



STATE OF NORTH CAROLINA  
DEPARTMENT OF TRANSPORTATION

MICHAEL F. EASLEY  
GOVERNOR

LYNDO TIPPETT  
SECRETARY

July 23, 2003

U.S. Army Corps of Engineers  
Regulatory Field Office  
Post Office Box 1000  
Washington, NC 27889-1000

ATTN: Mr. Michael Bell  
NCDOT Coordinator

Subject: **Nationwide 33 application for Dewatering.** Wayne County, Replacement of Bridge No. 34 Over Nahunta Swamp on NC 111, Federal Aid Project No. BRSTP-111(4), State Project No. 8.1331501, TIP Project No. B-3378.

Please find enclosed three copies of the project planning report for the above referenced project. We plan to replace this bridge at approximately the existing location and elevation, with traffic being maintained on-site using a temporary detour west of the existing alignment. The existing bridge will be replaced with a new bridge approximately 100 ft (31 m) in length.

A Nationwide Permit 23 was issued for this project on July 22, 2002 (Action ID 200210778), but did not include impacts due to dewatering for installation of the temporary detour pipes.

### **Temporary Detour**

There will be 0.05 ac temporary impacts from the installation of temporary pipes in Nahunta Swamp for the construction of the temporary detour. We propose to install two corrugated steel pipes with a diameter of 120 inches for each pipe. Impervious dikes (sheet pilings) will also be used in constructing the temporary detour.

### Construction Sequence

- Installation of temporary detour pipes
  1. Drive sheet pile down center of creek.
  2. Fan out sheet pile to side of creek on one side of creek.
  3. Dewater enclosed area.
  4. Excavate to allow temporary pipe to be buried one foot.
  5. Lay pipe.

6. Backfill.
  7. Remove fan sections of sheet pile.
  8. Turn water into first installed temporary pipe.
  9. Install sheet pile.
  10. Fan on other side.
  11. Repeat entire sequence.
- Removal of temporary detour
1. Repeat entire process for removal.

Restoration Plan: No permanent fill will result from the subject activity. The materials used as temporary fill in the construction of the detour will be removed.

Schedule for Construction of Causeways: It is assumed that the Contractor will begin construction of the proposed detour shortly after the date of availability for the project. The Let date was September 17, 2002 with a date of availability of October 20, 2002.

Removal and Disposal: The pipes will be removed within 90 days of the completion of the deck slab for the structure. The temporary pipes will be removed by the Contractor using excavating equipment. All materials placed in the stream by the Contractor will be removed. All materials removed by the Contractor will be disposed of at an off-site upland location.

### **Neuse Buffer Impacts**

This project is located in the Neuse River Basin; therefore the regulations pertaining to the Neuse River Buffer Rules will apply. The project consists of a bridge replacement and the construction of a temporary detour. There will be impacts to the buffers due to bridge construction and construction of the temporary detour. Impacts have been minimized. In addition, there will be no erosive velocities entering the buffers (Q10 2.0 ft<sup>3</sup>/s or less) and all flow will be diffuse. The impacts from bridge construction are 11,999 ft<sup>2</sup> (7,500 ft<sup>2</sup> in Zone 1 and 4,499 ft<sup>2</sup> in Zone 2) and thus allowable under the Neuse Buffer Rules. The impacts from construction of the temporary detour are 7,474 ft<sup>2</sup> (4,571 ft<sup>2</sup> in Zone 1 and 2,903 ft<sup>2</sup> in Zone 2) and thus allowable under the Neuse Buffer Rules. Therefore, no mitigation is required for this project.

### **Regulatory Approvals**

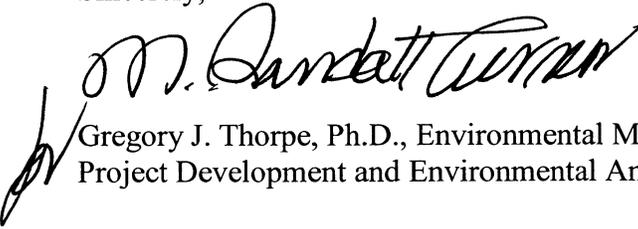
Section 404 Permit: This project is being processed by the Federal Highway Administration as a "Categorical Exclusion" in accordance with 23 CFR 771.115(b). Therefore, we do not anticipate requesting an individual permit, but propose to proceed under Nationwide 33 as authorized by Nationwide Permits 33 (FR number 10, pages 2020-2095; January 15, 2002).

Section 401 Permit: We anticipate 401 General Certification numbers 3366 will apply to this project. In accordance with 15A NCAC 2H .0501(a) we are providing two copies of this application to the North Carolina Department of Environment and Natural Resources, Division of Water Quality, for their records.

Riparian Buffer Certification: We request issuance of a Neuse River Riparian Buffer Certification from the DWQ for impacts to the Neuse Buffers in compliance with the Neuse River Buffer Rules.

If you have any questions or need additional information, please contact Matt Haney at (919) 715-1428.

Sincerely,

A handwritten signature in black ink, appearing to read "G. J. Thorpe". The signature is written in a cursive style with a large initial "G".

Gregory J. Thorpe, Ph.D., Environmental Management Director,  
Project Development and Environmental Analysis Branch

w/attachment

Mr. John Dorney, Division of Water Quality (2 copies)  
Mr. Travis Wilson, NCWRC  
Mr. Gary Jordan, USFWS  
Mr. Greg Perfetti, P.E., Structure Design  
w/o attachment  
Mr. David Franklin, USACE, Wilmington  
Mr. Jay Bennett, P.E., Roadway Design  
Mr. Omar Sultan, Programming and TIP  
Ms. Debbie Barbour, P.E., Highway Design  
Mr. David Chang, P.E., Hydraulics  
Mr. Mark Staley, Roadside Environmental  
Mr. J.H. Trogdon, P.E., Division 4 Engineer  
Mr. Jamie Shern, Division 4 Environmental Officer  
Ms. Karen Capps, P.E., Planning Engineer



**Office Use Only:**

Form Version May 2002

**USACE Action ID No.** \_\_\_\_\_ **DWQ No.** \_\_\_\_\_

(If any particular item is not applicable to this project, please enter "Not Applicable" or "N/A".)

**I. Processing**

1. Check all of the approval(s) requested for this project:

- |   |  |
|---|--|
| <input checked="" type="checkbox"/> Section 404 Permit              | <input checked="" type="checkbox"/> Riparian or Watershed Buffer Rules |
| <input type="checkbox"/> Section 10 Permit                          | <input type="checkbox"/> Isolated Wetland Permit from DWQ              |
| <input checked="" type="checkbox"/> 401 Water Quality Certification |  |

2. Nationwide, Regional or General Permit Number(s) Requested: NW 33

3. If this notification is solely a courtesy copy because written approval for the 401 Certification is not required, check here:

4. If payment into the North Carolina Wetlands Restoration Program (NCWRP) is proposed for mitigation of impacts (verify availability with NCWRP prior to submittal of PCN), complete section VIII and check here:

5. If your project is located in any of North Carolina's twenty coastal counties (listed on page 4), and the project is within a North Carolina Division of Coastal Management Area of Environmental Concern (see the top of page 2 for further details), check here:

**II. Applicant Information**

1. Owner/Applicant Information

Name: North Carolina Department of Transportation  
Mailing Address: Project Development & Environmental Analysis Branch  
1548 Mail Service Center  
Raleigh, NC 27699-1548

Telephone Number: 919-733-3141 Fax Number: 919-733-9794

E-mail Address: gthorpe@dot.state.nc.us

2. Agent/Consultant Information (A signed and dated copy of the Agent Authorization letter must be attached if the Agent has signatory authority for the owner/applicant.)

Name: \_\_\_\_\_  
Company Affiliation: \_\_\_\_\_  
Mailing Address: \_\_\_\_\_

Telephone Number: \_\_\_\_\_ Fax Number: \_\_\_\_\_

E-mail Address: \_\_\_\_\_

### III. Project Information

Attach a **vicinity map** clearly showing the location of the property with respect to local landmarks such as towns, rivers, and roads. Also provide a detailed **site plan** showing property boundaries and development plans in relation to surrounding properties. Both the vicinity map and site plan must include a scale and north arrow. The specific footprints of all buildings, impervious surfaces, or other facilities must be included. If possible, the maps and plans should include the appropriate USGS Topographic Quad Map and NRCS Soil Survey with the property boundaries outlined. Plan drawings, or other maps may be included at the applicant's discretion, so long as the property is clearly defined. For administrative and distribution purposes, the USACE requires information to be submitted on sheets no larger than 11 by 17-inch format; however, DWQ may accept paperwork of any size. DWQ prefers full-size construction drawings rather than a sequential sheet version of the full-size plans. If full-size plans are reduced to a small scale such that the final version is illegible, the applicant will be informed that the project has been placed on hold until decipherable maps are provided.

1. Name of project: Replacement of Bridge No. 34 on NC 111 over Nahunta Swamp
2. T.I.P. Project Number or State Project Number (NCDOT Only): B-3378
3. Property Identification Number (Tax PIN): \_\_\_\_\_
4. Location  
County: Wayne Nearest Town: Eureka  
Subdivision name (include phase/lot number): \_\_\_\_\_  
Directions to site (include road numbers, landmarks, etc.): Bridge No. 34 over Nahunta Swamp on NC 111. Approximately 2 miles southwest of Eureka. Take NC 222 west out of Eureka. Turn left onto NC 111. The project site is approximately 1 mile down NC 111.  
\_\_\_\_\_  
\_\_\_\_\_
5. Site coordinates, if available (UTM or Lat/Long): 35°30'00"/77°55'00"  
(Note – If project is linear, such as a road or utility line, attach a sheet that separately lists the coordinates for each crossing of a distinct waterbody.)
6. Property size (acres): \_\_\_\_\_
7. Nearest body of water (stream/river/sound/ocean/lake): Nahunta Swamp
8. River Basin: Neuse  
(Note – this must be one of North Carolina's seventeen designated major river basins. The River Basin map is available at <http://h2o.enr.state.nc.us/admin/maps/>.)
9. Describe the existing conditions on the site and general land use in the vicinity of the project at the time of this application: rural  
\_\_\_\_\_

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10. Describe the overall project in detail, including the type of equipment to be used: This project proposes to replace Bridge No. 34 on NC 111 over Nahunta Swamp in Wayne County. The bridge will be replaced with a new 100-ft (30.5 m) long bridge at the existing location. The roadway cross section will include two 12-ft (3.6 m) lanes with 3-ft (1 m) offsets. Guardrail will be installed where warranted. Traffic will be maintained on-site using a temporary detour west of the existing alignment.

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11. Explain the purpose of the proposed work: Replacement of existing bridge with two 12-ft lanes with 3-ft offsets. The existing bridge will be replaced with a new 100-ft bridge.

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**IV. Prior Project History**

If jurisdictional determinations and/or permits have been requested and/or obtained for this project (including all prior phases of the same subdivision) in the past, please explain. Include the USACE Action ID Number, DWQ Project Number, application date, and date permits and certifications were issued or withdrawn. Provide photocopies of previously issued permits, certifications or other useful information. Describe previously approved wetland, stream and buffer impacts, along with associated mitigation (where applicable). If this is a NCDOT project, list and describe permits issued for prior segments of the same T.I.P. project, along with construction schedules.

A Nationwide Permit 23 was issued for this project on July 22, 2002 (Action ID 200210778).

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**V. Future Project Plans**

Are any future permit requests anticipated for this project? If so, describe the anticipated work, and provide justification for the exclusion of this work from the current application.

No

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**VI. Proposed Impacts to Waters of the United States/Waters of the State**

It is the applicant's (or agent's) responsibility to determine, delineate and map all impacts to wetlands, open water, and stream channels associated with the project. The applicant must also

provide justification for these impacts in Section VII below. All proposed impacts, permanent and temporary, must be listed herein, and must be clearly identifiable on an accompanying site plan. All wetlands and waters, and all streams (intermittent and perennial) must be shown on a delineation map, whether or not impacts are proposed to these systems. Wetland and stream evaluation and delineation forms should be included as appropriate. Photographs may be included at the applicant's discretion. If this proposed impact is strictly for wetland or stream mitigation, list and describe the impact in Section VIII below. If additional space is needed for listing or description, please attach a separate sheet.

1. Provide a written description of the proposed impacts: Approximately 0.05 ac of surface waters will be temporarily filled in order to install two 120" pipes for the temporary detour.

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2. Individually list wetland impacts below:

Wetland Impact Site Number (indicate on map)	Type of Impact*	Area of Impact (acres)	Located within 100-year Floodplain** (yes/no)	Distance to Nearest Stream (linear feet)	Type of Wetland***

\* List each impact separately and identify temporary impacts. Impacts include, but are not limited to: mechanized clearing, grading, fill, excavation, flooding, ditching/drainage, etc. For dams, separately list impacts due to both structure and flooding.  
 \*\* 100-Year floodplains are identified through the Federal Emergency Management Agency's (FEMA) Flood Insurance Rate Maps (FIRM), or FEMA-approved local floodplain maps. Maps are available through the FEMA Map Service Center at 1-800-358-9616, or online at <http://www.fema.gov>.  
 \*\*\* List a wetland type that best describes wetland to be impacted (e.g., freshwater/saltwater marsh, forested wetland, beaver pond, Carolina Bay, bog, etc.) Indicate if wetland is isolated (determination of isolation to be made by USACE only).

List the total acreage (estimated) of all existing wetlands on the property: \_\_\_\_\_  
 Total area of wetland impact proposed: \_\_\_\_\_

3. Individually list all intermittent and perennial stream impacts below:

Stream Impact Site Number (indicate on map)	Type of Impact*	Length of Impact (linear feet)	Stream Name**	Average Width of Stream Before Impact	Perennial or Intermittent? (please specify)


- \* List each impact separately and identify temporary impacts. Impacts include, but are not limited to: culverts and associated rip-rap, dams (separately list impacts due to both structure and flooding), relocation (include linear feet before and after, and net loss/gain), stabilization activities (cement wall, rip-rap, crib wall, gabions, etc.), excavation, ditching/straightening, etc. If stream relocation is proposed, plans and profiles showing the linear footprint for both the original and relocated streams must be included.
- \*\* Stream names can be found on USGS topographic maps. If a stream has no name, list as UT (unnamed tributary) to the nearest downstream named stream into which it flows. USGS maps are available through the USGS at 1-800-358-9616, or online at [www.usgs.gov](http://www.usgs.gov). Several internet sites also allow direct download and printing of USGS maps (e.g., [www.topozone.com](http://www.topozone.com), [www.mapquest.com](http://www.mapquest.com), etc.).

Cumulative impacts (linear distance in feet) to all streams on site: \_\_\_\_\_

4. Individually list all open water impacts (including lakes, ponds, estuaries, sounds, Atlantic Ocean and any other water of the U.S.) below:

Open Water Impact Site Number (indicate on map)	Type of Impact*	Area of Impact (acres)	Name of Waterbody (if applicable)	Type of Waterbody (lake, pond, estuary, sound, bay, ocean, etc.)
N/A	Temporary fill	0.05	Nahunta Swamp	stream

- \* List each impact separately and identify temporary impacts. Impacts include, but are not limited to: fill, excavation, dredging, flooding, drainage, bulkheads, etc.

5. Pond Creation

If construction of a pond is proposed, associated wetland and stream impacts should be included above in the wetland and stream impact sections. Also, the proposed pond should be described here and illustrated on any maps included with this application.

Pond to be created in (check all that apply):  uplands  stream  wetlands  
 Describe the method of construction (e.g., dam/embankment, excavation, installation of draw-down valve or spillway, etc.): \_\_\_\_\_

Proposed use or purpose of pond (e.g., livestock watering, irrigation, aesthetic, trout pond, local stormwater requirement, etc.): \_\_\_\_\_

Size of watershed draining to pond: \_\_\_\_\_ Expected pond surface area: \_\_\_\_\_

**VII. Impact Justification (Avoidance and Minimization)**

Specifically describe measures taken to avoid the proposed impacts. It may be useful to provide information related to site constraints such as topography, building ordinances, accessibility, and financial viability of the project. The applicant may attach drawings of alternative, lower-impact site layouts, and explain why these design options were not feasible. Also discuss how impacts were minimized once the desired site plan was developed. If applicable, discuss construction techniques to be followed during construction to reduce impacts.

Two alternates were evaluated for this project. Alternate 1 involves replacing the bridge in place with a 100-ft bridge. Traffic would be detoured along surrounding roads during construction. Alternate 2 (Recommended) involves replacing the bridge in place with a 100-ft bridge. Traffic will be maintained on-site using a temporary detour west of the existing bridge. No permanent wetland or stream impacts will occur as a result of this project. Only minimal temporary stream impacts will occur.

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### **VIII. Mitigation**

DWQ - In accordance with 15A NCAC 2H .0500, mitigation may be required by the NC Division of Water Quality for projects involving greater than or equal to one acre of impacts to freshwater wetlands or greater than or equal to 150 linear feet of total impacts to perennial streams.

USACE – In accordance with the Final Notice of Issuance and Modification of Nationwide Permits, published in the Federal Register on March 9, 2000, mitigation will be required when necessary to ensure that adverse effects to the aquatic environment are minimal. Factors including size and type of proposed impact and function and relative value of the impacted aquatic resource will be considered in determining acceptability of appropriate and practicable mitigation as proposed. Examples of mitigation that may be appropriate and practicable include, but are not limited to: reducing the size of the project; establishing and maintaining wetland and/or upland vegetated buffers to protect open waters such as streams; and replacing losses of aquatic resource functions and values by creating, restoring, enhancing, or preserving similar functions and values, preferable in the same watershed.

If mitigation is required for this project, a copy of the mitigation plan must be attached in order for USACE or DWQ to consider the application complete for processing. Any application lacking a required mitigation plan or NCWRP concurrence shall be placed on hold as incomplete. An applicant may also choose to review the current guidelines for stream restoration in DWQ’s Draft Technical Guide for Stream Work in North Carolina, available at <http://h2o.enr.state.nc.us/ncwetlands/strmgide.html>.

1. Provide a brief description of the proposed mitigation plan. The description should provide as much information as possible, including, but not limited to: site location (attach directions and/or map, if offsite), affected stream and river basin, type and amount (acreage/linear feet) of mitigation proposed (restoration, enhancement, creation, or preservation), a plan view, preservation mechanism (e.g., deed restrictions, conservation easement, etc.), and a description of the current site conditions and proposed method of construction. Please attach a separate sheet if more space is needed.

No proposed mitigation.

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2. Mitigation may also be made by payment into the North Carolina Wetlands Restoration Program (NCWRP). Please note it is the applicant's responsibility to contact the NCWRP at (919) 733-5208 to determine availability and to request written approval of mitigation prior to submittal of a PCN. For additional information regarding the application process for the NCWRP, check the NCWRP website at <http://h2o.enr.state.nc.us/wrp/index.htm>. If use of the NCWRP is proposed, please check the appropriate box on page three and provide the following information:

Amount of stream mitigation requested (linear feet): 0  
Amount of buffer mitigation requested (square feet): 0  
Amount of Riparian wetland mitigation requested (acres): 0  
Amount of Non-riparian wetland mitigation requested (acres): 0  
Amount of Coastal wetland mitigation requested (acres): 0

**IX. Environmental Documentation (required by DWQ)**

Does the project involve an expenditure of public (federal/state) funds or the use of public (federal/state) land?

Yes  No

If yes, does the project require preparation of an environmental document pursuant to the requirements of the National or North Carolina Environmental Policy Act (NEPA/SEPA)?  
Note: If you are not sure whether a NEPA/SEPA document is required, call the SEPA coordinator at (919) 733-5083 to review current thresholds for environmental documentation.

Yes  No

If yes, has the document review been finalized by the State Clearinghouse? If so, please attach a copy of the NEPA or SEPA final approval letter.

Yes  No

**X. Proposed Impacts on Riparian and Watershed Buffers (required by DWQ)**

It is the applicant's (or agent's) responsibility to determine, delineate and map all impacts to required state and local buffers associated with the project. The applicant must also provide justification for these impacts in Section VII above. All proposed impacts must be listed herein, and must be clearly identifiable on the accompanying site plan. All buffers must be shown on a map, whether or not impacts are proposed to the buffers. Correspondence from the DWQ Regional Office may be included as appropriate. Photographs may also be included at the applicant's discretion.

Will the project impact protected riparian buffers identified within 15A NCAC 2B .0233 (Neuse), 15A NCAC 2B .0259 (Tar-Pamlico), 15A NCAC 2B .0250 (Randleman Rules and Water Supply Buffer Requirements), or other (please identify \_\_\_\_\_)?

Yes  No  If you answered “yes”, provide the following information:

Identify the square feet and acreage of impact to each zone of the riparian buffers. If buffer mitigation is required calculate the required amount of mitigation by applying the buffer multipliers.

Zone*	Impact (square feet)	Multiplier	Required Mitigation
1	12071	3	
2	7402	1.5	
Total	19473		

\* Zone 1 extends out 30 feet perpendicular from near bank of channel; Zone 2 extends an additional 20 feet from the edge of Zone 1.

If buffer mitigation is required, please discuss what type of mitigation is proposed (i.e., Donation of Property, Conservation Easement, Riparian Buffer Restoration / Enhancement, Preservation or Payment into the Riparian Buffer Restoration Fund). Please attach all appropriate information as identified within 15A NCAC 2B .0242 or .0260.

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**XI. Stormwater (required by DWQ)**

Describe impervious acreage (both existing and proposed) versus total acreage on the site. Discuss stormwater controls proposed in order to protect surface waters and wetlands downstream from the property.

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**XII. Sewage Disposal (required by DWQ)**

Clearly detail the ultimate treatment methods and disposition (non-discharge or discharge) of wastewater generated from the proposed project, or available capacity of the subject facility.

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**XIII. Violations (required by DWQ)**

Is this site in violation of DWQ Wetland Rules (15A NCAC 2H .0500) or any Buffer Rules?

Yes  No

Is this an after-the-fact permit application?

Yes  No

**XIV. Other Circumstances (Optional):**

It is the applicant's responsibility to submit the application sufficiently in advance of desired construction dates to allow processing time for these permits. However, an applicant may choose to list constraints associated with construction or sequencing that may impose limits on work schedules (e.g., draw-down schedules for lakes, dates associated with Endangered and Threatened Species, accessibility problems, or other issues outside of the applicant's control).

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*M. Randall Turner*

*7-23-03*

**Applicant/Agent's Signature**

**Date**

(Agent's signature is valid only if an authorization letter from the applicant is provided.)