



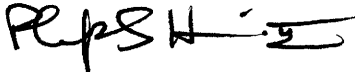
STATE OF NORTH CAROLINA  
DEPARTMENT OF TRANSPORTATION

MICHAEL F. EASLEY  
GOVERNOR

LYNDO TIPPETT  
SECRETARY

March 28, 2005

MEMORANDUM TO: Mr. Jon G. Nance, P.E.  
Division 5 Engineer

FROM: Philip S. Harris, III, P.E., Manager   
Office of the Natural Environment  
Project Development and  
Environmental Analysis Branch

SUBJECT: Wake; Division 5; US 64 from New Hope Road SR 2306 to Existing US  
64 near SR 1003; State Project No. 8.1402202; TIP Project No. R-2547  
BA and CC

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

PSH/gyb

Attachment

cc: Mr. Art McMillan, P.E.  
Mr. Omar Sultan  
Mr. Jay Bennett, P.E.  
Mr. David Chang, P.E.  
Mr. Randy Garris, P.E.  
Mr. Greg Perfetti, P.E.  
Mr. Mark Staley  
Mr. John F. Sullivan, III, FHWA  
Mr. Chris Murray, Division 5 DEO  
Ms. Cathy Houser, PE

# PROJECT COMMITMENTS

US 64 from New Hope Rd. SR 2306 to Existing US 64 near SR 1003;  
Wake County  
State Project No.: 8.1402202  
Federal Aid Project No.: NHF-DPI-0199(004)  
TIP No.: R-2547BA and CC

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 permit conditions are stated in the attached permit. All other conditions written into previous Water Quality Certifications and Neuse River Riparian Buffer Certifications for this project still apply.

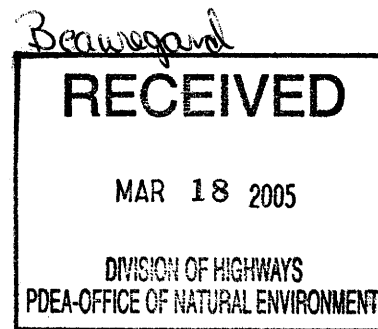


DEPARTMENT OF THE ARMY  
WILMINGTON DISTRICT, CORPS OF ENGINEERS

P.O. BOX 1890  
WILMINGTON, NORTH CAROLINA 28402-1890

February 16, 2005

IN REPLY REFER TO



Regulatory Division

Action ID. 200220819; TIP No. R-2547

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

Dear Dr. Thorpe:

Reference the Department of the Army permit issued on April 25, 2002, subsequently modified on May 4, 2004, for the discharge of fill material in waters of the United States, including wetlands, to facilitate construction of the US 64 Knightdale Bypass (T.I.P. No. R-2547), in the Neuse River basin, Wake County, North Carolina. Reference also your written request of December 13, 2004, for additional permit modification to impact an additional 10 linear feet of stream for extension of a pipe to accommodate an access driveway, at Site 19, in Section BA of TIP No. R-2547.

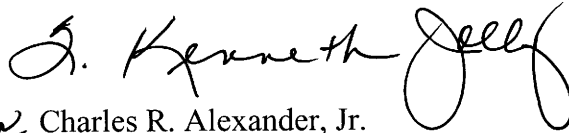
We have reviewed your proposal and have determined that impacts are temporary or relatively minor, and an additional public notice is not necessary. Therefore, the permit is hereby modified to include the work as shown on the enclosed plans, subject to the following additional special condition:

xx. Compensatory mitigation for the unavoidable impacts to an additional 10 linear feet of stream associated with the proposed project shall be provided by the Ecosystem Enhancement Program (EEP), as outlined in the letter dated December 8, 2004 from William D. Gilmore, EEP Transition Manager. Pursuant to the EEP Memorandum of Agreement (MOA) between the State of North Carolina and the US Army Corps of Engineers signed on July 22, 2003, the EEP will provide 20 linear feet of restoration equivalent warm water stream channel in the Neuse River basin (Hydrologic Cataloging Unit 03020201) by one year of the date of this permit. The NCDOT shall, within 30 days of the issue date of this permit, certify that sufficient funds have been provided to EEP to complete the required mitigation, pursuant to Paragraph V. of the MOA.

It is understood that all other conditions of the original permit remain applicable and that the expiration date is unchanged. Please note that the current permit expiration date is December 31, 2005.

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

Sincerely,

  
for Charles R. Alexander, Jr.  
Colonel, U.S. Army  
District Engineer

Enclosure

Copies Furnished with enclosure:

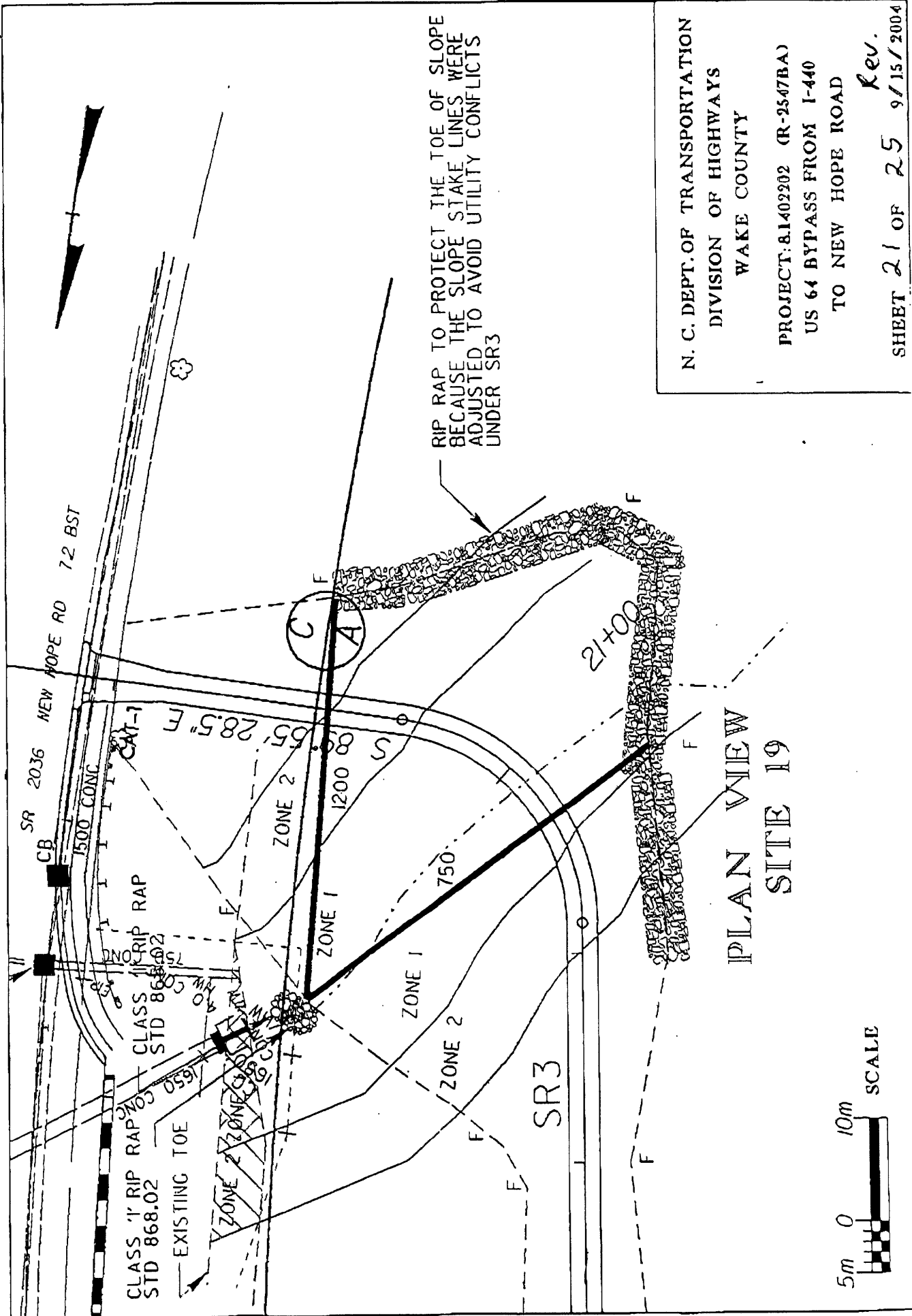
Mr. John Hennessy  
Division of Water Quality  
North Carolina Department of  
Environment and Natural Resources  
1650 Mail Service Center  
Raleigh, NC 27699-1650

Mr. Jon Nance  
Division Engineer  
NCDOT, Division of Highways, Division 5  
2612 Duke Street  
Durham, North Carolina 27704

Mr. Chris Murray  
Division Environmental Supervisor  
NCDOT, Division of Highways, Division 5  
2612 Duke Street  
Durham, North Carolina 27704

William D. Gilmore, P.E.  
Transition Manager  
Division of Ecosystem Enhancement  
North Carolina Department of Environment and Natural Resources  
1652 Mail Service Center  
Raleigh, NC 27699-1652





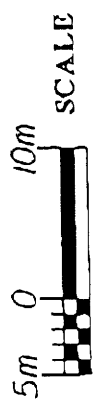
RIP RAP TO PROTECT THE TOE OF SLOPE  
BECAUSE THE SLOPE STAKE LINES WERE  
ADJUSTED TO AVOID UTILITY CONFLICTS  
UNDER SR3

N. C. DEPT. OF TRANSPORTATION  
DIVISION OF HIGHWAYS  
WAKE COUNTY

PROJECT: 8.1402202 (R-2547BA)  
US 64 BYPASS FROM I-440  
TO NEW HOPE ROAD

SHEET 21 OF 25 9/15/2004  
Rev.

PLAN VIEW  
SITE 19



IMPACT SUMMARY																
Site No.	Station (From/To)	Structure Size	WETLAND IMPACTS					SURFACE WATER IMPACTS					FILL IN BUFFER			
			Fill In Wetlands (ha)	Temp. Fill In Wetlands (ha)	Excavation In Wetlands (ha)	Mechanized Clearing (ha)	Fill In SW (Natural) (ha)	Fill In SW (Pond) (ha)	Temp. Fill In SW (ha)	Existing Channel Impacted (m)	Relocated Channel (m)	Enclosed Channel (m)	Zone 1 (ha)	Zone 2 (ha)		
18	18+84 -SR3-	1050 RCP												14	0.024	0.015
19	21+00 -SR3-	1650 RCP												21	0.04	0.03
19 REV	21+00 -SR3	1650 RCP										3			0.0445	0.0338
TOTALS: AS APPROVED			0.71	0	0	0	0.034	0.042	0	0.004	0	323.5	219	367.5	1.849	1.205
TOTALS: AS REVISED			0.71	0	0	0	0.034	0.042	0	0.004	0	326.5	219	387.5	1.8535	1.2098
DIFFERENCE												10 ft			481 sq ft	414 sq ft

N.C. DEPT. OF TRANSPORTATION  
DIVISION OF HIGHWAYS

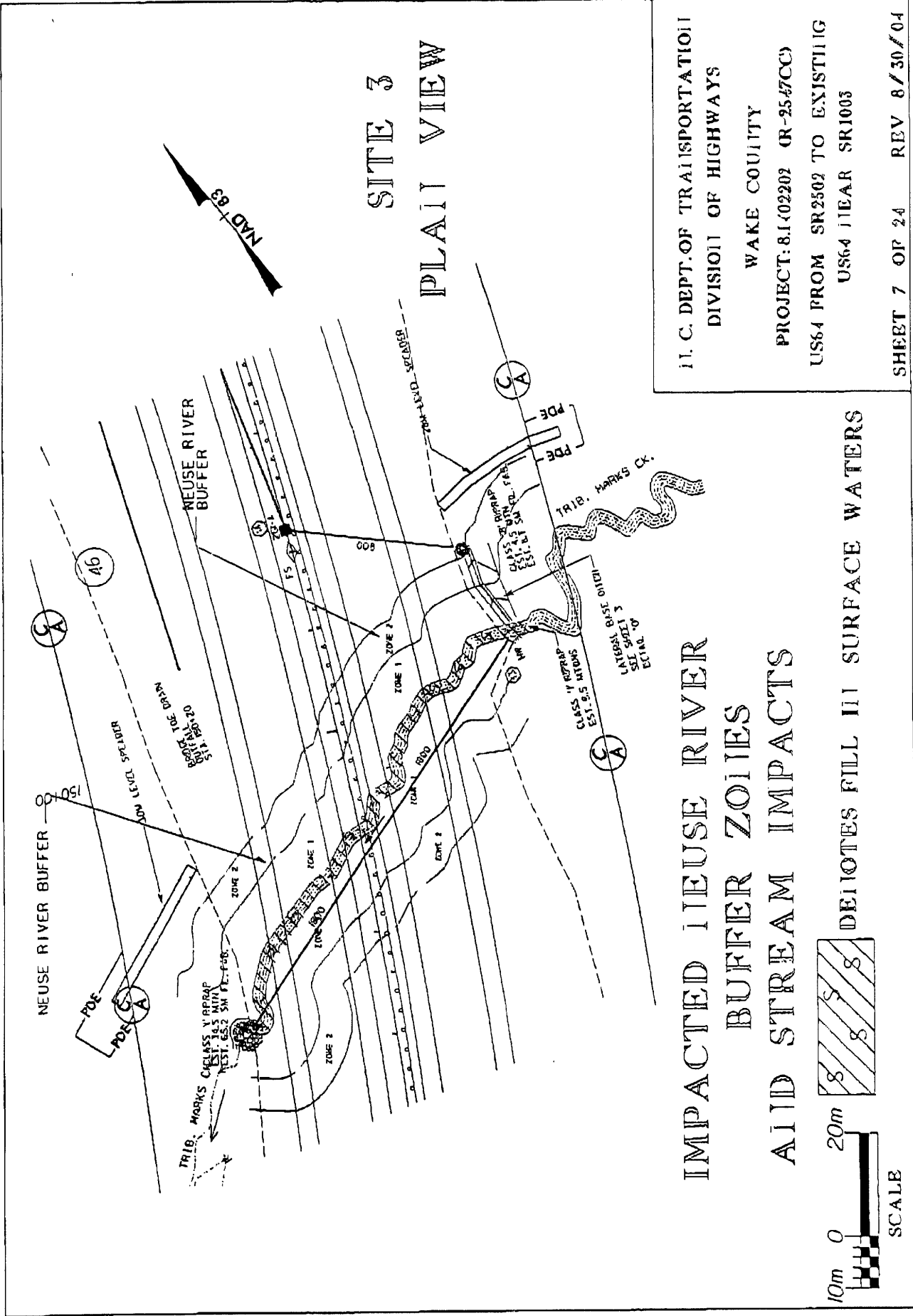
WAKE COUNTY

PROJECT 8.1402202 R-2547BA

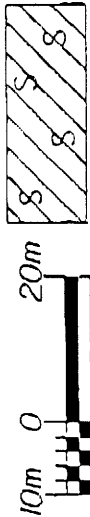
25 OF 25  
SHEET OF

REVISED

9/15/04



**IMPACTED NEUSE RIVER  
BUFFER ZONES  
AND STREAM IMPACTS**



U. S. DEPT. OF TRANSPORTATION  
DIVISION OF HIGHWAYS  
WAKE COUNTY  
PROJECT: 8.1.02202 CR-2547CC  
US64 FROM SR2502 TO EXISTING  
US64 JUNE SR1005  
SHEET 7 OF 24 REV 8/30/04





IMPACT SUMMARY

Site No.	Station (From/To)	Structure Size	WETLAND IMPACTS				SURFACE WATER IMPACTS						BUFFER IMPACTS				
			Fill In Wetlands (ha)	Temp. Fill In Wetlands (ha)	Excavation In Wetlands (ha)	Mechanized Clearing (Method III) (ha)	Fill In SW (Natural) (ha)	Fill In SW (Pond) (ha)	Temp. Fill In SW (ha)	Existing Channel Impacted (m)	Relocated Channel (m)	Enclosed Channel (m)	Zone 1 (eq fl)	Zone 2 (eq fl)			
1	SEE SITE 10 OF SECTION R-2547C FOR IMPACTS																
2	SEE SITE 10 OF SECTION R-2547C FOR IMPACTS																
3	149+78 -L-	1800mm RCP															
		Approved impacts															
		Additional impacts															
		Total revised impacts															
4	154+78.5 -L-	1 @ 2.4m X 2.1m RCBC															
5	154+60 -L-		0.092														
6	158+71.8 -L-	1 @ 2.4m X 2.4m RCBC															
7 & 8	13+92 -RPCY1	800 RCP															
9	8+15 -RPBDY1	1200 RCP															
10	15+10 -RPCY1	1350 RCP															
11	184+60 -L-		0.024														
12	185+40 -L-		0.002														
13	12+00 -Y3-	1350 RCP															
14	180+60 -L-	2 @ 750 PIPES															
TOTALS:			0.118	0.29	0.00	0.00	0.00	0.07	0.459	0.00	0.00	0.00	1126	289	680	1.826	1.256
			0.29	0.00	0.00	0.00	1.13	0.00	0.00	0.00	0.00	3694	948	2231	4.52	3.10	
			0.29	0.00	0.00	0.00	1.13	0.00	0.00	0.00	0.00	3694	948	2231	4.52	3.10	

N.C. DEPT. OF TRANSPORTATION  
DIVISION OF HIGHWAYS

WAKE COUNTY  
PROJECT: 8.1402202 (R-2547CC)

SHEET 23 OF 24

REV. 8/30/2004

Site 3 impacts  
approved impacts (sq fl) Zone 1 Zone 2  
additional impacts (sq fl) 17,115 11,946  
total revised impacts (eq fl) 204 280  
17,139 12,226



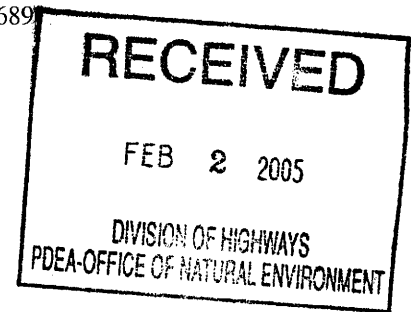


Michael F. Easley, Governor  
William G. Ross Jr., Secretary  
North Carolina Department of Environment and Natural Resources

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

*Beauregard*

January 27, 2005  
Wake County  
DWQ Project No. 011689  
TIP No. R-2547



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

Dear Dr. Thorpe:

Re: Modification to Certification Pursuant to Section 401 of the Federal Clean Water Act and the Neuse River Riparian Rules, Proposed US 64 Bypass of Knightdale from I-440 (Raleigh Beltline) to existing US 64 near SR 1003, I-440 from 0.83 miles south of US 64 to Poole Road and a portion of the East Wake Expressway from existing US 64 to the proposed US 64 Bypass in Wake County (TIP R-2547).  
WQC Project No. 011689

Attached hereto is a modification to Certification No. 3377 issued to the North Carolina Department of Transportation on April 10, 2002. The attached modification authorizes changes to the project design as described in your submittal dated December 13, 2004. The modification authorizes a modification to the horizontal alignment design for the project Section BA, an additional 10 linear feet of jurisdictional stream impacts and 481 square feet of Zone 1 and 414 square feet of Zone 2 buffer impacts for the project Section BA, and additional 204 square feet of Zone 1 and 280 square feet of Zone 2 buffer impacts for the project Section CC.. The only modifications to the design of the project authorized by this certification are those submitted in your December 13, 2004 application. All the authorized activities and conditions of certification associated with the original Water Quality Certification dated April 10, 2002 and all other corresponding modifications still apply except where superceded by this certification.

If we can be of further assistance, do not hesitate to contact Nicole Thomson at 919-715-3415.

Sincerely,

Alan W. Klimek, P.E.  
Director

Attachments:

Modification to WQC No. 3377

cc: Wilmington District US Army Corps of Engineers  
Mr. Eric Alsmeyer, US Army Corps of Engineers, Raleigh Field Office  
Mr. Jon G. Nance, PE, Division 5 Engineer, 2612 N. Duke Street, Durham, NC 27704  
Mr. Chris Murray, Division 5 Environmental Officer, 2612 N. Duke Street, Durham, NC 27704  
DWQ Raleigh Regional Office  
Central Files  
File Copy

## NORTH CAROLINA 401 WATER QUALITY CERTIFICATION

**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, Section .0500. Attached hereto is a modification to Certification No. 3377 issued to the North Carolina Department of Transportation on April 10, 2002. The attached modification authorizes changes to the project design as described in your submittal dated December 13, 2004. The modification authorizes the following:

Site Location	Action taken	Stream Impacts (ft.)	Riparian Buffer Impacts Zone 1 (sq. ft.)	Riparian Buffer Impacts Zone 2 (sq. ft.)
Section BA, Site 4	New Hope Road Horizontal Alignment – from – Y1REV-Sta 15+45.467 to 17+32.782	0	0	0
Section BA, Site 19	Sta 17+32.782; pipe extension for driveway	10	481	414
Section CC, Site 3	Grass Swale construction at Sta 150+30-L-	0	204	280
<b>Total Additional Impacts</b>		<b>10</b>	<b>685</b>	<b>694</b>

The only modifications to the design of the project authorized by this certification are those submitted in your December 13, 2004. All the authorized activities and conditions of certification associated with the original Water Quality Certification dated April 10, 2002 and all other corresponding modifications still apply except where superseded by this certification.

The application provides adequate assurance that the proposed impacts to the stream and riparian buffer zones 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 application, as described in the Public Notice. 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 total wetland fills for this project (now or in the future exceed one acre, 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.

### Condition(s) of Certification:

1. Construction will be conducted in such a manner as to prevent a significant increase in turbidity outside the area of construction or construction-related discharge. 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 assure compliance with the appropriate turbidity water quality standard.
  - a. The erosion and sediment control measures for the project must equal or exceed the proper design, installation, operation and maintenance outlined in the most recent version of the North Carolina Sediment and Erosion Control Planning and Design Manual. These 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.
  - b. For borrow pit sites, the erosion and sediment control measures must equal or exceed the proper design, installation, operation and maintenance outlined in the most recent version of the North Carolina

Surface Mining Manual. The reclamation measures and implementation must comply with the reclamation in accordance with the requirements of the Sedimentation Pollution Control Act.

2. There shall be no excavation from or waste disposal into jurisdictional wetlands or waters associated with this permit without appropriate modification of this permit. Should waste or borrow sites be located in wetlands or stream, compensatory mitigation will be required since it is a direct impact from road construction activities;
3. No live or fresh concrete shall come into contact with waters of the state until the concrete has hardened.
4. All sediment and erosion control measures shall not be placed in wetlands or waters to the maximum extent practicable. If placement of sediment and erosion control devices in wetlands and waters is unavoidable, they shall be removed and the natural grade restored after the Division of Land Resources has released the project;
5. No additional compensatory mitigation is required as a result of this certification.
6. All stormwater runoff shall be directed to sheetflow through stream buffers at nonerosive velocities, unless approved otherwise by this certification.
7. During the construction of the project, no staging of equipment of any kind is permitted in waters of the U.S., or protected riparian buffers.
8. Riparian vegetation must be reestablished within the construction limits of the project by the end of the growing season following completion of construction.
9. The dimension, pattern and profile of the stream above and below the crossing should not be modified by widening the stream channel or reducing the depth of the stream. Disturbed floodplains and streams should be restored to natural geomorphic conditions.
10. Any riprap used must not interfere with thalweg performance and aquatic life passage during low flow conditions.
11. 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.
12. Discharging hydroseed mixtures and washing out hydroseeders and other equipment in or adjacent to surface waters is prohibited.
13. Compensatory mitigation for unavoidable impacts to 10 linear feet of stream shall be done at a replacement ratio of 1:1. Applying a replacement ratio of 1:1, total mitigation for 10 linear feet of stream shall be provided for in Cataloging Unit 03020201 of the Neuse River Basin by the Ecosystem Enhancement Program (EEP) as outlined in the letter dated 8 December 2004.

14. Mitigation for impacts to 685 square feet of protected riparian buffers in Zone 1 and 694 square feet of protected riparian buffers in Zone 2 will be mitigated for as described below:

<b>Zone of Impact</b>	<b>Impacts (Square Feet)</b>	<b>Replacement Ratio</b>	<b>Total Square Feet of Mitigation Required</b>
Zone 1	685	3:1	2,055
Zone 2	694	1.5:1	1,041
<b>Total</b>	<b>1,379</b>		<b>3,096</b>

We understand that you have chosen to perform compensatory mitigation for impacts to protected buffers through an in lieu payment to the North Carolina Ecosystem Enhancement Program (NCEEP), and that the EEP has agreed to implement the mitigation for the project. Mitigation for unavoidable impacts to Neuse Riparian Buffers shall be provided through an in-lieu payment to the North Carolina Ecosystem Enhancement Program (NCEEP) at a rate of \$0.96 per square foot for 3,096 square feet of buffer impact. Therefore, a total payment of \$ 2972.16 shall be submitted to the NCEEP to offset the impacts. No construction activities in Neuse River Riparian buffers shall begin until payment for buffer mitigation is made and the Ecosystem Enhancement Program receives and clears your check (made payable to DENR – Ecosystem Enhancement Program).

15. Pursuant to NCAC15A 2B.0233(6), sediment and erosion control devices shall not be placed in Zone 1 of any Neuse 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 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.
16. The outside buffer, wetland or water boundary located within the construction corridor approved by this authorization shall be clearly marked by highly visible fabric fencing prior to any land disturbing activities. Impacts to areas within the fencing are prohibited unless otherwise authorized by this certification.
17. NCDOT, 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 law 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 to include conditions appropriate to assure compliance with such standards and requirements in accordance with 15A NCAC 2H.0507(d). Before modifying the certification, DWQ shall notify NCDOT and the US Army Corps of Engineers, provide public notice in accordance with 15A NCAC 2H.0503 and provide opportunity for public hearing in accordance with 15A NCAC 2H.0504. Any new or revised conditions shall be provided to NCDOT in writing, shall be provided to the United States Army Corps of Engineers for reference in any permit issued pursuant to Section 404 of the Clean Water Act, and shall also become conditions of the 404 Permit for the project.
18. 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.
19. All other conditions written into previous Water Quality Certifications and Neuse River Riparian Buffer Certifications for this project still apply.

Violations of any condition herein set forth shall 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 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, P.O. Box 27447, Raleigh, N.C. 27611-7447. 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 27<sup>th</sup> day of January 2005  
DIVISION OF WATER QUALITY

Alan W. Klimek, P.E.  
Director

Modification to WQC No. 3377

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