



STATE OF NORTH CAROLINA  
DEPARTMENT OF TRANSPORTATION

ROY COOPER  
GOVERNOR

JAMES H. TROGDON, III  
SECRETARY

September 16, 2019

N.C. Dept. of Environmental Quality  
Division of Coastal Management  
400 Commerce Avenue  
Morehead City, NC 28557

ATTN: Mr. Stephen Lane  
NCDOT Coordinator

Subject: **Application for CAMA Major Development Permit** for the Proposed Replacement of Bridge No. 43 over Pungo Swamp on US 264 in Beaufort County, North Carolina; TIP No. B-4414; Federal Aid Project No. BRSTP-0264(31); Debit \$475 from WBS No. 38358.1.2.

Dear Sir,

The North Carolina Department of Transportation (NCDOT) proposes to replace the existing 113-foot, three-span with crutch bent bridge No. 43 with a 155-foot, three-span bridge on existing alignment. Traffic will be maintained using an off-site detour. Permanent impacts to coastal wetlands total 0.07 acre, with an additional 0.08 acre permanent impact to riparian wetlands. There will be 147 linear feet of permanent stream impact due to the replacement structure and relocation of an unnamed tributary. All utilities will be relocated with no impacts to jurisdictional streams or wetlands.

Please see enclosed copies of the Division of Coastal Management Major Permit Forms 1 and 5, Division of Mitigation Services Acceptance Letter, permit drawings, stormwater management plan, and utility drawings for the above referenced project. A Categorical Exclusion (CE) was completed in April 2017 and distributed shortly after. Additional copies are available at the NCDOT website: <http://207.4.62.65/PDEA/EnvironmentalDocs/>

This project calls for a letting date of April 21, 2020 and a review date of March 3, 2020. The project schedule may be advanced if funding becomes available.

The bridge replacement was originally designed on new alignment approximately 50 feet upstream of the existing bridge; however, per agency comments, it was redesigned on existing alignment which reduced total wetland impacts from over 1 acre to less than 0.3 acre and reduced permanent channel change impacts from 236 feet to 105 feet. The typical roadway section is the minimum width per roadway design standards while the fill slopes are set to the maximum slope per geotechnical recommendations. Slopes along the unnamed tributary in the northwest quadrant have been further steepened with rock plating.

## Regulatory Approvals

CAMA Major Development Permit: NCDOT requests that the proposed work be authorized under a Coastal Area Management Act Major Permit. Adjacent riparian landowner certified mail return receipts will be provided once they are received. Authorization to debit the \$475 Permit Application Fee from WBS Element 383581.1.2 is hereby given.

Section 10 Permit: Application for a Section 10 Permit as required for the above-described activities in accordance with Section 10 of the Rivers and Harbors Act of March 3, 1899 (33 U.S.C. 403) has been requested under separate letter.

Section 404 Permit: Application for a Section 404 Nationwide Permit 23 in accordance with Section 404 of the Clean Water Act (33 U.S.C. 1344) has been requested under separate letter.

Section 401 Permit and Buffer Authorization: Application for a Section 401 General Certification and Tar-Pamlico Riparian Buffer Authorization has been requested under separate letter.

A copy of this permit application will be posted on the NCDOT Website at <https://connect.ncdot.gov/resources/Environmental/Pages/default.aspx>, under *Quick Links > Permit Applications*. Should you have any questions regarding this information, please contact Jason Dilday at (919) 707-6111 or [jldilday@ncdot.gov](mailto:jldilday@ncdot.gov).

Sincerely,



Philip S. Harris III, P.E., C.P.M., Unit Head  
Environmental Analysis Unit

for

cc: NCDOT Permit Application Standard Distribution List

# APPLICATION for Major Development Permit



(last revised 12/27/06)

North Carolina DIVISION OF COASTAL MANAGEMENT

<b>1. Primary Applicant/ Landowner Information</b>			
Business Name North Carolina Department Of Transportation		Project Name (if applicable) B-4414 Bridge Replacement US 264 over Pungo Swamp	
Applicant 1: First Name Philip	MI S	Last Name Harris	
Applicant 2: First Name	MI	Last Name	
<i>If additional applicants, please attach an additional page(s) with names listed.</i>			
Mailing Address 1598 Mail Service Center		PO Box	City Raleigh
			State NC
ZIP 27699 1581	Country USA	Phone No. 919 - 707 - 6111 ext.	FAX No. - -
Street Address (if different from above) 1000 Birch Ridge Drive		City Raleigh	State NC
			ZIP 27610-
Email jldilday@ncdot.gov			

<b>2. Agent/Contractor Information</b>			
Business Name			
Agent/ Contractor 1: First Name	MI	Last Name	
Agent/ Contractor 2: First Name	MI	Last Name	
Mailing Address		PO Box	City
			State
ZIP		Phone No. 1 - - ext.	Phone No. 2 - - ext.
FAX No.	Contractor #		
Street Address (if different from above)		City	State
			ZIP -
Email			

&lt;Form continues on back&gt;



<b>3. Project Location</b>				
County (can be multiple) Beaufort	Street Address US 264	State Rd. # US 264		
Subdivision Name n/a	City Pinetown	State NC	Zip 27865 -	
Phone No. - - ext.		Lot No.(s) (if many, attach additional page with list) , , , ,		
a. In which NC river basin is the project located? Tar-Pamlico		b. Name of body of water nearest to proposed project Pungo Swamp		
c. Is the water body identified in (b) above, natural or manmade? <input checked="" type="checkbox"/> Natural <input type="checkbox"/> Manmade <input type="checkbox"/> Unknown		d. Name the closest major water body to the proposed project site. Pungo Creek / Pungo River		
e. Is proposed work within city limits or planning jurisdiction? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		f. If applicable, list the planning jurisdiction or city limit the proposed work falls within. Town of Pinetown, NC		

<b>4. Site Description</b>	
a. Total length of shoreline on the tract (ft.) 886	b. Size of entire tract (sq.ft.) 110,154 sq. ft.
c. Size of individual lot(s) n/a, (If many lot sizes, please attach additional page with a list)	d. Approximate elevation of tract above NHW (normal high water) or NWL (normal water level) 1' to 8' <input type="checkbox"/> NHW or <input checked="" type="checkbox"/> NWL
e. Vegetation on tract Marsh	
f. Man-made features and uses now on tract NCDOT roadway and bridge.	
g. Identify and describe the existing land uses <u>adjacent</u> to the proposed project site. Cropland, woods, rural residential.	
h. How does local government zone the tract?	i. Is the proposed project consistent with the applicable zoning? (Attach zoning compliance certificate, if applicable) <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> NA
j. Is the proposed activity part of an urban waterfront redevelopment proposal? <span style="float: right;"><input type="checkbox"/>Yes <input checked="" type="checkbox"/>No</span>	
k. Has a professional archaeological assessment been done for the tract? If yes, attach a copy. <span style="float: right;"><input checked="" type="checkbox"/>Yes <input type="checkbox"/>No <input type="checkbox"/>NA</span>  If yes, by whom? <span style="float: right;">NCDOT</span>	
l. Is the proposed project located in a National Registered Historic District or does it involve a National Register listed or eligible property? <span style="float: right;"><input type="checkbox"/>Yes <input checked="" type="checkbox"/>No <input type="checkbox"/>NA</span>	

**<Form continues on next page>**



m. (i) Are there wetlands on the site?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
(ii) Are there coastal wetlands on the site?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
(iii) If yes to either (i) or (ii) above, has a delineation been conducted? <i>(Attach documentation, if available)</i>	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
n. Describe existing wastewater treatment facilities. n/a	
o. Describe existing drinking water supply source. n/a	
p. Describe existing storm water management or treatment systems. Runoff from the existing bridge discharges directly into Pungo Swamp as there are open deck drains on both sides of the bridge, continuous for the full length of the bridge	

**5. Activities and Impacts**

a. Will the project be for commercial, public, or private use?	<input type="checkbox"/> Commercial <input checked="" type="checkbox"/> Public/Government <input type="checkbox"/> Private/Community
b. Give a brief description of purpose, use, and daily operations of the project when complete. B-4414 is the planned replacement of bridge 43 in Beaufort County on US 264. The project lies within a CAMA county and CAMA wetlands are involved. The existing structure over Pungo Swamp was built in 1925 and reconstructed in 1956 and is a three span bridge on steel beams with a total length of 114'. The proposed structure will be a three span 36" concrete girder structure with an overall length of 155'. The final proposed structure does not require deck drains.	
c. Describe the proposed construction methodology, types of construction equipment to be used during construction, the number of each type of equipment and where it is to be stored. Cranes, pile driving equipment, grading equipment, bull dozers, excavators, offroad trucks, and boring machines. Anticipate top down construction.	
d. List all development activities you propose. Installation of a temporary work bridge and construction of a new bridge. Grading, paving, clearing, utility relocation, excavation and fill associated with the roadway and bridge work. Removal of the existing bridge.	
e. Are the proposed activities maintenance of an existing project, new work, or both?	Replacement of existing bridge to serve same purpose.
f. What is the approximate total disturbed land area resulting from the proposed project?	1.9 <input type="checkbox"/> Sq.Ft or <input checked="" type="checkbox"/> Acres
g. Will the proposed project encroach on any public easement, public accessway or other area that the public has established use of?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA
h. Describe location and type of existing and proposed discharges to waters of the state. The proposed bridge will have no direct discharge into the water. Stormwater runoff from the proposed bridge is to flow to traffic bearing grated inlets on each side of the bridge where it will be diffused with a riprap pad at the proposed pipe outlets and discharged at non-erosive velocities. All proposed stormwater runoff is discharged at the lowest practicable velocities adjacent to wetlands in all four quadrants outside of Buffer Zone 2.	
i. Will wastewater or stormwater be discharged into a wetland?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA
If yes, will this discharged water be of the same salinity as the receiving water?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> NA
j. Is there any mitigation proposed? If yes, attach a mitigation proposal.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA

<Form continues on back>

**6. Additional Information**

In addition to this completed application form, (MP-1) the following items below, if applicable, must be submitted in order for the application package to be complete. Items (a) – (f) are always applicable to any major development application. Please consult the application instruction booklet on how to properly prepare the required items below.

- a. A project narrative.
- b. An accurate, dated work plat (including plan view and cross-sectional drawings) drawn to scale. Please give the present status of the proposed project. Is any portion already complete? If previously authorized work, clearly indicate on maps, plats, drawings to distinguish between work completed and proposed.
- c. A site or location map that is sufficiently detailed to guide agency personnel unfamiliar with the area to the site.
- d. A copy of the deed (with state application only) or other instrument under which the applicant claims title to the affected properties.
- e. The appropriate application fee. Check or money order made payable to DENR.
- f. A list of the names and complete addresses of the adjacent waterfront (riparian) landowners and signed return receipts as proof that such owners have received a copy of the application and plats by certified mail. Such landowners must be advised that they have 30 days in which to submit comments on the proposed project to the Division of Coastal Management.
 

Name see attached letters	Phone No.
Address	
Name	Phone No.
Address	
Name	Phone No.
Address	
- g. A list of previous state or federal permits issued for work on the project tract. Include permit numbers, permittee, and issuing dates.
   
\_\_\_\_\_
   
\_\_\_\_\_
- h. Signed consultant or agent authorization form, if applicable.
- i. Wetland delineation, if necessary.
- j. A signed AEC hazard notice for projects in oceanfront and inlet areas. (Must be signed by property owner)
- k. A statement of compliance with the N.C. Environmental Policy Act (N.C.G.S. 113A 1-10), if necessary. If the project involves expenditure of public funds or use of public lands, attach a statement documenting compliance with the North Carolina Environmental Policy Act.

**7. Certification and Permission to Enter on Land**

I understand that any permit issued in response to this application will allow only the development described in the application. The project will be subject to the conditions and restrictions contained in the permit.

I certify that I am authorized to grant, and do in fact grant permission to representatives of state and federal review agencies to enter on the aforementioned lands in connection with evaluating information related to this permit application and follow-up monitoring of the project.

I further certify that the information provided in this application is truthful to the best of my knowledge.

Date 9/10/19

Print Name Philip S. Harris III, P.E., C.P.M. for

Signature Carla Queen

Please indicate application attachments pertaining to your proposed project.

- DCM MP-2 Excavation and Fill Information
- DCM MP-3 Upland Development
- DCM MP-4 Structures Information
- DCM MP-5 Bridges and Culverts



# BRIDGES and CULVERTS

Attach this form to Joint Application for CAMA Major Permit, Form DCM MP-1. Be sure to complete all other sections of the Joint Application that relate to this proposed project. Please include all supplemental information.

## 1. BRIDGES

This section not applicable

a. Is the proposed bridge:  
 Commercial  Public/Government  Private/Community

b. Water body to be crossed by bridge:  
Pungo Swamp

c. Type of bridge (construction material):  
The proposed bridge is a three span 36" concrete girder bridge.

d. Water depth at the proposed crossing at NLW or NWL:  
12'+

e. (i) Will proposed bridge replace an existing bridge?  Yes  No  
If yes,  
(ii) Length of existing bridge: 114'  
(iii) Width of existing bridge: 33'  
(iv) Navigation clearance underneath existing bridge: 4.5'  
(v) Will all, or a part of, the existing bridge be removed?  
(Explain) All of the existing bridge and existing piers are proposed to be removed.

f. (i) Will proposed bridge replace an existing culvert?  Yes  No  
If yes,  
(ii) Length of existing culvert: \_\_\_\_\_  
(iii) Width of existing culvert: \_\_\_\_\_  
(iv) Height of the top of the existing culvert above the NHW or NWL: \_\_\_\_\_  
(v) Will all, or a part of, the existing culvert be removed?  
(Explain)

g. Length of proposed bridge: 155'

h. Width of proposed bridge: 43'

i. Will the proposed bridge affect existing water flow?  Yes  No  
If yes, explain: Flooding source controlled by Pungo River tidal surge.

j. Will the proposed bridge affect navigation by reducing or increasing the existing navigable opening?  Yes  No  
If yes, explain: The existing bridge has a navigational clearance of 4.5' but the proposed bridge will have a navigational clearance of 4.9' and increase span.

k. Navigation clearance underneath proposed bridge: 4.9'

l. Have you contacted the U.S. Coast Guard concerning their approval?  Yes  No  
If yes, explain: Received USCG Advance Approval on July 30, 2019

m. Will the proposed bridge cross wetlands containing no navigable waters?  Yes  No  
If yes, explain:

n. Height of proposed bridge above wetlands: N/A

## 2. CULVERTS

This section not applicable

a. Number of culverts proposed: \_\_\_\_\_

b. Water body in which the culvert is to be placed:



**< Form continues on back >**

c. Type of culvert (construction material):

\_\_\_\_\_

d. (i) Will proposed culvert replace an existing bridge?  Yes  No

If yes,

(ii) Length of existing bridge: \_\_\_\_\_

(iii) Width of existing bridge: \_\_\_\_\_

(iv) Navigation clearance underneath existing bridge: \_\_\_\_\_

(v) Will all, or a part of, the existing bridge be removed?  
(Explain)

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

e. (i) Will proposed culvert replace an existing culvert?  Yes  No

If yes,

(ii) Length of existing culvert(s): \_\_\_\_\_

(iii) Width of existing culvert(s): \_\_\_\_\_

(iv) Height of the top of the existing culvert above the NHW or  
NWL: \_\_\_\_\_

(v) Will all, or a part of, the existing culvert be removed?  
(Explain)

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

f. Length of proposed culvert: \_\_\_\_\_

g. Width of proposed culvert: \_\_\_\_\_

h. Height of the top of the proposed culvert above the NHW or NWL.

\_\_\_\_\_

i. Depth of culvert to be buried below existing bottom contour.

\_\_\_\_\_

j. Will the proposed culvert affect navigation by reducing or  
increasing the existing navigable opening?  Yes  No

If yes, explain:

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

k. Will the proposed culvert affect existing water flow?  Yes  No

If yes, explain:

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

**3. EXCAVATION and FILL**

This section not applicable

a. (i) Will the placement of the proposed bridge or culvert require any  
excavation below the NHW or NWL?  Yes  No

If yes,

(ii) Avg. length of area to be excavated: 90'

(iii) Avg. width of area to be excavated: 21'

(iv) Avg. depth of area to be excavated: 4.5'

(v) Amount of material to be excavated in cubic yards: 320  
(this if for channel change)

b. (i) Will the placement of the proposed bridge or culvert require any  
excavation within coastal wetlands/marsh (CW), submerged  
aquatic vegetation (SAV), shell bottom (SB), or other wetlands  
(WL)? If any boxes are checked, provide the number of square  
feet affected.

CW 687 sf  SAV \_\_\_\_\_  SB \_\_\_\_\_

WL 82 sf  None

(ii) Describe the purpose of the excavation in these areas:

Excavation is required for the spill through abutment  
and channel change.

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

c. (i) Will the placement of the proposed bridge or culvert require any high-ground excavation?  Yes  No

If yes,

(ii) Avg. length of area to be excavated: 62'

(iii) Avg. width of area to be excavated: 45'

(iv) Avg. depth of area to be excavated: 4'

(v) Amount of material to be excavated in cubic yards: 415

d. If the placement of the bridge or culvert involves any excavation, please complete the following:

(i) Location of the spoil disposal area: to be determined by contractor

(ii) Dimensions of the spoil disposal area: to be determined by contractor

(iii) Do you claim title to the disposal area?  Yes  No (If no, attach a letter granting permission from the owner.)

(iv) Will the disposal area be available for future maintenance?  Yes  No

(v) Does the disposal area include any coastal wetlands/marsh (CW), submerged aquatic vegetation (SAVs), other wetlands (WL), or shell bottom (SB)?

CW  SAV  WL  SB  None

If any boxes are checked, give dimensions if different from (ii) above.

(vi) Does the disposal area include any area below the NHW or NWL?  Yes  No

If yes, give dimensions if different from (ii) above.

e. (i) Will the placement of the proposed bridge or culvert result in any fill (other than excavated material described in Item d above) to be placed below NHW or NWL?  Yes  No

If yes,

(ii) Avg. length of area to be filled: 105'

(iii) Avg. width of area to be filled: 13'

(iv) Purpose of fill: Fill in UT to Pungo Swamp (SB) for new roadway alignment.

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

f. (i) Will the placement of the proposed bridge or culvert result in any fill (other than excavated material described in Item d above) to be placed within coastal wetlands/marsh (CW), submerged aquatic vegetation (SAV), shell bottom (SB), or other wetlands (WL)? If any boxes are checked, provide the number of square feet affected.

CW 2007 sf  SAV \_\_\_\_\_  SB \_\_\_\_\_

WL 3264 sf  None

(ii) Describe the purpose of the excavation in these areas:

To construct roadway and roadway embankment.

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

g. (i) Will the placement of the proposed bridge or culvert result in any fill (other than excavated material described in Item d above) to be placed on high-ground?  Yes  No

If yes,

(ii) Avg. length of area to be filled: 1000'

(iii) Avg. width of area to be filled: 80'

(iv) Purpose of fill: To construct roadway embankment.

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

#### 4. GENERAL

a. Will the proposed project require the relocation of any existing utility lines?  Yes  No

If yes, explain: Fiber optic, copper (telephone).

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

b. Will the proposed project require the construction of any temporary detour structures?  Yes  No

If yes, explain:

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

If this portion of the proposed project has already received approval from local authorities, please attach a copy of the approval or certification.

**< Form continues on back >**

c. Will the proposed project require any work channels?  
 Yes  No

If yes, complete Form DCM-MP-2.

d. How will excavated or fill material be kept on site and erosion controlled?

Use of standard NCDOT Design Standards in Sensitive Watersheds

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e. What type of construction equipment will be used (for example, dragline, backhoe, or hydraulic dredge)?

Cranes, pile driving equipment, grading equipment, bull dozers, excavators, offroad trucks, and boring machines.

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f. Will wetlands be crossed in transporting equipment to project site?  
 Yes  No

If yes, explain steps that will be taken to avoid or minimize environmental impacts.

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g. Will the placement of the proposed bridge or culvert require any shoreline stabilization?  
 Yes  No

If yes, complete form MP-2, Section 3 for Shoreline Stabilization only.

9/16/2019

Date

B-4414 Bridge Replacement US 264 over Pungo Swamp

Project Name

for Philip S. Harris III, P.E., C.P.M.

Applicant Name

Clara Dineen

Applicant Signature





## Pre-Construction Notification (PCN) Form

For Nationwide Permits and Regional General Permits  
(along with corresponding Water Quality Certifications)

September 29, 2018 Ver 3

Please note: fields marked with a red asterisk \* below are required. You will not be able to submit the form until all mandatory questions are answered.

Also, if at any point you wish to print a copy of the E-PCN, all you need to do is right-click on the document and you can print a copy of the form.

Below is a link to the online help file.

<https://edocs.deq.nc.gov/WaterResources/0/edoc/624704/PCN%20Help%20File%202018-1-30.pdf>

### A. Processing Information

**County (or Counties) where the project is located:\***

Beaufort

**Is this project a public transportation project?\***

Yes  No

This is any publicly funded by municipal, state or federal funds road, rail, airport transportation project.

**Is this a NCDOT Project?\***

Yes  No

**(NCDOT only) T.I.P. or state project number:**

B-4414

**WBS #\***

38358.1.2

(for NCDOT use only)

**1a. Type(s) of approval sought from the Corps:\***

Section 404 Permit (wetlands, streams and waters, Clean Water Act)

Section 10 Permit (navigable waters, tidal waters, Rivers and Harbors Act)

**1b. What type(s) of permit(s) do you wish to seek authorization?\***

Nationwide Permit (NWP)

Regional General Permit (RGP)

Standard (IP)

This form may be used to initiate the standard/individual permit process with the Corps. Please contact your Corps representative concerning submittals for standard permits. All required items that are not provided in the E-PCN can be added to the miscellaneous upload area located at the bottom of this form.

**1c. Has the NWP or GP number been verified by the Corps?\***

Yes  No

**Nationwide Permit (NWP) Number:**

23 - Categorical Exclusions

**NWP Numbers (for multiple NWPS):**

List all NW numbers you are applying for not on the drop down list.

**1d. Type(s) of approval sought from the DWR:\***

check all that apply

401 Water Quality Certification - Regular

Non-404 Jurisdictional General Permit

Individual Permit

401 Water Quality Certification - Express

Riparian Buffer Authorization

**1e. Is this notification solely for the record because written approval is not required?**

\*

**For the record only for DWR 401 Certification:**

Yes  No

**For the record only for Corps Permit:**

Yes  No

**1f. Is this an after-the-fact permit application?\***

Yes

No

**1g. Is payment into a mitigation bank or in-lieu fee program proposed for mitigation of impacts?**

If so, attach the acceptance letter from mitigation bank or in-lieu fee program.

Yes  No

**Acceptance Letter Attachment**

Click the upload button or drag and drop files here to attach document

B-4414 - STR - RW - CM - TP 04.pdf

67.94KB

FILETYPE MUST BE PDF

**1h. Is the project located in any of NC's twenty coastal counties? \***

Yes  No

**1i. Is the project located within a NC DCM Area of Environmental Concern (AEC)? \***

Yes  No  Unknown

**1j. Is the project located in a designated trout watershed? \***

Yes  No

Link to trout information: <http://www.saw.usace.army.mil/Missions/Regulatory-Permit-Program/Agency-Coordination/Trout.aspx>

**B. Applicant Information**

**1a. Who is the Primary Contact? \***

NCDOT

**1b. Primary Contact Email: \***

jjldilday@ncdot.gov

**1c. Primary Contact Phone: \***

(xxx)xxx-xxxx  
(919)707-6111

**1d. Who is applying for the permit? \***

Owner  Applicant (other than owner)  
(Check all that apply)

**1e. Is there an Agent/Consultant for this project? \***

Yes  No

**2. Owner Information**

**2a. Name(s) on recorded deed: \***

Multiple owners

**2b. Deed book and page no.:**

**2c. Responsible party:**

(for Corporations)

**2d. Address \***

Street Address

1000 Birch Ridge Drive

Address Line 2

City

Raleigh

State / Province / Region

NC

Postal / Zip Code

27610

Country

USA

**2e. Telephone Number: \***

(xxx)xxx-xxxx

(919)707-6111

**2f. Fax Number:**

(xxx)xxx-xxxx

**2g. Email Address: \***

pharris@ncdot.gov

**C. Project Information and Prior Project History**

**1. Project Information**

**1a. Name of project: \***

Replacement of Bridge 43 over Pungo Swamp on US264, B-4414 (Central)

**1b. Subdivision name:**

(if appropriate)

**1c. Nearest municipality / town: \***

## 2. Project Identification



### 2a. Property Identification Number:

(tax PIN or parcel ID)

### 2b. Property size:

(in acres)

### 2c. Project Address

Street Address

Address Line 2

City

Postal / Zip Code

State / Province / Region

Country

### 2d. Site coordinates in decimal degrees

Please collect site coordinates in decimal degrees. Use between 4-6 digits (unless you are using a survey-grade GPS device) after the decimal place as appropriate, based on how the location was determined. (For example, most mobile phones with GPS provide locational precision in decimal degrees to map coordinates to 5 or 6 digits after the decimal place.)

#### Latitude: \*

35.531742  
ex: 34.208504

#### Longitude: \*

-76.733031  
-77.796371

## 3. Surface Waters

### 3a. Name of the nearest body of water to proposed project: \*

Pungo Swamp

### 3b. Water Resources Classification of nearest receiving water: \*

C, Sw, NSW

[Surface Water Lookup](#)

### 3c. What river basin(s) is your project located in? \*

Tar-Pamlico

### 3d. Please provide the 12-digit HUC in which the project is located. \*

030201040602

[River Basin Lookup](#)

## 4. Project Description and History

### 4a. Describe the existing conditions on the site and the general land use in the vicinity of the project at the time of this application: \*

US 264 has a functional classification as a minor arterial. Land use in the project vicinity consists of primarily agricultural fields, forested communities, rural residential dwellings and commercial properties.

### 4b. Have Corps permits or DWR certifications been obtained for this project (including all prior phases) in the past? \*

Yes  No  Unknown

### 4d. Attach an 8 1/2 X 11 excerpt from the most recent version of the USGS topographic map indicating the location of the project site. (for DWR)

[Click the upload button or drag and drop files here to attach document](#)

File type must be pdf

### 4e. Attach an 8 1/2 X 11 excerpt from the most recent version of the published County NRCS Soil Survey map depicting the project site. (for DWR)

[Click the upload button or drag and drop files here to attach document](#)

File type must be pdf

### 4f. List the total estimated acreage of all existing wetlands on the property:

4.0 acres

### 4g. List the total estimated linear feet of all existing streams on the property:

(intermittent and perennial)

600 linear feet

### 4h. Explain the purpose of the proposed project: \*

The purpose of this project is to replace a structurally deficient and functionally obsolete bridge.

### 4i. Describe the overall project in detail, including indirect impacts and the type of equipment to be used: \*

This project is proposed to replace the 3-span, 113-foot bridge with a 3-span, 158-foot bridge on the existing alignment. The existing bridge is currently being supported by an interior "crutch" bent. Traffic will be maintained on an off-site detour. An unnamed tributary to Pungo Creek will be relocated away from the fill slope and bridge abutment. Standard road building equipment, such as truck, dozers and cranes will be used.

### 4j. Please upload project drawings for the proposed project.



Click the upload button or drag and drop files here to attach document

B-4414_Permit Drawings_20190812.pdf	3.29MB
B-4414_Permit Drawings_BUFFER_20190801.pdf	967.24KB
B4414_utilities combined.pdf	3.85MB

File type must be pdf

## 5. Jurisdictional Determinations

5a. Have the wetlands or streams been delineated on the property or proposed impact areas? \*

- Yes
  No
  Unknown

Comments:

5b. If the Corps made a jurisdictional determination, what type of determination was made? \*

- Preliminary
  Approved
  Not Verified
  Unknown
  N/A

Corps AID Number:

Example: SAW-2017-99999

5c. If 5a is yes, who delineated the jurisdictional areas?

Name (if known): Brian Smith

Agency/Consultant Company: Carolina Ecosystems

Other:

5d1. Jurisdictional determination upload

Click the upload button or drag and drop files here to attach document

File type must be FDF

## 6. Future Project Plans

6a. Is this a phased project? \*

- Yes
  No

Are any other NWP(s), regional general permit(s), or individual permits(s) used, or intended to be used, to authorize any part of the proposed project or related activity? This includes other separate and distant crossing for linear projects that require Department of the Army authorization but don't require pre-construction notification.

## D. Proposed Impacts Inventory

### 1. Impacts Summary

1a. Where are the impacts associated with your project? (check all that apply):

- Wetlands
  Streams-tributaries
  Buffers
  Open Waters
  Pond Construction

### 2. Wetland Impacts

If there are wetland impacts proposed on the site, then complete this question for each wetland area impacted.

"W." will be used in the table below to represent the word "wetland".

2a. Site #* (?)	2a1 Reason* (?)	2b. Impact type* (?)	2c. Type of W.*	2d. W. name*	2e. Forested*	2f. Type of Jurisdiction* (?)	2g. Impact area*
1A	Handclearing	T	Riverine Swamp Forest	WA	No	Both	0.003 (acres)
1B	Fill/Excavation	P	Riverine Swamp Forest	WA	No	Both	0.021 (acres)
1B	Handclearing	T	Riverine Swamp Forest	WA	No	Both	0.010 (acres)
1C	Fill/Excavation	P	Riverine Swamp Forest	WD	Yes	Both	0.037 (acres)
1C	Handclearing	T	Riverine Swamp Forest	WD	Yes	Both	0.025 (acres)
1D	Handclearing	T	Riverine Swamp Forest	WB	No	Both	0.005 (acres)
1E	Fill/Excavation	P	Riverine Swamp Forest	WB	No	Both	0.040 (acres)
1E	Handclearing	T	Riverine Swamp Forest	WB	No	Both	0.023 (acres)

1F	Fill	P	Riverine Swamp Forest	WC	No	Both	0.041 (acres)
----	------	---	-----------------------	----	----	------	------------------

**2g. Total Temporary Wetland Impact**

0.066

**2g. Total Permanent Wetland Impact**

0.139

**2g. Total Wetland Impact**

0.205

**2h. Comments:**

Due to rounding, the total wetland impact rounds to 0.15 ac. Proposed mitigation is for 0.15 ac. Of this amount, 0.07 ac. is for coastal marsh and 0.08 ac. is for riparian wetlands. Additionally, there will be <0.01 acre of temporary fill in wetlands in the hand clearing areas for erosion control measures.

**3. Stream Impacts**

If there are perennial or intermittent stream impacts (including temporary impacts) proposed on the site, then complete this question for all stream sites impacted.

"S." will be used in the table below to represent the word "stream".

	3a. Reason for impact* (?)	3b. Impact type *	3c. Type of impact *	3d. S. name *	3e. Stream Type* (?)	3f. Type of Jurisdiction *	3g. S. width* Average (feet)	3h. Impact length* (linear feet)
S1	1B-Bridge Abutment	Permanent	Fill	Pungo Swamp	Perennial	Both	90 Average (feet)	42 (linear feet)
S2	1B-Bridge Abutment	Temporary	Fill	Pungo Swamp	Perennial	Both	90 Average (feet)	14 (linear feet)
S3	2-Channel Relocation	Permanent	Relocation	SB-UT to Pungo Swamp	Perennial	Both	15 Average (feet)	105 (linear feet)
S4	2-Channel Relocation	Temporary	Relocation	SB-UT to Pungo Swamp	Perennial	Both	15 Average (feet)	9 (linear feet)
S5	3-Work Bridge	Temporary	Workpad/Causeway	Pungo Swamp	Perennial	Both	90 Average (feet)	42 (linear feet)

\*\* All Perennial or Intermittent streams must be verified by DWR or delegated local government.

**3i. Total jurisdictional ditch impact in square feet:**

0

**3i. Total permanent stream impacts:**

147

**3i. Total temporary stream impacts:**

65

**3i. Total stream and ditch impacts:**

212

**3j. Comments:**

Site 3-temporary work bridge was calculated as the area of the existing bridge deck. Actual work bridge impact is unknown until decided by the contractor after Let. The temporary impact amount given is the worst case scenario.

Impacts to Pungo Creek due to interior bents is approximately 168 sqft.

**6. Buffer Impacts (for DWR)**

If project will impact a protected riparian buffer, then complete the chart below. Individually list all buffer impacts below.

**6a. Project is in which protect basin(s)? \***

Check all that apply.

- Neuse
- Catawba
- Goose Creek
- Other
- Tar-Pamlico
- Randleman
- Jordan Lake

6b. Impact Type* (?)	6c. Per or Temp* (?)	6d. Stream name *	6e. Buffer mitigation required? *	6f. Zone 1 impact* (square feet)	6g. Zone 2 impact* (square feet)
Site 1 Parallel, Allowable w/ mitigation	P	SA	Yes	1,085 (square feet)	0 (square feet)
Site 1 Road Crossing, Allowable	P	Pungo Creek	No	1,077 (square feet)	805 (square feet)
Site 1 Bridge, Allowable	P	Pungo Creek	No	1,302 (square feet)	80 (square feet)

## 6h. Total buffer impacts:

	Zone 1	Zone 2
Total Temporary impacts:	0.00	0.00
Total Permanent impacts:	3,464.00	885.00
Total combined buffer impacts:	3,464.00	885.00

### 6i. Comments:

Wetlands in buffers for site 1 total 1,556 sqft in zone 1 and 808 sqft in zone 2. Mitigation for wetland impacts exceeds the mitigable impact for buffers, so no mitigation is proposed for the parallel buffer impact.

### Supporting Documentation - i.e. Impact Maps, Plan Sheet, etc.

Click the upload button or drag and drop files here to attach document

File must be PDF

## E. Impact Justification and Mitigation

### 1. Avoidance and Minimization

#### 1a. Specifically describe measures taken to avoid or minimize the proposed impacts in designing the project: \*

This bridge replacement was originally designed on new alignment about 50 feet upstream of existing; however, per agency comment, it was redesigned on existing alignment which reduced total wetland impacts from over 1 acre to less than 0.3 acres and reduced permanent channel change impacts from 236 feet to 105 feet. The typical roadway section is the minimum width per roadway design standards while the fill slopes are set to the maximum slope per geotechnical recommendations. Slopes along the unnamed tributary in the northwest quadrant have been further steepened with rock plating. NCDOT Design Standards in Sensitive Watersheds will be employed. See Stormwater Management Plan for additional measures.

#### 1b. Specifically describe measures taken to avoid or minimize the proposed impacts through construction techniques: \*

Project was redesigned to replace bridge on existing alignment using an offsite detour to reduce impacts. The proposed bridge will have no direct discharge into the water. No roadside ditching is proposed at any of the quadrants of the bridge.

### 2. Compensatory Mitigation for Impacts to Waters of the U.S. or Waters of the State

#### 2a. Does the project require Compensatory Mitigation for impacts to Waters of the U.S. or Waters of the State?

Yes  No

#### 2c. If yes, mitigation is required by (check all that apply):

DWR  Corps

#### 2d. If yes, which mitigation option(s) will be used for this project?

Mitigation bank  Payment to in-lieu fee program  Permittee Responsible Mitigation

### 4. Complete if Making a Payment to In-lieu Fee Program

#### 4a. Approval letter from in-lieu fee program is attached.

Yes  No

#### 4b. Stream mitigation requested:

(linear feet)

147

#### 4c. If using stream mitigation, what is the stream temperature:

warm

NC Stream Temperature Classification Maps can be found under the Mitigation Concepts tab on the Wilmington District's RIBITS website.

#### 4d. Buffer mitigation requested (DWR only):

(square feet)

0

#### 4e. Riparian wetland mitigation requested:

(acres)

0.08

#### 4f. Non-riparian wetland mitigation requested:

(acres)

0

#### 4g. Coastal (tidal) wetland mitigation requested:

(acres)

0.07

### 4h. Comments

### 6. Buffer mitigation (State Regulated Riparian Buffer Rules) - required by DWR



6a. Will the project result in an impact within a protected riparian buffer that requires buffer mitigation? If yes, you must fill out this entire form - please contact DWR for more information.

Yes  No

## F. Stormwater Management and Diffuse Flow Plan (required by DWR)

\*\*\* Recent changes to the stormwater rules have required updates to this section. \*\*\*

### 1. Diffuse Flow Plan

1a. Does the project include or is it adjacent to protected riparian buffers identified within one of the NC Riparian Buffer Protection Rules?

Yes  No

1b. All buffer impacts and high ground impacts require diffuse flow or other form of stormwater treatment. If the project is subject to a state implemented riparian buffer protection program, include a plan that fully documents how diffuse flow will be maintained.

All Stormwater Control Measures (SCM)s must be designed in accordance with the [NC Stormwater Design Manual](#). Associated supplement forms and other documentation shall be provided.

What type of SCM are you providing?

- Level Spreader
  - Vegetated Conveyance (lower SHWT)
  - Wetland Swale (higher SHWT)
  - Other SCM that removes minimum 30% nitrogen
  - Proposed project will not create concentrated stormwater flow through the buffer
- (check all that apply)

For a list of options to meet the diffuse flow requirements, click [here](#).

Diffuse Flow Documentation

Click the upload button or drag and drop files here to attach document

File type must be PDF

### 2. Stormwater Management Plan

2a. Is this a NCDOT project subject to compliance with NCDOT's Individual NPDES permit NCS000250? \*

Yes  No

Comments:

## G. Supplementary Information

### 1. Environmental Documentation

1a. Does the project involve an expenditure of public (federal/state/local) funds or the use of public (federal/state) land? \*

Yes  No

1b. If you answered "yes" to the above, does the project require preparation of an environmental document pursuant to the requirements of the National or State (North Carolina) Environmental Policy Act (NEPA/SEPA)? \*

Yes  No

1c. If you answered "yes" to the above, has the document review been finalized by the State Clearing House? (If so, attach a copy of the NEPA or SEPA final approval letter.) \*

Yes  No

NEPA or SEPA Final Approval Letter

Click the upload button or drag and drop files here to attach document

FILE TYPE MUST BE PDF

### 2. Violations (DWR Requirement)

2a. Is the site in violation of DWR Water Quality Certification Rules (15A NCAC 2H .0500), Isolated Wetland Rules (15A NCAC 2H .1300), or DWR Surface Water or Wetland Standards or Riparian Buffer Rules (15A NCAC 2B .0200)? \*

Yes  No

### 3. Cumulative Impacts (DWR Requirement)

3a. Will this project (based on past and reasonably anticipated future impacts) result in additional development, which could impact nearby downstream water quality? \*

Yes  No

3b. If you answered "no," provide a short narrative description.

Implementation of the proposed Build Alternative would not contribute, in conjunction with past, present, or future projects, to substantial adverse cumulative effects on resources in the study areas.

## 4. Sewage Disposal (DWR Requirement)

4a. Is sewage disposal required by DWR for this project? \*

Yes  No  NA

## 5. Endangered Species and Designated Critical Habitat (Corps Requirement)

5a. Will this project occur in or near an area with federally protected species or habitat? \*

Yes  No

5b. Have you checked with the USFWS concerning Endangered Species Act impacts? \*

Yes  No

5c. If yes, indicate the USFWS Field Office you have contacted.

Raleigh

5d. Is another Federal agency involved? \*

Yes  No  Unknown

5e. Is this a DOT project located within Division's 1-8? \*

Yes  No

5j. What data sources did you use to determine whether your site would impact Endangered Species or Designated Critical Habitat? \*

N.C. Natural Heritage Program database; USFWS-Raleigh Field Office website; biological surveys for protected species listed for Beaufort County, which include green sea turtle, Kemp's ridley sea turtle, red knot, red wolf, red-cockaded woodpecker (RCW), Northern long eared bat, West Indian manatee, dwarf wedgemussel, Tar River spiny mussel, Atlantic sturgeon, rough-leaved loosestrife and sensitive joint-vetch. All species, except Northern long eared bat and West Indian manatee received biological conclusions of "No Effect". The Northern long eared bat has a biological conclusion of "May Affect, Likely to Adversely Affect" and is covered under a programmatic biological opinion with the USFWS for this project. West Indian manatee has a biological conclusion of "May Affect, Not Likely to Adversely Affect" NCDOT will adhere to "Guidelines for Avoiding Impacts to the West Indian Manatee: Precautionary Measures for Construction Activities in North Carolina Waters" during construction. Habitat for rough-leaved loosestrife and sensitive joint-vetch is present in the study area, however surveys were conducted on 6/14/2019, for the species and no specimens were observed. No eagles or eagle nests were observed within 660 feet of the study area.

### Consultation Documentation Upload

[Click the upload button or drag and drop files here to attach document](#)

File type must be PDF

## 6. Essential Fish Habitat (Corps Requirement)

6a. Will this project occur in or near an area designated as an Essential Fish Habitat? \*

Yes  No

Are there submerged aquatic vegetation (SAV) around the project vicinity? \*

Yes  No  Unknown

6b. What data sources did you use to determine whether your site would impact an Essential Fish Habitat? \*

NMFS County Index

## 7. Historic or Prehistoric Cultural Resources (Corps Requirement)

Link to the State Historic Preservation Office Historic Properties Map (does not include archaeological data: <http://gis.ncdcr.gov/hpweb/>)

7a. Will this project occur in or near an area that the state, federal or tribal governments have designated as having historic or cultural preservation status (e.g., National Historic Trust designation or properties significant in North Carolina history and archaeology)? \*

Yes  No

7b. What data sources did you use to determine whether your site would impact historic or archeological resources? \*

NEPA documentation

### 7c. Historic or Prehistoric Information Upload

[Click the upload button or drag and drop files here to attach document](#)

File must be PDF

## 8. Flood Zone Designation (Corps Requirement)

Link to the FEMA Floodplain Maps: <https://msc.fema.gov/portal/search>

8a. Will this project occur in a FEMA-designated 100-year floodplain? \*

Yes  No

8b. If yes, explain how project meets FEMA requirements:

NCDOT Hydraulics Unit coordination with FEMA

8c. What source(s) did you use to make the floodplain determination? \*

FEMA maps

## Miscellaneous



### Comments

#### Miscellaneous attachments not previously requested.

[Click the upload button or drag and drop files here to attach document](#)

File must be PDF or KMZ

## Signature



\*

By checking the box and signing below, I certify that:

- I have given true, accurate, and complete information on this form;
- I agree that submission of this PCN form is a "transaction" subject to Chapter 66, Article 40 of the NC General Statutes (the "Uniform Electronic Transactions Act");
- I agree to conduct this transaction by electronic means pursuant to Chapter 66, Article 40 of the NC General Statutes (the "Uniform Electronic Transactions Act");
- I understand that an electronic signature has the same legal effect and can be enforced in the same way as a written signature; AND
- I intend to electronically sign and submit the PCN form.

#### Full Name: \*

Mack Christopher Rivenbark, III

#### Signature

*Mack C. Rivenbark, III*

#### Date

9/16/2019



NORTH CAROLINA  
Environmental Quality

ROY COOPER  
Governor

MICHAEL S. REGAN  
Secretary

TIM BAUMGARTNER  
Director

August 30, 2019

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

Dear Mr. Harris:

Subject: Mitigation Acceptance Letter:

**B-4414, Replace Bridge 43 over Pungo Creek on US 264, Beaufort County**

The purpose of this letter is to notify you that the Division of Mitigation Services (DMS) will provide the compensatory stream and wetland mitigation for the subject project. Based on the information supplied by you on August 28, 2019, the impacts are located in CU 03020104 of the Tar-Pamlico River basin in the Northern Outer Coastal Plain (NOCP) Eco-Region, and are as follows:

Tar-Pamlico 03020104 NOCP	Stream			Wetlands			Buffer (Sq. Ft.)	
	Cold	Cool	Warm	Riparian	Non-Riparian	Coastal Marsh	Zone 1	Zone 2
Impacts (feet/acres)	0	0	147.0	0.08	0	0.07	0	0

\*Some of the stream and/or wetland impacts may be proposed to be mitigated at a 1:1 mitigation ratio. See permit application for details.

The impacts and associated mitigation needs were under projected by the NCDOT in the 2019 impact data. DMS will commit to implement sufficient compensatory stream and wetland mitigation credits to offset the impacts associated with this project as determined by the regulatory agencies using the delivery timeline listed in Section F.3.c.iii of the In-Lieu Fee Instrument dated July 28, 2010. If the above referenced impact amounts are revised, then this mitigation acceptance letter will no longer be valid and a new mitigation acceptance letter will be required from DMS.

If you have any questions or need additional information, please contact Beth Harmon at 919-707-8420.

Sincerely,

James B. Stanfill  
DMS Asset Management Supervisor

cc: Mr. Monte Matthews, USACE – Raleigh Regulatory Field Office  
Ms. Amy Chapman, NCDWR  
File: B-4414







**North Carolina Department of Transportation  
Highway Stormwater Program  
STORMWATER MANAGEMENT PLAN  
FOR NCDOT PROJECTS**



(Version 2.08; Released April 2018)

**WBS Element:** 38358.1.2      **TIP No.:** B-4414      **County(ies):** Beaufort      **Page** 1 **of** 1

**General Project Information**

<b>WBS Element:</b>	38358.1.2	<b>TIP Number:</b>	B-4414	<b>Project Type:</b>	Bridge Replacement	<b>Date:</b>	8/27/2019
<b>NCDOT Contact:</b>	Jacquelyn Bowles, PE			<b>Contractor / Designer:</b>	TGS Engineers (David B. Petty, PE)		
<b>Address:</b>	1581 Mail Service Center Raleigh, NC 27699-1581			<b>Address:</b>	706 Hillsborough Street Suite 200 Raleigh NC, 27603		
<b>Phone:</b>	919-707-6559			<b>Phone:</b>	919-773-8887 ext. 104		
<b>Email:</b>	jkbowles@ncdot.gov			<b>Email:</b>	dpetty@tgsengineers.com		
<b>City/Town:</b>	Pantego			<b>County(ies):</b>	Beaufort		
<b>River Basin(s):</b>	Tar-Pamlico			<b>CAMA County?</b>	Yes		
<b>Wetlands within Project Limits?</b>	Yes						

**Project Description**

<b>Project Length (lin. miles or feet):</b>	1000 ft.	<b>Surrounding Land Use:</b>	Woods, Farmland and Rural Residential					
	<b>Proposed Project</b>			<b>Existing Site</b>				
<b>Project Built-Upon Area (ac.)</b>	0.9 ac.		0.7 ac.					
<b>Typical Cross Section Description:</b>	Two 12' paved travel lanes with 2' to 8' paved shoulders and 3' to 6' grass shoulders.			Two 12' paved travel lanes with 3' to 4' paved shoulders.				
<b>Annual Avg Daily Traffic (veh/hr/day):</b>	<b>Design/Future:</b>	7800	<b>Year:</b>	2040	<b>Existing:</b>	5720	<b>Year:</b>	2020

**General Project Narrative:  
(Description of Minimization of Water Quality Impacts)**

Replacement of Bridge No. 060043 on US 264 over Pungo Swamp in Beaufort County southwest of Pantego, NC. Proposed 155' (1@45', 2@55') long by 43' wide three-span bridge to replace existing 114' long by 33' wide three-span bridge. The proposed bridge will have no direct discharge into the water. Stormwater runoff from the proposed bridge is to flow to traffic bearing grated inlets on each side of the bridge where it will be diffused with a riprap pad at the proposed pipe outlets and discharged at non-erosive velocities. All proposed stormwater runoff is discharged at the lowest practicable velocities adjacent to wetlands in all four quadrants outside of Buffer Zone 2. Outside the bridge, water is allowed to run off the roadway and down the grassed slopes before entering wetlands or buffers. No roadside ditching is proposed at any of the 4 corners of the bridge.

The project will require a channel change for a portion of UT to Pungo Swamp (SB) in the northwest quadrant which will be constructed using temporary impervious dikes. A temporary work bridge (conceptual footprint shown on sheet 4) is proposed for removal of the existing bridge and construction of the proposed bridge.

**Waterbody Information**

<b>Surface Water Body (1):</b>	Pungo Swamp		<b>NCDWR Stream Index No.:</b>	29-34-35-1			
<b>NCDWR Surface Water Classification for Water Body</b>	<b>Primary Classification:</b>	Class C					
	<b>Supplemental Classification:</b>	Swamp Waters (Sw)		(NSW)			
<b>Other Stream Classification:</b>	None						
<b>Impairments:</b>	None						
<b>Aquatic T&amp;E Species?</b>	Yes	<b>Comments:</b> Construction activities to adhere to Guidelines for Avoiding Impacts to the West Indian Manatee					
<b>NRTR Stream ID:</b>	Pungo Creek (SA)			<b>Buffer Rules in Effect:</b>	Tar-Pamlico		
<b>Project Includes Bridge Spanning Water Body?</b>	Yes	<b>Deck Drains Discharge Over Buffer?</b>	No	<b>Dissipator Pads Provided in Buffer?</b>	No		
<b>Deck Drains Discharge Over Water Body?</b>	No	(If yes, provide justification in the General Project Narrative)		(If yes, describe in the General Project Narrative; if no, justify in the General Project Narrative)			
	(If yes, provide justification in the General Project Narrative)						

09/08/19

See Sheet 1A For Index of Sheets  
See Sheet 1B For Conventional Plan Sheet Symbols  
See Sheet 1C-1 For Survey Control Sheets

STATE OF NORTH CAROLINA  
DIVISION OF HIGHWAYS

**BEAUFORT COUNTY**

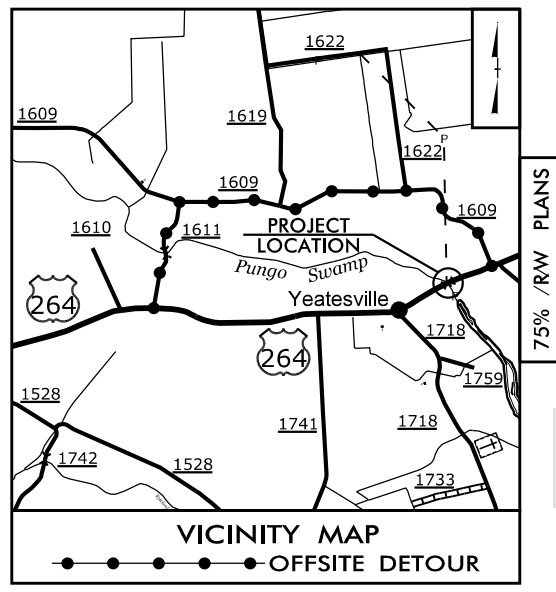
LOCATION: REPLACE BRIDGE NO. 43 OVER  
PUNGO CREEK ON US 264

TYPE OF WORK: GRADING, DRAINAGE, PAVING, AND STRUCTURE

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	B-4414	1	
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	
38358.1.2	BRSTP-0264(31)	PE	
38358.2.1	N/A	RW & UTIL.	
38358.3.1	N/A	CONST.	

PERMIT DRAWING  
SHEET 1 OF 6

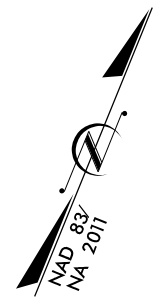
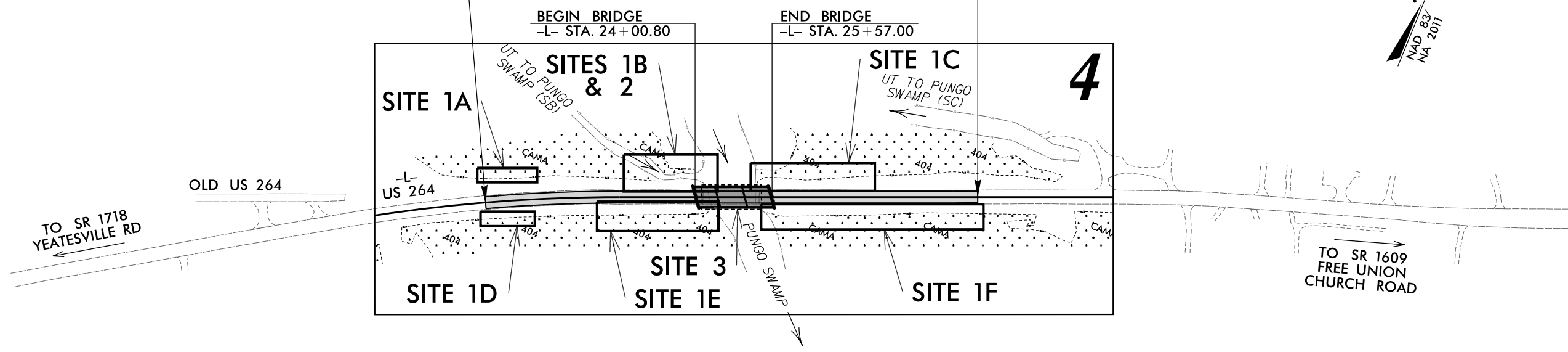
TIP PROJECT: B-4414



**WETLAND AND SURFACE WATER IMPACTS PERMIT**

BEGIN TIP PROJECT B-4414  
-L- STA. 19 + 75.00

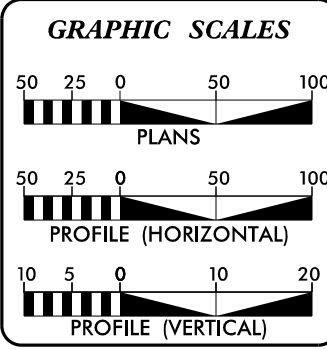
END TIP PROJECT B-4414  
-L- STA. 29 + 75.00



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

INCOMPLETE PLANS  
DO NOT USE FOR R/W ACQUISITION  
DOCUMENT NOT CONSIDERED FINAL  
UNLESS ALL SIGNATURES COMPLETED

CONTRACT:



DESIGN DATA

ADT 2020 =	5720
ADT 2040 =	7800
K =	9 %
D =	55 %
T =	7 % *
V =	60 MPH

\* (TTST 3% + DUAL 4%)

FUNC CLASS =  
MINOR ARTERIAL

REGIONAL TIER DESIGN

PROJECT LENGTH

LENGTH ROADWAY TIP PROJECT B-4414	=	0.159 mile
LENGTH STRUCTURES TIP PROJECT B-4414	=	0.030 mile
TOTAL LENGTH TIP PROJECT B-4414	=	0.189 mile

Prepared For:  
**DIVISION OF HIGHWAYS**  
1000 Birch Ridge Dr., Raleigh NC, 27610

By:  
TGS ENGINEERS  
706 HILLSBOROUGH ST.  
SUITE 200  
RALEIGH, NC 27603

PH (919) 733-8887  
CORP. LICENSE NO.: C-0275

2018 STANDARD SPECIFICATIONS

RIGHT OF WAY DATE:  
JULY 26, 2019

LETTING DATE:  
APRIL 21, 2020

V. MARCUS LOWERY, P.E.  
PROJECT ENGINEER

PAUL SCHULKEN, P.E.  
PROJECT DESIGN ENGINEER

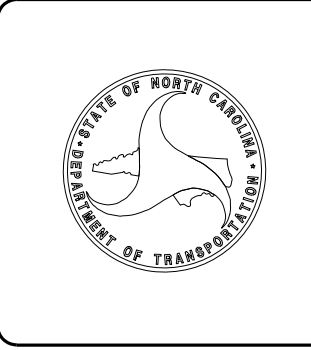
DAVID STUTTS, P.E.  
NCDOT CONTACT

HYDRAULICS ENGINEER

SIGNATURE: \_\_\_\_\_ P.E.

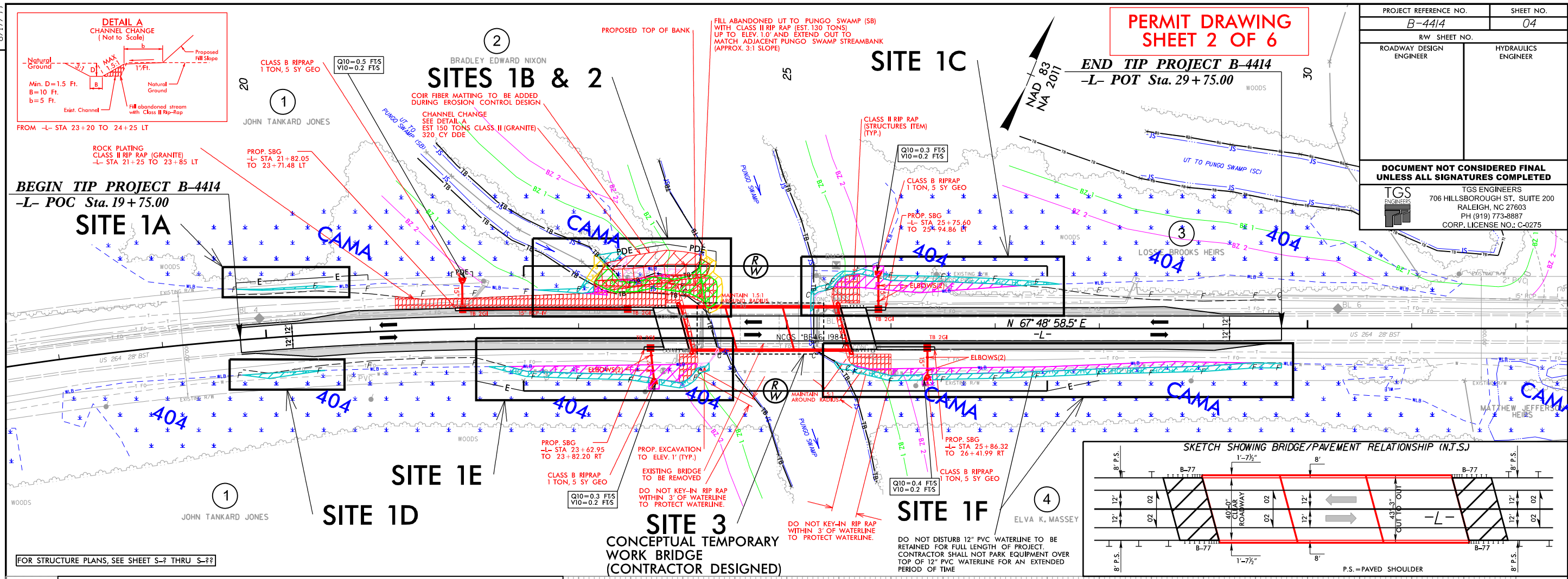
ROADWAY DESIGN ENGINEER

SIGNATURE: \_\_\_\_\_ P.E.



8/27/2019  
X:\NCDOT\B-4414\Hydraulics\PERMITS\_Environment\Drawings\B4414\_prm\_wet\_tsh.dgn  
User:KGrady

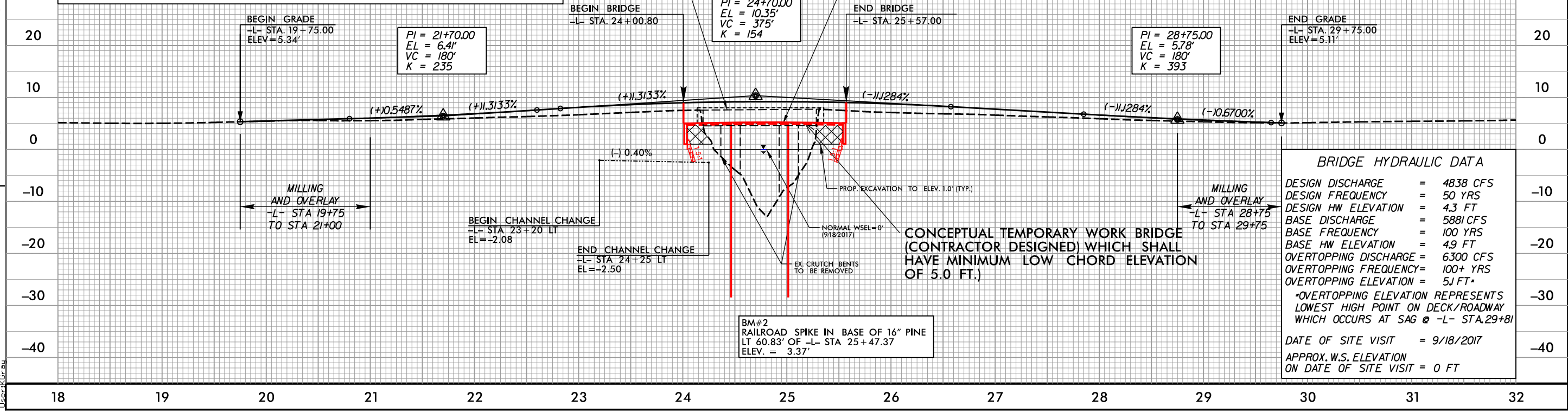
PROJECT REFERENCE NO. B-4414	SHEET NO. 04
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
<p><b>DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED</b></p>	
<p>TGS ENGINEERS 706 HILLSBOROUGH ST., SUITE 200 RALEIGH, NC 27603 PH (919) 773-8887 CORP. LICENSE NO.: C-0275</p>	



40	WETLAND IMPACTS			STREAM IMPACTS	
	Excavation in Wetlands	Permanent Fill in Wetlands	Hand Clearing in Wetlands	Impacts in Surface Water	Temporary Impacts in Surface Water
30	E E	F F	HC HC	S S	TS TS

BRIDGE NO. 43  
36" PRESTRESSED CONC. GIRDER  
SKEW ANGLE = 75°

**-L-  
US 264**



**BRIDGE HYDRAULIC DATA**

DESIGN DISCHARGE	= 4838 CFS
DESIGN FREQUENCY	= 50 YRS
DESIGN HW ELEVATION	= 4.3 FT
BASE DISCHARGE	= 5881 CFS
BASE FREQUENCY	= 100 YRS
BASE HW ELEVATION	= 4.9 FT
OVERTOPPING DISCHARGE	= 6300 CFS
OVERTOPPING FREQUENCY	= 100+ YRS
OVERTOPPING ELEVATION	= 5J FT*

\*OVERTOPPING ELEVATION REPRESENTS LOWEST HIGH POINT ON DECK/ROADWAY WHICH OCCURS AT SAG @ -L- STA.29+81

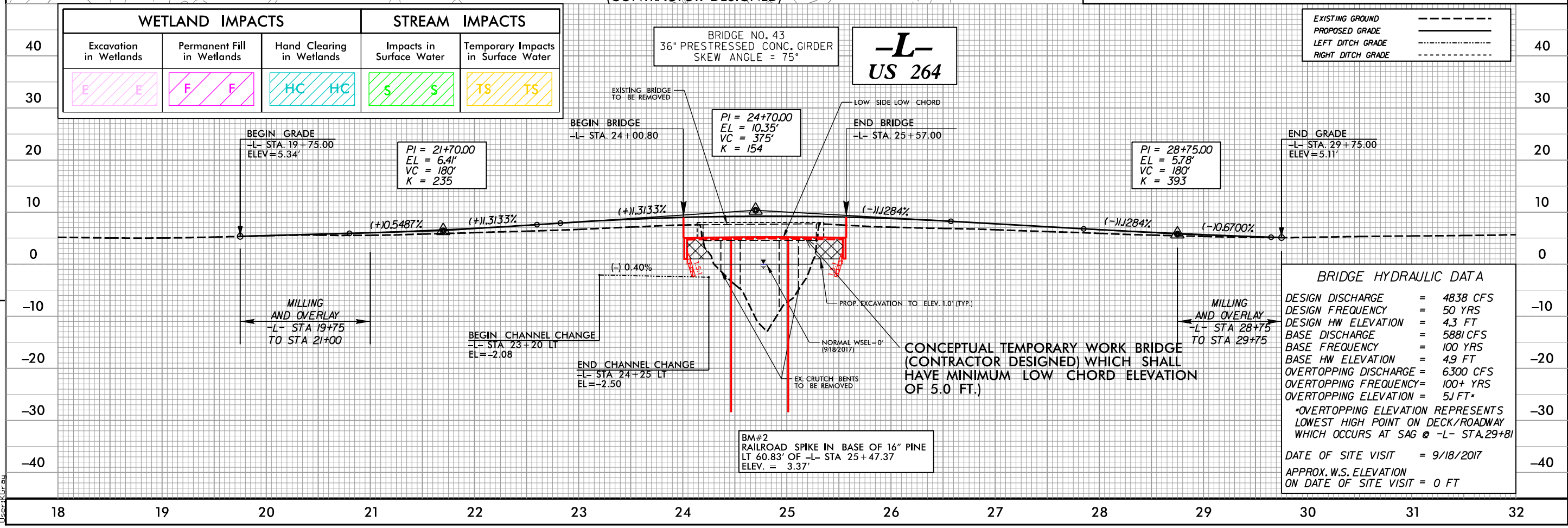
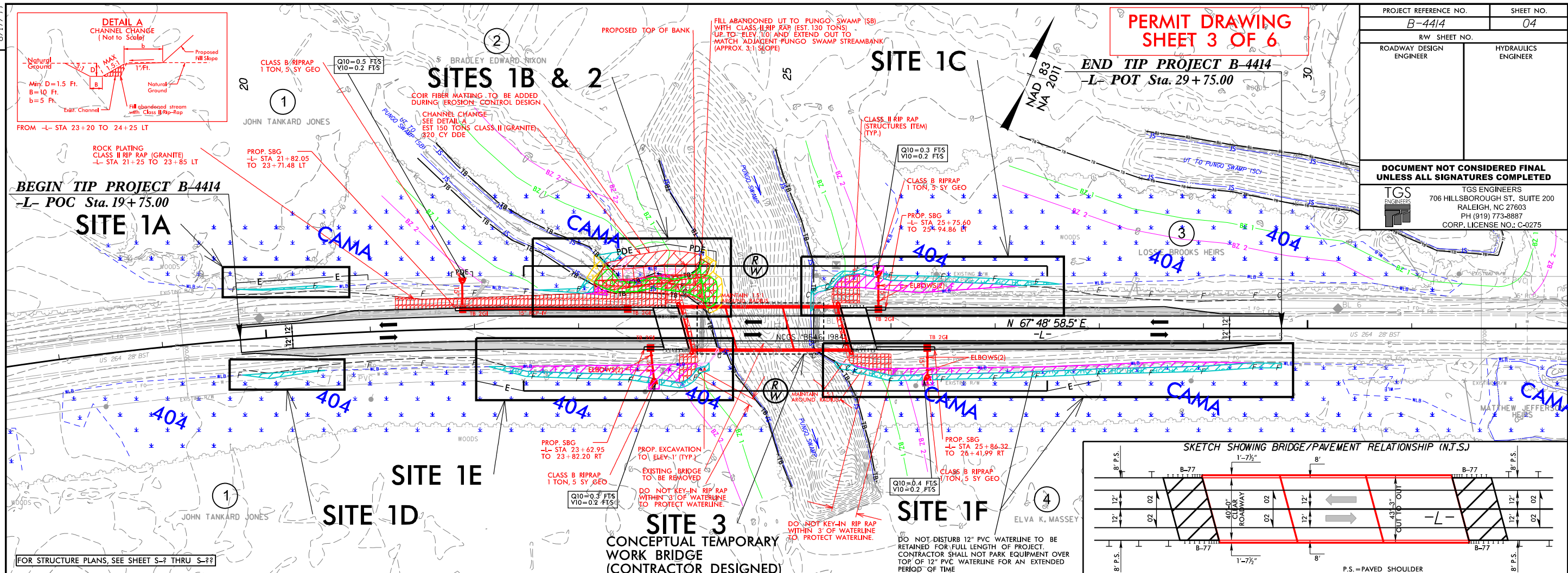
DATE OF SITE VISIT = 9/18/2017  
APPROX. W.S. ELEVATION ON DATE OF SITE VISIT = 0 FT

8/17/99  
 REVISIONS  
 8/27/2018 B-4414\Hydraulics\PERMITS\Drawings\B4414\_perm\_wet\_psh\_04.dgn  
 User:GCG



**PERMIT DRAWING  
SHEET 3 OF 6**

PROJECT REFERENCE NO. B-4414	SHEET NO. 04
RW SHEET NO.	HYDRAULICS ENGINEER
ROADWAY DESIGN ENGINEER	
<b>DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED</b>	
 TGS ENGINEERS 706 HILLSBOROUGH ST., SUITE 200 RALEIGH, NC 27603 PH (919) 773-8887 CORP. LICENSE NO.: C-0275	




8/17/99  
 REVISIONS  
 8/27/2018 B-4414\Hydraulics\PERMITS\Drawings\Drawings\B4414\_prm\_wet\_psh\_04.dgn  
 User:GCG

WETLAND IMPACTS			STREAM IMPACTS	
Excavation in Wetlands	Permanent Fill in Wetlands	Hand Clearing in Wetlands	Impacts in Surface Water	Temporary Impacts in Surface Water
E E	F F	HC HC	S S	TS TS

## STREAM AND WETLAND IMPACTS

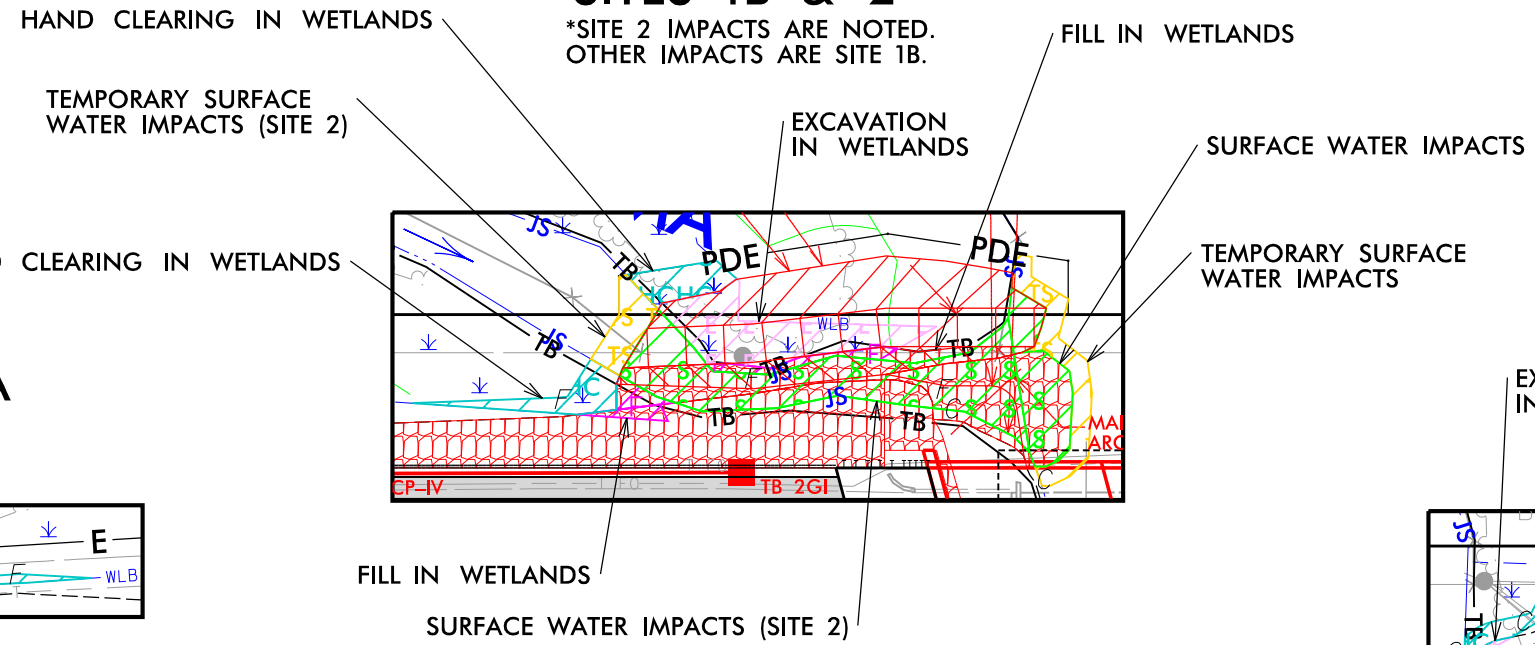
**PERMIT DRAWINGS  
FOR B-4414  
BEAUFORT COUNTY  
BRIDGE #060043**

PROJECT REFERENCE NO. B-4414	SHEET NO. 5
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
 <b>TGS ENGINEERS</b> 706 HILLSBOROUGH ST SUITE 200 RALEIGH, NC 27603 PH (919) 773-8887	
<b>DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED</b>	

**PERMIT DRAWING  
SHEET 4 OF 6**

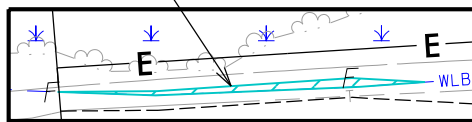
### SITES 1B & 2\*

\*SITE 2 IMPACTS ARE NOTED.  
OTHER IMPACTS ARE SITE 1B.



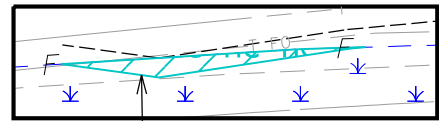
### SITE 1A

HAND CLEARING IN WETLANDS



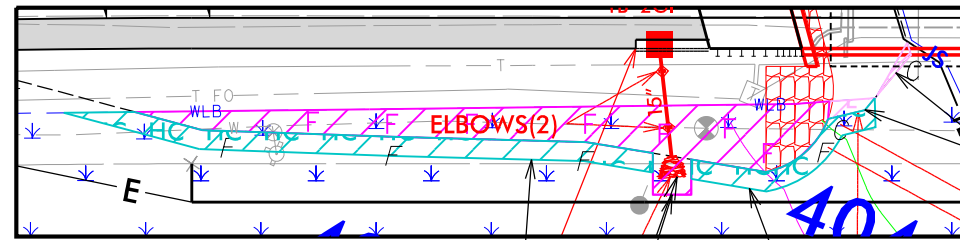
### SITE 1D

HAND CLEARING IN WETLANDS



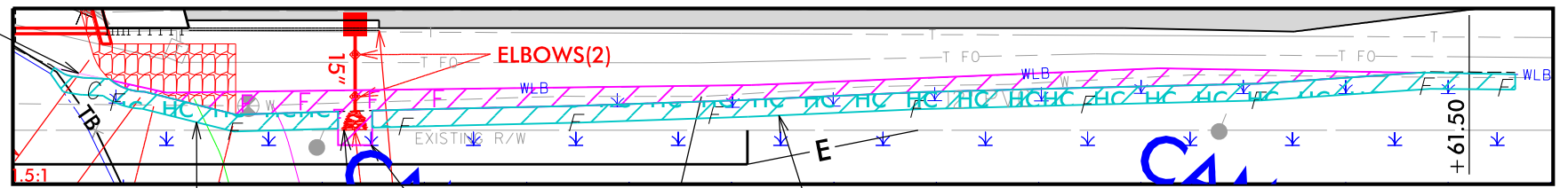
### SITE 1E

HAND CLEARING IN WETLANDS  
FILL IN WETLANDS



### SITE 1F

EXCAVATION IN WETLANDS  
FILL IN WETLANDS  
HAND CLEARING IN WETLANDS





6/23/16

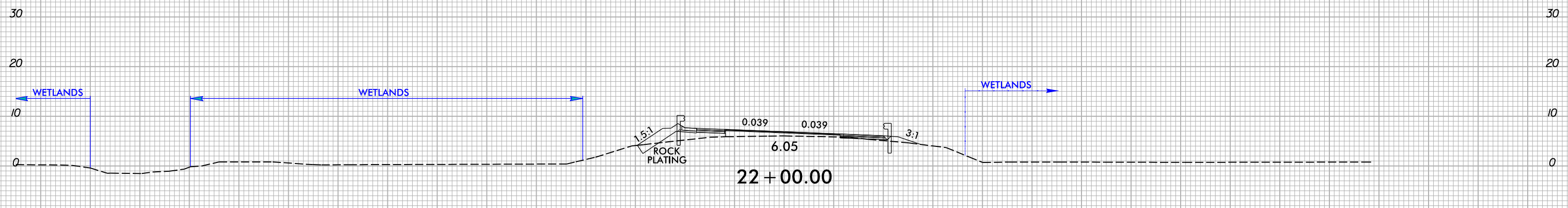
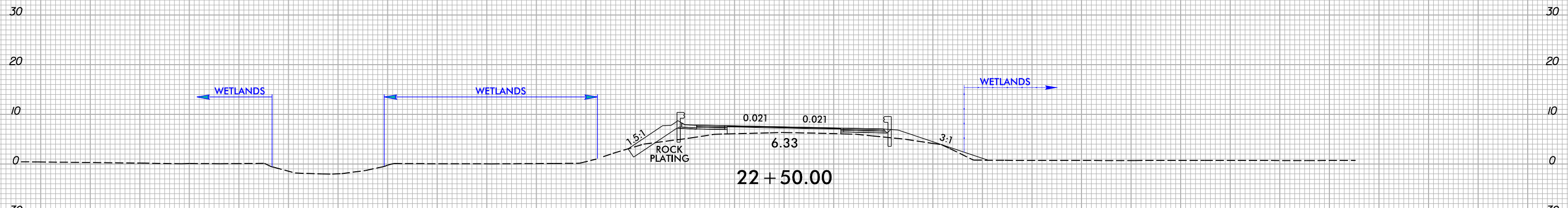
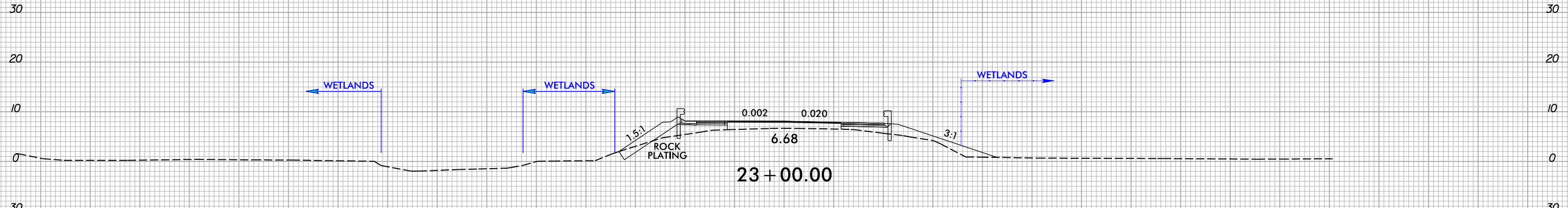
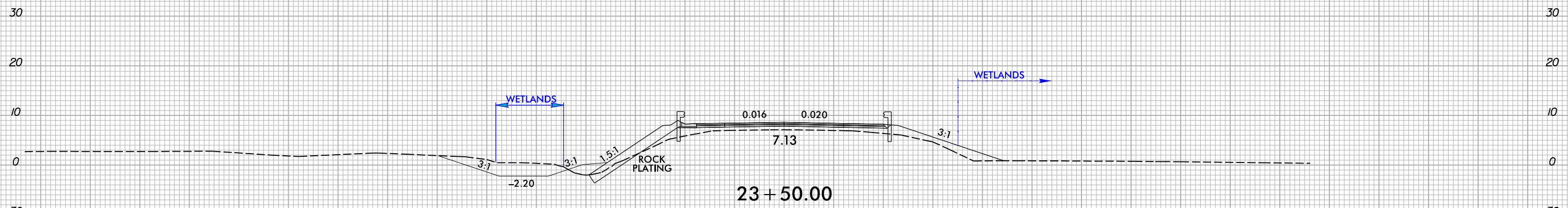


PROJ. REFERENCE NO.  
B-4414

SHEET NO.  
X-2

150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150

PERMIT DRAWINGS  
SHEET 5 OF 6



150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150

8/1/2019 8:11:00 AM X:\N0001\B-4414\Roadway\CorridorModeling\B4414\_rdy\_xpl.dgn User:KGray

**WETLAND AND SURFACE WATER IMPACTS SUMMARY**

Site No.	Station (From/To)	Structure Size / Type	Stream Map ID	WETLAND IMPACTS					SURFACE WATER IMPACTS				
				Permanent Fill In Wetlands (ac)	Temp. Fill In Wetlands (ac)	Excavation in Wetlands (ac)	Mechanized Clearing in Wetlands (ac)	Hand Clearing in Wetlands (ac)	Permanent SW impacts (ac)	Temp. SW impacts (ac)	Existing Channel Impacts Permanent (ft)	Existing Channel Impacts Temp. (ft)	Natural Stream Design (ft)
1A	L 19+74 to 20+69 LT	Roadway						< 0.01					
1B	L 22+61 to 24+38 LT	Roadway	Pungo Swamp	< 0.01		0.02		0.01	0.01	< 0.01	42	14	
1C	L 25+22 to 27+62 LT	Roadway		0.04		< 0.01		0.03					
1D	L 19+74 to 20+54 RT	Roadway						< 0.01					
1E	L 22+13 to 24+35 RT	Roadway		0.04		< 0.01		0.02					
1F	L 25+46 to 29+75 RT	Roadway		0.04		< 0.01		0.05					
2	L 23+08 to 24+22 LT	Roadway	UT to Pungo Swamp (SB)						0.03	< 0.01	105	9	
3	L 24+21 to 25+31	Temporary Work Bridge	Pungo Swamp							< 0.01			
<b>TOTALS*:</b>				0.12		0.02		0.11	0.04	0.02	147	23	0

\*Rounded totals are sum of actual impacts

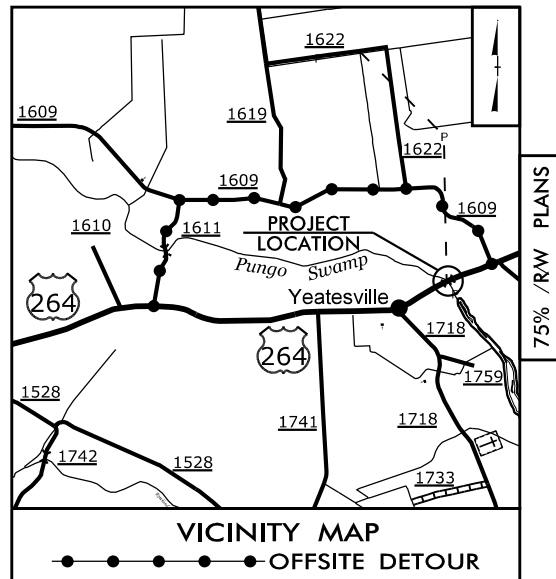
**NOTES:**

- 1) Wetland impacts listed above are both 404 and CAMA Wetlands.  
 CAMA wetlands are Sites 1A, 1B, and 1F (0.05 ac Permanent Fill, 0.02 ac Excavation, 0.06 ac Hand Clearing)  
 404 wetlands are Sites 1C, 1D, and 1E (0.08 ac Permanent Fill, <0.01 ac Excavation, 0.05 ac Hand Clearing)
- 2) <0.01 acres (approx. 25 sq ft) of Permanent SW impacts for interior bents at -L- 24+46 and -L- 25+01.
- 3) <0.01 acres of Temporary Fill in Wetlands in the Hand Clearing areas for erosion control measures.
- 4) Site 3: <0.01 acres of Temp SW impacts for temp work bridge interior bents between -L- 24+21 & 25+31.

NC DEPARTMENT OF TRANSPORTATION  
 DIVISION OF HIGHWAYS  
 8/27/2019  
 BEAUFORT COUNTY  
 B-4414  
 38358.1.2

**TIP PROJECT: B-4414**

See Sheet 1A For Index of Sheets  
See Sheet 1B For Conventional Plan Sheet Symbols  
See Sheet 1C-1 For Survey Control Sheets



STATE OF NORTH CAROLINA  
DIVISION OF HIGHWAYS

**BEAUFORT COUNTY**

**LOCATION: REPLACE BRIDGE NO. 43 OVER  
PUNGO CREEK ON US 264**

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

**BUFFER IMPACTS PERMIT**

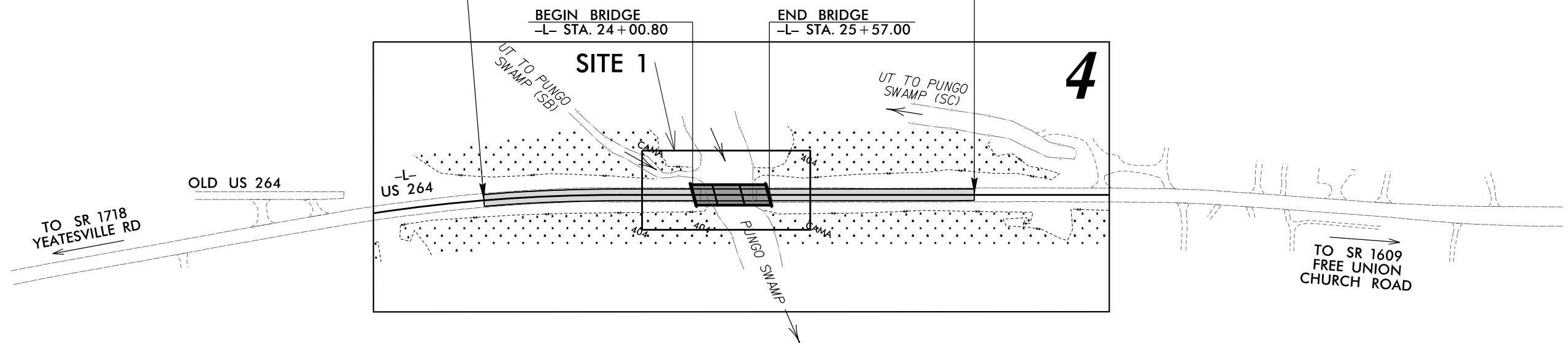
STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	B-4414	1	
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	
38358.1.2	BRSTP-0264(31)	PE	
38358.2.1	N/A	RW & UTIL.	
38358.3.1	N/A	CONST.	

**BUFFER DRAWING  
SHEET 1 OF 4**



**BEGIN TIP PROJECT B-4414**  
-L- STA. 19 + 75.00

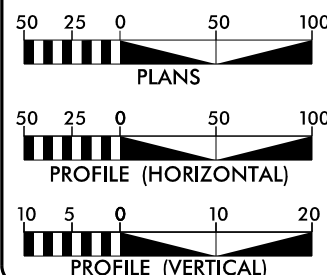
**END TIP PROJECT B-4414**  
-L- STA. 29 + 75.00



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

**INCOMPLETE PLANS**  
DO NOT USE FOR R/W ACQUISITION  
DOCUMENT NOT CONSIDERED FINAL  
UNLESS ALL SIGNATURES COMPLETED

**GRAPHIC SCALES**



**DESIGN DATA**

ADT 2020 = 5720  
ADT 2040 = 7800  
K = 9 %  
D = 55 %  
T = 7 % \*  
V = 60 MPH  
\* (TTST 3% + DUAL 4%)  
FUNC CLASS =  
MINOR ARTERIAL  
REGIONAL TIER DESIGN

**PROJECT LENGTH**

**LENGTH ROADWAY TIP PROJECT B-4414** = 0.159 mile  
**LENGTH STRUCTURES TIP PROJECT B-4414** = 0.030 mile  
**TOTAL LENGTH TIP PROJECT B-4414** = 0.189 mile

Prepared For:  
**DIVISION OF HIGHWAYS**  
1000 Birch Ridge Dr., Raleigh NC, 27610



TGS ENGINEERS  
706 HILLSBOROUGH ST.  
SUITE 200  
RALEIGH, NC 27603  
PH (919) 733-8887  
CORP. LICENSE NO.: C-0275

2018 STANDARD SPECIFICATIONS

**RIGHT OF WAY DATE:**  
JULY 26, 2019

**LETTING DATE:**  
APRIL 21, 2020

**V. MARCUS LOWERY, P.E.**  
PROJECT ENGINEER

**PAUL SCHULKEN, P.E.**  
PROJECT DESIGN ENGINEER

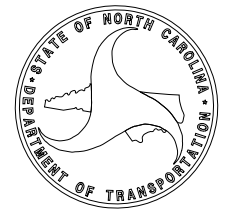
**DAVID STUTTS, P.E.**  
NCDOT CONTACT

**HYDRAULICS ENGINEER**

SIGNATURE: \_\_\_\_\_ P.E.

**ROADWAY DESIGN ENGINEER**

SIGNATURE: \_\_\_\_\_ P.E.



8/27/2019 X:\NCDOT\B-4414\Hydraulics\PERMITS\_Environment\Drawings\b4414\_prm\_buf\_tsh.dgn User:KGrady

**CONTRACT:**

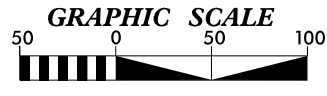
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RW SHEET NO.			
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER	
TGS ENGINEERS 706 HILLSBOROUGH ST SUITE 200 RALEIGH, NC 27603 PH (919) 773-8887		DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	

**PERMIT DRAWINGS  
FOR B-4414  
BEAUFORT COUNTY  
BRIDGE #060043**

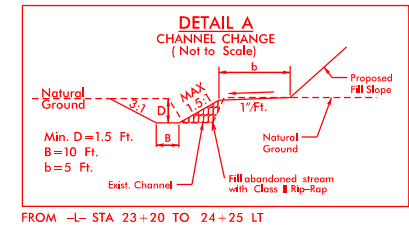
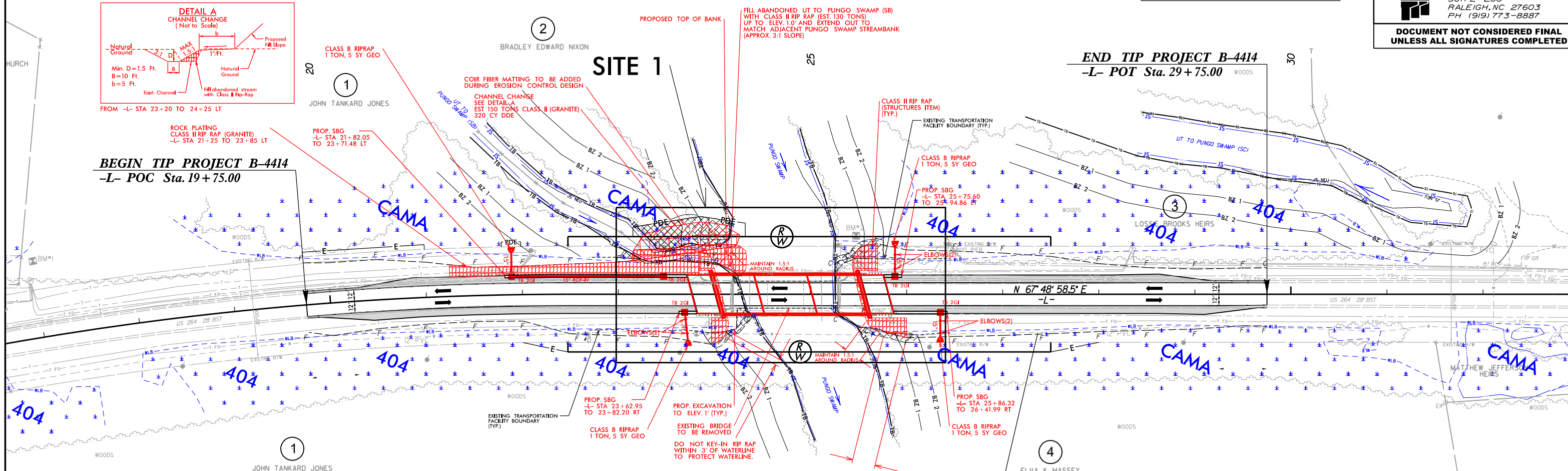
**BUFFER DRAWING  
SHEET 2 OF 4**

EXISTING BRIDGE DIMENSIONS 114'X33' (THREE-SPAN), 90 DEG. SKEW  
PROPOSED BRIDGE DIMENSIONS 155'X43' (THREE-SPAN), 75 DEG. SKEW  
TOTAL PROJECT LENGTH - 1000'

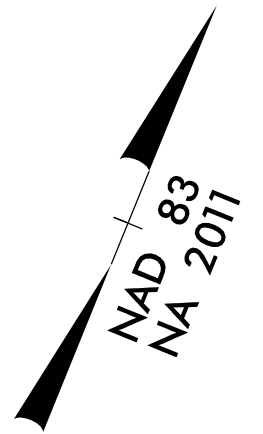
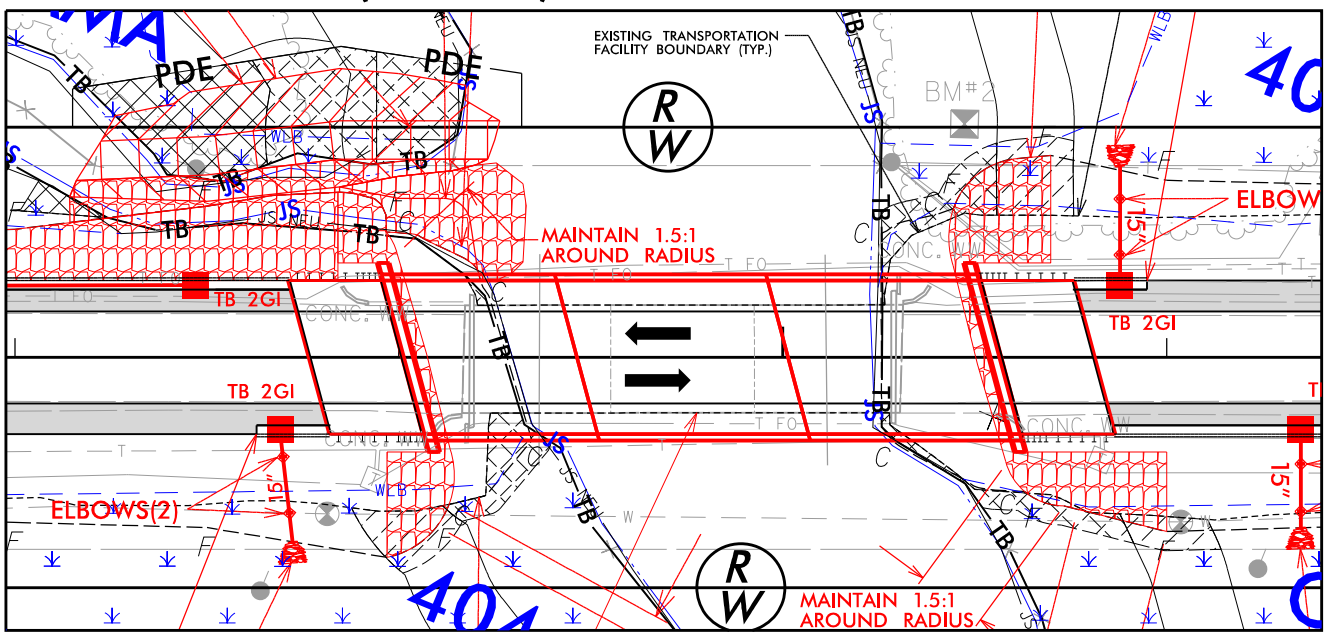
**BUFFER IMPACTS**



Buffer Zone (BZ) Impacts		
Area of Allowable Impacts within BZ1	Area of Mitigable Impacts within BZ1	Area of Allowable Impacts within BZ2
LEGEND		



**SITE 1 INSET (1" = 50')**



**RIPARIAN BUFFER IMPACTS SUMMARY**

Site No.	Station (From/To)	Structure Size / Type	IMPACTS									BUFFER REPLACEMENT	
			TYPE			ALLOWABLE			MITIGABLE			ZONE 1 (ft <sup>2</sup> )	ZONE 2 (ft <sup>2</sup> )
			ROAD CROSSING	BRIDGE	PARALLEL IMPACT	ZONE 1 (ft <sup>2</sup> )	ZONE 2 (ft <sup>2</sup> )	TOTAL (ft <sup>2</sup> )	ZONE 1 (ft <sup>2</sup> )	ZONE 2 (ft <sup>2</sup> )	TOTAL (ft <sup>2</sup> )		
1	L 22+99 to 23+67 LT	Roadway			X				1085	0	1085		
1	L 23+62 to 26+14	Roadway	X			1077	805	1882					
1	L 23+94 to 25+64	Bridge		X		1302	80	1382					
<b>TOTALS*:</b>						<b>2379</b>	<b>885</b>	<b>3264</b>	<b>1085</b>	<b>0</b>	<b>1085</b>	<b>0</b>	<b>0</b>

NOTES:

NC DEPARTMENT OF TRANSPORTATION  
 DIVISION OF HIGHWAYS  
 8/27/2019  
 BEAUFORT COUNTY  
 B-4414  
 38358.1.2  
 SHEET 3 OF 4



## WETLANDS IN BUFFER IMPACTS SUMMARY

SITE NO.	STATION (FROM/TO)		WETLANDS IN BUFFERS	
			ZONE 1 (ft <sup>2</sup> )	ZONE 2 (ft <sup>2</sup> )
1	L 22+99 to 26+14 LT	Roadway/Bridge	1556	808
<b>TOTAL:</b>			<b>1556</b>	<b>808</b>

NC DEPARTMENT OF TRANSPORTATION  
 DIVISION OF HIGHWAYS  
 8/27/2019  
 BEAUFORT COUNTY  
 B-4414  
 38358.1.2  
 SHEET      4      OF      4

Revised 2018 Feb

## **B-4414 NEU ENVIRONMENTAL PERMIT NARRATIVE**

**CenturyLink Telephone-** CenturyLink will abandon all buried cables on the North and South side of US 264 and remove the aerial cable and poles on the North side. The existing poles will be removed by bucket truck, which will swing out from the road, hooking a wench to and removing the pole without creating impacts to the wetland boundaries. CenturyLink will trench a new copper and fiber cable 15' inside the existing right of way beginning approximately 285' west of the project limits and continue for an additional 190', inside the project limits, to a bore pit located at approximate Station -L- 21+68, left of center. CenturyLink will bore a 4" SDR 11 conduit, 15' below the stream bed, for approximately 427' while gradually surfacing to the receiving bore pit located outside of the project limits. From the receiving bore pit, Centurylink will trench approximately 14' back to the nearest pedestal. There will be no disturbance to the wetland boundaries, stream or buffer zones from the installation of CenturyLink's facilities. Contact Mr. Rod Medlin; [medlinr@outsource-inc.com](mailto:medlinr@outsource-inc.com) CenturyLink; 606 Winstead Road, Greenville; NC 27834; Phone: (252) 439-1932.

**Tri-County Broadband Telecommunications** – Tri-Country broadband has two fiber optic cables located at the back of the existing NCDOT Right of Way on the North Side of US 264. These fiber cables are out of conflict and will not require relocating. Contact Mr. Seth Hartman; [sethartman@myriverstreet.net](mailto:sethartman@myriverstreet.net) Tri-County Broadband; 2193 NC 99 Hwy, South Belhaven; NC 27810; Phone: (252) 964-8252.

**Tideland EMC** - Tideland EMC has aerial electrical facilities on the South side of the project limits. Tideland EMC does not have conflicts with construction and will not require relocating. Contact Mr. Adam Fyle; [adamfyle@tidelandemc.com](mailto:adamfyle@tidelandemc.com) Tideland EMC; P.O. Box 159, Pantego; NC 27860; Phone: (252) 943-3046.

**Beaufort County Water** - Beaufort County Water has a 12" waterline on the South side of US 264. This line is not in conflict with the construction of the project and will not require relocating. Contact Mr. Erick Jennings; [Erick.jennings@co.beaufort.nc.us](mailto:Erick.jennings@co.beaufort.nc.us) Beaufort County Water; 132 West 2<sup>nd</sup> street, Washington; NC 27889; Phone: (252) 402-6547.

# August 28, 2019

09/28/09  
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**TIP PROJECT: B-4414**

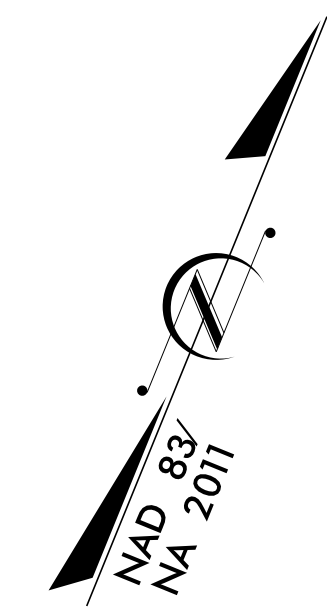
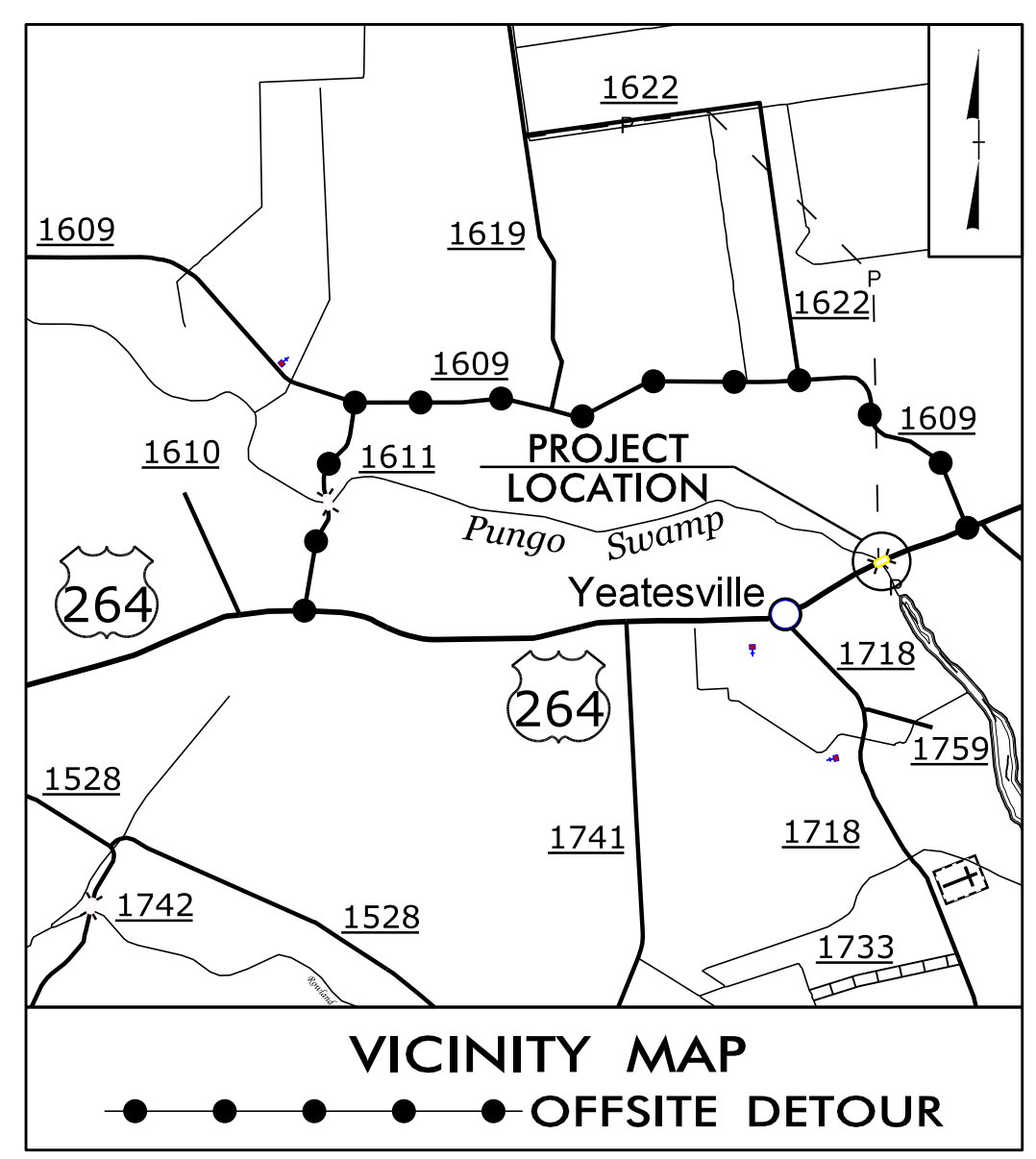
STATE OF NORTH CAROLINA  
DIVISION OF HIGHWAYS

T.I.P. NO.	SHEET NO.
B-4414	UE-1

## UTILITY ENVIRONMENTAL PERMIT PLANS BEAUFORT COUNTY

**LOCATION: REPLACE BRIDGE NO. 43 OVER  
PUNGO CREEK ON US 264**

**TYPE OF WORK: RELOCATION OF COMMUNICATION CABLES**

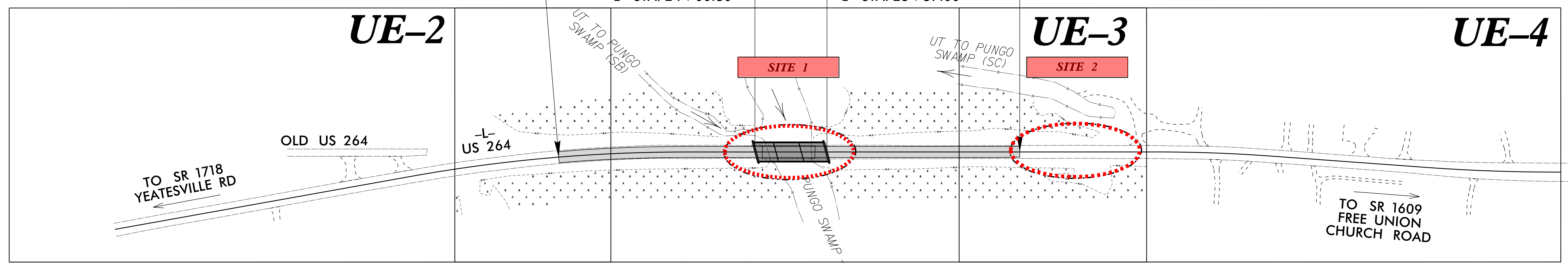


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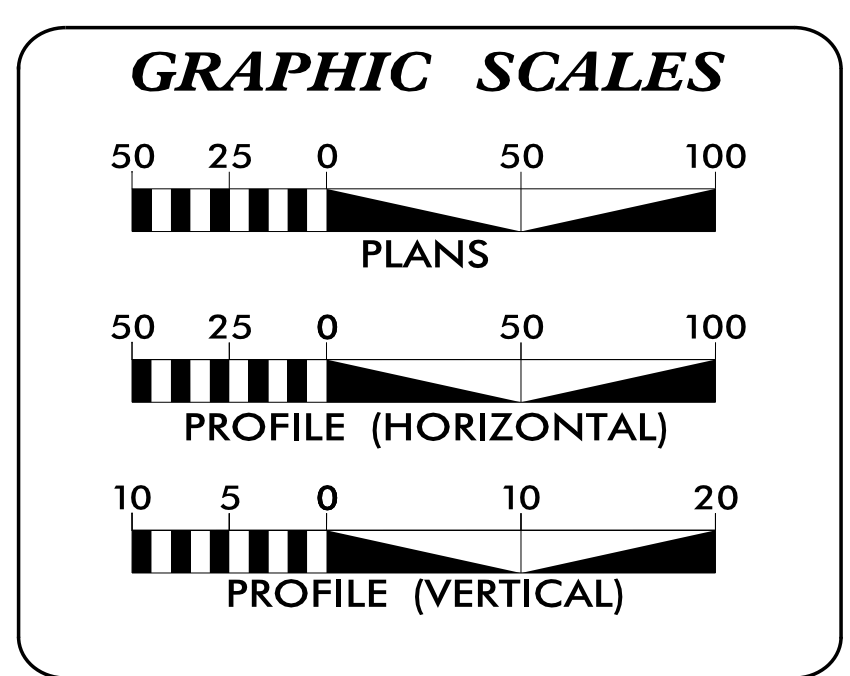
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-L- STA. 29+75.00

BEGIN BRIDGE  
-L- STA. 24+00.80

END BRIDGE  
-L- STA. 25+57.00



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



**INDEX OF SHEETS**

SHEET NO.:	DESCRIPTION:
UE-1	TITLE SHEET
UE-2 - UE-4	UE PLAN SHEETS
UE-5	UE PROFILE

**UTILITY OWNERS WITH CONFLICTS**

(A) COMMUNICATIONS - CENTURYLINK

PREPARED IN THE OFFICE OF:

**Michael Baker INTERNATIONAL**

Michael Baker Engineering, Inc.  
8000 Regency Parkway, Suite 600  
Cary, NC 27518  
919-463-5488

Daniel Oliver	UTILITY PROJECT MANAGER
Daniel Oliver	PROJECT UTILITY COORDINATOR
Christina Newsome	PROJECT UTILITY TECHNICIAN

**DIVISION OF HIGHWAYS  
UTILITIES UNIT**  
1555 MAIL SERVICES CENTER  
RALEIGH, NC 27699-1555  
PHONE (919) 707-6690  
FAX (919) 250-4151

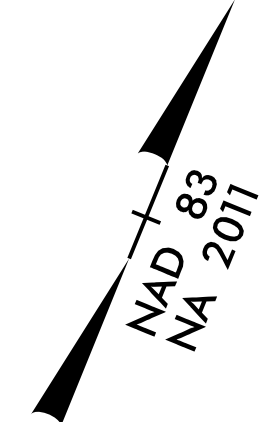
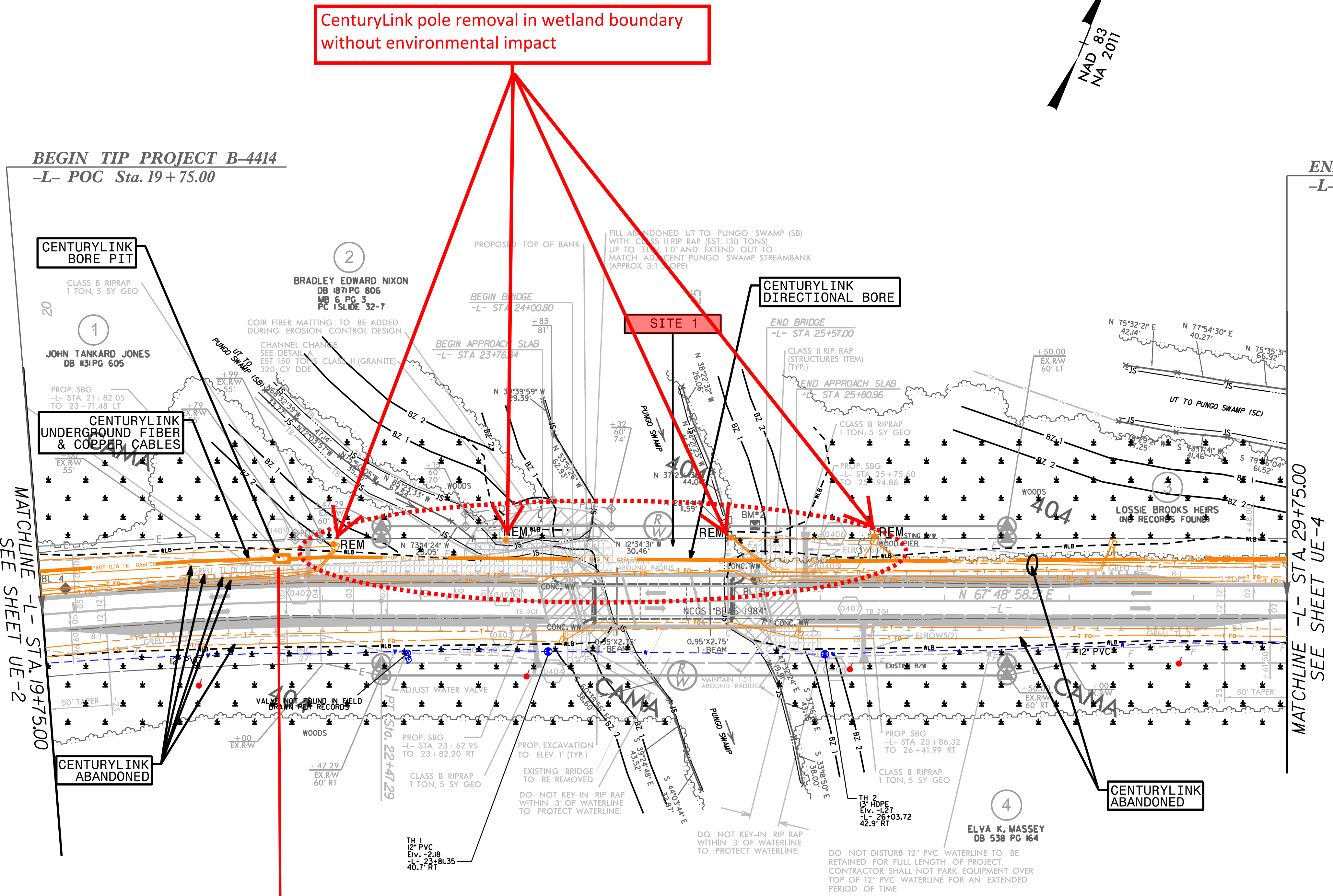
Nabil Hamdan	UTILITIES REGIONAL ENGINEER
Kelvin Martin	UTILITIES ENGINEER
Kyle Pleasant	UTILITIES AREA COORDINATOR
Larry James	UTILITIES COORDINATOR





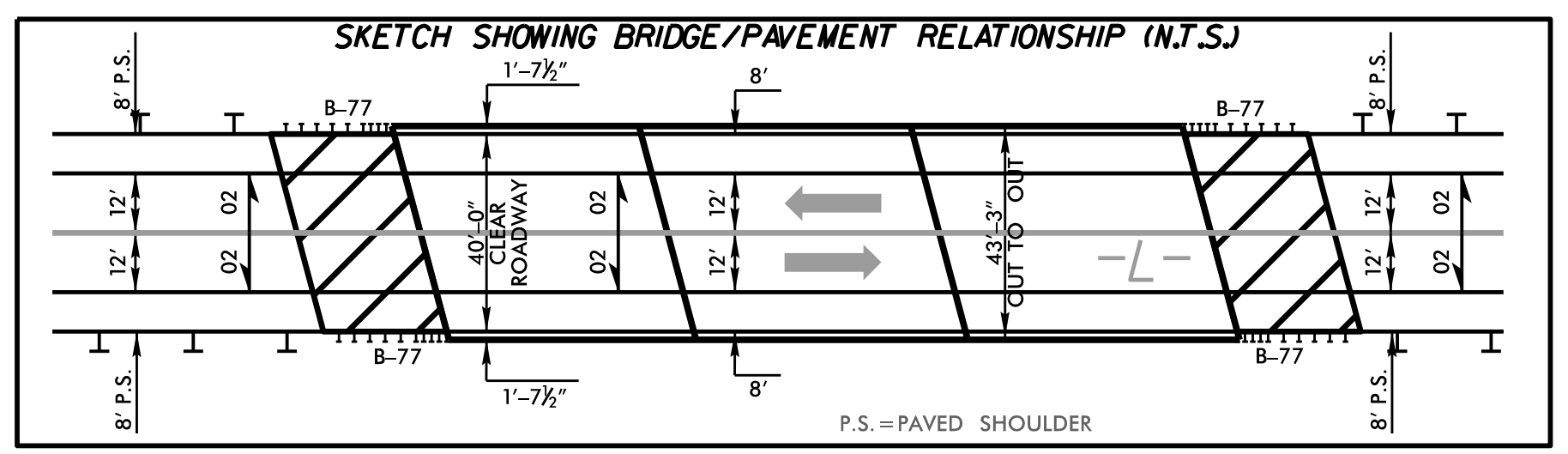
August 28, 2019

5/14/19  
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MATCHLINE -L- STA. 19+75.00  
SEE SHEET UE-2

MATCHLINE -L- STA. 29+75.00  
SEE SHEET UE-4

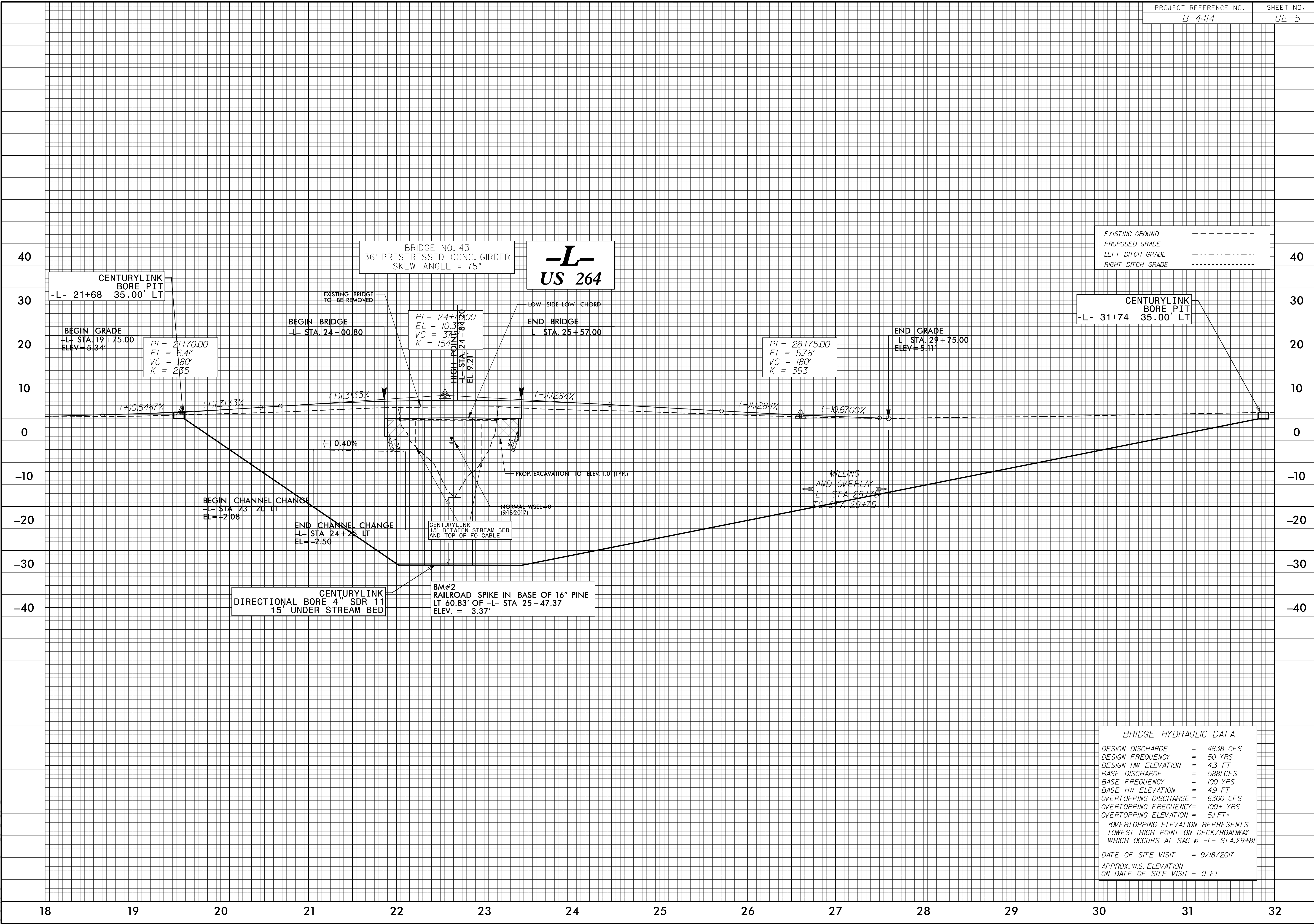






August 28, 2019

5/14/99  
 27-AUG-2019 15:03  
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 C:\Users\al\_carr\OneDrive



EXISTING GROUND  
 PROPOSED GRADE  
 LEFT DITCH GRADE  
 RIGHT DITCH GRADE

BRIDGE NO. 43  
 36' PRESTRESSED CONC. GIRDER  
 SKEW ANGLE = 75°  
 -L-  
 US 264

CENTURYLINK BORE PIT  
 -L- 21+68 35.00' LT

CENTURYLINK BORE PIT  
 -L- 31+74 35.00' LT

BEGIN GRADE  
 -L- STA. 19+75.00  
 ELEV = 5.34'

PI = 21+70.00  
 EL = 6.41'  
 VC = 180'  
 K = 235

BEGIN BRIDGE  
 -L- STA. 24+00.80

PI = 24+70.00  
 EL = 10.31'  
 VC = 371'  
 K = 1549

END BRIDGE  
 -L- STA. 25+57.00

PI = 28+75.00  
 EL = 5.78'  
 VC = 180'  
 K = 393

END GRADE  
 -L- STA. 29+75.00  
 ELEV = 5.11'

BEGIN CHANNEL CHANGE  
 -L- STA 23+20 LT  
 EL = +2.08

END CHANNEL CHANGE  
 -L- STA 24+25 LT  
 EL = -2.50

CENTURYLINK DIRECTIONAL BORE 4" SDR 11  
 15' UNDER STREAM BED

BM#2 RAILROAD SPIKE IN BASE OF 16" PINE  
 LT 60.83' OF -L- STA 25+47.37  
 ELEV. = 3.37'

MILLING AND OVERLAY  
 -L- STA 28+75  
 TO STA 29+75

BRIDGE HYDRAULIC DATA

DESIGN DISCHARGE	= 4838 CFS
DESIGN FREQUENCY	= 50 YRS
DESIGN HW ELEVATION	= 4.3 FT
BASE DISCHARGE	= 5881 CFS
BASE FREQUENCY	= 100 YRS
BASE HW ELEVATION	= 4.9 FT
OVERTOPPING DISCHARGE	= 6300 CFS
OVERTOPPING FREQUENCY	= 100+ YRS
OVERTOPPING ELEVATION	= 5.1 FT*

\*OVERTOPPING ELEVATION REPRESENTS LOWEST HIGH POINT ON DECK/ROADWAY WHICH OCCURS AT SAG @ -L- STA.29+81

DATE OF SITE VISIT = 9/18/2017  
 APPROX. W.S. ELEVATION ON DATE OF SITE VISIT = 0 FT