



STATE OF NORTH CAROLINA  
DEPARTMENT OF TRANSPORTATION

BEVERLY EAVES PERDUE  
GOVERNOR

EUGENE A. CONTI, JR.  
SECRETARY

November 2, 2012

North Carolina Division of Water Quality  
585 Waughtown Street  
Winston-Salem, NC 27107

ATTN: Ms. Amy Euliss  
NCDOT Project Coordinator

SUBJECT: **Application for Randleman Lake Buffer Authorization** for the proposed replacement of Bridge No. 56 over Richland Creek on SR 1193 (Baker Road), Guilford County, Division 7., F.A. Project No. BRSTP-1193(8), T.I.P. Project No. B-4957.

Dear Sir:

The North Carolina Department of Transportation (NCDOT) proposes to replace Bridge No. 56 over Richland Creek on SR 1193 (Baker Road). There will be no impacts to jurisdictional resources due to the replacement of the bridge. Allowable impacts to the Randleman Lake riparian buffers will result in 3,104 square feet of impact to the buffers, due to the road crossing and bridge. No mitigation is proposed for these activities.

Please see the enclosed copies of the Pre-Construction Notification (PCN), stormwater management plan, buffer impact drawings, and roadway design plans for the subject project. A Programmatic Categorical Exclusion (PCE) was completed for this project in November 2011 and distributed shortly after completion. Additional copies are available upon request.

This project calls for a letting date of May 21, 2013 and a review date of April 2, 2013; however, the let date may advance as additional funding becomes available.

---

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

TELEPHONE: 919-707-6100  
FAX: 919-212-5785  
WEBSITE: [WWW.NCDOT.ORG](http://WWW.NCDOT.ORG)

**LOCATION:**  
1020 BIRCH RIDGE DRIVE  
RALEIGH NC 27610-4328

A copy of this notice 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 contact Jason Dilday at either (919) 707-6111 or  
[jldilday@ncdot.gov](mailto:jldilday@ncdot.gov).

Sincerely,



for

Gregory J. Thorpe, Ph.D., Manager  
Project Development and Environmental Analysis Unit

CC:

NCDOT Permit Application Standard Distribution List



Office Use Only:  
 Corps action ID no. \_\_\_\_\_  
 DWQ project no. \_\_\_\_\_  
 Form Version 1.3 Dec 10 2008

## Pre-Construction Notification (PCN) Form

### A. Applicant Information

#### 1. Processing

1a. Type(s) of approval sought from the Corps:	<input type="checkbox"/> Section 404 Permit	<input type="checkbox"/> Section 10 Permit
1b. Specify Nationwide Permit (NWP) number:		or General Permit (GP) number:
1c. Has the NWP or GP number been verified by the Corps?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
1d. Type(s) of approval sought from the DWQ (check all that apply):		
<input type="checkbox"/> 401 Water Quality Certification – Regular <span style="margin-left: 100px;"><input type="checkbox"/> Non-404 Jurisdictional General Permit</span> <input type="checkbox"/> 401 Water Quality Certification – Express <span style="margin-left: 100px;"><input checked="" type="checkbox"/> Riparian Buffer Authorization</span>		
1e. Is this notification solely for the record because written approval is not required?	For the record only for DWQ 401 Certification: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	For the record only for Corps Permit: <input type="checkbox"/> Yes <input type="checkbox"/> No
1f. Is payment into a mitigation bank or in-lieu fee program proposed for mitigation of impacts? If so, attach the acceptance letter from mitigation bank or in-lieu fee program.	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
1g. Is the project located in any of NC's twenty coastal counties. If yes, answer 1h below.	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
1h. Is the project located within a NC DCM Area of Environmental Concern (AEC)?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No

#### 2. Project Information

2a. Name of project:	Replacement of Bridge 56 over Richland Creek on SR 1193 (Baker Road)
2b. County:	Guilford
2c. Nearest municipality / town:	High Point
2d. Subdivision name:	<i>not applicable</i>
2e. NCDOT only, T.I.P. or state project no.:	B-4957

#### 3. Owner Information

3a. Name(s) on Recorded Deed:	North Carolina Department of Transportation
3b. Deed Book and Page No.	<i>not applicable</i>
3c. Responsible Party (for LLC if applicable):	<i>not applicable</i>
3d. Street address:	1598 Mail Service Center
3e. City, state, zip:	Raleigh, NC 27699-1598
3f. Telephone no.:	(919) 707-6111
3g. Fax no.:	(919) 212-5785
3h. Email address:	jldilday@ncdot.gov

<b>4. Applicant Information (if different from owner)</b>	
4a. Applicant is:	<input type="checkbox"/> Agent <input type="checkbox"/> Other, specify:
4b. Name:	<i>not applicable</i>
4c. Business name (if applicable):	
4d. Street address:	
4e. City, state, zip:	
4f. Telephone no.:	
4g. Fax no.:	
4h. Email address:	
<b>5. Agent/Consultant Information (if applicable)</b>	
5a. Name:	<i>not applicable</i>
5b. Business name (if applicable):	
5c. Street address:	
5d. City, state, zip:	
5e. Telephone no.:	
5f. Fax no.:	
5g. Email address:	

<b>B. Project Information and Prior Project History</b>	
<b>1. Property Identification</b>	
1a. Property identification no. (tax PIN or parcel ID):	<i>not applicable</i>
1b. Site coordinates (in decimal degrees):	Latitude: 35.947383 (DD.DDDDDD) Longitude: -79.954149 (-DD.DDDDDD)
1c. Property size:	1.2 acres
<b>2. Surface Waters</b>	
2a. Name of nearest body of water (stream, river, etc.) to proposed project:	Richland Creek
2b. Water Quality Classification of nearest receiving water:	WS-IV
2c. River basin:	Cape Fear
<b>3. Project Description</b>	
3a. Describe the existing conditions on the site and the general land use in the vicinity of the project at the time of this application: SR 1193 is a urban local route. Land use within the project vicinity consists primarily of commerical and industrial development.	
3b. List the total estimated acreage of all existing wetlands on the property: 0	
3c. List the total estimated linear feet of all existing streams (intermittent and perennial) on the property: 200	
3d. Explain the purpose of the proposed project: To replace a structurally deficient and functionally obsolete bridge.	
3e. Describe the overall project in detail, including the type of equipment to be used: The project involves replacing a three span, 98-foot bridge with a three span, 122-foot bridge on the existing alignment with an off-site detour. Standard road building equipment, such as trucks, dozers, and cranes will be used.	
<b>4. Jurisdictional Determinations</b>	
4a. Have jurisdictional wetland or stream determinations by the Corps or State been requested or obtained for this property / project (including all prior phases) in the past? Comments:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Unknown
4b. If the Corps made the jurisdictional determination, what type of determination was made?	<input type="checkbox"/> Preliminary <input type="checkbox"/> Final
4c. If yes, who delineated the jurisdictional areas? Name (if known):	Agency/Consultant Company: Other:
4d. If yes, list the dates of the Corps jurisdictional determinations or State determinations and attach documentation.	
<b>5. Project History</b>	
5a. Have permits or certifications been requested or obtained for this project (including all prior phases) in the past?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Unknown
5b. If yes, explain in detail according to "help file" instructions.	
<b>6. Future Project Plans</b>	
6a. Is this a phased project?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
6b. If yes, explain.	

<b>C. Proposed Impacts Inventory</b>						
<b>1. Impacts Summary</b>						
1a. Which sections were completed below for your project (check all that apply):						
<input type="checkbox"/> Wetlands		<input type="checkbox"/> Streams - tributaries		<input checked="" type="checkbox"/> Buffers		
<input type="checkbox"/> Open Waters		<input type="checkbox"/> Pond Construction				
<b>2. Wetland Impacts</b>						
If there are wetland impacts proposed on the site, then complete this question for each wetland area impacted.						
2a. Wetland impact number – Permanent (P) or Temporary (T)	2b. Type of impact	2c. Type of wetland (if known)	2d. Forested	2e. Type of jurisdiction (Corps - 404, 10 DWQ – non-404, other)	2f. Area of impact (acres)	
Site 1 <input type="checkbox"/> P <input type="checkbox"/> T			<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Corps <input type="checkbox"/> DWQ		
Site 2 <input type="checkbox"/> P <input type="checkbox"/> T			<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Corps <input type="checkbox"/> DWQ		
Site 3 <input type="checkbox"/> P <input type="checkbox"/> T			<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Corps <input type="checkbox"/> DWQ		
Site 4 <input type="checkbox"/> P <input type="checkbox"/> T			<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Corps <input type="checkbox"/> DWQ		
Site 5 <input type="checkbox"/> P <input type="checkbox"/> T			<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Corps <input type="checkbox"/> DWQ		
Site 6 <input type="checkbox"/> P <input type="checkbox"/> T			<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Corps <input type="checkbox"/> DWQ		
<b>2g. Total wetland impacts</b>					0 Permanent 0 Temporary	
2h. Comments: There are no wetland impacts associated with this project.						
<b>3. Stream Impacts</b>						
If there are perennial or intermittent stream impacts (including temporary impacts) proposed on the site, then complete this question for all stream sites impacted.						
3a. Stream impact number - Permanent (P) or Temporary (T)	3b. Type of impact	3c. Stream name	3d. Perennial (PER) or intermittent (INT)?	3e. Type of jurisdiction (Corps - 404, 10 DWQ – non-404, other)	3f. Average stream width (feet)	3g. Impact length (linear feet)
Site 1 <input type="checkbox"/> P <input type="checkbox"/> T			<input type="checkbox"/> PER <input type="checkbox"/> INT	<input type="checkbox"/> Corps <input type="checkbox"/> DWQ		
Site 2 <input type="checkbox"/> P <input type="checkbox"/> T			<input type="checkbox"/> PER <input type="checkbox"/> INT	<input type="checkbox"/> Corps <input type="checkbox"/> DWQ		
Site 3 <input type="checkbox"/> P <input type="checkbox"/> T			<input type="checkbox"/> PER <input type="checkbox"/> INT	<input type="checkbox"/> Corps <input type="checkbox"/> DWQ		
Site 4 <input type="checkbox"/> P <input type="checkbox"/> T			<input type="checkbox"/> PER <input type="checkbox"/> INT	<input type="checkbox"/> Corps <input type="checkbox"/> DWQ		
Site 5 <input type="checkbox"/> P <input type="checkbox"/> T			<input type="checkbox"/> PER <input type="checkbox"/> INT	<input type="checkbox"/> Corps <input type="checkbox"/> DWQ		
Site 6 <input type="checkbox"/> P <input type="checkbox"/> T			<input type="checkbox"/> PER <input type="checkbox"/> INT	<input type="checkbox"/> Corps <input type="checkbox"/> DWQ		
<b>3h. Total stream and tributary impacts</b>						
3i. Comments: There are no stream impacts associated with this project.						

**4. Open Water Impacts**

If there are proposed impacts to lakes, ponds, estuaries, tributaries, sounds, the Atlantic Ocean, or any other open water of the U.S. then individually list all open water impacts below.

4a. Open water impact number – Permanent (P) or Temporary (T)	4b. Name of waterbody (if applicable)	4c. Type of impact	4d. Waterbody type	4e. Area of impact (acres)
O1 <input type="checkbox"/> P <input type="checkbox"/> T				
O2 <input type="checkbox"/> P <input type="checkbox"/> T				
O3 <input type="checkbox"/> P <input type="checkbox"/> T				
O4 <input type="checkbox"/> P <input type="checkbox"/> T				
<b>4f. Total open water impacts</b>				0 Permanent 0 Temporary

4g. Comments:

**5. Pond or Lake Construction**

If pond or lake construction proposed, then complete the chart below.

5a. Pond ID number	5b. Proposed use or purpose of pond	5c. Wetland Impacts (acres)			5d. Stream Impacts (feet)			5e. Upland (acres)
		Flooded	Filled	Excavated	Flooded	Filled	Excavated	Flooded
P1								
P2								
<b>5f. Total</b>								

5g. Comments:

5h. Is a dam high hazard permit required?

Yes

No

If yes, permit ID no:

5i. Expected pond surface area (acres):

5j. Size of pond watershed (acres):

5k. Method of construction:

<b>6. Buffer Impacts (for DWQ)</b>						
If project will impact a protected riparian buffer, then complete the chart below. If yes, then individually list all buffer impacts below. If any impacts require mitigation, then you <b>MUST</b> fill out Section D of this form.						
6a. Project is in which protected basin?				<input type="checkbox"/> Neuse <input type="checkbox"/> Catawba	<input type="checkbox"/> Tar-Pamlico <input checked="" type="checkbox"/> Randleman	<input type="checkbox"/> Other:
6b. Buffer impact number – Permanent (P) or Temporary (T)	6c. Reason for impact	6d. Stream name	6e. Buffer mitigation required?	6f. Zone 1 impact (square feet)	6g. Zone 2 impact (square feet)	
B1 <input checked="" type="checkbox"/> P <input type="checkbox"/> T	Bridge Impact	Richland Creek	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	1417	99	
B2 <input checked="" type="checkbox"/> P <input type="checkbox"/> T	Road Crossing Impact	Richland Creek	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	713	875	
B3 <input type="checkbox"/> P <input type="checkbox"/> T			<input type="checkbox"/> Yes <input type="checkbox"/> No			
<b>6h. Total buffer impacts</b>				2130	974	
6i. Comments: Buffer impacts will occur due to fill slopes and construction access.						

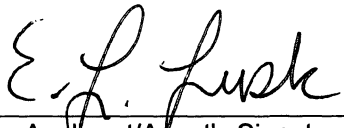
<b>D. Impact Justification and Mitigation</b>	
<b>1. Avoidance and Minimization</b>	
1a. Specifically describe measures taken to avoid or minimize the proposed impacts in designing project.  The proposed bridge is 24 feet longer than the existing bridge; the spans of the replacement bridge are spaced so that the bents will be outside the stream; the proposed bridge will be at approximately the same grade and alignment as the existing structure; the new bridge will have no deck drains or direct discharge to Richland Creek. Preformed scour holes, located outside the buffer areas will be used at all pipe outlets. An existing 15" driveway pipe, that drained through the buffer will be removed. The 24" replacement pipe will be relocated and drain into a 3' lateral base ditch, which will disperse and slow the flow before entering the buffer. An off-site detour will be used during construction.	
1b. Specifically describe measures taken to avoid or minimize the proposed impacts through construction techniques.  NCDOT Best Management Practices for Bridge Demolition and Removal will be implemented during the removal of the existing bridge; Best Management Practices for the Protection of Surface Waters will be employed; Design Standards in Sensitive Watersheds will be employed.	
<b>2. Compensatory Mitigation for Impacts to Waters of the U.S. or Waters of the State</b>	
2a. Does the project require Compensatory Mitigation for impacts to Waters of the U.S. or Waters of the State?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If no, explain: No impacts will occur to Richland Creek or any other jurisdictional resource.
2b. If yes, mitigation is required by (check all that apply):	<input type="checkbox"/> DWQ <input type="checkbox"/> Corps
2c. If yes, which mitigation option will be used for this project?	<input type="checkbox"/> Mitigation bank <input type="checkbox"/> Payment to in-lieu fee program <input type="checkbox"/> Permittee Responsible Mitigation



<b>3. Complete if Using a Mitigation Bank</b>				
3a. Name of Mitigation Bank: not applicable				
3b. Credits Purchased (attach receipt and letter)		Type	Quantity	
3c. Comments:				
<b>4. Complete if Making a Payment to In-lieu Fee Program</b>				
4a. Approval letter from in-lieu fee program is attached.		<input type="checkbox"/> Yes		
4b. Stream mitigation requested:		linear feet		
4c. If using stream mitigation, stream temperature:		<input type="checkbox"/> warm <input type="checkbox"/> cool <input type="checkbox"/> cold		
4d. Buffer mitigation requested (DWQ only):		square feet		
4e. Riparian wetland mitigation requested:		acres		
4f. Non-riparian wetland mitigation requested:		acres		
4g. Coastal (tidal) wetland mitigation requested:		acres		
4h. Comments:				
<b>5. Complete if Using a Permittee Responsible Mitigation Plan</b>				
5a. If using a permittee responsible mitigation plan, provide a description of the proposed mitigation plan.				
<b>6. Buffer Mitigation (State Regulated Riparian Buffer Rules) – required by DWQ</b>				
6a. Will the project result in an impact within a protected riparian buffer that requires buffer mitigation?			<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
6b. If yes, then identify the square feet of impact to each zone of the riparian buffer that requires mitigation. Calculate the amount of mitigation required.				
Zone	6c. Reason for impact	6d. Total impact (square feet)	Multiplier	6e. Required mitigation (square feet)
Zone 1			3 (2 for Catawba)	
Zone 2			1.5	
6f. Total buffer mitigation required:				0
6g. If buffer mitigation is required, discuss what type of mitigation is proposed (e.g., payment to private mitigation bank, permittee responsible riparian buffer restoration, payment into an approved in-lieu fee fund).				
6h. Comments: All buffer impacts are Allowable.				

<b>E. Stormwater Management and Diffuse Flow Plan (required by DWQ)</b>	
<b>1. Diffuse Flow Plan</b>	
1a. Does the project include or is it adjacent to protected riparian buffers identified within one of the NC Riparian Buffer Protection Rules?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
1b. If yes, then is a diffuse flow plan included? If no, explain why. Comments: See attached permit drawings.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
<b>2. Stormwater Management Plan</b>	
2a. What is the overall percent imperviousness of this project?	N/A
2b. Does this project require a Stormwater Management Plan?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
2c. If this project DOES NOT require a Stormwater Management Plan, explain why:	
2d. If this project DOES require a Stormwater Management Plan, then provide a brief, narrative description of the plan: See attached permit drawings.	
2e. Who will be responsible for the review of the Stormwater Management Plan?	<input type="checkbox"/> Certified Local Government <input type="checkbox"/> DWQ Stormwater Program <input type="checkbox"/> DWQ 401 Unit
<b>3. Certified Local Government Stormwater Review</b>	
3a. In which local government's jurisdiction is this project?	not applicable
3b. Which of the following locally-implemented stormwater management programs apply (check all that apply):	<input type="checkbox"/> Phase II <input type="checkbox"/> NSW <input type="checkbox"/> USMP <input type="checkbox"/> Water Supply Watershed <input type="checkbox"/> Other:
3c. Has the approved Stormwater Management Plan with proof of approval been attached?	<input type="checkbox"/> Yes <input type="checkbox"/> No
<b>4. DWQ Stormwater Program Review</b>	
4a. Which of the following state-implemented stormwater management programs apply (check all that apply):	<input type="checkbox"/> Coastal counties <input type="checkbox"/> HQW <input type="checkbox"/> ORW <input type="checkbox"/> Session Law 2006-246 <input type="checkbox"/> Other:
4b. Has the approved Stormwater Management Plan with proof of approval been attached?	<input type="checkbox"/> Yes <input type="checkbox"/> No
<b>5. DWQ 401 Unit Stormwater Review</b>	
5a. Does the Stormwater Management Plan meet the appropriate requirements?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
5b. Have all of the 401 Unit submittal requirements been met?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No

<b>F. Supplementary Information</b>	
<b>1. Environmental Documentation (DWQ Requirement)</b>	
1a. Does the project involve an expenditure of public (federal/state/local) funds or the use of public (federal/state) land?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
1b. If you answered "yes" to the above, does the project require preparation of an environmental document pursuant to the requirements of the National or State (North Carolina) Environmental Policy Act (NEPA/SEPA)?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
1c. If you answered "yes" to the above, has the document review been finalized by the State Clearing House? (If so, attach a copy of the NEPA or SEPA final approval letter.)  Comments:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
<b>2. Violations (DWQ Requirement)</b>	
2a. Is the site in violation of DWQ Wetland Rules (15A NCAC 2H .0500), Isolated Wetland Rules (15A NCAC 2H .1300), DWQ Surface Water or Wetland Standards, or Riparian Buffer Rules (15A NCAC 2B .0200)?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
2b. Is this an after-the-fact permit application?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
2c. If you answered "yes" to one or both of the above questions, provide an explanation of the violation(s):	
<b>3. Cumulative Impacts (DWQ Requirement)</b>	
3a. Will this project (based on past and reasonably anticipated future impacts) result in additional development, which could impact nearby downstream water quality?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
3b. If you answered "yes" to the above, submit a qualitative or quantitative cumulative impact analysis in accordance with the most recent DWQ policy. If you answered "no," provide a short narrative description.  Due to the minimal transportation impact resulting from this bridge replacement, this project will neither influence nearby land uses nor stimulate growth. Therefore, a detailed indirect or cumulative effects study will not be necessary.	
<b>4. Sewage Disposal (DWQ Requirement)</b>	
4a. Clearly detail the ultimate treatment methods and disposition (non-discharge or discharge) of wastewater generated from the proposed project, or available capacity of the subject facility.  not applicable	

<b>5. Endangered Species and Designated Critical Habitat (Corps Requirement)</b>		
5a. Will this project occur in or near an area with federally protected species or habitat?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
5b. Have you checked with the USFWS concerning Endangered Species Act impacts?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
5c. If yes, indicate the USFWS Field Office you have contacted.	<input checked="" type="checkbox"/> Raleigh	<input type="checkbox"/> Asheville
5d. What data sources did you use to determine whether your site would impact Endangered Species or Designated Critical Habitat? N.C. Natural Heritage Program database; USFWS-Raleigh Field Office website; biological surveys for protected species listed for Guilford County, which includes small-whorled pogonia. The species received a Biological Conclusion of "No Effect". Habitat for small-whorled pogonia is found within the study area. A survey for the species on June 6, 2012 resulted in no specimens being found.		
<b>6. Essential Fish Habitat (Corps Requirement)</b>		
6a. Will this project occur in or near an area designated as essential fish habitat?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
6b. What data sources did you use to determine whether your site would impact Essential Fish Habitat? NMFS County Index		
<b>7. Historic or Prehistoric Cultural Resources (Corps Requirement)</b>		
7a. Will this project occur in or near an area that the state, federal or tribal governments have designated as having historic or cultural preservation status (e.g., National Historic Trust designation or properties significant in North Carolina history and archaeology)?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
7b. What data sources did you use to determine whether your site would impact historic or archeological resources? NEPA Documentation		
<b>8. Flood Zone Designation (Corps Requirement)</b>		
8a. Will this project occur in a FEMA-designated 100-year floodplain?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
8b. If yes, explain how project meets FEMA requirements: NCDOT Hydraulics Unit coordination with FEMA		
8c. What source(s) did you use to make the floodplain determination? FEMA Maps		
Dr. Gregory J. Thorpe, Ph D Applicant/Agent's Printed Name	 Applicant/Agent's Signature (Agent's signature is valid only if an authorization letter from the applicant is provided.)	10.26.12 Date

# STORMWATER MANAGEMENT PLAN

Project: 40149.1.1  
TIP No.: B-4957  
County: Guilford  
Date: 08/16/2012

Hydraulics Project Manager: Stephen Morgan, P.E.

## ROADWAY DESCRIPTION

The project B-4957 consists of constructing a new bridge 120 feet long to replace the existing bridge No. 56 on SR 1193 (Baker Road) over Richland Creek. The total project length is 0.099 miles. Baker Road is a 2-lane road, with existing grassed shoulders and ditches. It is a connector Business I-85 to the East and US 311 Business to the West. Current ADT (2007) is 4500 and predicted ADT (2035) is 5900. No additional lanes will be added as part of the project.

Jurisdictional Stream: Richland Creek

## ENVIRONMENTAL DESCRIPTION

The surrounding community consists of mainly residential homes with a few businesses located near the termini of Business I-85 (east) and US 311 Business (west). The area is also mostly wooded with a few open areas, which consist of tall grass and weeds. The project is located within the Cape Fear River Basin and the Randleman Lake Buffer Rules will apply. Richland creek is classified as WS-IV waters, and there are no ORW or HQW waters present. Richland Creek is also on the 303(d) list due to impaired biological integrity. Wetlands are present, but are not impacted by the proposed project. Impacts to the buffers have been minimized by and using preformed scour holes at the pipe outlets.

## BEST MANAGEMENT PRACTICES

The primary goal of Best Management Practices (BMP's) is an effort to reduce sedimentation and erosion and to prevent degradation of the state's surface waters by the location, construction, and operation of the highway system. The BMP measures used on this project to reduce storm water impacts on this project include grassed shoulders and open ditches; there are no direct discharges to Richland Creek; small drainage system directs storm water away from the receiving waters and discharges into PSH (preformed scour holes) located outside the buffer areas.

An existing 15" RCP driveway pipe (and drive), located at -L- Station 17+00 Lt., is being removed. The existing 15" pipe drained through the buffer to the fill slope of the existing bridge. The pipe (proposed 24" RCP) and drive are being relocated to -L- Station 16+50 Lt. The pipe will outlet to a proposed 3' Lateral Base Ditch, which will disperse and slow the flow before entering the buffer.

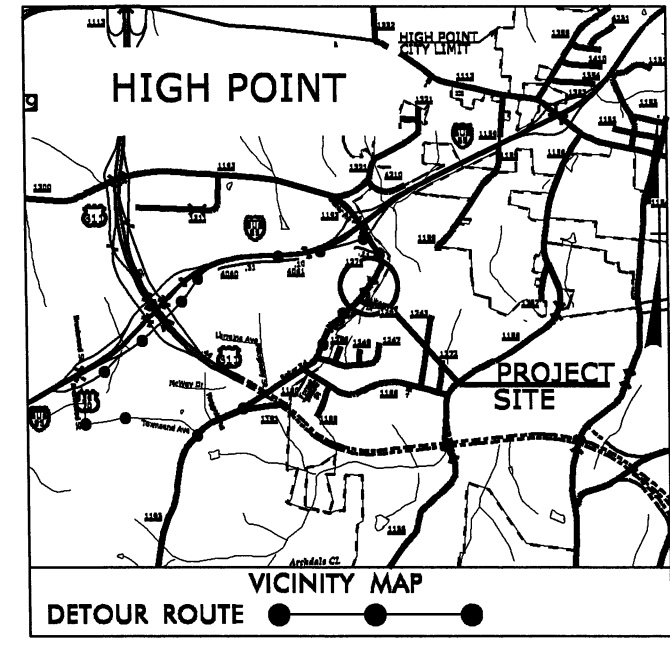
### BMP's:

- L- Station 19+45 Lt. - PSH
- L- Station 19+55 Rt. - PSH

There are no Surface Water Impacts associated with the project.

09/08/99  
 CONTRACT: C203159  
 TIP PROJECT: B-4957  
 SYSTEM TIME\$\$\$\$\$  
 USER NAME\$\$\$\$\$

See Sheet 1-A For Index of Sheets



STATE OF NORTH CAROLINA  
DIVISION OF HIGHWAYS

**GUILFORD COUNTY**

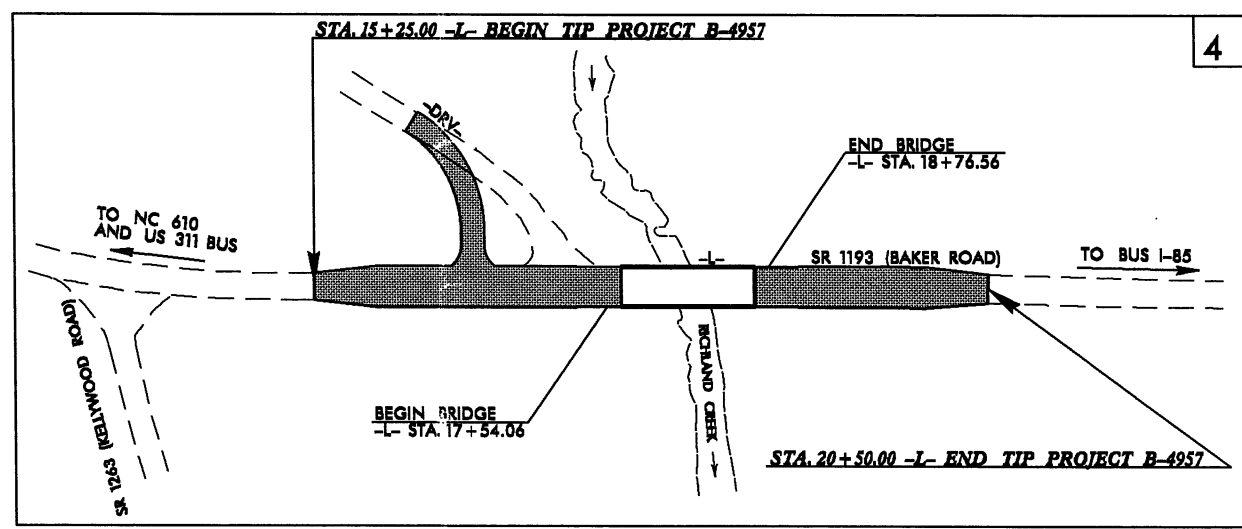
LOCATION: BRIDGE #56 OVER RICHLAND CREEK  
ON SR 1193 (BAKER ROAD)

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	B-4957	1	
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	
40149.1.1	BRSTP-1193(B)	P.E.	
40149.2.1	BRSTP-1193(B)	RW & UTIL	

Buffer Drawing  
Sheet 1 of 6

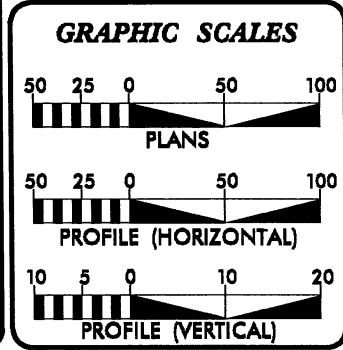


**BUFFER IMPACTS**



THIS PROJECT IS WITHIN THE MUNICIPAL BOUNDARIES OF HIGH POINT.  
CLEARING ON THIS PROJECT SHALL BE PERFORMED TO THE LIMITS ESTABLISHED BY METHOD II.

PRELIMINARY PLANS  
DO NOT USE FOR CONSTRUCTION



**DESIGN DATA**

ADT 2007 =	4500
ADT 2035 =	5900
DHV =	10 %
D =	55 %
T =	11 % *
V =	40 MPH
*TTST	5% DUAL 6%
FUNC CLASS = MINOR ARTERIAL SUBREGIONAL TIER	

**PROJECT LENGTH**

LENGTH OF ROADWAY TIP PROJECT B-4957 =	0.076 MILE
LENGTH OF STRUCTURE TIP PROJECT B-4957 =	0.023 MILE
TOTAL LENGTH OF TIP PROJECT B-4957 =	0.099 MILE

Prepared in the Office of:  
**DIVISION OF HIGHWAYS**  
1000 Birch Ridge Dr., Raleigh NC, 27610

2006 STANDARD SPECIFICATIONS

RIGHT OF WAY DATE:  
MAY 1, 2012

LETTING DATE:  
JUNE 18, 2013

JAMES A. SPEER, PE  
PROJECT ENGINEER

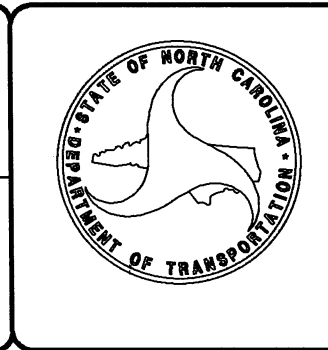
ALLISON K. WHITE  
PROJECT DESIGN ENGINEER

HYDRAULICS ENGINEER

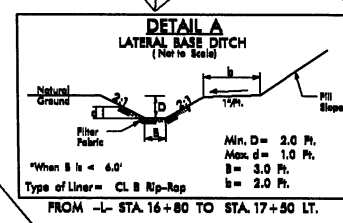
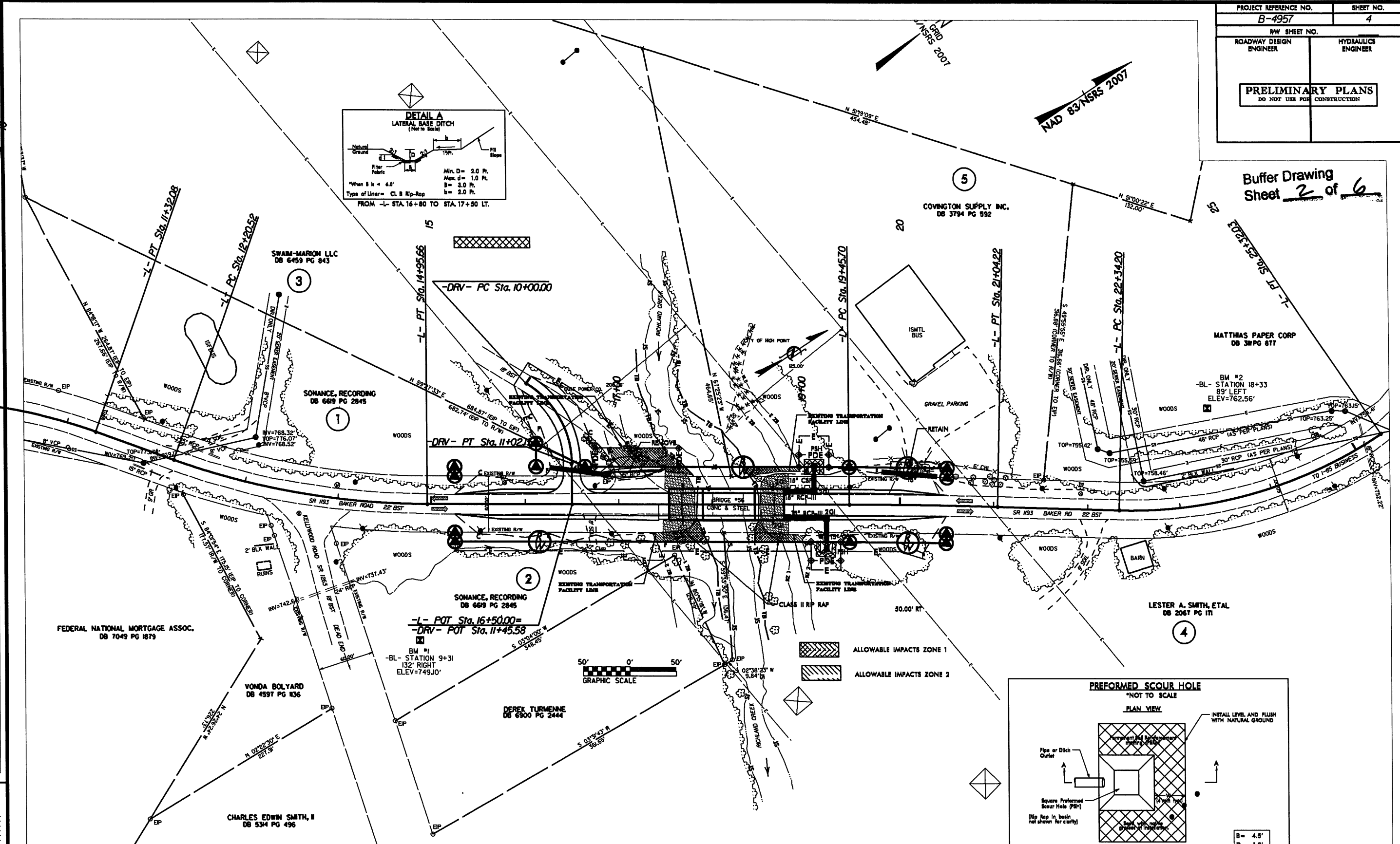
SIGNATURE: \_\_\_\_\_ P.E.

ROADWAY DESIGN ENGINEER

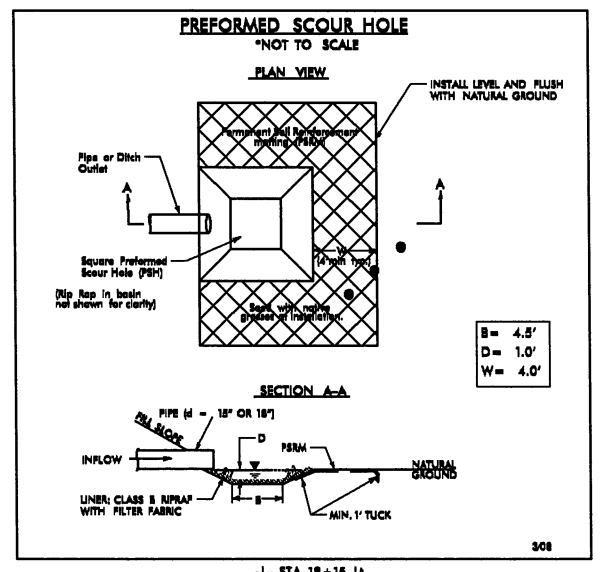
SIGNATURE: \_\_\_\_\_ P.E.



Buffer Drawing  
Sheet 2 of 6



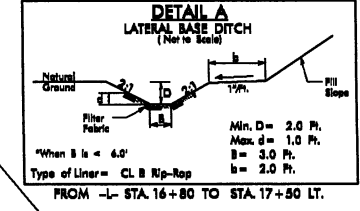
-L-			-DRV-	
PI Sta 10+66.36	PI Sta 13+59.46	PI Sta 20+24.96	PI Sta 23+88.09	PI Sta 10+56.04
$\Delta = 13' 45'' 31.7 (RT)$	$\Delta = 19' 42'' 21.5 (LT)$	$\Delta = 1' 35'' 36.2 (RT)$	$\Delta = 35' 33'' 03.4 (LT)$	$\Delta = 58' 31'' 45.5 (RT)$
$D = 10' 25'' 02.7$	$D = 7' 09'' 43.7$	$D = 11' 56'' 11.8$	$D = 11' 56'' 11.8$	$D = 57' 17'' 44.8$
$L = 132.08$	$L = 275.15$	$L = 158.52$	$L = 297.83$	$L = 102.15$
$T = 66.36$	$T = 138.95$	$T = 79.26$	$T = 153.88$	$T = 56.04$
$R = 550.00$	$R = 800.00$	$R = 5700.00$	$R = 480.00$	$R = 100.00$



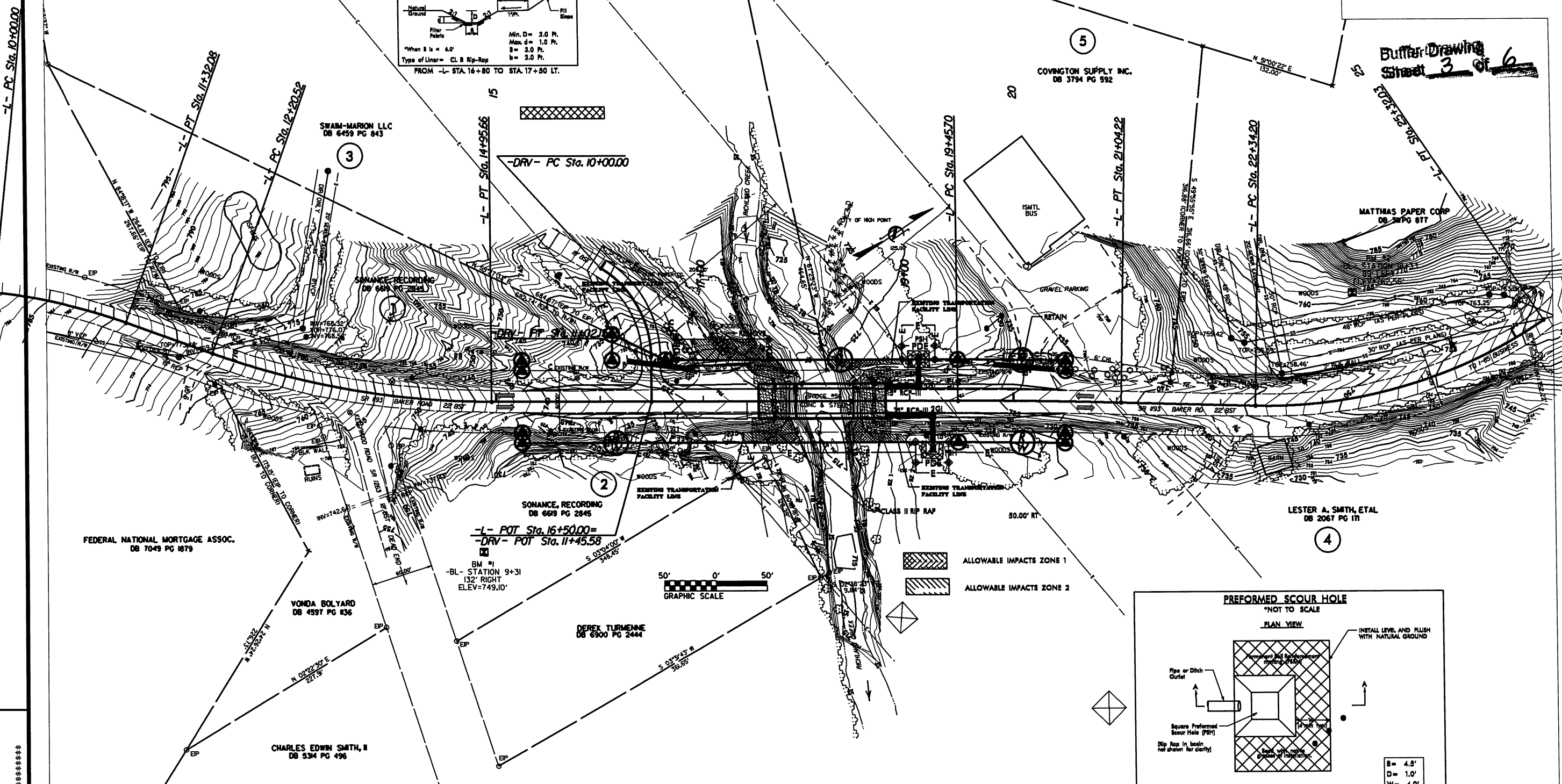
-L- STA. 18+15 LT.  
-L- STA. 18+20 RT.

8/17/99  
 REVISIONS  
 \*\*\*\*\*  
 TIME  
 \*\*\*\*\*

8/17/99

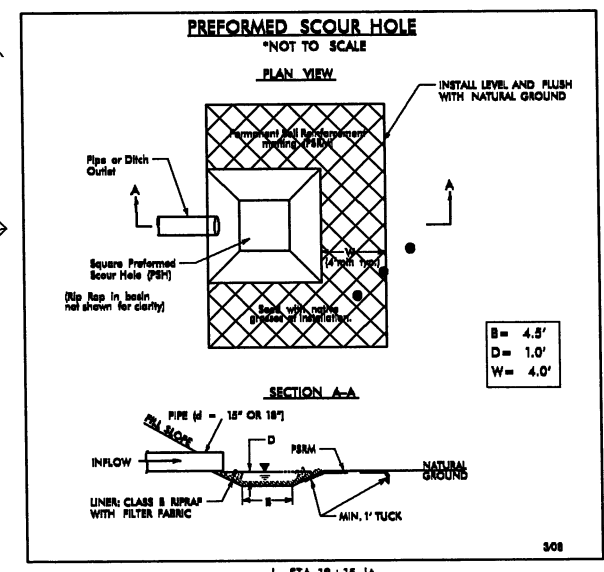
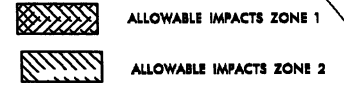
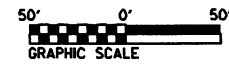


REVISIONS



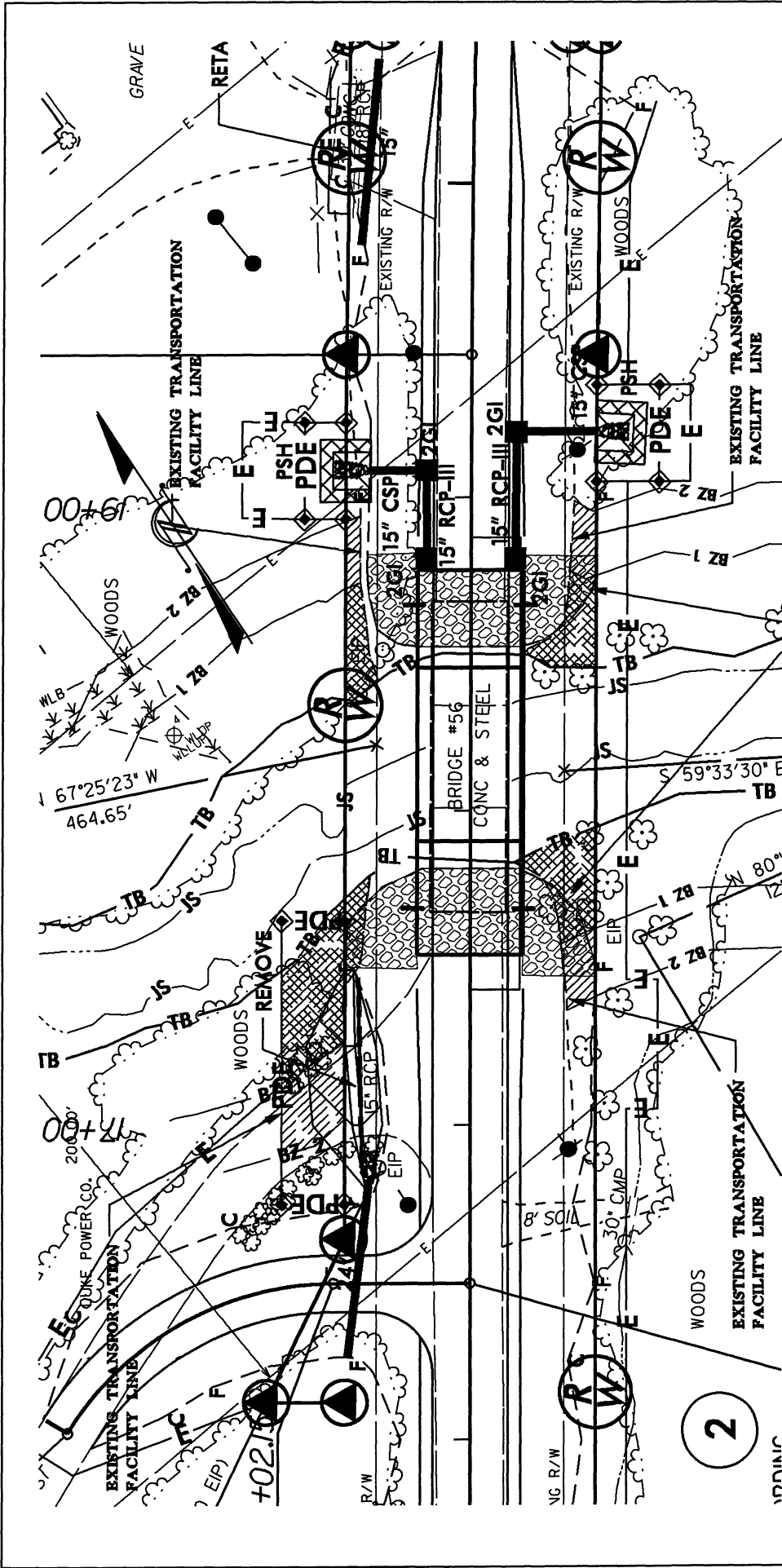
\*\*\*\*\*  
SYSTEM TIME: 08/17/99 10:00:00  
\*\*\*\*\*

-L-				-DRV-
PI Sta 10+66.36	PI Sta 13+59.46	PI Sta 20+24.96	PI Sta 23+88.09	PI Sta 10+56.04
$\Delta = 13^{\circ} 45' 31.7$ (RT)	$\Delta = 19^{\circ} 42' 21.5$ (LT)	$\Delta = 1^{\circ} 35' 36.2$ (RT)	$\Delta = 35^{\circ} 33' 03.4$ (LT)	$\Delta = 58^{\circ} 31' 45.5$ (RT)
D = 10' 25' 02.7	D = 7' 09' 43.7	D = 1' 00' 18.7	D = 11' 56' 11.8	D = 57' 17' 44.8
L = 132.08	L = 275.15	L = 158.52	L = 297.83	L = 102.15
T = 66.36	T = 138.95	T = 79.26	T = 153.88	T = 56.04
R = 550.00	R = 800.00	R = 5700.00	R = 480.00	R = 100.00



-L- STA. 18+15 LT.  
-L- STA. 18+20 RT.





N. C. DEPT. OF TRANSPORTATION  
 DIVISION OF HIGHWAYS  
 GUILFORD COUNTY  
 WBS No.: 40149.1.1 (B-4957)  
 REPLACE BRIDGE No. 56 OVER  
 RICHLAND CREEK ON SR 1193  
 (BAKER ROAD)  
 SHEET 4 OF 6  
 Rev. 10/05/12 08/06/12

# PLAN VIEW ENLARGEMENT

ALLOWABLE IMPACTS ZONE 1

ALLOWABLE IMPACTS ZONE 2

50' 0' 50'

GRAPHIC SCALE

2

**PROPERTY OWNERS**  
**NAMES AND ADDRESSES**

<b>PARCEL NO.</b>	<b>NAMES</b>	<b>ADDRESSES</b>
1,2	Sonace, Recording	374 Cook Rd. Denton, NC 27239
3	Swaim-Marion LLC	1907 Baker Rd. High Point, NC 27263
4	Lester A. Smith, et. al.	6009 Muddy Creek Rd. High Point, NC 27263
5	Covington Supply, Inc.	819 Baker Rod High Point, NC 27263

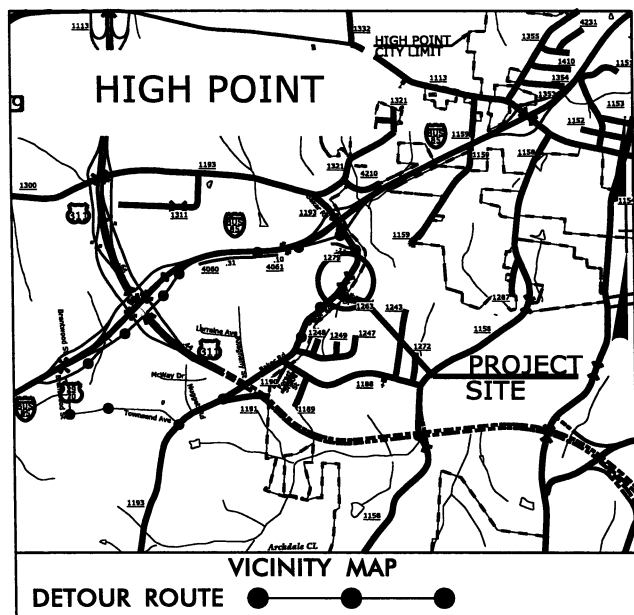
**NCDOT**  
DIVISION OF HIGHWAYS  
GUILFORD COUNTY  
PROJECT: 40149.1.1 (B-4957)  
REPLACE BRIDGE No.56  
OVER RICHLAND CREEK  
ON SR 1193 (BAKER ROAD)

## BUFFER IMPACTS SUMMARY

SITE NO.	STRUCTURE SIZE / TYPE	STATION (FROM/TO)	IMPACT						BUFFER REPLACEMENT				
			TYPE		ALLOWABLE		MITIGABLE		ZONE 1 (ft <sup>2</sup> )	ZONE 2 (ft <sup>2</sup> )	TOTAL (ft <sup>2</sup> )		
			ROAD CROSSING	BRIDGE	PARALLEL IMPACT	ZONE 1 (ft <sup>2</sup> )	ZONE 2 (ft <sup>2</sup> )	TOTAL (ft <sup>2</sup> )					
	Roadway Approach Fill	16+90 TO 18+94 Lt	X				713	565	1278				
		17+36 TO 18+99 Rt.	X					310	310				
	120' 3-span Bridge	17+54 TO 17+86		X			1417	99	1516				
<b>TOTAL:</b>							2130	974	3104	0.0	0.0	0.0	

N. C. DEPT. OF TRANSPORTATION  
 DIVISION OF HIGHWAYS  
 GUILFORD COUNTY  
 PROJECT: 40149.1.1 (B-4957)  
 8/16/2012; Revised 10/03/12  
 SHEET **6** OF **6**

See Sheet 1-A For Index of Sheets



STATE OF NORTH CAROLINA  
 DIVISION OF HIGHWAYS  
**GUILFORD COUNTY**

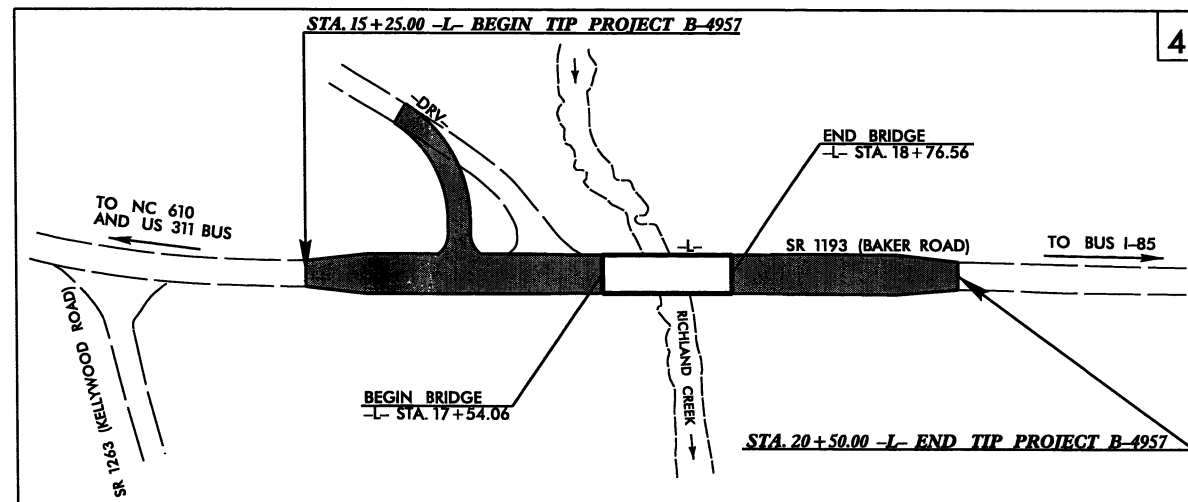
**LOCATION: BRIDGE #56 OVER RICHLAND CREEK  
 ON SR 1193 (BAKER ROAD)**

**TYPE OF WORK: GRADING, DRAINAGE, PAVING, AND STRUCTURE**

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	B-4957	1	
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	
40149.1.1	BRSTP-1193(8)	P.E.	
40149.2.1	BRSTP-1193(8)	RW & UTIL	



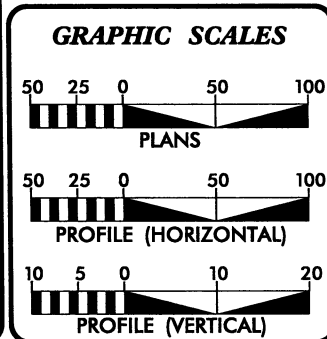
**TIP PROJECT: B-4957**



**PRELIMINARY PLANS**  
 DO NOT USE FOR CONSTRUCTION

THIS PROJECT IS WITHIN THE MUNICIPAL BOUNDARIES OF HIGH POINT.  
 CLEARING ON THIS PROJECT SHALL BE PERFORMED TO THE LIMITS ESTABLISHED BY METHOD II.

**CONTRACT:**



**DESIGN DATA**

ADT 2007 =	4500
ADT 2035 =	5900
DHV =	10 %
D =	55 %
T =	11 % *
V =	40 MPH
*TTST 5% DUAL 6%	
FUNC CLASS = MINOR ARTERIAL SUBREGIONAL TIER	

**PROJECT LENGTH**

LENGTH OF ROADWAY TIP PROJECT B-4957 =	0.076 MILE
LENGTH OF STRUCTURE TIP PROJECT B-4957 =	0.023 MILE
TOTAL LENGTH OF TIP PROJECT B-4957 =	0.099 MILE

Prepared In the Office of:  
**DIVISION OF HIGHWAYS**  
 1000 Birch Ridge Dr., Raleigh NC, 27610

2006 STANDARD SPECIFICATIONS

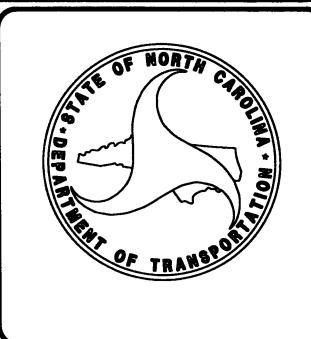
RIGHT OF WAY DATE: MAY 1, 2012	<b>JAMES A. SPEER, PE</b> PROJECT ENGINEER
LETTING DATE: JUNE 18, 2013	<b>ALLISON K. WHITE</b> PROJECT DESIGN ENGINEER

**HYDRAULICS ENGINEER**

SIGNATURE: \_\_\_\_\_ P.E.

**ROADWAY DESIGN ENGINEER**

SIGNATURE: \_\_\_\_\_ P.E.



01-MAY-2012 13:33 \\B4957\_Rdy\_tsh.dgn

04/16/11

Note: Not to Scale

\*S.U.E. = Subsurface Utility Engineering

STATE OF NORTH CAROLINA  
DIVISION OF HIGHWAYS

PROJECT REFERENCE NO. B-4957  
SHEET NO. 1-B

# CONVENTIONAL PLAN SHEET SYMBOLS

## BOUNDARIES AND PROPERTY:

State Line	-----
County Line	-----
Township Line	-----
City Line	-----
Reservation Line	-----
Property Line	-----
Existing Iron Pin	○
Property Corner	✱
Property Monument	⊞
Parcel/Sequence Number	Ⓢ
Existing Fence Line	-x-x-x-
Proposed Woven Wire Fence	○
Proposed Chain Link Fence	⊞
Proposed Barbed Wire Fence	◇
Existing Wetland Boundary	-----
Proposed Wetland Boundary	-----
Existing Endangered Animal Boundary	-----
Existing Endangered Plant Boundary	-----
Known Soil Contamination: Area or Site	⊞
Potential Soil Contamination: Area or Site	⊞

## BUILDINGS AND OTHER CULTURE:

Gas Pump Vent or U/G Tank Cap	○
Sign	Ⓢ
Well	Ⓢ
Small Mine	⊞
Foundation	⊞
Area Outline	⊞
Cemetery	⊞
Building	⊞
School	⊞
Church	⊞
Dam	⊞

## HYDROLOGY:

Stream or Body of Water	-----
Hydro, Pool or Reservoir	-----
Jurisdictional Stream	-----
Buffer Zone 1	-----
Buffer Zone 2	-----
Flow Arrow	-----
Disappearing Stream	-----
Spring	-----
Wetland	-----
Proposed Lateral, Tail, Head Ditch	-----
False Sump	-----

## RAILROADS:

Standard Gauge	-----
RR Signal Milepost	-----
Switch	-----
RR Abandoned	-----
RR Dismantled	-----

## RIGHT OF WAY:

Baseline Control Point	◆
Existing Right of Way Marker	△
Existing Right of Way Line	-----
Proposed Right of Way Line	-----
Proposed Right of Way Line with Iron Pin and Cap Marker	-----
Proposed Right of Way Line with Concrete or Granite Marker	-----
Existing Control of Access	-----
Proposed Control of Access	-----
Existing Easement Line	-----
Proposed Temporary Construction Easement	-----
Proposed Temporary Drainage Easement	-----
Proposed Permanent Drainage Easement	-----
Proposed Permanent Drainage / Utility Easement	-----
Proposed Permanent Utility Easement	-----
Proposed Temporary Utility Easement	-----
Proposed Aerial Utility Easement	-----
Proposed Permanent Easement with Iron Pin and Cap Marker	-----

## ROADS AND RELATED FEATURES:

Existing Edge of Pavement	-----
Existing Curb	-----
Proposed Slope Stakes Cut	-----
Proposed Slope Stakes Fill	-----
Proposed Curb Ramp	-----
Existing Metal Guardrail	-----
Proposed Guardrail	-----
Existing Cable Guiderail	-----
Proposed Cable Guiderail	-----
Equality Symbol	⊞
Pavement Removal	-----

## VEGETATION:

Single Tree	⊞
Single Shrub	⊞
Hedge	-----
Woods Line	-----

Orchard	-----
Vineyard	-----

## EXISTING STRUCTURES:

MAJOR:	
Bridge, Tunnel or Box Culvert	-----
Bridge Wing Wall, Head Wall and End Wall	-----
MINOR:	
Head and End Wall	-----
Pipe Culvert	-----
Footbridge	-----
Drainage Box: Catch Basin, DI or JB	-----
Paved Ditch Gutter	-----
Storm Sewer Manhole	-----
Storm Sewer	-----

## UTILITIES:

POWER:	
Existing Power Pole	-----
Proposed Power Pole	-----
Existing Joint Use Pole	-----
Proposed Joint Use Pole	-----
Power Manhole	-----
Power Line Tower	-----
Power Transformer	-----
UG Power Cable Hand Hole	-----
H-Frame Pole	-----
Recorded U/G Power Line	-----
Designated U/G Power Line (S.U.E.*)	-----

## TELEPHONE:

Existing Telephone Pole	-----
Proposed Telephone Pole	-----
Telephone Manhole	-----
Telephone Booth	-----
Telephone Pedestal	-----
Telephone Cell Tower	-----
UG Telephone Cable Hand Hole	-----
Recorded U/G Telephone Cable	-----
Designated U/G Telephone Cable (S.U.E.*)	-----
Recorded U/G Telephone Conduit	-----
Designated U/G Telephone Conduit (S.U.E.*)	-----
Recorded U/G Fiber Optics Cable	-----
Designated U/G Fiber Optics Cable (S.U.E.*)	-----

## WATER:

Water Manhole	-----
Water Meter	-----
Water Valve	-----
Water Hydrant	-----
Recorded U/G Water Line	-----
Designated U/G Water Line (S.U.E.*)	-----
Above Ground Water Line	-----

## TV:

TV Satellite Dish	-----
TV Pedestal	-----
TV Tower	-----
UG TV Cable Hand Hole	-----
Recorded U/G TV Cable	-----
Designated U/G TV Cable (S.U.E.*)	-----
Recorded U/G Fiber Optic Cable	-----
Designated U/G Fiber Optic Cable (S.U.E.*)	-----

## GAS:

Gas Valve	-----
Gas Meter	-----
Recorded U/G Gas Line	-----
Designated U/G Gas Line (S.U.E.*)	-----
Above Ground Gas Line	-----

## SANITARY SEWER:

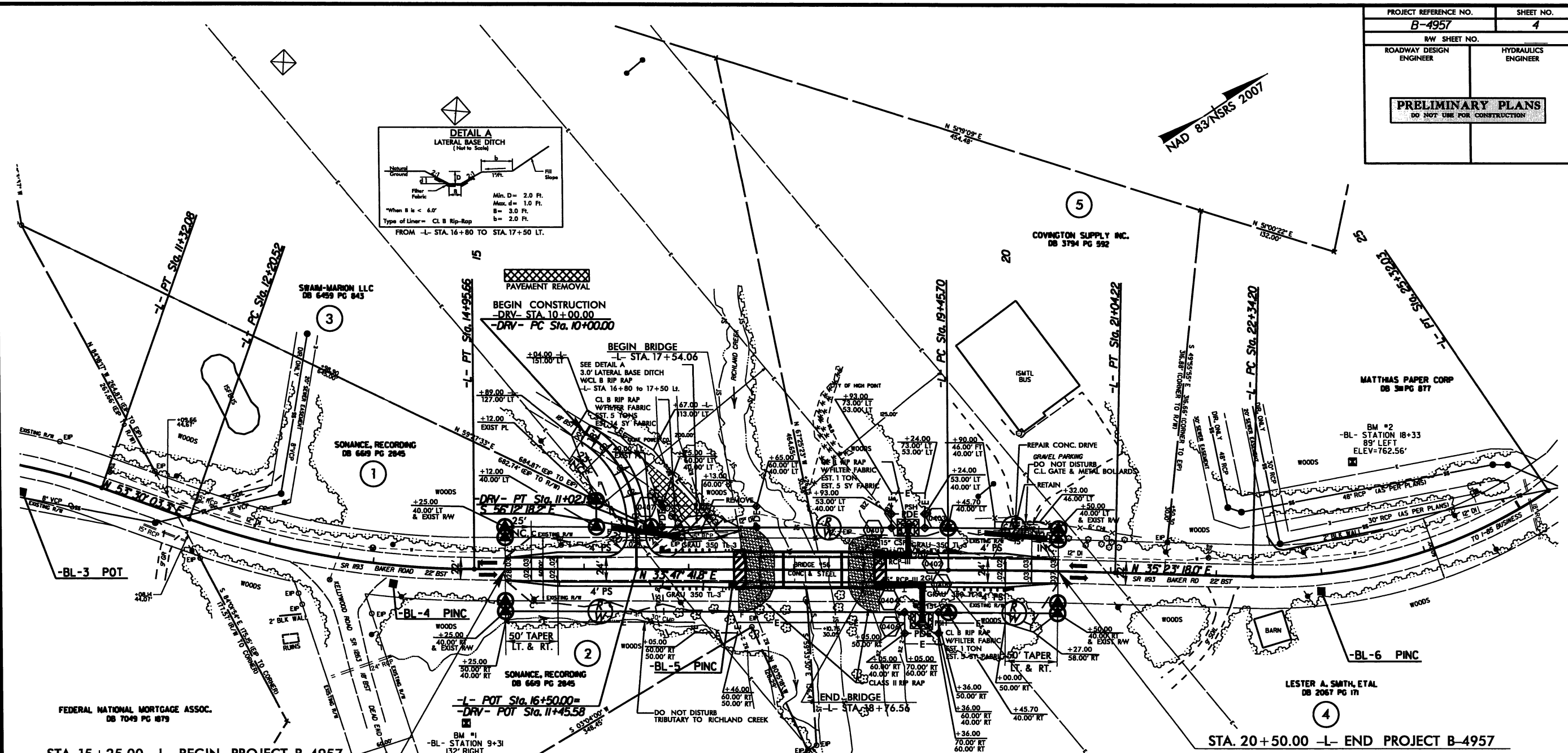
Sanitary Sewer Manhole	-----
Sanitary Sewer Cleanout	-----
UG Sanitary Sewer Line	-----
Above Ground Sanitary Sewer	-----
Recorded SS Forced Main Line	-----
Designated SS Forced Main Line (S.U.E.*)	-----

## MISCELLANEOUS:

Utility Pole	-----
Utility Pole with Base	-----
Utility Located Object	-----
Utility Traffic Signal Box	-----
Utility Unknown U/G Line	-----
UG Tank; Water, Gas, Oil	-----
Underground Storage Tank, Approx. Loc.	-----
A/G Tank; Water, Gas, Oil	-----
Geoenvironmental Boring	-----
UG Test Hole (S.U.E.*)	-----
Abandoned According to Utility Records	-----
End of Information	-----

8/17/99

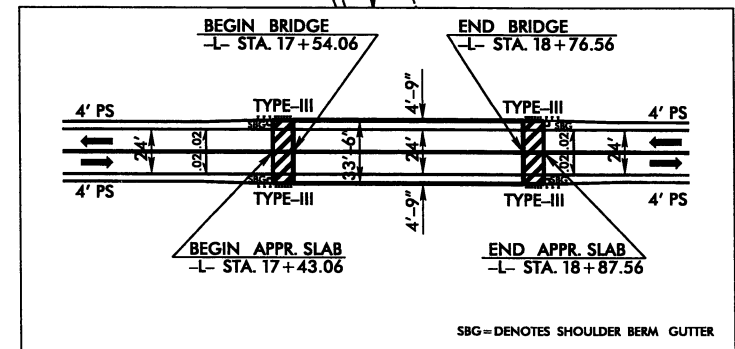
PROJECT REFERENCE NO. <b>B-4957</b>		SHEET NO. <b>4</b>	
RWY SHEET NO.			
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER	
<b>PRELIMINARY PLANS</b> DO NOT USE FOR CONSTRUCTION			



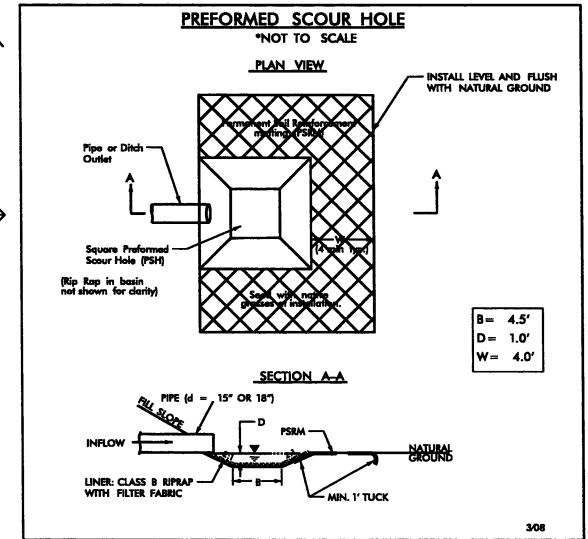
STA. 15+25.00 -L- BEGIN PROJECT B-4957

STA. 20+50.00 -L- END PROJECT B-4957

-L-			-DRV-	
PI Sta 10+66.36	PI Sta 13+59.46	PI Sta 20+24.96	PI Sta 23+88.09	PI Sta 10+56.04
$\Delta = 13^{\circ} 45' 31.7$ (RT)	$\Delta = 19^{\circ} 42' 21.5$ (LT)	$\Delta = 1^{\circ} 35' 36.2$ (RT)	$\Delta = 35^{\circ} 33' 03.4$ (LT)	$\Delta = 58^{\circ} 31' 45.5$ (RT)
D = 10' 25' 02.7"	D = 7' 09' 43.7"	D = 1' 00' 18.7"	D = 11' 56' 11.8"	D = 57' 17' 44.8"
L = 132.08'	L = 275.15'	L = 158.52'	L = 297.83'	L = 102.15'
T = 66.36'	T = 138.95'	T = 79.26'	T = 153.88'	T = 56.04'
R = 550.00'	R = 800.00'	R = 5700.00'	R = 480.00'	R = 100.00'



SKETCH SHOWING BRIDGE /ROADWAY RELATIONSHIP



-L- STA. 18+15 LI.  
-L- STA. 18+20 RI.

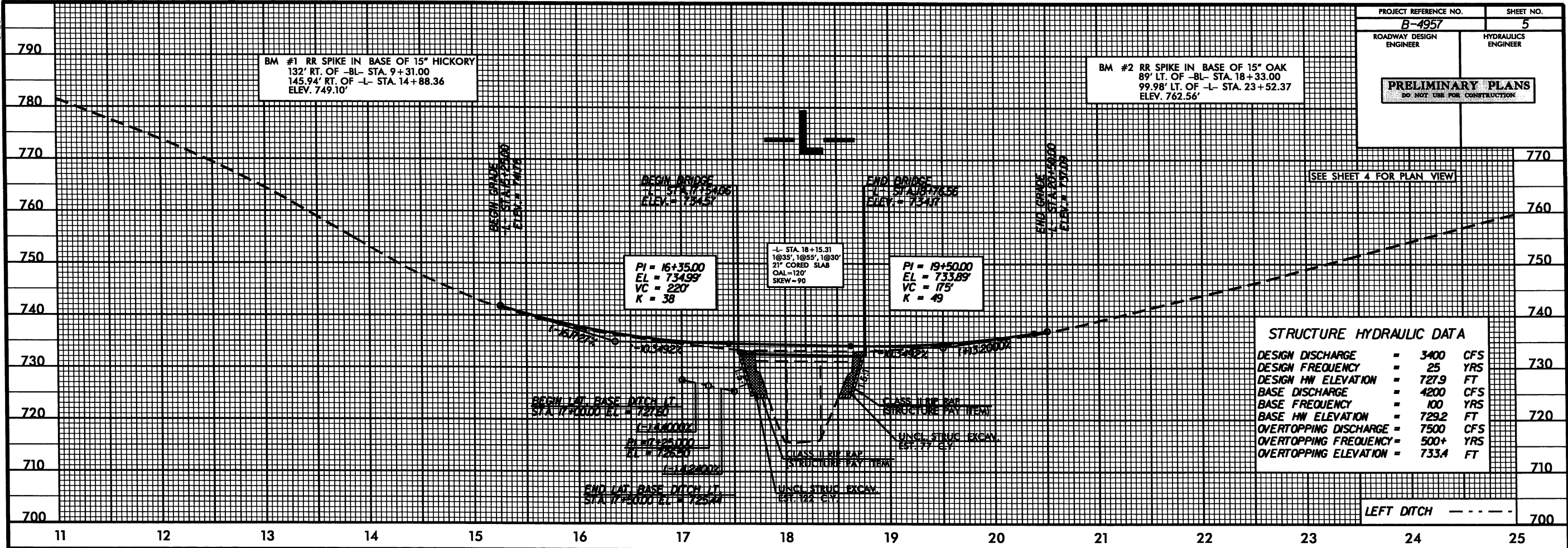
SEE SHEET 5 FOR -L- PROFILE  
SEE SHEET 5 FOR -DRV- PROFILE

R:\MAY-2012\13-33\B4957\_Rdy\_psh.dgn



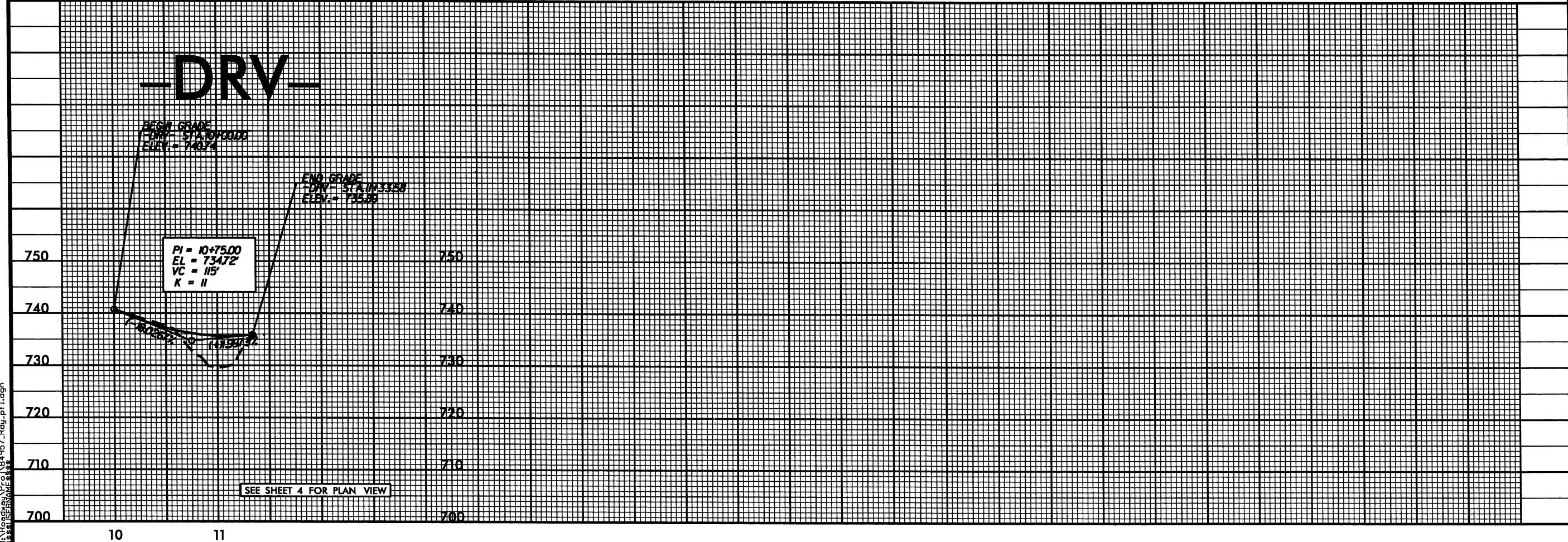
5/28/99

PROJECT REFERENCE NO. <b>B-4957</b>	SHEET NO. <b>5</b>
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
<b>PRELIMINARY PLANS</b> DO NOT USE FOR CONSTRUCTION	



**STRUCTURE HYDRAULIC DATA**

DESIGN DISCHARGE	=	3400	CFS
DESIGN FREQUENCY	=	25	YRS
DESIGN HW ELEVATION	=	727.9	FT
BASE DISCHARGE	=	4200	CFS
BASE FREQUENCY	=	100	YRS
BASE HW ELEVATION	=	729.2	FT
OVERTOPPING DISCHARGE	=	7500	CFS
OVERTOPPING FREQUENCY	=	500+	YRS
OVERTOPPING ELEVATION	=	733.4	FT



0: MAY-2012 13:33 R:\Rogers\Drawings\B-4957\_Rdy.p1.dgn