



STATE OF NORTH CAROLINA  
DEPARTMENT OF TRANSPORTATION

MICHAEL F. EASLEY  
GOVERNOR

LYNDO TIPPETT  
SECRETARY

September 19, 2005

U.S. Army Corps of Engineers  
Asheville Regulatory Field Office  
151 Patton Avenue, Room 208  
Asheville, NC 28801-5006

ATTN: Mr. Steve Lund  
NCDOT Coordinator

Subject: **Request for Individual Permit Modification** for NC 16 from north of NC 73 in Lincoln County to North of SR 1386 (St. James Church Road) in Lincoln County. Federal Aid Project No. STP-F-24-1(34) State Project No. 8.1830501. \$475.00 Debit work order 34383.1.4. TIP Project No. R-2206B.

Reference: USACE Individual Permit dated October 7, 2004, Action ID 200420899. NCDWQ Water Quality Certification dated September 21, 2004, Individual WQC No. 3476.

Dear Mr. Lund:

The purpose of this letter is to request modifications to the Clean Water Act (CWA) Individual Section 404 Permit and the Individual Water Quality Certification. This project is currently under construction. The North Carolina Department of Transportation (NCDOT) is proposing modifications to Site 4B - L-132+03 Rt. to 133+12 Lt. and Site 14B, Station -Y9-REV 18+46 Lt. to 18+56.

Permit Site 4B is a single barrel box culvert on a UT to Forney Creek. Due to the low flow and low bed load carrying capacity of the subject stream, a 12-16 inch head cut has developed and is moving upstream. A smaller UT intersects the subject stream at the head cut and has developed its own head cut. NCDOT proposes to place a cross-vane weir on the main stem and a boulder in the smaller UT. These measures are proposed to act as grade control and allow aquatic passage.

Permit Site 14B is a double barrel box culvert on Forney Creek. A small, unnamed tributary intersects Forney Creek approximately 25 feet upstream of the wingwall for the culvert. The banks of the unnamed tributary were armored with riprap keyed in from the toe of the stream bank to the average high water mark approximately two feet above the surface of the water. This is an after the fact notification. Action was taken to prevent the stream from migrating downstream and discharging into the wingwall of the box culvert. The amount of permanent channel impacted is 75 feet.

MAILING ADDRESS:  
NC DEPARTMENT OF TRANSPORTATION  
PROJECT DEVELOPMENT AND ENVIRONMENTAL ANALYSIS  
1548 MAIL SERVICE CENTER  
RALEIGH NC 27699-1548

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

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

LOCATION:  
TRANSPORTATION BUILDING  
1 SOUTH WILMINGTON STREET  
RALEIGH NC

A copy of the letter from the Ecosystem Enhancement Program (EEP) dated August 29, 2005, indicating their willingness and ability to provide the additional mitigation for this impact is included with this permit modification request.

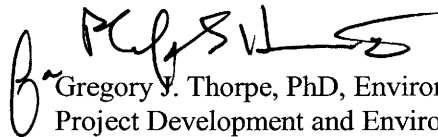
#### REGULATORY APPROVALS

The NCDOT respectfully requests that the referenced 404 USACE Permit (and Modification) and 401 Water Quality Certification (and Modification) be modified to reflect the revision to the natural stream design outlined in this letter. In compliance with Section 143-215.3D(e) of the NCAC, NCDOT will provide \$475 to act as payment for processing the Section 401 certification modification application previously noted in this application (see Subject line). We are providing seven copies of this modification request to the North Carolina Department of Environment and Natural Resources, Division of Water Quality for their review.

Enclosed are copies of the permitted areas, site map, and pictures of the construction.

If you have any questions, concerns, or need any additional information please contact Mr. Chris Underwood at (919) 715-1451.

Sincerely,



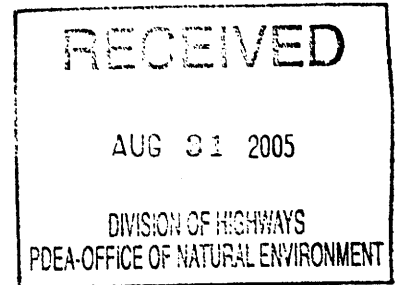
Gregory J. Thorpe, PhD, Environmental Management Director  
Project Development and Environmental Analysis Branch

CC: W/attachment

Mr. John Hennessy, NCDWQ  
Ms. Marella Buncick, USFWS  
Ms. Marla Chambers, NCWRC  
Ms. Becky Fox, USEPA – Whittier, NC  
Mr. Ronald Mikulak, USEPA – Atlanta, GA  
Mr. Clarence W. Coleman, P.E., FHWA  
Dr. David Chang, P.E., Hydraulics  
Mr. Greg Perfetti, P.E., Structure Design  
Mr. Mark Staley, Roadside Environmental  
Mr. M.L. Holder, P.E., Division 12 Engineer  
Ms. Trish Simon, Division 12 Environmental Officer

W/o attachment

Mr. Jay Bennett, P.E., Roadway Design  
Mr. Majed Alghandour, P. E., Programming and TIP  
Mr. Art McMillan, P.E., Highway Design  
Mr. Scott McLendon, USACE, Wilmington  
Ms. Beth Harmon, EEP  
Mr. Todd Jones, NCDOT External Audit Branch  
Mr. Carl Goode, P.E., Human Environment Unit  
Mr. Derrick Weaver, P.E., PDEA



August 29, 2005

Mr. Gregory J. Thorpe, Ph.D.  
Environmental Management Director  
Project Development and Environmental Analysis Branch  
North Carolina Department of Transportation  
1548 Mail Service Center  
Raleigh, North Carolina 27699-1548

Dear Dr. Thorpe:

Subject: EEP Mitigation Acceptance Letter:

**R-2206B/C, NC 16 Widening, Lincoln and Catawba Counties**

The purpose of this letter is to notify you that the Ecosystem Enhancement Program (EEP) will provide the additional stream mitigation for the subject project. Based on the information supplied by you in letters dated July 15, 2005 and August 16, 2005, the impacts are located in CU 03050101 of the Catawba River Basin in the Southern Piedmont (SP) Eco-Region, and are as follows:

Stream Impacts: 107 feet

As stated in your letter, the subject project is listed in Exhibit 2 of the Memorandum of Agreement among the North Carolina Department of Environment and Natural Resources, the North Carolina Department of Transportation, and the U. S. Army Corps of Engineers, Wilmington District dated July 22, 2003. The mitigation for the subject project will be provided in accordance with this agreement.

If you have any questions or need additional information, please contact Ms. Beth Harmon at 919-715-1929.

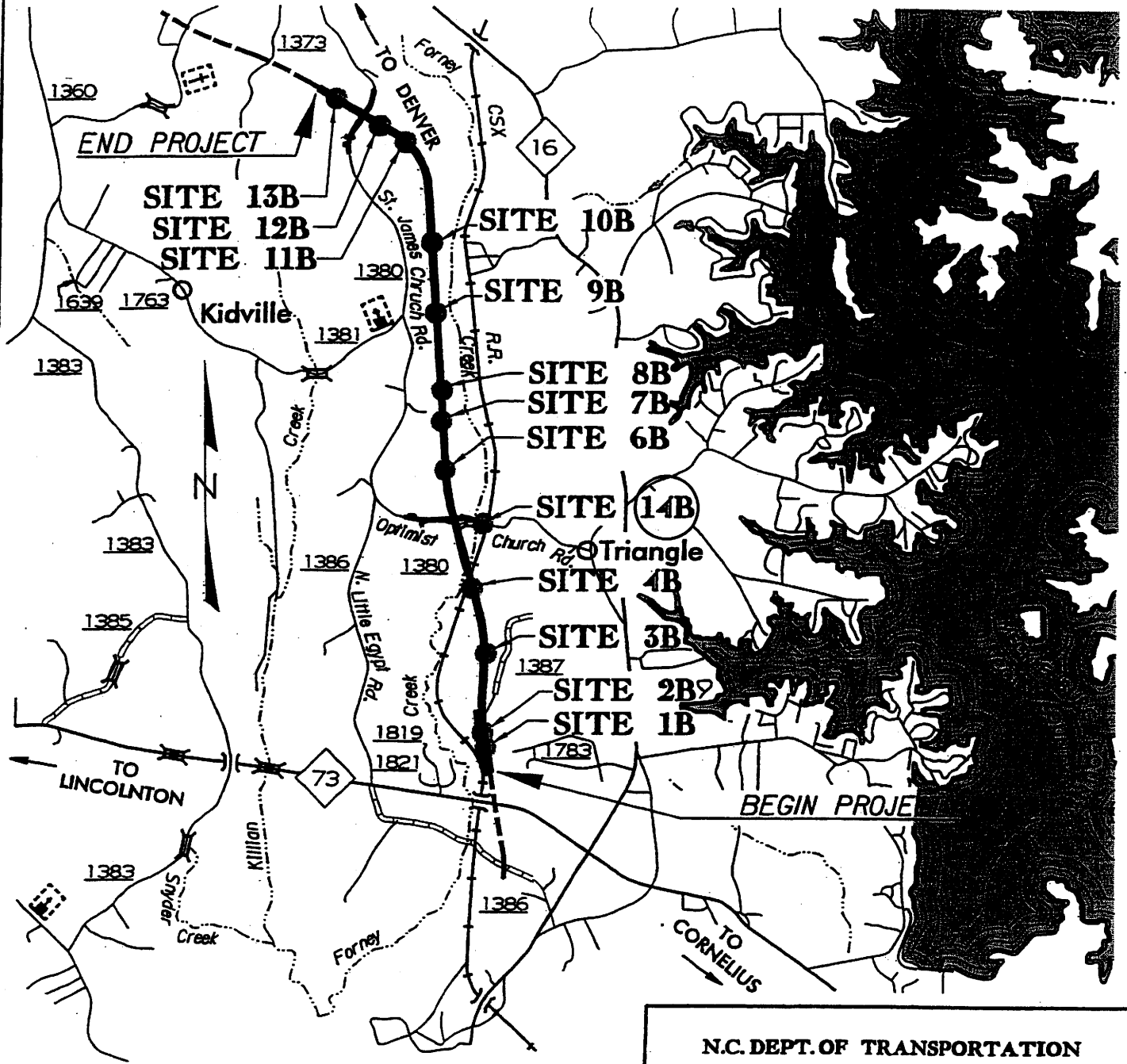
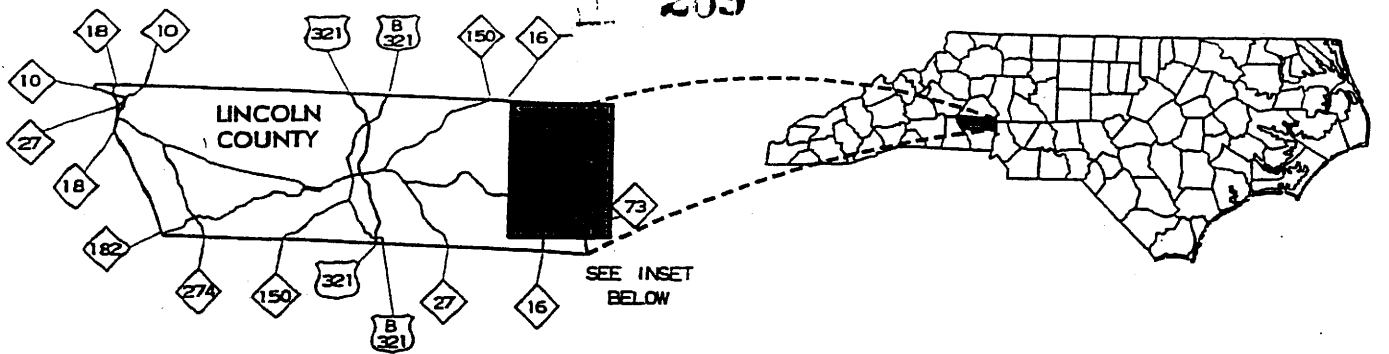
Sincerely,

A handwritten signature in black ink that reads "James B. Stumhill Sr".

William D. Gilmore, P.E.  
EEP Director

cc: Mr. Steve Lund, USACE-Asheville  
Mr. John Hennessy, Division of Water Quality, Wetlands/401 Unit  
File: R-2206B/C Additional





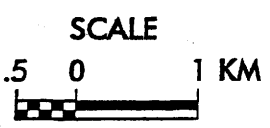
LOCATION MAP

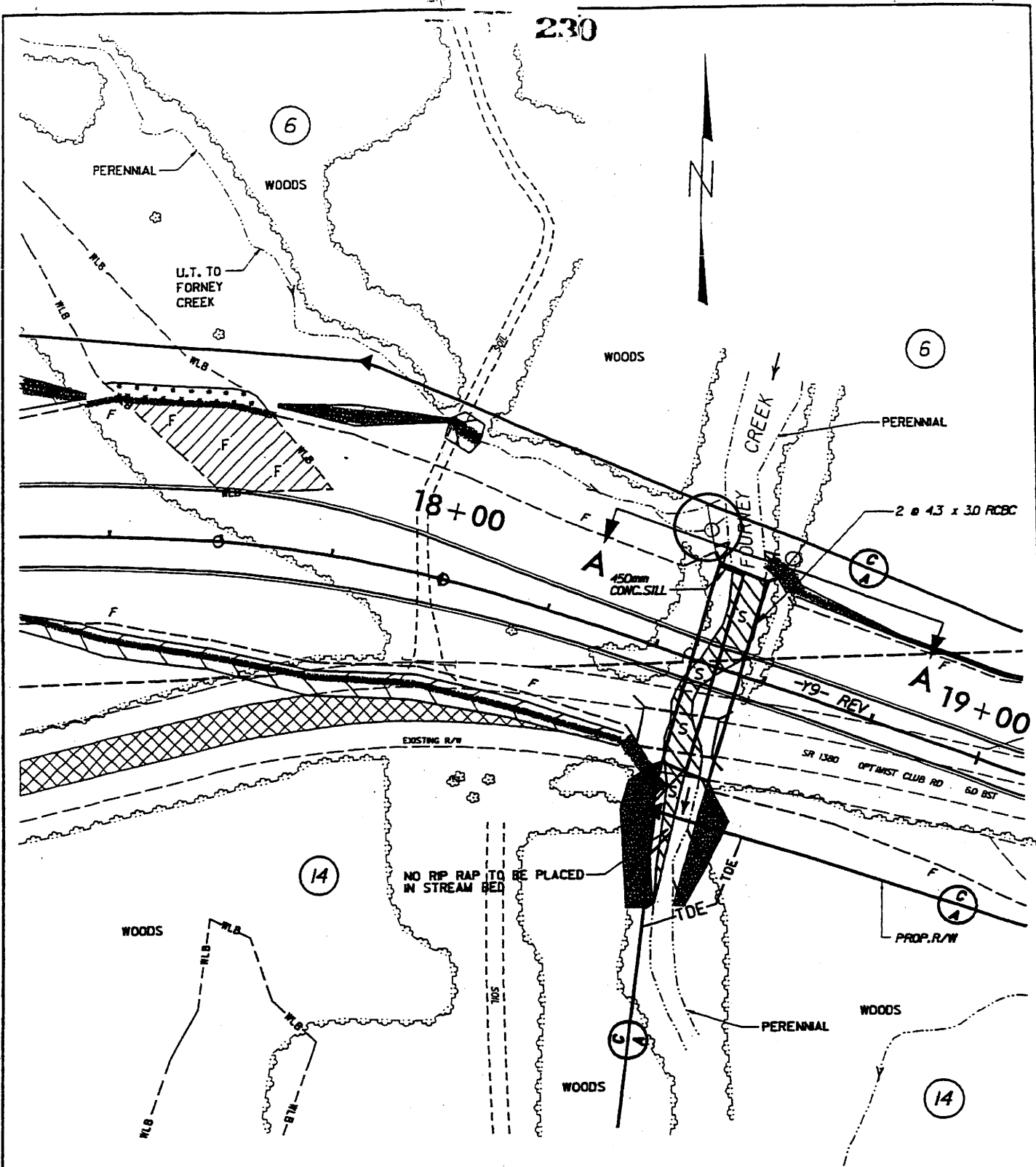
NOTE: SITE 5B REMOVED  
DUE TO NO IMPACT

N.C. DEPT. OF TRANSPORTATION  
DIVISION OF HIGHWAYS

LINCOLN COUNTY

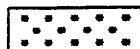
PROJECT: 8.1830501 (R-2206B)  
NC-16 BYPASS





**PLAN VIEW  
SITE 14B**

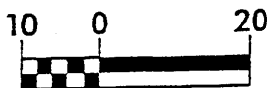
DENOTES MECHANIZED  
CLEARING



DENOTES FILL IN  
WETLANDS



DENOTES SURFACE WATER  
IMPACT (NATURAL)



**N.C. DEPT. OF TRANSPORTATION  
DIVISION OF HIGHWAYS**

**LINCOLN COUNTY**

**PROJECT: 81830501 (R-2206B)  
NC-16 BYPASS**

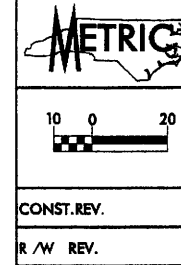
**SHEET 22 OF 35**

1/16/04

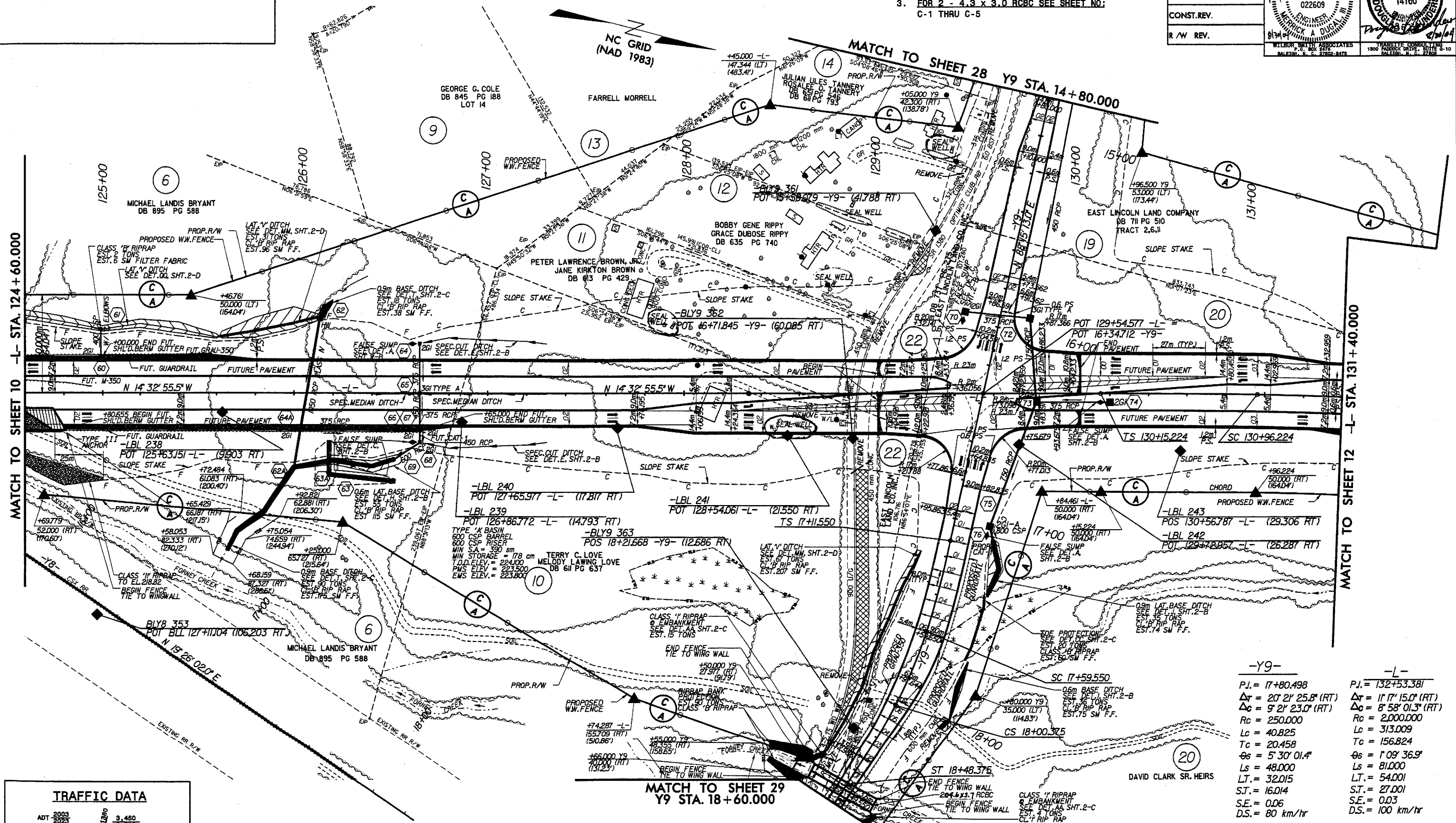
REVISIONS

NOTES

- FOR PROFILE OF: SEE SHEET NO:  
-L- 38 THRU 40  
Y9 56 THRU 57
- FOR CROSS SECTIONS OF: SEE SHEET NO:  
-L- X-38 THRU X-51  
Y9 X-153 THRU X-161
- FOR 2 - 4.3 x 3.0 RCBC SEE SHEET NO:  
C-1 THRU C-5



PROJECT REFERENCE NO. R-22068	SHEET NO. 11
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER NORTH CAROLINA PROFESSIONAL SEAL 022609	HYDRAULICS ENGINEER NORTH CAROLINA PROFESSIONAL SEAL 14160
CONST. REV.	
R/W REV.	



MATCH TO SHEET 10 -L- STA. 124 + 60.000

MATCH TO SHEET 12 -L- STA. 131 + 40.000

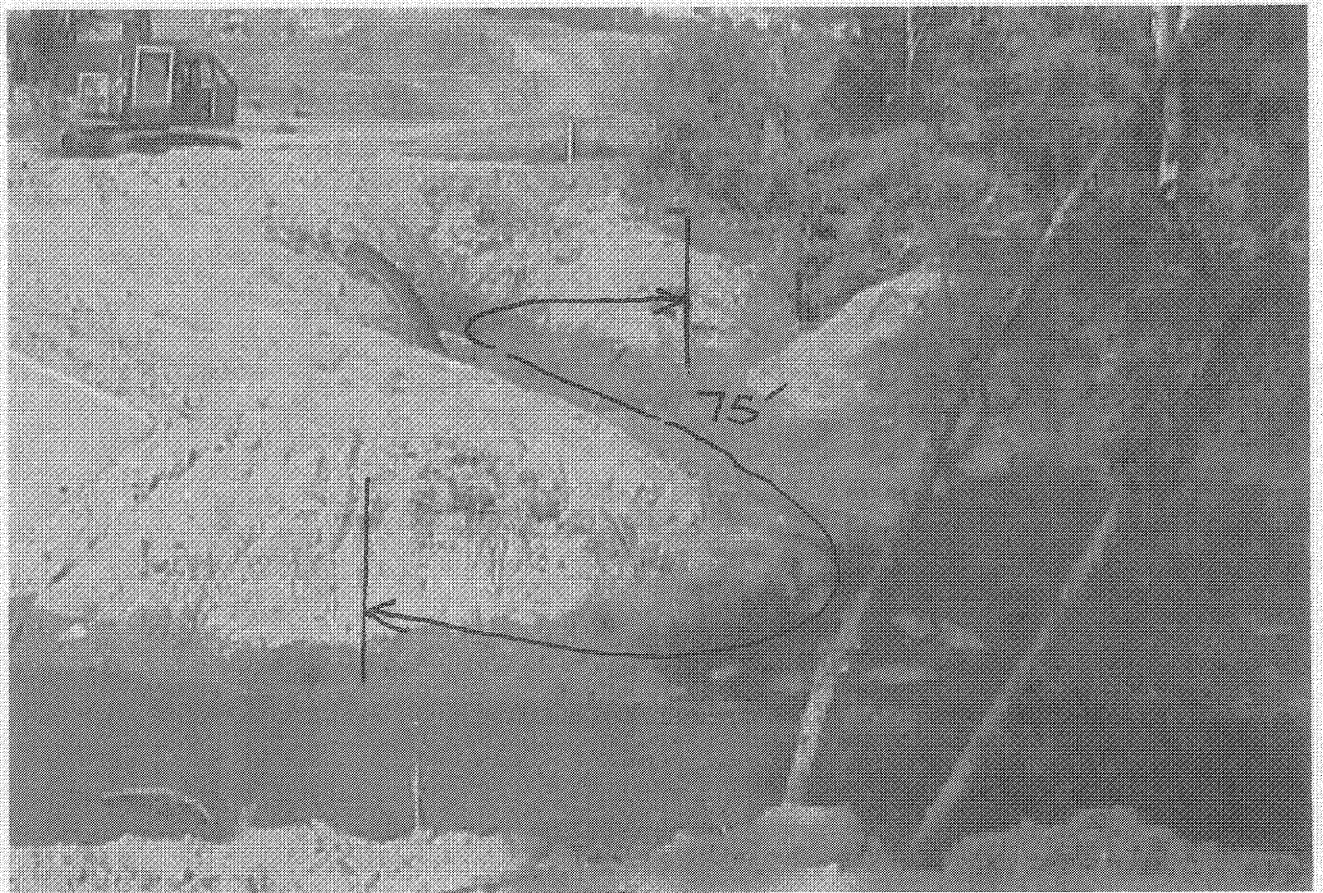
MATCH TO SHEET 29  
Y9 STA. 18 + 60.000

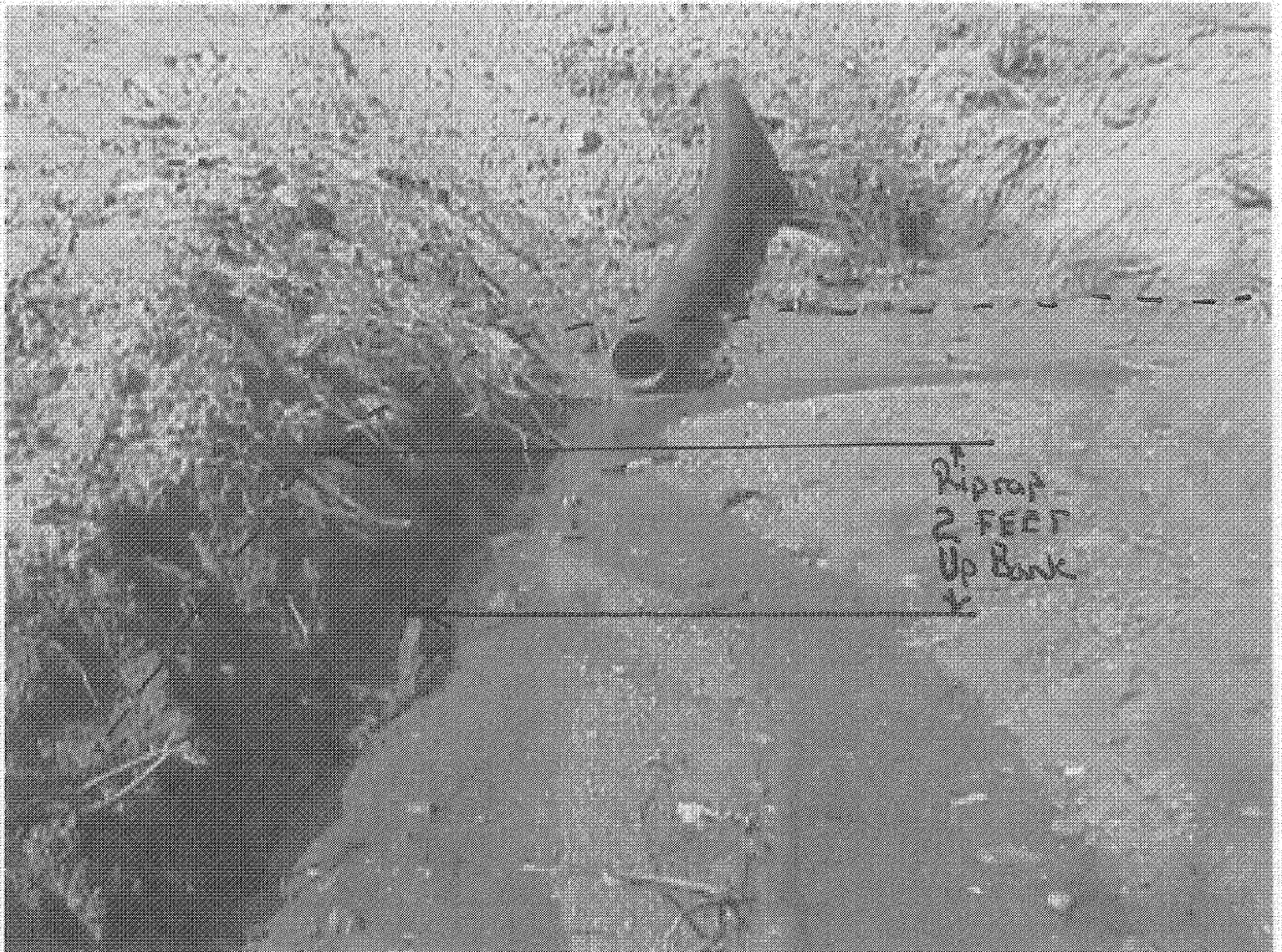
-Y9-	-L-
P.I. = 17+80.498	P.I. = 132+53.381
$\Delta r = 20' 21" 25.8" (RT)$	$\Delta r = 11' 17" 15.0" (RT)$
$\Delta c = 9' 21" 23.0" (RT)$	$\Delta c = 8' 58" 01.3" (RT)$
Rc = 250.000	Rc = 2,000.000
Lc = 40.825	Lc = 313.009
Tc = 20.458	Tc = 156.824
$\Theta s = 5' 30" 01.4"$	$\Theta s = 1' 09" 36.9"$
Ls = 48.000	Ls = 81.000
LT = 32.015	LT = 54.001
ST = 16.014	ST = 27.001
S.E. = 0.06	S.E. = 0.03
D.S. = 80 km/hr	D.S. = 100 km/hr

TRAFFIC DATA

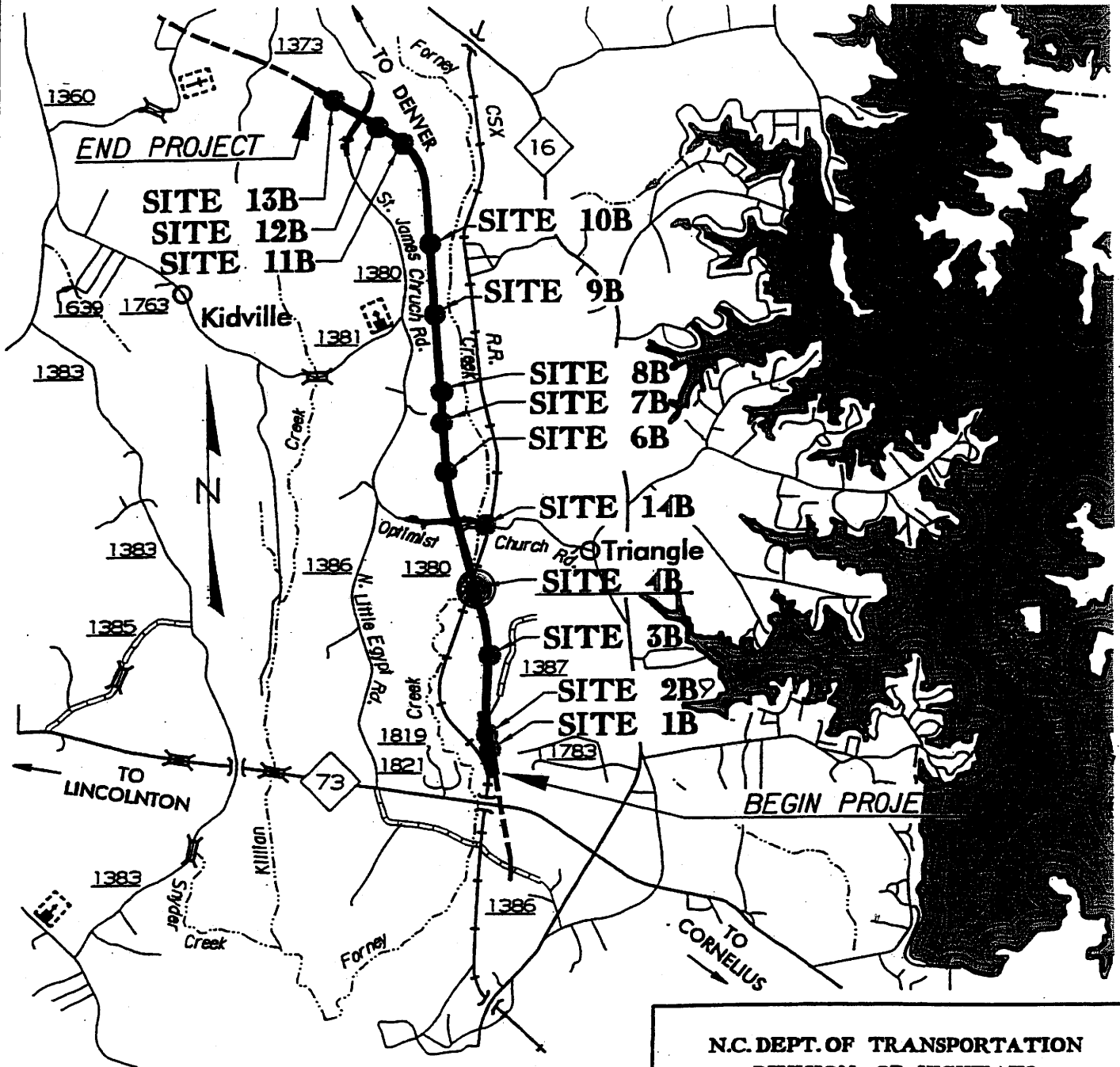
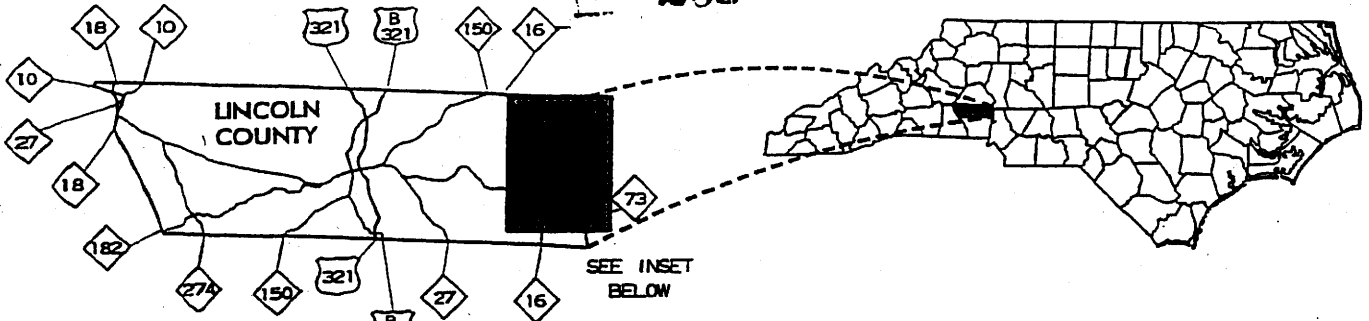
ADT 2003	3,450
2023	8,810
2,190	540
3,800	972
12,050	11,210
20,400	18,480
880	1,480
1,510	2,580
3,220	8,020



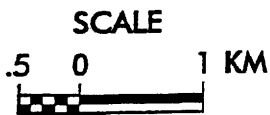








LOCATION MAP



NOTE: SITE 5B REMOVED  
DUE TO NO IMPACT

N.C. DEPT. OF TRANSPORTATION  
DIVISION OF HIGHWAYS

LINCOLN COUNTY

PROJECT: 8.1830501 (R-2206B)  
NC-16 BYPASS

7

WOODS

U.T. TO FORNEY CREEK

PERENNIAL

WOODS

C  
A

NC 16 BYPASS  
SOUTHBOUND

132+00

133+00

NC 16 BYPASS  
NORTHBOUND

375 RCP  
400 CSE  
WILKINS

10 21.15 RCP

C  
A  
NO RIP RAP TO BE PLACED  
IN STREAM BED

PERENNIAL

U.T. TO FORNEY CREEK

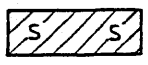
WOODS

6

WOODS

# PLAN VIEW SITE 4B

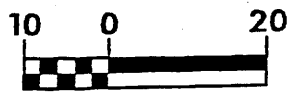
DENOTES SURFACE WATER  
IMPACT (NATURAL)



N.C. DEPT. OF TRANSPORTATION  
DIVISION OF HIGHWAYS

LINCOLN COUNTY

PROJECT: 8.1830501 (R-2206B)  
NC-16 BYPASS



REVISIONS

Remit Site  
HB

19  
EAST LINCOLN LAND COMPANY  
DB 711 PG 510  
TRACT 2.6,11

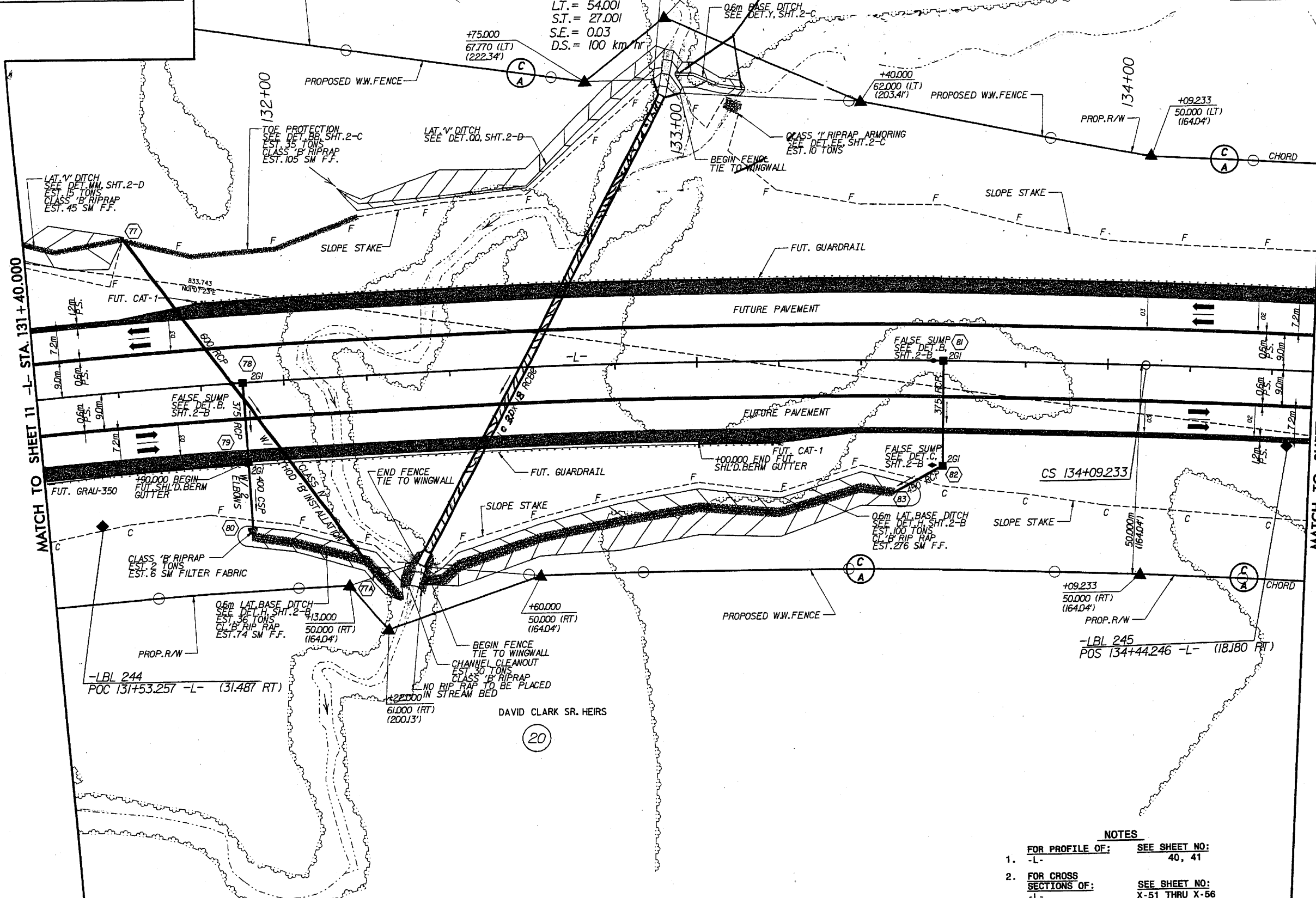
-L-  
P.I. = 132+53.381  
 $\Delta T = 11' 17" 15.0" (RT)$   
 $\Delta C = 8' 58" 01.3" (RT)$   
Rc = 2,000.000  
Lc = 313.009  
Tc = 156.824  
 $\theta_s = 1' 09" 36.9"$   
Ls = 81.000  
LT = 54.001  
S.T. = 27.001  
S.E. = 0.03  
D.S. = 100 km/hr

	PROJECT REFERENCE NO.	SHEET NO.
	R-2206B	12
	R/W SHEET NO.	
	ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
CONST. REV.		
R/W REV.		

NC GRID  
(NAD 1983)

MATCH TO SHEET 11 -L- STA. 131+40.000

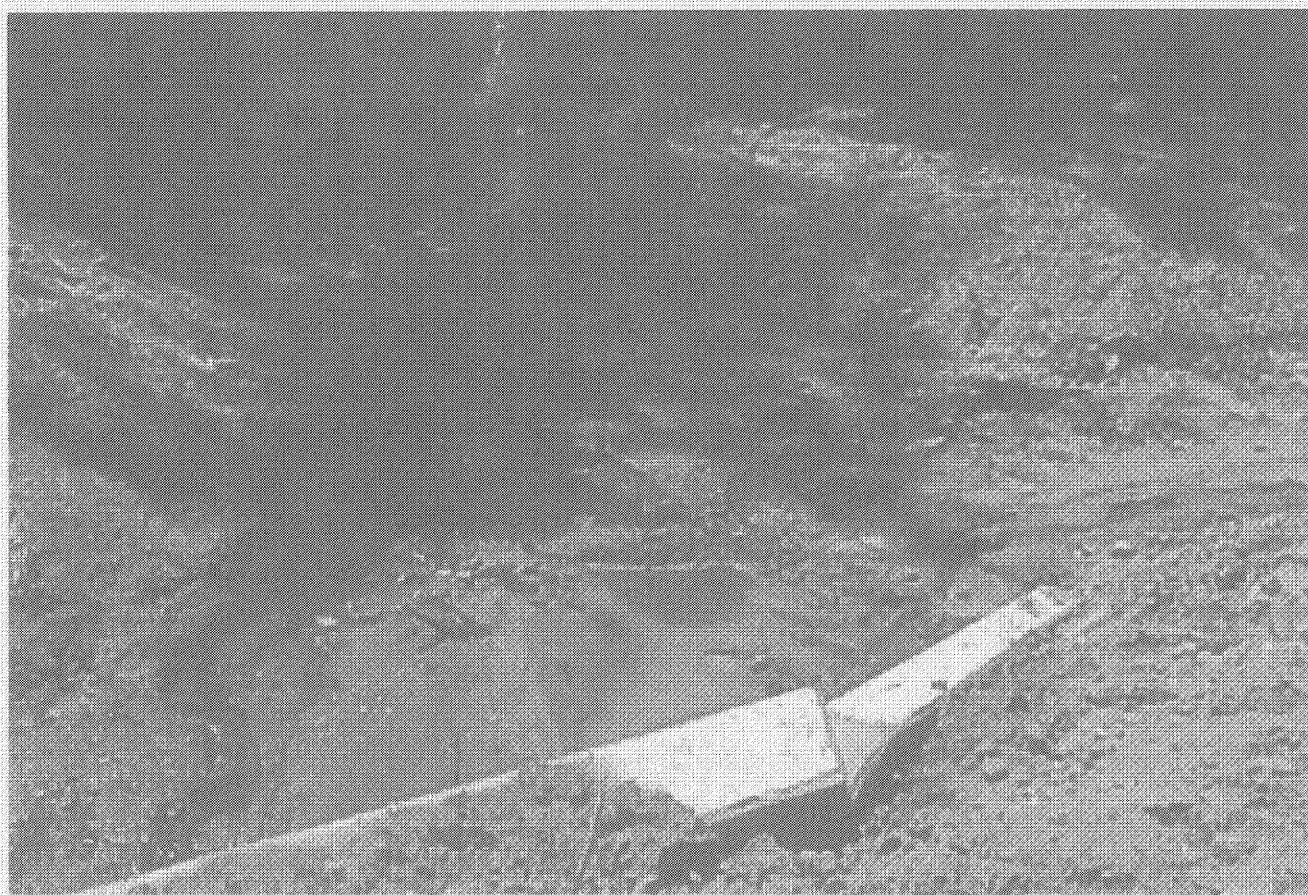
MATCH TO SHEET 13 -L- STA. 134+50.000



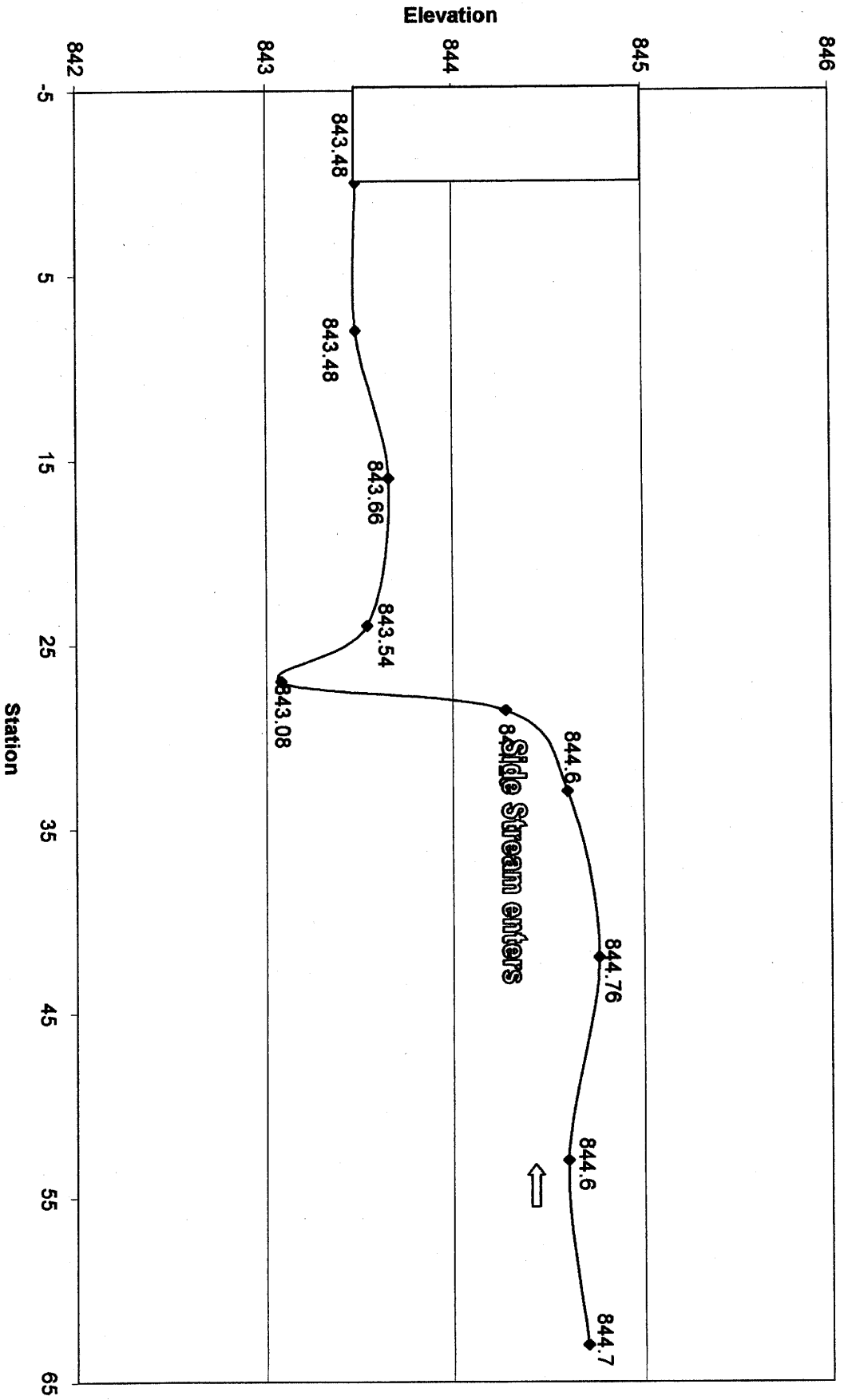
- NOTES**
- FOR PROFILE OF: SEE SHEET NO: -L- 40, 41
  - FOR CROSS SECTIONS OF: SEE SHEET NO: -L- X-51 THRU X-56
  - 2.1 x 1.5 RCBC SEE SHEET NO: C-6 THRU C-11

DATE: 8/24/05  
TIME: 11:00 AM

R-2206B, Permit Site 4B, Head Cut

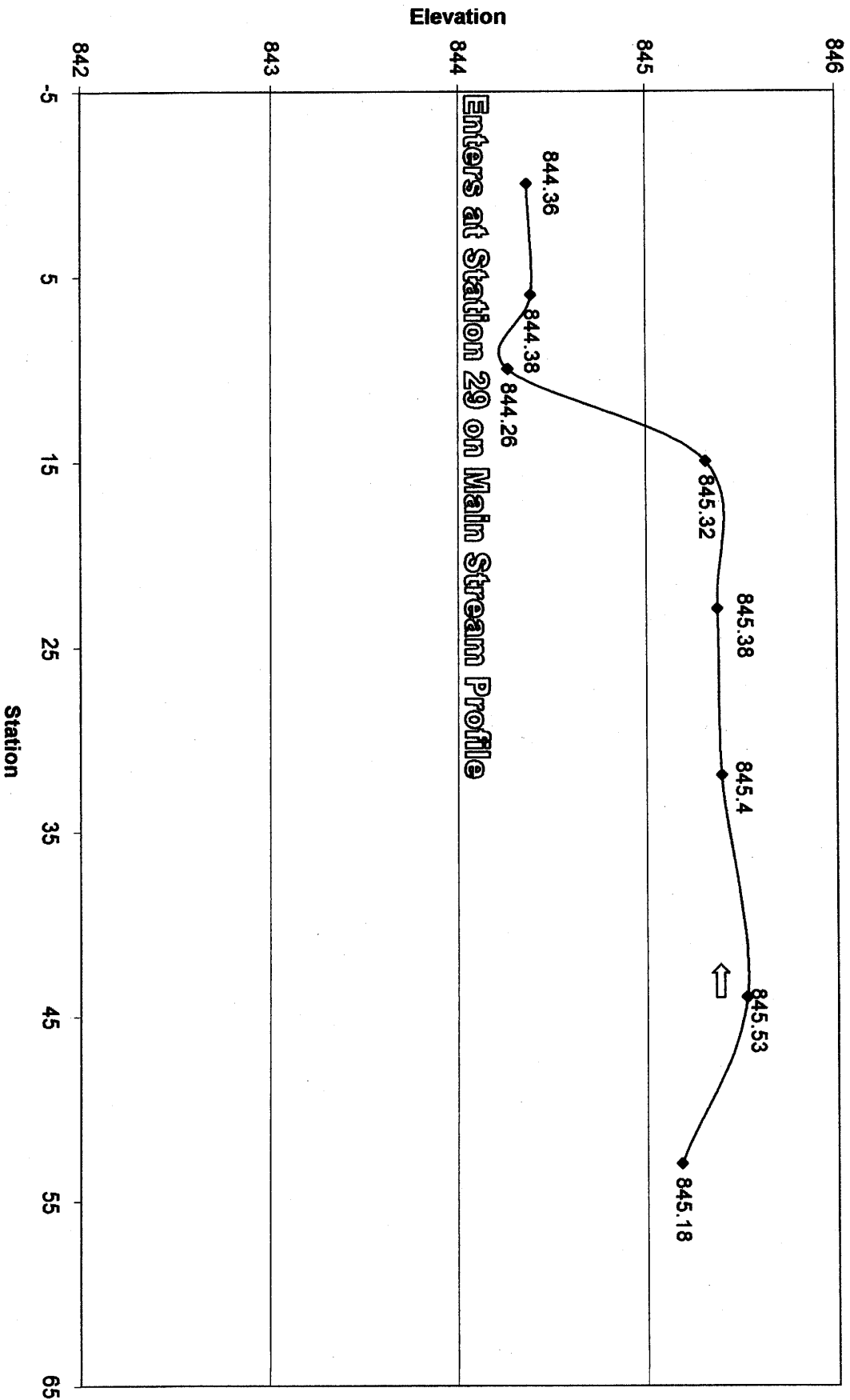


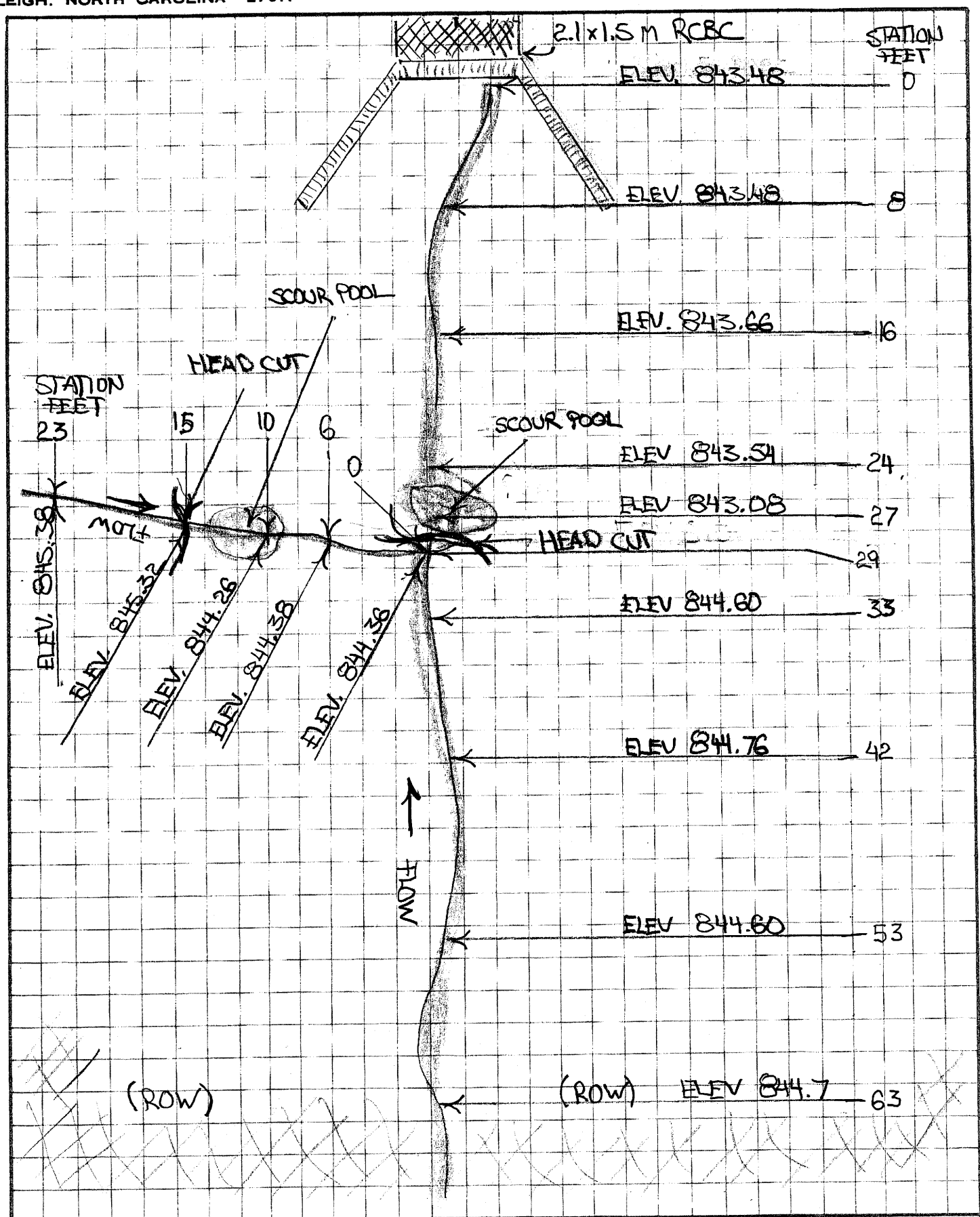
# Main Stream Channel Thalweg Profile

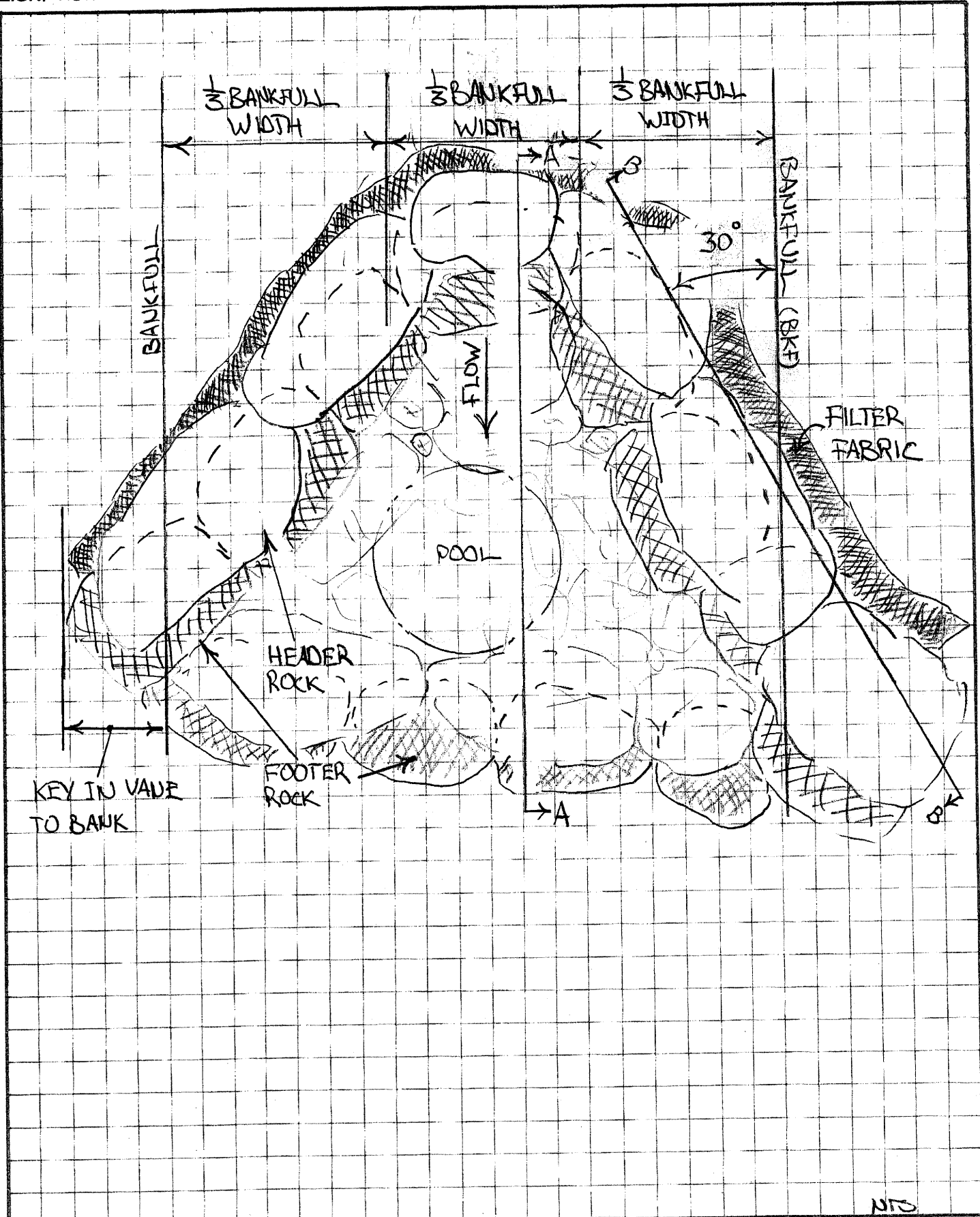


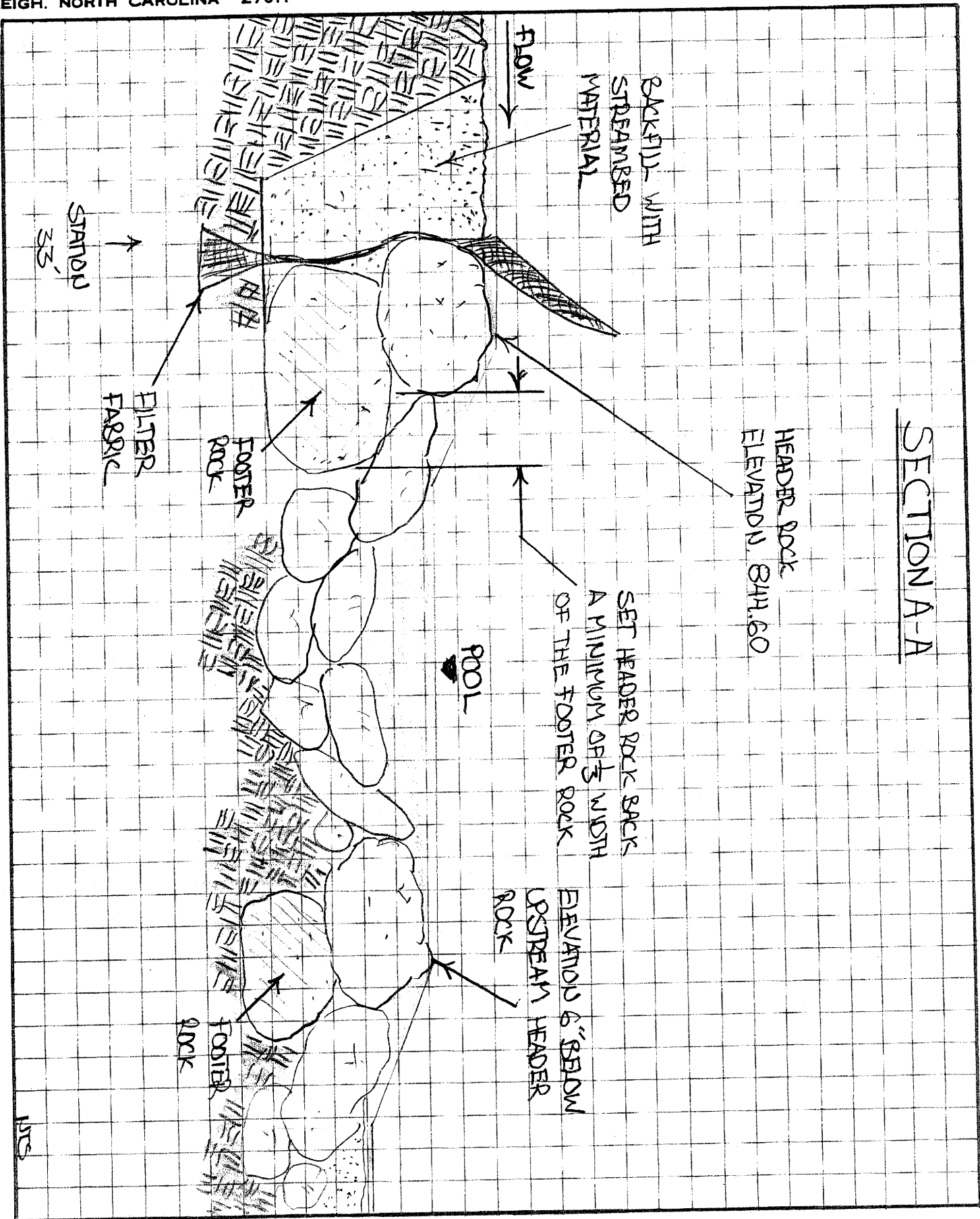


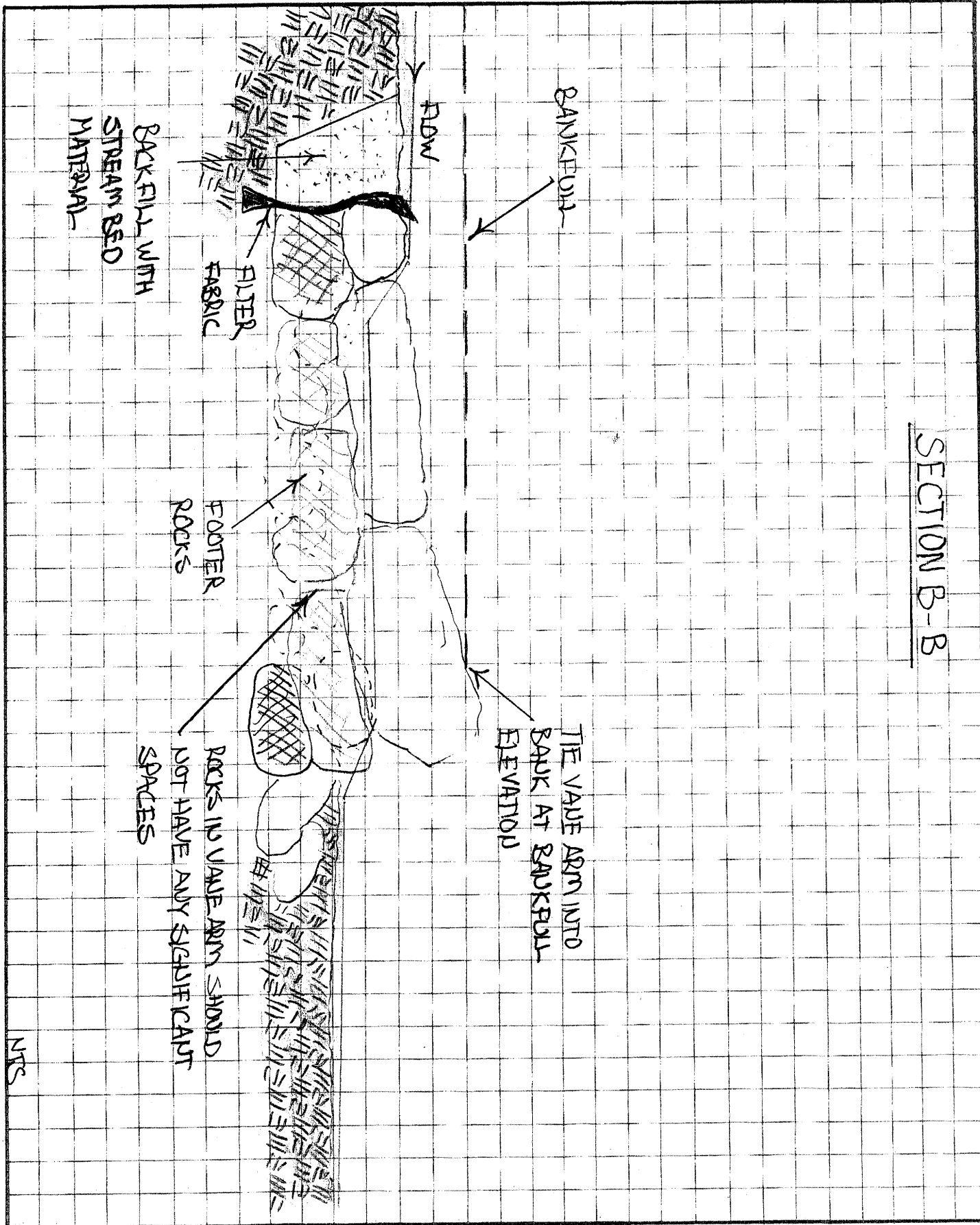
### Side Stream Channel Thalweg Profile











NTS



