



November 1, 2021

Mr. Tyler Stanton
North Carolina Department of Transportation
1020 Birch Ridge Drive Raleigh, NC 27610

Re: **HB-0001 – US 64 Replacement of Bridge Number 7 over Alligator River – 2021 Submerged Aquatic Vegetation Survey Findings Report**

Dear Mr. Stanton,

RK&K is pleased to provide you with this findings-report from the submerged aquatic vegetation (SAV) survey for the 2021 SAV surveys. Fieldwork was conducted on May 26th and October 14th, 2021.

Project Area Description

The proposed bridge project is located over the Alligator River at the Tyrrell (west) and Dare (east) county boundary. The SAV study area spans the open water and is approx. 3.17 miles long and 500 feet wide (Figure 1). Throughout the project study area, water depths range from the shoreline (0 foot) to approximately -11 feet mean lower low water (MLLW). The substrate within the project area consists of sand and hard bottom. The west side potential habitat zone consisted of 90% coverage of root mass, stumps, logs, and debris. Areas with direct exposures to bottom substrate was limited. The east side contained large open areas of sandy/hard bottom substrate with scattered root mass, stumps, logs, and debris.

Project Methodology

A survey to determine SAV presence was performed within the SAV study area beginning at the shoreline and extending out to -7 feet mean lower low water (MLLW) levels. This survey was performed utilizing marine sonar imaging and side-scan technology along with snorkeling and tactile methods. The in-water survey time consisted of 6 man hours.

Pre-fieldwork assessment of the North Carolina Department of Environmental Quality SAV data layer (1981-2015) and the National Oceanic and Atmospheric Administration Estuarine Benthic Cover GIS data layer was used to determine potential locations of SAV beds. No historical data recorded within the SAV study area (Figure 3).

Project Results

No live and/or rooted SAV was located within the project study area. Dead SAV was observed floating on the water surface and washed ashore. In consideration of local SAV presence, potentially within 1-mile of the project area, it is recommended that future surveys be conducted.

Please let us know if you have any questions concerning our findings. We appreciate the opportunity to provide you with these services.

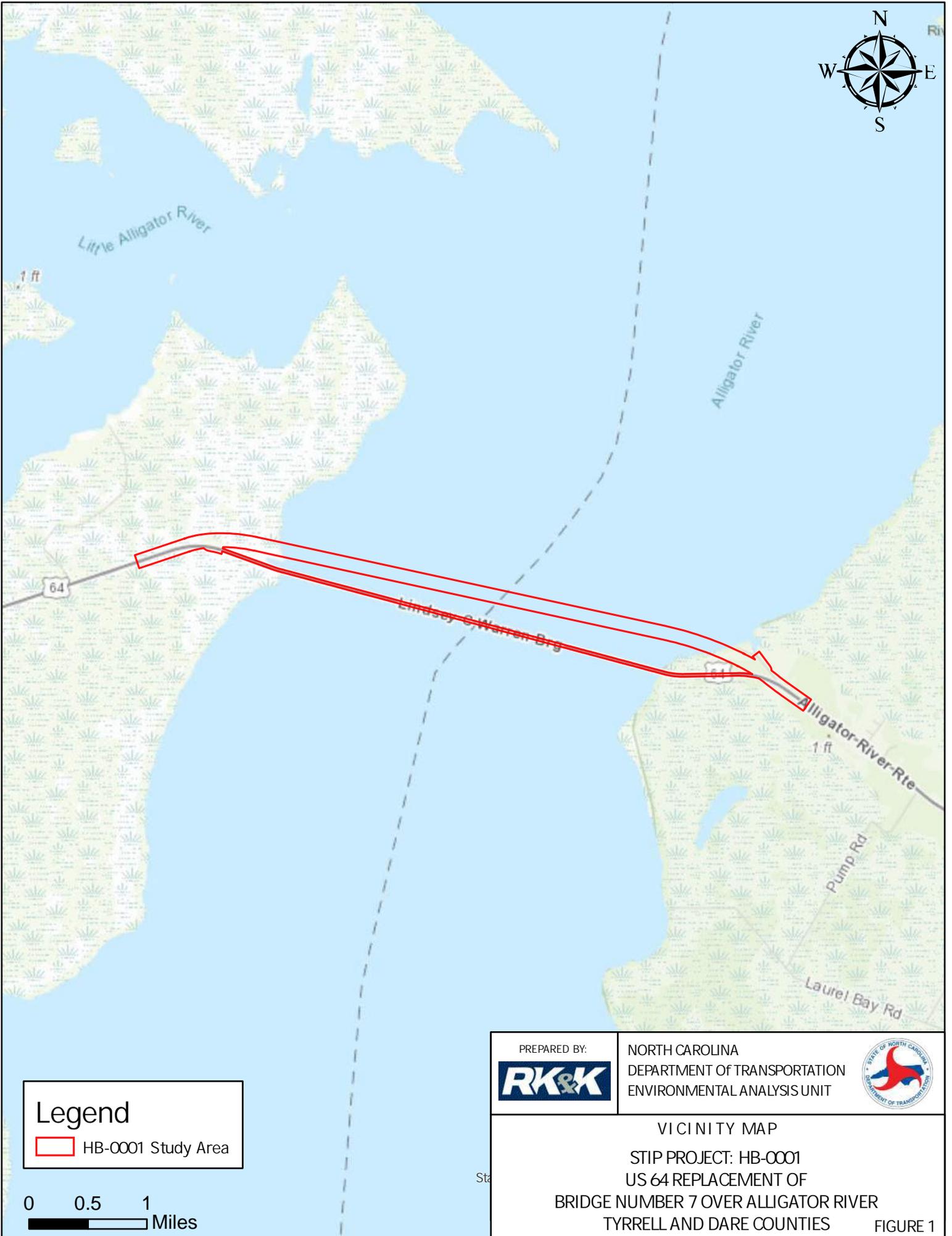
Sincerely,

Pete Stafford, PWS

¹National Oceanic and Atmospheric Administration. *Estuarine Benthic Cover GIS Data Layer, NC90*.

Estuarine Aquatic Bed, Submersed Rooted Vasculars (SRV), Beaufort Marine Lab. 2012-2014

²North Carolina Department of Environmental Quality. *Submerged Aquatic Vegetation, GIS Data Layer*. Albemarle-Pamlico National Estuary Partnership (APNEP), Raleigh, NC. 2015



PREPARED BY:
RK&K

NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
ENVIRONMENTAL ANALYSIS UNIT



VICINITY MAP
STIP PROJECT: HB-0001
US 64 REPLACEMENT OF
BRIDGE NUMBER 7 OVER ALLIGATOR RIVER
TYRRELL AND DARE COUNTIES

FIGURE 1

1 inch equals 1 miles



Alligator River

No SAV Observed in 2021

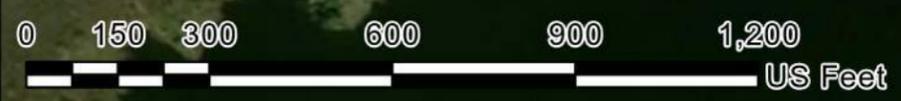


Lindsey C Warren Bridge

US-64

Legend

HB-0001 Study Area



1 inch equals 300 feet

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WESTERN SIDE - TYRRELL COUNTY ALLIGATOR RIVER 2021 SAV SURVEY	
STIP PROJECT: HB-0001 LINDSEY C WARREN BRIDGE TYRRELL AND DARE COUNTIES	
FIGURE 2	



Alligator River

No SAV Observed in 2021

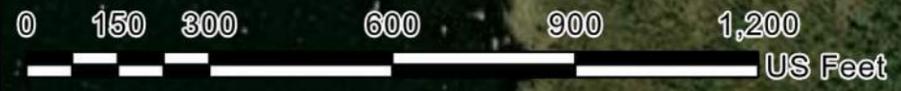


Carlano Dr

Lindsey C Warren Bridge

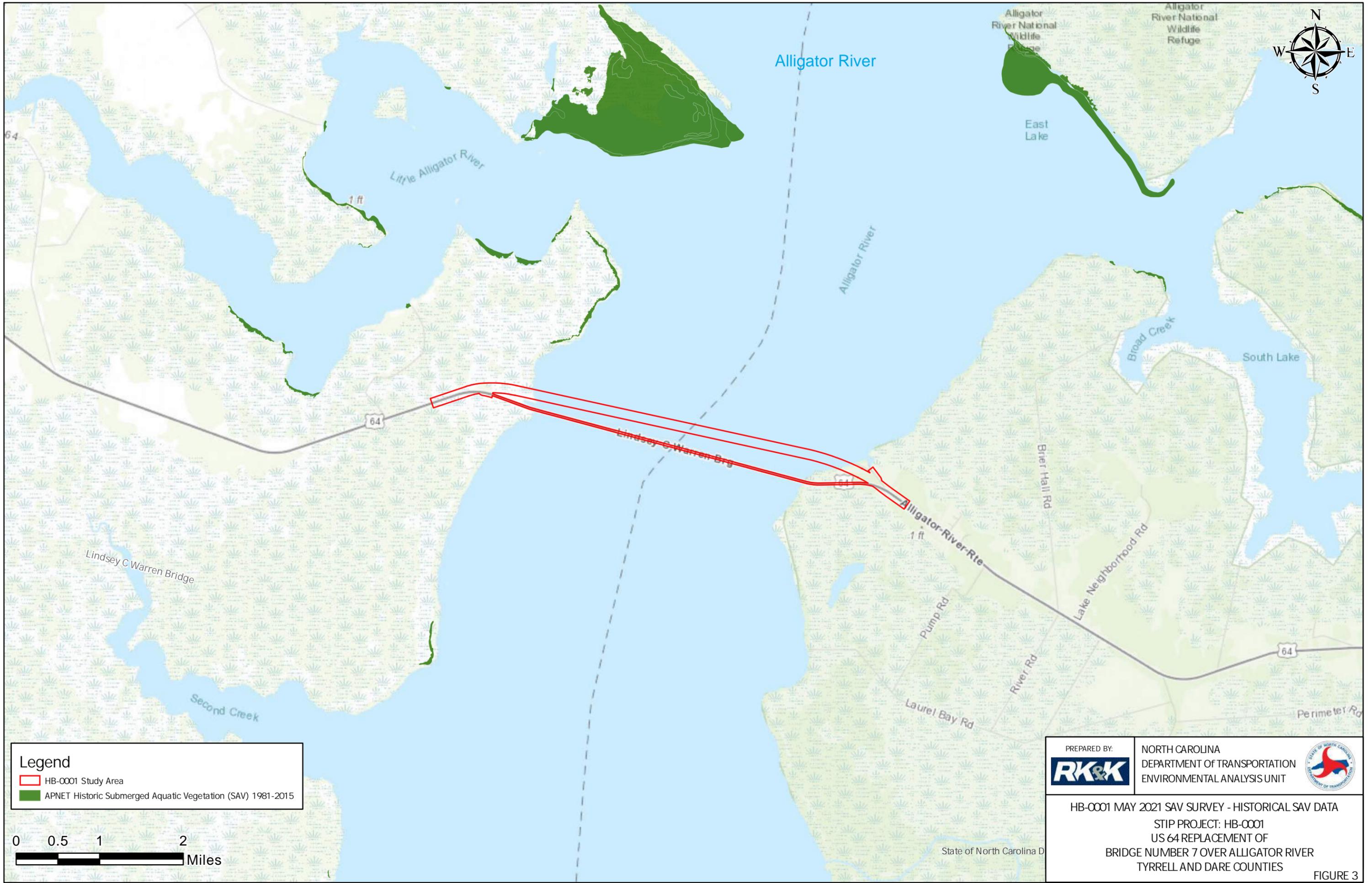
US-64

Legend
[Red outline box] HB-0001 Study Area



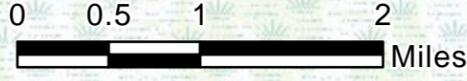
1 inch equals 300 feet

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EASTERN SIDE - DARE COUNTY ALLIGATOR RIVER 2021 SAV SURVEY	
STIP PROJECT: HB-0001 LINDSEY C WARREN BRIDGE TYRRELL AND DARE COUNTIES	
FIGURE 3	



Legend

- HB-0001 Study Area
- APNET Historic Submerged Aquatic Vegetation (SAV) 1981-2015



1 inch equals 5,280 feet

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HB-0001 MAY 2021 SAV SURVEY - HISTORICAL SAV DATA
 STIP PROJECT: HB-0001
 US 64 REPLACEMENT OF
 BRIDGE NUMBER 7 OVER ALLIGATOR RIVER
 TYRRELL AND DARE COUNTIES

FIGURE 3