



STATE OF NORTH CAROLINA  
DEPARTMENT OF TRANSPORTATION

MICHAEL F. EASLEY  
GOVERNOR

LYNDO TIPPETT  
SECRETARY

March 13, 2008

Eric Alsmeyer  
USACE Raleigh Regulatory Field Office  
3331 Heritage Trade Drive, Suite 105  
Wake Forest, NC 27857

Subject: Request for Section 401 and Section 404 Individual Permit Modification and Permit Extension for Widening of US 15-501 from north of SR 2294 (Mt. Moriah Road) to south of SR 1116 (Garrett Road) in Durham County. Federal Project No. NHF-15 (8), State Project No. 8.1352301, Division 5, WBS Element No. 35012.1.1, TIP No. U-4012.

Debit \$570.00 from WBS No. 35012.1.1.

Reference:

1. NCDOT permit application (December 13, 2004)
2. NCDENR-DWQ 401 Water Quality Certification (February 9, 2005) WQC Project No. 042000
3. USACE Individual Permit (March 16, 2005) Action ID No. 200020945

Dear Sir:

The North Carolina Department of Transportation (NCDOT) proposes to modify the Section 401 and 404 Individual Permits (IPs) previously issued for construction of this project. This permit modification application specifically reflects construction revisions at the bridge over New Hope Creek on US 15-501 in Durham County and location of two grass swales. The project is located within the Cape Fear River basin and Hydrologic Cataloging Unit 03030002.

NCDOT would also like to request permit extensions. The current permits are set to expire on December 31, 2008. Construction is expected to be complete by August 3, 2010.

**Summary of Changes**

**Bank Stabilization**

**Background:**

The interagency permit drawing review meeting for U-4012 was held on July 21, 2004. A review of the meeting minutes (dated August 24, 2004) indicates that it was agreed to install rip rap where the existing piers are to be removed along New Hope Creek at 70+35 and 70+75 -L- to help stabilize the stream bank. The North Carolina Wildlife Resource Commission (NCWRC) noted that the flattening of the stream bank slopes to 2:1 and lining with rip rap is acceptable.

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

TELEPHONE: 919-715-1334 or  
919-715-1335

FAX: 919-715-5501

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

**LOCATION:**  
2728 CAPITAL BLVD. SUITE 240  
RALEIGH NC 27604

The described changes were to be depicted on the plan and profile views. This information is not depicted on any permit drawings submitted to the regulatory agencies as part of the permit application dated December 13, 2004. The attached revised permit drawings 3, 7, 11 and 14 of 15 indicate the permanent installation of Class II rip rap below normal water surface on New Hope Creek at 70+35 and 70+75 -L- to stabilize the stream banks after removal of existing piers.

Jurisdictional Changes: The installation of Class II rip rap below normal water surface on New Hope Creek at 70+35 and 70+75 -L- will result in an additional 72 linear feet of permanent stream impact due to bank stabilization. The revised plan sheet 7 is also included.

As reported in the September 28, 2007 letter from Division 5, there are two clarifications that need to be addressed for placement of the special cut grass swale and the lateral grass swale. Below are the details for the swales.

### **Special Cut Grass Swale**

#### Background:

In the original permit drawings submitted, permit drawing 4 of 15 indicates that Special Cut Grass Swale (Detail C) is from 78+85 to 81+00 Rt. Plan Sheets 2-F and 8 indicate that Special Cut Grass Swale (Detail C) is from 78+85 to 81+50 Rt. The NCDOT Hydraulics Unit has indicated that the Special Cut Grass Swale (Detail C) should be constructed from 78+85 to 81+50 Rt. See the attached revised plan sheets 2-F and 8. This construction revision will not result in additional impacts to streams, wetlands or surface waters.

### **Lateral Grass Swale**

#### Background:

In the original permit drawings submitted, permit drawing 4 indicates that Lateral Grass Swale (Detail D) is from 79+00 to 81+00 Lt. Plan Sheets 2-F and 8 indicate that Lateral Grass Swale (Detail D) is from 79+00 to 81+50 Lt. The NCDOT Hydraulics Unit has indicated that the Lateral Grass Swale (Detail D) should be constructed from 79+00 to 81+50 Lt. See the attached revised plan sheets 2-F and 8. This construction revision will not result in additional impacts to streams, wetlands or surface waters.

### **Mitigation**

NCDOT has avoided and minimized impacts to jurisdictional resources to the greatest extent possible. However, the project will have additional permanent stream impacts of 72 feet for bank stabilization at New Hope Creek (HUC 03030002). NCDOT does propose compensatory mitigation for the additional impacts since there will be no loss of waters of the U.S.

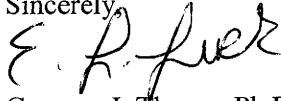
## **REGULATORY APPROVALS**

Section 404 Permit: The NCDOT requests that the referenced Individual Permit be modified and extended to reflect the revisions outlined in this letter.

Section 401 Permit: We also are hereby requesting a modified 401 Individual Certification and extension. In compliance with Section 143-215.3D (e) of the NCAC, we will provide \$570 to act as payment for processing the Section 401 permit. We are providing five copies of this application to the North Carolina Department of Environment and Natural Resources, Division of Water Quality, for their review.

A copy of this permit application will be posted on the NCDOT Website at:  
<http://www.ncdot.org/doh/preconstruct/pe/neu/Permit.html>. If you have any questions or need additional information, please call Deanna Riffey at (919) 715-1409.

Sincerely,



Gregory J. Thorpe, Ph.D.

Environmental Management Director, PDEA

for

Cc: w/attachment

Mr. Brian Wrenn, NCDWQ (5 Copies)  
Mr. Travis Wilson, NCWRC  
Mr. Gary Jordan, USFWS  
Ms. Kathy Matthews, USEPA  
Mr. Ronald Mikulak, USEPA – Atlanta, GA  
Mr. Clarence W. Coleman, P.E., FHWA

W/o attachment (see Website for attachments)

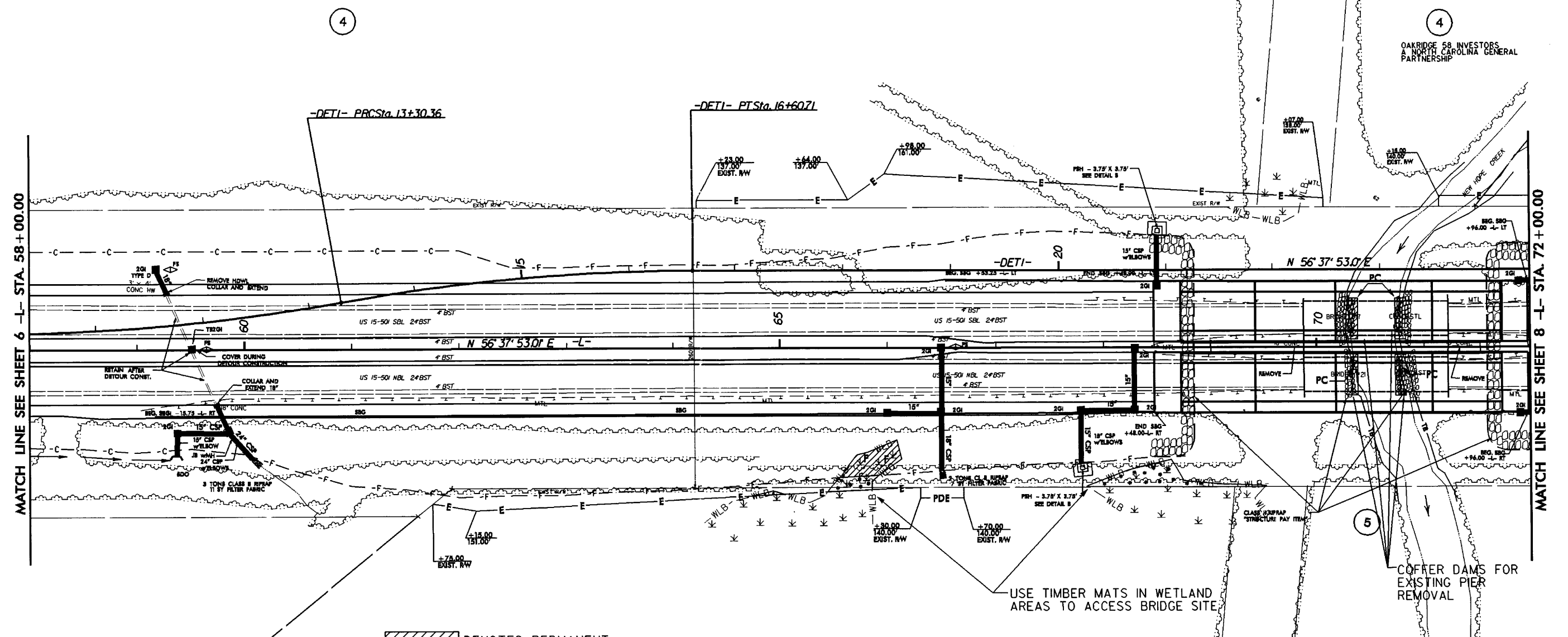
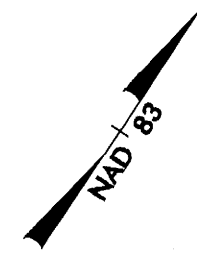
Mr. Dr. David Chang, P.E., Hydraulics  
Mr. Mark Staley, Roadside Environmental  
Mr. Greg Perfetti, P.E., Structure Design  
Mr. Victor Barbour, P.E., Project Services Unit  
Mr. J. Wally Bowman, P.E., Division Engineer  
Mr. Chris Murray, DEO  
Mr. Jay Bennett, P.E., Roadway Design  
Mr. Majed Alghandour, P. E., Programming and TIP  
Mr. Art McMillan, P.E., Highway Design  
Mr. Scott McLendon, USACE, Wilmington  
Mr. Ahmad-Al-Sharawneh, PDEA Project Engineer  
Ms. Beth Harmon  
Mr. Todd Jones, NCDOT External Audit Branch  
Mr. Carl Goode, PE, Human Environment Unit Head  
File U-4012

8/17/99

**ENGLISH**

PROJECT REFERENCE NO. U-4012	SHEET NO. 3
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
Permit Drawing Sheet 3 of 15	
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	
Revised 1/23/08	

-DETI-	
PI Sta 11+65.59	PI Sta 14+95.95
$\Delta = 9' 54' 35.9" (LT)$	$\Delta = 9' 54' 35.9" (RT)$
$D = 2' 59' 59.2"$	$D = 2' 59' 59.2"$
$L = 330.36'$	$L = 330.36'$
$T = 165.59'$	$T = 165.59'$
$R = 1910.00'$	$R = 1910.00'$
$SE = 05$	$SE = 05$
$V = 45 MPH$	$V = 45 MPH$



REVISIONS

MATCH LINE SEE SHEET 6 -L- STA. 58+00.00

MATCH LINE SEE SHEET 8 -L- STA. 72+00.00

- DENOTES PERMANENT CHANNEL IMPACTS
- DENOTES FILL IN WETLAND
- DENOTES MECHANIZED CLEARING

# SITE 1

**NOTE: PERMANENT CHANNEL IMPACTS DUE TO RIP RAP STABILIZATION OF STREAM BANKS BELOW NORMAL WATER SURFACE DUE TO REMOVAL OF EXISTING PIERS.**

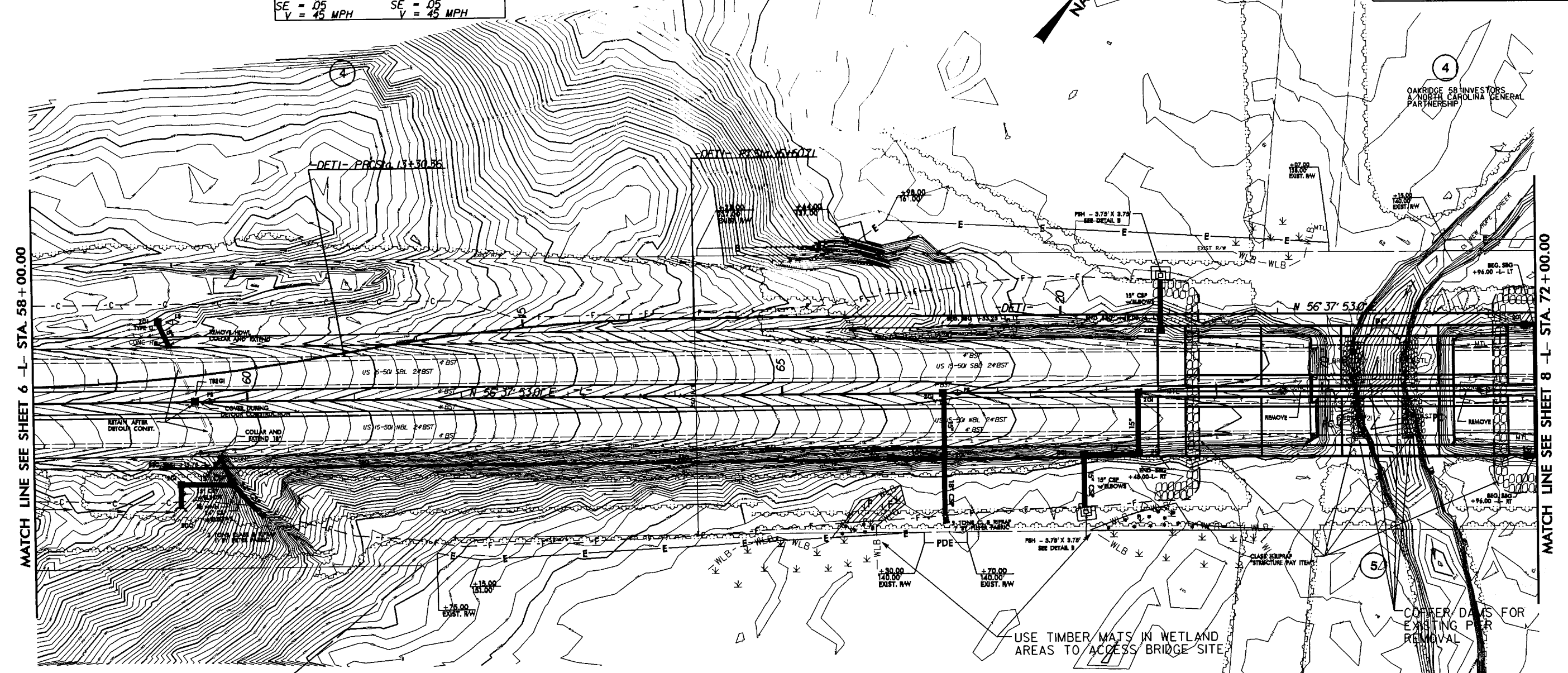
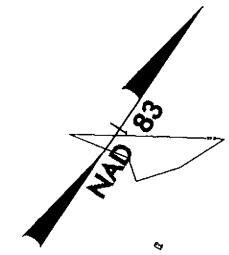
- SEE SHEET 2-C FOR STRUCTURE STAGING
- SEE SHEET 2- FOR SPECIAL MEDIAN GRADING DETAIL
- SEE SHEETS 9 THRU 12 FOR DETOURS
- SEE SHEETS 14 AND 16 FOR -L- PROFILES
- SEE SHEETS S-1 THRU S- FOR STRUCTURE PLANS

23 JAN 2008 13:20:12  
 1:10:00  
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PROJECT REFERENCE NO. U-4012	SHEET NO. 7
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
Permit Drawing	
Sheet 7 of 15	
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	
Revised 1/26/08	

-DETI-	
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$V = 45$ MPH	$V = 45$ MPH



- DENOTES PERMANENT CHANNEL IMPACTS
- DENOTES FILL IN WETLAND
- DENOTES MECHANIZED CLEARING

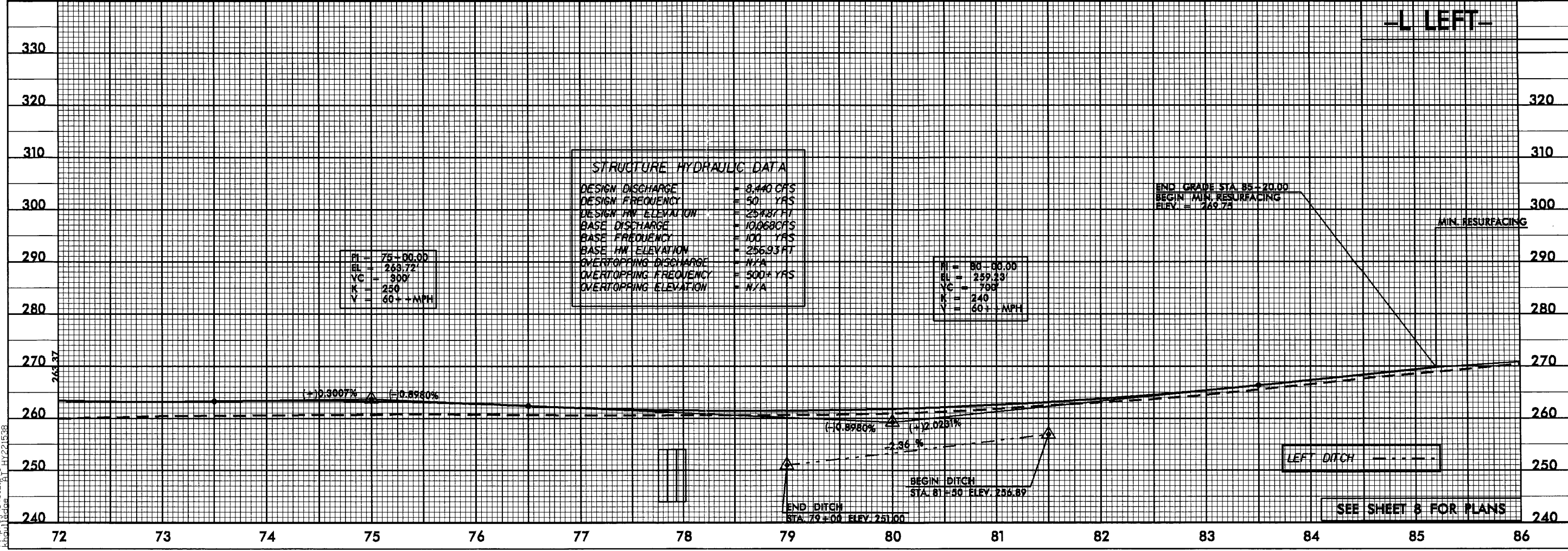
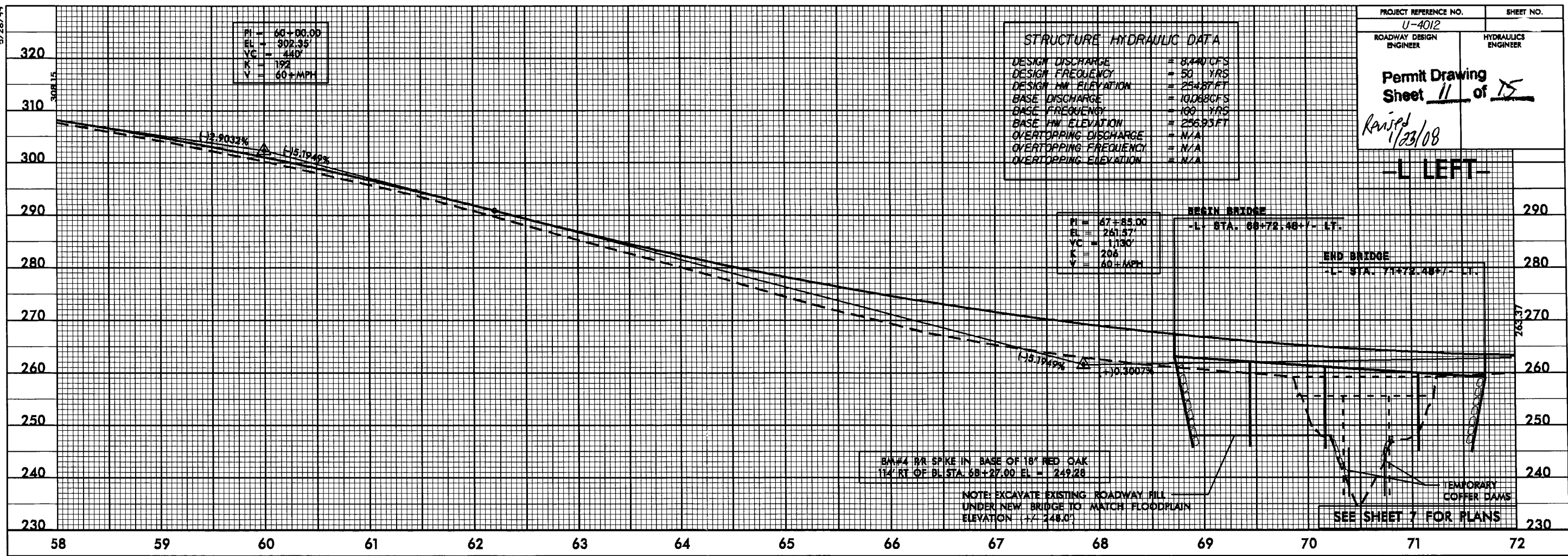
# SITE 1

NOTE: PERMANENT CHANNEL IMPACTS DUE TO RIP RAP STABILIZATION OF STREAM BANKS BELOW NORMAL WATER SURFACE DUE TO REMOVAL OF EXISTING PIERS.

- SEE SHEET 2-C FOR STRUCTURE STAGING
- SEE SHEET 2- FOR SPECIAL MEDIAN GRADING DETAIL
- SEE SHEETS 9 THRU 12 FOR DETOURS
- SEE SHEETS 14 AND 16 FOR -L- PROFILES
- SEE SHEETS S-1 THRU S- FOR STRUCTURE PLANS

8/17/99  
 REVISIONS  
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5/28/99  
 Const. Rev. - Additional Rip Rap added around the bridge piers of the existing US 15-501 bridges to match the Structure Design plans. BCK 1-22-08  
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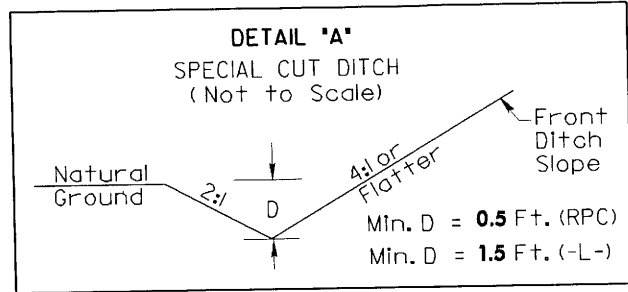




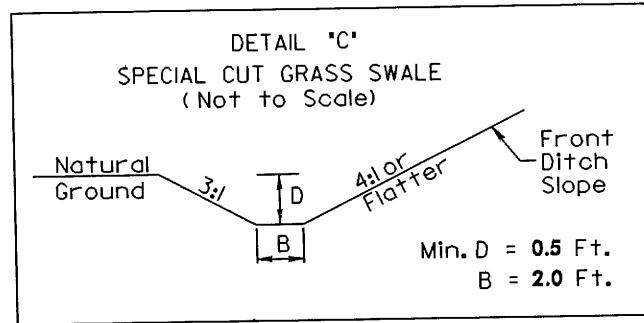
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REVISIONS

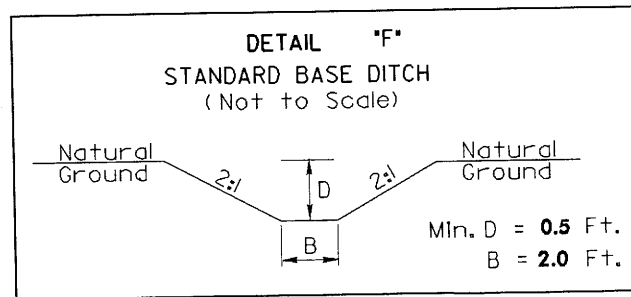
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RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
	<i>This document originally issued and sealed by Marc T. Shaw, Reg. 20870 on February 23, 2005. This document shall not be considered a certified document.</i>



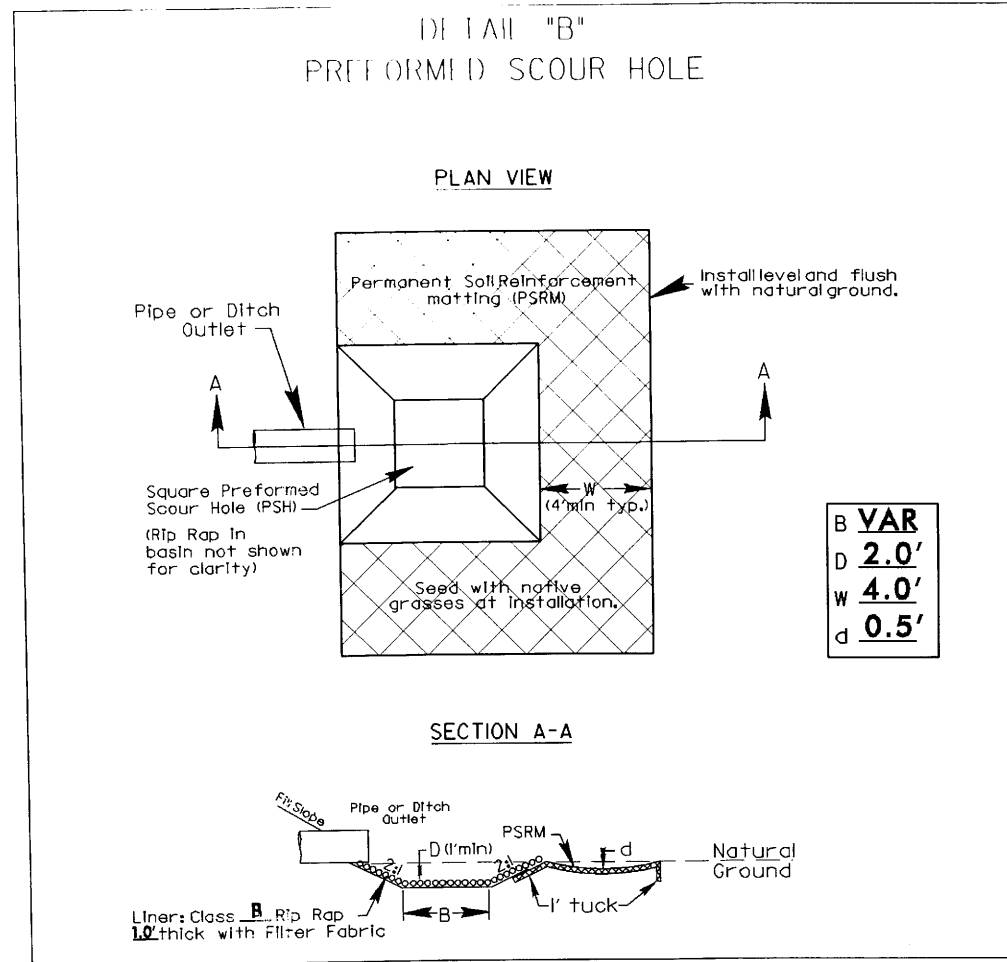
-L- STA 41+95 TO 43+50 RT  
RPC STA 13+50 TO 17+15 RT



-L- STA 78+85 TO 81+50 RT



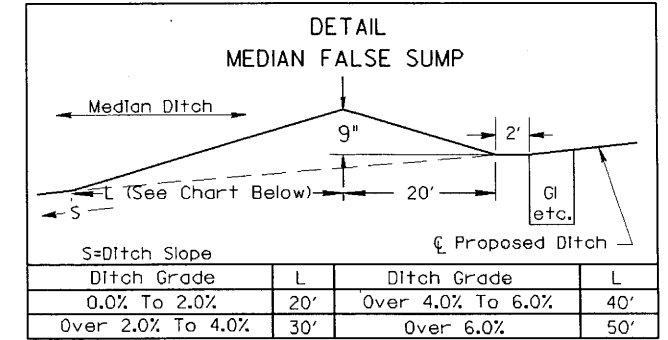
STA 41+48 TO 41+62 -L- RT



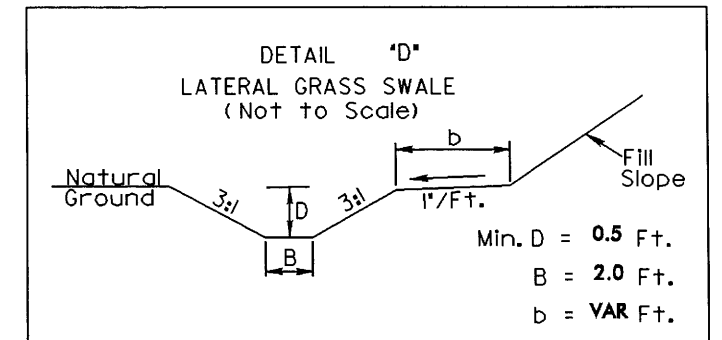
-L- STA 67+80 RT  
-L- STA 68+51 LT  
-L- STA 72+70 RT

-L- STA 72+87 LT  
-L- STA 76+61 RT  
-L- STA 78+66 LT

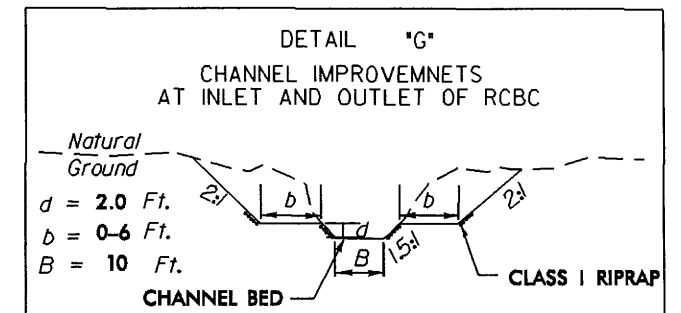
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**D 2.0'**  
**W 4.0'**  
**d 0.5'**



-L- CENTERLINE



-L- STA 79+00 TO 81+50 LT



-L- STA 77+89 LT/RT

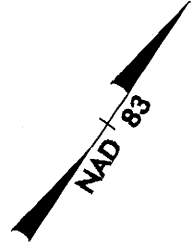
-L- STA 28+00 TO 29+00 RT

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andricham



PROJECT REFERENCE NO.	SHEET NO.
U-4012	7
R/W SHEET NO.	7
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

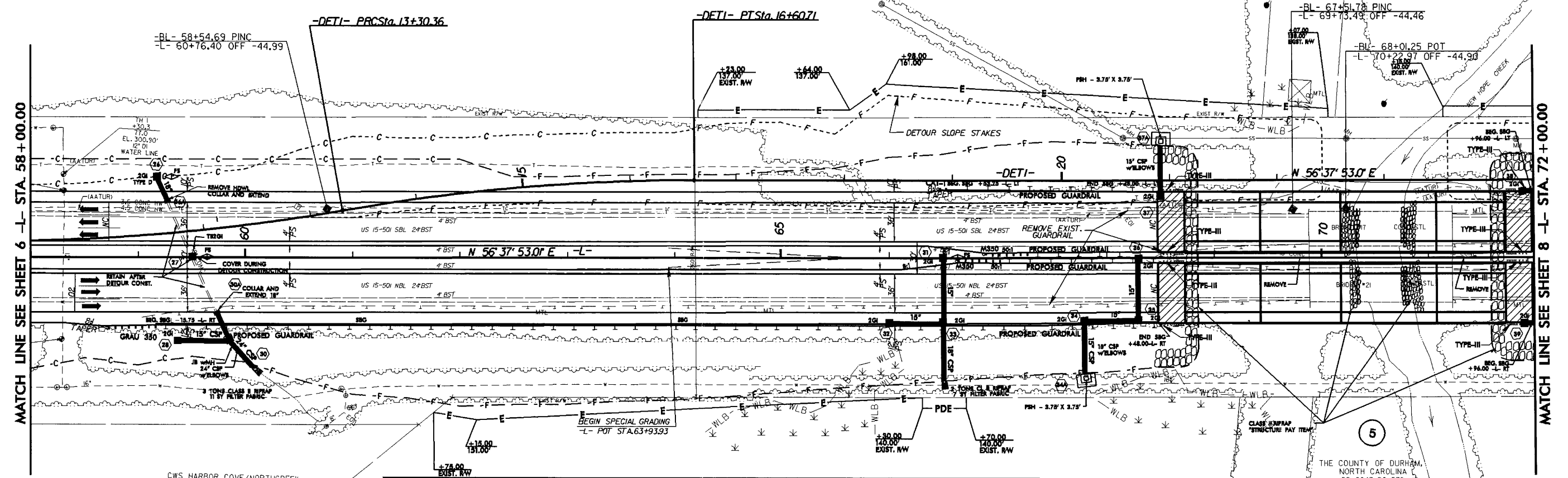
-DETI-	
PI Sta 11+65.59	PI Sta 14+95.95
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$T = 165.59'$	$T = 165.59'$
$R = 1910.00'$	$R = 1910.00'$
$SE = 05$	$SE = 05$
$V = 45 \text{ MPH}$	$V = 45 \text{ MPH}$



4  
OAKRIDGE 58 INVESTORS, A NORTH CAROLINA GENERAL PARTNERSHIP  
DB 1225 PG 545

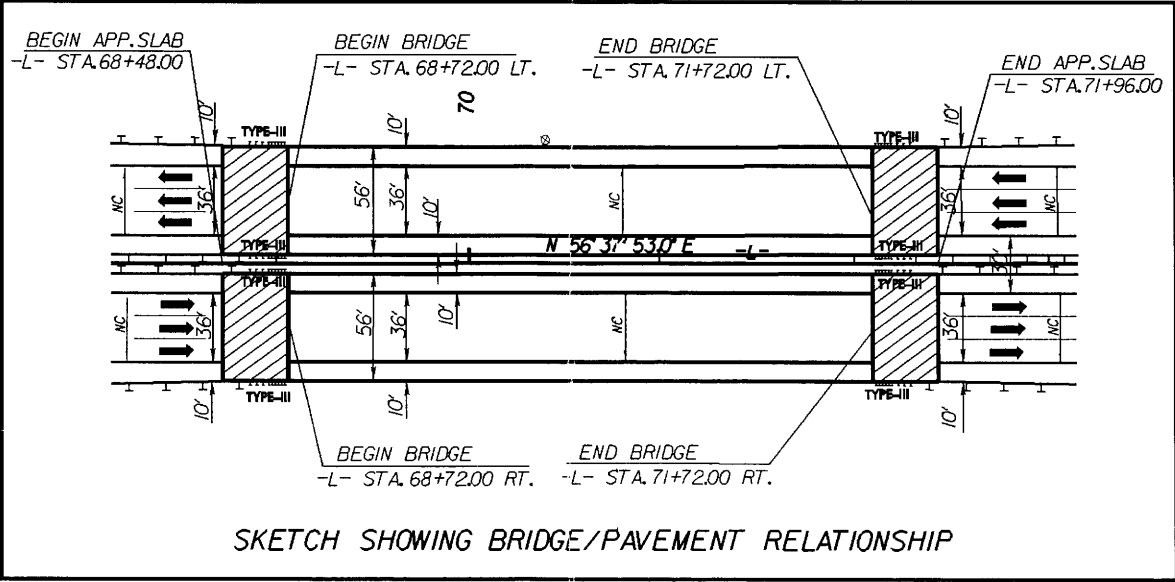
OAKRIDGE 58 INVESTORS, A NORTH CAROLINA GENERAL PARTNERSHIP  
DB 1225 PG 545

4



MATCH LINE SEE SHEET 6 -L- STA. 58+00.00

MATCH LINE SEE SHEET 8 -L- STA. 72+00.00



SKETCH SHOWING BRIDGE/PAVEMENT RELATIONSHIP

5  
THE COUNTY OF DURHAM, NORTH CAROLINA  
DB 2047 PG 579

5  
THE COUNTY OF DURHAM, NORTH CAROLINA  
DB 2047 PG 579

- SEE SHEET 2-C FOR STRUCTURE STAGING.
- SEE SHEET 2-D FOR SPECIAL MEDIAN GRADING DETAIL.
- SEE SHEET 2-F FOR DRAINAGE DETAILS.
- SEE SHEETS 9 THRU 12 FOR DETOURS.
- SEE SHEETS 14 AND 16 FOR -L- PROFILES.
- SEE SHEETS S-54 THRU S-128 FOR STRUCTURE PLANS.

Const. Rev. - Additional Rip Rap added around the bridge piers of the existing US 15-501 bridges to match the Structure Design plans. BCK 1-22-08

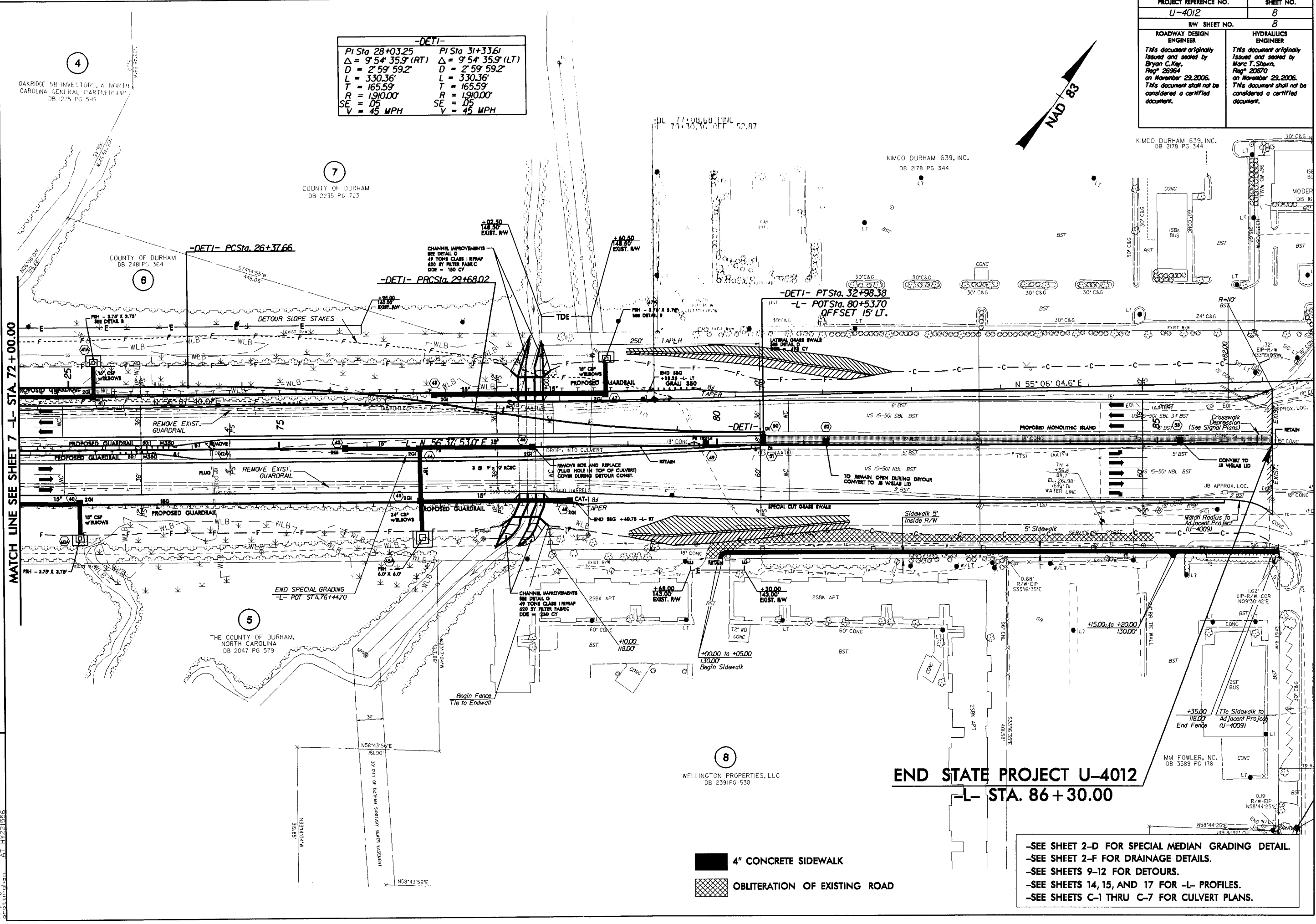
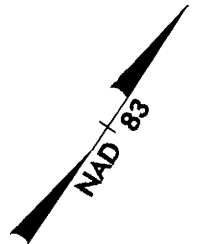
REVISIONS

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PROJECT REFERENCE NO.	SHEET NO.
U-4012	8
R/W SHEET NO.	8
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
This document originally issued and sealed by Bryan C. Key, Reg# 26964 on November 29, 2006. This document shall not be considered a certified document.	This document originally issued and sealed by Marc T. Shorn, Reg# 20870 on November 29, 2006. This document shall not be considered a certified document.

-DETI-	
PI Sta 28+03.25	PI Sta 31+33.61
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$T = 165.59'$	$T = 165.59'$
$R = 1910.00'$	$R = 1910.00'$
$SE = 05'$	$SE = 05'$
$V = 45$ MPH	$V = 45$ MPH



MATCH LINE SEE SHEET 7 -L- STA. 72+00.00

**END STATE PROJECT U-4012**  
**-L- STA. 86+30.00**

- 4" CONCRETE SIDEWALK
- OBLITERATION OF EXISTING ROAD

- SEE SHEET 2-D FOR SPECIAL MEDIAN GRADING DETAIL.
- SEE SHEET 2-F FOR DRAINAGE DETAILS.
- SEE SHEETS 9-12 FOR DETOURS.
- SEE SHEETS 14, 15, AND 17 FOR -L- PROFILES.
- SEE SHEETS C-1 THRU C-7 FOR CULVERT PLANS.

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 26-FEB-2008 15:54  
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