

# USCG NAVIGATION NEEDS ANALYSIS MEMO

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



# MEMORANDUM

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**To:** Andy Maris  
Bridge Management Specialist  
US Coast Guard Seventh District

**From:** Binod Basnet, PE  
Project Manager  
FDOT District Four

**Date:** June 14, 2021

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**Project:** Project Development & Environment Study  
SR A1A Over Sebastian Inlet – Bridge 880005 Bridge Replacement  
Indian River County and Brevard County

**FPID No.:** 445618-1-22-02

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**SUBJECT: NAVIGATION IMPACT NEEDS ANALYSIS**

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## 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) crossing the Sebastian Inlet (Inlet) located at the Indian River County and Brevard County boundary.

Currently the bridge provides access for vessels between the Indian River Lagoon and the Atlantic Ocean through the Inlet. The purpose of this navigation impact needs analysis is to analyze the navigational impacts of bridge replacement design alternatives by providing the most accurate picture of current and future navigation on the waterway. By evaluating the height of vessels that currently pass through the Inlet, a determination of the appropriate bridge vertical and horizontal navigational clearance needs required for a replacement bridge can be supported. This assessment takes into consideration the existing constraints to navigation for vessels which may reasonably utilize the Inlet.

## PROJECT LOCATION

The Sebastian Inlet Bridge (Bridge) is a 1,548-foot long concrete structure with two-lanes carrying State Road (SR) A1A over the Inlet at the Indian River and Brevard County boundary (Figure 1). The Bridge is located within FDOT and Sebastian Inlet District (SID) Commission right-of-way (ROW) and is adjacent to the Sebastian Inlet State Park. The project limits extend approximately 0.95 miles from Mile Post 22.050 of Roadway ID 88070000 south of the Bridge in Indian River County north to Mile Post 0.300 of Roadway ID 70060000 in Brevard County.

## PROJECT DESCRIPTION

The Bridge was constructed in 1964 with a vertical clearance of 39-feet and horizontal clearance of 150-feet between the fenders. The Bridge is recommended National Register of Historic Places (NRHP)-eligible under Criterion C in the area of Engineering for its high-integrity embodiment of a prestressed concrete bridge in Florida.

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**PROJECT LOCATION**  
 PROJECT DEVELOPMENT AND ENVIRONMENT (PD&E) STUDY  
 SR-A1A OVER SEBASTIAN INLET - BRIDGE 880005 - BRIDGE REPLACEMENT  
 INDIAN RIVER COUNTY AND BREVARD COUNTY, FLORIDA

**FIGURE  
1**

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 and scour critical. The Bridge deck was rated 6 Satisfactory, the superstructure 5 Fair, and the substructure 4 Poor per the National Bridge Institute (NBI) ratings from 0 to 9. The culvert element is not applicable.

The Bridge sufficiency rating is 51.6 with a health index of 79.8. 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 generally require repairs or replacement. The Bridge typical section and geometric alignment does not meet current road design standards or the needs of the corridor.

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. A 9-foot multi-use path, separated from SR A1A, is located on the west side of the roadway north and south of the Bridge. On the south side of the Bridge, 5-foot bike lanes are designated adjacent to the north and southbound travel lanes. North of the Bridge, paved shoulders are 2 to 4-feet wide and not marked as designated bike lanes.

Evaluation of new bridge alternatives will consider alignments along the existing Bridge, to the east of the existing Bridge, and to the west. No alteration of the Inlet navigation channel is proposed. A new bridge would likely be constructed in relatively close proximity to the existing Bridge to minimize impacts and to maintain traffic along SR A1A at this location.

There are no bridges east or west of the Bridge along the Inlet. The bridges closest to the Bridge are the US 192/Melbourne Causeway bridge located approximately 17.5 miles north and the SR 510/Wabasso Road bridge located approximately 7.5 miles south. Both bridges cross the ICW and are fixed span with vertical clearances at 65-feet. The horizontal clearances are 80-feet and 90-feet respectively. Additional access to the Atlantic Ocean is accommodated at the Canaveral Barge Canal/Port Canaveral Inlet approximately 28 miles to the north and the Fort Pierce Inlet approximately 28 miles to the south.

The Bridge is also situated within the Sebastian Inlet State Park, a Section 4(f) resource. Potential impacts to natural, cultural, and physical resources from proposed bridge alternatives is directly related to the vertical clearance of the bridge. An increase in bridge vertical clearance from the current height will require lengthening the bridge and its approaches. This could result in potential impacts to natural resources including wetlands, threatened and endangered species, habitat, park facilities, and park entrances.

## SEBASTIAN INLET

The Inlet is a tidally influenced waterway approximately 525-feet wide at the Bridge. The channel alignment is skewed 70 degrees ENE from the centerline of SR A1A. Fenders are situated 150-feet apart adjacent to the Bridge within the channel and are marked with red lights. The navigational channel is marked with blue and green lights underneath the Bridge, and the Bridge is lit with mounted lights on pilings along the fishing piers underneath the Bridge. This waterway is primarily used for recreational and charter fishing vessels with no known vessels operating in emergency operations.

Figure 2 shows a portion of the National Oceanic and Atmospheric Administration's (NOAA) Nautical Chart 11472. The NOAA chart also has a caution for the Inlet that "Passage through the inlet is not

recommended without local knowledge of all hazardous conditions affecting this area.”

The Inlet, under the Bridge, is located approximately 2 nautical miles east of the Intracoastal Waterway (ICW). In August 2007 the SID completed the construction of a navigation channel connecting the Inlet westward to the ICW. The purpose of this 3,120-ft long channel extension was to provide the maritime community with a safe, clearly designated passage to/from the Atlantic Ocean as a matter of public safety and for the future protection of associated aquatic resources. In 2012, the SID completed the Inlet channel realignment project (FDEP Permit No. 05-264486-005-EM) beginning approximately 4,560-feet west of the Bridge extending to the ICW. This realignment corrected the severe angle of the channel by widening the turn.

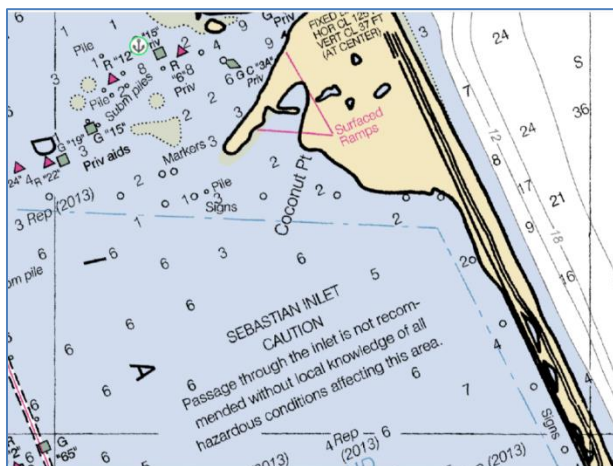


Figure 2: NOAA Nautical Chart 11472

## BACKGROUND

During the Planning Phase of FDOT’s project delivery process, a waterway survey (Attachment A) was completed that included field reconnaissance, navigational map, and aerial photo interpretation to assess the navigational needs of the boaters within the vicinity of the proposed bridge. Vessel traffic surveys were conducted November 9 through 11, 2019, which was Veteran’s Day weekend. Vessel estimated length, estimated height above water, make, type, name and/or Hull Identification Number and time entering/exiting the inlet were recorded.

The results of this waterway survey showed several different types of power boats were observed within the inlet including jet skis, cabin cruisers, catamarans, center consoles, pilothouse, cigarette, jon boats, bowriders and pontoon boats. The majority of boats observed during the field surveys included recreational vessels and commercial fishing charter boats 30 feet or less in length and 15 feet or less in height. Most vessels remained within the Inlet, although some traveled east into the Atlantic Ocean.

During the field surveys, conditions within the Inlet were variable with strong currents. Navigational aids mark the channel from the ICW to the inlet. Visibility is limited at night, although the bridge is lit with underdeck lighting and the fenders and northern jetty are marked with red lights. Navigation through the inlet is not recommended (per the NOAA navigational chart) to boaters without local knowledge due to hazardous conditions of the area.

## METHODOLOGY

As part of the PD&E study, no-action, repair, and replacement alternatives will be evaluated. Since this waterway is used for recreational and commercial navigation, part of this study includes assessing the change in vertical clearance of a new fixed level bridge and the effect on mariners and surrounding resources associated with the Sebastian Inlet State Park.

In order to determine the type and size of vessels that use the Inlet, a navigation survey was developed in accordance with the *Navigation Impact Study Scope: SR A1A Bridge/Sebastian Inlet Bridge* provided by

## Navigation Impact Needs Analysis

the US Coast Guard (Attachment B). The geographic survey boundaries include the Melbourne Causeway (US 192/SR 500)/Ernest Kouwan Hovan Bridge to the north, the SR 510/Wabasso Bridge to the south, SR A1A to the east, and US Highway 1 to the west.

The online navigation survey was launched April 1, 2021 and remained available through April 25, 2021 (Attachment C). Postcards were sent to 749 residents and businesses in Brevard County and 271 residents and businesses in Indian River County within the described geographical survey limits (Attachment D). Flyers were also hand delivered to the Sebastian Inlet State Park, Sebastian Inlet Surf & Sport, Black Dog Bait & Tackle, and Strike Zone Fishing on April 1, 2021. Email notices and flyer were forwarded to local governments on April 2, 2021. Notice was published in the USCG Local Notice to Mariners Week 14/21 (pages 71 and 76). The SID and the Town of Orchid posted a brief description along with the survey link on their websites and the Indian River County Metropolitan Agency included the information in their April e-Newsletter. The FDOT also posted a brief description along with the survey link on Facebook and Twitter (Attachment E).

All surveys submitted by the posted deadline were compiled to provide a current and accurate account of the Inlet waterway users. A total of 262 responses were received. The data included respondent information, vessel information, and comments. A summary of the results is presented below. Supporting data is included in Attachment F.

The information from the survey was used in this navigation impact needs analysis to provide data necessary for review and comment by the US Coast Guard regarding the proposed height of a fixed span replacement bridge alternative. The USCG Navigation Impact Data requirements are included in Attachment J.

## NAVIGATION SURVEY RESULTS

The April 2021 Navigation Survey (Survey) resulted in data provided by 262 respondents (Attachment F). Because not all respondents answered each question, and to support the discussion that follows, Figures 3 – 10 present a graphic representation of the answers to survey questions and Tables 1 – 8 provide a summary of responses by percentage.

A total of 262 responses were received for the question *Are you responding to this survey as?* Of the 262 responses, 189 respondents or 72 percent indicated they are boat owners owning either one or multiple types of boats (Figure 3, Table 1).

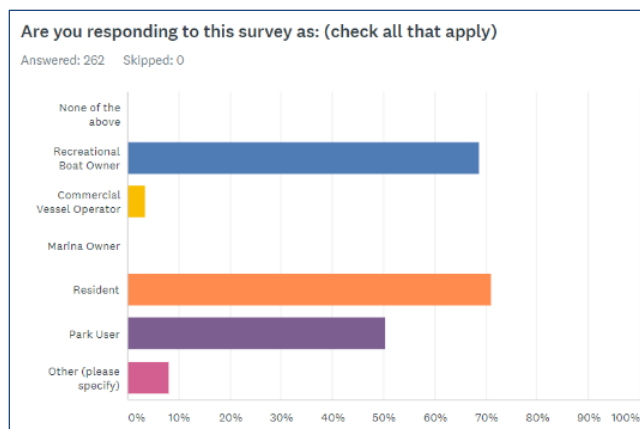


Figure 3: Survey Respondents by Type

TABLE 1. Survey Respondent Type Percentages

Answered: 262 Skipped: 0

ANSWER CHOICES	RESPONSES	
None of the above	0.00%	0
Recreational Boat Owner	68.7%	180
Commercial Vessel Operator	3.44%	9
Marina Owner	0.00%	0
Resident	70.99%	186
Park User	50.38%	132
Other (please specify)	8.02%	21
TOTAL		262

Of the 255 responses received for the question *If you are a boat owner or operator, what type of boat(s) do you own or operate?* 218 responses or 85 percent identified as power boat owners (power boat, fishing boat, tug/barge) and 8 percent as sailboat owners (Figure 4, Table 2).

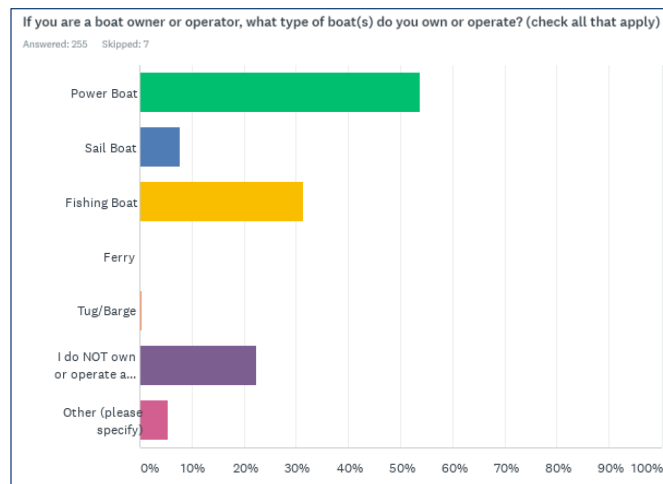


Figure 4: Boat Owner by Type

TABLE 2. Boat Owner Type by Percentage

ANSWER CHOICES		RESPONSES
Power Boat	53.73%	137
Sailboat	7.84%	20
Fishing Boat	31.37%	80
Ferry	0.00%	0
Tug/Burge	0.39%	1
I do NOT own or operate a boat or vessel	22.35%	57
Other (please specify)	5.49%	14
<b>TOTAL</b>		<b>255</b>

Of the 164 responses received for the question *Do you use the channel under the Sebastian Inlet Bridge?* 146 respondents or 89 percent indicated they use the channel under the Bridge (Figure 5, Table 3). If the respondent answered yes, the following question *If yes, when do you transit this waterway?* followed. Of the 164 respondents, the majority (84 percent) transit the waterway year round primarily during the daytime (Figure 6, Table 4).

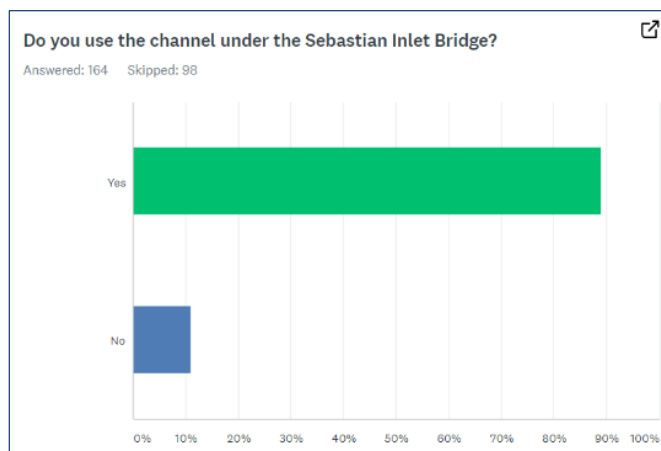


Figure 5: Inlet Channel Use

TABLE 3. Inlet Channel Use by Percentage

ANSWER CHOICES		RESPONSES
Yes	89.02%	146
No	10.98%	18
<b>TOTAL</b>		<b>164</b>

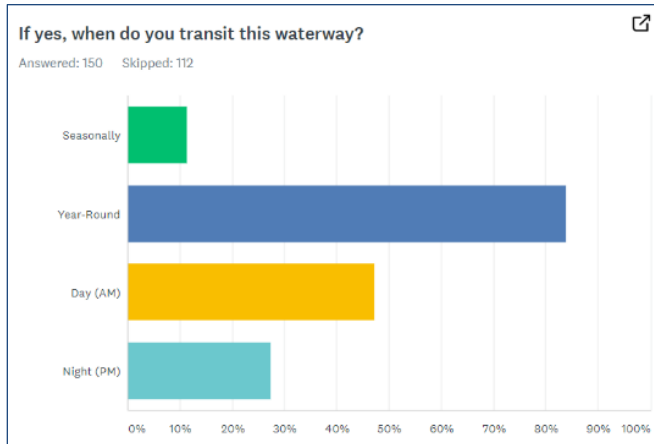


Figure 6: When Users Transit the Inlet

TABLE 4. When Users Transit the Inlet by Percentage

Answered: 150 Skipped: 112

ANSWER CHOICES	RESPONSES	
Seasonally	11.33%	17
Year-Round	84.00%	126
Day (AM)	47.33%	71
Night (PM)	27.33%	41
TOTAL		150

Of the 164 respondents that use the Inlet, 49 respondents or 30 percent also use the Canaveral Barge Canal/Port Canaveral Inlet, and 73 respondents or 45 percent also use the Fort Pierce Inlet (Figures 7–8, Tables 5–6). Both of these locations provide ocean access.

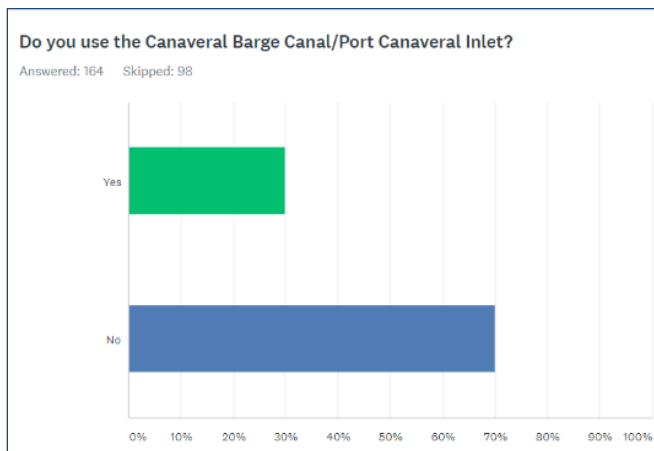


Figure 7: Canaveral Barge Canal/Port Canaveral Inlet Use

TABLE 5. Canaveral Barge Canal/Port Canaveral Inlet Use by Percentage

Answered: 164 Skipped: 98

ANSWER CHOICES	RESPONSES	
Yes	29.88%	49
No	70.12%	115
TOTAL		164

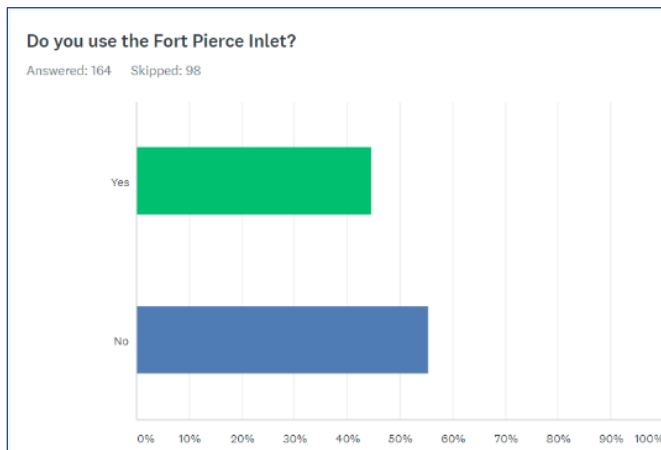


Figure 8: Fort Pierce Inlet Use

TABLE 6. Fort Pierce Inlet Use by Percentage

Answered: 164 Skipped: 98

ANSWER CHOICES	RESPONSES	
Yes	44.51%	73
No	70.12%	91
TOTAL		164



Of the 161 responses received for the question *Does the existing Sebastian Inlet Bridge vertical clearance meet your navigation needs?* 148 respondents or 92 percent indicated their navigation needs are met (Figure 9, Table 7).

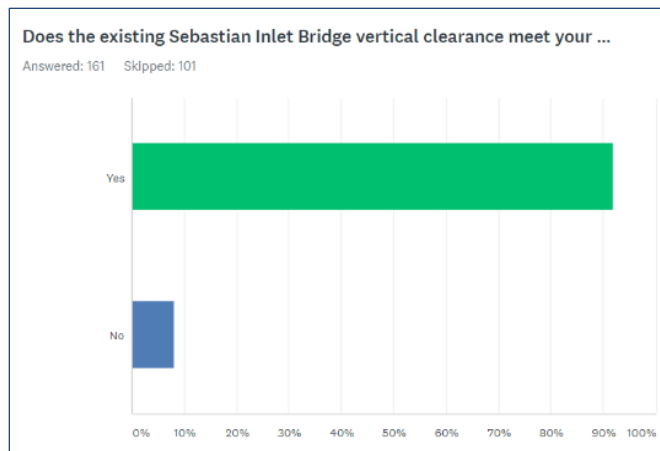


TABLE 7. Existing Bridge Meets Navigation Needs by Percentage

Answered: 161 Skipped: 101

ANSWER CHOICES	RESPONSES	COUNT
Yes	91.93%	148
No	8.07%	13
<b>TOTAL</b>		<b>161</b>

Figure 9: Existing Bridge Vertical Clearance Meets Navigation Needs

Of the 262 responses received, 58 respondents provided written comments. Two respondents indicated none as their comment. A summary of the number of comments received by topic is included in Table 8. Ten comments included more than one topic. A summary table of the comments received by respondent number are included in Attachment G.

TABLE 8. NUMBER OF COMMENTS BY TOPIC

GENERAL	VERTICAL CLEARANCE			HORIZONTAL CLEARANCE			CHANNEL DEPTH ISSUES			ENVIRONMENTAL CONCERNS	BIKE/ PED	BRIDGE CLOSURE CONCERNS	INLET DANGER
	Increase	Decrease	No Change	Increase	Decrease	No Change	Depth	Width	Other				
7	9	1	7	3	0	0	8	2	2	5	5	10	5

The Survey results showed the tallest vessel passing under the Bridge is 34-feet. Only 6 percent of respondents stated that they do not use the inlet due to vertical clearance requirements above 39-feet. These vessels range in height from 40 to 63.5 feet. A summary of the respondents with vessel heights above 39-feet is presented in Table 9. A summary table of responses regarding vessel height exceedance is included in Attachment H along with the individual respondent questionnaires.

TABLE 9. VESSEL HEIGHT BY RESPONDENT

RESPONDENT NUMBER	VESSEL HEIGHT (FEET)
40	50
43	50
111	54
140	45
235	45
239	40
242	63.5
252	49

Inlet channel depth is also a limiting factor for larger vessels due to varying channel depths around 12-feet from the Inlet west to the ICW.

For boat owners that do not use the Inlet, one or multiple responses were provided indicating why. The reasons are as follows:

- Vessel is too tall
- Vessel is a non-ocean going vessel (kayak or similar)
- The inlet is too dangerous
- The inlet is too crowded

Several survey questions were intended for commercial operations such as marinas or sport fishing charter operations in order to identify potential impacts, positive or negative, to the commercial boating industry. Most of the marina facilities do not have a fuel dock or offer repair services.

Of the 140 responses received for the question *Are you a Marina owner or Sport Fishing Charter Owner?*, 11 respondents or 8 percent are marina or sport fishing charter operators (Figure 10, Table 10).

Nine of the eleven owner/operators indicated that changing the vertical clearance would have no change to their businesses with two indicating a positive impact. A summary of the responses indicating the respondent is a marina or sport fishing charter owner is included in Table 11.

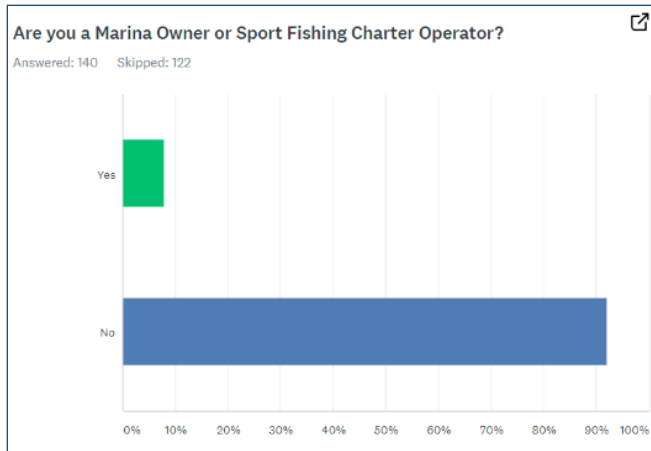


TABLE 10. Marina or Sport Fishing Charter Owner by Percentage

ANSWERED: 140 SKIPPED: 122		
ANSWER CHOICES	PERCENTAGE	COUNT
Yes	7.86%	11
No	92.14%	129
TOTAL		140

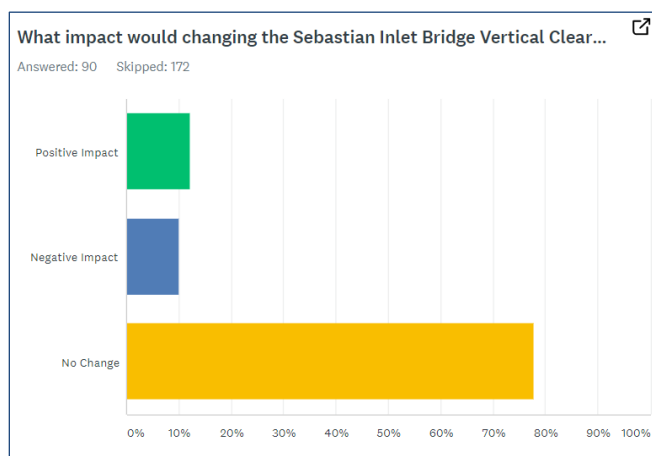
Figure 10: Marina or Sport Fishing Charter Owner

**TABLE 11. MARINA OR SPORT FISHING OWNER RESPONSES**

RESPONDENT NUMBER	ARE YOU A MARINA OR SPORT FISHING CHARTER OPERATOR	WHAT IMPACT WOULD CHANGING THE VERTICAL CLEARANCE OF THE BRIDGE HAVE ON YOUR BUSINESS	DOES YOUR MARINA HAVE A FUEL DOCK	DOES YOUR MARINA OFFER REPAIR FACILITIES
27	Yes	No Change	Skipped	Skipped
59	Yes	No Change	Skipped	Skipped
61	Yes	No Change	Skipped	Skipped
64	Yes	Positive	Skipped	Skipped
65	Yes	No Change	No	No
67	Yes	No Change	Yes	Yes
75	Yes	No Change	Yes	Yes
110	Yes	No Change	Skipped	Skipped
177	Yes	No Change	Skipped	Skipped
201	Yes	No Change	Yes	No
220	Yes	Positive	Skipped	Skipped

In addition to the marina owners and sport fishing operators, responses were received from 79 respondents indicating the impact changing the vertical clearance would have on their business. These responses were not directly related to business activities but were respondent opinion. The majority (77.78 percent) indicated changing the vertical clearance would have no change while 10 percent indicated a negative impact and 12.22 percent a positive impact (Figure 11, Table 9).

A summary of the respondent responses indicating what type of impact would result from changing the bridge vertical clearance is presented in Attachment I along with individual survey questionnaires for respondents that indicated a positive impact.



**TABLE 9. Impact Changing the Vertical Clearance Would Have on Your Business by Percentage**

ANSWER CHOICES	RESPONSES	
Positive Impact	12.22%	11
Negative Impact	10.00	9
No Change	77.78%	70
<b>TOTAL</b>		<b>90</b>

**Figure 11: Impact from Changing Vertical Clearance**

### SUMMARY

Due to the age and condition of the Bridge, a PD&E Study is being conducted to evaluate alternatives for replacement of the existing fixed Bridge with a new bridge structure. The alternatives being evaluated include fixed bridges located on the existing Bridge alignment, to the east of the existing Bridge, and to the west. Alternatives evaluation will also include repair/rehabilitation and the No-Build alternative.

In an effort to determine the necessary vertical clearance for a new fixed bridge, an online navigation survey was launched April 1, 2021 and remained available through April 25, 2021 (Attachment C). The survey was intended to determine the type and size of vessels that currently use the Inlet. A total of 262 survey responses were received.

### CONCLUSIONS

The Survey was conducted to gain accurate data regarding vessels that utilize the Inlet under the Bridge which will support a vertical clearance recommendation for a replacement bridge to be evaluated in the PD&E study.

Based on information gathered from Survey, vessel use of the Inlet will not be impacted by replacement of the existing fixed span bridge with a new fixed span bridge with similar vertical clearance. Data from the April 2021 Navigation Survey also indicates that vessel traffic traveling the ICW, located to the west of the Inlet, is limited by the vertical clearances of the US 192/Melbourne Causeway Bridge to the north and the SR 510/Wabasso Road Bridge to the south. These bridges are sufficient for ICW traffic with vertical clearances of 65-feet and horizontal clearances of 80-feet and 90-feet respectively. Any vessel traffic in the study area which exceeds these requirements would be locally moored vessels that can only utilize the ICW between the US 192/Melbourne Causeway Bridge and the SR 510/Wabasso Road Bridge.

The Survey results reported the tallest vessel passing under the Bridge is 34-feet. Only 6 percent of respondents stated that they do not use the inlet due to vertical clearance requirements above 39 feet. These vessels range in height from 40 to 54 feet. Inlet channel depth is also a limiting factor for larger vessels due to depths which vary around 12-feet. Maintenance dredging of the channel is periodically conducted by the SID under their USACE dredge permit.

Hazardous conditions also affect traversing the Inlet. The Inlet experiences extremely strong currents which require most vessels to have sufficient power to pass safely. The National Oceanic and Atmospheric Association's (NOAA) Nautical Chart 11472 has a caution for the Inlet which states "Passage through the inlet is not recommended without local knowledge of all hazardous conditions affecting this area."

There are no known proposed marina expansions or new marina facilities proposed in the vicinity of the Bridge. Much of the waterfront within the geographic survey area is private residential property or publicly owned recreation or conservation lands.

The PD&E Study is being conducted to evaluate alternatives for a new fixed span structure along with alternatives for repair/rehabilitation or the No-Build. Based on information from the February 2020 FDOT Navigation Study and the Survey, vessel use of the waterway will not be significantly impacted by replacement and construction of a fixed span bridge with a vertical clearance of 39-feet. Maintaining a vertical clearance of 39-feet will also reduce impacts to the adjacent natural, cultural, and physical resources and the Sebastian Inlet State Park, a Section 4(f) resource.

# **ATTACHMENT A**

## **Sebastian Inlet Bridge Navigation Study**

### **February 2020**

# Sebastian Inlet Bridge

## Navigation Study

FDOT FM No. 445618-1  
Brevard County and Indian River County



February 2020

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## Figures

Figure 1: Project Location Map

Figure 2: Manatee Protection Zones

Figure 3: Navigation Map

## Appendices

Appendix A: Vessel Log

Appendix B: Vessel Photographs

Appendix C: Bridge and Channel Photographs

## **1.0 Project Description**

The proposed project location is the Sebastian Inlet Bridge (No. 880005), a 1,548-foot long bridge carrying State Road (SR) A1A over the Sebastian Inlet at the Indian River and Brevard County line (Figure 1). The bridge is located within the Sebastian Inlet State Park right-of-way and carries traffic to/from Sebastian in the south to/from Melbourne to the north. Campgrounds and a boat ramp are located at the southern entrance and fishing occurs at the north entrance. A swimming cove and beach area are also located to the northwest of the bridge. Under deck fishing piers are located underneath the north and south portions of the bridge. Sebastian Inlet Bridge spans over Sebastian Inlet, which is one of five navigable channels that connect the Indian River Lagoon to the Atlantic Ocean. The closest connections to the Atlantic Ocean are Fort Pierce Inlet 28 miles to the south and Port Canaveral Inlet 29 miles to the north.

The proposed project includes the replacement of the mainline bridge and replacement of the existing under deck fishing piers. The potential to add sidewalks and/or bicycle paths will also be investigated.

Replacement of the mainline bridge will be along the same general alignment; however, the vertical clearance is anticipated to be increased from 37 feet to 65 feet. The project limits extend approximately 1.9 miles from the State Park Marina entrance north of the bridge to the southern entrance of the parking lot south of the bridge.

## **2.0 Project Need**

This replacement is necessary because the bridge, which was constructed in 1965, has been identified in the Intracoastal Waterway Bridge Safety Study performed by the Florida Department of Transportation (FDOT) District Four (D4) as a safety concern.

## **3.0 Navigational Study Need**

The permitting improvement provisions found in the 2014 Memorandum of Understanding between the U.S. Coast Guard (USCG), the Federal Highway Administration (FHWA), the Federal Transit Administration, and the Federal Railroad Administration requires applicants with Department of Transportation funded projects prepare a navigation impact report in order to analyze the navigational impacts of the bridge design alternatives.

A navigational study is required in accordance with 23 CFR 650H and 23 CFR Part 771, to assess boat traffic within the project's affected area. This will provide baseline data to the FHWA and FDOT for coordination with the USCG during project development.

## **4.0 Methodology**

This study is provided to determine the navigational implications of the replacement of the Sebastian Inlet Bridge on recreational and commercial boats within the area of the proposed bridge.

Qualified personnel conducted field reconnaissance, navigational map and aerial photo interpretation to assess the navigational needs of the boaters within the vicinity of the proposed bridge. Vessel traffic surveys were conducted November 9 through 11, 2019, which was Veteran's Day weekend. Vessel estimated length, estimated height above water, make, type, name and/or Hull Identification Number and time entering/exiting the inlet were recorded.



## 5.0 Vessels and Usage

Several different types of power boats were observed within the inlet including jet skis, cabin cruisers, catamarans, center consoles, pilothouse, cigarette, jon boats, bowriders and pontoon boats. The majority of boats observed during field visits were recreational or charter fishing boats, 30 feet or less in length. The maximum vessel height-above water observed was approximately 15 feet. A 40' sailing catamaran was also observed within the area and was anecdotally noted by a passerby as having gone under the bridge in the early morning hours, prior to the start of the daily survey. The results of the boat survey performed are presented in Appendix A and photographs of typical vessels are included in Appendix B.

Many boats were observed fishing in the areas directly east and west of the bridge, but not passing through the Inlet opening to the Atlantic Ocean. Weather conditions during the field surveys varied between rainy and sunny; however, strong currents were consistently present. Wave heights ranged from 1 to 4 feet, and conditions were rougher and more variable to the east of the bridge. Many boats observed approaching from the west turned around before reaching the bridge or before reaching the Inlet opening. The inlet was also temporarily closed on the afternoon of November 11<sup>th</sup> due to hazardous sea conditions.

A boat ramp is located approximately 0.7 miles south of the Inlet within Sebastian Inlet State Park. Boats were observed throughout the study period entering the park to use this boat ramp. No other marinas, marine repair facilities, public boat ramps, or private piers/docks are located along the waterway within 0.5 miles of the bridge.

## 6.0 Navigable Areas

Sebastian Inlet is located approximately 2 nautical miles from Intracoastal Waterway (ICW) Mile Marker 935. Private Aids to Navigation, including dayboards and buoys, mark the navigational channel leading from the ICW to the Inlet. Representative photographs of the bridge and channel are included in Appendix C.

Jetties are located east of the Inlet, jutting out from the north and south shorelines. The northern jetty extends approximately 650 feet from the shoreline and is marked with a red light. Fenders adjacent to the channel underneath the bridge on the north and south sides are marked with red lights. The navigational channel is marked with blue and green lights underneath the bridge, and the bridge is lit with mounted lights on pilings along the fishing piers underneath the bridge. Navigational aids appeared to be well maintained and were sufficiently visible for safe navigation. Figure 3 shows a portion of the National Oceanic and Atmospheric Administration's (NOAA) Nautical Chart 11472. The NOAA chart also has a caution for the Inlet that "Passage through the inlet is not recommended without local knowledge of all hazardous conditions affecting this area." The Inlet is noted as particularly hazardous to small boats not designed for the open seas.

Depths within the Inlet range from less than 1 foot at the shorelines to 12 feet in the navigational channel. The north and south portions of the Inlet gradually slope towards the navigational channel towards the center. The north and south shorelines are lined with large riprap boulders and becomes sandy towards the navigational channel. The Sebastian Inlet District is responsible for maintaining the navigational channel, including the markers. The most recent channel maintenance project (July 2019) consisted of dredging the 3,120-foot channel to 150-foot wide and to varying depths of up to -12 feet.

Manatee Protection Zones are located to the north and south of the navigation channel as designated by 68C-22.006 and 68C-22.007 F.A.C. Waters to the west of the bridge are designated as Slow Speed All

Year. The swimming cove northwest of the bridge is designated as Idle Speed All Year, but motorized vessel traffic is restricted from entering by buoys and rock jetties. The navigation channel is excluded from the Manatee Protection Zones (Figure 2).

Shallow Seagrass Caution Areas are located west of the Inlet within the Indian River Lagoon. These shallower areas are located outside of the marked channel.

Currents run perpendicular to the alignment of the bridge. Currents move to the east during outgoing (ebb) tides, and to the west during incoming (flood) tides. Observed currents within the Inlet were extremely strong throughout the entire survey. Velocity of the tidal currents have been reported in the NOAA US Coast Pilot to reach 10 knots, with turbulent conditions between the bridge and the end of the jetties.

## **7.0 Regulatory Requirements**

Navigational guidelines and protocol for the construction of bridges as administered by the FDOT/Federal Highway Administration (FHWA), are provided pursuant to 23 CFR 650.801-809 (Navigational Clearances for Bridges). It is the USCG's duty and responsibility to ensure that navigable waters of the United States are preserved, while balancing competing needs of land and waterborne modes of transportation. The USCG has an obligation to ensure a bridge's final permitted design does not impinge upon the "reasonable needs of navigation" for that specific waterway, while serving the needs of land transportation. The General Bridge Act of 1946 requires USCG approval to construct new bridges or reconstruct/modify an existing bridge over navigable waters. FDOT will coordinate with the USCG and FHWA for approval of the location and design plans of the proposed bridge.

Guide clearances established by the USCG for the Atlantic Intracoastal Waterway from Jacksonville to Miami state minimums of 65 feet vertical clearance and 125 feet horizontal clearance for fixed bridges. The Melbourne Causeway Bridge located at ICW Mile Marker 918.2, approximately 17.5 miles to the north, is a fixed bridge that provides 65 feet of vertical clearance and 117 feet of horizontal clearance. The Wabasso Bridge located at the ICW Mile Marker 943.3, approximately 7.4 miles to the south, is a fixed bridge that provides 65 feet of vertical clearance and 90 feet of horizontal clearance. The portion of the proposed bridge over Sebastian Inlet currently has a horizontal clearance of 125 feet and shall satisfy USCG vertical requirements for meeting the reasonable needs of navigation.

All bridges across waterways that support nighttime navigation are required to display navigational lights in accordance with 33 CFR Part 118. The approval of navigational lights and other required signals must be obtained prior to any construction from the USCG District Bridge Office. The USCG may exempt bridges over waterways with no significant nighttime navigation from the lighting or other signal requirements. Design plans for navigational lighting should be separate from the design plans for the bridge when submitting a USCG bridge permit application. Separate approval from the USCG is required for bridge navigational lighting and signals. The bridge lighting plan is a separate application from the bridge permit application.

The project site is accessible to federally and state listed species which may temporarily utilize the site for passage or foraging. Brown pelicans (*Pelecanus occidentalis*) frequent the area and a juvenile green sea turtle (*Chelonia mydas*) was observed along the southern shoreline throughout the field site visits. Wood storks (*Mycteria Americana*) were also observed along the southern shoreline and perched in trees to the north of the wading cove northwest of the bridge. The site is also located within a Wood Stork Core Foraging Area (CFA) as designated by the U.S. Fish and Wildlife Service. Construction protection provisions for listed species may be included as part of the permitting process.

## **8.0 Conclusions and Recommendations**

The purpose of this study was to provide navigational information for coordination with USCG during project development, and to identify any potential impacts to navigation for the proposed replacement of the Sebastian Inlet Bridge.

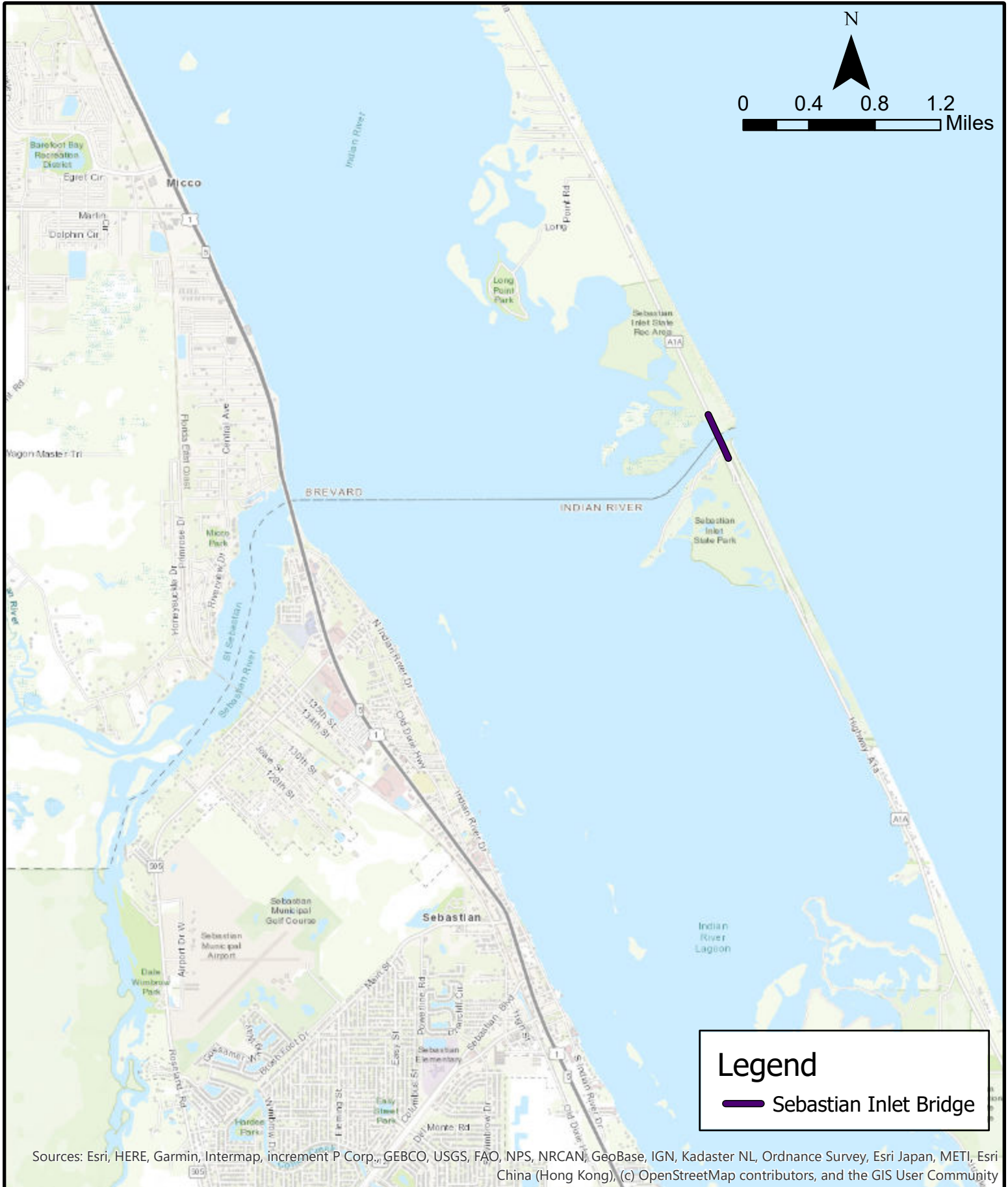
Observed vessel traffic during field surveys included recreational vessels and commercial fishing charter boats 30 feet or less in length and 15 feet or less in height. Most vessels remained within the Inlet, although some traveled east into the Atlantic Ocean.

Conditions within the Inlet were variable, but currents were strong throughout the field study. Navigational aids mark the channel from the ICW to the inlet. Visibility is limited at night, although the bridge is lit with underdeck lighting and the fenders and northern jetty are marked with red lights. Navigation through the inlet is not recommended to boaters without local knowledge due to hazardous conditions of the area.

Replacement of the bridge may temporarily limit vessel access to the Atlantic Ocean through the Inlet. Vessels searching for passage to the Atlantic Ocean would have to travel 28 miles to the south to Fort Pierce Inlet or 29 miles to the north to Port Canaveral Inlet.

The majority of boats observed using the Inlet were recreational or charter fishing boats with a maximum vessel height-above water of approximately 15 feet. However, the ability of larger vessels entering and exiting the Sebastian Inlet is limited due to the current vertical clearance of 37 feet. Guide clearances established by the USCG for bridges along the ICW provide minimums of 65 feet vertical clearance for fixed bridges. By increasing the bridge height to 65 feet, taller vessels traveling to and from the ICW would be able to travel through the inlet.

## **FIGURES**

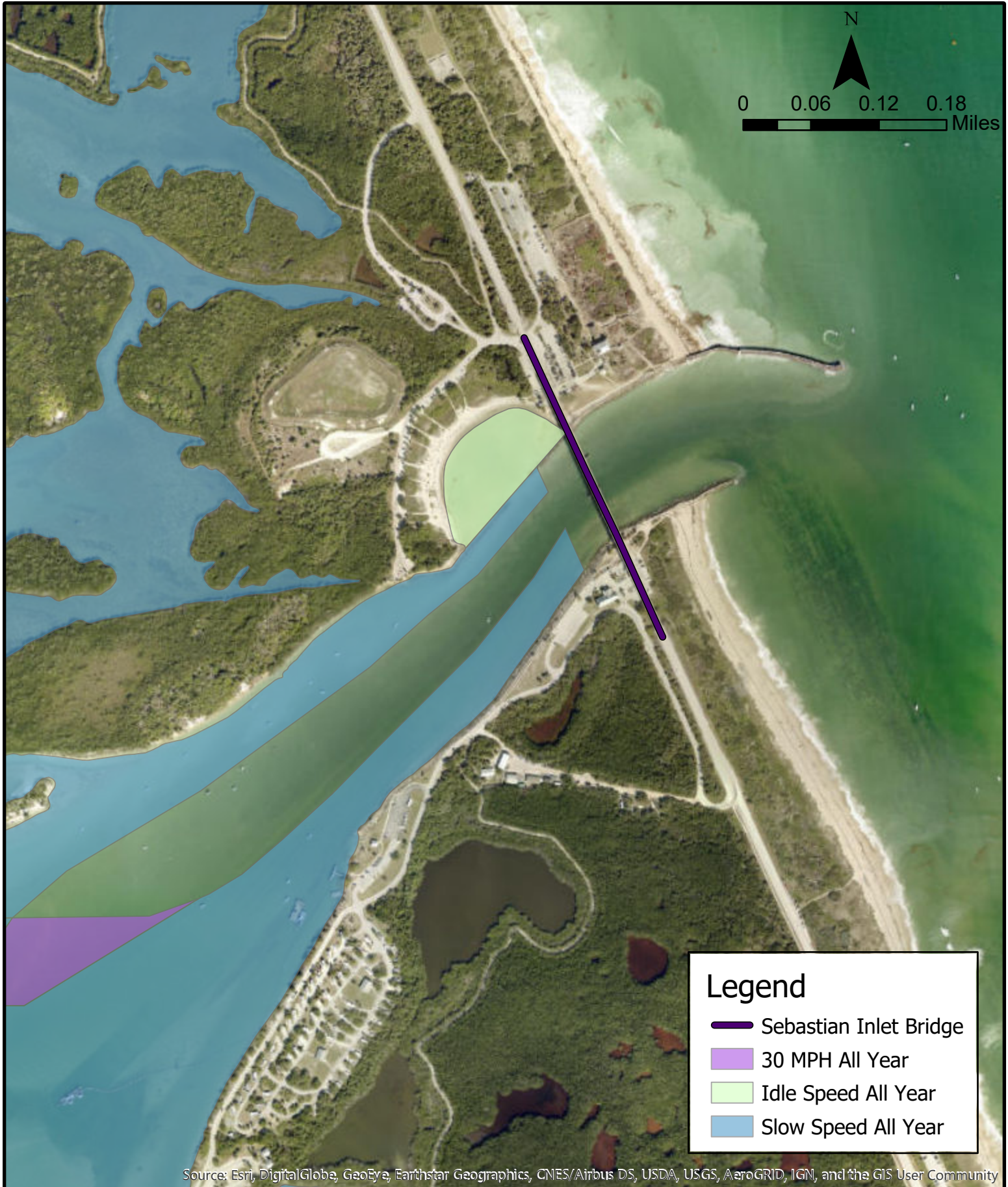


Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), (c) OpenStreetMap contributors, and the GIS User Community







# SEBASTIAN INLET BRIDGE REPLACEMENT NAVIGATION STUDY

**Project Location Map**  
**Figure 1**



**Legend**

-  Sebastian Inlet Bridge
-  30 MPH All Year
-  Idle Speed All Year
-  Slow Speed All Year

Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

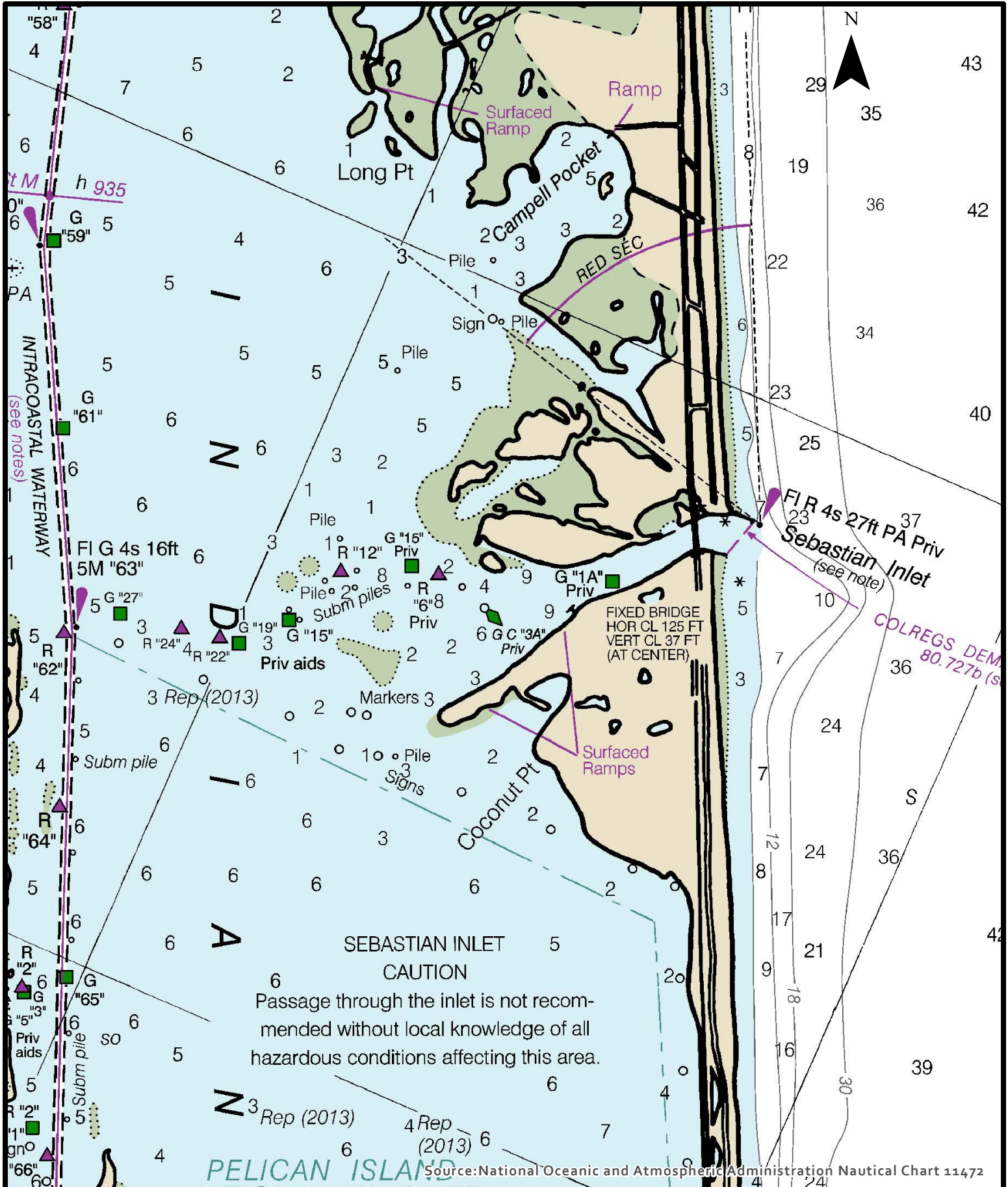


**SEBASTIAN INLET  
BRIDGE REPLACEMENT  
NAVIGATION STUDY**

**Manatee Protection  
Zones**

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**Figure 2**



**SEBASTIAN INLET  
 BRIDGE REPLACEMENT  
 NAVIGATION STUDY**

**Navigation Map**

**Figure 3**

# **APPENDIX A**

## **VESSEL LOG**



	Date	Time	Type of Vessel	Direction	Name or Number of Vessel	Height	Notes
1	11/9/2019	9:46 AM	25' cabin cruiser	EB/WB	Liquid Plumber	8'	Did not go under bridge. Fishing in area.
2	11/9/2019	3:15 PM	25' center console	EB/WB		8'	Went under bridge, turned around.
3	11/10/2019	8:12 AM	22' center console	EB/WB	FL8379KA	5'	Did not go under bridge.
4	11/10/2019	8:12 AM	20' Bayliner cabin cruiser	EB/WB	Trophy, FL8162HF	8'	
5	11/10/2019	8:13 AM	16' jon boat	EB/WB	FL8958RF	3'	In & out repeatedly, fishing in area
6	11/10/2019	8:13 AM	20' Sea Hunt center console	EB/WB	Just Right, FL7498PF	5'	In & out repeatedly, fishing in area
7	11/10/2019	8:15 AM	23' center console	EB/WB	FL0143BA	7'	In & out repeatedly, fishing in area
8	11/10/2019	8:31 AM	25' center console	EB/WB	Fishin Gypsy	8'	In & out repeatedly, fishing in area
9	11/10/2019	8:37 AM	23' center console	EB/WB	Sea Hunt, FL4255PU	7'	In & out repeatedly, fishing in area
10	11/10/2019	8:58 AM	28' pilothouse	EB/WB	Heavens Reel, FL3014RJ	9'	Return 9:12 am
11	11/10/2019	9:01 AM	23' Pursuit cabin cruiser	EB/WB	FL4435EF	8'	In & out repeatedly, fishing in area
12	11/10/2019	9:16 AM	23' center console	EB/WB	Attitude Adjustment	10'	attitudefishing.com, return 10:46 am
13	11/10/2019	9:31 AM	20' Nautic Star center console	EB/WB	Reel Nauti, FL8993NJ	8'	
14	11/10/2019	9:36 AM	20' Robalo center console	EB/WB	FL9253RT	8'	
15	11/10/2019	9:38 AM	23' bowrider	EB/WB	FL3536RT	6'	
16	11/10/2019	9:39 AM	20' Pursuit center console	EB/WB	FL4068--	9'	
17	11/10/2019	10:03 AM	23' Pathfinder center console	EB/WB	FL9205NA	5'	
18	11/10/2019	10:23 AM	22' Wellcraft center console	EB/WB	Off the Hook, FL07295MI	9'	
19	11/10/2019	10:37 AM	20' center console	EB/WB	FL1814SM	4'	Did not go under bridge.
20	11/10/2019	10:39 AM	26' Proline center console	EB/WB	FL6587PZ	9'	Did not go under bridge.
21	11/10/2019	10:43 AM	18' Key Largo center console	EB/WB	FL7845RY	4'	Did not go under bridge.
22	11/10/2019	10:45 AM	18' Cape Horn center console	EB/WB	FL6996MW	4'	
23	11/10/2019	10:52 AM	24' Contender center console	EB/WB	FL4791NM	9'	
24	11/10/2019	10:52 AM	21' Aerosport cabin cruiser	EB/WB	Squid Row, FL7335KN	6'	
25	11/10/2019	11:03 AM	18' Key Largo center console	EB/WB	FL9668NE	8'	
26	11/10/2019	11:04 AM	24' Sea Hunt center console	EB/WB	FL3944RD	9'	In & out repeatedly, fishing in area
27	11/10/2019	11:21 AM	jet ski	EB/WB		3'	Did not go under bridge.
28	11/10/2019	11:21 AM	jet ski	EB/WB		3'	Did not go under bridge.
29	11/10/2019	11:24 AM	22' Sea Pro center console	EB/WB		9'	Did not go under bridge.
30	11/10/2019	11:29 AM	22' center console	EB/WB	FL29155K	9'	Did not go under bridge.
31	11/10/2019	11:36 AM	16' Action Craft flats boat	EB/WB	FL9604RS	6'	Did not go under bridge.
32	11/10/2019	11:40 AM	22' Sea Hunt cabin cruiser	EB/WB	FL3858PG	8'	Did not go under bridge.
33	11/10/2019	11:40 AM	jet ski	EB/WB		3'	
34	11/10/2019	11:41 AM	jet ski	EB/WB		3'	
35	11/10/2019	11:41 AM	jet ski	EB/WB		3'	
36	11/10/2019	11:41 AM	jet ski	EB/WB		3'	
37	11/10/2019	11:41 AM	jet ski	EB/WB		3'	
38	11/10/2019	11:44 AM	18' Hurricane bowrider	EB/WB	FL0354NP	8'	
39	11/10/2019	11:52 AM	22' Sea Fox cabin cruiser	EB/WB	FL2876NW	9'	Did not go under bridge.
40	11/10/2019	12:10 PM	24' Sportsman center console	EB/WB		9'	No HIN. Did not go under bridge.
41	11/10/2019	12:43 PM	jet ski	EB/WB		3'	
42	11/10/2019	12:43 PM	jet ski	EB/WB		3'	
43	11/10/2019	12:46 PM	17' Key West center console	EB/WB	FL8577NR	8'	Did not go under bridge.
44	11/10/2019	12:52 PM	24' Blackfin center console	EB/WB	FL8123SK	9'	Did not go under bridge.
45	11/10/2019	12:54 PM	22' Nautic Star center console	EB/WB	FL1564NF	8'	Did not go under bridge.
46	11/10/2019	12:58 PM	30' Cobia center console	EB/WB		10'	
47	11/10/2019	12:58 PM	22' Nautic Star center console	EB/WB		9'	
48	11/10/2019	1:00 PM	jet ski	EB/WB		3'	
49	11/10/2019	1:00 PM	jet ski	EB/WB		3'	
50	11/10/2019	1:00 PM	jet ski	EB/WB		3'	
51	11/10/2019	1:05 PM	15' Element bowrider	EB/WB	Seas the Day, FL2190RD	8'	
52	11/10/2019	1:06 PM	30' Intrepid center console	EB/WB	Farside, FL7357FR	15'	Did not go under bridge.
53	11/10/2019	1:12 PM	24' Everglades center console	EB/WB	FL4975ES	9'	Did not go under bridge.
54	11/10/2019	1:17 PM	20' bowrider	EB/WB	FL5375LV	5'	
55	11/10/2019	1:44 PM	23' Royal Cat	EB/WB		9'	No HIN. Did not go under bridge.
56	11/10/2019	1:44 PM	jet ski	EB/WB		3'	
57	11/10/2019	1:46 PM	jet ski	EB/WB		3'	
58	11/10/2019	2:20 PM	18' center console	EB/WB	The Fridge, FL9485MJ	9'	
59	11/10/2019	2:25 PM	30' cabin cruiser	EB/WB	Hydrotherapy, FL5752GD	10'	
60	11/10/2019	2:41 PM	25' S1 center console	EB/WB	FL5988SK	9'	
61	11/10/2019	2:54 PM	18' Key West center console	EB/WB	FL7648RH	8'	
62	11/10/2019	3:09 PM	18' center console	EB/WB		8'	
63	11/10/2019	3:09 PM	20' Century center console	EB/WB		9'	
64	11/10/2019	3:14 PM	22' Cobia center console	EB/WB	FL4896PS	5'	
65	11/10/2019	3:28 PM	25' S1 center console	EB/WB	FL29155K	9'	
66	11/10/2019	3:34 PM	16' jon boat	EB/WB		1'	Did not go under bridge.
67	11/10/2019	3:37 PM	13' Boston Whaler	EB/WB	FL0718AC	4'	Return 4:21 PM
68	11/10/2019	3:46 PM	20' center console	EB/WB	FL6273RA	8'	
69	11/10/2019	3:56 PM	22' Scout center console	EB/WB	FL2586NW	9'	
70	11/10/2019	4:09 PM	23' Nautic Star center console	EB/WB	FL140RG	9'	

71	11/10/2019	4:42 PM	28' center console	EB/WB	Mahi Italian, FL8337RL	9'	
72	11/10/2019	4:42 PM	jet ski	EB/WB		3'	
73	11/11/2019	8:16 AM	22' Pathfinder center console	EB/WB	FL0002SL	9'	
74	11/11/2019	8:30 AM	22' center console	EB/WB	Torch, FL4048MZ	4'	Return 9:30 AM
75	11/11/2019	8:37 AM	22' Pathfinder center console	EB/WB	FL9206HA	4'	Return 12:13 PM
76	11/11/2019	8:39 AM	22' center console	EB/WB	High Tide, FL0724SM	9'	Return 10:20 AM
77	11/11/2019	8:45 AM	22' center console	EB/WB	Epic, FL2491RM		In & out repetedly, fishing in area
78	11/11/2019	8:46 AM	24' Bentley pontoon	EB/WB	FL9218RM		Return 9:09 AM
79	11/11/2019	8:48 AM	22' center console	EB/WB		5'	No HIN. Return 9:45 AM
80	11/11/2019	8:49 AM	16' Carolina Skiff center console	EB/WB	Babs, FL0430ML	4'	Return 8:54 AM
81	11/11/2019	8:49 AM	20' Mako center console	EB/WB	FL5908BG	5'	Return 8:55 AM
82	11/11/2019	8:49 AM	18' Key West center console	EB/WB	FL3438PP	4'	
83	11/11/2019	9:13 AM	24' Twin Vee	EB/WB		9'	Return 9:16 AM
84	11/11/2019	9:14 AM	30' Nautic Star center console	EB/WB		10'	Return 9:29 AM
85	11/11/2019	9:27 AM	26' Cobia center console	EB/WB	FL2957RT	9'	Return 12:23 PM
86	11/11/2019	9:38 AM	22' S1 center console	EB/WB		9'	Return 10:48 AM
87	11/11/2019	9:57 AM	20' Ranger center console	EB/WB	FL0301RV	9'	Return 10:08 AM
88	11/11/2019	10:01 AM	23' center console	EB/WB	Attitude Adjustment, FL3881MW	10'	Return 11:10 AM
89	11/11/2019	10:07 AM	20' Key West center console	EB/WB	Salt Princess, PA6908DR	9'	Return 12:16 PM
90	11/11/2019	10:12 AM	26' Pathfinder center console	EB/WB	Maria-Marie, FL8000RM	9'	Return 11:03 AM
91	11/11/2019	10:15 AM	20' Key West center console	EB/WB	FL3270MV	5'	
92	11/11/2019	10:19 AM	24' Century cabin cruiser	EB/WB	FL2291NJ	10'	Return 10:31 AM
93	11/11/2019	10:24 AM	28' Searay	EB/WB	Lady K	12'	Did not go under bridge.
94	11/11/2019	10:37 AM	20' Sea Pro center console	EB/WB	FL3561MT	9'	
95	11/11/2019	10:40 AM	20' Stalker center console	EB/WB	FL2034HU	9'	
96	11/11/2019	10:43 AM	26' Cigarette	EB/WB	FL6643MH	4'	ORM LA
97	11/11/2019	10:50 AM	20' Robalo center console	WB	FL4067PR	9'	
98	11/11/2019	11:00 AM	24' Kenner center console	EB/WB	FL1845SM	4'	
99	11/11/2019	11:17 AM	jet ski	EB/WB		3'	
100	11/11/2019	11:23 AM	jet ski	EB/WB		3'	
101	11/11/2019	11:35 AM	14' Explorer pontoon	EB/WB	FL3783RX	10'	Did not go under bridge.
102	11/11/2019	11:47 AM	20' Sea Craft center console	WB	FL8571DJ	9'	
103	11/11/2019	11:48 AM	jet ski	EB/WB		3'	
104	11/11/2019	11:53 AM	14' Carolina Skiff	EB/WB	Carolina Spliff, FL8760HD	3'	
105	11/11/2019	11:59 AM	28' Luhrs cabin cruiser	EB/WB	Lady Di, FL7293NZ	10'	
106	11/11/2019	12:01 PM	28' Contender center console	EB	Out for Fun, FL8763JN	10'	
107	11/11/2019	12:05 PM	28' center console	EB/WB	Mahi Italian	9'	
108	11/11/2019	12:19 PM	30' Zodiac Tow Boat US	EB/WB	NJ4875HL	10'	

**APPENDIX B**

**VESSEL PHOTOGRAPHS**



Catamaran



Cigarette boat



Pilothouse boat



Cabin cruiser



Bowrider



Zodiac



Pontoon boat



Center console



Sea Ray



Jon boat





Jet ski

## **APPENDIX C**

### **BRIDGE AND CHANNEL PHOTOGRAPHS**



Sebastian Inlet Bridge from the west, facing towards the east.



Sebastian Inlet Bridge from the east, facing towards the west.



Underdeck of Sebastian Inlet Bridge, facing north along bridge alignment.



Underdeck of Sebastian Inlet Bridge, facing north along bridge alignment at inlet channel.



Underdeck of Sebastian Inlet Bridge, facing south along bridge alignment.



Sebastian Inlet Bridge channel facing towards the west to the Intracoastal Waterway

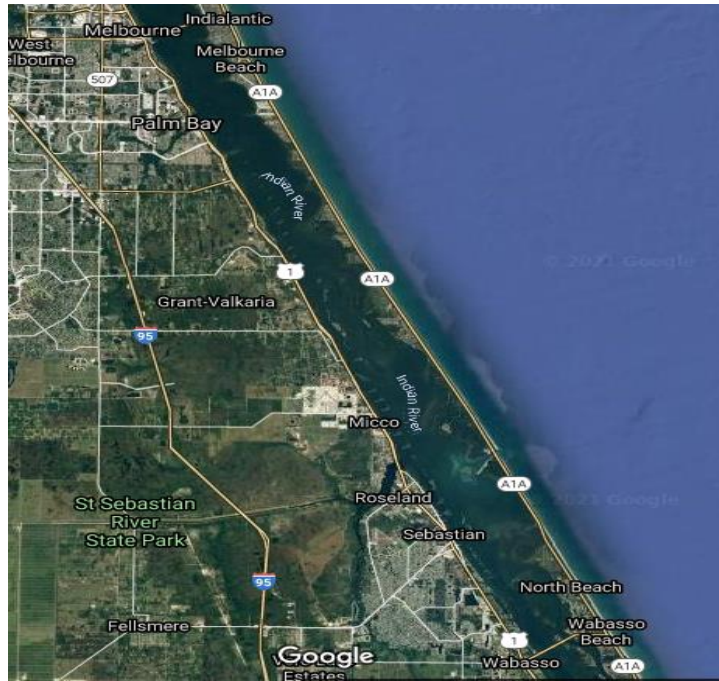


Sebastian Inlet Bridge channel facing towards the east to the Atlantic Ocean

# **ATTACHMENT B**

## **U.S. Coast Guard Navigation Impact Study Scope: SR A1A Bridge/Sebastian Inlet Bridge**

## Navigation Impact Study Scope: SR A1A Bridge/Sebastian Inlet Bridge



### *Northern Boundary:*

Melbourne CSWY SR 516 (US 192 - SR 500)/Ernest Kouwan Hovan Bridge

Horizontal Clearance: 117ft/Vertical Clearance: 65ft

### *Southern Boundary:*

SR 510 Bridge/Wabasso Bridge:

Horizontal Clearance: 90ft/Vertical Clearance: 65ft

### *Eastern Boundary:*

US Hwy 1 Bridge (SR 5)/St. Sebastian River Bridge (US 1 - SR 5):

Horizontal Clearance: 85ft/Vertical Clearance: 18ft

### *Western Boundary:*

SR A1A Bridge/Sebastian Inlet Bridge:

Horizontal Clearance: 125ft/Vertical Clearance: 37ft



Summary:

- Residents with vessels/docks/private marinas east of US Hwy 1 and west of SR A1A
- Commercial entities; city/state/federal municipalities; associated non-profit organizations
- Vessels less than 65 feet (air draft): top of vessel's highest point to its waterline
- Mixed-methodology of sampling: social media, Survey Monkey, hard copies, newspaper, etc.
- This area should meet the following threshold: minimum desired sample size = 100 responses; margin of error = 2%; confidence level = 95%; estimated responses = 20%; number to invite = 485.

Random Sampling of Residences with Vessels/Docks/Private Marinas:

*Northwestern Boundary to Southwestern Boundary:*

- Riverview Dr., Palm Bay, FL
- Anglers Dr. NE, Palm Bay FL to Bay Blvd. NE, Palm Bay, FL
- Worth Ct. NE and Anglers Dr. NE, Palm Bay, FL
- US 1/Dixie Hwy, Micco, FL south to Rocky Point Rd., Grant-Valkaria, FL
- Grant Island Estates/Grant Farm Island, Grant-Valkaria, FL
- North Indian River Rd., Sebastian, FL south to Dunn Runnin Rd., Sebastian, FL
- 44<sup>th</sup> Ave., Sebastian, FL
- Grove Place, Orchid, FL
- Marsh Island Dr./E Marsh Island Dr./Marsh Island Club, Vero Beach, FL

*Northeastern Boundary to Southeastern Boundary:*

- S. Riverside Dr., Indialantic, FL south to Ocean Ave. (Melbourne Beach Pier), Melbourne Beach, FL
- River Rd., Melbourne Beach, FL
- Pine St., Melbourne Beach, FL
- Riverview Ln., Melbourne Beach, FL
- S. River Rd., Melbourne Beach, FL
- Sanibel Way, Melbourne Beach, FL
- Ocean Ridge Dr., Melbourne Beach, FL
- Ocean Edge Colony, Melbourne Beach, FL
- Sea Crest Manor, Melbourne Beach, FL
- Indigo Cove, Melbourne Beach, FL
- Wexford Property, Melbourne Beach, FL
- Turtle Bay, Melbourne Beach, FL
- Spoonbill Ln., Melbourne Beach, FL
- Lighthouse Cove, Melbourne Beach, FL
- Riverside Dr., Melbourne Beach, FL
- Ballard Cove, Melbourne Beach, FL
- Grove Place, Orchid, FL

## Commercial Sources:

### *Marinas:*

- Sebastian River Marina and Boatyard
- Sebastian Inlet Marina
- Fins Marina
- Sembler Marina
- Miners Marina
- Gateway Marina South
- Palm Bay Marina
- Pelican Harbor Marina
- Melbourne Harbor Marina
- Inlet Marina
- Riverside Marina
- Various yacht clubs

### *Sport-Fishing Charters:*

- Sebastian Fishing Charters
- Sebastian Inlet Deep Sea Charter Fishing
- Sebastian Inlet Sport Fishing
- Fish Master
- Skipper Sportfishing Charters
- AA Fishing Charter
- Dirty Bird Charters
- Sebastian Inlet Bait & Tackle
- Whitney's Bait and Tackle
- East Coast Fishing Charters

### *Towing Services:*

- TowBoatUS Sebastian
- Sea Tow Sebastian

## City/State/Federal Sources:

- Sebastian Inlet District
- Sebastian Inlet State Park
- Sebastian Inlet Sail and Power Squadron
- U.S. Coast Guard Auxiliary, Flotilla 56
- Harbormaster: Sebastian Inlet Harbor Master Association, Inc.

# **ATTACHMENT C**

## **April 2021 Online Navigation Survey**



Florida Department of Transportation  
District Four

**SR A1A over Sebastian Inlet - Bridge 880005 - Bridge Replacement**

Project Development and Environment (PD&E) Study

Indian River County and Brevard County

FM No. 445618-1-22-02

## **NAVIGATION SURVEY**

This brief survey is designed to obtain feedback about bridge clearance needs of recreational boaters and commercial vessel operators.



Florida Department of Transportation  
District Four

\*indicates a required field

**\* Please tell us about yourself:**

<b>Name</b>	<input type="text"/>
<b>Address</b>	<input type="text"/>
<b>Address 2</b>	<input type="text"/>
<b>City</b>	<input type="text"/>
<b>State</b>	-- select state -- <input type="button" value="v"/>
<b>Zip Code</b>	<input type="text"/>
<b>Email Address</b>	<input type="text"/>
<b>Phone Number</b>	<input type="text"/>

**Are you responding to this survey as:** (check all that apply)

- Recreational Boat Owner
- Commercial Vessel Operator
- Marina Owner
- Resident
- Park User
- Other (please specify)

- None of the above

**If you are a boat owner or operator, what type of boat(s) do you own or operate?** (check all that apply)

- Power Boat
- Sail Boat
- Fishing Boat
- Ferry
- Tug/Barge
- I do NOT own or operate a boat or vessel
- Other (please specify)



Florida Department of Transportation  
District Four

The following questions are specific to those  
**OWNING** or **OPERATING** a vessel.

\* What is the approximate above water **HEIGHT** (in feet) of your tallest vessel?

\* What is the approximate maximum **WIDTH** (in feet) of your widest vessel?

\* What is the approximate maximum **DRAFT** (in feet) of your deepest vessel?

\* What is the bridge clearance requirement for your vessel?

(measured in feet)

Vertical Clearance:

Horizontal Clearance:



Florida Department of Transportation  
District Four

**\* Do you use the channel under the Sebastian Inlet Bridge?**

- Yes
- No

**If yes, when do you transit this waterway?**

- Seasonally
- Year-Round
- Day (AM)
- Night (PM)

**If you do NOT use the Sebastian Inlet, please indicate why?**

- I do not travel in that area
- My vessel is too large for the channel
- Other (please specify)

**\* Do you use the Canaveral Barge Canal/Port Canaveral Inlet?**

- Yes
- No

**\* Do you use the Fort Pierce Inlet?**

- Yes
- No





Florida Department of Transportation  
District Four

**\* Does the existing Sebastian Inlet Bridge vertical clearance meet your navigation needs?**

- Yes
- No

**If the existing bridge clearance is not adequate, what mean high water vertical clearance (in feet) would be necessary to make a replacement bridge suitable for your needs?**

Total Feet:



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The following questions are specific to those operating  
**MARINAS and SPORT FISHING CHARTERS.**

**Are you a Marina Owner or Sport Fishing Charter Operator?**

- Yes
- No

**What impact would changing the Sebastian Inlet Bridge Vertical Clearance have on your business?**

- Positive Impact
- Negative Impact
- No Change

**Does your Marina facility have a fuel dock?**

- Yes
- No

**Does your Marina facility offer repair services?**

- Yes
- No



Florida Department of Transportation  
District Four

**ADDITIONAL COMMENTS**

Please use the space below to comment on any navigation related issues regarding this waterway that were not covered in this survey. Please be as specific as you can with respect to actual navigational needs and requirements.

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# **ATTACHMENT D**

## **Mailing/Emailing List and Map Book**

















OWNER_NAME	ADDRESS	CITY	STATE	ZIP
12600 HIGHWAY LLC	12602 HIGHWAY A1A	VERO BEACH	FL	32963
13645 SEBASTIAN LLC	13645 N INDIAN RIVER DR	SEBASTIAN	FL	32958
1424 OLD US HWY 1 LLC	1424 US HIGHWAY 1	SEBASTIAN	FL	32958
49120 PROPERTIES LLC	12680 HIGHWAY A1A	VERO BEACH	FL	32963
ADAMS, HAROLD D & FRANCES	1654 N INDIAN RIVER DR	SEBASTIAN	FL	32958
ADMCK INVESTMENTS LLC	1686 INDIAN RIVER DR	SEBASTIAN	FL	32958
ALEWINE, RALPH W III & BETTY C	717 GROVE PL	ORCHID	FL	32963
ALFARAMA LLC	123 N CONGRESS AVE #377	BOYNTON BEACH	FL	33426
ALICANDRO, MARK B	13650 N INDIAN RIVER DR	SEBASTIAN	FL	32958
ALPORT, JEFFREY LYNN & MARVIN GENE	13055 N INDIAN RIVER DR	SEBASTIAN	FL	32958
APPLEGATE, GLEN R & SUSAN R	9200 44TH AV	SEBASTIAN	FL	32958
AUGUSTSSON, TOMMY R and DARLEE	12750 HIGHWAY A1A	VERO BEACH	FL	32963
BALLAM LLC	1405 INDIAN RIVER DR	SEBASTIAN	FL	32958
BALME, JON R and HARRIET M	404 INDIAN RIVER DR	SEBASTIAN	FL	32958
BENJAMIN, LYNDA L	HIGHWAY A1A	VERO BEACH	FL	32963
BILLYS, JAMES & MELISSA D	11110 U S HIGHWAY 1	SEBASTIAN	FL	32958
BIRT, ROGER D II and KATHLEEN	13175 N INDIAN RIVER DR	SEBASTIAN	FL	32958
BIRT, ROGER D II and KATHLEEN	13155 N INDIAN RIVER DR	SEBASTIAN	FL	32958
BLACK, KAREN E	12605 HIGHWAY A1A	VERO BEACH	FL	32963
BO, DONALD M (1/2) &	13480 N INDIAN RIVER DR	SEBASTIAN	FL	32958
BODE, BAXTER and SUSAN (1/2) &	5206 93RD LN	SEBASTIAN	FL	32958
BOONE, DAVID E & BEVERLY D	2925 MARSH ISLAND LN	VERO BEACH	FL	32963
BORDEN, TIMOTHY	N INDIAN RIVER DR	SEBASTIAN	FL	32958
BRADFORD, CHARLES R	850 INDIAN RIVER DR	SEBASTIAN	FL	32958
BRADLEY, RONALD D & CYNTHIA A	12928 HIGHWAY A1A	VERO BEACH	FL	32963
BROOME, CARY III	949 INDIAN RIVER DR	SEBASTIAN	FL	32958
BRUCE, ROBERT E &	12396 HIGHWAY A1A	VERO BEACH	FL	32963
BUCK, ROBERT J JR &	8830 44TH AV	SEBASTIAN	FL	32958
BUIST, THOMAS B	6000 N ISLAND HARBOR RD	SEBASTIAN	FL	32958
BURNS, KATHERINE H	13620 N INDIAN RIVER DR	SEBASTIAN	FL	32958
BUXTON, BARTON & CYNTHIA	13080 HIGHWAY A1A	VERO BEACH	FL	32963
CALLAGHAN, GILLIAN	10540 US HIGHWAY 1	SEBASTIAN	FL	32958
CAMPBELL, JOHN & PATRICE	11280 S INDIAN RIVER DR	SEBASTIAN	FL	32958
CAPT'N BUTCHER INC	1736 N INDIAN RIVER DR	SEBASTIAN	FL	32958
CARLYLE, RICHARD A & PAMELA A	12900 N INDIAN RIVER DR	SEBASTIAN	FL	32958
CARROLL, MICHAEL J JR &	13320 N INDIAN RIVER DR	SEBASTIAN	FL	32958
CARTRETT, KEVIN A & DIANE	13350 N INDIAN RIVER DR	SEBASTIAN	FL	32958
CASTELLANOS, RAFAEL & LEANNE	9020 44TH AV	SEBASTIAN	FL	32958
CHAMBERLAIN, CALVIN B & PATRICIA M	13925 N INDIAN RIVER DR	SEBASTIAN	FL	32958
CHERIE GUIDROZ PROPERTIES LLC	13390 N INDIAN RIVER DR	SEBASTIAN	FL	32958
CHRISTEN, JANET R & RUDOLF U	13750 OLD DIXIE HWY	SEBASTIAN	FL	32958
CJD HOLDINGS OF INDIAN RIVER INC	1109 INDIAN RIVER DR	SEBASTIAN	FL	32958
COALBY ARMS LLC	13580 N INDIAN RIVER DR	SEBASTIAN	FL	32958

OWNER_NAME	ADDRESS	CITY	STATE	ZIP
COKEN, LAWRENCE & CYNTHIA	6210 109TH ST	SEBASTIAN	FL	32958
COOK, TRACY A	9210 44TH AV	SEBASTIAN	FL	32958
CORDNER, HAROLD J and LIANNE K	12635 HIGHWAY A1A	VERO BEACH	FL	32963
CORMACK, KIMBERLEY	11576 S INDIAN RIVER DR	SEBASTIAN	FL	32958
CORRELL, RANDY M	5190 95TH ST	SEBASTIAN	FL	32958
CORTER, GARY W & DEBORAH E	961 INDIAN RIVER DR	SEBASTIAN	FL	32958
CRAB COVE INC	11320 INDIAN RIVER DR	SEBASTIAN	FL	32958
CRISTOFORI, BRUNO and JANET G	422 INDIAN RIVER DR	SEBASTIAN	FL	32958
CRISTOFORI, BRUNO and JANET G	412 INDIAN RIVER DR	SEBASTIAN	FL	32958
CUNNIFF, CASEY	12954 HIGHWAY A1A	VERO BEACH	FL	32963
DARRETTA, MARY ELLEN	11270 S INDIAN RIVER DR	SEBASTIAN	FL	32958
DARRETTA, MARY ELLEN	11250 S INDIAN RIVER DR	SEBASTIAN	FL	32958
DAVIES, JEFFREY NEIL & JENNIFER ANNE	13130 HIGHWAY A1A	VERO BEACH	FL	32963
DESTINATION SEBASTIAN LLC	12720 HIGHWAY A1A	VERO BEACH	FL	32963
DEVLIN, PATRICK J & CAROL C	11566 S INDIAN RIVER DR	SEBASTIAN	FL	32958
DODD, JOHN R & VALERIE	14015 N INDIAN RIVER DR	SEBASTIAN	FL	32958
DONNER, JEFFRY T and NANCY NIELSEN	8840 44TH AV	SEBASTIAN	FL	32958
DOWZALL, MARTIN E and ADRIENNE Y	13885 N INDIAN RIVER DR	SEBASTIAN	FL	32958
DRILLICH, CRAIG & LIMOR	12840 HIGHWAY A1A	VERO BEACH	FL	32963
DY, ERNESTO	6672 110TH PL	SEBASTIAN	FL	32958
DYNASTY PROPERTIES OF SOUTH FLORIDA LLC	12936 HIGHWAY A1A	VERO BEACH	FL	32963
ESCAPE INVESTMENTS LLC	2905 MARSH ISLAND LN	VERO BEACH	FL	32963
ETC CUSTODIAN	13805 N INDIAN RIVER DR	SEBASTIAN	FL	32958
EVANS, JOHN G	13895 N INDIAN RIVER DR	SEBASTIAN	FL	32958
FERGANY, AMR	1624 INDIAN RIVER DR	SEBASTIAN	FL	32958
FERNANDEZ-QUINCOES, GUILLERMO J	12850 HIGHWAY A1A	VERO BEACH	FL	32963
FERNDAL SUITES LLC	11450 INDIAN RIVER DR	SEBASTIAN	FL	32958
FEUER FAMILY-1 LLC	12476 HIGHWAY A1A	VERO BEACH	FL	32963
FIRST UNION NATIONAL BK OF FL	1524 US HIGHWAY 1			
FLANAGAN, LYNN (BORLAS) &	11516 S INDIAN RIVER DR	SEBASTIAN	FL	32958
FRANKLIN, MARY JANE	13680 N INDIAN RIVER DR	SEBASTIAN	FL	32958
FRAZIER, GARY W	701 GROVE PL	ORCHID	FL	32963
FREDELL, HOWARD L & MARY NELL	9090 44TH AV	SEBASTIAN	FL	32958
FREDELL, MARY M &	9070 44TH AV	SEBASTIAN	FL	32958
FRENCH, ALAN M (LE) & NANCY L (LE) & ALAN M & NANCY L	925 INDIAN RIVER DR	SEBASTIAN	FL	32958
GADDIS PROPERTIES LLC	10850 US HIGHWAY 1	SEBASTIAN	FL	32958
GAMUT PROPERTIES LLC	12710 HIGHWAY A1A	VERO BEACH	FL	32963
GARCIA, GREGORY DEAN & MARISA	11636 S INDIAN RIVER DR	SEBASTIAN	FL	32958
GARCIA, MICHAEL	11398 S INDIAN RIVER DR	SEBASTIAN	FL	32958
GARCIA, ROSE MARIE & ANNE H &	13875 N INDIAN RIVER DR	SEBASTIAN	FL	32958
GEARY, EDWARD JAMES and MARGARET E	9110 44TH AV	SEBASTIAN	FL	32958
GIAMBANCO, ROBERT & TINA M	8860 44TH AV	SEBASTIAN	FL	32958
GILLINGHAM, THOMAS S & DARLENE D	2945 MARSH ISLAND LN	VERO BEACH	FL	32963

OWNER_NAME	ADDRESS	CITY	STATE	ZIP
GILSON, RAYMOND E III	9230 44TH AV	SEBASTIAN	FL	32958
GJERDE, GARY ERIC & PAMELA KAY	6696 110TH ST			
GLEDHILL, ANNE	6220 109TH ST			
GOLDEN, FRANCES	6008 N ISLAND HARBOR RD	SEBASTIAN	FL	32958
GRIFFIN, DARRIN & ISHARIS	12790 HIGHWAY A1A	VERO BEACH	FL	32963-9415
GROVE VERO LLC	721 GROVE PL			
GUIDROZ, GARETT & CHERIE	13380 N INDIAN RIVER DR	SEBASTIAN	FL	32958
GUTHRIE, H EDWIN & F MARGARET	11160 U S HIGHWAY 1			
HALL, GARY L	12895 N INDIAN RIVER DR	SEBASTIAN	FL	32958
HALL, THOMAS & SANDRA	8810 44TH AV	SEBASTIAN	FL	32958
HAPPY SUNRISES LLC	12440 HIGHWAY A1A	VERO BEACH	FL	32963
HAZARD, WILLIAM J & ELIZABETH ANN	12670 HIGHWAY A1A	VERO BEACH	FL	32963
HECKMAN, TODD D & THERESA O	13110 HIGHWAY A1A	VERO BEACH	FL	32963
HENRY, MARK & BARBARA	6002 S ISLAND HARBOR RD	SEBASTIAN	FL	32958
HESKEL, NEIL STUART & CHRISTY LYNN	11300 S INDIAN RIVER DR	SEBASTIAN	FL	32958
HESS, DANIEL PAUL & LISA A	13465 N INDIAN RIVER DR	SEBASTIAN	FL	32958
HESS, DAVID P	955 INDIAN RIVER DR	SEBASTIAN	FL	32958
HINTERLACH, LINDA LEE	8940 44TH AV	SEBASTIAN	FL	32958
HOCKENBERY, KIM STRNAD (1/3) &	13095 N INDIAN RIVER DR	SEBASTIAN	FL	32958
HOCKENBERY, KIM STRNAD (1/3) &	13080 OLD DIXIE HWY	SEBASTIAN	FL	32958
HOUCK, KENNETH BRUCE & CHRISTINE	8870 44TH AV	SEBASTIAN	FL	32958
ILLINGWORTH, DAVID J and SILVIA M	703 GROVE PL	ORCHID	FL	32963
ISHAM FAMILY II LLC	12825 HIGHWAY A1A	VERO BEACH	FL	32963
J DODD PLUMBING INC	110TH ST	SEBASTIAN	FL	32958
JANKOVIC, SNEZANA	14005 N INDIAN RIVER DR	SEBASTIAN	FL	32958
JOHNSON, JASON A & CISKE M	12904 HIGHWAY A1A	VERO BEACH	FL	32963
JOLLEY, SAMUEL E & RUTH ANN	13590 N INDIAN RIVER DR	SEBASTIAN	FL	32958
JONES, STEPHEN C & JANE E	709 GROVE PL	ORCHID	FL	32963
JORDAN, ALICE DRYDEN	6040 N ISLAND HARBOR RD	SEBASTIAN	FL	32958
JOYCE, JOSEPH J & SUZANNE S	705 GROVE PL	ORCHID	FL	32963
KALSCH, LEE F & MARLENE J	11400 S INDIAN RIVER DR	SEBASTIAN	FL	32958
KARR, EDWARD T	INDIAN RIVER DR	FELLSMERE	FL	32948
KELLY, RICHARD A & CATHERINE L	1644 CENTRAL AVE	SEBASTIAN	FL	32958
KENNEDY FAMILY INVESTMENT LIMITED PARTNERSHIP	707 GROVE PL	VERO BEACH	FL	32963
KEY WEST TREASURE EXHIBIT INC	200 GREENE ST	KEY WEST	FL	33040
KHATIBI, FERAIDOON & JOYCE C	12870 HIGHWAY A1A	VERO BEACH	FL	32963
KIZIAH, GWYN W & PHYLLIS	13660 N INDIAN RIVER DR	SEBASTIAN	FL	32958
KOELLNER, LAURETTE T &	12738 HIGHWAY A1A	VERO BEACH	FL	32963
KORNFELD, HARVEY	13060 HIGHWAY A1A	VERO BEACH	FL	32963
KRUEGER, FREDERICK W	12976 HIGHWAY A1A	VERO BEACH	FL	32963
KUNZ FAMILY LTD PARTNERSHIP	13225 N INDIAN RIVER DR	SEBASTIAN	FL	32958
LAMB, CHARLENE R	13299 N INDIAN RIVER DR	SEBASTIAN	FL	32958
LANZI, THOMAS JAMES & DEBORAH	12875 N INDIAN RIVER DR	SEBASTIAN	FL	32958

OWNER_NAME	ADDRESS	CITY	STATE	ZIP
LEARY, MICHELE W & DOUGLAS J	6024 N ISLAND HARBOR RD	SEBASTIAN	FL	32958
LEOPOLDO, SILVIO & VALERIE	12800 HIGHWAY A1A	VERO BEACH	FL	32963
LIANG INC	1401 INDIAN RIVER DR	SEBASTIAN	FL	32958
LIEBLER, JAMES RANDOLPH	12740 HIGHWAY A1A	VERO BEACH	FL	32963
LIVOTI, SALVATORE M & MISTY	13455 N INDIAN RIVER DR	SEBASTIAN	FL	32958
LOHSE, KAREN P	11536 S INDIAN RIVER DR	SEBASTIAN	FL	32958
LOMELI-MCALOON, CONSUELO	13809 N INDIAN RIVER DR	SEBASTIAN	FL	32958
LOPEZ, RAYMOND JR & MIRIAM	12890 N INDIAN RIVER DR	SEBASTIAN	FL	32958
LOWELL, CHARLES W	9010 44TH AV	SEBASTIAN	FL	32958
LUBECK, LARRY J & KIMBERLY A	12770 HIGHWAY A1A	VERO BEACH	FL	32963
LUI, ALEC Y and MAY S	6688 110TH ST	SEBASTIAN	FL	32958
LYLES, ROBERT C JR	2935 MARSH ISLAND LN	VERO BEACH	FL	32963
LYNCH, DIANA	9280 44TH AV	SEBASTIAN	FL	32958
MAERZ, RICHARD C and DEBRA A	13275 N INDIAN RIVER DR	SEBASTIAN	FL	32958
MANN, CHARLES G & WENDY L	6016 N ISLAND HARBOR RD	SEBASSTIAN	FL	32958
MANN, SHARYN T	9101 MARSH ISLAND DR	VERO BEACH	FL	32963
MARJOVEC SECOND FAMILY LIMITED PARTNERSHIP	12736 HIGHWAY A1A	VERO BEACH	FL	32963
MARRON, ROSA A	7675 ROSELAND RD	SEBASTIAN	FL	32958
MARS, WILLIAM & JULIANN	13425 N INDIAN RIVER DR	SEBASTIAN	FL	32958
MARSH ISLAND HOMEOWNER ASSOCIATION INC	979 BEACHLAND BLVD	VERO BEACH	FL	32963
MASSEY, EDWARD STEPHEN & DEBBIE DUKE	9050 44TH AV	SEBASTIAN	FL	32958
MC CANN, SANDRA CALVIN	1637 INDIAN RIVER DR	SEBASTIAN	FL	32958
MCELVEEN, STEPHEN A and KAREN S (TR	13610 N INDIAN RIVER DR	SEBASTIAN	FL	32958
MCELVEEN, STEPHEN A (LE) and KAREN S (LE	13600 N INDIAN RIVER DR	SEBASTIAN	FL	32958
MCLAUGHLIN, ROBERT T & VICKY A	1690 INDIAN RIVER DR	SEBASTIAN	FL	32958
MEEKS, RONALD E and TAMMY A	11196 S INDIAN RIVER DR	SEBASTIAN	FL	32958
MORRIS, RICHARD P & CAROL S	14019 N INDIAN RIVER DR	SEBASTIAN	FL	32958
MORROW, RAYMOND W and MARIAN A	12760 HIGHWAY A1A	VERO BEACH	FL	32963
MORSE, BEVERLY ANN	12835 HIGHWAY A1A	VERO BEACH	FL	32963
MULLIGAN'S MARINA LLC	806 INDIAN RIVER DR	SEBASTIAN	FL	32958
MYERS, J GEOFFREY	13725 N INDIAN RIVER DR	SEBASTIAN	FL	32958
NADER-PEREZ, JESSICA	12894 HIGHWAY A1A	VERO BEACH	FL	32963
NEESE, GORDON	12920 N INDIAN RIVER DR	SEBASTIAN	FL	32958
NEESE, GORDON	12910 N INDIAN RIVER DR	SEBASTIAN	FL	32958
NEWTON, JOHN R & DEIRDRE O	6245 105TH PL	SEBASTIAN	FL	32958
NILSSON, ROBERT & TERESA	608 DAVIS ST	SEBASTIAN	FL	32958
NOVICK, PHILIP (1/3) & SANDRA (1/3)	715 GROVE PL	VERO BEACH	FL	32963
OLES, RALPH & SALLY	13630 N INDIAN RIVER DR	SEBASTIAN	FL	32958
ON THE INTRACOASTAL LLC	1550 INDIAN RIVER DR	SEBASTIAN	FL	32958
ORCHID ISLAND GOLF & BEACH COMMUNITY ASSOC INC	ONE BEACHSIDE DR	ORCHID	FL	32963
ORCZYK, STANLEY R and LYNN O	711 GROVE PL	VERO BEACH	FL	32963
OVERSTAKE, MATTHEW and MEGHAN	11656 S INDIAN RIVER DR	SEBASTIAN	FL	32958
OWN TIME LLC	11190 U S HIGHWAY 1	SEBASTIAN	FL	32958

OWNER_NAME	ADDRESS	CITY	STATE	ZIP
OYSTER POINTE RESORT CONDO ASSN INC	1570 US HIGHWAY 1	SEBASTIAN	FL	32958
PALERMO FAMILY LIMITED PARTNERSHIP	8920 44TH AV	SEBASTIAN	FL	32958
PALM COAST FLORIDA RESIDENTIAL DEVELOPMENT LLC	723 GROVE PL	VERO BEACH	FL	32963
PARCELLS, ROBERT E and SUSAN C	9180 MARSH ISLAND DR	VERO BEACH	FL	32963
PATTERSON, SAMUEL	13405 N INDIAN RIVER DR	SEBASTIAN	FL	32958
PEDEN, JOHN P	1200 INDIAN RIVER DR	SEBASTIAN	FL	32958
PELICAN'S LANDING OF SEBASTIAN INC	11330 INDIAN RIVER DR	SEBASTIAN	FL	32958
PELLICONE, ROBERT A (1/2) &	2915 MARSH ISLAND LN	VERO BEACH	FL	32963
PEREIRA, NICHOLAS & PRAFULLA RANI	13690 N INDIAN RIVER DR	SEBASTIAN	FL	32958
PERRY, JANNET ELLAN (LE)	12880 N INDIAN RIVER DR	SEBASTIAN	FL	32958
PESTRICHELLI, JANICE A (LE) & RICK F	11556 S INDIAN RIVER DR	SEBASTIAN	FL	32958
PINO, RICHARD	6520 114TH LN	SEBASTIAN	FL	32958
PLANTE, CAROLYN F (1%) &	8960 44TH AV	SEBASTIAN	FL	32958
POWERLINE GOLF INC	13005 N INDIAN RIVER DR	SEBASTIAN	FL	32958
PRATT, DOUGLAS JEFFREY	1318 US HIGHWAY 1	SEBASTIAN	FL	32958
PYKE, MARTHA SIMES (50%) &	1517 INDIAN RIVER DR	SEBASTIAN	FL	32958
PYLE, CATHY ERGLE	13790 RUFFNER LN	SEBASTIAN	FL	32958
RAUTH, BETTY JANE	11420 S INDIAN RIVER DR	SEBASTIAN	FL	32958
RAYNOR, STELLA R	941 INDIAN RIVER DR	SEBASTIAN	FL	
REDWINE, HARRY H JR & PENELOPE G	8820 44TH AV	SEBASTIAN	FL	32958
REICHERT, SHERI L & HAROLD F	13415 N INDIAN RIVER DR	SEBASTIAN	FL	32958
RENNEKER, JAMES and CARMEN	9240 44TH AV	SEBASTIAN	FL	32958
RICH, CYNTHIA M (LE) & JESSICA M	6048 N ISLAND HARBOR RD	SEBASTIAN	FL	32958
RILEY, DIANE F	9000 44TH AV	SEBASTIAN	FL	32958
RIVER RUN OF SEB CONDO ASSN	6565 N RIVER RUN	SEBASTIAN	FL	32958
RIVERA, LUIS	6695 110TH PL	SEBASTIAN	FL	32958
ROBERTS, JOANNE T	12655 HIGHWAY A1A	VERO BEACH	FL	32963
ROLLINGER, BILL E and JILL M	13115 N INDIAN RIVER DR	SEBASTIAN	FL	32958
ROSS, DENNIS C (LE) & PAMELA G (LE)	13340 N INDIAN RIVER DR	SEBASTIAN	FL	32958
SALVAGGIO, CHARLES T (LE) & ELLEN M (LE) & CHARLES T & ELLEN M	6685 110TH PL	SEBASTIAN	FL	32958
SAMUELS, JEFFREY KARR & CLARA INES	8980 44TH AVE	SEBASTIAN	FL	32958
SASSO, THOMAS J & GAIL F	8850 44TH AV	SEBASTIAN	FL	32958
SCHAFFER, ROBIN M &	917 INDIAN RIVER DR	SEBASTIAN	FL	32958
SCHMALING, ELIZABETH	1716 INDIAN RIVER DR	SEBASTIAN	FL	32958
SCHMITT, JEFFREY P and LAURA L	13040 HIGHWAY A1A	VERO BEACH	FL	32963
SCHOOLHOUSE PARTNERS LLC	6284 105TH PL	SEBASTIAN	FL	32958
SCHOOLHOUSE PARTNERS LLC	10520 US HIGHWAY 1	SEBASTIAN	FL	32958
SEB INLET MARINA & TRADING CO	1580 US HIGHWAY 1	SEBASTIAN	FL	32958
SEBASTIAN RIVER PROPERTIES LLC	1001 INDIAN RIVER DR	SEBASTIAN	FL	32958
SEMBLER & SEMBLER INC	RIVER DR			
SEMBLER MARINA PTNRS LTD	1660 INDIAN RIVER DR	SEBASTIAN	FL	32958
SERENE ACRES HOMEOWNERS ASSOC	13800 N INDIAN RIVER DR			
SHAW, GREGORY & JENNIFER	6535 114TH LN	SEBASTIAN	FL	32958

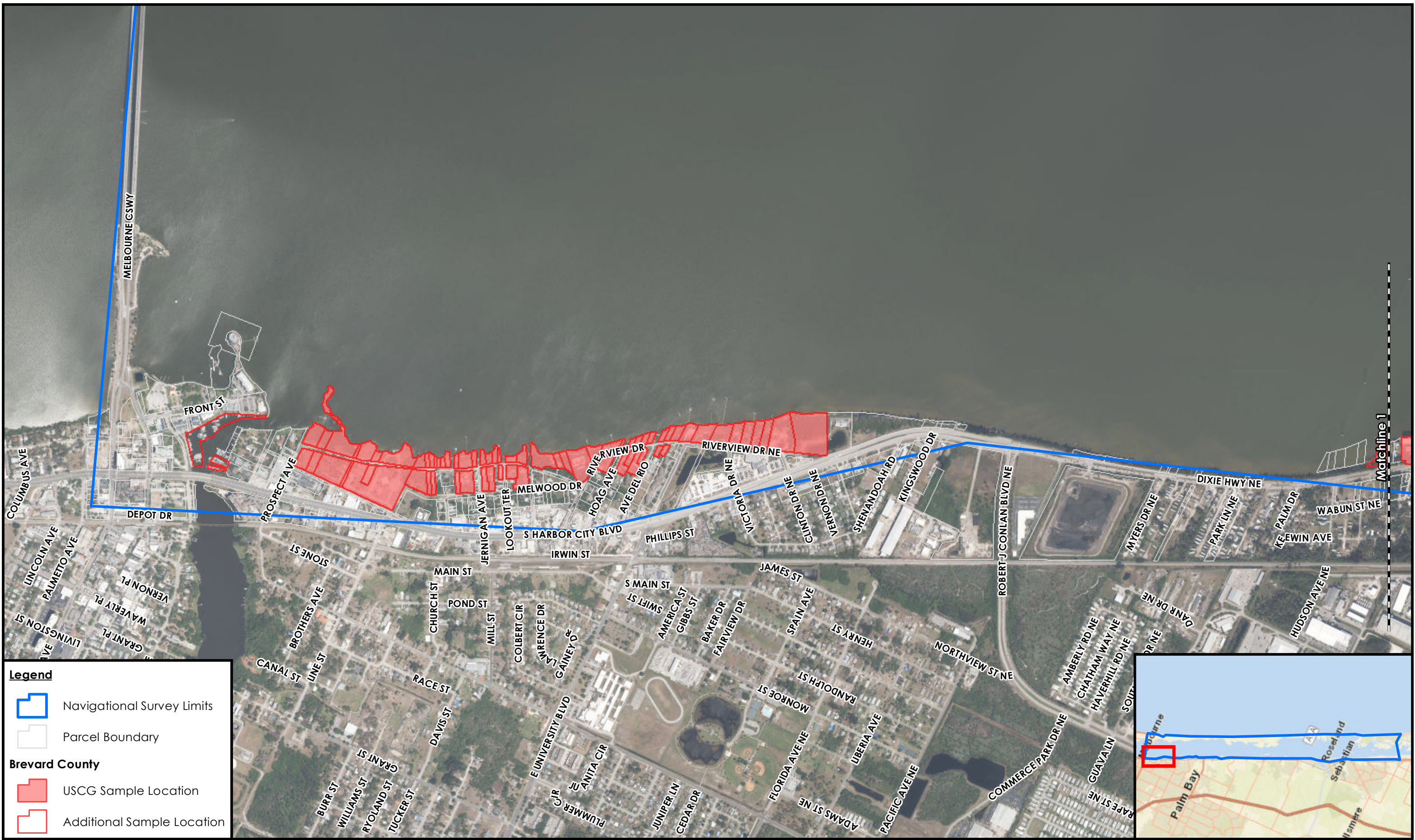
OWNER_NAME	ADDRESS	CITY	STATE	ZIP
SHELHAMER, DONALD E and VIRGINIA A	13692 OLD DIXIE HWY	SEBASTIAN	FL	32958
SHELTON, DALE R &	13835 N INDIAN RIVER DR	SEBASTIAN	FL	32958
SIEBERT, WILLARD W JR & KATHERINE P	1013 INDIAN RIVER DR	SEBASTIAN	FL	32958
SIMMONS, KENDALL & LEISL	9170 MARSH ISLAND DR	VERO BEACH	FL	32963
SINCLAIR, THOMAS W & SARAH J	8900 44TH AV	SEBASTIAN	FL	32958
SMITH, MICHAEL J	13445 N INDIAN RIVER DR	SEBASTIAN	FL	32958
SOUTHERN SISTERS FAMILY LIMITED PARTNERSHIP	12968 HIGHWAY A1A	VERO BEACH	FL	32963
SOWERS, MARK R & LAURA M	13670 N INDIAN RIVER DR	SEBASTIAN	FL	32958
SPEAR, TIMOTHY A & NICOLE M	8800 44TH AV	SEBASTIAN	FL	32958
SPILLER, WENDY SAUNDERS	12604 HIGHWAY A1A	VERO BEACH	FL	32963
STAPLES, ROBERT C (LE) & LESA A (LE)	13125 N INDIAN RIVER DR	SEBASTIAN	FL	32958
STENGER, DARYL	8790 44TH AV	SEBASTIAN	FL	32958
STENGER, RANDY ZANE &	8780 44TH AV	SEBASTIAN	FL	32958
STENGER, RANDY ZANE &	8770 44TH AV	SEBASTIAN	FL	32958
STEWART, BONNIE B	13070 HIGHWAY A1A	VERO BEACH	FL	32963
STONECIPHER, JERRY & SUSANNE	11188 U S HIGHWAY 1	SEBASTIAN	FL	32958
STRUNK, DOROTHY	1634 INDIAN RIVER DR	SEBASTIAN	FL	32958
STUART, KATHERINE	13995 N INDIAN RIVER DR	SEBASTIAN	FL	32958
STUMPP, ANTHONY	13025 N INDIAN RIVER DR	SEBASTIAN	FL	32958
SULLIVAN, JAMES P & PATRICIA B	14041 N INDIAN RIVER DR	SEBASTIAN	FL	32958
SULLIVAN, JEROME F and MARY ANN	1022 INDIAN RIVER DR	SEBASTIAN	FL	32958
SUSNAR, LISA M	6032 N ISLAND HARBOR RD	SEBASTIAN	FL	32958
TAYLOR, CYNTHIA L & SCOTT A	11140 U S HIGHWAY 1	SEBASTIAN	FL	32958
TAYLOR, JOHN N JR	1009 INDIAN RIVER DR	SEBASTIAN	FL	32958
TAYLOR, JOHN N JR	PO BOX 2531	FARMINGDALE	NJ	07727
TAYLOR, SCOTT A & CYNTHIA L	11120 US HIGHWAY 1	SEBASTIAN	FL	32958
TERRANOVA, MARIE	1016 INDIAN RIVER DR	SEBASTIAN	FL	32958
THE INLET AT SEBASTIAN CONDO ASSOC INC	13570 74TH AV	SEBASTIAN	FL	32958
THOMAS, JOAN C	9130 44TH AV	SEBASTIAN	FL	32958
THOMAS, RICHARD O JR & DOROTHY J	13845 N INDIAN RIVER DR	SEBASTIAN	FL	32958
THOMASON, BEVERLY	12940 N INDIAN RIVER DR	SEBASTIAN	FL	32958
TIMINSKY, TIMOTHY P and CAREY A	11230 S INDIAN RIVER DR	SEBASTIAN	FL	32958
TOMBERG, MARK (LE) and LORRAINE (LE)&	9220 44TH AV	SEBASTIAN	FL	32958
TRIPPE, CHARLES W & PAMELA R	12376 HIGHWAY A1A	VERO BEACH	FL	32963
TROJANOSKI, KATHY J	13815 N INDIAN RIVER DR	SEBASTIAN	FL	32958
TURNER, RONALD C	12446 HIGHWAY A1A	VERO BEACH	FL	32963
UNITED REAL ESTATE VENTURES INC	12096 HIGHWAY A1A	VERO BEACH	FL	32963
UNITED REAL ESTATE VENTURES INC	240 CRANDON BLVD STE 167	KEY BISCAYNE	FL	33149
VELLENGA, CHRISTIAN	933 INDIAN RIVER DR	SEBASTIAN	FL	32958
VELLENGA, CHRISTIAN	12586 HIGHWAY A1A	VERO BEACH	FL	32963
VILLAFUERTE, DANIEL	12730 HIGHWAY A1A	VERO BEACH	FL	32963
WALSH, JOSEPH V III & SUSAN C	9030 44TH AVE	SEBASTIAN	FL	32958
WARREN, ARCHIE JOE & SHARON K	1720 INDIAN RIVER DR	SEBASTIAN	FL	32958



OWNER_NAME	ADDRESS	CITY	STATE	ZIP
WEYANT, DENNIS C & PATRICIA A	9190 44TH AV	SEBASTIAN	FL	32958
WHISNANT, ROBIN	9150 44TH AV	SEBASTIAN	FL	32958
WHITE, JOHN H &	INDIAN RIVER DR	SEBASTIAN	FL	32958
WHITNEY, KENNETH COLEMAN & ELIZABETH REIKO KUBOTA	719 GROVE PL	VERO BEACH	FL	32963
WILSON, AVA	945 INDIAN RIVER DR	SEBASTIAN	FL	32958
WILSON, CAROL	11660 S INDIAN RIVER DR	SEBASTIAN	FL	32958
WIRTH, C THOMAS & AMBER	11360 INDIAN RIVER DR	SEBASTIAN	FL	32958
WIRTH, THOMAS & AMBER	6525 114TH LN	SEBASTIAN	FL	32958
WOOD, HEIDI & ROBERT C JR	9160 MARSH ISLAND DR	INDIAN RIVER SHO	FL	32963
WU, DAVID YEH NEN and LISHU T	14100 INDIAN RIVER DR	SEBASTIAN	FL	32958
WU, DAVID YEH NEN and LISHU T	14055 INDIAN RIVER DR	SEBASTIAN	FL	32958
ZITO, TED and RUTH	12436 HIGHWAY A1A	VERO BEACH	FL	32963
ZOLLA, RONALD W & KATHLEEN R	6230 109TH ST	SEBASTIAN	FL	32958



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**Legend**

- Navigational Survey Limits
- Parcel Boundary

**Brevard County**

- USCG Sample Location
- Additional Sample Location

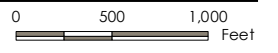
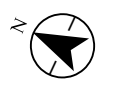
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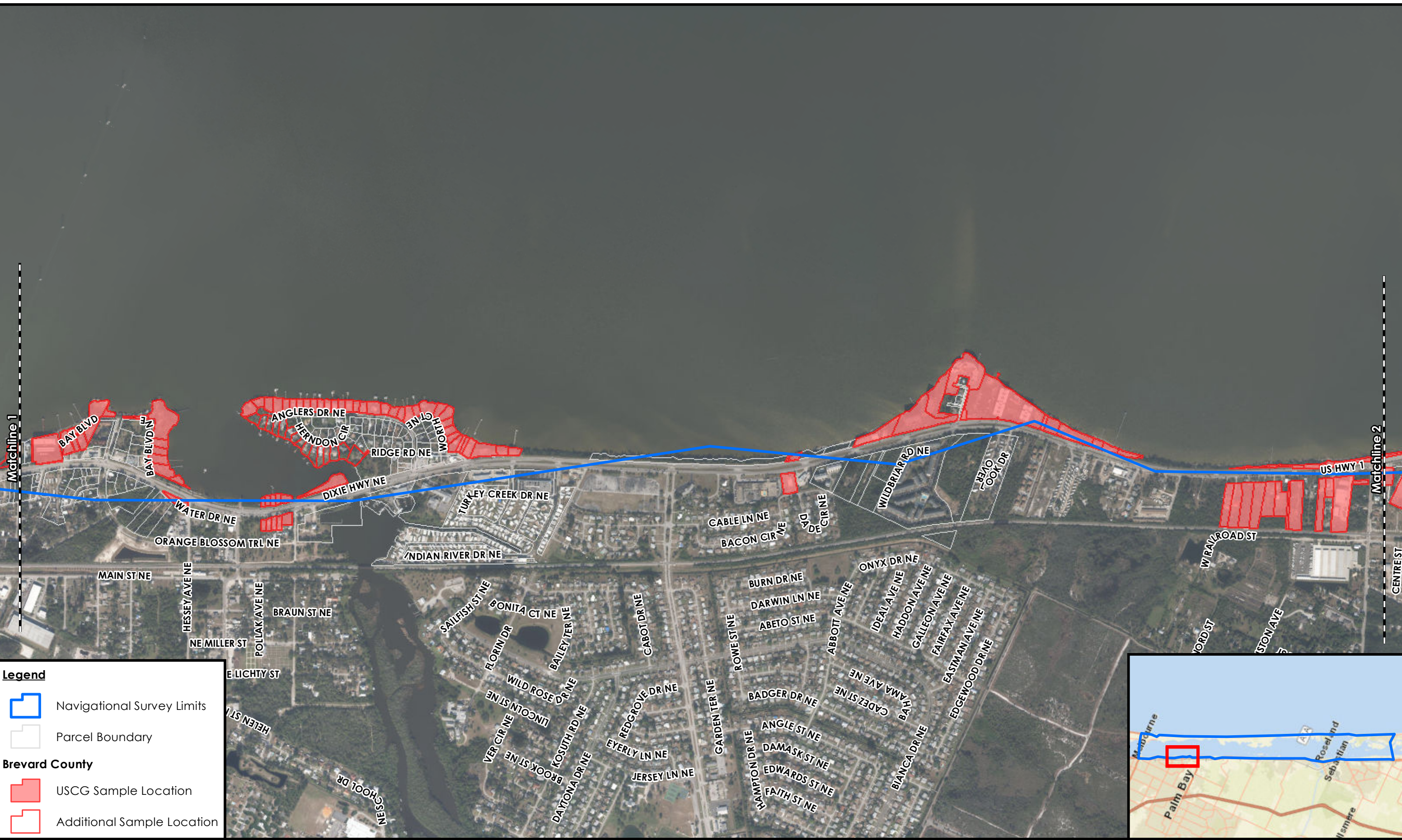
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2. Source data: Brevard County GIS, Indian River County GIS
3. Imagery: ESRI (Satmap 2020)

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**Legend**

- Navigational Survey Limits
- Parcel Boundary

**Brevard County**

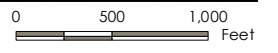
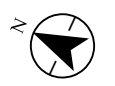
- USCG Sample Location
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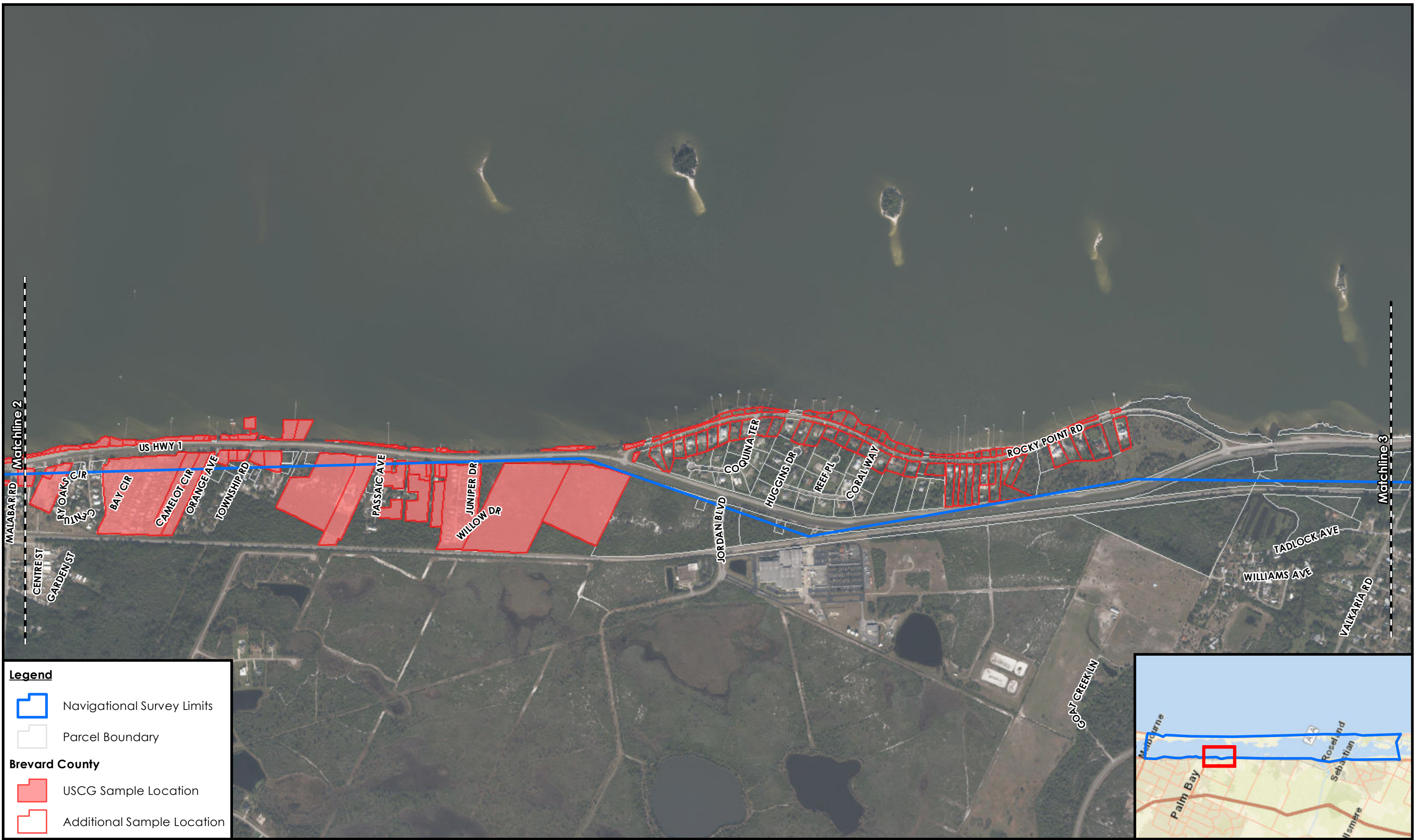
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 3. Imagery: ESRI (Satmap 2020)

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**Legend**

-  Navigational Survey Limits
-  Parcel Boundary

**Brevard County**

-  USCG Sample Location
-  Additional Sample Location

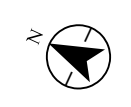


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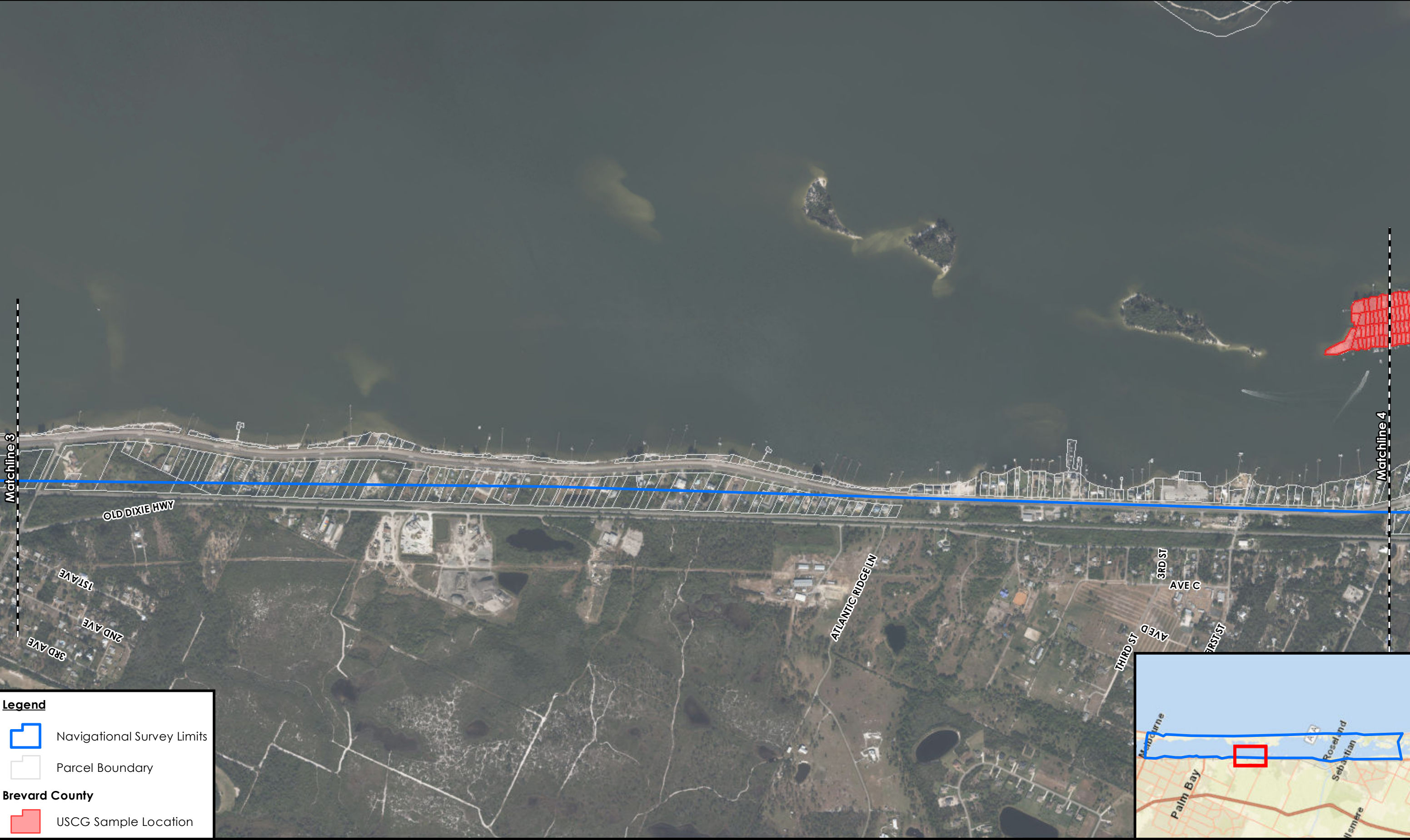
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**Legend**

- Navigational Survey Limits
- Parcel Boundary

**Brevard County**

- USCG Sample Location



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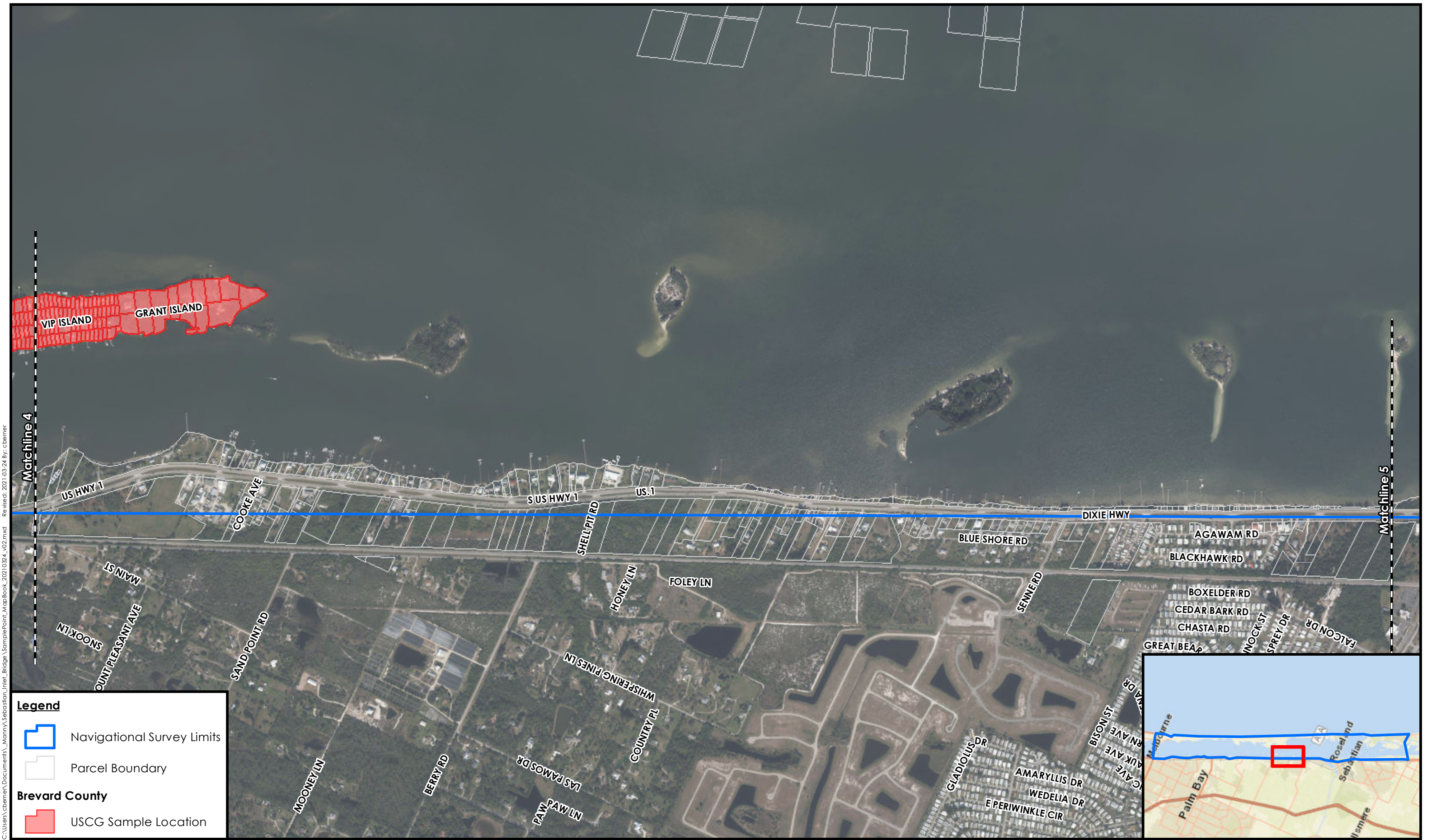
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2. Source data: Brevard County GIS, Indian River County GIS
3. Imagery: ESRI (Satmap 2021)

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**Legend**

-  Navigational Survey Limits
-  Parcel Boundary

**Brevard County**

-  USCG Sample Location

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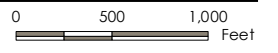
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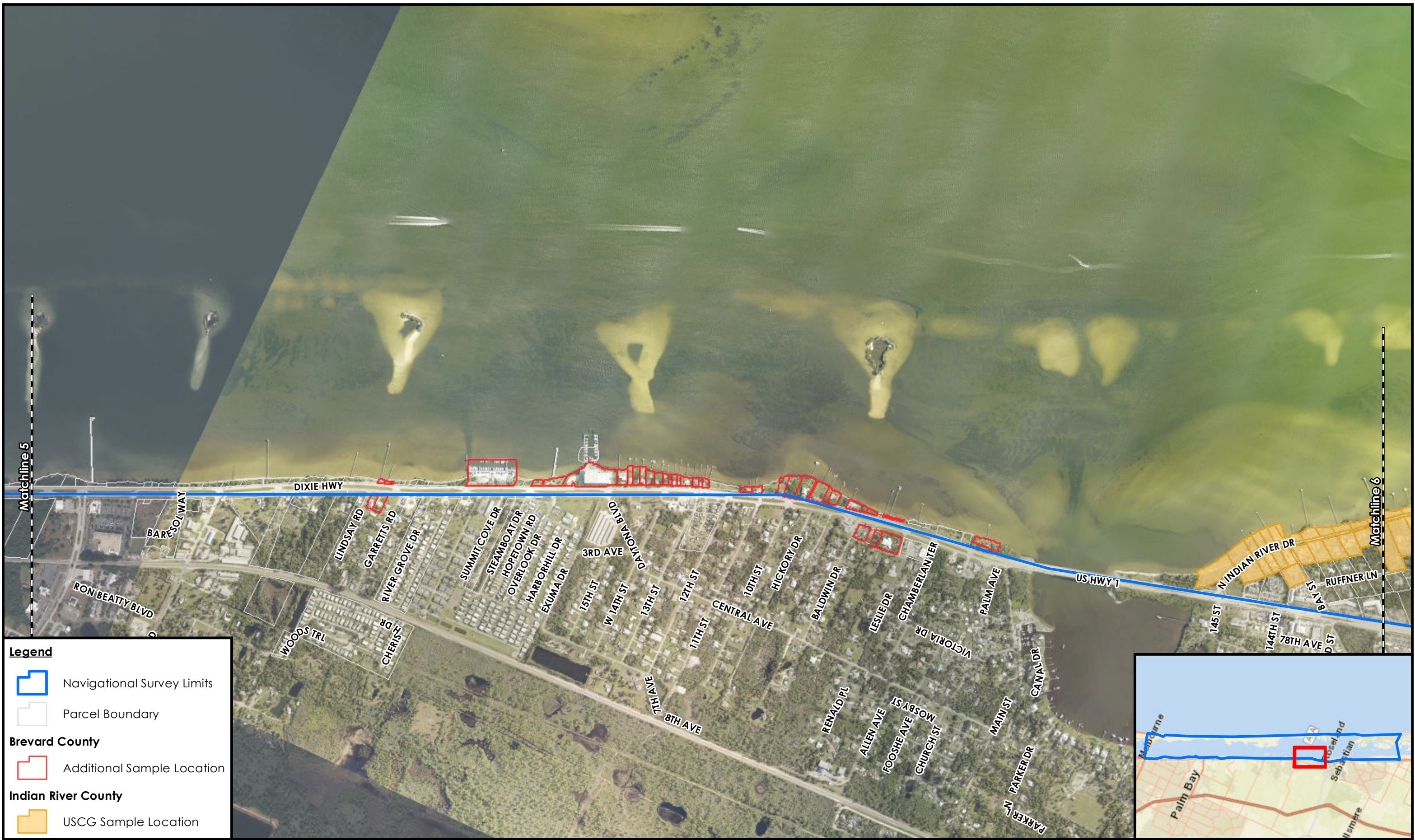
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**Legend**

- Navigational Survey Limits
- Parcel Boundary

**Brevard County**

- Additional Sample Location

**Indian River County**

- USCG Sample Location



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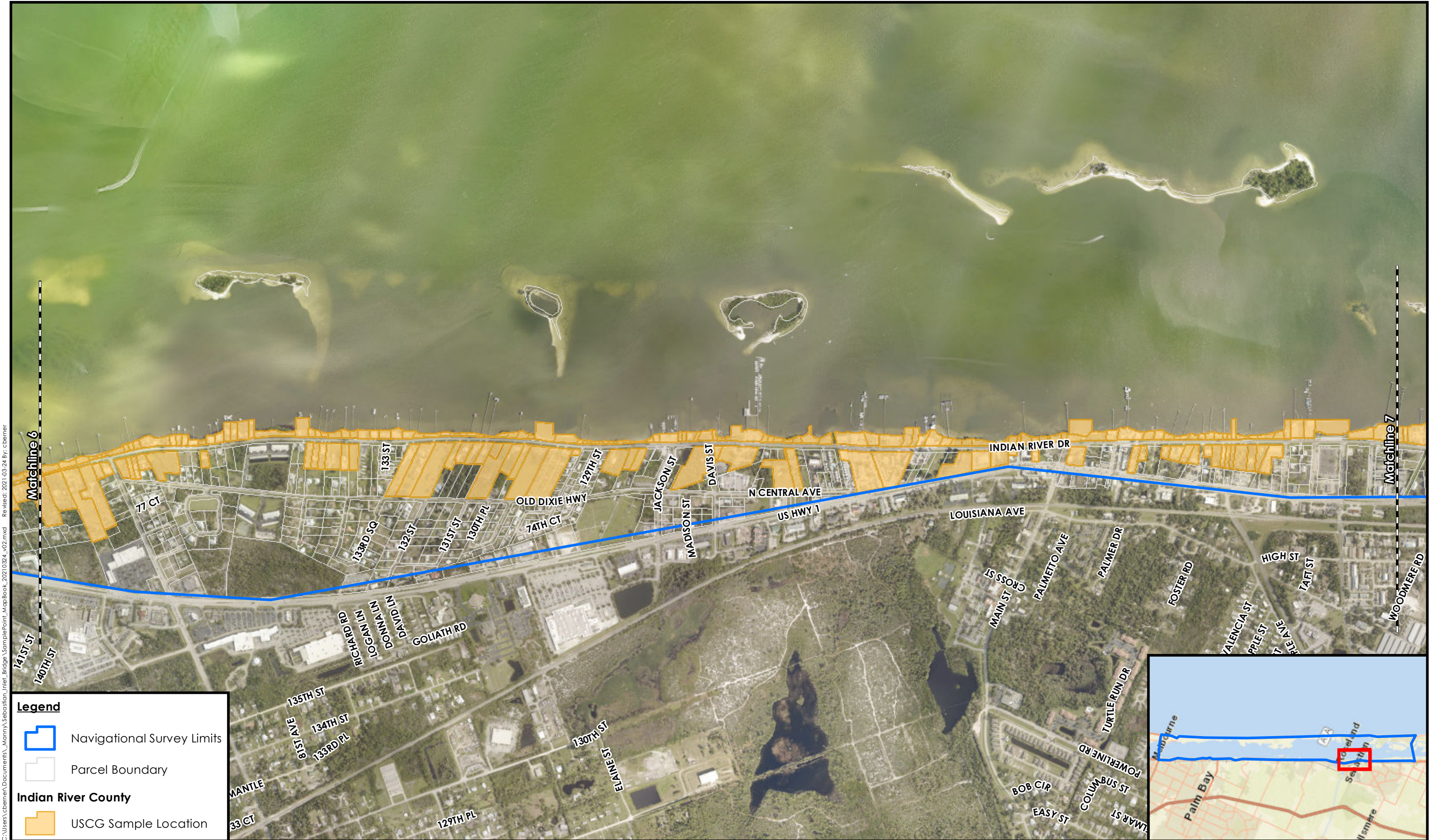
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**Legend**

-  Navigational Survey Limits
-  Parcel Boundary

**Indian River County**

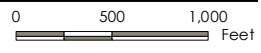
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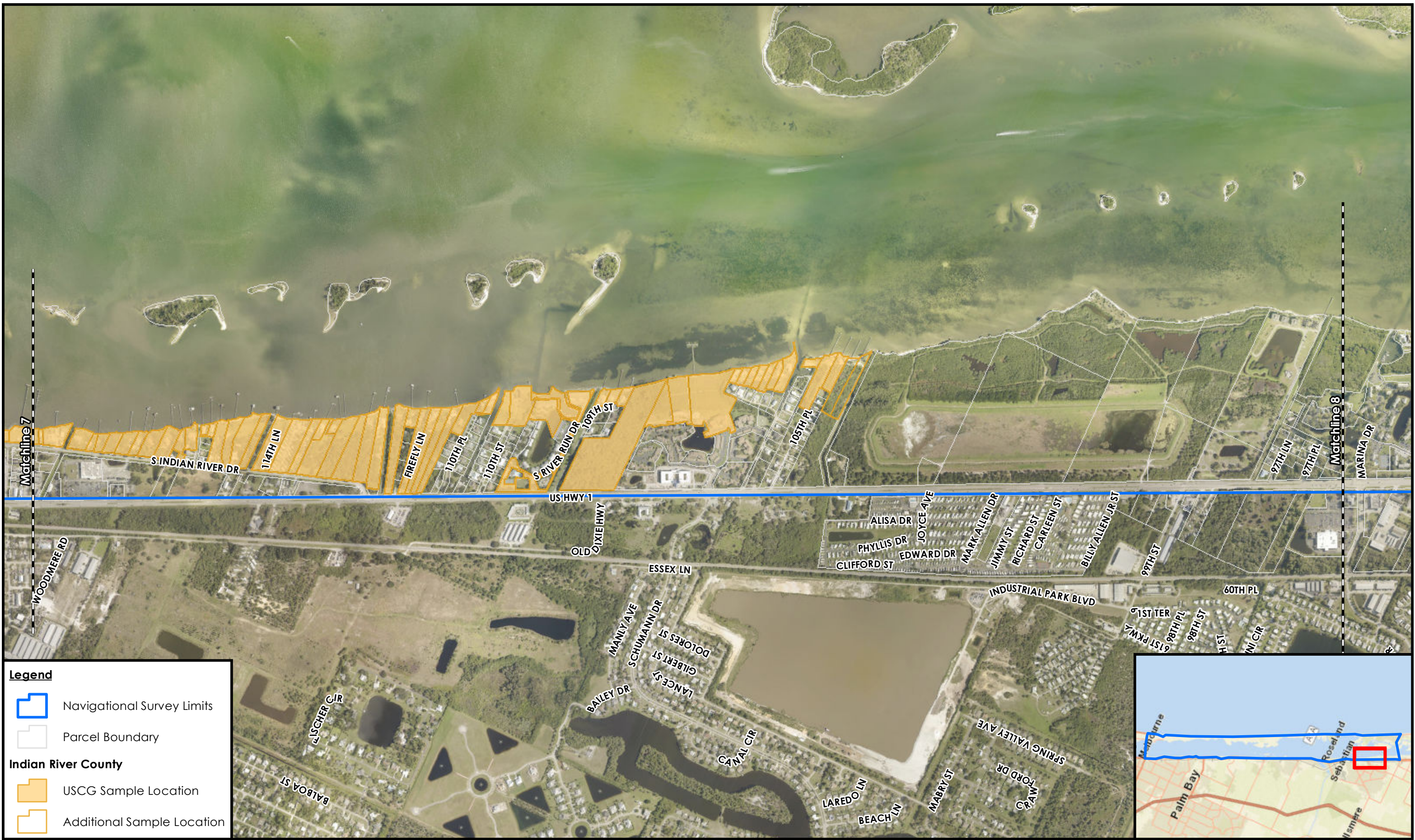
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**Legend**

- Navigational Survey Limits
- Parcel Boundary

**Indian River County**

- USCG Sample Location
- Additional Sample Location

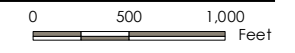
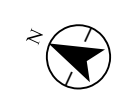


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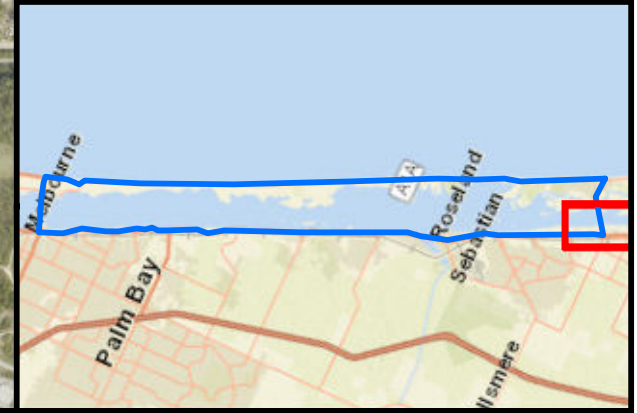


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**Legend**

-  Navigational Survey Limits
-  Parcel Boundary
- Indian River County**
-  USCG Sample Location
-  Additional Sample Location




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0 500 1,000 Feet





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 Prepared by: C.J.B. 03/24/21






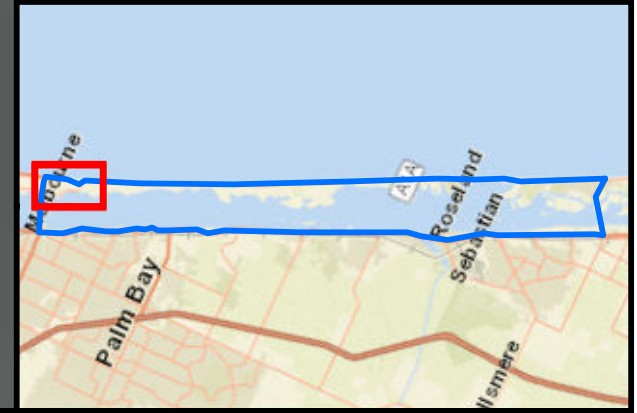
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**Legend**

-  Navigational Survey Limits
-  Parcel Boundary


**Brevard County**

-  USCG Sample Location



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0 500 1,000 Feet

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**Legend**

- Navigational Survey Limits
- Parcel Boundary

**Brevard County**

- USCG Sample Location



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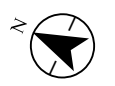
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**Legend**

-  Navigational Survey Limits
-  Parcel Boundary

**Brevard County**

-  USCG Sample Location



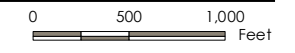
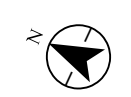
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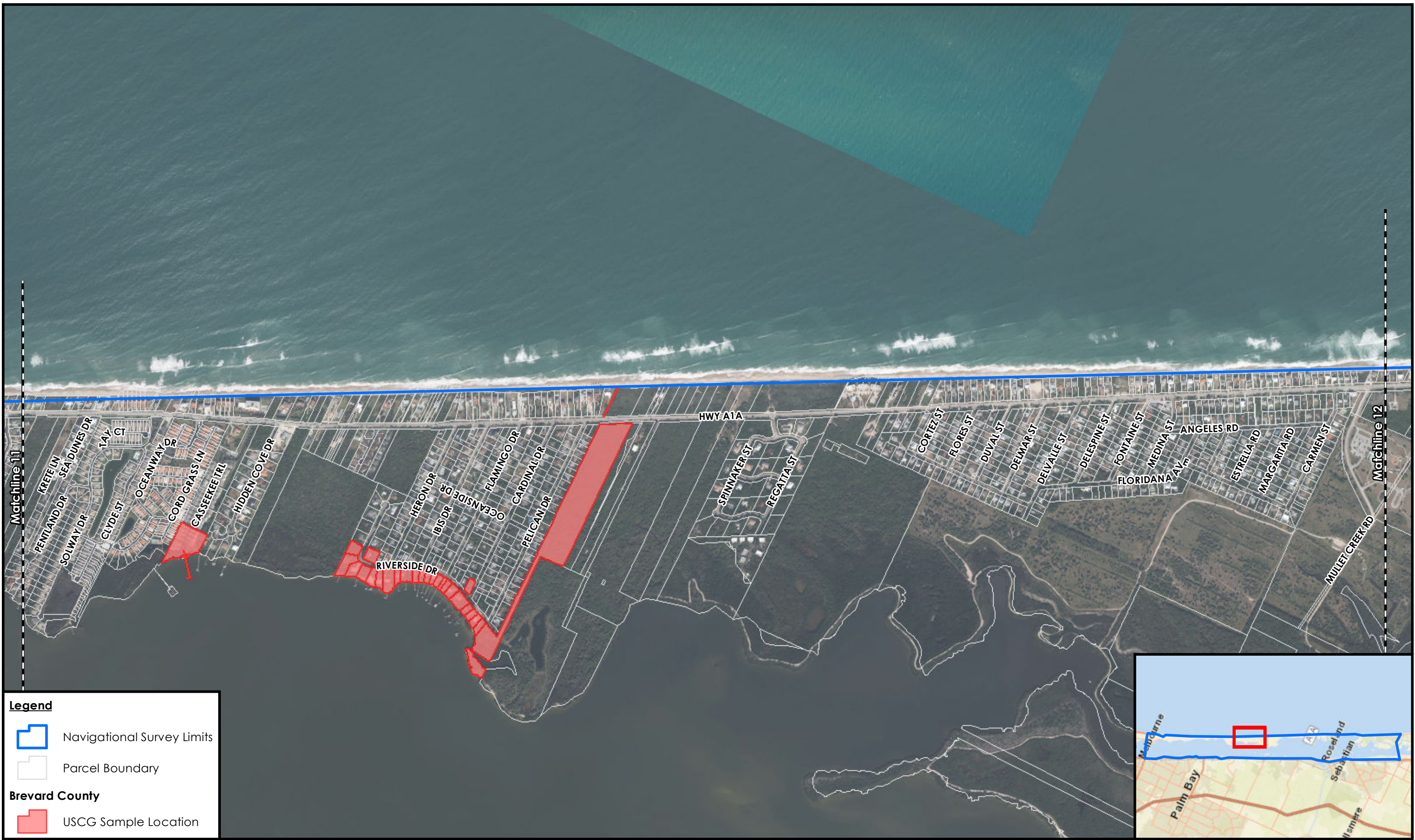
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**Legend**

-  Navigational Survey Limits
-  Parcel Boundary

**Brevard County**

-  USCG Sample Location



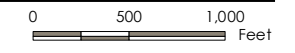
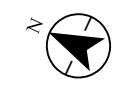
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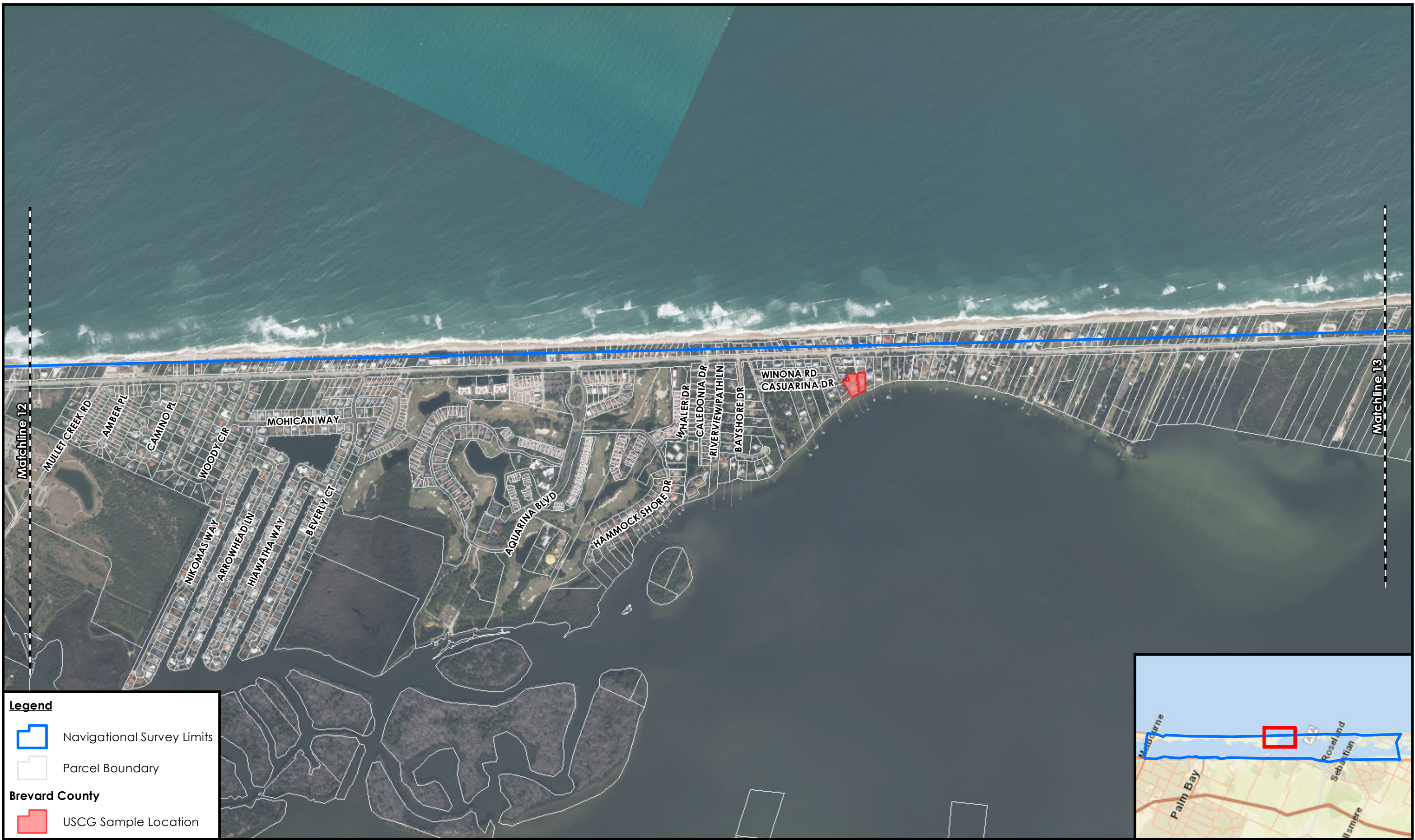
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**Legend**

- Navigational Survey Limits
- Parcel Boundary

**Brevard County**

- USCG Sample Location



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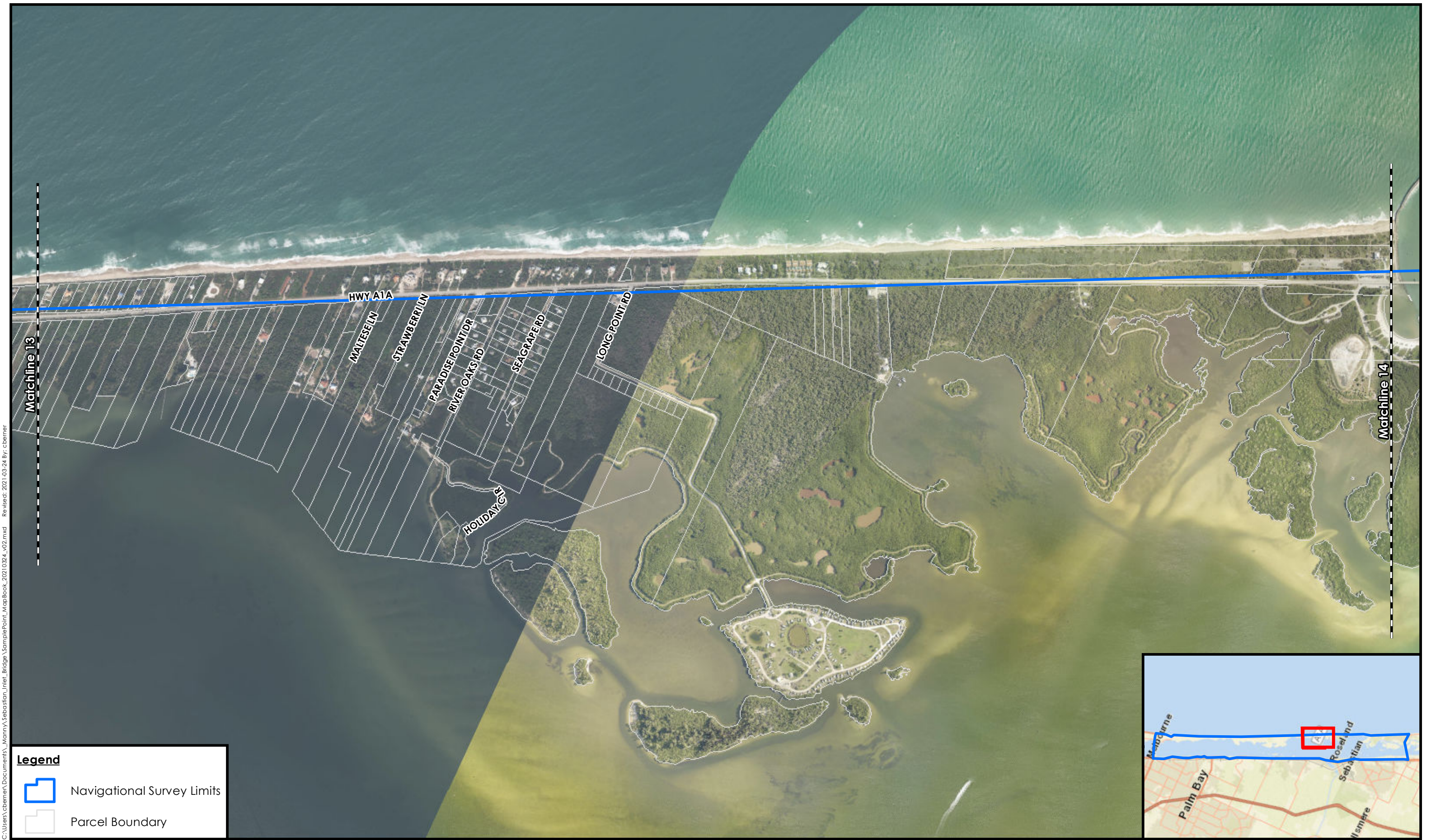
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**Legend**

-  Navigational Survey Limits
-  Parcel Boundary

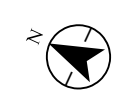


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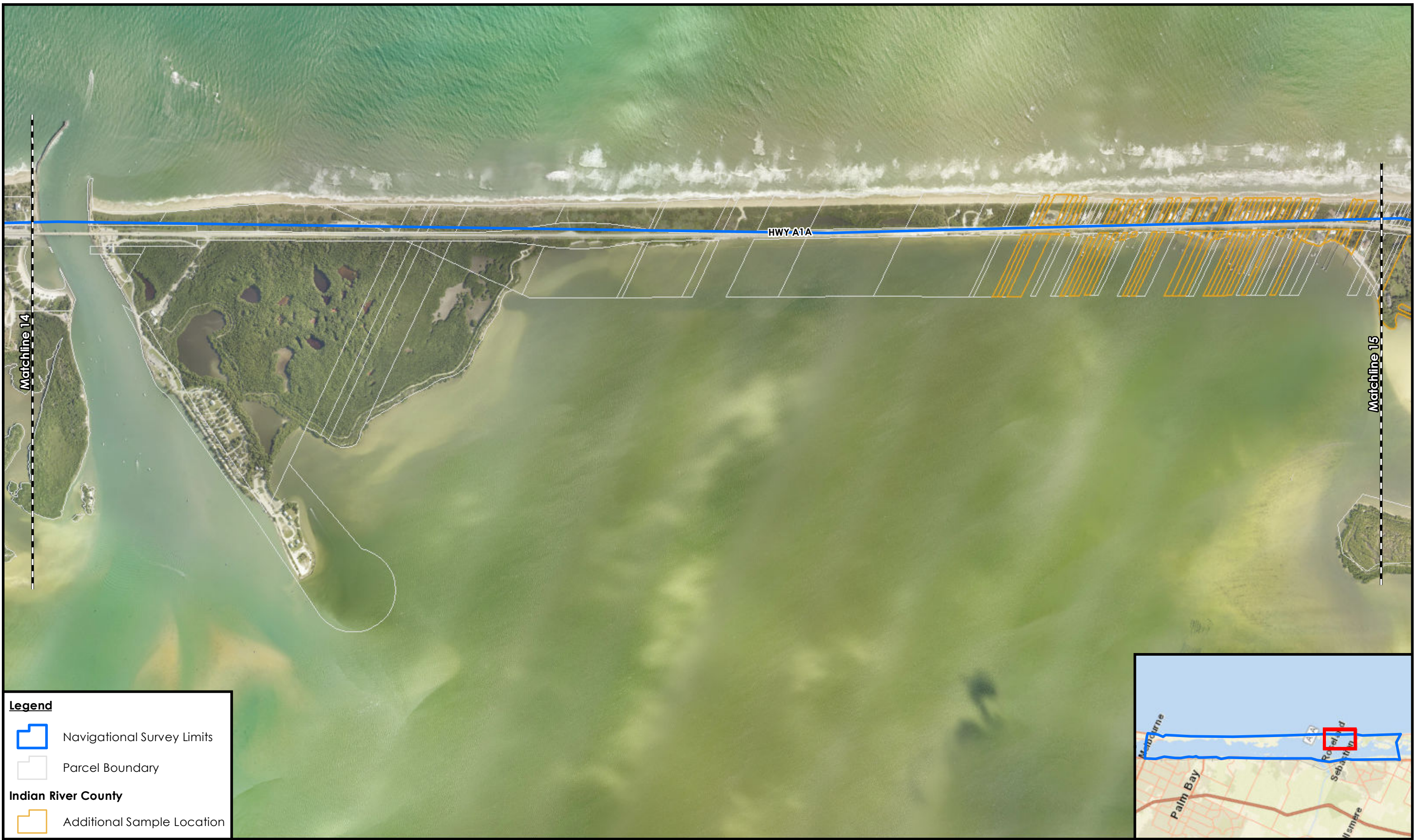
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**Legend**

-  Navigational Survey Limits
-  Parcel Boundary

**Indian River County**

-  Additional Sample Location



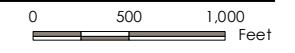
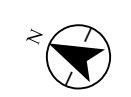
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 tel 813.223.9500  
 fax 813.223.0009






C:\Users\cberner\Documents\Manny\Sebastian\_Inlet\_Bridge\SamplePoint\_MapBook\_20210324\_v02.mxd Revised: 2021-03-24 By: cberner

**Legend**

-  Navigational Survey Limits
-  Parcel Boundary

**Indian River County**



-  Additional Sample Location






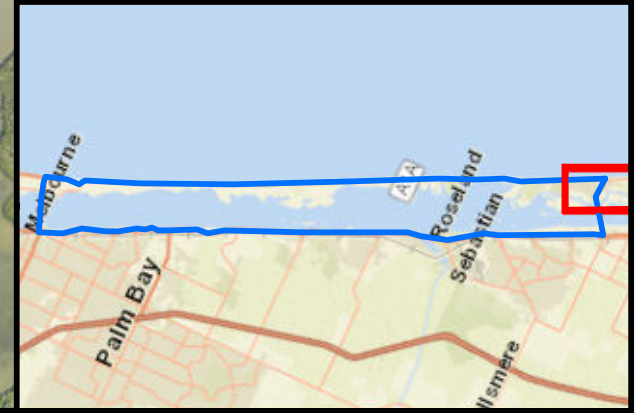
C:\Users\cberner\Documents\Manny\Sebastian\_Inlet\_Bridge\SamplePoint\_MapBook\_20210324\_v02.mxd Re Visited: 2021-03-24 By: cberner

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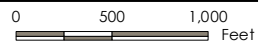
-  USCG Sample Location



Disclaimer: Stantec assumes no responsibility for data supplied in electronic format. The recipient accepts full responsibility for verifying the accuracy and completeness of the data. The recipient releases Stantec, its officers, employees, consultants and agents, from any and all claims arising in any way from the content or provision of the data.  
 Notes:  
 1. Coordinate System: NAD 1983 StatePlane Florida East RPS 0901 Feet  
 2. Source data: Brevard County GIS, Indian River County GIS  
 3. Imagery: ESRI (aermap 2021)

**Sebastian Inlet Bridge PD&E**  
 Navigation Survey Random Sampling Locations  
 March 2021

Stantec Consulting Services Inc.  
 777 S. Harbour Island Blvd, Suite 600  
 Tampa, FL 33602  
 tel 813.223.9500  
 fax 813.223.0009



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# **ATTACHMENT E**

## **Notices for April 2021 Online Navigation Survey**

# WE WANT TO HEAR FROM YOU!

## SEBASTIAN INLET NAVIGATION SURVEY

The Florida Department of Transportation (FDOT) District Four is conducting a Project Development and Environment (PD&E) Study to evaluate the replacement of the SR A1A bridge crossing the Sebastian Inlet located at the Indian River County - Brevard County boundary. The purpose of this project is to address the structural and functional deficiencies of the existing bridge and the gap in system linkage for bicyclists and pedestrians.

To determine appropriate navigational clearance needs for the bridge, an understanding of those who utilize the channel below the bridge is key to making informed decisions about the project.

To take the quick survey scan the QR code below or visit the project website at: [www.fdot.gov/projects/SebastianInletBridge](http://www.fdot.gov/projects/SebastianInletBridge)  
The survey closes April 25, 2021

*Scan Me* 

Public involvement is a critical component of the Project Development & Environment (PD&E) Study process and we encourage you to become and stay involved throughout the entire project. Please visit this website often to get the most up-to-date information on the Sebastian Inlet Bridge PD&E Study and register to be included on our mailing list to receive notifications regarding future public meetings.

Binod Basnet, PE | FDOT Project Manager | 954-777-4146 | [Binod.Basnet@dot.state.fl.us](mailto:Binod.Basnet@dot.state.fl.us)

Beth Beam, MS, AICP | Consultant Project Manager | 407-627-9772 | [Beth.Beam@stantec.com](mailto:Beth.Beam@stantec.com)

**SR-A1A over Sebastian Inlet - Bridge 880005 - Bridge Replacement**

Project Development and Environment (PD&E) Study

Indian River County and Brevard County, FL

FM No. 445618-1-22-02 | ETDM: 14433



# WE WANT TO HEAR FROM YOU!

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*Scan Me*

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FDOT Project Manager  
954-777-4146  
[Binod.Basnet@dot.state.fl.us](mailto:Binod.Basnet@dot.state.fl.us)

**Beth Beam, MS, AICP**  
Consultant Project Manager  
407-627-9772  
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U.S. Department  
of Homeland Security  
**United States  
Coast Guard**

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## LOCAL NOTICE TO MARINERS

**District: 7**

**Week: 14/21**

LITTLE RIVER, SOUTH CAROLINA TO ECONFINA RIVER, FLORIDA (INCLUDES PUERTO RICO AND THE U.S. VIRGIN ISLANDS)

Questions or inquiries concerning the Seventh Coast Guard District Local Notice to Mariners should be directed to:

Commander, Seventh Coast Guard District (dpw)  
Brickell Plaza Federal Building  
909 SE 1st Avenue, Room 406  
Miami, Florida 33131-3028  
Telephone: (305) 415-6750

Email LNM Article Entry Requests and Updates to: D07-SMB-D7-LNM@uscg.mil  
Email Proposed Changes Comments to: D07-SMB-DPWPublicComments@uscg.mil

Aids to Navigation discrepancies (change in the status of an aid to navigation that differs from what is published or charted), shoaling or hazard to navigation and Bridge discrepancies (including lighting) report to the nearest Coast Guard unit.

- DISTRICT 7: (305) 415-6800
- SECTOR CHARLESTON: (843) 740-7050
- SECTOR JACKSONVILLE: (904) 714-7557
- SECTOR MIAMI: (305) 535-4472
- SECTOR KEY WEST: (305) 292-8727
- SECTOR ST PETERSBURG: (727) 824-7506
- SECTOR SAN JUAN: (787) 729-2041

### BROADCAST NOTICE TO MARINERS

The following Broadcast Notice to Mariners (BNM) are in effect and have been included, unless previously cancelled, and promulgate important navigational safety information that is of immediate concern to Mariners:

- CCGD7 (D7) to BNM 083-21
- SECTOR CHARLESTON (CHA) to BNM 063-21
- SECTOR JACKSONVILLE (JAX) to BNM 127-21
- SECTOR MIAMI (MIA) to BNM 065-21
- SECTOR KEY WEST (KWT) to BNM 023-21
- SECTOR ST PETERSBURG (STP) to BNM 143-21
- SECTOR SAN JUAN (SJN) to BNM 007-21

### Navigation Internet Sites:

USCG Navigation Information Service (NIS): <https://www.navcen.uscg.gov>

Local Notice to Mariners (LNM) are published weekly and are available on the USCG Navigation Center website:  
<https://www.navcen.uscg.gov/?pageName=lnmDistrict&region=7>

Public Notices for Bridges: <https://www.navcen.uscg.gov/?pageName=pnBridges>

Online 2021 Light List and weekly updates: <https://www.navcen.uscg.gov/index.php?pageName=lightLists>

USCG Auxiliary Public Education Classes: [https://www.cgaux.org/boatinged/class\\_finder/index.php](https://www.cgaux.org/boatinged/class_finder/index.php)

U.S. Coast Pilot: <https://nauticalcharts.noaa.gov/publications/coast-pilot/index.html>

NOAA Chart Corrections and Chart Viewer: <https://www.nauticalcharts.noaa.gov>

NTM Special Notice Section: <https://msi.nga.mil/NTM>



## ABBREVIATIONS

### A through H

ADRIFT - Buoy Adrift  
AICW - Atlantic Intracoastal Waterway  
AI - Alternating  
B - Buoy  
BKW - Breakwater  
bl - Blast  
BNM - Broadcast Notice to Mariner  
bu - Blue  
C - Canadian  
CHAN - Channel  
CGD - Coast Guard District  
C/O - Cut Off  
CONT - Contour  
CRK - Creek  
CONST - Construction  
DAYMK/Daymk - Daymark  
DBN/Dbn - Daybeacon  
DBD/DAYBD - Dayboard  
DEFAC - Defaced  
DEST - Destroyed  
DISCON - Discontinued  
DMGD/DAMGD - Damaged  
ec - eclipse  
EST - Established Aid  
ev - every  
EVAL - Evaluation  
EXT - Extinguished  
F - Fixed  
fl - flash  
Fl - Flashing  
G - Green  
GIWW - Gulf Intracoastal Waterway  
HAZ - Hazard to Navigation  
HBR - Harbor  
HOR - Horizontal Clearance  
HT - Height

### I through O

I - Interrupted  
ICW - Intracoastal Waterway  
IMCH - Improper Characteristic  
INL - Inlet  
INOP - Not Operating  
INT - Intensity  
ISL - Islet  
Iso - Isophase  
kHz - Kilohertz  
LAT - Latitude  
LB - Lighted Buoy  
LBB - Lighted Bell Buoy  
LHB - Lighted Horn Buoy  
LGB - Lighted Gong Buoy  
LONG - Longitude  
LNM - Local Notice to Mariners  
LT - Light  
LT CONT - Light Continuous  
LTR - Letter  
LWB - Lighted Whistle Buoy  
LWP - Left Watching Properly  
MHz - Megahertz  
MISS/MSNG - Missing  
Mo - Morse Code  
MRASS - Marine Radio Activated Sound Signal  
MSLD - Misleading  
N/C - Not Charted  
NGA - National Geospatial-Intelligence Agency  
NO/NUM - Number  
NOS - National Ocean Service  
NW - Notice Writer  
OBSCU - Obscured  
OBST - Obstruction  
OBSTR - Obstruction  
Oc - Occulting  
ODAS - Anchored Oceanographic Data Buoy

### P through Z

PRIV - Private Aid  
Q - Quick  
R - Red  
RACON - Radar Transponder Beacon  
Ra ref - Radar reflector  
RBN - Radio Beacon  
REBUILT - Aid Rebuilt  
RECOVERED - Aid Recovered  
RED - Red Buoy  
REFL - Reflective  
RRL - Range Rear Light  
RELIGHTED - Aid Relit  
RELOC - Relocated  
RESET ON STATION - Aid Reset on Station  
RFL - Range Front Light  
RIV - River  
RRASS - Remote Radio Activated Sound Signal  
s - seconds  
SEC - Section  
SHL - Shoaling  
si - silent  
SIG - Signal  
SND - Sound  
SPM - Single Point Mooring Buoy  
SS - Sound Signal  
STA - Station  
STRUCT - Structure  
St M - Statute Mile  
TEMP - Temporary Aid Change  
TMK - Topmark  
TRLB - Temporarily Replaced by Lighted Buoy  
TRLT - Temporarily Replaced by Light  
TRUB - Temporarily Replaced by Unlighted Buoy  
USACE - Army Corps of Engineers  
W - White  
Y - Yellow

### **Additional Abbreviations Specific to this LNM Edition:**

24/7 - twenty-four hours per day, seven days a week  
AIS – automatic identification system  
COTP - Captain of the Port  
FWC - Florida Fish and Wildlife Conservation  
GIWW - Gulf Intracoastal Waterway  
GPS - Global Positioning System  
km/hr - kilometer per hour  
kt(s) - knot(s)  
LED - light-emitting diode  
LL – Light List  
MLLW - mean lower low water  
MLW - mean low water  
mph - miles per hour  
MMSI - Maritime Mobile Service Identity  
m/v - motor vessel  
NANU - Notice Advisory to NAVSTAR  
NAVCEN – U.S. Coast Guard Navigation Center  
NGA - National Geospatial-Intelligence Agency  
NIS - U.S. Coast Guard Navigational Informational Service  
NM - nautical miles  
NVIC - U.S. Coast Guard Navigation and Vessel Inspection Circulars  
ODMDS - ocean dredge material disposal site  
PATON - private aids to navigation  
PWS - Tropical Cyclone Surface Wind Speed Probabilities  
RHIB - ridged-hull inflatable boat  
SCPA - South Carolina Port Authority  
s/v - sailing vessel  
TCP - tropical cyclone public advisory  
TCM - tropical cyclone forecast/advisory  
UXO - unexploded ordinance  
V-AIS - virtual automatic identification system  
VHF-FM - Very High Frequency-Frequency Modulated

**WEST INDIES - VIRGIN ISLANDS - ST. CROIX: Hazard to Navigation.**

Coakley Bay Light 1 (LLNR 33055) is destroyed. The steel pile wreckage is broken 3' above the waterline and poses a hazard to navigation.  
Chart 25641 LNM: 49/17

**WEST INDIES - VIRGIN ISLANDS - ST. CROIX – LIME TREE BAY: Hazard to Navigation.**

The U.S. Coast Guard received a report of shoaling in approximate position 17-41.24N/064-45.07W that has encroached into the cross channel in Lime Bay Tree around and near Lime Tree Bay Channel Junction Light LK (LLNR 33190). The water depths in the shoal areas are estimated to be 18' to 22' MLLW. Mariners are advised to exercise extreme caution. Mariners are advised to exercise extreme caution and report all sightings to USCG Sector San Juan via VHF-FM Channel 16 or (787) 289-2041.

Chart 25641 LNM: 42/17

**WEST INDIES - VIRGIN ISLANDS - ST. JOHN – PILLSBURY SOUND - CRUZ BAY: NAVIGATIONAL AIDS UNRELIABLE.**

The Navigational Aids located in Cruz Bay, St. John may be unreliable. Not all ruins and dangers are marked or known due to the 2017 Hurricanes IRMA and MARIA. The Lights on the aids may be unreliable and the aids should be considered unlighted. Mariners are advised to use extreme caution when navigating through the area and report all sightings to USCG Sector San Juan via VHF-FM Channel 16 or (787) 289-2041.

Chart 25647 LNM: 47/17

**WEST INDIES - HAITI: NAVIGATIONAL AIDS UNRELIABLE (Update: July 27, 2020).**

The Navigational Aids located in Cap Haitien, Port-Au-Prince, and near Port-Au-Prince South Pier may be unreliable. Lights on some aids are from sources other than the U.S. Coast Guard, may be unreliable, and should be considered unlit. In addition, not all ruins and dangers are marked. Mariners are advised to use extreme caution when navigating the area.

LNM: 49/13

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**SECTION VIII - LIGHT LIST CORRECTIONS**

An Asterisk \*, indicates the column in which a correction has been made to new information

(1) No.	(2) Name and Location	(3) Position	(4) Characteristic	(5) Height	(6) Range	(7) Structure	(8) Remarks
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None

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**PUBLICATION CORRECTIONS**

None

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**ENCLOSURES**

**1. Summary of Bridge Construction and Repair/Drawbridge Status**

Weekly Updates

**\*new\* FDOT Sebastian Inlet Navigation Survey**

SR-A1A over Sebastian Inlet, FL

LNM: 14/21

**2. Regulated Navigation Area**

Saint Simons Sound, GA

LNM: 37/19

**\*Update\* 3. US Navy Exercise and Eastern Range Operations Warning Areas**

Atlantic Ocean - South Carolina - Georgia - Florida

LNM: 32/20

**4. GLDD - Post 45 Charleston Entrance Channel Maintenance**

Charleston Entrance Channel, SC

LNM: 08/18

**5. Post 45 Charleston Entrance Channel Maintenance Wave Buoy Deployment**

Charleston Entrance Channel, SC

LNM: 33/20

**6. GLDD Jacksonville Harbor Construction, 47-Foot Project Contract C Cut-42**

Blount Island, St John's River, Florida

LNМ: 43/20

**\*new\* 7. GLDD Shore Protection Project Fort Pierce Beach Renourishment**

Fort Pierce, FL

LNМ: 14/21

**8. GLDD Dredging and shore protection**

Palm Beach County, Florida

LNМ: 46/20

**9. GLDD Jupiter Inlet Dredging**

Jupiter Inlet, Florida

LNМ: 04/21

---

Eric C. Jones  
Rear Admiral, U.S. Coast Guard  
Commander, Seventh Coast Guard District

SOUTH CAROLINA – ATLANTIC INTRACOASTAL WATERWAY – CASINO CREEK TO BEAUFORT RIVER – LADY’S ISLAND (WOODS MEMORIAL) BRIDGE: Temporary Deviation

The Coast Guard has approved a temporary deviations to the operating schedule to the Lady’s Island Bridge across the Atlantic Intracoastal Waterway mile 536.0, Beaufort, South Carolina. The Bridge will be allowed to not open for navigation: to include Tugs with Tow from 7:55 a.m. to 9:15 a.m. on November 25, 2021 to facilitate the Turkey Trot 5K Bridge Run event.

Public Vessels and vessels in emergency situations should be passed at any time. Vessels that may pass through the bridge without an opening may do so at any time. For Waterways questions, contact Sector Charleston Waterways Management Division at (843) 323-7761 or the Sector’s 24-hour Command Center Line at (843) 740-7050.

Ref: LNM 14-21

Chart: 11518

GEORGIA - ATLANTIC INTRACOASTAL WATERWAY – BEAUFORT RIVER TO ST. SIMON SOUND - WILMINGTON RIVER- CAUSTON BLUFF (ISLAND EXPWY) SR 26 BRIDGE: Bridge Replacement / Temporary Deviation

Chatham County, the bridge owner, is authorized to continue to temporarily deviate from the drawbridge operation regulation 33 CFR 117.353(b) that governs the Causton Bluff (Islands Expressway) Bridges across the Atlantic Intracoastal Waterway (Wilmington River), mile 579.9, at Savannah, Georgia.

Due to unforeseen circumstances with the opening of the new high-level fixed bridge, which will make the drawbridges obsolete, the Coast Guard has authorized the temporary deviation to continue. Under this temporary deviation, the Causton Bluff (Islands Expressway) Bridge is allowed single-leaf operations utilizing the drawbridge operating schedule in 33 CFR 117.353(b) through 6 a.m. on March 31, 2021. A full opening will be provided during daylight hours only with a 48 hour advanced notice to the bridge tender.

The beams have been set crossing the AICW on the Islands Expressway (SR 26) Bridge with a fixed 65’ vertical clearance MHW and 170’ between the fender systems with 100’ navigable channel. If you have any questions please contact USCG Marine Safety Unit (MSU) Savannah Waterways Management at (912) 652-4353 or email [MSUSavannahWWM@uscg.mil](mailto:MSUSavannahWWM@uscg.mil)

Ref: LNM 34-19 through 14-21

Chart: 11507

FLORIDA – ATLANTIC INTRACOASTAL WATERWAY – TOLOMATO RIVER TO PALM SHORES – INDIAN RIVER – HALIFAX CREEK:- HIGHBRIDGE ROAD (KNOX) BRIDGE: Single Leaf Opening.

The Coast Guard has been notified that the Highbridge Road (Knox) Bridge across the Atlantic Intracoastal Waterway (Halifax River), mile 816.0, at Ormond Beach, FL. has experienced a casualty and is restricted to single leaf operations. Vessels requiring a double leaf opening shall contact the Bridge tender 4 hours in advance of the requested opening time. For waterways questions, contact USCG Sector Jacksonville Waterways Management Office, MST1 Jeremy Bailey at (904) 714-7631 or via email at [Jeremy.S.Bailey@uscg.mil](mailto:Jeremy.S.Bailey@uscg.mil)

Ref: LNM 03-21 through 14-21

Chart: 11485

FLORIDA – ATLANTIC INTRACOASTAL WATERWAY – PALM SHORES TO WEST PALM BEACH – SEBASTIAN INLET CHANNEL: Bridge Replacement / Navigational Impact Survey

The Florida Department of Transportation (FDOT) and their consultant, Stantec, will be replacing the SR A1A Bridge over the Sebastian Inlet. The bridge is located at the Indian River County, Florida/Brevard County, Florida boundary line, in approximate position Lat/Long: 27.860161, -80.448403. The replacement of the SR A1A Bridge across the Sebastian Inlet is expected to commence winter of 2026. To determine appropriate navigational clearance needs for the bridge project, an understanding of those who utilize the Sebastian Inlet Channel is essential to effecting informed decision-making. Mariners are highly encouraged to provide feedback by completing the quick survey located on the project website at: <https://www.fdot.gov/projects/sebastian-inlet-bridge-pd-e-study/home-page> or by scanning the QR code on the flyer at the end of this section.

The survey closes April 25, 2021.

Ref: LNM 14-21 through 16-21

Chart 11472

FLORIDA – ATLANTIC INTRACOASTAL WATERWAY – PALM SHORES TO WEST PALM BEACH –SOUTHERN BOULEVARD BRIDGE: Bridge Construction UPDATE

The Southern Blvd Bridge has been removed in its entirety from the waterway and a new bascule bridge is being constructed along the same alignment. A temporary lift bridge was installed approx. 100 feet north of the construction site. The temporary lift bridge provides a

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Indian River County and Brevard County, FL  
FM No. 445618-1-22-02 | ETDM: 14433





# SEBASTIAN INLET DISTRICT

(<https://www.sitd.us/>)

[Contact Us \(/contact-us\)](/contact-us)

<input type="text" value="Search..."/>	<input type="button" value="Go!"/>
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**THIS ITEM APPEARS ON**

[NEWS & EVENTS \(/NEWS-EVENTS\)](/news-events)

[HOMEPAGE \(/\)](/)

## FDOT Seeks Input From Boaters About Bridge Clearance Needs

## Beam, Beth

---

**From:** Brian Freeman <bfreeman@ircgov.com>  
**Sent:** Friday, April 30, 2021 11:02 AM  
**To:** Beam, Beth  
**Subject:** FW: MPOverview for April 2021

Hi Beth,

Below is the MPOverview e-newsletter for April, which included the navigation survey. Please let me know if you need anything else.

Thanks!

**Brian Freeman, AICP**  
MPO Staff Director

**Indian River County MPO**  
1801 27<sup>th</sup> Street  
Vero Beach, FL 32960  
Tel: 772-226-1990

---

**From:** Indian River County MPO <pjohnson@ircgov.com>  
**Sent:** Tuesday, April 6, 2021 4:27 PM  
**To:** Brian Freeman <bfreeman@ircgov.com>  
**Subject:** MPOverview for April 2021

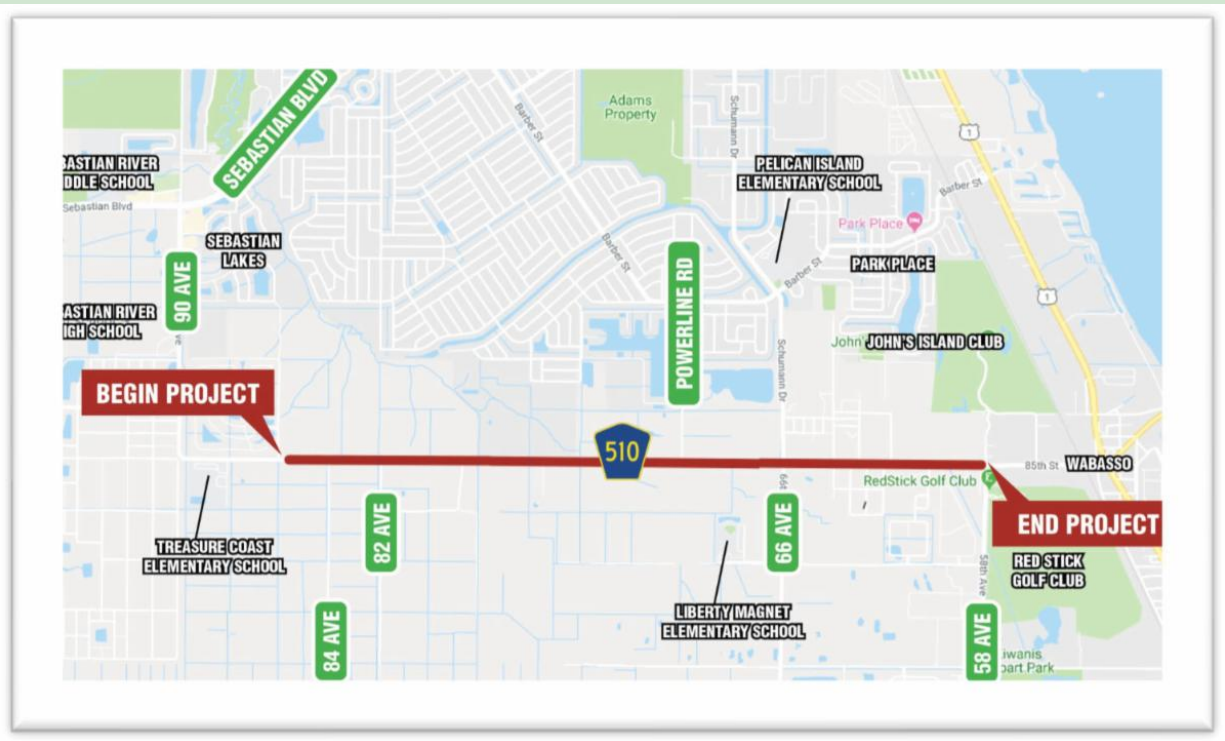
**CAUTION:** This message is from an external source. Please use caution when opening attachments or clicking links.

# The MPOverview



April 2021

**FDOT Virtual Public Workshop for the CR 510 Project on  
April 19, 2021 at 5:30 PM**



**To register for the Virtual Public Workshop GoToWebinar [CLICK HERE](#)**

**If you prefer to dial in by phone, call 415-655-0052, and dial the access code 462-861-211 when prompted.**

**An in-person location to participate in the virtual meeting is available at Sebastian City Hall located at 1225 Main St, Sebastian, FL 32958.**

The Florida Department of Transportation (FDOT), District Four, will conduct a Virtual Public Information Workshop regarding the above referenced project. The virtual workshop will begin **at 5:30 PM.** on Monday, April 19, 2021 with a presentation followed by a question/comment session.

The project will widen CR 510 to four lanes between CR 512 and 58th Avenue. In addition to widening the roadway, the project includes the installation of sidewalks and buffered bike lanes through the entire corridor. Construction of the first phase is scheduled to begin in the summer of 2024. The roundabout at 66th Avenue is proposed for construction as part of the CR 510 widening project at a later phase. For more information on the CR 510 project, please visit the [CR 510 project website](#).

The presentation will be posted on Monday, April 12, 2021 to the project website, and a recording of the Virtual Public Workshop will be posted shortly after the April 19, 2021 workshop.





# FDOT SEBASTIAN INLET NAVIGATION SURVEY

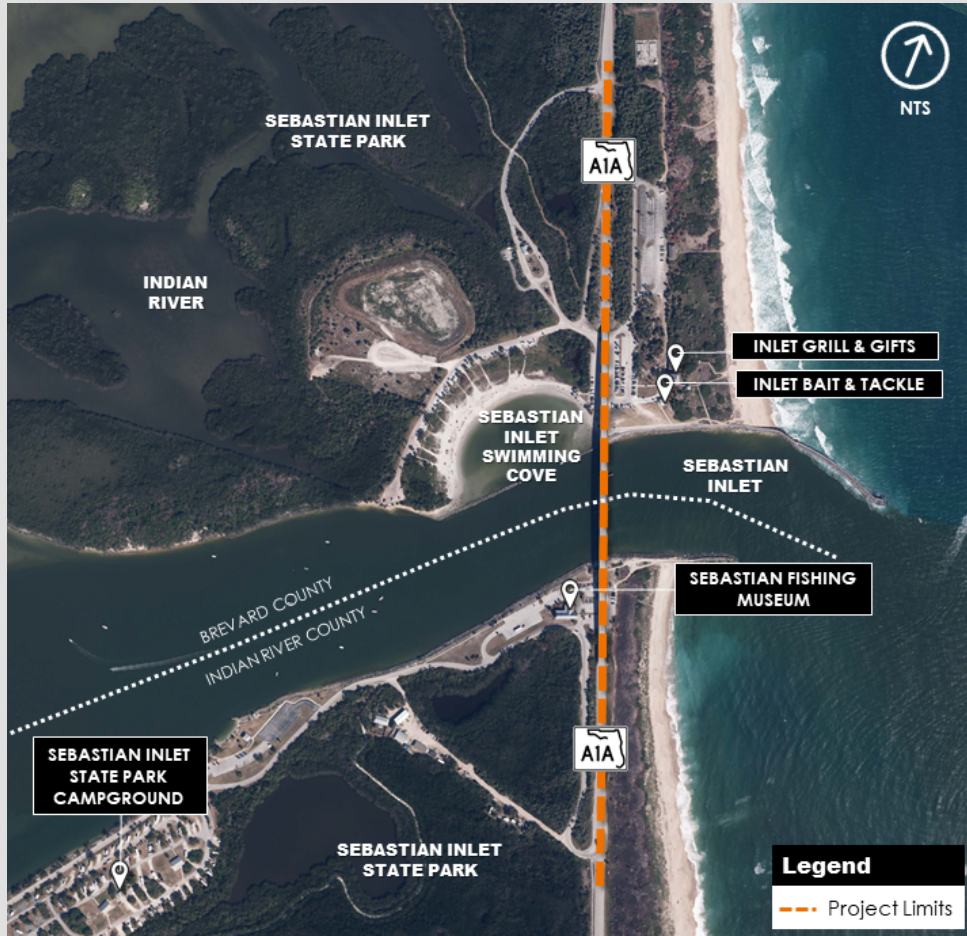
To take a quick survey please [CLICK HERE](#)

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To determine appropriate navigational clearance needs for the bridge, an understanding of those who utilize the channel below the bridge is key to making informed decisions about the project. For more information [please visit the project home page](#).

The survey closes April 25, 2021.



## You are Invited to a Public Workshop on the Resurfacing of Indian River Blvd. from the Merrill Barber Bridge to 53rd Street

Indian River County will be hosting a public workshop on the resurfacing of Indian River Blvd. between the Merrill Barber Bridge and 53rd Street. As part of the resurfacing project, bike lanes will be installed on both sides of the road. The resurfacing project length is approximately three miles.

**When:**  
**Thursday, April 8, 2021**  
**2:00 PM – 3:00 PM**

**Where:**  
**1st Floor Conference Room, County Administration Building "B"**  
**1800 27th Street**  
**Vero Beach, FL 32960**

*For more information, please contact the Indian River County MPO at 772-226-1455.*



## MPO MEETINGS ARE CURRENTLY "HYBRID"

In accordance with the Centers for Disease Control and Prevention (CDC) guidelines and the Governor's Executive Orders pertaining to the Covid-19 Pandemic, MPO and committee meetings are currently being conducted as "hybrid" meetings with in-person and virtual attendance options.

Click on the link below to join any of the MPO's meetings on Zoom from a PC, Mac, smartphone, or tablet:  
<https://ircgov.zoom.us/j/3107671195>

To call into a virtual meeting, call: (602) 333-2017 or  
(888) 204-5987 (US Toll Free) Conference code: 252340

[Click Here to Join MPO Zoom Meetings](https://ircgov.zoom.us/j/3107671195)

**Indian River County Metropolitan Planning Organization**

1801 27th Street, Vero Beach, FL 32960

772-226-1455 / [Email](#) / [Website](#)



**Title VI/Nondiscrimination:** For questions regarding our civil rights adherence policies, please contact Brian Freeman, Title VI Coordinator, at [bfreeman@ircgov.com](mailto:bfreeman@ircgov.com) or call 772-226-1990.

Indian River County MPO | 1801 27th Street, Vero Beach , FL 32960

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The Florida Department of Transportation (FDOT) has initiated a Project Development and Environment (PD&E) Study along State Road (SR) A1A over Sebastian Inlet. The project location is the Sebastian Inlet Bridge, which carries SR A1A over the Sebastian Inlet at the Indian River and Brevard County line. The purpose of this project is to address the structural and functional deficiencies of the existing bridge and address the gap in system linkage for bicyclists and pedestrians.

FDOT is seeking feedback in a navigational survey about bridge clearance needs of recreational boaters and commercial vessel operators.

You can complete the survey [here](https://www.surveymonkey.com/r/FDOT-NAV-SURVEY) (<https://www.surveymonkey.com/r/FDOT-NAV-SURVEY>). The survey closes on April 25, 2021.

For more information about the survey, review the FDOT's flyer:

📄 [SR A1A Sebastian Inlet Bridge Nav Survey Flyer.pdf](#)  
(/files/2e3f69e0a/SR+A1A+Sebastian+Inlet+Bridge+Nav+Survey+Flyer.pdf)

For more information about the study being conducted about the Sebastian Inlet bridge project, visit [FDOT's project website](https://www.fdot.gov/projects/sebastian-inlet-bridge-pd-e-study/home-page) (<https://www.fdot.gov/projects/sebastian-inlet-bridge-pd-e-study/home-page>).

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114 SIXTH AVENUE, INDIALANTIC FL 32903  
TELEPHONE (321) 724-5175

[PRIVACY POLICY \(/PRIVACY-POLICY\)](#)



# Town of Orchid

## Participate in Sebastian Inlet Bridge Navigation Survey

**Calendar Date:**

Sunday, April 25, 2021 (All day)

[Outlook \(iCal\) - Google](#)

Add to your calendar: [Back to calendar](#)

The Florida Department of Transportation is conducting a Project Development and Environment Study for the A1A Sebastian Inlet Bridge Project, which regards the replacement of the bridge crossing the Sebastian Inlet located at the county boundary between Indian River and Brevard. The purpose of the study is to address the structural and functional deficiencies of the existing bridge among other goals.

Public involvement is a critical component of the project process. A public kick-off meeting will be held in late spring 2021. Already, a public [project website](#) has been created and is periodically updated. You are encouraged to become and stay involved throughout the entire project, so please visit that website often to get the most up-to-date information.

Ahead of the kick-off meeting, a Navigation Survey is being conducted to obtain input regarding the Sebastian Inlet Bridge. This survey will collect information that will be used to make informed decisions about appropriate navigational clearance for the bridge and will provide an understanding of the needs of those who utilize the channel below the bridge. If you'd like to submit your responses to the quick survey, please visit the [project website](#) today. Please be aware that participation closes on April 25, 2021.

Project Managers can be contacted with the following details:

- Binod Basnet, Project Manager; (954) 777-4146
- Beth Beam, Consultant Project Manager; (407) 627-9772

## COMMUNITY

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[Town History](#)

[Services to Our Community](#) +

[Hurricane Season](#)

[Beach, Dunes and Shore](#) +

[Letters to Residents](#)

[Photo Gallery](#)

[Accessibility](#)

[County & Area Resources](#)

General Contact Information

**From:** [Ducanis, Grace](#)  
**To:** [Canedo, Guillermo](#); [Paredes, Veronica](#); [Padron, Gaspar](#)  
**Cc:** [Basnet, Binod](#); [Beam, Beth](#)  
**Subject:** RE: FM 445618-1 - Sebastian Inlet PD&E Study - Social Media  
**Date:** Tuesday, April 6, 2021 9:45:18 AM

---

Hi, Veronica,

The survey will be posted on Twitter and Facebook this afternoon.

Sincerely,

**Grace Ducanis**

Communications Officer

FDOT District 4

[grace.ducanis@dot.state.fl.us](mailto:grace.ducanis@dot.state.fl.us)

Office: 954-777-4091

Cell: 954-405-2629

[Facebook](#) | [Twitter](#) | [Instagram](#) | [YouTube](#) | [WordPress](#)



---

**From:** Canedo, Guillermo <Guillermo.Canedo@dot.state.fl.us>  
**Sent:** Monday, April 5, 2021 9:21 AM  
**To:** Paredes, Veronica <veronica.paredes@stantec.com>; Padron, Gaspar <Gaspar.Padron@dot.state.fl.us>; Ducanis, Grace <Grace.Ducanis@dot.state.fl.us>  
**Cc:** Basnet, Binod <Binod.Basnet@dot.state.fl.us>; Beam, Beth <Beth.Beam@stantec.com>  
**Subject:** RE: FM 445618-1 - Sebastian Inlet PD&E Study - Social Media

Grace,

Please assist Veronica with her request. PD&E should be spelled out on first reference.

Guillermo Canedo  
Communications Manager  
FDOT District Four  
Office: 954-777-4302  
Cell: 954-405-6028



[Facebook](#) | [Twitter](#) | [Instagram](#) | [YouTube](#) | [WordPress](#)

---



**From:** Paredes, Veronica <[veronica.paredes@stantec.com](mailto:veronica.paredes@stantec.com)>  
**Sent:** Monday, April 5, 2021 9:10 AM  
**To:** Canedo, Guillermo <[Guillermo.Canedo@dot.state.fl.us](mailto:Guillermo.Canedo@dot.state.fl.us)>; Padron, Gaspar <[Gaspar.Padron@dot.state.fl.us](mailto:Gaspar.Padron@dot.state.fl.us)>  
**Cc:** Basnet, Binod <[Binod.Basnet@dot.state.fl.us](mailto:Binod.Basnet@dot.state.fl.us)>; Beam, Beth <[Beth.Beam@stantec.com](mailto:Beth.Beam@stantec.com)>  
**Subject:** FM 445618-1 - Sebastian Inlet PD&E Study - Social Media

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

Good Morning Jorge and Guillermo,

Hope everyone had a great weekend. We would like to include the below statement on FDOT social media for our Sebastian Inlet Navigation Survey. Is there a form we must fill out/or guidance to follow?

*District Four is conducting a PD&E Study for the Sebastian Inlet Bridge Replacement (Brevard and Indian River Counties). WE WANT TO HEAR FROM YOU! Take the quick NAVIGATION SURVEY by visiting the project website at: [www.fdot.gov/projects/SebastianInletBridge](http://www.fdot.gov/projects/SebastianInletBridge). The Survey closes April 25, 2021.*

Thank you,

**Veronica Paredes**

Public Information Officer

Direct: 305 445-2900

Mobile: 305 215-8673

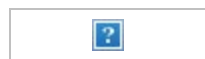
Fax: 305 445-3366

[veronica.paredes@stantec.com](mailto:veronica.paredes@stantec.com)

Stantec

901 Ponce de Leon Boulevard, Suite 900

Coral Gables FL 33134-3070



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**Please consider the environment before printing this email.**

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# **ATTACHMENT F**

## **April 2021 Online Navigation Survey Results**

# Florida Department of Transportation District Four

Monday, April 26, 2021

# 262

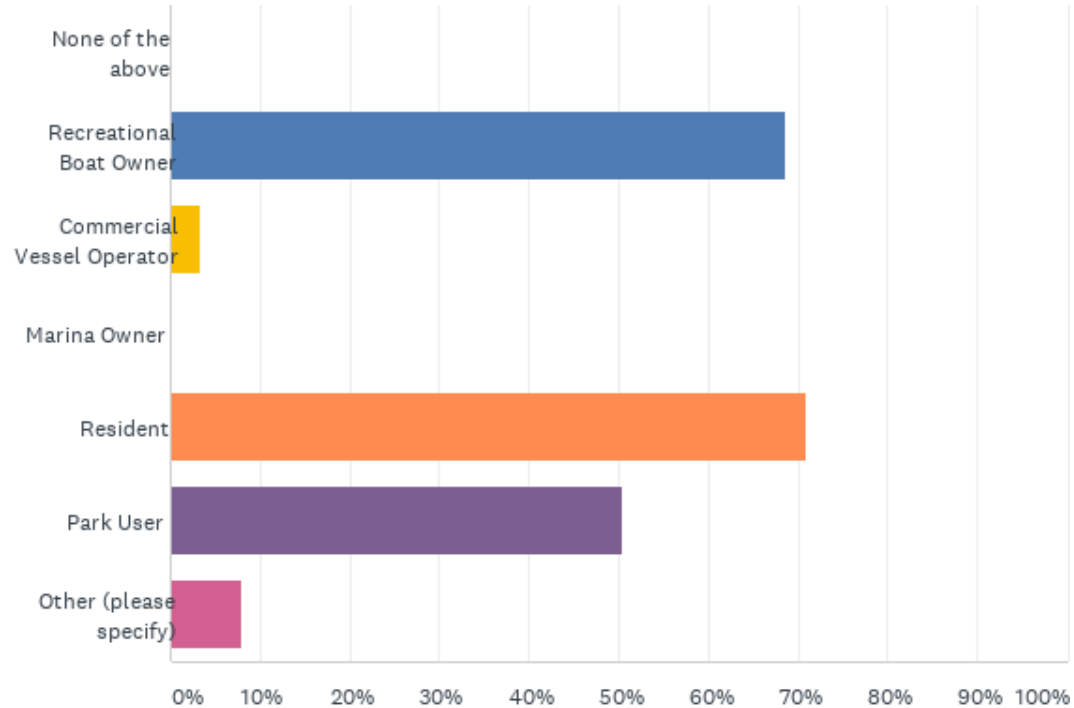
Total Responses

Date Created: Thursday, March 18, 2021

Complete Responses: 203

## Q2: Are you responding to this survey as: (check all that apply)

Answered: 262 Skipped: 0



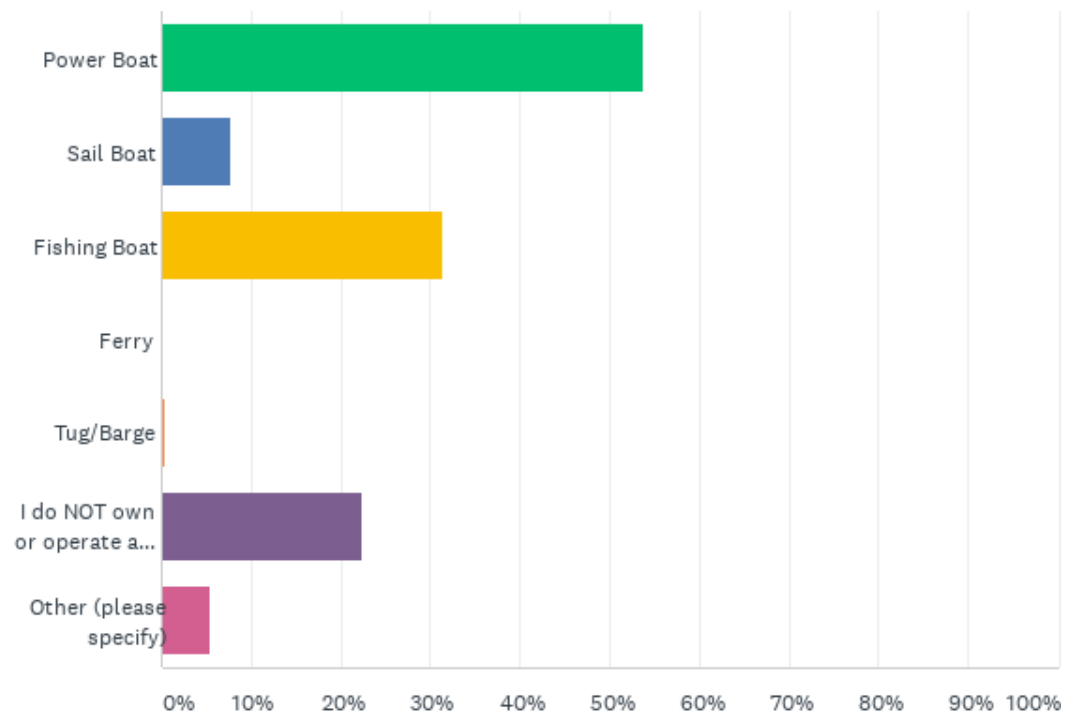
## Q2: Are you responding to this survey as: (check all that apply)

Answered: 262 Skipped: 0

ANSWER CHOICES	RESPONSES	
None of the above	0.00%	0
Recreational Boat Owner	68.70%	180
Commercial Vessel Operator	3.44%	9
Marina Owner	0.00%	0
Resident	70.99%	186
Park User	50.38%	132
Other (please specify)	8.02%	21
Total Respondents: 262		

### Q3: If you are a boat owner or operator, what type of boat(s) do you own or operate? (check all that apply)

Answered: 255 Skipped: 7



### Q3: If you are a boat owner or operator, what type of boat(s) do you own or operate? (check all that apply)

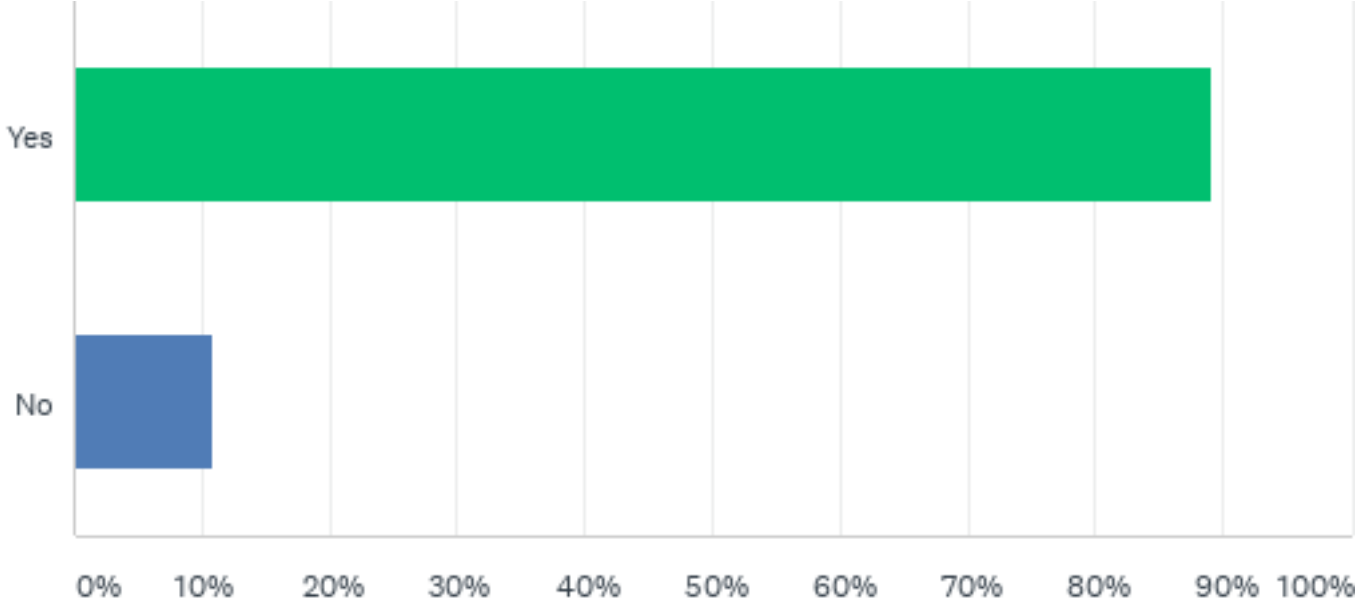
Answered: 255 Skipped: 7

ANSWER CHOICES	RESPONSES	
Power Boat	53.73%	137
Sail Boat	7.84%	20
Fishing Boat	31.37%	80
Ferry	0.00%	0
Tug/Barge	0.39%	1
I do NOT own or operate a boat or vessel	22.35%	57
Other (please specify)	5.49%	14
Total Respondents: 255		



# Q8: Do you use the channel under the Sebastian Inlet Bridge?

Answered: 164 Skipped: 98



## Q8: Do you use the channel under the Sebastian Inlet Bridge?

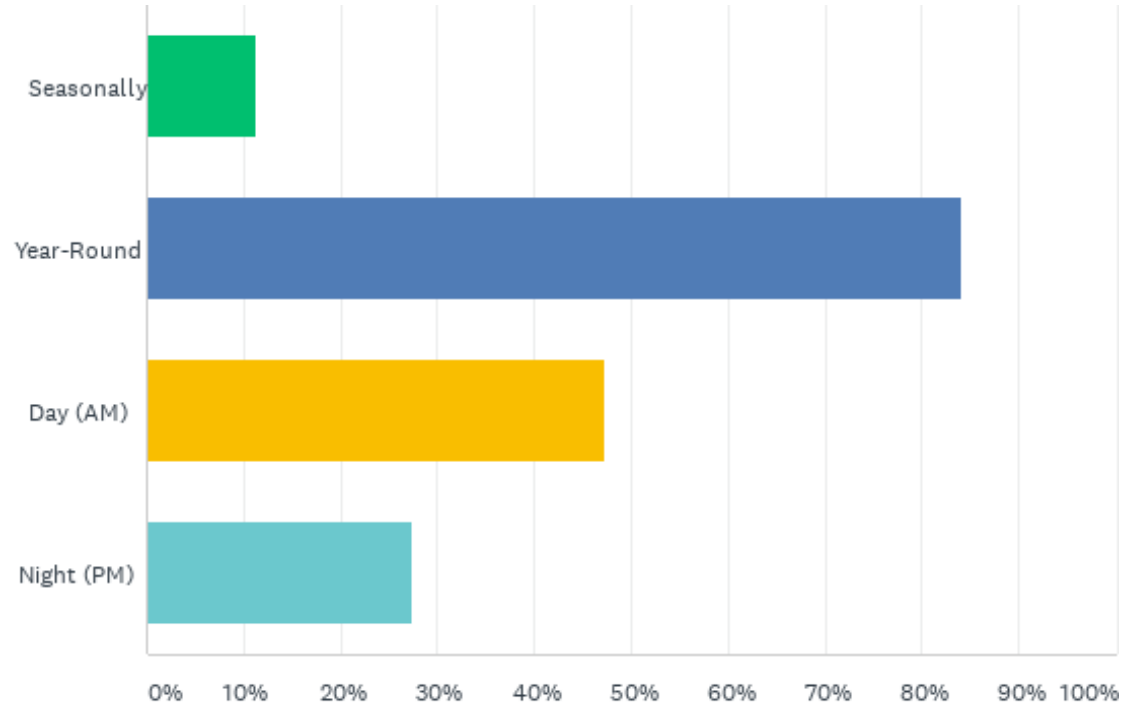
---

Answered: 164 Skipped: 98

ANSWER CHOICES	RESPONSES	
Yes	89.02%	146
No	10.98%	18
TOTAL		164

## Q9: If yes, when do you transit this waterway?

Answered: 150 Skipped: 112



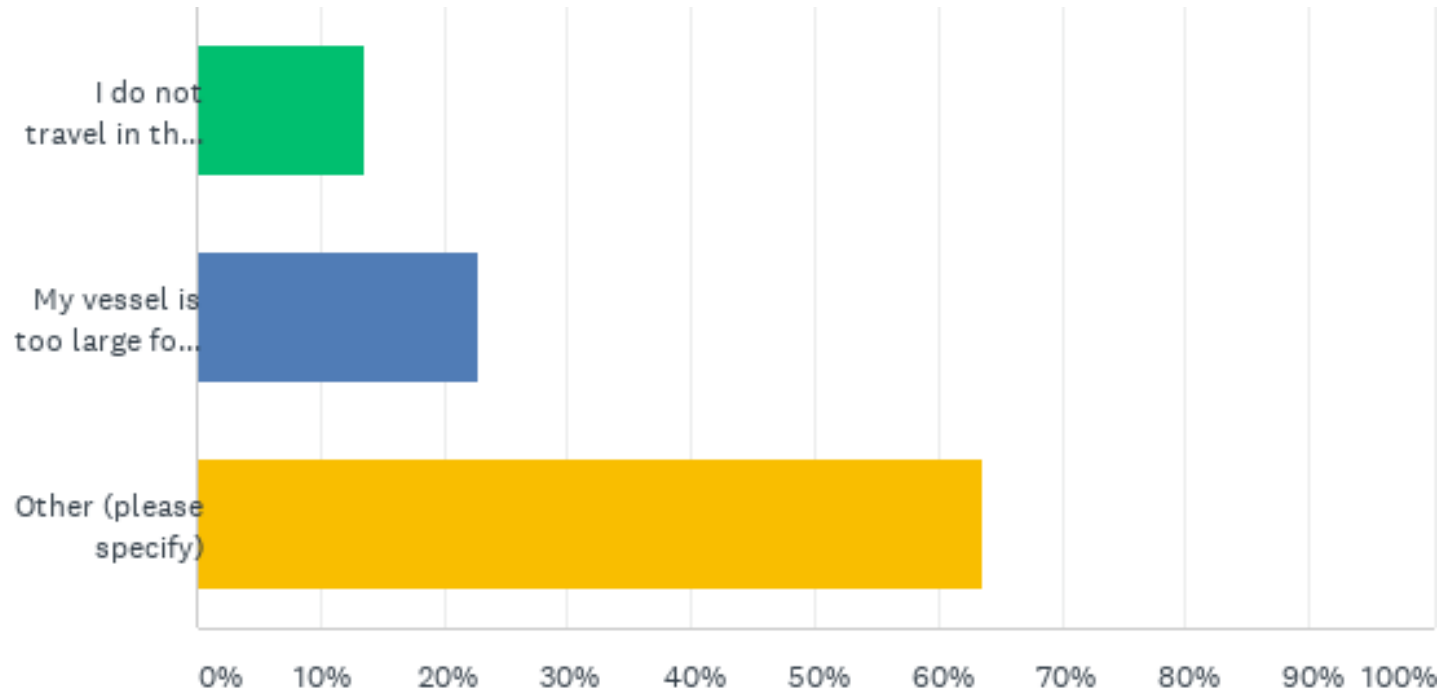
## Q9: If yes, when do you transit this waterway?

Answered: 150 Skipped: 112

ANSWER CHOICES	RESPONSES	
Seasonally	11.33%	17
Year-Round	84.00%	126
Day (AM)	47.33%	71
Night (PM)	27.33%	41
Total Respondents: 150		

# Q10: If you do NOT use the Sebastian Inlet, please indicate why?

Answered: 22 Skipped: 240



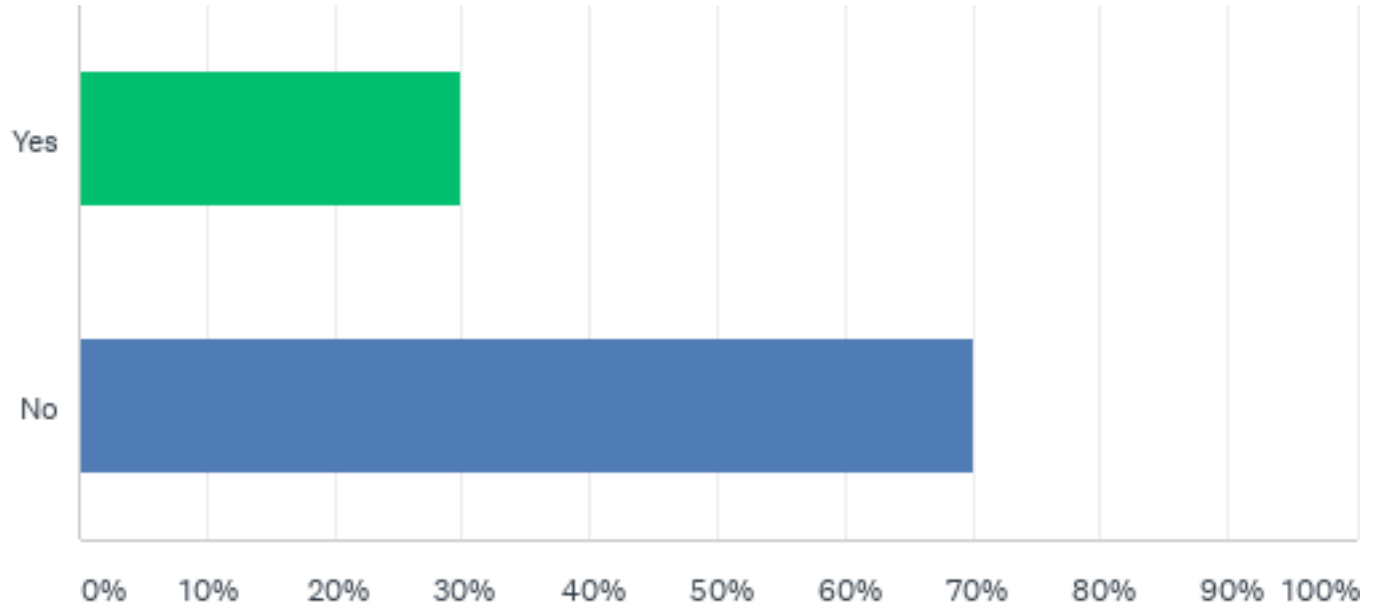
## Q10: If you do NOT use the Sebastian Inlet, please indicate why?

Answered: 22 Skipped: 240

ANSWER CHOICES	RESPONSES	
I do not travel in that area	13.64%	3
My vessel is too large for the channel	22.73%	5
Other (please specify)	63.64%	14
TOTAL		22

# Q11: Do you use the Canaveral Barge Canal/Port Canaveral Inlet?

Answered: 164 Skipped: 98



# Q11: Do you use the Canaveral Barge Canal/Port Canaveral Inlet?

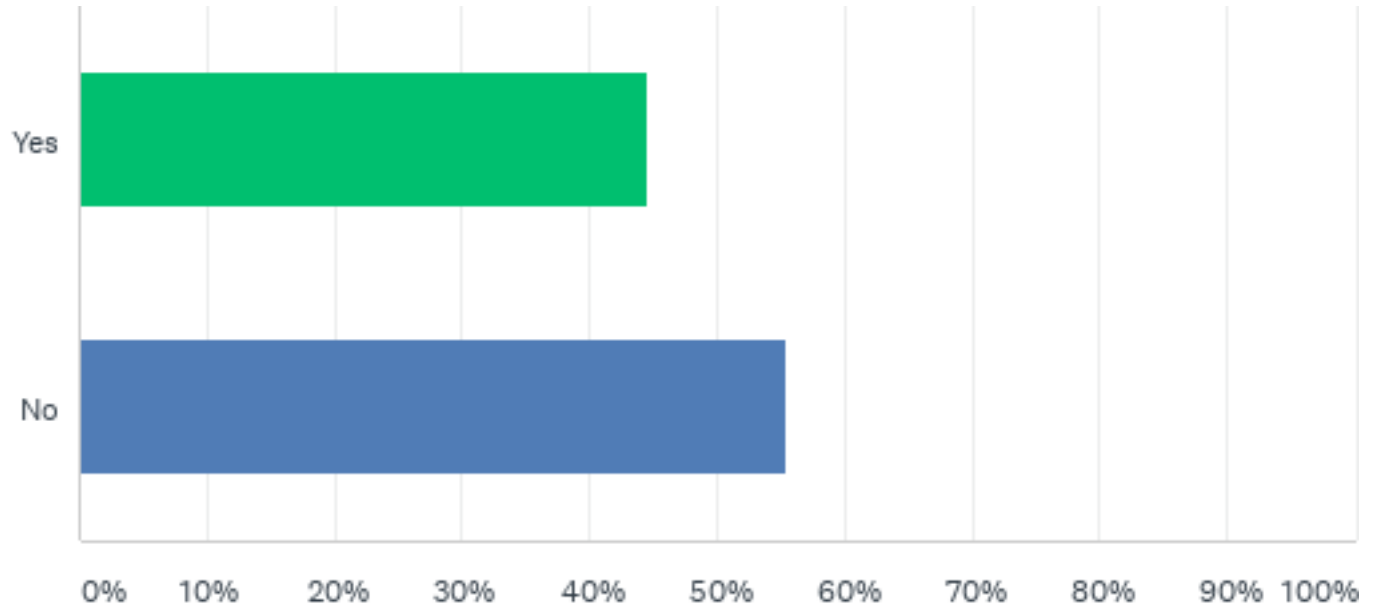
Answered: 164 Skipped: 98

ANSWER CHOICES	RESPONSES	
Yes	29.88%	49
No	70.12%	115
TOTAL		164



## Q12: Do you use the Fort Pierce Inlet?

Answered: 164 Skipped: 98



## Q12: Do you use the Fort Pierce Inlet?

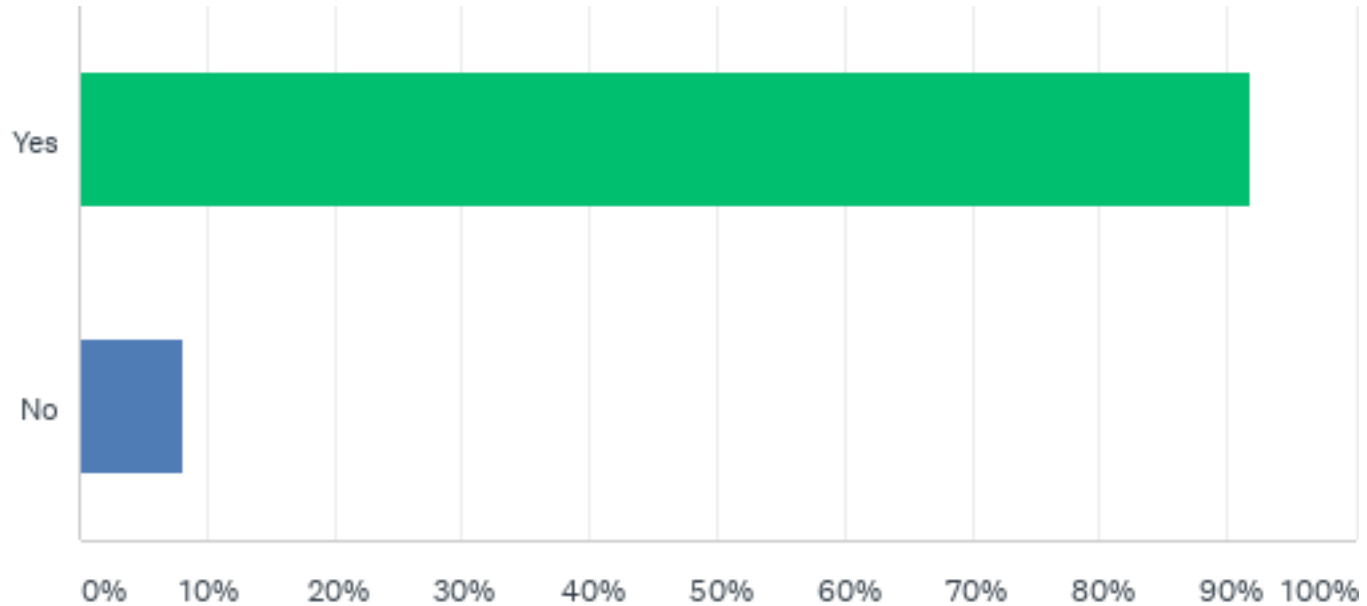
---

Answered: 164 Skipped: 98

ANSWER CHOICES	RESPONSES	
Yes	44.51%	73
No	55.49%	91
TOTAL		164

# Q13: Does the existing Sebastian Inlet Bridge vertical clearance meet your navigation needs?

Answered: 161 Skipped: 101



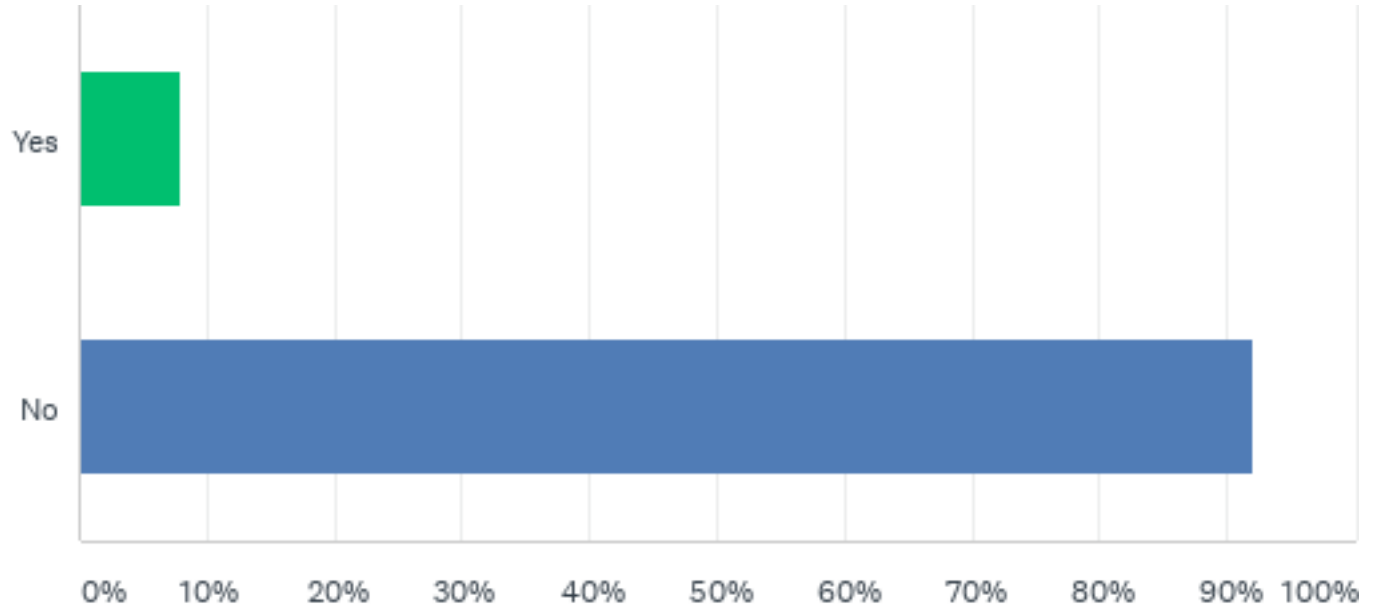
# Q13: Does the existing Sebastian Inlet Bridge vertical clearance meet your navigation needs?

Answered: 161 Skipped: 101

ANSWER CHOICES	RESPONSES	
Yes	91.93%	148
No	8.07%	13
TOTAL		161

# Q15: Are you a Marina Owner or Sport Fishing Charter Operator?

Answered: 140 Skipped: 122



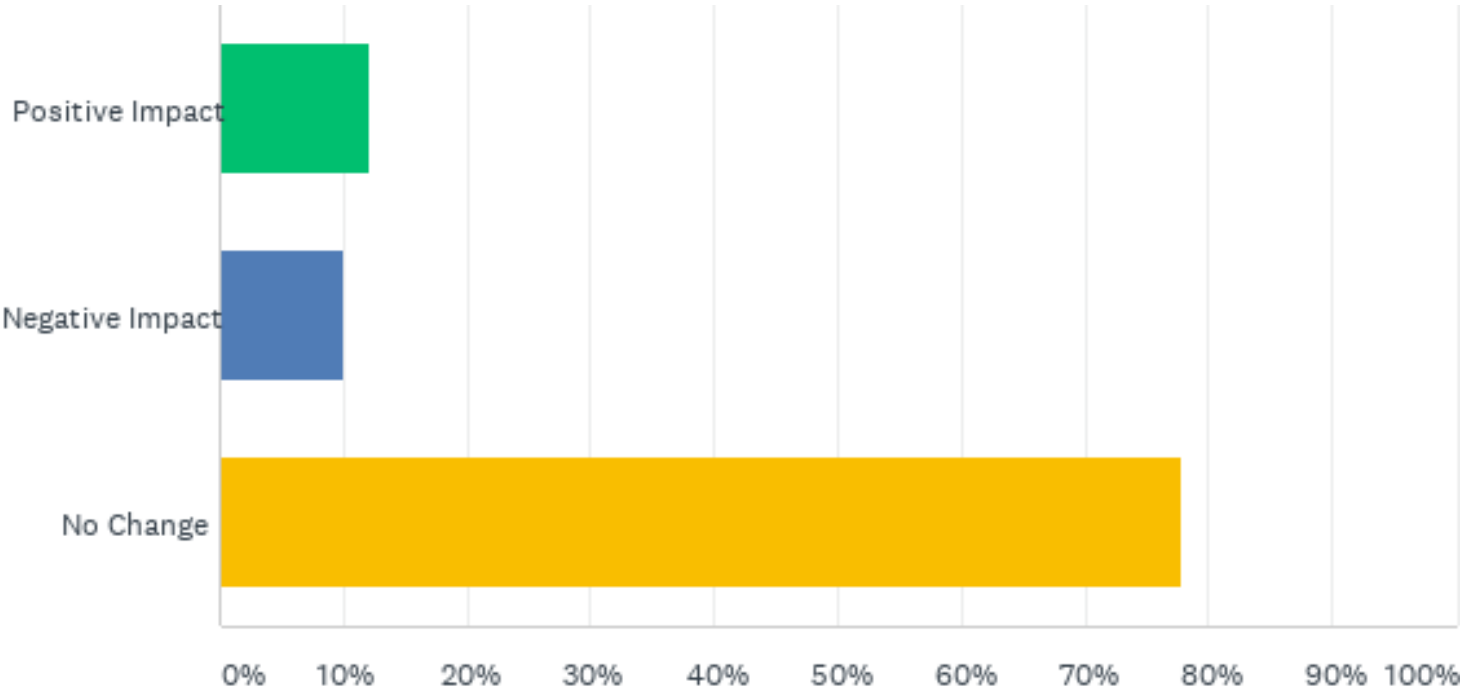
# Q15: Are you a Marina Owner or Sport Fishing Charter Operator?

Answered: 140 Skipped: 122

ANSWER CHOICES	RESPONSES	
Yes	7.86%	11
No	92.14%	129
TOTAL		140

# Q16: What impact would changing the Sebastian Inlet Bridge Vertical Clearance have on your business?

Answered: 90 Skipped: 172



# Q16: What impact would changing the Sebastian Inlet Bridge Vertical Clearance have on your business?

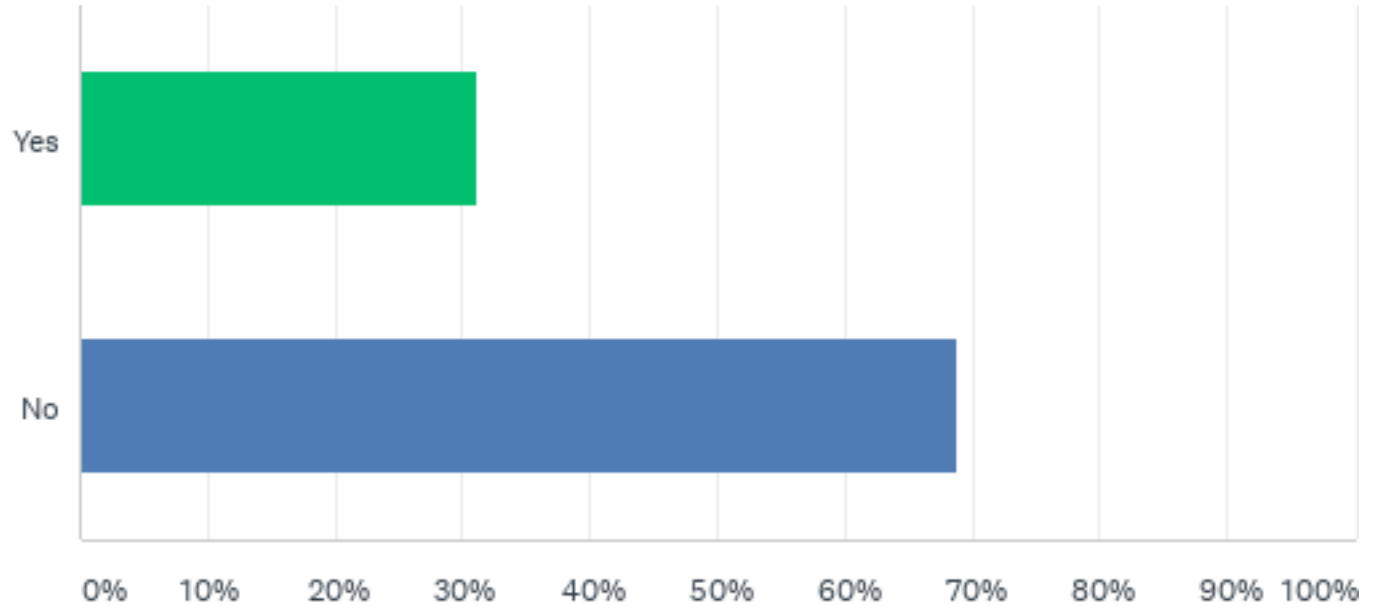
Answered: 90 Skipped: 172

ANSWER CHOICES	RESPONSES	
Positive Impact	12.22%	11
Negative Impact	10.00%	9
No Change	77.78%	70
TOTAL		90



# Q17: Does your Marina facility have a fuel dock?

Answered: 64 Skipped: 198



## Q17: Does your Marina facility have a fuel dock?

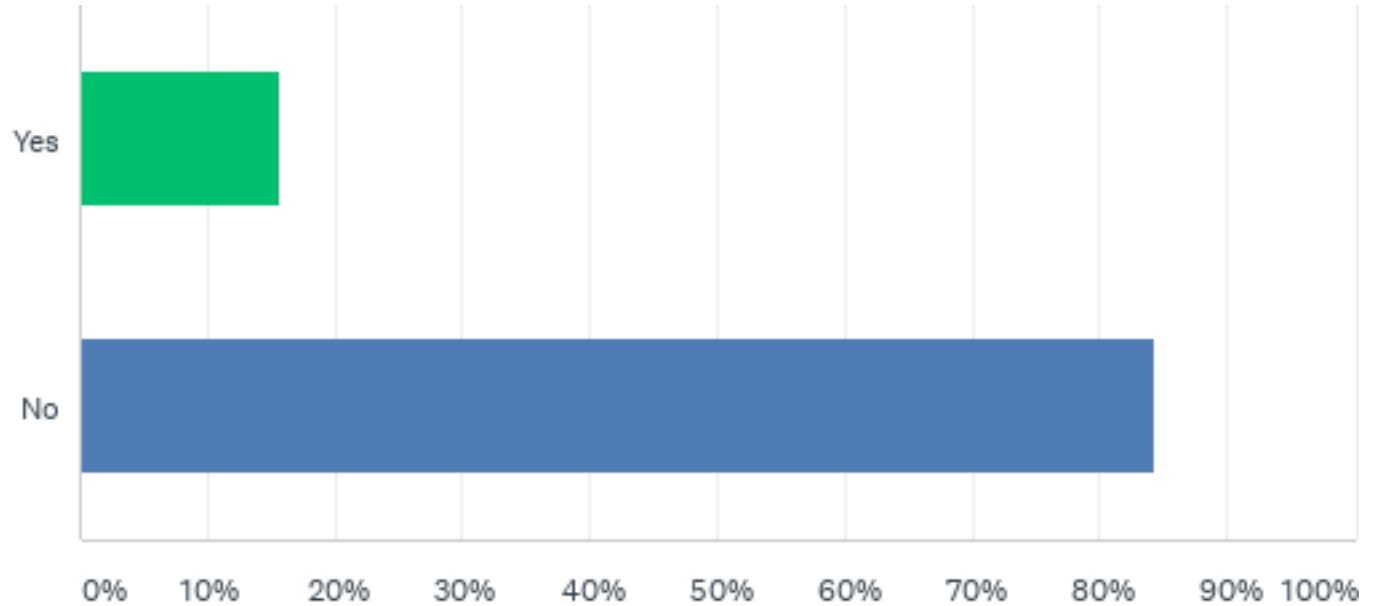
---

Answered: 64 Skipped: 198

ANSWER CHOICES	RESPONSES	
Yes	31.25%	20
No	68.75%	44
TOTAL		64

# Q18: Does your Marina facility offer repair services?

Answered: 64 Skipped: 198



## Q18: Does your Marina facility offer repair services?

Answered: 64 Skipped: 198

ANSWER CHOICES	RESPONSES	
Yes	15.63%	10
No	84.38%	54
TOTAL		64

# **ATTACHMENT G**

## **Summary Table of Comments Received by Respondent Number**

RESPONDENT NUMBER	COMMENT
261	Would like to stay informed on proposed changes
259	What about a bicycling survey?
258	The directions for this survey indicated a gap for bicyclists and pedestrians and no question was asked in that regard. We need a dedicated bike lane across this waterway!
253	Please make the bridge wide enough for a bike lane and also a protected sidewalk
243	A wider span between the fenders would be ideal. During certain times of day and year, recreational boaters fish between the fenders and can be a hazard when trying to navigate the inlet in dangerous outgoing tide conditions. More horizontal clearance could help with this problem.
241	No boats should be allowed to anchor in the navigation channels.
236	This bridge is critical in my daily commute to work in Vero Beach, as such any closures (whether partial or complete) greatly impact my ability to navigate to my work place. A complete closure at any time would be a detriment to my livelihood.
235	It was my understanding, after consulting with the Project Engineer, that the U.S.C.G. was mandating the new bridge be ICW compliant. As this conversation took place several months ago I am wondering why we are even discussing the need to raise the bridge height. To me it is a no brainer. Providing access to the ICW between Port Canaveral and Fort Pierce is a goal that should be accomplished now during the replacement project. I can't see any plausible argument to the contrary. I was at the opening ceremony for the current bridge and I would dearly love to sail my boat under it before I get too old for the task!
230	I typically use the Ft. Pierce inlet due to the width of the Sebastian inlet and having 2 boats going by each other (and not really trusting the other boater) the width is narrow.
228	The bridge being torn down would be devastating to all of our firefighters, paramedics, emergency room drs , etc - they have time limits and going around is not an option when you have a 30-45 min time limit to face a life saving victim in trauma - there must be a way to do the second bridge with the first one left in tact, it would isolate way too many people
215	I used to pass through in my flats boat but will not do so in my sailboat. Unsure of exact clearance. We would like to upgrade our sailboat to a larger boat, in this case we definitely would not have vertical clearance.
214	I think having another outlet for sailBoats is a good idea.
213	Bridge needs to be higher and become a navigable channel

RESPONDENT NUMBER	COMMENT
212	My navigation needs are not being able to drive across the bridge! Will the original bridge remain as you construct a new one?
210	Need to increase the height for sailboats. I have seen too many sail boats hit the bridge. Increase the height of any new bridge.
209	None
205	This is a sensitive wildlife area. Manatees are already being hit by boats and seagrass, their primary food, is being destroyed by boats. Please keep the bridge the same size. We do not need increased traffic by bigger boats to this area.
203	It would be great if you could widen the inlet to allow for more flushing of the Indian river lagoon and it would also make the inlet a little less rough.
202	A wider spread for boats to pass in and out of the channel would be great! It can be tricky on nice days when it's crowded-
196	Just wondering if the project to replace the bridge will involve a parallel bridge to be constructed before the existing one is razed
181	Make sure the navigation channel is not impacted during construction.
177	Making the vertical clearance higher will not fix anything because the inlet is still too shallow for larger vessels ie sailboats! Please just fix the existing bridge and dredge out in front of the north jetty Unless you plan to make the entire channel to the ICW at least 7' deep there is no legitimate reason to make the bridge higher And as for bicycles they have been using the bridge for a long time just like it is and in most cases the bike path along A1A is not really used by bicycles they tend to use the road
173	If you close this bridge before constructing a new one, you cut me off from work. I travel this bridge going and coming daily. Fuel is high. Time is money. I cannot afford to take 192 bridge daily to only turn and go south again. I travel south of my residence via a1a daily. Please do not close this bridge without having another already constructed. It would be a nightmare that would cripple many of us financially. Our bridge is fine IMO.
169	If it needs replacement. replace with same. its fine size wise
162	I am a crew boat operator now and have fun on tugs all over the east coast. I also ran sport fish boats from Hawaii to Key West to Bermuda. I don't think you need to appeal to commercial boats when building a bridge as the inlet is just too shallow and too narrow and too rough to accommodate tug and barge traffic regularly. I do think that gearing the bridge towards larger sport fishing vessels would be a great opportunity to grow the infrastructure in town via the local marinas, much like had been done in New Smyrna Beach.
160	I use the bridge to get to work, praying it is not out completely!

RESPONDENT NUMBER	COMMENT
158	I think the bridge is perfectly fine. It also would cause a lot of people to drive around from SR192 and that would be terrible for the people who work south or north and use the bridge every day. The only thing I could see doing is dredging the channel. It would help on the outgoing tide.
148	Protect the waterways and the animals - we need to watch while under construction
147	Clearance should at least 50'
142	Using the inlet is sometimes very dangerous for smaller boats like mine. This is because the Army Corp does not maintain the inlet. Any changes to the bridge should be in compliance with what the Army Corp needs to maintain the inlet.
140	Please increase the size to reflect all the bridges in the icw
130	The channel markers in the inlet up to the inter coastal waterway need to all be illuminated. It's difficult to navigate at night with how curvy it is.
122	If at all possible include a kayak launch ...
118	At least 30' vertical clearance, and nothing less than the current bridge's horizontal clearance would be adequate. The main factor limiting vessel traffic in Sebastian is water depth.
111	raise the bridge to ICW height of 65' at HHM. Also, widen the inlet to make it safer for recreational boat passage so it isn't as rough. This would help the economy with an influx of recreational boats. It is entirely too far from one ocean access to the next as it stands.
106	The construction process would ruin the world class fishery that the Sebastian Inlet offers. If the bridge is not in dire need of repairs or replacement than it should be left alone.
105	I believe that the channel through Sebastian inlet is too shallow. Most Coast Guard's vessels are too large to safely navigate this inlet.
103	Vertical limitations of bridge limit type and size of boat people by
98	I personally think if you raise the height of the bridge you will bring larger vessels in and make Sebastian even more desirable. We are populated enough. Make it lower. Lol
90	Serves my purposes as it at this time
89	I do not believe residents wish to see any larger vessels passing under the Sebastian Inlet bridge
76	North Jetty based fishermen fail to yield right of way to vessels. These same land based fishermen consistently harass and assault vessels.

PD&E Study



RESPONDENT NUMBER	COMMENT
69	If it works don't screw with it
68	Do not shut the park down during construction
64	Fix the bridge, dredge the inlet to where it's safe to navigate again
61	The width between the fenders are more important then making the bridge higher. Too much curvature in the fenders will also increase the current between the fenders, making the area more difficult to navigate for the inexperienced boater.
60	Make boat, and backing a trailer course mandatory for the northerners that are ruining our beloved state
59	Dangerous inlet channel narrow current strong north jetty to short
57	Widening inlet or increase water depth to ease navigation during rough tides.
40	That channel can be dangerous to navigate and may require additional breakwater devices to make it safer.
39	need to ensure 7' wide bike lanes in each direction
30	Significant attention should be paid to maintenance of traffic on A1A, along with protecting the lagoon and ocean environments.
26	Will there be a comment period for the general A1A using public regarding the road portion of the new bridge?
16	Dangerous currents.
14	I think the bridge is fine. Plenty high for the boats that use it. I am a native FI person and have lived across the river from the inlet for 25 yrs. I think it would be a waste of tax payers money to do anything with the bridge unless there are structural problems. Feel free to call me.👍
8	Do not tear down the current bridge before the new one is built.
7	If replacing the bridge, make a walking/bike path going both directions
5	n/a

# **ATTACHMENT H**

## **Summary Table of Responses Received Regarding Vessel Height by Respondent Number and Individual Survey Questionnaires**

RESPONDENT NUMBER	VESSEL HEIGHT (FEET)	DO YOU USE THE CHANNEL UNDER THE BRIDGE?	IF YOU DO NOT USE THE INLET, INDICATE WHY
40	50	No	My vessel is too large for the channel
43	52	No	My vessel is too large for the channel
111	55	No	My vessel is too large for the channel
140	45	No	Please increase the size to reflect all the bridges in the icw
235	45	No	vertical height is insufficient
239	40	No	Vessel is too tall
242	63.5	Yes	Aircraft/height restrictions
252	49	No	My vessel is too large for the channel

# #40

**COMPLETE**

**Collector:** Web Link 1 (Web Link)  
**Started:** Friday, April 09, 2021 10:47:29 AM  
**Last Modified:** Friday, April 09, 2021 10:53:52 AM  
**Time Spent:** 00:06:22  
**IP Address:** 97.102.82.80

Page 2

## Q1

Please tell us about yourself:

Name	<b>Donald Montplaisir</b>
Address	<b>5055 Dixie Hwy NE</b>
Address 2	<b>Unit B206</b>
City	<b>Palm Bay</b>
State	<b>FL</b>
Zip Code	<b>32905</b>
Email Address	<b>montd025@gmail.com</b>
Phone Number	<b>4072095733</b>

## Q2

Are you responding to this survey as: (check all that apply)

**Recreational Boat Owner,  
Resident**

## Q3

If you are a boat owner or operator, what type of boat(s) do you own or operate? (check all that apply)

**Power Boat,  
Sail Boat**

Page 3

## Q4

What is the approximate above water HEIGHT (in feet) of your tallest vessel?

50'

**Q5**

What is the approximate maximum WIDTH (in feet) of your widest vessel?

12'

---

**Q6**

What is the approximate maximum DRAFT (in feet) of your deepest vessel?

4.5'

---

**Q7**

What is the bridge clearance requirement for your vessel?(measured in feet)

Vertical Clearance: **50'**

Horizontal Clearance: **12'**

---

Page 4

**Q8**

**No**

Do you use the channel under the Sebastian Inlet Bridge?

---

**Q9**

**Respondent skipped this question**

If yes, when do you transit this waterway?

---

**Q10**

**My vessel is too large for the channel**

If you do NOT use the Sebastian Inlet, please indicate why?

---

**Q11**

**Yes**

Do you use the Canaveral Barge Canal/Port Canaveral Inlet?

---

**Q12**

**Yes**

Do you use the Fort Pierce Inlet?

---

Page 5

**Q13**

**No**

Does the existing Sebastian Inlet Bridge vertical clearance meet your navigation needs?

---

**Q14**

If the existing bridge clearance is not adequate, what mean high water vertical clearance (in feet) would be necessary to make a replacement bridge suitable for your needs?

Total Feet:

**50**

---

---

Page 6

**Q15**

**No**

Are you a Marina Owner or Sport Fishing Charter Operator?

---

**Q16**

**Respondent skipped this question**

What impact would changing the Sebastian Inlet Bridge Vertical Clearance have on your business?

---

**Q17**

**Respondent skipped this question**

Does your Marina facility have a fuel dock?

---

**Q18**

**Respondent skipped this question**

Does your Marina facility offer repair services?

---

---

Page 7

**Q19**

Please use the space below to comment on any navigation related issues regarding this waterway that were not covered in this survey. Please be as specific as you can with respect to actual navigational needs and requirements.

That channel can be dangerous to navigate and may require additional breakwater devices to make it safer

---

# #43

**COMPLETE**

**Collector:** Web Link 1 (Web Link)  
**Started:** Saturday, April 10, 2021 9:49:29 AM  
**Last Modified:** Saturday, April 10, 2021 9:57:01 AM  
**Time Spent:** 00:07:32  
**IP Address:** 67.8.143.65

---

Page 2

## Q1

Please tell us about yourself:

Name	David Reid
Address	1291 Ridge Rd NE
City	Palm Bay
State	FL
Zip Code	32905
Email Address	dlreid@gmail.com
Phone Number	3123300529

---

## Q2

Recreational Boat Owner

Are you responding to this survey as: (check all that apply)

---

## Q3

Sail Boat

If you are a boat owner or operator, what type of boat(s) do you own or operate? (check all that apply)

---

Page 3

## Q4

What is the approximate above water HEIGHT (in feet) of your tallest vessel?

50

---

## Q5

What is the approximate maximum WIDTH (in feet) of your widest vessel?

12

---

**Q6**

What is the approximate maximum DRAFT (in feet) of your deepest vessel?

5

---

**Q7**

What is the bridge clearance requirement for your vessel?(measured in feet)

Vertical Clearance: **52**

Horizontal Clearance: **40**

---

Page 4

**Q8**

**No**

Do you use the channel under the Sebastian Inlet Bridge?

---

**Q9**

**Respondent skipped this question**

If yes, when do you transit this waterway?

---

**Q10**

**My vessel is too large for the channel**

If you do NOT use the Sebastian Inlet, please indicate why?

---

**Q11**

**Yes**

Do you use the Canaveral Barge Canal/Port Canaveral Inlet?

---

**Q12**

**Yes**

Do you use the Fort Pierce Inlet?

---

Page 5

**Q13**

**No**

Does the existing Sebastian Inlet Bridge vertical clearance meet your navigation needs?

---



**Q14**

If the existing bridge clearance is not adequate, what mean high water vertical clearance (in feet) would be necessary to make a replacement bridge suitable for your needs?

Total Feet: **52**

---

Page 6

**Q15**

**No**

Are you a Marina Owner or Sport Fishing Charter Operator?

---

**Q16**

**Respondent skipped this question**

What impact would changing the Sebastian Inlet Bridge Vertical Clearance have on your business?

---

**Q17**

**Respondent skipped this question**

Does your Marina facility have a fuel dock?

---

**Q18**

**Respondent skipped this question**

Does your Marina facility offer repair services?

---

Page 7

**Q19**

**Respondent skipped this question**

Please use the space below to comment on any navigation related issues regarding this waterway that were not covered in this survey. Please be as specific as you can with respect to actual navigational needs and requirements.

---

#111

**COMPLETE**

**Collector:** Web Link 1 (Web Link)  
**Started:** Sunday, April 11, 2021 10:51:21 PM  
**Last Modified:** Sunday, April 11, 2021 10:55:02 PM  
**Time Spent:** 00:03:41  
**IP Address:** 98.192.130.156

---

Page 2

**Q1**

Please tell us about yourself:

Name	<b>Jason Echevarria</b>
Address	<b>11072 BEXHILL LANE</b>
City	<b>Tallahassee</b>
State	<b>FL</b>
Zip Code	<b>32317</b>
Email Address	<b>jasonech1@gmail.com</b>
Phone Number	<b>6192013436</b>

---

**Q2** **Recreational Boat Owner,**

Are you responding to this survey as: (check all that apply) **Resident**

---

**Q3** **Sail Boat**

If you are a boat owner or operator, what type of boat(s) do you own or operate? (check all that apply)

---

Page 3

**Q4**

What is the approximate above water HEIGHT (in feet) of your tallest vessel?

54'

---

**Q5**

What is the approximate maximum WIDTH (in feet) of your widest vessel?

14

---

**Q6**

What is the approximate maximum DRAFT (in feet) of your deepest vessel?

6

---

**Q7**

What is the bridge clearance requirement for your vessel?(measured in feet)

Vertical Clearance: **55**

Horizontal Clearance: **20**

---

Page 4

**Q8**

**No**

Do you use the channel under the Sebastian Inlet Bridge?

---

**Q9**

**Respondent skipped this question**

If yes, when do you transit this waterway?

---

**Q10**

**My vessel is too large for the channel**

If you do NOT use the Sebastian Inlet, please indicate why?

---

**Q11**

**Yes**

Do you use the Canaveral Barge Canal/Port Canaveral Inlet?

---

**Q12**

**No**

Do you use the Fort Pierce Inlet?

---

Page 5

**Q13**

**No**

Does the existing Sebastian Inlet Bridge vertical clearance meet your navigation needs?

---

**Q14**

If the existing bridge clearance is not adequate, what mean high water vertical clearance (in feet) would be necessary to make a replacement bridge suitable for your needs?

Total Feet: **65**

---

Page 6

**Q15**

**No**

Are you a Marina Owner or Sport Fishing Charter Operator?

---

**Q16**

**Respondent skipped this question**

What impact would changing the Sebastian Inlet Bridge Vertical Clearance have on your business?

---

**Q17**

**Respondent skipped this question**

Does your Marina facility have a fuel dock?

---

**Q18**

**Respondent skipped this question**

Does your Marina facility offer repair services?

---

Page 7

**Q19**

Please use the space below to comment on any navigation related issues regarding this waterway that were not covered in this survey. Please be as specific as you can with respect to actual navigational needs and requirements.

raise the bridge to ICW height of 65' at HHM. Also, widen the inlet to make it safer for recreational boat passage so it isn't as rough. This would help the economy with an influx of recreational boats. It is entirely too far from one ocean access to the next as it stands.

---

#140

**COMPLETE**

**Collector:** Web Link 1 (Web Link)  
**Started:** Monday, April 12, 2021 8:06:35 AM  
**Last Modified:** Monday, April 12, 2021 8:16:02 AM  
**Time Spent:** 00:09:26  
**IP Address:** 108.237.134.237

---

Page 2

**Q1**

Please tell us about yourself:

Name	<b>Ben</b>
Address	<b>300</b>
City	<b>Satellite beach</b>
State	<b>FL</b>
Zip Code	<b>32937</b>
Email Address	<b>hum@gmail.com</b>

---

**Q2** **Recreational Boat Owner,**  
Are you responding to this survey as: (check all that apply) **Resident**

---

**Q3** **Power Boat,**  
If you are a boat owner or operator, what type of boat(s) do you own or operate? (check all that apply) **Sail Boat,**  
**Fishing Boat**

---

Page 3

**Q4**

What is the approximate above water HEIGHT (in feet) of your tallest vessel?

45

---

**Q5**

What is the approximate maximum WIDTH (in feet) of your widest vessel?

12

---

**Q6**

What is the approximate maximum DRAFT (in feet) of your deepest vessel?

8

---

**Q7**

What is the bridge clearance requirement for your vessel?(measured in feet)

Vertical Clearance: **65**

Horizontal Clearance: **20**

---

Page 4

**Q8**

**Yes**

Do you use the channel under the Sebastian Inlet Bridge?

---

**Q9**

**Year-Round**

If yes, when do you transit this waterway?

---

**Q10**

Other (please specify):

Power boat fits fine but sailboat does not

If you do NOT use the Sebastian Inlet, please indicate why?

---

**Q11**

**No**

Do you use the Canaveral Barge Canal/Port Canaveral Inlet?

---

**Q12**

**No**

Do you use the Fort Pierce Inlet?

---

Page 5

**Q13**

**No**

Does the existing Sebastian Inlet Bridge vertical clearance meet your navigation needs?

---

**Q14**

If the existing bridge clearance is not adequate, what mean high water vertical clearance (in feet) would be necessary to make a replacement bridge suitable for your needs?

Total Feet: **65**

---

Page 6

**Q15**

**No**

Are you a Marina Owner or Sport Fishing Charter Operator?

---

**Q16**

**Positive Impact**

What impact would changing the Sebastian Inlet Bridge Vertical Clearance have on your business?

---

**Q17**

**No**

Does your Marina facility have a fuel dock?

---

**Q18**

**No**

Does your Marina facility offer repair services?

---

Page 7

**Q19**

Please use the space below to comment on any navigation related issues regarding this waterway that were not covered in this survey. Please be as specific as you can with respect to actual navigational needs and requirements.

Please increase the size to reflect all the bridges in the icw

---

#235

**COMPLETE**

**Collector:** Web Link 1 (Web Link)  
**Started:** Wednesday, April 14, 2021 11:30:21 AM  
**Last Modified:** Wednesday, April 14, 2021 11:45:03 AM  
**Time Spent:** 00:14:41  
**IP Address:** 97.104.65.143

---

Page 2

**Q1**

Please tell us about yourself:

Name	<b>Morris M. (Max) Taylor</b>
Address	<b>8850 South A1A Highway</b>
City	<b>Melbourne Beach</b>
State	<b>FL</b>
Zip Code	<b>32951</b>
Email Address	<b>gypsyscribe.max@gmail.com</b>
Phone Number	<b>3217272071</b>

---

**Q2**

Are you responding to this survey as: (check all that apply)

**Recreational Boat Owner,  
Resident**

---

**Q3**

If you are a boat owner or operator, what type of boat(s) do you own or operate? (check all that apply)

**Power Boat,  
Sail Boat**

---

Page 3

**Q4**

What is the approximate above water HEIGHT (in feet) of your tallest vessel?

45

---

**Q5**

What is the approximate maximum WIDTH (in feet) of your widest vessel?

10

---



**Q6**

What is the approximate maximum DRAFT (in feet) of your deepest vessel?

6

---

**Q7**

What is the bridge clearance requirement for your vessel?(measured in feet)

Vertical Clearance: **45**

Horizontal Clearance: **20**

---

Page 4

**Q8**

**No**

Do you use the channel under the Sebastian Inlet Bridge?

---

**Q9**

**Respondent skipped this question**

If yes, when do you transit this waterway?

---

**Q10**

Other (please specify):  
vertical height is insufficient

If you do NOT use the Sebastian Inlet, please indicate why?

---

**Q11**

**No**

Do you use the Canaveral Barge Canal/Port Canaveral Inlet?

---

**Q12**

**Yes**

Do you use the Fort Pierce Inlet?

---

Page 5

**Q13**

**No**

Does the existing Sebastian Inlet Bridge vertical clearance meet your navigation needs?

---

**Q14**

If the existing bridge clearance is not adequate, what mean high water vertical clearance (in feet) would be necessary to make a replacement bridge suitable for your needs?

Total Feet:

**63 (ICW compliant)**

---

Page 6

**Q15**

**No**

Are you a Marina Owner or Sport Fishing Charter Operator?

---

**Q16**

**Respondent skipped this question**

What impact would changing the Sebastian Inlet Bridge Vertical Clearance have on your business?

---

**Q17**

**Respondent skipped this question**

Does your Marina facility have a fuel dock?

---

**Q18**

**Respondent skipped this question**

Does your Marina facility offer repair services?

---

Page 7

**Q19**

Please use the space below to comment on any navigation related issues regarding this waterway that were not covered in this survey. Please be as specific as you can with respect to actual navigational needs and requirements.

It was my understanding, after consulting with the Project Engineer, that the U.S.C.G. was mandating the new bridge be ICW compliant. As this conversation took place several months ago I am wondering why we are even discussing the need to raise the bridge height. To me it is a no brainer. Providing access to the ICW between Port Canaveral and Fort Pierce is a goal that should be accomplished now during the replacement project. I can't see any plausible argument to the contrary. I was at the opening ceremony for the current bridge and I would dearly love to sail my boat under it before I get too old for the task!

---

#239

**COMPLETE**

**Collector:** Web Link 1 (Web Link)  
**Started:** Wednesday, April 14, 2021 8:47:33 PM  
**Last Modified:** Wednesday, April 14, 2021 8:52:16 PM  
**Time Spent:** 00:04:42  
**IP Address:** 97.104.81.26

---

Page 2

**Q1**

Please tell us about yourself:

Name	Connie
Address	802 s palm ave
City	Indialantic
State	FL
Zip Code	32903
Email Address	conniemarias@gmail.com

---

**Q2**

Are you responding to this survey as: (check all that apply)

Recreational Boat Owner,  
Resident

---

**Q3**

If you are a boat owner or operator, what type of boat(s) do you own or operate? (check all that apply)

Power Boat,  
Fishing Boat

---

Page 3

**Q4**

What is the approximate above water HEIGHT (in feet) of your tallest vessel?

40'

---

**Q5**

What is the approximate maximum WIDTH (in feet) of your widest vessel?

16'

---

**Q6**

What is the approximate maximum DRAFT (in feet) of your deepest vessel?

5'

---

**Q7**

What is the bridge clearance requirement for your vessel?(measured in feet)

Vertical Clearance: **45'**

Horizontal Clearance: **25'**

---

Page 4

**Q8**

**No**

Do you use the channel under the Sebastian Inlet Bridge?

---

**Q9**

**Year-Round**

If yes, when do you transit this waterway?

---

**Q10**

Other (please specify):  
Vessel is too tall

If you do NOT use the Sebastian Inlet, please indicate why?

---

**Q11**

**No**

Do you use the Canaveral Barge Canal/Port Canaveral Inlet?

---

**Q12**

**Yes**

Do you use the Fort Pierce Inlet?

---

Page 5

**Q13**

**No**

Does the existing Sebastian Inlet Bridge vertical clearance meet your navigation needs?

---

**Q14**

If the existing bridge clearance is not adequate, what mean high water vertical clearance (in feet) would be necessary to make a replacement bridge suitable for your needs?

Total Feet: **50'**

---

Page 6

**Q15**

**No**

Are you a Marina Owner or Sport Fishing Charter Operator?

---

**Q16**

**No Change**

What impact would changing the Sebastian Inlet Bridge Vertical Clearance have on your business?

---

**Q17**

**No**

Does your Marina facility have a fuel dock?

---

**Q18**

**No**

Does your Marina facility offer repair services?

---

Page 7

**Q19**

**Respondent skipped this question**

Please use the space below to comment on any navigation related issues regarding this waterway that were not covered in this survey. Please be as specific as you can with respect to actual navigational needs and requirements.

---

#242

**COMPLETE**

**Collector:** Web Link 1 (Web Link)  
**Started:** Wednesday, April 14, 2021 8:11:01 PM  
**Last Modified:** Thursday, April 15, 2021 6:45:08 AM  
**Time Spent:** 10:34:07  
**IP Address:** 108.237.135.59

---

Page 2

**Q1**

Please tell us about yourself:

Name	<b>Michael</b>
Address	<b>Hatch</b>
Address 2	<b>2223 FallsCircle</b>
City	<b>Vero Beach</b>
State	<b>FL</b>
Zip Code	<b>32967</b>
Email Address	<b>hatchmick@gmail.com</b>

---

**Q2**

Are you responding to this survey as: (check all that apply)

**Recreational Boat Owner,**  
**Resident,**  
**Park User**

---

**Q3**

If you are a boat owner or operator, what type of boat(s) do you own or operate? (check all that apply)

**Power Boat,**  
**Sail Boat**

---

Page 3

**Q4**

What is the approximate above water HEIGHT (in feet) of your tallest vessel?

63.5

---

**Q5**

What is the approximate maximum WIDTH (in feet) of your widest vessel?

14.6

---

**Q6**

What is the approximate maximum DRAFT (in feet) of your deepest vessel?

5.0

---

**Q7**

What is the bridge clearance requirement for your vessel?(measured in feet)

Vertical Clearance: **65**

Horizontal Clearance: **20**

---

Page 4

**Q8**

**Yes**

Do you use the channel under the Sebastian Inlet Bridge?

---

**Q9**

**Year-Round,**

If yes, when do you transit this waterway?

**Day (AM)**

---

**Q10**

Other (please specify):

If you do NOT use the Sebastian Inlet, please indicate why?

Aircraft /height restrictions

---

**Q11**

**Yes**

Do you use the Canaveral Barge Canal/Port Canaveral Inlet?

---

**Q12**

**Yes**

Do you use the Fort Pierce Inlet?

---

Page 5

**Q13**

**No**

Does the existing Sebastian Inlet Bridge vertical clearance meet your navigation needs?

---

**Q14**

If the existing bridge clearance is not adequate, what mean high water vertical clearance (in feet) would be necessary to make a replacement bridge suitable for your needs?

Total Feet:

**65**

---

---

Page 6

**Q15**

**No**

Are you a Marina Owner or Sport Fishing Charter Operator?

---

**Q16**

**Respondent skipped this question**

What impact would changing the Sebastian Inlet Bridge Vertical Clearance have on your business?

---

**Q17**

**Respondent skipped this question**

Does your Marina facility have a fuel dock?

---

**Q18**

**Respondent skipped this question**

Does your Marina facility offer repair services?

---

---

Page 7

**Q19**

**Respondent skipped this question**

Please use the space below to comment on any navigation related issues regarding this waterway that were not covered in this survey. Please be as specific as you can with respect to actual navigational needs and requirements.

---



#252

**COMPLETE**

**Collector:** Web Link 1 (Web Link)  
**Started:** Sunday, April 18, 2021 7:22:25 AM  
**Last Modified:** Sunday, April 18, 2021 7:26:37 AM  
**Time Spent:** 00:04:11  
**IP Address:** 97.102.3.80

---

Page 2

**Q1**

Please tell us about yourself:

Name	<b>Clyde Berry</b>
Address	<b>450 Green Turtle Cove</b>
City	<b>Satellite Beach</b>
State	<b>FL</b>
Zip Code	<b>32937</b>
Email Address	<b>c.berry@cfl.rr.com</b>
Phone Number	<b>3214311320</b>

---

**Q2**

**Recreational Boat Owner**

Are you responding to this survey as: (check all that apply)

---

**Q3**

**Sail Boat**

If you are a boat owner or operator, what type of boat(s) do you own or operate? (check all that apply)

---

Page 3

**Q4**

What is the approximate above water HEIGHT (in feet) of your tallest vessel?

49

---

**Q5**

What is the approximate maximum WIDTH (in feet) of your widest vessel?

12

---

**Q6**

What is the approximate maximum DRAFT (in feet) of your deepest vessel?

4.5

---

**Q7**

What is the bridge clearance requirement for your vessel?(measured in feet)

Vertical Clearance: **50**

Horizontal Clearance: **24**

---

Page 4

**Q8**

**No**

Do you use the channel under the Sebastian Inlet Bridge?

---

**Q9**

**Respondent skipped this question**

If yes, when do you transit this waterway?

---

**Q10**

**My vessel is too large for the channel**

If you do NOT use the Sebastian Inlet, please indicate why?

---

**Q11**

**Yes**

Do you use the Canaveral Barge Canal/Port Canaveral Inlet?

---

**Q12**

**Yes**

Do you use the Fort Pierce Inlet?

---

Page 5

**Q13**

**No**

Does the existing Sebastian Inlet Bridge vertical clearance meet your navigation needs?

---

**Q14**

If the existing bridge clearance is not adequate, what mean high water vertical clearance (in feet) would be necessary to make a replacement bridge suitable for your needs?

Total Feet: **50**

---

Page 6

**Q15**

**Respondent skipped this question**

Are you a Marina Owner or Sport Fishing Charter Operator?

---

**Q16**

**Respondent skipped this question**

What impact would changing the Sebastian Inlet Bridge Vertical Clearance have on your business?

---

**Q17**

**Respondent skipped this question**

Does your Marina facility have a fuel dock?

---

**Q18**

**Respondent skipped this question**

Does your Marina facility offer repair services?

---

Page 7

**Q19**

**Respondent skipped this question**

Please use the space below to comment on any navigation related issues regarding this waterway that were not covered in this survey. Please be as specific as you can with respect to actual navigational needs and requirements.

---

---

# **ATTACHMENT I**

## **Summary Table of Responses Received Regarding Impact of Changing Bridge Vertical Clearance by Respondent Number and Individual Survey Questionnaires for Positive Impact**

RESPONDENT NUMBER	Q16. WHAT IMPACT WOULD CHANGING THE SEBASTIAN INLET BRIDGE VERTICAL CLEARANCE HAVE ON YOUR BUSINESS?			
	Positive	Negative	No Change	Comment
6			✓	
7			✓	
10			✓	
14		✓		I think the bridge is fine. Plenty high for the boats that use it. I am a native FI person and have lived across the river from the inlet for 25 yrs. I think it would be a waste of tax payers money to do anything with the bridge unless there are structural problems. Feel free to call me. 👍
16			✓	
23			✓	
24			✓	
25			✓	
29			✓	
31			✓	
42			✓	
56			✓	
57			✓	Widening inlet or increase water depth to ease navigation during rough tides.
60			✓	Make boat, and backing a trailer course mandatory for the northerners that are ruining our beloved state
63			✓	
68			✓	Do not shut the park down during construction
69			✓	If it works don't screw with it
72			✓	
73			✓	
77			✓	

RESPONDENT NUMBER	Q16. WHAT IMPACT WOULD CHANGING THE SEBASTIAN INLET BRIDGE VERTICAL CLEARANCE HAVE ON YOUR BUSINESS?			
	Positive	Negative	No Change	Comment
81			✓	
86			✓	
94			✓	
96			✓	
98			✓	I personally think if you raise the height of the bridge you will bring larger vessels inn and make Sebastian even more desirable. We are populated enough. Make it lower. Lol
99			✓	
103	✓			Vertical limitations of bridge limit type and size of boat people bye
106			✓	The construction process would ruin the world class fishery that the Sebastian Inlet offers. If the bridge is not in dire need of repairs or replacement than it should be left alone.
108			✓	
109	✓			
112		✓		
113			✓	
119			✓	
121	✓			
122			✓	
124			✓	
125			✓	If at all possible include a kayak launch ...
127			✓	
130	✓			The channel markers in the inlet up to the inter coastal waterway need to all be illuminated. It's difficult to navigate at night with how curvy it is.
135			✓	
140	✓			Please increase the size to reflect all the bridges in the icw

RESPONDENT NUMBER	Q16. WHAT IMPACT WOULD CHANGING THE SEBASTIAN INLET BRIDGE VERTICAL CLEARANCE HAVE ON YOUR BUSINESS?			
	Positive	Negative	No Change	Comment
141			✓	
143	✓			
145		✓		
147			✓	Clearance should at least 50'
153			✓	
158			✓	I think the bridge is perfectly fine. It also would cause a lot of people to drive around from SR192 and that would be terrible for the people who work south or north and use the bridge every day. The only thing I could see doing is dredging the channel. It would help on the outgoing tide.
164			✓	
169		✓		If it needs replacement. replace with same. its fine size wise
171		✓		
173			✓	If you close this bridge before constructing a new one, you cut me off from work. I travel this bridge going and coming daily. Fuel is high. Time is money. I cannot afford to take 192 bridge daily to only turn and go south again. I travel south of my residence via a1a daily. Please do not close this bridge without having another already constructed. It would be a nightmare that would cripple many of us financially. Our bridge is fine IMO.
174			✓	
185		✓		
188			✓	
190			✓	
203	✓			It would be great if you could widen the inlet to allow for more flushing of the Indian river lagoon and it would also make the inlet a little less rough.
207			✓	
211		✓		
213			✓	Bridge needs to be higher and become a navigable channel

RESPONDENT NUMBER	Q16. WHAT IMPACT WOULD CHANGING THE SEBASTIAN INLET BRIDGE VERTICAL CLEARANCE HAVE ON YOUR BUSINESS?			Comment
	Positive	Negative	No Change	
214			✓	I think having another outlet for sailBoats is a good idea.
218			✓	
219			✓	
223		✓		
227			✓	
228			✓	The bridge being torn down would be devastating to all of our firefighters, paramedics, emergency room drs , etc - they have time limits and going around is not an option when you have a 30-45 min time limit to face a life saving victim in trauma - there must be a way to do the second bridge with the first one left in tact , it would isolate way too many people
229			✓	
231			✓	
236			✓	This bridge is critical in my daily commute to work in Vero Beach, as such any closures (whether partial or complete) greatly impact my ability to navigate to my work place. A complete closure at anytime would be a detriment to my livelihood.
238			✓	
239			✓	
241			✓	No boats should be allowed to anchor in the navigation channels.
244	✓			
245			✓	
247	✓			
248			✓	
253		✓		Please make the bridge wide enough for a bike lane and also a protected sidewalk
256			✓	
257			✓	



RESPONDENT NUMBER	Q16. WHAT IMPACT WOULD CHANGING THE SEBASTIAN INLET BRIDGE VERTICAL CLEARANCE HAVE ON YOUR BUSINESS?			
	Positive	Negative	No Change	Comment
261			✓	Would like to stay informed on proposed changes
<b>TOTAL</b>	<b>9</b>	<b>9</b>	<b>61</b>	

# #27

**COMPLETE**

**Collector:** Web Link 1 (Web Link)  
**Started:** Tuesday, April 06, 2021 4:28:58 PM  
**Last Modified:** Tuesday, April 06, 2021 4:31:32 PM  
**Time Spent:** 00:02:33  
**IP Address:** 164.159.59.2

---

Page 2

## Q1

Please tell us about yourself:

Name	<b>Jeremy Edwardson</b>
Address	<b>810 Wentworth St.</b>
City	<b>Sebastian</b>
State	<b>FL</b>
Zip Code	<b>32958</b>
Email Address	<b>edwardson_j@yahoo.com</b>
Phone Number	<b>8172190237</b>

---

## Q2

Are you responding to this survey as: (check all that apply)

<b>Recreational Boat Owner,</b>
<b>Commercial Vessel Operator,</b>
<b>Resident,</b>
<b>Park User</b>

---

## Q3

If you are a boat owner or operator, what type of boat(s) do you own or operate? (check all that apply)

<b>Power Boat,</b>
<b>Fishing Boat</b>

---

Page 3

## Q4

What is the approximate above water HEIGHT (in feet) of your tallest vessel?

12

---

**Q5**

What is the approximate maximum WIDTH (in feet) of your widest vessel?

10

---

**Q6**

What is the approximate maximum DRAFT (in feet) of your deepest vessel?

2

---

**Q7**

What is the bridge clearance requirement for your vessel?(measured in feet)

Vertical Clearance: **15**

Horizontal Clearance: **15**

---

Page 4

**Q8**

**Yes**

Do you use the channel under the Sebastian Inlet Bridge?

---

**Q9**

If yes, when do you transit this waterway?

**Year-Round,  
Day (AM),  
Night (PM)**

---

**Q10**

**Respondent skipped this question**

If you do NOT use the Sebastian Inlet, please indicate why?

---

**Q11**

**No**

Do you use the Canaveral Barge Canal/Port Canaveral Inlet?

---

**Q12**

**Yes**

Do you use the Fort Pierce Inlet?

---

Page 5

**Q13**

**Yes**

Does the existing Sebastian Inlet Bridge vertical clearance meet your navigation needs?

---

**Q14**

**Respondent skipped this question**

If the existing bridge clearance is not adequate, what mean high water vertical clearance (in feet) would be necessary to make a replacement bridge suitable for your needs?

---

---

Page 6

**Q15**

**Yes**

Are you a Marina Owner or Sport Fishing Charter Operator?

---

**Q16**

**No Change**

What impact would changing the Sebastian Inlet Bridge Vertical Clearance have on your business?

---

**Q17**

**Respondent skipped this question**

Does your Marina facility have a fuel dock?

---

**Q18**

**Respondent skipped this question**

Does your Marina facility offer repair services?

---

---

Page 7

**Q19**

**Respondent skipped this question**

Please use the space below to comment on any navigation related issues regarding this waterway that were not covered in this survey. Please be as specific as you can with respect to actual navigational needs and requirements.

---

#59

**COMPLETE**

**Collector:** Web Link 1 (Web Link)  
**Started:** Sunday, April 11, 2021 7:53:46 PM  
**Last Modified:** Sunday, April 11, 2021 8:00:24 PM  
**Time Spent:** 00:06:37  
**IP Address:** 184.91.228.251

---

Page 2

**Q1**

Please tell us about yourself:

Name	<b>Benjamin oneal</b>
Address	<b>2247 Davis dr</b>
City	<b>New Smyrna beach</b>
State	<b>FL</b>
Zip Code	<b>32168</b>
Email Address	<b>benfish22@hotmail.com</b>
Phone Number	<b>3215076503</b>

---

**Q2** **Recreational Boat Owner,**

Are you responding to this survey as: (check all that apply) **Park User**

---

**Q3** **Power Boat,**

If you are a boat owner or operator, what type of boat(s) do you own or operate? (check all that apply) **Fishing Boat**

---

Page 3

**Q4**

What is the approximate above water HEIGHT (in feet) of your tallest vessel?

12

---

**Q5**

What is the approximate maximum WIDTH (in feet) of your widest vessel?

9ft

---

**Q6**

What is the approximate maximum DRAFT (in feet) of your deepest vessel?

2ft

---

**Q7**

What is the bridge clearance requirement for your vessel?(measured in feet)

Vertical Clearance: **14ft**

Horizontal Clearance: **12ft**

---

Page 4

**Q8**

**Yes**

Do you use the channel under the Sebastian Inlet Bridge?

---

**Q9**

**Year-Round**

If yes, when do you transit this waterway?

---

**Q10**

**Respondent skipped this question**

If you do NOT use the Sebastian Inlet, please indicate why?

---

**Q11**

**Yes**

Do you use the Canaveral Barge Canal/Port Canaveral Inlet?

---

**Q12**

**Yes**

Do you use the Fort Pierce Inlet?

---

Page 5

**Q13**

**Yes**

Does the existing Sebastian Inlet Bridge vertical clearance meet your navigation needs?

---

**Q14**

**Respondent skipped this question**

If the existing bridge clearance is not adequate, what mean high water vertical clearance (in feet) would be necessary to make a replacement bridge suitable for your needs?

---

Page 6

**Q15**

**Yes**

Are you a Marina Owner or Sport Fishing Charter Operator?

---

**Q16**

**No Change**

What impact would changing the Sebastian Inlet Bridge Vertical Clearance have on your business?

---

**Q17**

**Respondent skipped this question**

Does your Marina facility have a fuel dock?

---

**Q18**

**Respondent skipped this question**

Does your Marina facility offer repair services?

---

Page 7

**Q19**

Please use the space below to comment on any navigation related issues regarding this waterway that were not covered in this survey. Please be as specific as you can with respect to actual navigational needs and requirements.

Dangerous inlet channel narrow current strong north jetty to short

---

# #61

**COMPLETE**

**Collector:** Web Link 1 (Web Link)  
**Started:** Sunday, April 11, 2021 7:55:00 PM  
**Last Modified:** Sunday, April 11, 2021 8:02:55 PM  
**Time Spent:** 00:07:54  
**IP Address:** 99.101.149.119

---

Page 2

## Q1

Please tell us about yourself:

Name	<b>Eric Davis</b>
Address	<b>636 34th Terrace</b>
City	<b>Vero Beach</b>
State	<b>FL</b>
Zip Code	<b>32968</b>
Email Address	<b>captDavis1@aol.com</b>
Phone Number	<b>7725326174</b>

---

**Q2** **Recreational Boat Owner,**  
Are you responding to this survey as: (check all that apply) **Commercial Vessel Operator**

---

**Q3** **Power Boat,**  
If you are a boat owner or operator, what type of boat(s) do you own or operate? (check all that apply) **Fishing Boat**

---

Page 3

## Q4

What is the approximate above water HEIGHT (in feet) of your tallest vessel?

14

---

## Q5

What is the approximate maximum WIDTH (in feet) of your widest vessel?

9

---



**Q6**

What is the approximate maximum DRAFT (in feet) of your deepest vessel?

2

---

**Q7**

What is the bridge clearance requirement for your vessel?(measured in feet)

Vertical Clearance: **12**

Horizontal Clearance: **9**

---

Page 4

**Q8**

**Yes**

Do you use the channel under the Sebastian Inlet Bridge?

---

**Q9**

**Year-Round,**

If yes, when do you transit this waterway?

**Day (AM),**

**Night (PM)**

---

**Q10**

**Respondent skipped this question**

If you do NOT use the Sebastian Inlet, please indicate why?

---

**Q11**

**Yes**

Do you use the Canaveral Barge Canal/Port Canaveral Inlet?

---

**Q12**

**Yes**

Do you use the Fort Pierce Inlet?

---

Page 5

**Q13**

**Yes**

Does the existing Sebastian Inlet Bridge vertical clearance meet your navigation needs?

---

**Q14**

Respondent skipped this question

If the existing bridge clearance is not adequate, what mean high water vertical clearance (in feet) would be necessary to make a replacement bridge suitable for your needs?

---

Page 6

**Q15**

Yes

Are you a Marina Owner or Sport Fishing Charter Operator?

---

**Q16**

No Change

What impact would changing the Sebastian Inlet Bridge Vertical Clearance have on your business?

---

**Q17**

Respondent skipped this question

Does your Marina facility have a fuel dock?

---

**Q18**

Respondent skipped this question

Does your Marina facility offer repair services?

---

Page 7

**Q19**

Please use the space below to comment on any navigation related issues regarding this waterway that were not covered in this survey. Please be as specific as you can with respect to actual navigational needs and requirements.

The width between the fenders are more important then making the bridge higher. Too much curvature in the fenders will also increase the current between the fenders, making the area more difficult to navigate for the inexperienced boater.

---

#64

**COMPLETE**

**Collector:** Web Link 1 (Web Link)  
**Started:** Sunday, April 11, 2021 8:03:58 PM  
**Last Modified:** Sunday, April 11, 2021 8:07:01 PM  
**Time Spent:** 00:03:02  
**IP Address:** 8.10.146.2

---

Page 2

**Q1**

Please tell us about yourself:

Name	<b>Braden</b>
Address	<b>2245 pinemeadow Ave</b>
City	<b>Melbourne</b>
State	<b>FL</b>
Zip Code	<b>32904</b>
Email Address	<b>bschopke12@gmail.com</b>
Phone Number	<b>3215445779</b>

---

**Q2**

Are you responding to this survey as: (check all that apply) **Recreational Boat Owner,**  
Other (please specify):  
No

---

**Q3** **Fishing Boat**

If you are a boat owner or operator, what type of boat(s) do you own or operate? (check all that apply)

---

Page 3

**Q4**

What is the approximate above water HEIGHT (in feet) of your tallest vessel?

15ft

---

**Q5**

What is the approximate maximum WIDTH (in feet) of your widest vessel?

8

---

**Q6**

What is the approximate maximum DRAFT (in feet) of your deepest vessel?

3

---

**Q7**

What is the bridge clearance requirement for your vessel?(measured in feet)

Vertical Clearance: **15ft**

Horizontal Clearance: **10 ft**

---

Page 4

**Q8**

**Yes**

Do you use the channel under the Sebastian Inlet Bridge?

---

**Q9**

**Year-Round,**

If yes, when do you transit this waterway?

**Day (AM),**

**Night (PM)**

---

**Q10**

**Respondent skipped this question**

If you do NOT use the Sebastian Inlet, please indicate why?

---

**Q11**

**No**

Do you use the Canaveral Barge Canal/Port Canaveral Inlet?

---

**Q12**

**No**

Do you use the Fort Pierce Inlet?

---

Page 5

**Q13**

**Yes**

Does the existing Sebastian Inlet Bridge vertical clearance meet your navigation needs?

---

**Q14**

Respondent skipped this question

If the existing bridge clearance is not adequate, what mean high water vertical clearance (in feet) would be necessary to make a replacement bridge suitable for your needs?

---

Page 6

**Q15**

Yes

Are you a Marina Owner or Sport Fishing Charter Operator?

---

**Q16**

Positive Impact

What impact would changing the Sebastian Inlet Bridge Vertical Clearance have on your business?

---

**Q17**

Respondent skipped this question

Does your Marina facility have a fuel dock?

---

**Q18**

Respondent skipped this question

Does your Marina facility offer repair services?

---

Page 7

**Q19**

Please use the space below to comment on any navigation related issues regarding this waterway that were not covered in this survey. Please be as specific as you can with respect to actual navigational needs and requirements.

Fix the bridge, dredge the inlet to where it's safe to navigate again

---

#65

**COMPLETE**

**Collector:** Web Link 1 (Web Link)  
**Started:** Sunday, April 11, 2021 7:56:38 PM  
**Last Modified:** Sunday, April 11, 2021 8:07:17 PM  
**Time Spent:** 00:10:38  
**IP Address:** 108.208.58.248

---

Page 2

**Q1**

Please tell us about yourself:

Name	<b>Adam</b>
Address	<b>816 brothers</b>
City	<b>Melbourne</b>
State	<b>FL</b>
Zip Code	<b>32901</b>
Email Address	<b>mrharper1603@gmai.com</b>

---

**Q2** **Commercial Vessel Operator**

Are you responding to this survey as: (check all that apply)

---

**Q3** **Fishing Boat**

If you are a boat owner or operator, what type of boat(s) do you own or operate? (check all that apply)

---

Page 3

**Q4**

What is the approximate above water HEIGHT (in feet) of your tallest vessel?

5

---

**Q5**

What is the approximate maximum WIDTH (in feet) of your widest vessel?

7

---

**Q6**

What is the approximate maximum DRAFT (in feet) of your deepest vessel?

4

---

**Q7**

What is the bridge clearance requirement for your vessel?(measured in feet)

Vertical Clearance: **10ft**

Horizontal Clearance: **10ft**

---

Page 4

**Q8**

**Yes**

Do you use the channel under the Sebastian Inlet Bridge?

---

**Q9**

**Year-Round**

If yes, when do you transit this waterway?

---

**Q10**

**Respondent skipped this question**

If you do NOT use the Sebastian Inlet, please indicate why?

---

**Q11**

**No**

Do you use the Canaveral Barge Canal/Port Canaveral Inlet?

---

**Q12**

**No**

Do you use the Fort Pierce Inlet?

---

Page 5

**Q13**

**Yes**

Does the existing Sebastian Inlet Bridge vertical clearance meet your navigation needs?

---

**Q14**

**Respondent skipped this question**

If the existing bridge clearance is not adequate, what mean high water vertical clearance (in feet) would be necessary to make a replacement bridge suitable for your needs?

---

Page 6

**Q15**

**Yes**

Are you a Marina Owner or Sport Fishing Charter Operator?

---

**Q16**

**No Change**

What impact would changing the Sebastian Inlet Bridge Vertical Clearance have on your business?

---

**Q17**

**No**

Does your Marina facility have a fuel dock?

---

**Q18**

**No**

Does your Marina facility offer repair services?

---

Page 7

**Q19**

**Respondent skipped this question**

Please use the space below to comment on any navigation related issues regarding this waterway that were not covered in this survey. Please be as specific as you can with respect to actual navigational needs and requirements.

---



#67

**COMPLETE**

**Collector:** Web Link 1 (Web Link)  
**Started:** Sunday, April 11, 2021 8:09:03 PM  
**Last Modified:** Sunday, April 11, 2021 8:11:20 PM  
**Time Spent:** 00:02:16  
**IP Address:** 184.89.92.129

---

Page 2

**Q1**

Please tell us about yourself:

Name	<b>Bryceson Wright</b>
Address	<b>941 banks st nw</b>
City	<b>Palm Bay</b>
State	<b>FL</b>
Zip Code	<b>32907</b>
Email Address	<b>Brywright6296@gmail.com</b>
Phone Number	<b>3218481296</b>

---

**Q2**

Are you responding to this survey as: (check all that apply)

<b>Recreational Boat Owner,</b>
<b>Commercial Vessel Operator,</b>
<b>Resident,</b>
<b>Park User</b>

---

**Q3**

If you are a boat owner or operator, what type of boat(s) do you own or operate? (check all that apply)

<b>Fishing Boat</b>
---------------------

---

Page 3

**Q4**

What is the approximate above water HEIGHT (in feet) of your tallest vessel?

13

---

**Q5**

What is the approximate maximum WIDTH (in feet) of your widest vessel?

12

---

**Q6**

What is the approximate maximum DRAFT (in feet) of your deepest vessel?

3

---

**Q7**

What is the bridge clearance requirement for your vessel?(measured in feet)

Vertical Clearance: **16**

Horizontal Clearance: **13**

---

Page 4

**Q8**

**Yes**

Do you use the channel under the Sebastian Inlet Bridge?

---

**Q9**

**Year-Round**

If yes, when do you transit this waterway?

---

**Q10**

**Respondent skipped this question**

If you do NOT use the Sebastian Inlet, please indicate why?

---

**Q11**

**Yes**

Do you use the Canaveral Barge Canal/Port Canaveral Inlet?

---

**Q12**

**Yes**

Do you use the Fort Pierce Inlet?

---

Page 5

**Q13**

**Yes**

Does the existing Sebastian Inlet Bridge vertical clearance meet your navigation needs?

---

**Q14**

**Respondent skipped this question**

If the existing bridge clearance is not adequate, what mean high water vertical clearance (in feet) would be necessary to make a replacement bridge suitable for your needs?

---

---

Page 6

**Q15**

**Yes**

Are you a Marina Owner or Sport Fishing Charter Operator?

---

**Q16**

**No Change**

What impact would changing the Sebastian Inlet Bridge Vertical Clearance have on your business?

---

**Q17**

**Yes**

Does your Marina facility have a fuel dock?

---

**Q18**

**Yes**

Does your Marina facility offer repair services?

---

---

Page 7

**Q19**

**Respondent skipped this question**

Please use the space below to comment on any navigation related issues regarding this waterway that were not covered in this survey. Please be as specific as you can with respect to actual navigational needs and requirements.

---

#75

**COMPLETE**

**Collector:** Web Link 1 (Web Link)  
**Started:** Sunday, April 11, 2021 8:25:29 PM  
**Last Modified:** Sunday, April 11, 2021 8:29:44 PM  
**Time Spent:** 00:04:14  
**IP Address:** 66.177.247.218

---

Page 2

**Q1**

Please tell us about yourself:

Name	Edward
Address	1217 Schumann dr
City	Sebastian
State	FL
Zip Code	32958
Email Address	pmegyerdi@gmail.com
Phone Number	3216522556

---

**Q2**

Are you responding to this survey as: (check all that apply)

Recreational Boat Owner,  
Resident,  
Park User

---

**Q3**

If you are a boat owner or operator, what type of boat(s) do you own or operate? (check all that apply)

Power Boat

---

Page 3

**Q4**

What is the approximate above water HEIGHT (in feet) of your tallest vessel?

4ft

---

**Q5**

What is the approximate maximum WIDTH (in feet) of your widest vessel?

4ft

---

**Q6**

What is the approximate maximum DRAFT (in feet) of your deepest vessel?

1ft

---

**Q7**

What is the bridge clearance requirement for your vessel?(measured in feet)

Vertical Clearance: **40+**

Horizontal Clearance: **40+**

---

Page 4

**Q8**

**Yes**

Do you use the channel under the Sebastian Inlet Bridge?

---

**Q9**

**Year-Round**

If yes, when do you transit this waterway?

---

**Q10**

**Respondent skipped this question**

If you do NOT use the Sebastian Inlet, please indicate why?

---

**Q11**

**No**

Do you use the Canaveral Barge Canal/Port Canaveral Inlet?

---

**Q12**

**No**

Do you use the Fort Pierce Inlet?

---

Page 5

**Q13**

**Yes**

Does the existing Sebastian Inlet Bridge vertical clearance meet your navigation needs?

---

**Q14**

If the existing bridge clearance is not adequate, what mean high water vertical clearance (in feet) would be necessary to make a replacement bridge suitable for your needs?

Total Feet:

**40ft**

---

Page 6

**Q15**

**Yes**

Are you a Marina Owner or Sport Fishing Charter Operator?

---

**Q16**

**No Change**

What impact would changing the Sebastian Inlet Bridge Vertical Clearance have on your business?

---

**Q17**

**Yes**

Does your Marina facility have a fuel dock?

---

**Q18**

**Yes**

Does your Marina facility offer repair services?

---

Page 7

**Q19**

**Respondent skipped this question**

Please use the space below to comment on any navigation related issues regarding this waterway that were not covered in this survey. Please be as specific as you can with respect to actual navigational needs and requirements.

---

# #110

**COMPLETE**

**Collector:** Web Link 1 (Web Link)  
**Started:** Sunday, April 11, 2021 10:44:50 PM  
**Last Modified:** Sunday, April 11, 2021 10:48:55 PM  
**Time Spent:** 00:04:04  
**IP Address:** 97.102.211.69

---

Page 2

## Q1

Please tell us about yourself:

Name	<b>Trevor Clarcq</b>
Address	<b>3795 Ponderosa Rd</b>
City	<b>Malabar</b>
State	<b>FL</b>
Zip Code	<b>32950</b>
Email Address	<b>tclarcq11@gmail.com</b>
Phone Number	<b>32196184</b>

---

**Q2** **Recreational Boat Owner,**

Are you responding to this survey as: (check all that apply) **Resident**

---

**Q3** **Power Boat,**

If you are a boat owner or operator, what type of boat(s) do you own or operate? (check all that apply) **Fishing Boat**

---

Page 3

## Q4

What is the approximate above water HEIGHT (in feet) of your tallest vessel?

12

---

## Q5

What is the approximate maximum WIDTH (in feet) of your widest vessel?

6

---

**Q6**

What is the approximate maximum DRAFT (in feet) of your deepest vessel?

4

---

**Q7**

What is the bridge clearance requirement for your vessel?(measured in feet)

Vertical Clearance: **14**

Horizontal Clearance: **8**

---

Page 4

**Q8**

**Yes**

Do you use the channel under the Sebastian Inlet Bridge?

---

**Q9**

**Year-Round**

If yes, when do you transit this waterway?

---

**Q10**

**Respondent skipped this question**

If you do NOT use the Sebastian Inlet, please indicate why?

---

**Q11**

**No**

Do you use the Canaveral Barge Canal/Port Canaveral Inlet?

---

**Q12**

**Yes**

Do you use the Fort Pierce Inlet?

---

Page 5

**Q13**

**Yes**

Does the existing Sebastian Inlet Bridge vertical clearance meet your navigation needs?

---



**Q14**

If the existing bridge clearance is not adequate, what mean high water vertical clearance (in feet) would be necessary to make a replacement bridge suitable for your needs?

Total Feet: **25**

---

Page 6

**Q15**

**Yes**

Are you a Marina Owner or Sport Fishing Charter Operator?

---

**Q16**

**No Change**

What impact would changing the Sebastian Inlet Bridge Vertical Clearance have on your business?

---

**Q17**

**Respondent skipped this question**

Does your Marina facility have a fuel dock?

---

**Q18**

**Respondent skipped this question**

Does your Marina facility offer repair services?

---

Page 7

**Q19**

**Respondent skipped this question**

Please use the space below to comment on any navigation related issues regarding this waterway that were not covered in this survey. Please be as specific as you can with respect to actual navigational needs and requirements.

---

#177

**COMPLETE**

**Collector:** Web Link 1 (Web Link)  
**Started:** Monday, April 12, 2021 1:10:33 PM  
**Last Modified:** Monday, April 12, 2021 1:19:30 PM  
**Time Spent:** 00:08:57  
**IP Address:** 173.168.84.51

---

Page 2

**Q1**

Please tell us about yourself:

Name	<b>Timothy Neuman</b>
Address	<b>410 Thrush Dr</b>
City	<b>Satellite Beach</b>
State	<b>FL</b>
Zip Code	<b>32937</b>
Email Address	<b>captneuman@gmail.com</b>
Phone Number	<b>3059922380</b>

---

**Q2**

Are you responding to this survey as: (check all that apply)

**Recreational Boat Owner,**  
**Commercial Vessel Operator,**  
**Resident,**  
**Park User,**  
Other (please specify):  
I was Captain of the Lifeguards at the Sebastian State Park

---

**Q3**

If you are a boat owner or operator, what type of boat(s) do you own or operate? (check all that apply)

**Power Boat,**  
**Sail Boat,**  
**Fishing Boat**

---

Page 3

**Q4**

What is the approximate above water HEIGHT (in feet) of your tallest vessel?

34'

---

**Q5**

What is the approximate maximum WIDTH (in feet) of your widest vessel?

14'

---

**Q6**

What is the approximate maximum DRAFT (in feet) of your deepest vessel?

5'

---

**Q7**

What is the bridge clearance requirement for your vessel?(measured in feet)

Vertical Clearance: **36'**

Horizontal Clearance: **16'**

---

Page 4

**Q8**

**Yes**

Do you use the channel under the Sebastian Inlet Bridge?

---

**Q9**

If yes, when do you transit this waterway?

**Year-Round,  
Day (AM),  
Night (PM)**

---

**Q10**

**Respondent skipped this question**

If you do NOT use the Sebastian Inlet, please indicate why?

---

**Q11**

**Yes**

Do you use the Canaveral Barge Canal/Port Canaveral Inlet?

---

**Q12**

**Yes**

Do you use the Fort Pierce Inlet?

---

Page 5

**Q13**

**Yes**

Does the existing Sebastian Inlet Bridge vertical clearance meet your navigation needs?

---

**Q14**

**Respondent skipped this question**

If the existing bridge clearance is not adequate, what mean high water vertical clearance (in feet) would be necessary to make a replacement bridge suitable for your needs?

---

---

Page 6

**Q15**

**Yes**

Are you a Marina Owner or Sport Fishing Charter Operator?

---

**Q16**

**No Change**

What impact would changing the Sebastian Inlet Bridge Vertical Clearance have on your business?

---

**Q17**

**Respondent skipped this question**

Does your Marina facility have a fuel dock?

---

**Q18**

**Respondent skipped this question**

Does your Marina facility offer repair services?

---

---

Page 7

**Q19**

Please use the space below to comment on any navigation related issues regarding this waterway that were not covered in this survey. Please be as specific as you can with respect to actual navigational needs and requirements.

Making the vertical clearance higher will not fix anything because the inlet is still too shallow for larger vessels ie sailboats!

Please just fix the existing bridge and dredge out in front of the north jetty

Unless you plan to make the entire channel to the ICW at least 7' deep there is no legitimate reason to make the bridge higher

And as for bicycles they have been using the bridge for a long time just like it is and in most cases the bike path along A1A is not really used by bicycles they tend to use the road

---

# #201

**COMPLETE**

**Collector:** Web Link 1 (Web Link)  
**Started:** Monday, April 12, 2021 8:49:53 PM  
**Last Modified:** Monday, April 12, 2021 8:53:34 PM  
**Time Spent:** 00:03:40  
**IP Address:** 108.72.196.103

---

Page 2

## Q1

Please tell us about yourself:

Name	<b>Sonny Richards</b>
Address	<b>8105 126th st</b>
City	<b>Sebastian</b>
State	<b>FL</b>
Zip Code	<b>32958</b>
Email Address	<b>32958</b>
Phone Number	<b>7726632922</b>

---

## Q2

**Commercial Vessel Operator**

Are you responding to this survey as: (check all that apply)

---

## Q3

**Power Boat**

If you are a boat owner or operator, what type of boat(s) do you own or operate? (check all that apply)

---

Page 3

## Q4

What is the approximate above water HEIGHT (in feet) of your tallest vessel?

16

---

## Q5

What is the approximate maximum WIDTH (in feet) of your widest vessel?

9

---

**Q6**

What is the approximate maximum DRAFT (in feet) of your deepest vessel?

24

---

**Q7**

What is the bridge clearance requirement for your vessel?(measured in feet)

Vertical Clearance: **20**

---

---

Page 4

**Q8**

**Yes**

Do you use the channel under the Sebastian Inlet Bridge?

---

**Q9**

**Year-Round,**

If yes, when do you transit this waterway?

**Day (AM),**

**Night (PM)**

---

**Q10**

**Respondent skipped this question**

If you do NOT use the Sebastian Inlet, please indicate why?

---

**Q11**

**No**

Do you use the Canaveral Barge Canal/Port Canaveral Inlet?

---

**Q12**

**Yes**

Do you use the Fort Pierce Inlet?

---

Page 5

**Q13**

**Yes**

Does the existing Sebastian Inlet Bridge vertical clearance meet your navigation needs?

---

**Q14**

Respondent skipped this question

If the existing bridge clearance is not adequate, what mean high water vertical clearance (in feet) would be necessary to make a replacement bridge suitable for your needs?

---

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**Q15**

Yes

Are you a Marina Owner or Sport Fishing Charter Operator?

---

**Q16**

No Change

What impact would changing the Sebastian Inlet Bridge Vertical Clearance have on your business?

---

**Q17**

Yes

Does your Marina facility have a fuel dock?

---

**Q18**

No

Does your Marina facility offer repair services?

---

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**Q19**

Respondent skipped this question

Please use the space below to comment on any navigation related issues regarding this waterway that were not covered in this survey. Please be as specific as you can with respect to actual navigational needs and requirements.

---

#220

**COMPLETE**

**Collector:** Web Link 1 (Web Link)  
**Started:** Tuesday, April 13, 2021 3:30:00 PM  
**Last Modified:** Tuesday, April 13, 2021 3:34:02 PM  
**Time Spent:** 00:04:02  
**IP Address:** 50.89.224.113

---

Page 2

**Q1**

Please tell us about yourself:

Name	<b>Mike Catania</b>
Address	<b>1415 Florence st</b>
City	<b>Malabar</b>
State	<b>FL</b>
Zip Code	<b>32950</b>
Email Address	<b>blkdia2227@msn.com</b>

---

**Q2**

Are you responding to this survey as: (check all that apply)

**Recreational Boat Owner,  
Resident,  
Park User**

---

**Q3**

If you are a boat owner or operator, what type of boat(s) do you own or operate? (check all that apply)

**Power Boat**

---

Page 3

**Q4**

What is the approximate above water HEIGHT (in feet) of your tallest vessel?

40'

---

**Q5**

What is the approximate maximum WIDTH (in feet) of your widest vessel?

17

---



**Q6**

What is the approximate maximum DRAFT (in feet) of your deepest vessel?

5

---

**Q7**

What is the bridge clearance requirement for your vessel?(measured in feet)

Vertical Clearance: **40**

Horizontal Clearance: **20**

---

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**Q8**

**Yes**

Do you use the channel under the Sebastian Inlet Bridge?

---

**Q9**

**Year-Round,**

If yes, when do you transit this waterway?

**Day (AM),**

**Night (PM)**

---

**Q10**

**Respondent skipped this question**

If you do NOT use the Sebastian Inlet, please indicate why?

---

**Q11**

**No**

Do you use the Canaveral Barge Canal/Port Canaveral Inlet?

---

**Q12**

**Yes**

Do you use the Fort Pierce Inlet?

---

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**Q13**

**Yes**

Does the existing Sebastian Inlet Bridge vertical clearance meet your navigation needs?

---

**Q14**

If the existing bridge clearance is not adequate, what mean high water vertical clearance (in feet) would be necessary to make a replacement bridge suitable for your needs?

Total Feet: **40**

---

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**Q15**

**Yes**

Are you a Marina Owner or Sport Fishing Charter Operator?

---

**Q16**

**Positive Impact**

What impact would changing the Sebastian Inlet Bridge Vertical Clearance have on your business?

---

**Q17**

**Respondent skipped this question**

Does your Marina facility have a fuel dock?

---

**Q18**

**Respondent skipped this question**

Does your Marina facility offer repair services?

---

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**Q19**

**Respondent skipped this question**

Please use the space below to comment on any navigation related issues regarding this waterway that were not covered in this survey. Please be as specific as you can with respect to actual navigational needs and requirements.

---

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# **ATTACHMENT J**

## **U.S. Coast Guard Navigation Impact Data Requirements**

## Navigation Impact Data Requirements

This appendix identifies the detailed elements, to include guide clearances on waterways, which are considered on a case-by-case basis when making a determination based on the reasonable needs of navigation.

The Coast Guard Bridge Program “ensures Marine Safety, Security, and Stewardship and contributes to the freedom of navigation and the nations Marine Transportation System through its authority to approve the location and plans of all new bridges, modifications of existing bridges, international bridges, and causeways in or over navigable waterways of the United States.”

In accordance with 33 CFR § 116.01, “[a]ll bridges are obstructions to navigation and are tolerated only as long as they serve the needs of land transportation while allowing for the reasonable needs of navigation.”

Authority for the permitting process is found in 33 U.S.C. § § 401, 491, 525-533, the International Bridge Act of 1972 and various acts of Congress. Pursuant to the Rivers and Harbors Act, 33 U.S.C. § 401 “No bridge shall at any time unreasonably obstruct the free navigation of any navigable waterway of the United States.” In addition, per 33 U.S.C. § 494 “No bridge erected or maintained under the provisions of sections 491 to 498 of this title, shall at any time unreasonably obstruct the free navigation of the waterway over which it is constructed.”

It is important to note that initial determinations of reasonable needs are based on facts and circumstances at the time of the proposal and may later be unreasonable if facts and circumstances surrounding the proposal change over time or are discovered during the permit application and public notice process.

## Navigation Impact Report

The permitting improvement provisions found in the 2014 Memorandum of Understanding between the U.S. Coast Guard, the Federal Highway Administration, the Federal Transit Administration, and the Federal Railroad Administration requires applicants with Department of Transportation funded projects to prepare a navigation impact report in order to analyze the navigational impacts of the bridge design alternatives. Submission of this report is highly encouraged for all other applicants to avoid delays and head off potential conflicts in the permit application process.

Navigation impact reports provide the most accurate picture of current and prospective navigation on a waterway. The project sponsor or potential permit applicant prepares the report early in project planning, and updates periodically during project development because waterways and waterway usage are dynamic and may change over time.

## Navigation Impact Needs Analysis

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WATERWAY DATA REQUIREMENTS (as required by the Coast Guard, include the below information as an attachment to the application letter per Appendix A of the BPAG)

**A. Means of Data Collection:** See BPAG for additional information.

1. The Coast Guard and applicants can use a variety of tools to gather information to assist in the determination of appropriate bridge navigational clearances, to include but not be limited to:
  - a. Conducting site visits and ride-alongs with qualified vessel operators on the waterway, obtaining firsthand knowledge of navigational needs through the proposed bridge site;
  - b. The Coast Guard issues a public notice to solicit comments for navigational concerns;
  - c. The Coast Guard advertises the bridge project in the Local Notice to Mariners;
  - d. Conduct waterway user surveys;
  - e. Conduct a waterways study (typically applicant-prepared);
  - f. The Coast Guard reviews navigational information in the environmental documentation prepared by the applicant;
  - g. The Coast Guard reviews bridge tender logs;
  - h. h. Conduct public meetings;
  - i. Consult with and conducting interagency meetings;
  - j. Consult guide clearances for the waterway;
  - k. Contact regional planning interests for current and future plans that will impact the waterway;
  - l. Consult USACE methodology in USACE Engineer Manuals EM-1110-2-1611 and EM-1110-2-1613 for determining horizontal and vertical clearance requirements (see Enclosure (2) for sample methodology);
  - m. Consult with local Coast Guard Sectors, Captains of the Port, Coast Guard Stations and Coast Guard Cutters prior to making navigation determinations since they offer a wealth of professional experience in navigational issues; and
  - n. When available, waterborne commerce statistics (collected by the U.S. Department of Commerce) should be reviewed and incorporated into the waterway evaluation as they provide cargo volumes and vessel trips for commercial shipments by waterway reach.
2. The Coast Guard will make every effort to involve members of the navigation community and other interested or affected parties early in the Coast Guard Bridge Program consideration of navigational needs. It is also imperative that dialogue be maintained with the navigational community throughout the project development and approval processes so that changes in waterway usage, particularly during lengthy project developments are documented and included in design decision making.

Navigation impact reports should identify and/or consider:

**B. Present governing bridge(s) or aerial structure(s) on the waterway:**

## Navigation Impact Needs Analysis

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1. Identify all bridges upstream and downstream of the proposed bridge site and their existing horizontal and vertical clearances to determine the existing minimum horizontal and vertical clearances (including overhead transmission line clearances). Provide in table format.

(If all bridges downstream have the same minimum clearance, state instead of the above requested information.)

Adjacent bridges are all located along the ICW and cannot be classified as upstream or downstream of the Sebastian Inlet Bridge. The bridges nearest to the Sebastian Inlet Bridge are the US 192/Melbourne Causeway Bridge to the north and the SR 510/Wabasso Road Bridge to the south, both of which cross the ICW. The US 192/Melbourne Causeway Bridge is approximately 17.5 miles north of where the ICW intersects with the channel that leads east to the Sebastian Inlet. This bridge has a vertical clearance of 65-feet and horizontal clearance of 117-feet. SR 510/Wabasso Road Bridge has a vertical clearance of 65-feet and horizontal clearance of 90-feet.

2. Does the proposed bridge(s) match (or is greater than) the navigational clearance of existing structures on the waterway?

The vertical clearance for a new bridge will be determined by coordination with the USCG. The bridge is located adjacent to and is surrounded by the Sebastian Inlet State Park which has natural and cultural resources. The Sebastian Inlet is skewed at a 70 degree ENE angle from the centerline of SR A1A. The inlet experiences extremely strong currents and the National Oceanic and Atmospheric Association's (NOAA) Nautical Chart 11472 has a caution for the inlet which states "Passage through the inlet is not recommended without local knowledge of all hazardous conditions affecting this area." Clearances determined by the USCG are a critical element for bridge design and alignment that will be completed as part of the PD&E Study.

3. What is the most restrictive horizontal clearance on the waterway? (This may be a fixed bridge downstream/upstream of the proposed structure, a low hanging power line downstream/upstream of the bridge(s), or it may be some other structure that limits horizontal clearance. Sometimes the existing to-be-replaced bridge(s) is the most restrictive structure.)

a. Milepoint: N/A

b. Horizontal clearance:

The Sebastian Inlet Bridge is the only structure with horizontal clearance on the waterway. The Sebastian Inlet Bridge has a horizontal clearance of 150-feet. The US 192/Melbourne Causeway Bridge has a horizontal clearance of 117-feet and the SR 510/Wabasso Road Bridge has a horizontal clearance of 90-feet.

4. What is the most restrictive vertical clearance on the waterway? (This may be a fixed bridge downstream/upstream of the proposed structure, a low hanging power line downstream/upstream of the bridge(s), or it may be some other structure which limits vertical clearance. Sometimes the existing to-be-replaced bridge(s) is the most restrictive structure.)

a. Milepoint: N/A

b. Vertical clearance:

The Sebastian Inlet Bridge is the only structure with vertical clearance on the waterway. The Sebastian Inlet Bridge has a design vertical clearance of 39-feet. Existing conditions indicate a vertical clearance of 37-feet. The US 192/Melbourne Causeway Bridge has a vertical clearance of 65-feet and the SR 510/Wabasso Road Bridge has a vertical clearance of 65-feet.

## Navigation Impact Needs Analysis

5. Will the proposed bridge(s) become the most restrictive/obstructive structure across the waterway?

The Sebastian Inlet Bridge is the only structure on the waterway and therefore, would be the most restrictive structure across the waterway.

**C. Waterway characteristics:** (All domestic bridge navigational clearances should be stated in linear feet in decimal form vs. feet and inches. All international bridge navigational clearances should be stated in linear unit of measure as well as the metric equivalent.)

1. Various waterway stages: (Datum that is used).

NOAA has a subordinate station, Station ID 8722004, located at the Sebastian Inlet Bridge. The following datum information is based on NAVD88:

TIDAL DATUM TYPE	SYMBOL	ELEVATION (NAVD-FEET)
Mean Higher High Water	MHHW	0.00
Mean High Water	MHW	-0.19
North American Vertical Datum	NAVD 88	0.00
Mean Sea Level	MSL	-1.20
Mean Tide Level	MTL	-1.24
Mean Low Water	MLW	-2.30
Mean Lower Low Water	MLLW	-2.43

2. Natural flow of the waterway including currents, waterway velocity, water direction, and velocity fluctuations (seasonal, daily, hourly, etc.), that might affect navigation.

The Sebastian Inlet is a tidal waterway affected by tidal cycles rather than seasonal rainfall patterns. Currents run perpendicular to the alignment of the bridge moving to the east during outgoing (ebb) tides and to the west during incoming (flood) tides. Observed currents within the Inlet were extremely strong throughout the entire survey. Velocity of the tidal currents have been reported in the NOAA US Coast Pilot to reach 10 knots, with turbulent conditions between the bridge and the end of the jetties.

3. Width of the waterway at bridge site:

The Sebastian Inlet Bridge opening between bridge fenders is 150-feet. The total width of the Sebastian Inlet waterway at the bridge is approximately 525-feet wide.

4. Depth of the waterway and elevation fluctuations at bridge site: [List the depth at each waterway bridge stage (ex. Range of tides, average high water elevation, etc.)].

Depth of the Inlet channel is mostly consistent throughout but does vary due to the presence of scour holes. Elevation and water depth are presented in the table below.

TIDAL DATUM TYPE	SYMBOL	ELEVATION (FEET NAVD88)	WATER DEPTH (FEET)
Mean Higher High Water	MHHW	0.00	15

## Navigation Impact Needs Analysis

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Mean High Water	MHW	-0.19	15
North American Vertical Datum	NAVD 88	0.00	15
Mean Sea Level	MSL	-1.24	14
Mean Tide Level	MTL	-1.20	14
Mean Low Water	MLW	-2.30	13
Mean Lower Low Water	MLLW	-2.43	13

5. Waterway layout and geometry: (For example, is there a dam or lock; does the elevation of the approach impact the required bridge(s) clearance?)

There are no dams or locks. The elevation of the approach does not impact the required bridge clearance.

6. Channel and waterway alignment: Location of the channel(s)

The channel alignment is approximately 70 degrees ENE from the centerline of SR A1A. The 3,120-foot channel connecting the inlet west to the ICW was dredged to a varying width of 125-feet to 150-feet and to varying depths of 9-feet to 12-feet.

7. Other limiting factors: (For example, bends in the waterway within one-half mile of project site, hindrances to free navigation, fog, hydraulics, etc.)

On the 0.5 mile approach to the bridge from the west there is no significant bend in the channel or waterway. Passing under the bridge the waterway and channel begin to bend from 70 degrees ENE to E and then ESE. At this location there are jetties located east of the Inlet, jutting out from the north and south shorelines. The northern jetty extends approximately 600 feet from the shoreline and the southern jetty extends approximately 300-feet.

**D. Do vessels that engage in emergency operations (i.e., law enforcement, fire, rescue, emergency dam repair, etc.), national defense activities (i.e., cruisers, fuel barges, munitions ships, etc.) or channel maintenance (i.e., dredges, dam, and levee repair, etc.) operate on the waterway? If yes, describe the vessels and provide the following information:**

No, vessels do not engage in emergency operations at this location.

1. Does levee maintenance, bridge work (other bridges), channel maintenance and emergency operations upstream of bridge require certain vessels to transit the waterway?

Not applicable

2. Does the proposed bridge(s) impact USCG and/or other government vessels' ability to transit the bridge(s) to conduct mission essential functions (icebreakers, patrols, etc.)?

Not applicable

3. Vessels using the waterway during the proposed bridge(s) lifespan (should include):

See Attachment F 2021 Navigation Survey Results.

o. Vessel name;

p. Registration/documentation numbers;

q. Vessel type;



## Navigation Impact Needs Analysis

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- r. Vessel owner contact information (company/individual name, address, contact info.);
  - s. Primary vessel mooring location (include waterway milepoint, if known);
  - t. Vessel overall length;
  - u. Vessel beam;
  - v. Vessel draft (depth of hull below waterline at full load);
  - w. Vessel air draft (height of the highest fixed point of the vessel above the waterline, when empty);
  - x. Specialized vessels that use the waterway (e.g., vessels which have limited maneuverability due to inherent design or mode of operation);
  - y. Safety margin required by vessel to navigate through the bridge(s);
  - z. Vessel transit frequencies under proposed bridge(s), transit speeds, and load configurations; and
  - aa. Vessel traffic characteristics (to include if tug assist is required for transit through the bridge(s) due to limited horizontal clearance).
4. Will the proposed bridge(s) provide the horizontal and vertical clearances for the safe, efficient passage of the largest of these vessels? Why?

The alternatives being evaluated for this bridge replacement project include a fixed span bridge at the vertical clearance height of 39-feet with a horizontal clearance of 150-feet (existing). At a vertical clearance of 65-feet, the impacts to the natural and physical environments are significantly increased from a bridge at the existing vertical clearance. Maintaining a vertical clearance of 39-feet will also reduce impacts to the adjacent natural, cultural, and physical resources and the Sebastian Inlet State Park.

The April 2021 Navigation Survey results showed the tallest vessel passing under the Bridge is 34-feet. A fixed span bridge with a vertical clearance of 40 feet will impact 6% of those vessels that do not transit the inlet due to vertical clearance requirements above 39 feet. These vessels range in height from 40 to 54-feet. Inlet channel depth is a limiting factor for larger vessels to pass along with variable channel depth from the Inlet west to the ICW.

Vessel traffic passing under the Bridge is also limited by the depth of the inlet channel which is relatively shallow and varies around a depth of 12-feet. Maintenance dredging of the channel is completed by the SID under their USACE dredge permit.

Hazardous conditions also affect traversing the Inlet. The Inlet experiences extremely strong currents which requires most vessels to have enough power to pass safely. The National Oceanic and Atmospheric Association's (NOAA) Nautical Chart 11472 has a caution for the Inlet which states "Passage through the inlet is not recommended without local knowledge of all hazardous conditions affecting this area." The small percentage of vessels which require an increased vertical clearance travel the ICW to the north or south.

5. If no, estimate the number of vessels in each of the above categories unable to pass through the proposed bridge(s). Give the name, length overall (LOA), beam, draft, and height of highest fixed point above the waterline for vessels affected by the bridge(s).

6. Can these vessels be modified (i.e., folding mast, relocation, or equipment, etc.) without decreasing their respective response times? If so, name the vessels.

## Navigation Impact Needs Analysis

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7. If modifications are feasible, state the name of the vessel(s), their trip frequency, the necessary modifications, the cost of the modification(s) and who will pay for them (i.e., vessel owner, applicant, other).
8. Provide any additional information concerning the potentially impacted or burdened users of the waterway as well as the future use of the waterway.

**E. Has the United States Corps of Engineers (USACE) completed, or does it plan to complete a federal navigation project on the waterway? If yes, provide the following information:**

1. Project name, downstream/upstream milepoints, depth, type of project, scope, status of project and other limiting factors.

No

2. Whether there is/was a “design vessel” used in planning the channel? What is/was the design vessel? Was the design vessel reviewed by the Coast Guard?

There was no design vessel used in the original planning of the channel.

3. The following specifications of the vessel for which the navigation project is or will be designed: LOA, beam, draft, and height of highest fixed point above the waterline.
4. Will the proposed bridge(s) provide the horizontal and vertical clearances necessary for the safe, efficient passage of the vessel for which the navigation project was designed?
5. If so, can the vessel be modified to clear the proposed bridge(s) without substantially increasing operating costs?
6. If modifications are feasible, state the necessary modifications, costs of any modification(s), and who will pay for the modifications.
7. Are there projected changes in waterway usage based upon anticipated waterway improvement projects?
8. Does the proposed bridge(s) impact USACE ability to transit the bridge(s) in a Federal project channel?

**F. Describe the present and prospective recreational navigation: Will the proposed bridge(s) affect the safe, efficient movement of any segment of the present or prospective recreational fleet operation on the waterway? If yes, provide the following information:**

Based on information from this survey, vessel use of the waterway will not be impacted by replacement of the fixed span bridge with a vertical clearance of 40 feet. Data from the navigation survey indicates that vessel traffic traveling the ICW is limited by the vertical clearances of the US 192/Melbourne Causeway Bridge to the north and the SR 510/Wabasso Road Bridge to the south. These bridges are sufficient for ICW traffic with vertical clearances of 65-feet and horizontal clearances of 80-feet and 90-feet respectively. Any vessel traffic in the study area which exceeds these requirements would be locally moored vessels that utilize the ICW between the US 192/Melbourne Causeway Bridge and the SR 510/Wabasso Road Bridge.

The April 2021 Navigation Survey results showed the tallest vessel passing under the Bridge is 34-feet. A fixed span bridge with a vertical clearance of 40 feet will impact 6% of those vessels that do not transit the inlet due to vertical clearance requirements above 39 feet. These vessels range in height from 40 to 54-feet. Inlet channel depth is a limiting factor for larger vessels to pass along with variable channel depth from the Inlet west to the ICW.

## Navigation Impact Needs Analysis

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1. Vessels utilizing the waterway during the proposed bridge(s) lifespan. (Information in this bullet should include:)

[See Attachment F 2021 Navigation Survey Results.](#)

- a. Vessel name;
  - b. Registration/documentation numbers;
  - c. Vessel type;
  - d. Vessel owner contact information (company/individual name, address, contact info.);
  - e. Primary vessel mooring location (include waterway milepoint, if known);
  - f. Vessel overall length;
  - g. Vessel beam;
  - h. Vessel draft (depth of hull below waterline at full load);
  - i. Vessel air draft (height of the highest fixed point of the vessel above the waterline, when empty);
  - j. Specialized vessels that use the waterway (e.g., vessels which have limited maneuverability due to inherent design or mode of operation);
  - k. Safety margin required by vessel to navigate through the bridge(s);
  - l. Vessel transit frequencies under proposed bridge(s), transit speeds, and load configurations; and
  - m. Vessel traffic characteristics (to include if tug assist is required for transit through the bridge(s) due to limited horizontal clearance).
2. What is the estimated percentage of the recreational fleet, which may be affected by the proposed bridge(s)?

[Based on the results of the April 2021 Navigation Survey \(Attachment F\), the tallest vessel passing under the Bridge is 34-feet. A fixed span bridge with a vertical clearance of 39-feet will impact 6% of those vessels that do not transit the inlet due to vertical clearance requirements above 39-feet. These vessels range in height from 40 to 54-feet. Inlet channel depth is a limiting factor for larger vessels to pass along with variable channel depth from the Inlet west to the ICW.](#)

3. Will the proposed bridge(s) eliminate the access of these vessels to existing or planned commercial, water-oriented facilities (i.e., restaurants, shops, recreational areas, marinas, etc.) in the vicinity of the proposed bridge(s)? If yes, describe these facilities.

[No.](#)

4. Is it feasible to modify the affected segments of the fleet to clear the proposed bridge(s) without substantially increasing operating costs? If yes, name the vessel(s), state the necessary modifications, cost of modifying each vessel and person or entity responsible for financing the modifications.

[Unknown at this time.](#)

5. Provide any additional information concerning the potentially impacted or burdened users of the

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## Navigation Impact Needs Analysis

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waterway as well as the future use of the waterway.

Based on the results of the April 2021 Navigation Survey (Attachment F), the tallest vessel passing under the Bridge is 34-feet. A fixed span bridge with a vertical clearance of 39-feet will impact 6% of those vessels that do not transit the inlet due to vertical clearance requirements above 39-feet. These vessels range in height from 40 to 54-feet. Inlet channel depth is a limiting factor for larger vessels to pass along with variable channel depth from the Inlet west to the ICW.

**NOTE:** Check with local USACE District Office, Chamber of Commerce or other organizations for proposed marinas, recreational areas, shops, etc.

**G. Describe** the present and waterway and prospective commercial navigation and the cargoes moved on the waterway: **Will the proposed bridge(s) affect the safe, efficient movement of any segment of the present or prospective commercial fleet operating on the waterway? If yes, provide the following information:**

Not applicable.

1. Vessel name;
2. Registration/documentation numbers;
3. Vessel type;
4. Vessel owner contact information (company/individual name, address, contact info.);
5. Primary vessel mooring location (include waterway milepoint, if known); vessel overall length;
6. Vessel beam;
7. Vessel draft (depth of hull below waterline at full load);
8. Vessel air draft (height of the highest fixed point of the vessel above the waterline, when empty);
9. Specialized vessels that use the waterway (e.g., vessels which have limited maneuverability due to inherent design or mode of operation);
10. Safety margin required by vessel to navigate through the bridge(s);
11. Vessel transit frequencies under proposed bridge(s), transit speeds, and load configurations; and
12. Vessel traffic characteristics (to include if tug assist is required for transit through the bridge(s) due to limited horizontal clearance).
13. Does the proposed bridge(s) impact existing and future cruise ship ports-of-call/terminals?
14. Does the proposed bridge(s) impact ports supporting post-Panamax vessels?
15. Does the proposed bridge(s) impact vessels that produce unique products for the region?
16. Does the proposed bridge(s) impact vessels that require helper boats/tugs? (Note the combined clearance requirement of the vessel and the helper boat/tug.)
17. Document annual cargo movements (cargo types and quantities);
18. State the estimated percentage of the commercial fleet, which may be affected by the proposed

## Navigation Impact Needs Analysis

bridge(s).

19. Will the proposed bridge(s) clearance impact present and/or prospective upstream commercial activity, e.g., jobs and economic growth and development?

20. If yes, address any existing or planned commercial/industrial developments negatively affected by the proposed clearances and discuss the economic impacts the proposed clearances will have on these businesses:

21. Document the foreseeable needs to future navigation;

22. Provide existing and historical navigational use and waterway conditions;

23. Provide input from waterway dependent facilities concerning future use;

24. Describe land use zoning along the waterway (particularly within the riparian zone);

25. Describe future vessel size and traffic trends;

26. Include input from states based on state development plans;

27. Include input from facilities based on business plans;

28. Document local commercial shipping and other businesses affected by this restriction. Note: the next opportunity to adjust clearances for navigation is usually between 50-100 years unless interim waterway improvement projects include the cost of bridge alterations.

29. Is it feasible to modify the restricted vessels to clear the proposed bridge(s) without substantially increasing operating costs? If yes, name the vessel(s), state the necessary modifications, cost of modifying each vessel and company or entity responsible

30. Provide any additional information concerning the potentially impacted or burdened users of the waterway as well as the future use of the waterway.

### **H. Identify the name and contact information for marine facilities located within a 3-mile radius of the proposed project (public boat ramps, marinas or major docking facilities, boat repair facilities, etc.:**

Marine facilities located within a 3-mile radius of the Sebastian Inlet Bridge are listed in the following table.

MARINE FACILITY NAME	MAXIMUM VESSEL LENGTH (FEET)	TOTAL / TRANSIENT SLIPS	APPROACH / DOCKSIDE DEPTH (FEET)
Sebastian Inlet Marina 8685 US Hwy 1 Micco, FL 32976	45	25 / 4	5 / 5
Capt'n Butchers Marina 1732 Indian River Drive Sebastian, FL 32958	60	25 / 4	5 / 5
Fins Marina 1660 N Indian River Drive Sebastian, FL 32958	65	78 / 10	6 / 6

## Navigation Impact Needs Analysis

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MARINE FACILITY NAME	MAXIMUM VESSEL LENGTH (FEET)	TOTAL / TRANSIENT SLIPS	APPROACH / DOCKSIDE DEPTH (FEET)
Captain Hiram's Sebastian 1580 US 1 Sebastian, FL 32958	50	46 / 14	5 / 5

**I. Will the proposed bridge(s) block access of any vessel presently using local service facilities (i.e., repair shops, parts distributors, fuel stations)? If yes, provide the following information:**

No

- Describe the facilities impacted and estimate the number of vessels currently using these facilities.
  - Vessel information should include the following for each blocked vessel:
    - Vessel name;
    - Registration/ documentation numbers;
    - Vessel type;
    - Vessel owner contact information (company/individual name, address, contact info);
    - Primary vessel mooring location (include waterway milepoint, if known); vessel overall length;
    - Vessel beam;
    - Vessel draft (depth of hull below waterline at full load); and
    - Vessel air draft (height of the highest fixed point of the vessel above the waterline, when empty);
- Could any of these facilities be considered critical infrastructure, key resources, or important/unique U.S. industrial capability (i.e., are these facilities unique or one of only a few of the type in the area?) Address whether the proposed clearances negatively affect those facilities and their customers.
- What economic impact will loss of access have on these facilities? Include estimated dollar amount to support Commandant and DHS goals.
- What is the distance to alternate service facilities capable of servicing the affected vessels? Describe the facilities.
- Will use of these alternate facilities substantially increase vessel operation affected vessels? Describe the facilities.
- Is it feasible to modify the affected vessels to clear the proposed bridge(s)?
- If yes, state the name, necessary modifications, cost of modifying each vessel and who will pay for the modifications.

**J. Are alternate routes bypassing the proposed bridge(s) available for use by vessels unable to pass the proposed bridge(s)? If yes, provide the following information:**

Yes.

## Navigation Impact Needs Analysis

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Vessel traffic traveling the ICW is limited by the vertical clearances of the US 192/Melbourne Causeway Bridge to the north and the SR 510/Wabasso Road Bridge to the south. These bridges are sufficient for ICW travel with vertical clearances of 65-feet and horizontal clearances of 80-feet and 90-feet respectively. Any vessel traffic in the study area which exceeds these requirements would be locally moored vessels that utilize the ICW between the US 192/Melbourne Causeway Bridge and the SR 510/Wabasso Road Bridge.

Based on responses received from the 2021 Navigation Survey 63 percent use the channel under the Bridge. The majority of respondents that transit the waterway indicated year round use primarily during the daytime. Of these responses, 30 percent use the Canaveral Barge Canal/Port Canaveral Inlet and 45 percent use the Fort Pierce Inlet.

1. State the number of vessels that will be forced to use alternate routes.

None based on information from the 2021 Navigation Survey (Attachment XX). In responding to whether the Bridge vertical clearance meets navigation needs, 92 percent of Inlet users indicated their navigation needs are met. Fifteen boat owner respondents indicated that they do not use the Inlet. The reasons are as follows:

- 7 – vessel too tall
- 5 – non ocean going vessel
- 2 – inlet too dangerous
- 1 – inlet too crowded

2. For each vessel identified in section H1.a. above, include the following information:

- a. Vessel name;
- b. Registration/documentation numbers;
- c. Vessel type;
- d. Vessel owner contact information (company/individual name, address, contact info.);
- e. Primary vessel mooring location (include waterway milepoint, if known);
- f. Vessel overall length;
- g. Vessel beam;
- h. Vessel draft (depth of hull below waterline at full load);
- i. Vessel air draft (height of the highest fixed point of the vessel above the waterline, when empty); and
- j. Specialized vessels that use the waterway (e.g., vessels which have limited maneuverability due to inherent design or mode of operation);

3. Identify any alternate routes and provide the respective distances between the proposed bridge(s) and these routes.

4. Will use of these routes substantially increase the transit time and/or operating costs of the affected vessels? This relates to the mobility goals of the Commandant and DHS.

5. If yes, describe the impacts of increased transit time and/or operating costs.

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6. Is it feasible to modify these vessels to clear the proposed bridge(s)?
7. If yes, state the name, necessary modifications, cost of modifying each vessel and who will pay for these modifications.

**K. Will the bridge(s) prohibit the entry of any vessels to the local harbor of refuge? If yes, describe the harbor and provide the following information:**

Based on responses received from the 2021 Navigation Survey 6 percent of vessels with a vertical clearance requirement greater than 39-feet would be excluded.

1. What percentage of vessels currently using the harbor refuge will not be able to pass the proposed bridge(s) to gain access to that refuge? Describe the vessels.

Based on responses received from the 2021 Navigation Survey (Attachment F), 6 percent of vessels will not be able to pass the proposed 39-foot fixed span bridge alternative.

2. Provide vessel information for those vessels identified in J.1.:
  - a. Vessel name;
  - b. Registration/documentation numbers;
  - c. Vessel type;
  - d. Vessel owner contact information (company/individual name, address, contact info.);
  - e. Primary vessel mooring location (include waterway milepoint, if known);
  - f. Vessel overall length;
  - g. Vessel beam;
  - h. Vessel draft (depth of hull below waterline at full load);
  - i. Vessel air draft (height of the highest fixed point of the vessel above the waterline, when empty); and
  - j. Specialized vessels that use the waterway (e.g., vessels which have limited maneuverability due to inherent design or mode of operation);
3. Is it feasible to modify these vessels to clear the proposed bridge(s)?
4. If yes, state the name, necessary modification, cost of modifying each vessel and who will pay for the modifications.
5. If alternate refuges are available, describe them and state the distance of each from the present harbor of refuge.

**NOTE:** A harbor of refuge is defined as a naturally or artificially protected water area that provides a place of relative safety or refuge for commercial and recreational vessels traveling along the coast or operating in a region.

**L. Will the proposed bridge(s) be located within one-half mile of a bend in a waterway? If yes, describe the bend and provide the following information:**

Yes



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1. Is there sufficient distance between the bridge(s) and the bend to allow proper vessel alignment for the safe, efficient passage of vessels through the proposed bridge(s)?

Yes, there is a bend eastward of the bridge between the north and south jetties that vessels currently pass through.

If no, what factors make construction of the bridge(s) at an alternate location impractical?

**M. Are there other factors (i.e., dockages, lightering areas, existing bridges, etc.) located within one-half mile of the proposed bridge(s), which would create hazardous passage through the proposed structure? If yes, provide the following information:**

Passage is considered hazardous through the Inlet.

1. Describe the factors. (For example, construction impacts to navigation and waterway users, etc.)

Based on currents and tidal conditions, alignment of the inlet, and jetty locations navigation through the inlet can be challenging. With the proposed fixed span bridge alternative, prior to demolition of the existing bridge and during construction of the proposed replacement bridge, the proposed bridge would be in relatively close proximity to the existing bridge to maintain a similar roadway alignment. However, upon completion of the new bridge and transfer of traffic, the old bridge would be removed.

2. What mitigative measures are being recommended? (For example, navigation safety during construction, etc.) Why?

Layout of the proposed bridge will be in relatively similar alignment with the existing bridge. Signage, lighting, notice to mariners, and open radio communication will be required to safely maintain navigation during construction of the new structure.

**N. Do local hydraulic conditions (i.e., wave chop, cross currents, tides, shoals, etc.) increase the hazard of passage through the proposed bridge(s)? If yes, provide the following information:**

Yes.

3. Describe the conditions:

4. What mitigative measures are being recommended? Why?

**O. Do local atmospheric conditions (i.e., strong, prevailing winds, fog, rapidly developing storms, etc.) increase the hazard of passage through the proposed bridge(s)? If yes, provide the following information:**

Not significantly. There are no unusual weather patterns or unusual atmospheric conditions associated with the location.

1. Describe the conditions:

2. What mitigative measures are being recommended? Why?

**P. Have guide clearances been established for the waterway? If yes, provide the following information:**

No.

1. Horizontal guide clearance;

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2. Vertical guide clearance;
3. Do the proposed bridge(s) clearances differ from these guide clearances?
4. If yes, what factors justify deviating from these guide clearances?

**Q. Are there other natural or man-made conditions that affect navigation (atmospherics, exclusion zones, etc.)?**

No.

1. Describe the conditions:
2. What mitigative measures are being recommended? Why?

**R. State any other factors considered necessary for the safe, efficient passage of vessels through the proposed bridge(s)? Are clearance gauges needed? Why?**

Not applicable.

**S. Include a description of the impacts to navigation caused or which could be reasonably caused by the proposed bridge(s) including but not limited to: proposed construction methodology, proposed or prospective changes to the existing bridge(s) operating schedule (for movable bridges), and any proposed mitigation to all unavoidable impacts to navigation.**

Because this is replacement of an existing fixed span bridge, impacts to navigation caused by the proposed fixed span bridge alternative are not anticipated. As mentioned above, signage, lighting, notice to mariners, and open radio communication will be required by construction documents to safely maintain navigation during construction. Additionally, construction equipment will not be allowed to block any portion of the main navigation channel without prior approval of the USCG.

1. Conduct a navigational impact report and include a review of all bridges upstream and downstream of the proposed site to determine the minimum vertical and horizontal clearances available on the waterway.
2. If the proposed bridge(s) is fixed and is replacing an existing drawbridge with unlimited vertical clearance, the applicant must determine whether the proposed bridge(s) will accommodate existing and perspective navigation.

**T. Is there any proposed or completed mitigation for impacted waterway users? Are there any impacts that cannot be mitigated?**

Unknown at this time.

1. Can vessels and cargoes be partially disassembled/dismantled in order to transit the proposed bridge(s), and if so, is it economically reasonable? The Coast Guard must take into consideration a vessel's ability to adjust its operations without economic loss.
2. Adjustment or mitigations techniques may include using other routes, lowering electronics (GPS, radar, communication antennae, etc.), lowering crane booms, etc.
3. Are alternative routes available for vessel passage?
4. Can vessels transit at typical lower water stages (mean low water, mean pool level, etc.)?