



STATE OF NORTH CAROLINA  
DEPARTMENT OF TRANSPORTATION

MICHAEL F. EASLEY  
GOVERNOR

LYNDO TIPPETT  
SECRETARY

October 19, 2006

MEMORANDUM TO: Mr. Jon G. Nance, PE  
Division Five Engineer

FROM: Philip S. Harris, III, P.E., Unit Head *E. F. Harris*  
Natural Environment Unit  
Project Development and Environmental Analysis Branch

SUBJECT: Vance County, Western Outer Loop from SR 1128 (Ruin  
Creek Rd) to SR 1101 (Old County Home Rd) near  
Henderson; T.I.P. Number U-2527; Federal Aid Project  
STP-0509(2); State Project 8.2390201

Attached is the modification to the U. S. Army Corps of Engineers 404 Individual Permit and the special conditions for the 401 Water Quality Certification for the above referenced project. All environmental permits have been received for the construction of this project.

PSH/gyb

Attachment

Cc:

Mr. Majed Alghandour, P. E., Programming and TIP  
Mr. Jay Bennett, P.E., Roadway Design  
Dr. David Chang, P.E., Hydraulics  
Mr. Randy Garris, P.E. State Contract Officer  
Mr. Art McMillan, P.E., Highway Design  
Mr. Greg Perfetti, P.E., Structure Design  
Mr. Mark Staley, Roadside Environmental  
Mr. John F. Sullivan, FHWA  
Mr. Eric Midkiff, P.E., PDEA Central Region Unit Head  
Mr. Chris Murray, Division Environmental Officer

## PROJECT COMMITMENTS

Western Outer Loop from SR 1128 (Ruin Creek Rd) to  
SR 1101 (Old County Home Rd) near Henderson  
Vance County  
State Project No. 8.2390201  
Federal Aid Project No. STP-0509 (2)  
TIP No.: U-2527

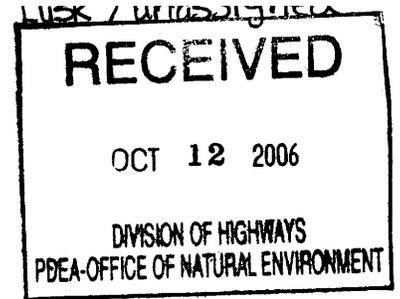
In addition to the standard Individual Section 404 and 401 Permit Conditions, State Consistency Conditions, NCDOT's Guidelines for Best Management Practices for Protection of Surface Waters, the following special commitments have been agreed to by NCDOT:

### **Commitments Developed through Permit Modifications**

No new special permit conditions are stated in the attached permits. All standard permit conditions apply to this project and all other conditions written into previous Section 404 permits, Section 401 Water Quality Certifications and Tar-Pamlico River Riparian Buffer Certifications for this project still apply.



DEPARTMENT OF THE ARMY  
WILMINGTON DISTRICT, CORPS OF ENGINEERS  
P.O. BOX 1890  
WILMINGTON, NORTH CAROLINA 28402-1890



IN REPLY REFER TO

October 10, 2006

Regulatory Division

Action ID. ORM-1997-8127 (RAMS-199708127)

Gregory J. Thorpe, Ph.D.  
Environmental Management Director, PDEA  
N.C. Department of Transportation  
1548 Mail Service Center  
Raleigh, NC 27699-1548

Dear Mr. Thorpe:

Reference the Department of the Army permit issued on March 25, 2004, for construction of the Western Outer Loop of Henderson (T.I.P. No. U-2527), crossing Red Bud Creek, unnamed tributaries, and an adjacent wetland, from SR 1128, to SR 1101, southwest of Henderson, in Vance County, North Carolina, and modified on October 1, 2004. Reference also your written request of September 8, 2006, for permit modification to impact an additional 46 linear feet of stream, to add riprap for stability of a stream bank.

The permit is hereby modified to include the work as shown on the enclosed modified drawings. 46 linear feet of additional on-site mitigation will be required for the 46 linear feet of additional impact to the perennial stream at Site 2. It is understood that all conditions of the original permit remain applicable, with the exception of Special Conditions j and k, which are modified as shown below, and that the expiration date is unchanged.

#### **Mitigation**

j. The permittee shall mitigate for 1,584 linear feet of impact to streams with important aquatic function, as described below (2,110 linear feet of onsite stream relocation).

#### **Onsite Stream Relocation/Restoration**

k. IMPLEMENTATION: The permittee shall mitigate for 1,584 linear feet of unavoidable impact to streams with important aquatic function, associated with this project, by completing 2,110 linear feet of onsite stream relocation/restoration, as described in the permit application. The stream relocation/restoration shall be constructed in accordance with the North Carolina Wildlife Resources Commission's (NCWRC) "Stream Relocation Guidelines." NCDOT shall consult with NCWRC on the stream relocation/restoration and implement all

practicable recommendations in the design of specific site requirements for re-establishment of bank vegetation, and placement of meanders and habitat structures. Vegetation shall be used to the maximum extent practicable to stabilize banks, and riprap and other man-made structural measures shall be minimized. The permittee shall construct all channel relocations/restoration in a dry work area, and stabilize the new channel before stream flows are diverted. Whenever possible, the permittee shall allow new channels to stabilize for an entire growing season.

If you have questions, please contact Eric Alsmeyer of the Raleigh Regulatory Field Office, at telephone (919) 876-8441, extension 23.

Sincerely,



*John E. Pulliam, Jr.*  
John E. Pulliam, Jr.  
Colonel, U.S. Army  
District Engineer

Enclosures

Copies Furnished with enclosure:

Mr. John Hennessey  
Water Quality Section  
Division of Environmental Management  
North Carolina Department of Environment,  
Health and Natural Resources  
Post Office Box 29535  
Raleigh, NC 27626-0535

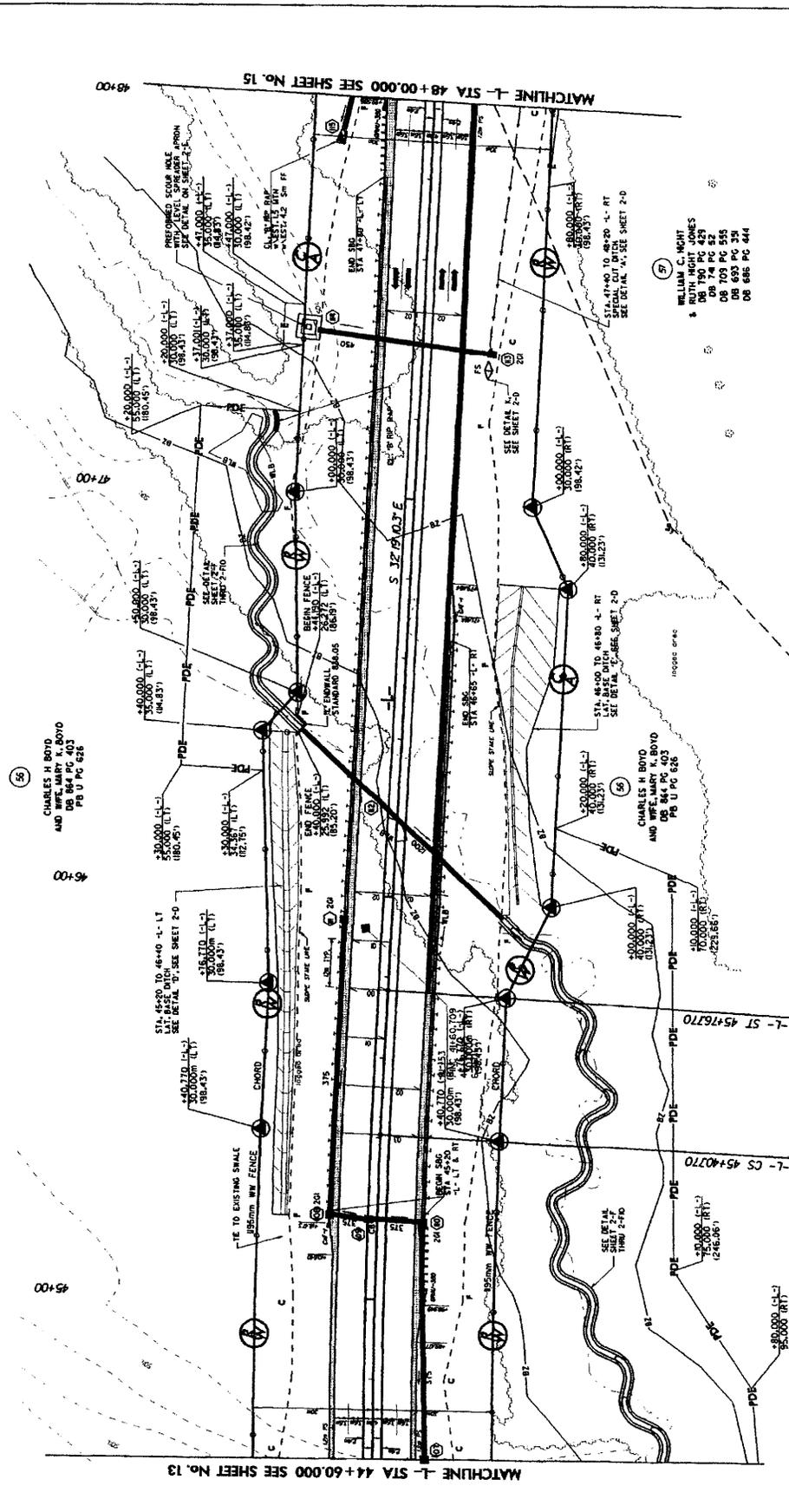
NCDOT  
ATTN: Jon G. Nance, P.E.  
2612 Duke Street  
Durham, North Carolina 27704

NCDOT  
ATTN: Christopher Murray  
2612 Duke Street  
Durham, North Carolina 27704

PROJECT REFERENCE NO. U-257  
 SHEET NO. 14  
 HYDRAULIC ENGINEER  
 ROADWAY DESIGN ENGINEER

METRICS  
 1" = 100'  
 COUNTY: \_\_\_\_\_  
 S/W REV: \_\_\_\_\_

NC GMD M4D 83



CHARLES H. BOYD  
 AND WIFE, MARY K. BOYD  
 DB 844 PG 403  
 PB U PG 626

WILLIAM C. HIGHT  
 & RUTH HIGHT JONES  
 DB 190 PG 421  
 DB 103 PG 555  
 DB 633 PG 336  
 DB 686 PG 444

SEE SHEETS 23 & 24 FOR L- PROFILE

STEWART ENGINEERING  
 INCORPORATED  
 1100 W. BROAD ST.  
 RALEIGH, N.C. 27601

REVISIONS

NO.	DESCRIPTION

19

CL. 'B' RIP RAP

BZ

NO RIP RAP  
IN STREAM BED

TIE TO  
EXISTING SWALE



N 89°57'27" E  
1713.917

F

C



F

BZ



C

F

E

C

GRADE TO DRAIN

750

+22.418  
57.329



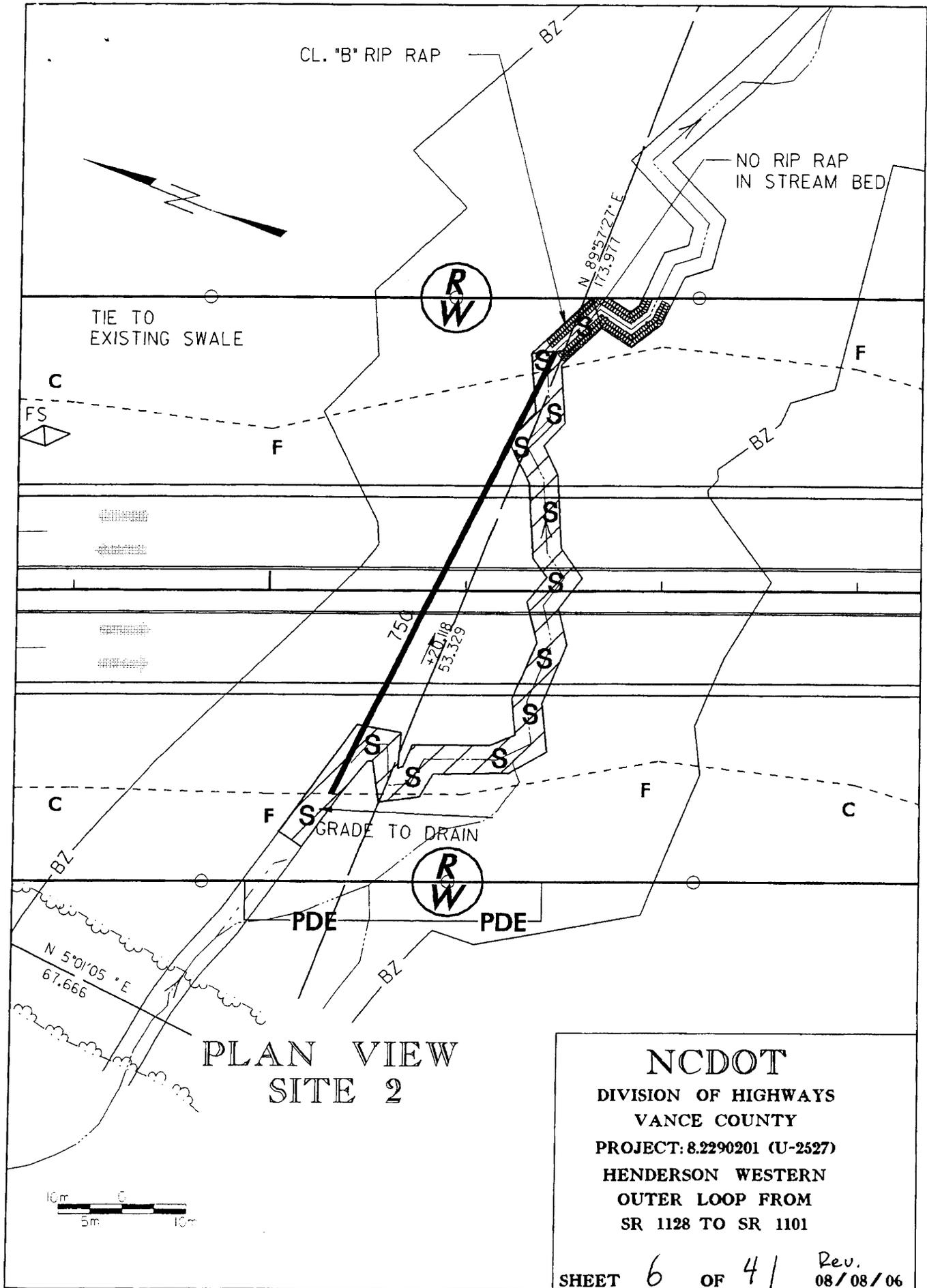
PDE

PDE

# PLAN VIEW SITE 2

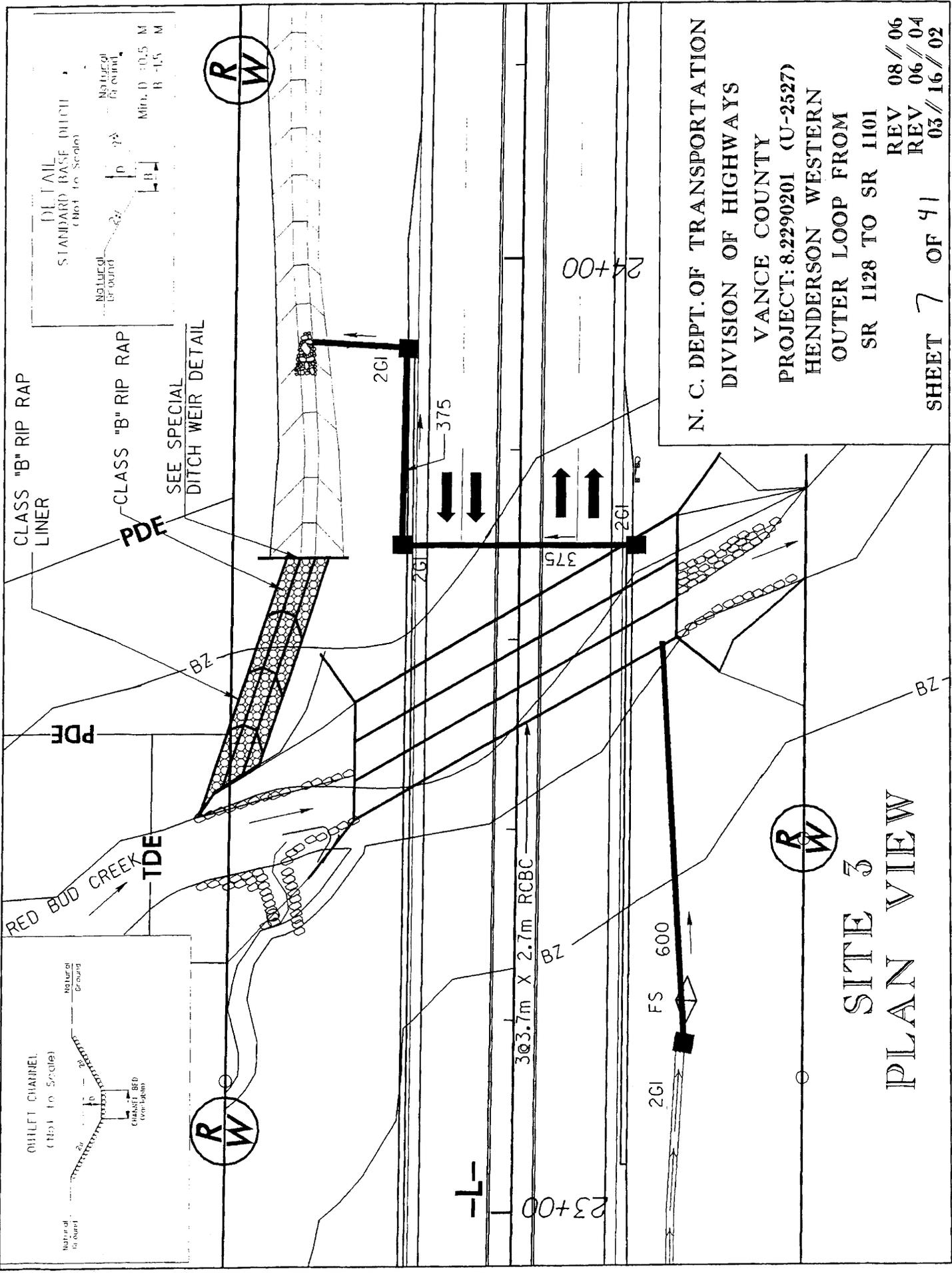


**NCDOT**  
DIVISION OF HIGHWAYS  
VANCE COUNTY  
PROJECT: 8.2290201 (U-2527)  
HENDERSON WESTERN  
OUTER LOOP FROM  
SR 1128 TO SR 1101



**NCDOT**  
 DIVISION OF HIGHWAYS  
 VANCE COUNTY  
 PROJECT: 8.2290201 (U-2527)  
 HENDERSON WESTERN  
 OUTER LOOP FROM  
 SR 1128 TO SR 1101

SHEET 6 OF 41 Rev. 08/08/06



N. C. DEPT. OF TRANSPORTATION  
 DIVISION OF HIGHWAYS  
 VANCE COUNTY  
 PROJECT: 8.2290201 (U-2527)  
 HENDERSON WESTERN  
 OUTER LOOP FROM  
 SR 1128 TO SR 1101  
 SHEET 7 OF 41  
 REV 08//06  
 REV 06//04  
 03//16//02  
 REV. 03//06

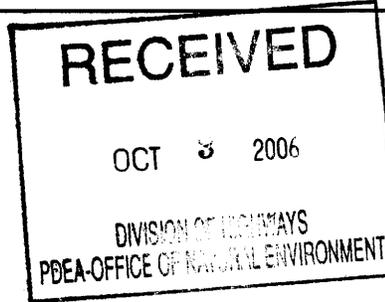
SITE 3  
 PLAN VIEW



Michael F. Easley, Governor  
William G. Ross Jr., Secretary  
North Carolina Department of Environment and Natural Resources

Alan W. Klimek, P.E. Director  
Division of Water Quality

*Lusk/Haney?*



September 26, 2006

Dr. Greg Thorpe, PhD., Manager  
Planning and Environmental Branch  
North Carolina Department of Transportation  
1548 Mail Service Center  
Raleigh, North Carolina, 27699-1548

Subject: Modification to the 401 Water Quality Certification Pursuant to Section 401 of the Federal Clean Water Act and TAR-PAMLICO BUFFER RULES, with ADDITIONAL CONDITIONS for Proposed Western Outer Loop in Vance County, Federal Aid Project No. STP-0509(2), State Project No. 8.2390201, TIP No. U-2527, DWQ Project No. 20031494 v.3.

Dear Dr. Thorpe:

Attached hereto is a modification of Certification No. 3451 issued to The North Carolina Department of Transportation dated February 19, 2004 and modified September 2, 2004. This modification is applicable only to the additional proposed activities dated received September 12, 2006. All the authorized activities and conditions of certification associated with the original Water Quality Certification dated February 19, 2004 and subsequent modifications still apply except where superceded by this certification.

If we can be of further assistance, do not hesitate to contact us.

Sincerely,

Alan W. Klimek, P.E.  
Director

Attachments

cc: Eric Alsmeyer, US Army Corps of Engineers, Raleigh Field Office  
Chris Murray, Division 5 Environmental Officer  
Travis Wilson, NC Wildlife Resources Commission  
Ecosystem Enhancement Program  
DWQ Raleigh Regional Office  
File Copy



**Modification to the 401 Water Quality Certification Pursuant to Section 401 of the Federal Clean Water Act and TAR-PAMLICO BUFFER RULES, with ADDITIONAL CONDITIONS**

**THIS CERTIFICATION** is issued in conformity with the requirements of Section 401 Public Laws 92-500 and 95-217 of the United States and subject to the North Carolina Division of Water Quality (DWQ) Regulations in 15 NCAC 2H .0500 and 15A NCAC 2B.0259. This certification modification authorizes the NCDOT to impact 46 linear feet of jurisdictional streams and 1,184 square feet of protected riparian buffers in Vance County. The project shall be constructed pursuant to the modification dated received September 12, 2006. The authorized impacts are as described below:

**New Stream Impacts in the Tar-Pamlico River Basin**

Site	Riprap Impact to Perennial Stream (linear ft)	Total Stream Impact (linear ft)	Stream Impacts Requiring Mitigation (linear ft)
2	46	46	N/A
<b>Total</b>	<b>46</b>	<b>46</b>	<b>0</b>

**Total Stream Impact for Project: 46 linear feet**

**New Tar-Pamlico Riparian Buffer Impacts**

Site	Zone 1 Impact (sq ft)	minus Wetlands in Zone 1 (sq ft)	= Zone 1 Buffers (not wetlands) (sq ft)	Zone 1 Buffer Mitigation Required (using 3:1 ratio)	Zone 2 Impact (sq ft)	minus Wetlands in Zone 2 (sq ft)	= Zone 2 Buffers (not wetlands) (sq ft)	Zone 2 Buffer Mitigation Required (using 1.5:1 ratio)
2	1,184	0	1,184	3,352	0	0	0	0
<b>Totals</b>	<b>1,184</b>	<b>0</b>	<b>1,184</b>	<b>3,352</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>

**Total Buffer Impact for Project: 1,184 square feet.**

The application provides adequate assurance that the discharge of fill material into the waters of the Tar-Pamlico River Basin in conjunction with the proposed development will not result in a violation of applicable Water Quality Standards and discharge guidelines. Therefore, the State of North Carolina certifies that this activity will not violate the applicable portions of Sections 301, 302, 303, 306, 307 of PL 92-500 and PL 95-217 if conducted in accordance with the application and conditions hereinafter set forth.

This approval is only valid for the purpose and design that you submitted in your modified application dated received September 12, 2006. All the authorized activities and conditions of certification associated with the original Water Quality Certification dated February 19, 2004 and modified September 2, 2004 still apply except where superseded by this certification. Should your project change, you are required to notify the DWQ and submit a new application. If the property is sold, the new owner must be given a copy of this Certification and approval letter, and is thereby responsible for complying with all the conditions. If any additional wetland impacts, or stream impacts, for this project (now or in the future) exceed one acre or 150 linear feet, respectively, additional compensatory mitigation may be required as described in 15A NCAC 2H .0506 (h) (6) and (7). For this approval to remain valid, you are required to comply with all the conditions listed below. In addition, you should obtain all other federal, state or local permits before proceeding with your project including (but not limited to) Sediment and Erosion control, Coastal Stormwater, Non-discharge and Water Supply watershed regulations. This Certification shall expire on the same day as the expiration date of the corresponding Corps of Engineers Permit.



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**Conditions of Certification:**

1. All other conditions written into previous Water Quality Certifications for this project still apply.
2. Compensatory mitigation for impacts to 1,184 square feet of protected riparian buffers in Zone 1 shall be required. We understand that you have chosen to perform compensatory mitigation for impacts to protected buffers through use of the North Carolina Ecosystem Enhancement Program (EEP), in accordance with the Tri-Party MOA signed on July 22, 2003 and the Dual-Party MOA signed on April 12, 2004. Mitigation for unavoidable impacts to Tar-Pamlico Riparian Buffers shall be provided in the Tar-Pamlico River Basin and done in accordance with 15A NCAC 2B.0259.
3. Riprap should not be placed in the active thalweg channel or placed in the streambed in a manner that precludes aquatic life passage. Bioengineering boulders or structures should be properly designed, sized and installed.
4. All stormwater runoff shall be directed as sheetflow through stream buffers at nonerosive velocities, unless otherwise approved by this certification.
5. All riparian buffers impacted by the placement of temporary fill or clearing activities shall be restored to the preconstruction contours and revegetated. Maintained buffers shall be permanently revegetated with non-woody species by the end of the growing season following completion of construction. For the purpose of this condition, maintained buffer areas are defined as areas within the transportation corridor that will be subject to regular DOT maintenance activities including mowing. The area with non-maintained buffers shall be permanently revegetated, with native woody species before the next growing season following completion of construction.
6. Pursuant to NCAC15A 2B.0259(6) sediment and erosion control devices shall not be placed in Zone 1 of any Tar-Pamlico Buffer without prior approval by the NCDWQ. At this time, the NCDWQ has approved no sediment and erosion control devices in Zone 1, outside of the approved project impacts, anywhere on this project. Moreover, sediment and erosion control devices shall be allowed in Zone 2 of the buffers provided that Zone 1 is not compromised and that discharge is released as diffuse flow.
7. If concrete is used during construction, a dry work area should be maintained to prevent direct contact between curing concrete and stream water. Water that inadvertently contacts uncured concrete should not be discharged to surface waters due to the potential for elevated pH and possible aquatic life and fish kills.
8. During the construction of the project, no staging of equipment of any kind is permitted in waters of the U.S., or protected riparian buffers.
9. The dimension, pattern and profile of the stream above and below the crossing should not be modified. Disturbed floodplains and streams should be restored to natural geomorphic conditions.
10. All work in or adjacent to stream waters shall be conducted in a dry work area. Approved BMP measures from the most current version of NCDOT Construction and Maintenance Activities manual such as sandbags, rock berms, cofferdams and other diversion structures shall be used to prevent excavation in flowing water.
11. Heavy equipment shall be operated from the banks rather than in the stream channel in order to minimize sedimentation and reduce the introduction of other pollutants into the stream.
12. All mechanized equipment operated near surface waters must be regularly inspected and maintained to prevent contamination of stream waters from fuels, lubricants, hydraulic fluids, or other toxic materials.
13. No rock, sand or other materials shall be dredged from the stream channel except where authorized by this certification.



14. Discharging hydroseed mixtures and washing out hydroseeders and other equipment in or adjacent to surface waters is prohibited.

15. The permittee and its authorized agents shall conduct its activities in a manner consistent with State water quality standards (including any requirements resulting from compliance with §303(d) of the Clean Water Act) and any other appropriate requirements of State and Federal law. If DWQ determines that such standards or laws are not being met (including the failure to sustain a designated or achieved use) or that State or federal law is being violated, or that further conditions are necessary to assure compliance, DWQ may reevaluate and modify this certification.

16. A copy of this Water Quality Certification shall be posted on the construction site at all times. In addition, the Water Quality Certification and all subsequent modifications, if any, shall be maintained with the Division Engineer and the on-site project manager.

17. The outside buffer, wetland or water boundary located within the construction corridor approved by this authorization shall be clearly marked by highly visible fencing prior to any land disturbing activities. Impacts to areas within the fencing are prohibited unless otherwise authorized by this certification.

18. Upon completion of the project, the NCDOT Division Engineer shall complete and return the "Certification of Completion Form" to notify DWQ when all work included in the 401 Certification has been completed.

19. Native riparian vegetation must be reestablished within the construction limits of the project by the end of the growing season following completion of construction.

20. There shall be no excavation from, or waste disposal into, jurisdictional wetlands or waters associated with this permit without appropriate modification. Should waste or borrow sites be located in wetlands or streams, compensatory mitigation will be required since that is a direct impact from road construction activities.

21. Erosion and sediment control practices must be in full compliance with all specifications governing the proper design, installation and operation and maintenance of such Best Management Practices in order to protect surface waters standards:

- a. The erosion and sediment control measures for the project must be designed, installed, operated, and maintained in accordance with the most recent version of the *North Carolina Sediment and Erosion Control Planning and Design Manual*.
- b. The design, installation, operation, and maintenance of the sediment and erosion control measures must be such that they equal, or exceed, the requirements specified in the most recent version of the *North Carolina Sediment and Erosion Control Manual*. The devices shall be maintained on all construction sites, borrow sites, and waste pile (spoil) projects, including contractor-owned or leased borrow pits associated with the project.
- c. For borrow pit sites, the erosion and sediment control measures must be designed, installed, operated, and maintained in accordance with the most recent version of the *North Carolina Surface Mining Manual*.
- d. The reclamation measures and implementation must comply with the reclamation in accordance with the requirements of the Sedimentation Pollution Control Act.

22. Sediment and erosion control measures shall not be placed in wetlands or waters unless otherwise approved by this Certification. If placement of sediment and erosion control devices in wetlands and waters is unavoidable, they shall be removed and the natural grade restored upon completion of the project.

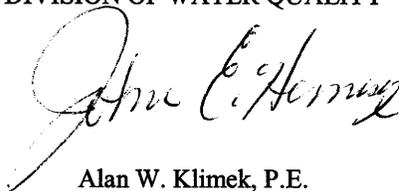


Violations of any condition herein set forth may result in revocation of this Certification and may result in criminal and/or civil penalties. This Certification shall become null and void unless the above conditions are made conditions of the Federal 404 and/or Coastal Area Management Act Permit. This Certification shall expire upon the expiration of the 404 or CAMA permit.

If this Certification is unacceptable to you have the right to an adjudicatory hearing upon written request within sixty (60) days following receipt of this Certification. This request must be in the form of a written petition conforming to Chapter 150B of the North Carolina General Statutes and filed with the Office of Administrative Hearings, 6714 Mail Service Center, Raleigh, N.C. 27699-6714. If modifications are made to an original Certification, you have the right to an adjudicatory hearing on the modifications upon written request within sixty (60) days following receipt of the Certification. Unless such demands are made, this Certification shall be final and binding.

This the 26th day of September 2006

DIVISION OF WATER QUALITY



Alan W. Klimek, P.E.  
Director

WQC No. 3451 ver.3

# Certification of Completion

DWQ Project No.: \_\_\_\_\_ County: \_\_\_\_\_

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

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

Date of Issuance of Wetland Permit: \_\_\_\_\_

## Certificate of Completion

Upon completion of all work approved within the **401 Water Quality Certification and Buffer Rules**, and any subsequent modifications, the applicant is required to return this certificate to the 401 Oversight/Express Permitting Unit, North Carolina Division of Water Quality, 1650 Mail Service Center, Raleigh, NC, 27699-1650. This form may be returned to DWQ by the applicant, the applicant's authorized agent, or the project engineer. It is not necessary to send certificates from all of these.

### *Applicant's Certification*

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

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

### *Agent's Certification*

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

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

### *If this project was designed by a Certified Professional*

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

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