STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION

JOSH STEIN
GOVERNOR

DANIEL H. JOHNSON
SECRETARY

December 12, 2025

Mr. Hal R. Pitts
Chief, Bridge Branch
Fifth Coast Guard District
431 Crawford Street
Portsmouth, VA 23704

Subject: US Coast Guard Bridge Permit Request
Mid-Currituck Bridge (R-2576)
Currituck County, NC

Dear Mr. Pitts:

In accordance with Section 3 of the Bridge Permit Application Guide (USCG BPAG COMDTPUB P16591.3E, March 2025), the North Carolina Turnpike Authority (NCTA) of the North Carolina Department of Transportation (NCDOT) requests approval of the enclosed bridge permit application from the US Coast Guard for the Mid-Currituck Bridge (R-2576) in Currituck County, North Carolina. Application is hereby made for a Coast Guard bridge permit.

The permit application (Attachments A through D) and associated documents (Attachments E through I) are included with this permit application letter.

Sincerely,

DocuSigned by:
Alan Shapiro
B149124683BD45D...

Alan Shapiro, P.E.
North Carolina Turnpike Authority, Chief Engineer

Attachments

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TURNPIKE AUTHORITY
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ATTACHMENTS

Attachment A – Waterway Data Requirements

Attachment B – Bridge Permit Application

Attachment C – Bridge Permit Plan Sheet Job Aid

Attachment D – Bridge Sketches

Attachment E – Navigation Impact Report (NIR)

Attachment F – Preliminary Navigation Clearance Determination (PNCD)

Attachment G – Bridge Survey & Hydraulic Design Report

Attachment H – Natural Resources Technical Report Update

Attachment I – Invasive Species Control Plan

ATTACHMENT A

Waterway Data Requirements

ATTACHMENT A - WATERWAY DATA REQUIREMENTS

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

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

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.

The table below shows the clearances for the other crossings of Currituck Sound, along with the distance each crossing is away from the location of the Mid-Currituck Bridge project across Currituck Sound.

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

Crossing Name	Distance from Mid-Currituck Bridge Project	Horizontal Clearance	Vertical Clearance
Overhead Transmission Lines	18.6 miles south	1,130 feet	~ 70 feet (estimated)
Overhead Transmission Lines	18.6 miles south	980 feet	~ 65 feet (estimated)
Wright Memorial Bridges	18.7 miles south	40 feet	35 feet

2. Does the proposed bridge(s) match (or is greater than) the navigational clearance of existing structures on the waterway? No (vertically) and yes (horizontally) – this was addressed in the Navigation Impact Report (NIR) and in the Preliminary Navigation Clearance Determination (PNCD) (see Attachments E and F of this permit application). The minimum vertical clearance for the proposed bridge is 20 feet, which is less than the Wright Memorial Bridges. The minimum horizontal clearance for the proposed bridge is 40 feet, which matches the Wright Memorial Bridges, but in reality, is 88 feet between piers as shown in the Bridge Sketches (see Attachment D), which is greater than the Wright Memorial Bridges.

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.)
Wright Memorial Bridges

a. Milepoint: Near the southern end of Currituck Sound at Albemarle Sound.

b. Horizontal clearance: 40 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.)
Wright Memorial Bridges

a. Milepoint: Near the southern end of Currituck Sound at Albemarle Sound (approximately 0.5 miles).

b. Vertical clearance: 35 feet

5. Will the proposed bridge(s) become the most restrictive/obstructive structure across the waterway? Yes (vertically) but no (horizontally).

C. <u>Waterway characteristics:</u> (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). The US Geological Survey has a gauging station in Currituck Sound relatively near the proposed bridge location. Data from this station has been used to determine mean high water and mean low water levels. The gauging station is located near Corolla, NC, at 36-22-28 N and 75-50-04 W, and is based on NAVD 1988. Information about the gauging station is available online at: https://waterdata.usgs.gov/nwis/inventory?agency_code=USGS&site_no=02043433.

2. Natural flow of the waterway including currents, waterway velocity, water direction, and velocity fluctuations (seasonal, daily, hourly, etc.), that might affect navigation. Currituck Sound is not tidally influenced. Water flow and elevation are driven mostly by wind direction and intensity in Currituck Sound. There is no natural flow in this shallow basin, and there are no direct connections from Currituck Sound to the Atlantic Ocean. There are connections to the Atlantic Ocean both to the south and the north from Currituck Sound. Oregon Inlet provides a connection to the Atlantic Ocean south of Currituck Sound and is located roughly 45 miles south of the proposed bridge location and about 26 miles south of Currituck Sound. Chesapeake Bay provides a connection to the Atlantic Ocean north of Currituck Sound and is roughly 75 miles north of the proposed bridge location.

3. Width of the waterway at bridge site: 24,490 feet

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.)]. The water depths in Currituck Sound are generally shallow, ranging from 0 to -9 feet. Data from a USGS gauging station near the project site shows a range in water surface elevations from a low of about -2.4 feet to a high of about 4.0 feet over 8 years of data. However, the daily mean water elevation has typically ranged between about -2.8 feet to 2.5 feet over the past 14 years of available data. Mean High Water is at 0.5 feet, and Mean Low Water is at 0.0 feet.

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?) The proposed navigation span for the Currituck Sound Bridge is generally located in alignment with the Big Narrows area located about four miles south of the proposed bridge, which is a natural restriction in Currituck Sound for marine traffic (see Exhibit B of the NIR and the bridge sketches in Attachment D of this permit application).

6. Channel and waterway alignment: Location of the channel(s) There is no defined channel in Currituck Sound at the bridge site. The navigation channel has been established based on the location of generally deeper water and an alignment with the Big Narrows passageway to the south and the North Landing River (Intracoastal Waterway) to the north.

7. Other limiting factors: (For example, bends in the waterway within one-half mile of project site, hindrances to free navigation, fog, hydraulics, etc.) There are no limiting factors to navigation within one-half mile of the proposed bridge location.

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: Yes

1. Does levee maintenance, bridge work (other bridges), channel maintenance and emergency operations upstream of bridge require certain vessels to transit the waterway? No

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.)? No

3. Vessels using the waterway during the proposed bridge(s) lifespan (should include): See the NIR (Attachment E) for information on known emergency vessels using Currituck Sound. The USCG in Wanchese, NC, responded to the survey, and all of their boats can be accommodated under the proposed bridge. Similar-sized vessels are typically used by the North Carolina Wildlife Resources Commission for hunting and fishing patrols. The same would be true for local police, fire, and emergency rescue squads.

a. Vessel name; See NIR

b. Registration/documentation numbers; See NIR

c. Vessel type; See NIR

d. Vessel owner contact information (company/individual name, address, contact info.); See NIR

e. Primary vessel mooring location (include waterway milepoint, if known); See NIR

f. Vessel overall length; See NIR

g. Vessel beam; See NIR

h. Vessel draft (depth of hull below waterline at full load); See NIR

i. Vessel air draft (height of the highest fixed point of the vessel above the waterline, when empty); See NIR

j. Specialized vessels that use the waterway (e.g. vessels which have limited maneuverability due to inherent design or mode of operation); See NIR

k. Safety margin required by vessel to navigate through the bridge(s); See NIR

l. Vessel transit frequencies under proposed bridge(s), transit speeds, and load configurations; and See NIR

m. Vessel traffic characteristics (to include if tug assist is required for transit through the bridge(s) due to limited horizontal clearance). See NIR

4. Will the proposed bridge(s) provide the horizontal and vertical clearances for the safe, efficient passage of the largest of these vessels? Why? Yes, all the reported and known vessels for emergency operations on Currituck Sound should be accommodated with the proposed horizontal and vertical clearance of the Mid-Currituck Bridge.

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.

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: There is no known USACE navigation project for Currituck Sound at or near the bridge crossing location.

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

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?

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:
Yes, the NIR (see Attachment E) contains the results of two surveys of vessels that use Currituck Sound and transit the area of the proposed bridge. The available information on these vessels is contained in the NIR and associated appendices of that report.

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

a. Vessel name; See NIR

b. Registration/documentation numbers; Not Available

c. Vessel type; See NIR

d. Vessel owner contact information (company/individual name, address, contact info.); See NIR

e. Primary vessel mooring location (include waterway milepoint, if known); See NIR

f. Vessel overall length; See NIR

g. Vessel beam; See NIR

h. Vessel draft (depth of hull below waterline at full load); See NIR

i. Vessel air draft (height of the highest fixed point of the vessel above the waterline, when empty); See NIR

j. Specialized vessels that use the waterway (e.g., vessels which have limited maneuverability due to inherent design or mode of operation); See NIR

k. Safety margin required by vessel to navigate through the bridge(s); Not available

l. Vessel transit frequencies under proposed bridge(s), transit speeds, and load configurations; and See NIR

m. Vessel traffic characteristics (to include if tug assist is required for transit through the bridge(s) due to limited horizontal clearance). Not available

2. What is the estimated percentage of the recreational fleet, which may be affected by the proposed bridge(s)? 10 percent (see NIR for further details).

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. Most of these vessels can lower their mast or electronic devices to transit the bridge.

5. Provide any additional information concerning the potentially impacted or burdened users of the waterway as well as the future use of the waterway. None are known.

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: Currituck Sound is not typically used for the movement of goods because of the relatively shallow water depths. The areas south of the proposed bridge crossing near the Big Narrows are very shallow water and not conducive to commercial navigation. The Intracoastal Waterway is located along the North River, which is located west of Currituck Sound. The proposed bridge crossing would not affect the movement of present or prospective commercial navigation.

1. Vessel name; N/A

2. Registration/documentation numbers; N/A

3. Vessel type; N/A

4. Vessel owner contact information (company/individual name, address, contact info.); N/A

5. Primary vessel mooring location (include waterway milepoint, if known); vessel overall length; N/A

6. Vessel beam; N/A

7. Vessel draft (depth of hull below waterline at full load); N/A

8. Vessel air draft (height of the highest fixed point of the vessel above the waterline, when empty); N/A

9. Specialized vessels that use the waterway (e.g. vessels which have limited maneuverability due to inherent design or mode of operation); N/A

10. Safety margin required by vessel to navigate through the bridge(s); N/A

11. Vessel transit frequencies under proposed bridge(s), transit speeds, and load configurations; and N/A

12. Vessel traffic characteristics (to include if tug assist is required for transit through the bridge(s) due to limited horizontal clearance). N/A

13. Does the proposed bridge(s) impact existing and future cruise ship ports-of-call/terminals? N/A

14. Does the proposed bridge(s) impact ports supporting post-Panamax vessels? N/A

15. Does the proposed bridge(s) impact vessels that produce unique products for the region? N/A

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.) N/A

17. Document annual cargo movements (cargo types and quantities); N/A

18. State the estimated percentage of the commercial fleet, which may be affected by the proposed bridge(s). N/A

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

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: N/A

21. Document the foreseeable needs to future navigation; N/A

22. Provide existing and historical navigational use and waterway conditions; N/A

23. Provide input from waterway dependant facilities concerning future use; N/A

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

25. Describe future vessel size and traffic trends; N/A

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

27. Include input from facilities based on business plans; N/A

28. Document local commercial shipping and other businesses affected by this restriction. N/A

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. N/A

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

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.: There are limited marine facilities within a 3-mile radius of the proposed bridge crossing. The Whalehead Club Boat Ramp (252-453-9040) is located about 1.6 miles north of the bridge location along the east side of Currituck Sound at 1100 Club Road, Corolla, NC 27927. The Coinjock Public Boat Ramp (operated by the NC Wildlife Resources Commission) is located along the North River at 482 Waterlily Road, Coinjock, NC 27923, 2.8 miles from the bridge location by direct distance, but about 13 miles from the bridge by water. Similarly, the Coinjock Marina (252-453-3271) at 321 Waterlily Road, Coinjock, NC 27923, and the Midway Marina (252-453-3625) at 157 Coinjock Development Road, Coinjock, NC 27923 are also located along the North River, 2.6 miles from the bridge location by direct distance, but about 14 miles by water. The Poplar Branch Public Boat Access (also operated by the NC Wildlife Resources Commission) is located 3.5 miles south of the proposed bridge crossing along the west bank of Currituck Sound at 101 Poplar Branch Road, Poplar Branch, NC 27965. There are no major docking facilities or boat repair facilities within a 3-mile radius of the proposed bridge. There are several private docks along the banks of Currituck Sound in the area of the bridge. Marine Pro (252-457-0016) is a boat repair facility along US 158 north of the project near Coinjock at 4524 Caratoke Highway, Barco, NC 27917. This facility is 3.2 miles from the proposed bridge over Currituck Sound and 2.2 miles from the west end of the Mid-Currituck Bridge project at US 158.

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

1. Describe the facilities impacted and estimate the number of vessels currently using these facilities.

a. Vessel information should include the following for each blocked vessel:

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); and

8) Vessel air draft (height of the highest fixed point of the vessel above the waterline, when empty);

2. 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.

3. What economic impact will loss of access have on these facilities? Include estimated dollar amount to support Commandant and DHS goals.

4. What is the distance to alternate service facilities capable of servicing the affected vessels? Describe the facilities.

5. Will use of these alternate facilities substantially increase vessel operation affected vessels? Describe the facilities.

6. Is it feasible to modify the affected 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 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 and No. Use of the Intracoastal Waterway instead of Currituck Sound is the best option for

marina traffic that cannot effectively navigate in the shallow waters of Currituck Sound. The water distance from Point Harbor west of the Wright Memorial Bridge to Bell Island in northern Currituck Sound is about 32 miles using the Intracoastal Waterway and 30 miles using Currituck Sound. Within Currituck Sound, in the immediate area of the proposed bridge, there are no realistic alternate routes to bypass the bridge. To go from one side of the bridge to the other using the alternate route via the Intracoastal Waterway would be a roughly 62-mile trip.

1. State the number of vessels that will be forced to use alternate routes. Based on surveys conducted for the NIR, 90 percent of the 125 vessels that responded to the survey would be able to transit the proposed bridge location. See the NIR for additional information (Attachment E).

2. For each vessel identified in section H1.a. above, include the following information: See the NIR (Attachment E) and the NIR Exhibits G and H for specific information on vessels that are larger than the proposed clearances for the Currituck Sound Bridge.

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.

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: No

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.

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: No

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)?

2. 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: No

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

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

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: No

1. Describe the conditions: *Waves and currents in Currituck Sound are primarily wind driven. Currituck Sound is a generally shallow water body (see Exhibit B and C of the NIR). The proposed navigation location for the bridge over Currituck Sound is in deeper water and should not be subjected to hydraulic conditions that make passage hazardous.*

2. 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: No

1. Describe the conditions: *Currituck Sound is an open water body with generally normal prevailing winds for the area and typical weather conditions.*

2. What mitigative measures are being recommended? Why?

P. Have guide clearances been established for the waterway? If yes, provide the following information: There are no established guide clearances for Currituck Sound by the USCG.

1. Horizontal guide clearance;

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? Because of fluctuations in water depths in Currituck Sound caused by wind and wave action, the use of clearance gauges is recommended at the proposed bridge navigational crossing location.

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.

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. An NIR has been prepared for this project and is available with this permit application (see Attachment E). Bridge construction is anticipated to be done by barges in waters that are generally greater than 6 feet deep. In shallower waters along the east and west sides of Currituck Sound, construction trestles are anticipated as the construction method for building the proposed bridge.

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. There is no existing bridge that is being replaced at the proposed bridge crossing location.

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

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. Adjustment or mitigations techniques may include using other routes, lowering electronics (GPS, radar, communication antennae, etc.), lowering crane booms, etc. Most reported vessels that are taller than the proposed vertical clearance under the bridge can lower their masts or electronics to be able to transit the area of the bridge. See the NIR (Attachment E) for more specific details about these vessels.

2. Are alternative routes available for vessel passage? There is no alternate route within Currituck Sound to avoid the proposed bridge. The crossing is located near the middle of the length of Currituck Sound and crosses the entire width of the Sound. There is an alternate route using the Intracoastal Waterway that would avoid the proposed bridge. This alternate route

would be about 62 miles long from one side of the bridge to the other, using the Intracoastal Waterway.

3. Can vessels transit at typical lower water stages (mean low water, mean pool level, etc.)?
Yes

ATTACHMENT B

Bridge Permit Application

APPENDIX B: BRIDGE PERMIT APPLICATION

A. THE APPLICATION PACKAGE

The application package consists of the following information. Submit information in the format outlined below. If any section is not applicable to the project, state why it is not applicable. This BPAG Applicant Template is also provided on the Bridge Program public website: https://www.dco.uscg.mil/Our-Organization/Assistant-Commandant-for-Prevention-Policy-CG-5P/Marine-Transportation-Systems-CG-5PW/Office-of-Bridge-Programs/Bridge-Permit-Application-Process/.

1. Per 33 CFR § 115.50(j), submit application materials to the Coast Guard District Bridge Office that has jurisdiction over the area of the proposed bridge site.

   Application Date:

   December 12, 2025

   a. Applicant information:

      1) Name (company/agency and POC name):

         Alan Shapiro, PE

      2) Address:

         North Carolina Turnpike Authority
         1578 Mail Service Center
         Raleigh, NC 27699-1578

      3) Telephone number; and

         919-707-4944

      4) Email address:

         awshapiro@ncdot.gov

   b. Consultant/Agent information (if employed):

      Check here if not applicable and leave this section blank: ☒

      1) Name (company/agency and POC name):

         N/A

      2) Address:

         N/A

      3) Telephone number:

N/A

4) Email address; and

N/A

5) Document authorizing the consultant/agent to obtain permits on behalf of the applicant:

Cite enclosure(s) in the application package, list title and date of document(s), as appropriate:

N/A

c. Name of Proposed Bridge(s) (must be consistent with the plan sheet title block):

Mid-Currituck Bridge Project (R-2576) – Currituck Sound Bridge – Proposed Bridge on New Route between US 158 and NC 12 over Currituck Sound near Coinjock, NC

1) Name of the waterway that the bridge(s) is located in or over:

Currituck Sound (see Exhibit A of the Navigation Impact Report included with this permit application in Attachment E).

2) Number of miles above the mouth of the waterway where the bridge(s) would be located and provide latitude and longitude coordinates (to five decimal places) at centerline of navigation channel (Lat/Long must be determined using WGS-84 datum. Contact the local Coast Guard Bridge Office for guidance if needed):

Milepoint:

Approximately 19 miles north of where Currituck Sound joins Albemarle Sound. There is no prescribed navigational channel in Currituck Sound. The navigation span along the bridge has been placed in a location of deeper water that aligns with the likely route of any vessel traffic transiting through Currituck Sound.

Lat/Long:

The coordinates for the centerline of the planned navigation channel at the proposed bridge crossing are 36.33757 and -75.88890.

3) City or town, county/parish, and state where the bridge(s) would be located at, near, or between:

Near Coinjock and extending from Aydlett on the west to Corolla on the east across Currituck Sound in Currituck County, North Carolina.

4) Brief description of project to include action being taken, type of bridge(s) proposed [fixed or movable (drawbridge, bascule, vertical lift, swing span, pontoon, etc.), highway, railway, pedestrian, pipeline] and existing bridge(s) at

project site, if applicable:

The Currituck Sound Bridge is a new fixed-span highway bridge on new location. This bridge is part of the larger Mid-Currituck Bridge project, a new location highway and bridge facility connecting US 158 near Coinjock, NC with NC 12 in Corolla, NC.

5) Is this project a design-build or alternate design project:

☒ Yes ☐ No

If yes, provide a brief description:

The Mid-Currituck Bridge project will be a toll bridge facility under the North Carolina Turnpike Authority (NCTA). The contracting mechanism for the implementation of the project final design and construction will be some form of alternative procurement method such as design-build or a public-private partnership. The exact nature of the alternative contracting method remains under evaluation currently.

6) Date of plans and number of plan sheets (i.e., 1 of 4, indicate if revised, include multiple dates when necessary, etc.):

June 14, 2023 (see bridge sketches in Attachment D with this permit application – 7 sheets)

7) Provide the estimated cost of the bridge(s) and approaches with proposed vertical and horizontal navigational clearances:

$399 million (Currituck Sound bridge-only construction cost estimate) in 2025 dollars. This would provide a minimum of 20 feet of vertical clearance over mean high water at the navigation span and a minimum of 16 feet of vertical clearance for most of the remaining bridge length.
$885 million (including costs for the right-of-way and utility relocations but does not include environmental mitigation, toll integration, and landscaping) in 2025 dollars. This cost estimate is for the Mid-Currituck Bridge project as currently planned at the time of the permit application.

8) Identify the type(s) and source(s) of project funding (federal, state, private, etc.):

Federal, state, and toll revenue bonds.

9) Describe the proposed project timeline (from permit to construction completion, e.g., NEPA scoping, NEPA document completion, request for bids, designs complete, build starts, construction complete, etc.):

Contract Procurement 2026 – Design, Right-of-Way Acquisition, and Utility Relocation 2027-2028 – Construction 2028-2033

10) Identify any other Federal actions (e.g., permits, permissions, approvals, or

consultations, etc.) and the agency associated with the proposal:

US Army Corps of Engineers Section 404 Permit, applied for September 18, 2024. The 404 Permit was issued on October 28, 2025. This is a combined permit application that also covers Section 401 Water Quality Certification by the North Carolina Division of Water Resources. The 401 Certification was issued on September 18, 2025. The Coastal Area Management Act (CAMA) Permit through the North Carolina Division of Coastal Management was applied for September 18, 2024. The CAMA Permit was issued on September 19, 2025.

11) Identify any other non-Federal agency actions and the agency (e.g., permits, permissions, approvals, or consultations) associated with the proposal:

No other non-Federal agency permits, permissions, or approvals are required. However, continued coordination and consultation has been and will continue to be had with the NC Wildlife Resources Commission, the NC Division of Marine Fisheries, the NC Division of Water Quality, the NC Division of Coastal Management, and the NC Historic Preservation Office.

d. Legal authority for proposed action:

1) Is the applicant a state or municipal agency with eminent domain authority over private, state, and/or local property? (If yes, the primary authority will be presumed without proof)

☒ Yes ☐ No ☐ N/A

If yes, please identify what agency has eminent domain authority:

North Carolina Department of Transportation (NCDOT) – NCTA is a Division of NCDOT

2) If there is an existing bridge(s) being replaced or modified, and the applicant does not own it, include a signed statement from the bridge owner authorizing the removal or modification work.

☒ N/A, applicant owns the existing bridge

Cite enclosure(s) in the application package, list title and date of document(s), as appropriate:

N/A – this is a new location project and there is no existing bridge.

3) For privately owned bridges, state whether the applicant has the right to build in accordance with 33 CFR § 115.05. If the applicant does not own the property needed to build the bridge(s) as proposed, include a signed statement (e.g., deed or easement) from the property owner or owners authorizing the proposed construction or modification work.

☒ N/A, publicly owned, not a privately owned bridge

☐ Privately owned, applicant has right to build

Cite enclosure(s) in the application package, list title and date of document(s), as appropriate:

N/A – this will be a publicly owned and operated toll bridge.

e. For international bridges (if applicable) check which authority the bridge(s) is being built or modified under:

☒ N/A

☐ The International Bridge Act of 1972

The Coast Guard requires Presidential approval, via the State Department, before issuing a bridge permit under the International Bridge Act of 1972. Include a copy with the bridge permit application as appropriate. Cite provided enclosure title and date of document:

N/A

☐ Special Act of Congress

Cite the appropriate legislative authority:

N/A

NOTE: Please include a copy of State Department approval for international bridges in the application package for a Coast Guard bridge permit.

f. Dimensions of the navigation opening (All navigational clearances should be stated in U.S. linear feet in decimal form (not feet and inches). For international bridges, provide clearances in both linear feet and meters):

1) Vertical clearance(s) as indicated on plan sheets *(Note, this is the minimum vertical distance between the lowest part (e.g., member, chord, or steel) of the superstructure spanning the navigation channel and the recognized high water elevation (e.g., MHW, OHW, 2% flow line, etc.) at the bridge site. Cite clearances above the appropriate high water elevation. In the case of movable bridges, cite clearances in the open and closed positions. In some situations, vertical clearances should be cited at the margins of the navigation channel, and for a bascule bridge clearances at the tip of the open leaves. Include multiple clearances when appropriate.*:

20 feet (minimum) – the proposed bridge profile provides for 21.57 feet above

mean high water – see bridge sketches in Attachment D.

2) Horizontal clearance(s) as indicated on plan sheets *(Note, this is the horizontal distance, measured normal to the axis (centerline) of the channel, through which the stated vertical clearance is available. Clearance(s) may be between piers (full width of the span), between the bridge protective system, within the margins of the navigational channel, or bank-to-bank in the case of a bridge having no piers or bridge pier protective system within the waterway. Also, list both clearances if there is a difference in the distance between piers and the distance measured normal to the axis of the channel)*:

40 feet (minimum) – the proposed bridge has a 100-foot channel span which results in about an 88-foot horizontal waterway opening.

3) Length of bridge(s) project *(Note this is the length of the bridge(s) project as indicated on the plan sheets from abutment-to-abutment or approach-to-approach.)*:

24,665 feet for the new bridge.

If this is a modification or replacement project, is the length the same as the existing bridge?

☒ N/A, not a modification or replacement

☐ Yes ☐ No

If no, note the difference in length between the existing and proposed bridges.

☐ N/A

N/A

4) Width of bridge(s) project *(Note this is the width of the bridge(s) at its widest point (out-to-out) as indicated on the plan sheets.)*:

The bridge width varies from 42’-7” (42.58’) to 66’-7” (66.58’) (Out to Out). The bridge width is 42’-7” (42.58’) at the navigation span.

If this is a modification or replacement project, is the width the same as the existing bridge?

☒ N/A, not a modification or replacement project

☐ Yes ☐ No

If no, note the difference in width between the existing and proposed bridges.

☐ N/A

N/A

g. Temporary structure(s) or bridge(s). *(Note a temporary work trestle/platform does not span the waterway and is solely used for construction purposes. A temporary bridge will span the waterway, including the navigational channel, and is used for transportation or construction purposes)*. If a temporary structure or bridge will be required, provide the following as applicable:

☒ N/A, no temporary structure or bridge, this section left blank

1) Description of the temporary structure(s):

☐ N/A, no temporary structure

Temporary work platforms are anticipated to be used on the west and east sides of Currituck Sound in shallower water – no construction work platforms are anticipated in the deeper, more navigable water or at the presumed navigation channel location.

2) Description of the temporary bridge(s):

☒ N/A, no temporary bridge

N/A

3) Vertical clearance(s), as indicated on plan sheets *(For a temporary structure, only required if it crosses a navigation channel)*:

☒ N/A, temporary structure does not cross the navigation channel

N/A

4) Horizontal clearance(s) as indicated on plan sheets *(List both clearances if there is a difference in the distance between piers and the distance measured normal to the axis of the channel. For a temporary structure, only required if it encroaches upon a navigation channel)*:

☒ N/A, temporary structure does not encroach on the navigation channel

N/A

5) Length of the proposed temporary structure(s)/bridge(s):

N/A

6) Width of the proposed temporary structure(s)/bridge(s):

N/A

7) Identify the schedule and extent of removal(s) for the temporary structure(s)/bridge(s):

N/A

h. Existing bridge(s) at the project site, if applicable:

☒ N/A, no existing bridge, this section left blank.

1) Name of existing bridge(s): (e.g., US 40 Highway Bridge; or Coleman Memorial Bridge; or State Route 7 Bridge also known as Preston Falls Bridge):

N/A

2) Waterway milepoint (in statute miles):

N/A

3) Type of bridge(s) and description (number of lanes, spans, fixed or moveable (drawbridge, bascule, vertical lift, swing span, pontoon, etc.); highway, railway, pedestrian, pipeline, etc.);

N/A

4) For movable spans identify the existing drawbridge operating regulation governing the structure (if applicable):

☐ N/A, fixed bridge

a) If the existing bridge(s) has a movable span, identify whether its operating schedule is regulated by 33 CFR § 117.5 or if it operates under a special operating regulation found in 33 CFR Part 117 Subpart B (if so, cite the regulation):

N/A

b) Modification of an existing drawbridge may require revision or removal of the existing regulation (e.g., if the bridge project involves replacing the existing drawbridge with a fixed bridge). Contact the local Coast Guard District Bridge Office to determine if the existing regulation will transfer to the new bridge, if a new regulation will be proposed, if it will be removed, or if there will be no change required. Identify the anticipated status of the drawbridge regulation

(e.g., regulation transferred, new regulation, regulation removed, no regulation change,):

N/A

5) Latitude and longitude coordinates (degree/minute/second) at centerline of the existing bridge(s) based on WGS-84 horizontal datum:

N/A

6) Dimensions of the existing bridge(s): *(The proposed and existing vertical clearances must be compared using the same datums. This may require surveying the existing bridge. All navigational clearances should be stated in U.S. linear decimal feet. In addition, provide clearances in meters if an international bridge(s))*:

   a) Vertical clearance(s) as built (include both the open and closed-to-navigation clearances for movable spans). *(For modification and replacement projects, the applicant must cite the vertical clearance of the existing bridge and the proposed bridge from the same datum. If the vertical datum for the existing bridge differs from the proposed vertical datum (tidal referenced to geodetic), show all necessary converted vertical clearance values and note the original values in the notes section on the plan sheets to demonstrate any change in approved clearances. If conversions (i.e., Mean Low Tide to Mean Low Water) cannot be made, it is necessary for the applicant to survey the existing bridge to provide as-built clearances using the same verifiable vertical datum (tidal and geodetic) as the proposed project.)*:

   N/A

   b) Horizontal clearance as built:

   N/A

   c) Length of existing bridge(s):

   N/A

   d) Width of existing bridge(s): (This is the width of the bridge(s) at its widest point (out-to-out)):

   N/A

7) Owner of the existing bridge(s):

N/A

8) Previous permit authority (or authorities), date(s) of permit and/or amendments, including issuing agency (cite enclosure(s) when available):

N/A

9) If available include copies of previous permit(s) and plans with application (cite enclosure when available):

N/A

i. Construction methodology, if known, and removal plans for existing bridge(s), as applicable:

1) Discuss proposed construction methodology and restrictions if known:

☐ N/A, construction methodology not known

The Mid-Currituck Bridge over Currituck Sound is anticipated to be constructed by use of a combination of construction methods depending on location, water depth, and setting. Temporary work platforms are anticipated along the west and east sides of Currituck Sound where water depths are generally shallower (less than 6 feet). Construction barges are anticipated for most of the bridge construction in deeper waters in the middle of Currituck Sound.

2) Discuss maintenance of land traffic during construction activities:

☐ N/A, land traffic maintenance not required

Generally, this project is on new location and will not impact existing land traffic. However, construction materials will need to be delivered to Currituck Sound for bridge construction. These material deliveries will mostly be from the west side of Currituck Sound where there is relatively light land traffic along Narrow Shore Road and Aydlett Road. There will likely need to be some material deliveries from the east side of Currituck Sound along the more heavily traveled NC 12. These deliveries for bridge construction will be minimized to the extent practicable for the maintenance of land traffic. These deliveries may be scheduled for periods of lighter traffic along NC 12.

3) Discuss extent of removal of existing bridge(s) (e.g., in its entirety, down to or below the natural bottom of the waterway, to a specific elevation, etc.), including parts in the water and on land (if applicable) and time needed for removal. Cite all correspondence that influenced removal depths:

☒ N/A, no existing bridge

There is no existing bridge to be removed at this location.

4) Discuss demolition methodology:

☒ N/A, no existing bridge

N/A

NOTE: In the interest of navigational safety, the Coast Guard must make the final decision concerning the extent of bridge(s) removal.

B. WATERWAY DATA REQUIREMENTS:

Contact the local Coast Guard District Bridge Office to determine if a navigation impact report is required and what data should be included (see Appendix A) for the proposed project. The information will assist the Coast Guard in making a preliminary navigation clearance determination, when applicable, which will inform alternatives that will be analyzed in the environmental documentation.

C. ENVIRONMENTAL DOCUMENTATION:

NOTE: See Appendix E for a table of the Environmental Laws, Executive Orders, and Regulations Requiring Compliance, as applicable, impacting Bridge Program actions.

NOTE: All Bridge Program actions must conform with the National Environmental Policy Act (NEPA) of 1969 (42 U.S.C. § 4321), as amended by the Fiscal Responsibility Act of 2023, and all applicable Executive Orders and Acts currently in force affecting the environmental review for the permitting of infrastructure. For all of the below environmental laws, Executive Orders, and regulations, the Coast Guard requests specific decision documents as part of the application.

1. **National Environmental Policy Act -** The National Environmental Policy Act (NEPA) (42 USC 4321, et seq.) requires federal agencies to analyze the impacts of their proposed major federal actions on the human environment before the action is taken by considering the natural and physical environment and the relationship of the people with that environment. Coast Guard bridge permits are major federal actions that require the preparation of an environmental evaluation document describing the potential environmental effects under NEPA.

   a. Lead Federal Agency:

   US Department of Transportation, Federal Highway Administration

   b. List any Cooperating Agencies for the project:

   ☐ None

   US Army Corps of Engineers and US Coast Guard

   c. Type of environmental document prepared by the Lead Federal Agency (check applicable document):

   ☒ Environmental Impact Statement/Record of Decision (EIS/ROD)

Cite enclosure(s) in the application package, list title and date of document(s), as appropriate:

The ROD, FEIS Reevaluation, FEIS, DEIS, and associated technical documents can be found on the Mid-Currituck Bridge project website at: https://www.ncdot.gov/projects/mid-currituck-bridge/Pages/project-documents.aspx.

☐ Environmental Assessment/Finding of No Significant Impact (EA/FONSI)

Cite enclosure(s) in the application package, list title and date of document(s), as appropriate:

N/A

☐ Categorical Exclusion (CE)

Cite enclosure(s) in the application package, list title and date of document(s), as appropriate:

N/A

d. Has the environmental document been modified, reevaluated, supplemented or rescinded for the proposed action?

☒ Yes ☐ No

If yes, summarize and cite enclosure title(s) in the application package and cite date(s) for all documents as appropriate:

☐ N/A, document has not been modified, reevaluated, supplemented or rescinded

The ROD, FEIS Reevaluation, FEIS, DEIS, and associated technical documents can be found on the Mid-Currituck Bridge project website at: https://www.ncdot.gov/projects/mid-currituck-bridge/Pages/project-documents.aspx.

2. **Environmental Effects Abroad** - Executive Order 12114 on the Environmental Effects Abroad of Major Federal Actions requires all federal agencies taking actions that may or will significantly harm the physical or natural environment of other nations or the global commons to take environmental considerations into account for that action.

a. Does the proposed project involve a bridge connection to Canada or Mexico?

☐ Yes ☒ No

1) If yes, cite location(s) (including page number(s) or section as appropriate) in the environmental documentation where environmental effects abroad are described

(If a proposed project has environmental impacts outside of the geographical borders of the United States and its territories it shall be discussed in the environmental document. Summarize the impacts, proposed mitigation, and the Department of State and Council on Environmental Quality consultation findings here.):

☒ N/A, no international connection

N/A

3. **Clean Water Act, Section 401: Water Quality Certification** - Section 401 of the Clean Water Act of 1977(CWA) (33 U.S.C. 1251), as amended, prohibits Federal permitting or licensing agencies from issuing authorizations for construction activities having discharges into navigable waters, until the appropriate water quality certifying agency has issued a water quality certification or waiver procedures have been satisfied.

   a. Has the certifying authority or authorities issued a Water Quality Certification (WQC), waiver or statement that the WQC is not required for the Coast Guard bridge permit?

   ☒ Issued for a Coast Guard bridge permit

   ☒ Issued for a U.S. Army Corps of Engineers (USACE) permit and the certifying authority confirmed WQC applies to the Coast Guard bridge permit

   ☐ Waived

   ☐ Denied

   ☐ Other/not required/still valid

   NOTE: The USCG will not accept an application package as complete if a WQC, waiver, or statement from the appropriate regulatory body has not been obtained.

   b. Name of Federal, State or Tribal certifying authority/authorities, date(s) of certification(s), and corresponding enclosure(s) title:

   ☐ N/A, WQC not issued

   North Carolina Division of Water Resources; NCDOT Coordinator (position currently open).
   Transportation Permitting Branch Supervisor – Ms. Faith Hardin, 919-707-9225, faith.hardin@deq.nc.gov.

The Section 401 Water Quality Certification was applied for with NC Division of Water Resources (NCDWR) on September 18, 2024. The 401 Certification was issued on September 18, 2025 and is available at https://edocs.deq.nc.gov/WaterResources/DocView.aspx?id=4052238&dbid=0&repo=WaterResources&searchid=f3643aab-5107-4f44-b992-267cdc1fe286.

c. WQC expiration date (If not applicable, explain why):

☐ N/A

December 31, 2030 – Sames as the Section 404 Permit

d. When a WQC is included in a USACE Nationwide Permit (NWP) or other state resource, general or regional permit, that WQC only applies to the USACE permit. The certifying authority/authorities must confirm that the WQC already issued through the NWP/resource/general/regional permit is valid for the CG permit. Include any confirmation correspondence and the date of the confirmation:

☒ N/A, WQC issued separately for the CG permit.

N/A

e. If waived, denied or not required, summarize why and cite enclosure(s) in the application package of supporting material:

☒ N/A, WQC issued separately for the CG permit (not waived, denied or not required).

N/A

f. For permit modifications, include a new WQC for a Coast Guard bridge permit or a written confirmation from the certifying authority/authorities that the existing WQC has been reissued/renewed or is still valid for the proposed action.

☒ N/A, not a permit modification (WQC date(s) and file name above).

☐ New WQC attached (WQC date(s) and file name above):

☐ Written confirmation of WQC validity attached (cite enclosure):

N/A

4. **Clean Water Act, Section 404 and Protection of Wetlands** - Section 404 of the Clean Water Act (CWA) establishes a program to regulate the discharge of dredged or fill material into waters of the United States, including wetlands. Section 404 requires a permit from the US Army Corps before dredged or fill material may be discharged into

waters of the United States. Also, per the Executive Order 11990 on the Protection of Wetlands, no federally approved project will occur in wetlands unless there is no practical alternative to constructing in the wetlands. As a result, the Coast Guard must analyze alternative locations which avoid taking wetlands. If no alternative locations or designs are practicable, then the Coast Guard must ensure that the project design includes all practicable measures to minimize wetland impacts.

a. Is the proposed project located in or adjacent to a wetland?

☒ Yes ☐ No

If no, provide explanation:

N/A

b. If yes, what is the area (acreage) of wetlands that will be permanently and temporarily impacted by the proposed project?

☐ N/A, minimal or no permanent or temporary impacts

The Mid-Currituck Bridge project is estimated to permanently impact 1.21 acres of wetlands and temporarily impact 17.29 acres of wetlands. Additionally, there will be 0.23 acres of permanent surface water impacts and 0.04 acres of temporary surface water impacts. There will be 572 linear feet of permanent channel impacts and 127 linear feet of temporary channel impacts. The Currituck Sound Bridge has no impacts to wetlands (permanent or temporary), 0.13 acres of permanent surface water impacts, and 229 linear feet of permanent channel impacts.

c. Describe any wetland mitigation and cite enclosure(s) (including page number(s) or section, as appropriate).

☐ N/A, minimal or no permanent or temporary impacts

Compensatory mitigation for impacts to wetlands will be addressed through the NC Division of Mitigation Services (NCDMS). In a letter dated October 3, 2025, NCDMS agreed to implement the mitigation for the project. DMS has indicated that they will assume responsibility for satisfying the compensatory mitigation requirements for the project in accordance with DMS's In-Lieu Fee Instrument, signed July 28, 2010

d. Does the proposed project include the discharge of dredged or fill material into waters of the United States, including wetlands (e.g., in-water work to construct or remove piers) that requires a USACE permit (nationwide authorization or individual)?

☐ Yes ☐ No

e. If yes, note the date the 404 permit was issued, the date it expires, and cite the enclosure title or provide a statement of no concern from the USACE:

The USACE individual Section 404 permit application was submitted on September 18, 2024. The draft 404 permit was issued on October 17, 2025 (SAW-1995-02242). The permit expires on December 31, 2030.

5. **Coastal Zone Management Act** - The Coastal Zone Management Act (CZMA) of 1972 (16 U.S.C. § 1451), as amended, and its implementing regulations (15 CFR Part 930), requires all projects located within the designated coastal zone of a state to be consistent with the State's federally approved Coastal Zone Management plan (CZMP).

a. Is the project located within the boundaries of a State's approved CZMP?

☒ Yes ☐ No, not located within the boundaries of an approved CZMP

b. If yes, has the State specifically excluded this activity from its federally approved CZMP?

☐ N/A, not located within the boundaries of an approved CZMP

☐ Yes ☒ No, activity is not excluded

c. List the certification and/or state concurrence or consistency, date(s), and corresponding file names. Cite page number or section in environmental document, if applicable:

☐ N/A, certification/concurrence not required

The CAMA permit application was submitted to NCDCM on September 18, 2024. The CAMA permit was issued on September 19, 2025 and is available at https://edocs.deq.nc.gov/WaterResources/DocView.aspx?id=4052751&dbid=0&repo=WaterResources&searchid=f3643aab-5107-4f44-b992-267cdc1fe286.

6. **Floodplain Management** - Executive Order 11988 on Floodplain Management requires all federal agencies to avoid authorizing projects in the base (100-year) floodplain unless there is no practical alternative. By their very nature, most bridges are located within the base floodplain. Therefore, the Coast Guard must ensure that the project design includes all measures practicable to minimize floodplain impacts and to protect the natural and beneficial values of the floodplain.

a. Is the proposed project located in the base (100-year) floodplain?

☒ Yes ☒ No, not within the base (100-year) floodplain

b. If yes, is there an encroachment into the base (100-year) floodplain? (An encroachment does not exist when only the piers, pilings, or pile bents are located in the floodplain.)

☐ Yes ☒ No ☐ N/A, not in the base (100-year) floodplain

1) If yes, describe the encroachment, including any change to the floodplain elevation, quantities of fill removed (if any), fill placed, and net new fill (cite enclosure, page number, section, etc.):

☒ N/A, no encroachment

N/A

2) If no, describe how the project avoids encroachment into the base floodplain. Provide evidence through hydrologic and hydraulic analysis performed in accordance with standard engineering practice that the proposed project will not increase the base floodplain elevation at the project location, i.e., demonstrate no rise to the base floodplain elevation. Cite all enclosures (including page number(s) or section as appropriate):

☐ N/A, not in the base (100-year) floodplain

The proposed Currituck Sound Bridge spans the 100-year floodplain without encroachment except for pile bents located in the floodplain.

c. Is there a significant encroachment (constituting a considerable probability of loss of human life; likely future damage associated with the encroachment that could be substantial in cost or extent; or a notable adverse impact on natural and beneficial floodplain values) into the floodplain?

☐ Yes ☒ No ☐ N/A, not in the base (100-year) floodplain

1) If yes, provide documentation/coordination and cite enclosure(s) in the application package:

☒ N/A, no significant encroachment

N/A

d. Provide the 100-year flood elevation:

The 100 Year water-surface elevation is 3.9’ (Level III Wave Study) and 5.0’ (FEMA). The Bridge Survey & Hydraulic Design Report for the Currituck Sound Bridge is included in Attachment G.

e. Provide low steel/member elevation for the proposed bridge:

The low member elevation for the 40-foot-wide navigational opening is 22.07' as shown in the bridge sketches in Attachment D.

7. **Wild and Scenic Rivers** - Section 7 of the Wild and Scenic Rivers Act of 1968 (16 U.S.C. § 1271), as amended, prohibits the issuance of any federal permit for construction of projects having adverse impacts on a river, or a proposed river, and adjacent lands with values qualifying it for protection under this Act.

   a. Is the river involved in the proposed bridge project a designated or proposed Wild and Scenic River segment or listed on the Nationwide Rivers Inventory?

   ☐ Yes ☒ No, not a designated or proposed waterway

   b. If yes, list impacts and mitigation, summarize correspondence with the river-administering agency and cite location(s) (including page number(s) or section as appropriate) in the application package:

   ☒ N/A, not a designated river

   N/A

8. **Coastal Barrier Resources Act** - The Coastal Barrier Resources Act (CBRA) established the Coastal Barrier Resources System and prohibits federal funding for building and development in undeveloped portions of designated coastal barriers, including the Great Lakes unless the project falls under an exception to the CBRA.

   a. Does the proposed project connect to a unit of the Coastal Barrier Resources System (CBRS)?

   ☐ Yes ☒ No, there is no connection to any unit of the CBRS

   b. If yes, summarize the CBRA-related impacts, proposed mitigation, and any U.S. Fish and Wildlife Service (USFWS) regional office consultation findings. Cite corresponding enclosure(s). Cite page number or section in environmental document, if applicable:

   ☒ N/A, no connection to CBRS

   N/A

   c. If yes, and the project is federally funded, cite enclosure of Section 6 exception in the application package and any correspondence with the USFWS:

   ☒ N/A, no connection to CBRS

N/A

9. **Land and Water Conservation Fund Act** - Section 6(f) of the Land and Water Conservation Fund Act (LWCFA) assures that once an area has been funded with LWCFA assistance, it is continually maintained in public recreation use unless the National Park Service (NPS) approves substitution property of reasonably equivalent usefulness and location and of at least equal fair market value. The Secretary must approve all conversions of property acquired or developed with LWCFA assistance under this section to other than public outdoor recreation uses.

   a. Does the proposed project involve a conversion of land or facilities funded under Section 6(f) of the LWCFA?

   ☐ Yes ☒ No, there are no impacts to any LWCFA properties

   b. If yes, summarize and include correspondence with the NPS and authorization from the Secretary of the Interior for that conversion and cite enclosure title(s) (including page number(s) or section as appropriate):

   ☒ N/A, no LWCFA properties impacted

   N/A

10. **National Marine Sanctuaries Act and Marine Protected Areas** - Section 304(d) of the National Marine Sanctuaries Act (16 U.S.C. § 1434(d)) requires interagency consultation between NOAA and federal agencies taking actions, including authorization of private activities, "likely to destroy, cause the loss of, or injure a sanctuary resource."

   a. Is the proposed project in or adjacent to a National Marine Sanctuary?

   ☐ Yes ☒ No, not located in or adjacent to a National Marine Sanctuary

   b. If yes, list National Marine Sanctuaries Act coordination, date(s), and enclosure(s) and NOAA comment, if applicable:

   ☒ N/A, not in or adjacent to a National Marine Sanctuary

   N/A

   c. Is the proposed bridge(s) likely to destroy, cause loss of, or injure a resource of a National Marine Sanctuary?

   ☐ Yes ☒ No

   d. If yes, summarize and include evidence of consultation with NOAA's Office of National Marine Sanctuaries and the agency's findings/conditions and cite location(s)

(including page number(s) or section as appropriate) in the application package. If no, provide explanation:

☒ N/A, proposed bridge is not likely to destroy, cause loss of, or injure a resource of a National Marine Sanctuary

N/A

Executive Order 13158 on Marine Protected Areas requires all federal agencies whose actions affect the natural or cultural resources that are protected by a Marine Protected Area (MPA) to identify such actions and, to the extent permitted by law and to the maximum extent practicable, avoid harm to the natural and cultural resources that are protected by an MPA.

a. Is the proposed project in or adjacent to an MPA?

☐ Yes ☒ No, not located in or adjacent to an MPA

b. If yes, will the proposed project affect the natural or cultural resources that are protected by the MPA?

☒ N/A, project is not in or adjacent to an MPA

☐ Yes ☐ No

If no, provide evidence:

N/A

c. If yes, include evidence of correspondence with the MPA Center, if applicable, and cite location(s) (including page number(s) or section as appropriate) in the application package:

☒ N/A, proposed project does not affect natural or cultural resources that are protected by the MPA

N/A

11. **Endangered Species Act and Fish and Wildlife Coordination Act** - Section 7 of the Endangered Species Act of 1973 (ESA) (16 U.S.C. § 1531), as amended, requires each Federal agency to ensure that any action authorized, funded, or carried out by the agency

is not likely to jeopardize the continued existence of any endangered or threatened species or result in the destruction or adverse modification of critical habitat.

a. Are there federally designated threatened or endangered species and/or critical habitat in the area that the proposed project is located?

☒ Yes ☐ No there are no federally designated threatened or endangered species and/or critical habitat in the area of the proposed project

If no, provide explanation:

N/A

b. May the proposed project affect federally designated threatened or endangered species and/or critical habitat?

☒ Yes ☐ No, there are no potential impacts to protected species and/or critical habitat, nor is any consultation required

If no, provide explanation:

See Section 6.8 of the Record of Decision and Section 4.3.8 of the FEIS Reevaluation Study Report. These documents are located at https://www.ncdot.gov/projects/mid-currituck-bridge/Pages/project-documents.aspx. A Natural Resources Technical Report Update was prepared for the project in June 2023 and is attached in Attachment H. The species with a biological conclusion of May Affect – Not Likely to Adversely Affect includes the west Indiana Manatee and the Atlantic Sturgeon. The only species shown as May Affect – Likely to Adversely Affect are the northern long-eared bat and the tricolored bat (see below for additional information). All other protected species have a biological conclusion of No Effect or are not applicable.

c. If yes, was there formal or informal consultation with the United States Fish and Wildlife Service (USFWS) or the National Marine Fisheries Service (NMFS)?

☐ N/A

☐ Formal consultation

☒ Informal consultation

d. If formal, provide date(s) and attach biological assessment/evaluation, biological opinion, and any other relevant correspondence and cite location(s) (including page number(s) or section as appropriate) in application package:

☒ N/A, formal consultation not required

N/A

e. If informal, provide dates and include correspondence or documented phone conversations with and from USFWS/NMFS and cite location(s) (including page number(s) or section as appropriate) in the application package:

☐ N/A, informal consultation not required

A Biological Assessment (BA) was prepared by FHWA and NCDOT/NCTA in June 2011 for the Mid-Currituck Bridge Project Preferred Alternative in support of the 2012 Final Environmental Impact Statement. The BA was used in Section 7 consultation with both USFWS and NMFS concerning 13 federally protected species occurring in Currituck and Dare Counties. USFWS concurred with the Biological Conclusions for protected species under their jurisdiction in a letter dated July 8, 2011, and formal consultation was not needed. NMFS concurred with the Biological Conclusions for species under their jurisdiction in a letter dated October 18, 2011, and formal consultation was not needed. Consultation was considered completed unless a take occurred or new information revealed effects of the action not previously considered, or the identified action is subsequently modified in a manner that causes an effect to the listed species or critical habitat in a manner or to an extent not previously considered, or if a new species is listed or critical habitat designated that may be affected by the proposed project.

Since the publication of the 2011 BA, the rufa red knot and northern long-eared bat were listed as threatened by the USFWS in 2014 and 2015, respectively. Therefore, a technical memorandum was developed in May 2015 to address these two species. USFWS has revised the previous programmatic biological opinion (PBO) in conjunction with FHWA, USACE, and NCDOT for the northern long-eared bat (NLEB) (Myotis septentrionalis) in eastern North Carolina. The PBO covers the entire NCDOT program in Divisions 1-8, including all NCDOT projects and activities. Although the PBO covers Divisions 1-8, NLEBs are currently only known in 22 counties, but may potentially occur in 8 additional counties within Divisions 1-8. NCDOT, FHWA, and USACE have agreed to two conservation measures that will avoid/minimize the mortality of NLEBs. These conservation measures only apply to the 30 current known/potential counties shown in Figure 2 of the PBO at this time. The programmatic determination for NLEB for the NCDOT program is May Affect, Likely to Adversely Affect. The PBO will ensure compliance with Section 7 of the Endangered Species Act for ten years (effective through December 31, 2030) for all NCDOT projects with a federal nexus in Divisions 1-8, which includes Currituck County, where the Mid-Currituck Bridge project is located. USFWS concurred with the Biological Conclusions in the 2015 technical memorandum in a letter dated June 29, 2015.

Since 2015, the eastern black rail has been listed as threatened with a Section 4(d) rule by the USFWS in November 2020. The June 2023 Natural Resources Technical Report Update in Attachment H indicates that there is no suitable habitat within the study area to support the eastern black rail. On September 14, 2022, the USFWS announced a proposal to list the tricolored bat (Perimyotis subflavus -

PESU) as endangered under the Endangered Species Act. In November 2023, the USFWS issued a programmatic conference opinion (PCO) in conjunction with FHWA, USACE, and NCDOT for the tricolored bat, which determined that the NCDOT biological conclusion is "May Affect, Likely to Adversely Affect" for all counties in Divisions 1-8, which includes Currituck County, where the Mid-Currituck Bridge project is located. There are no known occurrences of this species in or near the project study area.

The 2011 Biological Assessment is located on the Mid-Currituck Bridge project website at: https://connect.ncdot.gov/projects/MidCurrituckBridgeDocuments/Biological%20Assessment%20June%202011.pdf and the 2015 Technical Memorandum is located at: https://www.ncdot.gov/projects/mid-currituck-bridge/Documents/tech-memo-2015.pdf. The 2023 Natural Resources Technical Report Update in Attachment H summarizes the biological conclusions for all federally protected species, including a No Effect conclusion for the eastern black rail.

The Fish and Wildlife Coordination Act (FWCA) (16 USC § 742, et seq.) provides the basic authority for the USFWS' involvement in evaluating impacts to fish and wildlife from proposed water resource development projects. It requires that fish and wildlife resources receive equal consideration to other project features. It also requires Federal agencies that construct, license, or permit water resource development projects to first consult with the USFWS (and NMFS in some instances) and the State fish and wildlife agency regarding the impacts on fish and wildlife resources and measures to mitigate these impacts.

a. Describe any correspondence with and recommendations from USFWS, NMFS, and the relevant state wildlife agency regarding FWCA coordination and cite location(s), date(s) and enclosure(s) (including page number(s) or section as appropriate) in the application package:

☐ None

FHWA and NCDOT/NCTA have coordinated with USFWS and NMFS as well as NC Wildlife Resources Commission and NC Division of Marine Fisheries throughout the project development process to date for the Mid-Currituck Bridge project. This coordination has been accomplished through interagency meetings, review of fish and wildlife-related project documentation, consultation, and the NEPA process. Documentation of this coordination effort is reported in various project-related publications included at: https://www.ncdot.gov/projects/mid-currituck-bridge/Pages/project-documents.aspx.

12. **Magnuson-Stevens Fishery Conservation and Management Act -** The Magnuson-Stevens Fishery Conservation and Management Act (Magnuson-Stevens Act) (16 U.S.C. § 1855), as amended, requires Federal agencies which fund, permit, or carry out activities

that may adversely impact Essential Fish Habitats (EFH) to consult with the National Marine Fisheries Service (NMFS) regarding potential adverse effects of actions on EFH.

a. Will the proposed project likely adversely affect designated EFH as defined in the Magnuson-Stevens Act?

☒ Yes ☐ No, there are no potential adverse impacts to designated EFH

If no, provide explanation:

N/A

b. If yes, identify location of EFH assessment and list relevant correspondence with NMFS in the application package.

☐ N/A, no adverse effects on designated EFH

Documentation of the impact of the proposed project on EFH has been documented and is located on the project website at: https://connect.ncdot.gov/projects/MidCurrituckBridgeDocuments/Essential Fish Habitat Technical Report November 2011.pdf.

During the Section 404 permit application process an addendum to the Essential Fish Habitat assessment was prepared and is available at https://www.ncdot.gov/projects/mid-currituck-bridge/Documents/final-essential-fish-habitat-technical-report-addendum.pdf.

Additionally, the impacts on EFH were further addressed in Section 4.3.7 of the FEIS Reevaluation Study Report which is located at https://www.ncdot.gov/projects/mid-currituck-bridge/Documents/reevaluation-feis.pdf. NMFS did not submit comments on the FEIS. NMFS indicated in an e-mail to FHWA that their lack of comments demonstrates that the FEIS for the Mid-Currituck Bridge Study satisfied NMFS's issues on the project related to compliance with the engineering and environmental analyses required under the National Environmental Policy Act (NEPA). NMFS further indicated that their lack of comments should not be viewed as an endorsement of the project and that FHWA and NCTA should recognize that NMFS will expect additional effort related to delineation, minimization, and mitigation of SAV impacts during final design and the permitting process. NMFS did submit correspondence on the DEIS. Their letter and the responses to their comments are contained in Section 2.1.3 of the Stakeholder Involvement Report for the FEIS on pages 2-11 through 2-21. This document can be found at: https://connect.ncdot.gov/projects/MidCurrituckBridgeDocuments/Stakeholder Involvement for FEIS Technical Report Vol 1 December 2011.pdf. As part of the NMFS comments on the DEIS, NMFS concluded that the project would result in substantial adverse impacts to EFH.

13. **Marine Mammal Protection Act** - The Marine Mammal Protection Act (MMPA) (16 USC § 1361, et seq.) prohibits, with certain exceptions, the take of marine mammals in U.S. waters and by U.S. citizens on the high seas, and the importation of marine mammals and marine mammal products into the U.S. If a take may occur, an Incidental Take Authorization may be necessary. The National Marine Fisheries Service (NMFS) covers seals, sea lions, whales, dolphins and porpoises. Meanwhile, the U.S. Fish and Wildlife Service (USFWS) manages polar bears, the Pacific Walrus, Northern Sea Otters and the West Indian Manatee.

    a. Describe any possibility of impacts to marine mammals. List MMPA coordination, date(s), enclosure(s), and NMFS or USFWS comment, if applicable. If coordination is not required, explain why:

    The West Indian Manatee is the only marine mammal potentially associated with the Mid-Currituck Bridge project. The biological conclusion for this species, through coordination with the USFWS, is May Affect, Not Likely to Adversely Affect. A project permit (404 and 401) condition is that adherence to the "Guidelines for Avoiding Impacts to the West Indian Manatee: Precautionary Measures for Construction Activities in North Carolina Waters" is required throughout construction.

    b. Does the proposed project involve a "take" of marine mammals as defined in the MMPA?

    ☐ Yes ☒ No, there are no "takes" of mammals protected by the MMPA

    1) If yes, include the incidental harassment authorization or letter of authorization from NMFS, any relevant correspondence and summarize the impacts, proposed mitigation and NMFS regional office consultation findings:

    ☒ N/A, no "take" of marine mammals protected by the MMPA

    N/A

    2) If no, explain why the project does not involve a "take" of marine mammals, including description of any preventative mitigations:

    ☐ N/A, project involves a take as described above

    The project must adhere to the "Guidelines for Avoiding Impacts to the West Indian Manatee: Precautionary Measures for Construction Activities in North Carolina Waters" as a condition of the Sections 401 and 404 permits.

14. **Migratory Bird Treaty Act** - Migratory Bird Treaty Act (MBTA) (16 U.S.C. § 703-712) made it illegal to take any migratory bird, nest, egg, or part or any bird protected under the Act except under the terms of a valid permit issued by the USFWS.

    a. Describe any possibility of impacts to migratory birds. List MBTA coordination, date(s), and enclosure(s):

    N/A

    b. Does the proposed project involve a potential take of migratory birds as defined in the MBTA?

    ☐ Yes ☒ No, there are no potential "takes" of birds protected by the MBTA

    1) If no, provide explanation and describe any preventative mitigations:

    ☒ N/A, project involves a take as described above

    The ROD, FEIS Reevaluation, FEIS, DEIS, and associated technical documents can be found on the Mid-Currituck Bridge project website at: https://www.ncdot.gov/projects/mid-currituck-bridge/Pages/project-documents.aspx. The Migratory Bird Treaty Act is covered in this documentation.

    2) If yes, is a permit required?

    ☐ Yes ☐ No ☒ N/A, no potential take

    3) If a permit is required, include it and any correspondence with USFWS and cite location(s) (including page number(s) or section as appropriate) in the application package:

    ☒ N/A, no permit required

    N/A

    c. Have the project's effects on migratory birds been evaluated in accordance with the executive order for the Responsibility of Federal Agencies to Protect Migratory Birds?

    ☐ Yes ☐ No ☒ N/A, no effects on migratory birds

d. If yes, describe coordination with USFWS conducted in accordance with the executive order. Provide date(s), enclosure(s), and USFWS comment, if applicable. If no, explain why:

☒ N/A, no coordination required

N/A

15. **Bald and Golden Eagle Protection Act** - The two species of eagles that are native to the United States have additional protection under the Bald and Golden Eagle Protection Act (BGEPA)(16 USC § 668-668c). USFWS may issue permits for the take, possession, or transport of bald or golden eagles, as well as their parts, nests, and eggs.

a. Describe any impacts to eagles, nests, parts, or eggs. List BGEPA coordination, date(s), and enclosure(s):

☒ N/A, there are no impacts to Bald or Golden Eagles including nests, parts, or eggs protected by the BGEPA

The ROD, FEIS Reevaluation, FEIS, DEIS, and associated technical documents can be found on the Mid-Currituck Bridge project website at: https://www.ncdot.gov/projects/mid-currituck-bridge/Pages/project-documents.aspx. The Bald and Golden Eagle Protection Act is covered in this documentation. NCDOT has committed for this project to develop construction contracts that will require compliance with USFWS guidelines for the protection of eagles contained in their 2007 National Bald Eagle Management Guidelines. Eagles and eagle nests will be surveyed prior to project construction to avoid and minimize potential disturbance and impacts to construction timing. Based on surveys conducted as part of the NEPA evaluation of the project, there were no identified eagle nests in or near the project area. Additional ground and aerial surveys were conducted in November 2022 and no bald eagles or nests were detected in or near the project area.

b. May the proposed project take or disturb bald or golden eagles (including active and inactive nests) as defined in the BGEPA?

☐ Yes ☒ No

1) If no, provide explanation and describe any preventative mitigations:

N/A

2) If yes, is a permit required?

☒ N/A, no potential take or disruption

☐ Yes ☐ No

3) If a permit is required, summarize the proposed mitigation and USFWS Regional Office consultation findings and cite location(s) (including page number(s) or section as appropriate) in the application package:

☒ N/A, no permit required

N/A

16. **Invasive Species** - Executive Order 13112 on Invasive Species requires all federal agencies whose actions may affect the status of invasive species to prevent the introduction of invasive species and not authorize, fund, or carry out actions that it believes are likely to cause or promote the introduction or spread of invasive species.

a. Does the proposed project have potential to introduce or foster the spread of invasive species?

☒ Yes ☐ No, there is no potential introduction or spread of invasive species

b. If yes, cite the document that describes measures that will be taken to minimize this risk and location(s) (including page number(s) or section as appropriate) in the application package:

☐ N/A, no potential impacts from invasive species

NCDOT has developed an invasive species control plan for this project. This plan is included in Attachment I of the permit application.

17. **Historical and Cultural Resources** - Federal agencies are required to take into account the effects of their undertaking on sites, structures, etc., protected by the historic and cultural resource laws and regulations identified in this section.

a. In accordance with Section 106 of the National Historic Preservation Act of 1966 (54 U.S.C. § 306108 et seq.), as amended, does the proposed project have potential to impact properties (including submerged abandoned shipwrecks) listed in or eligible for inclusion in the National Register of Historic Places (NRHP)?

☐ Yes ☒ No

Identify any State Historic Preservation Officer(s) (SHPO) and/or Tribal Historic Preservation Officer(s) (THPO) with oversight of the project

Renee Gledhill-Early, Environmental Review Coordinator, NC Historic Preservation Office, renee.gledhill-earley@dncr.nc.gov, 919-814-6579.

b. If yes, identify the documents that describe the effects and appropriate mitigation and provide evidence of consultation with the SHPO and/or THPO, and the Advisory Council on Historic Preservation, if applicable, and cite location (s) (including enclosure names, and page number(s) or section as appropriate) in the application

package. Please check all documents that are included and cite any corresponding enclosures:

☒ N/A, no potential impacts to properties listed in or eligible for inclusion in the NRHP

☐ Historic properties affected but no adverse effect determination, cite enclosure(s)

N/A

☐ Historic properties adversely effected and Memorandum of Agreement or Programmatic Agreement completed, cite enclosure(s)

N/A

☐ No historic properties effected determination, cite enclosure(s)

N/A

c. For projects involving federal lands also provide:

☐ Archeological clearances, cite enclosure(s)

N/A

☐ Archeological reports, cite enclosure(s)

N/A

d. Provide any other information regarding Section 106 process, such as public meetings or unique information, and corresponding enclosure(s) (including page number(s) or section as appropriate):

☐ None

Cultural resources surveys have been conducted for the Mid-Currituck Bridge and are included in the project documentation on the project website at https://www.ncdot.gov/projects/mid-currituck-bridge/Pages/project-documents.aspx.

e. Does the proposed project have potential to involve Native American cultural items as identified by the Native American Graves Protection and Repatriation Act?

☐ Yes ☒ No

1) If yes, please identify Tribal Nations that might be impacted, summarize impacts, identify any proposed mitigation, and summarize any consultation findings. Cite any corresponding enclosure(s) and National Park Service (NPS) comment, if applicable. Cite page number or section in environmental document, if applicable:

☒ N/A, no potential involvement of resources as identified by the Native American Graves Protection and Repatriation Act

N/A

f. Does the proposed project involve or have the potential to involve any Native American historic resources identified by the American Indian Religious Freedom Act of 1978?

☐ Yes ☒ No

1) If yes, please identify Tribal Nations that might be impacted, summarize impacts, identify any proposed mitigation, and summarize consultation findings. Cite any corresponding enclosure(s) and appropriate tribal consultation findings, if applicable. Cite page number or section in environmental document, if applicable:

☒ N/A, no potential involvement of resources as identified by the American Indian Religious Freedom Act

N/A

g. Does the proposed project involve or have the potential to involve a historic or prehistoric ruin or monument as identified by the Antiquities Act of 1906?

☐ Yes ☒ No

1) If yes, please summarize impacts, any proposed mitigation, and consultation findings. Cite any corresponding enclosure(s) and appropriate SHPO, NPS or other appropriate agency consultation findings, if applicable. Cite page number or section in environmental document, if applicable:

☒ N/A, no potential impacts of resources as identified by the Antiquities Act

N/A

h. Does the proposed project involve or have the potential to involve an archaeological resource or site identified by the Archeological Resources Protection Act of 1979?

☐ Yes ☒ No

1) If yes, please summarize impacts, any proposed mitigation, and consultation findings. Cite corresponding enclosure(s) and appropriate SHPO, NPS or other appropriate agency consultation findings, if applicable. Cite page number or section in environmental document, if applicable:

☒ N/A, no potential involvement of resources as identified by the Archeological Resources Protection Act

N/A

i. Does the proposed project involve or have the potential to involve a shipwreck as identified by the Abandoned Shipwreck Act?

☐ Yes ☒ No

1) If yes, please summarize impacts, any proposed mitigation, and consultation findings. Cite any corresponding enclosure(s) and appropriate SHPO, NPS or other appropriate agency consultation findings, if applicable. Cite page number or section in environmental document, if applicable:

☒ N/A, no potential involvement of resources as identified by the Abandoned Shipwreck Act

N/A

18. **Clean Air Act** - Section 176(c) of the Clean Air Act (CAA)(42 U.S.C. § 7401, as amended), prevents the Coast Guard from approving any project or from issuing any permit for actions not conforming to the provisions of an approved Federal Implementation Plan (FIP) or to a State Implementation Plan (SIP).

a. Is the project in an area of maintenance or nonattainment for each of the criteria pollutants in the National Ambient Air Quality Standards (NAAQS)?

☐ Yes ☒ No

b. If project occurs in a nonattainment or maintenance area, do the transportation or general conformity regulations, or both, apply?

☒ N/A, project does not occur in a nonattainment or maintenance area

☐ General ☐ Transportation

c. Is the project exempt from a transportation conformity analysis for any of the reasons listed in 40 CFR § 93.126?

☐ Yes ☒ No

1) If yes, identify the reason(s):

☒ N/A, project is not exempt from a transportation conformity analysis

N/A

d. Is the project exempt from a general conformity analysis for any of the reasons listed in 40 CFR § 93.153(c)?

☐ Yes ☒ No

1) If yes, identify the reason(s):

☒ N/A, project is not exempt from a general conformity analysis

N/A

e. If general conformity applies, is the project listed in a conforming State Implementation Plan?

☐ Yes ☐ No ☒ N/A, general conformity does not apply

f. If a general conformity determination was prepared, include the draft and final determinations and any relevant correspondence and cite their title (including page number(s) or section as appropriate) in the application package:

☒ N/A, a general conformity determination was not prepared

N/A

g. If transportation conformity applies, is the project listed in a conforming State Implementation Plan (SIP), Transportation Improvement Program (TIP), Regional Transportation Plan (RTP), or Federal Implementation Plan (FIP)?

☒ N/A, transportation conformity does not apply

☐ Yes ☒ No

1) If yes, identify the plan and cite location of information regarding listing in the application package (including page number(s) or section as appropriate):

☒ N/A, transportation conformity does not apply so project is not listed in any SIP, TIP, RTP or FIP

N/A

h. If transportation conformity applies, does the project contribute to any new localized CO, PM10, or PM2.5 violations or increase the frequency or severity or any existing violations of the same?

☒ N/A, transportation conformity does not apply

☐ Yes ☒ No

1) If yes, cite enclosure title and (including page number(s) or section as appropriate):

☒ N/A, transportation conformity does not apply and project does not contribute to any violations

N/A

19. **Hazardous Materials, Substances and Wastes**

a. Does the proposed project involve or is it located near a Superfund site or impact, or have the potential to impact any site regulated under the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA), Resource Conservation and Recovery Act (RCRA) or State law regulating hazardous materials, substances or wastes?

☐ Yes ☒ No

b. If yes, describe the involvement and cite the location(s) (including page number(s) or section as appropriate) in the NEPA or other document where hazardous materials, substances or wastes are discussed:

N/A

c. If no, provide any additional pertinent information and cite any analysis conducted:

Click here to enter text.

20. **[RESERVED]**

On 21 January 2025, President Trump signed Executive Order 14173 (Ending Illegal Discrimination and Restoring Merit-Based Opportunity). EO 14173 revoked EO 12898 (Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations). As a result of the revocation and in alignment with DHS, environmental justice will not be considered as part of any USCG permit action.

Additionally, President Trump signed Executive Order (E.O.) 14148, Initial Rescissions of Harmful Executive Orders and Actions. E.O. 14148 rescinded the following Executive

Orders E.O. 14008, Tackling the Climate Crisis at Home and Abroad; E.O. 14013, Rebuilding and Enhancing Programs to Resettle Refugees and Planning for the Impact of Climate Change on Migration; E.O. 14027, Establishment of the Climate Change Support Office; E.O. 14030, Climate-Related Financial Risk; and E.O. 13990, Protecting Public Health and the Environment and Restoring Science to Tackle the Climate Crisis. In alignment with the rescission of the Executive Orders listed, the USCG has eliminated the use of climate change terminology in its application.

ATTACHMENT C

Bridge Permit Plan Sheet Job Aid

Bridge Permit Application Plan Sheet Job Aid

Project Name:

Mid-Currituck Bridge Project (R-2576) – Currituck Sound Bridge – Proposed Bridge on New Route between US 158 and NC 12 over Currituck Sound near Coinjock, NC

Plans submitted with the bridge permit application become an official, and permanent, part of the issued permit or permit amendment. To minimize application processing delays, applicants should avoid placing extraneous information on the plan sheets not requested by the Coast Guard. Including extraneous information creates unnecessary issues when the bridge owner wants to deviate from the approved plan sheets. Please ensure this checklist is completed for all application submissions.

1. **General**

☒ Provide all plans in standard 8 ½ X 11" size, providing the fewest sheets possible that still show significant project structural details. Plan sheets may be submitted electronically.

NOTE: Do not show bridge navigational lighting plans on bridge plan and elevation views.

☒ Show all dimensions and distances in U.S. linear feet in decimal form (versus feet and inches). For international bridges show all dimensions in both linear feet and meters.

☒ Include the datum used in the plan and elevation view. Use the same datum for all submitted drawings (e.g. NAVD, NGVD). For replacement and modification projects, the datum used may differ between the new plans and the previously approved plans for the existing structure. If this situation occurs, please be sure to show all necessary conversions to demonstrate any change in approved clearances.

☐ Prior to permit issuance and plan sheet approval, all plan sheets must bear the date, signature and stamp of a professional engineer.

NCBELS policy is that only final plans are sealed and signed.

NOTE: the engineer stamp date must either match or be dated later than the title block date before the permit and plans can be approved by the Coast Guard. For projects involving FHWA Office of Federal Lands, please contact CG-BRG for further direction.

If desired, it is acceptable for the engineer to add the following statement to the plans, "Conceptual plans utilized to obtain Coast Guard bridge permit".

☒ Plan sheets properly depict the proposed project in a manner that allows the general public to thoroughly understand the project and permit action.

☒ Plan sheets properly depict the proposed permit action, specifically taking into consideration any existing plan sheets. Consider whether existing plan sheets will be supplemented or superseded for permit amendment actions.

2. **Title Blocks -** Include the following items in the title blocks (lower right-hand corner on all of the plan sheets):

☒ Applicant/Owner;

☒ Consultant/Agent;

☐ N/A

☒ Name of Bridge(s);

☒ Name of Waterway;

☒ Mile point of bridge(s) location (from confluence of mouth of waterway) in statute miles;

☒ City, county/parish, and state (state whether the bridge(s) is at, near, or between – as appropriate);

☒ Date of plans (i.e., mm/dd/yyyy, must either match or be dated prior to the engineer's date stamp); and

☒ The total number of plan sheets identified in the title block must match the number of plan sheets submitted for approval. Each sheet should be identified by the sheet number and total number of sheets in set to be approved (i.e., Sheet 1 of 5).

3. **Location/Vicinity Map**

☒ Show graphic scale and north arrow;

☒ Show location of bridge(s) on waterway;

☒ Identify the name of the waterway;

☒ Show course of waterway (i.e. ebb/flood, or direction of flow for non-tidal waters);

☐ Show structures immediately adjacent to the proposed bridge(s) and their relation to the proposed bridge(s);

☒ N/A

☒ Insert a small map of the state in which the project is located with an arrow showing the location of the proposed project.

4. **Plan View**

☒ Show graphic bar scale and north arrow;

☒ Show existing shorelines (may be defined or established by local or state regulation);

☒ Show ebb and flood in tidal waters and direction of flow in non-tidal waterway;

☒ Show mean high and low waterlines in tidal areas or ordinary high water and ordinary low water elevations if proposed activity is in a non-tidal waterway. Only one waterline is required in instances where the difference in mean high and low water elevation is minimal relative to the slope of the waterway banks. Waterlines are not required when bulkheads or other artificial banks are present.

☐ Not Required

☐ Identify all portions of existing bridge(s) that will remain in place;

☒ N/A

☐ Identify all portions of existing bridge(s) that will be removed by using a discernable method (e.g. grayscale, dashed lines, etc.);

☒ N/A

☒ Show principal dimensions of structure(s) from grade-to-grade. Show length, width, etc.;

☐ Show location of dredging, excavation, fill or rip-rap, when it presents potential impact to mariners. **Note: The Coast Guard does not approve these activities or items. Contact the U.S. Army Corps of Engineers for approval;**

☒ N/A

☐ Show location of the bridge protective system, piles, cables, etc. existing or to be constructed in the waterway. When available, identify type of material to be used;

☒ N/A

☒ Show limits of navigational channel;

☒ Show axis (centerline) of channel;

☒ Show horizontal clearances, normal to the axis (centerline) of the channel between the bridge protective system, pilings, or abutments; and

☒ On waterways where water depths may restrict vessel movements, show water depth at mean low (or ordinary low if non-tidal) at various locations in the channel, under, upstream and downstream of the bridge(s).

☐ N/A

5. **Elevation View**

☒ Show graphic bar scale;

☒ Show mean high and mean low water elevations in tidal areas or ordinary high and low water elevations in non-tidal areas;

☐ Show amount of fill material in cubic yards below mean high water;

☒ Show proposed navigational opening (i.e., the box that depicts the minimum horizontal and vertical clearances through which vessels will transit);

☒ Show horizontal clearance normal to the axis (centerline) of the navigational channel between the bridge protective fender system, pilings, or abutments, as appropriate;

☒ Show vertical clearance between the low steel member of the navigation span and the appropriate high water stage (Mean High Water (MHW), Ordinary High Water (OHW), etc.). Include the low steel elevation;

☐ If a Federally maintained navigational channel is present and the most restrictive vertical clearance is not over the channel, show vertical clearance at the center of the channel, as well as at the horizontal limits of the navigational channel referenced to the appropriate high water stage (Mean High Water (MHW), Ordinary High Water (OHW), etc.);

☒ N/A

☐ If the bridge(s) will have a draw, show the draw in the open and closed positions. Vertical clearances in the open position might not be unlimited, especially for vertical lift bridges and bascule bridges. For bascule bridges, specify which part of the navigation channel has an unlimited clearance in the open position i.e. the center 50 feet of the channel, etc.;

☒ N/A

☐ Show proposed and existing contour of waterway bottom;

☒ Show 100-year flood elevation; and

☒ If the bridge(s) will have a permanent traveler system installed for inspection/maintenance, show the reduction in vertical clearance (traveler height below low steel) and the location of traveler storage when not in use.

☒ N/A

6. **Typical Section View**

☒ Show graphic bar scale;

☒ Show out-to-out width of the structure(s). (This is the width of the bridge(s) at its widest point.); and

☒ Include location and dimensions of travel lanes, shoulders, sidewalks, fishing/pedestrian platforms, railings, pipelines, etc.

7. **Details of the Bridge Protective System** (if details are known and ready for CG approval as part of the permit decision)

☒ N/A

☐ Show bridge pier protective system in plan and elevation views with appropriate dimensions (length, diameter of pier protection cells, etc.). Include detail of attachment to pier, countersunk bolts, and relationship to mean high and low waterlines (on elevation view) when available.

8. **Temporary Structures/Falsework** (If it impacts navigation, details must be provided at time of public notice. Submit plan sheets separately, not as part of the plan sheets for permit approval).

☒ N/A

☐ Show location of temporary structures/falsework;

☐ Show minimum horizontal and vertical clearances if impacting the navigation span.

☒ N/A

☐ Show dimensions of proposed temporary structure(s).

9. Temporary Bridge(s) (Required for public notice and permit approval. Must be part of plan sheet set for permit approval)

☒ N/A

☐ Show location of temporary bridge(s);

☐ Show minimum horizontal and vertical clearances of proposed temporary bridge(s).

☐ Show length of proposed temporary bridge(s).

☐ Show width of proposed temporary bridge(s).

WHEN NOT AVAILABLE AT TIME OF PERMIT APPROVAL, THE BELOW MUST BE SUBMITTED TO THE DISTRICT BRIDGE OFFICE WHEN SO REQUIRED:

a. **Details of the Bridge Protective System** (if details and materials are not known at time of CG permit decision)

☐ Show bridge protective system in plan and elevation views including detail of attachment to pier, countersunk bolts, and relationship to mean high and low waterlines (on elevation view).

b. **Temporary Structures/Falsework** (if no impact to navigation and details and materials are not known at time of CG permit decision)

☐ Show temporary structures/falsework;

☐ Show existing bridge(s) to be removed using dashed lines; and

☐ Show minimum horizontal and vertical clearances during construction.

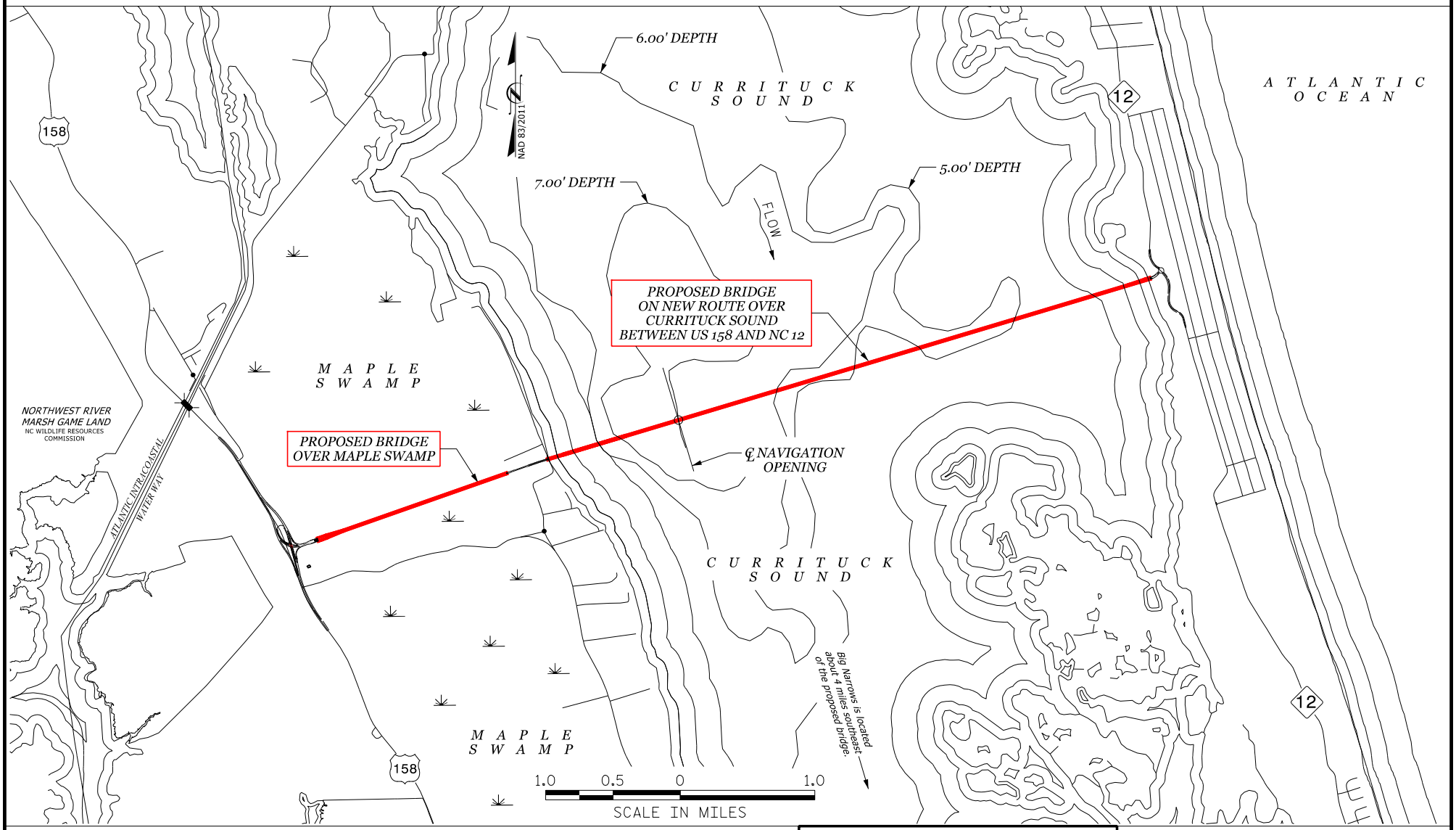
c. **Bridge Lighting Plan**

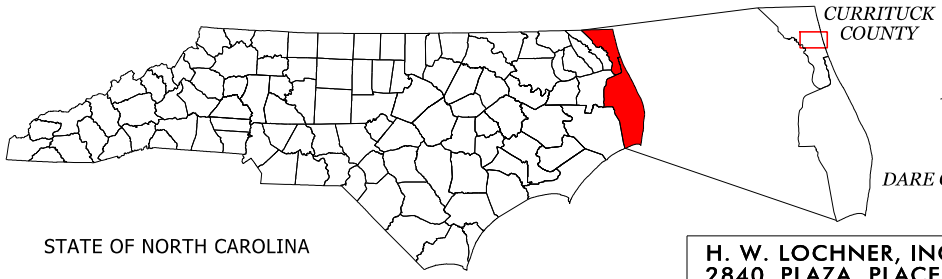
☐ Submit lighting plan in accordance with 33 CFR Part 118 and bridge lighting guide (see USCG Bridge Program website: Office of Bridge Programs (uscg.mil)). This is a separate application from the bridge permit application. The submission time can vary by District Bridge Office. Applicants should contact their local District Bridge Office to determine at what point is appropriate to submit a bridge lighting plan.

ATTACHMENT D

Bridge Sketches
November 10, 2025

VICINITY MAP





H. W. LOCHNER, INC.
2840 PLAZA PLACE, SUITE 202
RALEIGH, NC 27612
(919)571–7111
NC License Number F–0159

CONCEPTUAL PLANS UTILIZED TO OBTAIN COAST GUARD BRIDGE PERMIT

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

State of North Carolina
Department of Transportation
Raleigh, NC

MID–CURRITUCK BRIDGE
on
New Route
between
US 158 and NC 12
over
Currituck Sound, Mile Post 19
near
Coinjock, NC

Currituck County

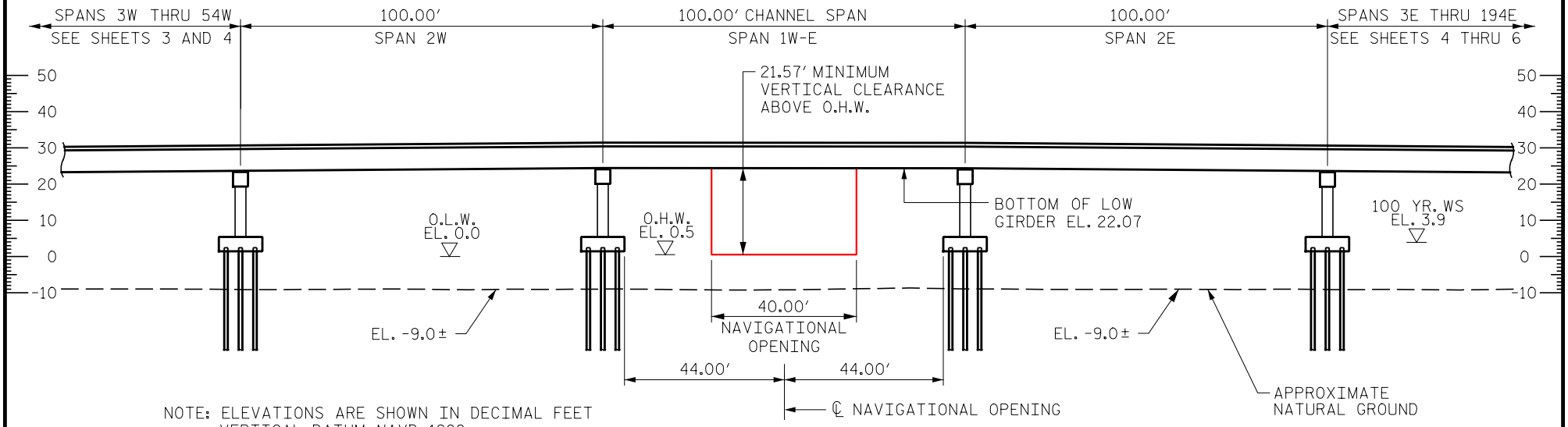
State Project: R–2576

November 10, 2025 Sheet 1 of 7

(+)0.7487% (-)0.7487%

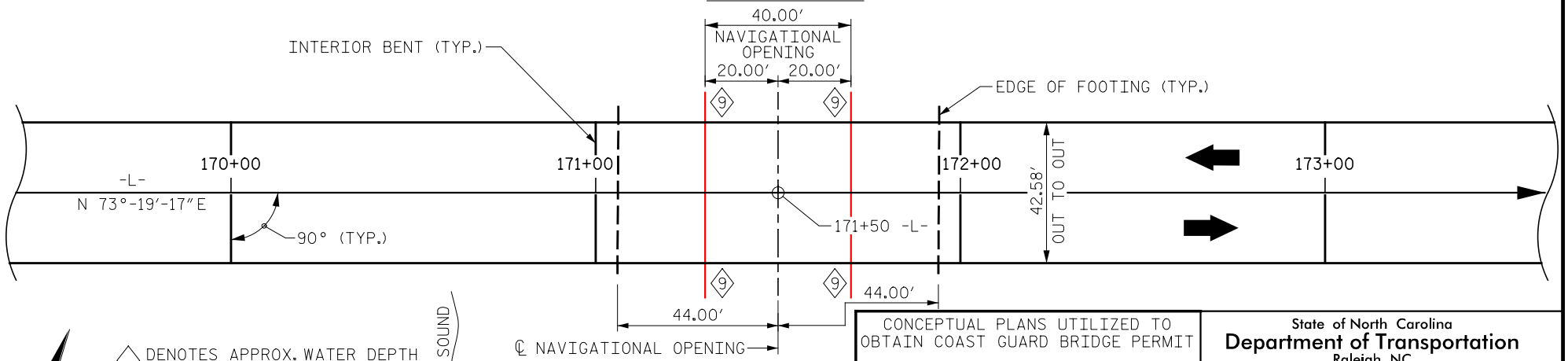
PI = 171+50.00
EL = 30.00'
VC = 250'

GRADE DATA -L-



NOTE: ELEVATIONS ARE SHOWN IN DECIMAL FEET
VERTICAL DATUM: NAVD 1988

ELEVATION



◇ DENOTES APPROX. WATER DEPTH AT ORDINARY LOW WATER

PLAN

40 0 40
SCALE IN FEET

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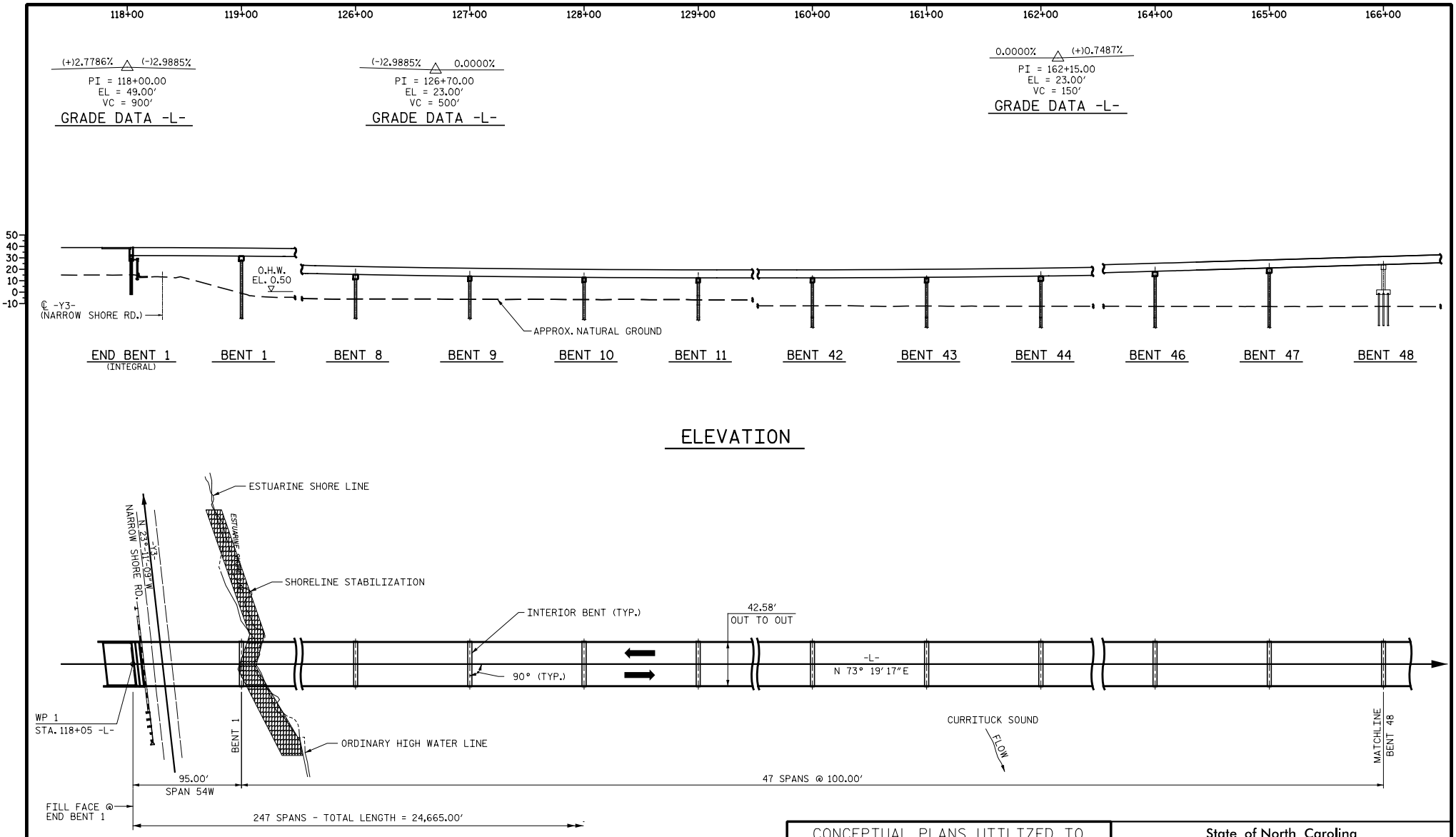
November 10, 2025 Sheet 2 of 7



ELEVATION

PLAN

NOTE: ELEVATIONS ARE SHOWN IN DECIMAL FEET VERTICAL DATUM: NAVD 1988

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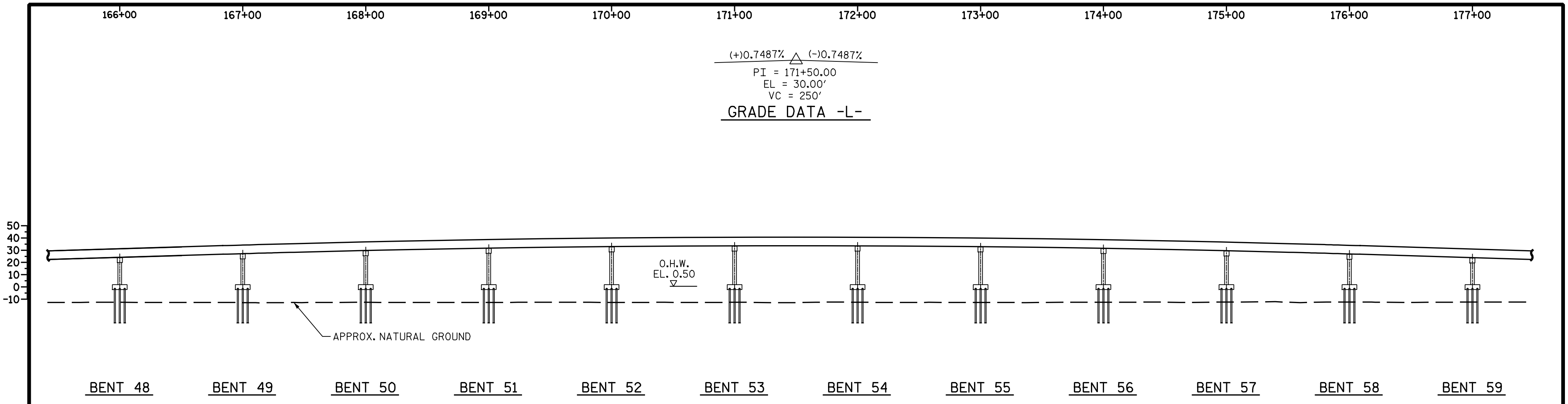
November 10, 2025 Sheet 3 of 7



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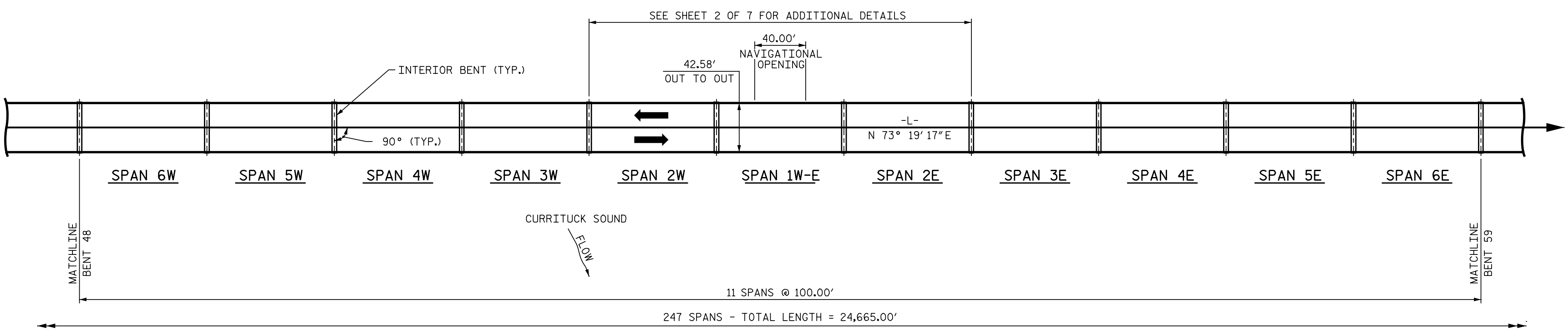

PLAN

NOTE: ELEVATIONS ARE SHOWN IN DECIMAL FEET VERTICAL DATUM: NAVD 1988

120 0 120

SCALE IN FEET

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CONCEPTUAL PLANS UTILIZED TO OBTAIN COAST GUARD BRIDGE PERMIT

NORTH CAROLINA PROFESSIONAL SEAL 043835 ENGINEER MARC. A. LEBLANC

PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION

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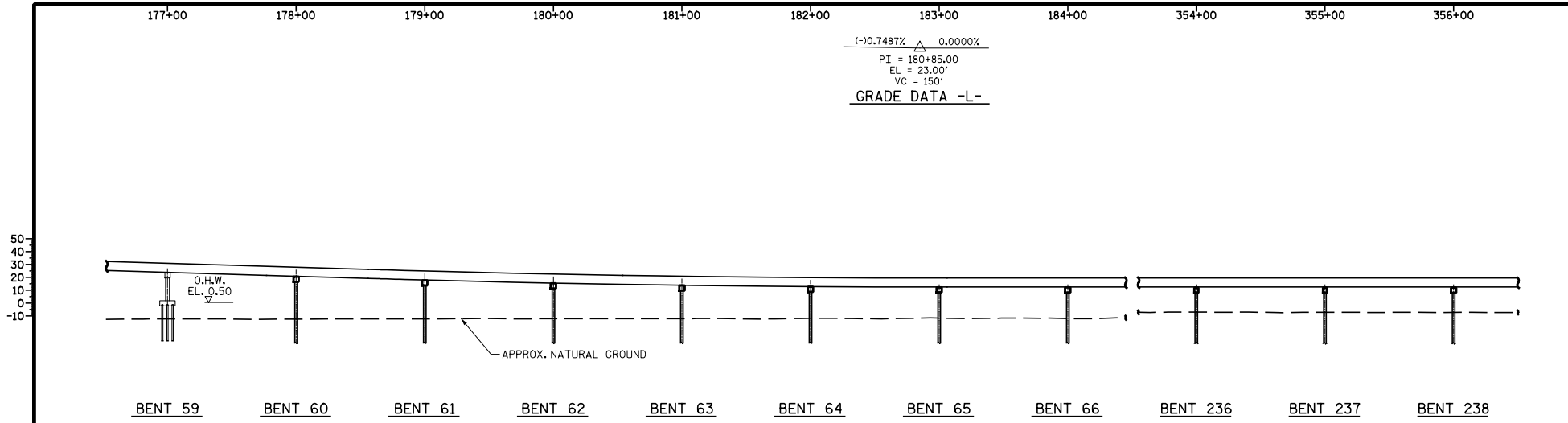
November 10, 2025 Sheet 4 of 7



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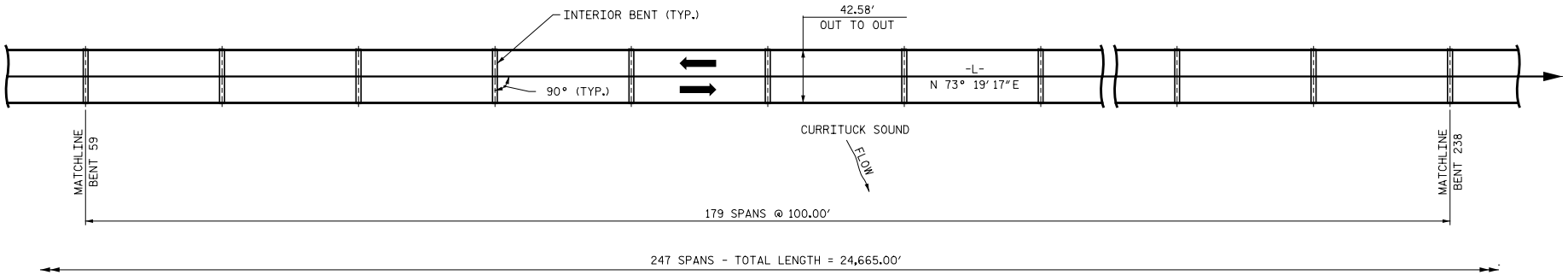

PLAN

NOTE: ELEVATIONS ARE SHOWN IN DECIMAL FEET VERTICAL DATUM: NAVD 1988

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SCALE IN FEET

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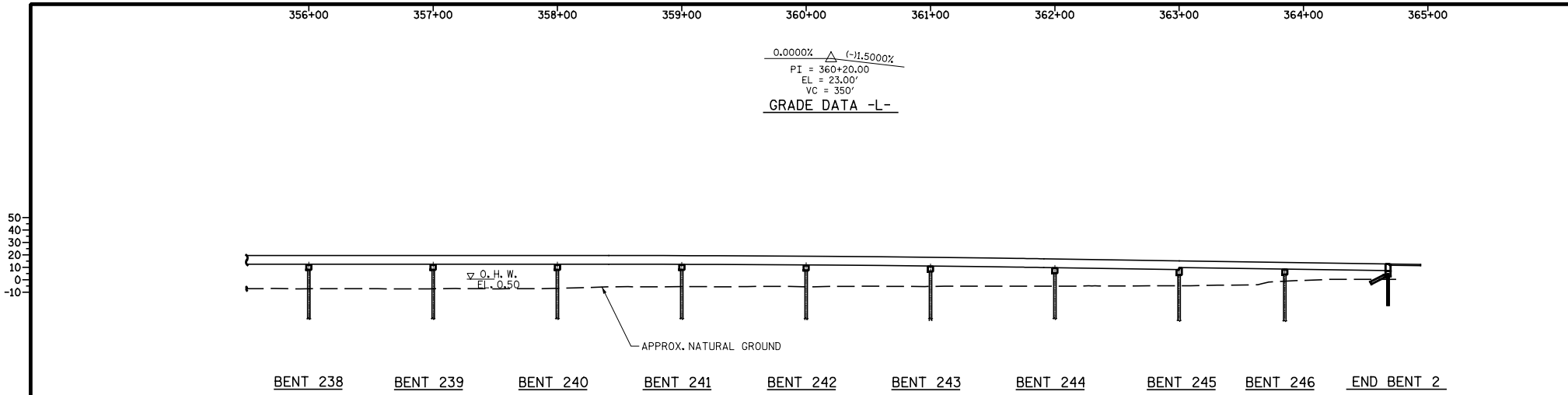
November 10, 2025 Sheet 5 of 7



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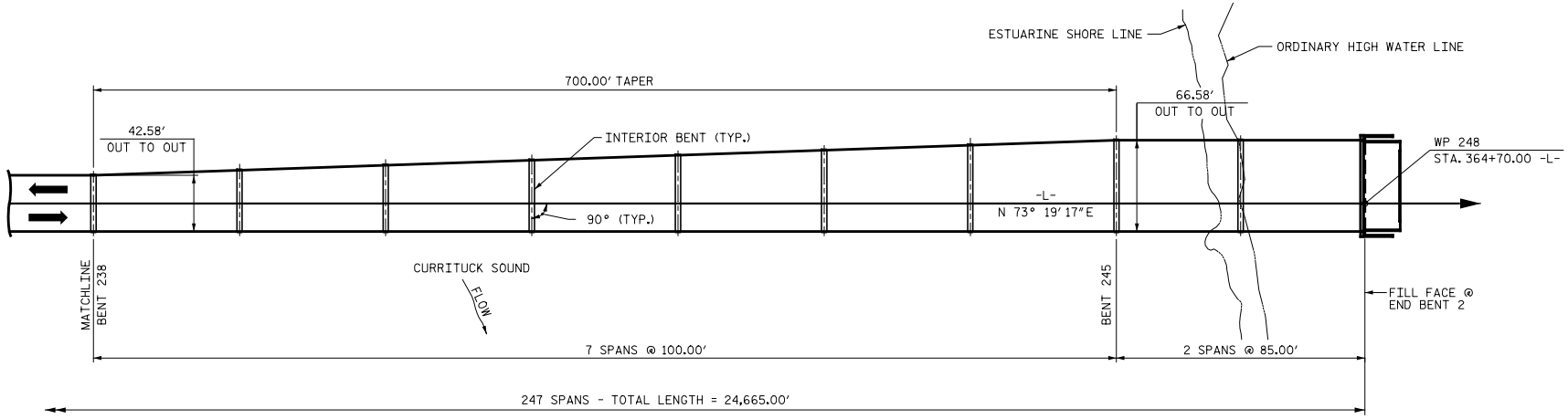

PLAN

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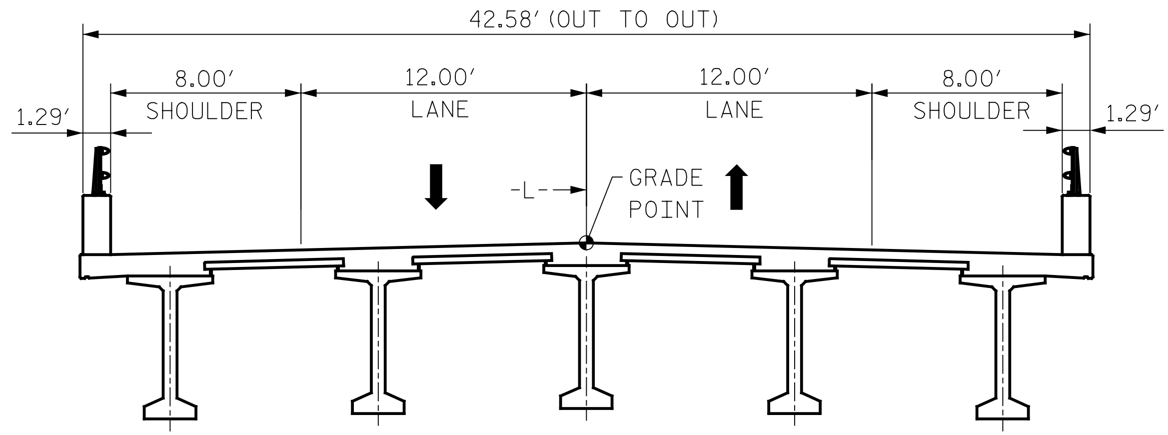
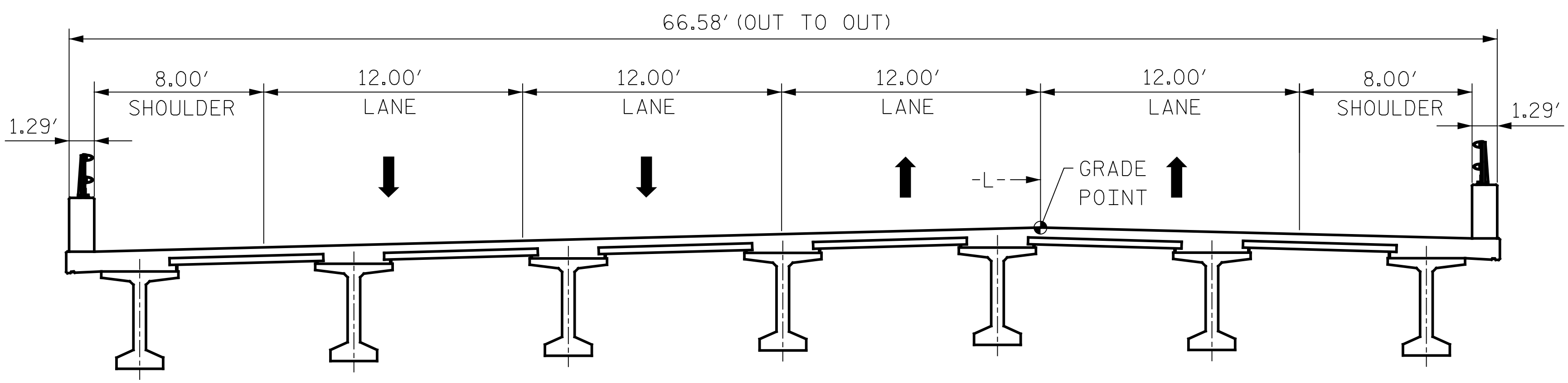
November 10, 2025 Sheet 6 of 7



CHANNEL SPAN TYPICAL SECTION



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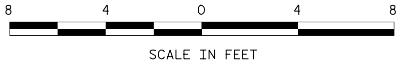

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NC License Number F-0159

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NORTH CAROLINA PROFESSIONAL SEAL 043835 ENGINEER MARC. A. LEBLANC

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November 10, 2025 Sheet 7 of 7

ATTACHMENT E

Navigation Impact Report (NIR)
January 2024

NORTH CAROLINA Turnpike Authority

Navigation Impact Report Update

for the
Mid-Currituck Bridge Project

Prepared for:

NORTH CAROLINA Turnpike Authority

and

Prepared by:

LOCHNER

January 2024

NORTH CAROLINA Turnpike Authority

Table of Contents

INTRODUCTION

PURPOSE

The purpose of this document is to update and reconfirm the planning, coordination, and investigation efforts to best understand the potential navigational clearance needs and requirements for the Mid-Currituck Bridge across Currituck Sound in Currituck County, North Carolina. This effort intends to provide information to reaffirm the likely vertical and horizontal bridge clearance needs and requirements as contained in the Preliminary Navigation Clearance Determination (PNCD) for this project dated February 9, 2021. There have been no material changes in existing conditions or boating characteristics in the area of the Mid-Currituck Bridge project since the time of the prior Navigation Impact Report in December 2020.

A bridge crossing of navigable waters requires a permit from the US Coast Guard (USCG). According to the USCG website for the Office of Bridge Programs, their mission is "to administer the various bridge statutes, environmental laws of the United States, pertinent regulations, and policies in a timely, courteous, responsive, and professional manner. This mission will contribute to the development of a safer, more efficient, and convenient marine and land transportation system that will effectively utilize and conserve the nation's resources in a cost-efficient manner while providing for the well-being, general safety, security, and interests of the citizens of the United States." Furthermore, the current statutes and court rulings require that bridges provide for the "reasonable needs of navigation, not for all the needs of navigation". The reasonable needs of land traffic must also be met.

BACKGROUND

The North Carolina Turnpike Authority (NCTA), a division of the North Carolina Department of Transportation (NCDOT), in cooperation with the Federal Highway Administration (FHWA), has prepared an Environmental Impact Statement (EIS) and Record of Decision (ROD) to evaluate proposed transportation improvements in the Currituck Sound area. To address identified problems and needs, the EIS/ROD identified three primary purposes of the project:

- To substantially improve traffic flow on NC 12 and US 158.
- To substantially reduce travel time for persons traveling between the Currituck County mainland and the Currituck County Outer Banks.
- To substantially reduce hurricane clearance time for residents and visitors who use NC 168 and US 158 during a coastal evacuation.

To meet the three underlying purposes for the project, NCTA is proposing a new bridge across Currituck Sound connecting US 158 and NC 12. The Selected Alternative is shown in Exhibit A at the end of this report.

Throughout the EIS study process, discussions with the USCG relative to any new bridge crossing of Currituck Sound have indicated that the new bridge should meet or exceed the clearance provided (35 feet vertically and 40 feet horizontally) on the US 158 Wright Memorial Bridge (see Exhibit A) at the south end of Currituck Sound unless it can be demonstrated that less bridge

clearance will not impede reasonable needs for navigation. The Wright Memorial Bridge has separate structures for eastbound and westbound traffic movement and is located approximately 18.5 miles south of the planned location for the Mid-Currituck Bridge. The Wright Memorial Bridge is the only existing bridge crossing of Currituck Sound and is the most restrictive vertical and horizontal clearance on Currituck Sound.

SETTING

Currituck Sound is a shallow protected inlet of the Atlantic Ocean, approximately 30 miles in length and 3 to 8 miles in width with numerous islands. At the proposed Mid-Currituck Bridge crossing location, Currituck Sound is about 4.5 miles wide. Currituck Sound has a surface area of about 98,000 acres or 153 square miles. Exhibits B and C are the Coast Survey Maps (12204 and 12207) from the National Oceanic & Atmospheric Administration, National Ocean Service that include Currituck Sound, and adjacent water bodies, including Back Bay and the North Landing River.

Currituck Sound is a very low salinity estuary extending from near the North Carolina/Virginia state line south to its confluence with Albemarle Sound. Water is supplied to Currituck Sound from three primary sources: freshwater streams, groundwater, precipitation, and ocean water. The main sources of freshwater include several feeder streams, groundwater, and direct precipitation. Currituck Sound is connected to the Atlantic Ocean both to the south and to the north. The southern ocean connection is via Albemarle Sound and Oregon Inlet (shown in Exhibit B). There are two northern connections to the Chesapeake Bay and the Atlantic Ocean (shown in Exhibit C). Both are along the North Landing River with one using West Neck Creek, Canal No. 2, and London Bridge Creek, and the other connection using the Albemarle Chesapeake Canal and the Elizabeth River (navigable).

The Atlantic Intracoastal Waterway (AIWW) provides a hydrologic and transportation corridor from Albemarle Sound to the Chesapeake Bay that connects to Currituck Sound but not through Currituck Sound (depicted on Exhibits B and C). The AIWW follows the North River in North Carolina (a tributary to Albemarle Sound west of Currituck Sound) and then the North Landing River in conjunction with the Albemarle Chesapeake Canal and Elizabeth River to the north, to the Chesapeake Bay. The AIWW opens onto Currituck Sound for approximately 4 miles at its northern end near Knotts Island. The entire length of the AIWW is dredged from Albemarle Sound to the North Landing River in Virginia, including the portion adjacent to Currituck Sound.

Some water uses are dependent on the mix of freshwater and saltwater in Currituck Sound. Historically, this inlet of the Atlantic Ocean had two direct connections. However, both have closed. This resulted in a dramatic drop in the salinity level in Currituck Sound. Now the salinity levels are generally between 0.5 and 5.0 parts per thousand (brackish water but nearly freshwater). Typically, the level is less than 3.5 parts per thousand.

A 2001 US Geological Survey (USGS) Water-Resources Investigations Report (01-4097) indicated that increased salinity in the northern portion of Currituck Sound has been attributed to northerly winds driving brackish water south from the Chesapeake Bay. The same report also suggested that increased salinity in the southern portion of Currituck Sound may be a result of southerly

winds driving brackish water north from Albemarle Sound. Winds from the south typically produce higher water levels in Currituck Sound, whereas winds from the north typically produce lower water levels. Winds have a greater influence on salinity levels and water levels in Currituck Sound than do astronomical tides.

The USGS published a water quality study of Currituck Sound in 2020. This study found that the central part of Currituck Sound had the least variability in salinity levels. This is the area where the Mid-Currituck Bridge is proposed for construction. This study found that southerly winds are dominant in the spring and summer and push more saline water up from the south into Currituck Sound, thereby increasing water levels and salinity. Northerly winds are dominant in the fall and winter and tend to push water out of Currituck Sound, decreasing the water levels and the salinity.

The USGS has an operational gage on Currituck Sound near the east bank at Corolla, NC (https://waterdata.usgs.gov/nc/nwis/uv/?site_no=02043433&PARAmeter_cd=00065,00060). This gage has been active since August 2011 to the present, collecting water surface elevations, wind speeds, and wind direction. The maximum daily gage elevations have ranged (August 2011 to September 2019) from a low of -2.14 feet to a high of 4.03 feet with a mean of 0.45 feet. The minimum daily gage elevations have ranged (August 2011 to September 2019) from a low of -2.40 feet to a high of 2.21 feet with a mean of -0.03 feet. The mean daily gage readings range (August 2011 to January 2024) from a low of -2.81 feet to a high of 2.49 feet with a mean of 0.27 feet. The standard deviation for each set of data is about 0.63 feet, which results in typical water levels between -0.66 and 1.08 feet. Based on this data, the mean high-water elevation has been assumed to be approximately 0.50 feet.

The US Army Corps of Engineers Field Research Facility at Duck, NC, established a water level gage (http://www.frf.usace.army.mil/ckSound/csa.html) located in Currituck Sound just south of the Big Narrows. This gage collected water elevation data in 2016-2018. The high-water level was 3.36 feet during the data collection period and the low-water level was -3.18 feet with a mean of 0.11 feet and a standard deviation of 0.64 feet. This means that typical water levels vary from -0.5 feet to 0.75 feet. This data is comparable to the above USGS data.

Water depths in Currituck Sound are generally shallow. The NOAA bathymetric data charts for Currituck Sound are shown in the attached Exhibits B and C. Water depths fluctuate substantially in Currituck Sound. At the Wright Memorial Bridge, water depths are generally 5 to 7 feet, with shallower areas near each shore. Just to the north of the Wright Memorial Bridge, some areas have water depths that are greater than 7 feet but nothing over 9 feet. Further north, there are a series of islands and a narrowing of Currituck Sound called the Big Narrows. Water depths in the Big Narrows area tend to be very shallow in the 1 to 3-foot depth range. The widest water route through the islands is about a half mile wide. This area is an impediment to vessel traffic through Currituck Sound. Immediately north of the islands and the Big Narrows area is the location for the Mid-Currituck Bridge. Water depths in this area generally vary from 3 to 7 feet. Currituck Sound bottom elevations were surveyed along the centerline of the selected alignment and are depicted on the attached profile as Exhibit D. To the north of the proposed Mid-Currituck Bridge crossing, the water depths in Currituck Sound continue to vary substantially with a maximum depth of about 7 feet. This is true for the entire northern portion of Currituck Sound, including the areas adjacent to the AIWW.

Based on available information, it appears that Currituck Sound functions as two connected bodies of water with the Big Narrows and island area separating the two. The southern portion of Currituck Sound has greater connectivity and association with Albemarle Sound south of the Wright Memorial Bridge. The northern portion of Currituck Sound has greater connectivity and association with Chesapeake Bay and the AIWW. The proposed Mid-Currituck Bridge is located just to the north of the narrows and island area. The shallow water depths and the proximity of the narrows would tend to limit large vessel traffic in and through this area.

Currituck Sound historically has supported populations of submerged aquatic vegetation (SAV). In Currituck Sound, these plants are most likely to establish in water depths of less than 6 feet. The shallower the water the greater the potential for SAV as light penetration is increased. Water depth is not the only factor relative to the establishment of SAV. The composition of the bottom sediments along with water flow speeds and wave action also have a bearing on SAV presence. At the proposed bridge crossing, current SAV populations are in the shallow waters near the east and west ends of the bridge. The presence of SAV can be an impediment to vessel activity because of potential interactions between motor propellers and SAV, along with the shallow water depths.

Private property access for vessels is limited along Currituck Sound by the depth of water at the shoreline and the presence of barrier islands, marshlands, and SAV. Private docks do extend into Currituck Sound. These could be mooring locations for vessels (unknown sizes) or could be pedestrian access for non-boat-related water activities. Some of the private docks extend out into the sound to reach deeper water depths than what exists close to shore, and others are relatively short docks close to shore. No information is available on the presence of vessels at these docks or the type and size of vessels that are associated with these docks. However, the presence of the docks is an indicator of potential vessel activity.

Near the bridge on the west side of Currituck Sound, there are approximately 35 docks between the planned crossing location and to the south at the Big Narrows area. South of the narrows, dock access from the west side of the sound begins again at Grandy but is limited further south by adjacent marshlands. North of the proposed bridge on the west side of the sound, there are approximately 13 docks south of the opening to Maple Swamp and an additional 70 docks in the Waterlily area north of Maple Swamp.

Private property vessel access on the east side of Currituck Sound is also limited by the same environmental constraints as the west side. South of the bridge crossing on the east side of Currituck Sound, approximately 44 docks provide private property access to the water before reaching the Big Narrows area. North of the bridge location on the east side of Currituck Sound there are about 12 private docks.

Boat launch facilities are provided at several locations around Currituck Sound. The closest locations to the planned bridge crossing are as follows:

- Poplar Branch – two launches on the west side of Currituck Sound just north of the Big Narrows and island area and approximately 3.5 miles south of the bridge location. This is a public access operated by the North Carolina Wildlife Resources Commission.

- Private Launches – there are several private launches north of the bridge location on the west side of Currituck Sound; the closest one is about 0.6 miles away and there are several in the Waterlily area. There are also private launches along the AIWW near Coinjock.
- Beasley Bay – this is a private launch on the east side of Currituck Sound approximately 4.5 miles south of the bridge.
- Whale Head Bay – this is a private launch located approximately 1.6 miles north of the bridge on the east side of Currituck Sound.

Vessels that engage in emergency operations are certain to operate on Currituck Sound in watercraft that would be appropriate for their activities. These operations would likely include the USCG, various local police, fire, and emergency rescue operations, and fish and wildlife gaming patrols. The USCG station in Wanchese, NC responded to the survey conducted for this project and none of the identified vessels would be restricted by the proposed bridge.

BRIDGE CLEARANCE ACTIONS TAKEN

US COAST GUARD COORDINATION

Throughout the project's lengthy history, NCTA has been coordinating with the USCG relative to potential vertical and horizontal bridge clearance needs for the Mid-Currituck Bridge. This coordination has included meetings and telephone conference calls reviewing the USCG requirements for determining bridge clearance and navigational needs.

As part of those coordination efforts, a Preliminary Public Notice (PPN) was published in 2009 to identify existing and potential future navigational needs relative to the vessels that regularly use or are reasonably likely to use the area of Currituck Sound where the proposed bridge would be located.

The PPN prepared for the Mid-Currituck Bridge included written information about the project, a location map, and a survey response form. The written information and survey response form are included at the end of this report as Exhibit E. The PPN was distributed by the USCG on September 28, 2009, as PPN 5-1163. The public had until October 28, 2009, to respond to the PPN.

The mailing list for the PPN (approximately 3,000 unique entities) included names and addresses relative to the following categories (sources of names/addresses: Currituck County Tax Department; NC Wildlife Resources Commission; NC Division of Marine Fisheries; and Currituck County website):

- Property owners with waterfront abutting property within a mile of the bridge crossing on the east and west sides of Currituck Sound.
- Marina operators along Currituck Sound or Albemarle Sound.
- Commercial fishing vessel owners that have been known to fish in Currituck Sound.
- Licensed vessel owners in either Currituck County or Dare County.

After the project was delayed for some years, NCTA reinitiated coordination efforts with the USCG. A formal Bridge Project Initiation Request was submitted by NCTA to USCG on August 23, 2017. Because of the delay in the project, USCG decided to prepare a second PPN for public distribution. This PPN also included written information about the project, a location map, and a survey response form. The written information, survey response form, and map are included at the back of this report as Exhibit F. The PPN was distributed by the USCG on February 21, 2020, as D05PPN-04-2020 in the Fifth Coast Guard District, Local Notice to Mariners. The public had until March 24, 2020, to respond to the PPN.

Additionally, the PPN was directly mailed to just over 20,000 addresses in the project area. The mailing list included the following individuals and groups:

- All persons with a commercial boat registration in Currituck and Dare Counties.
- All persons with private boat registration in Currituck and Dare Counties.
- All persons with a fishing or hunting license in Currituck and Dare Counties.
- All adjacent property owners along both sides of Currituck Sound within at least one mile in each direction of the proposed crossing.
- Marine-related facilities in Currituck Sound (indicated by *) and other waterway environs, including:
    - Coinjock Marina; 321 Waterlily Road; Coinjock, NC 27923 *
    - Midway Marina; 157 Coinjock Development Road; Coinjock, NC 27923 *
    - Whalehead Club; 1100 Club Road; Corolla, NC 27927 *
    - Station Bay Marina; 1566 Duck Road; Kitty Hawk, NC 27849 *
    - Island Marine; P O Box 213; Knotts Island, NC 27950 *
    - Pearls Bay Villa Marina; 112 Bay Villa Lane; Knotts Island, NC 27950 *
    - Tulls Bay Marina; 1407 Tulls Creek Road; Moyock, NC 27958 *
    - Lambs Marina; 152 US Highway 158W; Camden, NC 27921
    - Cypress Cove Marina; 175 Ramp Road; Columbia, NC 27925
    - D B City Marina; 340 Camden Causeway; Elizabeth City, NC 27909
    - Frog Island Marina; 200 Frog Island Road; Elizabeth City, NC 27909
    - Pelican Marina; 43 Camden Causeway; Elizabeth City, NC 27909
    - Albemarle Plantation Marina; 421 Albemarle Blvd; Hertford, NC 27944
    - Bills Marine; 1648 Colington Road; Kill Devil Hills, NC 27948
    - Dock of the Bay Marina; 4200 Bob Perry Road; Kitty Hawk, NC 27949
    - Outer Banks Fishing Club; 30 Fairway Drive; Kitty Hawk, NC 27949
    - Pirates Cove Yacht Club; 2000 Sailfish Drive; Manteo, NC 27954
    - Shallowbag Bay Marina; 1100 North Bay Club Drive; Manteo, NC 27954
    - Waterfront Marina; 207 Queen Elizabeth Avenue #14; Manteo, NC 27954
    - Great Lakes Dredge & Dock; 100 East Dunn Street; Nags Head, NC 27959
    - Bluewater Yacht Club; 920 Harbor Road; Wanchese, NC 27981
    - Broad Creek Fishing Center; 798 Harbor Road; Wanchese, NC 27981
    - Spencer Yachts; 31 Beverly Drive; Wanchese, NC 27981
    - Thicket Lump Marina; 219 Ticket Lump Drive; Wanchese, NC 27981
    - Wanchese Marina; 4457 Mill Landing Road; Wanchese, NC 27981
    - Atlantic Yacht Basin; 2615 Basin Road; Chesapeake, VA 23322

  - Centerville Waterway Marina; 100 Centerville Turnpike North; Chesapeake, VA 23320
  - Chesapeake Marina; 5532 Bainbridge Point; Chesapeake, VA 23320
  - Top Rack Marina; 5532 Bainbridge Point; Chesapeake, VA 23320
  - Wright Marine; 143 Tilden Avenue; Chesapeake, VA 23320
  - West Neck Marina; 3985 West Neck Road; Virginia Beach, VA 23456
- Local newspapers serving Currituck County.
  - The Virginian-Pilot; 150 W Brambleton Avenue; Norfolk, VA 23510
  - The Daily Advance; 1016 W Ehringhaus Street; Elizabeth City, NC 27909
- Currituck County Public libraries (3 locations).
  - 4261 Caratoke Highway; Barco, NC 27917
  - 1123 Ocean Trail; Corolla, NC 27927
  - 126 Campus Drive; Moyock, NC 27958

PRELIMINARY PUBLIC NOTIFICATION (PPN) RESULTS

A total of 25 responses were received from the 2009 PPN. These 25 responses represent a less than 1% response rate. This was extremely low but may be indicative of the limited use of Currituck Sound in the vicinity of the proposed bridge crossing. A summary table of the PPN responses is included at the end of this report as Exhibit G. The responses cover 29 vessels.

For the 2020 PPN, a total of 147 responses were received. This also represents a less than 1% response rate. However, the 2020 mailing list did include persons with hunting and fishing licenses who may not be boat owners. Of the 147 responses, 25 persons provided no boating information. The remaining 122 responses contained boat information for 128 vessels. Recreational use was cited for 108 boats, commercial use for 4 boats, and a combination of recreational and commercial uses for 13 boats. Military use by the USCG was cited for 3 vessels. A summary table of the PPN responses is included at the back of this report as Exhibit H.

Several respondents to the 2020 PPN used the survey as a mechanism to either support or oppose the proposed bridge crossing. Of the 147 responses, 72 contained such an indication about the Mid-Currituck Bridge project. There were 53 respondents expressing support for the bridge project and 19 respondents indicating their opposition to the project.

Vertical Clearance

Of the 147 PPN responses in 2020, 18 of those responses indicated a desired vertical clearance for the Mid-Currituck Bridge. Two respondents indicated that the 15-foot vertical clearance indicated in the PPN should be adequate. Seven persons responded that vertical clearance should be greater than 15 feet but did not provide a specific height for the vertical clearance. One person called for a 20-foot vertical clearance. Likewise, a single respondent called for a 24-foot clearance and another for a 30-foot clearance. Four persons expressed a desire for the vertical clearance to be 35 feet which would match the Wright Memorial Bridge. One person requested a 40-foot vertical clearance to match the water depth. A single person asked that the bridge match the Coinjock Bridge (US 158 bridge over the AIWW) at 65 feet.

In the 2009 PPN responses, vessel heights ranged from a low of 4 feet to a high of 45 feet. All but six vessels were less than 15 feet in height. Those six vessels greater than 15 feet had vertical heights of 45, 32, 26.5, 26, 23.7, and 23 feet. Three of these vessels were commercial boats with drafts of 3.5 and 6 feet. The 6-foot draft was related to the vessel with the 45-foot height. The other two commercial vessels had 3.5-foot drafts (23- and 23.7-foot heights). The three recreational vessels included a sailboat, a catamaran, and a dory. The draft for the 26-foot-high sailboat was 4.5 feet. The draft for the 26.5-foot-high catamaran was less than a foot. The draft for the 32-foot-high dory class was 2 feet.

The 45-foot-high commercial trawler was moored in Wanchese, NC roughly 18 miles south of the southern limit of Currituck Sound. The respondent requested a 65-foot vertical clearance for the bridge like other bridges over inland waterways. From this comment, it appeared that the respondent was unclear on the location of the bridge as it would not cross the AIWW. This vessel had a reported draft of 6 feet. The respondent further requested consideration for shallow draft boats with masts such as catamarans.

The 32-foot-high recreational Crown Point Dory was moored near Manteo, NC. The respondent requested that the Mid-Currituck Bridge have the same vertical clearance as the Wright Memorial Bridge. He further indicated that he transited the narrows to access northern Currituck Sound. His vessel was a flat bottom boat with a draft of 2 feet.

The 26.5-foot-high recreational catamaran was moored in Currituck Sound at South Harbor View in Corolla, NC. This mooring location is immediately south (roughly 0.5 miles) of the east end of the proposed bridge crossing.

The 26-foot-high recreational sailboat was moored in Currituck Sound at Sea Ridge Drive in Corolla, NC. This mooring location, like the one above, is located south of the planned bridge (about 0.9 miles). This vessel had a reported 4.5-foot draft.

The 23.7-foot-high commercial vessel was moored near Poplar Branch at Duck, NC. This is in the southern portion of Currituck Sound south of the narrows and islands. Given the 3.5-foot draft on this vessel, it was unlikely that it would be able to access the northern portion of Currituck Sound through the narrows. Therefore, access to the northern portion of Currituck Sound and the bridge would be via the AIWW, an approximate 55-mile journey.

The 23-foot-high Sport Fisherman Charter Boat was moored at Pirates Cove Marina near Manteo, NC approximately 10 miles south of Currituck Sound. The respondent noted that due to the shallow water in the north end of Currituck Sound, the bridge would not impact his operations because the water depth is insufficient for his operation.

All the vessels represented by the responses from the 2009 PPN would appear to be able to generally operate in the vicinity of the bridge crossing of Currituck Sound. The 45-foot-high commercial vessel would seem to have operational challenges with the shallow areas of Currituck Sound given its 6-foot draft. The 26-foot-high recreational sailboat would also seem to have some difficulties with the shallow waters of Currituck Sound since this vessel has a draft of 4.5 feet. Retracting the keel would be required in areas of shallow water. There are a couple of additional commercial vessels that have a draft of 4 feet, and they could also find the water depths in Currituck Sound challenging.

In the 2020 PPN responses, vessel heights ranged from a low of 1.5 feet to a high of 47 feet. Vessel height was provided for 125 of the 128 boats represented in the survey responses. The average height of these 124 vessels is 10.6 feet with most in the 3-foot to 19-foot range in height. The 90th percentile height for the vessels reporting was 20 feet. The 95th percentile height was at 28.4 feet.

There are 15 responses with vessel heights of 20 feet or greater. The tallest boat, at 47 feet, indicated being in the area of the bridge once every two years. The next tallest vessel, at 40 feet, did not provide a frequency of transiting the bridge area and provided a very limited response to the survey. Two boats indicated never being at the bridge location (20-foot and 29-foot heights). There is a 28-foot boat that reported transiting the bridge area once a year and a 23-foot vessel that indicated being near the bridge crossing twice a year. The remaining 8 vessels ranged in height from 20 feet to 35 feet (20, 20, 24, 25,28, 28.5, 31, 33, and 35 feet) and reported transiting the bridge location more than twice a year.

The 20-foot-high Parker boat is moored at Maple, NC, in Coinjock Bay about 7 miles on the north side of the bridge crossing location. This boat owner reported being in the vicinity of the bridge about three times a week for both recreational and commercial purposes. The draft on this boat is reported as 1.5 feet, so easily capable of maneuvering in much of Currituck Sound.

The 20-foot-high Spud Barge owner reported regular use of the bridge crossing area for commercial purposes. No specific mooring location was provided; however, the owner operates out of Powells Point, NC, which is about 13 miles south of the bridge and south of the Big Narrows but is north of the Wright Memorial Bridge. The barges are reported to have a draft of 3 feet.

The 24-foot-high Flying Scot sailboat is moored in Southern Shores some 15 miles south of the bridge location in the southern portion of Currituck Sound, south of the Big Narrows and islands. This boat is reported to have a draft of 3.5 feet and to transit the bridge area from 3 to 8 times a year. The owner indicated that this boat is used for recreational and commercial purposes (sailing classes in Currituck Sound).

The 25-foot-high Hunter sailboat is moored in Corolla, NC, about 0.6 miles south of the east end of the bridge. The owner reported using the bridge location at various times throughout the spring, summer, and fall of the year for recreational purposes. The draft on this boat was reported to be 4.3 feet.

The 28-foot-high commercial and recreational fish/crab boat is moored at Knotts Island in northern Currituck Sound, roughly 11 to 15 miles from the bridge location. The owner reported the draft of the boat at 2.5 feet and that it transits the bridge location “10 month yearly” which is unclear as to frequency.

The 28.5-foot-high Hobie catamaran recreational sailboat is moored at Bells Island about 6 to 8 miles north of the bridge crossing location. The owner reported transiting the area of the bridge location during the summer recreationally. The boat has a shallow draft of less than 1 foot.

The 31-foot-high Nacra 580 catamaran sailboat indicated being in the vicinity of the bridge from 3 to 8 times a year for recreational and commercial purposes. The sailboat is moored at Southern Shores in the southern portion of Currituck Sound some 15 miles from the bridge location. The

owner indicated this boat has a draft of 2.5 feet and it is used for sailing classes in Currituck Sound.

The 33-foot-high sailboat is stored on a trailer in Moyock, NC about 11 miles from the bridge site. The owner reports being in the area of the planned bridge from 6 to 20 times a year for recreational activity. The reported draft on this sailboat is 6 feet with the keel extended but can be reduced to 1.25 feet by raising the keel.

The owner of the 35-foot-high sailboat reported transiting the bridge area about six times a year from the mooring location at Colington Island, NC, which is about five miles south of the Wright Memorial Bridge in Albemarle Sound. The reported draft is 6 feet but has a swing keel that can reduce the draft to 1.5 feet. At 35 feet in height, this sailboat might have issues navigating under the Wright Memorial Bridge. However, given its mooring location, it is possible that it could use the AIWW to access northern Currituck Sound and the bridge location.

Horizontal Clearance

In the responses to the 2009 PPN, vessel beam widths ranged from 3.5 feet to 15 feet. The three tall commercial vessels had beam widths of 12 to 15 feet. All other vessels in the survey had beam widths less than 10 feet.

Similar results were reported with the 2020 PPN with vessel beam widths ranging from 3 feet to 42 feet. The average beam width was 8 feet with most ranging from 4 to 12 feet. Ninety percent of the vessels in this survey had beam widths of 10 feet or less and 95 percent had beam widths of 12.4 feet or less. The six boats with greater than a 12.4-foot beam included widths of 14 feet (a pontoon boat, a Sabre yacht, and a sport fisher), 15 feet (B&D Boatworks motor yacht), 16.8 feet (USCG vessel), and 25 to 42 feet (spud barges). Of these, three reported never being in the area of the bridge crossing. The other three reported more regular transiting of the bridge location (14-foot pontoon boat, 16.8-foot USCG vessel, and 25- to 42-foot barges).

According to the USCG Bridge Administration Manual, the minimum horizontal clearance is typically set as a multiple of the beam width depending on currents, navigation aids, vessel traffic, and type of channel. For Currituck Sound, there is no defined navigational channel, and it is shallow water. Therefore, a larger multiplier will be required. Currents are typically dependent on wind speed and direction; however, normally currents in Currituck Sound are relatively low. Therefore, a lower multiplier will be required based on this factor. Vessel traffic is reported to be limited at this location. Therefore, one-way vessel operations would seem appropriate and would result in a lower beam multiplier. Based on these conditions, it would seem appropriate to use a 3.5 multiplier of beam width to determine the minimum horizontal clearance. Using the 25-foot beam width of the smaller spud barge in the 2020 PPN study would result in an 87.5-foot minimum horizontal clearance. Arguably, this minimum could be lower since most vessels from the two PPN surveys that navigate this area would have beam widths of 10 feet or less. At a 10-foot beam width, the minimum horizontal clearance would be 35 feet for one-way traffic. If two-way traffic is considered, the multiplier would increase to 5 times the beam width. However, the boating activity in Currituck Sound is light, and as such this should support one-way traffic considerations instead of two-way traffic.

BOATING INDUSTRY COORDINATION

A coordination meeting was held in 2009 with the Boating Industry Services Section of the North Carolina Small Business and Technology Development Center of North Carolina State University. This organization works to promote the boating industry in North Carolina and understands boating in North Carolina coastal waters such as Currituck Sound. A summary of the meeting discussion is attached at the back of the report as Exhibit I. Mr. Mike Bradley leads this section and is intimately familiar with the boating industry in North Carolina. The information from the 2009 PPN was reviewed with Mr. Bradley and the following summarizes the coordination meeting:

- Mr. Bradley encouraged the use of the Draft Environmental Impact Study (DEIS) Public Hearing process for further local input on the vertical and horizontal clearance needs of the boating community in Currituck Sound. He felt that the extent of previous efforts through the US Coast Guard's Preliminary Public Notice (PPN) process should be summarized so that the public would know what had already been happening.
- Mr. Bradley examined the responses to the PPN. The boats with vertical heights over 15 feet were reviewed. Because of the type of vessel or the location of the vessel, he felt that these boats could handle a bridge with less clearance than their vessel heights. The vessels either had a mast that lowered or could be reduced in sections to traverse under the bridge.
- Mr. Bradley noted that many of the boats in Currituck Sound may be "T" tops with a center console. As such the "T" top could be 15 feet above the water. Extending above the "T" top is the radio antenna. A bridge vertical clearance of 18 feet above water could likely accommodate these boats without the antenna having to be removed. He encouraged consideration of a navigational span of at least 18 feet vertical clearance for a portion of the bridge. The remainder of the bridge could have a lower 15-foot vertical clearance.
- Mr. Bradley agreed that the Big Narrows area in Currituck Sound south of the proposed bridge location is a restriction that will likely reduce the boating traffic through that area because of erratic and shallow water and reduced winds because of nearby islands. He saw the 35 recreational private docks along the west side of the Sound north of the Big Narrows and south of the proposed bridge crossing as an area for more detailed study through the Public Hearing process, involving property owners in this area. The other issue area is along the east side of Currituck Sound south of the bridge and the private recreational docks in this area. It is unclear if boats are using these docks and the size of these boats. The locations of these docks are north of the Big Narrows and south of the bridge location. More information is needed to determine the possible impacts of the project on these private docks and owners.
- Based on the available data, Mr. Bradley confirmed that a general 15-foot-high vertical clearance for the majority of the bridge with an 18-foot-high vertical clearance for the navigational span would be sufficient for the navigational needs of the area.

As suggested by Mr. Bradley, the opportunity for boaters to discuss the vertical and horizontal clearance under the bridge over Currituck Sound was afforded at each of the public meetings and hearings held for the Mid-Currituck Bridge DEIS in 2010. There were no persons who engaged in discussions about the bridge clearances.

In the 2020 PPN survey, the mailing was sent to property owners south and north of the proposed bridge location. This included those persons with private docks in Currituck Sound near the bridge to ascertain their thoughts on the bridge clearances.

ADDITIONAL DATA COLLECTION

The USCG developed a list of questions to conduct a survey of marinas in the Currituck Sound area in July and August of 2020. The results of this targeted survey were intended to add to the body of knowledge about boats that regularly use Currituck Sound in the area of the planned bridge crossing and their navigational needs. Unfortunately, none of the marina surveys were returned and therefore, no additional information was garnered through this additional effort.

PLANNED NEXT STEPS

CONTINUED COORDINATION

NCTA will continue to coordinate with the USCG throughout the project development and permitting process. While it appears that a 15-foot vertical clearance under the bridge should be adequate for most vessels, some vessels would require a higher clearance height. Based on the 2009 and the 2020 PPN responses, nearly all vessels that regularly transit the area of the bridge crossing could be accommodated by a 35-foot vertical clearance.

PREVIOUS NAVIGATION IMPACT REPORT

In December 2020, NCTA prepared and published a Navigation Impact Report for the project. This current document is an update of that prior report. The previous Navigation Impact Report was provided to the USCG, and as a result, a Preliminary Navigational Clearance Determination was issued by the USCG in February 2021. Given the extent of the prior Preliminary Public Notifications on this project, NCTA believes that no additional data collection is appropriate for this project at this time. Additionally, there have been no material changes in the existing project area that would alter the results of prior investigations. Access to Currituck Sound remains as previously indicated and existing conditions relative to boating in Currituck Sound remain.

PERMIT APPLICATION

NCTA is aware that the actual navigational clearances for the Mid-Currituck Bridge over Currituck Sound cannot be definitively established until a USCG bridge permit application is filed and the USCG permit process is completed. This process includes a public notice period for the receipt of comments and input on the project relative to reasonable navigational clearance needs.

Continued coordination with the USCG should provide NCTA with a relatively clear understanding of the navigational clearance requirements that will be required on this project. As a result of the PPN surveys and this updated Navigation Impact Report, NCTA will request the USCG to issue a new Preliminary Navigational Clearance Determination. This will help guide the project development process toward the USCG permit application.

CONCLUSIONS AND RECOMMENDATIONS

Based on the information available, NCTA and NCDOT have preliminarily determined that the minimum clearance requirements for the Mid-Currituck Bridge should be 15 feet vertical above Mean High Water and 40 feet horizontal. The 15-foot vertical clearance would be the minimum for most all spans across Currituck Sound, and the actual span widths would likely provide additional horizontal clearance above the 40-foot minimum.

A navigational span is anticipated with a maximum vertical clearance of 21 feet (20-foot vessel height plus 1-foot additional clearance as recommended in "Guide Specifications for Bridges Vulnerable to Coastal Storms" published by AASHTO in 2008) above Mean High Water and a minimum 40-foot horizontal clearance. The additional one foot of clearance provides a measure of safety for wave action during higher water conditions. The location of the navigational span would be in an area of deeper water and general alignment with a north-south corridor through Currituck Sound and the Big Narrows. There are no known plans of the US Army Corps of Engineers to complete a federal navigation project through Currituck Sound.

These conclusions are being recommended based on the following factors:

- The location of the proposed bridge across Currituck Sound is just north of an area of extremely shallow water that has numerous islands and is not conducive to most vessel traffic. Longitudinally traversing Currituck Sound is limited by boat because of the Big Narrows and island area. Therefore, meeting the same clearance requirements of the Wright Memorial Bridge would not seem to be a reasonable requirement for this proposed crossing.
- The AIWW is available for access to and from northern Currituck Sound. The southern portions of Currituck Sound are accessible from Albemarle Sound under the Wright Memorial Bridge. It is unlikely that a dredged channel through Currituck Sound would ever be proposed to increase vessel traffic through Currituck Sound in the area of the Big Narrows.
- The vast majority of respondents to the two PPN surveys could be accommodated by these recommended bridge clearances. There were very few respondents that could reasonably traverse Currituck Sound due to its water depths with vessel heights greater than the recommended 15-foot minimum clearance and 21-foot maximum clearance.
- The 21-foot vertical clearance for the navigational span would provide adequate clearance for most vessel types (90% of the survey respondents) in Currituck Sound in the vicinity of this crossing.

- The limited number of respondents to the PPN indicates that the users of this area of Currituck Sound are few. An extensive survey was distributed twice, and responses were received from a low percentage of those included in the survey.
- The shallow waters and erratic depths of Currituck Sound limit the types of vessels that can access the area. Vessels with a draft of around 4 feet or more would find navigating in Currituck Sound in the vicinity of the bridge crossing to be difficult because of the shallow and erratic water depths.
- The potential number of vessels affected by a 15-foot minimum and a 21-foot maximum vertical clearance would be limited, and it would be unreasonable to consider a greater vertical clearance and associated increased bridge cost for these few vessels.
- The presence of private docks and boat launches around the bridge location are indicative of access only and not vessel type and size. The shallow waters near the docks would tend to limit vessel size to some extent.
- The impacts to vessel owners potentially impacted by the 15-foot minimum vertical clearance and the 21-foot maximum vertical clearance could be mitigated by boat owners. This mitigation could involve mooring their vessel in a location unaffected by the bridge or reducing the height of the vessel for transiting the bridge area.
- The 15-foot minimum vertical clearance was included in the PPN as the anticipated clearance for the bridge, and the appropriateness of this clearance height was largely confirmed based on the responses to the PPN.
- Environmentally sensitive areas containing SAV in shallow water naturally limit boating activity in these areas near the east end of the bridge crossing.
- The 40-foot minimum horizontal clearance should be sufficient for one-way traffic for most of the vessels using Currituck Sound. Longer spans are likely for much of the bridge length. While accommodation for two-way traffic is not anticipated to be needed, these longer spans could likely provide sufficient horizontal distance for two-way traffic for these vessels, if needed.

EXHIBITS

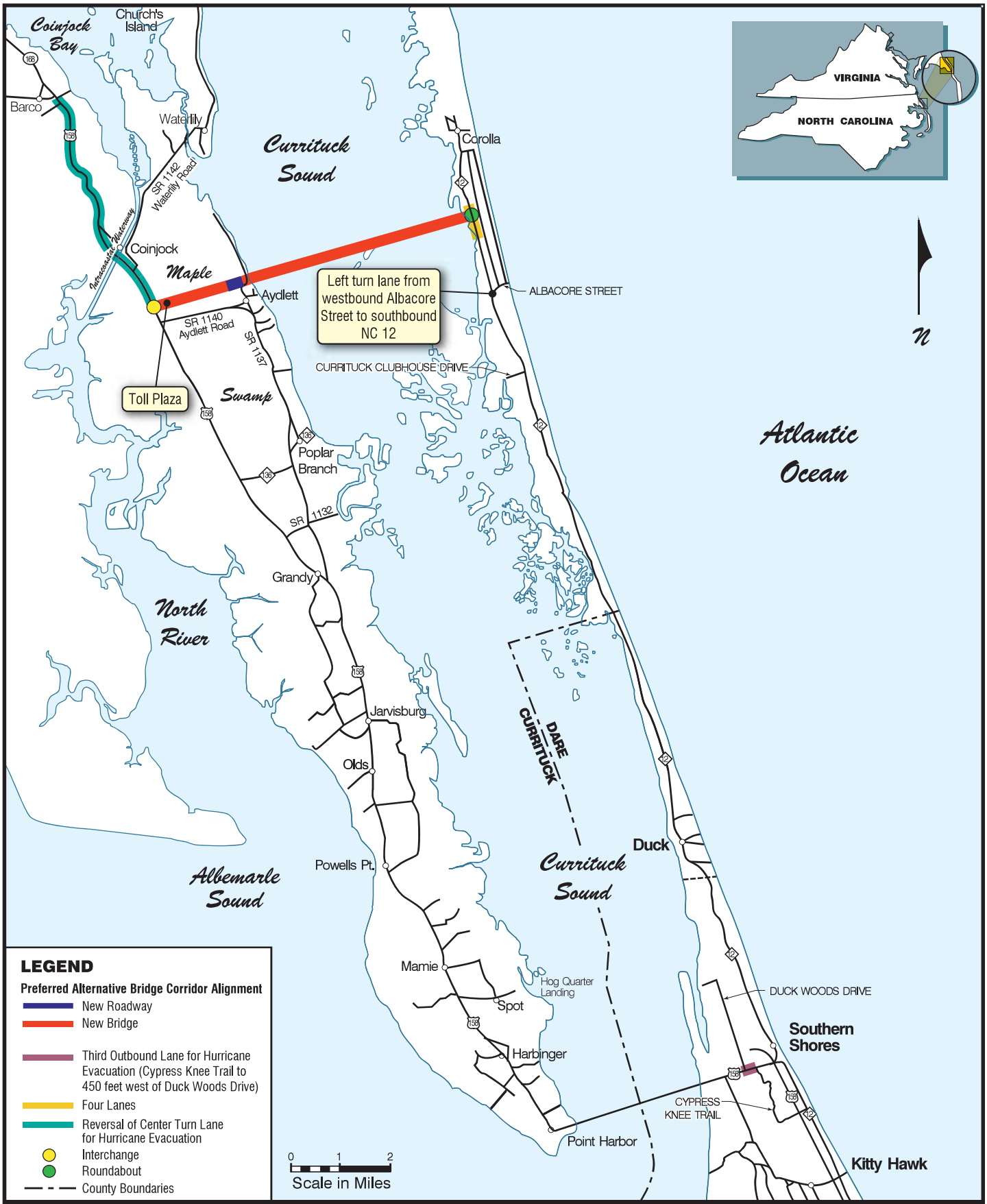


EXHIBIT A

Selected Alternative

NOAA encourages users to submit inquiries, discrepancies or comments about this chart at http://www.nauticalcharts.noaa.gov/staff/contact.htm.

Formerly C&GS 1229, 1st Ed., June 1913 D-1956-903 KAPP 527

SOUNDINGS IN FEET

12204

PAMLICO AND ROANOKE SOUND CHANNEL DEPTHS
TABULATED FROM SURVEYS BY THE CORPS OF ENGINEERS - SURVEYS TO MAY 2017

NAME OF CHANNEL	LEFT OUTSIDE QUARTER	MIDDLE HALF OF CHANNEL	RIGHT OUTSIDE QUARTER	DATE OF SURVEY	WIDTH (FEET)	LENGTH (MILES)	DEPTH MLLW (FEET)
LIGHT 54 TO WANCHESE CHANNEL	9.1	5.9	5.1	3,5-17	100	4.3	12
WANCHESE CHANNEL	6.9	5.8	2.9	4-17	100	0.8	12
WANCHESE CHANNEL TO WASHINGTON BAUM BRIDGE	A6.0	A6.0	A4.4	3,4-17	100	4.0	12
WASHINGTON BAUM BRIDGE TO MANTEO CHANNEL	6.7	6.7	6.5	4-17	100	2.0	12
MANTEO CHANNEL	5.9	0.8	2.9	5-17	100-200	1.6	12
MANTEO CHANNEL TO ALBEMARLE SOUND	3.6	4.5	7.0	4-17	100	1.5	10

A. EXCEPT FOR SHOALING TO 2.0 FEET FROM 35°50'50.1"N, 75°36'31.5"W TO 35°51'07.3"N, 75°36'40.9"W.
NOTE - CONSULT THE CORPS OF ENGINEERS FOR CHANGES SUBSEQUENT TO THE ABOVE INFORMATION

TIDAL INFORMATION

NAME	(LAT/LONG)	Mean Higher High Water	Mean High Water	Mean Low Water
		feet	feet	feet
Kitty Hawk	(36°06'N/75°43'W)	3.7	3.4	0.2
Roanoke Sound Channel	(35°48'N/75°35'W)	0.5	0.5	0.0
Oregon Inlet	(35°46'N/75°31'W)	2.3	2.1	0.1

12204

CAUTION
This chart has been corrected from the Notice to Mariners (NM) published weekly by the National Geospatial-Intelligence Agency and the Local Notice to Mariners (LNM) issued periodically by each U.S. Coast Guard district to the dates shown in the lower left hand corner. Chart updates corrected from Notice to Mariners published after the dates shown in the lower left hand corner are available at nauticalcharts.noaa.gov.

SOUNDINGS IN FEET

Published at Washington, D.C.
U.S. DEPARTMENT OF COMMERCE
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
NATIONAL OCEAN SERVICE
COAST SURVEY

FATHOMS	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
FEET	6	12	18	24	30	36	42	48	54	60	66	72	78	84	90	96	102

Currituck Beach Light to Wimble Shoals
SOUNDINGS IN FEET - SCALE 1:80,000

12204

Use NOAA electronic navigational charts for the most up-to-date information.

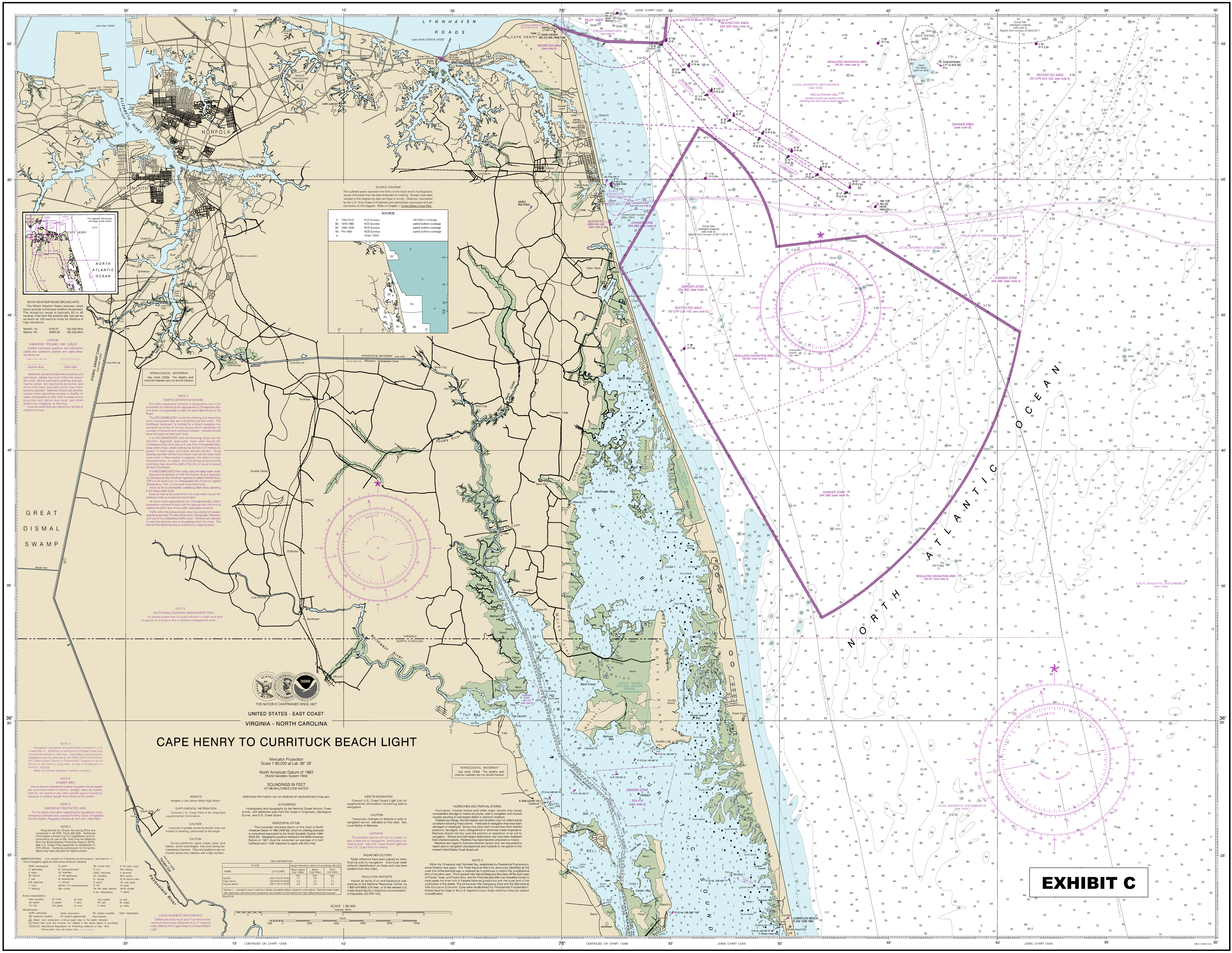
39th Ed., Jun. 2018. Last Correction: 10/8/2019. Cleared through:
LNM: 2020 (5/19/2020), NM: 2220 (5/30/2020)

To ensure that this chart was printed at the proper scale, the line below should measure six inches (152 millimeters).
If the line does not measure six inches (152 millimeters), this copy is not certified safe for navigation.

(POD) providers fulfill a vessel's requirement to carry a navigational chart "published by the National Ocean Service" in accordance with federal regulations, including but not limited to 33 C.F.R. 164.33(a), 33 C.F.R. 164.72(b), and 46 C.F.R. 28.225(a). POD charts meet stringent print standards and can be recognized by an official certification of authenticity printed on the chart. A list of POD providers can be found at: nauticalcharts.noaa.gov/pod

SCALE 1:80,000
Nautical Miles 1 ½ 0 1 2 3 4 5 6 7
Yards 1000 0 2000 4000 6000 8000 10000

Formerly C&GS 1227, 1st Ed., Feb. 1913 V-1913-130 KAPP 548



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Published at Washington, D.C.
U.S. DEPARTMENT OF COMMERCE
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
NATIONAL OCEAN SERVICE
COAST SURVEY

SOUNDINGS IN FEET

FATHOMS	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
FEET	6	12	18	24	30	36	42	48	54	60	66	72	78	84	90	96	102

METERS 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31

Cape Henry to Currituck Beach Light
SOUNDINGS IN FEET - SCALE 1:80,000

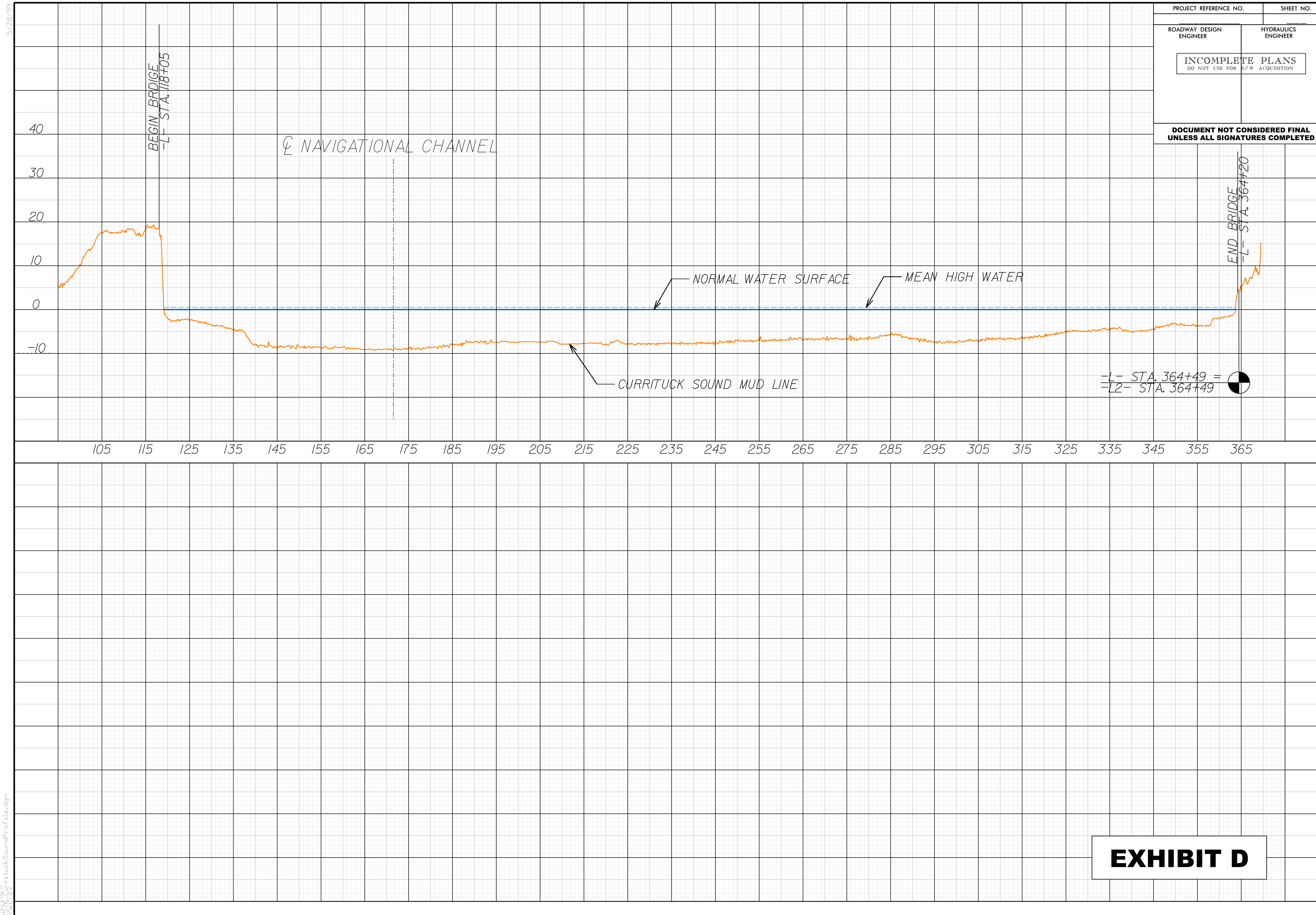
Use NOAA electronic navigational charts for the most up-to-date information.

25th Ed., Aug. 2019. Last Correction: 5/22/2020. Cleared through:
LNM: 2020 (5/19/2020), NM: 2220 (5/30/2020)

To ensure that this chart was printed at the proper scale, the line below should measure six inches (152 millimeters).
If the line does not measure six inches (152 millimeters), this copy is not certified safe for navigation.

(POD) providers fulfill a vessel's requirement to carry a navigational chart "published by the National Ocean Service" in accordance with federal regulations, including but not limited to 33 C.F.R. 164.33(a), 33 C.F.R. 164.72(b), and 46 C.F.R. 28.225(a). POD charts meet stringent print standards and can be recognized by an official certification of authenticity printed on the chart. A list of POD providers can be found at: nauticalcharts.noaa.gov/pod

EXHIBIT D



PROJECT REFERENCE NO.
SHEET NO.
ROADWAY DESIGN ENGINEER
HYDRAULICS ENGINEER
INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION
DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED
BEGIN BRIDGE
-L- STA. 118+05
℄ NAVIGATIONAL CHANNEL
END BRIDGE
-L- STA. 364+20
NORMAL WATER SURFACE
MEAN HIGH WATER
CURRITUCK SOUND MUD LINE
-L- STA. 364+49 =
-L2- STA. 364+49
40
30
20
10
0
-10
105
115
125
135
145
155
165
175
185
195
205
215
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355
365

U.S. Department of Homeland Security

United States Coast Guard

Commander
United States Coast Guard
Fifth Coast Guard District

431 Crawford Street
Portsmouth, Va. 23704-5004
Staff Symbol: (dpb)
Phone: (757) 398-6422
Fax: (757) 398-6334
Email: Bill.H.Brazier@uscg.mil

16591

Sept 28, 2009

PRELIMINARY PUBLIC NOTICE 5-1163

TO WHOM IT MAY CONCERN:

The purpose of this notice is to notify mariners, adjacent property owners, and government agencies that the North Carolina Turnpike Authority (NCTA), in coordination with the North Carolina Department of Transportation (NCDOT) and the Federal Highway Administration (FHWA) propose plans for a new bridge to be constructed across Currituck Sound.

WATERWAY AND LOCATION: Currituck Sound, approximately 18 miles from the Wright Memorial Bridge, in the vicinity of Aydlett on the mainland and Corolla on the Outer Banks in Currituck County, NC - Chart# 12205

CHARACTER OF WORK: NCTA, in coordination with NCDOT and FHWA, is currently studying alternatives for the location for the proposed new Mid-Currituck Bridge across Currituck Sound to improve traffic flow on area thoroughfares US 158 and NC 12. The information gathered as a result of this preliminary public notice will assist the Coast Guard in determining adequate minimum horizontal and vertical clearances for the proposed fixed-span bridge alternative crossing Currituck Sound. The type of vessel information needed includes the vessel types that transit the waterway, commercial or recreational usage, height, draft, length, beam, tonnage, and mooring locations in Currituck Sound. Please submit the attached form in response to this preliminary public notice. The proposed bridge will provide 15 feet of vertical clearance along its length across Currituck Sound and a horizontal clearance of 40 feet between piles.

SOLICITATION OF COMMENTS:

It is requested that anyone having an interest in this proposed project, from the standpoint of navigation, submit vessel information, comments, and recommendations on the enclosed form and comments will be received for the record at the office of Commander (dpb), Fifth Coast Guard District, 431 Crawford Street, Portsmouth, Virginia 23704-5004 through October 28, 2009

Waverly W. Gregory, Jr.

WAVERLY W. GREGORY, JR.
Chief, Bridge Administration Branch
By direction of the Commander
Fifth Coast Guard District

EXHIBIT E

Mid-Currituck Bridge
Preliminary Public Notice 5-1163
Response Form

Vessel Information	**Please provide all requested information:**
Vessel Type	
Use – Commercial or Recreational	
Vessel Height	
Draft	
Length	
Beam	
Tonnage	
Mooring Location	

Name (Optional): _____

Address (Optional): _____

Phone (Optional):

_____

Comments and Recommendations: _____

_____

_____

_____

_____

EXHIBIT E

U.S. Department of Homeland Security

United States Coast Guard

Commander
United States Coast Guard
Fifth Coast Guard District

431 Crawford Street
Portsmouth, VA 23704-5004
Staff Symbol: (dpb)
Phone: (757) 398-6422
Fax: (757) 398-6334
Email: Martin.A.Bridges@uscg.mil
CGDFiveBridges@uscg.mil

16591
21 FEB 2020

PRELIMINARY PUBLIC NOTICE D05PPN-04-2020

All interested parties are notified that the Commander, Fifth Coast Guard District has received a proposal from the North Carolina Turnpike Authority and North Carolina Department of Transportation with plans for construction of a new highway fixed bridge over a navigable waterway of the United States.

WATERWAY AND LOCATION: Currituck Sound, approximately 18 miles north of Wright Memorial Bridge, between Aydlett on the mainland and Corolla on the Outer Banks, in Currituck County, NC.

CHARACTER OF WORK: The proposed project is to construct a new bridge across Currituck Sound from the mainland to the Outer Banks. The proposed two-lane, fixed span bridge is approximately 4.7 miles long and will have a minimum vertical clearance of 15 feet above mean high water and 40 feet of horizontal clearance between piers. The navigation span will be placed over deepest water. The proposed bridge will extend from a point on the mainland just north of Aydlett to the Outer Banks near the Corolla Bay community just south of Great Beach Pond and Whale Head Bay. The purpose of the project is to substantially improve traffic flow on the project area's thoroughfares (US 158 and NC 12), reduce travel time for persons traveling between the Currituck County mainland and the Currituck County Outer Banks, and reduce hurricane clearance time for residents and visitors who use US 158 and NC 168 during a coastal evacuation.

MIMIMUM NAVIGATIONAL CLEARANCES:

Existing	***Proposed***
Vertical Clearance: N/A	Vertical Clearance: Fixed - 15 feet above mean high water
Horizontal Clearance: N/A	Horizontal Clearance: 40 feet between piers

North American Vertical Datum of 1988 (NAVD88)

EXHIBIT F

SOLICITATION OF COMMENTS:

Mariners are requested to provide navigational information, such as the sizes and types of vessels presently owned and operated on the waterway and nature of navigation (including the extent of nighttime navigation) on the waterway. Mariners are requested to comment on the navigational clearances and need for bridge protective systems, clearance gauges, and navigational lighting on the proposed bridge. Please submit the attached response form.

Interest parties are requested to express their views, in writing, on the proposed bridge project, giving sufficient detail to establish a clear understanding of their reasons for support of, or opposition to, the proposed project. Comments will be received for the record at the office of Commander (dpb), Fifth Coast Guard District, 431 Crawford Street, Portsmouth, VA 23704-5004 through ***March 24, 2020.***

HAL R. PITTS
Bridge Program Manager
By direction

Encl: (1) Response Form
(2) Location/Vicinity Map

EXHIBIT F

Mid-Currituck Bridge
approximately 18 miles north of Wright Memorial Bridge, between Coinjock on the mainland and Corolla on the Outer Banks, in Currituck County, NC.

Preliminary Public Notice *D05PPN-04-2020*

Response Form

It is requested that anyone having an interest in this proposed project, from the standpoint of navigation, submit vessel information, comments, and recommendations on this form to the office of Commander (dpb), Fifth Coast Guard District, 431 Crawford Street, Portsmouth, VA 23704-5004 by ***March 24, 2020.***

Vessel Information	Please provide all requested information:
Vessel Type	
Frequency of Transit	
Use - *Commercial and /or Recreational*	
Vessel Height	
Draft	
Length	
Beam	
Tonnage	
Mooring Location	

Name (Optional): _____

Address (Optional): _____

Phone (Optional): _____

Comments and Recommendations: _____

_____

_____

_____

_____

EXHIBIT F

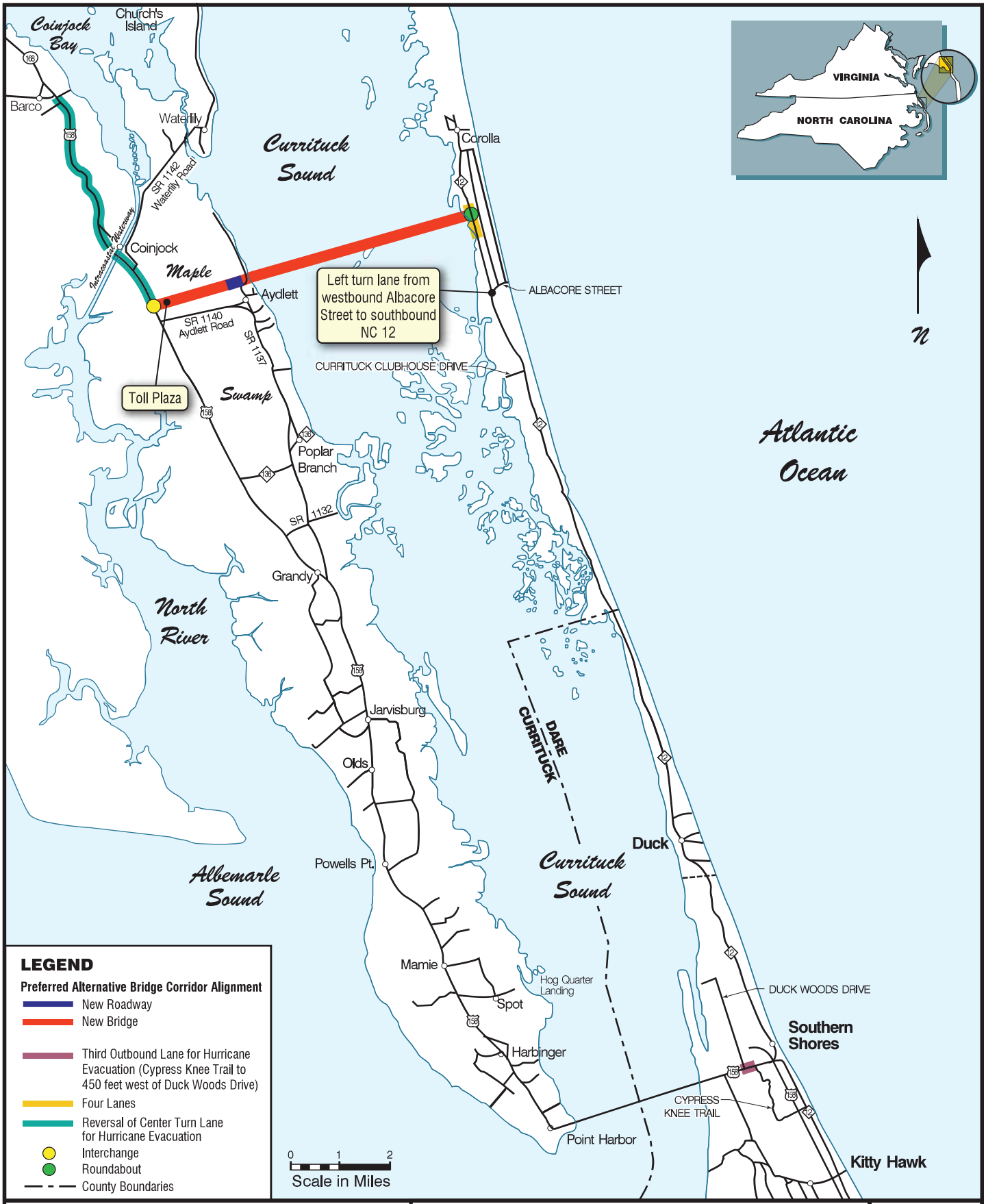


EXHIBIT F

Selected Alternative

Figure
1

No.	Name	Address	Phone	Vessel Information	Vessel Type	Use	Vessel Height	Draft	Length	Beam	Tonnage	Mooring Location
1	Frank James, Jr.	304 Park Ave; Piscataway, NJ 08854 41041 Channel Ct; Avon, NC 27915			Robalo 260	Recreational	8' - 3"	1' - 8"	26' - 5"	9'	6,075 lbs	Trailer
2	Sulivan Boat Woks & Charters	PO Box 91; Point Harbor, NC 27964	252-956-0953 cell 252-491-8570		Sport Fisherman Charter Boat	Commerical	23'	42"	33' - 7"	12' - 7"	8 Net Registered Tons	Pirates Cove Marina
3	Captain Emmett Smith, USN (Ret)	3875 Jefferson Blvd; Virginia Beach, VA 23455	252-617-5795		Searay 180DC w/outboard	Recreational	6'	30"	18'	7' - 6"	Dry Weight 1950 lbs	75% Virginia beach on Trailer 25% lift 101 Sandy Lane
4	C. P. "Buster" Nunemaker, III	2600 South Pilot Lane; Nags Head, NC 27959	252-305-1166		Wellcraft 250 Coastal	Recreational		2.5'	25' - 6"	8'	3,900 lbs	Trailer
5	Clyde D. Spruill	190 Tabernacle Lane; Aydlett, NC 27916	252-453-2084		Southwestern w/Evinrude 175hp outboard	Commerical primarily & recreational	7'	18"	25'	10'	1,500 lbs	Resident Dock Aydlett, NC 27916
6	Clyde D. Spruill	190 Tabernacle Lane; Aydlett, NC 27916	252-453-2084		Stumpknocker w/ 40 hp Mariner	Commerical & Recreational	4'	12"	17'	5 1/2'	800 lbs	Resident Dock Aydlett, NC 27916
7	Carl Talley	PO Box 37; Poplar Branch, NC 27965			Cat	Commerical	23' - 8"	3 1/2'	45'	15'	5	Popular Branch/Duck
8	John Geddie	131 Willow Ct; Duck, NC 27949			Roontoon Boat	Recreational	11'	30"	24'	8'	1	Currituck Sound Duck
9	Ben Kelley	211 Fentress Dr. Knotts Island, NC 27950	252-429-9213		Carolina Skiff	Recreational	12' Above waterline	12"	23' - 6"	8'		Knotts Island-Currituck Sound
10	Richard Schneider	938 S. Harbor View Corolla, NC 27927	443-250-4704		Hobie Getaway Catamaran	Recreational	26 1/2'	8"	16' - 7"	7' - 8"	390 lbs	938 South Harbor View Corolla, NC
11	F. Cross	137 Nautical Lane; Currituck, NC 27929	252-232-3079		23' Scout, Fishing/Pleasure	Recreational	7'	30"	23'	8' - 6"	not much	Coinjock Bay
12	George Banks	PO Box 367; Hatteras, NC 27943	252-986-2709		Carolina Skiff	Recreational	14'	1.5'	21'	8'	7	Hatteras, NC
13	Ervin E. Pickett	105 Poplar Bay Rd; Poplar Branch, NC 27965	252-207-3113		1. Fiberglass Inboard 2. Fiberglass Outboard	1. Commerical 2. Commerical	1. 7 1/2' 2. 2'	1. 2 1/2' 2. 1'	1. 30' 2. 19'	1. 8 1/2' 2. 6'	1. 2 1/2 ton 2. 1 ton	Poplar Branch Currituck, NC
14	David J. Chappelle, Sr	106 Dana Street; Moyock, NC 27958	252-232-2429		Starcraft	Recreational			16'		700 lbs	106 Dana Street Moyock, NC
15	Lamar Salterfield	PO Box 422; Rodanthe, NC 27968	252-987-1515		21' Center Console	Both	5'	4'	21'	7'	1	Rodanthe, NC
16	Joe Moran	1154 Harbourview Dr; KDH, NC 27948	252-207-9861		19' Renken	Commerical	8'	4'	19'	8'	1	Collington Harbour
17	Graham Wagner	3016 Robin Lane; Havertown, PA 19083	610-446-2300 (graham @wagnerrealestate.com)		Hunter 170 Sailboat	Recreational	26'	4' 6"	17'	7'	500 lbs	Monterey Shores-Sound Front 910 Sea Ridge Dr Corolla, NC 27927
18	R. S. Meekins, Jr.	PO Box 398; Wanchese, NC 27981	252-473-3283		Commerical Trawler	Commerical	45'	6'	42'	12'	12	Wanchese, NC
19	Horace Whitfield	42 Honeysuckle Ln; S. Shores, NC 27949	252-216-5245		30' Crown Point Dory	Recreational	32'	2'	30'	8'	2	Manteo, NC
20	Nancy Swisstack	PO Box 754; Buxton, NC 27920			Motor boat	Recreational			24'			
21	Marion West Ambrose, Jr	279 Waterlilly Rd; Coinjock, NC 27923			1. Jones Bros. 2. HM Juniper Skiff	Recreational	1. 6' 2. 3'	1. 2' 2. 2'	1. 19' 2. 18'	1. 7' 2. 7'		Coinjock, NC
22	W. M. Pace	9920 Cherokee Road; Richmond, VA 23235	804-380-3603		Runabout	Recreational	4'	8"	17'	3.5'	500 lbs	Southern Shore and Slip
23	Terry Lynn	205 Owens Beach Rd; Harbinger, NC 27941			25' Parker / 18' Parker / 15' Skiff	Commerical	12' / 6'	2' / 15"	25' / 18' / 15'	9.6' / 5'	1.5 tons / 3/4 tons	Jarvisburg / Harbinger
24	Jimmie Roberts	PO Box 156; Aydlett, NC 27916			Centerconsole Fiberglass	Recreational	8'	2'	23'	8'	1/2	Aydlett Shore, Currituck
25	Ches Tyson	147 Pinewood Acres; Powell Point, NC 27906	252-202-8468		Look Out	Both	13' 7"	22'	26'	10' 4"	4.5	Kitty Hawk

No.	Name	Address	Phone	Vertical Clearance	Bridge Support	Vessel Information	Vessel Type	Frequency of Transit	Use	Vessel Height	Draft	Length	Beam	Tonnage	Mooring Location
1	Guy Johnson	113 Baggy Davis Lane; Currituck, NC 27929	252-232-3900 252-202-7776	>15'			Catamaran Hobie 16	Summer	Recreational	28'-6"	10"	16'-7"	7'-11"	320 lbs	Bells Island
2	Mike Bryant	3194 Adam Keeling Road; Virginia Beach, VA 23454		>15'			Sport Fishing	2 time a year	Recreational	23'	3'	32'	10'-2"		Virginia Beach, VA
3	Hardy Peters	323 N. Dogwood Trail; Southern Shores, NC	252-489-3491	35'			Nacra 580 Sailboat	3-8 times a year	Commercial and Recreational	31'	2.5'	19'	8'	< 1 ton	Southern Shores
3	Hardy Peters	323 N. Dogwood Trail; Southern Shores, NC	252-489-3491				Flying Scot Sailboat	3-8 times a year	Commercial and Recreational	24'	3.5'	20'	6'	1.5 ton	Southern Shores
4	Graham Wagner	910 Sea Ridge Drive; Corolla, NC	610-761-7612	30'			Hunter Sailboat	Spring, Summer, Fall	Recreational	25'	52"	18'-4"	7'-2"	836 lbs	Monteray Shores
5	Mark Miller	836 Buccaneer Village; Manteo, NC	910-476-3144	>15'			Contender Center Console	Infrequent	Recreational	17'	2.5'	28'	8'-9"	5 ton	Wanchese
6	Stonewall Pittman	316 Narrow Shore Road; Aydlett, NC	252-453-2351	35'											
7			252-453-4522	24'											
8	Joseph Simpson	140 Edgewater Drive; Grandy, NC 27939	252-491-9232	>15'			Pontoon	6-8-times a year	Recreational	9'	18"	24'	8"	1.5 tons	Grandy
9	E. Wayne Clark	177 E Ridge Road; Moyock, NC 27958	757-617-7137				Fiberglass Boat	+20 times a year	Recreational	12'	2'	21'	8'		
10				40'						40'	3'				
11					No										
12	Calvin R Umphett	118 Woodhouse	252-202-3681				Pleasure Craft	0 - in dry dock	Recreational	13'	2'	28'	10'		
13					Yes		Center Console	Seldom	Recreational	5'	1.5'	21'	7.5'	1.5 tons	Southern Shores
14	Michael H. Payment	117 Barefoot Lane; Grandy, NC 27939	757-763-8110		Yes		Cuddy Cabin (Key West)	Summer	Recreational	5'	3'	20'	6'		Trailer
15	Steve Hatchman	297 Sea Oats; Southern Shores, NC	612-716-3991	>15'			Runabout with outboard	16 times a year	Recreational	6'-6"	2'-6"	19'	8'	1 ton	Trailer
16	George Kendall	1216 Harbour View Drive; Kill Devil Hills, NC	252-449-8658				Motor	4 times a year	Recreational	12'	3'	35'	9'	4 tons	Colington Harbour
17	Arthur Hepler	Manteo, NC			Yes										
18	Raymond Kutzer	102 Duchess Court; Kill Devil Hills, NC 27948	814-440-8590		Yes										
19	Dave Stormont	6036 Currituck Road; Kitty Hawk, NC 27949	252-207-2422		Yes		Outboard Motor Vessel	6 times a year	Recreational	6'	2'	20'	7'		Kitty Hawk
20	Glenda Gaskill	Kill Devil Hills, NC			Yes										
21	Robert Gilliam	2127 Sandfiddler Road; Corolla, NC 27927	919-428-1089				Yamaha Jet Boat	1-2 times a week in summer	Recreational	12'	1.5'	24'	8'	3500 lbs	Carova Beach
22	Jim Huitt		804-339-3013				Pro Sport 2200 WA	3-4 times a year	Recreational	10'	2'	22'	8.5'	1 ton	Martins Point Kitty Hawk
23	Larry Thompson	211 Amberjack Court; Nags Head, NC	757-650-2235		Yes		Center Console	4 times per year	Recreational	7'-8"	12"	20'-11"	8'-5"	2300 lbs	Nags Head
24	Edgar O'Neal	3537 Caratoke Highway; Maple, NC 27956	252-455-0833		Yes		Open Skiff	Weekly	Recreational	4'	8"	16'	58"		Maple
25	William S. Arnoult	270 Hillcrest Drive; Kitty Hawk, NC 27949	301-980-8422				Day Sail	1 time per year	Recreational	25'	3'	18'	6'	500 lbs	
26	Adam Herman	210 W Lost Colony Drive; Nags Head, NC 27959			Yes		Polar Center Console	Rare - once in 19 years	Recreational	8'	1.5'	18'	5'	2500 lbs	
27	Don M. Roberts	204-236 Narrow Shore Road; Aydlett, NC	757-944-1322				Center Console - V Bottom	Daily May - September	Recreational	7'-2"	22"	18'	6'-4"	1 ton	Aydlett

No.	Name	Address	Phone	Vertical Clearance	Bridge Support	Vessel Information	Vessel Type	Frequency of Transit	Use	Vessel Height	Draft	Length	Beam	Tonnage	Mooring Location
28	Wallace Pittman	205 Poyners Road; Moyock, NC 27958	757-434-9452		Yes		Skiff	10 times a year	Recreational	6'	1'	19'	6'	1 ton	Trailer
29	Marion H. Whitaker, Jr.	219 Mariners Way; Moyock, NC 27958													
30	Brian Bollager	152 Poteskeet Loop; Southern Shores, NC	252-715-0225				Sailboat	Infrequent	Recreational	15'	18"	10'	3.5'		Southern Shores
31	James Barnes	212 Moyock Landing Drive; Moyock, NC 27958			Yes		Pontoon	1-2 times per year	Recreational	10'	2'-6"	24'	8'	0.5 ton	Mainland Currituck County
32					Yes		Center Console - Outboard	Seldom	Recreational	5'	2.5'	22'-10"	102"		Colington
33	J. Kenneth Edsal	1335 Waterlily Road; Coinjock, NC 27923	252-453-3169		No		Cuddy Cab	Multiple times daily	Commercial and Recreational	13'	3'	34'	10'	2 tons	Waterlily and Poplar Branch
33	J. Kenneth Edsal	1335 Waterlily Road; Coinjock, NC 27923	252-453-3169				Open Skiff	Multiple times daily	Commercial and Recreational	7'	2.5'	20'	8.5'	1 ton	Waterlily and Poplar Branch
33	J. Kenneth Edsal	1335 Waterlily Road; Coinjock, NC 27923	252-453-3169				Skiff with Scissors Rig	Multiple times daily	Commercial and Recreational	8'	2.5'	23'	8.5'	1 ton	Waterlily and Poplar Branch
34		101 Cooper Landing Drive; Aydlett, NC 27619	540-270-0708		No		Pontoon	50-60 times a year	Recreational	8'	18"	20'	8'	2 tons	Aydlett
35	John Atwood	P.O. Box 35	757-705-7383 252-429-3295				Fish/Crab	10 Month Yearly	Commercial and Recreational	28'	30"	30'	10'-3"	9 tons	Knotts Island
36	Murray Elliott	198 Elliott Road; Aydlett, NC 27916	252-809-2275		No		Motorboat	Varies	Recreational	8'	1'	18'	6'	1 ton	Aydlett
37	Richard Connell	109 Wood Duck Drive; Currituck, NC 27929			Yes		Scout	3-4 times a year	Recreational	5'	3'	14.5'	5'	1 ton	Bells Island
38	Steve Hankins		603-828-4139				Cruiser	<20 times a year	Recreational	4'	18"	15'		0.5 ton	
39							Fiberglass/Outboard	Once a month	Commercial and Recreational	8'	3'	28'	8'		Duck
40	Officer-in-Charge USCG ANT Wanchese, NC	908 Harbor Road; Wanchese, NC 27981	252-473-1531				Military	2 times a year	Military	14'-7"	5'-11"	55'	16'-10"	74066 lbs	Wanchese
40	Officer-in-Charge USCG ANT Wanchese, NC	908 Harbor Road; Wanchese, NC 27981	252-473-1531				Military	2 times a year	Military	9'	2'-4"	29'-7"	8'-4"	9700 lbs	Wanchese
41					Yes		Pontoon	4 times a year	Recreational	10'	2'	22'	8'	1.5 tons	Kitty Hawk
42							Center Console Planning Hull	Weekly	Commercial and Recreational	10'	24"	21'	8.5'	<5 tons	Kitty Hawk
43							Center Console Planning Hull	Weekly	Commercial and Recreational	10'	24"	21'	8.5'	<5 tons	Kitty Hawk
44	Margaret L. Harrell	128 North Point Blvd; Moyock, NC	252-267-3774		Yes										
45							Key West 2020cc	2-3 times a week	Recreational	9'	17"	20'-6"	7'		Trailer
46							Sail Hunter	Once every two years	Recreational	47'	4'	30'	8'		Oriental
47	Lynn Tadlock	11575 Avondale Drive, Fairfax, VA	703-278-0164				Godfr Hurrican deck boat	Daily in summer	Recreational	13'		23'		8000 lbs	
48	Ed Holmes	106 Canal Court; Grandy, NC 27939	252-267-4332				Pontoon Boat	weekly	Recreational	15'	3'	20'		3 tons	Grandy
49	Robert Kirk	121 Tabernacle Lane; Aydlett, NC 27916	252-202-6654		No										
50	Jerry Shepherd	106 Teal Drive; Currituck NC	703-595-9305				Fish and Ski	3 times per year	Recreational	4'	18"	21'	6'	1 ton	Currituck
51	Russ K. Hampton	105 Annettes Court; Aydlett, NC 27916	252-453-2264		No		Open Skiff	Weekly in season	Recreational	6'	6"	19'	6'		Trailer
51	Russ K. Hampton	105 Annettes Court; Aydlett, NC 27916	252-453-2264				Ski Boat	Weekly in season	Recreational	6'	18"	20'	7'		Trailer

No.	Name	Address	Phone	Vertical Clearance	Bridge Support	Vessel Information	Vessel Type	Frequency of Transit	Use	Vessel Height	Draft	Length	Beam	Tonnage	Mooring Location
52	William Brumsey	115 Goose Castle Terrace; Currituck, NC 27929	252-207-2035		Yes		Center Console	6-8 times per year	Recreational	8'	12"	21'	8'-6"	3.8 tons	Bells Island
53	Pete McClintock	114 Tulls Bay Drive; Moyock, NC 27958	757-421-0929	>15'			Center Console, Outboard	6 times per year	Recreational	10'	16"	19.2'	6.4'		Moyock
54	TJ Crum	4006 Parker Street; Kitty Hawk, NC			No										
55	Jim Davis	242 Broadway Drive; Kill Devil Hills, NC 27948	252-441-3810		Yes		Bayliner	Never	Recreational			24.5'			
55	Jim Davis	242 Broadway Drive; Kill Devil Hills, NC 27948	252-441-3810				Tartan Sailboat	Never	Recreational			33'			
56	James Leeds	Bells Island			Yes		Deck Boat	2 times per week	Recreational	4'	1'	21'			
57	Donna Holcomb	101 Seahawk Court; Grandy, NC 27939	757-805-7205				Fisher Marine	10 times per year	Recreational	7'	6"	15'	3'-6"		Grandy
58	Amy Thomas	108 Bayside Drive					Center Console	<10	Recreational	7.5'	19"	23'	8'-6"	3800 lbs	Rivers Edge
59	Michael P. Lanman	131 Martin Lane; Duck, NC 27949	561-445-5501				Pontoon Boat	3 times weekly in summer	Recreational	7'-3"	14"	27'	8.5'	2.5 tons	Duck
60	George Fockler	7017 Martins Point Road, Kitty Hawk, NC 27949					Center Console, Outboard	Never	Recreational	9'	13"	22.5'	8'-6"	2300 lbs	Kitty Hawk
61	Thomas Herman	104 Weir Point Drive; Manteo, NC 27954					Sea Ray Power Cruiser		Recreational	4.5'	3'	26'-8"	8'-6"	4680 lbs	Manteo
62	Kevin M Carroll	7001 Currituck Road; Kitty Hawk, NC 27949	727-698-6963				Nautic Star Legacy Center Console	Rarely	Recreational	9'	18"	23'	8'-2"	4500 lbs	Kitty Hawk
63		2144 Drake Road	757-335-1573				2472 Sea Ark	Monthly	Recreational	8'	1.5'	24'	8'		Knotts Island
64	Jerry W. Wright	204 Jerry's Way; Jarvisburg, NC 27947	256-491-8303				Inboard	10-15 trips per year	Commercial and Recreational	12'	2.5'	30'	12'	3 tons	Jarvisburg
65	Bradley Nash	128 Quail Run; Moyock, NC	252-305-5447				Center Console	1-2 times a month	Commercial and Recreational	13'	16"	21'	8'	3000 lbs	Camden
66	David Hoare	6389 Caratoke Highway	252-207-2336		Yes		Stingray i/o drive	2-3 times a month	Recreational	7-8'	2'	20'	8'		Trailer
67	Steve West	1005 Brookedale Court; Chesapeake, VA 23322			Yes		Scout Sport Fisher	on and off	Recreational	5'	18"-24"	18'	5'	2500 lbs	Grandy
68	Charlie Beasley	62 Deer Path Lane; Kitty Hawk, NC 27949	252-261-3045	15'	Yes		Parker Privateer Carolina Skiff	Never	Commercial	5'	2.5'	25'	9'		Colington Island
69				65'			Center Console	2 times per year	Recreational	10'	2'				Trailer
70	William Grover	2166 Teal Road; Corolla, NC 27927			Yes		Fishing & Cruising	Regular	Recreational	10'	1'	24'	8'	1.5 tons	Carova
71	Henry & Nancy Marcussen	135 Duck Woods Drive; Southern Shores, NC 27949	252-715-2738		Yes		Bayliner Element E18	Once a month	Recreational	84"	24"	18'-2"	7'-5"	1 ton	Southern Shores
72	G Kaputa	145 Lea Court; Kill Devil Hills, NC 27948	252-489-9211				Cabin Shamrock Plaining	Weekly	Recreational	10'-5"	3'	25.5'	10'	2 tons	Carlington Harbour
73	Melinda Hubert	Kitty Hawk, NC			Yes										
74							Cuddy Cabin inboard/outboard	Hardly ever	Recreational	8'	3'-6"	20'-3"	6'-6"	1 ton	Moyock
75	Ray Hedgepeth	1617 Princess Ann Road; Kill Devil Hills, NC 27948		20'	Yes										
76					Yes		Scout	Once a month	Recreational	7'	2'	18'-6"	8'		Dare County
77	Bob Bernhard	296 Woodleigh Road; Knotts Island, NC 27950	757-613-0478				Honda PWC-ARX1200T3	2 times a week in summer	Recreational	42"	24"	126"	49"	791 lbs	Trailer
78							Boston Whaler Outrage	1 time per month	Recreational	10'	12"	18'-6"	7'-2"	2500 lbs	Jean Guite Creek

No.	Name	Address	Phone	Vertical Clearance	Bridge Support	Vessel Information	Vessel Type	Frequency of Transit	Use	Vessel Height	Draft	Length	Beam	Tonnage	Mooring Location
79							Sailboat	6 times a year	Recreational	35'	6'	26'	8'-6"	5000 lbs	Colington
80	Christopher Durham		252-204-1254		No		Carolina Skiff		Recreational	8'	18"	19'	8'	1800 lbs	Multiple
81							Pro Craft Competitor Bass Boat	10 times a year	Recreational	3'	2'	17.6'		1200 lbs	Trailer
82							Mako 238 WA	2 times per month	Recreational	14'	14"	23'	8'-6"	3000 lbs	Jean Guite Creek
83					Yes		Propulsion	Never	Commercial and Recreational	3'	1'	16'	7'	1600 lbs	
84							Center Console	5 times a year	Recreational	11'-7"	20"	28'-4"	9'-8"		Kill Devil Hills
85	R. Gusler	Wanchese, NC			Yes		Outboard	Once a year	Recreational	3'	2'	15'	5'		
86					Yes		Jon Boat	Very Infrequent	Recreational	5'	6"	14'	5'	<1 ton	Kill Devil Hills
87					No										
88	Daniel Leggett	70 Hickory Tail					Boston Whaler	1 time per month	Recreational	6'	1'	17'	7'	0.25 tons	Jean Guite Creek
89	Tammy Johnson	1 Sailfish Drive; Manteo, NC 27954			Yes										
90	Hunter Crum				No										
91	Amanda Evans	134 E Canvasback Drive; Currituck, NC 27929	757-288-6290		No		Jet Skis	Weekly	Recreational	3'	1'	11'	3'	1100 lbs	Currituck
92	Lloyd G. Brinson	100 Gadwell Drive; Currituck, NC			No		Stingray Bow Rider	4 times a month	Recreational	6'	18"	21'	6'	3400 lbs	Bells Island
93	Linda Brinson	100 Gadwell Drive; Currituck, NC 27927	336-816-8503		No		Stingray Bowrider	3-4 times a month	Recreational	6'	18"	21"	6"	3400 lbs	Currituck, NC
94	Joseph Pruden	305 Harbinger River Road; Harbinger, NC 27941			Yes										
95	Terry G Seaks	2000 Brassfield Road; Greensboro, NC 27410	336-288-9048		Yes		Tide Runner fishing boat	Rarely	Recreational	2.5'	1.5'	10'-5"	5'	250 lbs	Kitty Hawk
96							Carolina Skiff	2-3 times a year	Recreational	5'	1'	19'	5'	0.5 ton	Colington Harbour
97							Catamaran Twin Vee with Tower	4 times per year	Recreational	15'	2'	22'	9.5'	2.5 tons	Southern Shores
98							Kayak - Hobie	Local fishing	Recreational	3'	10"	14'	3'		Trailer
99	Richard Anderson	59 Deer Path Lane	261-5511	15'			Carolina Skiff	Infrequent	Recreational	2'	6"	14'	5'		Southern Shores
100	Mark Hellmon	2001 Creek Road; Kitty Hawk, NC 27949	513-582-8889				Pontoon	Occasionally	Recreational	8'	2'	24'	8.5'	3500 lbs	Trailer
101							Key West	Rarely	Recreational	6'	2.5'	17'	6'	1 ton	Trailer
102	William B Cornett	319 Whitestone Road	704-400-4871				Outboard	2-4 times per year	Recreational	8'	2'	23'	8'	<1 ton	Wanchese
103	W. Ouzts, Sr.	103 Donna Court; Moyock, NC 27958	757-620-1914				Pontoon Boat	4 times per season	Recreational	12'	4'	20'	14'		Trailer
104	Chris Coleman	8443 Caratoke Highway; Powells Point, NC 27966	252-491-9223				Spud Barges	Regular use	Commercial	20'	3'	45'	25'-42'	60 tons	
105	Michael H Glover				Yes		Recreational Boat		Recreational			15'			
106	Randy Reale	237 Kitty Hawk Bay Drive; Kill Devil Hills, NC 27948					Sports Boat	2-3 times a season	Recreational	7'-2"	16'	21'-4"	8'-4"	1.2 tons	Kitty Hawk Bay

No.	Name	Address	Phone	Vertical Clearance	Bridge Support	Vessel Information	Vessel Type	Frequency of Transit	Use	Vessel Height	Draft	Length	Beam	Tonnage	Mooring Location
107	Lillie Button Daniels	PO Box 24; Wanchese, NC 27981			Yes										
108	Harry D Hill	101 Goose Castle Terrace; Currituck, NC 27929	252-435-4599		Yes		Pontoon	4-6 times yearly	Recreational	7'	8"	21"	8.5"	2000 lbs	Bells Island
109	Capt. Romulus A. Whitaker	PO Box 150; Hatteras, NC 27943	252-986-1031	35'			Sport Fisher	Never	Commercial	29'	4.5'	53'	14'	27 tons	Hatteras
110	CH Garczynski	1033 Martins Point Road; Kitty Hawk, NC 27949	252-261-0673		No		Carolina Skiff J-16	Infrequent	Recreational	4'	1'	15'-8"	4'	<1 ton	Kitty Hawk
111	Brenda Gale	101 Cooper Landing Drive; Aydlett, NC 27619	571-276-0064		No		Pontoon	50-60 times a year	Recreational	8'	18"	20'	8'		Aydlett
112	Sean Jennings	143 Sound Shore Drive	757-630-2206		Yes		Center Console	2-3 times a week	Recreational	8'-3"	16"	23'	8.5	2 tons	Currituck on the Sound
113	Edward Horner	149 Yaupon Terrace; Southern Shores, NC	347-739-5257		Yes										
114	Victoria Hampton	105 Annettes Court; Aydlett, NC 27916			No										
115	Jeff Thompson	PO Box 166: Wanchese, NC 27981	252-473-6395		No		Fiberglass		Commercial	15'	32"	32'	12'		Wanchese
116	James Storey	108 Quoric Court; Kill Devil Hills, NC 27948													
117	Sam Brinson	134 E Canvasback Drive; Currituck, NC 27929			No		C-Hawk Sport Cabin	Weekly	Recreational	8'	2'	25'	5'	3500 lbs	Pier
118					Yes		Boston Whaler	Never	Recreational	4'	2'	17'	8'	2000 lbs	
119	Mike Glover	16 Yacht Club Court; Manteo, NC					Sabre	Never	Recreational	17'	4'	42'	14'	15 tons	Manteo
120					Yes		Boston Whaler	Never	Recreational	4'	2'	17'	8'	2000 lbs	
121	J Aydlett	1716 Bay Drive; Kill Devil Hills, NC 27948	252-202-9393		Yes		Skiff	12 times a year	Recreational	18'	12"	13'-10"		128 lbs	Residence
122	Michael Schutzer	864 Drifting Sands Drive; Corolla, NC 27927	732-407-6973		Yes		Yamaha 1925X Jet Boat	15-20 times per year	Recreational	3.5'	12.8"	19'	8'	2156 lbs	Residence
123							185 Bayliner	2-3 times a year	Recreational	7'	3.5'	19'	6.5'		Coinjock
124	George LB Grinnan	106 Quail Way; Duck, NC 27949	252-261-1921		Yes		Carolina Skiff	Once a week	Recreational	5'-6"	6-8"	19'	5'		Residence
125					Yes										
126	Brian P Innes	136 Pats Way; Barco, NC 27917	252-207-5100		Yes		C-Dory	Few times a year	Recreational						Residence
127	Jessiebeth Geddie	131 Willow Court; Duck, NC	252-207-8525		Yes		Southern Skimmer	Monthly	Recreational	5'	8"	16'	4'		Duck
128	Bernsten	141 N Holly Trail; Southern Shores 27949	252-564-4142				Donzi Power	3-4 times a year	Military	10'	2'	23'	9'	4500 lbs	Southern Shores
129	William Knoch	574 Ocean Trail; Corolla, NC 27927	252-207-8907		No		Kencraft	40 days a year	Recreational	5'	10"	16'	5'	800 lbs	Trailer
130	Katherine A Roche	111 Shore Drive; Jarvisburg, NC 27941	252-491-6527		Yes										
131	J Troutman	Nags Head, NC			Yes		Center Console	Limited	Recreational	9'	20"	20'	8'		Nags Head
132	Rey Smith	6076 Currituck Road; Kitty Hawk, NC 27949					Robalo	Twice a year	Recreational	15'	20	26'	8.5'	1000 lbs	
133	John Geddie	131 Willow Court; Duck, NC 28409	252-261-4273		Yes		Pontoon	Monthly	Recreational	8'	1.5'	21'	8'		Duck
134	Rodney W Perry	81 S Dogwood Trail; Southern Shores, NC 27949	252-261-3574		Yes		Center Console	Several times a year	Recreational	7'	18"	21'	8'		Southern Shores

No.	Name	Address	Phone	Vertical Clearance	Bridge Support	Vessel Information	Vessel Type	Frequency of Transit	Use	Vessel Height	Draft	Length	Beam	Tonnage	Mooring Location
135				>15'			Parker	3 times a week	Commercial and Recreational	20'	18"	23'	9'		Maple
136							Albemarle Express	Daily in season	Recreational	10'	2'	24'	8'	7000 lbs	Colington
137	Moakley	Wanchese, NC			Yes		B&D Motor Yacht	Never	Recreational	20'	6'	60'	15'		Pirates Cove
138					Yes										
139							Skiff	During duck season	Recreational	5'	8"	18'	7'		
140							Deck Boat	4 times a week	Recreational	10'	3'	22'	8'	4000 lbs	Tulls Creek
141							Hobie Tandem Island Sailboat	3 times a week	Recreational	19'	1'	18'-6"	10'	600 lbs	
142							Center Console	Occasionally	Recreational	10'		21'	102"	2200 lbs	
143							Outboard powered boat	>6 times a year	Recreational	5'-6"	2'-6"	22'	7'	2.5 tons	Point Harbor
144	William P Blackwell	203 Augusta Drive; Grandy, NC 27939			Yes										
145	Michael Kelly	PO Box 1089; Nags Head, NC 27959	252-202-4116				Hurricane Deck Boat	1-3 times a year	Recreational	12'	2'	23'	8'	1 ton	
146	Franklin Shelby	11910 Millbrooke Court; Monrovia, MD 21770	301-865-1314		Yes		Pleasure - fishing boat	Rarely	Recreational	10'	3'	28'	10.5'	6 tons	Kill Devil Hills
147	Jonathan Keffer	175 Riversedge Drive; Moyock, NC 27958	252-548-0955	35'			Sailboat	6-20 times a year	Recreational	33'	15" to 6'	28'-5"	8'-4"	3800 lbs	Trailer

NORTH CAROLINA Turnpike Authority

Attachment II

Bridge Clearance Coordination Meeting Summary

Date: February 8, 2010

Attendees: Tracy Roberts, HNTB
Jose Luque, ACS Infrastructure Development
Roy Bruce, Lochner MMM LLP
Mike Bradley, Small Business and Technology Development Center (SBTDC) – Boating Industry Services

Location: SBTDC Conference Room – 5 West Hargett Street, Raleigh, NC

Notes by: Roy Bruce (edits by Tracy Roberts)

Subject: Mid-Currituck Bridge – Bridge Clearance Coordination Meeting

Following introductions and explanations of project roles, Tracy gave an overview of the project to date and the work already done on the bridge clearance requirements. The following summarizes the discussions at the meeting and the decisions made:

Subject	Action	To Be Completed by
1. Bridge Clearance Issues		
1.1 Mike encouraged strong use of the Draft Environmental Impact (DEIS) Public Hearing process for further local input on the horizontal and vertical clearance needs of the boating community in Currituck Sound. He felt that the extent of previous efforts through the US Coast Guard's Preliminary Public Notice (PPN) process should be summarized so that the public knows what has already been happening.		
1.2 The 45 foot high commercial trawler from the PPN responses is not likely to be in Currituck Sound according to Mike because of the 6 foot draft of the boat and the erratic and shallow water depths in Currituck Sound. This vessel cannot get under the Wright Memorial Bridge (due to a vertical clearance of only 35 feet) to the deepest water. This vessel can only access Currituck Sound via the Intracoastal Waterway near the north end of the Sound.		

EXHIBIT I

Subject	Action	To Be Completed by
1.3 The 32 foot high Crown Point Dory boat is also not likely to traverse Currituck Sound, particularly through the Big Narrows area due to the shallow water depth and limited winds. According to Mike this boat can lower its mast in sections to traverse under a 15 to 18 foot high bridge. The owner of this boat is the captain of the State owned Elizabeth II that is moored in Manteo at the State Museum. The Crown Point Dory is an old type of commercial fishing vessel. This one is being used for recreational purposes only.		
1.4 The 23 foot 8 inch commercial cat vessel has the mast at the bow. This is a traditional oyster fishing boat. It is likely an antique according to Mike as these types of vessels are not used much today. The mast on this vessel can be lowered to traverse under restricted clearances. Since this boat is located south of the Big Narrows, Mike expects that it is using southern Currituck Sound and exiting to Albemarle Sound under the Wright Memorial Bridge. Mike does not expect that this vessel is heading north in Currituck Sound because of the shallow water and limited winds in the Big Narrows.		
1.5 The 26.5 foot Hobie Catamaran could be an issue for C1 more so than C2 because of the mooring location of this boat on the east side of Currituck Sound between these two corridors. Deeper sailing water is north of the C1 corridor rather than south of the C2 corridor. Mike noted that this boat can also take down its mast at restricted vertical clearance locations. He also does not expect this boat to traverse the Big Narrows area because of water depths and limited winds.		
1.6 The 26 foot high Hunter 170 Sailboat is similar to the above boat with a mooring on the east side of Currituck Sound between the C1 and C2 corridors. This sailboat has a larger draft (4.5 feet) than the catamaran (8 inches) and will find Currituck Sound more challenging given the shallow water depths. Mike indicated that this boat would not likely traverse the Big Narrows area because of shallow water and limited winds.		
1.7 The 23 foot high sport fisherman charter boat would not likely be in Currituck Sound because of the boat draft (3.5 feet) and shallow waters according to Mike. This is confirmed by the boat owner in their response to the PPN.		

Subject	Action	To Be Completed by
1.8 Mike noted that many of the boats in Currituck Sound may be "T" tops with a center console. As such the "T" top could be 15 feet above the water. Extending above the "T" top is the radio antenna. A bridge vertical clearance of 18 feet above water could likely accommodate these boats without the antenna having to be removed. Mike encouraged consideration of a navigational span of at least 18 feet vertical clearance for a portion of the bridge. The remainder of the bridge could have a lower 15 foot vertical clearance.		
1.9 Mike asked about any crab pots that are in Currituck Sound. Laws require that these pots be set up with a buoy and be out of the navigational channel. Since there is no formal navigational channel in Currituck Sound, these pots could be a hindrance to navigation in the Sound.		
1.10 Mike asked about "shrimping" in Currituck Sound. His concern was relative to the width of the commercial trawlers with the outriggers extended going under the bridge. Once Mike knew that the proposed bridge spans would be around 100 feet in the deeper water, he saw no problems with horizontal clearances for fishing vessels.		
1.11 Mike agreed that the Big Narrows area in Currituck Sound is a restriction that will likely reduce the boating traffic through that area because of erratic and shallow water and reduced winds because of nearby islands. He saw the 35 recreational private docks along the west side of the Sound north of the Big Narrows and south of C1/C2 as an area for more detailed study through the Public Hearing process with property owners in this area. The other issue area is along the east side of Currituck Sound between the C1 and C2 alignments and the private recreational docks in this area. It is unclear if boats are using these docks and the size of these boats. The locations of these docks are north of the Big Narrows and south of one or both bridge corridors. More information is needed to determine possible impacts of the project on these private docks and owners.		
1.12 Based on the available data, Mike saw no reason why a 15 to 18 foot high vertical bridge clearance could not be provided over Currituck Sound in this area.		

Subject	Action	To Be Completed by
1.13 Mike encouraged us to meet with the US Coast Guard and show them the bathymetric map of Currituck Sound used in the meeting today. Tracy explained that this would be done once the DEIS Public Hearing process is completed for the project and more data is known about boating in Currituck Sound.		

ATTACHMENT F

Preliminary Navigation Clearance Determination (PNCD)
March 1, 2024

U.S. Department of Homeland Security
United States Coast Guard

Commander
United States Coast Guard
Fifth Coast Guard District

431 Crawford Street
Portsmouth, VA 23704-5004
Staff Symbol: dpb
Phone: (757) 398-6222
Fax: (757) 398-6334
Email: Hal.R.Pitts@uscg.mil
CGDFiveBridges@uscg.mil

16591
1 MAR 2024

Mr. Rodger Rochelle, PE
North Carolina Department of Transportation
North Carolina Turnpike Authority
1578 Mail Service Center
Raleigh, NC 27699-1578

Dear Mr. Rochelle:

The Coast Guard has reviewed the Navigation Impact Report update dated January 2024, for Mid-Currituck Sound, at Currituck County, NC. Based on the preliminary review of this study and the information available as of the date of this letter, the Coast Guard does not foresee anything that would prevent a bridge permit from being issued. The Preliminary Navigation Clearance Determination (PNCD) and information below are provided to assist the North Carolina Department of Transportation and North Carolina Turnpike Authority in preparing and submitting a bridge permit application.

The Coast Guard has made a PNCD that a fixed bridge across Mid-Currituck Sound, approximately 18 miles north of Wright Memorial Bridge, between Aydlett on the mainland and Corolla on the Outer Banks, in Currituck County, NC, will provide for the current and prospective reasonable needs of navigation. The proposed fixed bridge should provide at least 20 feet of vertical clearance above mean high water and at least 40 feet of horizontal clearance through the main navigation span of the bridge. The location of the navigational span of the bridge should be located in an area of deeper water, in general alignment with a north-south corridor through Currituck Sound and the Big Narrows and provide for the reasonable needs of navigation.

Please note that this PNCD is not binding, does not constitute an approval or final agency action, and **expires three (3) years from the date of this correspondence**. A final determination can only be made in accordance with regulation and after North Carolina Department of Transportation and North Carolina Turnpike Authority submits a complete bridge permit application to the Coast Guard. If a complete bridge permit application is not submitted within three (3) years from the date of this correspondence, an updated Navigation Impact Report as described in appendix A of the Coast Guard's Bridge Permit Application Guide, COMDTPUB P16591.3D, should be prepared and submitted in order to obtain a new PNCD.

16591
1 MAR 2024

Mr. Hal R. Pitts, at the above listed address or telephone number, has been assigned as the Coast Guard's Bridge Permit project officer. Please maintain frequent and regular contact with the project officer to ensure efficient and effective project administration.

Sincerely,

PITTS.HAL.R.1121267272 Digitally signed by PITTS.HAL.R.1121267272 Date: 2024.03.01 12:33:51 -05'00'

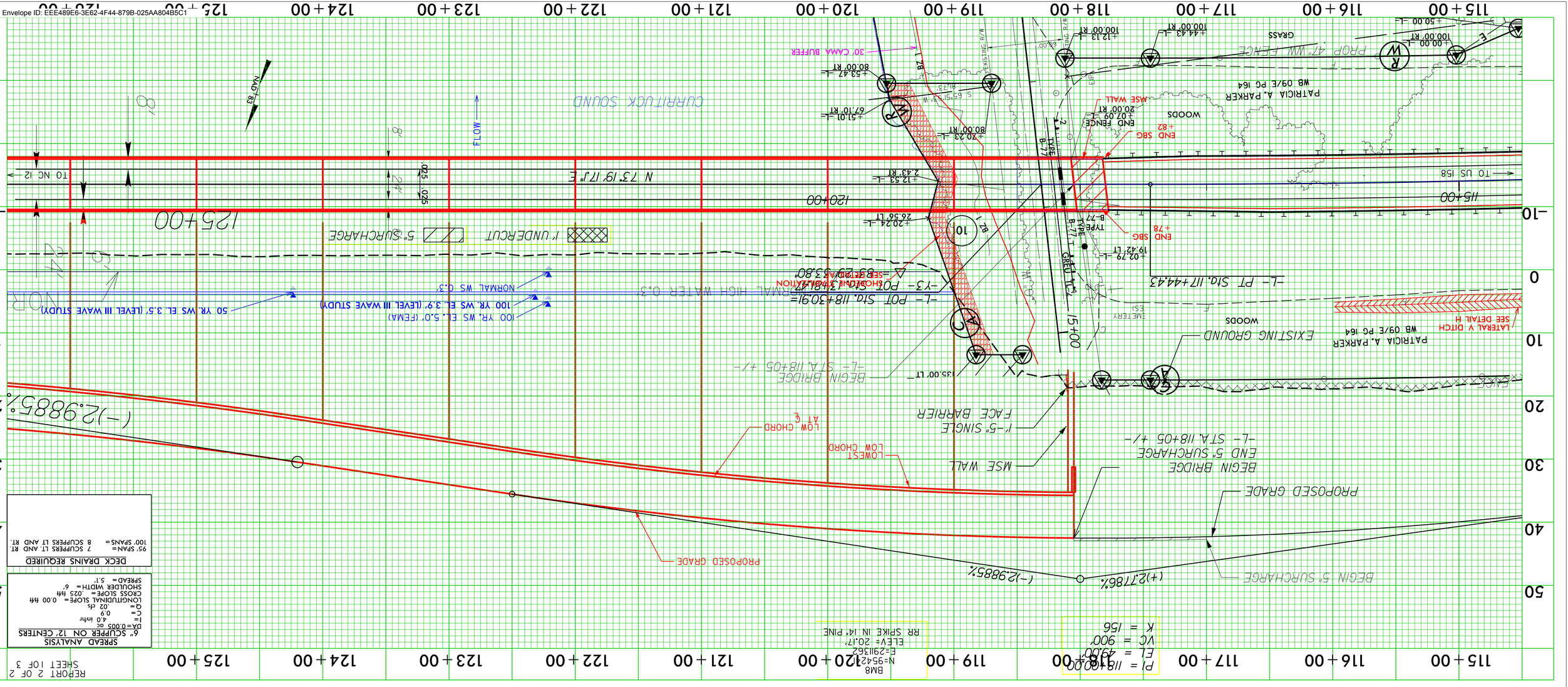
HAL R. PITTS
Bridge Program Manager
By direction

Encl: Bridge Permit Application Guide, COMDTPUB P16195.3D and BPAG Applicant Template located at (https://go.usa.gov/xRFk2)

Copy: Coast Guard Sector North Carolina, Waterways Management
Federal Highways Administration, NC Division Office
U. S. Army Corps of Engineers, Wilmington District Office

ATTACHMENT G

Bridge Survey & Hydraulic Design Report
August 2023



INFORMATION TO BE SHOWN ON PLANS

Elevations Provided by the Wave Study (Provided by Hydraulics Unit)

Design: Discharge N/A c.f.s. Frequency 50 yr. yr. Elev. 3.5 ft.

Base Flood: Discharge N/A c.f.s. Frequency 100 yr. Elev. 3.9 ft.

Overtopping: Discharge N/A c.f.s. Frequency 500+ yr. Elev. 13.68 ft. Sag sta 367+12.94 L2

ADDITIONAL INFORMATION AND COMPUTATIONS

SCOUR CALCULATIONS PROVIDED BY Moffatt & Nichol

LOCATION	TOTAL SCOUR (FEET)		FLOW VELOCITIES (FT/SEC)	
	100 yr.	500 yr.	100yr.	500yr.
SECTION 1 STA. 119-169	10.1	11.2	6.0	7.5
SECTION 2 STA. 170-173	13.4	14.3	7.5	8.5
SECTION 3 STA. 174-248	11.0	11.7	7.5	8.5
SECTION 4 STA. 249-363	8.2	9.1	4.0	5.0
SECTION 5 EAST 2 BENTS	9.3	10.4	4.0	5.0

LEVEL III WAVE STUDY DATA FOR COASTAL BRIDGE
BRIDGE # (NEW)MID-CURRITUCK
COUNTY CURRITUCK

LOCATION (AT THALWEG) CONVERSION FOR
LAT 36.34248 MSL TO NAVD DELTA
LONG-75.86605 SUBTRACT 0.32 FT

HYDRAULIC DATA	UNITS	100 YR	50 YR	10 YR
DEPTH-AVE. CURRENT SPEED	FT/SEC	3.8	3.2	2.2
WIND SPEED	MI/HR			
WATER SURFACE ELEVATION	FT MSL	4.2	3.9	2.8
	FT NAVD	3.9	3.5	2.5
WAVE CREST ELEVATION	FT MSL	8.1	7.3	5.0
	FT NAVD	7.7	7.0	4.7
SIGNIFICANT WAVE HEIGHT	FT	3.4	3.2	2.5

The nearest benchmark is up Albemarle Sound at Frog Island and it states:

This station has been determined to be Non-tidal for tidal datum purposes. There is either no measureable periodic rise and fall of the tide at this location, or it may be present but inconsistent, or the periodic tide is present and consistent, however the Mean Range of Tide (MN) is negligible, that is below the established tidal/non-tidal threshold of 0.03m (0.10ft). Only the datum of local Mean Sea Level (MSL) is published at these stations. For Nautical Charting Datum applications, a non-tidal Low Water Datum (LWD) is established as 0.50ft (0.15m) below MSL.

SITE DATA

Drainage Area N/A (INDETERMINATE - SOUND) Source N/A

River Basin PASQUOTANK Character RURAL COASTAL PLAINS

Stream Classification (Such as Trout, High Quality Water, etc.) SC

Data on Existing Structure N/A (NEW LOCATION)

Total Waterway Opening N/A s.f.

Waterway Opening Below 100yr. WS EL. N/A s.f.

Debris Potential: Low X Moderate High

Data on Structures Up and Down Stream N/A

Design Control Elev. N/A ft.

Gage Station No. N/A Period of Records N/A yrs.

Max. Discharge N/A c.f.s. Date N/A Frequency N/A

Historical Flood Information:

Date Elev. ft. Est. Freq. yr. Source Period of Knowledge yrs.

Date Elev. ft. Est. Freq. yr. Source Period of Knowledge yrs.

Date Elev. ft. Est. Freq. yr. Source Period of Knowledge yrs.

Historical Scour Info. : General ft. Contraction ft. Local ft.

Channel Slope N/A ft/ft Source N/A Normal Water Surface Elev. 0.3 ft.

Manning's n: Left O.B. Channel Right O.B. Source

Flood Study /Status FEMA ZONE AE (EL 5) COASTAL STORM SURGE Floodway Established? N/A

Flood Study 100yr. Discharge N/A c.f.s. WS Elev.: With Floodway N/A ft. Without Floodway N/A ft. @ River Station ?

DESIGN DATA

Hydrological Method LEVEL III WAVE STUDY DATA FOR COASTAL BRIDGE

Hydraulic Design Method LEVEL III WAVE STUDY DATA FOR COASTAL BRIDGE

Floods Evaluated:

@ River Station ?	Freq. (yr.)	Q (c.f.s)	Elev. (ft.)	Backwater (ft.)	Bridge Opening Velocity (f.p.s.)
	10	N/A	2.5	N/A	N/A
	50	N/A	3.5	N/A	N/A
	100	N/A	3.9	N/A	N/A
	N/A	N/A	N/A	N/A	N/A
	N/A	N/A	N/A	N/A	N/A

Waterway Opening Provided Below: Design W.S. Elev. 54,335 s.f., 100yr W.S. Elev. 68,123 s.f., Total 2,968,376 s.f.,

Average Channel Velocity (Design) 3.2 f.p.s. Average Overbank Velocity (Design) NA f.p.s.

Computed Scour : General SEE BACK COVER ft. Contraction SEE BACK COVER ft. Local SEE BACK COVER ft.

Is a Floodway Revision Required? NO

REPORT 2 OF 2
SHEET 1OF 3

BRIDGE SURVEY & HYDRAULIC DESIGN REPORT

N. C. DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
HYDRAULICS UNIT
RALEIGH, N. C.

I.D. No. R-2576 Project No. 34470.1.TAI Proj. Station 241+37.5 -L-

County CURRITUCK Bridge Over CURRITUCK SOUND Bridge Inv. No.

On Highway Between US 158 and NC 12

Recommended Structure 1 @ 95' 72" MBT, 244 @ 100' 72" MBT, 2 @ 85' 54" MBT

4' 0" END BENT CAPS West End: Vertical Abutment w/ MSE wall; East End: Sloping Abutment

Recommended Width of Roadway 40' TO 64' CLEAR ROADWAY Skew 90°

Recommended Location is (Up, At, Down) Stream from Existing Crossing, NEW LOCATION

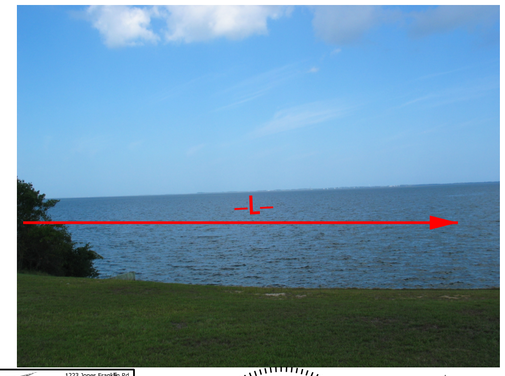
Latitude 36.34248 Longitude -75.86605

Statewide Tier ☒ Regional Tier ☐ Sub-Regional Tier ☐

Bench Mark is BM 8 RR SPIKE IN 14" PINE LOCATED 422' RIGHT OF STATION 119+10 -L-

N95424, E29136 Elev. 20.17 ft. Datum: NAVD 88

Temporary Crossing NOT REQUIRED (NEW LOCATION)



WETHERILL ENGINEERING
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Fax: 919 851 8107
TRANSPORTATION PLANNING/DESIGN - BRIDGE/STRUCTURE DESIGN
CIVIL/SITE DESIGN - GIS/GPS - CONSTRUCTION OBSERVATION

Designed by: M.S. PRICE, P.E.

Assisted by:

Project Engineer : J. L. LINDSEY, P.E.

Reviewed by: Ray D. Lovinggood 08/22/2023

NORTH CAROLINA PROFESSIONAL SEAL 15470 ENGINEER JEFFREY G. SHELTON 8/21/2023

NORTH CAROLINA PROFESSIONAL SEAL 15833 ENGINEER JERRY L. LINDSEY 8/21/2023

MODELING AND SCOUR COMPS DRAFT & DECK DRAINAGE ONLY

CURRITUCK SOUND Stream ... Struc. Inv. No. ... I.D. No. R-2576 Project No. 34470.1.TAI PDF File ...R-2576_Currituck_Sound_1OF_3.pdf

R-2576_Currituck Sound_2 OF 3.pdf

REPORT 2 OF 2
SHEET 2 OF 3

SCOUR CALCULATIONS PROVIDED BY Moffat & Nichol

LOCATION	TOTAL SCOUR (FEET)		FLOW VELOCITIES (FT/SEC)	
	100 yr.	500 yr.	100yr.	500yr.
SECTION 1 STA 119+169	10.1	11.2	6.0	7.5
SECTION 2 STA 170+173	13.4	14.3	7.5	8.5
SECTION 3 STA 174+248	11.0	11.7	7.5	8.5
SECTION 4 STA 249+363	8.2	9.1	4.0	5.0
SECTION 5 EAST 2 BENTS	9.3	10.4	4.0	5.0

PI = 171+50.00
EL = 30.00'
VC = 250'
K = 167

PI = 180+85.00
EL = 23.00'
VC = 150'
K = 200

PI = 180+85.00
EL = 23.00'
VC = 150'
K = 200

8/21/2023
NORTH CAROLINA PROFESSIONAL SEAL 31077 ENGINEER KEVIN B. ALLEN
DRAFT & DECK DRAINAGE ONLY
Developed by
K. B. Allen

8/21/2023
NORTH CAROLINA PROFESSIONAL SEAL 15478 ENGINEER JEFFREY G. SHELDEN
MODELING AND SCOUR COMPS
Developed by
Jeffrey G. Sheldeen

PROPOSED GRADE

(+)0.7487%

(−)0.7487%

(−)0.7487%

(−)0.0000%

LOWEST LOW CHORD

NAVIGATIONAL SPAN

LOW CHORD AT ℄

50 YR. WS EL. 3.5' (LEVEL III WAVE STUDY)

100 YR. WS EL. 5.0 (FEMA)
100 YR. WS 3.9' (LEVEL III WAVE STUDY)

NORMAL WS 0.3'

EXISTING NATURAL GROUND

EXISTING NATURAL GROUND

60 50 40 30 20 10 0 −10

165+00 166+00 167+00 168+00 169+00 170+00 171+00 172+00 173+00 174+00 175+00 176+00 177+00 178+00 179+00 180+00 181+00 182+00 183+00 184+00

CURRITUCK SOUND

NAD 83

CURRITUCK SOUND

CURRITUCK SOUND

CURRITUCK SOUND

CURRITUCK SOUND

165+00 170+00 175+00 180+00 185

TO US 158

TO NC 12

.025

.025

8' 24'

8' 24'

8'

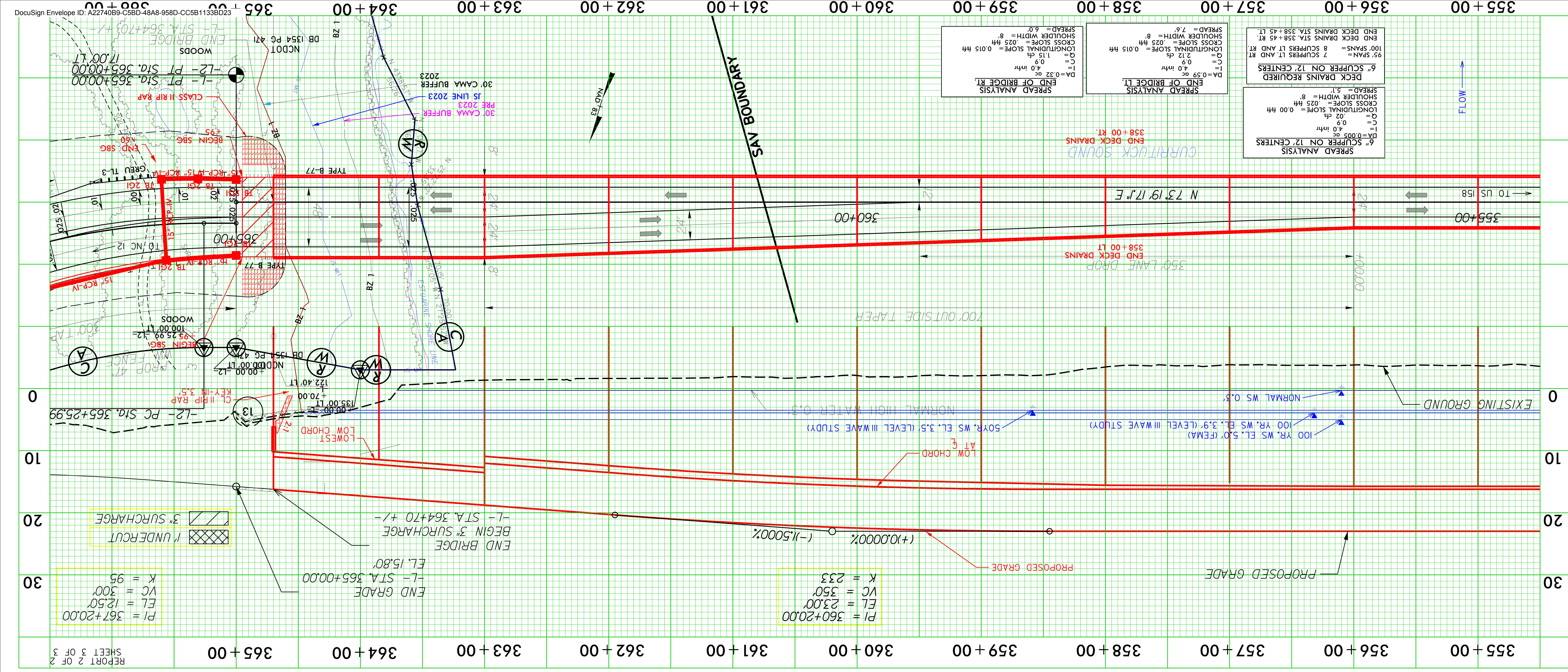
8'

N 73° 19' 17.1" E

N 73° 19' 17.1" E

FLOW

164+00 165+00 166+00 167+00 168+00 169+00 170+00 171+00 172+00 173+00 174+00 175+00 176+00 177+00 178+00 179+00 180+00 181+00 182+00 183+00 184+00 185+00



INFORMATION TO BE SHOWN ON PLANS

Elevations Provided by the Wave Study (Provided by Hydraulics Unit)

Design: Discharge N/A c.f.s. Frequency 50 yr. yr. Elev. 3.5 ft.

Base Flood: Discharge N/A c.f.s. Frequency 100 yr. Elev. 3.9 ft.

Overtopping: Discharge N/A c.f.s. Frequency 500+ yr. Elev. 13.68 ft. Sag sta 367+12.94 L2

ADDITIONAL INFORMATION AND COMPUTATIONS

SCOUR CALCULATIONS PROVIDED BY Moffatt & Nichol

LOCATION	TOTAL SCOUR (FEET)		FLOW VELOCITIES (FT/SEC)	
	100 yr.	500 yr.	100yr.	500yr.
SECTION 1 STA 119-169	10.1	11.2	6.0	7.5
SECTION 2 STA 170-173	13.4	14.3	7.5	8.5
SECTION 3 STA 174-248	11.0	11.7	7.5	8.5
SECTION 4 STA 249-363	8.2	9.1	4.0	5.0
SECTION 5 EAST 2 BENTS	9.3	10.4	4.0	5.0

LEVEL III WAVE STUDY DATA FOR COASTAL BRIDGE
BRIDGE # (NEW)MID-CURRITUCK
COUNTY CURRITUCK

LOCATION (AT THALWEG) CONVERSION FOR
LAT 36.34248 MSL TO NAVD DELTA
LONG -75.86605 SUBTRACT 0.32 FT

HYDRAULIC DATA	UNITS	100 YR	50 YR	10 YR
DEPTH-AVE. CURRENT SPEED	FT/SEC	3.8	3.2	2.2
WIND SPEED	MI/HR			
WATER SURFACE ELEVATION	FT MSL	4.2	3.9	2.8
	FT NAVD	3.9	3.5	2.5
WAVE CREST ELEVATION	FT MSL	8.1	7.3	5.0
	FT NAVD	7.7	7.0	4.7
SIGNIFICANT WAVE HEIGHT	FT	3.4	3.2	2.5

The nearest benchmark is up Albemarle Sound at Frog Island and it states:

This station has been determined to be Non-tidal for tidal datum purposes. There is either no measureable periodic rise and fall of the tide at this location, or it may be present but inconsistent, or the periodic tide is present and consistent, however the Mean Range of Tide (MN) is negligible, that is below the established tidal/non-tidal threshold of 0.03m (0.10ft). Only the datum of local Mean Sea Level(MSL) is published at these stations. For Nautical Charting Datum applications, a non-tidal Low Water Datum (LWD) is established as 0.50ft (0.15m) below MSL.

SITE DATA

Drainage Area N/A (INDETERMINATE - SOUND) Source N/A

River Basin PASQUOTANK Character RURAL COASTAL PLAINS

Stream Classification (Such as Trout, High Quality Water, etc.) SC

Data on Existing Structure N/A (NEW LOCATION)

Total Waterway Opening N/A s.f.
Waterway Opening Below 100yr. WS EL. N/A s.f.

Debris Potential: Low X Moderate ...... High ......

Data on Structures Up and Down Stream N/A

Design Control Elev. N/A ft.

Gage Station No. N/A Period of Records N/A yrs.

Max. Discharge N/A c.f.s. Date N/A Frequency N/A

Historical Flood Information:

Date ...... Elev. ...... ft. Est. Freq. ...... yr. Source ...... Period of Knowledge ...... yrs.

Date ...... Elev. ...... ft. Est. Freq. ...... yr. Source ...... Period of Knowledge ...... yrs.

Date ...... Elev. ...... ft. Est. Freq. ...... yr. Source ...... Period of Knowledge ...... yrs.

Historical Scour Info. : General ...... ft. Contraction ...... ft. Local ...... ft.

Channel Slope N/A ft/ft Source N/A Normal Water Surface Elev. 0.3 ft.

Manning's n: Left O.B. ...... Channel ...... Right O.B. ...... Source ......

Flood Study /Status FEMA ZONE AE (EL 5) COASTAL STORM SURGE Floodway Established? N/A

Flood Study 100yr. Discharge N/A c.f.s. WS Elev.: With Floodway N/A ft. Without Floodway N/A ft.
@ River Station ?

DESIGN DATA

Hydrological Method LEVEL III WAVE STUDY DATA FOR COASTAL BRIDGE

Hydraulic Design Method LEVEL III WAVE STUDY DATA FOR COASTAL BRIDGE

Floods Evaluated: @ River Station ?

Freq. (yr.)	Q (c.f.s)	Elev. (ft.)	Backwater (ft.)	Bridge Opening Velocity (f.p.s.)
10	N/A	2.5	N/A	N/A
50	N/A	3.5	N/A	N/A
100	N/A	3.9	N/A	N/A
N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A

Waterway Opening Provided Below: Design W.S. Elev. 54,335 s.f., 100yr W.S. Elev. 68,123 s.f., Total 2,968,376 s.f.,

Average Channel Velocity (Design) 3.2 f.p.s. Average Overbank Velocity (Design) NA f.p.s.

Computed Scour : General SEE BACK COVER ft. Contraction SEE BACK COVER ft. Local SEE BACK COVER ft.

Is a Floodway Revision Required? NO

Stream CURRITUCK SOUND Struc. Inv. No. ...... I.D. No. R-2576 Project No. 34470.1.TA1 PDF File --R-2576_Currituck Sound_3 OF 3.pdf

BRIDGE SURVEY & HYDRAULIC DESIGN REPORT

N. C. DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
HYDRAULICS UNIT
RALEIGH, N. C.

I.D. No. R-2576 Project No. 34470.1.TA1 Proj. Station 241+37.5 -L-

County CURRITUCK Bridge Over CURRITUCK SOUND Bridge Inv. No. ......

On Highway ...... Between US 158 and NC 12

Recommended Structure 1@ 95' 72" MBT, 244 @ 100' 72" MBT, 2 @ 85' 54" MBT
4' 0" END BENT CAPS. West End: Vertical Abutment w/ MSE wall; East End: Sloping Abutment

Recommended Width of Roadway 40' TO 64' CLEAR ROADWAY Skew 90°

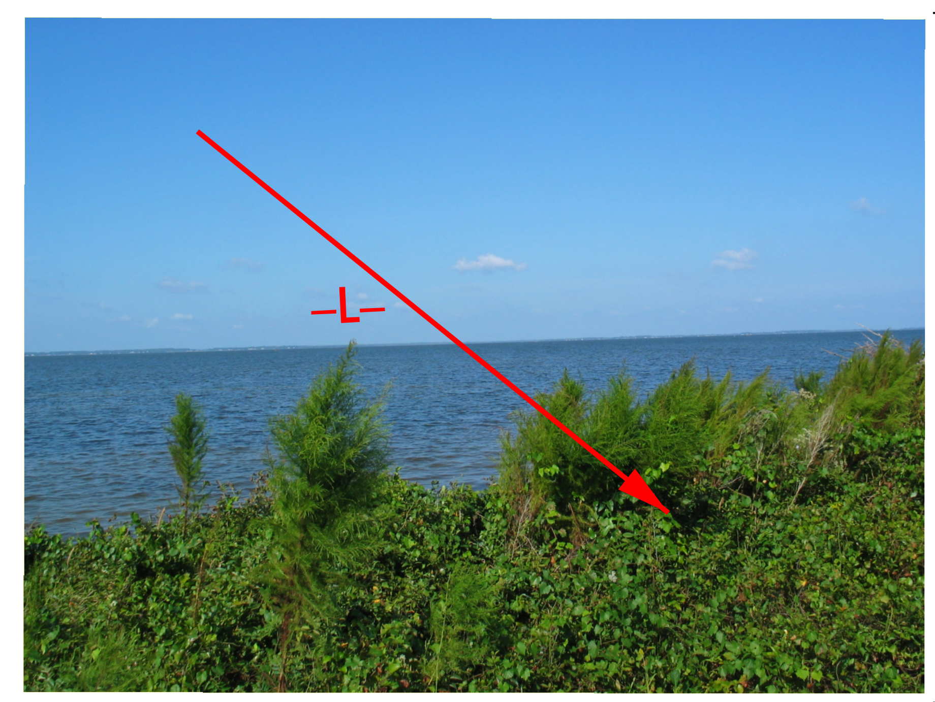
Recommended Location is (Up, At, Down) Stream from Existing Crossing. NEW LOCATION

Latitude 36.34248 Longitude -75.86605

Statewide Tier ☒ Regional Tier ☐ Sub-Regional Tier ☐

Bench Mark is BM 8 RR SPIKE IN 14" PINE LOCATED 422' RIGHT OF STATION 119+10-L-
N954241, E2911362 Elev. 20.17 ft. Datum: NAVD 88

Temporary Crossing NOT REQUIRED (NEW LOCATION)



WETHERILL ENGINEERING 1223 Jones Franklin Rd. Raleigh, N.C. 27606 License No. F-0377 Bus: 919 851 8077 Fax: 919 851 8107
TRANSPORTATION PLANNING/DESIGN - BRIDGE/STRUCTURE DESIGN CIVIL/SITE DESIGN - GIS/GPS - CONSTRUCTION OBSERVATION

Designed by: M.S. PRICE, P.E.

Assisted by: ......

Project Engineer : J. L. LINDSEY, P.E.

Reviewed by: DocuSigned by: Ray D. Lovingood 045BBB7F58224FE... 08/22/2023

NORTH CAROLINA PROFESSIONAL SEAL 15470 ENGINEER JEFFREY G. SHELDEN DocuSigned by: Jeffrey G. Shelden 8/21/2023
MODELING AND SCOUR COMPS

NORTH CAROLINA PROFESSIONAL SEAL 15833 ENGINEER JERRY L. LINDSEY DocuSigned by: Jerry L. Lindsey 8/21/2023
DRAFT & DECK DRAINAGE ONLY

ATTACHMENT H

Natural Resources Technical Report Update
June 2023

FINAL

NATURAL RESOURCES TECHNICAL REPORT UPDATE

Mid-Currituck Bridge
Currituck and Dare Counties, North Carolina

STIP R-2576
Federal Aid Project No. BRSTP-000S (494)
WBS Element No. 34470.1.TA1

NORTH CAROLINA TURNPIKE AUTHORITY
a division of the North Carolina Department of Transportation

June 2023

1.0 INTRODUCTION

The North Carolina Turnpike Authority (NCTA) proposes construction of a 4.7-mile-long, two lane toll bridge (the Mid-Currituck Bridge) across Currituck Sound between the communities of Aydlett on the mainland and Corolla on the Outer Banks, an interchange between US 158 and the mainland approach road to the bridge, a bridge across Maple Swamp as part of the mainland approach road, limited improvements to existing NC 12 and US 158, and primarily reversing the center turn lane on US 158 to improve hurricane clearance times (STIP R-2576) in Currituck and Dare Counties. The study area for this project as addressed in this technical report is found in Figure 1. The following Natural Resources Technical Report (NRTR) update serves to update the wetland delineation and federally protected species evaluation from the 2 March 2019 Reevaluation of the Final Environmental Impact Statement and has been prepared to assist in the preparation of the appropriate environmental documentation.

2.0 METHODOLOGY

Pre-field work and field work was conducted in accordance with the NCDOT Environmental Coordination and Permitting's Preparing Natural Resources Technical Reports Procedure and the latest NRTR Template September 2021, as appropriate. Field work was conducted on 27 February through 1 March 2023. A Preliminary Jurisdictional Determination (PJD) package was submitted to the U.S. Army Corps of Engineers (USACE) and the North Carolina Division of Water Resources (NCDWR) on 25 April 2023 requesting verification of water resources identified in the study area. The principal personnel contributing to the field work and document is provided in the appendix.

3.0 PROTECTED SPECIES

3.1 Endangered Species Act Protected Species

The United States Fish and Wildlife Service (USFWS) and National Oceanic and Atmospheric Administration (NOAA) list the following federally protected species as potentially occurring within the study area, under the Endangered Species Act (ESA) (Table 1). For each species, a discussion of the presence or absence of habitat is included below along with the Biological Conclusion rendered based on available information and results of surveys for species and/or potentially suitable habitat in the study area.

Table 1. ESA federally protected species potentially within the study area[1]

Scientific Name	Common Name	Federal Status[2]	Habitat Present	Biological Conclusion[3]	
				USFWS Jurisdictional Species	NMFS Jurisdictional Species
Myotis sepentrionalis	northern long-eared bat	T	Yes	MA-LAA	NA

Scientific Name	Common Name	Federal Status[2]	Habitat Present	Biological Conclusion[3]	
				USFWS Jurisdictional Species	NMFS Jurisdictional Species
Canis rufus	red wolf	E-EXPN	Yes	No Effect	NA
Perimyotis subflavus	tricolored bat	PE	Yes	Undetermined	Unresolved
Trichechus manatus	west Indian manatee	T	Yes	MA-NLAA	NA
Laterallus jamaicensis ssp. jamaicensis	eastern black rail	T	No	No Effect	NA
Charadrius melodus	piping plover	T	No	No Effect	NA
Calidris canutus rufa	red knot	T	No	No Effect	NA
Picoides borealis	red-cockaded woodpecker	E	Yes	No Effect	NA
Alligator mississippiensis	American alligator	T(S/A)	Yes	Not Required	NA
Chelonia mydas	green sea turtle	T	Yes	No Effect	No Effect
Eretmochelys imbricata	hawksbill sea turtle	E	No	No Effect	No Effect
Lepidochelys kempii	Kemp's ridley sea turtle	E	Yes	No Effect	No Effect
Dermochelys coriacea	leatherback sea turtle	E	No	No Effect	No Effect
Caretta caretta	loggerhead sea turtle	T	Yes	No Effect	No Effect
Acipenser brevirostrum	shortnose sturgeon	E	Yes	NA	No Effect
Acipenser oxyrhynchus oxyrhynchus	Atlantic sturgeon	E	Yes	NA	MA-NLAA
Amaranthus pumilus	seabeach amaranth	T	No	No Effect	NA

[1] USFWS IPaC data checked on 10 March 2023
[2] E - Endangered
PE – Proposed Endangered
T - Threatened
T(S/A) - Threatened due to similarity of appearance
EXPN – Experimental population, Non-essential
[3] MA-NLAA - May Affect – Not Likely to Adversely Affect
MA-LAA - May Affect – Likely to Adversely Affect
NA – Not applicable; no biological conclusion required

Northern long-eared bat
USFWS optimal survey window: Year-round

Biological Conclusion: May Affect, Likely to Adversely Affect

Northern long-eared bats (NLEB) roost in dead and live trees during the summer months and hibernate in caves or mines during the winter months. Caves and mines are not present in the Currituck Sound region, but parts of the study area have forested areas that could be potential habitat for the NLEB. The US Fish and Wildlife Service has issued a programmatic biological opinion (PBO) in conjunction with the Federal Highway Administration (FHWA), the USACE, and NCDOT for the northern long-eared bat (*Myotis septentrionalis*) in eastern North Carolina. The PBO covers the entire NCDOT program in Divisions 1-8, including all NCDOT projects and activities. Although the PBO covers Divisions 1-8, the USFWS only considers NLEBs to be known or potentially found in 30 counties within Divisions 1-8. NCDOT, FHWA, and USACE have agreed to two conservation measures that will avoid/minimize mortality of NLEBs. These conservation measures only apply to the 30 current known/potential counties shown on Figure 2 of the PBO at this time. The programmatic determination for NLEB for the NCDOT program is May Affect, Likely to Adversely Affect. The PBO will ensure compliance with Section 7 of the Endangered Species Act for ten years (effective through 31 December 2030) for all NCDOT projects with a federal nexus in Divisions 1-8, which includes Currituck and Dare Counties, where R-2576 is located. A review of NCNHP records on 10 March 2023 indicated no known occurrences of this species within 1.0 mile of the study area.

Red wolf
USFW optimal survey window: Year-round

Biological Conclusion: No Effect

The swamp forests associated with Maple Swamp provide potential habitat for the red wolf. However, it is unlikely that the reintroduced population in Alligator River National Wildlife Refuge (ARNWR) will cross large waterbodies (Albemarle, Roanoke, and/or Croatan sounds) and reach the study area. The low likelihood of occurrence within the project area, combined with the close management of this experimental population by the USFWS, does not support establishment of this species in the study area. A review of NCNHP records on 10 March 2023 indicated no known occurrences of this species within 1.0 mile of the study area.

Tricolored bat
USFWS optimal survey window: Year-round

Biological Conclusion: Unresolved

On 14 September 2022, the U.S. Fish and Wildlife Service announced a proposal to list the tricolored bat (*Perimyotis subflavus* - PESU) as endangered under the

Endangered Species Act. Given the proposal to list PESU as Federally Endangered, NCDOT and its federal partners, FHWA and USACE, are initiating a conference programmatic consultation to address impacts on this species. USFWS has not provided an official effective listing date, but it is anticipated to occur in the second half of 2023. Upon listing, USFWS is expected to provide habitat descriptions and an area of influence/distribution range for PESU. When this information is provided, it will help to inform NCDOT's determinations on habitat that could be impacted by NCDOT actions. A review of NCNHP records on 10 March 2023 indicated no known occurrences of this species within 1.0 mile of the study area.

West Indian manatee
USFWS optimal survey window: Year-round

Biological Conclusion: May Affect, Not Likely to Adversely Affect

West Indian manatees are found in marine water, brackish water, estuaries, river mouths, and bays at shallow depths estimated around 9 to 16 feet deep. They forage on SAV beds, which can be found within the Currituck Sound. But, the lower water temperatures of the northern North Carolina region prevent the species from commonly occurring in the area. A review of NCNHP records on 10 March 2023 indicated no known occurrences of this species within 1.0 mile of the study area.

Eastern black rail
USFWS optimal survey window: April 1-June 30

Biological Conclusion: No Effect

In North Carolina, the Eastern black rail resides and nests in dense vegetation cover within brackish marshes and freshwater wetlands. Shoreline areas in the study area lack suitable marsh for this species. Photographs depicting shoreline areas within the study area are included in the attached appendix. There is no suitable habitat within the study area to support this species, and a review of NCNHP records on 10 March 2023 indicated no known occurrences of this species within 1.0 mile of the study area.

Piping plover
USFWS optimal survey window: Year-round

Biological Conclusion: No Effect

Suitable habitat for the piping plover includes areas around inlets and sandy beaches along the coastline, which do not occur in the study area. In addition, a review of NCNHP records on 10 March 2023 indicated no known occurrences of this species within 1.0 mile of the study area.

Red knot
USFWS optimal survey window: Year-round

Biological Conclusion: No Effect

In North Carolina, red knots forage and roost primarily during migration and early winter months along beaches, mudflats, lagoons, and estuary edges. The absence of exposed muddy/sandy shorelines in the study area limits suitable habitat for this species; and, a review of NCNHP records on 10 March 2023 indicated no known occurrences of this species within 1.0 mile of the study area.

Red-cockaded woodpecker
USFWS optimal survey window: November-early March

Biological Conclusion: No Effect

The red-cockaded woodpecker (RCW) occurs in open, mature stands of primarily pine forests for foraging and requires older pine trees for nesting/roosting habitat; however, in northeastern North Carolina, RCWs occur in a wide variety of upland and wetland habitats and can utilize habitats dominated by hardwoods and/or with dense midstories (USACE 2022). A review of NCNHP records on 10 March 2023 indicated a known occurrence of this species within 1.0 mile of the western portion of the study area near Coinjock. The determination for this species is based on the 31 January 2023 Biological Assessment (NCTA 2023). Aerial surveys were conducted by JCA, Inc. on 2-4 November 2022. No RCW cavity trees will be removed or impacted by the proposed project and no active RCW cavity trees were found within 0.5 mile of the proposed clearing limits.

American alligator
USFWS optimal survey window: Year-round; only warm days in winter

Biological Conclusion: Not Required

While American alligators reside on the Dare County mainland, it is near the northern extreme range of this species. Although appropriate habitat for the American alligator is present in the study area, the species is rare north of Alligator River National Wildlife Refuge and not expected in the study area. This species is on the protected species list because of its similarity in appearance to the endangered American crocodile. A review of NCNHP records on 10 March 2023 indicated no known occurrences of this species within 1.0 mile of the study area.

Green sea turtle
USFWS optimal survey window: April-August for beach surveys

Biological Conclusion: No Effect

In North Carolina, green sea turtles are found in shallow waters along the coastline and in lagoons, reefs, bays, and inlets where an abundance of SAVs can be found. They nest on sandy beaches along the coastline. Currituck Sound could provide suitable habitat for the sea turtle due to the abundant SAV available; however, nesting would not occur in the study area due to the absence of beach habitat within site boundaries. A review of NCNHP records on 10 March 2023 indicated a known occurrence of this species within 1.0 mile of the two Outer Banks study areas near Corolla (HWY 12 site and Albacore Street site).

Hawksbill sea turtle
USFWS optimal survey window: April-August for beach surveys

Biological Conclusion: No Effect

Hawksbill sea turtles are found in coastal waters near estuaries, coral reefs, and lagoons. They nest on sandy beaches along the coastline, but juveniles can be found offshore and in sounds. Currituck Sound could provide suitable habitat for juveniles and adults, but nesting would not occur in the study area due to the absence of beach habitat within site boundaries. A review of NCNHP records on 10 March 2023 indicated no known occurrences of this species within 1.0 mile of the study area.

Kemp's ridley sea turtle
USFWS optimal survey window: April-August for beach surveys

Biological Conclusion: No Effect

Kemp's ridley sea turtles are found in coastal habitats with muddy or sandy bottoms near shore. Currituck Sound could provide suitable habitat for the Kemp's ridley sea turtle due to the abundant SAV available; however, nesting would not occur in the study area due to the absence of beach habitat within site boundaries. A review of NCNHP records on 10 March 2023 indicated a known occurrence of this species within 1.0 mile of the two Outer Banks study areas near Corolla (HWY 12 site and Albacore Street site).

Leatherback sea turtle
USFWS optimal survey window: April-August for beach surveys

Biological Conclusion: No Effect

Leatherback sea turtles are found in the open water and at times offshore to forage on jellyfish. They nest on sandy beaches along the coastline. The Currituck Sound could provide suitable habitat for a potential food source; however, nesting would not occur in the study area due to the absence of beach habitat within site boundaries. However, a review of NHP records on 10 March 2023 indicated a known occurrence of this species within 1.0 mile of the HWY158 study areas near Kitty Hawk.

Loggerhead sea turtle
USFWS optimal survey window: April-August for beach surveys

Biological Conclusion: No Effect

Loggerhead sea turtles are found in shallow waters along the coastline inshore where abundance of SAVs can be found. They nest on sandy beaches along the coastline. Currituck Sound could provide suitable habitat for this turtle due to the abundant SAV available. However, nesting would not occur in the study area due to the absence of beach habitat within site boundaries A review of NHP records on 10 March 2023 indicated a known occurrence of this species within 1.0 mile of the two Outer Banks study areas near Corolla (HWY 12 site and Albacore Street site).

Shortnose sturgeon
USFWS optimal survey window: Not required

Biological Conclusion: No Effect

The estuarine waters, soft-bottom substrate, and submerged aquatic vegetation beds in Currituck Sound provide potential foraging habitat for the shortnose sturgeon. Any potential occurrence of this species within the study area would likely be short-term and in conjunction with annual spring migrations. A review of NCNHP records on 10 March 2023 indicated no known occurrences of this species within 1.0 mile of the study area.

Atlantic sturgeon
USFWS optimal survey window: Not required

Biological Conclusion: May Affect, Not Likely to Adversely Affect

Atlantic sturgeon is assumed to occur and forage in the Currituck Sound portions of the study area; however few impacts are expected due to the mobility of this species and its anticipated avoidance of construction/disturbance areas in the Currituck Sound. A review of NCNHP records on 10 March 2023 indicated one known occurrence of this species within 1.0 mile of the study area in the Currituck Sound. The project may affect the Atlantic sturgeon due to proximity of known spawning grounds in the Albemarle Sound; however, the project is not likely to adversely affect or jeopardize the continued existence of the Atlantic sturgeon.

Seabeach amaranth
USFWS optimal survey window: July-October

Biological Conclusion: No Effect

Suitable habitat (coastal dunes, especially overwash areas near inlets) for seabeach amaranth is not located within the study area. In addition, a review of NCNHP records on 10 March 2023 indicated no known occurrences of this species within 1.0 mile of the study area.

3.2 Bald and Golden Eagle Protection Act

The Bald and Golden Eagle Protection Act is enforced by the USFWS. Golden eagles do not nest in North Carolina. Habitat for the bald eagle primarily consists of mature forests in proximity to large bodies of open water for foraging. Large dominant trees are utilized for nesting sites, typically within 1.0 mile of open water.

The determination for this species is based on the 31 January 2023 Biological Assessment (NCTA 2023). Aerial surveys were conducted by JCA, Inc. on 2-4 November 2022. One water body, Currituck Sound, large enough or sufficiently open to be considered potential feeding source was identified. No bald eagles or nests were detected within the 660 ft. radius eagle survey corridor during ground or aerial surveys conducted by JCA, Inc. on 2-4 November 2022. A review of the NHP database on 10 March 2023 revealed no known occurrences of this species within 1.0 mile of the study area.

4.0 REGULATORY CONSIDERATIONS

4.1 Clean Water Act Waters of the U.S.

Nine surface water areas were identified in the study area (Table 2). The locations of each surface water are shown on Figures 2-4.

Table 2. Surface waters in the study area

Surface Water	Connection	Area (ac) in Study Area
PB	Adjacent to Jean Guite Creek	<0.1
PC	Adjacent to Currituck Sound	<0.1
PD	Adjacent to Jean Guite Creek	<0.1
EA	Currituck Sound	0.9
EB	Currituck Sound	<0.1
EC1	Abuts Jean Guite Creek	<0.1
EC2	Abuts Jean Guite Creek	<0.1
EC3	Abuts Jean Guite Creek	<0.1
ED1	Currituck Sound	<0.1
ED2	Currituck Sound	<0.1
SA	Intracoastal Waterway	0.1
D1	Ditch within wetland WD	<0.1

Two streams were identified in the study area (Table 3). The locations of these streams are shown on Figures 2-4. NCDWR stream identification forms are included in a separate Jurisdictional Determination (JD) Package. All streams in the study area have been designated as warm water streams for the purposes of stream mitigation.

Table 3. Status of streams in the study area

Map ID	Length (ft.)	Classification	Compensatory Mitigation Required	River Basin Buffer
SA	234	Perennial	Yes	NA
S1A	200	Intermittent	Yes	NA
S1B	59	Perennial	Yes	NA
Total	**493**			

Fourteen different wetland polygons were identified within the study area (Table 4). The locations of these wetland polygons are shown on Figures 2-4. All wetlands in the study area are located within the Pasquotank River basin [USGS Hydrologic Unit 03010205]. USACE wetland determination forms and N.C. Wetland Assessment Method (NCWAM) forms for each site are included in a separate JD Package.

Table 4. Characteristics of wetlands in the study area

Map ID	NCWAM Classification	Forested	NCWAM Rating	Hydrologic Classification	404/401 or 401	Area (ac.) in Study Area
EWB1	Basin Wetland	N	Low*	Non-riparian	404/401	0.06
EWB2	Basin Wetland	Y	Medium	Non-riparian	404/401	0.18
EWC1	Basin Wetland	Y	High*	Non-riparian	404/401	0.01
EWC2	Basin Wetland	Y	High*	Non-riparian	404/401	0.01
EWD	Basin Wetland	Y	Medium*	Non-riparian	404/401	0.19
EWE	Basin Wetland	Y	Medium*	Non-riparian	404/401	0.07
EWF	Basin Wetland	Y	High*	Non-riparian	404/401	0.27
FWB	Basin Wetland	N	Low	Non-riparian	404/401	0.02
WA1	Hardwood Flat	Y	High	Non-riparian	404/401	18.92
WA2	Hardwood Flat	Y	High	Non-riparian	404/401	6.54
WB1	Non-Riverine Swamp Forest	Y	High	Non-riparian	404/401	0.46
WB2	Non-Riverine Swamp Forest	Y	High	Non-riparian	404/401	0.04
WB3	Non-Riverine Swamp Forest	N	High	Non-riparian	404/401	0.08
WB4	Non-Riverine Swamp Forest	N	Low	Non-riparian	404/401	0.20
WB5	Non-Riverine Swamp Forest	N	Low	Non-riparian	404/401	0.15
WB6	Non-Riverine Swamp Forest	N	Low	Non-riparian	404/401	<0.01
WB7	Non-Riverine Swamp Forest	N	Low	Non-riparian	404/401	<0.01
WB8	Non-Riverine Swamp Forest	N	Low	Non-riparian	404/401	0.01
WB9	Non-Riverine Swamp Forest	Y	Medium	Non-riparian	404/401	0.09
WB10	Non-Riverine Swamp Forest	Y	Medium	Non-riparian	404/401	0.26

Map ID	NCWAM Classification	Forested	NCWAM Rating	Hydrologic Classification	404/401 or 401	Area (ac.) in Study Area
WC	Non-Riverine Swamp Forest	Y	High	Non-riparian	404/401	12.71
WD	Non-Riverine Swamp Forest	Y	High	Non-riparian	404/401	0.86
WE	Non-Riverine Swamp Forest	Y/N	Medium*	Non-riparian	404/401	0.60
WF	Hardwood Flat	Y/N	Low	Non-riparian	404/401	1.05
WG1	Headwater Forest	Y	Medium*	Non-riparian	404/401	0.02
WG2	Headwater Forest	Y	Medium*	Non-riparian	404/401	0.13
WH	Basin Wetland	Y	Medium	Non-riparian	404/401	0.14
WH2	Basin Wetland	Y	Medium	Non-riparian	404/401	0.36
WI1	Basin Wetland	N	Medium*	Non-riparian	404/401	0.03
WI2	Basin Wetland	N	Medium*	Non-riparian	404/401	0.04
					Total	**43.45**

* NCWAM rating completed during the 2017 delineation.

4.2 Rivers and Harbors Act Section 10 Navigable Waters

Currituck Sound has been designated by the USACE as a Navigable Water under Section 10 of the Rivers and Harbors Act.

4.3 Coastal Area Management Act Areas of Environmental Concern

Public Trust Waters under jurisdiction of the Coastal Area Management Act (CAMA) Areas of Environmental Concern (AEC) were identified in the study area and include the Currituck Sound (map IDs: of EA, EB, ED), Jean Guite Creek (map ID: EC), and the Intracoastal Waterway (map ID: SA) as shown on Figures 2-4.

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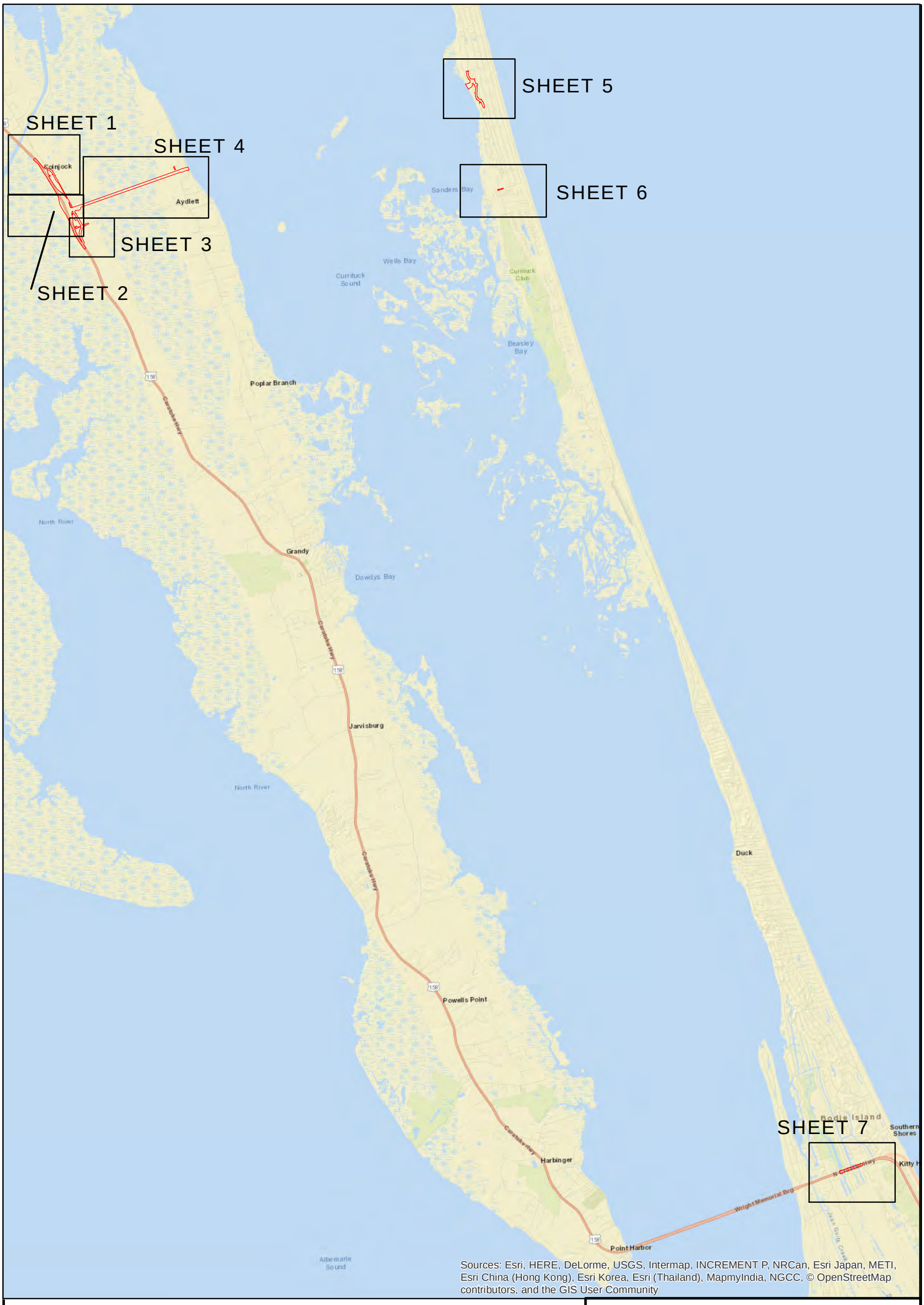

SOURCE:

PROJECT BOUNDARY PROVIDED BY: HW LOCHNER
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Scale in Feet

VICINITY MAP

R-2576 MID-CURRITUCK BRIDGE

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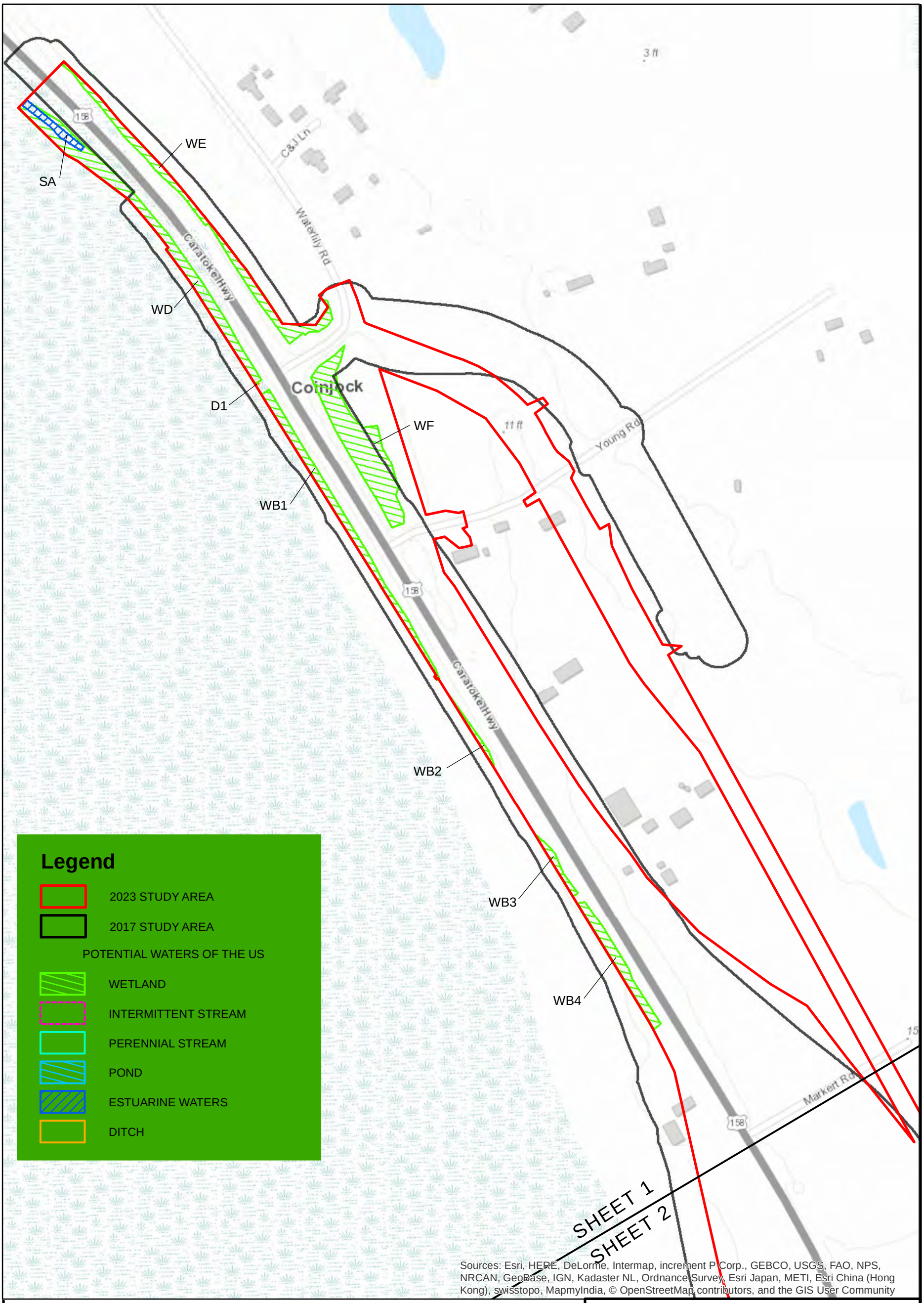
FIGURE 1



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Scale in Feet

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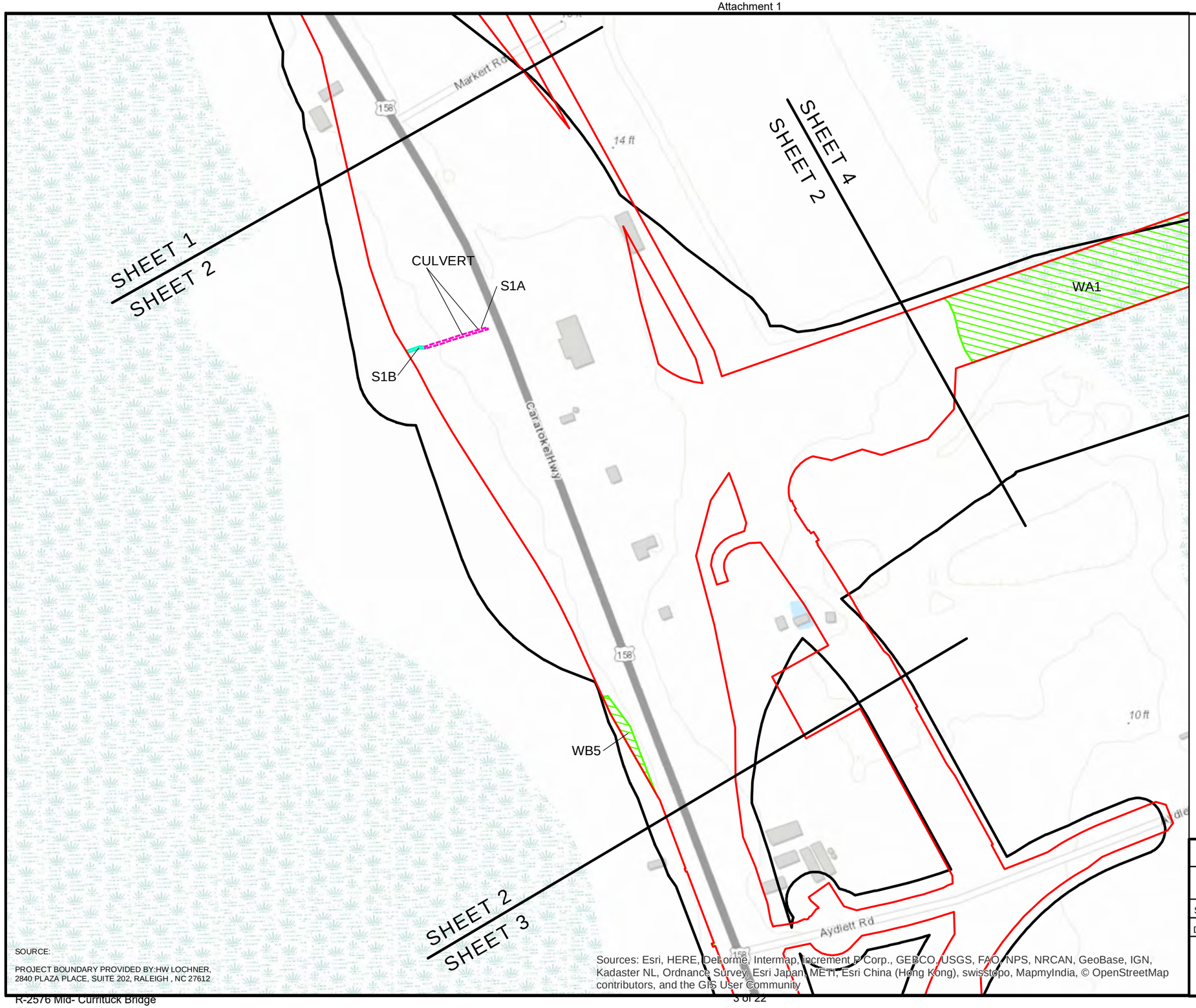
FIGURE 2
SHEET 1 OF 7



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Legend

- 2023 STUDY AREA
- 2017 STUDY AREA

POTENTIAL WATERS OF THE US

- WETLAND
- INTERMITTENT STREAM
- PERENNIAL STREAM
- POND
- ESTUARINE WATERS
- DITCH

0 150 300 600

Scale in Feet

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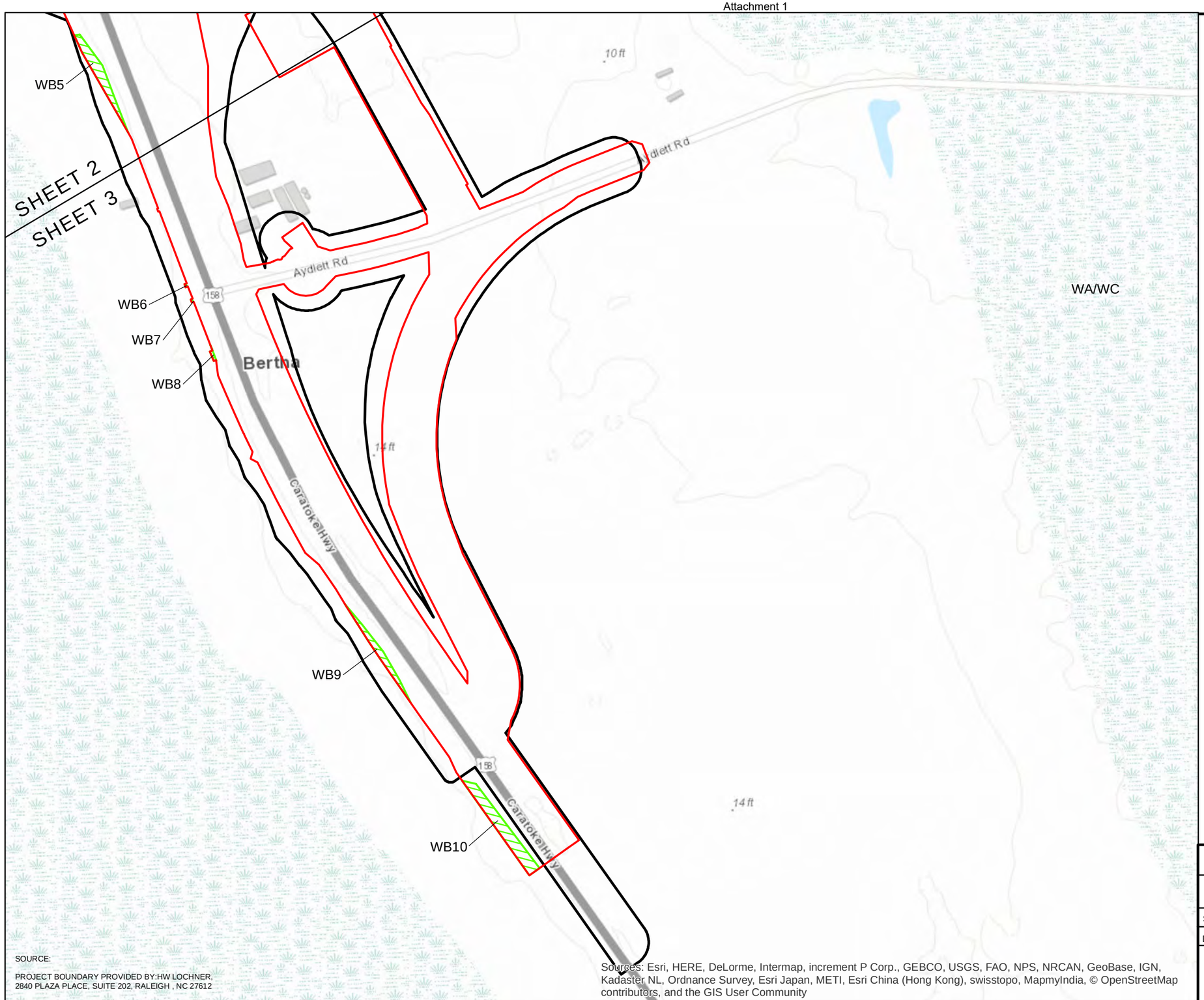
FIGURE 1
SHEET 2 OF 7



Legend

- 2023 STUDY AREA
- 2017 STUDY AREA

POTENTIAL WATERS OF THE US

- WETLAND
- INTERMITTENT STREAM
- PERENNIAL STREAM
- POND
- ESTUARINE WATERS
- DITCH

0 150 300 600

Scale in Feet

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FIGURE 2
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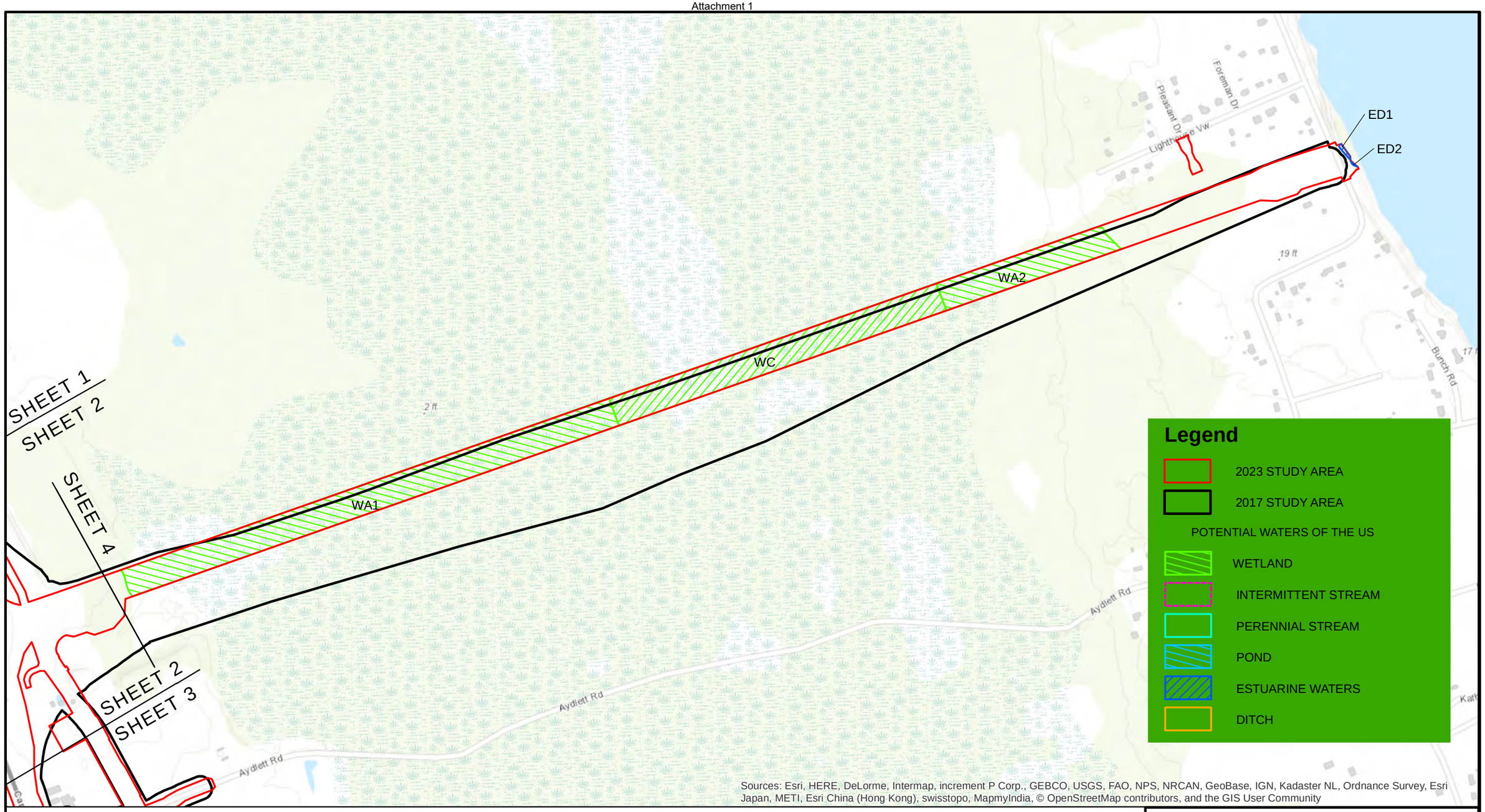

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FIGURE 2
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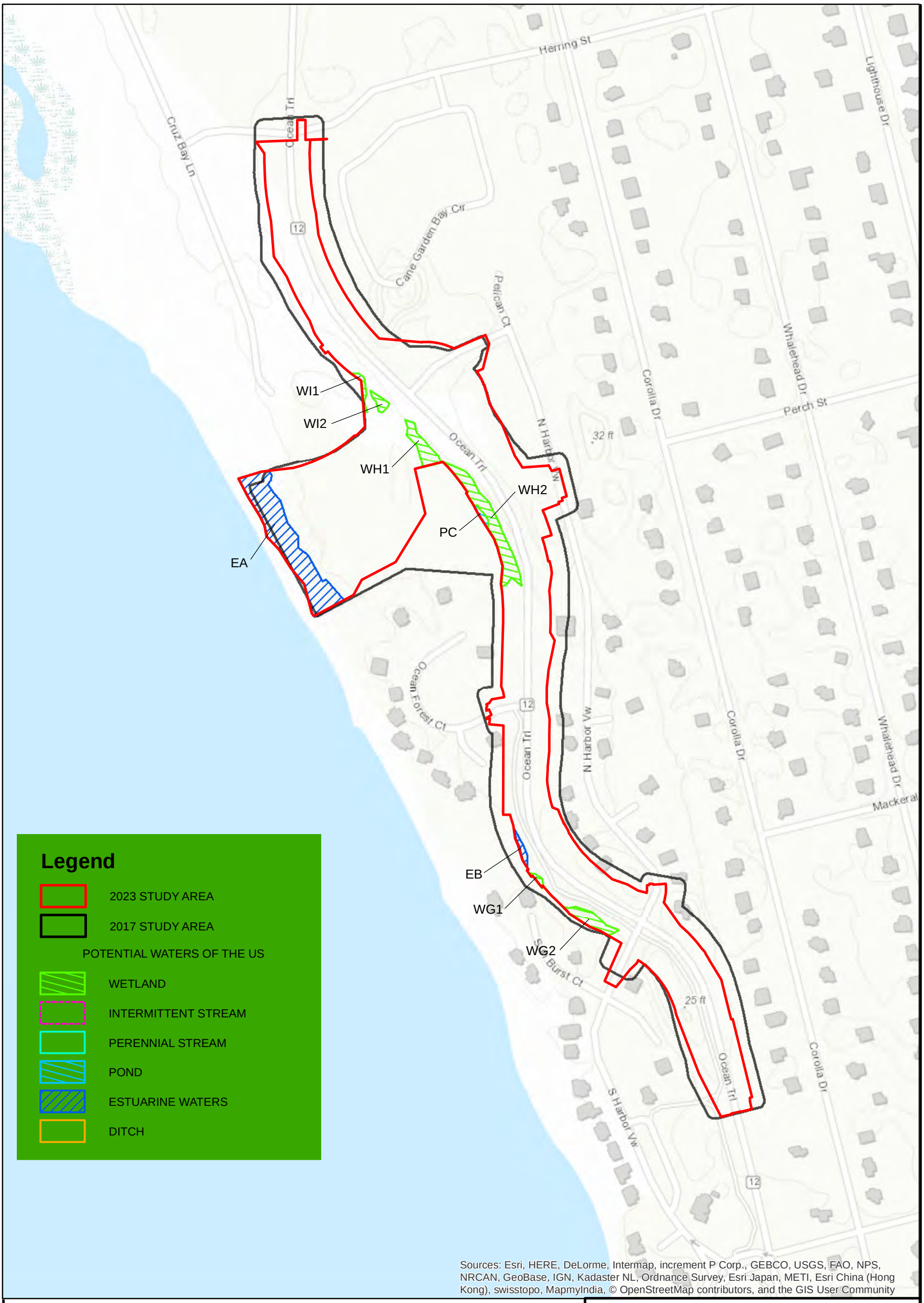

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Scale in Feet

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FIGURE 2
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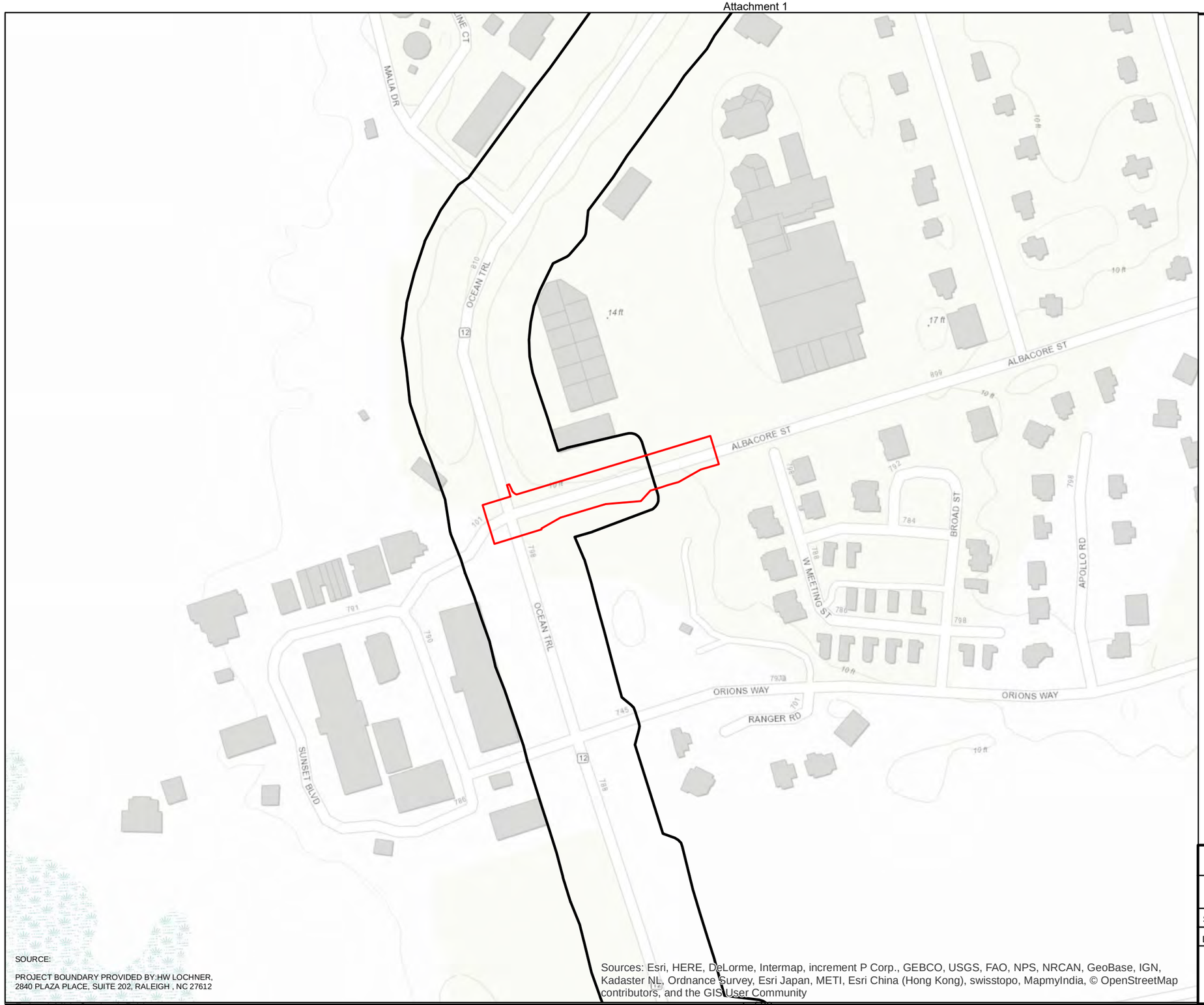

Legend

- 2023 STUDY AREA
- 2017 STUDY AREA

POTENTIAL WATERS OF THE US

- WETLAND
- INTERMITTENT STREAM
- PERENNIAL STREAM
- POND
- ESTUARINE WATERS
- DITCH

0 100 200 400

Scale in Feet

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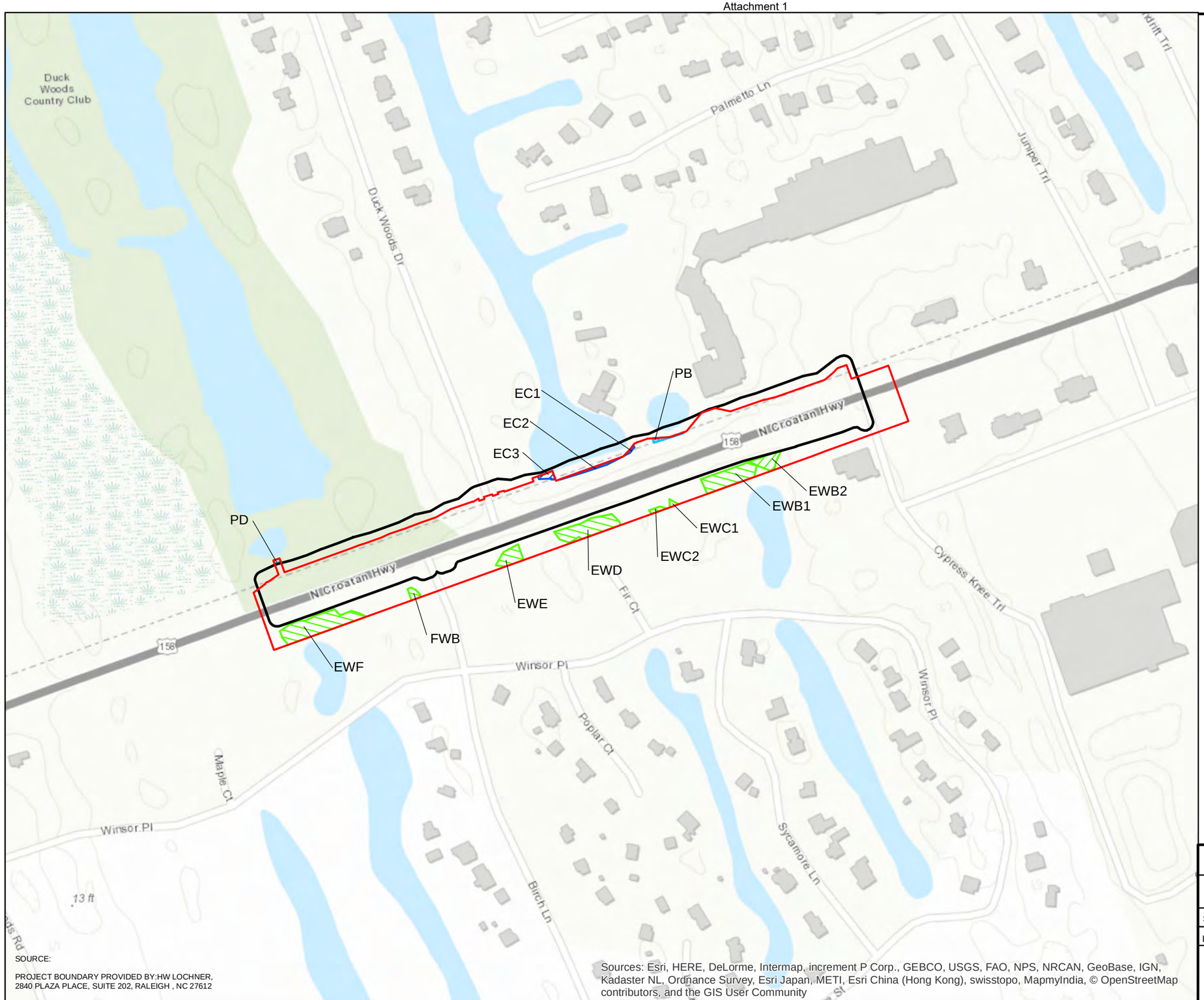
FIGURE 2
SHEET 6 OF 7



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- 2023 STUDY AREA
- 2017 STUDY AREA

POTENTIAL WATERS OF THE US

- WETLAND
- INTERMITTENT STREAM
- PERENNIAL STREAM
- POND
- ESTUARINE WATERS
- DITCH

0 150 300 600

Scale in Feet

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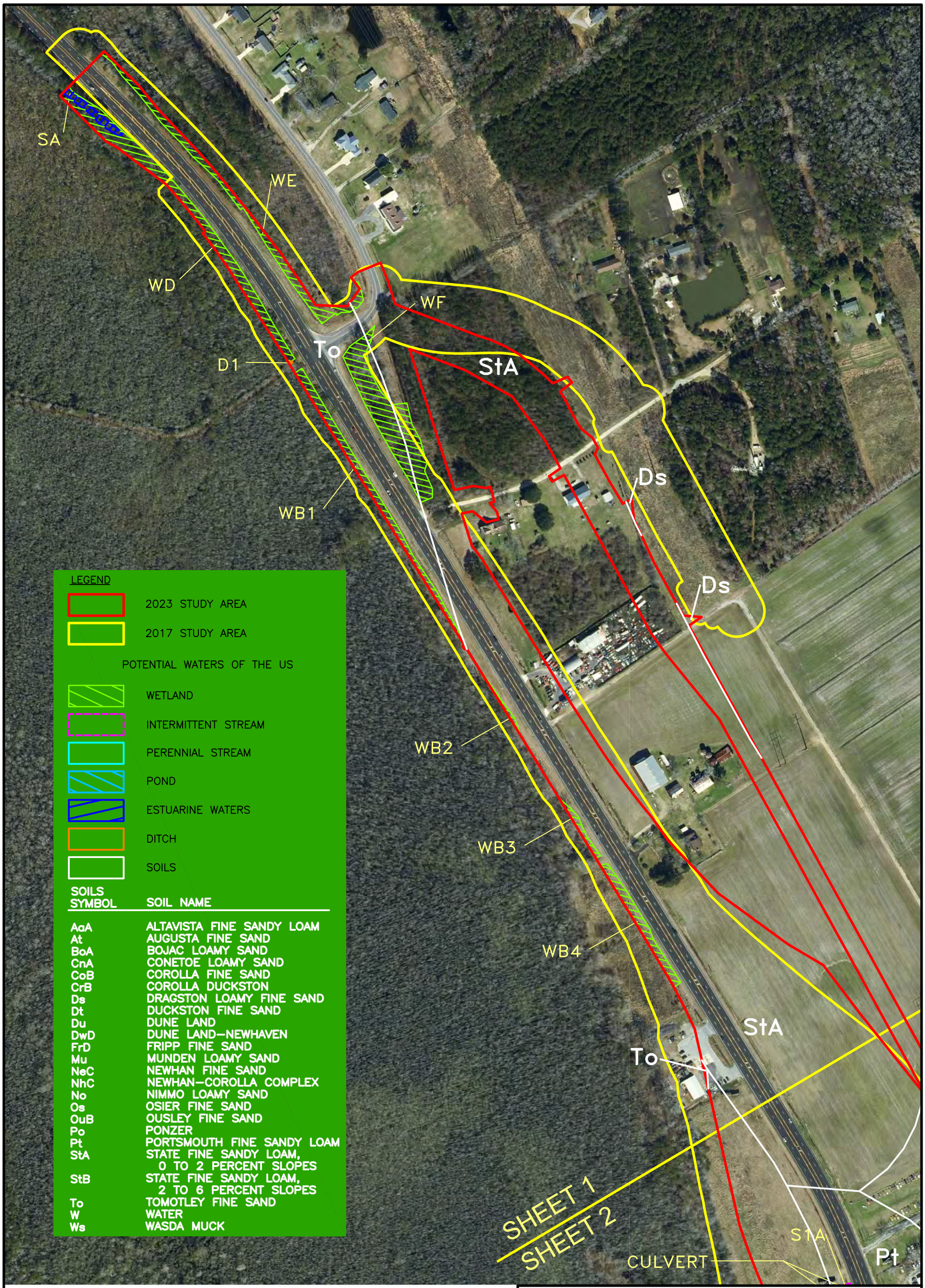
FIGURE 2
SHEET 7 OF 7



SOURCE:
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WEBSITE: WWW.NCONEMAP.COM

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0 150 300 600
SCALE IN FEET

SOILS

R-2576 MID-CURRITUCK BRIDGE

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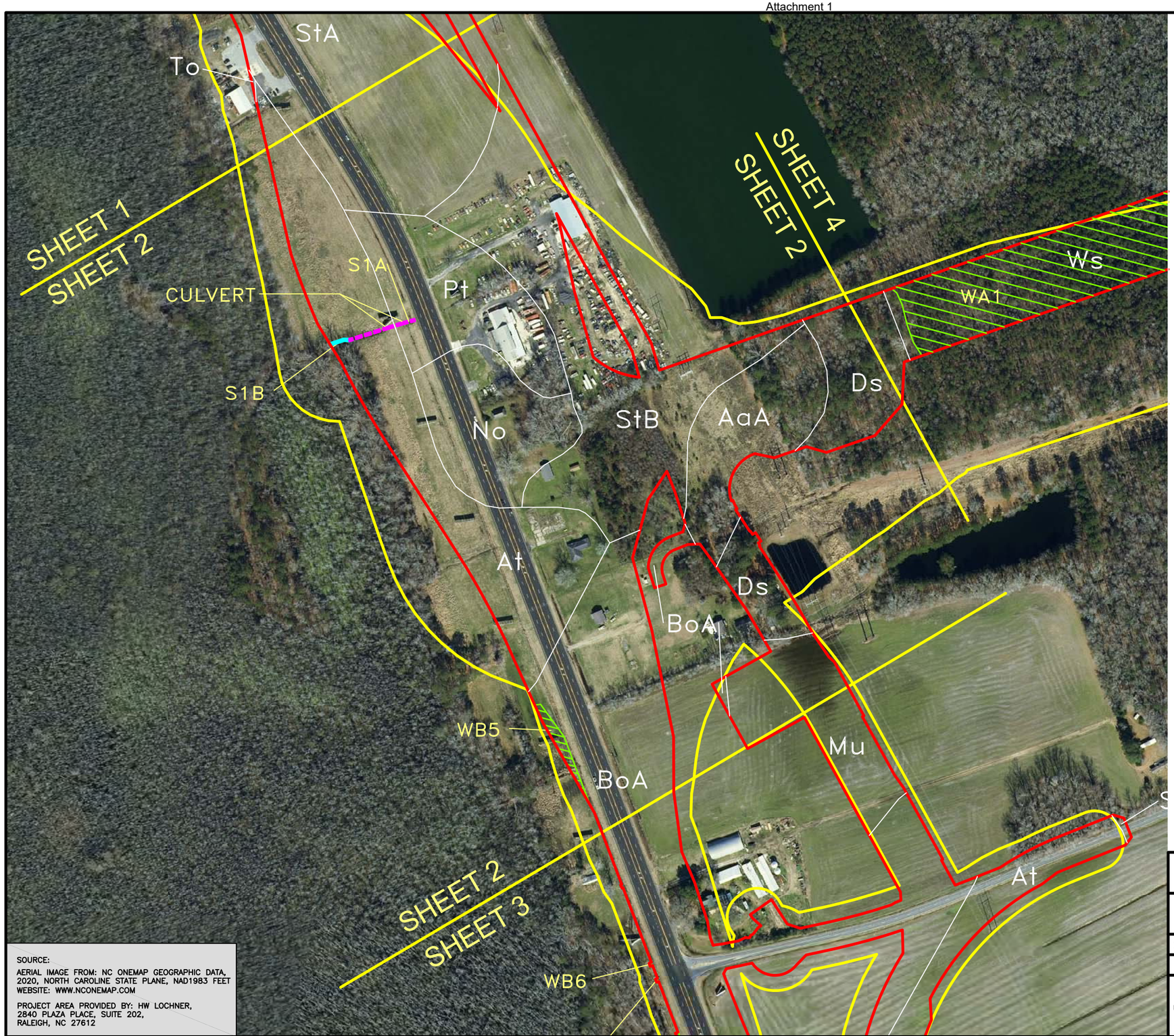
FIGURE 3
SHEET 1 OF 7



SOURCE:
AERIAL IMAGE FROM: NC ONEMAP GEOGRAPHIC DATA, 2020, NORTH CAROLINE STATE PLANE, NAD1983 FEET
WEBSITE: WWW.NCONEMAP.COM

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LEGEND

- 2023 STUDY AREA
- 2017 STUDY AREA

POTENTIAL WATERS OF THE US

- WETLAND
- INTERMITTENT STREAM
- PERENNIAL STREAM
- POND
- ESTUARINE WATERS
- DITCH
- SOILS

SOILS SYMBOL	SOIL NAME
AaA	ALTAVISTA FINE SANDY LOAM
At	AUGUSTA FINE SAND
BoA	BOJAC LOAMY SAND
CnA	CONETOE LOAMY SAND
CoB	COROLLA FINE SAND
CrB	COROLLA DUCKSTON
Ds	DRAGSTON LOAMY FINE SAND
Dt	DUCKSTON FINE SAND
Du	DUNE LAND
DwD	DUNE LAND–NEWHAVEN
FrD	FRIPP FINE SAND
Mu	MUNDEN LOAMY SAND
NeC	NEWHAN FINE SAND
NhC	NEWHAN–COROLLA COMPLEX
No	NIMMO LOAMY SAND
Os	OSIER FINE SAND
OuB	OUSLEY FINE SAND
Po	PONZER
Pt	PORTSMOUTH FINE SANDY LOAM
StA	STATE FINE SANDY LOAM, 0 TO 2 PERCENT SLOPES
StB	STATE FINE SANDY LOAM, 2 TO 6 PERCENT SLOPES
To	TOMOTLEY FINE SAND
W	WATER
Ws	WASDA MUCK

0 150 300 600
SCALE IN FEET

SOILS

R-2576 MID-CURRITUCK BRIDGE

SCALE: AS SHOWN	APPROVED BY:	DRAWN BY: TLJ
DATE: 06/12/23		FILE: 212126_AERIAL

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FIGURE 3
SHEET 2 OF 7

SOURCE:
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WEBSITE: WWW.NCONEMAP.COM

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LEGEND

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POTENTIAL WATERS OF THE US

- WETLAND
- INTERMITTENT STREAM
- PERENNIAL STREAM
- POND
- ESTUARINE WATERS
- DITCH
- SOILS

SOILS SYMBOL	SOIL NAME
AgA	ALTAVISTA FINE SANDY LOAM
At	AUGUSTA FINE SAND
BoA	BOJAC LOAMY SAND
CnA	CONETOE LOAMY SAND
CoB	COROLLA FINE SAND
CrB	COROLLA DUCKSTON
Ds	DRAGSTON LOAMY FINE SAND
Dt	DUCKSTON FINE SAND
Du	DUNE LAND
DwD	DUNE LAND–NEWHAVEN
FrD	FRIPP FINE SAND
Mu	MUNDEN LOAMY SAND
NeC	NEWHAN FINE SAND
NhC	NEWHAN–COROLLA COMPLEX
No	NIMMO LOAMY SAND
Os	OSIER FINE SAND
OuB	OUSLEY FINE SAND
Po	PONZER
Pt	PORTSMOUTH FINE SANDY LOAM
StA	STATE FINE SANDY LOAM, 0 TO 2 PERCENT SLOPES
StB	STATE FINE SANDY LOAM, 2 TO 6 PERCENT SLOPES
To	TOMOTLEY FINE SAND
W	WATER
Ws	WASDA MUCK

0 150 300 600
SCALE IN FEET

SOILS

R-2576 MID-CURRITUCK BRIDGE

SCALE: AS SHOWN	APPROVED BY:	DRAWN BY: TLJ
DATE: 03/29/23		FILE: 212126_AERIAL

CZR ENVIRONMENTAL CONSULTANTS
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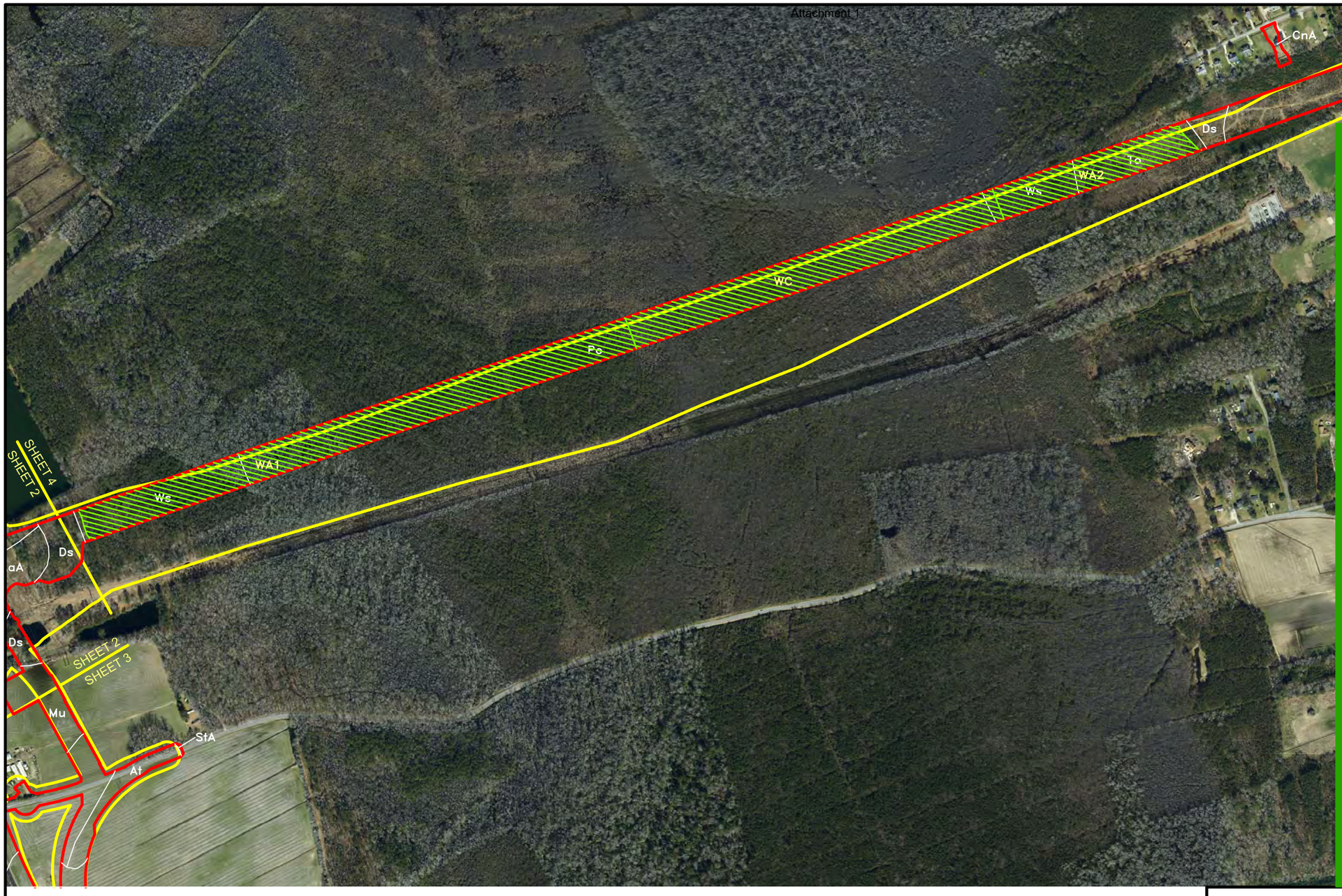
TEL 910/392-9253
FAX 910/392-9139

CP#2121.26

FIGURE 3
SHEET 3 OF 7



LEGEND

- 2023 STUDY AREA
- 2017 STUDY AREA

POTENTIAL WATERS OF THE US

- WETLAND
- INTERMITTENT STREAM
- PERENNIAL STREAM
- POND
- ESTUARINE WATERS
- DITCH
- SOILS

SOILS SYMBOL	SOIL NAME
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At	AUGUSTA FINE SAND
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To	TOMOTLEY FINE SAND
W	WATER
Ws	WASDA MUCK

SOURCE:

AERIAL IMAGE FROM: NC ONEMAP GEOGRAPHIC DATA, 2020, NORTH CAROLINE STATE PLANE, NAD1983 FEET
WEBSITE: WWW.NCONEMAP.COM

PROJECT AREA PROVIDED BY: HW LOCHNER, 2840 PLAZA PLACE, SUITE 202, RALEIGH, NC 27612

0 150 300 600

SCALE IN FEET

SOILS

R-2576 MID-CURRITUCK BRIDGE

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FIGURE 3
SHEET 4 OF 7

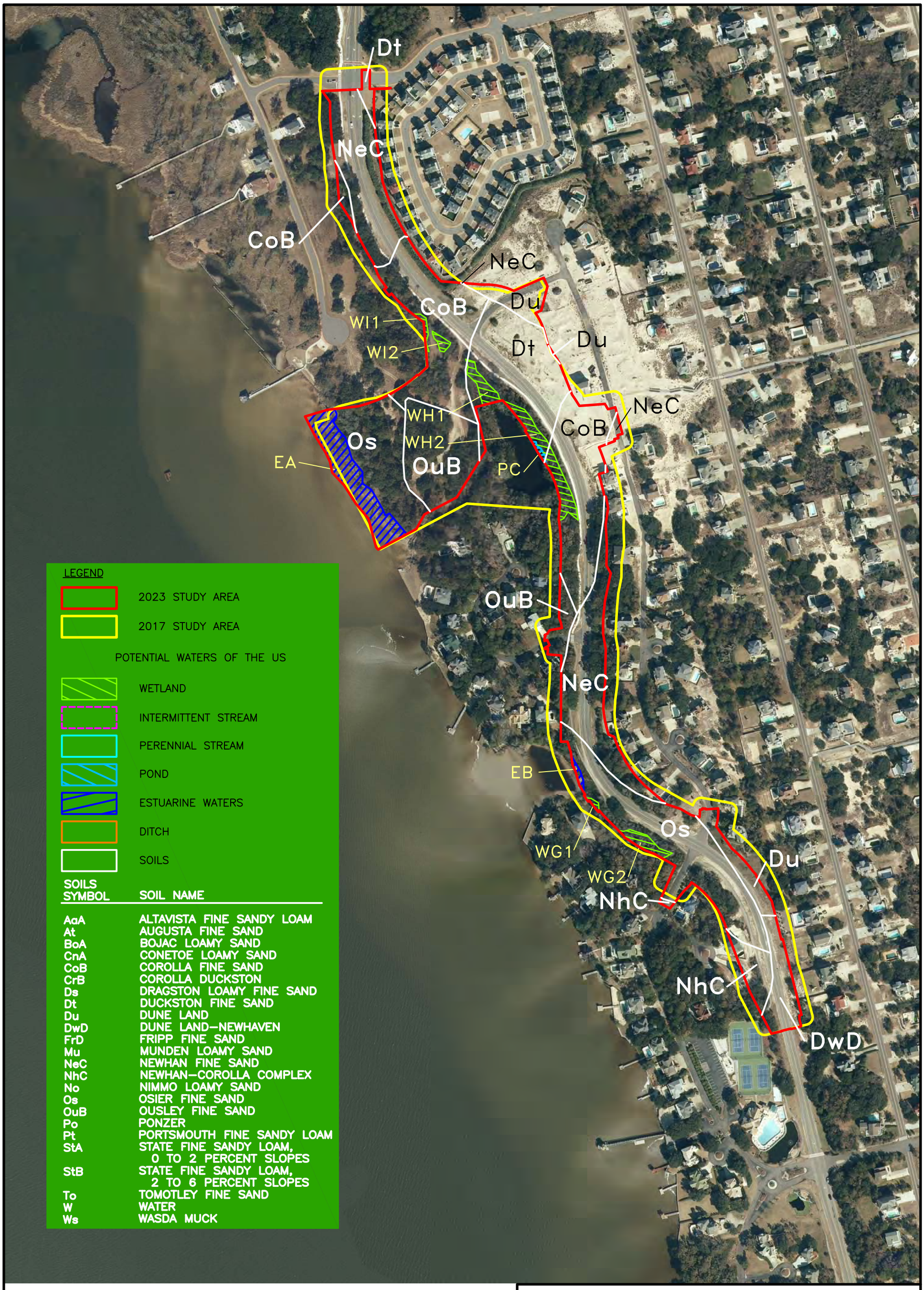

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FIGURE 3
SHEET 5 OF 7

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LEGEND

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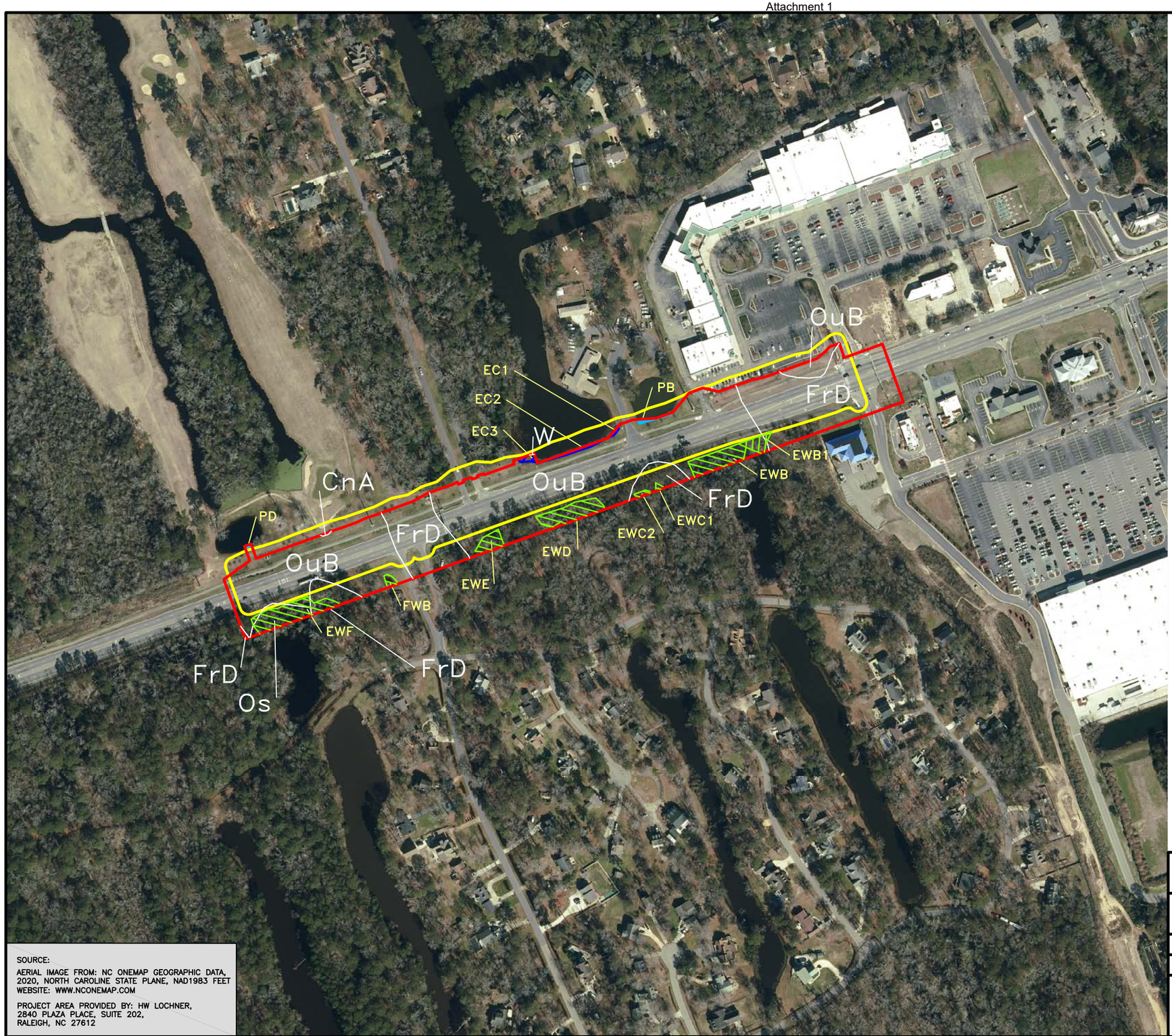
FIGURE 3
SHEET 6 OF 7



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LEGEND

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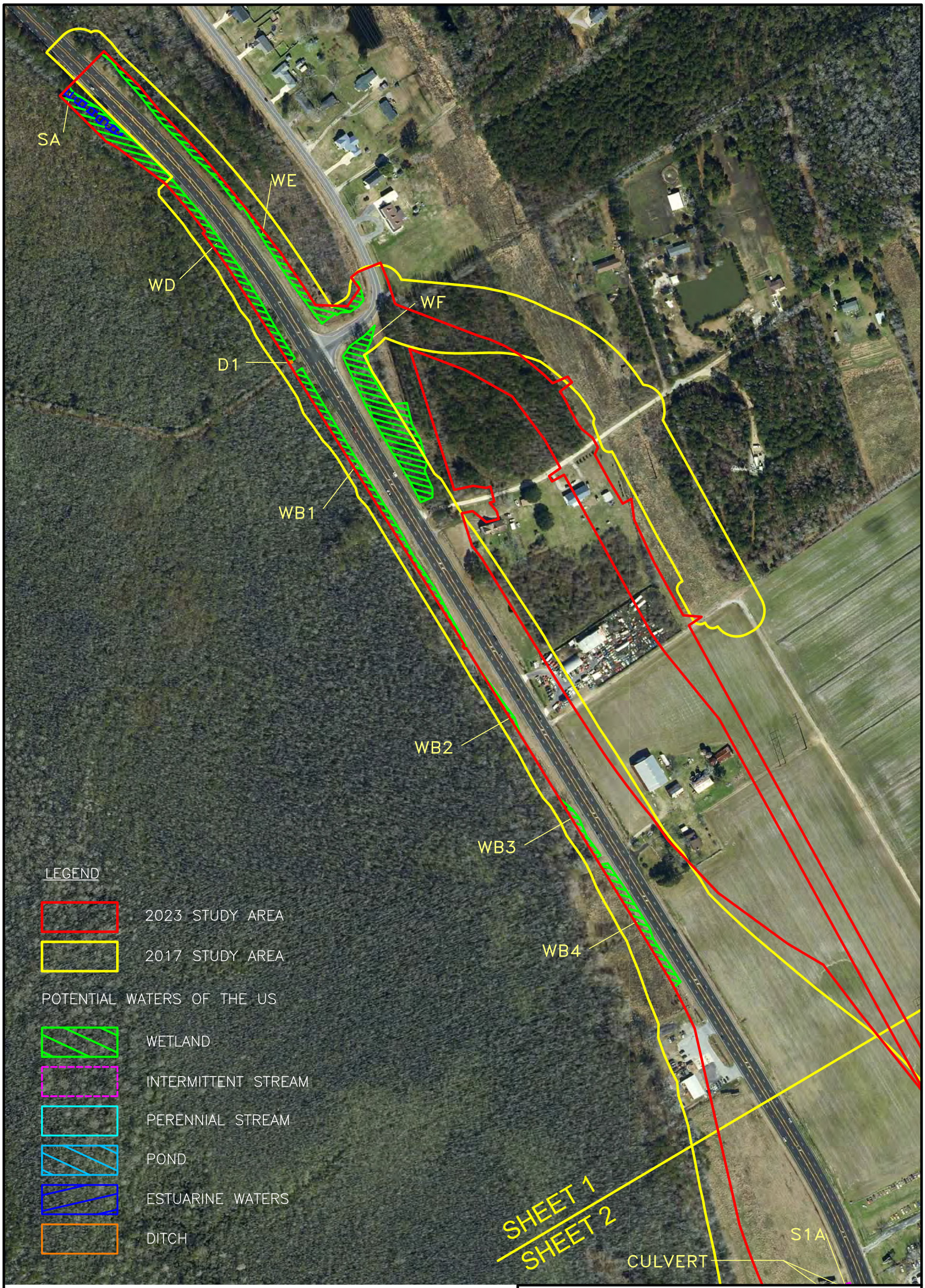
FIGURE 3
SHEET 7 OF 7



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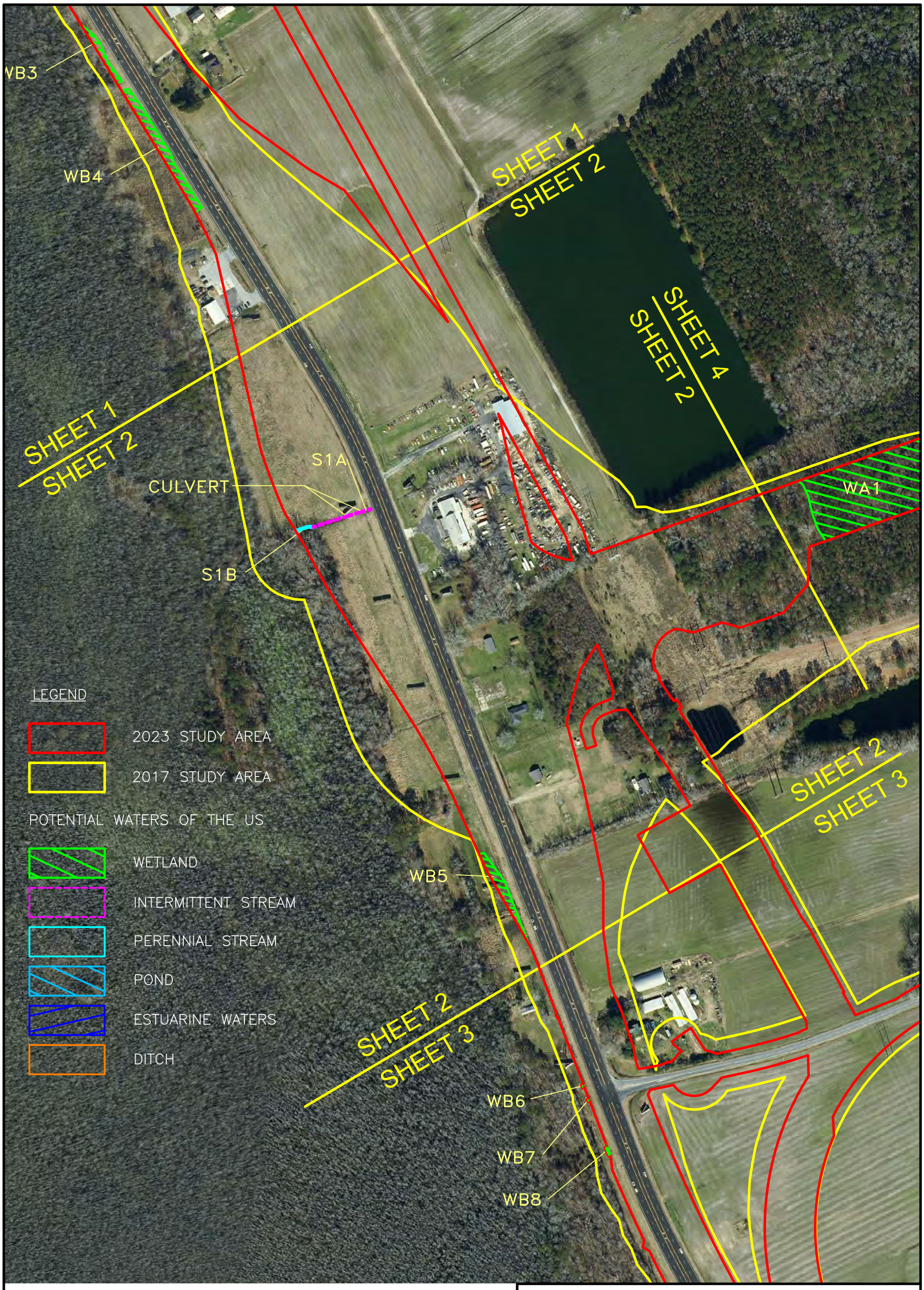
0 150 300 600
SCALE IN FEET

POTENTIAL WATERS OF THE US

R-2576 MID-CURRITUCK BRIDGE

SCALE: AS SHOWN	APPROVED BY:	DRAWN BY: TLJ
DATE: 06/12/23		FILE: 212126_AERIAL
CZR ENVIRONMENTAL CONSULTANTS		CP#2121.26
		FIGURE 4 SHEET 1 OF 7



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PROJECT AREA PROVIDED BY: HW LOCHNER, 2840 PLAZA PLACE, SUITE 202, RALEIGH, NC 27612

0 150 300 600
SCALE IN FEET

POTENTIAL WATERS OF THE US

R-2576 MID-CURRITUCK BRIDGE

SCALE: AS SHOWN	APPROVED BY:	DRAWN BY: TLJ
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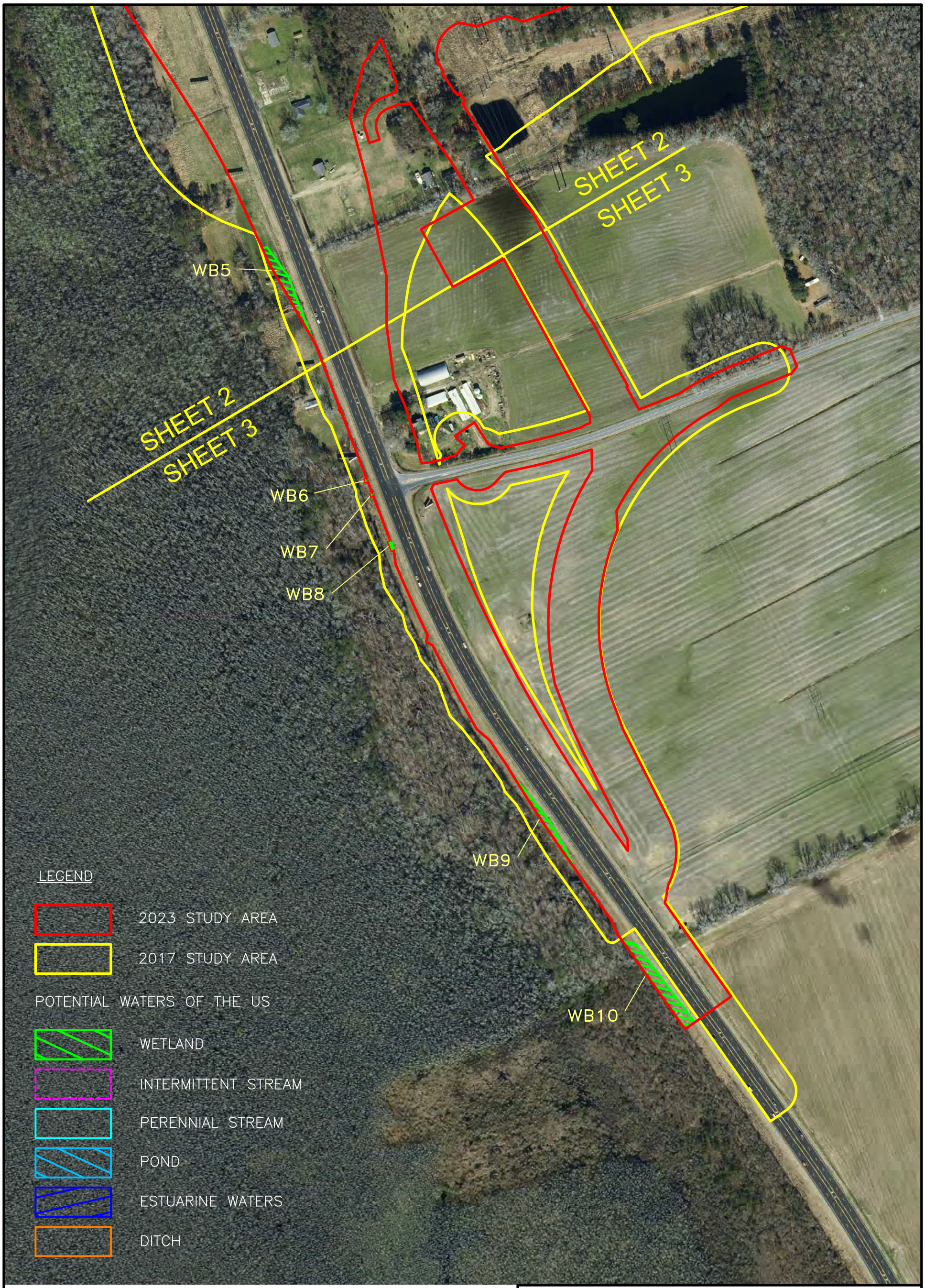
FIGURE 4
SHEET 2 OF 7



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SCALE IN FEET

POTENTIAL WATERS OF THE US

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FIGURE 4
SHEET 3 OF 7

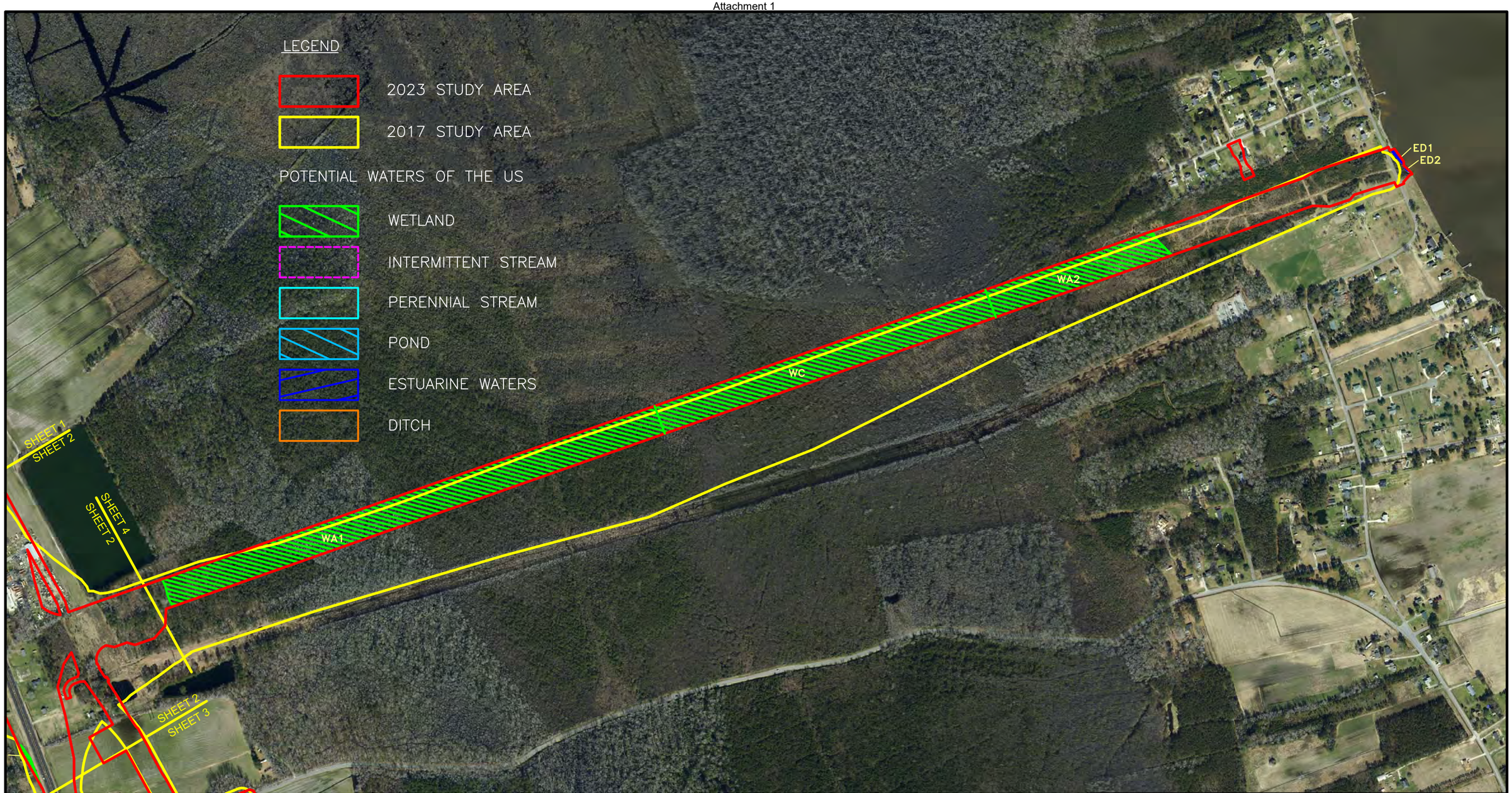

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FIGURE 4
SHEET 4 OF 7

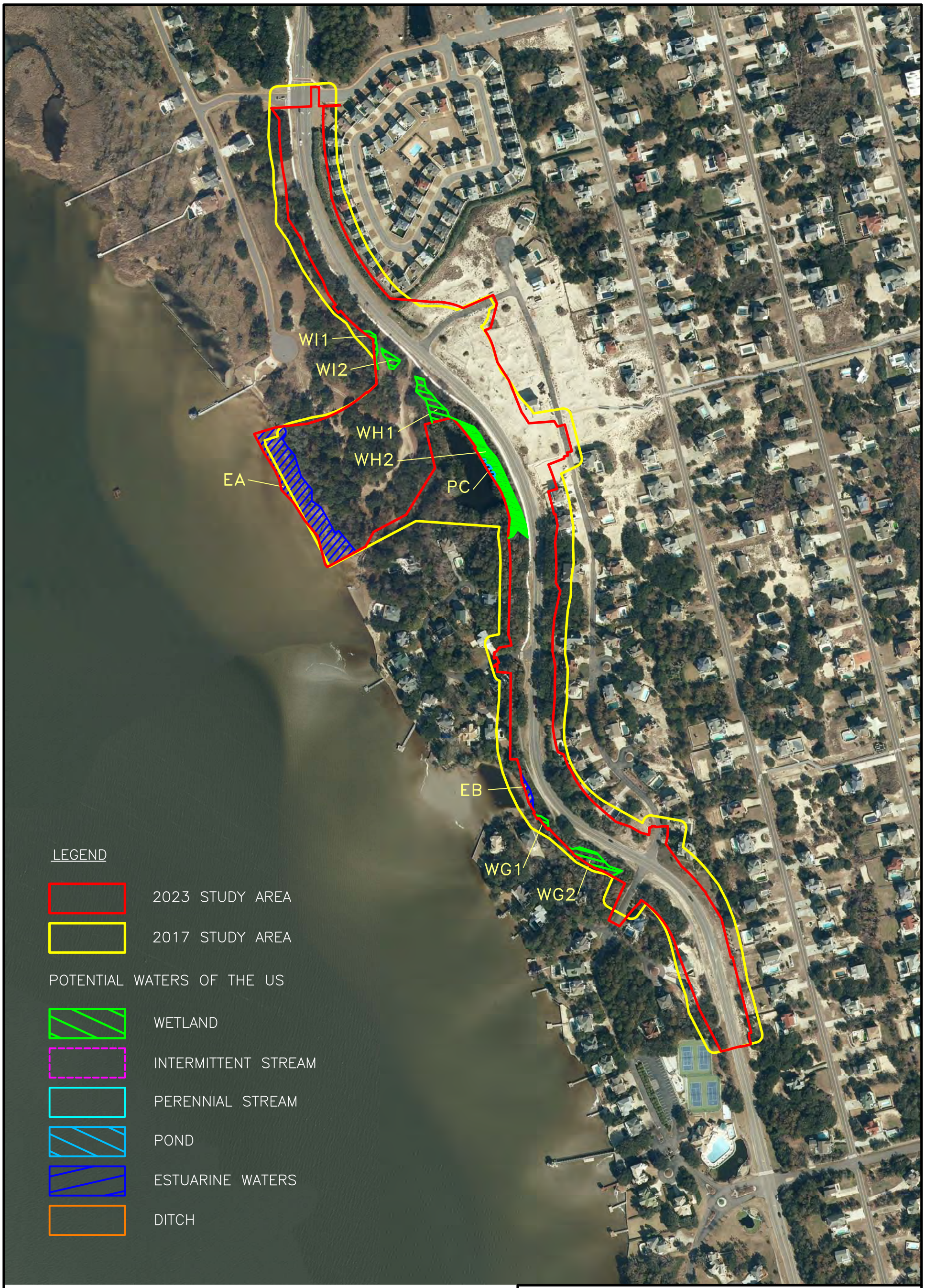

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FIGURE 4
SHEET 5 OF 7

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FIGURE 4
SHEET 6 OF 7

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FIGURE 4
SHEET 7 OF 7

Shoreline Areas Within the Study Area Photos

Photo 1 – View of Currituck Sound (EA) looking north from northern study area boundary on 27 February 2023.

Photo 2 – View of Currituck Sound (EA) looking south from northern study area boundary on 27 February 2023.

Photo 3 – View of Currituck Sound (EA) looking south southern study area boundary on 27 February 2023.

Photo 4 – View of Currituck Sound (EA) looking north from southern study area boundary on 27 February 2023.

Photo 5 – View of Currituck Sound (EB) looking northwest
on 27 February 2023.

Photo 6 – View of Currituck Sound (EB) looking north
on 27 February 2023.

Photo 7 – View of Currituck Sound (EB) looking south on 27 February 2023.

Photo 8 – View of Currituck Sound (EB) looking southwest on 27 February 2023.

Photo 1 –View of tributary to Jean Guite Creek (EC) looking northeast on 27 February 2023.

Photo 12 – View of Currituck Sound (ED) looking north from the northern study area boundary on 01 March 2023.

Photo 13 – View of Currituck Sound (ED) looking south from the northern study area boundary on 01 March 2023.

Photo 14 – View of Currituck Sound (ED) looking south from the southern study area boundary on 01 March 2023.

Photo 15 – View of Currituck Sound (ED) looking north from the southern study area boundary on 01 March 2023.

Qualifications of Contributors

Principal Investigator:	Matt Smith
Education:	B.S. Marine Biology, 1994
Experience:	Sr. Environmental Scientist, CZR Incorporated, 2020-present Senior Scientist, ESI (Terracon), 1998-2020
Responsibilities:	T/E species assessment, wetland and stream delineation, document preparation
Investigator:	Sam Cooper
Education:	B.S. Biology, 1985 M.S. Marine Biology, 1988
Experience:	Technical Director and Sr. Environmental Scientist, CZR Incorporated, 1988 - present
Responsibilities:	document preparation and review
Investigator:	Hayden Slater
Education:	B.S. Environmental Science, Ecology
Experience:	Biologist, CZR Incorporated, 2020-present
Responsibilities:	T/E species assessment, wetland and stream delineation
Investigator:	Kayla Hess
Education:	B.S. Natural Resources Management, 2016 M.S. Forestry, Fisheries, and Geomatic Sciences, 2019
Experience:	Biologist, CZR Incorporated, 2020-present Research Technician/Graduate Assistant, University of Florida, 2018-2019
Responsibilities:	document preparation

ATTACHMENT I

Invasive Species Control Plan
October 21, 2021

Non-Native Invasive Species Control Plan

Mid-Currituck Bridge (R-2576)

The North Carolina Turnpike Authority (NCTA) as a unit of the North Carolina Department of Transportation (NCDOT) is planning the construction of transportation improvements in Currituck and Dare Counties of North Carolina as part of the Mid-Currituck Bridge project (R-2576). The Mid-Currituck Bridge is a controlled-access toll road on new location that extends from US 158 near Coinjock/Aydlett to NC 12 near Corolla. The total length of the project is approximately 7.0 miles and includes a bridge over Maple Swamp on the Currituck County mainland and a bridge over Currituck Sound between the mainland and the Outer Banks of Currituck County. In addition, the project includes improvements to US 158 (both in Currituck and Dare Counties) and NC 12 (in Currituck County).

BACKGROUND

In February 1999, President Clinton signed Executive Order 13112 which calls on Executive Branch agencies to work to prevent and control the introduction and spread of invasive species (https://www.federalregister.gov/documents/1999/02/08/99-3184/invasive-species). In August 1999, the Federal Highway Administration (FHWA) issued guidance on invasive species and the roadside use of native plants (Federal Highway Administration Guidance on Invasive Species | Roadside Use of Native Plants | Ecosystem and Vegetation System Management | Environmental Review Toolkit | FHWA (dot.gov)). Then in December 2016, President Barak Obama signed Executive Order 13751 which amended and continued Executive Order 13112 (https://www.federalregister.gov/documents/2016/12/08/2016-29519/safeguarding-the-nation-from-the-impacts-of-invasive-species).

During the project development portion of the Mid-Currituck Bridge project under the National Environmental Policy Act (NEPA), the US Environmental Protection Agency (USEPA) in a letter dated March 12, 2012 (page C-4 of the Final Environmental Impact Statement Reevaluation Report) provided the following comment on the Final Environmental Impact Statement (FEIS) regarding how prior USEPA comments on the Draft Environmental Impact Statement (DEIS) were addressed:

> *"Regarding the response to comment #19 dealing with the introduction of invasive plant species, the information provided is not believed to be responsive or consistent with the FHWA requirements under Executive Order 13112. EPA has previously provided additional guidance to NCDOT and FHWA concerning the use of a combination of methods to potentially control invasive plants. Foremost, the transportation agencies should minimize clearing to existing vegetated areas to the extent practicable. Contractor and NCDOT equipment arriving from off-site locations can be cleaned daily to remove foreign seed sources, one of the most common sources of invasive plants on highway projects. Disturbed areas should be re-vegetated as soon as possible with native plants. Wherever aggressive invasive plants begin to establish a colony, measures that include physical or mechanical removal, herbicide spraying and/or re-planting should be performed expeditiously. Trained and knowledgeable site personnel can monitor for invasive plants weekly or monthly and take appropriate steps as soon as invasive plants are identified. EPA acknowledges and concurs that current NCDOT BMPs [Best Management Practices] and monitoring activities are not to [too] adequate to address the issues and only becomes a potential concern identified by resource agencies*

after construction of the project. A detailed monitoring and action plan needs to be developed prior to the approval of the project permits."

As part of the FEIS Reevaluation Report (page B-18), the following response was provided relative to the USEPA comment above:

"As discussed in Section 4.3.5 of this revaluation study report and Section 3.3.5 of the FEIS, an invasive plant species control plan will be developed during construction planning and will be included in the permit application. Preparation of an invasive species control plan during construction planning was added as Commitment 11 to the Project Commitments in Appendix C of this reevaluation study report. The invasive species control plan will be developed in accordance with Federal Highway Administration (FHWA)'s August 10, 1999 guidance on invasive species. In accordance with FHWA's guidance, the invasive species control plan will include a discussion of any preventative measures or eradication measures for invasive species that will be taken on the project. Such measures may include the inspection and cleaning of construction equipment, commitments to ensure the use of invasive-free mulches, topsoils, and seed mixes, and eradication strategies to be deployed should an invasion occur. The invasive plants that must be addressed and the measures to be implemented to minimize their harm will be based on the North Carolina Department of Agriculture and Consumer Services' list of noxious weeds (i.e., plants whose presence is detrimental to crops or other desirable plants, livestock, land, or other property, or is injurious to the public health)."

As a result of the USEPA comment and response, a Project Commitment was added in the FEIS Reevaluation Report and in the Record of Decision. This Project Commitment states:

"An invasive plant species control plan will be developed during construction planning and will be included in the permit application."

This invasive species plan for the Mid-Currituck Bridge project has been developed to satisfy this Project Commitment.

CONTROL PLAN

NCDOT will, to the maximum extent practicable, monitor the contractor's compliance with the non-native invasive species protections included in the construction contract documents for the project. For this project, non-native invasive species are defined as listed by the North Carolina Invasive Plant Council for coastal North Carolina (http://nc-ipc.weebly.com/coastal-plain-invasive-plants.html).

In general, the contractor is to minimize, to the maximum extent practicable, the removal of existing vegetation from the project area. Additionally, areas of the project that have vegetation removed are to be revegetated with appropriate species as quickly as practicable and in accordance with NCDOT specifications and provisions.

The contractor will control the introduction of non-native invasive species within the project limits by adhering to the requirements of landscape materials in Section 1060 of the NCDOT Standard Specifications for Roads & Structures. These requirements limit noxious weeds for seed, mulch, planting

materials and other landscape materials in accordance with the North Carolina Department of Agriculture & Consumer Services (NCDA&CS). NCDOT will also incorporate its standard provision 'NCDOT General Seed Specification for Seed Quality', with additional restrictions on noxious weeds for seed approved by NCDA&CS for NCDOT use into the project contract. This standard provision is attached as part of this plan. NCDOT will specify only the use of weed free compost following CFR 503 regulations and obtained from sources approved by the US Composting Council (USCC) or those using USCC procedures to ensure no noxious weeds or pathogens are present. This specification is attached as part of this plan.

The contractor will be required to clean by pressure washing all construction equipment, including cranes, graders, pans, excavators, loaders, barges, boats, etc., prior to being brought into project construction areas or immediately upon entering the project. Equipment will be cleaned thoroughly before moving from identified infested sites to ensure that seeds or other propagules are not transported to other portions of the project site. Residual material from cleaning will be collected via a wash pit and disposed of to ensure the non-native invasive species do not propagate either by removal to an approved facility or buried at sufficient depth to prohibit germination or propagation within the project limits.

Should any ground disturbed area within the project limits (all right of way and easement areas), with the exception of areas to be bridged in Maple Swamp and in Currituck Sound, be identified as containing non-native invasive species following revegetation, the contractor will be responsible for remediation that may be required to control the non-native invasive species. Any disturbed area containing an invasive species will be sufficiently electronically mapped by the contractor so as to be able to locate these areas in the future and document them for NCDOT use. These areas will be coordinated with the NCDOT Roadside Environmental Unit and the NCDOT Division 1 Environmental Officer to develop a mutually agreeable and appropriate remediation approach depending on the particular non-native invasive species.

The provisions outlined in this document will be included in the project construction documents along with additional details as appropriate. As the Mid-Currituck Bridge project continues through the project development process, some updates and revisions to the requirements outlined in this plan may be appropriate and necessary prior to issuance of the construction documents. This plan does not set a precedent for future NCDOT projects since the Mid-Currituck Bridge has unique project circumstances.

STANDARD SPECIAL PROVISION[1]
NCDOT GENERAL SEED SPECIFICATION FOR SEED QUALITY

(5-17-11) Z-3

Seed shall be sampled and tested by the North Carolina Department of Agriculture and Consumer Services, Seed Testing Laboratory. When said samples are collected, the vendor shall supply an independent laboratory report for each lot to be tested. Results from seed so sampled shall be final. Seed not meeting the specifications shall be rejected by the Department of Transportation and shall not be delivered to North Carolina Department of Transportation warehouses. If seed has been delivered it shall be available for pickup and replacement at the supplier's expense.

Any re-labeling required by the North Carolina Department of Agriculture and Consumer Services, Seed Testing Laboratory, that would cause the label to reflect as otherwise specified herein shall be rejected by the North Carolina Department of Transportation.

Seed shall be free from seeds of the noxious weeds Johnsongrass, Balloonvine, Jimsonweed, Witchweed, Itchgrass, Serrated Tussock, Showy Crotalaria, Smooth Crotalaria, Sicklepod, Sandbur, Wild Onion, and Wild Garlic. Seed shall not be labeled with the above weed species on the seed analysis label. Tolerances as applied by the Association of Official Seed Analysts will NOT be allowed for the above noxious weeds except for Wild Onion and Wild Garlic.

Tolerances established by the Association of Official Seed Analysts will generally be recognized. However, for the purpose of figuring pure live seed, the found pure seed and found germination percentages as reported by the North Carolina Department of Agriculture and Consumer Services, Seed Testing Laboratory will be used. Allowances, as established by the NCDOT, will be recognized for minimum pure live seed as listed on the following pages.

The specifications for restricted noxious weed seed refers to the number per pound as follows:

Restricted Noxious **Weed**	Limitations per Lb. Of Seed	Restricted Noxious **Weed**	Limitations per Lb. of Seed
Blessed Thistle	4 seeds	Cornflower (Ragged Robin)	27 seeds
Cocklebur	4 seeds	Texas Panicum	27 seeds
Spurred Anoda	4 seeds	Bracted Plantain	54 seeds
Velvetleaf	4 seeds	Buckhorn Plantain	54 seeds
Morning-glory	8 seeds	Broadleaf Dock	54 seeds
Corn Cockle	10 seeds	Curly Dock	54 seeds
Wild Radish	12 seeds	Dodder	54 seeds
Purple Nutsedge	27 seeds	Giant Foxtail	54 seeds
Yellow Nutsedge	27 seeds	Horsenettle	54 seeds
Canada Thistle	27 seeds	Quackgrass	54 seeds
Field Bindweed	27 seeds	Wild Mustard	54 seeds
Hedge Bindweed	27 seeds		

[1] Source: NCDOT Roadside Environmental Unit

Seed of Pensacola Bahiagrass shall not contain more than 7% inert matter, Kentucky Bluegrass, Centipede and Fine or Hard Fescue shall not contain more than 5% inert matter whereas a maximum of 2% inert matter will be allowed on all other kinds of seed. In addition, all seed shall not contain more than 2% other crop seed nor more than 1% total weed seed. The germination rate as tested by the North Carolina Department of Agriculture shall not fall below 70%, which includes both dormant and hard seed. Seed shall be labeled with not more than 7%, 5% or 2% inert matter (according to above specifications), 2% other crop seed and 1% total weed seed.

Exceptions may be made for minimum pure live seed allowances when cases of seed variety shortages are verified. Pure live seed percentages will be applied in a verified shortage situation. Those purchase orders of deficient seed lots will be credited with the percentage that the seed is deficient.

FURTHER SPECIFICATIONS FOR EACH SEED GROUP ARE GIVEN BELOW:

Minimum 85% pure live seed; maximum 1% total weed seed; maximum 2% total other crop seed; maximum 144 restricted noxious weed seed per pound. Seed less than 83% pure live seed will not be approved.

Sericea Lespedeza
Oats (seeds)

Minimum 80% pure live seed; maximum 1% total weed seed; maximum 2% total other crop; maximum 144 restricted noxious weed seed per pound. Seed less than 78% pure live seed will not be approved.

Tall Fescue (all approved varieties)
Kobe Lespedeza
Korean Lespedeza
Weeping Lovegrass
Carpetgrass
Bermudagrass
Browntop Millet
German Millet – Strain R
Clover – Red/White/Crimson

Minimum 78% pure live seed; maximum 1% total weed seed; maximum 2% total other crop seed; maximum 144 restricted noxious weed seed per pound. Seed less than 76% pure live seed will not be approved.

Common or Sweet Sundangrass

Minimum 76% pure live seed; maximum 1% total weed seed; maximum 2% total other crop seed; maximum 144 restricted noxious weed seed per pound. Seed less than 74% pure live seed will not be approved.

Rye (grain; all varieties)
Kentucky Bluegrass (all approved varieties)
Hard Fescue (all approved varieties)
Shrub (bicolor) Lespedeza

Minimum 70% pure live seed; maximum 1% total weed seed; maximum 2% total other crop seed; maximum 144 noxious weed seed per pound. Seed less than 70% pure live seed will not be approved.

Centipedegrass
Crownvetch
Pensacola Bahiagrass
Creeping Red Fescue
Japanese Millet
Reed Canary Grass
Zoysia

Minimum 70% pure live seed; maximum 1% total weed seed; maximum 2% total other crop seed; maximum 5% inert matter; maximum 144 restricted noxious weed seed per pound.

Barnyard Grass
Big Bluestem
Little Bluestem
Bristly Locust
Birdsfoot Trefoil
Indiangrass
Orchardgrass
Switchgrass
Yellow Blossom Sweet Clover

COMPOST BLANKET:[2]

(8-23-17)

Description

This work shall consist of furnishing, installing, maintaining, and seeding a water permeable *Compost Blanket* to reduce soil erosion and sediment by promoting the establishment of vegetation on sandy soils where vegetation is difficult to establish.

Materials

Compost:

Compost used for Compost Blankets shall be weed free and derived from a well-decomposed source of organic matter. The compost shall be produced using an aerobic composting process meeting CFR 503 regulations, including time and temperature data indicating effective weed seed, pathogen, and insect larvae kill. The compost shall be free of any refuse, contaminants or other materials toxic to plant growth. Non-composted products will not be accepted. Test methods for the items below should follow USCC TMECC guidelines for laboratory procedures:

1. pH between 5.0-8.0 in accordance with TMECC 04.11-A, "Electrometric pH Determinations for Compost".
2. For seeded Compost Blankets, seed should be incorporated at the time of application in the entire depth of the compost blanket, at rates per foot, per square yard, or per acre, as acceptable to the engineer. The following particle sizes shall also be followed: 100% passing a 2" sieve; 99% passing a 1" sieve; minimum of 60% passing a ½" sieve. All other testing parameters remain the same. The seeding rates are generally similar or slightly higher than those used when considering application of seed via hydroseeding or other seeding methods.
3. Moisture content of less than 60% in accordance with standardized test methods for moisture determination.
4. Material shall be relatively free (<1% by dry weight) of inert or foreign man made materials.
5. A sample shall be submitted to the engineer for approval prior to being used and must comply with all local, state and federal regulations.

Construction Methods

1. Compost Blankets will be placed as directed. Unless otherwise specified, Compost Blankets should be installed at a minimum depth of 1".
2. The Compost Blanket shall be seeded at time of installation for establishment of permanent vegetation. The Engineer will specify seeding requirements.
3. Compost Blankets are not to be used in direct flow situations or in runoff channels.
4. The type and rate of seed, fertilizer and lime shall be in accordance with the Seeding and Mulching provisions of this contract and as directed.

[2] Source: NCDOT Roadside Environmental Unit

Maintenance

1. The Contractor shall perform routine inspections and maintain the Compost Blanket in a functional condition at all times.
2. Where the Compost Blanket fails, it will be routinely repaired.
3. The Compost Blanket will be seeded on site, at rates and seed types as determined by the Engineer. Once vegetation is established, final seeding is not required.

Performance

1. The Contractor is responsible for establishing a working erosion control system and may, with approval of the Engineer, work outside the minimum construction requirements as needed.
2. Where the Compost Blanket deteriorates or fails, it will be repaired or replaced with a more effective approved alternative.

Measurement and Payment

The Contractor shall provide the Engineer with proof that a minimum 1" thick Compost Blanket has been applied after settling. This rate equals approximately 270 cubic yards of compost material per acre of application area. The Contractor shall supply satisfactory evidence that the specified amount of material has been effectively placed (i.e., truck load tickets).

Compost Blanket will be measured and paid for as the actual number of acres measured along the surface of the ground over which the Compost Blanket is installed and accepted.

Payment will be made under:

Pay Item	Pay Unit
Compost Blanket	Acre