



STATE OF NORTH CAROLINA  
DEPARTMENT OF TRANSPORTATION

ROY COOPER  
GOVERNOR

JAMES H. TROGDON, III  
SECRETARY

July 17, 2017

MEMORANDUM TO: Ms. Karen Collette, P.E.  
Division 3 Engineer

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

SUBJECT: New Hanover County; Replacement of Bridge No. 19 on SR 1100 over  
Lord's Creek;  
Federal Aid No. BRZ-1100(29); WBS 42840.1.1; **TIP B-5236.**

Attached are the U.S. Army Corps of Engineers Nationwide Permit General Conditions, N.C. Division of Water Resources (NCDWR) Water Quality Certification, and N.C. Division of Coastal Management CAMA 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. Ron Davenport, P.E. Contracts Management  
Mr. Mason Herndon, Division Environmental Officer  
Dr. Majed Al-Ghandour, P.E., Programming and TIP  
Mr. Gary Lovering, P.E., Roadway Design  
Mr. Carl Barclay, P.E., Utilities Unit  
Mr. Jay Twisdale, P.E., Hydraulics  
Mr. Brian Hanks, P.E., Structure Design  
Mr. Mark Staley, Roadside Environmental  
Mr. Ron Hancock, P.E., State Roadway Construction Engineer  
Mr. Jay McInnis, P.E., Project Development

## **PROJECT COMMITMENTS:**

**New Hanover County  
Bridge No. 19 on SR 1100  
Over Lord's Creek  
Federal Aid Project No. BRZ-1100(29)  
W.B.S. No. 42840.1.1  
T.I.P. No. B-5236**

## **COMMITMENTS FROM PROJECT DEVELOPMENT AND DESIGN**

### **Division 3 Construction, Resident Engineer's Office**

In order to have time to adequately reroute school busses, New Hanover County Schools will be contacted at (910) 254-4080 at least one month prior to road closure.

New Hanover County Emergency Services will be contacted at (910) 798-6900 at least one month prior to road closure to make the necessary temporary reassessments to primary response units.

### **Division 3 Construction**

Suitable habitat for the West Indian Manatee exists within the project area; therefore, the United States Fish and Wildlife Service (USFWS) *Guidelines for Avoiding Impacts to the West Indian Manatee, Precautionary Measures for Construction Activities in North Carolina Waters* shall be adhered to during construction.

### **Roadway Design, Division 3 Construction**

This portion of SR 1100 is designated as New Hanover County State Bicycle Route No. 3 (Ports of Call) and State Bicycle Route No. 5 (Cape Fear Run). The project design will include 4ft paved shoulders and bicycle safe rails.

### **Environmental Analysis Unit, Structure Unit**

NCDOT has received USCG Advanced Approval which is valid for 5 years from the letter dated October 22, 2013.

### **Roadside Environmental Unit, Division 3 Construction**

NCDOT will adhere to the Design Standards in Sensitive Watersheds due to Lord's Creek proximity (within 1.0 mile) of the Cape Fear River [AU 18-(71)a], which is listed as impaired for turbidity.

## **COMMITMENTS FROM PERMITTING**

### **Division 3 Construction, Roadside Environmental Unit**

404 condition #2: All of the jurisdictional features that are not authorized for impact should be demarcated with high visibility fencing to avoid any equipment from entering during construction.

404 condition #3: The project must adhere to an in water work moratoria during the timeframe of April 1 – September 30.

CAMA condition #2: Turbidity curtains shall be used to isolate all in-water areas from the adjacent waters of Lords Creek, including but not limited to the existing bridge removal, pile installation, pile removal, and placement of riprap and other fill material within or adjacent to surface waters. The turbidity curtains shall encircle the immediate work area, however they shall not impede navigation. The turbidity curtains shall be properly maintained and retained in the water until construction is complete, and shall only be removed when turbidity within the curtains reaches ambient levels.

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

Action Id. SAW-2011-00026 County: New Hanover U.S.G.S. Quad: NC-CAROLINA BEACH

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

Permittee:

NCDOT

Attn.: Mr. Jason Dilday  
1598 Mail Service Center  
Raleigh, NC 27699-1598

Address:

Size (acres)

8.5

Nearest Waterway

Cape Fear River

USGS HUC

03030005

Nearest Town Wilmington

River Basin Cape Fear

Coordinates Latitude: 34.086167998987

Longitude: -77.9212246418964

Location description: The project (B-5236) is located at Bridge number 19 located along River Road (SR 1100) where it crosses Lords Creek, New Hanover County.

Description of projects area and activity: The project involves the replacement of Bridge 19 (an existing 91 foot span) with a new 120 foot span on the same alignment taking advantage of an off-site detour. The project will impact 0.18 acres of coastal wetlands, 42 linear feet of stream for bank stabilization, and 0.03 acres of open water.

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

Authorization: Regional General Permit Number or Nationwide Permit Number: **NW-23**

**SEE ATTACHED RGP or NWP GENERAL, REGIONAL AND 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 and attached information, application dated and signed April 7, 2017, and programmatic categorical exclusion dated January 12, 2015. 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 authorization is modified, suspended or revoked. If, prior to the expiration date identified below, the nationwide 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 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 permit, will remain authorized provided the activity is completed within twelve months of the date of the nationwide 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 Elizabeth City, NC, at (252) 264-3901.

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: Brad Shaver Date: April 20, 2017

Expiration Date of Verification: March 18, 2022

## **Determination of Jurisdiction:**

A.  There are waters, including wetlands, 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.

B.  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.

C.  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.

D.  The jurisdictional areas within the above described project area have been identified under a previous action. Please reference jurisdictional determination issued 9/19/2011. Action ID: **SAW-2011-00026**.

**Basis For Determination:** The subject features appear to have both an ordinary high water mark and characteristics described in the 1987 Corps Delineation Manual and appropriate Regional Supplement. The waterbody and abutting wetlands further exhibits influence from tides and would be considered Section 10 waters.

**Remarks:** Special Conditions attached including a mitigation transfer form for the wetland loss.

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(electronic):

NCDOT-Division 3 attn: Mr. Mason Herndon  
NCDEQ-DWR attn.: Ms. Joanne Steenhuis  
NCDEQ-DCM attn.: Mr. Stephen Lane  
USACE attn.: Mr. Todd Tugwell  
USACE attn.: Ms. Cindy Corbett

**SPECIAL CONDITIONS**  
**B-5236**  
**Bridge # 19 SR 1100**

1. The project must adhere to the United States Fish and Wildlife Service (USFWS) Guidelines for avoiding impacts to the West Indian Manatee.
2. All of the jurisdictional features that are not authorized for impact should be demarcated with high visibility fencing to avoid any equipment from entering during construction.
3. The project must adhere to an in water work moratoria during the timeframe of April 1- September 30.
4. In order to compensate for impacts associated with this permit, mitigation shall be provided in accordance with the provisions outlined on the most recent version of the attached Compensatory Mitigation Responsibility Transfer Form. The requirements of this form, including any special conditions listed on this form, are hereby incorporated as special conditions of this permit authorization.



Brad Shaver  
April 20, 2017

Action ID Number: SAW-2011-00026

County: New Hanover

Permittee: NCDOT

Project Name: NCDOT / B 5236 / BR 19 / SR 1100 / Division 3

Date Verification Issued: April 20, 2017

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.

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Signature of Permittee

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Date

**U.S. ARMY CORPS OF ENGINEERS**  
**Wilmington District**  
**Compensatory Mitigation Responsibility Transfer Form**

Permittee: NCDOT

Project Name: Bridge # 19 over Lords Creek

Action ID: SAW-2011-00026

County: New Hanover

**Instructions to Permittee:** The Permittee must provide a copy of this form to the Mitigation Sponsor, either an approved Mitigation Bank or the North Carolina Division of Mitigation Services (NCDMS), who will then sign the form to verify the transfer of the mitigation responsibility. Once the Sponsor has signed this form, it is the Permittee's responsibility to ensure that to the U.S. Army Corps of Engineers (USACE) Project Manager identified on page two is in receipt of a signed copy of this form before conducting authorized impacts, unless otherwise specified below. If more than one mitigation Sponsor will be used to provide the mitigation associated with the permit, or if the impacts and/or the mitigation will occur in more than one 8-digit Hydrologic Unit Code (HUC), multiple forms will be attached to the permit, and the separate forms for each Sponsor and/or HUC must be provided to the appropriate mitigation Sponsors.

**Instructions to Sponsor:** The Sponsor must verify that the mitigation requirements (credits) shown below are available at the identified site. By signing below, the Sponsor is accepting full responsibility for the identified mitigation, regardless of whether or not they have received payment from the Permittee. Once the form is signed, the Sponsor must update the bank ledger and provide a copy of the signed form and the updated bank ledger to the Permittee, the USACE Project Manager, and the Wilmington District Mitigation Office (see contact information on page 2). The Sponsor must also comply with all reporting requirements established in their authorizing instrument.

**Permitted Impacts and Compensatory Mitigation Requirements:**

**Permitted Impacts Requiring Mitigation\***

8-digit HUC and Basin: 03030005, Cape Fear River Basin

Stream Impacts (linear feet)			Wetland Impacts (acres)			
Warm	Cool	Cold	Riparian Riverine	Riparian Non-Riverine	Non-Riparian	Coastal
						0.18

\*If more than one mitigation sponsor will be used for the permit, only include impacts to be mitigated by this sponsor.

**Compensatory Mitigation Requirements:**

8-digit HUC and Basin: 03030005, Cape Fear River Basin

Stream Mitigation (credits)			Wetland Mitigation (credits)			
Warm	Cool	Cold	Riparian Riverine	Riparian Non-Riverine	Non-Riparian	Coastal
						0.36

**Mitigation Site Debited:** NC DMS

(List the name of the bank to be debited. For umbrella banks, also list the specific site. For NCDMS, list NCDMS. If the NCDMS acceptance letter identifies a specific site, also list the specific site to be debited).

***Section to be completed by the Mitigation Sponsor***

**Statement of Mitigation Liability Acceptance:** I, the undersigned, verify that I am authorized to approve mitigation transactions for the Mitigation Sponsor shown below, and I certify that the Sponsor agrees to accept full responsibility for providing the mitigation identified in this document (see the table above), associated with the USACE Permittee and Action ID number shown. I also verify that released credits (and/or advance credits for NCDMS), as approved by the USACE, are currently available at the mitigation site identified above. Further, I understand that if the Sponsor fails to provide the required compensatory mitigation, the USACE Wilmington District Engineer may pursue measures against the Sponsor to ensure compliance associated with the mitigation requirements.

Mitigation Sponsor Name: NCDEQ DMS

Name of Sponsor's Authorized Representative: Beth Harmon

Signature of Sponsor's Authorized Representative Beth Harmon

Date of Signature 08/30/2017

**USACE Wilmington District**  
**Compensatory Mitigation Responsibility Transfer Form, Page 2**

**Conditions for Transfer of Compensatory Mitigation Credit:**

- Once this document has been signed by the Mitigation Sponsor and the USACE is in receipt of the signed form, the Permittee is no longer responsible for providing the mitigation identified in this form, though the Permittee remains responsible for any other mitigation requirements stated in the permit conditions.
- Construction within jurisdictional areas authorized by the permit identified on page one of this form can begin only after the USACE is in receipt of a copy of this document signed by the Sponsor, confirming that the Sponsor has accepted responsibility for providing the mitigation requirements listed herein. For authorized impacts conducted by the North Carolina Department of Transportation (NCDOT), construction within jurisdictional areas may proceed upon permit issuance; however, a copy of this form signed by the Sponsor must be provided to the USACE within 30 days of permit issuance. NCDOT remains fully responsible for the mitigation until the USACE has received this form, confirming that the Sponsor has accepted responsibility for providing the mitigation requirements listed herein.
- Signed copies of this document must be retained by the Permittee, Mitigation Sponsor, and in the USACE administrative records for both the permit and the Bank/ILF Instrument. It is the Permittee's responsibility to ensure that the USACE Project Manager (address below) is provided with a signed copy of this form.
- If changes are proposed to the type, amount, or location of mitigation after this form has been signed and returned to the USACE, the Sponsor must obtain case-by-case approval from the USACE Project Manager and/or North Carolina Interagency Review Team (NCIRT). If approved, higher mitigation ratios may be applied, as per current District guidance and a new version of this form must be completed and included in the USACE administrative records for both the permit and the Bank/ILF Instrument.

**Comments/Additional Conditions:**

This form is not valid unless signed below by the USACE Project Manager and by the Mitigation Sponsor on Page 1. **Once signed, the Sponsor should provide copies of this form along with an updated bank ledger to: 1) the Permittee, 2) the USACE Project Manager at the address below, and 3) the Wilmington District Mitigation Office, Attn: Todd Tugwell, 11405 Falls of Neuse Road, Wake Forest, NC 27587 (email: [todd.tugwell@usace.army.mil](mailto:todd.tugwell@usace.army.mil)).** Questions regarding this form or any of the permit conditions may be directed to the USACE Project Manager below.

**USACE Project Manager:** Brad Shaver

**USACE Field Office:** Wilmington Regulatory Field Office  
US Army Corps of Engineers  
69 Darlington Avenue  
Wilmington, NC 28403

Email:



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USACE Project Manager Signature

April 20, 2017

Date of Signature

Current Wilmington District mitigation guidance, including information on mitigation ratios, functional assessments, and mitigation bank location and availability, and credit classifications (including stream temperature and wetland groupings) is available at <http://ribits.usace.army.mil>.

**NATIONWIDE PERMIT 23**  
**DEPARTMENT OF THE ARMY**  
**CORPS OF ENGINEERS**  
**FINAL NOTICE OF ISSUANCE AND MODIFICATION OF NATIONWIDE PERMITS**  
**FEDERAL REGISTER**  
**AUTHORIZED MARCH 19, 2017**

**Approved Categorical Exclusions.** Activities undertaken, assisted, authorized, regulated, funded, or financed, in whole or in part, by another Federal agency or department where:

- (a) That agency or department has determined, pursuant to the Council on Environmental Quality's implementing regulations for the National Environmental Policy Act (40 CFR part 1500 et seq.), that the activity is categorically excluded from environmental documentation, because it is included within a category of actions which neither individually nor cumulatively have a significant effect on the human environment; and
- (b) The Office of the Chief of Engineers (Attn: CECW-CO) has concurred with that agency's or department's determination that the activity is categorically excluded and approved the activity for authorization under NWP 23.

The Office of the Chief of Engineers may require additional conditions, including pre-construction notification, for authorization of an agency's categorical exclusions under this NWP.

**Notification:** Certain categorical exclusions approved for authorization under this NWP require the permittee to submit a pre-construction notification to the district engineer prior to commencing the activity (see general condition 31). The activities that require pre-construction notification are listed in the appropriate Regulatory Guidance Letters. (Sections 10 and 404)

**Note:** The agency or department may submit an application for an activity believed to be categorically excluded to the Office of the Chief of Engineers (Attn: CECW-CO). Prior to approval for authorization under this NWP of any agency's activity, the Office of the Chief of Engineers will solicit public comment. As of the date of issuance of this NWP, agencies with approved categorical exclusions are the: Bureau of Reclamation, Federal Highway Administration, and U.S. Coast Guard. Activities approved for authorization under this NWP as of the date of this notice are found in Corps Regulatory Guidance Letter 05-07, which is available at:  
<http://www.usace.army.mil/Missions/CivilWorks/RegulatoryProgramandPermits/GuidanceLetters.aspx>. Any future approved categorical exclusions will be announced in Regulatory Guidance Letters and posted on this same web site.

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

### **4.1 NWP #23 - Approved Categorical Exclusions**

4.1.1 The discharge of dredged or fill material associated with this NWP must not cause the loss of greater than 1 acre of waters of the United States or 500 linear feet of stream bed for each single and complete project.

4.1.2 No development activities authorized by this NWP may begin until the permittee obtains a consistency concurrence or a CAMA permit from the North Carolina Division of Coastal Management, if either is required.

*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/NWP2017/2017NWP23.pdf> for the complete reference.*

## **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.

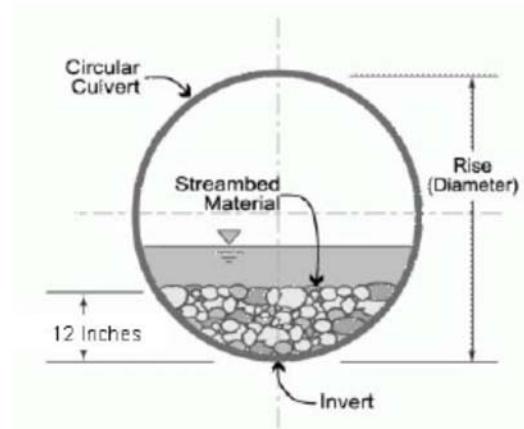
**3.5.5.** It shall be of a size sufficient to prevent its movement from the authorized alignment by natural forces under normal conditions.

**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 NWPs 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.

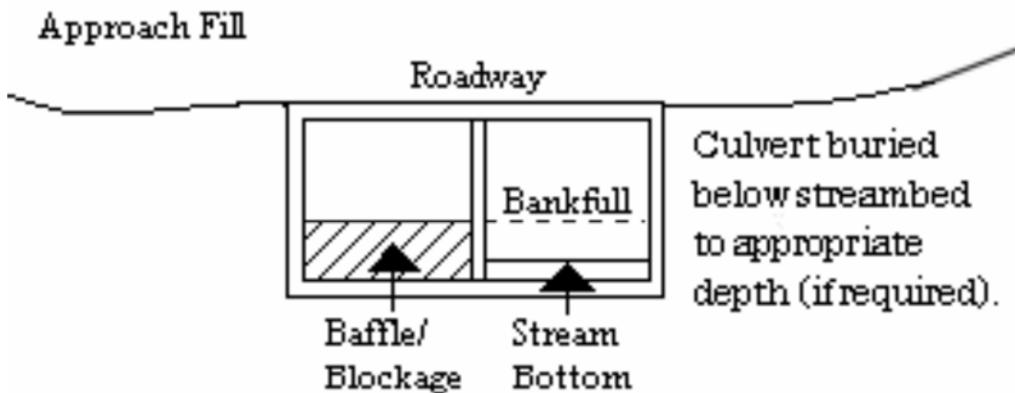
Culverts must be designed and constructed in a manner that minimizes destabilization and head cutting. Destabilizing the channel and head cutting upstream should be considered and appropriate actions incorporated in the design and placement of the culvert.

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 reason(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.



# 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.

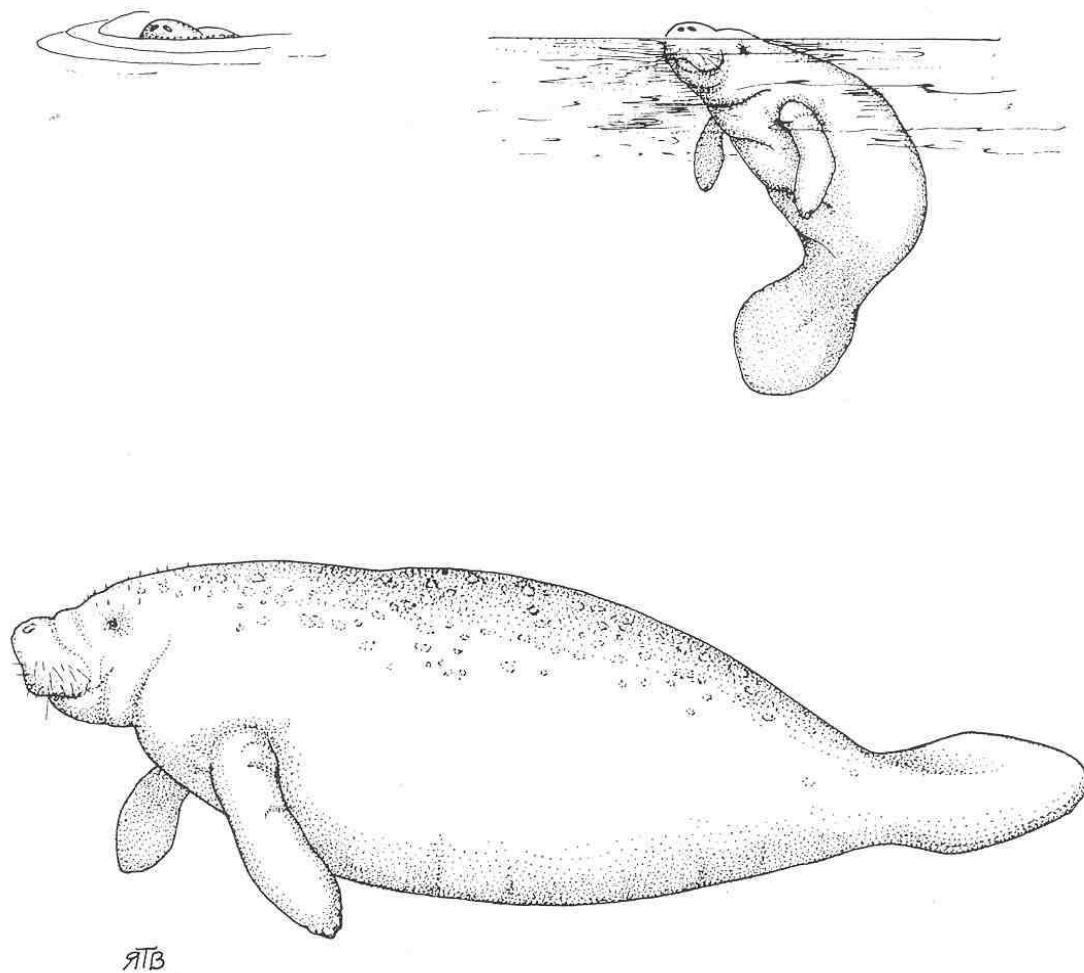


Illustration used with the permission of the North Carolina State Museum of Natural Sciences.  
Source: Clark, M. K. 1987. Endangered, Threatened, and Rare Fauna of North Carolina: Part I. A re-evaluation of the mammals. Occasional Papers of the North Carolina Biological Survey 1987-3. North Carolina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



ROY COOPER  
*Governor*

MICHAEL S. REGAN  
*Secretary*

S. JAY ZIMMERMAN  
*Director*

April 21, 2017  
New Hanover County  
NCDWR Project No. 20170424  
(Bridge No. 19 on) SR 1100  
TIP No. B-5236  
Federal Aid Project No.  
BRZ-1100(29)

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

Mr. Philip S. Harris, III, P.E., CPM

Natural Environment Section Head

Project Development and Environmental Analysis

North Carolina Department of Transportation

1598 Mail Service Center

Raleigh, North Carolina, 27699-1598

Dear Mr. Harris:

You have our approval, in accordance with the conditions listed below, for the following impacts for the purpose of replacing bridge No. 19 over Lord's Creek on SR 1100 in New Hanover County:

#### Stream Impacts in the Cape Fear River Basin

Site	Permanent Fill in Intermittent Stream (linear ft)	Temporary Fill in Intermittent Stream (linear ft)	Permanent Fill in Perennial Stream (linear ft)	Temporary Fill in Perennial Stream (linear ft)	Total Stream Impact (linear ft)
16+10 to 20+00 LT			12		12
16+10 to 20+50 RT			30		30
<b>TOTAL</b>	<b>0</b>	<b>0</b>	<b>42</b>	<b>0</b>	<b>42</b>

**Total Stream Impact for Project: 42 linear feet.**

#### Wetland Impacts in the Cape Fear River Basin

Site	Fill (ac)	Fill (temporary) (ac)	Excavation (ac)	Mechanized Clearing (ac)	Hand Clearing (ac)	Total Wetland Impact (ac)
10+75 to 11+90 LT					0.002	0.002
10+75 to 11+20 RT					0.006	0.006
14+20 to 15+20 LT	0.013		0.001		0.020	0.03
14+75 to 15+20 RT	0.005		0.002		0.008	0.01
16+10 to 20+00 LT	0.086				0.085	0.17
16+10 to 20+50 RT	0.072				0.091	0.16
<b>Total</b>	<b>0.18</b>	<b>0.00</b>	<b>0.002</b>	<b>0.00</b>	<b>0.21</b>	<b>0.39</b>

**Total Wetland Impact for Project: 0.18 acres.**



State of North Carolina | Environmental Quality

1617 Mail Service Center | Raleigh, North Carolina 27699-1617

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

<b>Site</b>	<b>Permanent Fill in Open Waters (ac)</b>	<b>Temporary Fill in Open Waters (ac)</b>	<b>Total Fill in Open Waters (ac)</b>
16+10 to 20+00 LT	0.011	0.00	0.01
16+10 to 20+50 RT	0.020	0.00	0.02
<b>TOTAL</b>	<b>0.03</b>	<b>0.00</b>	<b>0.03</b>

**Total Open Water Impact for Project:0.03 acres.**

The project shall be constructed in accordance with your application dated received April 7, 2017. After reviewing your application, we have decided that these impacts are covered by General Water Quality Certification Number 4093. This certification corresponds to the Nationwide Permit 23 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 streams (now or in the future) exceed 150 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.

**Condition(s) of Certification:**

**Project Specific Conditions**

1. As a condition of this 401 Water Quality Certification, the bridge demolition and construction must be accomplished in strict compliance with the most recent version of NCDOT's Best Management Practices for Construction and Maintenance Activities. [15A NCAC 02H .0507(d)(2) and 15A NCAC 02H .0506(b)(5)]
2. Bridge deck drains shall not discharge directly into the stream. Stormwater shall be directed across the bridge and pre-treated through site-appropriate means (grassed swales, pre-formed scour holes, vegetated buffers, etc.) before entering the stream. To meet the requirements of NCDOT's NPDES permit NCS0000250, please refer to the most recent version of the *North Carolina Department of Transportation Stormwater Best Management Practices Toolbox* manual for approved measures. [15A NCAC 02H .0507(d)(2) and 15A NCAC 02H .0506(b)(5)]
3. A turbidity curtain will be installed in the stream if driving or drilling activities occur within the stream channel, on the stream bank, or within 5 feet of the top of bank. This condition can be waived with prior approval from the NCDWR. [15A NCAC 02H .0506(b)(3)]
4. Adherence to *The Guidelines for Avoiding Impacts to the West Indian Manatee: Precautionary Measures for Construction Activities in North Carolina Waters* will be required throughout construction

**General Conditions**

5. 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)]

6. 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]
7. 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)]
8. 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)]
9. 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)]
10. 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)]
11. 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)]
12. Heavy equipment shall be operated from the banks rather than in the stream channel in order to minimize sedimentation and reduce the introduction of other pollutants into the stream. [15A NCAC 02H.0506(b)(3)]
13. 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)]
14. 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)]
15. Discharging hydroseed mixtures and washing out hydroseeders and other equipment in or adjacent to surface waters is prohibited. [15A NCAC 02H.0506(b)(3)]
16. 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]
17. 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)]
18. 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)]
19. 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]
20. 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.

21. 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)]
22. 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)]
23. 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)]
24. 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)]
25. 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.
26. Where placement of sediment and erosion control devices in wetlands and/or waters is unavoidable in the Hand Clearing areas, they shall be removed and the natural grade restored upon completion of the project. [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. Sam M.Hayes, General Counsel  
Department of Environmental Quality  
1601 Mail Service Center  
Raleigh, NC 27699-6701

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,



S. Jay Zimmerman, Director  
Division of Water Resources

Electronic copy only distribution:

Brad Shaver, US Army Corps of Engineers, Wilmington Field Office  
Mason Herndon, Division 3 Environmental Officer  
Colin Mellor, NC Department of Transportation  
Chris Rivenbark, NC Department of Transportation  
Jason Dilday, NC Department of Transportation  
Gary Jordan, US Fish and Wildlife Service  
Travis Wilson, NC Wildlife Resources Commission  
Cathy Brittingham, NC Division of Coastal Management  
Joanne Steenhuis, NC Division of Water Resources Wilmington Regional Office  
File Copy



*Environmental  
Quality*

NCDWR Project No.: 2017-0424

Applicant: NC-DOT

ROY COOPER

*Governor*

MICHAEL S. REGAN

*Secretary*

S. JAY ZIMMERMAN

*Director*

County: New Hanover

Project Name: Replacement of Bridge No. 19 over Lord's Creek on SR 1100 (River Road)

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 \_\_\_\_\_

 Nothing Compares 2 You

State of North Carolina | Environmental Quality

1617 Mail Service Center | Raleigh, North Carolina 27699-1617

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

**WATER QUALITY GENERAL CERTIFICATION NO. 4093**

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

- **NATIONWIDE PERMIT NUMBER 23 (APPROVED CATEGORICAL EXCLUSIONS)**

Water Quality Certification Number 4093 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) (23) 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: March 19, 2017

Signed this day March 3, 2017

By



for S. Jay Zimmerman, P.G.  
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 streams equal or greater than 40 linear feet; or
- c) Any stream relocation or stream restoration; or
- d) Any impacts to streams from excavation or dredging; or
- e) Total temporary or permanent impacts to wetlands and/or open waters equal to or greater than one-tenth (1/10) acre; or
- f) Any impacts to waters, or wetlands adjacent to waters, designated as: ORW (including SAV), HQW (including PNA), SA, WS-I, WS-II, Trout, or a North Carolina or National Wild and Scenic River; or
- g) Any impacts to coastal wetlands [15A NCAC 7H .0205], or Unique Wetlands (UWL) [15A NCAC 2H .0506]; or
- h) 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
- i) 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
  - 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. For the North Carolina Department of Transportation, compliance with the NCDOT's individual NPDES permit NCS000250 shall serve to satisfy this condition. For all other projects that disturb 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); have permanent wetland, stream, or open water impacts; and are proposing new built-upon area shall comply with the following requirements: [15A NCAC 02H .0506 (b)(5) and (c)(5)]:

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- a. 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. Projects that have vested rights, exemptions, or grandfathering from state or locally-implemented stormwater programs do not satisfy this condition. Projects that satisfy state or locally-implemented stormwater programs through use of community in-lieu programs do not satisfy this condition.
- c. Projects that require written authorization from DWR shall submit the following with their application for review and approval:
  - i. For projects that have a stormwater management plan (SMP) reviewed under a state stormwater program<sup>1</sup> or a state-approved local government stormwater program<sup>2</sup> shall submit plans that show the location and approximate size of all proposed stormwater measures;
  - ii. All other low density projects not covered above shall submit a completed low density supplement form with all required items; and
  - iii. All other high density projects not covered above shall submit a completed SMP, 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.
- d. Projects that do not require written approval from DWR shall obtain approval of the SMP, when required, before any impacts authorized by this Certification occur.
- e. SMPs approved by DWR may be phased on a case-by-case basis. SMPs for each future phase must be approved before construction of that phase commences. Approved SMPs may not be modified without prior written authorization 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]
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]

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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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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), compensatory mitigation may be required for losses of greater than 150 linear feet of streams and/or greater than one (1) acre of wetlands. 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 150 linear feet per 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.

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.

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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]

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.

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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 surface 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 not take place within 50 feet of a waterbody or wetlands to prevent contamination 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. 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)]
27. 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)]
28. 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).
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.

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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 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.
7. Public hearings may be held prior to a Certification decision if deemed in the public's best interest by the Director of the North Carolina Division of Water Resources.

*History Note: Water Quality Certification (WQC) Number 4093 issued March 3, 2017 replaces WQC 3891 issued March 19, 2012; WQC 3701 issued November 1, 2007; WQC Number 3632 issued March 2007; WQC Number 3403 issued March 2003; WQC Number 3361 issued March 18, 2002; WQC Number 3107 issued February 11, 1997; WQC Number 2734 issued May 1 1993; and WQC Number 2670 issued on January 21, 1992.*



ROY COOPER  
*Governor*

MICHAEL S. REGAN  
*Secretary*

BRAXTON C. DAVIS  
*Director*

June 29, 2017

N.C. Department of Transportation  
1598 Mail Service Center  
Raleigh, N.C. 27699-1598

Dear Sir or Madam:

The enclosed permit constitutes authorization under the Coastal Area Management Act, and where applicable, the State Dredge and Fill Law, for you to proceed with your project proposal. The original (buff-colored form) is retained by you and it must be available on site when the project is inspected for compliance. Please sign both the original and the copy and return the copy to this office in the enclosed envelope. Signing the permit and proceeding means you have waived your right of appeal described below.

If you object to the permit or any of the conditions, you may request a hearing pursuant to NCGS 113A-121.1 or 113-229. Your petition for a hearing must be filed in accordance with NCGS Chapter 150B with the Office of Administrative Hearings, 6714 Mail Service Center, Raleigh, NC 27611-6714, (919) 733-2698 within twenty (20) days of this decision on your permit. You should also be aware that another qualified party may submit an objection to the issuance of this permit within twenty (20) days.

The project plan is subject to those conditions appearing on the permit form. Otherwise, all work must be carried out in accordance with your application. Modifications, time extensions, and future maintenance requires additional approval. Please read your permit carefully prior to starting work and review all project plans, as approved. If you are having the work done by a contractor, it would be to your benefit to be sure that he fully understands all permit requirements.

From time to time, Department personnel will visit the project site. To facilitate this review, we request that you complete and mail the enclosed Notice Card just prior to work initiation. However, if questions arise concerning permit conditions, environmental safeguards, or problem areas, you may contact Department personnel at any time for assistance. By working in accordance with the permit, you will be helping to protect our vitally important coastal resources.

Sincerely,

A handwritten signature in black ink that reads "Douglas V. Huggett".

Douglas V. Huggett  
Major Permits Manager  
N.C. Division of Coastal Management

Enclosure

Permit Class  
**NEW**

Permit Number  
**81-17**

STATE OF NORTH CAROLINA  
Department of Environmental Quality  
and  
Coastal Resources Commission

# Permit

for

Major Development in an Area of Environmental Concern  
pursuant to NCGS 113A-118

Excavation and/or filling pursuant to NCGS 113-229

Issued to **N.C. Department of Transportation, 1598 Mail Service Center, Raleigh, NC 27699-1598**

Authorizing development in New Hanover County at Lords Creek, Bridge No. 19 on SR 1100 (River Road), as requested in the permittee's application dated 3/31/17, including the attached workplan drawings (14) as referenced in Condition No. 1 of this permit.

This permit, issued on June 29, 2017, is subject to compliance with the application (where consistent with the permit), all applicable regulations, special conditions and notes set forth below. Any violation of these terms may be subject to fines, imprisonment or civil action; or may cause the permit to be null and void.

### **TIP No. B-5236, Bridge Replacement**

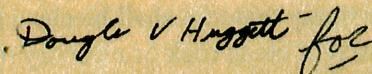
- 1) Unless specifically altered herein, all work authorized by this permit shall be carried out in accordance with the following attached workplan drawings (14): 8 dated as received 6/16/17, 2 dated 8/30/16, 1 dated 8/31/16, 1 dated 7/18/16, 1 dated 3/21/17, and 1 dated 3/28/17.
- 2) Turbidity curtains shall be used to isolate all in-water work areas from the adjacent waters of Lords Creek, including but not limited to the existing bridge removal, pile installation, pile removal, and placement of riprap and other fill material within or adjacent to surface waters. The turbidity curtains shall encircle the immediate work area, however they shall not impede navigation. The turbidity curtains shall be properly maintained and retained in the water until construction is complete, and shall only be removed when turbidity within the curtains reaches ambient levels.

**(See attached sheets for Additional Conditions)**

This permit action may be appealed by the permittee or other qualified persons within twenty (20) days of the issuing date.

Signed by the authority of the Secretary of DEQ and the Chairman of the Coastal Resources Commission.

This permit must be accessible on-site to Department personnel when the project is inspected for compliance.



Braxton C. Davis, Director  
Division of Coastal Management

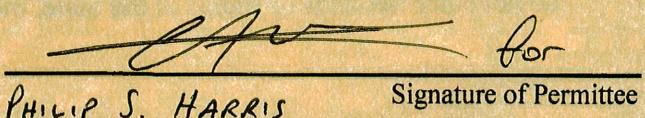
Any maintenance work or project modification not covered hereunder requires further Division approval.

All work must cease when the permit expires on

This permit and its conditions are hereby accepted.

### **No expiration date, pursuant to GS 136-44.7B**

In issuing this permit, the State of North Carolina agrees that your project is consistent with the North Carolina Coastal Management Program.



Philip S. HARRIS

Signature of Permittee

**ADDITIONAL CONDITIONS**

- 3) The bridge shall be constructed using top down construction and a cofferdam with an offsite detour. Any other construction method may require additional authorization from the N.C. Division of Coastal Management (DCM).
- 4) Temporary cofferdams may be used to construct the two interior bents for the new bridge. Temporary dewatering may occur. The cofferdams shall be removed in their entirety as soon as possible after the concrete is fully cured.
- 5) The installation of the bridge piles shall be accomplished by pile driving and/or the use of a vibratory hammer. Should the permittee and/or its contractor propose to utilize another type of installation, such as jetting or drilled shaft construction, additional authorization from DCM shall be required.
- 6) Piling from the existing bridge, as well as any remnant piling from previous bridges, shall be removed in their entirety, except that if a piling breaks during removal and cannot be removed in its entirety, the piling may be cut off flush with the bed of the water body, and DCM shall be notified of each occurrence within one working day.
- 7) No excavation or filling shall take place at any time in any vegetated wetlands or surrounding waters outside of the alignment of the areas indicated on the attached workplan drawings, without permit modification.
- 8) All fill material shall be clean and free of any pollutants except in trace quantities.
- 9) Material excavated at the project site may be used in fill areas associated with the project or shall be removed from the site and taken to a high ground location.
- 10) All excavated materials shall be confined above normal high water level and landward of regularly or irregularly flooded wetlands behind adequate dikes or other retaining structures to prevent spillover of solids into any wetlands or surrounding waters.
- 11) The temporary placement and double handling of any excavated or fill material within waters of the State or vegetated wetlands is not authorized, except for that fill necessary for the construction of the authorized cofferdam and erosion control measures.
- 12) The placement of riprap shall be limited to the areas as depicted on the attached workplan drawings. The riprap material shall be clean and free from loose dirt or any pollutant. The riprap material shall consist of clean rock or masonry materials, such as but not limited to, granite, marl, or broken concrete. It shall be of a size sufficient to prevent its movement from the site by wave or current action.
- 13) Filter fabric shall be in place prior to the placement of any riprap and/or backfill.
- 14) All reasonable efforts shall be made to contain all debris and excess materials associated with the removal of the existing bridge and construction of the new bridge, with the intent that materials/debris do not enter wetlands or waters of the State, even temporarily.

**ADDITIONAL CONDITIONS**

- 15) Any waste materials or debris generated in the demolition and removal of the existing bridge and/or construction of the new bridge or roadway shall be disposed of at an approved upland site or shall be recycled in an environmentally appropriate manner provided appropriate authorizations are obtained from any relevant state, federal, or local authorities.
- 16) Uncured concrete shall not be allowed to contact waters of the State, or water that will enter waters of the State.
- 17) Bridge deck drains shall not directly discharge into the open waters of Lords Creek and shall not cause erosion of adjacent wetlands.
- 18) Construction staging areas shall be located only in upland areas, and not in wetlands or waters of the State.

**Utility Impacts**

**NOTE:** The construction of the new bridge will also require the relocation of water, sewer, and fiber optic telecommunication lines.

- 19) The authorized utility work shall not result in any permanent or temporary impacts to wetlands or waters of the State, without permit modification.
- 20) Any utility work associated with this project that is not specifically depicted on the attached workplan drawings, or described within the attached permit application, shall require approval from DCM, either under the authority of this permit, or by the utility company obtaining separate authorization.

**NOTE:** Plans and specifications should be submitted and approved by the N.C. Division of Water Resources, Public Water Supply Plan Review Section, before construction begins on the new waterlines.

**Impacts to Wetlands and Waters of the State and Compensatory Mitigation**

**NOTE:** This project will permanently impact approximately 7,625 square feet of Coastal Wetlands (7,390 square feet due to permanent fill, and 235 square feet due to excavation). This project will temporarily impact approximately 9,148 square feet of Coastal Wetlands (7,406 square feet due to hand clearing and 1,742 square feet due to temporary fill and hand clearing). This project will permanently impact approximately 0.03 acres of surface waters and will temporarily impact approximately 0.02 acres of surface waters.

**NOTE:** In accordance with the N.C. Division of Mitigation Services (DMS) letter dated 3/28/17, compensatory mitigation for permanent impacts of 0.18 acres of Coastal Marsh associated with the authorized project shall be provided by the DMS in accordance with the DMS In-Lieu Fee Instrument dated 7/28/10.

### ADDITIONAL CONDITIONS

- 21) The compensatory mitigation of 0.18 acres of Coastal Wetlands shall be in-kind, i.e. the targeted species composition of the restored wetlands shall approximate the species composition of the impacted wetlands. The mitigation shall be implemented and in place within 3 years of the issuance of this permit.
- 22) There shall be no clearing of wetlands outside of the areas indicated on the attached workplan drawings without prior approval from DCM. Within Coastal Wetland areas that are approved for hand clearing, the extent of hand clearing shall be minimized to the maximum extent practicable.
- 23) Wetland areas to be temporarily impacted by clearing shall not be grubbed.
- 24) Construction mats shall be utilized to support equipment within Coastal Wetland areas to minimize temporary wetland impacts. These mats shall be removed immediately following project completion.
- 25) Due to the possibility that compaction, hand clearing, temporary fill, and/or other site alterations might prevent the temporary Coastal Wetland impact areas from re-attaining pre-project wetland functions, the permittee shall provide an annual update on the Coastal Wetland areas temporarily impacted by this project. This annual update shall consist of photographs and a brief written report on the progress of these temporarily impacted areas in re-attaining their pre-project wetland functions. The permittee shall schedule a meeting with DCM to verify the extent and location of temporary impacts upon project completion. Within three years after project completion, the permittee shall hold another agency field meeting with DCM to determine if the Coastal Wetland areas temporarily impacted by this project have re-attained pre-project wetland functions. If at the end of three years DCM determines that the Coastal Wetland areas temporarily impacted by the project have not re-attained pre-project wetland functions, DCM will determine whether compensatory wetland mitigation shall be required.

### Sedimentation and Erosion Control

- 26) This project shall conform to all requirements of the N.C. Sedimentation Pollution Control Act and the N.C. Department of Transportation's (NCDOT's) Memorandum of Agreement with the N.C. Division of Energy, Mineral and Land Resources.

### General

- 27) In order to protect the West Indian Manatee, *Trichechus manatus*, the applicant shall implement the U.S. Fish & Wildlife Service's Guidelines, and strictly adhere to all requirements therein. The guidelines can be found at [http://www.fws.gov/nc-es/mammal/manatee\\_guidelines.pdf](http://www.fws.gov/nc-es/mammal/manatee_guidelines.pdf).
- 28) During bridge construction, the permittee shall make every attempt to allow the same navigation that is currently possible in Lords Creek, upstream and downstream of the existing bridge.

### ADDITIONAL CONDITIONS

- 29) No attempt shall 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 following completion of construction.
- 30) The permittee shall exercise all available precautions in the day-to-day operation of the facility to prevent waste from entering the adjacent waters and wetlands.
- 31) If it is determined that additional permanent and/or temporary impacts are necessary that are not shown on the attached workplan drawings or described in the authorized permit application, a permit modification and/or additional authorization from DCM may be required. In addition, any changes in the approved plan may also require a permit modification and/or additional authorization from DCM. The permittee shall contact a representative of DCM prior to commencement of any such activity for this determination and any permit modification.
- 32) Development authorized by this permit shall only be conducted on lands owned by NCDOT and/or its Right-of-Ways and/or easements.
- 33) The permittee and/or its contractor shall contact the DCM Transportation Project Field Representative in Morehead City at (252) 808-2808 ext. 208 to request a preconstruction conference prior to project initiation.
- 34) The N.C. Division of Water Resources (DWR) authorized the proposed project on 4/21/17 (DWR Project No. 20170424) under General Water Quality Certification No. 4093. Any violation of the Certifications approved by DWR shall be considered a violation of this CAMA permit.

**NOTE:** The U.S. Army Corps of Engineers authorized the proposed project under Nationwide Permit Number 23 (COE Action ID No. SAW-2011-00026), which was issued on 4/20/17.

**NOTE:** This permit does not eliminate the need to obtain any additional permits, approvals or authorizations that may be required.

**NOTE:** An application processing fee of \$475 was received by DCM for this project. This fee also satisfied the Section 401 application processing fee requirements of DWR.



16591  
22 Oct 2013

Ms. Natalie N. Lockhart, Project Development Engineer  
Project Development & Environmental Analysis Branch  
NC Dept. of Transportation  
1548 Mail Service Center  
Raleigh, NC 27699-1548

Dear Ms. Lockhart:

Review of your proposed bridge project is complete. Based on the documentation provided and we received two comments for Public Notice 5-1212, one from NC State Environmental Review Clearinghouse that the environmental document meets the provision of the State Environmental Policy Act and the other from the NC State Historic Preservation Office that the project as proposed will not have an adverse effect on any historic structures; it is determined that a formal Coast Guard bridge permit will not be required for the proposed replacement of the bridge on State Road 1100 (River Road) across Lords Creek in New Hanover County, NC.

The project will be placed in our Advance Approval category as per Title 33 Code of Federal Regulations Part 115.70. This Advance Approval determination is for the location and proposed replacement of the bridge on State Road 1100 (River Road) including removal of the existing bridge over Lords Creek and is **valid for five years from the date of this letter**. If the construction and removal do not commence within this time period, you must contact this office for reaffirmation of this authorization. Future bridge projects along the same waterway will have to be independently evaluated before they may be considered for Advance Approval.

The fact that a Coast Guard bridge permit is not required does not relieve you of the responsibility for compliance with the requirements of any other Federal, State, or local agency who may have jurisdiction over any aspect of the project. Although the project will not require a bridge permit, other areas of Coast Guard jurisdiction apply. The following must be met:

- a. At no time during the bridgework will the waterway be closed to navigation without the prior notification and approval of the Coast Guard.
- b. This office should be notified as soon as possible to commencement and completion of bridgework so that appropriate announcements may be prepared for our Local Notice to Mariners publication.
- c. The lowest portion of the superstructure of the bridge across the waterway should clear the 100-year flood height elevation, if feasible.

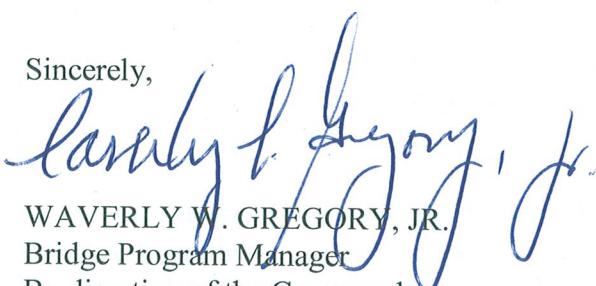
16591  
22 Oct 2013

The National Ocean Service (NOS) of the National Oceanic and Atmosphere Administration (NOAA) is responsible for maintaining the charts of U.S. waters; therefore, they must be notified of this proposed work. You must notify our office and the NOS upon completion of the activity approved in this letter. Your notification of completion must include as-built drawings, which certifies the location and clearance of the bridge that was constructed. This information will be sent to the following address:

Ms. Allison Wittrock  
National Ocean Service  
N/CS26, Room 7317  
1315 East-West Highway  
Silver Spring, MD 20910-3282

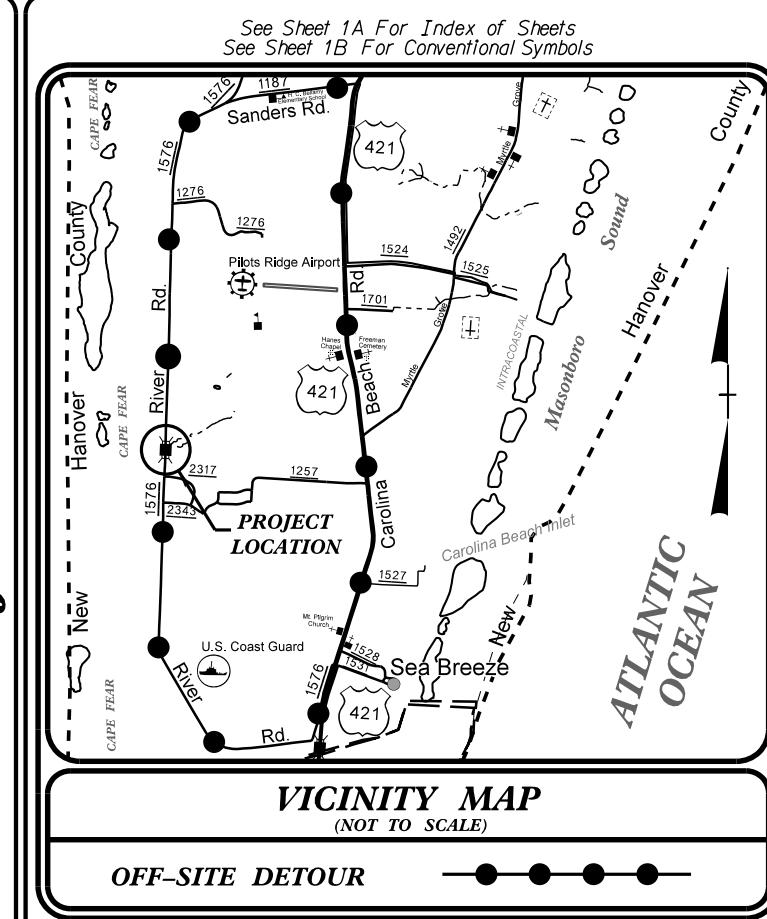
If you have any further questions, please contact Jim Rousseau at the above-listed address or telephone number.

Sincerely,



WAVERLY W. GREGORY, JR.  
Bridge Program Manager  
By direction of the Commander  
Fifth Coast Guard District

Copy: Allison Wittrock, NOS  
CG Sector North Carolina, Waterways Management



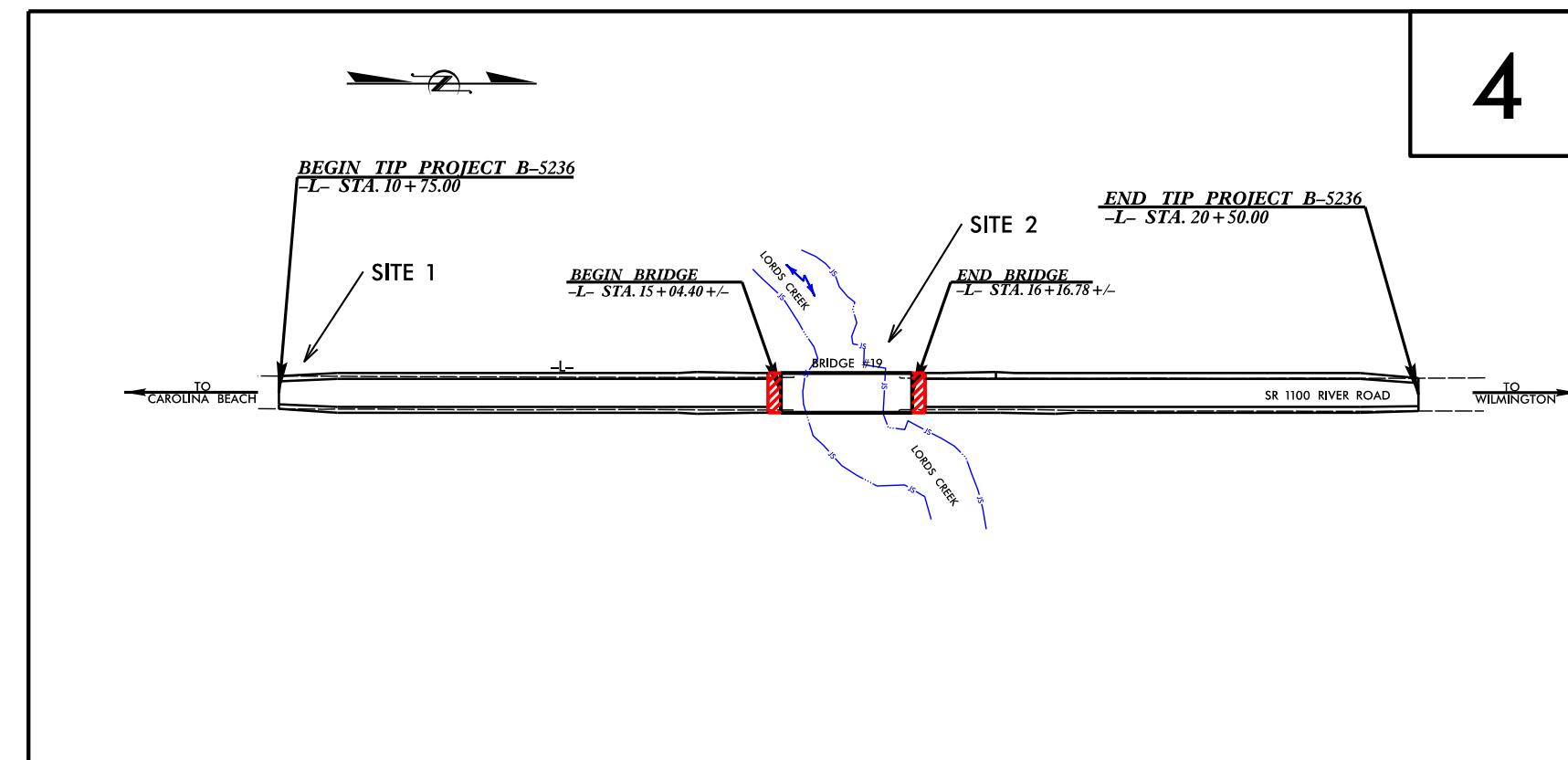
STATE OF NORTH CAROLINA  
DIVISION OF HIGHWAYS

# **NEW HANOVER COUNTY**

**LOCATION: REPLACE BRIDGE NO. 19 OVER LORDS CREEK  
ON SR 1100.**

**TYPE OF WORK: GRADING, PAVING, DRAINAGE & STRUCTURE**

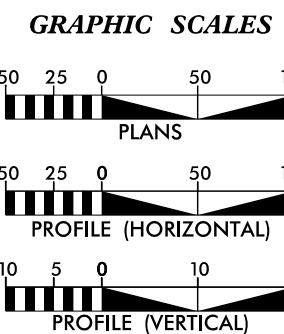
## WETLAND AND SURFACE WATER IMPACTS PERMIT



THIS PROJECT IS NOT WITHIN ANY MUNICIPAL BOUNDARIES.  
CLEARING ON THIS PROJECT SHALL BE PERFORMED TO THE LIMITS ESTABLISHED BY METHOD III.

**INCOMPLETE PLANS**  
DO NOT USE FOR R/W ACQUISITION

**PRELIMINARY PLANS**  
DO NOT USE FOR CONSTRUCTION



**DESIGN DATA**

ADT 2016 = 5220  
ADT 2036 = 8885  
K = 11 %  
D = 80 %  
T = 3 % \*  
V = 60 MPH  
\* (TTST = 1% + DUALS 2%  
FUNC CLASS = MINOR  
ARTERIAL  
SUB-REGIONAL TIER

### ***PROJECT LENGTH***

*Prepared In the Office of:*  
**DIVISION OF HIGHWAYS**

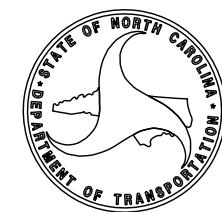
2012 STANDARD SPECIFICATION

**LETTING DATE:**  
SEPTEMBER 19, 2017

HYDRAULICS ENGINEER

SIGNATURE: P.E.  
**ROADWAY DESIGN ENGINEER**

P.E.



**PERMIT DRAWING  
SHEET 2 OF 10**

2

4

RUTH B. PHILLIPS REVOCABLE TRUST  
FIRST TRACT  
DB 3911 PG 389  
(ROW 30' FROM CL SRI100)

BURNETT ENTERPRISES, INCORPORATED  
DB 1000 PG 265  
(ROW 30' FROM CL SRI100)

NAD 83/NSRS 2007  
NC GRID

Sta. = 11+00 -L- LT  
 DA = 0.175 ac  
 Q = 0.46 cfs  
 V = 1.5 fps  
 d = 0.3 ft  
 s = 0.0116 ft/ft

## CAMA

CAMA

## REVISIONS

BEGIN TIP PROJECT B-5236  
-L- STA. 10 + 75.00

SIGNATURE RIVER OAKS NC. LTD  
DB 5694 PG 1007  
(ROW 60' FROM CL SR100)

ND TIP PROJECT B-5236  
- STA. 20+50.00

NATURE RIVER OAKS NC, LTD.  
DB 5190 PG 1195  
MB 51 PG 7  
W 50' FROM CL OF SR1100

A graphic scale bar consisting of a black horizontal line with a white checkered pattern on its left side. The text 'GRAPHIC SCALE' is printed below the line. At the left end, '80'' is written above the line. In the center, '0'' is written above the line. At the right end, '80'' is written above the line.

**PERMIT DRAWING  
SHEET 3 OF 10**

2

4

SITE

CAM

$$\begin{aligned}
 \text{Sta.} &= 11+00 - \\
 \text{DA} &= 0.175 \text{ ac} \\
 \text{Q} &= 0.46 \text{ cfs} \\
 \text{V} &= 1.5 \text{ fpm} \\
 \text{d} &= 0.3 \text{ ft} \\
 \text{s} &= 0.0116 \text{ ft/ft}
 \end{aligned}$$

BURNETT ENTERPRISES, INCORPORATED  
DB 1000 PG 265  
(ROW 30' FROM CL SRIIOO)

RUTH B. PHILLIPS REVOCABLE TRUST  
FIRST TRACT  
DB 3911 PG 389  
(ROW 30' FROM CL SR100)

CAM

111

— 11 —

100

BEGIN TIP PROJECT B-5236  
-1- STA. 10 + 75.00

SIGNATURE RIVER OAKS NC. LTD  
DB 5694 PG 1007  
(ROW 60' FROM CL SRW00)

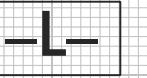
END TIP PROJECT B-5236  
-L- STA. 20 + 50.00

A horizontal scale bar consisting of a black and white checkered pattern on the left, a solid black bar in the center, and a white bar on the right. The text "GRAPHIC SCALE" is written below the scale bar.

PERMIT DRAWING  
SHEET 4 OF 10

PROJECT REFERENCE NO.		SHEET NO.
B-5236		5
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER	
INCOMPLETE PLANS DO NOT USE FOR X/W ACQUISITION		
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION		

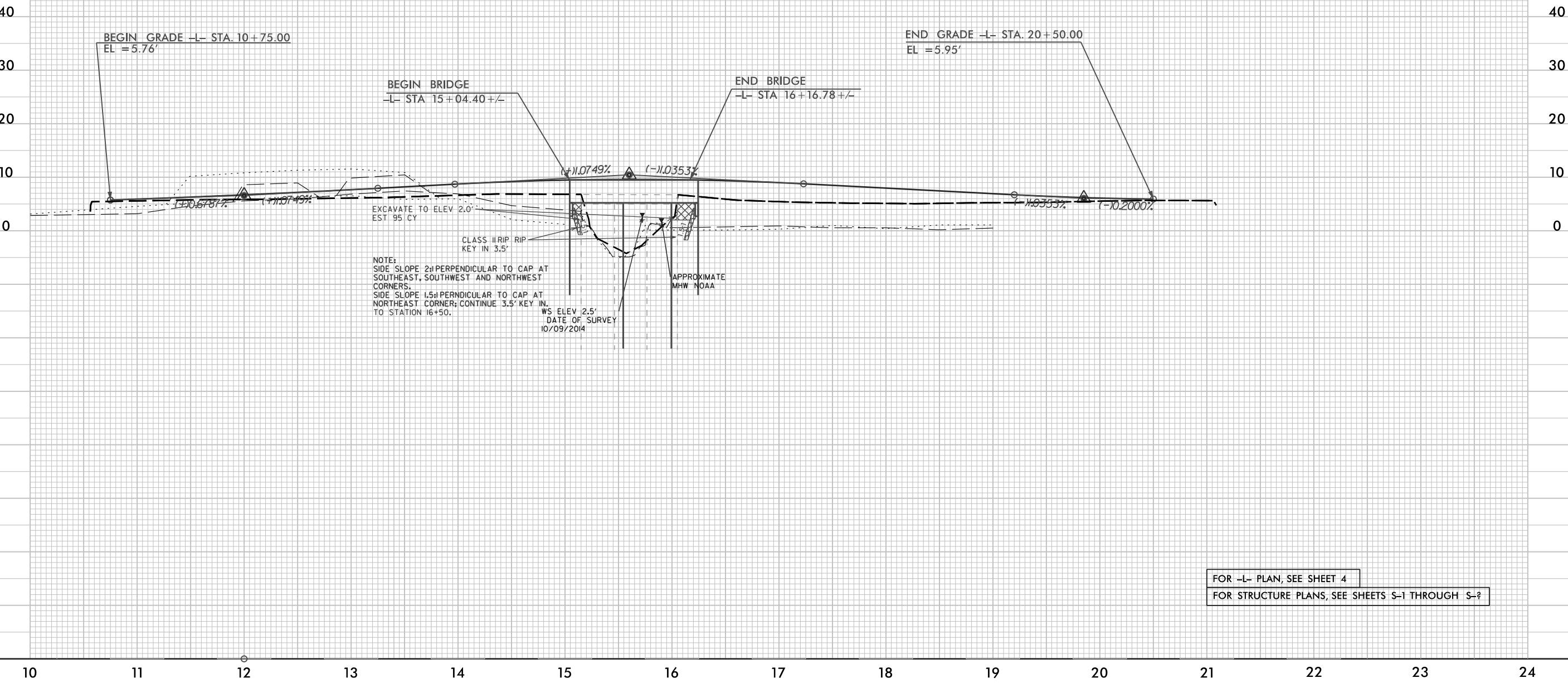
BM #1 RR SPIKE SET IN 14" PINE  
-L- STA. 13 + 63.00 43.00' LT, ELEV. = 7.98'  
N 124023 E 2326627



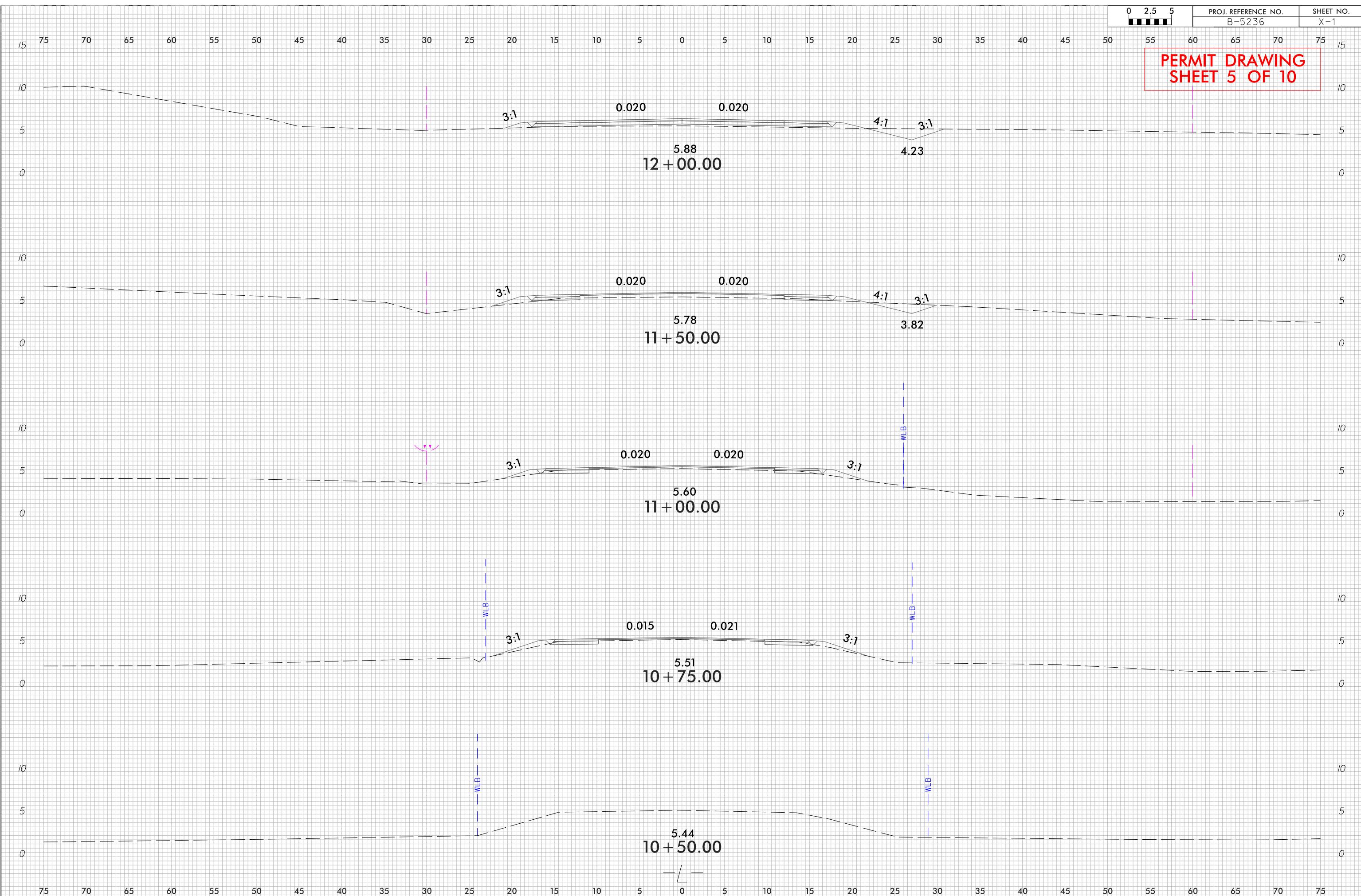
PI = 15 + 60.00  
EL = 10.48'  
VC = 326'  
K = 154'  
V = 60 mph

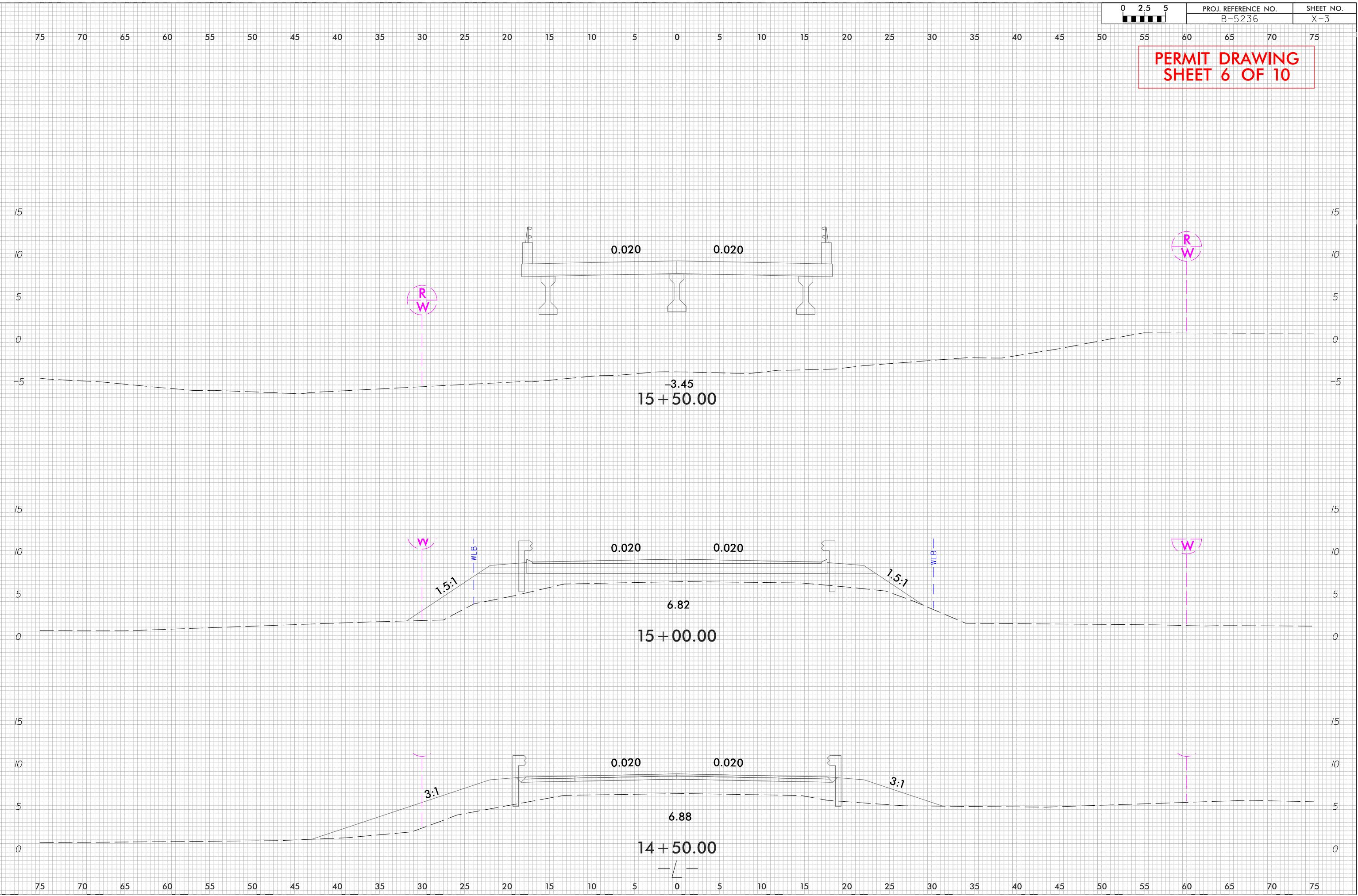
PI = 12 + 00.00  
EL = 6.61'  
VC = 250'  
K = 631'  
V = 80 mph

PI = 19 + 85.00  
EL = 6.08'  
VC = 130'  
K = 156'  
V = 60 mph

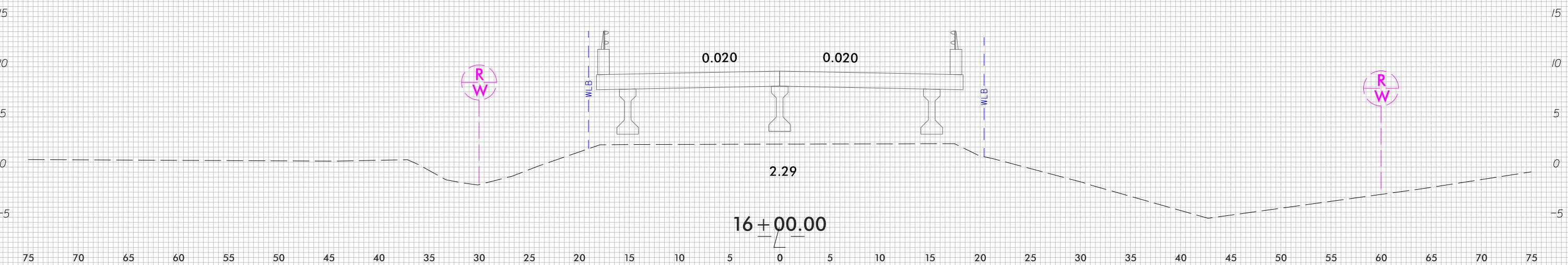
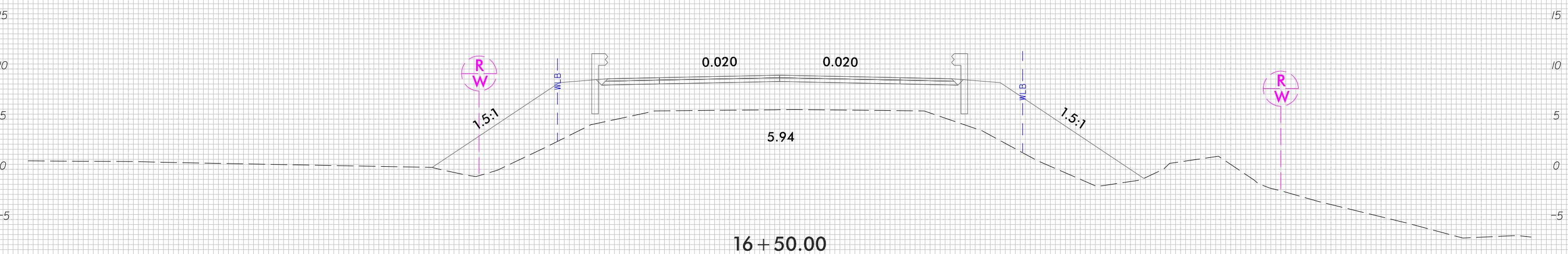
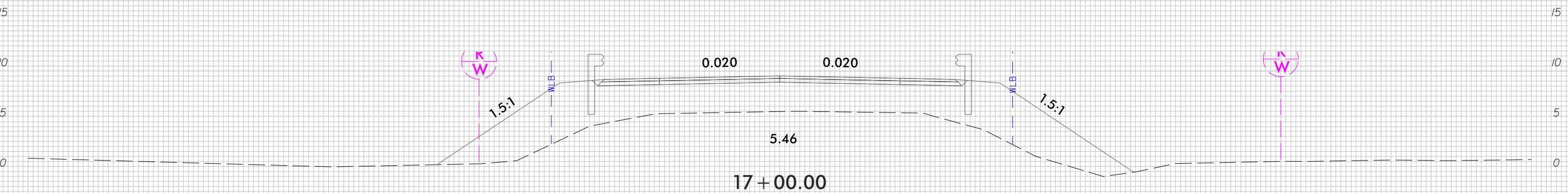


**PERMIT DRAWING  
SHEET 5 OF 10**

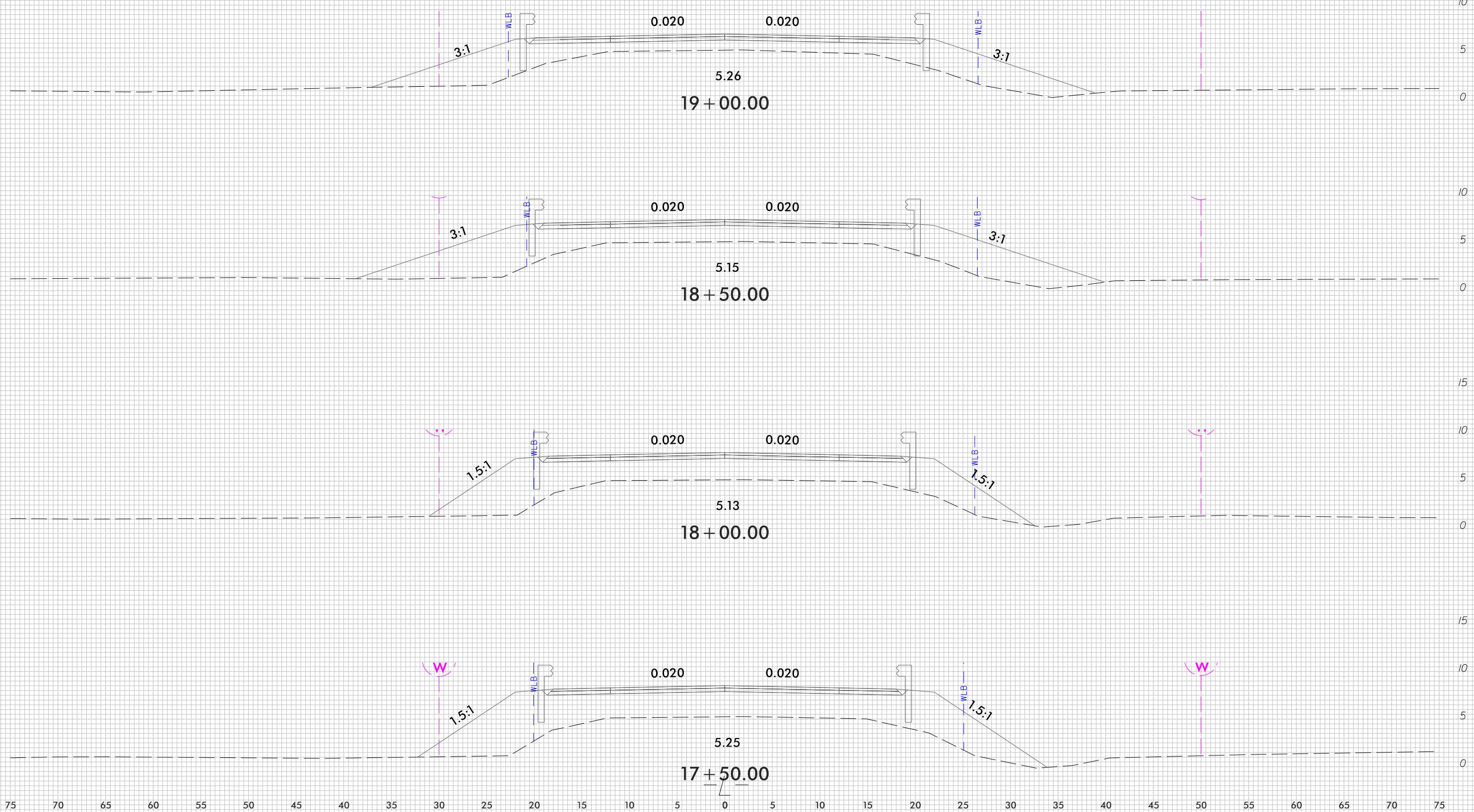




**PERMIT DRAWING  
SHEET 7 OF 10**

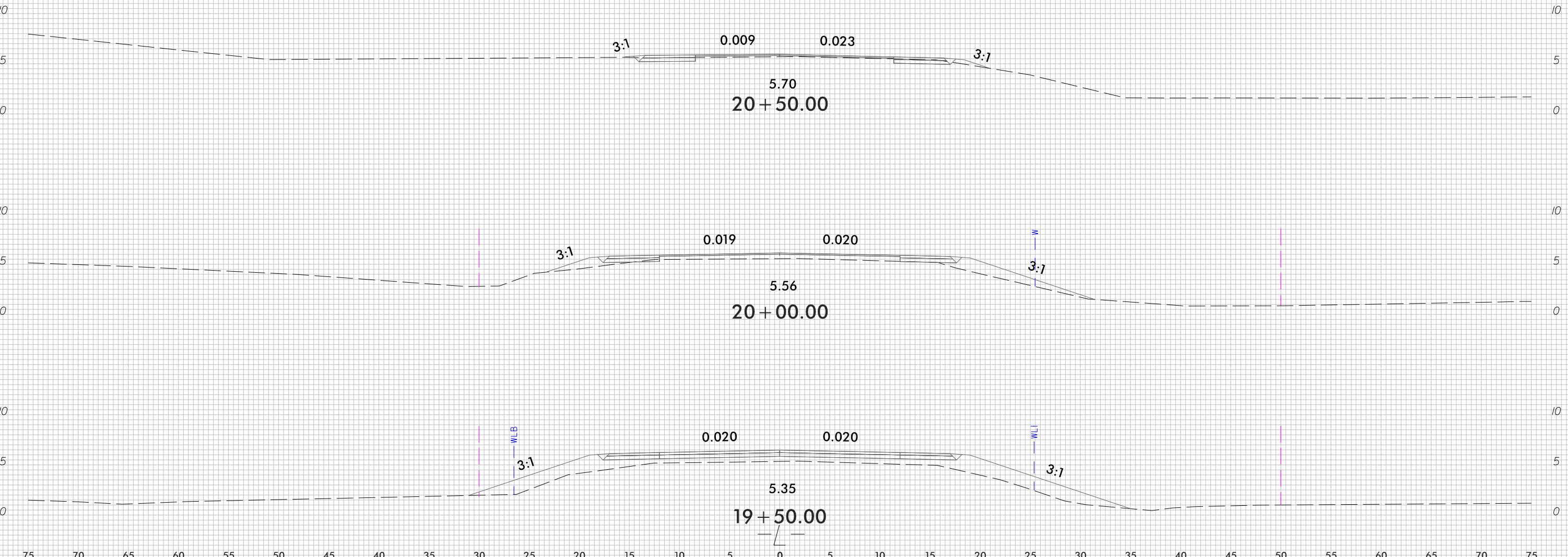


**PERMIT DRAWING  
SHEET 8 OF 10**



75 70 65 60 55 50 45 40 35 30 25 20 15 10 5 0 5 10 15 20 25 30 35 40 45 50 55 60 65 70

**PERMIT DRAWING  
SHEET 9 OF 10**



## WETLAND PERMIT IMPACT SUMMARY

\*Rounded totals are sum of actual impacts

## NOTES:

Permanent Stream Impacts: due to interior bents = 25 sq. ft.

Temporary Stream Impacts: due to work coffer dams for interior bent construction = 1056 sq. ft.

Temporary Fill in Wetlands in the Hand Clearing areas for erosion control measures = 0.04 acres

NC DEPARTMENT OF TRANSPORTATION

## DIVISION OF HIGHWAYS

6/15/2017

6/10/2017

New Hanover  
B-5236

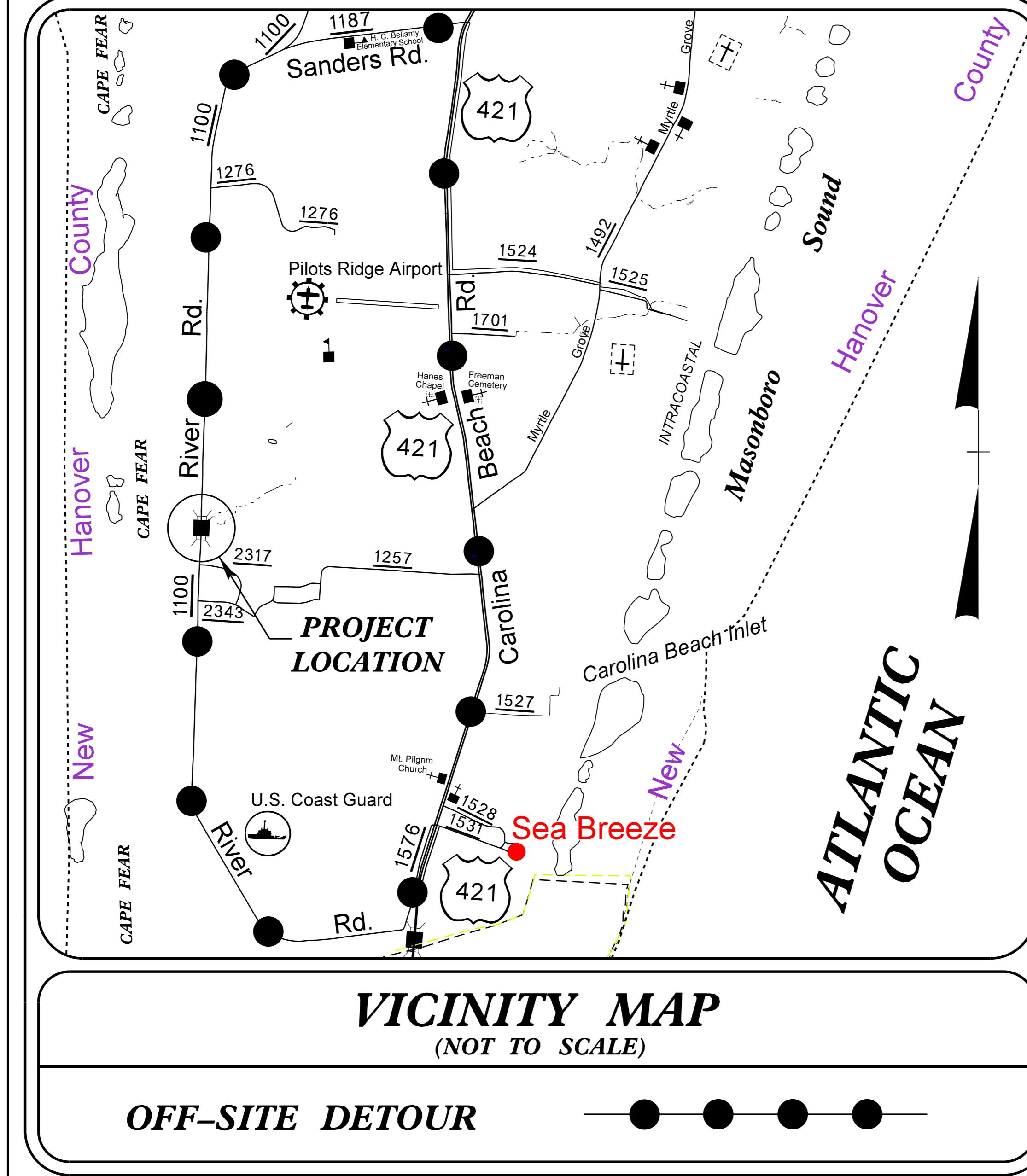
B-3230

+28+0.1.1

OF

SHEET 10 OF

## TIP PROJECT: B-5236



## INCOMPLETE PLANS

DO NOT USE FOR REVIEW ACQUISITION

**PRELIMINARY PLANS**

**DOCUMENT NOT CONSIDERED FINAL  
UNLESS ALL SIGNATURES COMPLETED**

IN TIP PROJECT B-5236  
STA. 10 + 75.00

20T Sta. 10+00

BEGIN 4" DIRECT BORE AT STA. 13+8  
PLACE NEW H/H  
OPEN CUT AND EXPOSE EXISTING CABL  
MOVE TO NEW H/H

END 4" DIRECT BORE AT STA. 19+17

BURNETT ENTERPRISES, INCORPORATED  
DB. 1000 BC 265

SIGNATURE RIVER OAKS NC, LTD.  
DB 5190 PG 1195  
MR 51 PG 7

NAD 83/95

END TIP PROJECT B-5236  
-L- STA. 20 + 50.00

The diagram illustrates two methods of pipeline installation: Trenchless Installation and Open Cut. It features two vertical lines representing the ground surface. The top section shows 'TRENCHLESS INSTALLATION' with a green horizontal arrow passing through the gap between the two lines. The bottom section shows 'TRENCHLESS INSTALLATION' with a blue horizontal arrow passing through the gap between the two lines. The 'OPEN CUT' method is shown with red arrows on both the left and right sides, indicating excavation along the pipeline's path.

## WATER MAIN PROFILE

The diagram illustrates a horizontal sequence of three main stages: 'OPEN CUT' on the left, 'TRENCHLESS INSTALLATION' in the center, and 'OPEN CUT' on the right. A thick blue vertical line serves as a boundary between the first and second stages, and another thick blue vertical line serves as a boundary between the second and third stages. A double-headed horizontal arrow is positioned above the central 'TRENCHLESS INSTALLATION' stage, spanning the distance between the two vertical boundaries. The text 'TRENCHLESS INSTALLATION' is centered within this span.

# CAMA WETLAND LOBDS CREEK

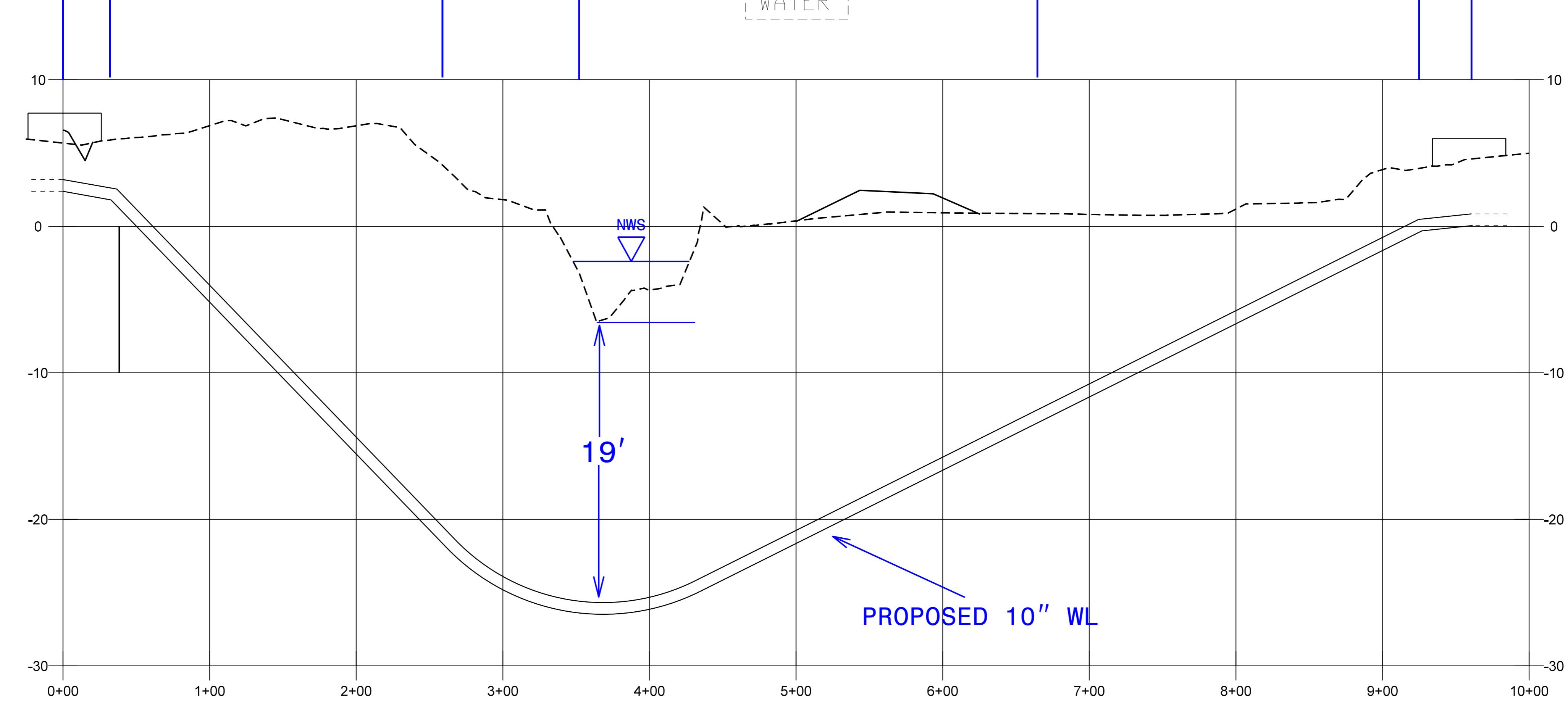
TRENCHLESS INSTALLATION  
CAMA  
WETLAND LORDS CREEK  
BOUNDARY Q  
CAMA  
WETLAND  
BOUNDAR

STA. 0+00 BEGIN PROP. 10"WL

---

STA. 0+32 BEGIN PROP. 10"WL

STA. 9+25 END PROP. 10" WL  
TRENCHLESS INSTALLATION  
STA. 9+60.65 END PROP.  
10" WL INSTALLATION



# SEWER MAIN PROFILE

## OPEN CUT ← → TRENCHLESS INSTALLATION → OPEN CUT

# CAMA WETLAND BOUNDARY

# LORD CREE G

# CAMA WETLAND BOUNDARY

STA. 0+00 BEGIN PROP. 8" FSS

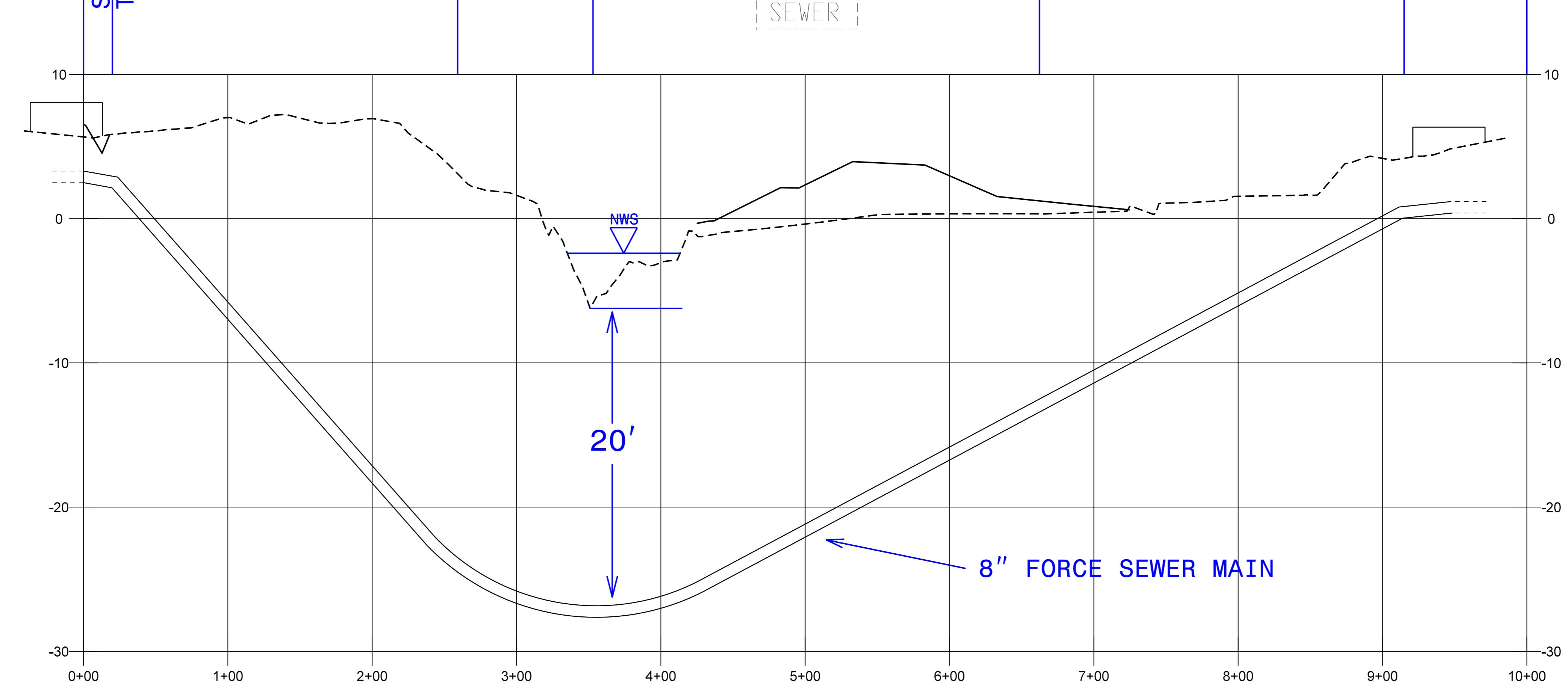
---

STA. 0+20 BEGIN PROP. 8" FSS

REFERENCE FSS INITIATION

**STA. 9+15 END PROP. 8" FSS**  
**TRENCHLESS INSTALLATION**

**STA. 9+52.32 END PROP.**  
**8" FSS INSTALLATION**



# TELEPHONE LINE PROFILE

Hand Hole +10'

Existing -10'

Telephone -20'

Conduit -30'

Open cut 0+00

to Expose and Move to New H/H 13+89

H/H  
4'X4'  
Bore  
Pit  
00+00 00+32

CAMA  
WETLAND  
BOUNDAR'

00' 0+00

0+13

LORDS  
CREEK  
C  
BRIDGEWATER | WATER  
01+14 01+36 | 01+67  
BRIDGE  
02+34

SHEET 2 PROFILE STA. 2+65

1+00 / 1+50 2+00 2+50  
4" TELEPHONE CONDUIT  
20' Below Creek Bottom

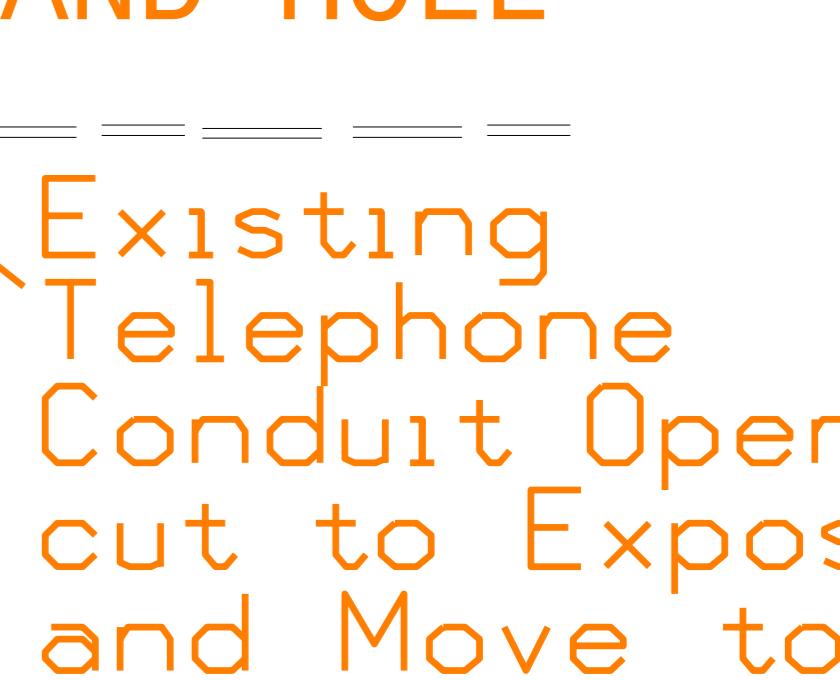
# CAMA WETLAND BOUNDARY 04+46

H/H  
4'X4' Bore Pit  
Ø5+27

-HAND HOLE

---

Existing Telephone Conduit Open cut to Expose 8 and Move to New H/H



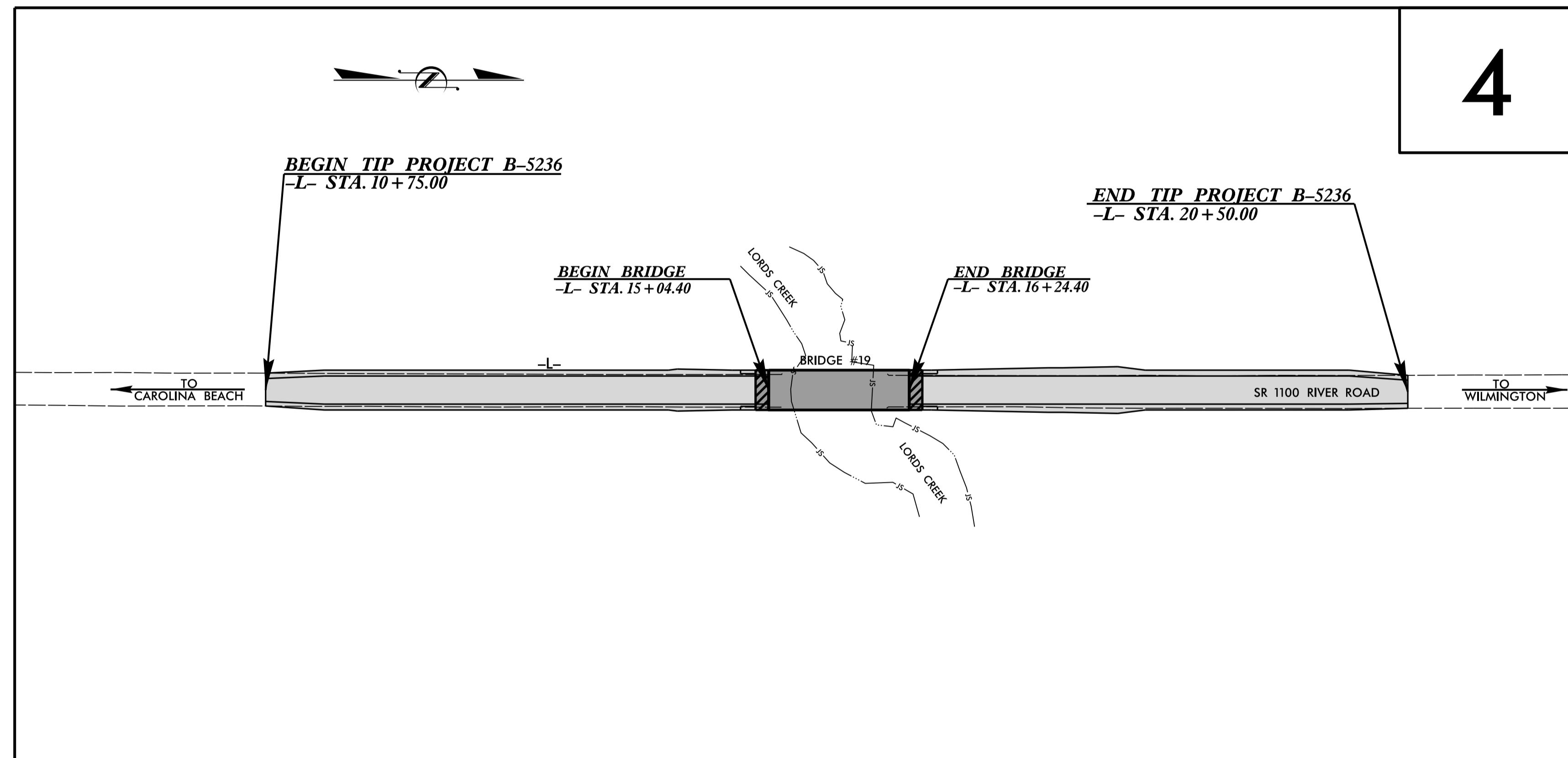
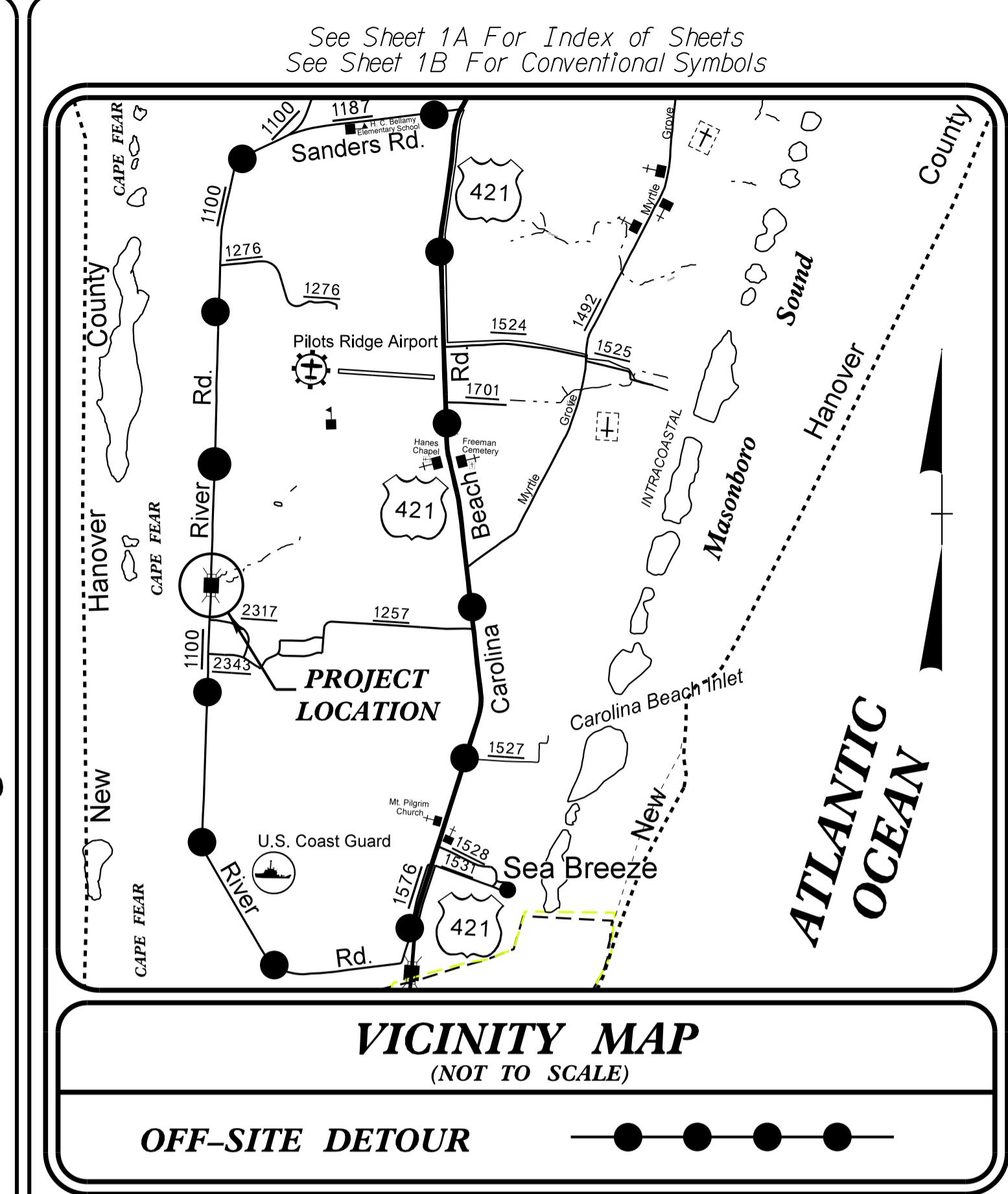
SHEET 1 PROFILE STA. 2+65

STATE OF NORTH CAROLINA  
DIVISION OF HIGHWAYS

# NEW HANOVER COUNTY

**LOCATION: REPLACE BRIDGE NO. 19 OVER LORDS CREEK  
ON SR 1100**

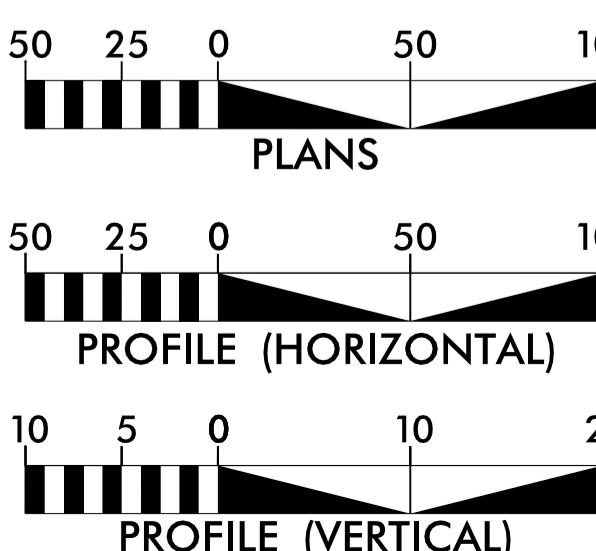
## **TYPE OF WORK: GRADING, PAVING, DRAINAGE & STRUCTURE**



THIS PROJECT IS NOT WITHIN ANY MUNICIPAL BOUNDARIES.  
CLEARING ON THIS PROJECT SHALL BE PERFORMED TO THE LIMITS ESTABLISHED BY METHOD III.

**DOCUMENT NOT CONSIDERED FINAL  
UNLESS ALL SIGNATURES COMPLETED**

## ***GRAPHIC SCALES***



## ***DESIGN DATA***

ADT 2017 = 5400  
ADT 2037 = 9075  
K = 11 %  
D = 80 %  
T = 3 % \*  
V = 60 MPH

\* (TTST = 1% + DUALS 2%)

FUNC CLASS = MINOR ARTERIAL

SUB-REGIONAL TIER

## **PROJECT LENGTH**

LENGTH ROADWAY TIP PROJECT B-5236	=	0.162 MI
LENGTH STRUCTURE TIP PROJECT B-5236	=	0.023 MI
TOTAL LENGTH TIP PROJECT B-5236	=	0.185 MI

*Prepared in the Office of:*  
**VISION OF HIGHWAYS**

**2012 STANDARD SPECIFICATION**

---

**RIGHT OF WAY DATE**

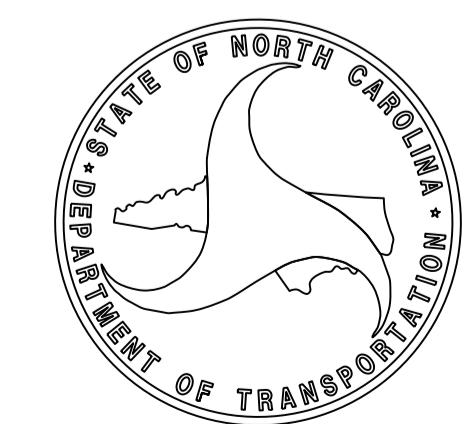
**JULY 20, 2016**

---

**LETTING DATE:**

**SEPTEMBER 19, 2017**

<p><i>in the Office of:</i></p> <p><b>OF HIGHWAYS</b></p> <p><i>Dr., Raleigh, NC 27610</i></p> <hr/> <p><b>GARY LOVERING, PE</b></p> <p><i>PROJECT ENGINEER</i></p> <hr/> <p><b>VACANT</b></p> <p><i>PROJECT DESIGN ENGINEER</i></p>	<p><b>HYDRAULICS ENGINEER</b></p> <hr/> <p><b>P.E.</b></p> <p><i>SIGNATURE:</i></p> <p><b>ROADWAY DESIGN ENGINEER</b></p>
--	---



## CONVENTIONAL PLAN SHEET SYMBOLS

Note: Not to Scale

\*S.U.E. = Subsurface Utility Engineering

## BOUNDARIES AND PROPERTY:

State Line

County Line

Township Line

City Line

Reservation Line

Property Line

Existing Iron Pin



Property Corner

Property Monument



Parcel/Sequence Number



(123)

Existing Fence Line



Proposed Woven Wire Fence



Proposed Chain Link Fence



Proposed Barbed Wire Fence



Existing Wetland Boundary



WLB

Proposed Wetland Boundary



WLB

Existing Endangered Animal Boundary



EAB

Existing Endangered Plant Boundary



EPB

Existing Historic Property Boundary



HPB

Known Contamination Area: Soil



SKULL

Potential Contamination Area: Soil



SKULL

Known Contamination Area: Water



SKULL

Potential Contamination Area: Water



SKULL

Contaminated Site: Known or Potential



SKULL

## BUILDINGS AND OTHER CULTURE:

Gas Pump Vent or UG Tank Cap



Sign



Well



Small Mine



Foundation



Area Outline



Cemetery



Building



School



Church



Dam



## HYDROLOGY:

Stream or Body of Water



Hydro, Pool or Reservoir



Jurisdictional Stream



JS

Buffer Zone 1



BZ 1

Buffer Zone 2



BZ 2

Flow Arrow



Disappearing Stream



Spring



Wetland



Proposed Lateral, Tail, Head Ditch



FLOW

False Sump



## RAILROADS:

Standard Gauge



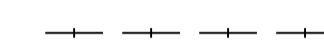
RR Signal Milepost



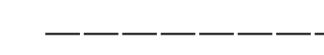
Switch



RR Abandoned



RR Dismantled



## RIGHT OF WAY:

Baseline Control Point



Existing Right of Way Marker



Existing Right of Way Line



Proposed Right of Way Line



Proposed Right of Way Line with Iron Pin and Cap Marker



Proposed Right of Way Line with Concrete or Granite RW Marker



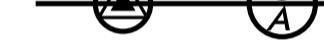
Proposed Control of Access Line with Concrete C/A Marker



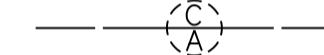
Existing Control of Access



Proposed Control of Access



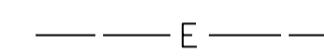
Existing Easement Line



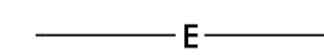
Proposed Temporary Construction Easement



Proposed Temporary Drainage Easement



Proposed Permanent Drainage Easement



Proposed Permanent Drainage / Utility Easement



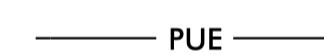
Proposed Permanent Utility Easement



Proposed Temporary Utility Easement



Proposed Aerial Utility Easement

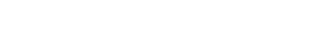


Proposed Permanent Easement with Iron Pin and Cap Marker



## ROADS AND RELATED FEATURES:

Existing Edge of Pavement



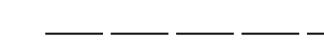
Existing Curb



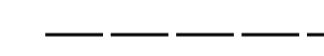
Proposed Slope Stakes Cut



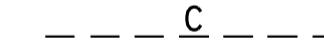
Proposed Slope Stakes Fill



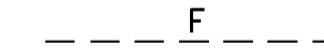
Proposed Curb Ramp



Existing Metal Guardrail



Proposed Guardrail



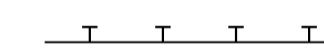
Existing Cable Guiderrail



Proposed Cable Guiderrail



Equality Symbol



Pavement Removal



## VEGETATION:

Single Tree



Single Shrub



Hedge



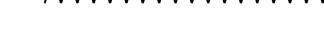
Woods Line



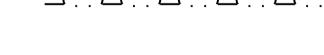
Proposed Lateral, Tail, Head Ditch



Orchard



Vineyard



Agricultural Field



Fruit Tree



Ground Cover



Shrub



Hedge



Woods Line



Proposed Lateral, Tail, Head Ditch



Orchard



Vineyard



Agricultural Field



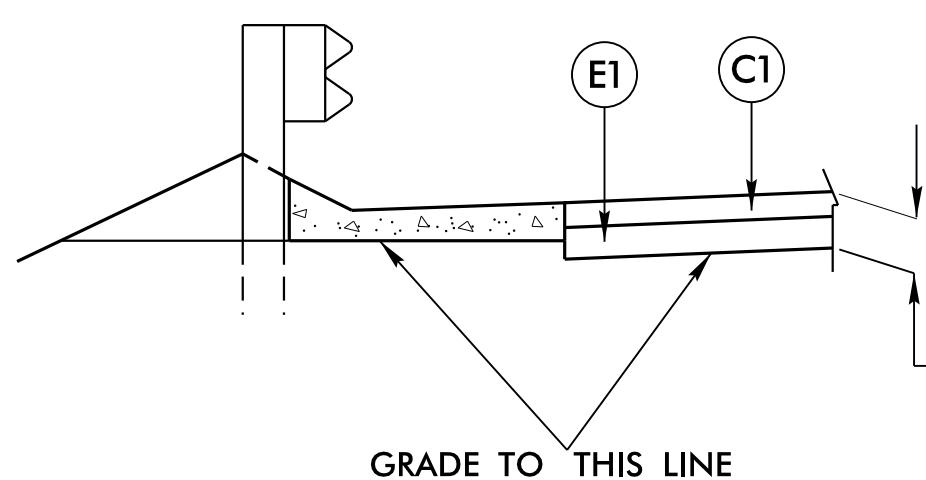
Fruit Tree



6/2/06 1422\B5236\dpd\9999

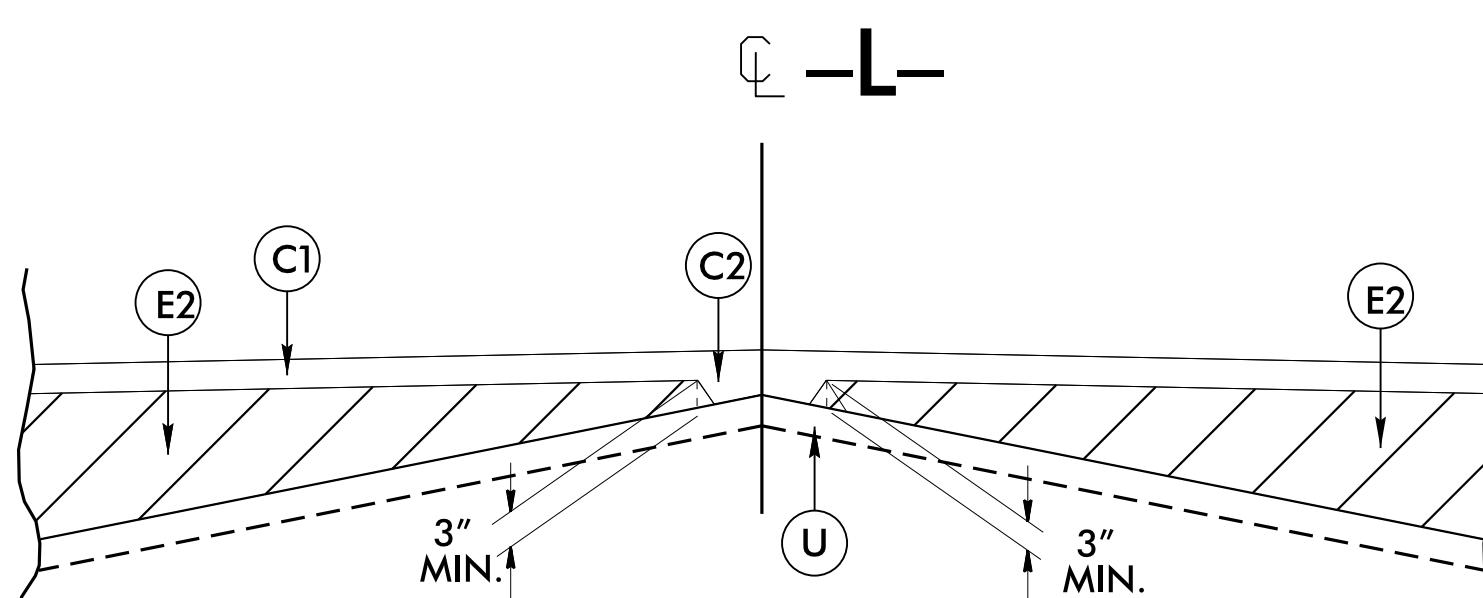
PAVEMENT SCHEDULE	
FINAL PAVEMENT DESIGN	
C1	PROP. APPROX. 3" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B, AT AN AVERAGE RATE OF 168 LBS. PER SQ. YD. IN EACH OF TWO LAYERS.
C2	PROP. VAR. DEPTH ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B, AT AN AVERAGE RATE OF 112 LBS. PER SQ. YD. PER 1" DEPTH TO BE PLACED IN LAYERS NOT LESS THAN 1" IN DEPTH OR GREATER THAN 2.5" DEPTH.
E1	PROP. APPROX. 5" ASPHALT CONCRETE BASE COURSE, TYPE B25.0B, AT AN AVERAGE RATE OF 570 LBS. PER SQ. YD.
E2	PROP. VAR. DEPTH ASPHALT CONCRETE BASE COURSE, TYPE B25.0B, AT AN AVERAGE RATE OF 114 LBS. PER SQ. YD. PER 1" DEPTH TO BE PLACED IN LAYERS NOT LESS THAN 4" IN DEPTH OR GREATER THAN 5.5" DEPTH.
T	EARTH MATERIAL.
U	EXISTING PAVEMENT.
W	VARIABLE DEPTH ASPHALT PAVEMENT (SEE DETAIL SHOWING METHOD OF WEDGING).

NOTE: PAVEMENT EDGE SLOPES ARE 1:1 UNLESS SHOWN OTHERWISE.

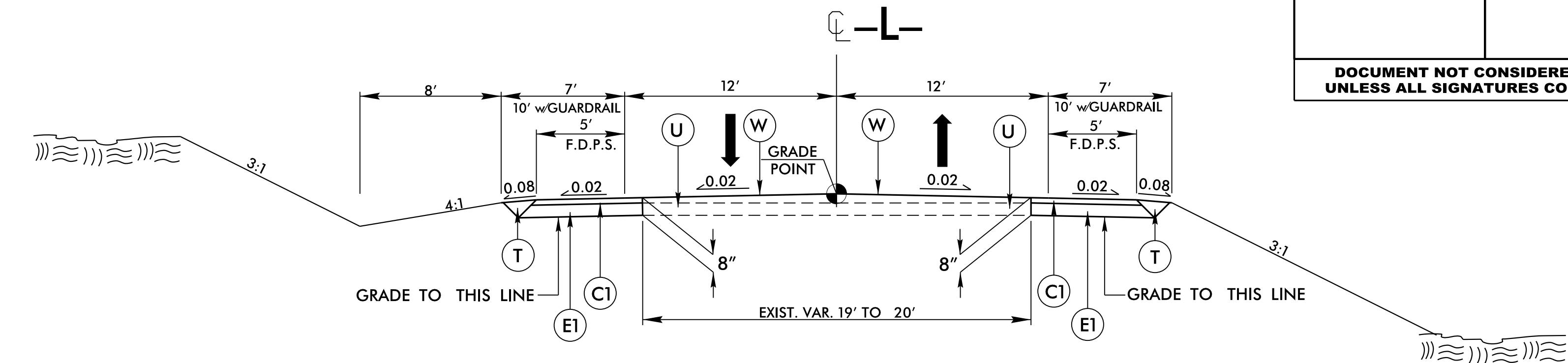


DETAIL SHOWING SHOULDER BERM  
GUTTER ON TOP OF SUBGRADE

-L- STA. 14 + 80.40 TO 14 + 93.23 LT.\RT.  
-L- STA. 16 + 35.57 TO 16 + 48.50 LT.\RT.

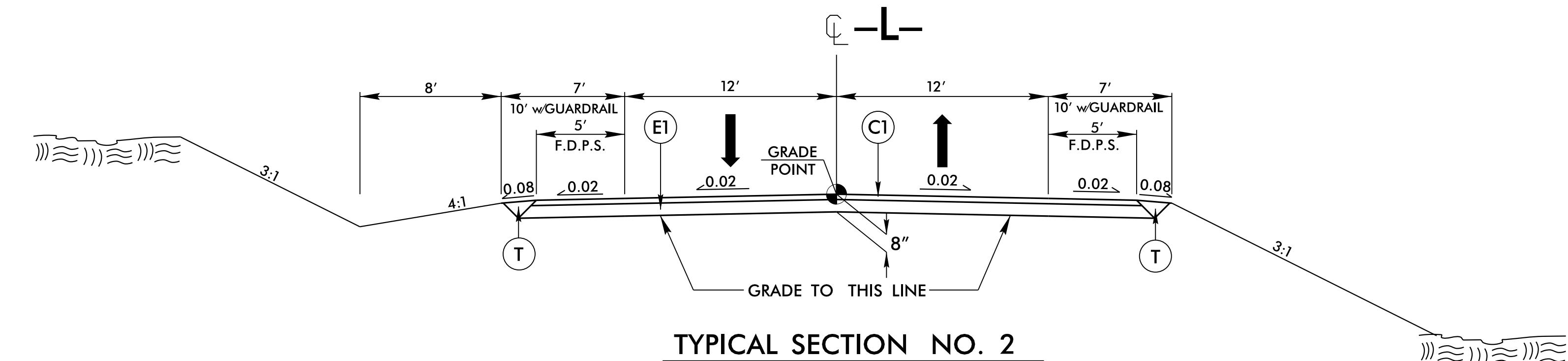


Detail Showing Method of Wedging



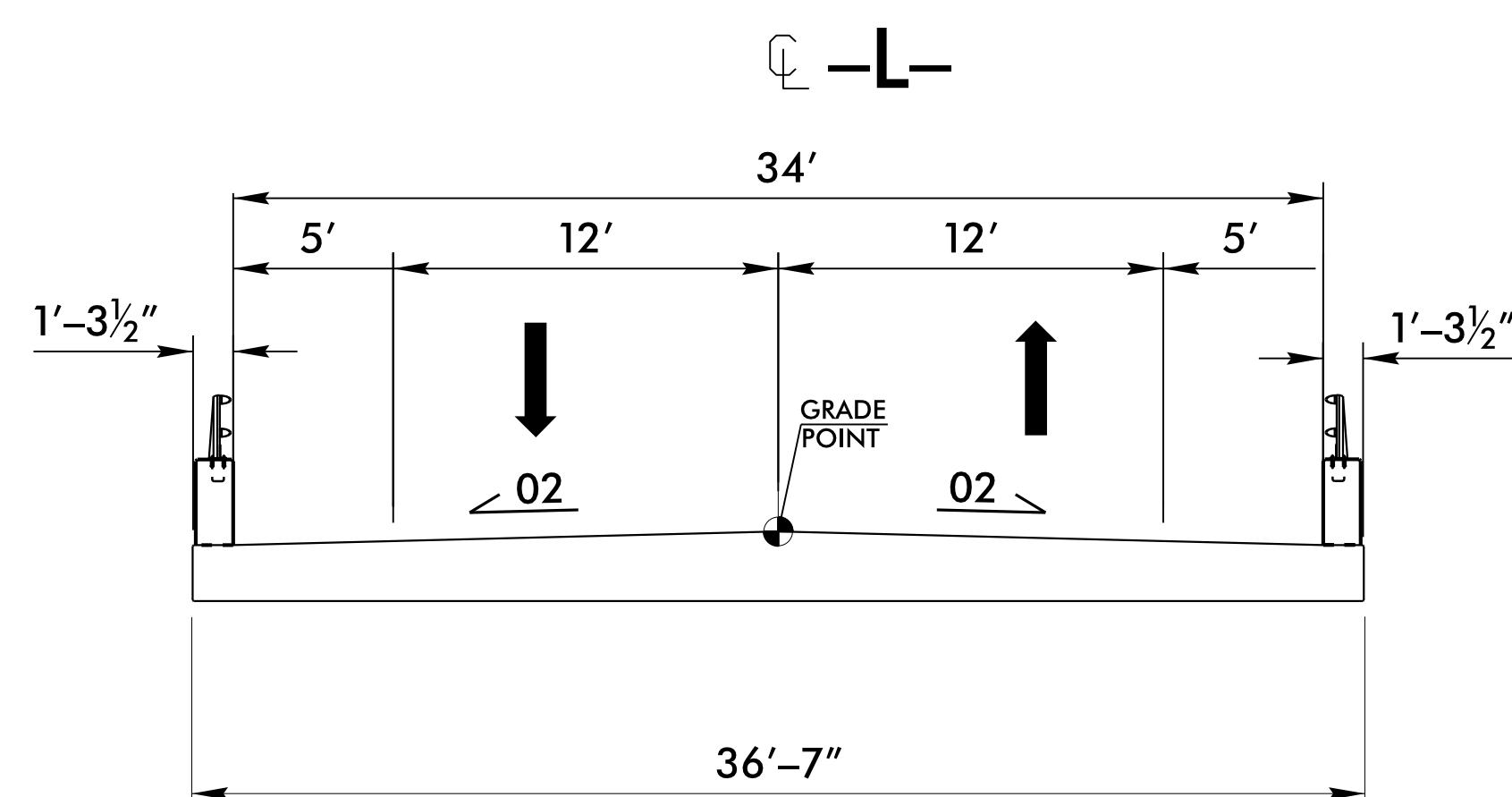
TYPICAL SECTION NO. 1

-L- STA. 10 + 75.00 TO 11 + 75.00  
-L- STA. 19 + 80.00 TO 20 + 50.00



TYPICAL SECTION NO. 2

-L- STA. 11 + 75.00 TO 15 + 04.40 (BEGIN BRIDGE)  
-L- STA. 16 + 24.40 (END BRIDGE) TO 19 + 80.00



TYPICAL SECTION NO. 3

-L- STA. 15 + 04.40 TO 16 + 24.40

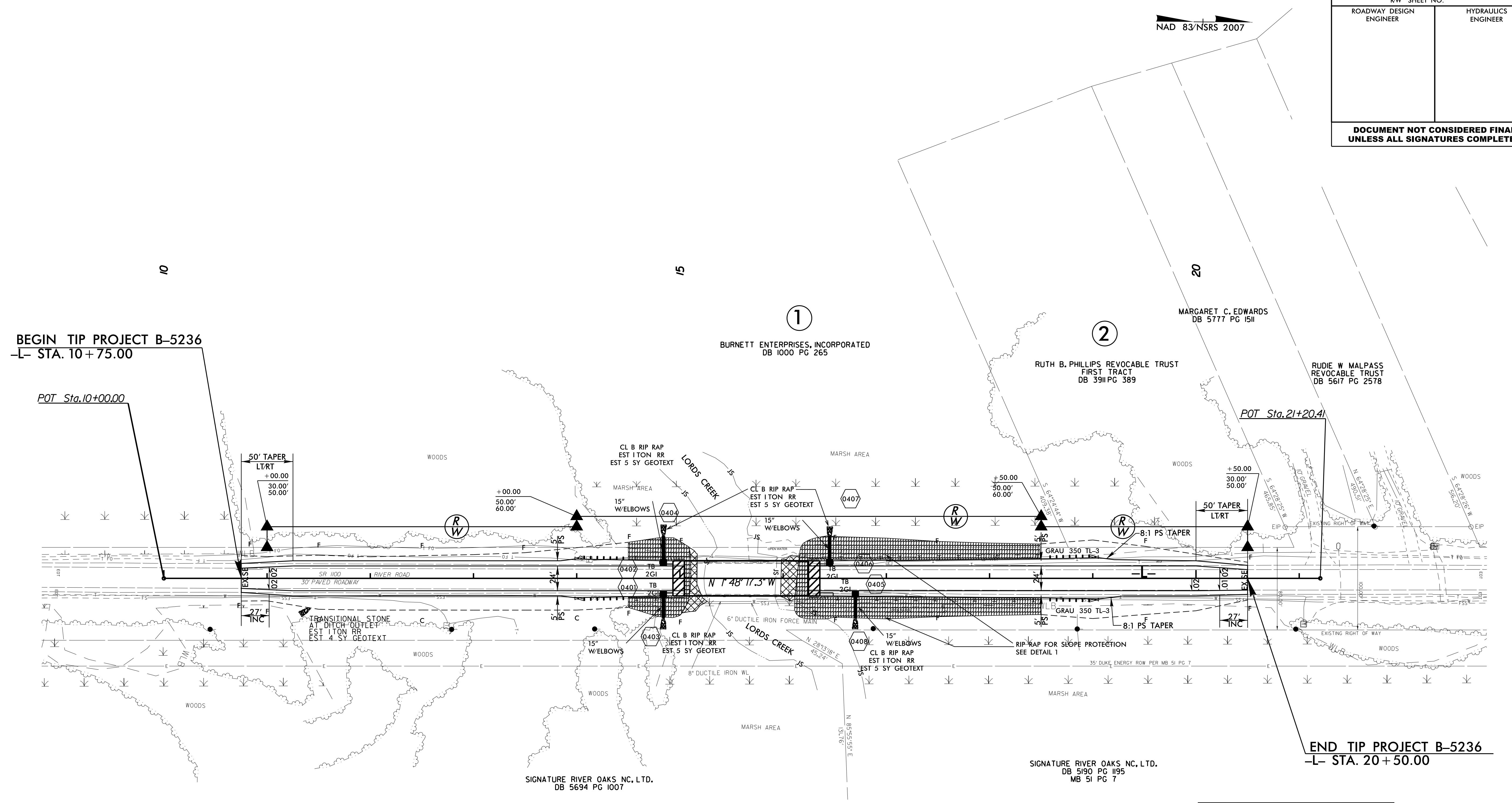
PROJECT REFERENCE NO.	SHEET NO.
B-5236	2A-1
ROADWAY DESIGN ENGINEER	PAVEMENT DESIGN ENGINEER
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	

**DOCUMENT NOT CONSIDERED FINAL  
UNLESS ALL SIGNATURES COMPLETED**

## REVISIONS

03/20/2017 DESIGN REVISION: Extended Rock Platting limits to minimize wetland impacts. chl

21\ -MAR-2015 08:53  
R:\Roadway\Pro\B5236\_Rdy-psh\_04.dgn  
\$\$\$\$\$USERNAME\$\$\$\$\$



## **SKETCH OF BRIDGE IN RELATIONSHIP TO PAVEMENT**

**BEGIN APPROACH**  
-L- STA 14 + 93.23  
8:1 PS TAPER

**END APPROACH**  
-L- STA 16 + 35.57

**TYPE-III**

**BRIDGE NO. 19**

**BEGIN BRIDGE**

**END BRIDGE**

Dimensions shown: 5', 12'12", 24", 02.02', 34', 12'12", 5', 24", 02.02'.

**(NOT TO SCALE)**

**ROCK PLATING DETAIL 1**

**RIP RAP FOR SLOPE PROTECTION**  
(Not to Scale)

RAIL

18" CL A STONE

2' THICK CL II RIPRAP

STATION 16 + 28 TO  
0 RIGHT USE 1:5:1  
AND KEY IN 3.5'

2:1 SLOPE \*

GEOTEXTILE

NATURAL GROUND

BRIDGE APPROACH SLAB  
R -L- PROFILE, SEE SHEET 5  
R STRUCTURE PLANS, SEE SHEET S-1 THROUGH S-?