



STATE OF NORTH CAROLINA  
DEPARTMENT OF TRANSPORTATION

MICHAEL F. EASLEY  
GOVERNOR

LYNDO TIPPETT  
SECRETARY

May 13, 2005

MEMORANDUM TO: Mr. Terry R. Gibson, PE  
Division 6 Engineer

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

SUBJECT: Robeson County, US 74 from Maxton Bypass in Maxton to  
NC 41 in Lumberton; State Work Order Number 6.469012T;  
T.I.P. No. R-0513

Attached is the modification of the U. S. Army Corps of Engineers 404 Individual Permit and the Division of Water Quality 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. Art McMillan, P.E.  
Mr. Jay Bennett, P.E.  
Mr. David Chang, P.E.  
Mr. Randy Garris, P.E.  
Mr. Greg Perfetti, P.E.  
Mr. Mark Staley  
Mr. Omar Sultan  
Mr. John F. Sullivan, FHWA  
Mr. Jim Rerko, Division 6 DEO

**MAILING ADDRESS:**  
NC DEPARTMENT OF TRANSPORTATION  
PROJECT DEVELOPMENT AND ENVIRONMENTAL ANALYSIS  
1598 MAIL SERVICE CENTER  
RALEIGH NC 27699-1598

TELEPHONE: 919-733-3141  
FAX: 919-733-9794

WEBSITE: [WWW.DOT.ORG](http://WWW.DOT.ORG)

**LOCATION:**  
TRANSPORTATION BUILDING  
1 SOUTH WILMINGTON STREET  
RALEIGH NC

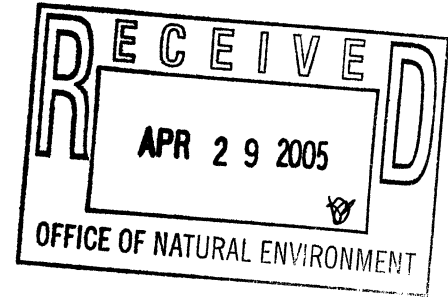


Michael F. Easley, Governor  
William G. Ross Jr., Secretary  
North Carolina Department of Environment and Natural Resources

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

Cashin

April 19, 2005



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

Re: Certification Pursuant to Section 401 of the Federal Clean Water Act,  
Modification to the Relocation of US 74 from the Maxton Bypass to NC 41, Robeson County, State  
Project No. 6.469002T, TIP No. R-513, WQC Project No. 040734, WBS Element 34336.1.5  
WQC No. 3468

Dear Dr. Thorpe:

Attached hereto is a modification to Certification No. 3468 issued to the North Carolina Department of Transportation on April 19, 2005. The attached modification authorizes 8.75 acres of additional wetland impacts and 909 linear feet of additional stream impacts. This modification is applicable only to the additional proposed activities. All the authorized activities and conditions of certification associated with the original Water Quality Certification dated August 5, 2004 and all other corresponding modifications still apply except where superceded by this certification.

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

Sincerely,

Alan W. Klimek, P.E.  
Director

Attachments  
Modifications to WQC No. 3468

cc: Richard Spencer, US Army Corps of Engineers Wilmington Field Office  
Christopher Militscher, US Environmental Protection Agency – Region IV  
Ken Averitte, NC DWQ Fayetteville Regional Office  
Central Files  
File Copy

**APPROVAL OF 401 Water Quality Certification and 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, Section .0500, and 15 NCAC 2B .0233. The attached modification authorizes the NCDOT to incur the following impacts:

**Table 1. – Wetland Impacts in the Lumber River Basin**

<b>Site</b>	<b>Total (acres)</b>	<b>Mitigation Required (acres)</b>
<b>Section BB Impacts authorized under original WQC</b>	<b>19.23</b>	<b>38.46</b>
<b>Section BB Impacts for this modification</b>		
Fill	3.048	6.096
Excavation	0.014	0.028
Mechanized Clearing	0.318	0.636
<b>Total</b>	<b>3.38</b>	<b>6.76</b>
<b>Total Modified Impacts for Section BB</b>	<b>22.61</b>	<b>45.22</b>
<b>Section C Impacts authorized under original WQC</b>	<b>19.07</b>	<b>38.14</b>
<b>Section C Impacts for this modification</b>		
Fill	0.29	0.58
Mechanized Clearing	0.11	0.22
<b>Total</b>	<b>0.40</b>	<b>0.80</b>
<b>Total Modified Impacts for Section C</b>	<b>19.47</b>	<b>38.94</b>

**Table 2. – Stream Impacts in the Lumber River Basin**

<b>Section</b>	<b>Stream Impacts (linear feet)</b>	<b>Mitigation Required (linear feet)</b>
<b>Section A Impacts authorized under original WQC</b>	<b>1879</b>	<b>1879</b>
<b>Section A Impacts for this modification</b>	<b>92</b>	<b>0</b>
<b>Total Modified Impacts for Section A</b>	<b>1971</b>	<b>1879</b>
<b>Section BB Impacts authorized under original WQC</b>	<b>453</b>	<b>0</b>

<b>Section BB Impacts for this modification</b>	620	620
<b>Total Modified Impacts for Section BB</b>	<b>1073</b>	<b>620</b>
<b>Section C Impacts authorized under original WQC</b>	<b>4743</b>	<b>3274</b>
<b>Section C Impacts for this modification</b>	197	197
<b>Total Modified Impacts for Section C</b>	<b>4940</b>	<b>3471</b>

This modification is applicable only to the additional proposed activities. All the authorized activities and conditions of certification associated with the original Water Quality Certification dated August 5, 2004 and all other corresponding modifications still apply except where superceded by this certification. The project shall be constructed pursuant to the application submitted on March 10, 2005. The application provides adequate assurance that the discharge of fill material into the waters of the Lumber River Basins 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 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 three years from the date of the cover letter from DWQ or on the same day as the expiration date of the corresponding Corps of Engineers Permit, whichever is sooner.

Condition(s) of Certification:

1. We understand that you have chosen to perform compensatory mitigation for impacts to wetlands and streams through an in-lieu payment to the North Carolina Ecosystem Enhancement Program (NCEEP), and that the NCEEP has agreed to implement the mitigation for the project. The subject project is listed in Exhibit 2 of the July 22, 2003 Memorandum of Agreement between NC DENR, NC DOT, and the US Army Corps of Engineers, Wilmington District. The compensatory mitigation shall be conducted in the same eco-region as the impacts that are occurring as a result of this project. NCEEP has indicated in a letter dated March 8, 2005 that they will assume responsibility for

satisfying the federal Clean Water Act compensatory mitigation requirements associated with the additional impacts for the above-referenced project as detailed in the table below:

Type of Impact	Amount of Mitigation
Non-Riverine Wetlands	17.5 acres
Streams	817 linear feet

Conditions from WQC No. 3468 issued August 5, 2004:

2. 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 be design, installed, operated, and maintained in accordance with 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. 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 Planning and Design 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. Any reclamation measures and implementation must comply with the reclamation in accordance with the requirements of the Sedimentation Pollution Control Act.
3. No waste, spoil, solids, or fill of any kind shall occur in wetlands, waters, or riparian areas beyond the footprint of the impacts depicted in the application. All construction activities shall be performed so that no violations of state water quality standards, statutes, or rules occur.
4. 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 within 30 days after the project has been released.
5. 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.
6. NCDOT and its contactors and/or agents shall not excavate, fill, or perform mechanized land clearing at any time in the construction or maintenance of this project within waters and/or wetlands, except as authorized by this Certification, or any modification to this Certification. There shall be no excavation from, or waste disposal into jurisdictional wetlands or waters associated with this

Certification without appropriate modification. If this occurs, compensatory mitigation will be required since it is a direct impact from road construction activities.

7. Excavation of stream crossings should be conducted in the dry unless demonstrated by the applicant or its authorized agent to be unfeasible and approved by the DWQ. Sandbags, cofferdams, flexible pipe or other diversion structures should be used to minimize excavation in flowing water.
8. Placement of culverts and other structures in waters, streams, and wetlands must be placed below the elevation of the streambed to allow low flow passage of water and aquatic life unless it can be shown to DWQ that providing passage would be impractical. Design and placement of culverts and other structures including temporary erosion control measures shall not be conducted in a manner that may result in dis-equilibrium of wetlands or streambeds or banks, adjacent to or upstream and down stream of the above structures. The applicant is required to provide evidence that the equilibrium shall be maintained if requested in writing by DWQ.
9. The natural dimension, pattern and profile of the streams above and below the crossing shall not be modified by widening the stream channel or changing the depth of the stream except as approved by this certification.
10. The removal of vegetation in riparian areas should be minimized. NCDOT is encouraged to use existing on-site vegetation and materials for stream bank stabilization and to minimize the use of riprap. Riprap shall not be placed in the stream bottom.
11. Using native trees and shrubs, riparian vegetation must be re-established within the construction limits of the project by the end of the growing season following completion of construction.
12. Heavy equipment should be operated from the bank rather than in the stream channel unless demonstrated by the applicant or its authorized agent to be unfeasible and approved by the DWQ. 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 substances.
13. Live or fresh concrete shall not come into contact with waters of the state until the concrete has hardened. Water that inadvertently contacts uncured concrete should not be discharged to surface waters.
14. Discharging hydroseed mixtures and washing out hydroseeders and other equipment in or adjacent to surface waters is prohibited.
15. NCDOT shall require its contractors (and/or agents) to comply with all of the terms of this Certification, and shall provide each of its contractors (and/or agents) a copy of this Certification.

16. *Mitigation:*

Wetland Mitigation

Compensatory mitigation for 54.12 acres of wetland impacts shall be provided through the following schemes:

- The NCDENR Ecosystem Enhancement Program (EEP) has agreed to provide compensatory mitigation for 54.12 acres of wetland impacts incurred for construction of R-513. DWQ

acknowledges that the EEP has agreed to provide compensation for the subject project (reference EEP letter of May 20, 2004, received by DWQ July 28, 2004).

Stream Mitigation

Compensatory mitigation for 8,192 feet of stream impacts shall be provided through the following schemes:

- The NCDENR Ecosystem Enhancement Program has agreed to provide compensatory mitigation for 8,192 feet of stream impacts incurred for construction of R-513 (reference EEP letters of May 20, 2004). EEP shall provide the compensatory mitigation in accordance with the Tri-Party MOA signed on June 12, 2002 and the Dual-Party MOA signed on July 22, 2003.

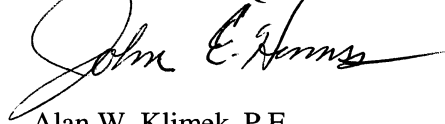
17. Upon completion of the project, the NCDOT shall complete and return the enclosed "Certification of Completion Form" to notify DWQ when all work included in the 401 Certification has been completed. The responsible party shall complete the attached form and return it to the 401/Wetlands Unit of the Division of Water Quality 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, 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 19<sup>th</sup> day of April 2005

DIVISION OF WATER QUALITY



Alan W. Klimek, P.E.  
Director

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

County: \_\_\_\_\_

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

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

Date of Issuance of 401 Water Quality Certification: \_\_\_\_\_

**Certificate of Completion**

Upon completion of all work approved within the 401 Water Quality Certification or applicable Buffer Rules, and any subsequent modifications, the applicant is required to return this certificate to the 401/Wetlands Unit, North Carolina Division of Water Quality, 1621 Mail Service Center, Raleigh, NC, 27699-1621. 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: \_\_\_\_\_

**Engineer's Certification**

\_\_\_\_\_ Partial \_\_\_\_\_ Final

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

Signature \_\_\_\_\_

Registration No. \_\_\_\_\_

Date \_\_\_\_\_





REPLY TO  
ATTENTION OF:

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

March 31, 2005

Regulatory Division

Subject: Action ID No. 2003-00999, TIP No. R-513 Maxton Bypass, Robeson Counties, North Carolina.

Dr. Gregory J. Thorpe, Ph.D.  
Environmental Management Director  
Project Development & Environmental Analysis  
1548 Mail Service Center  
Raleigh, N.C. 27699-1548

Dear Dr. Thorpe:

I am responding to your request dated March 10, 2005 for a modification to the existing Department of the Army (DA) permit issued for the above referenced project on September 2, 2004. The proposed project modifications are as follows:

**CORRECTED WETLAND DELINEATION AND IMPACT SUMMARY  
REVISION**

During clearing operations on the above referenced project, additional wetland and stream sites were identified that were not included in the permit for the project. These areas were field verified by the Corps of Engineers on February 1 and 3, 2005. Revised permit drawings have been submitted showing the additional areas as follows:

**R-513A, permit drawing sheet 12A of 15, Station 15+40, Site 7**

**The crossing of a stream channel by use of a 1350 mm RCBC impacting 92 linear feet of stream channel.**

**R-513BB, permit drawing sheet 6A of 18, Station 172+50 – 173+50, Site 3A**

**The filling of a wetland for road construction impacting 1.81 acres of jurisdictional non-riverine wetlands.**

**R-513BB, permit drawing sheets 14A&B of 18, Station 224+75 – 227+50, Site 8A**

**The filling of a wetland for road construction impacting 4.06 acres of jurisdictional non-riverine wetlands. The crossing of a stream channel by use of a 900 mm**

**RCP impacting 223 linear feet of stream channel.**

**R-513BB, permit drawing sheet 15A of 18, Station 231+40 – 233+05, Site 10**

**The filling of a wetland for road construction impacting 2.49 acres of jurisdictional non-riverine wetlands. The crossing of a stream channel by use of a 600 mm RCP impacting 397 linear feet of stream channel.**

**R-513C, permit drawing sheets 15A&B of 36, Station 21+13 – 22+26 Y5, Site 2B**

**The filling of a wetland for road construction impacting 0.4 acres of jurisdictional non-riverine wetlands. The crossing of a stream channel by use of a 1200 mm RCP impacting 197 linear feet of stream channel.**

I have determined that the proposed project modifications described above are not contrary to the public interest and therefore, the DA permit is hereby modified to include authorization for the modifications listed above and as shown on the revised permit drawings (enclosed). Special Condition number 4 is hereby modified to read as follows:

**Compensatory mitigation for the unavoidable impacts to 62.87 acres of wetland and 9,101 linear feet of stream associated with the proposed project shall be provided by the Ecosystem Enhancement Program (EEP), as outlined in the letter dated March 8, 2005 from William D. Gilmore, EEP Director. The EEP will provide 628.70 acres of preservation of wetlands (55.3 acres of riverine and 573.4 acres of non-riverine wetlands) and 91,010 linear feet of stream preservation in the Southern Inner Coastal Plain Eco-Region at the Great Coharie Site in Sampson County that has been acquired and protected by the EEP. 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 a minimum of 57.34 acres of restoration of non-riverine wetlands, 5.53 acres of restoration of riverine wetlands and 9,101 linear feet of restoration of warm water stream channel in the Lumber River basin (Hydrologic Cataloging Unit 03040203 by July 22, 2005 and half of the proposed preservation mitigation would be available at that time for mitigation for other project impacts. 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.**

Please note that the conditions of a modified Water Quality Certification shall be a part of this authorization. Furthermore, all unmodified terms and conditions of your original Department of the Army permit of September 2, 2005 shall remain in effect and the original permit expiration date shall remain the same.

Should you have any questions, please contact Mr. Richard Spencer, Wilmington Field Office, Regulatory Division, at telephone (910) 251-4172.

Sincerely,



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

Enclosures

Copies Furnished (with enclosures):

Mr. David Cox  
North Carolina Wildlife Resources Commission  
512 N. Salisbury Street  
Raleigh, North Carolina 27604-1188

Mr. John Hennessy  
NCDENR-DWQ  
Wetlands Section  
1650 Mail Service Center  
Raleigh, NC 27699-1650

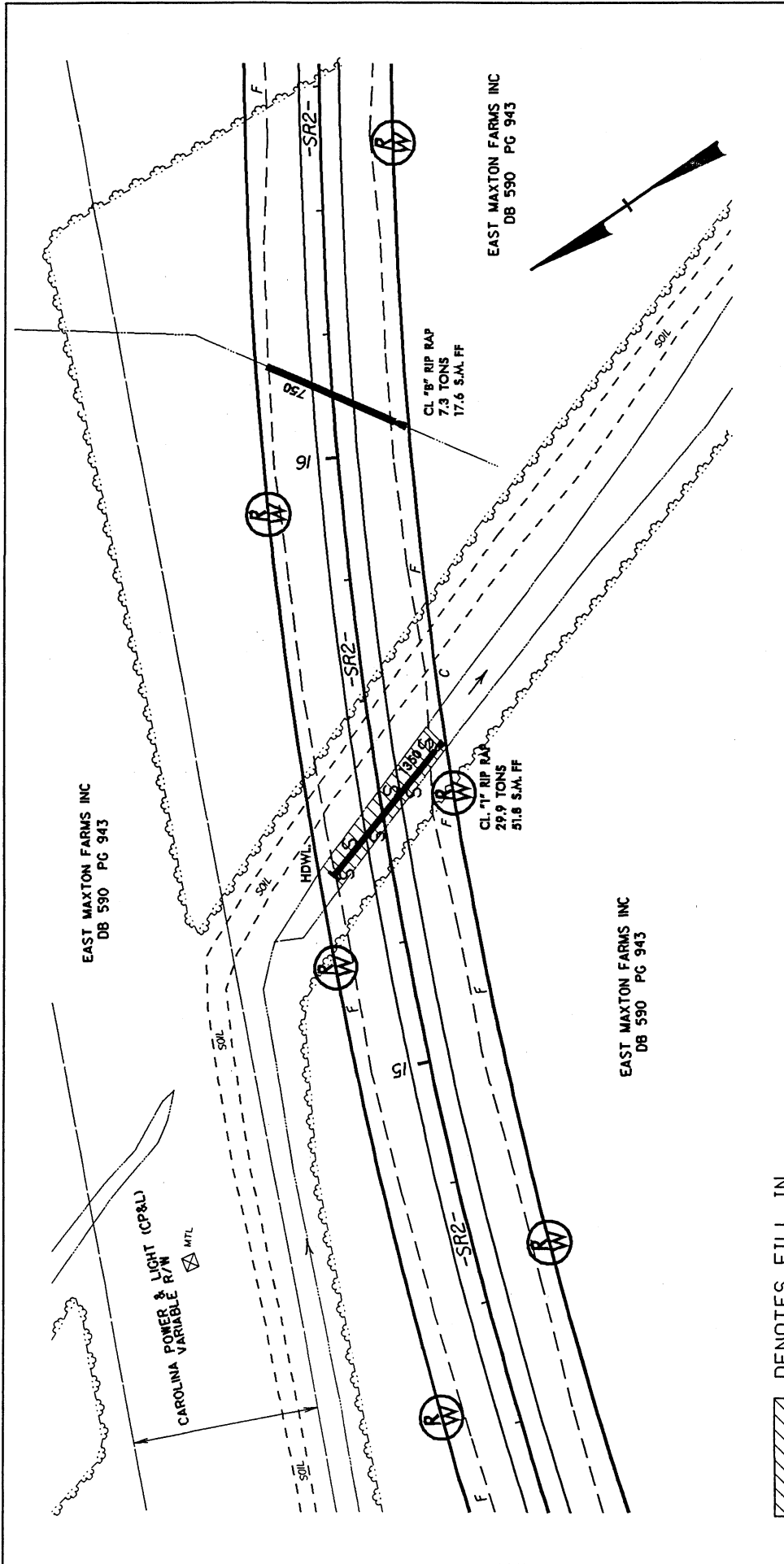
Mr. Pete Benjamin  
U.S. Fish and Wildlife Service  
Fish and Wildlife Enhancement  
Post Office Box 33726  
Raleigh, North Carolina 27636-3726

Mr. Chris Militcher  
United States Environmental Protection Agency  
Raleigh Office  
Office of Environmental Assessment  
310 New Bern Avenue, Room 206  
Raleigh, NC 27601

Mr. Art King  
Division Environmental Officer, Division 8  
North Carolina Department of Transportation  
P.O. Box 1067  
Aberdeen, North Carolina 28315

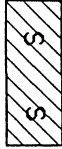



Mr. James J. Rerko, PWS  
Division Environmental Officer, Division 6  
North Carolina Department of Transportation  
P.O. Box 1150  
Fayetteville, North Carolina 28302-1150

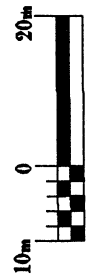
Ms. Beth Harmon  
North Carolina Ecosystem Enhancement Program  
1652 Mail Service Center  
Raleigh, North Carolina 27699-1652



**NCDOT**  
**DIVISION OF HIGHWAYS**  
**ROBESON COUNTY**  
**PROJECT: 6.469002T (R-0513A)**  
**US 74 FROM MAXTON BYPASS**  
**TO 1.82 KM EAST OF SR 1166**  
**(CABINET SHOP ROAD)**

**PLAN VIEW**  
**SITE # 7**

- 
 DENOTES FILL IN SURFACE WATERS
- 
 DENOTES FILL IN WETLAND
- 
 DENOTES EXCAVATION IN WETLAND
- 
 DENOTES MECHANIZED CLEARING



HORIZONTAL SCALE

**IMPACT SUMMARY**

Site No.	Station (From/To)	Structure Size	WETLAND IMPACTS			SURFACE WATER IMPACTS				DITCH IMPACTS					
			Fill In Wetlands (ac)	Temp. Fill In Wetlands (ac)	Excavation In Wetlands (ac)	Mech Clearing (Method III) (ac)	Fill In SW (Natural) (ac)	Fill In SW (Pond) (ac)	Temp. Fill In SW (ac)	Existing Channel Impacted (ft)	Relocated Channel (ft)	Enclosed Channel (ft)	Boussinesq Equation (ac)		
1	13+00 TO 16+60 -L- 13+60 TO 14+20 RPB1	1650mm	0.14		0.23		0.39					1715		230	0.87
2	28+10 -L-	900mm						NON-JURISDICTIONAL STREAM							
3	33+38 to 33+75		1.01			0.06									
4	12+78 Rp 'B'		0.02			0.01									
5	12+42 -Y2-	2 - 2.4m x 2.1m					0.07					164		79	
6	82+00 TO 85+50 -L-		8.01			0.53									
7	15+40 -SR2-	1350 mm					0.03							92	
PEE DEE RIVER BASIN ( LUMBER RIVER) NO BUFFER REGULATIONS															
TOTALS			9.18	0	0.23	0.60	0.49	0	0	0	0	1879	0	401	0.87

N.C. DEPT. OF TRANSPORTATION  
DIVISION OF HIGHWAYS

ROBESON COUNTY

PROJECT: 6.469002T - R-513 A

Rev: 3/2005  
APRIL, 2002

SHEET 13 OF 15

### IMPACT SUMMARY

Site No.	Station (From/To)	Structure Size	WETLAND IMPACTS				SURFACE WATER IMPACTS					DITCH IMPACTS			
			Fill In Wetlands (ha)	Temp. Fill In Wetlands (ha)	Excavation In Wetlands (ha)	Mech 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)	Boussinesq Equation (ha)		
1	13+00 TO 16+60 -L-	1650mm	0.058		0.094		0.157					523		70	0.353
2	13+60 TO 14+20 RPB Y1 28+10 -L-	900mm				NON-JURISDICTIONAL STREAM									
3	33+38 to 33+75		0.409			0.026									
4	12+78 Rp 'B'		0.007			0.003									
5	12+42 -Y2-	2 - 2.4m x 2.1m					0.029					50		24	
6	82+00 TO 85+50 -L-		3.242			0.215									
7	15+40 -SR2-	1350 mm					0.013							28	
PEE DEE RIVER BASIN ( LUMBER RIVER) NO BUFFER REGULATIONS															
TOTALS			3.716	0	0.094	0.244	0.199	0	0	0	573	0	122	0.353	0

N.C. DEPT. OF TRANSPORTATION  
DIVISION OF HIGHWAYS

ROBESON COUNTY

PROJECT: 6.469002T - R-513 A

Rev: 3/2005  
APRIL, 2002

SHEET 14 OF 15

E.W. STONE  
DB 893 PC 656

SPECIAL LATERAL "Y" DITCH  
(SEE DETAIL "N2")

JERRY FRANKLIN STONE  
DB 595 PC 855

SPECIAL PAL DITCH  
(SEE DETAIL "B1")

CL/B'RM RAY  
FILTER FABRIC

JERRY FRANKLIN STONE  
DB 595 PC 855

174+00

173+00

# PLAN VIEW SITE # 3-A

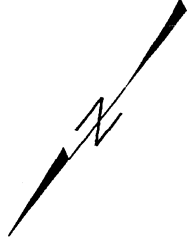
■ F ■  
DENOTES FILL IN  
WETLAND

■ E ■  
DENOTES EXCAVATION  
IN WETLAND

\*\*\*  
DENOTES MECHANIZED  
CLEARING



HORIZONTAL SCALE



# NCDOT

## DIVISION OF HIGHWAYS

### ROBESON COUNTY

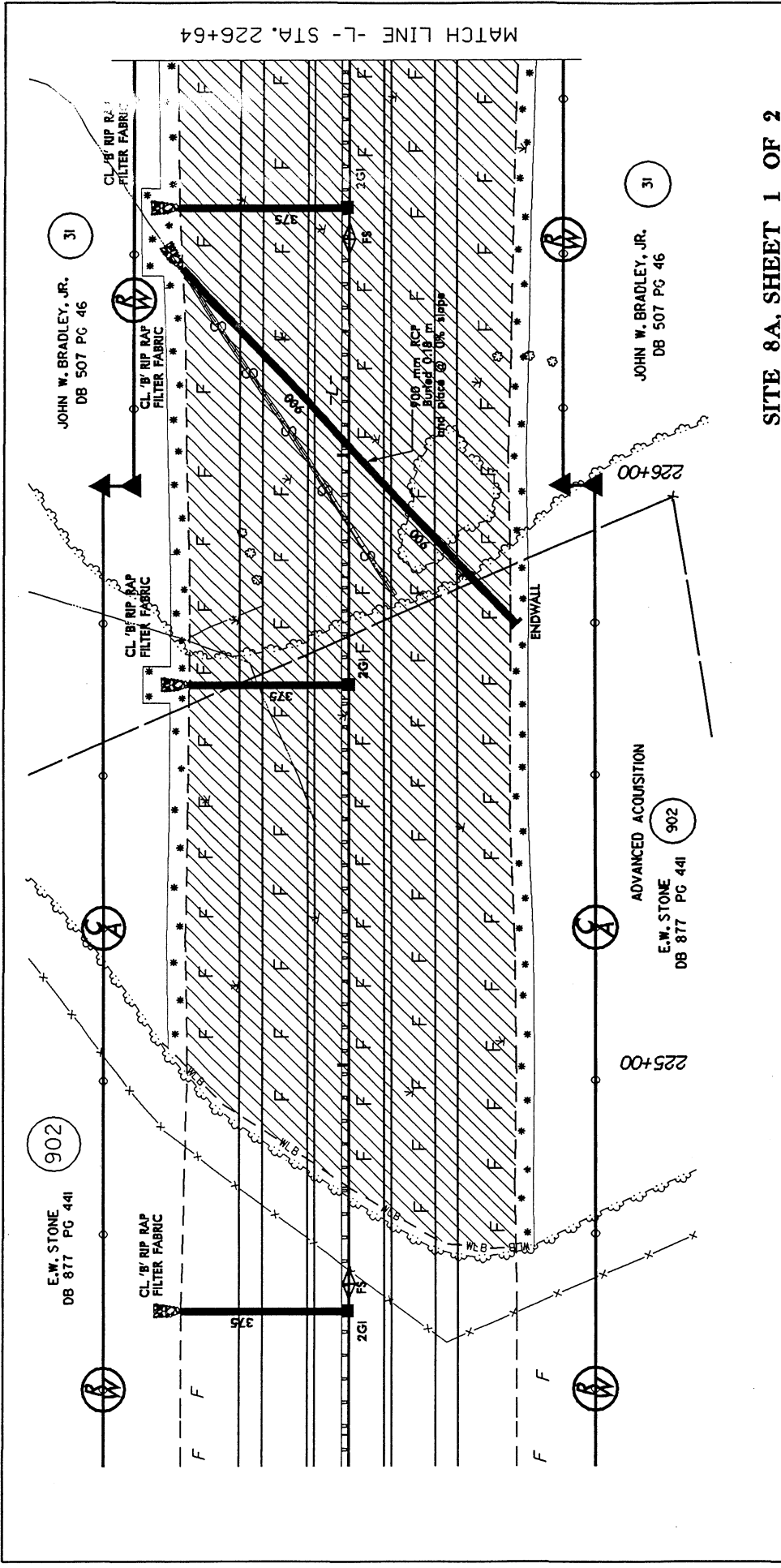
#### PROJECT: 6.469002T (R-513BD)

#### MAXTON-LUMBERTON

US 74 FROM WEST OF SR 1157  
TO WEST OF SR 1164

SHEET **6A** OF **18** 3/1/05





NCDOT  
 DIVISION OF HIGHWAYS  
 ROBESON COUNTY  
 PROJECT: 6.469002T (R-513BB)  
 MAXTON-LUMBERTON  
 US 74 FROM WEST OF SR 1157  
 TO WEST OF SR 1164  
 SHEET 18 OF 18

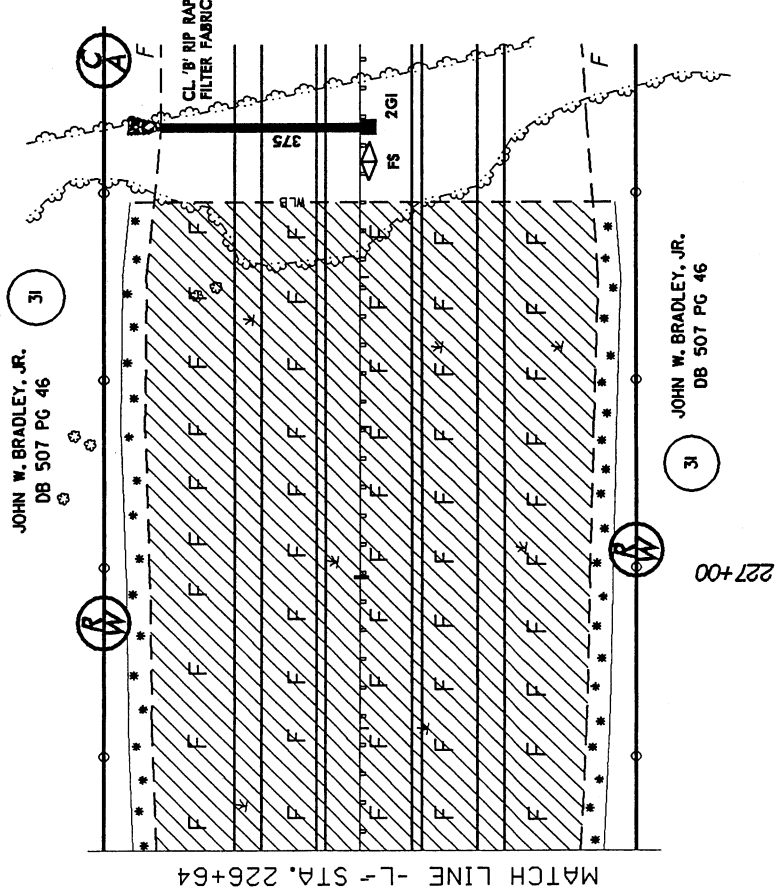
**SITE 8A, SHEET 1 OF 2**  
**PLAN VIEW**  
**SITE # 8-A**

DENOTES FILL IN SURFACE WATERS  
 DENOTES FILL IN WETLAND  
 DENOTES EXCAVATION IN WETLAND  
 DENOTES MECHANIZED CLEARING

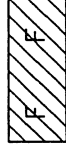
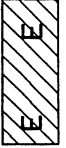
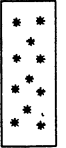
HORIZONTAL SCALE  
 10m 0 20m

E.W. STONE DB 877 PG 441  
 ADVANCED ACQUISITION E.W. STONE DB 877 PG 441 902  
 JOHN W. BRADLEY, JR. DB 507 PG 46  
 JOHN W. BRADLEY, JR. DB 507 PG 46

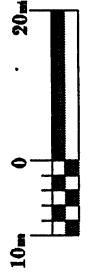
MATCH LINE -L- STA. 226+64



MATCH LINE - L-1 STA. 226+64

-  DENOTES FILL IN WETLAND
-  DENOTES EXCAVATION IN WETLAND
-  DENOTES MECHANIZED CLEARING

## PLAN VIEW SITE # 8-A



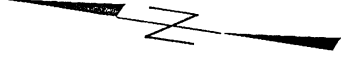
HORIZONTAL SCALE

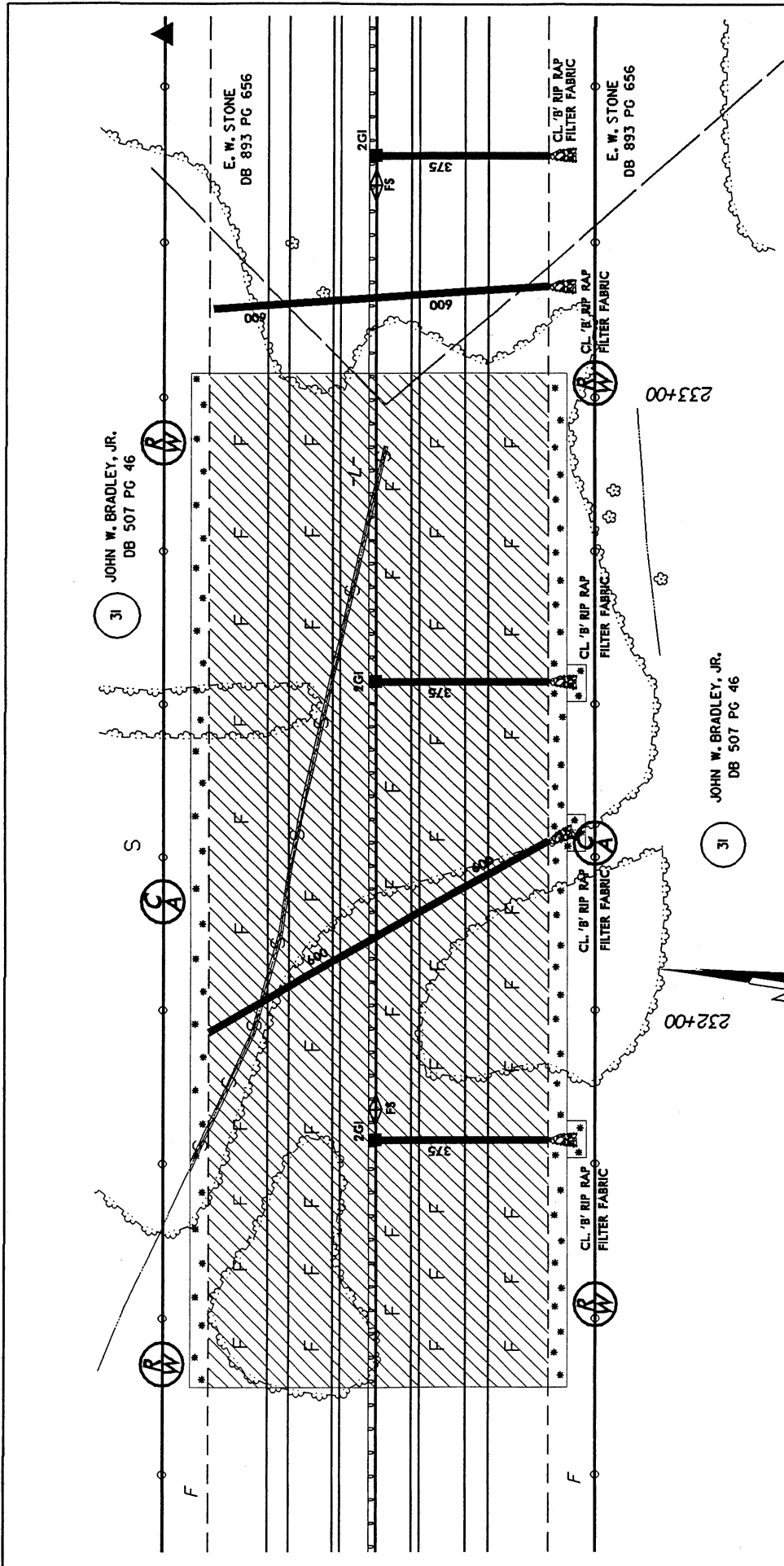
SITE 8A, SHEET 2 OF 2

NCDOT

DIVISION OF HIGHWAYS  
 ROBESON COUNTY  
 PROJECT: 6.469002T (R-513BB)  
 MAXTON-LUMBERTON  
 US 74 FROM WEST OF SR 1157  
 TO WEST OF SR 1164

SHEET 18 OF 18 3/1/05

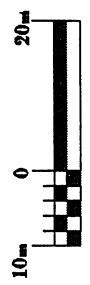




**NCDOT**  
 DIVISION OF HIGHWAYS  
 ROBESON COUNTY  
 PROJECT: 6-469002T (R-513BB)  
 MAXTON-LUMBERTON  
 US 74 FROM WEST OF SR 1157  
 TO WEST OF SR 1164  
 SHEET 15A OF 18 3/1/05

**PLAN VIEW**  
**SITE # 10**

- DENOTES FILL IN SURFACE WATERS
- DENOTES FILL IN WETLAND
- DENOTES EXCAVATION IN WETLAND
- DENOTES MECHANIZED CLEARING



HORIZONTAL SCALE

**WETLAND PERMIT IMPACT SUMMARY**

Site No.	Station (From/To)	Structure Size / Type	WETLAND IMPACTS			SURFACE WATER IMPACTS				Natural Stream Design (m)		
			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)	
1	160+92.65 to 161+44.08 -L-	NONE	0.121			0.014						
2	18+99.07 to 19+51.92 -SR5-	NONE	0.088			0.014						
3	170+04.90 to 172+15.80 -L-	1200 mm RCP	1.283		0.001	0.213		0.005				
3A	172+50 to 173+50 -L-	NONE	0.672		0.014	0.045						
4	188+99.69 to 191+93.48 -L-	1200 mm & 900 mm RCP	1.079		0.008	0.135						
5	194+51.36 to 195+93.06 -L-	1200 mm RCP	0.564			0.064						
6	200+20.89 -L-	750 mm RCP					0.009			75		
7	214+49.55 to 215+89.33 -L-	1200 mm RCP	0.657		0.004	0.085						
8	217+05.98 to	4 @ 1050 mm RCP	3.067		0.016	0.371						
8A	224+75 to 227+50 -L-	900 mm RCP	1.475			0.167	0.004			68		
<b>TOTALS:</b>			9.006	0	0.043	1.108	0.013	0.005	0	143		0

**NCDOT**

DIVISION OF HIGHWAYS  
 ROBESON COUNTY  
 PROJECT 6.469002T (R-513BB)  
 MAXTON-LUMBERTON  
 US 74 FROM WEST OF SR 1157  
 TO WEST OF SR 1164

REVISED 3/1/05  
 9/18/2003

SHEET **6A** OF **13**

**WETLAND PERMIT IMPACT SUMMARY**

Site No.	Station (From/To)	Structure Size / Type	WETLAND IMPACTS				SURFACE WATER IMPACTS				Natural Stream Design (m)	
			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)		
9	229+60.27 -L-	900 mm RCP					0.019				63	
10	231+40 to 233+05 -L-	600 mm RCP	0.901			0.106	0.007				121	
TOTALS:			0.901	0	0	0.106	0.026	0	0	0	184	0

**NCDOT**  
 DIVISION OF HIGHWAYS  
 ROBESON COUNTY  
 PROJECT 6.469002T (R-513BB)  
 MAXTON-LUMBERTON  
 US 74 FROM WEST OF SR 1157  
 TO WEST OF SR 1164

REvised 3/1/05  
9/18/2003

SHEET **16** OF **16**

**WETLAND PERMIT IMPACT SUMMARY**

Site No.	Station (From/To)	Structure Size / Type	WETLAND IMPACTS				SURFACE WATER IMPACTS				Natural Stream Design (ft)		
			Fill In Wetlands (ac)	Temp. Fill In Wetlands (ac)	Excavation In Wetlands (ac)	Mechanized Clearing (Method III) (ac)	Fill In SW (Natural) (ac)	Fill In SW (Pond) (ac)	Temp. Fill In SW (ac)	Existing Channel Impacted (ft)			
1	160+92.65 to 161+44.08 -L-	NONE	0.299			0.035							
2	18+99.07 to 19+51.92 -SR5-	NONE	0.217			0.035							
3	170+04.90 to 172+15.80 -L-	1200 mm RCP	3.169		0.002	0.526			0.012				
3A	172+50 to 173+50 -L-	NONE	1.662		0.035	0.111							
4	188+99.69 to 191+93.48 -L-	1200 mm & 900 mm RCP	2.665		0.02	0.333							
5	194+51.36 to 195+93.06 -L-	1200 mm RCP	1.393			0.158							
6	200+20.89 -L-	750 mm RCP						0.022			246		
7	214+49.55 to 215+89.33 -L-	1200 mm RCP	1.623		0.01	0.21							
8	217+05.98 to	4 @ 1050 mm RCP	7.575		0.04	0.916							
8A	224+75 to 227+50 -L-	900 mm RCP	3.646			0.411		0.010			223		
<b>TOTALS:</b>			22.249	0	0.107	2.735	0.032	0.012	0	0	469	0	

**NCDOT**

DIVISION OF HIGHWAYS  
ROBESON COUNTY  
PROJECT 6.469002T (R-513BB)  
MAXTON-LUMBERTON  
US 74 FROM WEST OF SR 1157  
TO WEST OF SR 1164

REVISED 3/1/05  
9/18/2003

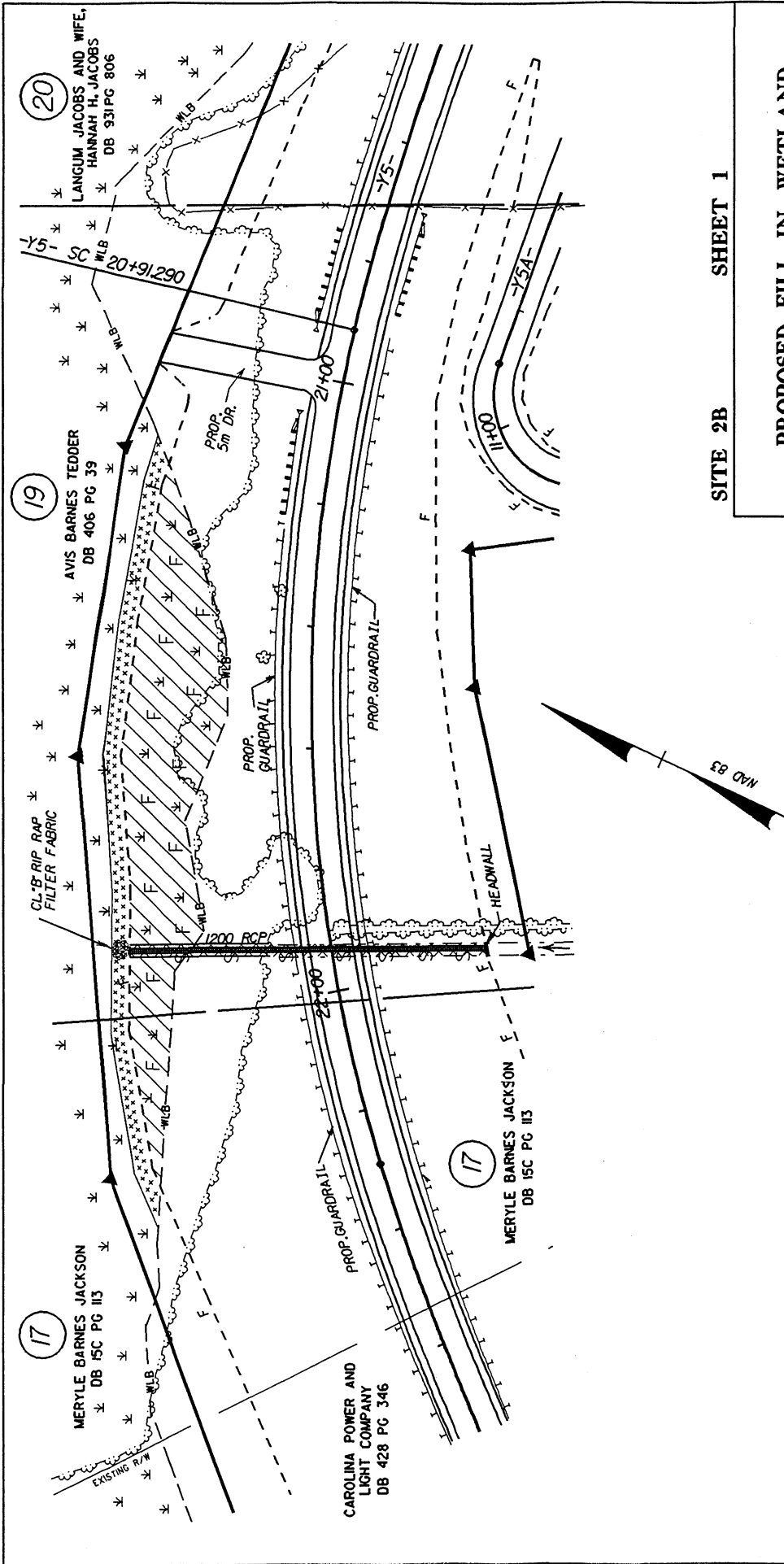
SHEET **17A** OF **18**

**WETLAND PERMIT IMPACT SUMMARY**

Site No.	Station (From/To)	Structure Size / Type	WETLAND IMPACTS				SURFACE WATER IMPACTS				Natural Stream Design (ft)	
			Fill In Wetlands (ac)	Temp. Fill In Wetlands (ac)	Excavation In Wetlands (ac)	Mechanized Clearing (Method III) (ac)	Fill In SW (Natural) (ac)	Fill In SW (Pond) (ac)	Temp. Fill In SW (ac)	Existing Channel Impacted (ft)		
9	229+60.27 -L-	900 mm RCP					0.047				207	
10	231+40 to 233+05 -L-	600 mm RCP	2.227			0.262	0.018				397	
<b>TOTALS:</b>			2.227	0	0	0.262	0.065	0	0	0	604	0

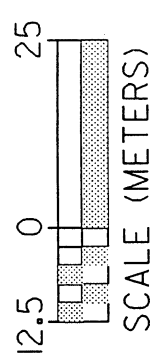
**NCDOT**

DIVISION OF HIGHWAYS  
 ROBESON COUNTY  
 PROJECT 6.469002T (R-513BB)  
 MAXTON-LUMBERTON  
 US 74 FROM WEST OF SR 1157  
 TO WEST OF SR 1164



**PLAN VIEW  
SITE 2B**

- DENOTES FILL IN SURFACE WATERS
- DENOTES FILL IN WETLAND
- DENOTES MECHANIZED CLEARING



SITE 2B SHEET 1

PROPOSED FILL IN WETLAND

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

PROJECT 6.469002T - R-513C  
RELOCATION OF US 74  
FROM WEST OF S.R. 1164  
TO EAST OF N.C. 41

SHEET 2A OF 36 FEBRUARY, 2005





### IMPACT SUMMARY

Site No.	Station (From/To)	Structure Size	WETLAND IMPACTS					SURFACE WATER IMPACTS							
			Fill In Wetlands (ac)	Temp. Fill In Wetlands (ac)	Excavation In Wetlands (ac)	Boussinesq Equation Ditch Impacts (ac)	Mechanized Clearing (Method III) (ac)	Fill In SW (Natural) (ac)	Fill In SW (Pond) (ac)	Existing Channel Impacted (ft)	Relocated Channel (ft)	Enclosed Channel (ft)			
1	250+34 TO 253+07 -L-	8' x 6' RCBC	3.60		0.35		0.05								
2	282+14 TO 282+72 -L- 12+23 TO 14+03 -Y8-		2.57		0.12		0.93								
3	285+59 TO 287+09 -L- 15+85 TO 18+27 -Y8-	2@42" RCP	3.93		0.05		0.27		0.15			827			781
4	32+42 TO 33+42 -Y3-		1.17												
5	51+63 TO 53+56 -Y8-		1.08		0.09		0.01		0.25						
6	256+00 -L- LT & RT									0.54					
7	272+90 -L- LT & RT								0.25			1056	476		777
8	290+85 -L-	42" RCP							0.12			413			403
9	308+00 -L-								0.05			230			216
1A	252+00 TO 257+00 -L- 11+80 TO 13+50 -Y1-	66" RCP							0.54			2217			213
2A	6+50 -RP"D"-		0.09						0.03						
2B	21+13 TO 22+26 -Y5-	48" RCP	0.29						0.11						197
TOTALS			12.73	0	0.61	0.01	1.65	1.13	0.54	4743	476	2588			

SITE 1: Wetlands considered total take

Total fill, exc., etc. = 4.00  
 Add'l for total take = 4.47  
 Total Site 1 impacts = 8.47

Total R-5/3C Impacts = (12.73 + 4.47 + 0.61 + 1.65) = 19.47

N.C. DEPT. OF TRANSPORTATION  
 DIVISION OF HIGHWAYS

ROBESON COUNTY

PROJECT: 6.469200T R-513C

Rev 3/2005  
 Rev 3/2004  
 JUNE, 2000

SHEET 33A of 36

### IMPACT SUMMARY

Site No.	Station (From/To)	Structure Size	WETLAND IMPACTS					SURFACE WATER IMPACTS							
			Fill In Wetlands (ha)	Temp. Fill In Wetlands (ha)	Excavation In Wetlands (ha)	Boussinesq Equaton Ditch Impacts (ha)	Mechanized Clearing (Method III) (ha)	Fill In SW (Natural) (ha)	Fill In SW (Pond) (ha)	Existing Channel Impacted (m)	Relocated Channel (m)	Enclosed Channel (m)			
1	250+34 TO 253+07 -L-	2.4 x 1.8 RCBC	1.457	0.140	0.047	0.019	0.019								
2	282+14 TO 282+72 -L- 12+23 TO 14+03 -Y8-		1.039	0.047	0.047	0.377	0.377								
3	285+59 TO 287+09 -L- 15+85 TO 18+27 -Y8-	2@1050 RCP	1.589	0.022	0.022	0.110	0.110	0.061	0.061	252				238	
4	32+42 TO 33+42 -Y3-		0.472												
5	51+63 TO 53+56 -Y8-		0.438	0.036	0.036	0.101	0.101								
6	256+00 -L- LT & RT								0.217						
7	272+90 -L- LT & RT							0.100	0.100	322	145	237			
8	290+85 -L-	1050 RCP						0.047	0.047	126		123			
9	308+00 -L-							0.019	0.019	70		66			
1A	252+00 TO 257+00 -L- 11+80 TO 13+50 -Y1-	1650 RCP						0.218	0.218	676		65			
2A	6+50 -RP"D"		0.038			0.013	0.013								
2B	21+13 to 22+26 -Y5-	1200 RCP	0.108			0.038	0.038	0.012	0.012			60			
TOTALS			5.141	0	0.245	0.004	0.563	0.457	0.457	1446	0.217	1446	145	789	

N.C. DEPT. OF TRANSPORTATION  
DIVISION OF HIGHWAYS

ROBESON COUNTY

PROJECT: 6.469200T R-513C

Rev 3/2005

Rev 3/2004

JUNE, 2000

SHEET

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