



STATE OF NORTH CAROLINA  
DEPARTMENT OF TRANSPORTATION

ROY COOPER  
GOVERNOR

JAMES H. TROGDON, III  
SECRETARY

December 3, 2019

MEMORANDUM TO: Mr. Chad Kimes, P.E.  
Division 3 Engineer

FROM: *for* Philip S. Harris, III, P.E., Unit Head  
Environmental Analysis Unit

SUBJECT: New Hanover County; Isabel Holmes Memorial Bridge on US 74/NC  
133 over the Northeast Cape Fear River.  
WBS No. **15BPR.14**

Attached are the U.S. Army Corps of Engineers General Permit, N.C. Division of Water Resources (NCDWR) Water Quality Certification, and N.C. Division of Coastal Management General Permit. All environmental permits have been received for the construction of this project.

A copy of this permit package will be posted on the NCDOT website at:  
<https://connect.ncdot.gov/resources/Environmental/Pages/default.aspx>

**Quick Links>Permit Documents> Issued Permits.**

cc: w/o attachment (see website for attachments)

Mr. Mason Herndon, Division Environmental Officer  
Mr. Kevin Fischer, P.E., Structure Design

# PROJECT COMMITMENTS

Isabel Holmes Memorial Bridge on US 74/NC 133 over the Northeast Cape Fear River  
New Hanover County  
WBS Element 15BPR.14

## COMMITMENTS FROM PROJECT DEVELOPMENT AND DESIGN

There were no special commitments from project development.

## COMMITMENTS FROM PERMITTING

### Division 3 Construction

**CAMA General Permit No. 74998 and Corps of Engineers Permit Action ID No. SAW-2019-00085:**

NCDOT must abide by a seasonal restriction to protect Atlantic sturgeon by restricting cable installation to between December 1 and January 31.

### **Conditions from the National Marine Fisheries Service letter dated 9/18/2019**

A primary nursery area in-water work moratorium of February 1 to September 30 is also in effect for this project.

NCDOT shall adhere to *National Marine Fisheries Service's Sea Turtle and Smalltooth Sawfish Construction Conditions* dated March 23, 2006 (and apply them to Atlantic sturgeon).

NCDOT shall adhere to *GUIDELINES FOR AVOIDING IMPACTS TO THE WEST INDIAN MANATEE Precautionary Measures for Construction Activities in North Carolina Waters*.

### **Approved installation method**

The contractor will complete the work between the fenders by divers using a handheld vacuum device powered by a hydraulic pump (mounted on a barge) to remove sediment, then captured in geotextile dewatering bags and disposed of off-site. If site conditions allow, the contractor will attempt the suction method beneath the fenders. If not, the contractor will jet beneath the fenders.

**U.S. ARMY CORPS OF ENGINEERS**  
**WILMINGTON DISTRICT**

Action Id. SAW-2019-00085 County: New Hanover County U.S.G.S. Quad: Castle Hayne

**GENERAL PERMIT (REGIONAL AND NATIONWIDE) VERIFICATION**

Permittee: NCDOT  
attn: Mr. Gordon Cashin  
Address: 1000 Birch Ridge Road  
Raleigh NC, 27610

Size (linear feet)	<u>300</u>	Nearest Town	<u>Wilmington</u>
Nearest Waterway	<u>Northeast Cape Fear River</u>	River Basin	<u>Cape Fear</u>
USGS HUC	<u>03030007</u>	Coordinates	Latitude: <u>34.2518955039287</u> Longitude: <u>-77.9505880731761</u>

Location description: The project is located between the fenders of the Isabel Holmes bridge and through the Cape Fear River, New Hanover County.

Description of projects area and activity: This verification covers the installation of a 300 foot linear cable under the Cape Fear River from fender to fender structure.

Applicable Law:  Section 404 (Clean Water Act, 33 USC 1344)  
 Section 10 (Rivers and Harbors Act, 33 USC 403)

Authorization: Regional General Permit Number and/or Nationwide Permit Number: NW 12  
***SEE ATTACHED RGP or NWP GENERAL, REGIONAL AND/OR SPECIAL CONDITIONS***

**Your work is authorized by the above referenced permit provided it is accomplished in strict accordance with the attached conditions and your submitted application dated 10/4/2019 and attached permit drawings dated 9/19/2019. Any violation of the attached conditions or deviation from your submitted plans may subject the permittee to a stop work order, a restoration order, a Class I administrative penalty, and/or appropriate legal action.**

This verification will remain valid until the expiration date identified below unless the nationwide and/or regional general permit authorization is modified, suspended or revoked. If, prior to the expiration date identified below, the nationwide and/or regional general permit authorization is reissued and/or modified, this verification will remain valid until the expiration date identified below, provided it complies with all requirements of the modified nationwide permit. If the nationwide and/or regional general permit authorization expires or is suspended, revoked, or is modified, such that the activity would no longer comply with the terms and conditions of the nationwide permit, activities which have commenced (i.e., are under construction) or are under contract to commence in reliance upon the nationwide and/or regional general permit, will remain authorized provided the activity is completed within twelve months of the date of the nationwide and/or regional general permit's expiration, modification or revocation, unless discretionary authority has been exercised on a case-by-case basis to modify, suspend or revoke the authorization.

Activities subject to Section 404 (as indicated above) may also require an individual Section 401 Water Quality Certification. You should contact the NC Division of Water Resources (telephone 919-807-6300) to determine Section 401 requirements.

For activities occurring within the twenty coastal counties subject to regulation under the Coastal Area Management Act (CAMA), prior to beginning work you must contact the N.C. Division of Coastal Management in Morehead City, NC, at (252) 808-2808.

This Department of the Army verification does not relieve the permittee of the responsibility to obtain any other required Federal, State or local approvals/permits.

If there are any questions regarding this verification, any of the conditions of the Permit, or the Corps of Engineers regulatory program, please contact **Brad Shaver at (910) 251-4611 or Brad.E.Shaver@usace.army.mil.**

Corps Regulatory Official: 601756 SHAVER.BRAD.E.1276 Digitally signed by SHAVER.BRAD.E.1276601756 Date: 2019.10.16 07:39:19 -04'00' Date: October 15, 2019  
Expiration Date of Verification: March 18, 2022

**A. Determination of Jurisdiction:**

1.  There are waters on the above described project area that may be subject to Section 404 of the Clean Water Act (CWA) (33 USC § 1344) and/or Section 10 of the Rivers and Harbors Act (RHA) (33 USC § 403). This preliminary determination is not an appealable action under the Regulatory Program Administrative Appeal Process (Reference 33 CFR Part 331). However, you may request an approved JD, which is an appealable action, by contacting the Corps district for further instruction. Please note, if work is authorized by either a general or nationwide permit, and you wish to request an appeal of an approved JD, the appeal must be received by the Corps and the appeal process concluded prior to the commencement of any work in waters of the United States and prior to any work that could alter the hydrology of waters of the United States.
2.  There are Navigable Waters of the United States within the above described project area subject to the permit requirements of Section 10 of the Rivers and Harbors Act (RHA) (33 USC § 403) and Section 404 of the Clean Water Act (CWA) (33 USC § 1344). Unless there is a change in the law or our published regulations, this determination may be relied upon for a period not to exceed five years from the date of this notification.
3.  There are waters, including wetlands, within the above described project area that are subject to the permit requirements of Section 404 of the Clean Water Act (CWA) (33 USC § 1344). Unless there is a change in the law or our published regulations, this determination may be relied upon for a period not to exceed five years from the date of this notification.
4.  A jurisdiction determination was not completed with this request. Therefore, this is not an appealable action. However, you may request an approved JD, which is an appealable action, by contacting the Corps for further instruction.
5.  The aquatic resources within the above described project area have been identified under a previous action. Please reference the approved jurisdictional determination issued . Action ID: **SAW-** .

**B. Basis For Jurisdictional Determination:** N/A. An Approved JD has not been completed.

**C. Remarks:** See attached special conditions.

The Wilmington District is committed to providing the highest level of support to the public. To help us ensure we continue to do so, please complete our Customer Satisfaction Survey, located online at [http://corpsmapu.usace.army.mil/cm\\_apex/f?p=136:4:0](http://corpsmapu.usace.army.mil/cm_apex/f?p=136:4:0).

Copy furnished:

**NC DOT-Division 3 attn: Mr. Mason Herndon**  
**NC DEQ-DWR attn: Ms. Joanne Steenhuis**

**SPECIAL CONDITIONS**  
**Isabel Holmes Bridge Preservation**  
**State Project# 15BPR.14**

- 1. All work must be performed in strict compliance with the application dated 10/4/2019 and plan sheets 1-8 of 8 dated 9/19/2019 attached, which are authorized by this permit. Any modification to the authorized permit plans must be approved by the USACE prior to implementation.**
- 2. Failure to institute and carry out the details of the following special conditions, below, will result in a directive to cease all ongoing and permitted work within waters and/or wetlands associated with the permitted project, or such other remedies and/or fines as the District Engineer or his authorized representatives may seek.**
- 3. The permittee will ensure that the construction design plans for this project do not deviate from the authorized permit plans. Any deviation in the construction design plans will be brought to the attention of the Corps of Engineers, Wilmington Regulatory Field Office prior to any active construction in waters or wetlands.**
- 4. The permittee shall require its contractors and/or agents to comply with the terms and conditions of this permit in the construction and maintenance of this project, and shall provide each of its contractors and/or agents associated with the construction or maintenance of this project with a copy of this permit, and any authorized modifications. A copy of this permit including the authorized plans referenced in Special Condition (1) and authorized modifications, including all conditions, shall be available at the project site during construction and maintenance of this project.**
- 5. Except as authorized by this permit or any USACE approved modification to this permit, no excavation, fill, or mechanized land-clearing activities shall take place at any time in the construction or maintenance of this project, within waters or wetlands, or shall any activities take place that cause the degradation of waters or wetlands. In addition, except as specified in the plans attached to this permit, no excavation, fill or mechanized land-clearing activities shall take place at any time in the construction or maintenance of this project, in such a manner as to impair normal flows and circulation patterns within, into, or out of waters or wetlands or to reduce the reach of waters or wetlands.**

**This permit does not authorize temporary placement or double handling of excavated or fill material or construction equipment within waters or wetlands outside the permitted area.**

**6. This permit does not authorize the interference with any existing or proposed Federal project, and the Permittee will not be entitled to compensation for damage or injury to the authorized structure or work which may be caused from existing or future operations undertaken by the United States in the public interest. No attempt will be made by the Permittee to prevent the full and free use by the public of all navigable waters at or adjacent to the authorized work. Use of the permitted activity must not interfere with the public's right to free navigation on all navigable waters of the United States.**

**7. Upon conclusion of consultation with NOAA Marine Fisheries (NMFS), the applicant is required to install the submarine cable between December 1 and January 31. Any work proposed outside this restricted window will require coordination with the USACE and NOAA Marine Fisheries.**

**8. Additionally, the applicant has agreed to adhere to NMFS's *Sea Turtle and Smalltooth Sawfish Construction Conditions and apply them to Atlantic sturgeon.***

SHAVER.BRAD.E. Digitally signed by  
SHAVER.BRAD.E.1276601756  
1276601756 Date: 2019.10.16 07:39:54 -04'00'

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Brad Shaver

Action ID Number: SAW-2019-00085

County: New Hanover County

Permittee: NCDOT

Project Name: NCDOT Br 11 US 74 Isabel Holmes Bridge Submarine Cable Division 3

Date Verification Issued: October 15, 2019

Project Manager: Brad Shaver

Upon completion of the activity authorized by this permit and any mitigation required by the permit, sign this certification and return it to the following address:

US ARMY CORPS OF ENGINEERS  
WILMINGTON DISTRICT  
Attn: Brad Shaver  
69 Darlington Ave  
Wilmington, NC 28403

Please note that your permitted activity is subject to a compliance inspection by a U. S. Army Corps of Engineers representative. Failure to comply with any terms or conditions of this authorization may result in the Corps suspending, modifying or revoking the authorization and/or issuing a Class I administrative penalty, or initiating other appropriate legal action.

I hereby certify that the work authorized by the above referenced permit has been completed in accordance with the terms and condition of the said permit, and required mitigation was completed in accordance with the permit conditions.

\_\_\_\_\_  
Signature of Permittee

\_\_\_\_\_  
Date

**NATIONWIDE PERMIT 12**  
**DEPARTMENT OF THE ARMY**  
**CORPS OF ENGINEERS**  
**FINAL NOTICE OF ISSUANCE AND MODIFICATION OF NATIONWIDE PERMITS**  
**FEDERAL REGISTER**  
**AUTHORIZED MARCH 19, 2017**

**Utility Line Activities.** Activities required for the construction, maintenance, repair, and removal of utility lines and associated facilities in waters of the United States, provided the activity does not result in the loss of greater than 1/2-acre of waters of the United States for each single and complete project.

**Utility lines:** This NWP authorizes the construction, maintenance, or repair of utility lines, including outfall and intake structures, and the associated excavation, backfill, or bedding for the utility lines, in all waters of the United States, provided there is no change in pre-construction contours. A “utility line” is defined as any pipe or pipeline for the transportation of any gaseous, liquid, liquescent, or slurry substance, for any purpose, and any cable, line, or wire for the transmission for any purpose of electrical energy, telephone, and telegraph messages, and radio and television communication. The term “utility line” does not include activities that drain a water of the United States, such as drainage tile or french drains, but it does apply to pipes conveying drainage from another area.

Material resulting from trench excavation may be temporarily sidecast into waters of the United States for no more than three months, provided the material is not placed in such a manner that it is dispersed by currents or other forces. The district engineer may extend the period of temporary side casting for no more than a total of 180 days, where appropriate. In wetlands, the top 6 to 12 inches of the trench should normally be backfilled with topsoil from the trench. The trench cannot be constructed or backfilled in such a manner as to drain waters of the United States (e.g., backfilling with extensive gravel layers, creating a french drain effect). Any exposed slopes and stream banks must be stabilized immediately upon completion of the utility line crossing of each waterbody.

**Utility line substations:** This NWP authorizes the construction, maintenance, or expansion of substation facilities associated with a power line or utility line in non-tidal waters of the United States, provided the activity, in combination with all other activities included in one single and complete project, does not result in the loss of greater than 1/2-acre of waters of the United States. This NWP does not authorize discharges into non-tidal wetlands adjacent to tidal waters of the United States to construct, maintain, or expand substation facilities.

**Foundations for overhead utility line towers, poles, and anchors:** This NWP authorizes the construction or maintenance of foundations for overhead utility line towers, poles, and anchors in all waters of the United States, provided the foundations are the minimum size necessary and separate footings for each tower leg (rather than a larger single pad) are used where feasible.

**Access roads:** This NWP authorizes the construction of access roads for the construction and maintenance of utility lines, including overhead power lines and utility line substations, in non-tidal waters of the United States, provided the activity, in combination with all other activities included in one single and complete project, does not cause the loss of greater than 1/2-acre of non-tidal waters of the United States. This NWP does not authorize discharges into non-tidal wetlands adjacent to tidal waters for access roads. Access roads must be the minimum width necessary (see Note 2, below). Access roads must be constructed so that the length of the road minimizes any adverse effects on waters of the United States and must be as near as possible to pre-construction contours and elevations (e.g., at grade corduroy roads or geotextile/gravel roads).

Access roads constructed above pre-construction contours and elevations in waters of the United States must be properly bridged or culverted to maintain surface flows.

This NWP may authorize utility lines in or affecting navigable waters of the United States even if there is no associated discharge of dredged or fill material (See 33 CFR Part 322). Overhead utility lines constructed over section 10 waters and utility lines that are routed in or under section 10 waters without a discharge of dredged or fill material require a section 10 permit.

This NWP also authorizes temporary structures, fills, and work necessary to conduct the utility line activity. Appropriate measures must be taken to maintain normal downstream flows and minimize flooding to the maximum extent practicable, when temporary structures, work, and discharges, including cofferdams, are necessary for construction activities, access fills, or dewatering of construction sites. Temporary fills must consist of materials, and be placed in a manner, that will not be eroded by expected high flows. Temporary fills must be removed in their entirety and the affected areas returned to pre-construction elevations. The areas affected by temporary fills must be revegetated, as appropriate.

Notification: The permittee must submit a pre-construction notification to the district engineer prior to commencing the activity if any of the following criteria are met: (1) the activity involves mechanized land clearing in a forested wetland for the utility line right-of-way; (2) a section 10 permit is required; (3) the utility line in waters of the United States, excluding overhead lines, exceeds 500 feet; (4) the utility line is placed within a jurisdictional area (i.e., water of the United States), and it runs parallel to or along a stream bed that is within that jurisdictional area; (5) discharges that result in the loss of greater than 1/10-acre of waters of the United States; (6) permanent access roads are constructed above grade in waters of the United States for a distance of more than 500 feet; or (7) permanent access roads are constructed in waters of the United States with impervious materials. (See general condition 31.) (Sections 10 and 404)

Note 1: Where the proposed utility line is constructed or installed in navigable waters of the United States (i.e., section 10 waters) within the coastal United States, the Great Lakes, and United States territories, copies of the pre-construction notification and NWP verification will be sent by the Corps to the National Oceanic and Atmospheric Administration (NOAA), National Ocean Service (NOS), for charting the utility line to protect navigation.

Note 2: Access roads used for both construction and maintenance may be authorized, provided they meet the terms and conditions of this NWP. Access roads used solely for construction of the utility line must be removed upon completion of the work, in accordance with the requirements for temporary fills.

Note 3: Pipes or pipelines used to transport gaseous, liquid, liquescent, or slurry substances over navigable waters of the United States are considered to be bridges, not utility lines, and may require a permit from the U.S. Coast Guard pursuant to Section 9 of the Rivers and Harbors Act of 1899. However, any discharges of dredged or fill material into waters of the United States associated with such pipelines will require a section 404 permit (see NWP 15).

Note 4: For overhead utility lines authorized by this NWP, a copy of the PCN and NWP verification will be provided to the Department of Defense Siting Clearinghouse, which will evaluate potential effects on military activities.

*The following list of General Conditions has been adapted for work in North Carolina for NCDOT projects. Information related to USACE notification requirements has been removed. Therefore, numbering and lettering below may not be consecutive. Please refer to <http://saw-reg.usace.army.mil/NWP2017/2017NWP12.pdf> for the complete reference.*

#### **4.0 Additional Regional Conditions for Specific Nationwide Permits**

##### **4.1 NWP #12 - Utility Line Activities**

**4.1.1.** Pipeline/utility line construction through jurisdictional waters and wetlands will be accomplished utilizing directional drilling/boring methods to the maximum extent practicable.

**4.1.2.** Temporary discharge of excavated or fill material into wetlands and waters of the United States will be for the absolute minimum period of time necessary to accomplish the work. Temporary discharges will be fully contained with appropriate erosion control or containment methods or otherwise such fills will consist of non-erodible materials.

**4.1.3.** The work area authorized by this permit, including temporary and/or permanent fills, will be minimized to the greatest extent practicable. Justification for work corridors exceeding forty (40) feet in width is required and will be based on pipeline diameter and length, size of equipment required to construct the utility line, and other construction information deemed necessary to support the request. The applicant is required to provide this information to the Corps with the initial notification package.

**4.1.9.** For the purposes of this NWP, any permanently maintained corridor along the utility ROW within forested wetlands shall be considered a permanent impact and a compensatory mitigation plan will be required for all such impacts associated with the requested activity.

**4.1.10.** Use of rip-rap or any other engineered structures to stabilize a stream bed should be avoided to the maximum extent practicable. If riprap stabilization is needed, it should be placed only on the stream banks, or, if it is necessary to be placed in the stream bed, the finished top elevation of the riprap should not exceed that of the original stream bed.

**4.1.11.** When directional boring or horizontal directional drilling (HDD) under waters of the U.S., including wetlands, permittees shall closely monitor the project for hydraulic fracturing or “fracking.” Any discharge from hydraulic fracturing or “fracking” into waters of the U.S., including wetlands, shall be reported to the appropriate Corps Regulatory Field Office within 48 hours. Restoration and/or mitigation may be required as a result from any unintended discharges.

## NATIONWIDE PERMIT GENERAL CONDITIONS

### The following General Conditions must be followed in order for any authorization by a NWP to be valid:

1. Navigation. (a) No activity may cause more than a minimal adverse effect on navigation.  
(b) Any safety lights and signals prescribed by the U.S. Coast Guard, through regulations or otherwise, must be installed and maintained at the permittee's expense on authorized facilities in navigable waters of the United States.  
(c) The permittee understands and agrees that, if future operations by the United States require the removal, relocation, or other alteration, of the structure or work herein authorized, or if, in the opinion of the Secretary of the Army or his authorized representative, said structure or work shall cause unreasonable obstruction to the free navigation of the navigable waters, the permittee will be required, upon due notice from the Corps of Engineers, to remove, relocate, or alter the structural work or obstructions caused thereby, without expense to the United States. No claim shall be made against the United States on account of any such removal or alteration.
2. Aquatic Life Movements. No activity may substantially disrupt the necessary life cycle movements of those species of aquatic life indigenous to the waterbody, including those species that normally migrate through the area, unless the activity's primary purpose is to impound water. All permanent and temporary crossings of waterbodies shall be suitably culverted, bridged, or otherwise designed and constructed to maintain low flows to sustain the movement of those aquatic species. If a bottomless culvert cannot be used, then the crossing should be designed and constructed to minimize adverse effects to aquatic life movements.
3. Spawning Areas. Activities in spawning areas during spawning seasons must be avoided to the maximum extent practicable. Activities that result in the physical destruction (e.g., through excavation, fill, or downstream smothering by substantial turbidity) of an important spawning area are not authorized.
4. Migratory Bird Breeding Areas. Activities in waters of the United States that serve as breeding areas for migratory birds must be avoided to the maximum extent practicable.
6. Suitable Material. No activity may use unsuitable material (e.g., trash, debris, car bodies, asphalt, etc.). Material used for construction or discharged must be free from toxic pollutants in toxic amounts (see section 307 of the Clean Water Act).
7. Water Supply Intakes. No activity may occur in the proximity of a public water supply intake, except where the activity is for the repair or improvement of public water supply intake structures or adjacent bank stabilization.
8. Adverse Effects From Impoundments. If the activity creates an impoundment of water, adverse effects to the aquatic system due to accelerating the passage of water, and/or restricting its flow must be minimized to the maximum extent practicable.

9. Management of Water Flows. To the maximum extent practicable, the pre- construction course, condition, capacity, and location of open waters must be maintained for each activity, including stream channelization, storm water management activities, and temporary and permanent road crossings, except as provided below. The activity must be constructed to withstand expected high flows. The activity must not restrict or impede the passage of normal or high flows, unless the primary purpose of the activity is to impound water or manage high flows. The activity may alter the pre- construction course, condition, capacity, and location of open waters if it benefits the aquatic environment (e.g., stream restoration or relocation activities).

10. Fills Within 100-Year Floodplains. The activity must comply with applicable FEMA- approved state or local floodplain management requirements.

11. Equipment. Heavy equipment working in wetlands or mudflats must be placed on mats, or other measures must be taken to minimize soil disturbance.

12. Soil Erosion and Sediment Controls. Appropriate soil erosion and sediment controls must be used and maintained in effective operating condition during construction, and all exposed soil and other fills, as well as any work below the ordinary high water mark or high tide line, must be permanently stabilized at the earliest practicable date. Permittees are encouraged to perform work within waters of the United States during periods of low-flow or no-flow, or during low tides.

13. Removal of Temporary Fills. Temporary fills must be removed in their entirety and the affected areas returned to pre-construction elevations. The affected areas must be revegetated, as appropriate.

14. Proper Maintenance. Any authorized structure or fill shall be properly maintained, including maintenance to ensure public safety and compliance with applicable NWP general conditions, as well as any activity-specific conditions added by the district engineer to an NWP authorization.

19. Migratory Birds and Bald and Golden Eagles. The permittee is responsible for ensuring their action complies with the Migratory Bird Treaty Act and the Bald and Golden Eagle Protection Act. The permittee is responsible for contacting appropriate local office of the U.S. Fish and Wildlife Service to determine applicable measures to reduce impacts to migratory birds or eagles, including whether “incidental take” permits are necessary and available under the Migratory Bird Treaty Act or Bald and Golden Eagle Protection Act for a particular activity.

21. Discovery of Previously Unknown Remains and Artifacts. If you discover any previously unknown historic, cultural or archeological remains and artifacts while accomplishing the activity authorized by this permit, you must immediately notify the district engineer of what you have found, and to the maximum extent practicable, avoid construction activities that may affect the remains and artifacts until the required coordination has been completed. The district engineer will initiate the Federal, Tribal, and state coordination required to determine if the items or remains warrant a recovery effort or if the site is eligible for listing in the National Register of Historic Places.

30. Compliance Certification. Each permittee who receives an NWP verification letter from the Corps must provide a signed certification documenting completion of the authorized activity and implementation of any required compensatory mitigation. The success of any required permittee- responsible mitigation, including the achievement of ecological performance standards, will be

addressed separately by the district engineer. The Corps will provide the permittee the certification document with the NWP verification letter. The certification document will include:

(a) A statement that the authorized activity was done in accordance with the NWP authorization, including any general, regional, or activity-specific conditions;

(b) A statement that the implementation of any required compensatory mitigation was completed in accordance with the permit conditions. If credits from a mitigation bank or in-lieu fee program are used to satisfy the compensatory mitigation requirements, the certification must include the documentation required by 33 CFR 332.3(l)(3) to confirm that the permittee secured the appropriate number and resource type of credits; and

(c) The signature of the permittee certifying the completion of the activity and mitigation. The completed certification document must be submitted to the district engineer within 30 days of completion of the authorized activity or the implementation of any required compensatory mitigation, whichever occurs later.

## **FINAL REGIONAL CONDITIONS 2017**

### **Final 2017 Regional Conditions for Nationwide Permits (NWP) in the Wilmington District**

#### **1.0 Excluded Waters**

The Corps has identified waters that will be excluded from the use of all NWP's during certain timeframes. These waters are:

##### **1.1 Anadromous Fish Spawning Areas**

Waters of the United States identified by either the North Carolina Division of Marine Fisheries (NCDMF) or the North Carolina Wildlife Resources Commission (NCWRC) as anadromous fish spawning areas are excluded during the period between February 15 and June 30, without prior written approval from the Corps and either NCDMF or NCWRC.

##### **1.2 Trout Waters Moratorium**

Waters of the United States in the designated trout watersheds of North Carolina are excluded during the period between October 15 and April 15 without prior written approval from the NCWRC, or from the Eastern Band of Cherokee Indians (EBCI) Fisheries and Wildlife Management (FWM) office if the project is located on EBCI trust land. (See Section 2.7 for information on the designated trout watersheds).

##### **1.3 Sturgeon Spawning Areas as Designated by the National Marine Fisheries Service (NMFS)**

Waters of the United States designated as sturgeon spawning areas are excluded during the period between February 1 and June 30, without prior written approval from the NMFS.

#### **3.0 List of Corps Regional Conditions for All Nationwide Permits**

The following conditions apply to all Nationwide Permits in the Wilmington District:

### **3.1 Limitation of Loss of Stream Bed**

NWPs may not be used for activities that may result in the loss or degradation of more than 300 total linear feet of stream bed, unless the District Engineer has waived the 300 linear foot limit for ephemeral and intermittent streams on a case-by-case basis and has determined that the proposed activity will result in minimal individual and cumulative adverse impacts to the aquatic environment. Waivers for the loss of ephemeral and intermittent streams must be in writing and documented by appropriate/accepted stream quality assessments\*. This waiver only applies to the 300 linear feet threshold for NWPs.

This Regional Condition does not apply to NWP 23 (Approved Categorical Exclusions).

\*NOTE: Permittees should utilize the most current methodology prescribed by Wilmington District to assess stream function and quality. Information can be found at:

[https://ribits.usace.army.mil/ribits\\_apex/f?p=107:27:0::NO](https://ribits.usace.army.mil/ribits_apex/f?p=107:27:0::NO)

### **3.2 Mitigation for Loss of Stream Bed**

For any NWP that results in a loss of more than 150 linear feet of stream, the permittee shall provide a mitigation proposal to compensate for more than minimal individual and cumulative adverse impacts to the aquatic environment. For stream losses of 150 linear feet or less that require a PCN, the District Engineer may determine, on a case-by-case basis, that compensatory mitigation is required to ensure that the activity results in minimal adverse effect on the aquatic environment.

### **3.3 Pre-construction Notification for Loss of Streambed Exceeding 150 Feet**

Prior to use of any NWP for any activity which impacts more than 150 total linear feet of perennial stream, intermittent or ephemeral stream, the permittee shall submit a PCN to the District Engineer prior to commencing the activity (see General Condition 32). This applies to NWPs that do not have specific notification requirements. If a NWP has specific notification requirements, the requirements of the NWP should be followed.

### **3.4 Restriction on Use of Live Concrete**

For all NWPs which allow the use of concrete as a building material, live or fresh concrete, including bags of uncured concrete, may not come into contact with the water in or entering into waters of the United States. Water inside coffer dams or casings that has been in contact with wet concrete shall only be returned to waters of the United States after the concrete is set and cured and when it no longer poses a threat to aquatic organisms.

### **3.5 Requirements for Using Riprap for Bank Stabilization**

For all NWPs that allow for the use of riprap material for bank stabilization, the following measures shall be applied:

**3.5.1.** Where bank stabilization is conducted as part of an activity, natural design, bioengineering and/or geoengineering methods that incorporate natural durable materials, native seed mixes, and native plants and shrubs are to be utilized to the maximum extent practicable.

**3.5.2.** Filter cloth must be placed underneath the riprap as an additional requirement of its use in North Carolina waters. The placement of filter fabric is not required if the riprap will be pushed or “keyed” into the bank of the waterbody. A waiver from the specifications in this Regional Condition may be requested in writing. The waiver will only be issued if it can be demonstrated that the impacts of complying with this Regional Condition would result in greater adverse impacts to the aquatic environment.

**3.5.3.** The placement of riprap shall be limited to the areas depicted on submitted work plan drawings.

**3.5.4.** The riprap material shall be clean and free from loose dirt or any pollutant except in trace quantities that would not have an adverse environmental effect.

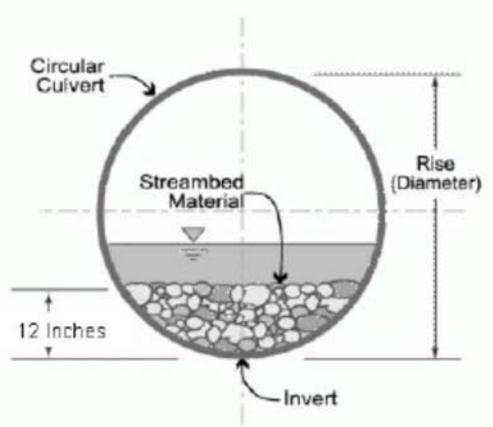
**3.5.5.** It shall be of a size sufficient to prevent its movement from the authorized alignment by natural forces under normal conditions.

**3.5.6.** The riprap material shall consist of clean rock or masonry material such as, but not limited to, granite, marl, or broken concrete.

### **3.6 Requirements for Culvert Placement**

**3.6.1** For all NWP's that involve the construction/installation of culverts, measures will be included in the construction/installation that will promote the safe passage of fish and other aquatic organisms. The dimension, pattern, and profile of the stream above and below a pipe or culvert should not be modified by altering the width or depth of the stream profile in connection with the construction activity. The width, height, and gradient of a proposed culvert should be sufficient to pass the average historical low flow and spring flow without adversely altering flow velocity. Spring flow is the seasonal sustained high flow that typically occurs in the spring. Spring flows should be determined from gage data, if available. In the absence of such data, bank-full flow can be used as a comparable indicator.

In Public Trust Areas of Environmental Concern (AEC) and/or the Estuarine Waters AEC as designated by the Coastal Area Management Act (CAMA): All pipes/culverts must be sufficiently sized to allow for the burial of the bottom of the culvert at least one foot below normal bed elevation.



In all other areas: Culverts greater than 48 inches in diameter will be buried at least one foot below the bed of the stream. Culverts 48 inches in diameter or less shall be buried to maintain aquatic passage and to maintain passage during drought or low flow conditions, and every effort shall be made to maintain the existing channel slope.

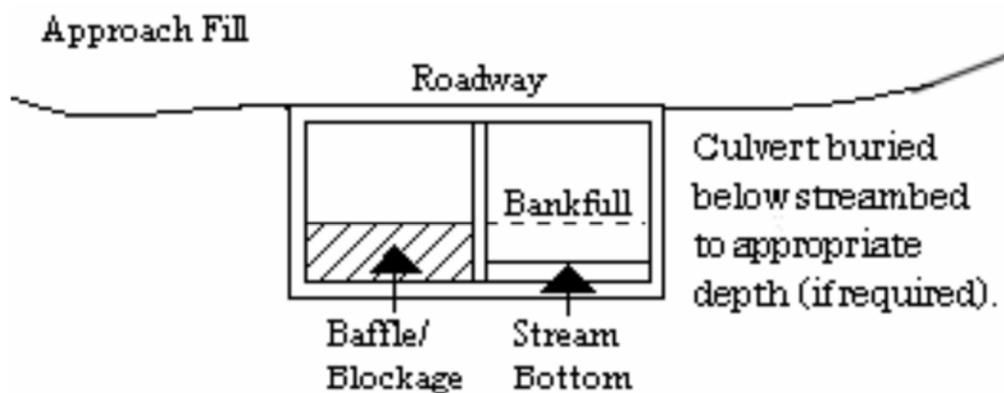
Culverts must be designed and constructed in a manner that minimizes destabilization and head cutting. Destabilizing the channel and head cutting upstream should be considered and appropriate actions incorporated in the design and placement of the culvert.

A waiver from the depth specifications in this condition may be requested, in writing, by the permittee and issued by the Corp; this request must be specific as to the reasons(s) for the request. The waiver will be issued if it can be demonstrated that the proposed design would result in less impacts to the aquatic environment.

All counties: Culverts placed within riparian and/or riverine wetlands must be installed in a manner that does not restrict the flow and circulation patterns of waters of the United States.

Culverts placed across wetland fills purely for the purposes of equalizing surface water do not have to be buried, but the culverts must be of adequate size and/or number to ensure unrestricted transmission of water.

**3.6.2** Bank-full flows (or less) shall be accommodated through maintenance of the existing bank- full channel cross sectional area. Additional culverts or culvert barrels at such crossings shall be allowed only to receive bank-full flows.



**3.6.3** Where adjacent floodplain is available, flows exceeding bank-full should be accommodated by installing culverts at the floodplain elevation. Additional culverts or culvert barrels at such crossings should not be buried, or if buried, must have sills at the inlets to ensure that they only receive flows exceeding bank-full.

**3.6.4** Excavation of existing stream channels shall be limited to the minimum necessary to construct or install the proposed culvert. The final width of the impacted stream at the culvert inlet and outlet should be no greater than the original stream width. A waiver from this condition may be requested in writing; this request must be specific as to the reason(s) for the request. The waiver will be issued if the proposed design would result in less impacts to the aquatic environment and/or if it can be demonstrated that it is not practicable to restore the final width of the impacted stream at the culvert inlet and outlet to the width of the original stream channel.

**3.6.5** The width of the culvert shall be comparable to the width of the stream channel. If the width of the culvert is wider than the stream channel, the culvert shall include baffles, benches and/or sills to maintain the width of the stream channel. A waiver from this condition may be requested in writing; this request must be specific as to the reason(s) for the request. The waiver will be issued if it can be demonstrated that it is not practicable or necessary to include baffles, benches or sills and the design would result in less impacts to the aquatic environment.

### **3.7 Notification to NCDEQ Shellfish Sanitation Section**

Permittees shall notify the NCDEQ Shellfish Sanitation Section prior to dredging in or removing sediment from an area closed to shell fishing where the effluent may be released to an area open for shell fishing or swimming in order to avoid contamination from the disposal area and cause a temporary shellfish closure to be made. Such notification shall also be provided to the appropriate Corps Regulatory Field Office. Any disposal of sand to the ocean beach should occur between November 1 and April 30 when recreational usage is low. Only clean sand should be used and no dredged sand from closed shell fishing areas may be used. If beach disposal were to occur at times other than stated above or if sand from a closed shell fishing area is to be used, a swimming advisory shall be posted, and a press release shall be issued by the permittee.

### **3.8 Submerged Aquatic Vegetation**

Impacts to Submerged Aquatic Vegetation (SAV) are not authorized by any NWP, except NWP 48, unless EFH Consultation has been completed pursuant to the Magnuson-Stevens Fisheries Conservation and Management Act (Magnuson-Stevens Act). Permittees shall submit a PCN (See NWP General Condition 32) to the District Engineer prior to commencing the activity if the project would affect SAV. The permittee may not begin work until notified by the Corps that the requirements of the Magnuson-Stevens Act have been satisfied and that the activity is authorized.

### **3.9 Sedimentation and Erosion Control Structures and Measures**

All PCNs will identify and describe sedimentation and erosion control structures and measures proposed for placement in waters of the United States. The structures and measures should be depicted on maps, surveys or drawings showing location and impacts to jurisdictional wetlands and streams.

### **3.10 Restoration of Temporary Impacts to Stream Beds**

Upon completion of work that involves temporary stream impacts, streambeds are to be restored to pre-project elevations and widths using natural streambed material such that the impacted stream reach mimics the adjacent upstream and downstream reach. The impacted area shall be backfilled with natural streambed material to a depth of at least 12 inches or to the bottom depth of the impacted area if shallower than 12 inches. An engineered in-stream structure or material can be used to provide protection of a buried structure if it provides benefits to the aquatic environment and can be accomplished by a natural streambed design. A permittee may request a waiver of this condition if it is determined a buried structure needs significant physical protection beyond those provided in this condition. This condition does not apply to NWP 27 – Aquatic Habitat Restoration, Enhancement, and Establishment Activities.

### **3.11 Restoration of Temporary Impacts to Stream Banks**

Upon completion of work involving temporary stream bank impacts, stream banks are to be restored to pre-project grade and contours or beneficial grade and contours if the original bank slope is steep and unstable. Natural durable materials, native seed mixes, and native plants and shrubs are to be utilized in the restoration. Natural designs which use bioengineered and/or geo-engineered methods are to be applied. An engineered structure or material can be used to provide protection of a buried structure if it provides benefits to the stream bank environment, provided it is not in excess of the minimum amount needed for protection and does not exceed an average of one cubic yard per running foot placed along the bank below the plane of the ordinary high water mark. A permittee may request a waiver of this condition if it is determined a buried structure needs significant physical protection beyond those provided in this condition. This condition does not apply to NWP 27 – Aquatic Habitat Restoration, Enhancement, and Establishment Activities.

**ROY COOPER**  
*Governor*  
**MICHAEL S. REGAN**  
*Secretary*  
**LINDA CULPEPPER**  
*Director*



October 8, 2019  
 New Hanover County  
 NCDWR Project No. 20191338  
 Isabel Holmes Cable replacement  
 WBS 15BPR.14

**APPROVAL of 401 WATER QUALITY CERTIFICATION with ADDITIONAL CONDITIONS**

Mr. Gordon Cashin  
 NCDOT  
 1000 Birch Ridge Drive  
 Raleigh, NC 27610

Dear Mr. Cashin:

You have our approval, in accordance with the conditions listed below, for the following impacts for the purpose of replacing of a buried submarine cable that will convey power to the drawbridge for the Isabel Holmes Memorial Bridge in the Northeast Cape Fear River in New Hanover County:

**Open Water Impacts in the Cape Fear River Basin**

Site	Permanent Fill in Open Waters (ac)	Temporary Fill in Open Waters (ac)	Total Fill in Open Waters (ac)
Site 1 (Cable installation)	0.04		0.04
<b>Total</b>	0.04		0.04

**Total Open Water Impact for 0.04 acres.**

The project shall be constructed in accordance with your application dated received October 7, 2019. After reviewing your application, we have decided that these impacts are covered by General Water Quality Certification Number 4133. This certification corresponds to the Nationwide Permit 12 issued by the Corps of Engineers. In addition, you should acquire any other federal, state or local permits before you proceed with your project including (but not limited to) Sediment and Erosion Control, Non-Discharge and Water Supply Watershed regulations. This approval will expire with the accompanying 404 permit.

This approval is valid solely for the purpose and design described in your application (unless modified below). Should your project change, you must notify the NCDWR and submit a new application. If the property is sold, the new owner must be given a copy of this Certification and approval letter and is thereby responsible for complying with all the conditions. If total wetland fills for this project (now or in the future) exceed one acre, or of total impacts to perennial streams (now or in the future) exceed 300 linear feet, compensatory mitigation may be required as described in 15A NCAC 2H .0506 (h) (6) and (7). For this approval to remain valid, you must adhere to the conditions listed in the attached certification and any additional conditions listed below.



## Conditions of Certification:

### Project Specific Condition

1. The NCDOT Division Environmental Officer or Environmental Assistant will conduct a pre-construction meeting with all appropriate staff to ensure that the project supervisor and essential staff understand the potential issues with stream and pipe alignment at the permitted site. NCDWR staff shall be invited to the pre-construction meeting. [15A NCAC 02H.0506(b)(2) and (b)(3)]

### General Conditions

2. Unless otherwise approved in this certification, placement of culverts and other structures in open waters and streams shall be placed below the elevation of the streambed by one foot for all culverts with a diameter greater than 48 inches, and 20 percent of the culvert diameter for culverts having a diameter less than 48 inches, to allow low flow passage of water and aquatic life. Design and placement of culverts and other structures including temporary erosion control measures shall not be conducted in a manner that may result in dis-equilibrium of wetlands or streambeds or banks, adjacent to or upstream and downstream of the above structures. The applicant is required to provide evidence that the equilibrium is being maintained if requested in writing by NCDWR. If this condition is unable to be met due to bedrock or other limiting features encountered during construction, please contact NCDWR for guidance on how to proceed and to determine whether or not a permit modification will be required. [15A NCAC 02H.0506(b)(2)]
3. If concrete is used during construction, a dry work area shall be maintained to prevent direct contact between curing concrete and stream water. Water that inadvertently contacts uncured concrete shall not be discharged to surface waters due to the potential for elevated pH and possible aquatic life and fish kills. [15A NCAC 02B.0200]
4. During the construction of the project, no staging of equipment of any kind is permitted in waters of the U.S. or protected riparian buffers. [15A NCAC 02H.0506(b)(2)]
5. The dimension, pattern and profile of the stream above and below the crossing shall not be modified. Disturbed floodplains and streams shall be restored to natural geomorphic conditions. [15A NCAC 02H.0506(b)(2)]
6. The use of rip-rap above the Normal High Water Mark shall be minimized. Any rip-rap placed for stream stabilization shall be placed in stream channels in such a manner that it does not impede aquatic life passage. [15A NCAC 02H.0506(b)(2)]
7. The Permittee shall ensure that the final design drawings adhere to the permit and to the permit drawings submitted for approval. [15A NCAC 02H .0507(c) and 15A NCAC 02H .0506 (b)(2) and (c)(2)]
8. All work in or adjacent to stream waters shall be conducted in a dry work area. Approved BMP measures from the most current version of NCDOT Construction and Maintenance Activities manual such as sandbags, rock berms, cofferdams and other diversion structures shall be used to prevent excavation in flowing water. [15A NCAC 02H.0506(b)(3) and (c)(3)]
9. Heavy equipment may be operated on a barge within the stream channels however; its usage shall minimize sediment from entering the channel. [15A NCAC 02H.0506(b)(2) & (3)]
10. All mechanized equipment operated near surface waters must be regularly inspected and maintained to prevent contamination of stream waters from fuels, lubricants, hydraulic fluids, or other toxic materials. [15A NCAC 02H.0506(b)(3)]
11. No rock, sand or other materials shall be dredged from the stream channel except where authorized by this certification. [15A NCAC 02H.0506(b)(3)]

12. Discharging hydroseed mixtures and washing out hydroseeders and other equipment in or adjacent to surface waters is prohibited. [15A NCAC 02H.0506(b)(3)]
13. The permittee and its authorized agents shall conduct its activities in a manner consistent with State water quality standards (including any requirements resulting from compliance with §303(d) of the Clean Water Act) and any other appropriate requirements of State and Federal law. If the NCDWR determines that such standards or laws are not being met (including the failure to sustain a designated or achieved use) or that State or federal law is being violated, or that further conditions are necessary to assure compliance, the NCDWR may reevaluate and modify this certification. [15A NCAC 02B.0200]
14. All fill slopes located in jurisdictional wetlands shall be placed at slopes no flatter than 3:1, unless otherwise authorized by this certification. [15A NCAC 02H.0506(b)(2)]
- 15. A copy of this Water Quality Certification shall be maintained on the construction site at all times. In addition, the Water Quality Certification and all subsequent modifications, if any, shall be maintained with the Division Engineer and the on-site project manager. [15A NCAC 02H .0507(c) and 15A NCAC 02H .0506 (b)(2) and (c)(2)]**
16. The outside buffer, wetland or water boundary located within the construction corridor approved by this authorization shall be clearly marked by highly visible fencing prior to any land disturbing activities. Impacts to areas within the fencing are prohibited unless otherwise authorized by this certification. [15A NCAC 02H.0501 and .0502]
- 17. The issuance of this certification does not exempt the Permittee from complying with any and all statutes, rules, regulations, or ordinances that may be imposed by other government agencies (i.e. local, state, and federal) having jurisdiction, including but not limited to applicable buffer rules, stormwater management rules, soil erosion and sedimentation control requirements, etc.**
- 18. The Permittee shall report any violations of this certification to the Division of Water Resources within 24 hours of discovery. [15A NCAC 02B.0506(b)(2)]**
19. Upon completion of the project (including any impacts at associated borrow or waste sites), the NCDOT Division Engineer shall complete and return the enclosed "Certification of Completion Form" to notify the NCDWR when all work included in the 401 Certification has been completed. [15A NCAC 02H.0502(f)]
20. Native riparian vegetation must be reestablished in the riparian areas within the construction limits of the project by the end of the growing season following completion of construction. [15A NCAC 02B.0231(a)(6)]
21. There shall be no excavation from, or waste disposal into, jurisdictional wetlands or waters associated with this permit without appropriate modification. Should waste or borrow sites, or access roads to waste or borrow sites, be located in wetlands or streams, compensatory mitigation will be required since that is a direct impact from road construction activities.[15A NCAC 02H.0506(b)(3) and (c)(3)]
22. Erosion and sediment control practices must be in full compliance with all specifications governing the proper design, installation and operation and maintenance of such Best Management Practices in order to protect surface waters standards [15A NCAC 02H.0506(b)(3) and (c)(3)]:
  - a. The erosion and sediment control measures for the project must be designed, installed, operated, and maintained in accordance with the most recent version of the *North Carolina Sediment and Erosion Control Planning and Design Manual*.
  - b. The design, installation, operation, and maintenance of the sediment and erosion control measures must be such that they equal, or exceed, the requirements specified in the most recent version of the *North Carolina Sediment and Erosion Control Manual*. The devices shall be maintained on all construction sites, borrow sites, and waste pile (spoil) projects, including contractor-owned or leased borrow pits associated with the project.

- c. For borrow pit sites, the erosion and sediment control measures must be designed, installed, operated, and maintained in accordance with the most recent version of the *North Carolina Surface Mining Manual*.
- d. The reclamation measures and implementation must comply with the reclamation in accordance with the requirements of the Sedimentation Pollution Control Act.

23. Sediment and erosion control measures shall not be placed in wetlands or waters unless otherwise approved by this Certification. [15A NCAC 02H.0506(b)(3) and (c)(3)]

If you wish to contest any statement in the attached Certification you must file a petition for an administrative hearing. You may obtain the petition form from the office of Administrative hearings. You must file the petition with the office of Administrative Hearings within sixty (60) days of receipt of this notice. A petition is considered filed when it is received in the office of Administrative Hearings during normal office hours. The Office of Administrative Hearings accepts filings Monday through Friday between the hours of 8:00am and 5:00pm, except for official state holidays. The original and one (1) copy of the petition must be filed with the Office of Administrative Hearings.

The petition may be faxed-provided the original and one copy of the document is received by the Office of Administrative Hearings within five (5) business days following the faxed transmission. The mailing address for the Office of Administrative Hearings is:

Office of Administrative Hearings  
6714 Mail Service Center  
Raleigh, NC 27699-6714  
Telephone: (919) 431-3000, Facsimile: (919) 431-3100

A copy of the petition must also be served on DEQ as follows:

Mr. Bill F. Lane, General Counsel  
Department of Environmental Quality  
1601 Mail Service Center  
Raleigh, NC 27699-1601

This letter completes the review of the Division of Water Resources under Section 401 of the Clean Water Act. If you have any questions, please contact Joanne Steenhuis at (910) 796-7306 or joanne.steenhuis@ncdenr.gov.

Sincerely,

DocuSigned by:



9C9886312DCD474...

Linda Culpepper, Director  
Division of Water Resources

Electronic copy only distribution:

Brad Shaver, US Army Corps of Engineers, Wilmington Field Office  
Mason Herndon, Division 3 Environmental Supervisor  
Chris Rivenbark, NC Department of Transportation  
Cathy Brittingham, NC Division of Coastal Management  
Joanne Steenhuis, NC Division of Water Resources Wilmington Regional Office  
File Copy

ROY COOPER  
Governor  
MICHAEL S. REGAN  
Secretary  
LINDA CULPEPPER  
Director



NCDWR Project No.: \_\_\_\_\_ County: \_\_\_\_\_

Applicant: \_\_\_\_\_

Project Name: \_\_\_\_\_

Date of Issuance of 401 Water Quality Certification: \_\_\_\_\_

**Certificate of Completion**

Upon completion of all work approved within the 401 Water Quality Certification or applicable Buffer Rules, and any subsequent modifications, the applicant is required to return this certificate to the 401 Transportation Permitting Unit, North Carolina Division of Water Resources, 1617 Mail Service Center, Raleigh, NC, 27699-1617. This form may be returned to NCDWR by the applicant, the applicant’s authorized agent, **or** the project engineer. It is not necessary to send certificates from all of these.

***Applicant’s Certification***

I, \_\_\_\_\_, hereby state that, to the best of my abilities, due care and diligence was used in the observation of the construction such that the construction was observed to be built within substantial compliance and intent of the 401 Water Quality Certification and Buffer Rules, the approved plans and specifications, and other supporting materials.

Signature: \_\_\_\_\_ Date: \_\_\_\_\_

***Agent’s Certification***

I, \_\_\_\_\_, hereby state that, to the best of my abilities, due care and diligence was used in the observation of the construction such that the construction was observed to be built within substantial compliance and intent of the 401 Water Quality Certification and Buffer Rules, the approved plans and specifications, and other supporting materials.

Signature: \_\_\_\_\_ Date: \_\_\_\_\_

***Engineer’s Certification***

\_\_\_\_\_ Partial \_\_\_\_\_ Final

I, \_\_\_\_\_, as a duly registered Professional Engineer in the State of North Carolina, having been authorized to observe (periodically, weekly, full time) the construction of the project for the Permittee hereby state that, to the best of my abilities, due care and diligence was used in the observation of the construction such that the construction was observed to be built within substantial compliance and intent of the 401 Water Quality Certification and Buffer Rules, the approved plans and specifications, and other supporting materials.

Signature \_\_\_\_\_ Registration No. \_\_\_\_\_  
Date \_\_\_\_\_



**STATE OF NORTH CAROLINA  
DEPARTMENT OF ENVIRONMENTAL QUALITY  
DIVISION OF WATER RESOURCES**

**WATER QUALITY GENERAL CERTIFICATION NO. 4133**

**GENERAL CERTIFICATION FOR PROJECTS ELIGIBLE FOR US ARMY CORPS OF ENGINEERS**

- **NATIONWIDE PERMIT 12 (UTILITY LINE ACTIVITIES)**

Water Quality Certification Number 4133 is issued in conformity with the requirements of Section 401, Public Laws 92-500 and 95-217 of the United States and subject to the North Carolina Regulations in 15A NCAC 02H .0500 and 15A NCAC 02B .0200 for the discharge of fill material to surface waters and wetland areas as described in 33 CFR 330 Appendix A (B) (12) of the US Army Corps of Engineers regulations.

The State of North Carolina certifies that the specified category of activity will not violate applicable portions of Sections 301, 302, 303, 306 and 307 of the Public Laws 92-500 and 95-217 if conducted in accordance with the conditions hereinafter set forth.

Effective date: December 1, 2017

Signed this day: December 1, 2017

By

A handwritten signature in black ink, appearing to be 'Linda Culpepper', written over a horizontal line.

*for* Linda Culpepper  
Interim Director

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**Activities meeting any one (1) of the following thresholds or circumstances require written approval for a 401 Water Quality Certification from the Division of Water Resources (DWR):**

- a) If any of the Conditions of this Certification (listed below) cannot be met; or
- b) Total permanent impacts to wetlands or open waters equal to or greater than one-tenth (1/10) acre within the entire utility project; or
- c) Any permanent impacts to streams; or
- d) Total temporary impacts to streams greater than 500 feet within the entire utility project; or
- e) Any stream relocation or stream restoration; or
- f) Any high-density utility line and associated facilities project, as defined in 15A NCAC 02H .1003(2)(a) and by the density thresholds specified in 15A NCAC 02H .1017, which:
  - i. Disturbs one acre or more of land (including a project that disturbs less than one acre of land that is part of a larger common plan of development or sale); and
  - ii. Has permanent wetland, stream or open water impacts; and
  - iii. Is proposing new built-upon area; and
  - iv. Does not have a stormwater management plan reviewed and approved under a state stormwater program<sup>1</sup> or a state-approved local government stormwater program<sup>2</sup>.

Projects that have vested rights, exemptions, or grandfathering from state or locally-implemented stormwater programs and projects that satisfy state or locally-implemented stormwater programs through use of community in-lieu programs **require written approval**; or

- g) Any permanent impacts to waters, or to wetlands adjacent to waters, designated as: ORW (including SAV), HQW (including PNA), SA, WS-I, WS-II, Trout, or North Carolina or National Wild and Scenic River; or
- h) Any permanent impacts to coastal wetlands [15A NCAC 07H .0205], or Unique Wetlands (UWL); or
- i) Any impact associated with a Notice of Violation or an enforcement action for violation(s) of NC Wetland Rules (15A NCAC 02H .0500), NC Isolated Wetland Rules (15A NCAC 02H .1300), NC Surface Water or Wetland Standards (15A NCAC 02B .0200), or State Regulated Riparian Buffer Rules (15A NCAC 02B .0200); or
- j) Any impacts to subject water bodies and/or state regulated riparian buffers along subject water bodies in the Neuse, Tar-Pamlico, or Catawba River Basins or in the Randleman Lake, Jordan Lake or Goose Creek Watersheds (or any other basin or watershed with State Regulated Riparian Area Protection Rules [Buffer Rules] in effect at the time of application) *unless*:
  - i. The activities are listed as "EXEMPT" from these rules; or
  - ii. A Buffer Authorization Certificate is issued by the NC Division of Coastal Management (DCM); or

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<sup>1</sup> e.g. Coastal Counties, HQW, ORW, or state-implemented Phase II NPDES

<sup>2</sup> e.g. Delegated Phase II NPDES, Water Supply Watershed, Nutrient-Sensitive Waters, or Universal Stormwater Management Program

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- iii. A Buffer Authorization Certificate or a Minor Variance is issued by a delegated or designated local government implementing a state riparian buffer program pursuant to 143-215.23.

**Activities included in this General Certification that do not meet one of the thresholds listed above do not require written approval.**

## **I. ACTIVITY SPECIFIC CONDITIONS:**

1. All sewer lines shall be designed, constructed and maintained in accordance with Title 15A NCAC Chapter 02T.
2. Any utility construction corridor that is parallel to a stream or open water shall not be closer than 10 feet to the top of bank or ordinary high-water mark. Exceptions to this condition require application to and written approval from DWR. [15A NCAC 02H .0506 (b)(4) and (c)(4)]
3. Where there are temporary or permanent impacts from stream crossings, utility lines shall cross the stream channel at a near-perpendicular direction (i.e., between 75 degrees and 105 degrees to the stream bank). Exceptions to this condition require application to and written approval from DWR. [15A NCAC 02H .0506 (b)(2) and (c)(2)]
4. Construction corridors in wetlands and across stream channels shall be minimized to the maximum extent practicable and shall not exceed 50 feet wide for gas utility lines and 40 feet wide for all other utility lines. Exceptions to this condition require application to and written approval from DWR. [15A NCAC 02H .0506 (b)(2) and (c)(2)]

For construction corridors in wetlands and across stream channels, stumps shall be grubbed only as needed to install the utility and remaining stumps shall be cut off at grade level. The general stripping of topsoil within wetlands along the construction corridor is not permitted.

5. Permanent maintained access corridors in wetlands and across stream channels shall be restricted to the minimum width practicable and shall not exceed 30 feet wide for gas utility lines and 20 feet wide for all other utility lines except at manhole locations. 15-foot by 15-foot perpendicular vehicle turnarounds shall be allowed in access corridors but must be spaced at least 500 feet apart. Exceptions to this condition require application to and written approval from DWR. [15A NCAC 02H .0506 (b)(2) and (c)(2)]
6. For all utility lines constructed within wetlands, an anti-seep collar shall be placed at the downstream (utility line gradient) wetland boundary and every 150 feet up the gradient until the utility exits the wetland. Anti-seep collars may be constructed with class B concrete, compacted clay, PVC pipe, or metal collars. Wetland crossings that are directionally drilled, and perpendicular wetland crossings that are open cut and less than 150 feet long do not require anti-seep collars. The compacted clay shall have a specific

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infiltration of  $1 \times 10^{-5}$  cm/sec or less. A section and plan view diagram is attached for the anti-seep collars. [15A NCAC 02H .0506 (b)(4) and (c)(4)]

The following specifications shall apply to class B concrete:

- a. Minimum cement content, sacks per cubic yard with rounded coarse aggregate 5.0
  - b. Minimum cement content, sacks per cubic yard with angular coarse aggregate 5.5
  - c. Maximum water-cement ratio gallons per sack 6.8
  - d. Slump range 2" to 4"
  - e. Minimum strength - 28-day psi 2,500
7. The applicant shall have a specific plan for restoring wetland contours. Any excess material will be removed to a high ground disposal area. [15A NCAC 02H .0506 (b)(2) and (c)(2)]

The mixing of topsoil and subsoils within the wetlands along utility corridors shall be minimized to the greatest extent practical. During excavation, the soils shall be placed on fabric to minimize impacts whenever possible. Topsoil excavated from utility trenches will be piled separately from subsoils and will be backfilled into the trench only after the subsoils have been placed and compacted.

8. For the North Carolina Department of Transportation, compliance with the NCDOT's individual NPDES permit NCS000250 shall serve to satisfy this condition. All other high-density utility line and associated facilities projects that trigger threshold Item (f) above shall comply with one of the following requirements: [15A NCAC 02H .0506(b)(5) and (c)(5)]
- a. Provide a completed Stormwater Management Plan (SMP) for review and approval, including all appropriate stormwater control measure (SCM) supplemental forms and associated items, that complies with the high-density development requirements of 15A NCAC 02H .1003. Stormwater management shall be provided throughout the entire project area in accordance with 15A NCAC 02H .1003. For the purposes of 15A NCAC 02H .1003(2)(a), density thresholds shall be determined in accordance with 15A NCAC 02H .1017.
  - b. Provide documentation (including calculations, photos, etc.) that the project will not cause degradation of downstream surface waters. Documentation shall include a detailed analysis of the hydrological impacts from stormwater runoff when considering the volume and velocity of stormwater runoff from the project built upon area and the size and existing condition of the receiving stream(s).

Exceptions to this condition require application to and written approval from DWR.

### II. GENERAL CONDITIONS:

1. When written authorization is required, the plans and specifications for the project are incorporated into the authorization by reference and are an enforceable part of the Certification. Any modifications to the project require notification to DWR and may require an application submittal to DWR with the appropriate fee. [15A NCAC 02H .0501 and .0502]

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2. No waste, spoil, solids, or fill of any kind shall occur in wetlands or waters beyond the footprint of the impacts (including temporary impacts) as authorized in the written approval from DWR; or beyond the thresholds established for use of this Certification without written authorization. [15A NCAC 02H .0501 and .0502]

No removal of vegetation or other impacts of any kind shall occur to state regulated riparian buffers beyond the footprint of impacts approved in a Buffer Authorization or Variance or as listed as an exempt activity in the applicable riparian buffer rules. [15A NCAC 02B .0200]

3. In accordance with 15A NCAC 02H .0506(h) and Session Law 2017-10, compensatory mitigation may be required for losses of greater than 300 linear feet of perennial streams and/or greater than one (1) acre of wetlands. Impacts associated with the removal of a dam shall not require mitigation when the removal complies with the requirements of Part 3 of Article 21 in Chapter 143 of the North Carolina General Statutes. Impacts to isolated and other non-404 jurisdictional wetlands shall not be combined with 404 jurisdictional wetlands for the purpose of determining when impact thresholds trigger a mitigation requirement. For linear publicly owned and maintained transportation projects that are not determined to be part of a larger common plan of development by the US Army Corps of Engineers, compensatory mitigation may be required for losses of greater than 300 linear feet per perennial stream.

Compensatory stream and/or wetland mitigation shall be proposed and completed in compliance with G.S. 143-214.11. For applicants proposing to conduct mitigation within a project site, a complete mitigation proposal developed in accordance with the most recent guidance issued by the US Army Corps of Engineers Wilmington District shall be submitted for review and approval with the application for impacts.

4. All activities shall be in compliance with any applicable State Regulated Riparian Buffer Rules in Chapter 2 of Title 15A.
5. When applicable, all construction activities shall be performed and maintained in full compliance with G.S. Chapter 113A Article 4 (Sediment and Pollution Control Act of 1973). Regardless of applicability of the Sediment and Pollution Control Act, all projects shall incorporate appropriate Best Management Practices for the control of sediment and erosion so that no violations of state water quality standards, statutes, or rules occur. [15A NCAC 02H .0506 (b)(3) and (c)(3) and 15A NCAC 02B .0200]

Design, installation, operation, and maintenance of all sediment and erosion control measures shall be equal to or exceed the requirements specified in the most recent version of the *North Carolina Sediment and Erosion Control Manual*, or for linear transportation projects, the *NCDOT Sediment and Erosion Control Manual*.

All devices shall be maintained on all construction sites, borrow sites, and waste pile (spoil) sites, including contractor-owned or leased borrow pits associated with the project. Sufficient materials required for stabilization and/or repair of erosion control measures and stormwater routing and treatment shall be on site at all times.

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For borrow pit sites, the erosion and sediment control measures shall be designed, installed, operated, and maintained in accordance with the most recent version of the *North Carolina Surface Mining Manual*. Reclamation measures and implementation shall comply with the reclamation in accordance with the requirements of the Sedimentation Pollution Control Act and the Mining Act of 1971.

If the project occurs in waters or watersheds classified as Primary Nursery Areas (PNAs), SA, WS-I, WS-II, High Quality Waters (HQW), or Outstanding Resource Waters (ORW), then the sedimentation and erosion control designs shall comply with the requirements set forth in 15A NCAC 04B .0124, *Design Standards in Sensitive Watersheds*.

6. Sediment and erosion control measures shall not be placed in wetlands or waters except within the footprint of temporary or permanent impacts authorized under this Certification. Exceptions to this condition require application to and written approval from DWR. [15A NCAC 02H .0501 and .0502]
7. Erosion control matting that incorporates plastic mesh and/or plastic twine shall not be used along streambanks or within wetlands. Exceptions to this condition require application to and written approval from DWR. [15A NCAC 02B .0201]
8. An NPDES Construction Stormwater Permit (NCG010000) is required for construction projects that disturb one (1) or more acres of land. The NCG010000 Permit allows stormwater to be discharged during land disturbing construction activities as stipulated in the conditions of the permit. If the project is covered by this permit, full compliance with permit conditions including the erosion & sedimentation control plan, inspections and maintenance, self-monitoring, record keeping and reporting requirements is required. [15A NCAC 02H .0506(b)(5) and (c)(5)]

The North Carolina Department of Transportation (NCDOT) shall be required to be in full compliance with the conditions related to construction activities within the most recent version of their individual NPDES (NCS000250) stormwater permit. [15A NCAC 02H .0506(b)(5) and (c)(5)]

9. All work in or adjacent to streams shall be conducted so that the flowing stream does not come in contact with the disturbed area. Approved best management practices from the most current version of the *NC Sediment and Erosion Control Manual*, or the *NC DOT Construction and Maintenance Activities Manual*, such as sandbags, rock berms, cofferdams, and other diversion structures shall be used to minimize excavation in flowing water. Exceptions to this condition require application to and written approval from DWR. [15A NCAC 02H .0506(b)(3) and (c)(3)]
10. If activities must occur during periods of high biological activity (e.g. sea turtle nesting, fish spawning, or bird nesting), then biological monitoring may be required at the request of other state or federal agencies and coordinated with these activities. [15A NCAC 02H .0506 (b)(2) and 15A NCAC 04B .0125]

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All moratoriums on construction activities established by the NC Wildlife Resources Commission (WRC), US Fish and Wildlife Service (USFWS), NC Division of Marine Fisheries (DMF), or National Marine Fisheries Service (NMFS) shall be implemented. Exceptions to this condition require written approval by the resource agency responsible for the given moratorium. A copy of the approval from the resource agency shall be forwarded to DWR.

Work within a designated trout watershed of North Carolina (as identified by the Wilmington District of the US Army Corps of Engineers), or identified state or federal endangered or threatened species habitat, shall be coordinated with the appropriate WRC, USFWS, NMFS, and/or DMF personnel.

11. Culverts shall be designed and installed in such a manner that the original stream profiles are not altered and allow for aquatic life movement during low flows. The dimension, pattern, and profile of the stream above and below a pipe or culvert shall not be modified by widening the stream channel or by reducing the depth of the stream in connection with the construction activity. The width, height, and gradient of a proposed culvert shall be such as to pass the average historical low flow and spring flow without adversely altering flow velocity. [15A NCAC 02H .0506(b)(2) and (c)(2)]

Placement of culverts and other structures in streams shall be below the elevation of the streambed by one foot for all culverts with a diameter greater than 48 inches, and 20% of the culvert diameter for culverts having a diameter less than or equal to 48 inches, to allow low flow passage of water and aquatic life.

If multiple pipes or barrels are required, they shall be designed to mimic the existing stream cross section as closely as possible including pipes or barrels at flood plain elevation and/or sills where appropriate. Widening the stream channel shall be avoided.

When topographic constraints indicate culvert slopes of greater than 5%, culvert burial is not required, provided that all alternative options for flattening the slope have been investigated and aquatic life movement/connectivity has been provided when possible (e.g. rock ladders, cross vanes, etc.). Notification, including supporting documentation to include a location map of the culvert, culvert profile drawings, and slope calculations, shall be provided to DWR 60 calendar days prior to the installation of the culvert.

When bedrock is present in culvert locations, culvert burial is not required provided that there is sufficient documentation of the presence of bedrock. Notification, including supporting documentation such as a location map of the culvert, geotechnical reports, photographs, etc. shall be provided to DWR a minimum of 60 calendar days prior to the installation of the culvert. If bedrock is discovered during construction, then DWR shall be notified by phone or email within 24 hours of discovery.

If other site-specific topographic constraints preclude the ability to bury the culverts as described above and/or it can be demonstrated that burying the culvert would result in destabilization of the channel, then exceptions to this condition require application to and written approval from DWR.

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Installation of culverts in wetlands shall ensure continuity of water movement and be designed to adequately accommodate high water or flood conditions. When roadways, causeways, or other fill projects are constructed across FEMA-designated floodways or wetlands, openings such as culverts or bridges shall be provided to maintain the natural hydrology of the system as well as prevent constriction of the floodway that may result in destabilization of streams or wetlands.

The establishment of native woody vegetation and other soft stream bank stabilization techniques shall be used where practicable instead of rip-rap or other bank hardening methods.

12. Bridge deck drains shall not discharge directly into the stream. Stormwater shall be directed across the bridge and pre-treated through site-appropriate means to the maximum extent practicable (e.g. grassed swales, pre-formed scour holes, vegetated buffers, etc.) before entering the stream. Exceptions to this condition require application to and written approval from DWR. [15A NCAC 02H .0506(b)(5)]
13. Application of fertilizer to establish planted/seeded vegetation within disturbed riparian areas and/or wetlands shall be conducted at agronomic rates and shall comply with all other Federal, State and Local regulations. Fertilizer application shall be accomplished in a manner that minimizes the risk of contact between the fertilizer and surface waters. [15A NCAC 02B .0200 and 15A NCAC 02B .0231]
14. If concrete is used during construction, then all necessary measures shall be taken to prevent direct contact between uncured or curing concrete and waters of the state. Water that inadvertently contacts uncured concrete shall not be discharged to waters of the state. [15A NCAC 02B .0200]
15. All proposed and approved temporary fill and culverts shall be removed and the impacted area shall be returned to natural conditions within 60 calendar days after the temporary impact is no longer necessary. The impacted areas shall be restored to original grade, including each stream's original cross sectional dimensions, planform pattern, and longitudinal bed profile. For projects that receive written approval, no temporary impacts are allowed beyond those included in the application and authorization. All temporarily impacted sites shall be restored and stabilized with native vegetation. [15A NCAC 02H .0506(b)(2) and (c)(2)]
16. All proposed and approved temporary pipes/culverts/rip-rap pads etc. in streams shall be installed as outlined in the most recent edition of the *North Carolina Sediment and Erosion Control Planning and Design Manual* or the *North Carolina Surface Mining Manual* or the *North Carolina Department of Transportation Best Management Practices for Construction and Maintenance Activities* so as not to restrict stream flow or cause dis-equilibrium during use of this Certification. [15A NCAC 02H .0506(b)(2) and (c)(2)]

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17. Any rip-rap required for proper culvert placement, stream stabilization, or restoration of temporarily disturbed areas shall be restricted to the area directly impacted by the approved construction activity. All rip-rap shall be placed such that the original stream elevation and streambank contours are restored and maintained. Placement of rip-rap or other approved materials shall not result in de-stabilization of the stream bed or banks upstream or downstream of the area or in a manner that precludes aquatic life passage. [15A NCAC 02H .0506(b)(2)]
18. Any rip-rap used for stream or shoreline stabilization shall be of a size and density to prevent movement by wave, current action, or stream flows and shall consist of clean rock or masonry material free of debris or toxic pollutants. Rip-rap shall not be installed in the streambed except in specific areas required for velocity control and to ensure structural integrity of bank stabilization measures. [15A NCAC 02H .0506(b)(2)]
19. Applications for rip-rap groins proposed in accordance with 15A NCAC 07H .1401 (NC Division of Coastal Management General Permit for construction of Wooden and Rip-rap Groins in Estuarine and Public Trust Waters) shall meet all the specific conditions for design and construction specified in 15A NCAC 07H .1405.
20. All mechanized equipment operated near surface waters shall be inspected and maintained regularly to prevent contamination of stream waters from fuels, lubricants, hydraulic fluids, or other toxic materials. Construction shall be staged in order to minimize the exposure of equipment to surface waters to the maximum extent practicable. Fueling, lubrication and general equipment maintenance shall be performed in a manner to prevent, to the maximum extent practicable, contamination of surface waters by fuels and oils. [15A NCAC 02H .0506(b)(3) and (c)(3) and 15A NCAC 02B .0211 (12)]
21. Heavy equipment working in wetlands shall be placed on mats or other measures shall be taken to minimize soil disturbance. [15A NCAC 02H .0506(b)(3) and (c)(3)]
22. In accordance with 143-215.85(b), the applicant shall report any petroleum spill of 25 gallons or more; any spill regardless of amount that causes a sheen on surface waters; any petroleum spill regardless of amount occurring within 100 feet of surface waters; and any petroleum spill less than 25 gallons that cannot be cleaned up within 24 hours.
23. If an environmental document is required under the State Environmental Policy Act (SEPA), then this General Certification is not valid until a Finding of No Significant Impact (FONSI) or Record of Decision (ROD) is issued by the State Clearinghouse. If an environmental document is required under the National Environmental Policy Act (NEPA), then this General Certification is not valid until a Categorical Exclusion, the Final Environmental Assessment, or Final Environmental Impact Statement is published by the lead agency. [15A NCAC 01C .0107(a)]

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24. This General Certification does not relieve the applicant of the responsibility to obtain all other required Federal, State, or Local approvals before proceeding with the project, including those required by, but not limited to, Sediment and Erosion Control, Non-Discharge, Water Supply Watershed, and Trout Buffer regulations.
25. The applicant and their authorized agents shall conduct all activities in a manner consistent with State water quality standards (including any requirements resulting from compliance with §303(d) of the Clean Water Act), and any other appropriate requirements of State and Federal Law. If DWR determines that such standards or laws are not being met, including failure to sustain a designated or achieved use, or that State or Federal law is being violated, or that further conditions are necessary to assure compliance, then DWR may revoke or modify a written authorization associated with this General Water Quality Certification. [15A NCAC 02H .0507(d)]
26. The permittee shall require its contractors and/or agents to comply with the terms and conditions of this permit in the construction and maintenance of this project, and shall provide each of its contractors and/or agents associated with the construction or maintenance of this project with a copy of this Certification. A copy of this Certification, including all conditions shall be available at the project site during the construction and maintenance of this project. [15A NCAC 02H .0507 (c) and 15A NCAC 02H .0506 (b)(2) and (c)(2)]
27. When written authorization is required for use of this Certification, upon completion of all permitted impacts included within the approval and any subsequent modifications, the applicant shall be required to return a certificate of completion (available on the DWR website: <https://edocs.deq.nc.gov/Forms/Certificate-of-Completion>). [15A NCAC 02H .0502(f)]
28. Additional site-specific conditions, including monitoring and/or modeling requirements, may be added to the written approval letter for projects proposed under this Water Quality Certification in order to ensure compliance with all applicable water quality and effluent standards. [15A NCAC 02H .0507(c)]
29. If the property or project is sold or transferred, the new permittee shall be given a copy of this Certification (and written authorization if applicable) and is responsible for complying with all conditions. [15A NCAC 02H .0501 and .0502]

### III. GENERAL CERTIFICATION ADMINISTRATION:

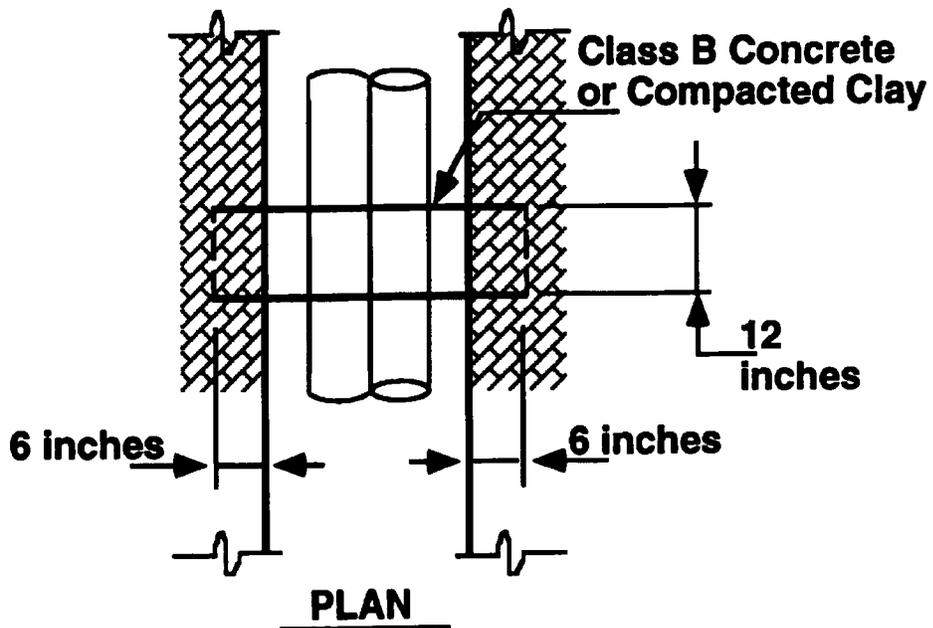
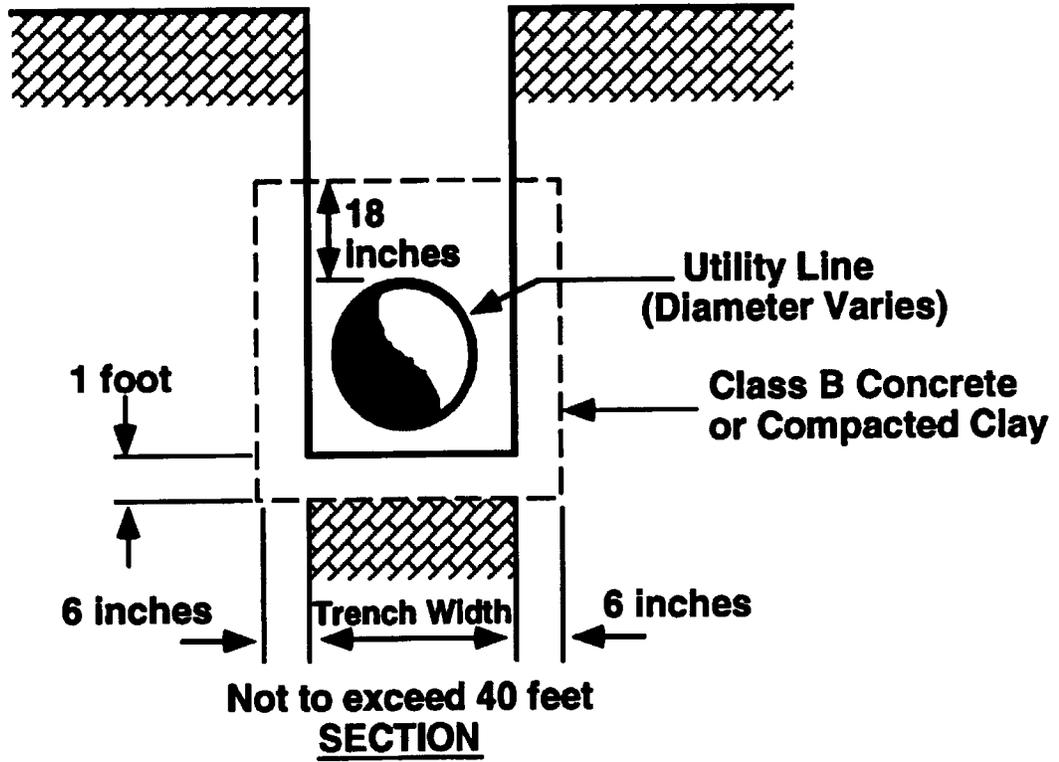
1. In accordance with North Carolina General Statute 143-215.3D(e), written approval for a 401 Water Quality General Certification must include the appropriate fee. An applicant for a CAMA permit under Article 7 of Chapter 113A of the General Statutes for which a Water Quality Certification is required shall only make one payment to satisfy both agencies; the fee shall be as established by the Secretary in accordance with 143-215.3D(e)(7).

## GC4133

2. This Certification neither grants nor affirms any property right, license, or privilege in any waters, or any right of use in any waters. This Certification does not authorize any person to interfere with the riparian rights, littoral rights, or water use rights of any other person and this Certification does not create any prescriptive right or any right of priority regarding any usage of water. This Certification shall not be interposed as a defense in any action respecting the determination of riparian or littoral rights or other rights to water use. No consumptive user is deemed by virtue of this Certification to possess any prescriptive or other right of priority with respect to any other consumptive user regardless of the quantity of the withdrawal or the date on which the withdrawal was initiated or expanded.
3. This Certification grants permission to the Director, an authorized representative of the Director, or DWR staff, upon the presentation of proper credentials, to enter the property during normal business hours. [15A NCAC 02H .0502(e)]
4. This General Certification shall expire on the same day as the expiration date of the corresponding Nationwide Permit and/or Regional General Permit. The conditions in effect on the date of issuance of Certification for a specific project shall remain in effect for the life of the project, regardless of the expiration date of this Certification. This General Certification is rescinded when the US Army Corps of Engineers reauthorizes any of the corresponding Nationwide Permits and/or Regional General Permits or when deemed appropriate by the Director of the Division of Water Resources.
5. Non-compliance with or violation of the conditions herein set forth by a specific project may result in revocation of this General Certification for the project and may also result in criminal and/or civil penalties.
6. The Director of the North Carolina Division of Water Resources may require submission of a formal application for Individual Certification for any project in this category of activity if it is deemed in the public's best interest or determined that the project is likely to have a significant adverse effect upon water quality, including state or federally listed endangered or threatened aquatic species, or degrade the waters so that existing uses of the water or downstream waters are precluded.

*History Note: Water Quality Certification (WQC) Number 4133 issued December 1, 2017 replaces WQC 4086 issued March 3, 2017; WQC 3884 issued March 19, 2012; WQC Number 3819 issued March 19, 2010; WQC Number 3699 issued November 1, 2007; WQC Number 3625 issued March 19, 2007; WQC Number 3374 issued March 18, 2002; WQC Number 3288 issued June 1, 2000; WQC Number 3101 issued February 11, 1997; WQC Number 3022 issued September 6, 1995, WQC Number 2664 issued January 21, 1992.*

**ANTI -SEEP COLLAR**





## Statement of Compliance and Consistency

This permit is subject to compliance with this application, site drawing and attached general and specific conditions. Any violation of these terms may subject the permittee to a fine or criminal or civil action; and may cause the permit to become null and void.

This permit must be on the project site and accessible to the permit officer when the project is inspected for compliance. The applicant certifies by signing this permit that 1) prior to undertaking any activities authorized by this permit, the applicant will confer with appropriate local authorities to confirm that this project is consistent with the local land use plan and all local ordinances, and 2) a written statement or certified mail return receipt has been obtained from the adjacent riparian landowner(s).

The State of North Carolina and the Division of Coastal Management, in issuing this permit under the best available information and belief, certify that this project is consistent with the North Carolina Coastal Management Program.

### River Basin Rules Applicable To Your Project:

Tar - Pamlico River Basin Buffer Rules

Other: \_\_\_\_\_

Neuse River Basin Buffer Rules

If indicated on front of permit, your project is subject to the Environmental Management Commission's Buffer Rules for the River Basin checked above due to its location within that River Basin. These buffer rules are enforced by the NC Division of Water Resources. Contact the Division of Water Resources at the Washington Regional Office (252-946-6481) or the Wilmington Regional Office (910-796-7215) for more information on how to comply with these buffer rules.

## Division of Coastal Management Offices

### Morehead City Headquarters

400 Commerce Ave  
Morehead City, NC 28557  
252-808-2808/ 1-888-4RCOAST  
Fax: 252-247-3330

(Serves: Carteret, Craven, Onslow -  
North of New River Inlet- and Pamlico  
Counties)

### Washington District

943 Washington Square Mall  
Washington, NC 27889  
252-946-6481  
Fax: 252-948-0478

(Serves: Beaufort, Bertie, Hertford, Hyde,  
Tyrrell and Washington Counties)

### Elizabeth City District

401 S. Griffin St.  
Ste. 300  
Elizabeth City, NC 27909  
252-264-3901  
Fax: 252-264-3723

(Serves: Camden, Chowan, Currituck,  
Dare, Gates, Pasquotank and Perquimans  
Counties)

### Wilmington District

127 Cardinal Drive Ext.  
Wilmington, NC 28405-3845  
910-796-7215  
Fax: 910-395-3964

(Serves: Brunswick, New Hanover,  
Onslow - South of New River Inlet-  
and Pender Counties)



UNITED STATES DEPARTMENT OF COMMERCE  
National Oceanic and Atmospheric Administration  
NATIONAL MARINE FISHERIES SERVICE  
Southeast Regional Office  
263 13<sup>th</sup> Avenue South  
St. Petersburg, Florida 33701-5505  
<https://www.fisheries.noaa.gov/region/southeast>

09/18/2019

F/SER31:SBC  
SERO-2019-00475

Brad Shaver  
Wilmington Regulatory Field Office  
U.S. Army Corps of Engineers  
69 Darlington Ave.  
Wilmington, North Carolina 28403

Philip S. Harris III, P.E., CPM, Unit Head  
Environmental Analysis Unit  
North Carolina Department of Transportation  
1598 Mail Service Center  
Raleigh, North Carolina 27699-1598

Dear Sirs:

This letter responds to your request for consultation with us, the National Marine Fisheries Service (NMFS), pursuant to Section 7 of the Endangered Species Act (ESA) for the following action.

Applicant(s)	ECO Number	Project Type(s)
North Carolina Department of Transportation	SERO-2019-00475	Installation of a submarine cable in the Cape Fear River

### Consultation History

We received your letter requesting consultation on April 29, 2019. We requested additional information on June 5, 2019. We received a final response on August 29, 2019, and initiated consultation that day.

### Project Location

Address	Latitude/Longitude	Water body
Public Road (US 74/NC 133) including bridge over the Northeast Cape Fear River in New Hanover County, North Carolina	34.251967°N, 77.950739°W (North American Datum 1983)	Cape Fear River





**Image of the project location and surrounding area (©2015 Google)**

### **Existing Site Conditions**

The project area is located in the Northeast Cape Fear River, approximately 26.8 river miles (rmi) from the Atlantic Ocean in Atlantic sturgeon critical habitat. Existing structures include a submarine cable and bascule (drawbridge) bridge with an over-water bridge length of approximately 840 feet (ft) and an over-water area of approximately 1.3 acres (ac) (54,000 square feet [ft<sup>2</sup>]). The width of the Cape Fear River at the project area is approximately 850 ft wide. Water depths are approximately 36-41 ft deep per diver's report. The substrate at the Cape Fear River in the vicinity of the proposed crossing is sand and silt. No seagrasses or other marine vegetation are located in the project area.

### **Project Description**

The U.S. Army Corps of Engineers requests authorization to permit in-water work preservation activities for the North Carolina Department of Transportation (NCDOT) on the Isabel Holmes Bascule Bridge on US 74/NC 133 over the Northeast Cape Fear River. The proposed action will include the replacement of a new buried submarine cable that conveys power to the drawbridge mechanism. Construction will include the installation of 4 composite armored cables encased in high-density polyethylene (HDPE) pipe buried below the mudline. The existing cable is in an adjacent location and is proposed to be left in place. The total linear footage (lin ft) of the new cable based on the proposed alignment is approximately 300 ft.

The cable will be installed via trench, which will require excavation to an average depth of 3 ft below the mudline, depending on the location. Only 216 ft of the 300-ft proposed alignment will require trench excavation. The contractor will use a hydraulic suction pump to dig the trench, which would be completed by divers using a handheld vacuum device powered by a hydraulic

pump (mounted on a barge) to remove sediment, then captured in geotextile dewatering bags. The proposed method of installation beneath the fenders is to use jetting; however, if site conditions allow, the contractor will attempt the suction method beneath the fenders. The material removed from the trench will be disposed of off-site in an approved manner and in accordance with all applicable federal, state, and/or local laws and regulations. Any material designated as hazardous waste shall be disposed of at an approved hazardous waste site. Sand and silt displaced from any required jetting will not be captured, though these areas would be small. The trench will be backfilled with approximately 72 cubic yards (yd<sup>3</sup>) of a mixture of crushed stone and sand, crusher dust, or pea gravel.

The applicant anticipates that the duration of in-water work will take several weeks (dependent upon weather and other factors) and has agreed to conduct work during daylight hours only.

**Construction Conditions**

The applicant has agreed to adhere to NMFS's *Sea Turtle and Smalltooth Sawfish Construction Conditions and will apply them to Atlantic sturgeon*.<sup>1</sup> In addition, the applicant will abide by a seasonal restriction for Atlantic sturgeon and restrict cable installation to between December 1 and January 31. A primary nursery area in-water work moratorium of February 1 to September 30 is also in effect for this project. Given the depth and strong current at the project site, NCDOT will not utilize a turbidity curtain.

**Effects Determination(s) for Species the Action Agency or NMFS Believes May Be Affected by the Proposed Action**

Species	ESA Listing Status <sup>2</sup>	Action Agency Effect Determination	NMFS Effect Determination
<b>Fish</b>			
Shortnose sturgeon	E	None made	NLAA
Atlantic sturgeon (Carolina DPS)	E	None made	NLAA

**Critical Habitat**

The project is located in Atlantic sturgeon critical habitat Carolina Unit 4. The physical and biological features (PBFs) of the critical habitat are described in the table below. We believe only the salinity gradient and soft substrate (PBF 2), unobstructed water of appropriate depth (PBF 3), and water quality (PBF 4) may be affected by the proposed action. PBF 1 is not present at the project site.

<sup>1</sup> NMFS. 2006. Sea Turtle and Smalltooth Sawfish Construction Conditions revised March 23, 2006. National Oceanic and Atmospheric Administration, National Marine Fisheries Service, Southeast Regional Office, Protected Resources Division, Saint Petersburg, Florida. <https://www.fisheries.noaa.gov/webdam/download/92937961>

<sup>2</sup> E = endangered; T = threatened; NLAA = may affect, not likely to adversely affect; NE = no effect; NP = not present

<b>PBF Identification</b>	<b>Features</b>	<b>Purpose/Function of PBF</b>
<i>Hard Substrate (PBF 1)</i>	Hard bottom substrate (e.g., rock, cobble, gravel, limestone, boulder, etc.) in low salinity waters (i.e., 0.0-0.5 ppt range)	Necessary for the settlement of fertilized eggs and refuge, growth, and development of early life stages
<i>Salinity Gradient and Soft Substrate (PBF 2)</i>	Aquatic habitat inclusive of waters with a gradual downstream gradient of 0.5 up to as high as 30 parts per thousand and soft substrate (e.g., sand, mud) between the river mouth and spawning sites	Necessary for juvenile foraging and physiological development
<i>Unobstructed Water of Appropriate Depth (PBF 3)</i>	Water of appropriate depth and absent of physical barriers to passage (e.g., locks, dams, thermal plumes, turbidity, sound, reservoirs, gear, etc.) between the river mouth and spawning sites	Necessary to support: <ul style="list-style-type: none"> <li>• Unimpeded movement of adults to and from spawning sites;</li> <li>• Seasonal and physiologically dependent movement of juvenile Atlantic sturgeon to appropriate salinity zones within the river estuary; and</li> <li>• Staging, resting, or holding of subadults or spawning condition adults. Water depths in main river channels must also be deep enough (at least 1.2 m) to ensure continuous flow in the main channel at all times when any sturgeon life stage would be in the river</li> </ul>
<i>Water Quality (PBF 4)</i>	Water quality conditions, especially in the bottom meter of the water column, with appropriate temperature and oxygen values	Necessary to support: <ul style="list-style-type: none"> <li>• Spawning;</li> <li>• Annual and inter-annual adult, subadult, larval, and juvenile survival; and</li> <li>• Larval, juvenile, and subadult growth, development, and recruitment. Appropriate temperature and oxygen values will vary interdependently, and depending on salinity in a particular habitat.</li> </ul>

### **Analysis of Potential Routes of Effects to Species**

Sturgeon may be injured due to interaction with the barge-mounted hydraulic suction pump and jetting activities during cable installation. However, we believe this effect is discountable. The suction pumping will be completed by hand via divers and therefore the likelihood of a sturgeon interacting with the suction pump is greatly reduced. By restricting in-water work to December

1 – February 1, which is outside of the predicted spring and fall spawning period for Atlantic sturgeon, the likelihood of sturgeon presence coinciding with in-water construction is also greatly reduced. If sturgeon are present, they are likely to move away and will be able to access other portions of the river outside of the project area to avoid mechanical equipment during the excavation and installation of the cable. The applicant's implementation of NMFS's *Sea Turtle and Smalltooth Sawfish Construction Conditions* will further reduce the risk by requiring all construction workers watch for sturgeon. Operation of any mechanical construction equipment will cease immediately if a sturgeon is seen within a 50-ft radius of the equipment. Activities will not resume until the protected species has departed the project area of its own volition.

The project area contains habitat that may be used by Atlantic and shortnose sturgeon for spawning, foraging, and refuge. Sturgeon may be temporarily affected by their inability to access the project site due to their avoidance of construction activities and physical exclusion from the project area due to trench dredging and cable installation, however we believe this effect will be insignificant. By restricting in-water work to December 1 – January 31 which is outside of the predicted spring and fall spawning period for Atlantic sturgeon, the likelihood of sturgeon presence coinciding with in-water construction (e.g., trench excavation and cable installation) is greatly reduced. For any sturgeon that are present during construction, river access at the project site will not be completely blocked at any time during the proposed cable installation. The proposed project will not span the entire width of the river, and therefore will allow sturgeon upriver/downriver access at all times during construction. Upon project completion, pre-project habitat characteristics will be restored, the suction and jetting pump and barge will be removed, and Atlantic sturgeon will have access to the habitat again. In-water work will also only occur during daytime hours, leaving noise-free periods during the night when sturgeon can transit through the area to move upstream or downstream of the project location.

#### **Analysis of Potential Routes of Effect to Critical Habitat**

Trench excavation may affect aquatic habitat with a gradual salinity gradient and soft substrate (PBF 2) by removing soft sediments at the project site used by juvenile Atlantic sturgeon for foraging and physiological development. We believe this effect to PBF 2 will be insignificant. Although the sediment used to backfill the excavated material will consist of a new mixture of hard and soft sediments, the amount of soft sediment removed would be at such a small amount and limited compared to the area of sand and silt available adjacent to the project area and in the Cape Fear River. Excavation and construction will have no effect on the salinity gradient in the project area.

The unobstructed water of appropriate depth (PBF 3) may be affected by the proposed action. For the life stages potentially using the action area, PBF 3 refers to water that is free from obstruction such that: spawning adults can make unencumbered movements to the spawning grounds; adults can access staging, resting, and holding habitats; and juveniles can make seasonal and physiologically-dependent movements to appropriate salinity zones within the river. It also refers to the requirement that the main channel be deep enough to ensure that there is continuous flow when adults or juveniles are there. The project will not alter the depth of the main channel. Cape Fear River waters will be partially and temporarily obstructed by the presence of construction equipment and excavation, but these effects will be insignificant due to the temporary nature of the project. By restricting in-water work to December 1 – February 1, which is outside of the predicted spring and fall spawning period for Atlantic sturgeon, the

likelihood of sturgeon presence coinciding with in-water construction (e.g., suction pumping or jetting, and cable installation) is greatly reduced. If sturgeon are present, the installation of the cable and dredging activities will only affect a small portion of the river at a time.

Water quality (PBF 4) supporting important life functions, such as growth and reproduction, of various life stages of Atlantic sturgeon may be affected by increases in temperature and decreases in Dissolved Oxygen (DO) caused by increased turbidity from cable installation, jetting, and suction pumping to create the trench. Suspended sediments that create turbidity absorb more heat than water molecules, potentially raising the water temperature, and decreasing the ability for oxygen to remain dissolved in the water column. Suspended sediments may also decrease DO by reducing light for photosynthesis by aquatic plants or increasing oxygen demand due to decomposition if the suspended sediments are high in organic materials. We anticipate very minor and temporary increases in temperature and decreases in DO that will have an insignificant effect on PBF 4 due to (1) the temporary duration of the project and during daylight hours only, (2) the layer of sediment removed during excavation (to a depth of 3 – 4.5 ft) and backfilled is expected to generate localized turbidity limited to the locations of the equipment and the backfill is expected to remain in the bottom, and (3) the rapid removal and redeposition of sediments on the outgoing tide.

### **Conclusion**

Because all potential project effects to listed species and critical habitat were found to be discountable, insignificant, or beneficial, we conclude that the proposed action is not likely to adversely affect listed species and critical habitat under NMFS's purview. This concludes your consultation responsibilities under the ESA for species under NMFS's purview. Consultation must be reinitiated if a take occurs or new information reveals effects of the action not previously considered, or if 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 identified action. NMFS's findings on the project's potential effects are based on the project description in this response. Any changes to the proposed action may negate the findings of this consultation and may require reinitiation of consultation with NMFS.

We look forward to further cooperation with you on other projects to ensure the conservation of our threatened and endangered marine species and designated critical habitat. If you have any questions on this consultation, please contact Shelby Creager, Consultation Biologist, at (727) 209-5951, or by email at [Shelby.Creager@noaa.gov](mailto:Shelby.Creager@noaa.gov).

Sincerely,



BERNHART.DAVID.M.10  
66125889  
2019.09.18 12:38:55 -04'00'

David Bernhart  
Assistant Regional Administrator  
for Protected Resources

File: 1514-22.f.1/1514-22.1.1



# United States Department of the Interior

## FISH AND WILDLIFE SERVICE

Raleigh Field Office  
Post Office Box 33726  
Raleigh, North Carolina 27636-3726

### **GUIDELINES FOR AVOIDING IMPACTS TO THE WEST INDIAN MANATEE Precautionary Measures for Construction Activities in North Carolina Waters**

The West Indian manatee (*Trichechus manatus*), also known as the Florida manatee, is a Federally-listed endangered aquatic mammal protected under the Endangered Species Act of 1973, as amended (16 U.S.C. 1531 *et seq.*) and the Marine Mammal Protection Act of 1972, as amended (16 U.S.C 1461 *et seq.*). The manatee is also listed as endangered under the North Carolina Endangered Species Act of 1987 (Article 25 of Chapter 113 of the General Statutes). The U.S. Fish and Wildlife Service (Service) is the lead Federal agency responsible for the protection and recovery of the West Indian manatee under the provisions of the Endangered Species Act.

Adult manatees average 10 feet long and weigh about 2,200 pounds, although some individuals have been recorded at lengths greater than 13 feet and weighing as much as 3,500 pounds. Manatees are commonly found in fresh, brackish, or marine water habitats, including shallow coastal bays, lagoons, estuaries, and inland rivers of varying salinity extremes. Manatees spend much of their time underwater or partly submerged, making them difficult to detect even in shallow water. While the manatee's principal stronghold in the United States is Florida, the species is considered a seasonal inhabitant of North Carolina with most occurrences reported from June through October.

To protect manatees in North Carolina, the Service's Raleigh Field Office has prepared precautionary measures for general construction activities in waters used by the species. Implementation of these measure will allow in-water projects which do not require blasting to proceed without adverse impacts to manatees. In addition, inclusion of these guidelines as conservation measures in a Biological Assessment or Biological Evaluation, or as part of the determination of impacts on the manatee in an environmental document prepared pursuant to the National Environmental Policy Act, will expedite the Service's review of the document for the fulfillment of requirements under Section 7 of the Endangered Species Act. These measures include:

1. The project manager and/or contractor will inform all personnel associated with the project that manatees may be present in the project area, and the need to avoid any harm to these endangered mammals. The project manager will ensure that all construction personnel know the general appearance of the species and their habit of moving about completely or partially submerged in shallow water. All construction personnel will be informed that they are responsible for observing water-related activities for the presence of manatees.
2. The project manager and/or the contractor will advise all construction personnel that

there are civil and criminal penalties for harming, harassing, or killing manatees which are protected under the Marine Mammal Protection Act and the Endangered Species Act.

3. If a manatee is seen within 100 yards of the active construction and/or dredging operation or vessel movement, all appropriate precautions will be implemented to ensure protection of the manatee. These precautions will include the immediate shutdown of moving equipment if a manatee comes within 50 feet of the operational area of the equipment. Activities will not resume until the manatee has departed the project area on its own volition (i.e., it may not be herded or harassed from the area).

4. Any collision with and/or injury to a manatee will be reported immediately. The report must be made to the U.S. Fish and Wildlife Service (ph. 919.856.4520 ext. 16), the National Marine Fisheries Service (ph. 252.728.8762), and the North Carolina Wildlife Resources Commission (ph. 252.448.1546).

5. A sign will be posted in all vessels associated with the project where it is clearly visible to the vessel operator. The sign should state:

CAUTION: The endangered manatee may occur in these waters during the warmer months, primarily from June through October. Idle speed is required if operating this vessel in shallow water during these months. All equipment must be shut down if a manatee comes within 50 feet of the vessel or operating equipment. A collision with and/or injury to the manatee must be reported immediately to the U.S. Fish and Wildlife Service (919-856-4520 ext. 16), the National Marine Fisheries Service (252.728.8762), and the North Carolina Wildlife Resources Commission (252.448.1546).

6. The contractor will maintain a log detailing sightings, collisions, and/or injuries to manatees during project activities. Upon completion of the action, the project manager will prepare a report which summarizes all information on manatees encountered and submit the report to the Service's Raleigh Field Office.

7. All vessels associated with the construction project will operate at "no wake/idle" speeds at all times while in water where the draft of the vessel provides less than a four foot clearance from the bottom. All vessels will follow routes of deep water whenever possible.

8. If siltation barriers must be placed in shallow water, these barriers will be: (a) made of material in which manatees cannot become entangled; (b) secured in a manner that they cannot break free and entangle manatees; and, (c) regularly monitored to ensure that manatees have not become entangled. Barriers will be placed in a manner to allow manatees entry to or exit from essential habitat.

Prepared by (rev. 06/2003):  
U.S. Fish and Wildlife Service  
Raleigh Field Office  
Post Office Box 33726  
Raleigh, North Carolina 27636-3726  
919/856-4520

Figure 1. The whole body of the West Indian manatee may be visible in clear water; but in the dark and muddy waters of coastal North Carolina, one normally sees only a small part of the head when the manatee raises its nose to breathe.

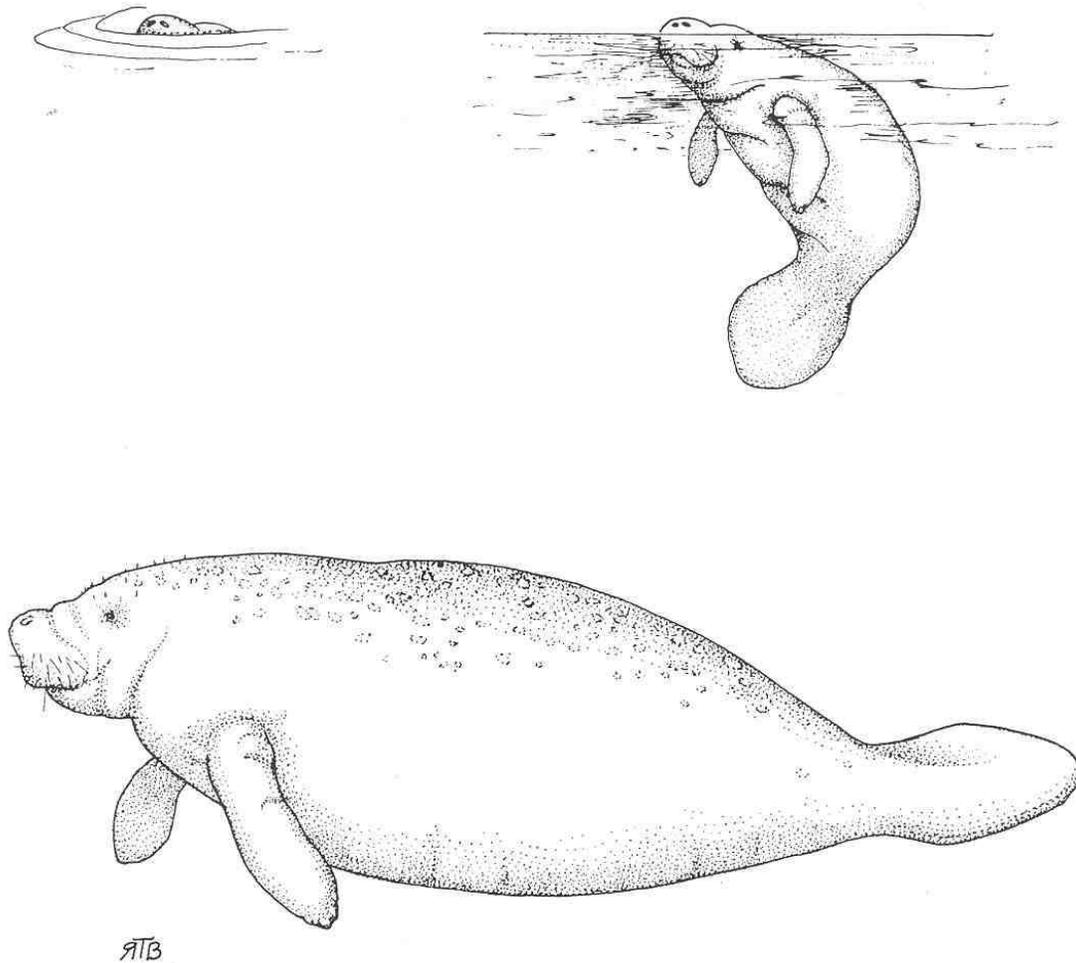


Illustration used with the permission of the North Carolina State Museum of Natural Sciences.  
Source: Clark, M. K. 1987. Endangered, Threatened, and Rare Fauna of North Carolina: Part I. A re-evaluation of the mammals. Occasional Papers of the North Carolina Biological Survey 1987-3. North Carolina State Museum of Natural Sciences. Raleigh, NC. pp. 52.



**UNITED STATES DEPARTMENT OF COMMERCE**  
**National Oceanic and Atmospheric Administration**  
**NATIONAL MARINE FISHERIES SERVICE**  
Southeast Regional Office  
263 13th Avenue South  
St. Petersburg, FL 33701

## **SEA TURTLE AND SMALLTOOTH SAWFISH CONSTRUCTION CONDITIONS**

The permittee shall comply with the following protected species construction conditions:

- a. The permittee shall instruct all personnel associated with the project of the potential presence of these species and the need to avoid collisions with sea turtles and smalltooth sawfish. All construction personnel are responsible for observing water-related activities for the presence of these species.
- b. The permittee shall advise all construction personnel that there are civil and criminal penalties for harming, harassing, or killing sea turtles or smalltooth sawfish, which are protected under the Endangered Species Act of 1973.
- c. Siltation barriers shall be made of material in which a sea turtle or smalltooth sawfish cannot become entangled, be properly secured, and be regularly monitored to avoid protected species entrapment. Barriers may not block sea turtle or smalltooth sawfish entry to or exit from designated critical habitat without prior agreement from the National Marine Fisheries Service's Protected Resources Division, St. Petersburg, Florida.
- d. All vessels associated with the construction project shall operate at "no wake/idle" speeds at all times while in the construction area and while in water depths where the draft of the vessel provides less than a four-foot clearance from the bottom. All vessels will preferentially follow deep-water routes (e.g., marked channels) whenever possible.
- e. If a sea turtle or smalltooth sawfish is seen within 100 yards of the active daily construction/dredging operation or vessel movement, all appropriate precautions shall be implemented to ensure its protection. These precautions shall include cessation of operation of any moving equipment closer than 50 feet of a sea turtle or smalltooth sawfish. Operation of any mechanical construction equipment shall cease immediately if a sea turtle or smalltooth sawfish is seen within a 50-ft radius of the equipment. Activities may not resume until the protected species has departed the project area of its own volition.
- f. Any collision with and/or injury to a sea turtle or smalltooth sawfish shall be reported immediately to the National Marine Fisheries Service's Protected Resources Division (727-824-5312) and the local authorized sea turtle stranding/rescue organization.
- g. Any special construction conditions, required of your specific project, outside these general conditions, if applicable, will be addressed in the primary consultation.

Revised: March 23, 2006

O:\forms\Sea Turtle and Smalltooth Sawfish Construction Conditions.doc



9/19/19

PROJECT: 15BPR.14

CONTRACT:

STATE OF NORTH CAROLINA  
DIVISION OF HIGHWAYS



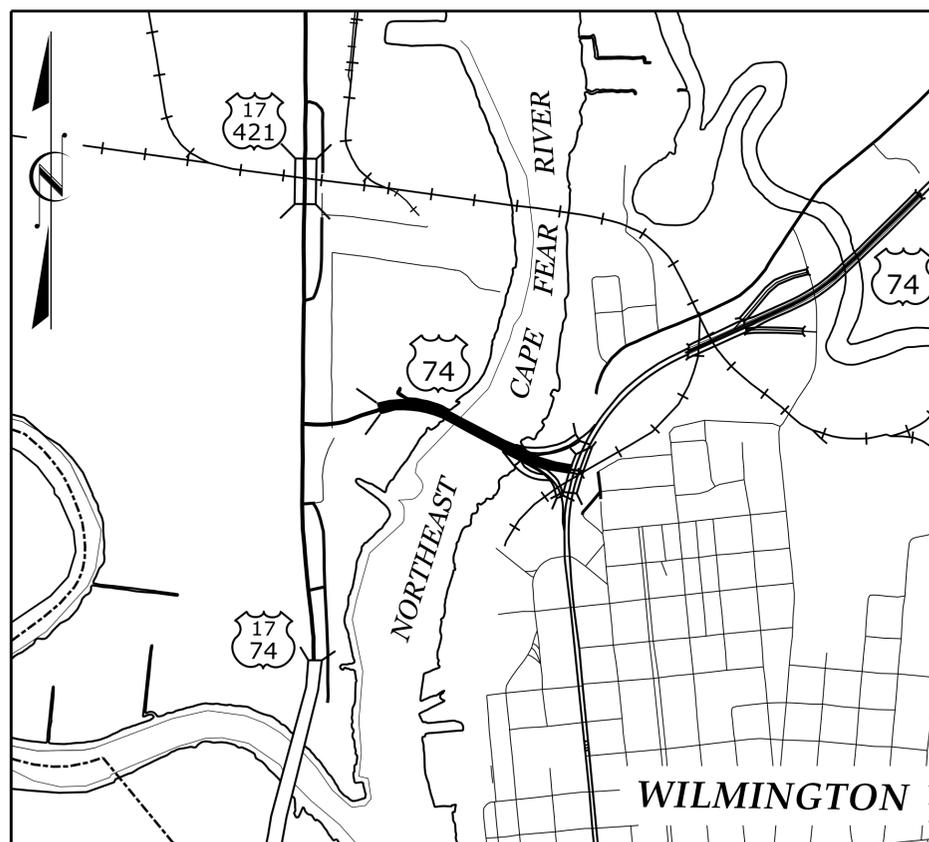
**NEW HANOVER COUNTY**

LOCATION: ISABEL HOLMES BASCULE BRIDGE  
ON US 74, NC 133 OVER  
NORTHEAST CAPE FEAR RIVER

TYPE OF WORK: BRIDGE PRESERVATION

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	15BPR.14	1	213
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	
15BPR.14		CONSTRUCTION	

Permit Drawing  
Sheet 1 of 8



PERMIT DRAWINGS  
DATE: 9/19/2019

**VICINITY MAP**



DESIGN DATA

DESIGN DATA

LENGTH OF STRUCTURE = 0.437 MI

2018 STANDARD SPECIFICATIONS  
LETTING DATE:  
FEBRUARY 19, 2019

Prepared for the Office of:  
**DIVISION OF HIGHWAYS**  
STRUCTURES MANAGEMENT UNIT  
1000 BIRCH RIDGE DR., RALEIGH, N.C. 27610

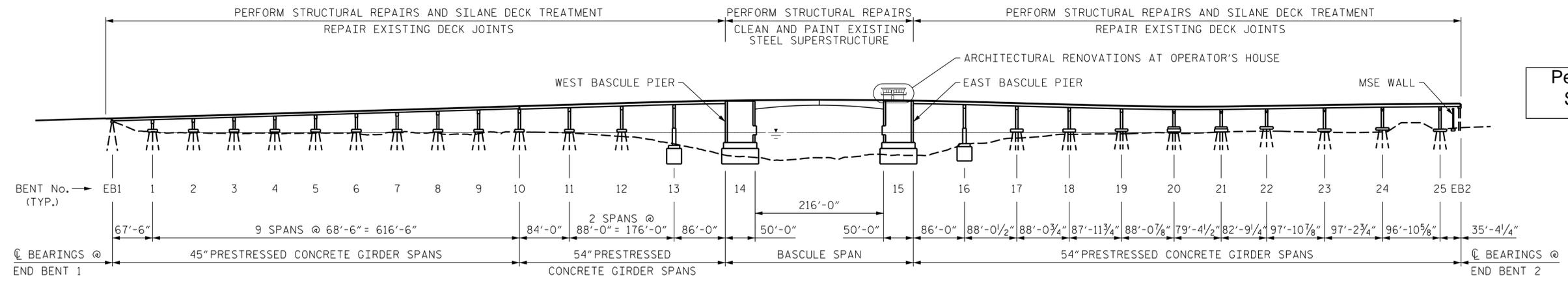
Prepared in the Office of:



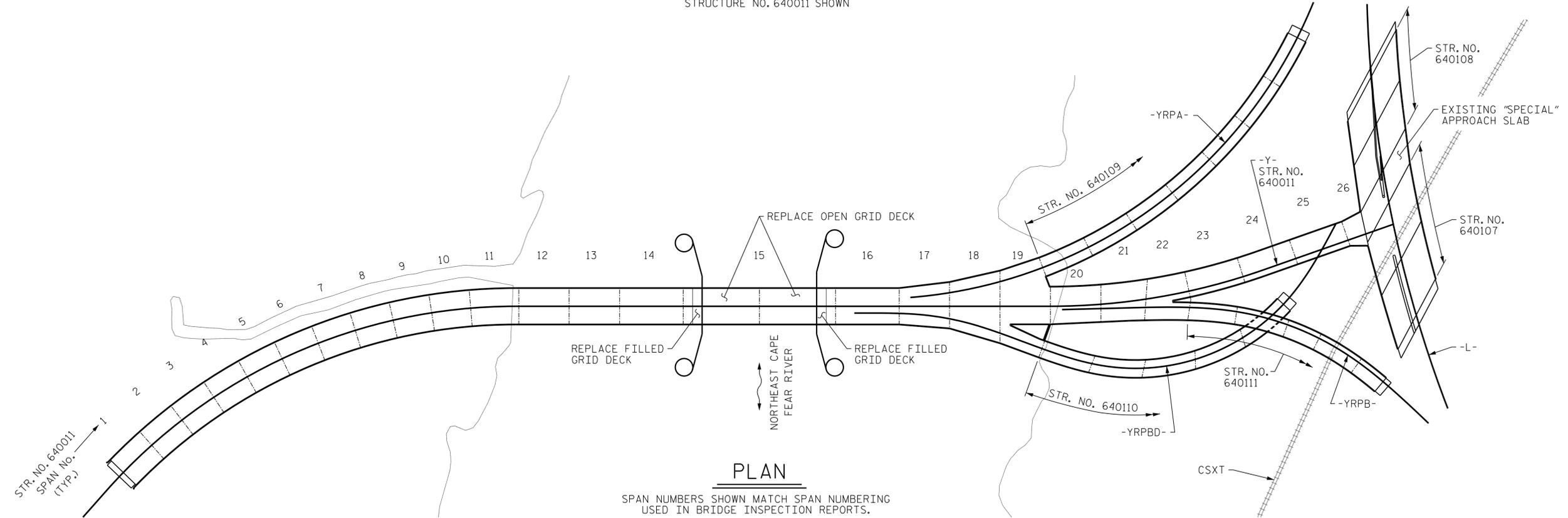
333 FAYETTEVILLE STREET, SUITE 505  
RALEIGH, NC 27601  
NC LICENSE NO. C-2979

DESIGN ENGINEER OF RECORD

DOCUMENT NOT CONSIDERED  
FINAL UNLESS ALL  
SIGNATURES COMPLETED



**ELEVATION**  
STRUCTURE NO. 640011 SHOWN



**PLAN**  
SPAN NUMBERS SHOWN MATCH SPAN NUMBERING  
USED IN BRIDGE INSPECTION REPORTS.

**SCOPE OF WORK**

- STRUCTURAL:**
1. REPLACE OPEN GRID DECK ON BASCULE SPAN.
  2. REPLACE EXISTING FILLED GRID DECK AT ENDS OF BASCULE SPAN.
  3. PLACE SILANE DECK TREATMENT ON APPROACH SPANS AND APPROACH SLAB.
  4. REPLACE/REPAIR DECK EXPANSION JOINTS ON APPROACH SPANS AND ADJACENT STRUCTURES ON EAST SIDE OF RIVER.
  5. PERFORM SUPERSTRUCTURE AND SUBSTRUCTURE REPAIRS AS SHOWN IN THE PLANS.
  6. INSTALL CATHODIC PROTECTION MEASURES AS SHOWN IN THE PLANS.

- MECHANICAL:**  
SEE "MECHANICAL SCOPE OF WORK" SHEET.
- ELECTRICAL:**  
SEE "ELECTRICAL SCOPE OF WORK" SHEET.
- CLEANING AND PAINTING:**  
EXISTING BASCULE SPAN STEEL SUPERSTRUCTURE SHALL BE CLEANED AND PAINTED IN ACCORDANCE WITH THE SPECIAL PROVISIONS.
- UTILITIES:**  
REPLACE EXISTING SANITARY SEWER LINE FROM OPERATOR HOUSE.

- ARCHITECTURAL:**
1. REPLACE OPERATOR'S HOUSE ROOF.
  2. INSTALL NEW OPERATOR'S HOUSE INTERIOR FINISHES, PLUMBING, FIXTURES, LIGHTING, AND WINDOWS.
  3. REPLACE OPERATOR'S HOUSE HVAC.
  4. INSTALL NEW OPERATOR'S HOUSE FIRE ALARM SYSTEM.

PROJECT NO. 15BPR.14  
NEW HANOVER COUNTY  
STATION: \_\_\_\_\_

STATE OF NORTH CAROLINA  
DEPARTMENT OF TRANSPORTATION  
RALEIGH

**GENERAL PLAN  
AND ELEVATION**

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S-3
1			3			TOTAL SHEETS
2			4			213



DESIGNED BY: J. DOUGHTY DATE: JULY 2018  
DRAWN BY: K. WHITE DATE: JULY 2018  
CHECKED BY: B. LOFLIN DATE: AUG 2018  
DESIGN ENGINEER OF RECORD: J. DOUGHTY DATE: NOV 2018

PERMIT DRAWINGS DATE: 9/19/2019

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UNLESS ALL SIGNATURES COMPLETED**

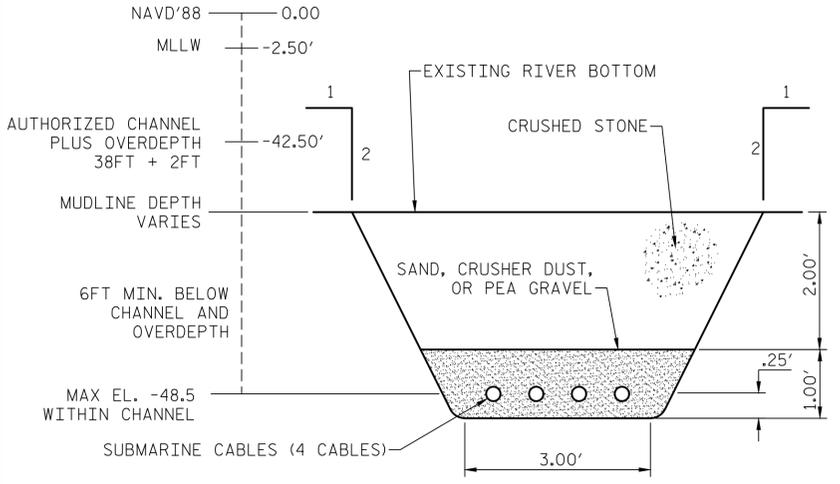
9/19/2019

9/19/2019 400\_0056\_15BPR14\_SML EGD\_640011.dgn



9/19/19

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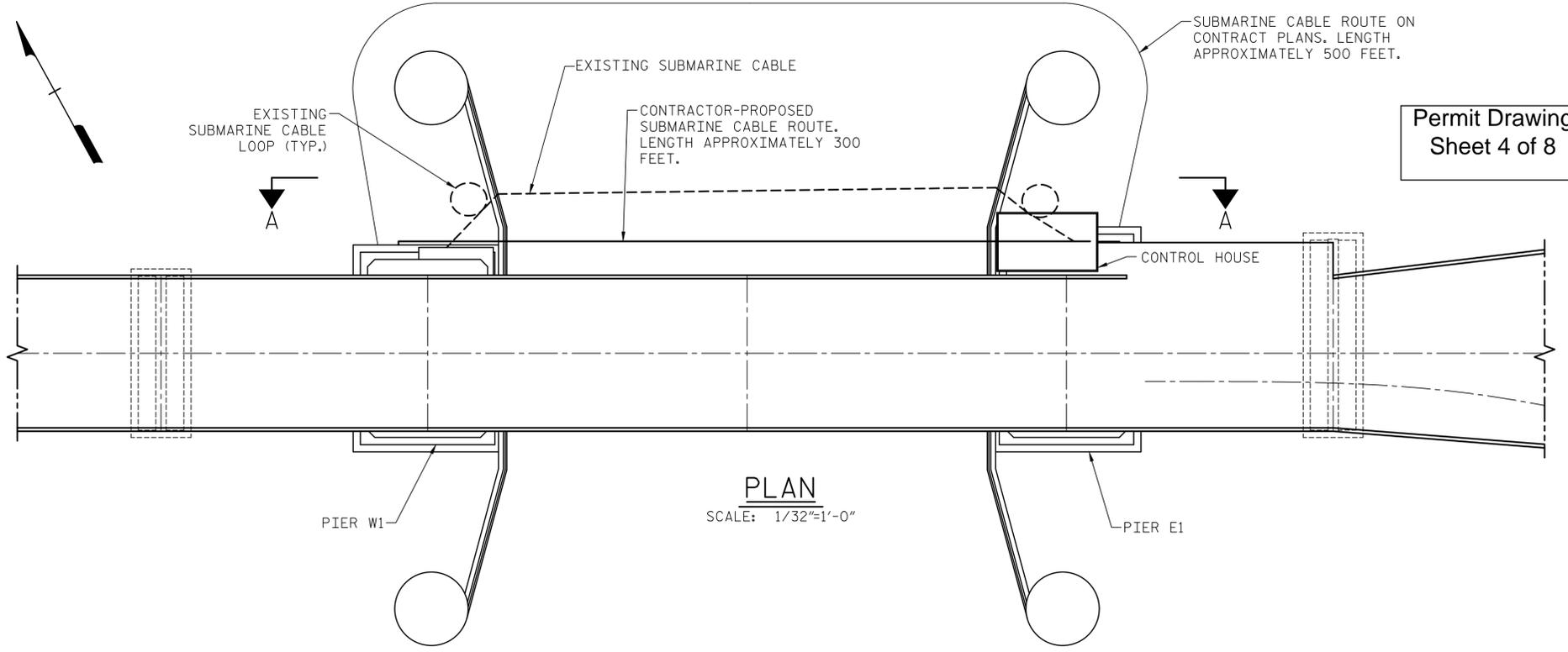
**SECTION B-B  
SUBMARINE CABLE TRENCHING DETAIL**  
3/4"=1'-0"

SECTION IS BASED ON MAXIMUM ELEVATION CRITERIA. ELEVATION MAY VARY ALONG CHANNEL BOTTOM. SEE NOTE 2.

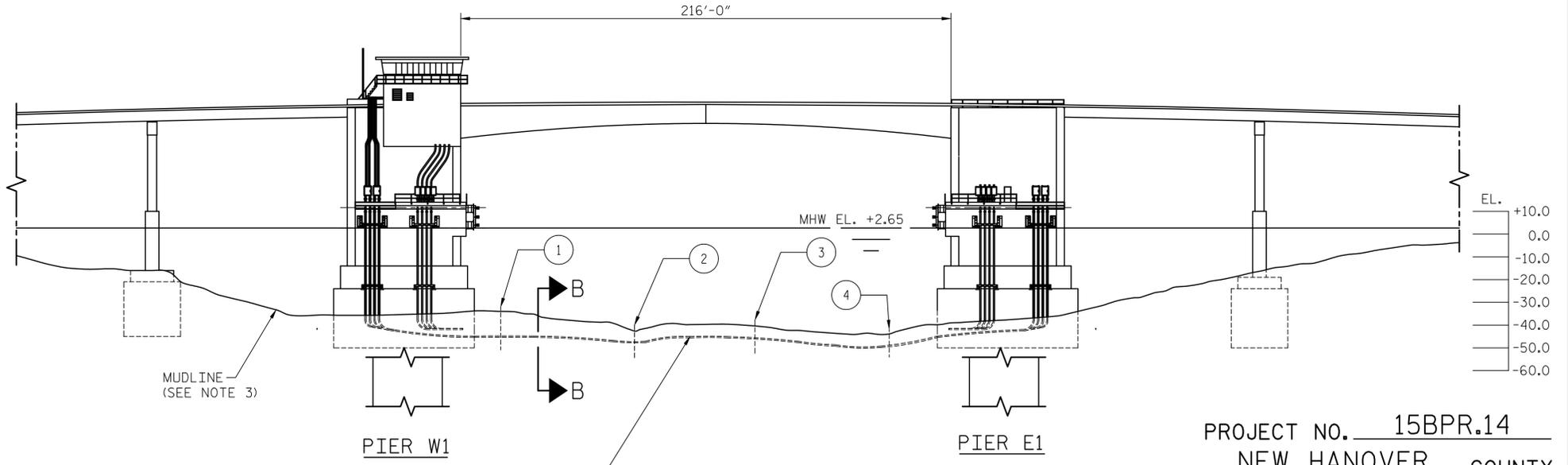
**NOTES:**

1. FOR SUBMARINE CABLE ROUTING DETAILS, REFER TO SHEET E-40 FOR PIER E1 AND SHEET E-39 FOR PIER W1.
2. THE BURIAL DEPTH OF THE SUBMARINE CABLES WILL VARY ALONG THE LENGTH OF THE RUN BASED ON THIS CRITERIA:
  - 2.1. WITHIN THE 200' NAVIGABLE CHANNEL, THE CABLES MUST BE INSTALLED BELOW AN ELEVATION OF -48.50 BASED ON A MINIMUM CLEARANCE OF 46.00' BELOW MLLW.
  - 2.2. MAINTAIN MINIMUM COVERAGE OF CABLES BELOW RIVER BOTTOM AS SHOWN IN SECTION B-B ON THIS SHEET BOTH WITHIN AND OUTSIDE OF THE NAVIGABLE CHANNEL.
3. MUDLINE IN SECTION A-A IS INTENDED TO SHOW GENERAL CABLE ROUTING, IN ACCORDANCE WITH NOTE 2, FOLLOWING CONTOUR OF MUDLINE BUT IS NOT AN EXACT REPRESENTATION OF EXISTING MUDLINE.

LOCATION	APPROXIMATE ELEVATION
①	MUDLINE EL. -44.50 TOP OF CABLE EL. -48.50 ← 6' BELOW OVERDEPTH 4' BELOW MUDLINE
②	MUDLINE EL. -47.00 TOP OF CABLE EL. -49.75 ← 7.25' BELOW OVERDEPTH 2.75' BELOW MUDLINE
③	MUDLINE EL. -45.00 TOP OF CABLE EL. -48.50 ← 6' BELOW OVERDEPTH 3.5' BELOW MUDLINE
④	MUDLINE EL. -48.00 TOP OF CABLE EL. -50.75 ← 8.25' BELOW OVERDEPTH 2.75' BELOW MUDLINE



Permit Drawing  
Sheet 4 of 8



NEW SUBMARINE CABLE ROUTING LOCATION MARKERS INDICATED AS REFERENCE TO DETERMINE APPROXIMATE TOP OF CABLE BURIAL DEPTH BELOW MUDLINE FOR THE NAVIGABLE CHANNEL RUN.

PROJECT NO. 15BPR.14  
NEW HANOVER COUNTY  
STATION: \_\_\_\_\_



333 FAYETTEVILLE STREET, SUITE 505  
RALEIGH, NC 27601  
NC LICENSE NO. C-2979

STATE OF NORTH CAROLINA  
DEPARTMENT OF TRANSPORTATION  
RALEIGH  
ELECTRICAL  
SUBMARINE CABLES,  
PLAN & ELEVATION

DESIGNED BY: J. C. RINEHART DATE: 07/11/18  
DRAWN BY: R. L. REED DATE: 07/11/18  
CHECKED BY: L. V. BORDEN DATE: 11/15/18  
DESIGN ENGINEER OF RECORD: J. G. STRENKOSKI DATE: 11/15/18

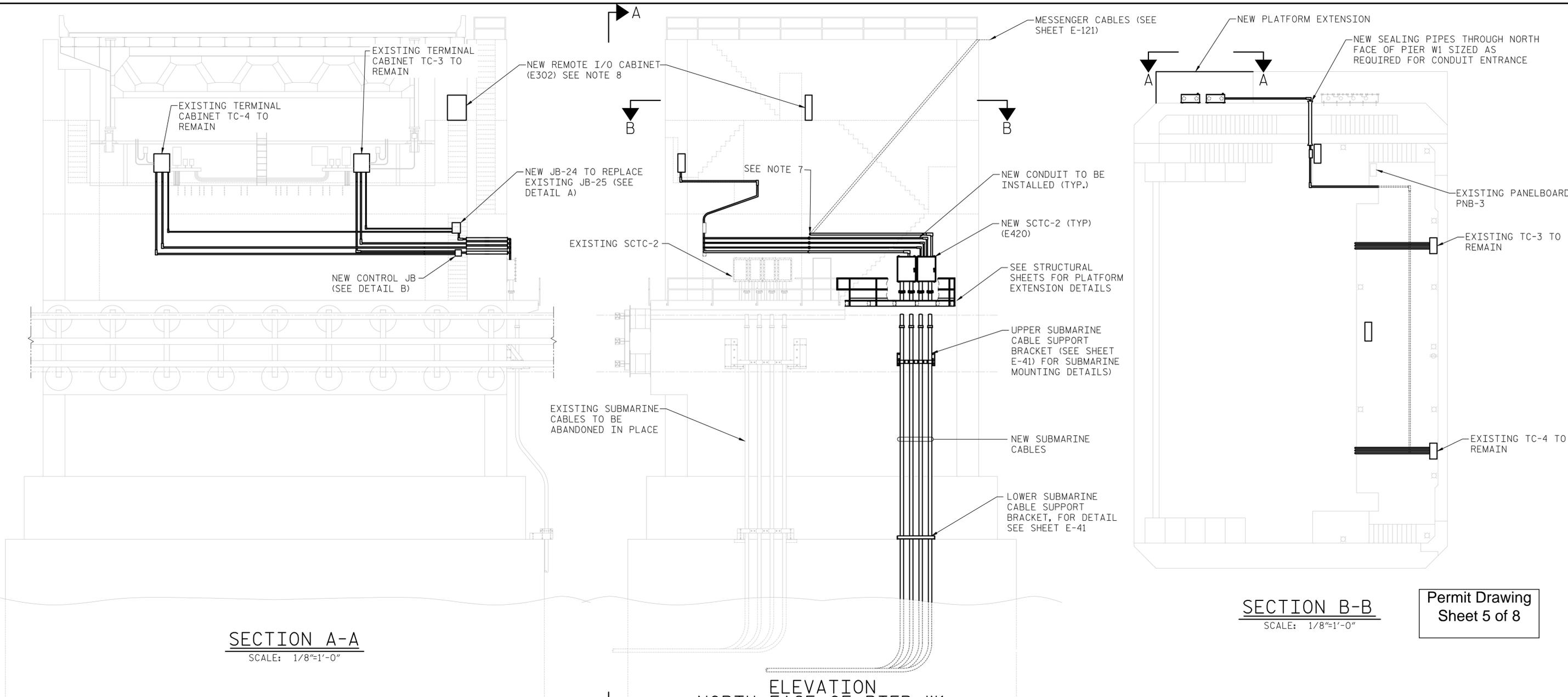
PERMIT DRAWINGS DATE: 9/19/2019

DOCUMENT NOT CONSIDERED FINAL  
UNLESS ALL SIGNATURES COMPLETED

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	E-38
1			3			TOTAL SHEETS 213
2			4			

9/19/19

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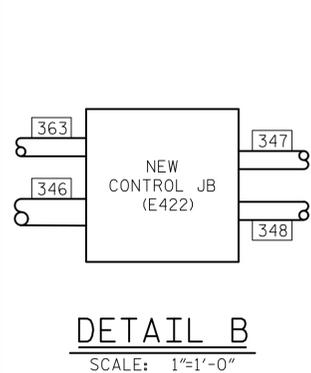


**SECTION A-A**  
SCALE: 1/8"=1'-0"

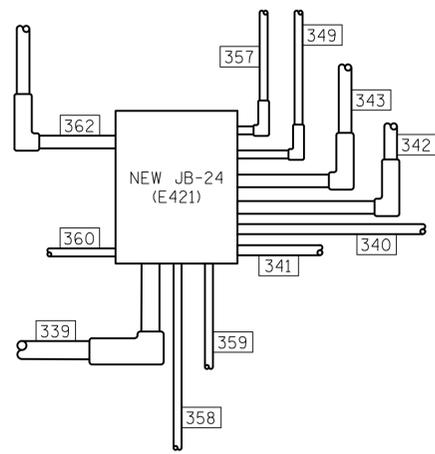
**SECTION B-B**  
SCALE: 1/8"=1'-0"

**ELEVATION NORTH FACE OF PIER W1**  
SCALE: 1/8"=1'-0"

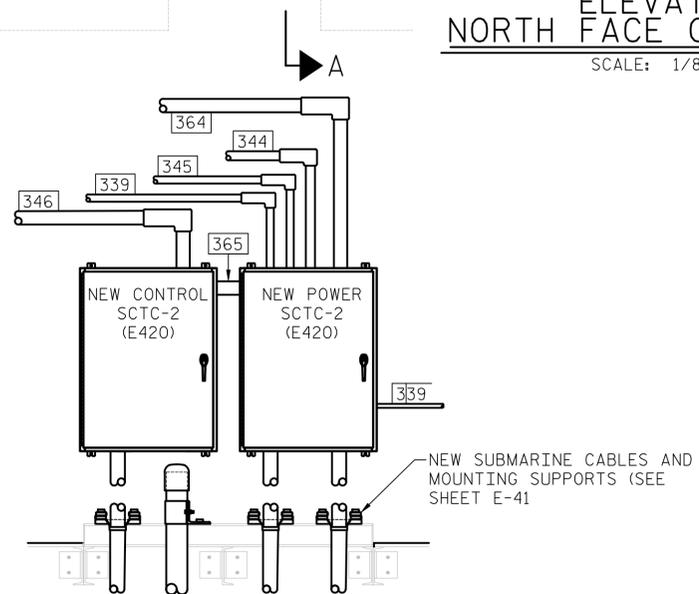
Permit Drawing  
Sheet 5 of 8



**DETAIL B**  
SCALE: 1"=1'-0"



**DETAIL A**  
SEE NOTE 6  
SCALE: 1"=1'-0"



**SECTION C-C**  
SCALE: 1/2"=1'-0"

- NOTES:**
1. SEE SHEET E-110 FOR FAR SIDE CONDUIT SCHEDULE AND SHEET E-109 FOR FAR SIDE CONDUIT LAYOUT.
  2. CONDUIT ROUTING IS SHOWN AS APPROXIMATE. ROUTINGS SHALL BE FIELD ADJUSTED TO WORK AROUND EXISTING CONDUIT AND MACHINERY.
  3. CONTRACTOR SHALL ADJUST CONDUIT AND CONDUIT BODY SIZES AS REQUIRED BY THE NEC.
  4. SEE SHEET E-41 FOR SUBMARINE CABLE DETAILS
  5. SEE SHEET E-119 FOR CONDUIT MOUNTING DETAILS
  6. CONDUIT ROUTING FOR MACHINERY PLATFORM LIGHTS AND RECEPTACLE, STAIRWAY LIGHTS, COUNTERWEIGHT PIT LIGHTS, AND SWITCHES SHALL REPLICATE EXISTING ROUTING.
  7. CONDUIT RUN 364 IS TO PENETRATE THROUGH NORTH WALL INTO COUNTER WEIGHT PIT USING EXISTING BORE TO BE USED FOR NEW MESSENGER CABLE. RUNS 339 AND 344-346 SHALL BE NEW BORES THROUGH NORTH WALL.
  8. EXISTING RAILING SHALL BE MODIFIED TO ALLOW MOUNTING OF NEW PLC I/O CABINET. CONTRACTOR SHALL DETERMINE OPTIMAL LOCATION OF CABINET TO ALLOW FOR NEC WORKING SPACE.

DESIGNED BY: J. C. RINEHART DATE: 07/13/18  
 DRAWN BY: R. L. REED DATE: 07/13/18  
 CHECKED BY: L. V. BORDEN DATE: 11/15/18  
 DESIGN ENGINEER OF RECORD: J. G. STRENKOSKI DATE: 11/15/18

PERMIT DRAWINGS DATE: 9/19/2019



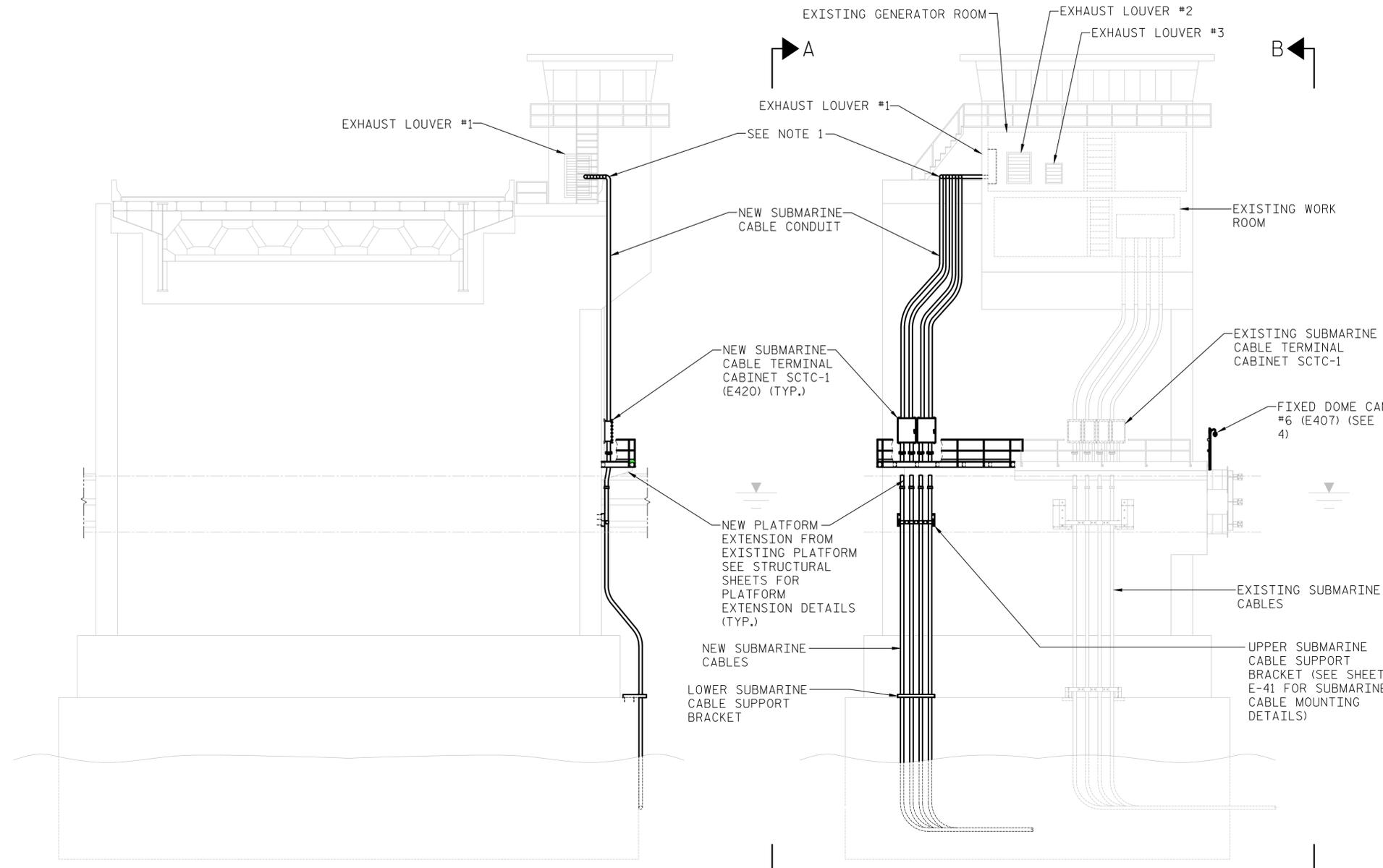
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UNLESS ALL SIGNATURES COMPLETED

PROJECT NO. 15BPR.14  
 NEW HANOVER COUNTY  
 STATION:

STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION RALEIGH					
ELECTRICAL SUBMARINE CABLE ROUTING DETAILS - FAR SIDE					
REVISIONS					
NO.	BY:	DATE:	NO.	BY:	DATE:
1			3		
2			4		
					SHEET NO. E-39
					TOTAL SHEETS 213

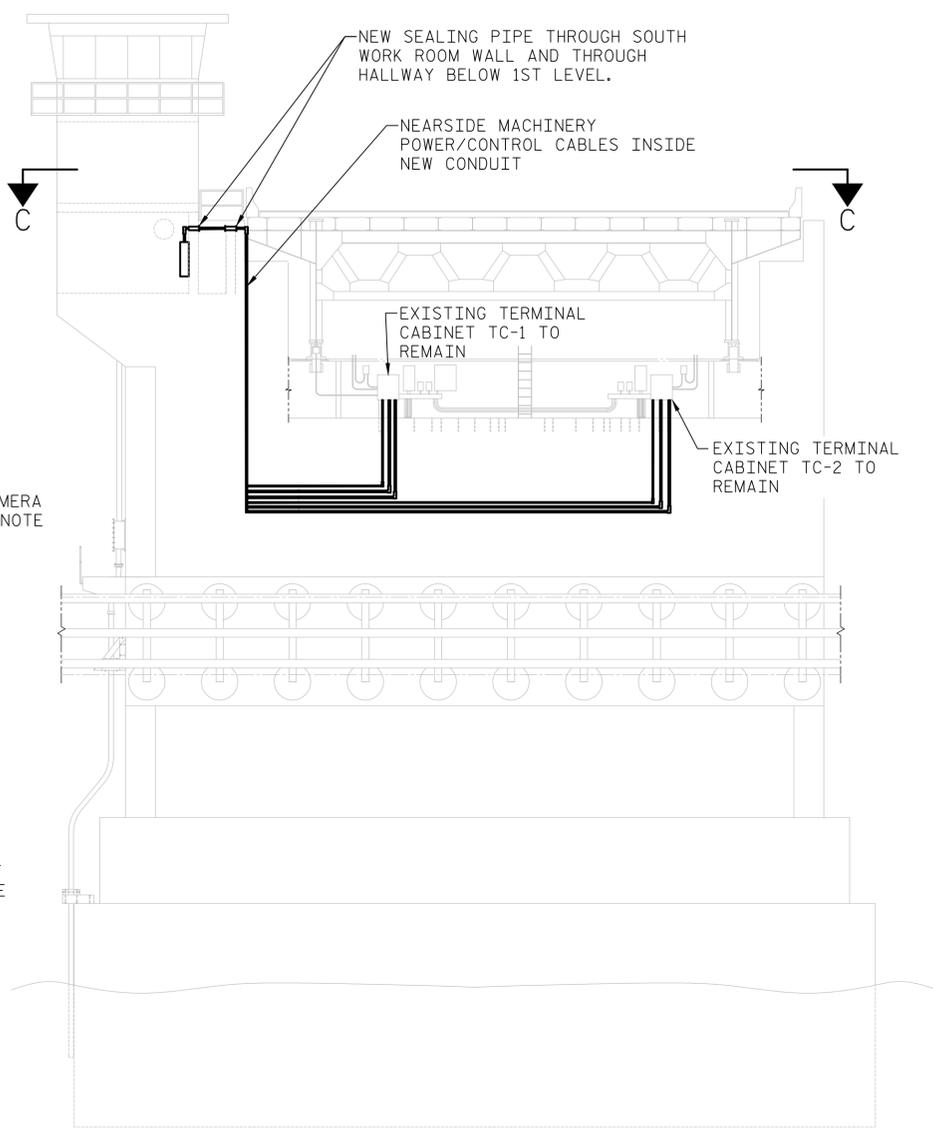
9/19/19

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**SECTION A-A  
EAST FACE OF PIER E1**  
SCALE: 3/32"=1'-0"

**ELEVATION  
NORTH FACE OF PIER E1**  
SCALE: 3/32"=1'-0"



**SECTION B-B  
WEST FACE OF PIER E1**  
SCALE: 3/32"=1'-0"

**NOTES:**

1. ROUTE NEW CONDUIT FROM NEW FAR SIDE EQUIPMENT CABINET IN GENERATOR ROOM, THROUGH EXHAUST LOUVER #1, DOWN NORTH FACE OF PIER E1 TO NEW SUBMARINE CABLE TERMINAL CABINETS.
2. REFER TO SHEET E-19 FOR LOCATION OF NEW FAR SIDE EQUIPMENT CABINET.
3. REFER TO SHEET E-20 FOR SECTION C-C.
4. FOR FIXED DOME CAMERA #6 CONDUIT ROUTING DETAILS, SEE SHEET E-25. FOR CAMERA MOUNTING DETAILS SEE SHEET E-105.

BASE FLOOD ELEVATION (BFE), 9 FT. ABOVE SEA LEVEL.

DESIGNED BY:	J. C. RINEHART	DATE :	07/16/18
DRAWN BY:	R. L. REED	DATE :	07/16/18
CHECKED BY:	L. V. BORDEN	DATE :	11/15/18
DESIGN ENGINEER OF RECORD:	J. G. STRENKOSKI	DATE :	11/15/18

**PERMIT DRAWINGS** DATE: 9/19/2019

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Permit Drawing  
Sheet 6 of 8

PROJECT NO. 15BPR.14  
NEW HANOVER COUNTY  
STATION: \_\_\_\_\_

333 FAYETTEVILLE STREET, SUITE 505  
RALEIGH, NC 27601  
NC LICENSE NO. C-2979

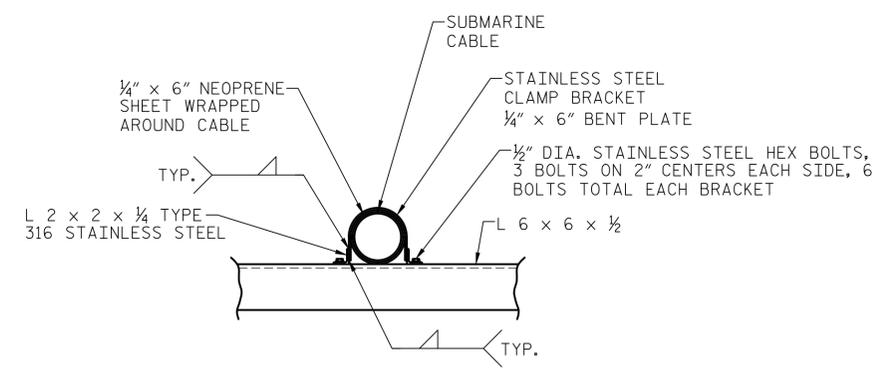
STATE OF NORTH CAROLINA  
DEPARTMENT OF TRANSPORTATION  
RALEIGH  
ELECTRICAL  
SUBMARINE CABLE  
ROUTING DETAILS -  
NEAR SIDE

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	TOTAL SHEETS
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2			4			

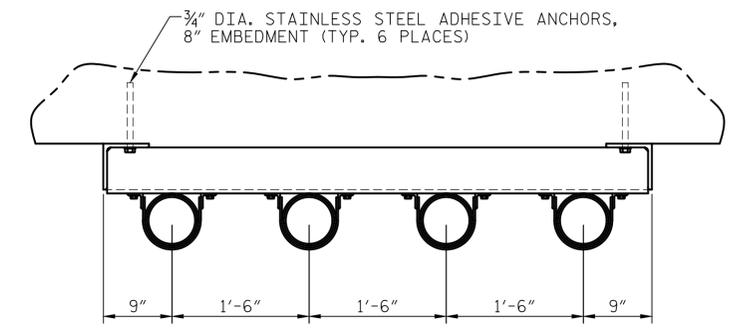
E-40

9/19/19

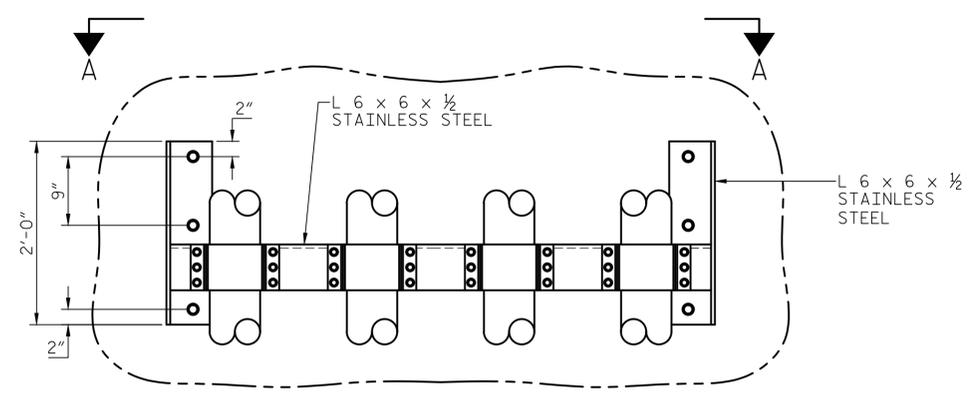
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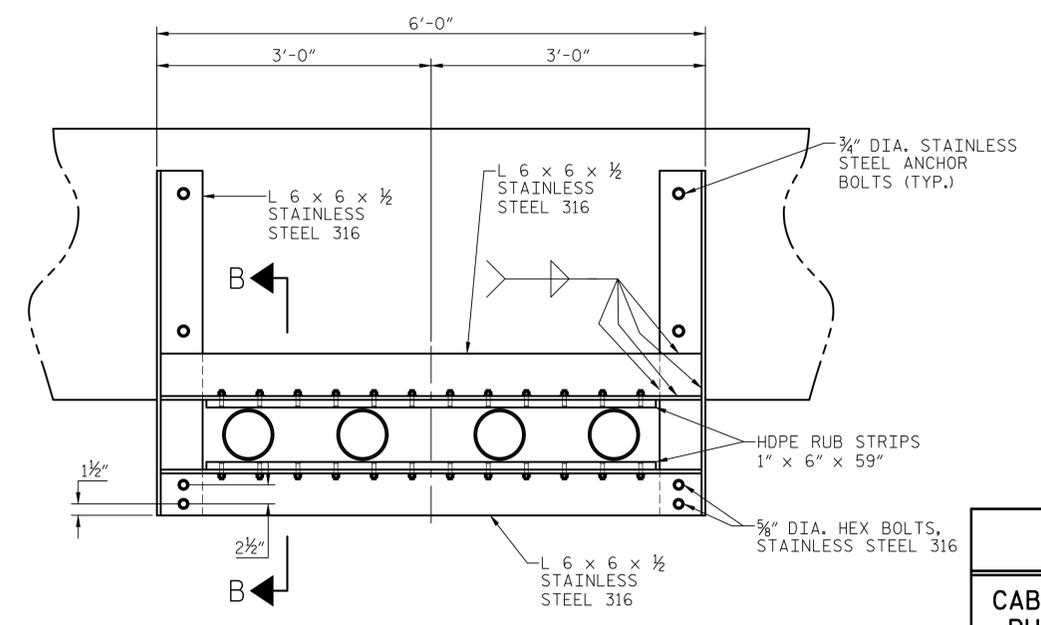
**SUBMARINE CABLE BRACKET DETAIL**  
SCALE: 1 1/2"=1'-0"



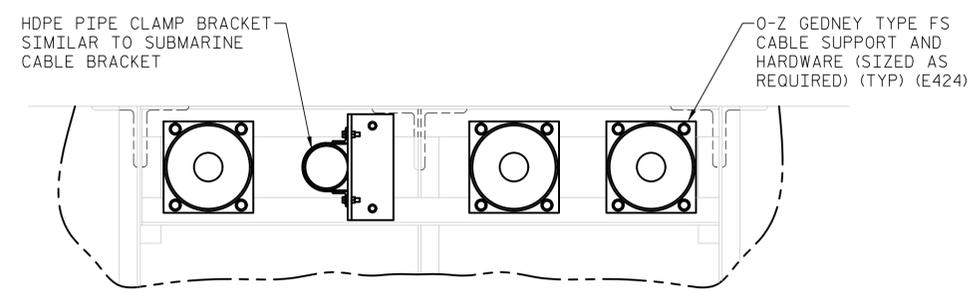
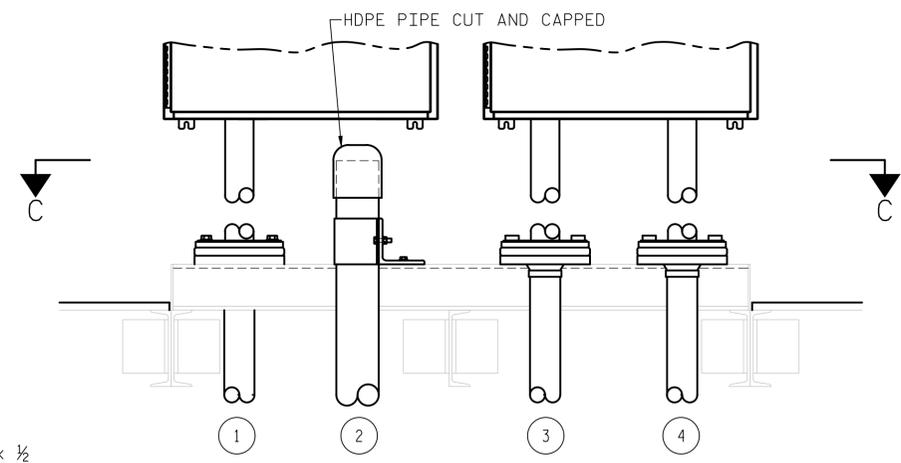
**VIEW A-A**  
SCALE: 1"=1'-0"



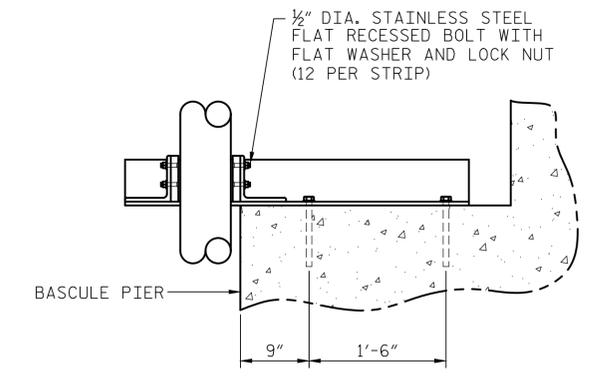
**UPPER SUBMARINE CABLE SUPPORT BRACKET**  
SCALE: 1"=1'-0"



**PLAN LOWER SUBMARINE CABLE SUPPORT BRACKET**  
SCALE: 1"=1'-0"



**SECTION C-C**  
SCALE: 1"=1'-0"



**SECTION B-B**  
SCALE: 1"=1'-0"

SUBMARINE CABLE MAKEUP			
CABLE RUN NUMBER	DESCRIPTION	CONDUCTOR COUNT AND SIZE (AWG)	TOTAL WITH SPARE CONDUCTOR COUNT AND SIZE (AWG)
1	CONTROL CONDUCTORS SCTC-1 TO SCTC-2	(97) 10 (1) 12-FIBER (3) CAT-5 (3) 3-PAIR (1) PA SYSTEM CABLE	(126) 10 (2) 12-FIBER (5) CAT-5 (5) 3-PAIR (2) PA SYSTEM CABLE (3) 1-PAIR
2	HDPE 5" EMPTY DUCT FOR FUTURE CONNECTIONS	-	-
3	VARIABLE FREQUENCY DRIVE POWER CABLES	(3) 2/0 VFD POWER CABLES	(3) 2/0 VFD POWER CABLES (4) 2/0 POWER CONDUCTORS
4	POWER CONDUCTORS FROM SCTC-1 TO SCTC-2	(24) 10 (13) 6 (6) 8 (7) 1	(47) 10 (18) 6 (12) 8 (13) 1

**NOTES:**

- SUBMARINE CABLES CONTAINING CONDUCTORS FOR VFD MOTORS SHALL HAVE A 2000V INSULATION RATING. OTHER CABLES SHALL HAVE A 600V MINIMUM RATING.
- THE SUBMARINE CABLE ARMOUR WIRES SHALL BE STRIPPED AT THE POINT WHERE THEY ARE CLAMPED TO PROVIDE A GROUNDING POINT. THE SUBMARINE CABLE PANEL AND SUPPORT FRAME SHALL BE SOLIDLY BONDED TO THE ELECTRICAL SERVICE GROUND.
- DETAILS SHOWN FOR PIER E1. PIER W1 IS SIMILAR.

PROJECT NO. 15BPR.14  
NEW HANOVER COUNTY  
STATION: \_\_\_\_\_

Permit Drawing  
Sheet 7 of 8

**MODJESKI and MASTERS**  
Experience great bridges.  
333 FAYETTEVILLE STREET, SUITE 505  
RALEIGH, NC 27601  
NC LICENSE NO. C-2979

STATE OF NORTH CAROLINA  
DEPARTMENT OF TRANSPORTATION  
RALEIGH  
ELECTRICAL  
SUBMARINE CABLE  
DETAILS

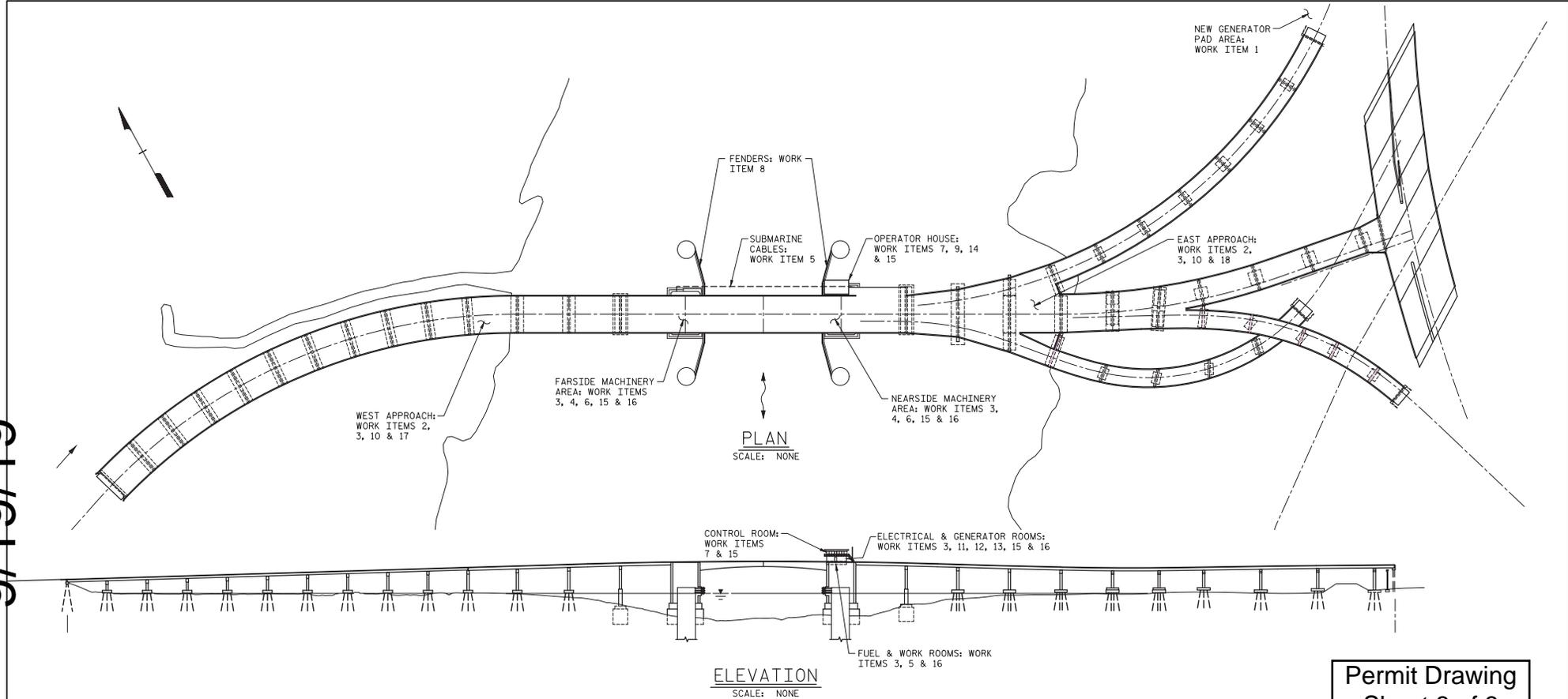
DESIGNED BY: L. V. BORDEN DATE: 08/27/18  
DRAWN BY: R. L. REED DATE: 09/05/18  
CHECKED BY: L. V. BORDEN DATE: 11/15/18  
DESIGN ENGINEER OF RECORD: J. G. STRENKOSKI DATE: 11/15/18

PERMIT DRAWINGS DATE: 9/19/2019

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NO.	BY:	DATE:	NO.	BY:	DATE:	E-41
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2			4			

9/19/19

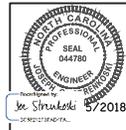


**Permit Drawing  
Sheet 8 of 8**

PROJECT NO. 15BPR.14  
NEW HANOVER COUNTY  
 STATION: \_\_\_\_\_

**ELECTRICAL WORK ITEMS:**

1. PROVIDE NEW CONCRETE GENERATOR PAD WITH NEW BACKUP GENERATOR, ATS, LOAD BANK, SECURITY FENCE, CRUSHED STONE ACCESS DRIVEWAY, AND RELATED COMPONENTS.
2. REMOVE EXISTING TRAFFIC GATES AND INSTALL NEW TRAFFIC GATES AT SAME LOCATION (6 LOCATIONS). REMOVE EXISTING RAMP A AND RAMP B TRAFFIC GATES AND INSTALL NEW TRAFFIC GATES AT NEW LOCATIONS (2 LOCATIONS). INSTALL NEW NEARSIDE OFFGOING TRAFFIC GATE AT NEW LOCATION (1 LOCATION).
3. REMOVE EXISTING EXPOSED CONDUIT AND CONDUCTORS ON THE BASCULE PIERS AND APPROACH SPANS AND REPLACE WITH NEW CONDUIT AND WIRING.
4. REROUTE CONDUITS AND CONDUCTORS FROM SUBMARINE CABLE TERMINAL CABINETS TO THE MACHINERY AREAS TO ELIMINATE USE OF EXISTING PULL BOXES IN COUNTERWEIGHT PITS.
5. INSTALL NEW SUBMARINE CABLES AND RELATED TERMINAL CABINETS.
6. REMOVE EXISTING FLEXIBLE CABLES TO MOVEABLE SPAN. PROVIDE AND INSTALL NEW FLEXIBLE CABLES AND RELATED HARDWARE BETWEEN EXISTING JUNCTION BOXES.
7. INSTALL NEW ANALOG CCTV CAMERAS. PROVIDE ADDITIONAL CAMERAS AND A SECOND VIEWING MONITOR IN CONTROL ROOM FOR ADDITIONAL CAMERA VIEWS.
8. REMOVE EXISTING PIER NAVIGATION LIGHTS AND WARNING HORN. PROVIDE AND INSTALL NEW PIER NAVIGATION LIGHTS, WARNING HORN, AND CHANNEL FLOODLIGHTS BENEATH MOVABLE SPAN.
9. INSTALL NEW SECURITY FENCE WITH RFID LOCK AROUND CONTROL HOUSE.
10. REMOVE EXISTING HPS ROADWAY LIGHTING CONDUCTORS. INSTALL NEW CONDUCTORS AND CONNECT NEW WIRING TO EXISTING POLES AND FIXTURES.
11. IN CONJUNCTION WITH MAIN MOTOR REPLACEMENT, PROVIDE AND INSTALL NEW AC FLUX VECTOR DRIVES, CABINETS, AND RELATED COMPONENTS.
12. REMOVE EXISTING PANEL BOARDS PNB-1 AND PNB-2, TRANSFORMER, GENERATORS, AND AUTOMATIC TRANSFER SWITCHES. PROVIDE AND INSTALL A NEW 208/120V PANEL BOARD, TRANSFORMER, AND TELEPHONE BOARD, INSTALL NEW HEAT PUMP SYSTEM TO SERVE ELECTRICAL ROOMS BELOW CONTROL ROOM.
13. REMOVE EXISTING CONTROL CABINETS IN ELECTRICAL ROOM. INSTALL NEW MOTOR CONTROL CENTER WITH MOTOR STARTERS AND RELATED COMPONENTS FOR POWER DISTRIBUTION.
14. PROVIDE NEW PUBLIC ADDRESS SYSTEM.
15. INSTALL NEW PLC BASED CONTROL SYSTEM INCLUDING CONTROL CABINETS AND COMPONENTS, NEW/REFURBISHED CONTROL CONSOLE, AND VARIOUS LIMIT SWITCHES/SENSORS.
16. REMOVE EXISTING SERVICE LIGHTS IN MACHINERY AREAS, ELECTRICAL ROOMS, AND STAIRWAYS. INSTALL NEW LED SERVICE LIGHTING FIXTURES IN SIMILAR LOCATIONS.
17. REMOVE EXISTING WEST TRAFFIC SIGNAL HEADS. INSTALL NEW STANDARD TRAFFIC SIGNAL HEADS WITH VISORS.
18. INSTALL NEW 120VAC POWER FOR EAST INTERSECTION TRAFFIC SIGNALS WITH PROVISIONS FOR A PORTABLE GENERATOR CONNECTION.
19. PROVIDE AND INSTALL TEMPORARY CONTROLS AS REQUIRED TO MAINTAIN BRIDGE OPERATIONS DURING CONSTRUCTION.



STATE OF NORTH CAROLINA  
 DEPARTMENT OF TRANSPORTATION  
 RALEIGH  
 ELECTRICAL  
 ELECTRICAL SCOPE  
 OF WORK

DESIGNED BY: J. C. BINEHART DATE: 03/09/18  
 DRAWN BY: R. L. REED DATE: 03/09/18  
 CHECKED BY: L. V. BORDEN DATE: 11/15/18  
 DESIGN ENGINEER OF RECORD: J. G. STRUDWICK DATE: 11/15/18

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REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	E-1
1			3			TOTAL SHEETS
2			4			213