

Replace US 64 Tyrrell County Bridge Number 7 over the Alligator River

TIP HB-0001

Project Information Package

MERGER TEAM CONCURRENCE POINT 3 and 4A MEETING

June 23, 2021

Meeting Objectives

The objectives of the Concurrence Point 3 and 4A (CP3&4A) meeting is to present relevant information to the HB-0001 project merger team in order to reach concurrence on Concurrence Point (CP) 3, “Least Environmentally Damaging Practicable Alternative (LEDPA)/ Preferred Alternative,” and CP 4A “Avoidance and Minimization,” for the proposed replacement of the Lindsey C. Warren Bridge (Tyrrell County Bridge No. 7).

Project Description

The North Carolina Department of Transportation (NCDOT) is beginning the planning and environmental studies for the proposed project, HB-0001, Replace US 64 Tyrrell County Bridge Number 7 over the Alligator River. The bridge replacement was previously addressed as part of a previous State of North Carolina (non-federal) Environmental Impact Statement (EIS) Study for the improvement of widening approximately 27 miles of US 64 in Tyrrell and Dare Counties (TIP R-2544/R-2545). The R-2544/2545 project had progressed through the Merger process and CP3 was achieved on February 14, 2013, and CP4A on December 17, 2014. The State environmental review process completed a draft Final Environmental Impact Statement, but the FEIS was not signed, and a Record of Decision was not reached. A Merger Screening Meeting was held on January 28, 2021, where it was determined that the HB-0001 project would proceed through the Merger process as a standalone project.

For the HB-0001 project, NCDOT proposes a two-lane, high-level, fixed-span bridge on the R-2544/2545 LEDPA centerline. This will allow the project to re-consider and potentially re-approve previous concurrence points based on the LEDPA alignment. Resources will be re-evaluated for the proposed study area as part of the HB-0001 project.

HB-0001 is included as an amendment to the 2020-2029 NCDOT State Transportation Improvement Program (STIP) and is programmed for planning and environmental studies only. NCDOT is preparing a federal Categorical Exclusion (CE; Type III) for the project, with Federal Highway Administration (FHWA) as the lead federal agency. NCDOT anticipates that the project will utilize previously established Merger decisions and continue through the Merger process.

Project History & Status

- Merger Screening meeting held January 28th, 2021, and project was placed into Merger.
- CP1 meeting held March 10th, 2021, and concurrence was received.
- CP2/2A meeting held April 21st, 2021, and concurrence was received.
- FHWA Type III Categorical Exclusion due in July 2021
- Project Schedule
 - Right of Way – July 2022 (tentative)
 - Let – July 2023 (tentative)

Project Cost

The project is currently unfunded in the 2020-2029 State Transportation Improvement Program (STIP); however, NCDOT anticipates securing federal monies for right of way acquisition and construction so the

project is moving forward under the assumption that it will be a federally funded project. Updated project cost estimates are shown in **Table 1** below:

Table 1: HB-0001 Project Cost Estimates (as of June 2021)

	Cost (\$)
Right of Way	Awaiting updated estimate
Utility	129,300
Construction	211,700,000
TOTAL	

Purpose and Need of the Project (CP1)

A virtual Concurrence Point 1 Meeting was held on March 10, 2021, where the project details and environmental features were presented and discussed. After reviewing the project data sheets and figures which showed the project vicinity, proposed study area, environment features, close ups of the bridge approaches, and the proposed alignment relative to the Alligator River National Wildlife Refuge boundary on the Dare County approach, the Merger Team reached concurrence on the following purpose and need:

The **NEED** for the proposed project

The current bridge is experiencing substantial deterioration due to its age and structural deficiencies resulting in ongoing maintenance problems, jeopardizing its ability to provide a reliable connection between Columbia and Manns Harbor, Manteo, and the Outer Banks. The **NEED** for the project is demonstrated by the following summary of existing and projected conditions:

- Replacement is critical due to the age and structural deficiency of the bridge. The existing bridge is a 2.83-mile long, 2-lane bridge consisting of 343 spans with a moveable steel swing span. The bridge was constructed in 1960 and is classified as structurally deficient with a 31.71 rating of a possible 100.
- The existing bridge requires costly, heavy maintenance on a regular basis and requires constant smaller maintenance activities to keep the swing mechanism operational.
- Approximately 1.5 years ago (November 2019) a \$17 million major rehab project was constructed, consisting of several hundred pile jackets, concrete repair, deck surfacing, and a major mechanical overhaul of the swing mechanism and controls. Similar rehabilitation efforts will be needed within the next 7 years.
- Even with the major rehabilitation, the Division is required to perform regular work to maintain the swing mechanism, which has a history of malfunction resulting in closure of the bridge to vehicular travel. The mechanical parts, gears, and controls are not readily available and require custom fabrication with long lead times to acquire and replace.
- The existing Lindsay C. Warren bridge traffic will need to be maintained during construction of the new bridge. Depending on duration of construction, regular maintenance of the existing bridge may also need to occur. Vertical navigational clearance will need to be approved by the US Coast Guard and marine passage along the Intracoastal Waterway will need to be maintained during construction.

The **PURPOSE** of the proposed project is to:

- To replace the existing 2.83-mile-long Lindsay C. Warren Bridge, Tyrrell County Bridge

number 7, carrying US 64 across the Alligator River with a two-lane, high-level, fixed-span bridge.

The Merger Team also reached concurrence on the project study area for HB-0001, as detailed below:

Project Study Area

The proposed project study area was developed to address the above-stated purpose and need for HB-0001. The project study area boundaries are fully depicted on **Figure 1** and **Figure 2** of the CP3/4A Merger Packet and are described as follows:

- The project study area extends 250-feet on either side of the proposed HB-0001 centerline and 50-feet on either side of the existing Lindsay C. Warren Bridge.

Detailed Study Alternatives Carried Forward/Bridging Alternatives (CP2/2A)

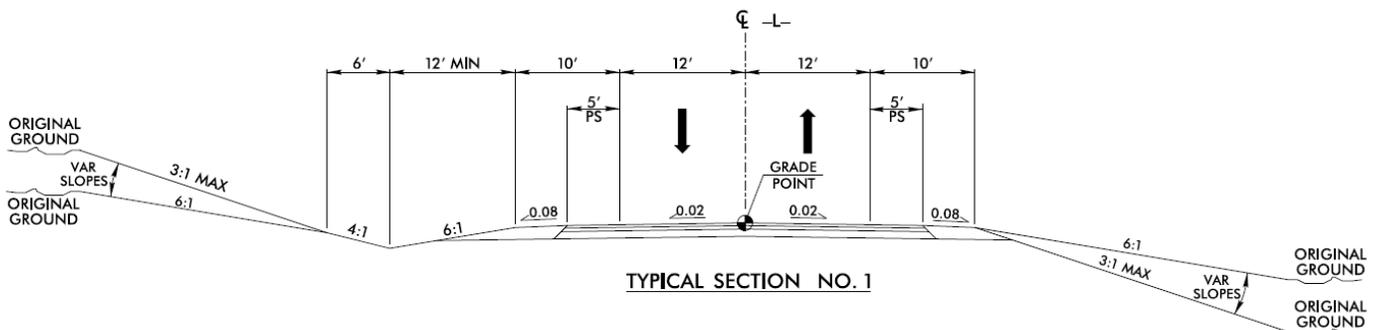
A virtual Combined Concurrence Point 2/2A Meeting was held on April 21, 2021, where impacts for the HB-0001 alignment alternative were presented in relation to the original alignment alternatives from the R-2544/R-2545 project. After reviewing the calculated impacts and figures which showed the project alignment alternatives, environment features, and close ups of the bridge approaches, the Merger Team reached concurrence on the following alternatives to carry forward for detailed design:

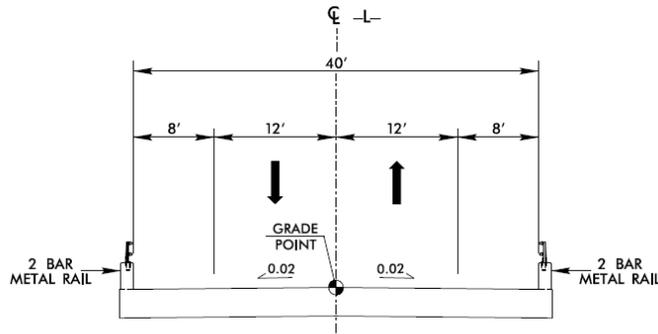
HB-0001 Corridor Alignment

Based on the discussions and information presented at the combined CP2/2A meeting in April 2021, the Merger Team concurred on carrying only the HB-0001 alignment forward for detailed study. That alternative was based on the original R-2544/R-2545 LEDPA alignment and included a slight modification of the approach on the eastern side of the bridge as it crosses into Dare County and the Alligator River National Wildlife Refuge (ARNWR). That modification was the result of minimization efforts developed in the R-2544/R-2545 CP4A merger meeting to avoid impacts entirely to the ARNWR. For purposes of the HB-0001 project, this refined alignment from the 4A meeting is referred to as the HB-0001 “red” alignment and is the only alignment being carried forward for detailed studies as part of this HB-0001 project.

HB-0001 Typical Section

The HB-0001 project proposes a 2-lane roadway and bridge, with 10’ shoulders (5’ paved on the approaches) and 8’ paved on the bridge. The proposed typical sections for the roadway approaches (Typical Section No. 1) and the bridge deck (Typical Section No. 2), are shown below:





TYPICAL SECTION NO. 2

Because the HB-0001 project’s Purpose (Concurrence Point 1) is “to replace the existing 2.83-mile-long Lindsey C. Warren Bridge, Tyrrell County Bridge number 7, carrying U.S. 64 across the Alligator River with a two-lane, high-level, fixed span bridge”, and the bridge replacement requires adjustments to the existing roadway approach alignments on the east and west sides of the bridge, the Merger Team concurred during the April 21, 2021 meeting that the specific bridge design details related to pier locations, span lengths, deck heights above the river surface, minimum hydraulic openings, etc., will all be addressed during the subsequent final design phase of the project and will be presented to the Merger Team for review during the CP4A, CP4B, and CP4C meetings.

Concurrence Point 3: Least Environmentally Damaging Practicable Alternative (LEDPA)

Impact Table

As previously discussed with the Merger Team, the HB-0001 project proposes a 2-lane roadway and bridge typical section, and the project limits only extend far enough for the roadway approaches of the new bridge to tie back into the existing alignment of U.S. 64.

Using the typical cross sections shown above, and the proposed alignment for the HB-0001 bridge replacement, the Project Team used a “slope stakes + 25 feet” buffer on either side of the alignment as a template to overlay on the current environmental resource GIS data. The resulting calculated impacts are included in **Table 2** below. Note that the HB-0001 bridge length is based on the original R-2544/R-2545 designs that came out of that project’s CP 4A meeting; however, the final bridge length for the HB-0001 project has not yet been determined.

Table 2: Potential Environmental Effects, HB-0001 Alternative

Impacted Resources	HB-0001	Notes
Built Environment		
Underground Storage Tanks (UST)	0	Closest USTs are located at Alligator River Marina, which will be avoided
Cultural Resources	1	One resource is present, the Lindsey C. Warren, Tyrrell County Bridge Number 7 (Determined NRHP Eligible), which will be demolished as part of the project
Relocated Structures (Residences/Businesses/Non-Profit)	0	
Communication Tower	0	
Cemetery	0	
Managed Areas (acres)		
Alligator River Gameland	0.11	These impacts are due to the slope stakes plus 25-foot buffer. It is anticipated that these impacts will be eliminated as design progresses
Alligator River National Wildlife Refuge	0.0	
Conservation Fund-owned land (Palmetto-Peartree Preserve)	4.7	Waiting on Roadway & Division input on which alignment to use. Calculated impact acreage may change.
Natural Environment (acres)		
Prime Farmland	8.7	All acres are "Prime if Drained" Preliminary screening of farmland conversion impacts resulted in a total score of 55 out of 160 points, which is less than the 60-point threshold established by NRCS; therefore, farmland conversion impacts are not considered notable
Soils Impacts (Including Estuarine Open Water)	21.3	
Plant Communities (excludes Maintained/Disturbed and Ag land)	18.2	
Canal Relocation	0.3	

Table 2: Potential Environmental Effects, HB-0001 Alternative

Impacted Resources	HB-0001	Notes
T&E Species Habitat	Yes	Species with Habitat (Biological Conclusions, April 2021 NRTR and RCW Draft BA):
		<ul style="list-style-type: none"> • American Alligator (Not Required) • Black rail (MA-NLAA) • Northern long-eared bat (MA-LAA) • Red wolf (MA-NLAA) <ul style="list-style-type: none"> • Red-cockaded woodpecker (MA-LAA) • West Indian manatee (MA-NLAA) • Shortnose sturgeon (MA-NLAA) • Atlantic sturgeon (MA-NLAA) • Bald eagle (No Effect)
Essential Fish Habitat	Yes	Alligator River
CAMA Resources (acres)		
Estuarine Public Trust Waters	0.1	
Inland Public Trust Waters	0.0	
Inland Public Trust Waters Shorelines (30 feet)	0.0	
Estuarine Public Trust Waters Shorelines (75 feet)	2.1	
Outstanding Resource Waters Shorelines (575 feet)	0.0	The ORW-designated portion of the Alligator River is south of the existing bridge and stops at the bridge
Coastal Wetlands	0.15	
Non-CAMA Resources (acres)		
Wetlands	17.5	Excludes Coastal Wetlands
Surface Waters	0.36	Included Ponds and Tributaries

Concurrence Point 4A: Avoidance and Minimization

Table 2 above includes information about and potential impacts of the Preferred Alternative (HB-0001 Red Alignment) and also incorporates the minor design changes since the April 2021 meeting for Concurrence Points 2 and 2A that were developed to further avoid and minimize impacts to the resources in the project area. Details on those resources and the associated minimization efforts are included below:

- **Section 4(f) and Public Trust Resources**
 - Alligator River National Wildlife Refuge
 - NC Wildlife Resources Commission (NC WRC) Alligator River Game Lands
 - Palmetto-Peartree Preserve (Conservation Fund-owned property)
 - NC WRC Boat Access
 - N.C. Waterfront Access Marine Industry Fund (WAMI) Site

Alignment shifts were made to the western roadway approach to avoid impacts to the Alligator River Game Lands south of existing U.S. 64, as well as the WAMI site. The alignment on the eastern approach was also shifted during the R-2544/R-2545 Merger CP4A meeting to avoid impacting the Alligator River National Wildlife Refuge and the NC WRC public boat access on

Old Ferry Landing Road.

An additional four (4) roadway alignment revisions are being investigated that would minimize, or possibly even avoid, impacts to the Palmetto-Peartree Preserve, located north of existing U.S. 64 on the wester approach/Tyrrell County side of the bridge. However, the preferred alternative will consider property impacts along with roadway operability and safety and may not be the alternative that has the least amount of ROW impacts on the Palmetto-Peartree Preserve.

- **Wetlands and CAMA AECs**

The study area is located within the Estuarine and Ocean System Area of Environmental Concern (AEC). The Alligator River, as well as portions of Tributaries TA, TB, and TD are designated as Estuarine Waters and Public Trust Waters. Coastal Shorelines include all lands within 75 feet of the normal high-water level of estuarine waters and within 30 feet of the normal high-water level of public trust waters. Additionally, CAMA coastal wetland is present at wetland sites WC, WN, WO, WP, and WQ.

The proposed HB-0001 bridge structure is currently designed to span the public trust water shoreline buffers (30' and 75' buffer zones) on each side of the Alligator River. Additional structural, geotechnical, and hydraulic design will be done in the final design phase that will further evaluate the proposed bridge structure length to minimize the currently anticipated jurisdictional wetlands and streams and CAMA AEC impacts associated with the project.

- **Federally Protected Species**

As of October 8, 2020 (Dare County) and September 17, 2020 (Tyrrell County), the United States Fish and Wildlife (USFWS) Information for Planning and Consulting (IPaC) and USFWS County Listing lists eighteen federally protected species under the Endangered Species Act (ESA) for Dare and Tyrrell Counties, respectively. For each species where habitat is present within the project study area, a Biological Conclusion (BC) rendered based on survey results in the study area is listed in Table 2 above.

Red Wolf, Red Cockaded Woodpecker (RCW), and Black Rail

The need for Section 7 Consultation (informal or formal) with USFWS is being discussed for the red wolf; informal consultation is anticipated for black rail; and formal consultation for RCW is anticipated. Any mitigation measures developed as part of the Section 7 Consultation process for these species will be incorporated into the final design for the project.

West Indian Manatee

The *Guidelines for Avoiding Impacts to the West Indian Manatee: Precautionary Measures for Construction Activities in North Carolina Waters* (USFWS, 2003) will be implemented for this project to ensure no adverse effects occur to this species.

Atlantic and Shortnose Sturgeon

Consultation with and concurrence from the National Marine Fisheries Service (NMFS) is anticipated for the species.

Bald Eagle

Under the National Bald Eagle Management Guidelines (USFWS 2007a), road construction within 660 ft. of a nest during the breeding season should be avoided. No bald eagle nests were found during aerial surveys within the HB-0001 study area or 660 ft. buffer. One active eagle nest was found in a dead pine within 0.5 mi. of the study area, east of the Alligator River and south of U.S. Hwy. 64. Two additional nests were found east of the river that appeared to be

unoccupied. No bald eagle nests will be impacted by the proposed bridge replacement.

Wildlife Crossings

The proposed project includes two arched pipes (53”X41”), one located on each approach, that are included to accommodate wildlife crossing the U.S. 64 corridor. Standard 4-to-5-foot directional fencing will be installed to direct wildlife to these pipes and to keep them from crossing the roadway where they could potentially be struck by vehicular traffic.

- **In-Water Work Moratorium**

Anadromous Fish Habitat has been identified within the study area. The Alligator River north of the existing U.S. 64 bridge (30-16-21.5) is classified as coastal Anadromous Fish Spawning Area (AFSA) under Marine Fisheries Commission (MFC) jurisdiction. The Alligator River south of the existing U.S. 64 bridge (30-16-7) is classified as joint AFSA waters under the jurisdiction of MFC and the North Carolina Wildlife Resource Commission (WRC). No Primary Nursery Areas have been identified within the study area. An in-water construction work moratorium from February 15 to June 30 will apply to this project.

- **U.S. Coast Guard Coordination and Vertical Navigational Clearance**

A Navigational Impact Report is being prepared and coordination with the US Coast Guard (USCG) has recently been initiated by the Project Team. As part of this effort, the minimum horizontal and vertical clearances for the navigational channel will be developed in coordination with USCG.

- **Bridge Design**

Detailed design work related to the bridge structure, geotechnical foundations, and stormwater drainage has begun and will seek to develop a bridge structure that maximizes span lengths as a means to minimizing the number of piers and foundations required to be constructed and located both in the Alligator River, as well as on the shorelines for each approach.

Due to the length of the proposed structure and its anticipated height above Mean High Water (MHW), an open drainage system for the deck is anticipated.

In addition, hydrodynamic modeling will be conducted by a coastal engineering firm and the results will be used to help determine the appropriate design for the bridge’s superstructure, substructure, and foundations.

- **Roadway Typical Cross Section**

The proposed roadway typical cross section includes a reduced shoulder width of 8-feet (5’ paved on the approaches and 8’ paved on the bridge), as opposed to the standard 10-foot shoulder width for U.S. routes, that minimizes the project impact footprint associated with the new roadway approaches on the surrounding public lands and jurisdictional features within the project study area.

- **Section 106 Memorandum of Agreement**

NC DOT and FHWA are currently coordinating with NC-HPO to develop a Section 106 Memorandum of Agreement (MOA) that addresses the impacts to existing Lindsey C. Warren Bridge, which has been determined eligible for listing in the National Register of Historic Places. Mitigation efforts being considered for inclusion in the MOA include, but are not limited to, decorative bridge design features for the replacement structure, a historic marker on the end bents or approach spans of the new bridge (possibly decorative features in addition to the marker), and

documentation of the existing bridge. Continued coordination with SHPO on these mitigation measures will occur as the project moves into the final design phase.

If you have any questions concerning the project, please contact John Conforti, Senior Project Manager, at 919-707-6015 or by email at jgconforti@ncdot.gov. Please include the STIP Project Number (HB-0001) in all correspondence and comments.

JGC/cmy

Attachments:

- Figure 1 – Vicinity Map
- Figure 2 – Project Study Area
- Figure 3 – Environmental Features Map
- Figure 4,4A,4B – Potential Impacts Maps

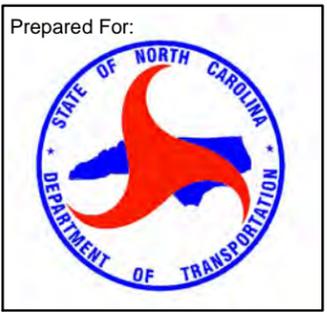
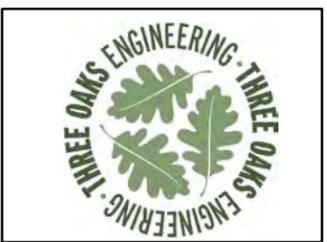
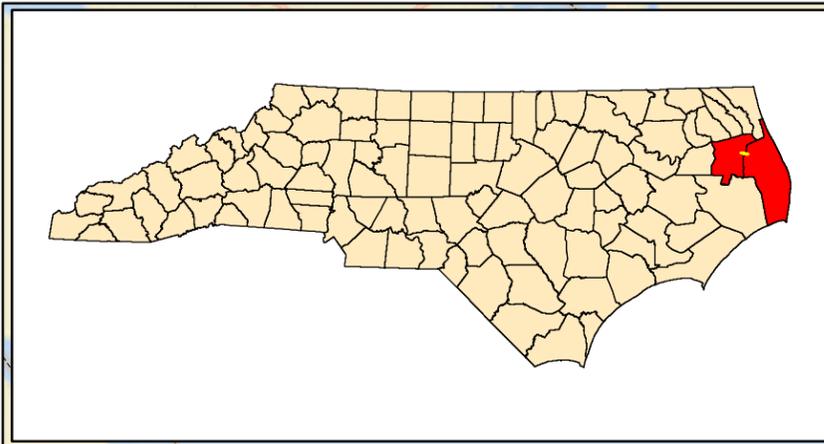
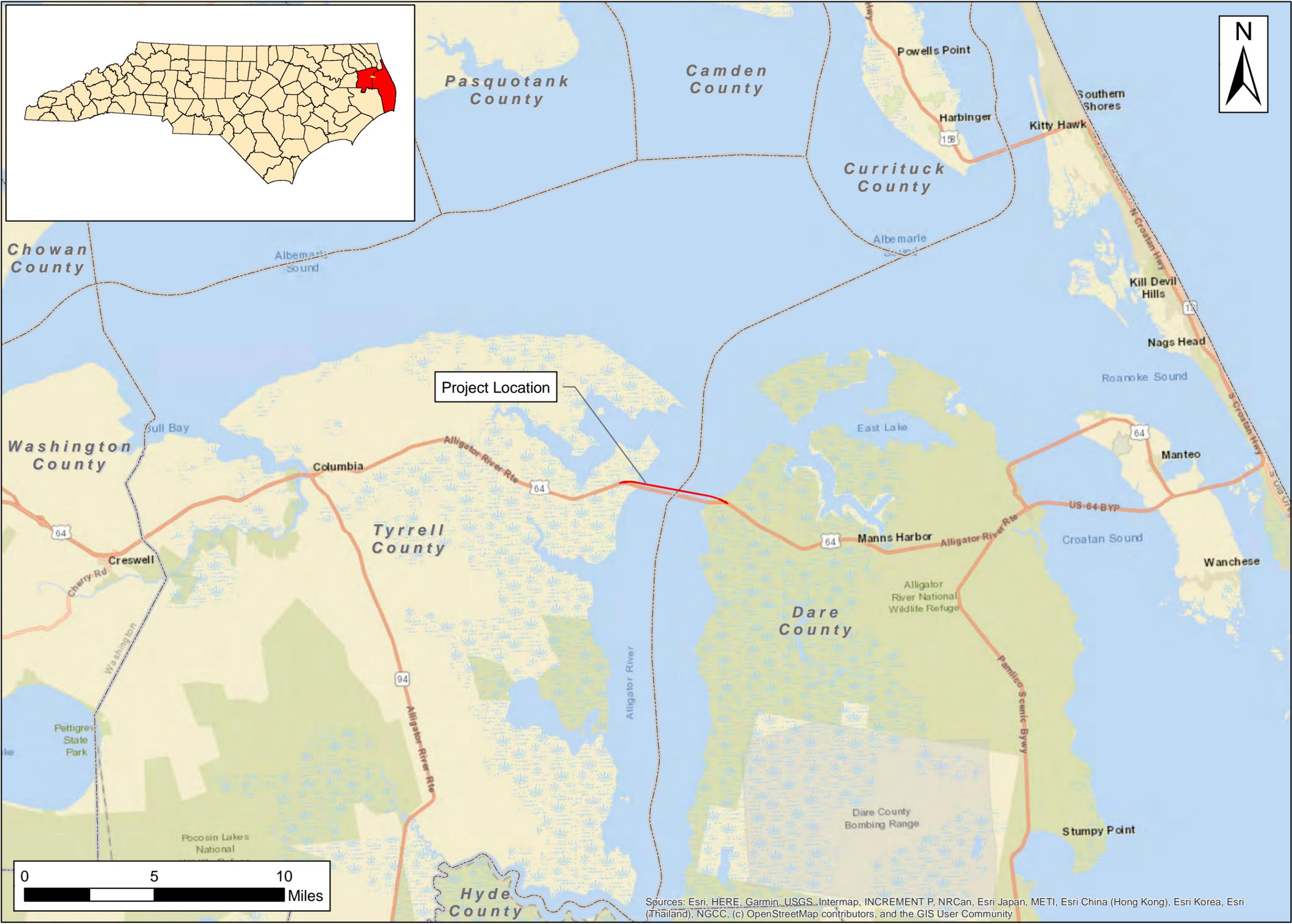
HB-0001 PROJECT DATA SHEETS	
Proposed Project Details	
Project Description	<p>The project would replace the existing US 64 Tyrrell County Bridge No. 7 (Lindsay C. Warren Bridge) over the Alligator River in Tyrrell and Dare Counties. The existing bridge is a two-lane, swing bridge and would be removed as part of the project. The proposed replacement structure would be a modern two-lane, high-level, fixed-span bridge providing a vertical navigable clearance of 65-feet, as coordinated with the USCG. Total project length is approximately 4.64 miles.</p> <p>The project study area extends 250-feet on either side of the proposed HB-0001 centerline and 50-feet on either side of the existing Lindsay C. Warren bridge. See Figure 1 for project limits and study area.</p>
Project Limits	The project starts in Tyrrell County on US-64, just west of Fort Landing Road (Sta. 662+50). The new bridge alignment diverges from the existing US 64 alignment and passes north of the existing marina/convenience store and crosses the Alligator River to the north of the existing Lindsay C. Warren Bridge. The project ends in Dare County and ties back into the existing US 64 past Old Ferry Landing Road (Sta. 907+60).
Typical Section	High-span bridge, undivided, with 12-foot travel lanes and 10-foot outside shoulders (5' paved on the approaches) and 8' paved shoulders on the bridge (40-foot clear roadway width).
Access Control	Arterial bridge
Design Speed	60 mph
Right-of-Way Width	varies
Physical or Engineering Constraints	The replacement bridge would be designed in accordance with the latest version of the AASHTO Guide Specifications for Bridges Vulnerable to Coastal Storms. Vertical navigational clearance will need to be approved by the US Coast Guard.
Other Considerations	Traffic on the existing Lindsay C. Warren bridge will need to be maintained during construction of the new bridge. Depending on duration of construction, regular maintenance of the existing bridge may need to occur. Marine traffic will also continue using the existing channel, except for the replacement of the existing channel, and the swing span bridge would continue to function.
Survey Request Date	Surveys requested in March 2021 and will be delivered by August 2, 2021
Design Plan	N/A
Construction Recommendation	N/A
Construction Recommendation	N/A
Consultant Involvement	As of March 1, 2021, Three Oaks Engineering is now the Prime Consultant
Essential Project Information	
STIP Project Name	Replace US 64 Tyrrell County Bridge Number 7 over the Alligator River

STIP Number	HB-0001
County	Dare & Tyrrell Counties
NCDOT Division	Division 1
ROW Date	N/A
LET Date	R/W – July '22, Let – July '23 (Tentative for both)
Schedule Considerations	The project is anticipated to have a completed environmental document (Type III Categorical Exclusion) in July 2021.
Cost Estimates	The project is unfunded in the TIP. STIP Construction cost estimated at \$135 million. Current estimates (May 2021) include \$129,300 for utilities and \$211,700,000 for construction. ROW estimates are pending.
Funding Type	The project is funded for planning and environmental study only.
Project History	
Planning Studies	This project was originally included as part of a larger project, R-2544/2545. A state Draft Environmental Impact Statement was completed in 2012. A Final Draft Environmental Impact Statement was drafted but the project did not reach a signed Record of Decision.
SPOT Description	N/A
Feasibility Studies	A Feasibility Study for express design and cost estimating was completed in 2014 for the bridge portion of TIP project R-2544/2545
Problem Statement	The existing Lindsay C. Warren Bridge was constructed in 1960 and is classified as structurally deficient with a 31.71 rating. The existing bridge requires heavy maintenance on a regular basis, and mechanical parts are not readily available and typically require custom fabrication.
Alternatives Previously Dismissed and Why	Four bridge alignment alternatives were eliminated from further study in the Draft EIS for the R-2544 & R-2545 project. Four alternatives were carried forward to the Final EIS. The primary reason for eliminating corridors, including bridge alternatives, were potential for substantial impacts to wetlands, substantial impacts to the ARNWR, and more costly bridge replacements.
Purpose & Need	
Purpose	To replace the existing 2.83-mile-long Lindsay C. Warren Bridge, Tyrrell County Bridge number 7, carrying US 64 across the Alligator River
Need(s)	Replacement is critical due to the age and structural deficiency of the bridge. The existing bridge is a 2.83-mile long, 343-span structure with a moveable steel swing span. The bridge was constructed in 1960 and is classified as structurally deficient with a 31.71 rating of a possible 100. The existing bridge requires costly, heavy maintenance on a regular basis and requires constant smaller maintenance activities to keep the swing mechanics operational. Approximately 3 years ago a \$17 million major rehab project was constructed, consisting of several hundred pile jackings, concrete repair, deck surfacing, and a major mechanical overhaul of the swing mechanism and controls. Similar rehabilitation efforts will be needed within the next 7 years. Even with the major rehab, NCDOT is still required to perform regular work to

	maintain the swing mechanism, which has a history of malfunction resulting in closure of the bridge to vehicular travel. The mechanical parts, gears, and controls are not readily available and require custom fabrication with long lead times to acquire and replace. In case of malfunction, the available detour is 94 miles long – from Columbia south on NC 94 and then east on US 264 from Swan Quarter to Mann’s Harbor. US 64 is a critical hurricane evacuation route that must remain operational during storm events. During storm events, the detour routes are often adversely affected by storm water that can hamper effective evacuation.
Public and Agency Coordination	
Anticipated Permits	Section 404 Individual or General Permit, Section 401 Water Quality Certification, Coast Guard bridge permit, CAMA Major Development Permit. The R-2544/2545 project completed Section 7 formal consultation with the USFWS for the red-cockaded woodpecker (RCW) and resulted in the issuance of a Biological Opinion. Consultation with the USFWS will be re-initiated for HB-0001.
Federal Agency Involvement	The Federal Highway Administration (FHWA) will be the lead federal agency; the U.S. Army Corps of Engineers (USACE) has jurisdiction over Waters of the United States. Other federal agencies with jurisdiction of resources inside the project area include the U.S. Fish and Wildlife Service, National Marine Fisheries Service, and US Coast Guard.
Public Involvement Strategy	TPD
Merger Screening Date	The R-2544/2545 project was in Merger and Concurrence Point 3 (LEDPA) was achieved in 2013 and CP4a in 2014. HB-0001 will re-affirm prior decisions and re-establish CP3 with the merger co-chairs and proceed to CP4a. A merger Co-chair meeting was held on January 28, 2021, to determine the Merger status of HB-0001. The Project was placed in Merger.
Potential Merger Triggers	Wetlands, ARNWR, Coast Guard, NC DCM/CAMA
Existing Conditions	
Functional Classification	Principal Arterial - Rural bridge
Strategic Transportation Corridor	US 64 E is part of Strategic Transportation Corridor M
AADT	A traffic forecast was completed by NCDOT in 2007 to support the R-2544/2545 project. It was recognized that operations during summer peak periods was critical to understanding traffic operations. Traffic counts were completed between Memorial Day to Labor Day in 2006. 2006 summer weekday: 3,400 2006 summer weekend: 5,500 According to NCDOT traffic data AADT in 2019 was counted as 4,400.
Access Control	No access control

Typical Section	Rural two-lane, undivided, 11-foot travel lanes with 2-foot shoulders (26 ft clear roadway width).
Right-of-Way Width	100 feet
Posted Speed	55 mph
Structures (bridges, RCBC, etc.)	US 64 Alligator River Bridge #880007
Railroad Involvement	N/A
Other Adjacent STIP Projects	R-5940; Columbia to Alligator River Bridge, Modernize Roadway; Right-of-way 2028
Preliminary Resource Inventory Table	
Utilities	No utility relocations were identified within the HB-0001 study area during the R-2544/2545 environmental document. Utilities will be reviewed for the HB-0001 project.
Hazardous Materials	The existing marina/convenience store on the west side of Alligator River in Tyrrell County has existing groundwater and soil contamination. The R-2544/2545 project determined that the site is likely to present a low potential for impacts. The HB-0001 project will re-assess the site for the environmental document.
Known Potentially Eligible National Register of Historic Places Sites/Districts	HB-0001 would result in demolition of the existing Lindsay C. Warren Bridge, a bridge determined eligible for listing in the NRHP in 2003. The R-2544/2545 project reached a Memorandum of Agreement (MOA) with the NC Historic Preservation Office (HPO). The existing MOA would be reviewed with the NC HPO and modified as needed for the HB-0001 project.
Other Cultural Resources	N/A
Wetlands	There are coastal and jurisdictional wetlands on either side of the HB-0001 project in both Tyrrell and Dare counties. Significant efforts were made during the R-2544/2545 project to minimize impacts to wetlands. The addition of two proposed wildlife crossings would enhance the value of adjoining wetlands and wildlife habitat by improving connectivity, maintaining established wildlife corridors, and increasing opportunities for foraging and for shelter. Compensatory mitigation will be determined during consultation with the USACE and NCDEQ-DWR.
Streams	N/A
FEMA Floodplain Detailed Study Area	The project study area is within FEMA Zone AE (Special Flood Hazard Area subject to inundation by the 1 percent annual chance flood; base elevations determined).

Water Supply Watersheds	N/A
Riparian Buffer Rules	N/A
Active Agriculture	N/A
Parks, Greenways, Game Lands, Section 4(f) & Section 6(f) Properties	There are several managed resources on either side of the HB-0001 project, including the Alligator River Game Land, Alligator River National Wildlife Refuge, and the Conservation Fund-owned Palmetto-Peartree Preserve.
Environmental Justice Populations	East Lake Community is on the eastern edge of the HB-0001 study area.
Other Resources (i.e., Wild and Scenic Rivers, TVA, Scenic Byways, etc.)	There is a North Carolina Waterfront Access and Marine Industry Fund (WAMI) site in proximity to the project.



**Replace U.S. 64
Tyrrell County Bridge
No. 7 over the
Alligator River**

Tyrrell & Dare Counties

**HB-0001
Vicinity Map**

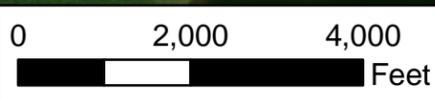
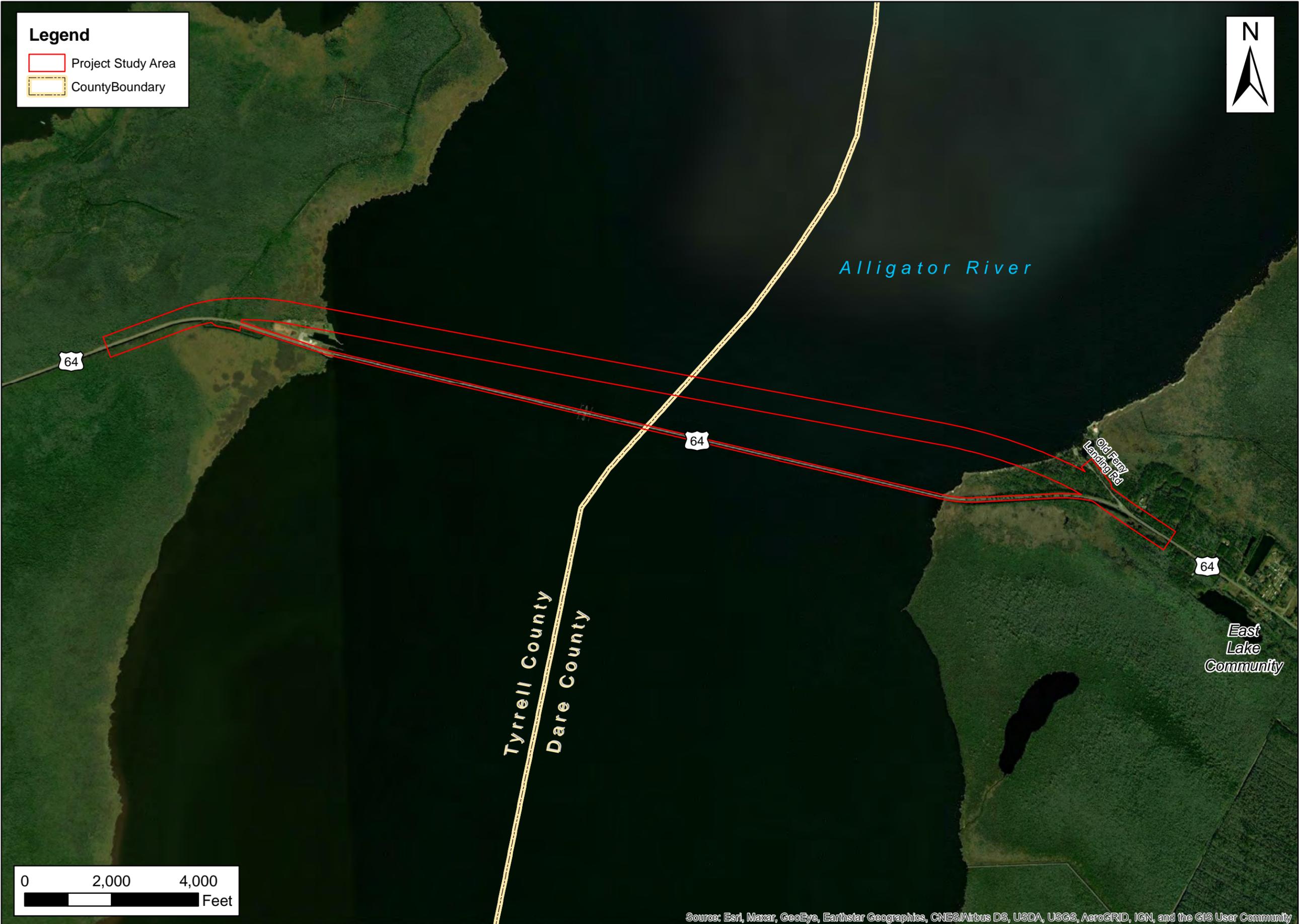
Date:	June 2021
Scale:	As Shown
Job No.:	HB-0001
Drawn By:	CMR
Checked By:	JSM

**Figure
1**

Sources: Esri, HERE, Garmin, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), NGCC, (c) OpenStreetMap contributors, and the GIS User Community

Legend

-  Project Study Area
-  County Boundary



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



Prepared For:

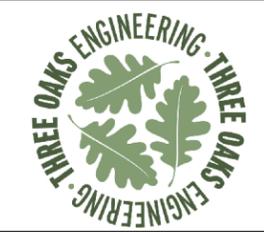
**Replace U.S. 64
Tyrrell County Bridge
No. 7 over the
Alligator River**

Tyrrell & Dare Counties

**HB-0001
Study Area Map**

Date:	June 2021
Scale:	As Shown
Job No.:	HB-0001
Drawn By:	CMR
Checked By:	JSM

Figure
2



**Replace U.S. 64
Tyrrell County Bridge
No. 7 over the
Alligator River**

Tyrrell & Dare
Counties

**HB-0001
Environmental
Features Map**

Date: June 2021

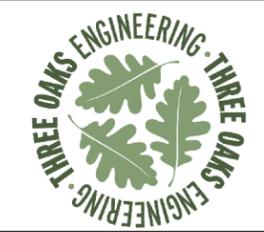
Scale: As Shown

Job No.: HB-0001

Drawn By: CMR Checked By: JSM

Figure
3





**Replace U.S. 64
Tyrrell County Bridge
No. 7 over the
Alligator River**

Tyrrell & Dare
Counties

**HB-0001
Potential
Impacts Map**

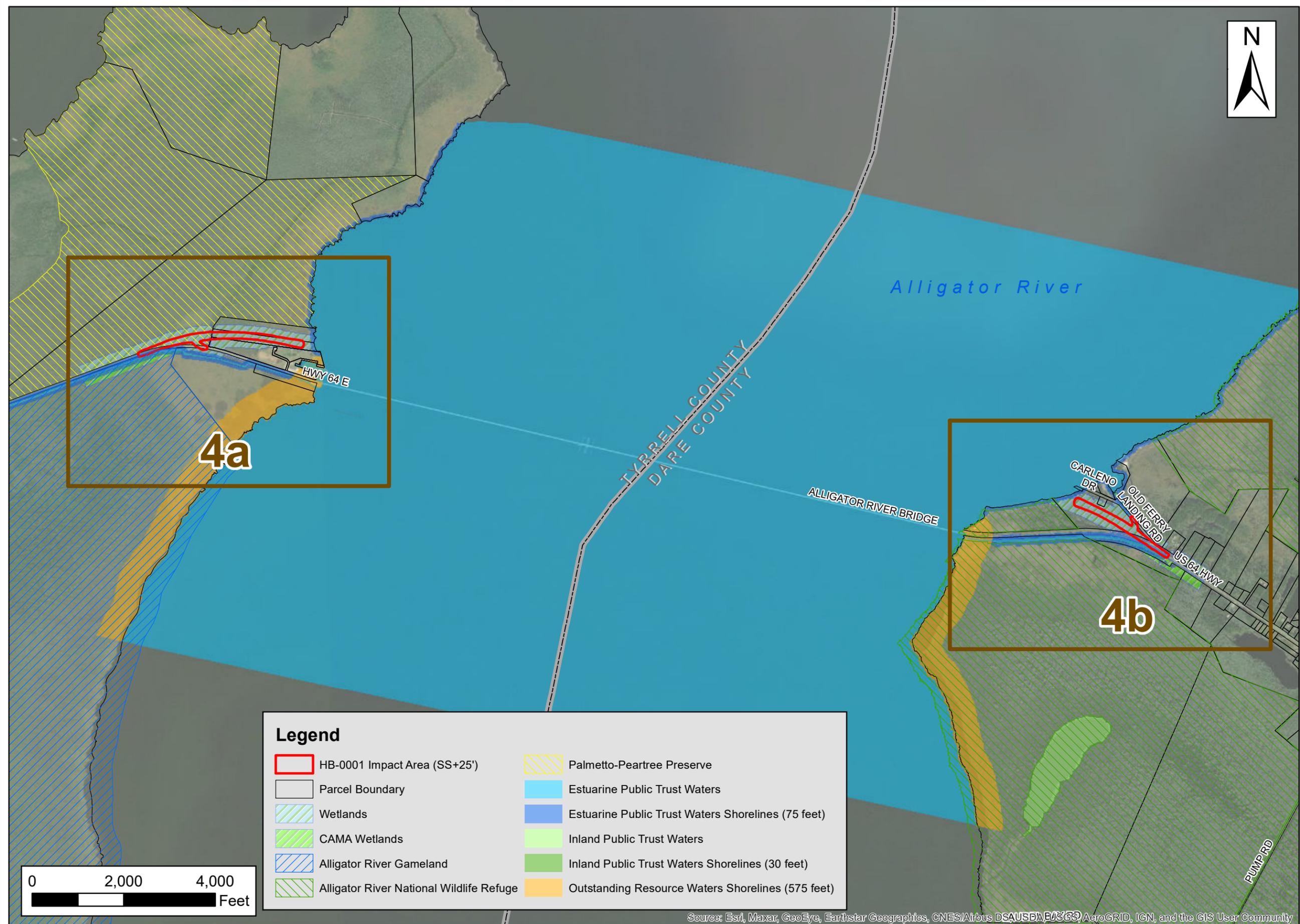
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Scale: As Shown

Job No.: HB-0001

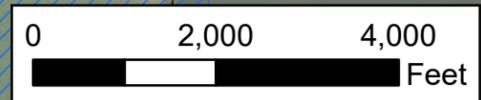
Drawn By: CMR Checked By: JSM

Figure
4

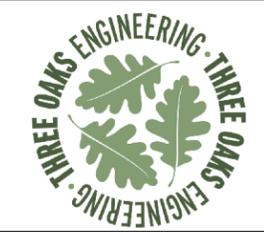


Legend

HB-0001 Impact Area (SS+25')	Palmetto-Peartree Preserve
Parcel Boundary	Estuarine Public Trust Waters
Wetlands	Estuarine Public Trust Waters Shorelines (75 feet)
CAMA Wetlands	Inland Public Trust Waters
Alligator River Gameland	Inland Public Trust Waters Shorelines (30 feet)
Alligator River National Wildlife Refuge	Outstanding Resource Waters Shorelines (575 feet)



Source: Esri, Maxar, GeoEye, Earthstar Geographics, CNES/Airbus DSAUSDA/ECS, AeroGRID, IGN, and the GIS User Community



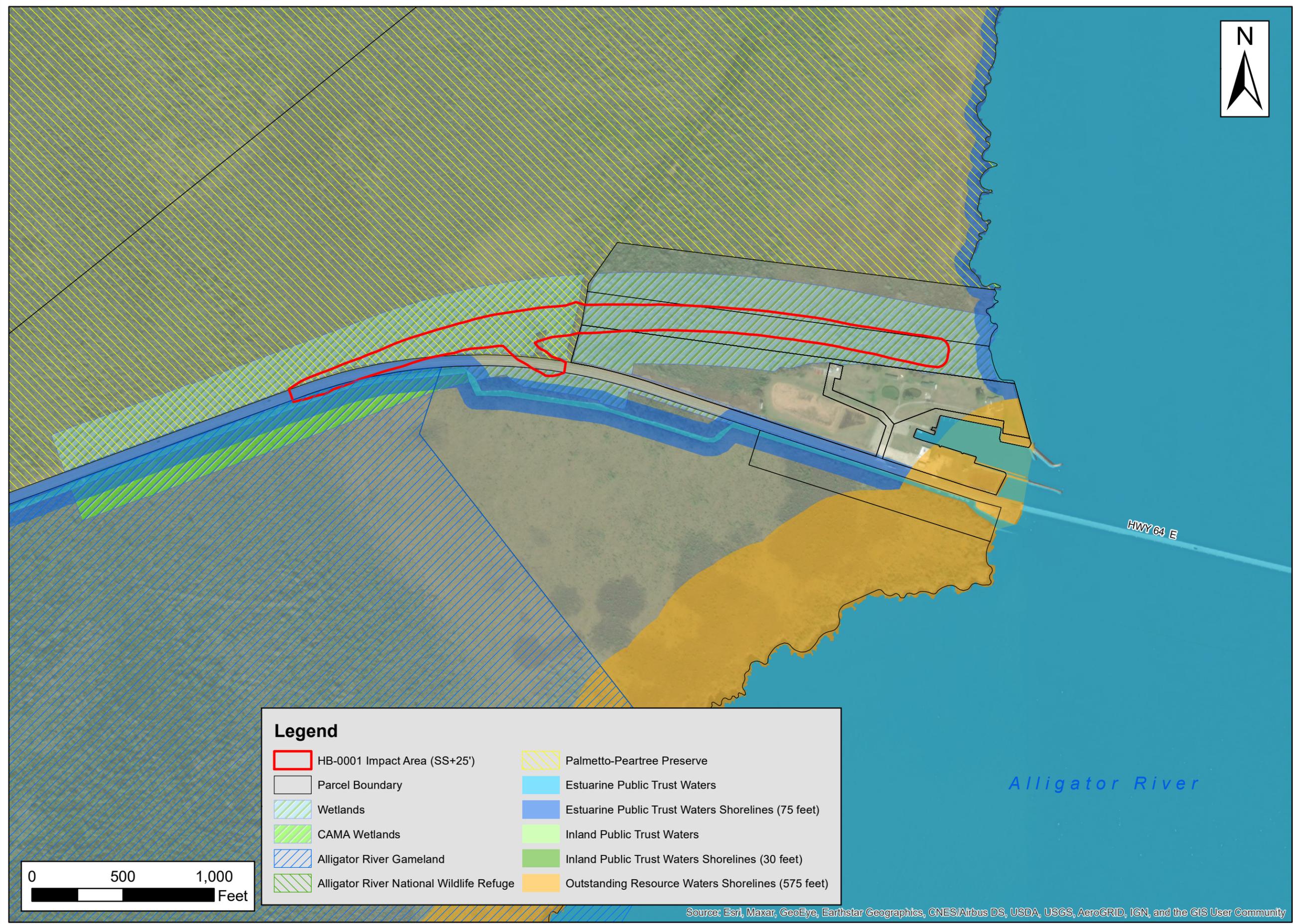
**Replace U.S. 64
Tyrrell County Bridge
No. 7 over the
Alligator River**

Tyrrell County

**HB-0001
Potential
Impacts Map**

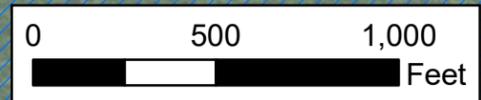
Date:	June 2021
Scale:	As Shown
Job No.:	HB-0001
Drawn By:	CMR
Checked By:	JSM

Figure
4a

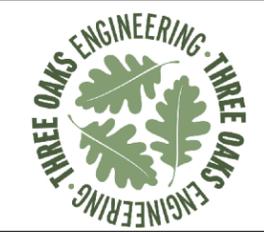


Legend

HB-0001 Impact Area (SS+25')	Palmetto-Peartree Preserve
Parcel Boundary	Estuarine Public Trust Waters
Wetlands	Estuarine Public Trust Waters Shorelines (75 feet)
CAMA Wetlands	Inland Public Trust Waters
Alligator River Gameland	Inland Public Trust Waters Shorelines (30 feet)
Alligator River National Wildlife Refuge	Outstanding Resource Waters Shorelines (575 feet)



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



**Replace U.S. 64
Tyrrell County Bridge
No. 7 over the
Alligator River**

Dare County

**HB-0001
Potential
Impacts Map**

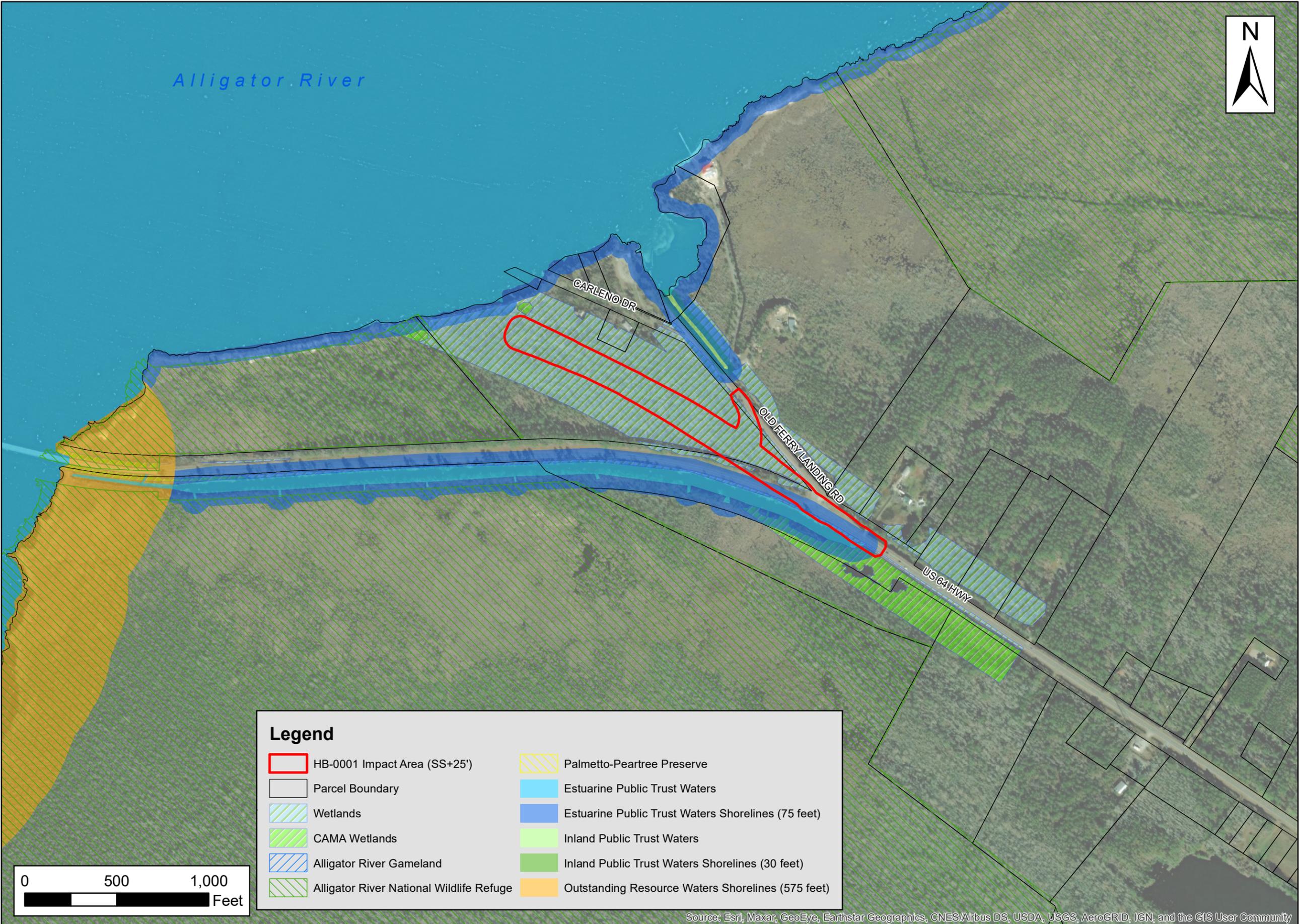
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Scale: As Shown

Job No.: HB-0001

Drawn By: CMR Checked By: JSM

Figure
4b



Legend

HB-0001 Impact Area (SS+25')	Palmetto-Peartree Preserve
Parcel Boundary	Estuarine Public Trust Waters
Wetlands	Estuarine Public Trust Waters Shorelines (75 feet)
CAMA Wetlands	Inland Public Trust Waters
Alligator River Gameland	Inland Public Trust Waters Shorelines (30 feet)
Alligator River National Wildlife Refuge	Outstanding Resource Waters Shorelines (575 feet)

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