



STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION

MICHAEL F. EASLEY
GOVERNOR

LYNDO TIPPETT
SECRETARY

May 8, 2009

U. S. Army Corps of Engineers
Regulatory Field Office
3331 Heritage Trade Drive Suite 105
Wake Forest, NC 27587

ATTN: Mr. Monte Matthews
NCDOT Coordinator

Subject: **Application for Section 404 Nationwide Permits 23, 33, and Section 401 Water Quality Certification** for the proposed replacement of Bridge No. 99 over Coal Creek on SR 1317 (Old Hwy 60) in Wilkes County, Federal Aid Project No. BRZ-1317(4); Division 11; TIP No. B-4677
\$240.00 debit WBS 33832.1.1

Dear Sir:

The North Carolina Department of Transportation (NCDOT) proposes to replace Bridge No. 99 over Coal Creek on Old Highway 60 (SR 1317), with a bottomless culvert. There will be 90 feet of temporary surface water impacts and 73 feet of permanent surface water impacts, both due to installation of the culvert footing and wall for the bottomless culvert.

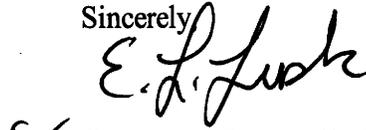
Please see enclosed copies of the Pre-Construction Notification (PCN), Stormwater Management Plan, permit drawings and design plans. The Categorical Exclusion (CE) was completed in July 2007 and the Right-of-Way Consultation was completed in October 2008. Documents were distributed shortly thereafter. Additional copies are available upon request.

This project calls for a letting date of January 19, 2010 and a review date of December 1, 2009.

Comments from the North Carolina Wildlife Resources Commission (NCWRC) will be required prior to authorization by the Corps of Engineers. By copy of this letter and attachment, NCDOT hereby requests NCWRC review. NCDOT request that NCWRC forward their comments to the Corps of Engineers and the NCDOT within 30 calendar days of receipt of this application.

A copy of this permit application will be posted on the NCDOT Website at:
<http://www.ncdot.org/doh/preconstruct/pe/>. If you have any questions or need additional information, please call Jennifer Harrod at (919) 431-6672.

Sincerely,



Gregory J. Thorpe, Ph.D.

Environmental Management Director, PDEA

w/attachment

Mr. Brian Wrenn, NCDWQ (5 copies)

Ms. Marla Chambers, NCWRC

Ms. Marella Buncick, USFWS

w/o attachment (see permit website for attachments)

Dr. David Chang, P.E., Hydraulics

Mr. Mark Staley, Roadside Environmental

Mr. Victor Barbour, P.E., Project Services Unit

Mr. Greg Perfetti, P.E., Structure Design

Mr. Michael A Pettyjohn, P.E., Division 11 Engineer

Mr. Heath Slaughter, Division Environmental Officer

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. Tracy Walter, Project Planning Engineer



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 checked="" type="checkbox"/> Section 404 Permit	<input type="checkbox"/> Section 10 Permit
1b. Specify Nationwide Permit (NWP) number: 23 33 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 checked="" type="checkbox"/> 401 Water Quality Certification – Regular <input type="checkbox"/> Non-404 Jurisdictional General Permit <input type="checkbox"/> 401 Water Quality Certification – Express <input type="checkbox"/> Riparian Buffer Authorization		
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 checked="" 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:	Replacment of Bridge No. 99 over Coal Creek on SR 1317 (Old Highway 60)
2b. County:	Wilkes
2c. Nearest municipality / town:	Purlear
2d. Subdivision name:	<i>not applicable</i>
2e. NCDOT only, T.I.P. or state project no.:	B-4677

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) 431-6672
3g. Fax no.:	(919) 431-2002
3h. Email address:	jwharrod@ncdot.gov

4. Applicant Information (if different from owner)	
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:	
5. Agent/Consultant Information (if applicable)	
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. Project Information and Prior Project History	
1. Property Identification	
1a. Property identification no. (tax PIN or parcel ID):	<i>not applicable</i>
1b. Site coordinates (in decimal degrees):	Latitude: 36.20 (DD.DDDDD) Longitude: - 81.28 (-DD.DDDDD)
1c. Property size:	292.71' L x 166.67' W = 48,785.98 sq. ft. (48,785.98) / (43,650) = 1.12 acres
2. Surface Waters	
2a. Name of nearest body of water (stream, river, etc.) to proposed project:	Coal Creek
2b. Water Quality Classification of nearest receiving water:	WS-IV
2c. River basin:	Yadkin-Pee Dee
3. Project Description	
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: Bridge No. 99 will be replaced at existing location (slightly to the west) with a 85-foot long bottomless culvert.	
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: 160 feet	
3d. Explain the purpose of the proposed project: To replace a structurally deficient and functionally obsolete bridge. Bridge No. 99 has a sufficiency rating of 33.9 out of a possible 100, and a superstructure and condition rating of 4 out of 9.	
3e. Describe the overall project in detail, including the type of equipment to be used: The project involves replacing a 33-foot bridge with a 85-foot bottomless culvert on the existing alignment with an off-site detour. Standard road building equipment, such as trucks, dozers, and cranes will be used.	
4. Jurisdictional Determinations	
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.	
5. Project History	
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.	

6. Future Project Plans

6a. Is this a phased project?

Yes

No

6b. If yes, explain.

C. Proposed Impacts Inventory

1. Impacts Summary

1a. Which sections were completed below for your project (check all that apply):

- Wetlands Streams - tributaries Buffers
 Open Waters Pond Construction

2. Wetland Impacts

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)
W1 <input type="checkbox"/> P <input type="checkbox"/> T			<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Corps <input type="checkbox"/> DWQ	
W2 <input type="checkbox"/> P <input type="checkbox"/> T			<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Corps <input type="checkbox"/> DWQ	
W3 <input type="checkbox"/> P <input type="checkbox"/> T			<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Corps <input type="checkbox"/> DWQ	
W4 <input type="checkbox"/> P <input type="checkbox"/> T			<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Corps <input type="checkbox"/> DWQ	
W5 <input type="checkbox"/> P <input type="checkbox"/> T			<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Corps <input type="checkbox"/> DWQ	
W6 <input type="checkbox"/> P <input type="checkbox"/> T			<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Corps <input type="checkbox"/> DWQ	
2g. Total wetland impacts					X Permanent X Temporary

2h. Comments: N/A

3. Stream Impacts

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)
S1 <input checked="" type="checkbox"/> P <input type="checkbox"/> T	Bottomless Culvert (installation of culvert footing and wall)	Coal Creek	<input checked="" type="checkbox"/> PER <input type="checkbox"/> INT	<input checked="" type="checkbox"/> Corps <input type="checkbox"/> DWQ	15	73
S2 <input type="checkbox"/> P <input checked="" type="checkbox"/> T	Bottomless Culvert (installation of culvert footing and wall)	Coal Creek	<input checked="" type="checkbox"/> PER <input type="checkbox"/> INT	<input checked="" type="checkbox"/> Corps <input type="checkbox"/> DWQ	15	90
S3 <input type="checkbox"/> P <input type="checkbox"/> T			<input type="checkbox"/> PER <input type="checkbox"/> INT	<input type="checkbox"/> Corps <input type="checkbox"/> DWQ		
S4 <input type="checkbox"/> P <input type="checkbox"/> T			<input type="checkbox"/> PER <input type="checkbox"/> INT	<input type="checkbox"/> Corps <input type="checkbox"/> DWQ		
S5 <input type="checkbox"/> P <input type="checkbox"/> T			<input type="checkbox"/> PER <input type="checkbox"/> INT	<input type="checkbox"/> Corps <input type="checkbox"/> DWQ		
S6 <input type="checkbox"/> P <input type="checkbox"/> T			<input type="checkbox"/> PER	<input type="checkbox"/> Corps		

			<input type="checkbox"/> INT	<input type="checkbox"/> DWQ				
3h. Total stream and tributary impacts					73 ft. Perm 90 ft. Temp			
3i. Comments: Total Impacts = 73 + 90 = 163 feet								
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								
4f. Total open water impacts				X Permanent X Temporary				
4g. Comments: N/A								
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								
5f. Total								
5g. Comments:								
5h. Is a dam high hazard permit required?				<input type="checkbox"/> Yes <input type="checkbox"/> No		If yes, permit ID no:		
5i. Expected pond surface area (acres):								
5j. Size of pond watershed (acres):								
5k. Method of construction:								

6. Buffer Impacts (for DWQ)

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 **MUST** fill out Section D of this form.

6a. Project is in which protected basin?		<input type="checkbox"/> Neuse <input type="checkbox"/> Tar-Pamlico <input type="checkbox"/> Other: <input type="checkbox"/> Catawba <input type="checkbox"/> Randleman			
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 type="checkbox"/> P <input type="checkbox"/> T			<input type="checkbox"/> Yes <input type="checkbox"/> No		
B2 <input type="checkbox"/> P <input type="checkbox"/> T			<input type="checkbox"/> Yes <input type="checkbox"/> No		
B3 <input type="checkbox"/> P <input type="checkbox"/> T			<input type="checkbox"/> Yes <input type="checkbox"/> No		
6h. Total buffer impacts					
6i. Comments: N/A					

D. Impact Justification and Mitigation		
1. Avoidance and Minimization		
1a. Specifically describe measures taken to avoid or minimize the proposed impacts in designing project. The new structure is a bottomless culvert on existing location. During construction traffic will follow an off-site detour. There will be no direct discharge into Coal Creek.		
1b. Specifically describe measures taken to avoid or minimize the proposed impacts through construction techniques. NCDOT Best Management Practices will be implemented during all phases of construction and demolition.		
2. Compensatory Mitigation for Impacts to Waters of the U.S. or Waters of the State		
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 NCDOT does not propose mitigation due to Coal Creek is not an ORW, HQW or WS watershed. The 90 linear feet of temporary impacts are minimal impacts to the bank where the culvert wall is installed and does not constitute a "loss of waters".	
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	
3. Complete if Using a Mitigation Bank		
3a. Name of Mitigation Bank: not applicable		
3b. Credits Purchased (attach receipt and letter)	Type	Quantity
3c. Comments:		
4. Complete if Making a Payment to In-lieu Fee Program		
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: N/A		
5. Complete if Using a Permittee Responsible Mitigation Plan		
5a. If using a permittee responsible mitigation plan, provide a description of the proposed mitigation plan.		

6. Buffer Mitigation (State Regulated Riparian Buffer Rules) – required by DWQ					
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:		
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:					

E. Stormwater Management and Diffuse Flow Plan (required by DWQ)	
1. Diffuse Flow Plan	
1a. Does the project include or is it adjacent to protected riparian buffers identified within one of the NC Riparian Buffer Protection Rules?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
1b. If yes, then is a diffuse flow plan included? If no, explain why. Comments:	<input type="checkbox"/> Yes <input type="checkbox"/> No
2. Stormwater Management Plan	
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	
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
3. Certified Local Government Stormwater Review	
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
4. DWQ Stormwater Program Review	
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
5. DWQ 401 Unit Stormwater Review	
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

F. Supplementary Information	
1. Environmental Documentation (DWQ Requirement)	
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
2. Violations (DWQ Requirement)	
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):	
3. Cumulative Impacts (DWQ Requirement)	
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.	
4. Sewage Disposal (DWQ Requirement)	
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	

5. Endangered Species and Designated Critical Habitat (Corps Requirement)		
5a. Will this project occur in or near an area with federally protected species or habitat?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
5b. Have you checked with the USFWS concerning Endangered Species Act impacts?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
5c. If yes, indicate the USFWS Field Office you have contacted.	<input 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? http://www.fws.gov/nc-es/es/countyfr.html ; Field investigations within the project study area were conducted by Wang Engineering for EcoScience Corporation for NCDOT on June 7-8, 2005. The Bog turtle is the only T/E species listed for Wilkes county. The Bog turtle is T(S/A) and is not subject to Section 7 Consultation and a Bio. Conclusion is Not Required.		
6. Essential Fish Habitat (Corps Requirement)		
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?		
7. Historic or Prehistoric Cultural Resources (Corps Requirement)		
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		
8. Flood Zone Designation (Corps Requirement)		
8a. Will this project occur in a FEMA-designated 100-year floodplain?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
8b. If yes, explain how project meets FEMA requirements:		
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 <small>(Agent's signature is valid only if an authorization letter from the applicant is provided.)</small>	5.8.09 Date

STORMWATER MANAGEMENT PLAN

Project: 33832.1.1

TIP No. B-4677

Wilkes County

04/08/2009

Hydraulics Project Manager: W. Henry Wells, P.E. (Sungate Design Group),
Marshal Clawson, P.E. (NCDOT Hydraulics Unit)

ROADWAY DESCRIPTION

The project B-4677 consists of constructing a 28' X 8' bottomless culvert to replace the existing bridge #99 in Wilkes County on SR 1346 over Coal Creek. The total project length is 0.07 miles. The project creates impacts to Coal Creek, which is located in the Yadkin River Basin. The project drainage systems consist of grated inlets with associated pipe systems, and rip rap dissipaters at the pipe outlets.

Jurisdiction Stream: Coal Creek

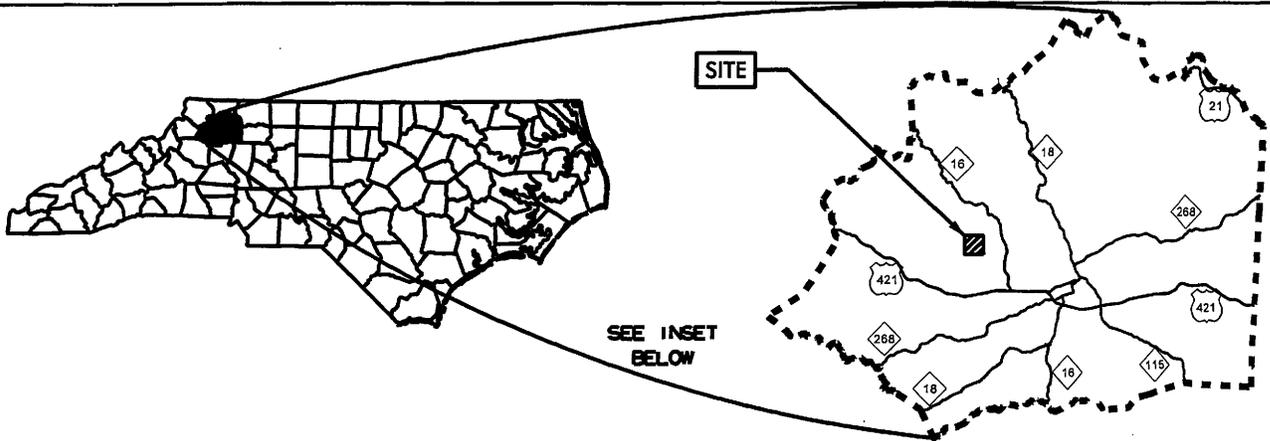
ENVIRONMENTAL DESCRIPTION

The project is located within the Yadkin River Basin in Wilkes County. There are no wetlands within the project limits. Impacts to the stream have been minimized by using preformed rip rap dissipaters at the pipe outlets and reducing the roadway approach work to minimize fill slopes encroachment.

BEST MANAGEMENT PRACTICES AND MAJOR STRUCTURES

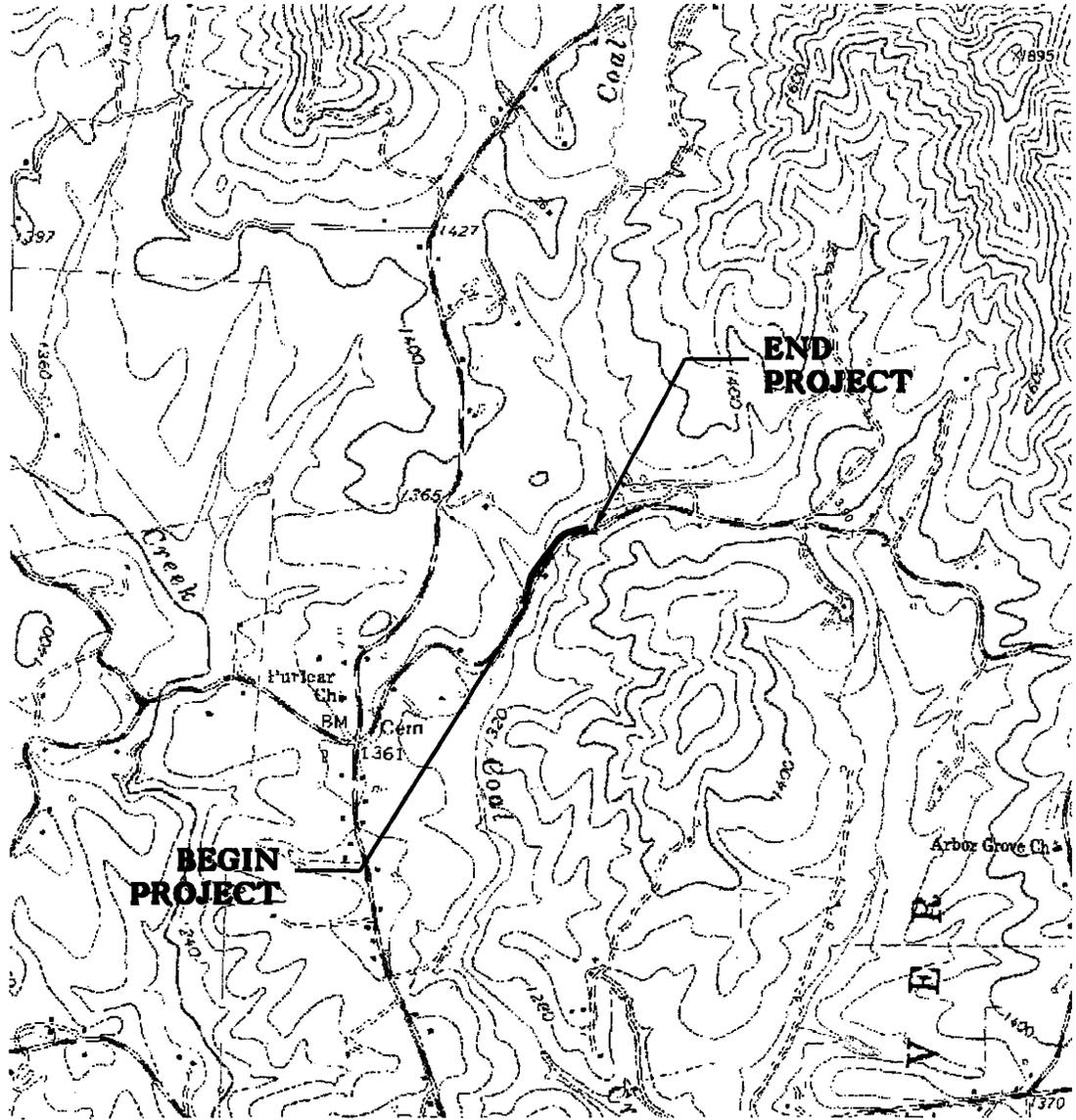
The primary goal of Best Management Practices (BMPs) is to prevent degradation of the states surface waters by the location, construction and operation of the highway system. The BMPs are activities, practices and procedures taken to prevent or reduce stormwater pollution. The BMP measures used on this project to reduce stormwater impacts are:

- Rip rap dissipaters at pipe outlets.



SEE INSET
BELOW

WILKES COUNTY



WETLAND IMPACTS

N.C. DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS
 WILKES COUNTY
 PROJECT: 33832.1.1 (B-4677)
 BRIDGE NO. 99 OVER
 COAL CREEK ON SR 1317
 (OLD HWY 60)
 SHEET ___ OF ___ 3-3-09
 Permit Drawing

PROPERTY OWNERS

NAMES AND ADDRESSES

PARCEL NO.	NAMES	ADDRESSES
2	MARIE FAW MARTIN JAMES E. MARTIN, JR	ADDRESSES
3	MARIE FAW MARTIN LAURAL DE LA RIVA	ADDRESSES

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

WILKES COUNTY
PROJECT: 33832.1.1 (B-4677)
BRIDGE NO. 99 OVER
COAL CREEK ON SR 1317
(OLD HWY 60)

SHEET ___ OF ___

3-3-09

Permit Drawing
Sheet 2 of 9

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	B-4677	1	
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	
33832.1.1	BRZ-1317(4)	P.E.	
33832.2.1	BRZ-1317(4)	R/W / UTIL	

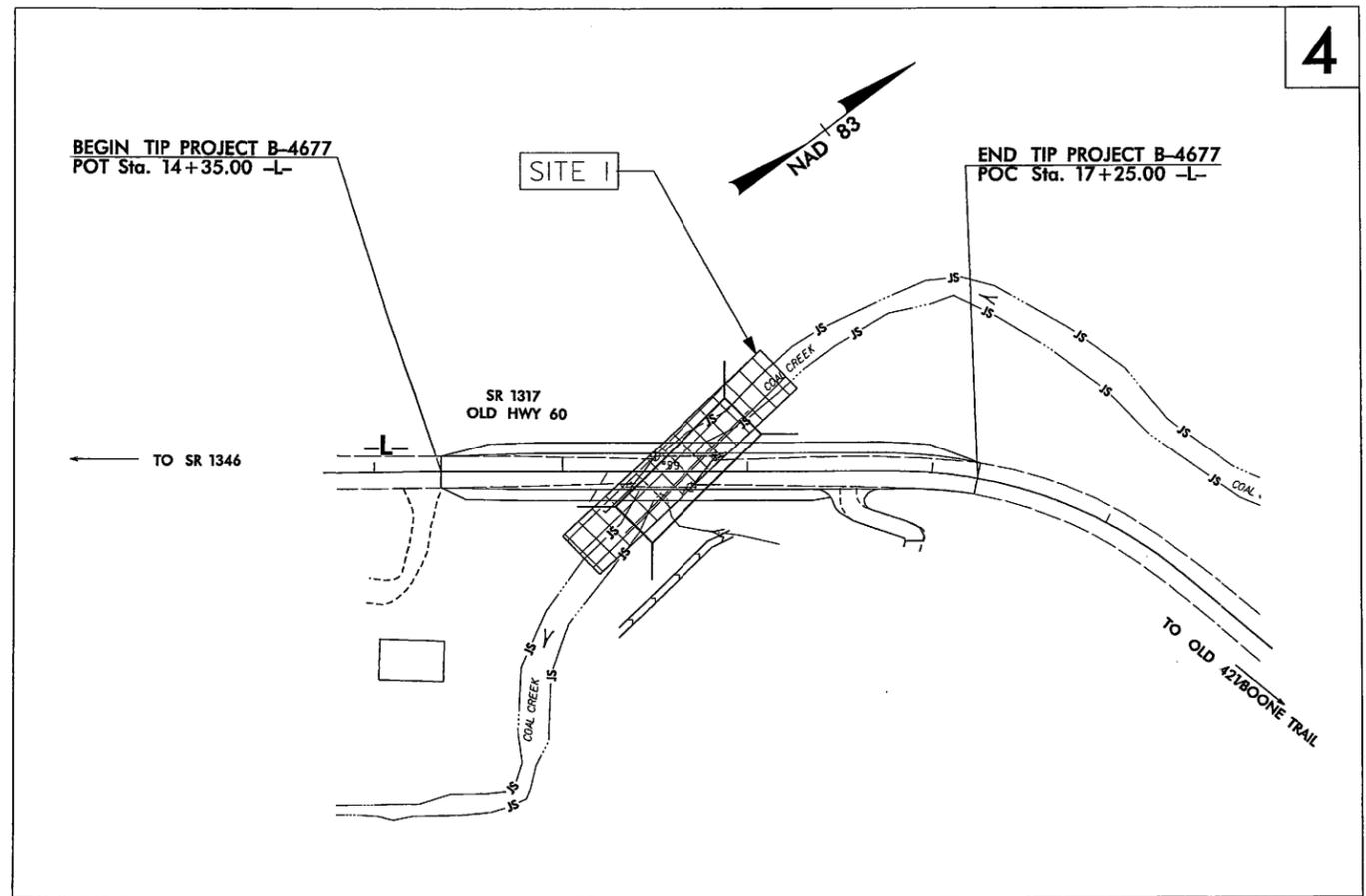
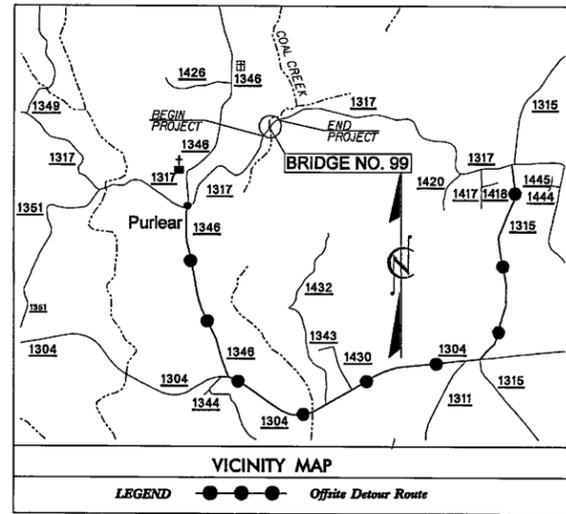
STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

WILKES COUNTY

LOCATION: BRIDGE NO. 99 OVER COAL CREEK ON SR 1317 (Old Hwy 60)

TYPE OF WORK: GRADING, DRAINAGE, CULVERT, AND PAVING

See Sheet 1-A For Index of Sheets



WETLAND/STREAM IMPACTS

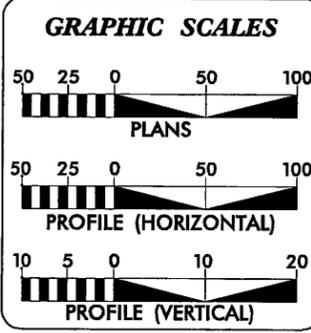
** - DESIGN EXCEPTION REQUIRED FOR LANE WIDTH, SAG VERTICAL CURVE K VALUE, VERTICAL STOPPING SIGHT DISTANCE, SHOULDER WIDTH, AND HORIZONTAL CURVE RADIUS

THIS PROJECT IS NOT WITHIN MUNICIPAL BOUNDARIES.

NCDOT CONTACT: CATHY HOUSER, P.E., PROJECT ENGINEER - ROADWAY DESIGN

"CLEARING ON THIS PROJECT SHALL BE ESTABLISHED BY METHOD III."

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION



DESIGN DATA

ADT 2010 =	600
ADT 2030 =	900
DHV =	11 %
D =	65 %
T =	3 % *
** V =	60 MPH
RURAL LOCAL	
* TTST 1 %	DUAL 4 %

PROJECT LENGTH

LENGTH ROADWAY TIP PROJECT B-4677	=	0.048 mi.
LENGTH STRUCTURE TIP PROJECT B-4677	=	0.007 mi.
TOTAL LENGTH TIP PROJECT B-4677	=	0.055 mi.

Prepared in the Office of:
WANG ENGINEERING COMPANY, INC.
CARY, N.C.
FOR NORTH CAROLINA DEPARTMENT OF TRANSPORTATION

2006 STANDARD SPECIFICATIONS

RIGHT OF WAY DATE: **CLIFTON T. REGISTER, P.E.**
JANUARY 16, 2009
PROJECT ENGINEER

LETTING DATE: **SCOTT L. KENNEDY**
JANUARY 19, 2010
PROJECT DESIGN ENGINEER

HYDRAULICS ENGINEER
SUNGATE DESIGN GROUP, PA

SIGNATURE: _____ P.E.

ROADWAY DESIGN ENGINEER
WANG ENGINEERING

SIGNATURE: _____ P.E.

DIVISION OF HIGHWAYS
STATE OF NORTH CAROLINA

STATE HIGHWAY DESIGN ENGINEER

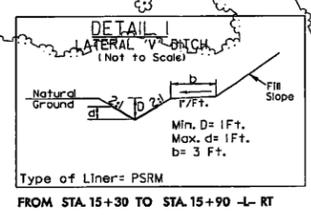
TIP PROJECT: B-4677

CONTRACT:

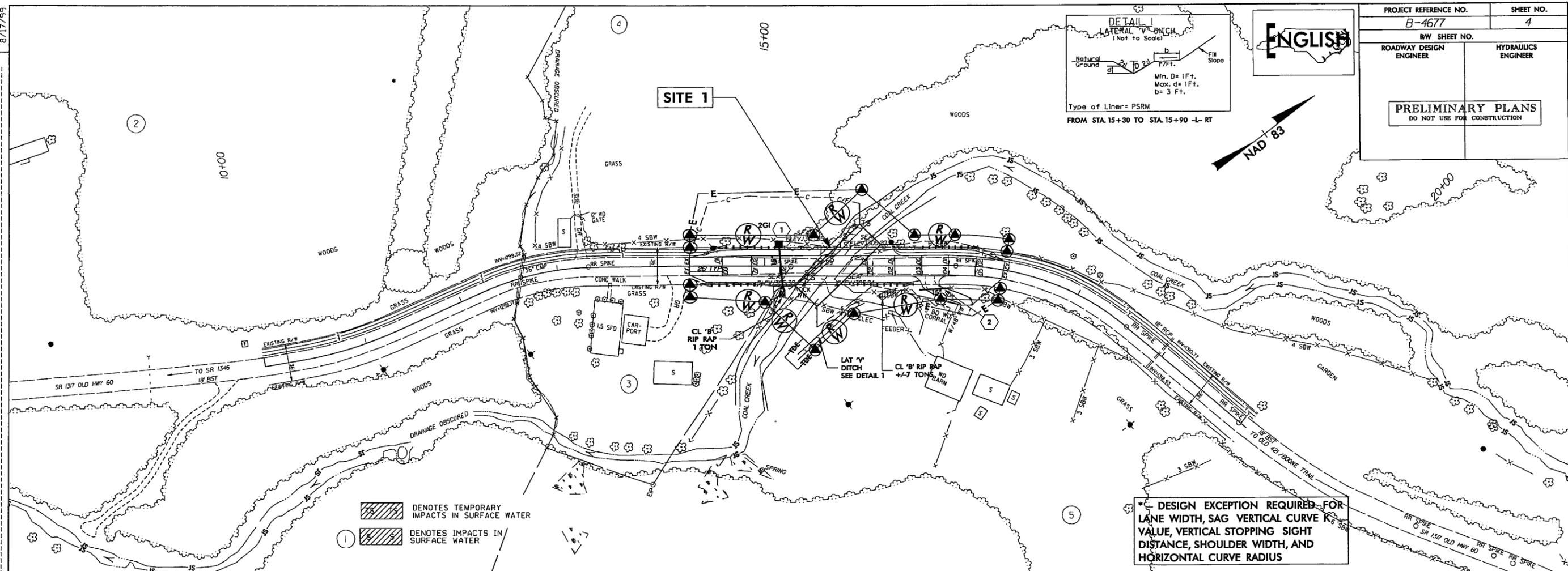
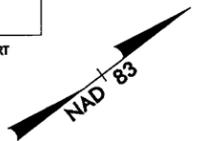
09/08/09 \$\$\$\$\$\$SYTIME\$\$\$\$\$\$ \$\$\$\$\$\$DGN\$\$\$\$\$\$ \$\$\$\$\$\$USERNAME\$\$\$\$\$\$

8/17/99

PROJECT REFERENCE NO. B-4677	SHEET NO. 4
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	

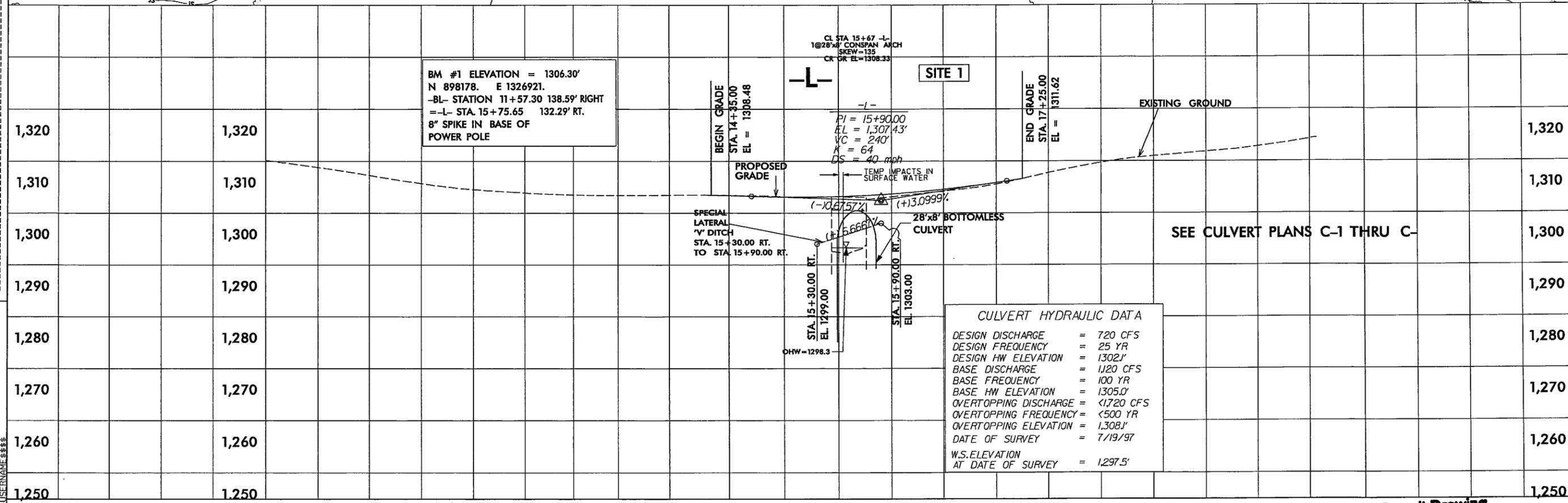


ENGLISH



DENOTES TEMPORARY IMPACTS IN SURFACE WATER
 DENOTES IMPACTS IN SURFACE WATER

* DESIGN EXCEPTION REQUIRED FOR LANE WIDTH, SAG VERTICAL CURVE VALUE, VERTICAL STOPPING SIGHT DISTANCE, SHOULDER WIDTH, AND HORIZONTAL CURVE RADIUS



BM #1 ELEVATION = 1306.30'
 N 898178. E 1326921.
 -BL- STATION 11+57.30 138.59' RIGHT
 =-L- STA. 15+75.65 132.29' RT.
 8" SPIKE IN BASE OF POWER POLE

SITE 1

EXISTING GROUND

SEE CULVERT PLANS C-1 THRU C-

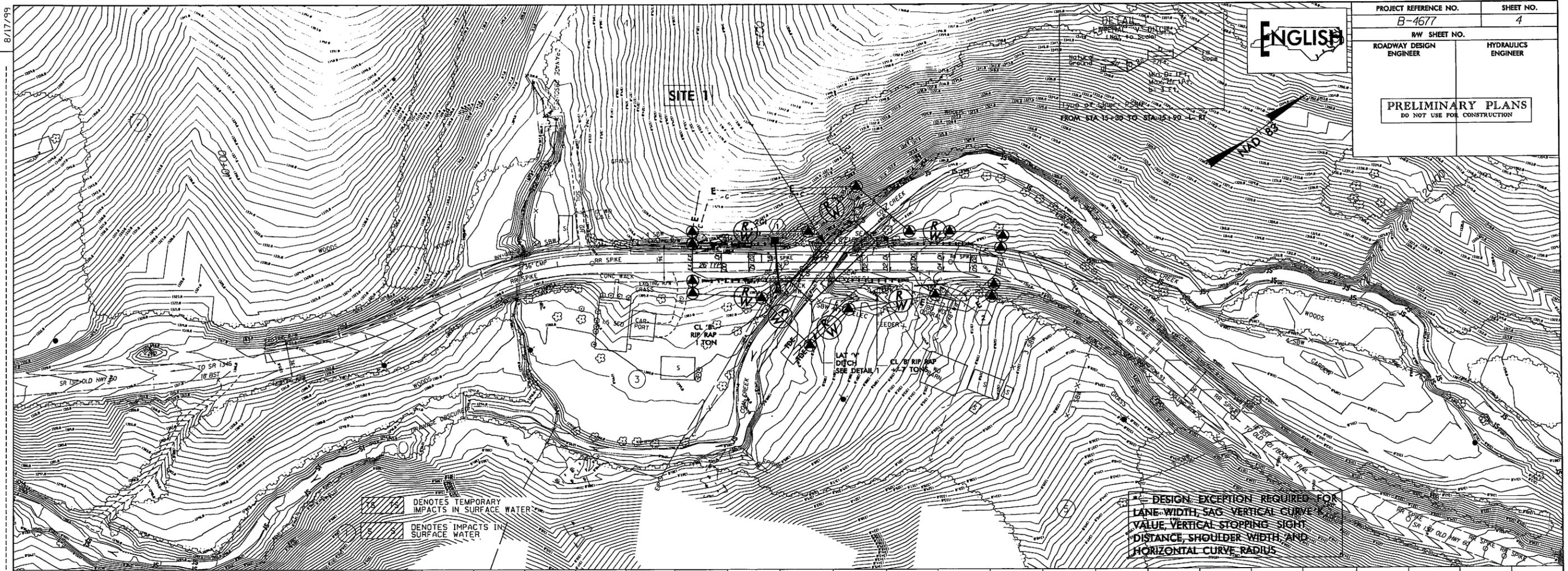
CULVERT HYDRAULIC DATA

DESIGN DISCHARGE	= 720 CFS
DESIGN FREQUENCY	= 25 YR
DESIGN HW ELEVATION	= 1302'
BASE DISCHARGE	= 1120 CFS
BASE FREQUENCY	= 100 YR
BASE HW ELEVATION	= 1305.0'
OVERTOPPING DISCHARGE	= <1,720 CFS
OVERTOPPING FREQUENCY	= <500 YR
OVERTOPPING ELEVATION	= 1,308.1'
DATE OF SURVEY	= 7/19/97
W.S. ELEVATION AT DATE OF SURVEY	= 1,297.5'

8/17/99

PROJECT REFERENCE NO. B-4677	SHEET NO. 4
RW SHEET NO.	HYDRAULICS ENGINEER
ROADWAY DESIGN ENGINEER	
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	

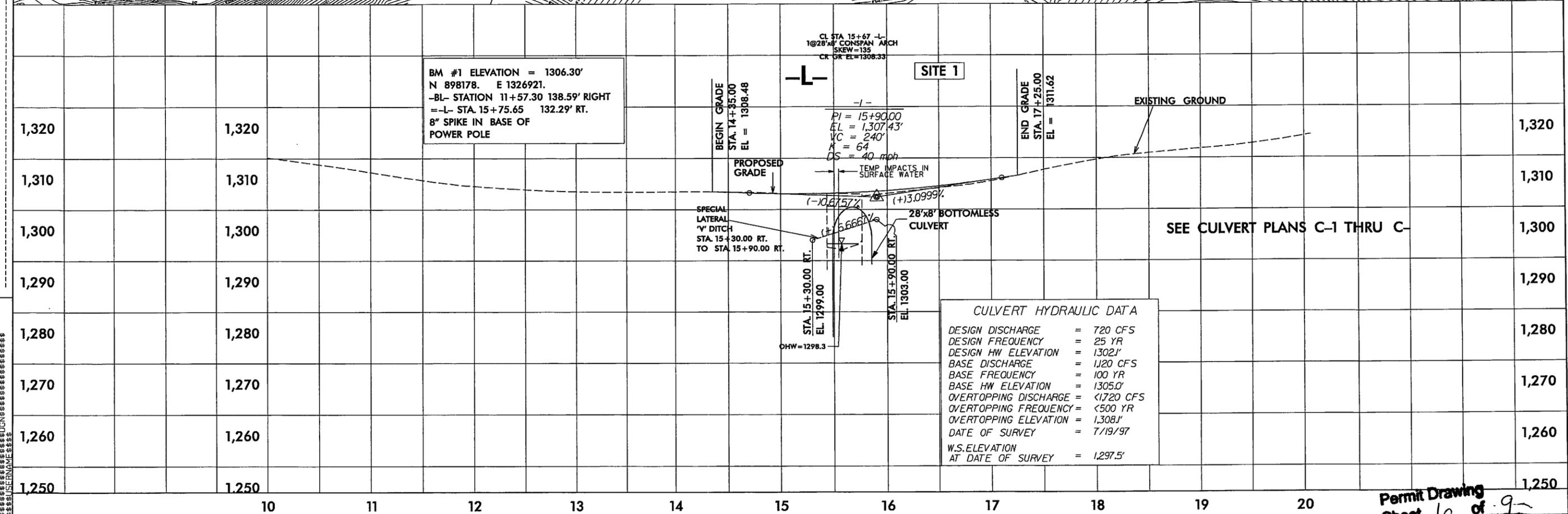
ENGLISH



REVISIONS

DENOTES TEMPORARY IMPACTS IN SURFACE WATER
 DENOTES IMPACTS IN SURFACE WATER

DESIGN EXCEPTION REQUIRED FOR
 LANE WIDTH, SAG VERTICAL CURVE VALUE, VERTICAL STOPPING SIGHT DISTANCE, SHOULDER WIDTH, AND HORIZONTAL CURVE RADIUS



BM #1 ELEVATION = 1306.30'
 N 898178. E 1326921.
 -BL- STATION 11+57.30 138.59' RIGHT
 =-L- STA. 15+75.65 132.29' RT.
 8" SPIKE IN BASE OF POWER POLE

CL STA 15+67 -L-
 @28'x8' CONSPAN ARCH
 SKEW=135
 CR SR EL=1308.33

SITE 1

BEGIN GRADE STA. 14+35.00 EL = 1308.48
 END GRADE STA. 17+25.00 EL = 1311.62
 PI = 15+90.00
 EL = 1307.43'
 VC = 240'
 K = 64
 DS = 40 mph
 SPECIAL LATERAL 'V' DITCH STA. 15+30.00 RT. TO STA. 15+90.00 RT.
 STA. 15+30.00 RT. EL. 1299.00
 STA. 15+90.00 RT. EL. 1303.00
 OHW=1298.3
 (-)0.8757%
 (+)3.0999%
 28'x8' BOTTOMLESS CULVERT
 TEMP IMPACTS IN SURFACE WATER

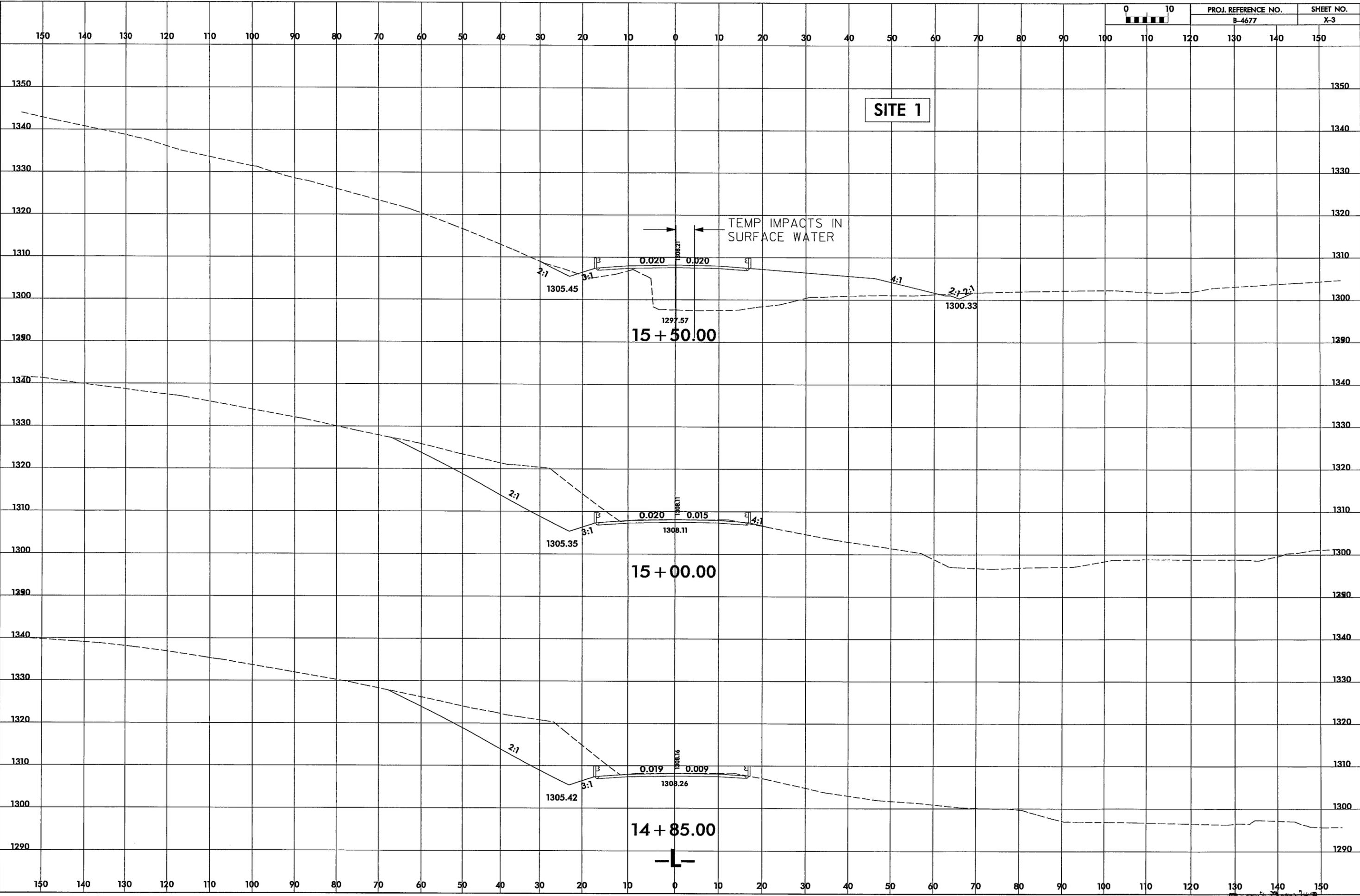
SEE CULVERT PLANS C-1 THRU C-

CULVERT HYDRAULIC DATA

DESIGN DISCHARGE	= 720 CFS
DESIGN FREQUENCY	= 25 YR
DESIGN HW ELEVATION	= 1302.1'
BASE DISCHARGE	= 1,120 CFS
BASE FREQUENCY	= 100 YR
BASE HW ELEVATION	= 1305.0'
OVERTOPPING DISCHARGE	= <1,720 CFS
OVERTOPPING FREQUENCY	= <500 YR
OVERTOPPING ELEVATION	= 1,308.1'
DATE OF SURVEY	= 7/19/97
W.S. ELEVATION AT DATE OF SURVEY	= 1,297.5'

SYTIME
C:\P\PROJECTS\B-4677\DRAWING\PLANS\PLANS.DWG
8/17/99 10:00 AM

8/22/99



***** TIME *****
***** DATE *****
***** DRAWING *****
***** SHEET *****

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	B-4677	1	
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	
33832.1.1	BRZ-1317(4)	P.E.	
33832.2.1	BRZ-1317(4)	RW / UTIL	

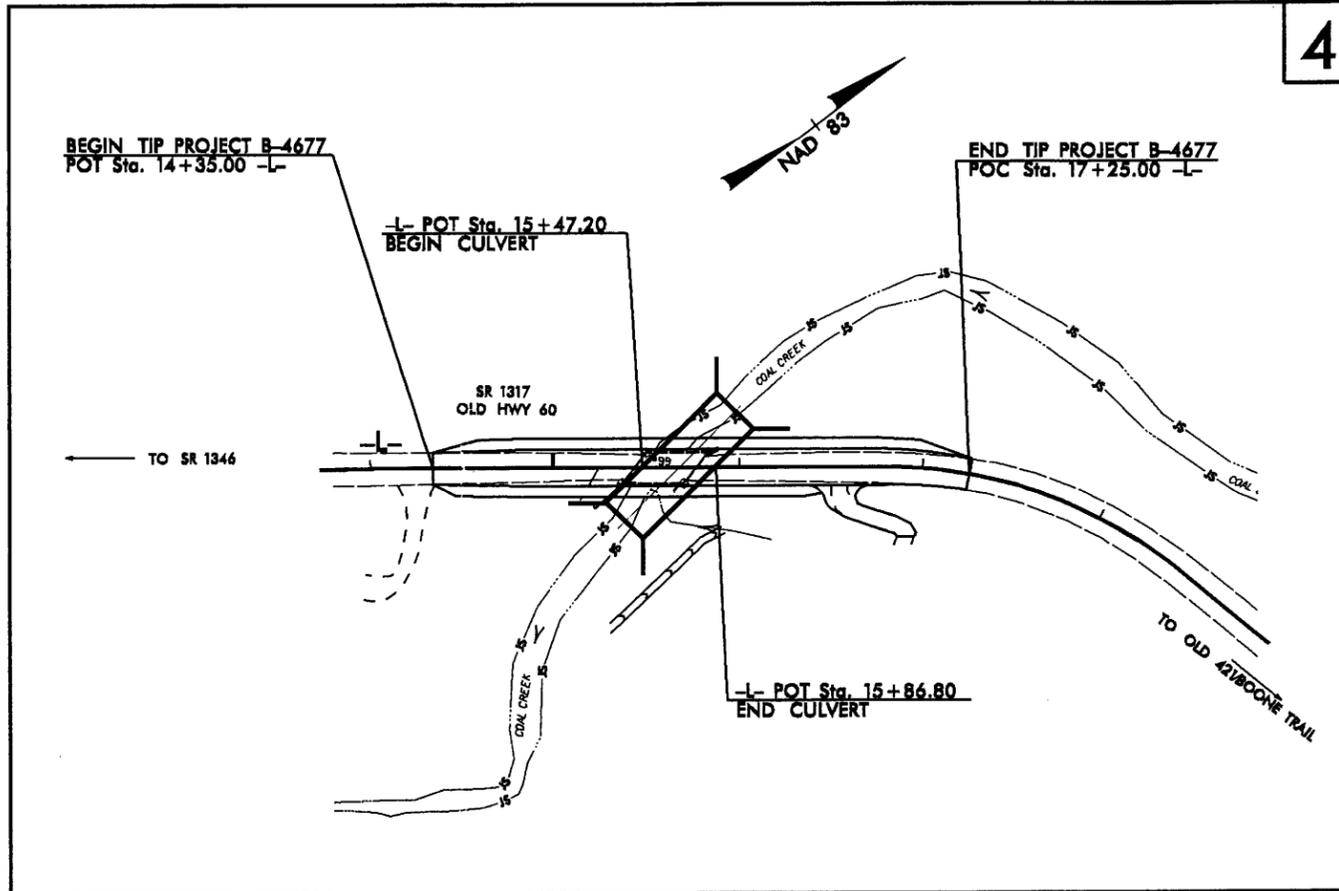
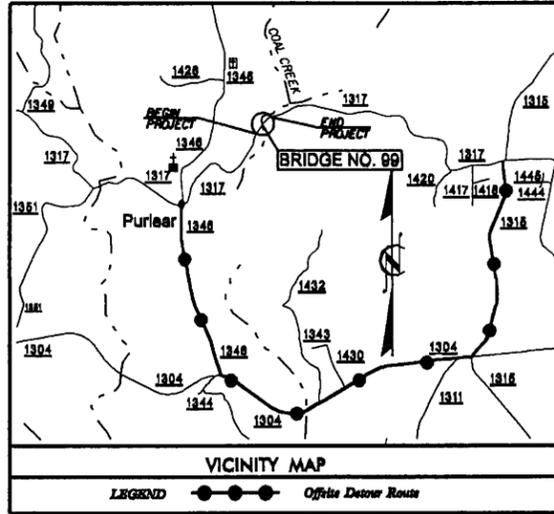
See Sheet 1-A For Index of Sheets

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

WILKES COUNTY

LOCATION: BRIDGE NO. 99 OVER COAL CREEK ON SR 1317 (Old Hwy 60)

TYPE OF WORK: GRADING, DRAINAGE, CULVERT, AND PAVING



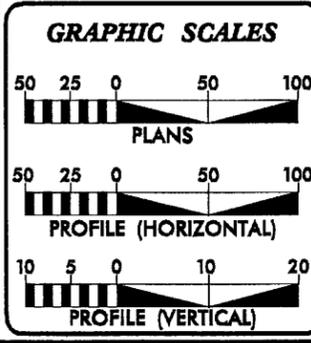
** - DESIGN EXCEPTION REQUIRED FOR LANE WIDTH, SAG VERTICAL CURVE K VALUE, VERTICAL STOPPING SIGHT DISTANCE, SHOULDER WIDTH, AND HORIZONTAL CURVE RADIUS

THIS PROJECT IS NOT WITHIN MUNICIPAL BOUNDARIES.

NCDOT CONTACT: CATHY HOUSER, P.E., PROJECT ENGINEER - ROADWAY DESIGN

"CLEARING ON THIS PROJECT SHALL BE ESTABLISHED BY METHOD III."

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION



DESIGN DATA

ADT 2010 = 600
ADT 2030 = 900
DHV = 11 %
D = 65 %
T = 3 % *
** V = 60 MPH
RURAL LOCAL
* TTST 1 % DUAL 4 %

PROJECT LENGTH

LENGTH ROADWAY TIP PROJECT B-4677 = 0.048 mi.
LENGTH STRUCTURE TIP PROJECT B-4677 = 0.007 mi.
TOTAL LENGTH TIP PROJECT B-4677 = 0.055 mi.

Prepared in the Office of:
WANG ENGINEERING COMPANY, INC.
CARY, N.C.
FOR NORTH CAROLINA DEPARTMENT OF TRANSPORTATION

2006 STANDARD SPECIFICATIONS

RIGHT OF WAY DATE: **JANUARY 16, 2009**
LETTING DATE: **JANUARY 19, 2010**

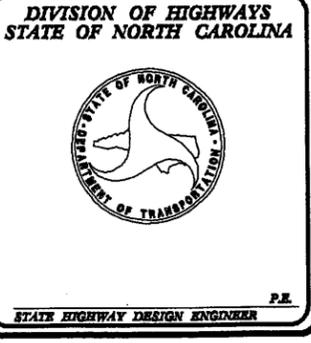
CLIFTON T. REGISTER, P.E.
PROJECT ENGINEER

SCOTT L. KENNEDY
PROJECT DESIGN ENGINEER

HYDRAULICS ENGINEER
SUNGLIN DESIGN GROUP, PA

SIGNATURE: _____ P.E.
ROADWAY DESIGN ENGINEER
WANG ENGINEERING

SIGNATURE: _____ P.E.
STATE HIGHWAY DESIGN ENGINEER



CONTRACT: TIP PROJECT: B-4677
 27-MAR-2009 11:43
 r:\p00d\wqy\proj\1317\1317_rdy_tsh.dgn
 \$\$\$USERNAME\$\$\$

3/15/06

Note: Not to Scale

*S.U.E. = Subsurface Utility Engineering

STATE OF NORTH CAROLINA DIVISION OF HIGHWAYS

CONVENTIONAL PLAN SHEET SYMBOLS

BOUNDARIES AND PROPERTY:

Table listing symbols for 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, 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.

BUILDINGS AND OTHER CULTURE:

Table listing symbols for buildings and other culture: Gas Pump Vent or UG Tank Cap, Sign, Well, Small Mine, Foundation, Area Outline, Cemetery, Building, School, Church, Dam.

HYDROLOGY:

Table listing symbols for 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:

Table listing symbols for railroads: Standard Gauge, RR Signal Milepost, Switch, RR Abandoned, RR Dismantled.

RIGHT OF WAY:

Table listing symbols for 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 Utility Easement, Proposed Permanent Easement with Iron Pin and Cap Marker.

ROADS AND RELATED FEATURES:

Table listing symbols for roads and related features: Existing Edge of Pavement, Existing Curb, Proposed Slope Stakes Cut, Proposed Slope Stakes Fill, Proposed Wheel Chair Ramp, Existing Metal Guardrail, Proposed Guardrail, Existing Cable Guiderail, Proposed Cable Guiderail, Equality Symbol, Pavement Removal.

VEGETATION:

Table listing symbols for vegetation: Single Tree, Single Shrub, Hedge, Woods Line, Orchard, Vineyard.

EXISTING STRUCTURES:

Table listing symbols for 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:

Table listing symbols for utilities: POWER: Existing Power Pole, Proposed Power Pole, Existing Joint Use Pole, Proposed Joint Use Pole, Power Manhole, Power Line Tower, Power Transformer, U/G 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, U/G 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:

Table listing symbols for 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:

Table listing symbols for TV: TV Satellite Dish, TV Pedestal, TV Tower, U/G 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:

Table listing symbols for gas: Gas Valve, Gas Meter, Recorded U/G Gas Line, Designated U/G Gas Line (S.U.E.*), Above Ground Gas Line.

SANITARY SEWER:

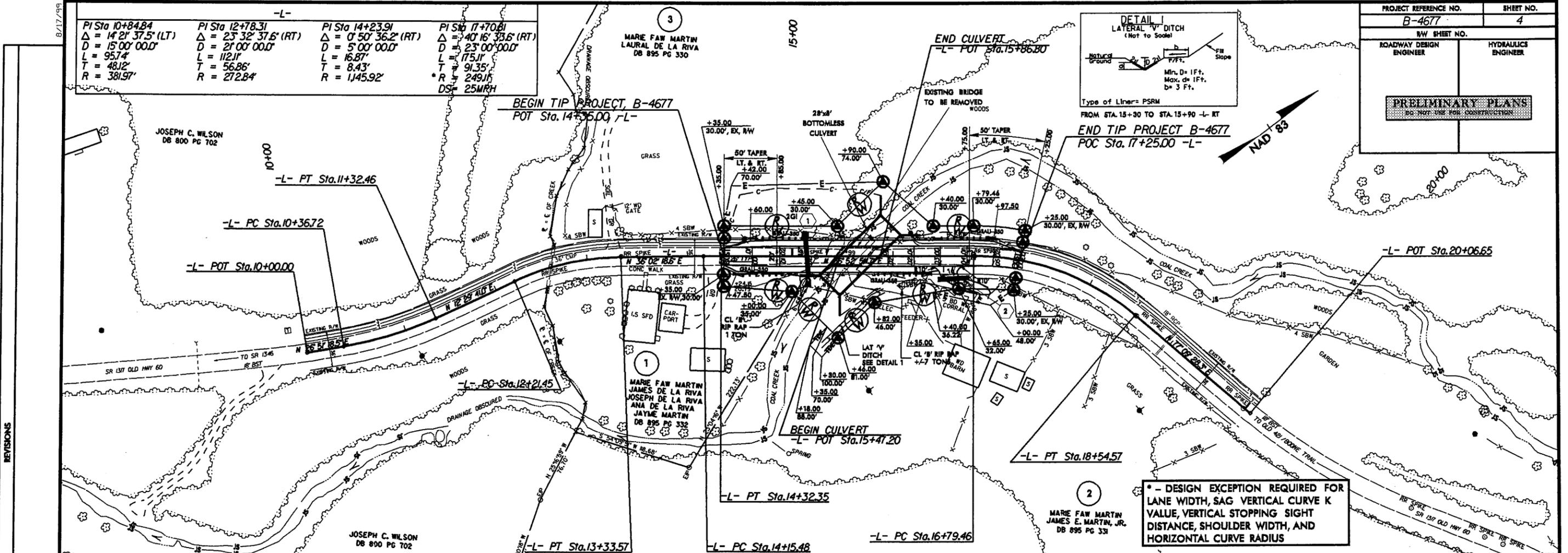
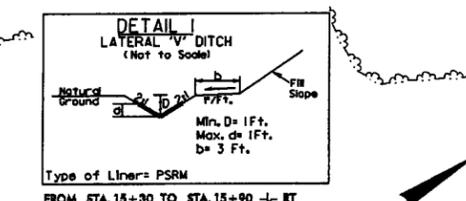
Table listing symbols for sanitary sewer: Sanitary Sewer Manhole, Sanitary Sewer Cleanout, U/G Sanitary Sewer Line, Above Ground Sanitary Sewer, Recorded SS Forced Main Line, Designated SS Forced Main Line (S.U.E.*).

MISCELLANEOUS:

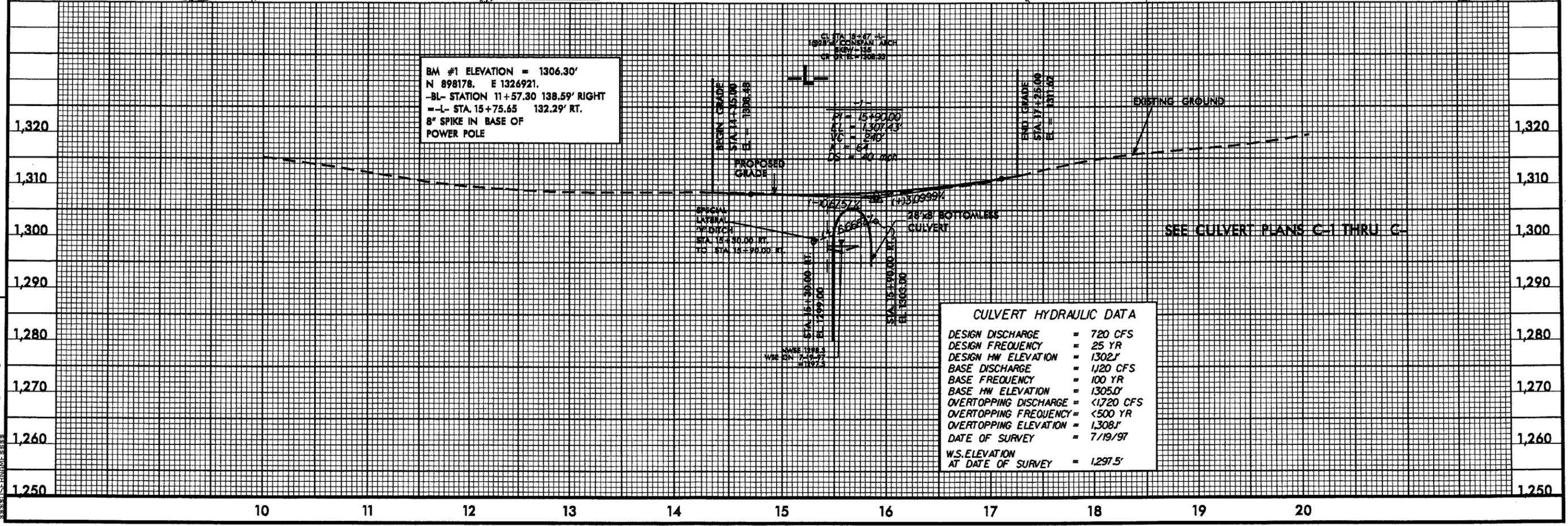
Table listing symbols for miscellaneous: Utility Pole, Utility Pole with Base, Utility Located Object, Utility Traffic Signal Box, Utility Unknown U/G Line, U/G Tank; Water, Gas, Oil, A/G Tank; Water, Gas, Oil, U/G Test Hole (S.U.E.*), Abandoned According to Utility Records, End of Information.

PROJECT REFERENCE NO.	SHEET NO.
B-4677	4
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	

PI Sta 10+84.84 $\Delta = 14^{\circ} 21' 37.5"$ (LT) $D = 15^{\circ} 00' 00.0"$ $L = 95.74'$ $T = 48.12'$ $R = 381.97'$	PI Sta 12+78.31 $\Delta = 23^{\circ} 32' 37.6"$ (RT) $D = 21^{\circ} 00' 00.0"$ $L = 112.11'$ $T = 56.86'$ $R = 272.84'$	PI Sta 14+23.91 $\Delta = 0^{\circ} 50' 36.2"$ (RT) $D = 5^{\circ} 00' 00.0"$ $L = 16.87'$ $T = 8.43'$ $R = 1,145.92'$	PI Sta 17+70.81 $\Delta = 34^{\circ} 16' 33.6"$ (RT) $D = 23^{\circ} 00' 00.0"$ $L = 175.11'$ $T = 91.35'$ $R = 249.15'$ $DS = 25MRH$
--	---	---	---



* - DESIGN EXCEPTION REQUIRED FOR LANE WIDTH, SAG VERTICAL CURVE K VALUE, VERTICAL STOPPING SIGHT DISTANCE, SHOULDER WIDTH, AND HORIZONTAL CURVE RADIUS



BM #1 ELEVATION = 1306.30'
 N 898178. E 1326921.
 -BL- STATION 11+57.30 138.59' RIGHT
 -L- STA 15+75.65 132.29' RT.
 8" SPIKE IN BASE OF POWER POLE

CULVERT HYDRAULIC DATA	
DESIGN DISCHARGE	= 720 CFS
DESIGN FREQUENCY	= 25 YR
DESIGN HW ELEVATION	= 1302.1'
BASE DISCHARGE	= 1,120 CFS
BASE FREQUENCY	= 100 YR
BASE HW ELEVATION	= 1305.0'
OVERTOPPING DISCHARGE	= <1720 CFS
OVERTOPPING FREQUENCY	= <500 YR
OVERTOPPING ELEVATION	= 1308.1'
DATE OF SURVEY	= 7/19/97
W.S. ELEVATION AT DATE OF SURVEY	= 1,297.5'

27-MAR-2009 11:45 AM B:\4677_rdy_psh.dgn