



STATE OF NORTH CAROLINA  
DEPARTMENT OF TRANSPORTATION

MICHAEL F. EASLEY  
GOVERNOR

LYNDO TIPPETT  
SECRETARY

August 23, 2004

MEMORANDUM TO: Mr. Timothy Johnson, P.E.  
Division 8 Engineer

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

SUBJECT: Richmond County, Ellerbe Bypass Extension; TIP Number  
R-3303; State Work Order Number 8.1581201; F. A. Project No.  
STP-73(4)

Attached is the U. S. Army Corps of Engineers Nationwide Permit Modification and the general conditions for the NCDWQ 401 Water Quality Certification for the above referenced project. All environmental permits have been received for the construction of this project. .

PSH/ma

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. Art King, Division 8 Environmental Officer

**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

## **PROJECT COMMITMENTS**

Ellerbe Bypass Connector  
NC 73 Extension from existing NC 73/US 220 to SR 1452 (Church Street)  
Richmond County  
State Project No. 8.1581201  
Federal Aid Project No. STP-73(4)  
TIP No. R-3303

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:

The current Section 404 Permit dated July 2003 for R-2231 and R-3303 and their conditions still apply. All other conditions written into previous Water Quality Certifications for R-3303 still apply.

### **Commitments Developed through Project Development and Design**

#### **Design Services Unit**

No right of way, including temporary or permanent easements, will be purchased from or encroach onto the Ellerbe Springs Inn and Restaurant (listed on the National Register of Historic Places) located north of the intersection of NC 73 and US 220.

Bicycle accommodations include a 4-foot paved shoulder throughout the length of the project

#### **Hydraulics Unit**

Erosion and sedimentation control measures, as specified by NCDOT's Design Standards in Sensitive Watersheds (15A NCAC 04B.0024) will be implemented throughout the project.

### **Commitments Developed through Permit Modification**

#### **Roadside Environmental/Division 5 Construction**

For the construction activities for the bridge located from Station 190+00 to 191+53, the NCDOT shall strictly adhere to sediment and erosion control Best Management Practices as described for High Quality Waters entitled "Design Standards in Sensitive Watersheds" (15A NCAC 04B.0024) throughout design and construction of the project.

#### **Division 5 Construction**

Prior to commencing construction within jurisdictional waters of the United State of any portion of the proposed highway project, the permittee shall forward the latest version of project construction drawings to the Corps of Engineers, Wilmington Regulatory Field Office NCDOT Regulatory Project Manager. Half size drawings will be acceptable.

R-3303

Green Sheet

8/20/04

The permittee shall schedule a meeting between its representatives, the contractor's representatives, and the Corps of Engineers, Wilmington Regulatory Field Office NCDOT Regulatory Project Manager, prior to any work within jurisdictional waters and wetlands to ensure that there is a mutual understanding of all the terms and conditions contained within this Department of the Army Permit. The permittee shall notify the Corps of Engineers Project Manager a minimum of thirty (30) days in advance of the scheduled meetings in order to provide that individual with ample opportunity to schedule and participate in the required meetings.

**Project Development and Environmental Analysis**

Compensatory mitigation of 54.58 acres shall be done for 27.29 acres of impacts to jurisdictional wetlands in the Yadkin River Basin. In addition, 2.45 acres of compensatory mitigation shall be provided to offset 2.12 acres of jurisdictional wetlands in the Lumber River Basin. The mitigation shall be provided as described below.

Mitigation Site	Acres of WL Debited from Site	Type of Mitigation	River Basin	Acres of Mitigation Credited
Key Branch Mitigation Site	54.58	Restoration	Yadkin	54.58
Myrick Pond Mitigation Site	2.45	Restoration	Lumber	2.45
<b>Total</b>				

Compensatory mitigation for impacts to streams shall be done for 7249 linear feet of stream impact in the Yadkin Basin and 351 linear feet in the Lumber Basin, at a replacement ratio of 1:1. The mitigation shall be provided as described below.

Mitigation Site	Linear Feet of Streams Debited from Site	Type of Mitigation	River Basin	Acres of Mitigation Credited
Sites 3&6 in Section B	676	Onsite Restoration	Yadkin	676
Key Branch Mitigation Site	6183	Offsite Restoration	Yadkin	6183
Haithecock Mitigation Site	390	Offsite Restoration	Yadkin	390
Myrick Pond Site	351	Onsite Restoration	Lumber	351
<b>Total</b>				



**North Carolina Department of Environment and Natural Resources**  
**Division of Water Quality**

Michael F. Easley, Governor

William G. Ross, Jr., Secretary  
Alan W. Klimek, P.E., Director

August 18, 2004

Mr. Gregory J. Thorpe, Ph.D., Environmental Director  
NCDOT Planning and Environmental Branch  
1548 Mail Service Center  
Raleigh, NC, 27699-1548

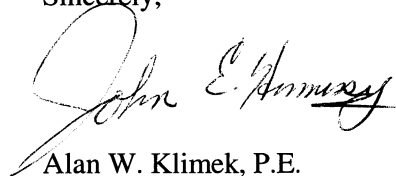
Dear Dr. Thorpe:

Re: MODIFICATION TO Water Quality Certification Pursuant to §401 of the Federal Clean Water Act, Ellerbe Bypass and Ellerbe Connector (NC 73 Extension) Richmond and Montgomery Counties.  
TIP No. R-2231;  
Federal Aid No. NHF-45-1(49); State Project No. 8.T550803;  
TIP No. R-3303;  
Federal Aid No. STP-73(4); State Project No. 8.1581201.  
DWQ Project No. 000874

Attached hereto is a copy of the Modification to Certification No. 3419 issued to The North Carolina Department of Transportation dated August 18, 2004. All of the authorized activities and conditions of certification associated with the original Water Quality Certification dated April 1, 2003, 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 us.

Sincerely,



Alan W. Klimek, P.E.

Attachments

cc: Wilmington District Corps of Engineers  
Richard Spencer, USACE Wilmington Field Office  
Ken Averitte, NCDWQ Fayetteville Regional Office  
Christopher Miltscher, US Environmental Protection Agency – Region IV  
T. Johnson, PE, Division Engineer, NCDOT Division 8  
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. The attached modification authorizes impacts to wetlands and streams as described herein. 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 April 1, 2003 and all other corresponding modifications still apply except where superceded by this certification.

### Wetland Impacts in the Yadkin River Basin

Section	Riverine (acres)	Non-Riverine (acres)	Total (acres)
Section A	8.01	4.28	12.29
Section B	5.68	2.38	8.06
Section CA	0.00	0.00	0.00
Section CB	6.02	0.00	6.02
R-3303	0.92	0.00	0.92
<b>Total</b>	<b>20.63</b>	<b>6.66</b>	<b>27.29</b>

### Wetland Impacts in the Lumber River Basin

Section	Riverine (acres)	Non-Riverine (acres)	Total (acres)
Section A	0.00	0.00	0.00
Section B	0.25	0.00	0.25
Section CA	1.87	0.00	1.87
Section CB	0.00	0.00	0.00
R-3303	0.00	0.00	0.00
<b>Total</b>	<b>2.12</b>	<b>0.00</b>	<b>2.12</b>

### Surface Water Impacts for the Yadkin River Basin

Section	Stream Impacts (linear feet)	Natural Channel Design (linear feet)	Offsite Mitigation Requirement (1:1 Ratio)
Section A	2335	0	2335
Section B	1854	0	1854
Section CA	0	0	0
Section CB	2693	676	2017
R-3303	315	0	315
<b>Total</b>	<b>7197</b>	<b>-676</b>	<b>6521</b>

**Surface Water Impacts for the Lumber River Basin**

<b>Section</b>	<b>Impacts (linear feet)</b>	<b>Ponds (acres)</b>	<b>On-Site Natural Channel Design (linear feet)</b>	<b>Mitigation Required</b>
Section A	0	0		0
Section B	0	12.36	1066	-1066
Section CA	351	0		351
Section CB	0	0		0
R-3303	0	0		0
<b>Total</b>	<b>351</b>	<b>12.36</b>	<b>1066</b>	<b>-715</b>

The application provides adequate assurance that the discharge of fill material into the waters of Yadkin and 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 you may be required to 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 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. 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. Any reclamation measures and implementation must comply with the reclamation in accordance with the requirements of the Sedimentation Pollution Control Act.

2. 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 Preconstruction Notice Application. All construction activities, including the design, installation, operation, and maintenance of sediment and erosion control Best Management Practices, shall be performed so that no violations of state water quality standards, statutes, or rules occur.
3. 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 six months of the date that the Division of Land Resources has released the project.
4. If an environmental document is required, this Certification is not valid until a FONSI or ROD is issued by the State Clearinghouse. All water quality-related conditions of the FONSI or ROD shall become conditions of this Certification.
5. Measures shall be taken to prevent live or fresh concrete from coming into contact with waters of the state until the concrete has hardened.
6. There shall be no excavation from or waste disposal into jurisdictional wetlands or waters associated with this permit without appropriate modification of this certification. 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.
7. All channel relocations will be constructed in a dry work area, and stabilized before stream flows are diverted. Channel relocations will be completed and stabilized prior to diverting water into the new channel. Whenever possible, channel relocations shall be allowed to stabilize for an entire growing season. Vegetation used for bank stabilization shall be limited to native woody species, and should include establishment of a 30 foot wide wooded and an adjacent 20 foot wide vegetated buffer on both sides of the relocated channel to the maximum extent practical. A transitional phase incorporating coir fiber and seedling establishment is allowable. Also, rip rap may be allowed if it is necessary to maintain the physical integrity of the stream, but the applicant must provide written justification and any calculations used to determine the extent of rip-rap coverage requested.
8. Compensatory mitigation of 54.58 acres shall be done for 27.29 acres of impacts to jurisdictional wetlands in the Yadkin River Basin. In addition, 2.45 acres of compensatory mitigation shall be provided to offset 2.12 acres of jurisdictional wetlands in the Lumber River Basin. The mitigation shall be provided as described below.

Mitigation Site	Acres of WL Debited from Site	Type of Mitigation	River Basin	Acres of Mitigation Credited
Key Branch Mitigation Site	54.58	Restoration	Yadkin	54.58
Myrick Pond Mitigation Site	2.45	Restoration	Lumber	2.45
<b>Total</b>				<b>57.03</b>

August 18, 2004

9. For the construction activities for the bridge located from Station 190+00 to 191+53, the NCDOT shall strictly adhere to sediment and erosion control Best Management Practices as described for High Quality Waters entitled "Design Standards in Sensitive Watersheds" (15A NCAC 04B .0024) throughout design and construction of the project.
10. Compensatory mitigation for impacts to streams shall be done for 7249 linear feet of stream impact in the Yadkin Basin and 351 linear feet of impact in the Lumber Basin, at a replacement ratio of 1:1. The mitigation shall be provided as described below.

Mitigation Site	Linear Feet of Streams Debited from Site	Type of Mitigation	River Basin	Acres of Mitigation Credited
Sites 3 & 6 in Section B	676	Onsite Restoration	Yadkin	676
Key Branch Mitigation Site	6183	Offsite Restoration	Yadkin	6183
Haithcock Mitigation Site	390	Offsite Restoration	Yadkin	390
Myrick Pond Site	351	Onsite Restoration	Lumber	351
<b>Total</b>				<b>7600</b>

11. Construction activities related to the section of the Ellerbe Connector (NC 73 Extension, TIP R-3303) located in Richmond County are hereby authorized by this certification.
12. 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 Transportation Permitting Unit of the Division of Water Quality upon completion of the project.
13. 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 stream beds 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.
14. The permittee 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.
15. 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.
16. Riparian vegetation must be reestablished within the construction limits of the project by the end of the growing season following completion of construction.



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17. 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.
18. Any riprap used must not interfere with thalweg performance and aquatic life passage during low flow conditions.
19. 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.
20. The outside buffer, wetland or water boundary as well as along the construction corridor within these boundaries approved under this authorization shall be clearly marked by orange fabric fencing for the areas that have been approved to infringe within the buffer, wetland or water prior to any land disturbing activities.
21. Discharging hydroseed mixtures and washing out hydroseeders and other equipment in or adjacent to surface waters is prohibited.

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 28<sup>th</sup> day of April 2004

DIVISION OF WATER QUALITY



Alan W. Klimek, P.E.  
Director

Modification to WQC No. 3419

**Certificate of Completeness**

DWQ Project No.: 000874

County: Richmond/Montgomery

Applicant: NCDOT

Project Name: Ellerbe Bypass and Ellerbe Connector (NC 73 Extension)

Date of Issuance of 401 Water Quality Certification: August 18, 2004

**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, 1650 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: \_\_\_\_\_

**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 \_\_\_\_\_

## DEPARTMENT OF THE ARMY PERMIT

Permittee NC Department of Transportation

Permit No. 199400590

Issuing Office USAED, Wilmington

**NOTE:** The term "you" and its derivatives, as used in this permit, means the permittee or any future transferee. The term "this office" refers to the appropriate district or division office of the Corps of Engineers having jurisdiction over the permitted activity or the appropriate official of that office acting under the authority of the commanding officer.

You are authorized to perform work in accordance with the terms and conditions specified below.

### Project Description:

Directly discharge dredged and/or fill material into Job's Creek, and tributaries to South Prong Creek, Bell's Creek, Rocky Ford Branch, Rocky Ford Creek, Naked Creek, Big Mountain Creek and Little Mountain Creek impacting a total of 7600 linear feet of streams and 29.8 acres of wetlands to facilitate the construction of the U.S. 220, Transportation Improvements Project (TIP) R-2231, State Project Number 8.T550803 and NC 73 Extension, TIP R-3303, State Project Number 8.1581201 and the discharge of dredged and/or fill material that may be required for the construction of the compensatory mitigation sites at Key Branch (Anson County), Myrick's Pond (Richmond County), and Haithcock Road (Montgomery County).

### Project Location:

In the Lumber and Yadkin River basins, from the intersection of the existing four-lane roadway south of Ellerbe at SR 1448, in Richmond County, to the intersection of existing US 220 and US 220A, just south of Candor in Montgomery County, including the NC 73, 2-lane 24-foot extension from the intersection of US 220 and NC 73 and connecting with the new US 220 four-lane facility north of SR 1452 in Richmond County, North Carolina.

### Permit Conditions:

#### General Conditions:

1. The time limit for completing the work authorized ends on December 31, 2006. If you find that you need more time to complete the authorized activity, submit your request for a time extension to this office for consideration at least one month before the above date is reached.
2. You must maintain the activity authorized by this permit in good condition and in conformance with the terms and conditions of this permit. You are not relieved of this requirement if you abandon the permitted activity, although you may make a good faith transfer to a third party in compliance with General Condition 4 below. Should you wish to cease to maintain the authorized activity or should you desire to abandon it without a good faith transfer, you must obtain a modification of this permit from this office, which may require restoration of the area.
3. If you discover any previously unknown historic or archeological remains while accomplishing the activity authorized by this permit, you must immediately notify this office of what you have found. We will initiate the Federal and state coordination required to determine if the remains warrant a recovery effort or if the site is eligible for listing in the National Register of Historic Places.

4. If you sell the property associated with this permit, you must obtain the signature of the new owner in the space provided and forward a copy of the permit to this office to validate the transfer of this authorization.

5. If a conditioned water quality certification has been issued for your project, you must comply with the conditions specified in the certification as special conditions to this permit. For your convenience, a copy of the certification is attached if it contains such conditions.

6. You must allow representatives from this office to inspect the authorized activity at any time deemed necessary to ensure that it is being or has been accomplished in accordance with the terms and conditions of your permit.

**Special Conditions:**

See enclosed sheet.

**Further Information:**

1. Congressional Authorities: You have been authorized to undertake the activity described above pursuant to:

( ) Section 10 of the Rivers and Harbors Act of 1899 (33 U.S.C. 403).

(<sup>X</sup>) Section 404 of the Clean Water Act (33 U.S.C. 1344).

( ) Section 103 of the Marine Protection, Research and Sanctuaries Act of 1972 (33 U.S.C. 1413).

2. Limits of this authorization.

a. This permit does not obviate the need to obtain other Federal, state, or local authorizations required by law.

b. This permit does not grant any property rights or exclusive privileges.

c. This permit does not authorize any injury to the property or rights of others.

d. This permit does not authorize interference with any existing or proposed Federal project.

3. Limits of Federal Liability. In issuing this permit, the Federal Government does not assume any liability for the following:

a. Damages to the permitted project or uses thereof as a result of other permitted or unpermitted activities or from natural causes.

b. Damages to the permitted project or uses thereof as a result of current or future activities undertaken by or on behalf of the United States in the public interest.

c. Damages to persons, property, or to other permitted or unpermitted activities or structures caused by the activity authorized by this permit.

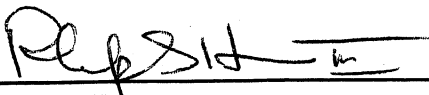
d. Design or construction deficiencies associated with the permitted work.

- e. Damage claims associated with any future modification, suspension, or revocation of this permit.
4. **Reliance on Applicant's Data:** The determination of this office that issuance of this permit is not contrary to the public interest was made in reliance on the information you provided.
5. **Reevaluation of Permit Decision.** This office may reevaluate its decision on this permit at any time the circumstances warrant. Circumstances that could require a reevaluation include, but are not limited to, the following:
- a. You fail to comply with the terms and conditions of this permit.
  - b. The information provided by you in support of your permit application proves to have been false, incomplete, or inaccurate (See 4 above).
  - c. Significant new information surfaces which this office did not consider in reaching the original public interest decision.

Such a reevaluation may result in a determination that it is appropriate to use the suspension, modification, and revocation procedures contained in 33 CFR 325.7 or enforcement procedures such as those contained in 33 CFR 326.4 and 326.5. The referenced enforcement procedures provide for the issuance of an administrative order requiring you to comply with the terms and conditions of your permit and for the initiation of legal action where appropriate. You will be required to pay for any corrective measures ordered by this office, and if you fail to comply with such directive, this office may in certain situations (such as those specified in 33 CFR 209.170) accomplish the corrective measures by contract or otherwise and bill you for the cost.

6. **Extensions.** General condition 1 establishes a time limit for the completion of the activity authorized by this permit. Unless there are circumstances requiring either a prompt completion of the authorized activity or a reevaluation of the public interest decision, the Corps will normally give favorable consideration to a request for an extension of this time limit.

Your signature below, as permittee, indicates that you accept and agree to comply with the terms and conditions of this permit.

  
 \_\_\_\_\_  
 (PERMITTEE)

7/3/03  
 \_\_\_\_\_  
 (DATE)

NC DEPARTMENT OF TRANSPORTATION

This permit becomes effective when the Federal official, designated to act for the Secretary of the Army, has signed below.

\_\_\_\_\_  
 (DISTRICT ENGINEER)

\_\_\_\_\_  
 (DATE)

CHARLES R. ALEXANDER, JR. COLONEL

When the structures or work authorized by this permit are still in existence at the time the property is transferred, the terms and conditions of this permit will continue to be binding on the new owner(s) of the property. To validate the transfer of this permit and the associated liabilities associated with compliance with its terms and conditions, have the transferee sign and date below.

\_\_\_\_\_  
 (TRANSFeree)

\_\_\_\_\_  
 (DATE)

**SPECIAL CONDITIONS (Action ID. 1994-0-0590; NCDOT/TIP R-2231 & 3303)**

1. All work authorized by this permit must be prepared in strict compliance with the attached plans, which are a part of this permit.

2. The permittee shall mitigate for 29.8 acres of unavoidable impacts to riverine wetlands and for 7600 linear feet of impact to important streams, associated with the project, as follows:

a. The permittee shall mitigate for 423 linear feet of unavoidable impacts to an unnamed tributary to Big Mountain Creek (Section CB, Impact Site #3), an important stream channel, by completing 423 linear feet of onsite stream relocation, as described in the permit application. The stream relocation shall be constructed in accordance with the North Carolina Wildlife Resources Commission's (NCWRC) "Stream Relocation Guidelines", and with the attached permit drawings. NCDOT shall consult with NCWRC on all stream relocations 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.

b. The permittee shall mitigate for 253 linear feet of unavoidable impacts to an unnamed tributary to Big Mountain Creek (Section CB, Impact Site #6), an important stream channel, by completing 253 linear feet of onsite stream relocation, as described in the permit application. The stream relocation shall be constructed in accordance with the North Carolina Wildlife Resources Commission's (NCWRC) "Stream Relocation Guidelines", and with the attached permit drawings. NCDOT shall consult with NCWRC on all stream relocations 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.

c. In addition to the stipulation in items a. and b. above, the following stipulation shall also apply to these mitigation sites:

i. The permittee shall construct all channel relocations in a dry work area. The permittee shall stabilize the relocated channel before stream flows are directed into the new channel. Whenever possible, channel relocations shall be allowed to stabilize for an entire growing season. Upon completion of the project, an as-built channel survey shall be conducted. It is recommended that stream surveys, for both project construction and project monitoring, follow the methodology contained in the USDA Forest Service Manual, *Stream Channel Reference Sites* (Harrelson, et.al, 1994). The survey should document the dimension, pattern and profile of the relocated channel.

ii. The permittee shall identify a stable reference reach that is close to the proposed relocation site and will not be impacted by the proposed highway construction. The applicant will coordinate a field meeting with the Corps of Engineers to approve the reference reach selection prior to channel design and relocation of the existing stream. Baseline data on the reference reach channel dimension, pattern, and profile shall be collected and used as a blueprint for the relocation channel design. A detailed design plan of the relocation stream shall be submitted to this office for review prior to construction, including clearing activities, at this site (Section C, Impact Site #4&#5).

iii. Vegetation used to stabilize banks shall be limited to native woody species, and should include establishment of a 50 foot wide vegetated buffer on the relocated channel. Stream banks will be planted with native vegetation that represents both woody (trees and shrubs) and herbaceous species. Species selection will be based on a survey of the vegetation from the approved reference reach. Survival of woody species planted at the stream mitigation sites should be at least 320 trees/acre through year three. A ten percent mortality rate will be accepted in year four (288 trees/acre) and another ten percent in year five resulting in a required survival rate of 260 trees/acre through year five.

iv. The permittee shall monitor the stream relocation mitigation site for a period of five years starting the year following construction. Monitoring data at the site should include the following: reference photos, plant survival and channel stability. Data shall be collected each year for 5 years at the same time of year. No less than two (2) bankfull flow events must be documented through the required 5-year monitoring period. If less than 2 bankfull events occur during the first 5 years, monitoring will continue until the second bankfull event is documented. The bankfull events must occur during separate monitoring years.

v. If within any monitoring year, bank or stream stability is not acceptable as determined by the Corps of Engineers, and remedial action required by the Corps of Engineers is performed, the five-year monitoring period of the affected portions of the stream will start again at monitor year one. The permittee will coordinate all stream mitigation remedial activities with the Corps of Engineers, Wilmington District, prior to taking any remedial action. The permittee will submit a brief written report with representative photographs within 90 days after the monitoring year is completed.

vi. The permittee shall provide the Corps of Engineers, Wilmington District with a stream mitigation construction sequencing schedule within 30 days following the project preconstruction meeting. The plan, shall at a minimum, indicate a date of start of construction at the relocation site, grading schedule, planting schedule, completion of construction, monitoring schedule, and a date of potential diversion into the new channel.

vii. The permittee and/or current and subsequent property owners shall maintain the mitigation site in its natural condition, as altered by work in the mitigation plan, in perpetuity. Prohibited activities within the mitigation site specifically include, but are not limited to: the construction or placement of roads, walkways, buildings, signs, or structures of any kind (i.e., billboards, interior fences, etc.); filling, grading, excavation, leveling, or any other earth

moving activity or activity that may alter the drainage patterns on the property; the cutting, mowing, destruction, removal, or other damage of any vegetation; disposal or storage of any debris, trash, garbage, or other waste material; except as may be authorized by the mitigation plan, or subsequent modifications that are approved by the Corps of Engineers, Wilmington District. In addition, the permittee shall take no action, whether on or off the mitigation property, which will adversely impact the wetlands or streams on the mitigation property, except as specifically authorized by this permit, or subsequent modifications that are approved by the Corps of Engineers, Wilmington District.

d. The permittee shall mitigate for 6924 linear feet of unavoidable impacts to important stream channel associated with this project by restoring 10,751 linear feet of stream channel in the Yadkin River Basin. 6,183 linear feet of perennial stream shall be restored at the Key Branch Mitigation Site in the Yadkin River Basin (Cataloging Unit 03040104). The stream restoration shall be constructed in accordance with the final mitigation plans that will be submitted and approved by the Corps of Engineers, Wilmington District prior to construction. The final plans should be based on the 60% design plans submitted to the Corps District on 6 September 2002. 4,568 linear feet of perennial stream shall be restored at the Haithcock Road Mitigation site in the Yadkin River Basin (Cataloging Unit 03040104). The stream restoration shall be constructed in accordance with the final mitigation plans that will be submitted and approved by the Corps of Engineers, Wilmington District prior to construction.

e. The permittee shall mitigate for 351 linear feet of unavoidable impacts to important stream channel associated with this project by restoring 702 linear feet of stream channel in the Lumber River Basin (Cataloging Unit 03040203). The stream restoration shall be constructed at the Myrick's Pond Mitigation Site as identified in the Myrick's Pond Mitigation Plan, dated October 2002. The stream restoration shall be constructed in accordance with the final mitigation plans that will be submitted and approved by the Corps of Engineers, Wilmington District prior to construction.

f. In addition to the stipulation in items d. and e. above, the following stipulation shall also apply to these mitigation sites:

i. The proposed stream restoration design shall be based on an approved stable reference reach. Baseline data on the reference reach channel dimension, pattern, and profile shall be collected and used as a blueprint for the channel restoration design. A detailed final design plan of the stream restoration shall be submitted to the Corps of Engineers, Wilmington District for review and approval prior to construction.

ii. The development of a monitoring plan for the design reach that would assesses geomorphologic and biological parameters will be required and shall be in keeping with "Stream Mitigation Guidelines", dated April 2003. The monitoring plan should include the protocol and provisions for providing reference photographs, channel stability analysis and biological data on a yearly basis. Reference photographs, both longitudinal and lateral, should be taken at least twice a year, preferably in winter and summer and at permanently established locations. Perpendicular transects or cross sections should be permanently established at



selected points on the designed reach where channel width, depth, cross-sectional area, and lateral photographs will be collected and provided in the annual monitoring reports. Cross sections shall be established once every 20 bank-full widths and will be divided evenly between riffle and pool bed features. Additional cross sections should be considered for areas where there are structures or other areas where there is a chance of failure.

iii. An as-built plan will be required for the design reach. The as-built should also include longitudinal profile (three longitudinal profiles, each covering 20 bankfull-widths) data for the design reach, that should be monitored and data recorded annually. Design reach channel geometry measurements should also be a part of the as-built information. They will include sinuosity, meander wavelength, belt width, meander width ratio and radius of curvature. This plan should also show the location of all proposed attendant features, e.g. in-stream, bank protection or grade control structures, and the location of all sampling plots, transects, photography reference points, etc.

g. The permittee shall mitigate for 2.1 acres of unavoidable impacts to riverine wetlands within the Lumber River Basin (Hydrologic Catalog Unit 03040203) by providing 2.5 acres of riverine wetland restoration at the Myrick's Pond Site as identified in the Myrick's Pond Mitigation Plan, dated October 2002. In addition, the following stipulations shall apply to this mitigation site:

i. The permittee shall identify a reference site that is adjacent to or near the proposed restoration site and will not be impacted by the proposed highway construction. The applicant will coordinate a field meeting with the Corps of Engineers to approve the reference site selection prior to final mitigation design and restoration of the mitigation site. Baseline data on the reference site hydrology, surface elevations, and vegetation shall be collected and used as a blueprint for the wetland restoration design. A detailed design plan of the wetland restoration shall be submitted to this office for review prior to construction, including clearing activities, at this site.

ii. To meet the success criteria, the monitoring data must show that for each normal precipitation year within the monitoring period, the site exhibits saturation within the upper 12 inches of the soil surface for a minimum of 12.5% or 28 days, or greater consecutive day duration during the growing season and inundation must occur 5 out of 10 years or 50% of the years monitored, at a minimum frequency. Baseline hydrologic data shall be obtained from the reference site, which can be used to support the mitigation site's hydrology success. WETS tables for Richmond County will be utilized as appropriate to determine normal precipitation years.

iii. If there are no normal precipitation years during the first five years of monitoring, to meet performance criteria, the permittee will continue to monitor hydrology on the site until it shows that the site has been inundated or saturated as described above during a normal precipitation year.

iv. The mitigation site shall be suitably graded to promote the establishment of planted wetland vegetation. If mineral soil is exposed at the desired restoration grade, the site should be graded to at least minus one-foot and brought back to grade by providing at least one foot of wetland topsoil. If organic soil is exposed at the desired restoration grade, the soil should be disked or suitability prepared for planting. Every effort must be made to utilize the topsoil from the impacted wetlands on this project to promote wetland re-vegetation.

v. The mitigation site will be planted with native vegetation that represents both woody (trees and shrubs) and herbaceous species. Species selection will be based on a survey of the vegetation from the approved reference site. Survival of woody species planted at the mitigation site must be at least 320 trees/acre through year three. A ten percent mortality rate will be accepted in year four (288 trees/acre) and another ten percent in year five resulting in a required survival rate of 260 trees/acre through year five.

vi. Vegetation monitoring must begin in the spring just after leaf-out. Permanent randomly located sample plots shall be established at the mitigation site. Plot size should be based on established standards for sampling vegetation planted at the target densities, usually 0.05 acre (50-foot X 50-foot). A minimum of three vegetation sampling plots shall be established at the site. After the first year of monitoring, the sample size (number of plots) shall be checked by use of statistical methods used to identify adequate sample size and if necessary adjusted. The planted tree stock shall be marked by use of tree marking paint and/or tree tags for identification and sampling. Plants that have colonized the sample plot should be identified and noted in the monitoring report but not used in the planted vegetation monitoring calculations. Plant recruitment should be calculated as a separate item and corrective measures may need to be taken if the volunteers are undesirable or are jeopardizing the survival of the planted stock. The measurement of planted stock survival using stem density will be acceptable provided that only planted stock is counted. In addition, in order to get an indication of health and vigor of the planted stock, general observations of lateral plant growth, leaf and bud development should also be annotated in the reports.

vii. Continually recording monitoring wells, surface gauges and/or piezometers shall be developed in the reference site and restoration site and be of sufficient numbers and adequately spaced to measure the extent, frequency and duration of the site inundation/saturation. This will aid in quickly identifying problem areas for remediation and determine the hydrologic success of the mitigation effort. The permittee must comply with USACE WRP Technical Note HY-IA3.1 for installation and development of the monitor wells and/or piezometers. Monitor wells shall be visited frequently to avoid lengthy down time of non-functioning wells and maintenance shall be scheduled in such a way as to minimize any down time for repairs or replacement. Lengthy down time of wells during the growing season may result in the extension of the monitoring period in order to fill in gaps in the data.

viii. The permittee and/or current and subsequent property owners shall maintain the mitigation site in its natural condition, as altered by work in the mitigation plan, in perpetuity. Prohibited activities within the mitigation site specifically include, but are not limited to: the construction or placement of roads, walkways, buildings, signs, or structures of any kind

(i.e., billboards, interior fences, etc.); filling, grading, excavation, leveling, or any other earth moving activity or activity that may alter the drainage patterns on the property; the cutting, mowing, destruction, removal, or other damage of any vegetation; disposal or storage of any debris, trash, garbage, or other waste material; except as may be authorized by the mitigation plan, or subsequent modifications that are approved by the Corps of Engineers, Wilmington District. In addition, the permittee shall take no action, whether on or off the mitigation property, which will adversely impact the wetlands or streams on the mitigation property, except as specifically authorized by this permit, or subsequent modifications that are approved by the Corps of Engineers, Wilmington District.

h. The permittee shall mitigate for 21 acres of unavoidable impacts to riverine wetlands and 6.7 acres of non-riverine wetlands within the Yadkin River Basin (Hydrologic Catalog Units 03040104 & 03040201) by restoring, at a minimum, 55.4 acres of riverine wetlands at the Key Branch Mitigation Site as described in the report entitled "Key Branch Wetland Mitigation Plan" dated August 24, 2001. In addition, the following stipulations shall apply to this mitigation site:

i. To meet the success criteria, the monitoring data must show that for each normal precipitation year within the monitoring period, the site exhibits saturation within the upper 12 inches of the soil surface for a minimum of 12.5% or 31 days, or greater consecutive day duration during the growing season and inundation must occur 5 out of 10 years or 50% of the years monitored, at a minimum frequency. Baseline hydrologic data shall be obtained from the reference site, which can be used to support the mitigation site's hydrology success. WETS tables for Moore County will be utilized as appropriate to determine normal precipitation years.

ii. The mitigation site will be planted with native vegetation that represents both woody (trees and shrubs) and herbaceous species. Species selection will be based on a survey of the vegetation from the reference sites. Survival of woody species planted at the mitigation site should be at least 320 trees/acre through year three. A ten percent mortality rate will be accepted in year four (288 trees/acre) and another ten percent in year five resulting in a required survival rate of 260 trees/acre through year five.

iii. Vegetation monitoring must begin in the spring just after leaf-out. Permanent randomly located sample plots shall be established at the mitigation site. Plot size should be based on established standards for sampling vegetation planted at the target densities, usually 0.05 acre (50-foot X 50-foot). A minimum of eight vegetation sampling plots shall be established at the site. After the first year of monitoring, the sample size (number of plots) shall be checked by use of statistical methods used to identify adequate sample size and if necessary adjusted. The planted tree stock shall be marked by use of tree marking paint and/or tree tags for identification and sampling. Plants that have colonized the sample plot should be identified and noted in the monitoring report but not used in the planted vegetation monitoring calculations. Plant recruitment should be calculated as a separate item and corrective measures may need to be taken if the volunteers are undesirable or are jeopardizing the survival of the planted stock. The measurement of planted stock survival using stem density will be acceptable provided that only planted stock is counted. In addition, in order to get an indication of health and vigor of the

planted stock, general observations of lateral plant growth, leaf and bud development should also be annotated in the reports.

iv. Continually recording monitoring wells, surface gauges and/or piezometers shall be developed in the reference sites (four wells) and restoration site (eight wells) and be adequately spaced to measure the extent, frequency and duration of the site inundation/saturation. This will aid in quickly identifying problem areas for remediation and determine the hydrologic success of the mitigation effort. The permittee must comply with USACE WRP Technical Note HY-IA3.1 for installation and development of the monitor wells and/or piezometers. Monitor wells shall be visited frequently to avoid lengthy down time of non-functioning wells and maintenance shall be scheduled in such a way as to minimize any down time for repairs or replacement. Lengthy down time of wells during the growing season may result in the extension of the monitoring period in order to fill in gaps in the data.

v. Except as described in the mitigation plan, no activities shall be initiated, conducted or allowed on the Key Branch Mitigation Site that may disturb, impair, alter, and/or modify the hydrology, vegetation and/or hydric soils of any of the existing wetland areas, including any restored wetlands.

i. The permittee and/or current and subsequent property owners shall maintain the Key Branch Mitigation Site, Myrick's Pond Mitigation Site, Haithcock Road Stream Mitigation Site and the on-site mitigation sites in their natural conditions, as altered by work in the mitigation plans, in perpetuity. Prohibited activities within the mitigation sites specifically include, but are not limited to: the construction or placement of roads, walkways, pathways, buildings, signs, or structures of any kind (i.e., billboards, interior fences, etc.); filling, grading, excavating, leveling, or any other earth moving activity that may alter the drainage patterns on the property; the cutting, mowing, destruction, removal, or other damage of any vegetation; disposal or storage of any debris, trash, garbage, or other waste material; except as may be approved by the Corps of Engineers. In addition, the permittee and/or current and subsequent property owners shall take no action, whether on or off the mitigation properties, which will adversely impact the wetlands or streams on the mitigation sites, except as specifically authorized by this permit, or subsequent modifications that are approved by the Corps of Engineers, Wilmington District.

j. The applicant shall protect all compensatory mitigation sites from future alterations by placing conservation covenants and restrictions running with the land and recorded with the deed, conveyance, or transfer. The Corps shall approve the language of conservation covenants and restrictions, prior to recordation. The applicant shall record the conservation covenants and restrictions within 4 months after obtaining the land interest. The conservation covenants and restrictions shall be recorded in the land records of their respective counties prior to the start of the mitigation construction of the mitigation sites. The applicant shall submit a copy of the fully executed and recorded deed, with the liber and folio number stamped, thereon, and property plat to the Corps within 30 days following recordation. Upon any offers for purchase, transfer, or grant of the mitigation sites, the purchaser, offerer, or grantee must receive notification that the covenants and restrictions are included in the deed. These covenants and

restrictions should include prohibitions against any discharges of dredged or fill material, permanent flooding, discharges of untreated stormwater, excavation, tree cutting, removal of vegetation, or construction within the area of easement, as displayed on the plat map which describes the property being conveyed, granted, or transferred, except as authorized by the Corps. The Corps shall approve any alteration of the language or restrictions in the covenants and restrictions.

3. When final design plans are completed for TIP R-2231 and R3303, any necessary permit modification requests shall be submitted to the Corps of Engineers and the North Carolina Division of Water Quality (NCDWQ). If necessary, a public notice describing the modifications and any additional impacts associated with the modifications will be circulated for public review and comment. Final design plans shall reflect all appropriate avoidance and minimization measures taken to lessen the project impacts on aquatic resources. The permittee shall submit a compensatory mitigation plan for proposed additional impacts within streams and wetlands associated with the proposed modifications. Construction within streams and wetlands on TIP R-2231 and R-3303 shall begin only after approval by the Corps of Engineers of the modified impacts.

4. Prior to commencing construction within jurisdictional waters of the United States for any portion of the proposed highway project, the permittee shall forward the latest version of project construction drawings to the Corps of Engineers, Wilmington Regulatory Field Office NCDOT Regulatory Project Manager. Half-size drawings will be acceptable.

5. The permittee shall schedule a meeting between its representatives, the contractor's representatives, and the Corps of Engineers, Wilmington Regulatory Field Office NCDOT Regulatory Project Manager, prior to any work within jurisdictional waters and wetlands to ensure that there is a mutual understanding of all of the terms and conditions contained within this Department of the Army Permit. The permittee shall notify the Corps of Engineers Project Manager a minimum of thirty (30) days in advance of the scheduled meetings in order to provide that individual with ample opportunity to schedule and participate in the required meetings.

6. The permittee and its contractors and/or agents shall not excavate, fill, or perform mechanized landclearing at any time in the construction or maintenance of this project within waters and/or wetlands, or cause the degradation of waters and/or wetlands, except as authorized by this permit, or any modification to this permit. There shall be no excavation from, waste disposal into, or degradation of, jurisdictional wetlands or waters associated with this permit without appropriate modification of this permit, including appropriate compensatory mitigation. This prohibition applies to all borrow and fill activities connected with this project.

7. To ensure that all borrow and waste activities occur on high ground and do not result in the degradation of adjacent wetlands and streams, except as authorized by this permit, the permittee shall require its contractors and/or agents to identify all areas to be used to borrow material, or to dispose of dredged, fill, or waste material. The permittee shall ensure that all such areas comply with the preceding condition (\*) of this permit, and shall require and maintain documentation of the location and characteristics of all borrow and disposal sites associated with

this project. This information will include data regarding soils, vegetation and hydrology sufficient to clearly demonstrate compliance with the preceding condition (\*). All information will be available to the Corps of Engineers upon request. NCDOT shall require its contractors to complete and execute reclamation plans for each waste and borrow site and provide written documentation that the reclamation plans have been implemented and all work is completed. This documentation will be provided to the Corps of Engineers within 30 days of the completion of the reclamation work.

8. The permittee shall comply with the conditions specified in the water quality certification, No. 3419, issued by the North Carolina Division of Water Quality on April 1, 2003.

9. The permittee shall place the inverts of culverts and other structures greater than 48 inches in diameter in waters, streams, and wetlands one foot below the bed of the stream to allow low flow passage of water and aquatic life, unless providing passage would be impractical and the Corps of Engineers has waived this requirement. For culverts 48 inches in diameter or smaller, culverts must be buried below the bed of the stream to a depth equal to or greater than 20 percent of the diameter of the culvert. 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, upstream or downstream of the structures.

10. The permittee shall use appropriate sediment and erosion control practices which equal or exceed those outlined in the most recent version of the "North Carolina Sediment and Erosion Control Planning and Design Manual" to assure compliance with the appropriate turbidity water quality standard (50 NTU's in all streams and rivers, and 25 NTU's in all lakes).

11. The permittee shall remove all sediment and erosion control measures placed in wetlands or waters, and shall restore natural grades in those areas, prior to project completion.

12. The permittee shall take measures to prevent live or fresh concrete from coming into contact with any surface waters until the concrete has hardened.

13. If the permittee discovers any previously unknown historic or archeological remains while accomplishing the authorized work, he shall immediately stop work and notify the Wilmington District Engineer who will initiate the required State/Federal coordination.

14. No excavated or fill material shall be placed at any time in waters or wetlands outside the authorized permit area, nor will it be placed in any location or in any manner so as to impair surface water flow into or out of any wetland area.

15. The permittee shall maintain the authorized work in good condition and in conformance with the terms and conditions of this permit. The permittee is not relieved of this requirement if he abandons the permitted activity without transferring it to a third party.

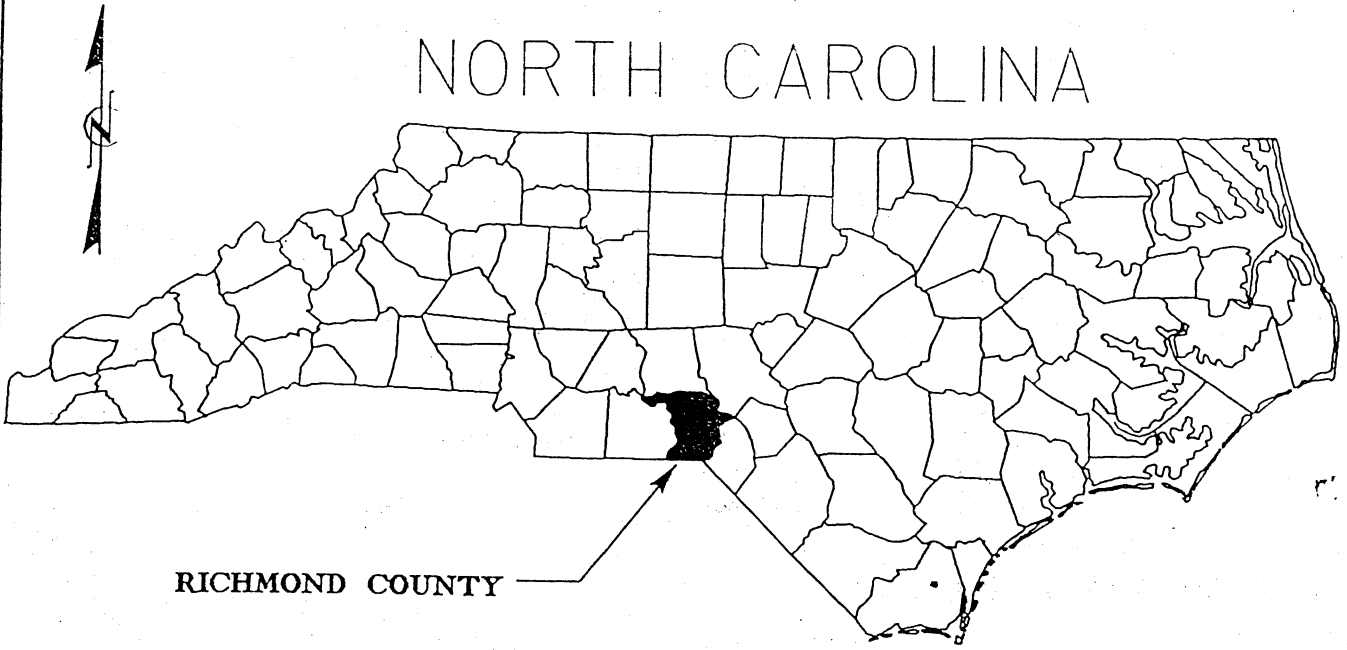
16. All fill material shall be clean and free of any pollutants except in trace quantities. Metal products, organic materials, or unsightly debris will not be used.

17. This Department of the Army permit does not obviate the need to obtain other Federal, State, or local authorizations required by law.

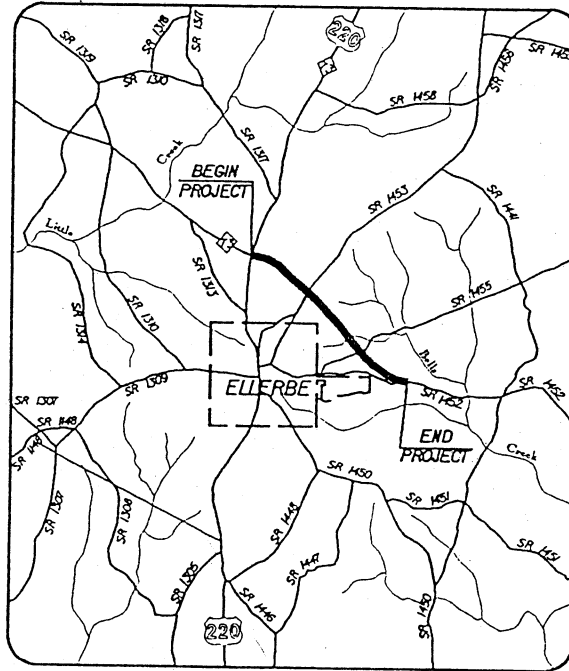
18. In issuing this permit, the Federal Government does not assume any liability for:

- a. Damages to the permitted project or uses thereof as a result of other permitted or unpermitted activities or from natural causes.
- b. Damages to the permitted project or uses thereof as a result of current or future Federal activities initiated on behalf of the general public.
- c. Damages to other permitted or un-permitted activities or structures caused by the authorized activity.
- d. Design and construction deficiencies associated with the permitted work.
- e. Damage claims associated with any future modification, suspension, or revocation of this permit.

# NORTH CAROLINA



RICHMOND COUNTY



VICINITY MAP

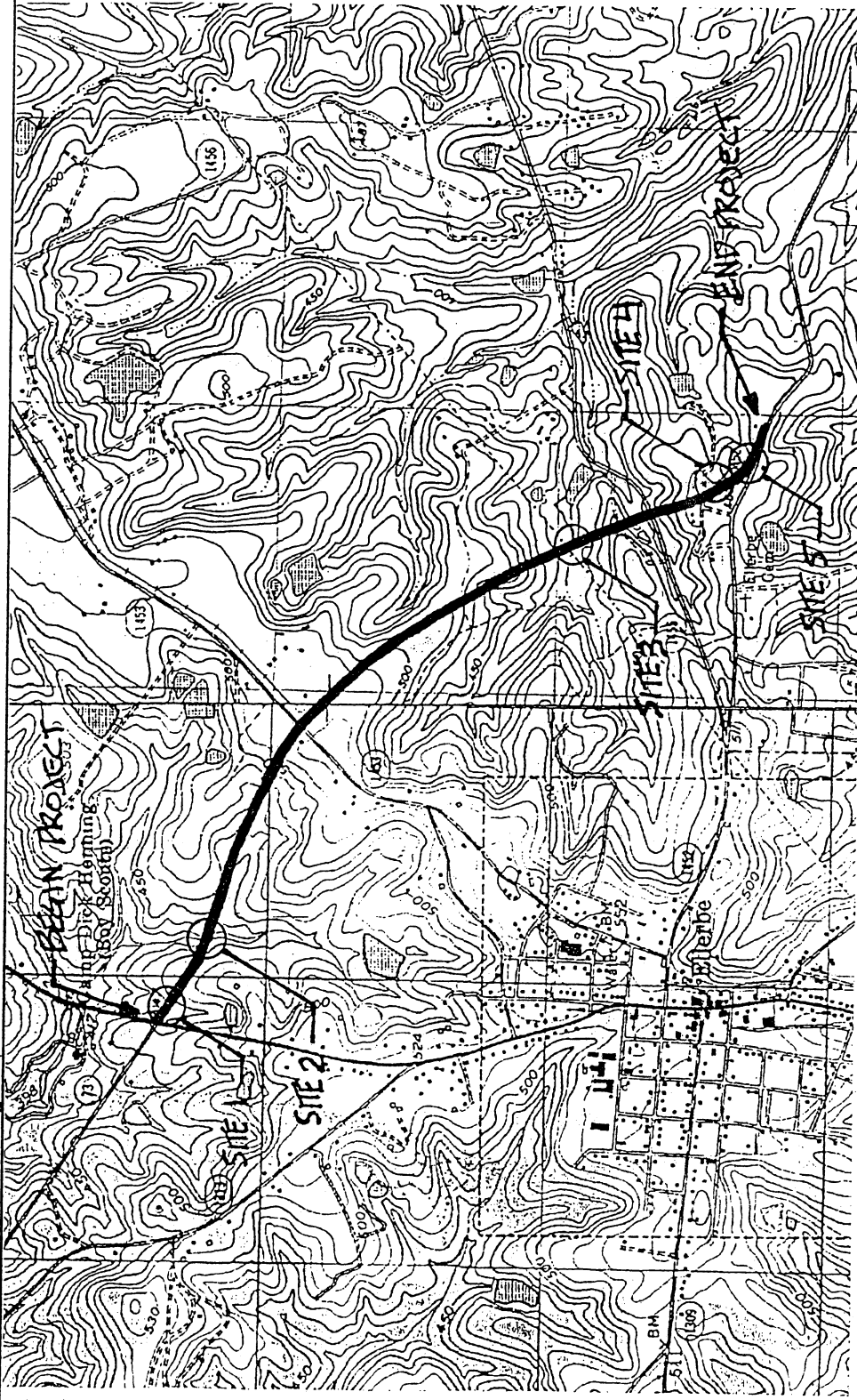
## VICINITY MAPS

**NCDOT**  
DIVISION OF HIGHWAYS  
RICHMOND COUNTY  
PROJECT: 8.1581201 (R-3303)  
NC 73 EXTENSION FROM  
EXISTING NC 73 / US  
220 TO SR 1452

SHEET 2 OF 5

03/01/05





1" = 2000'

NCDOT

DIVISION OF HIGHWAYS

RICHMOND COUNTY

PROJECT: 8.1581201 (R-3305)

NC 73 EXTENSION FROM

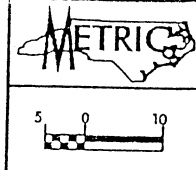
EXISTING NC 73/US

220 TO SR 1452

SHEET 1 OF 5

03/31/03

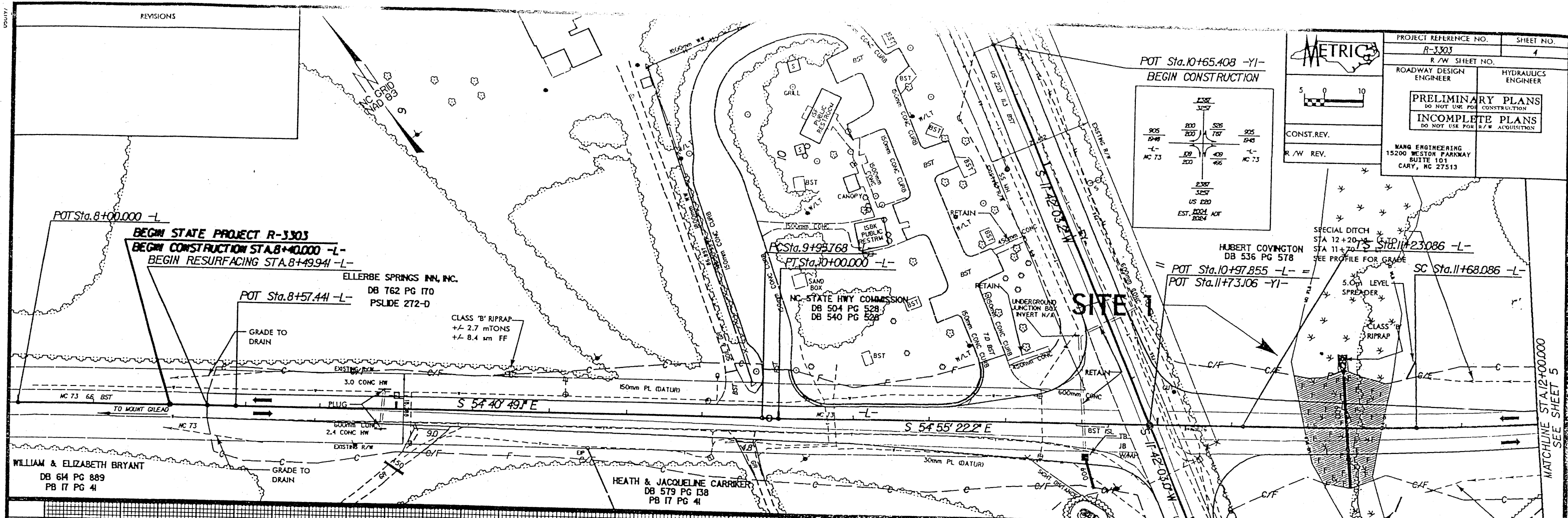
SITE MAP



PROJECT REFERENCE NO.	SHEET NO.
R-3303	4
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
<b>PRELIMINARY PLANS</b> DO NOT USE FOR CONSTRUCTION	
<b>INCOMPLETE PLANS</b> DO NOT USE FOR R/W ACQUISITION	
WANG ENGINEERING 15200 WESTON PARKWAY SUITE 101 CARY, NC 27513	

POT Sta.10+65.408 -YI-  
BEGIN CONSTRUCTION

E/SSE 3.25%			
905 1948	800 820	526 707	905 843
-L NC 73	109 200	409 466	-L NC 73
E/SSE 3.25%			
US 220 EST. 2004 REV. 2004			



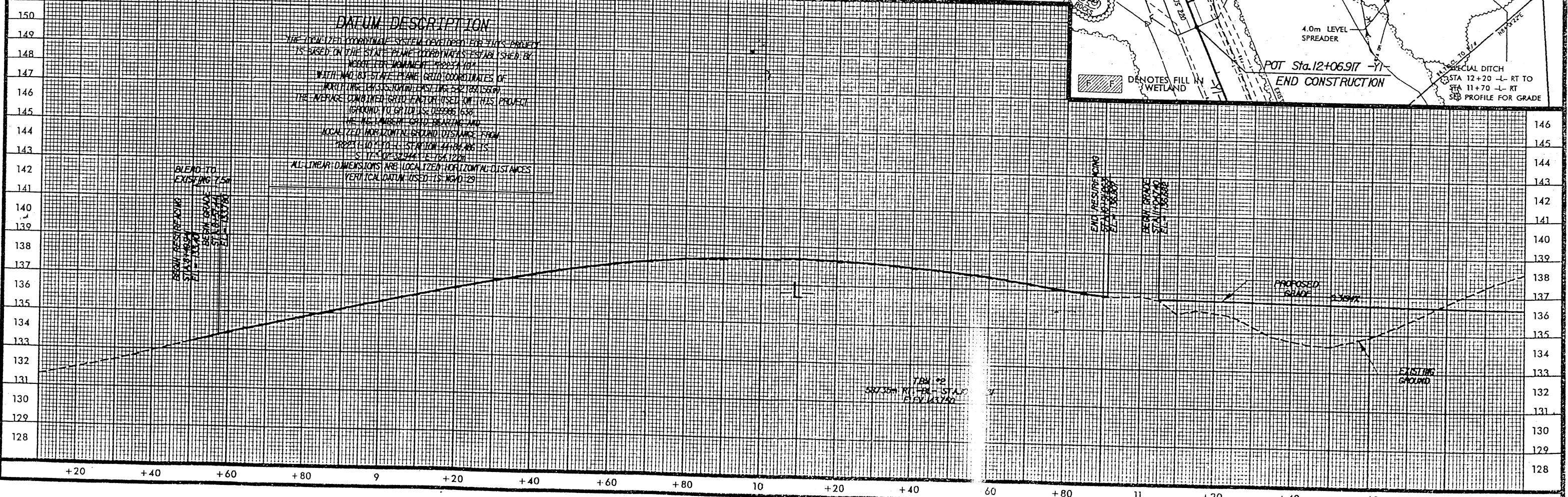
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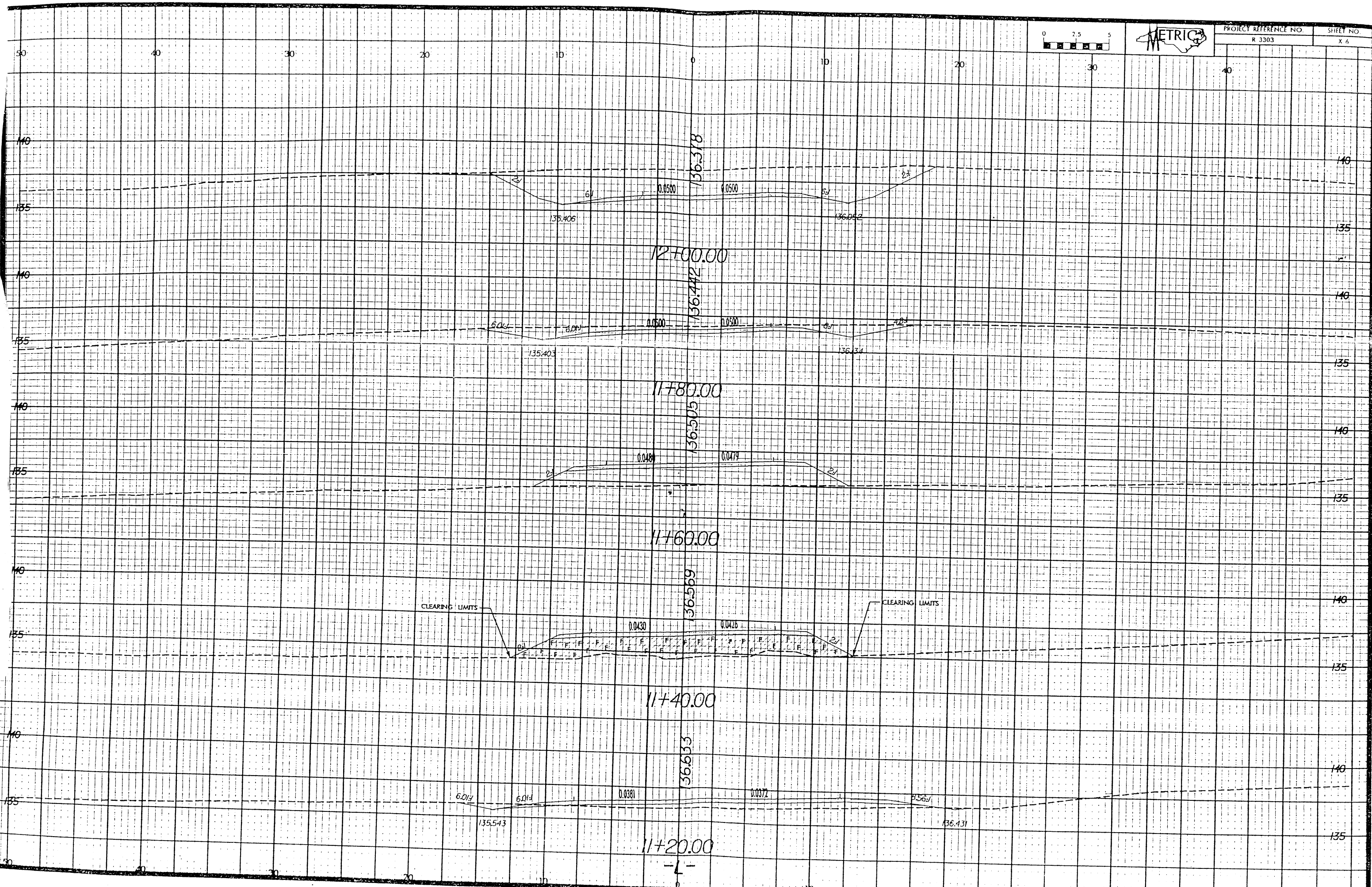
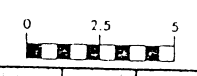
THE LOCALIZED COORDINATE SYSTEM DEVELOPED FOR THIS PROJECT IS BASED ON THE STATE PLANE COORDINATES ESTABLISHED BY THE STATE PLANNING BOARD.

WITH THE LOCAL STATE PLANE GRID COORDINATES OF NORTHING 14350000 AND EASTING 2000000, THE AVERAGE LOCALIZED GRID LENGTH USED ON THIS PROJECT (GROUND TO GRID) IS 0.0006639.

THE LOCALIZED GRID BEARING AND LOCALIZED HORIZONTAL GROUND DISTANCE FROM POINT 101 TO POINT STATION 11+70.00 IS 5.71° 34' 44" E AND 12.12M.

ALL LINEAR DIMENSIONS ARE LOCALIZED HORIZONTAL DISTANCES. VERTICAL DATUM USED IS NGVD 29.

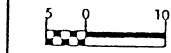
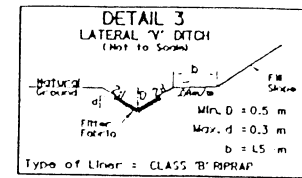
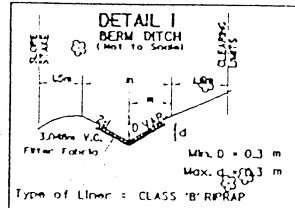
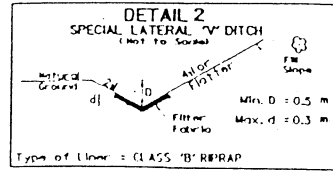




11+20.00

-4-

REVISIONS



CONST. REV.  
R/W REV.

PROJECT REFERENCE NO. R-3303	SHEET NO. 5
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
<b>PRELIMINARY PLANS</b> DO NOT USE FOR CONSTRUCTION	
<b>INCOMPLETE PLANS</b> DO NOT USE FOR R/W ACQUISITION	
WANG ENGINEERING 15200 WESTON PARKWAY SUITE 101 CARY, NC 27513	

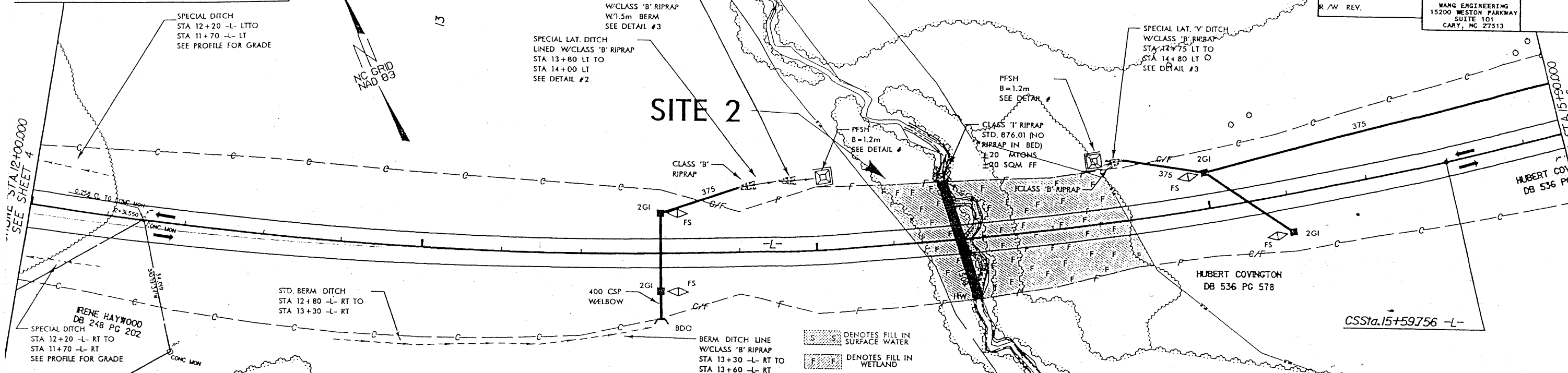
HUBERT COVINGTON  
DB 536 PG 578

SPECIAL LAT. 'V' DITCH  
W/CLASS 'B' RIPRAP  
STA 14+75 LT TO  
STA 14+80 LT O  
SEE DETAIL #3

SPECIAL LAT. DITCH  
LINED W/CLASS 'B' RIPRAP  
STA 13+80 LT TO  
STA 14+00 LT  
SEE DETAIL #2

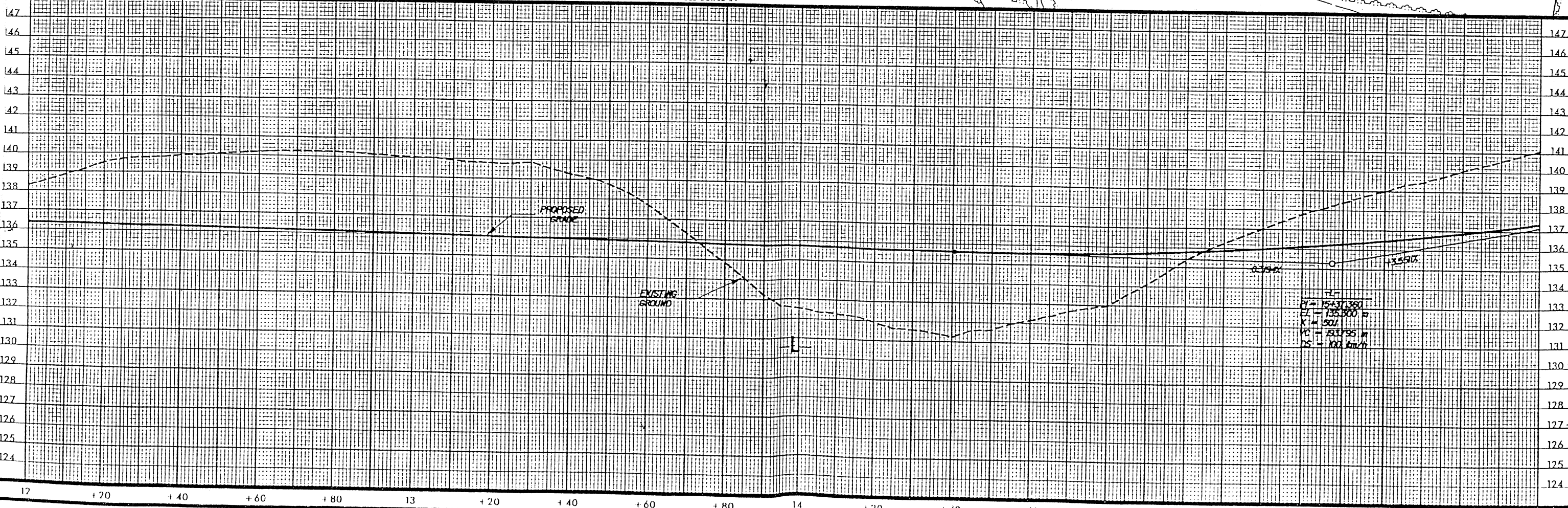
LAT. 'V' DITCH LINED  
W/CLASS 'B' RIPRAP  
W/1.5m BERM  
SEE DETAIL #3

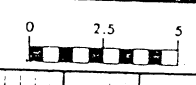
**SITE 2**



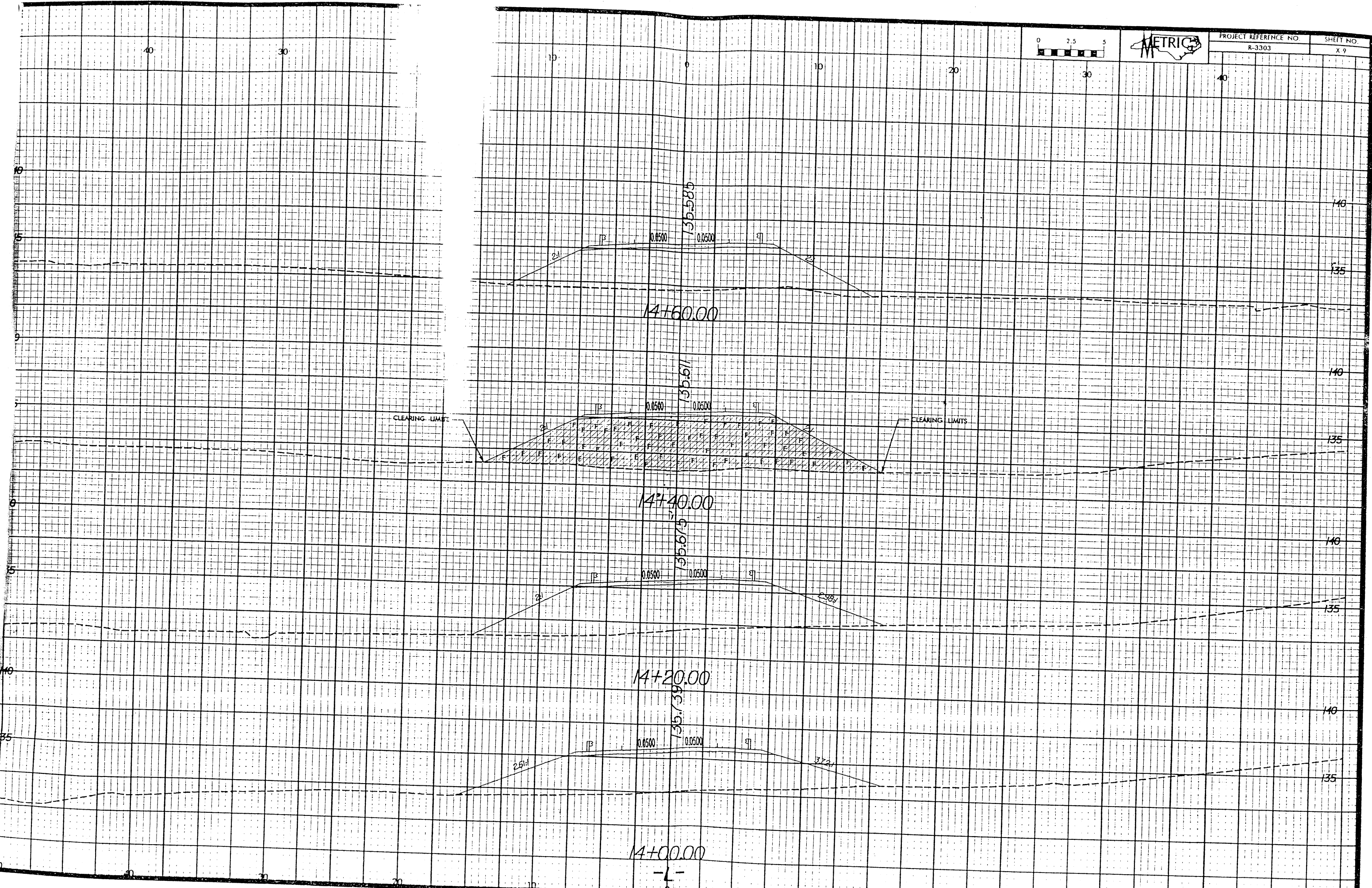
SS DENOTES FILL IN SURFACE WATER  
FF DENOTES FILL IN WETLAND

BERM DITCH LINE  
W/CLASS 'B' RIPRAP  
STA 13+30 -L- RT TO  
STA 13+60 -L- RT  
SEE DETAIL #1

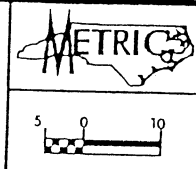
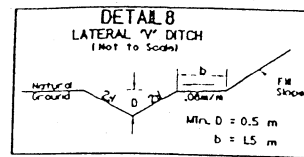
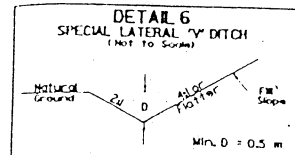
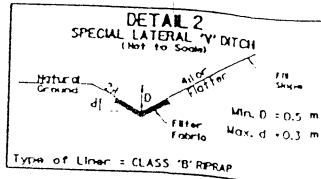
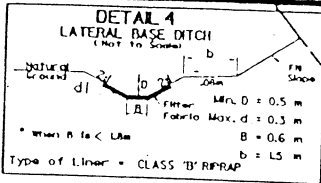




PROJECT REFERENCE NO. R-3303 SHEET NO. X-9



REVISIONS



PROJECT REFERENCE NO. R-3303 SHEET NO. 10

R/W SHEET NO.

ROADWAY DESIGN ENGINEER HYDRAULICS ENGINEER

**PRELIMINARY PLANS**  
DO NOT USE FOR CONSTRUCTION

**INCOMPLETE PLANS**  
DO NOT USE FOR R/W ACQUISITION

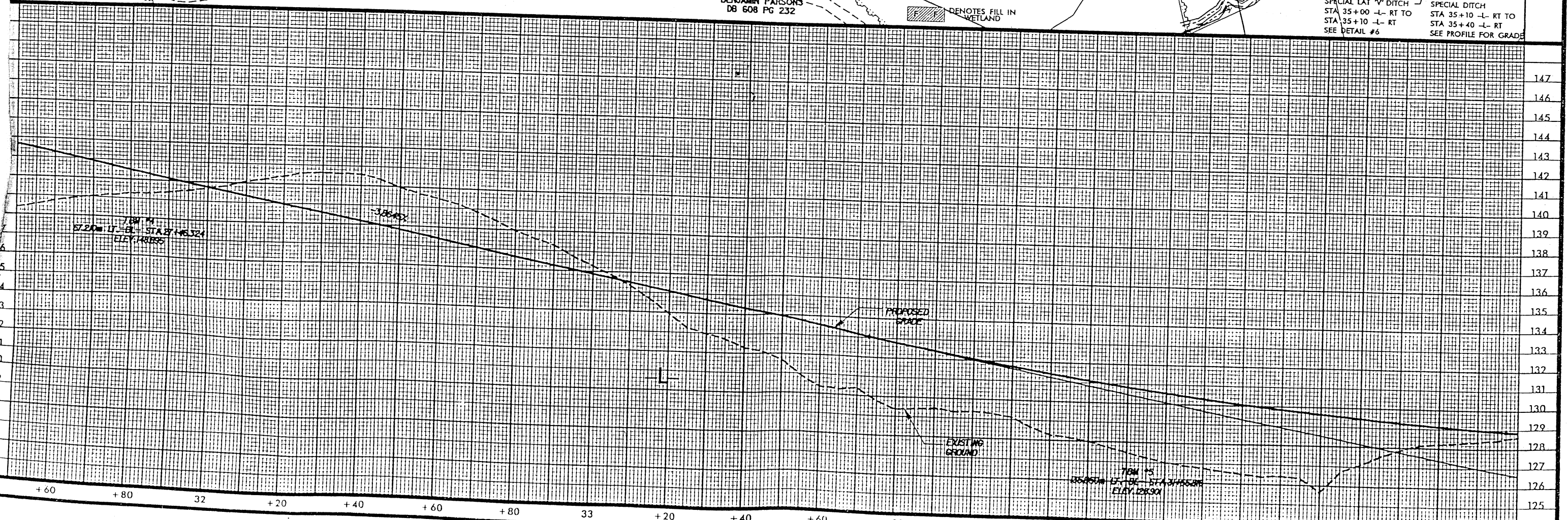
WANG ENGINEERING  
15200 WESTON PARKWAY  
SUITE 101  
CARY, NC 27513

CONST. REV.  
R/W REV.

LUCY MABE  
DB 79 PG 101

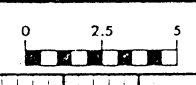
SEE SHEET 9

MATCHLINE STA. 35+40.000  
SEE SHEET 11



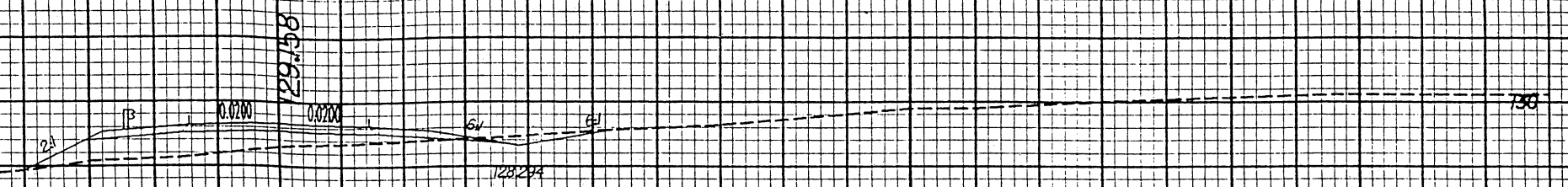
Stationing: +60 +80 32 +20 +40 +60 +80 33 +20 +40 +60 +80

Elevations: 147 146 145 144 143 142 141 140 139 138 137 136 135 134 133 132 131 130 129 128 127 126 125

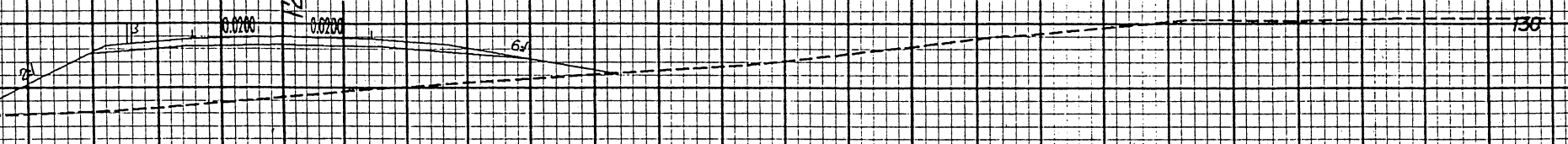


PROJECT REFERENCE NO. R-3303 SHEET NO. X-33

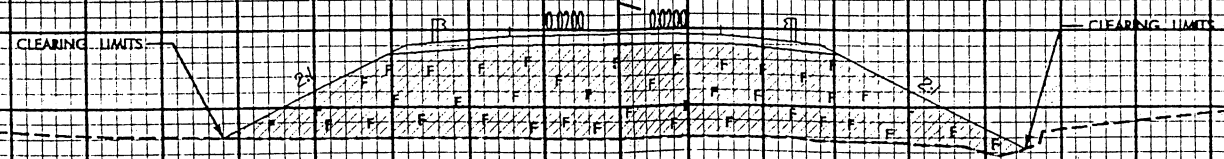
10 0 10 20 30 40



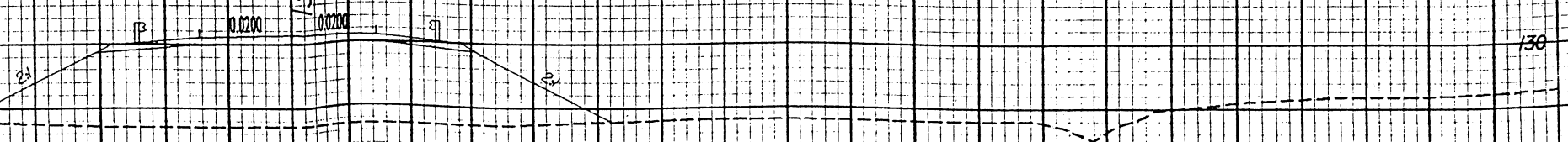
35+20.00



35+00.00



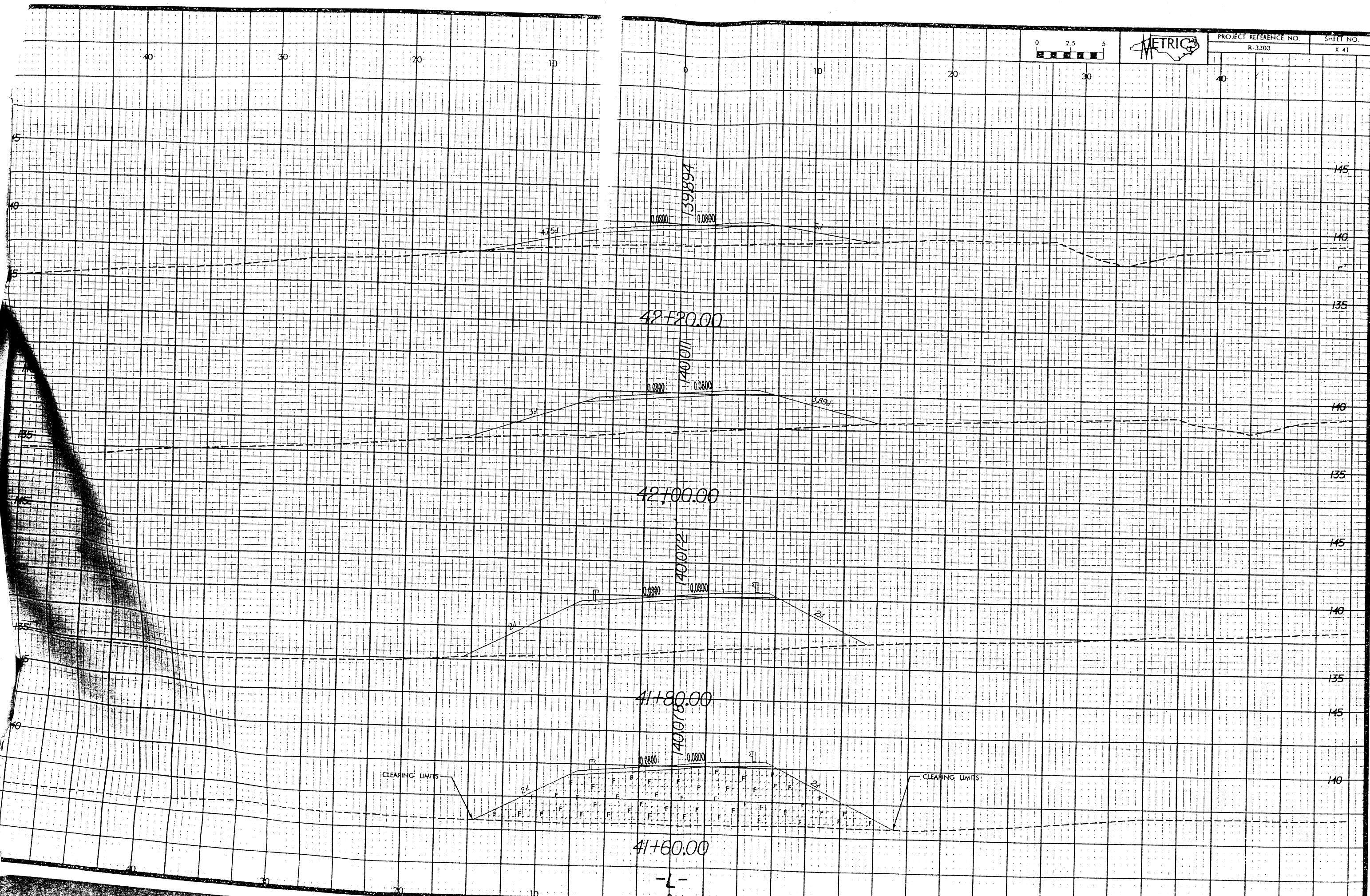
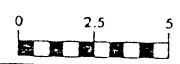
34+80.00



34+60.00







CLEARING LIMITS

CLEARING LIMITS

41+60.00

41+80.00

42+00.00

42+20.00