STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION

BEVERLY EAVES PERDUE
GOVERNOR

EUGENE A. CONTI, JR.
SECRETARY

November 23, 2009

North Carolina Department of Environment and Natural Resources
Division of Water Quality
2321 Crabtree Boulevard, Suite 250
Raleigh, NC 27604

ATTN: Mr. Rob Ridings
NCDOT Coordinator

Dear Sir,

Subject: **Application for a Section 401 Water Quality Certification and Neuse Buffer Authorization** for the replacement of Bridge No. 43 over the South Flat River on SR 1112(Charlie Long Road), State Project No. 8.2380801, Federal Aid Project No. BRZ-1112(7), Division 5, T.I.P No. B-4600.

Reference: Section 401 Water Quality Certification issued on October 20, 2009
Section 404 permit application dated October 13, 2009

It is requested that the above referenced Water Quality Certification be redacted. This permit application replaces the previous permit application for a Nationwide Permit 33 dated October 13, 2009 and the Division of Water Quality permit issued on October 20, 2009.

The North Carolina Department of Transportation (NCDOT) proposes to replace bridge No. 43 over the South Flat River on SR 1112 (Charlie Long Road).

There will be 65 feet of permanent stream impacts from bank stabilization associated with this bridge replacement. Therefore, NCDOT wishes to use a NW 13 for bank stabilization.

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

TELEPHONE: : 919-431-2000
FAX: 919-431-2001

WEBSITE: WWW.NCDOT.ORG

LOCATION:
4701 Atlantic Ave.,
Suite 116
Raleigh, NC 27604

Please see the enclosed copies of the Jurisdictional Determination, Stormwater Management Plan, permit drawings and design plans for the above-referenced project. The Programmatic Categorical Exclusion (PCE) for this was completed project in June 2008. Additional copies are available upon request.

This project calls for a letting date of March 16, 2010 and a review date of February 2, 2010. However, the let date may advance as additional funds become available.

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 Sara Easterly at (919) 431-1605.

Sincerely,

Gregory J. Thorpe, Ph.D.
Environmental Management Director, PDEA

W/attachment
- Mr. Brian Wrenn, NCDWQ (5 Copies)
- Mr. Eric Alsmeyer, USACE
- Mr. J. Wally Bowman, P.E., Division Engineer
- Mr. Chris Murray, DEO

W/o attachment (see website for attachments)
- 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. 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. Gary Jordan, USFWS
- Mr. Travis Wilson, NCWRC
- Mr. Ma'ad Hassan, P.E., PDEA Project Planning Engineer
- Ms. LeiLani Paugh, NEU
- Mr. Randy Griffin, NEU

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:	☒ Section 404 Permit	☐ Section 10 Permit
1b. Specify Nationwide Permit (NWP) number: 13	or General Permit (GP) number:	
1c. Has the NWP or GP number been verified by the Corps?	☐ Yes	☒ No

1d. Type(s) of approval sought from the DWQ (check all that apply):

☒ 401 Water Quality Certification – Regular ☐ Non-404 Jurisdictional General Permit

☐ 401 Water Quality Certification – Express ☒ 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: ☐ Yes ☒ No	For the record only for Corps Permit: ☒ Yes ☐ 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.		☒ Yes ☐ No
1g. Is the project located in any of NC's twenty coastal counties. If yes, answer 1h below.		☐ Yes ☒ No
1h. Is the project located within a NC DCM Area of Environmental Concern (AEC)?		☐ Yes ☒ No

2. Project Information

2a. Name of project:	Replacment of Bridge 43 over South Flat Creek on SR 1112 (Charlie Long Road)
2b. County:	Person
2c. Nearest municipality / town:	Brushy Fork
2d. Subdivision name:	*not applicable*
2e. NCDOT only, T.I.P. or state project no:	B-4600

3. Owner Information

3a. Name(s) on Recorded Deed:	North Carolina Department of Transportation
3b. Deed Book and Page No.	*not applicable*
3c. Responsible Party (for LLC if applicable):	*not applicable*
3d. Street address:	1598 Mail Service Center
3e. City, state, zip:	Raleigh, NC 27699-1598
3f. Telephone no.:	(919) 431-1605
3g. Fax no.:	(919) 431-2002
3h. Email address:	seeasterly@ncdot.gov

4. Applicant Information (if different from owner)	
4a. Applicant is:	☐ Agent ☐ Other, specify:
4b. Name:	*not applicable*
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:	*not applicable*
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):	*not applicable*	
1b. Site coordinates (in decimal degrees):	Latitude: 36.2944 (DD.DDDDDD)	Longitude: - 79.0645 (-DD.DDDDDD)
1c. Property size:	5 acres	
2. Surface Waters		
2a. Name of nearest body of water (stream, river, etc.) to proposed project:	South Flat River	
2b. Water Quality Classification of nearest receiving water:	WSIII, NSW	
2c. River basin:	Neuse	
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: Low density single family, cultivated land, and forest land		
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: 132		
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 bridge No. 43 with a 105-foot, 3-span bridge 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:	☒ Yes	☐ No ☐ Unknown
4b. If the Corps made the jurisdictional determination, what type of determination was made?	☐ Preliminary	☒ Final
4c. If yes, who delineated the jurisdictional areas? Name (if known):	Agency/Consultant Company: Louis Berger Other:	
4d. If yes, list the dates of the Corps jurisdictional determinations or State determinations and attach documentation. August 21, 2008		
5. Project History		
5a. Have permits or certifications been requested or obtained for this project (including all prior phases) in the past?	☒ Yes	☐ No ☐ Unknown
5b. If yes, explain in detail according to "help file" instructions. Revising NW 33 application and redacting the 401 WQC application.		
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)
Site 1 ☐ P ☐ T			☐ Yes ☐ No	☐ Corps ☐ DWQ	
Site 2 ☐ P ☐ T			☐ Yes ☐ No	☐ Corps ☐ DWQ	
Site 3 ☐ P ☐ T			☐ Yes ☐ No	☐ Corps ☐ DWQ	
Site 4 ☐ P ☐ T			☐ Yes ☐ No	☐ Corps ☐ DWQ	
Site 5 ☐ P ☐ T			☐ Yes ☐ No	☐ Corps ☐ DWQ	
Site 6 ☐ P ☐ T			☐ Yes ☐ No	☐ Corps ☐ DWQ	
				2g. **Total wetland impacts**	0 Permanent 0 Temporary

2h. Comments:

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)
Site 1 ☒ P ☐ T	Bank Stabilization	South Flat River	☒ PER ☐ INT	☒ Corps ☐ DWQ	10	65
Site 2 ☐ P ☐ T			☐ PER ☐ INT	☐ Corps ☐ DWQ		
Site 3 ☐ P ☐ T			☐ PER ☐ INT	☐ Corps ☐ DWQ		
Site 4 ☐ P ☐ T			☐ PER ☐ INT	☐ Corps ☐ DWQ		
Site 5 ☐ P ☐ T			☐ PER ☐ INT	☐ Corps ☐ DWQ		
Site 6 ☐ P ☐ T			☐ PER ☐ INT	☐ Corps ☐ DWQ		
					3h. **Total stream and tributary impacts**	65 Perm 0 Temp

3i. Comments:

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 ☐ P ☐ T				
O2 ☐ P ☐ T				
O3 ☐ P ☐ T				
O4 ☐ P ☐ T				
			4f. Total open water impacts	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								
	5f. Total							

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:	

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?	☒ Neuse ☐ Catawba	☐ Tar-Pamlico ☐ Randleman	☐ 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 ☒ P ☐ T	Bridge Impacts	South Flat River	☐ Yes ☒ No	4,441	250
B2 ☒ P ☐ T	Road Crossing	South Flat River	☐ Yes ☒ No	1,126	2,490
B3 ☐ P ☐ T			☐ Yes ☐ No		
			6h. **Total buffer impacts**	5,567	2,740

6i. Comments:

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 proposed bridge will span the river; an off site detour will be used

1b. Specifically describe measures taken to avoid or minimize the proposed impacts through construction techniques.

2:1 slopes in jurisdictional and buffer areas, and Best Management Practices for Surface Waters, rip rap dissipater at pipe outlets.

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?	☐ Yes ☒ No
2b. If yes, mitigation is required by (check all that apply):	☐ DWQ ☐ Corps
2c. If yes, which mitigation option will be used for this project?	☐ Mitigation bank ☐ Payment to in-lieu fee program ☐ 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.	☐ Yes
4b. Stream mitigation requested:	0 linear feet
4c. If using stream mitigation, stream temperature:	☐ warm ☐ cool ☐ cold
4d. Buffer mitigation requested (DWQ only):	0 square feet
4e. Riparian wetland mitigation requested:	0 acres
4f. Non-riparian wetland mitigation requested:	0 acres
4g. Coastal (tidal) wetland mitigation requested:	0 acres

4h. Comments:

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?			☐ Yes	☒ 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?	☒ Yes ☐ No
1b. If yes, then is a diffuse flow plan included? If no, explain why. Comments: if yes, see attached permit drawings.	☒ Yes ☐ 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?	☒ Yes ☐ 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?	☐ Certified Local Government ☐ DWQ Stormwater Program ☐ 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):	☐ Phase II ☐ NSW ☐ USMP ☐ Water Supply Watershed ☐ Other:
3c. Has the approved Stormwater Management Plan with proof of approval been attached?	☐ Yes ☐ No
4. DWQ Stormwater Program Review	
4a. Which of the following state-implemented stormwater management programs apply (check all that apply):	☐ Coastal counties ☐ HQW ☐ ORW ☐ Session Law 2006-246 ☐ Other:
4b. Has the approved Stormwater Management Plan with proof of approval been attached?	☐ Yes ☐ No
5. DWQ 401 Unit Stormwater Review	
5a. Does the Stormwater Management Plan meet the appropriate requirements?	☒ Yes ☐ No
5b. Have all of the 401 Unit submittal requirements been met?	☒ Yes ☐ 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?	☒ Yes	☐ 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)?	☒ Yes	☐ 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:	☒ Yes	☐ 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)?	☐ Yes	☒ No
2b. Is this an after-the-fact permit application?	☐ Yes	☒ 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?	☐ Yes ☒ 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.		
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?	☐ Yes	☒ No
5b. Have you checked with the USFWS concerning Endangered Species Act impacts?	☐ Yes	☒ No
5c. If yes, indicate the USFWS Field Office you have contacted.	☐ Raleigh ☐ Asheville	
5d. What data sources did you use to determine whether your site would impact Endangered Species or Designated Critical Habitat? NHP, USFWS website, and the NCDOT mussel survey conducted in 2007. No dwarf wedgemussel species were found. The Biological Conclusion remains "No Effect"		
6. Essential Fish Habitat (Corps Requirement)		
6a. Will this project occur in or near an area designated as essential fish habitat?	☐ Yes	☒ No
6b. What data sources did you use to determine whether your site would impact Essential Fish Habitat? NMFS County Index		
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)?	☐ Yes	☒ 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?	☐ Yes	☒ No
8b. If yes, explain how project meets FEMA requirements: NCDOT Hydraulics 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	E. L. Luck Applicant/Agent's Signature (Agent's signature is valid only if an authorization letter from the applicant is provided.)	11.24.09 Date

U.S. ARMY CORPS OF ENGINEERS
WILMINGTON DISTRICT

Action ID. **2007-03756** County: **Person** U.S.G.S. Quad: **Hurdle Mills**

Easterly

NOTIFICATION OF JURISDICTIONAL DETERMINATION

Property Owner/Agent: **NCDOT; Division of Highways**
Address: **ATTN: Gregory J. Thorpe, Ph.D**
1598 Mail Service Center
Raleigh, North Carolina 27699-1598
Telephone No.: **(919) 715-5502 (Bill Goodwin)**

Property description: **Study area for TIP #B-4600; On SR 1112 (Charlie Long Rd), BR 43 over the South Flat River, northwest of Hurdle Mills, NC.**

Size (acres) **N/A**
Nearest Waterway **South Flat River and UT**
USGS HUC **03020201**
Nearest Town **Hurdle Mills**
River Basin **Neuse**
Coordinates N **36.2947** W **-79.0649**

Indicate Which of the Following Apply:

A. Preliminary Determination

_ Based on preliminary information, there may be wetlands on the above described property. We strongly suggest you have this property inspected to determine the extent of Department of the Army (DA) jurisdiction. To be considered final, a jurisdictional determination must be verified by the Corps. This preliminary determination is not an appealable action under the Regulatory Program Administrative Appeal Process (Reference 33 CFR Part 331).

B. Approved Determination

_ There are Navigable Waters of the United States within the above described project area subject to the permit requirements of Section 10 of the Rivers and Harbors Act and Section 404 of the Clean Water Act. Unless there is a change in the law or our published regulations, this determination may be relied upon for a period not to exceed five years from the date of this notification.

X There are waters of the U.S. on the above described project area subject to the permit requirements of Section 404 of the Clean Water Act (CWA)(33 USC § 1344). Unless there is a change in the law or our published regulations, this determination may be relied upon for a period not to exceed five years from the date of this notification.

_ We strongly suggest you have the waters of the U.S. including wetlands on your project area delineated. Due to the size of your property and/or our present workload, the Corps may not be able to accomplish this wetland delineation in a timely manner. For a more timely delineation, you may wish to obtain a consultant. To be considered final, any delineation must be verified by the Corps.

X The waters of the U.S. on your project area have been delineated and the delineation has been verified by the Corps. We strongly suggest you have this delineation surveyed. Upon completion, this survey should be reviewed and verified by the Corps. Once verified, this survey will provide an accurate depiction of all areas subject to CWA jurisdiction on your property which, provided there is no change in the law or our published regulations, may be relied upon for a period not to exceed five years.

_ The waters of the U.S. including wetlands have been delineated and surveyed and are accurately depicted on the plat signed by the Corps Regulatory Official identified below on _____. Unless there is a change in the law or our published regulations, this determination may be relied upon for a period not to exceed five years from the date of this notification.

_ There are no waters of the U.S., to include wetlands, present on the above described property which are subject to the permit requirements of Section 404 of the Clean Water Act (33 USC 1344). Unless there is a change in the law or our published regulations, this determination may be relied upon for a period not to exceed five years from the date of this notification.

_ The property is located in one of the 20 Coastal Counties subject to regulation under the Coastal Area Management Act (CAMA). You should contact the Division of Coastal Management in Washington, NC, at (252) 946-6481 to determine their requirements.

Placement of dredged or fill material within waters of the US and/or wetlands without a Department of the Army permit may constitute a violation of Section 301 of the Clean Water Act (33 USC § 1311). If you have any questions regarding this determination and/or the Corps regulatory program, please contact **Eric Alsmeyer** at **919-554-4884, Ext. 23**.

C. Basis For Determination

The impact area contains two perennial stream channel (the South Flat River and a UT) with indicators of ordinary high water marks, RPWs, and tributaries to Falls Lake, a TNW.

D. Remarks

The drawing, Figure 2 (copy att.), submitted on 11/13/2007 by The Louis Berger Group, Inc., generally depicts the jurisdictional waters of the US within the subject study area.

Appeals Information (This information applies only to approved jurisdictional determinations.)

Attached to this verification is an approved jurisdictional determination. If you are not in agreement with that approved jurisdictional determination, you can make an administrative appeal under 33 CFR 331. Enclosed you will find a Notification of Appeal Process (NAP) fact sheet and request for appeal (RFA) form. If you request to appeal this determination you must submit a completed RFA form to the following address:

District Engineer, Wilmington Regulatory Division
Attn: Jean Manuele, Field Office Chief,
Raleigh Regulatory Field Office
3331 Heritage Park Drive, Suite 105
Wake Forest, North Carolina 27587

In order for an RFA to be accepted by the Corps, the Corps must determine that it is complete, that it meets the criteria for appeal under 33 CFR part 331.5, and that it has been received by the District Office within 60 days of the date of the NAP. Should you decide to submit an RFA form, it must be received at the above address by 10/21/2008.
It is not necessary to submit an RFA form to the District Office if you do not object to the determination in this correspondence.

Corps Regulatory Official _____ Date: **8/21/2008** Determination Expiration Date: **8/21/2013**

The Wilmington District is committed to providing the highest level of support to the public. To help us ensure we continue to do so, please complete the Customer Satisfaction Survey located at our website at http://regulatory.usacesurvey.com/ to complete the survey online.

Copy furnished (w/ att.):
The Louis Berger Group, Inc.
Attn: Ray Bode, PWS
101 Wade Ave., Sutie 400
Raleigh, NC 27605

Figure 2. Jurisdictional Waters Map
B-4600 - Bridge Replacement for NCDOT
Bridge Number 43, Person County, NC

N

Aerial photo taken
on 8/2/2002

0 245 490 Feet

North Carolina Department
of Transportation
8.8.07

NOTIFICATION OF ADMINISTRATIVE APPEAL OPTIONS AND PROCESS AND REQUEST FOR APPEAL		
Applicant: **NCDOT; Division of Highways;**	File Number: **2007-03756**	Date: **8/21/2008**
Attached is:		See Section below
☐ INITIAL PROFFERED PERMIT (Standard Permit or Letter of permission)		A
☐ PROFFERED PERMIT (Standard Permit or Letter of permission)		B
☐ PERMIT DENIAL		C
☒ APPROVED JURISDICTIONAL DETERMINATION		D
☐ PRELIMINARY JURISDICTIONAL DETERMINATION		E

SECTION I - The following identifies your rights and options regarding an administrative appeal of the above decision. Additional information may be found at http://www.usace.army.mil/inet/functions/cw/cecwo/reg or Corps regulations at 33 CFR Part 331.

A: INITIAL PROFFERED PERMIT: You may accept or object to the permit.

- ACCEPT: If you received a Standard Permit, you may sign the permit document and return it to the district engineer for final authorization. If you received a Letter of Permission (LOP), you may accept the LOP and your work is authorized. Your signature on the Standard Permit or acceptance of the LOP means that you accept the permit in its entirety, and waive all rights to appeal the permit, including its terms and conditions, and approved jurisdictional determinations associated with the permit.
- OBJECT: If you object to the permit (Standard or LOP) because of certain terms and conditions therein, you may request that the permit be modified accordingly. You must complete Section II of this form and return the form to the district engineer. Your objections must be received by the district engineer within 60 days of the date of this notice, or you will forfeit your right to appeal the permit in the future. Upon receipt of your letter, the district engineer will evaluate your objections and may: (a) modify the permit to address all of your concerns, (b) modify the permit to address some of your objections, or (c) not modify the permit having determined that the permit should be issued as previously written. After evaluating your objections, the district engineer will send you a proffered permit for your reconsideration, as indicated in Section B below.

B: PROFFERED PERMIT: You may accept or appeal the permit

- ACCEPT: If you received a Standard Permit, you may sign the permit document and return it to the district engineer for final authorization. If you received a Letter of Permission (LOP), you may accept the LOP and your work is authorized. Your signature on the Standard Permit or acceptance of the LOP means that you accept the permit in its entirety, and waive all rights to appeal the permit, including its terms and conditions, and approved jurisdictional determinations associated with the permit.
- APPEAL: If you choose to decline the proffered permit (Standard or LOP) because of certain terms and conditions therein, you may appeal the declined permit under the Corps of Engineers Administrative Appeal Process by completing Section II of this form and sending the form to the division engineer. This form must be received by the division engineer within 60 days of the date of this notice.

C: PERMIT DENIAL: You may appeal the denial of a permit under the Corps of Engineers Administrative Appeal Process by completing Section II of this form and sending the form to the division engineer. This form must be received by the division engineer within 60 days of the date of this notice.

D: APPROVED JURISDICTIONAL DETERMINATION: You may accept or appeal the approved JD or provide new information.

- ACCEPT: You do not need to notify the Corps to accept an approved JD. Failure to notify the Corps within 60 days of the date of this notice, means that you accept the approved JD in its entirety, and waive all rights to appeal the approved JD.
- APPEAL: If you disagree with the approved JD, you may appeal the approved JD under the Corps of Engineers Administrative Appeal Process by completing Section II of this form and sending the form to the district engineer. This form must be received by the division engineer within 60 days of the date of this notice.

E: PRELIMINARY JURISDICTIONAL DETERMINATION: You do not need to respond to the Corps regarding the preliminary JD. The Preliminary JD is not appealable. If you wish, you may request an approved JD (which may be appealed), by contacting the Corps district for further instruction. Also you may provide new information for further consideration by the Corps to reevaluate the JD.

SECTION II - REQUEST FOR APPEAL or OBJECTIONS TO AN INITIAL PROFFERED PERMIT		
REASONS FOR APPEAL OR OBJECTIONS: (Describe your reasons for appealing the decision or your objections to an initial proffered permit in clear concise statements. You may attach additional information to this form to clarify where your reasons or objections are addressed in the administrative record.)		
ADDITIONAL INFORMATION: The appeal is limited to a review of the administrative record, the Corps memorandum for the record of the appeal conference or meeting, and any supplemental information that the review officer has determined is needed to clarify the administrative record. Neither the appellant nor the Corps may add new information or analyses to the record. However, you may provide additional information to clarify the location of information that is already in the administrative record.		
POINT OF CONTACT FOR QUESTIONS OR INFORMATION:		
If you have questions regarding this decision and/or the appeal process you may contact: Jean Manuele U.S. Army Corps of Engineers, Raleigh Regulatory Field Office 3331 Heritage Trade Drive, Suite 105 Wake Forest, North Carolina 27587	If you only have questions regarding the appeal process you may also contact: Mr. Mike Bell, Administrative Appeal Review Officer CESAD-ET-CO-R U.S. Army Corps of Engineers, South Atlantic Division 60 Forsyth Street, Room 9M15 Atlanta, Georgia 30303-8801	
RIGHT OF ENTRY: Your signature below grants the right of entry to Corps of Engineers personnel, and any government consultants, to conduct investigations of the project site during the course of the appeal process. You will be provided a 15 day notice of any site investigation, and will have the opportunity to participate in all site investigations.		
_____ Signature of appellant or agent.	Date:	Telephone number:

For appeals on Initial Proffered Permits and approved Jurisdictional Determinations send this form to:

District Engineer, Wilmington Regulatory Division, Attn: Jean Manuele, Project Manager, Raleigh Regulatory Field Office, 3331 Heritage Trade Drive, Suite 105, Wake Forest, North Carolina 27587

For Permit denials and Proffered Permits send this form to:

Division Engineer, Commander, U.S. Army Engineer Division, South Atlantic, Attn: Mr. Mike Bell, Administrative Appeal Officer, CESAD-ET-CO-R, 60 Forsyth Street, Room 9M15, Atlanta, Georgia 30303-8801

STORMWATER MANAGEMENT PLAN

Project: 33792.1.1
TIP No. B-4600
Person County 04/20/2009

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

ROADWAY DESCRIPTION

The project B-4600 consists of constructing a new bridge 105 feet long to replace the existing bridge #43 in Person County on SR-1100 over South Flat River. The total project length is 0.135 miles. The project creates impacts to South Flat River, which is located in the Neuse River Basin. The project drainage systems consist of grated inlets with associated pipe systems, and rip rap energy dissipaters at the pipe outlets.

Jurisdiction Stream: South Flat River

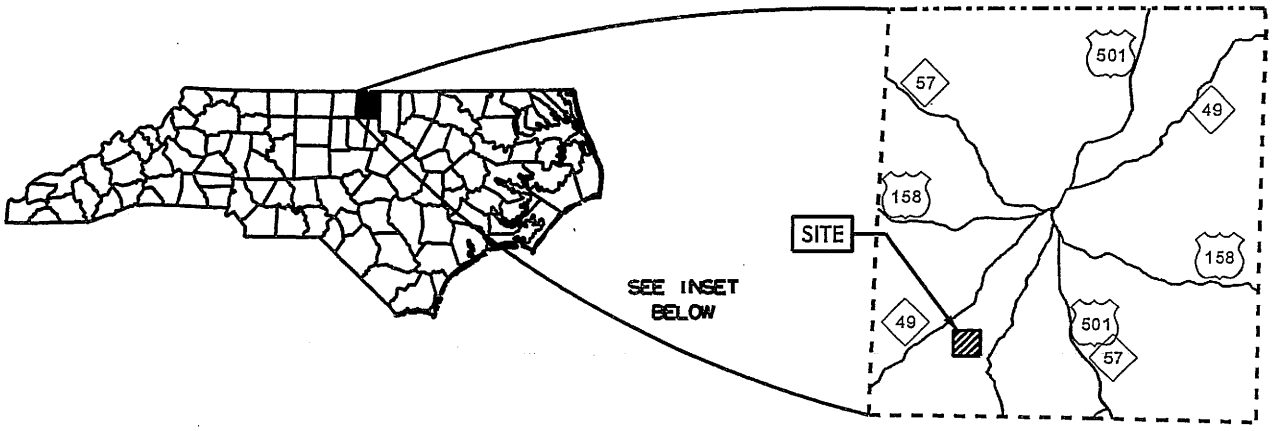
ENVIRONMENTAL DESCRIPTION

The project is located within the Neuse River Basin in Person County, which is not a CAMA county. There are no wetlands within the project limits. The South Flat River is subject to the Neuse River buffer rules. Impacts to the buffer have been minimized by and using rip rap energy dissipaters at the pipe outlets and reducing the roadway approach work to minimize fill slopes encroachment into the buffers.

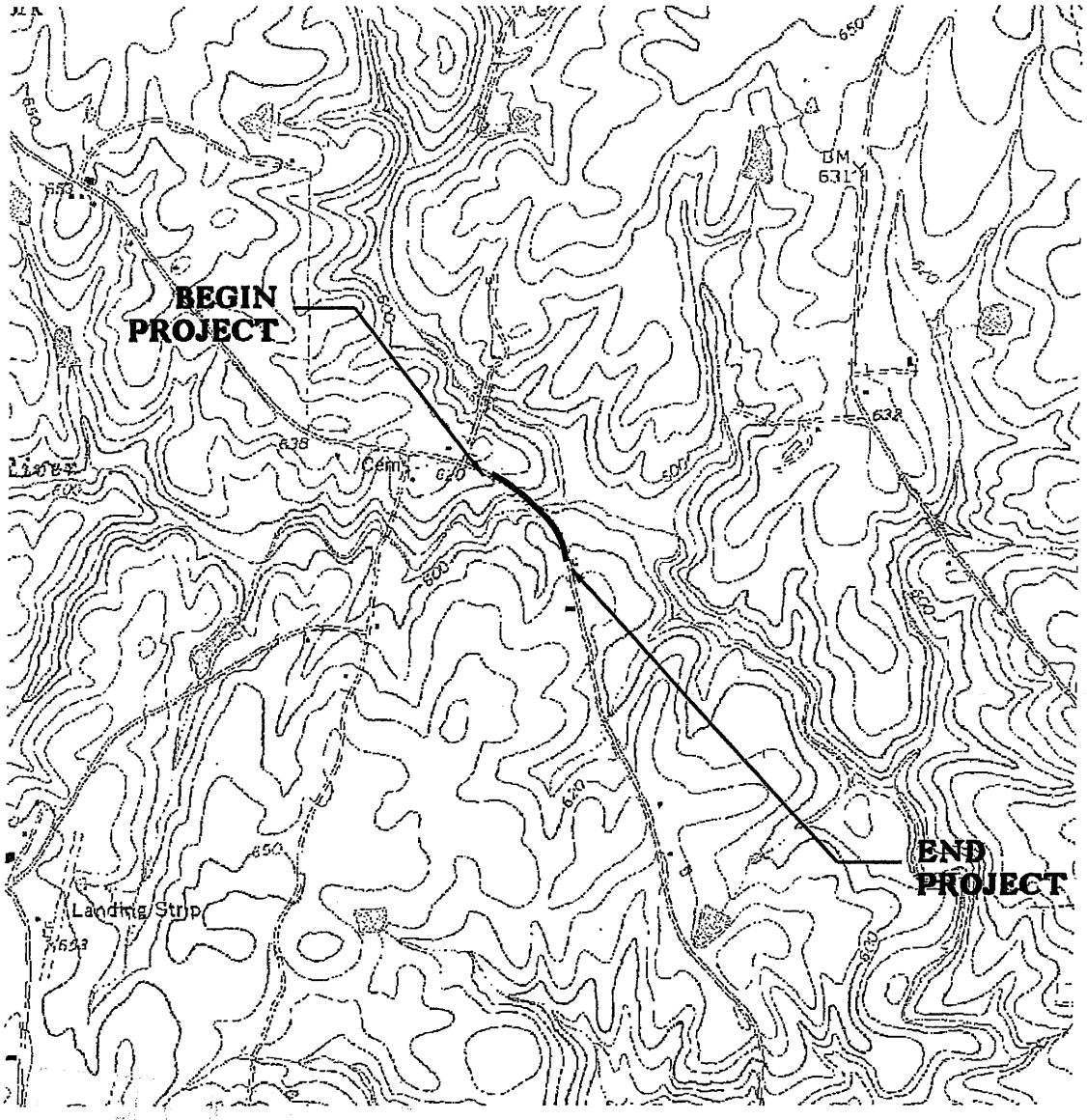
BEST MANAGEMENT PRACTICES AND MAJOR STRUCTURES

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 energy dissipaters at pipe outlets.



PERSON COUNTY



WETLAND/STREAM
IMPACTS

N.C. DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS

PERSON COUNTY

PROJECT: 33792.1.1 (B-4600)
BRIDGE NO. 43 OVER
SOUTH FLAT RIVER
ON SR 1112 (LONG ROAD)

SHEET 1 OF 8 7-31-09

PROPERTY OWNERS

NAMES AND ADDRESSES

PARCEL NO.	NAMES	ADDRESSES
3	LYNN S. WILSON	244 MYRTLE J DRIVE HURDLE MILLS, NC 27541

WETLAND/STREAM IMPACTS

NCDOT

DIVISION OF HIGHWAYS

PERSON COUNTY

PROJECT: 33792.1.1 (B-4600)
BRIDGE NO. 43 OVER
SOUTH FLAT RIVER
ON SR 1112 (LONG ROAD)

WETLAND PERMIT IMPACT SUMMARY

Site No.	Station (From/To)	Structure Size / Type	WETLAND IMPACTS					SURFACE WATER IMPACTS				
			Permanent Fill In Wetlands (ac)	Temp. Fill In Wetlands (ac)	Excavation in Wetlands (ac)	Mechanized Clearing in Wetlands (ac)	Hand Clearing in Wetlands (ac)	Permanent SW impacts (ac)	Temp. SW impacts (ac)	Existing Channel Impacts Permanent (ft)	Existing Channel Impacts Temp. (ft)	Natural Stream Design (ft)
1	14+90/15+45 -L-	BANK STABILIZATION						0.01		65		
TOTALS:								0.01		65		

NC DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

PERSON COUNTY
WBS - 33792.1.1 (B-4600)

SHEET 3 of 8 11/13/2009

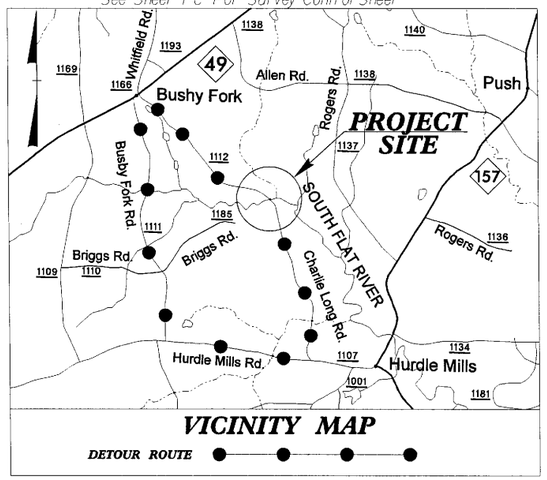
ATN Revised 3/31/05

01/08/09

TIP PROJECT: B-4600

CONTRACT:

See Sheet 1-A For Index of Sheets
See Sheet 1-B For Conventional Symbols
See Sheet 1-C For Survey Control Sheet



VICINITY MAP

DETOUR ROUTE

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

PERSON COUNTY

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	B-4600	1	
STATE PROJ. NO.	F. A. PROJ. NO.	DESCRIPTION	
33792.1.1	BRZ-1112(7)	P.E.	
33792.2.1	BRZ-1112(7)	R/W, UTIL.	

Permit Drawing Sheet 4 of 90

ENGLISH

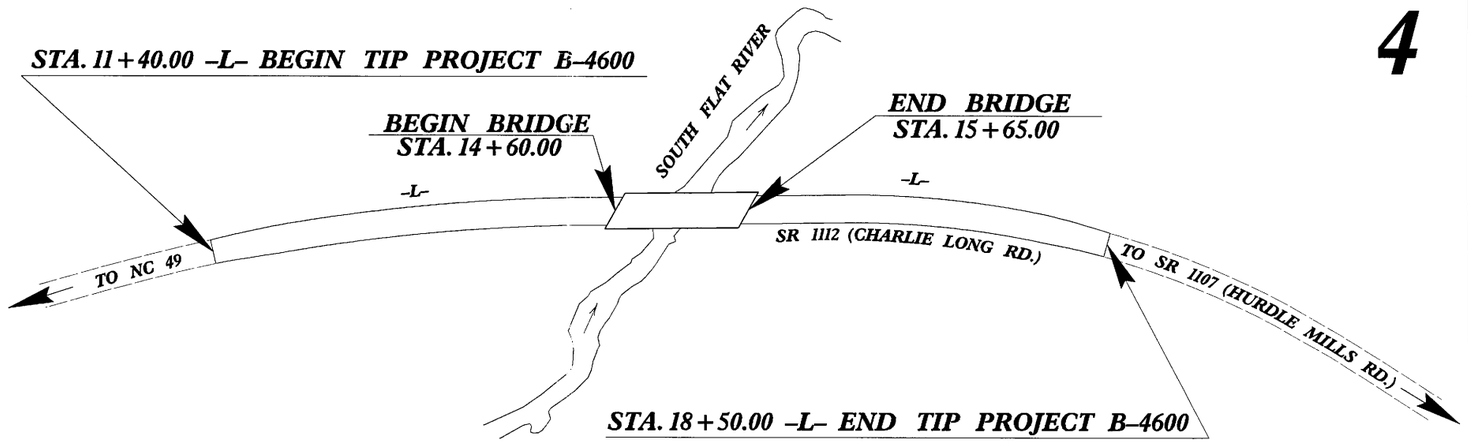
LOCATION: BRIDGE NO. 43 OVER SOUTH FLAT RIVER ON SR 1112 (CHARLIE LONG ROAD)

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

WETLAND/STREAM IMPACTS

NAD 83/95

4



NOTE: THIS PROJECT IS NOT WITHIN ANY MUNICIPAL BOUNDARIES.

NOTE: CLEARING ON THIS PROJECT SHALL BE PERFORMED TO THE LIMITS ESTABLISHED BY METHOD III.

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

GRAPHIC SCALES

50 25 0 50 100
PLANS

50 25 0 50 100
PROFILE (HORIZONTAL)

10 5 0 10 20
PROFILE (VERTICAL)

DESIGN DATA

ADT 2010 = 819
ADT 2030 = 1300
DHV = 13 %
D = 60 %
T = 3 % *
V = 60 MPH

* TTST 1% DUAL 2%
FUNC CLASS = RURAL LOCAL

PROJECT LENGTH

LENGTH OF ROADWAY TIP PROJECT B-4600 = 0.114 MILES
LENGTH OF STRUCTURE TIP PROJECT B-4600 = 0.020 MILES
TOTAL LENGTH OF TIP PROJECT B-4600 = 0.134 MILES

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

2006 STANDARD SPECIFICATIONS

RIGHT OF WAY DATE: MARCH 20, 2009

LETTING DATE: MARCH 16, 2010

BRENDA MOORE, P.E.
PROJECT ENGINEER

JOYCE DREW
PROJECT DESIGN ENGINEER

HYDRAULICS ENGINEER

SIGNATURE: *P.E.*

ROADWAY DESIGN ENGINEER

SIGNATURE: *P.E.*

DIVISION OF HIGHWAYS STATE OF NORTH CAROLINA

P.E.
STATE HIGHWAY DESIGN ENGINEER

$$$$$$$SYSTIME$$$$$
$$$$$$$$$$$$$$$$$$DGN$$$$$$$$$$$$$$$$$$
$$$USERNAME$$$$

8/17/99

REVISIONS

R/W REV.07/16/09 (BW.I) 1. RECONNECTING DRIVEWAYS AND ADDING DRIVEWAY PIPES FOR PARCELS 1 AND 2.
---------------------- 2. UPDATING PROPERTY OWNER NAME,PLAT AND DEED BOOK INFORMATION FOR PACELS 1 THRU 3
---------------------- 3. ADDING PDE -L- STA.14+92.50' LT. TO STA.15+80.56' LT. AND -L- STA.14+50.50' RT. TO STA.15+2198.45' RT. FOR PARCELS 1 THRU 4.
R/W REV.09/10/09 (BW.I) 1. CHANGING PDE TO R/W -L- STA.14+92.50' LT. TO -L- STA.16+46 EX. R/W LT. FOR PARCELS 1 AND 3.

PROJECT REFERENCE NO.	SHEET NO.
B-4600	4
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

Permit Drawing
Sheet 5 of 8

▨ S S DENOTES IMPACTS IN SURFACE WATER

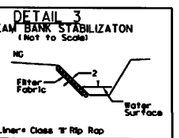
RELATIONSHIP OF PROP. BRIDGE TO PAVEMENT

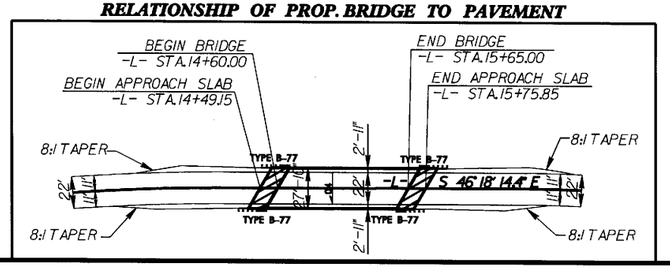
PAVED SHOULDER

FOR -L- PROFILE, SEE SHEET NO. 5

▨ BRIDGE APPROACH SLAB

$$$$$$SYSTIME$$$$$$
$$$$$$USERNAME$$$$$$$$$$DGN$$$$$$$$$$$$$$$$$$$$$





8/17/99

REVISIONS

R/W REV. 07/16/09 (BWJ) 1. RECONNECTING DRIVEWAYS AND ADDING DRIVEWAY PIPES FOR PARCELS 1 AND 2.
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R/W REV. 09/10/09 (BWJ) 1. CHANGING PDE TO R/W -L- STA.14+92.50' LT. TO -L- STA.16+46 EX. R/W LT. FOR PARCELS 1 AND 3.

$$$$$$SYSTIME$$$$$$
$$$$$$$$$$$$DGN$$$$$$$$$$$$$$$$$$$$
$$$$USERNAME$$$$

PROJECT REFERENCE NO.	SHEET NO.
B-4600	4
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

Permit Drawing
Sheet 6 of 9

ENGLISH

▨ DENOTES IMPACTS IN SURFACE WATER

RELATIONSHIP OF PROP. BRIDGE TO PAVEMENT

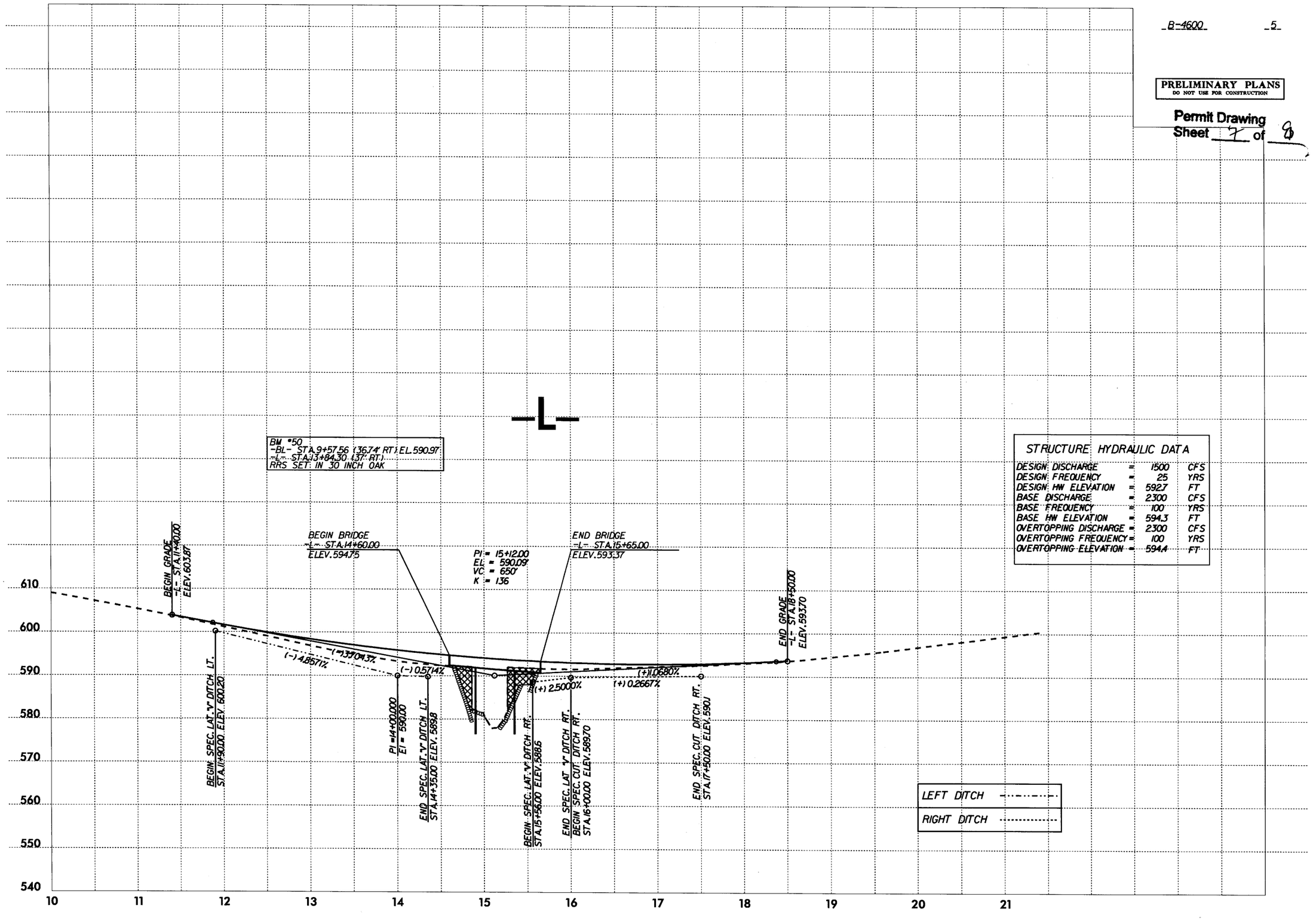
PAVED SHOULDER

FOR -L- PROFILE, SEE SHEET NO. 5

▨ BRIDGE APPROACH SLAB

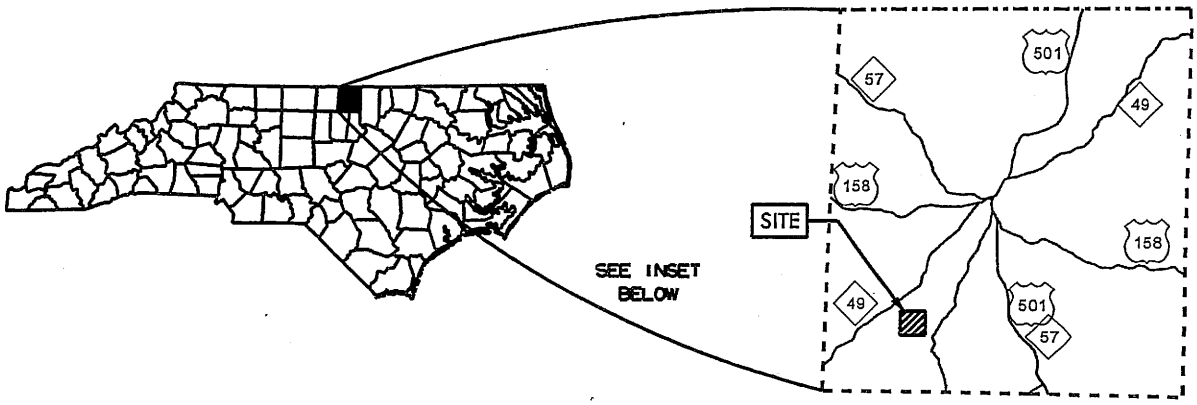
PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

Permit Drawing
Sheet 7 of 8

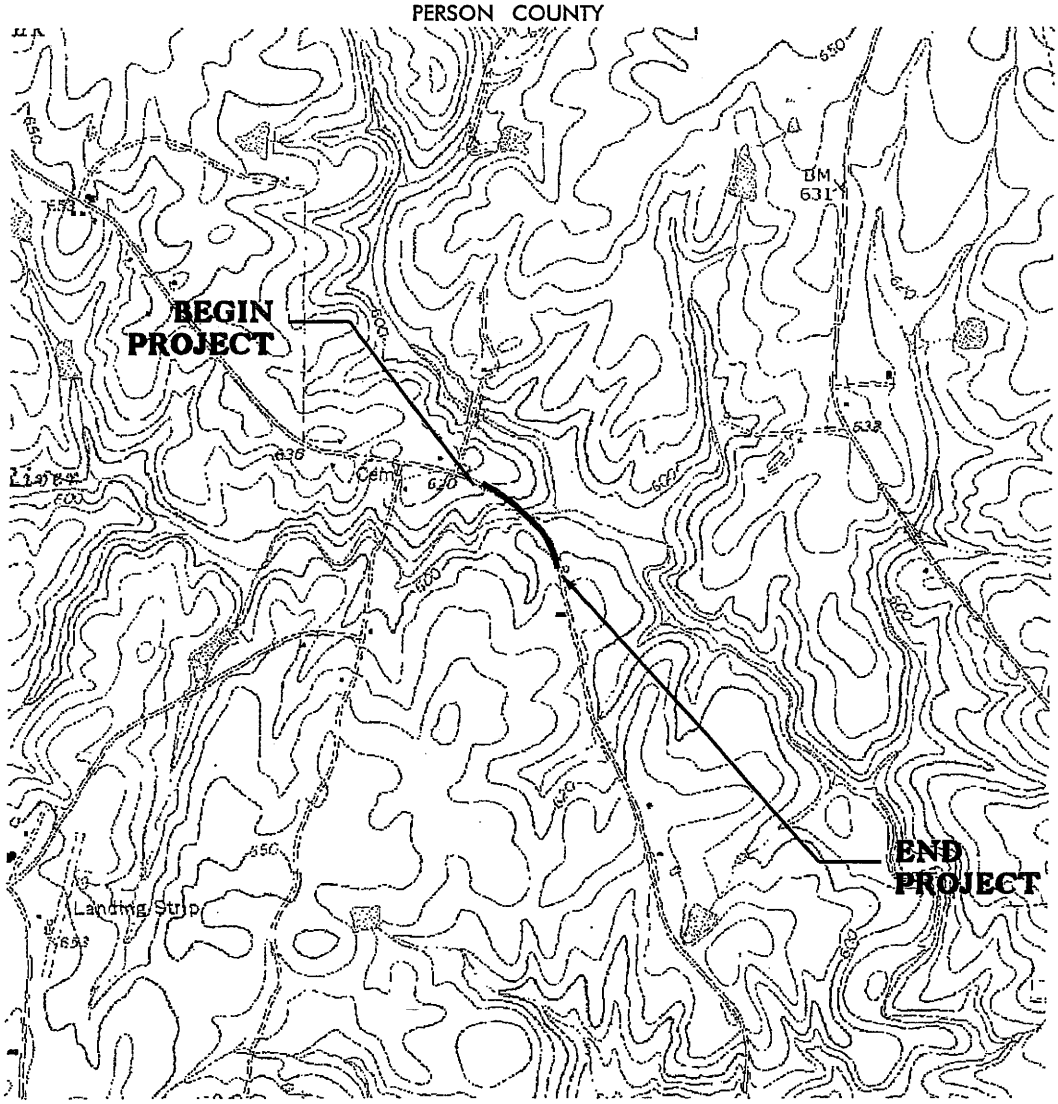


PROJ. REFERENCE NO.	SHEET NO.
B-4600	X-4

Permit Drawing
Sheet 8 of 9



PERSON COUNTY



BUFFER
IMPACTS

N.C. DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS

PERSON COUNTY

PROJECT: 33792.1.1 (B-4600)
BRIDGE NO. 43 OVER
SOUTH FLAT RIVER
ON SR 1112 (LONG ROAD)

SHEET 1 OF 6 7-31-09

PROPERTY OWNERS

NAMES AND ADDRESSES

PARCEL NO.	NAMES	ADDRESSES
1	EARL THOMAS BRANN	433 FRANK WHITFIELD RD HURDLE MILLS, NC 27541
2	W. FARRELL WHITFIELD	1434 CHARLIE LONG RD HURDLE MILLS, NC 27541
3	LYNN S. WILSON	244 MYRTLE J DRIVE HURDLE MILLS, NC 27541
4	ROBERT HUGH PEEDIN	P.O. BOX 74 HURDLE MILLS, NC 27541

BUFFER IMPACTS

NCDOT

DIVISION OF HIGHWAYS

PERSON COUNTY

PROJECT: 33792.1.1 (B-4600)
BRIDGE NO. 43 OVER
SOUTH FLAT RIVER
ON SR 1112 (LONG ROAD)

 7-31-09

BUFFER IMPACTS SUMMARY

			IMPACT									BUFFER REPLACEMENT	
			TYPE			ALLOWABLE			MITIGABLE				
SITE NO.	STRUCTURE SIZE / TYPE	STATION (FROM/TO)	ROAD CROSSING	BRIDGE	PARALLEL IMPACT	ZONE 1 (ft^2)	ZONE 2 (ft^2)	TOTAL (ft^2)	ZONE 1 (ft^2)	ZONE 2 (ft^2)	TOTAL (ft^2)	ZONE 1 (ft^2)	ZONE 2 (ft^2)
1													
	ROADWAY FILL	13+75/14+60 -L-	X			642.0	1380.0	2022.0					
	3 SPAN BRIDGE	14+60/15+65 -L-		X		4441.0	250.0	4691.0					
	ROADWAY FILL	15+65/16+35 -L-	X			484.0	1110.0	1594.0					
TOTAL:						5567.0	2740.0	8307.0					

N.C. DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS

PERSON COUNTY
PROJECT: 33792.1.1 (B-4600)

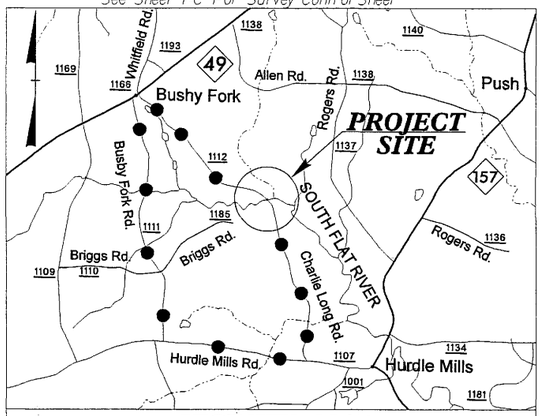
9/22/2009
SHEET 3 OF 6

Rev. May 2006

TIP PROJECT: B-4600

CONTRACT:

See Sheet 1-A For Index of Sheets
See Sheet 1-B For Conventional Symbols
See Sheet 1-C For Survey Control Sheet



VICINITY MAP

DETOUR ROUTE

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

PERSON COUNTY

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	B-4600	1	

STATE PROJ. NO.	F. A. PROJ. NO.	DESCRIPTION
33792.1.1	BRZ-1112(7)	P.E.
33792.2.1	BRZ-1112(7)	R/W, UTIL.

Buffer Drawing Sheet 4 of 6

ENGLISH

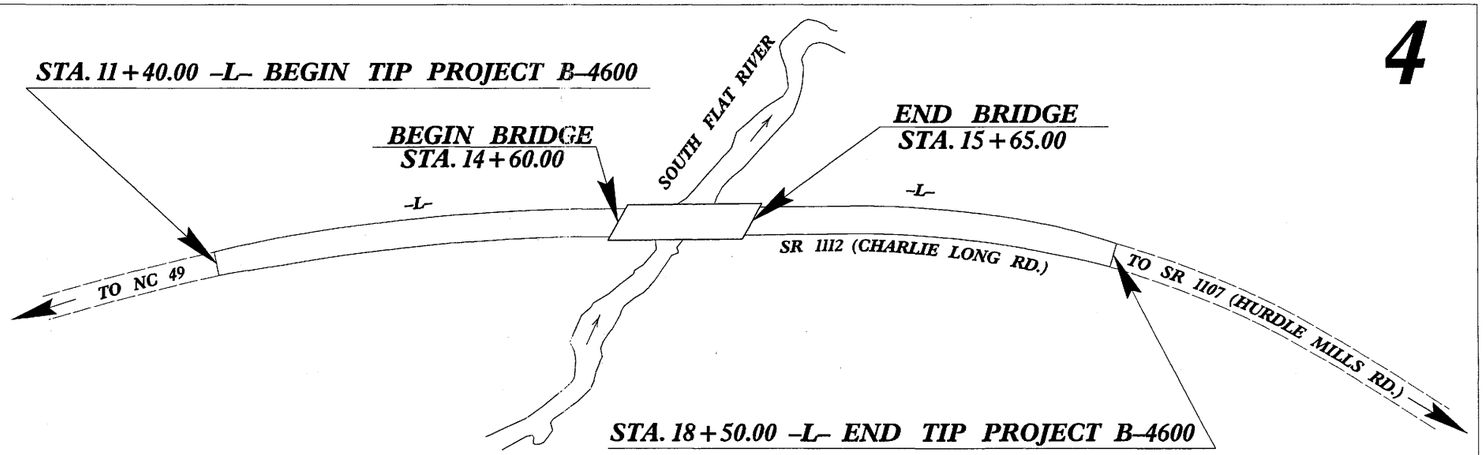
LOCATION: BRIDGE NO. 43 OVER SOUTH FLAT RIVER ON SR 1112 (CHARLIE LONG ROAD)

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

BUFFER IMPACTS

NAD 83/95

4



NOTE: THIS PROJECT IS NOT WITHIN ANY MUNICIPAL BOUNDARIES.

NOTE: CLEARING ON THIS PROJECT SHALL BE PERFORMED TO THE LIMITS ESTABLISHED BY METHOD III.

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

GRAPHIC SCALES

50 25 0 50 100
PLANS

50 25 0 50 100
PROFILE (HORIZONTAL)

10 5 0 10 20
PROFILE (VERTICAL)

DESIGN DATA

ADT 2010 = 819
ADT 2030 = 1300
DHV = 13 %
D ≐ 60 %
T = 3 % *
V = 60 MPH

* TTST 1% DUAL 2%
FUNC CLASS = RURAL LOCAL

PROJECT LENGTH

LENGTH OF ROADWAY TIP PROJECT B-4600 = 0.114 MILES
LENGTH OF STRUCTURE TIP PROJECT B-4600 = 0.020 MILES
TOTAL LENGTH OF TIP PROJECT B-4600 = 0.134 MILES

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

2006 STANDARD SPECIFICATIONS

RIGHT OF WAY DATE: MARCH 20, 2009

LETTING DATE: MARCH 16, 2010

BRENDA MOORE, P.E.
PROJECT ENGINEER

JOYCE DREW
PROJECT DESIGN ENGINEER

HYDRAULICS ENGINEER

SIGNATURE: P.E.

ROADWAY DESIGN ENGINEER

SIGNATURE: P.E.

DIVISION OF HIGHWAYS STATE OF NORTH CAROLINA

STATE OF NORTH CAROLINA · DEPARTMENT OF TRANSPORTATION

P.E.
STATE HIGHWAY DESIGN ENGINEER

PROJECT REFERENCE NO.	SHEET NO.
B-4600	4
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

ENGLISH

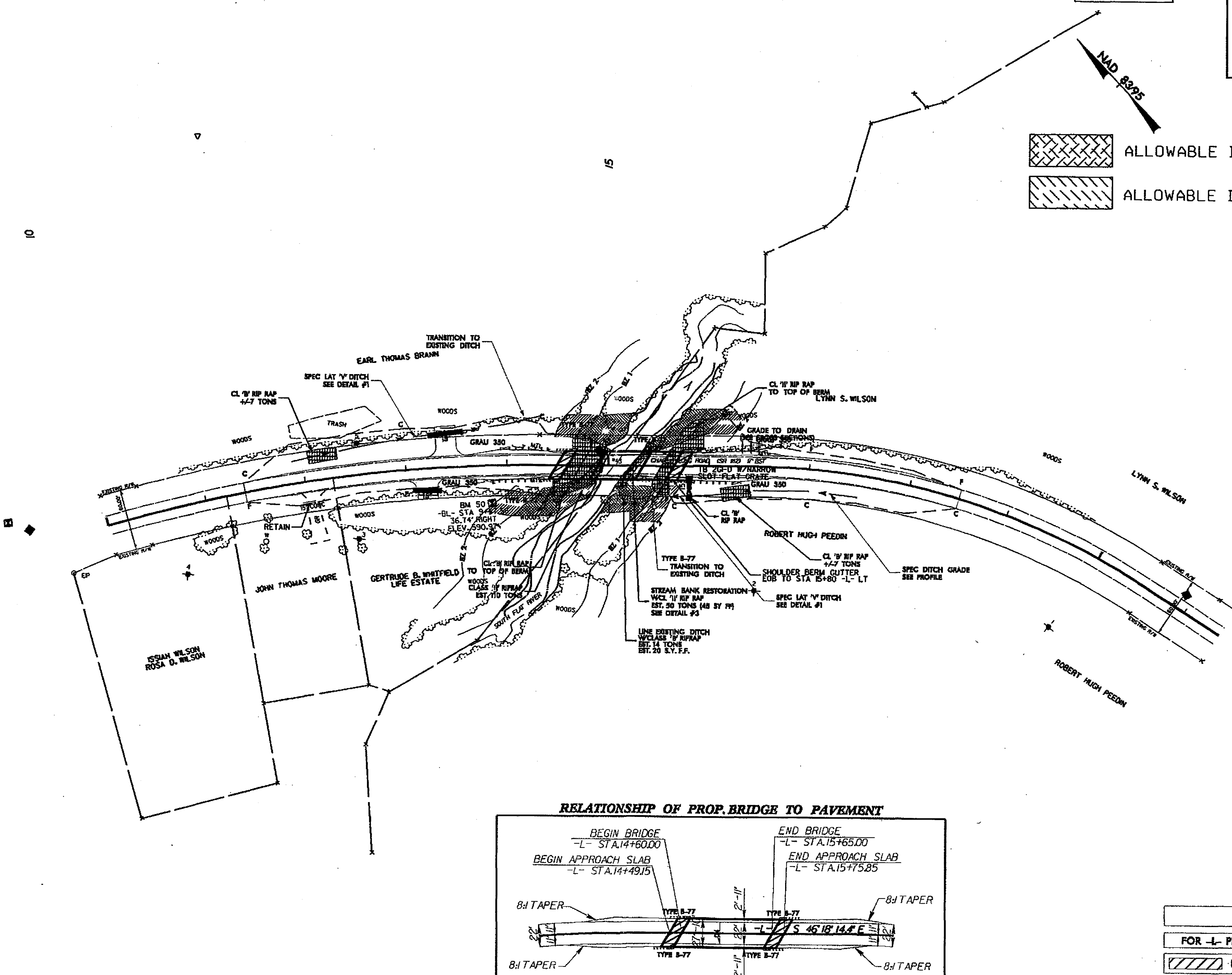
PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

Buffer Drawing
Sheet 5 of 6

NAD 83/95

ALLOWABLE IMPACTS ZONE 1

ALLOWABLE IMPACTS ZONE 2



EARL THOMAS BRANN
TRANSITION TO EXISTING DITCH
SPEC LAT 'V' DITCH SEE DETAIL #1
CL 'B' RIP RAP +/-7 TONS
TRASH
WOODS
GRAU 350
CL 'II' RIP RAP TO TOP OF BERM
LYNN S. WILSON
GRADE TO DRAIN
TB 2GI-D W/NARROW SLOT FLAT GRATE
BM 50
-BL- STA 9+
36.74' RIGHT
ELEV. 590.97
RETAIN
CL 'B' RIP RAP
ROBERT HUGH PEEDIN
CL 'B' RIP RAP +/-7 TONS
SPEC DITCH GRADE SEE PROFILE
SHOULDER BERM GUTTER EOB TO STA 15+80 -L- LT
TYPE B-77
TRANSITION TO EXISTING DITCH
STREAM BANK RESTORATION W/CL 'II' RIP RAP EST. 50 TONS (48 SY FF) SEE DETAIL #3
SPEC LAT 'V' DITCH SEE DETAIL #1
LINE EXISTING DITCH W/CLASS 'B' RIPRAP EST. 14 TONS EST. 20 S.Y. F.F.
CL 'II' RIP RAP TO TOP OF BERM
CLASS 'II' RIPRAP EST 110 TONS
SOUTH FLAT RIVER
GERTRUDE B. WHITFIELD LIFE ESTATE
JOHN THOMAS MOORE
ISSIAH WILSON
ROSA D. WILSON
EXISTING R/W
10
15
20
RELATIONSHIP OF PROP. BRIDGE TO PAVEMENT
BEGIN BRIDGE -L- STA.14+60.00
END BRIDGE -L- STA.15+65.00
BEGIN APPROACH SLAB -L- STA.14+49.15
END APPROACH SLAB -L- STA.15+75.85
8:1 TAPER
TYPE B-77
S 46° 18' 14.4" E

PAVED SHOULDER

FOR -L- PROFILE, SEE SHEET NO. 5

BRIDGE APPROACH SLAB

REVISIONS

R/W REV. 07/16/09 (BHJ) 1. RECONNECTING DRIVEWAYS AND ADDING DRIVEWAY PIPES FOR PARCELS 1 AND 2.
2. UPDATING PROPERTY OWNER NAME, PLAT AND DEED BOOK INFORMATION FOR PARCELS 1 THRU 3
3. ADDING PDE -L- STA.14+92.50' LT. TO STA.15+80.56' LT. AND -L- STA.14+50.50' RT. TO STA.15+21.98.45' RT. FOR PARCELS 1 THRU 4.
R/W REV. 08/10/09 (BHJ) 1. CHANGING PDE TO R/W -L- STA.14+92.50' LT. TO -L- STA.16+46, EX. R/W LT. FOR PARCELS 1 AND 3.

8/17/99

22-SEP-2009 09:53

PROJECT REFERENCE NO.	SHEET NO.
B-4600	4
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

ENGLISH

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

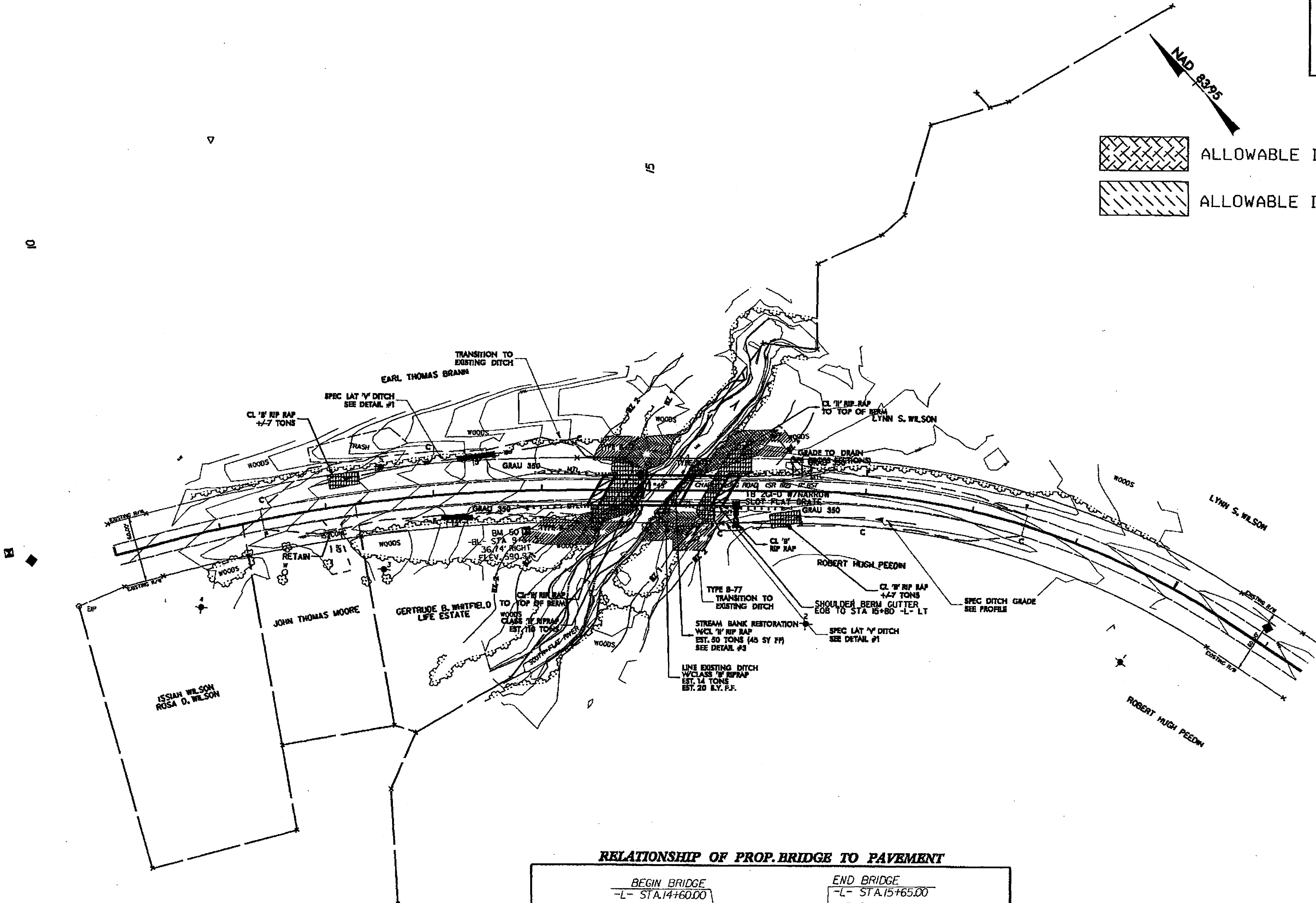
Buffer Drawing
Sheet 6 of 6

REVISIONS

R/W REV.07/16/09 (BNJ) 1. RECONNECTING DRIVEWAYS AND ADDING DRIVEWAY PIPES FOR PARCELS 1 AND 2.
2. UPDATING PROPERTY OWNER NAME,PLAT AND DEED BOOK INFORMATION FOR PACELS 1THRU 3
3. ADDING PDE -L- STA.14+92.50' LT. TO STA.15+80.56' LT. AND -L- STA.14+50.50' RT. TO STA.15+21(38.45' RT. FOR PARCELS 1THRU 4.
R/W REV.09/10/09 (BNJ) 1. CHANGING PDE TO R/W -L- STA.14+92.50' LT. TO -L- STA.16+46, EX. R/W LT. FOR PARCELS 1 AND 3.

ALLOWABLE IMPACTS ZONE 1

ALLOWABLE IMPACTS ZONE 2



NAD 83/95
EARL THOMAS BRANN
TRANSITION TO EXISTING DITCH
SPEC LAT 'V' DITCH SEE DETAIL #1
CL 'B' RIP RAP +/-7 TONS
CL 'B' RIP RAP TO TOP OF BERM
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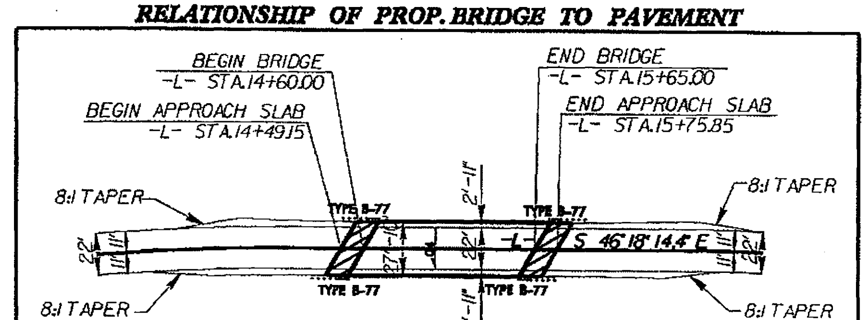
WOODS
ROBERT HUGH PEEDIN
TYPE B-77 TRANSITION TO EXISTING DITCH
SHOULDER BERM GUTTER EOB TO STA 15+80 -L- LT
STREAM BANK RESTORATION W/CL 'B' RIP RAP EST. 50 TONS (45 SY FF) SEE DETAIL #3
SPEC LAT 'V' DITCH SEE DETAIL #1
SPEC DITCH GRADE SEE PROFILE
LINE EXISTING DITCH W/CLASS 'B' RIPRAP EST. 14 TONS EST. 20 S.Y. F.F.
GERTRUDE B. WHITFIELD LIFE ESTATE
JOHN THOMAS MOORE
ISSIAH WILSON ROSA D. WILSON
RETAIN
GRAU 350
EXISTING R/W

RELATIONSHIP OF PROP. BRIDGE TO PAVEMENT



PAVED SHOULDER

FOR -L- PROFILE, SEE SHEET NO. 5

BRIDGE APPROACH SLAB

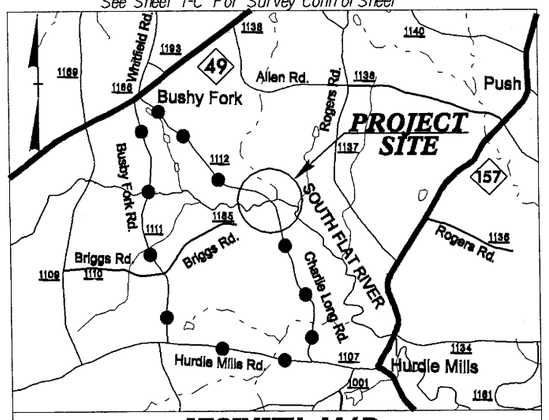
22-SEP-2009 10:05

09/08/99

TIP PROJECT: B-4600

CONTRACT:

See Sheet 1-A For Index of Sheets
See Sheet 1-B For Conventional Symbols
See Sheet 1-C For Survey Control Sheet



STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

PERSON COUNTY

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	B-4600	1	

STATE PROJ. NO.	F. A. PROJ. NO.	DESCRIPTION
33792.1.1	BRZ-1112(7)	P.E.
33792.2.1	BRZ-1112(7)	R/W, UTIL.

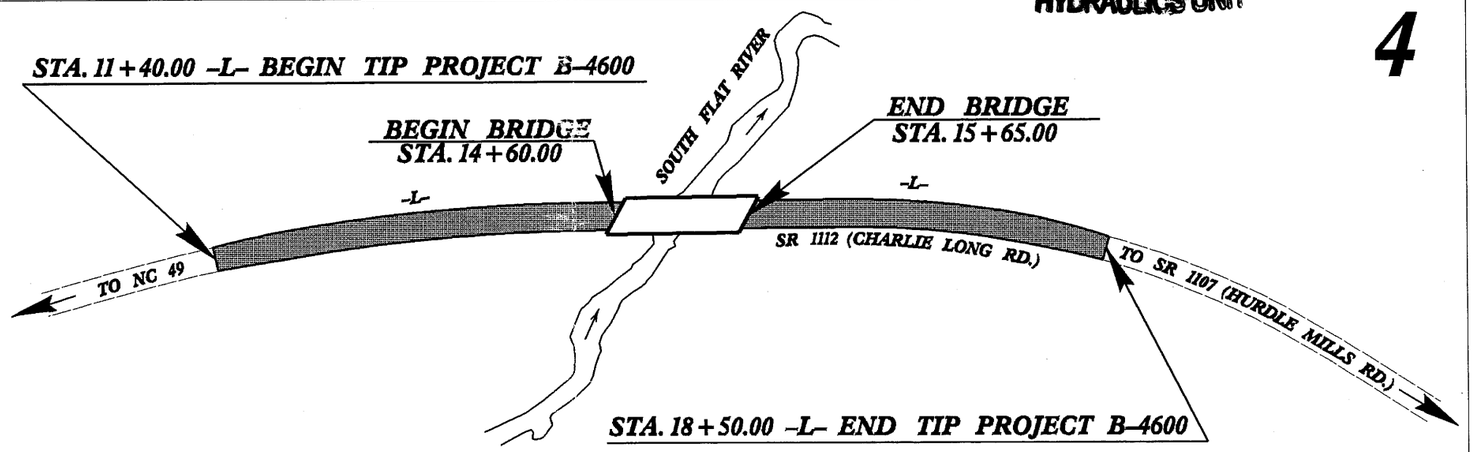
LOCATION: BRIDGE NO. 43 OVER SOUTH FLAT RIVER ON SR 1112 (CHARLIE LONG ROAD)

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

NAD 83/95

RECEIVED
JUL 29 2009
DIVISION OF HIGHWAYS
HYDRAULICS UNIT

4



NOTE: THIS PROJECT IS NOT WITHIN ANY MUNICIPAL BOUNDARIES.

NOTE: CLEARING ON THIS PROJECT SHALL BE PERFORMED TO THE LIMITS ESTABLISHED BY METHOD III.

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

GRAPHIC SCALES

50 25 0 50 100
PLANS

50 25 0 50 100
PROFILE (HORIZONTAL)

10 5 0 10 20
PROFILE (VERTICAL)

DESIGN DATA

ADT 2010 = 819
ADT 2030 = 1300
DHV = 13 %
D = 60 %
T = 3 % *
V = 60 MPH

* TTST 1% DUAL 2%
FUNC CLASS = RURAL LOCAL

PROJECT LENGTH

LENGTH OF ROADWAY TIP PROJECT B-4600 = 0.114 MILES
LENGTH OF STRUCTURE TIP PROJECT B-4600 = 0.020 MILES
TOTAL LENGTH OF TIP PROJECT B-4600 = 0.134 MILES

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

2006 STANDARD SPECIFICATIONS

RIGHT OF WAY DATE: MARCH 20, 2009

LETTING DATE: MARCH 16, 2010

BRENDA MOORE, P.E.
PROJECT ENGINEER

JOYCE DREW
PROJECT DESIGN ENGINEER

HYDRAULICS ENGINEER

SIGNATURE: P.E.

ROADWAY DESIGN ENGINEER

SIGNATURE: P.E.

DIVISION OF HIGHWAYS
STATE OF NORTH CAROLINA

P.E.
STATE HIGHWAY DESIGN ENGINEER

29-JUL-2009 12:07
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$$$$USERNAME$$$$

3/15/06

PROJECT REFERENCE NO.	SHEET NO.
B-4600	1-B

Note: Not to Scale

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

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

CONVENTIONAL PLAN SHEET SYMBOLS

BOUNDARIES AND PROPERTY:

- State Line
- County Line
- Township Line
- City Line
- Reservation Line
- Property Line
- Existing Iron Pin — EIP
- Property Corner
- Property Monument — ECM
- Parcel/Sequence Number — 123
- Existing Fence Line
- Proposed Woven Wire Fence
- Proposed Chain Link Fence
- Proposed Barbed Wire Fence
- Existing Wetland Boundary — WLB
- Proposed Wetland Boundary — WLB
- Existing Endangered Animal Boundary — EAB
- Existing Endangered Plant Boundary — EPB

BUILDINGS AND OTHER CULTURE:

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

HYDROLOGY:

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

RAILROADS:

- Standard Gauge — CSX TRANSPORTATION
- RR Signal Milepost — MILEPOST 35
- Switch — 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 — E
- Proposed Temporary Construction Easement — E
- Proposed Temporary Drainage Easement — TDE
- Proposed Permanent Drainage Easement — PDE
- Proposed Permanent Utility Easement — PUE
- Proposed Temporary Utility Easement — TUE
- Proposed Permanent Easement with Iron Pin and Cap Marker

ROADS AND RELATED FEATURES:

- Existing Edge of Pavement
- Existing Curb
- Proposed Slope Stakes Cut — C
- Proposed Slope Stakes Fill — F
- Proposed Wheel Chair Ramp — WCR
- 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 — Vineyard

EXISTING STRUCTURES:

MAJOR:

- Bridge, Tunnel or Box Culvert — CONC
- Bridge Wing Wall, Head Wall and End Wall — CONC WW

MINOR:

- Head and End Wall — CONC HW
- Pipe Culvert
- Footbridge
- Drainage Box: Catch Basin, DI or JB — CB
- Paved Ditch Gutter
- Storm Sewer Manhole — S
- Storm Sewer — S

UTILITIES:

POWER:

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

TELEPHONE:

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

WATER:

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

TV:

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

GAS:

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

SANITARY SEWER:

- Sanitary Sewer Manhole
- Sanitary Sewer Cleanout
- U/G Sanitary Sewer Line — SS
- Above Ground Sanitary Sewer — A/G Sanitary Sewer
- Recorded SS Forced Main Line — FSS
- Designated SS Forced Main Line (S.U.E.*) — FSS

MISCELLANEOUS:

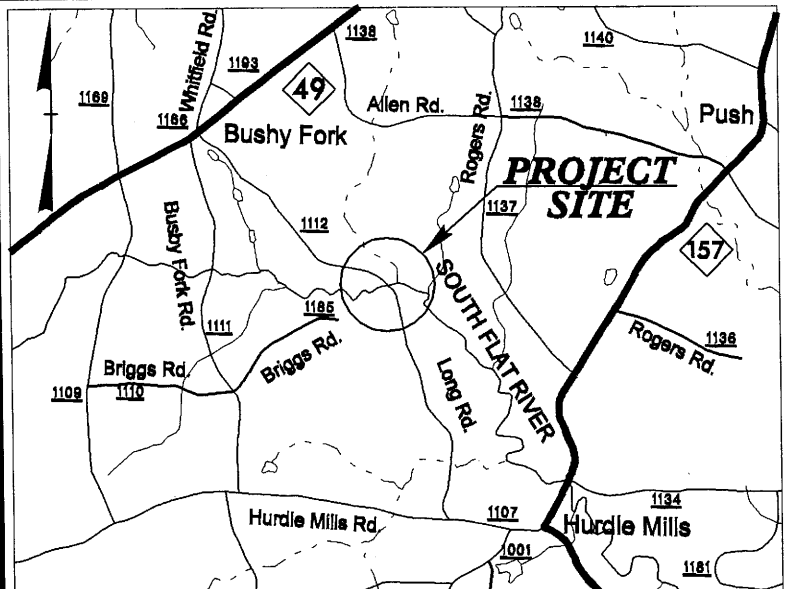
- Utility Pole
- Utility Pole with Base
- Utility Located Object
- Utility Traffic Signal Box — S
- Utility Unknown U/G Line — ?U/L
- U/G Tank; Water, Gas, Oil
- A/G Tank; Water, Gas, Oil
- U/G Test Hole (S.U.E.*)
- Abandoned According to Utility Records — AATUR
- End of Information — E.O.I.

PROJECT REFERENCE NO.	SHEET NO.
B-4600	1-C
Location and Surveys	

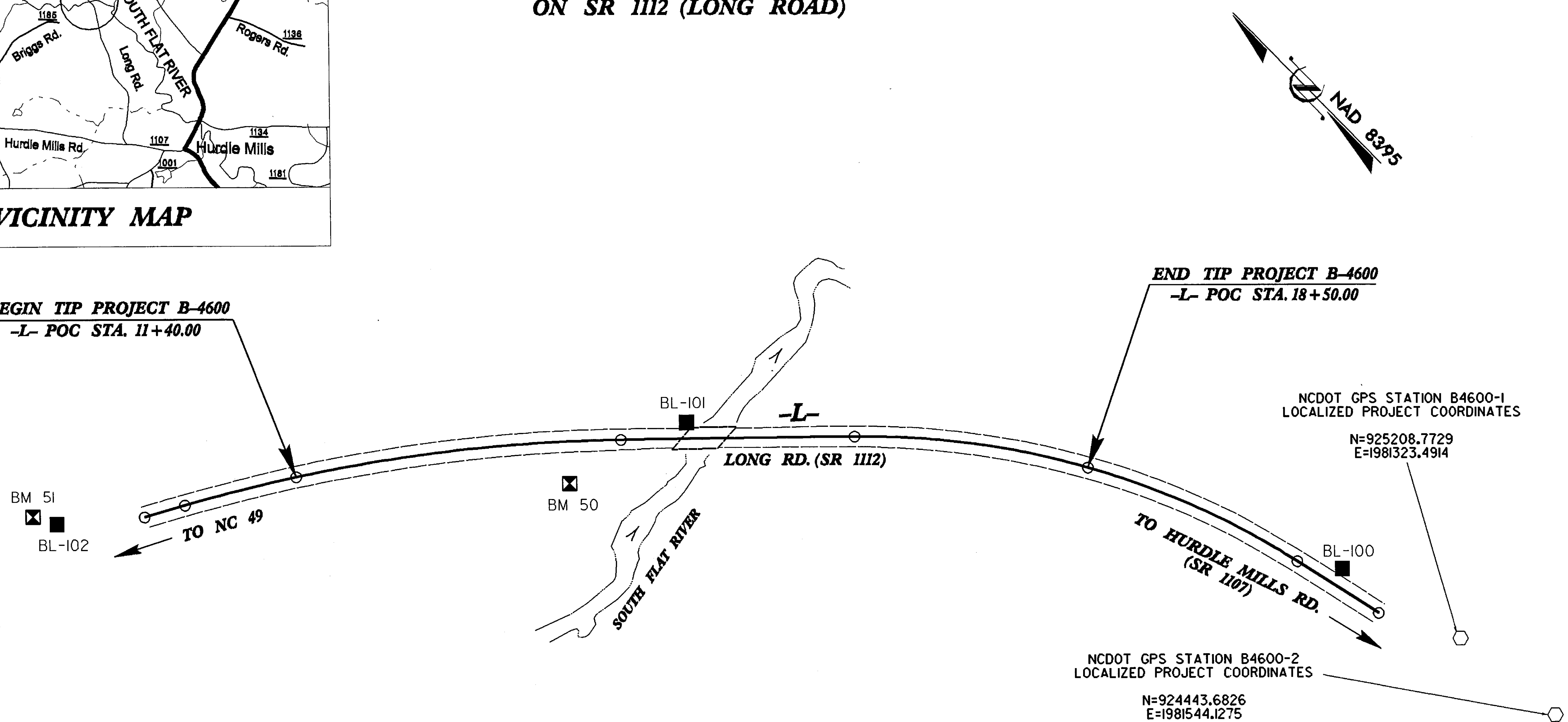
SURVEY CONTROL SHEET B-4600

PERSON COUNTY

LOCATION: BRIDGE NO. 43 OVER SOUTH FLAT RIVER ON SR 1112 (LONG ROAD)



VICINITY MAP



CONTROL DATA

BASELINE POINT	DESC.	NORTH	EAST	ELEVATION	L STATION	OFFSET
100	BL-100	925725.2307	1981255.1547	599.26	20+92.23	15.95 LT
101	BL-101	926226.4714	1980930.5876	591.26	14+91.16	14.49 LT
102	BL-102	926556.4561	1980466.2101	611.65	OUTSIDE PROJECT LIMITS	

BENCHMARK DATA

50 ELEVATION = 590.97
N 926261 E 1980818
L STATION 13+84 37 RIGHT
R\R SPIKE SET IN 30" OAK

51 ELEVATION = 613.56
N 926576 E 1980456
L STATION 10+00
N 45° 10' 24.4" W DIST 99.81
R\R SPIKE SET IN 12" GUM

DATUM DESCRIPTION

THE LOCALIZED COORDINATE SYSTEM DEVELOPED FOR THIS PROJECT IS BASED ON THE STATE PLANE COORDINATES ESTABLISHED BY NCDOT FOR MONUMENT "B4600-1"
WITH NAD 83/95 STATE PLANE GRID COORDINATES OF NORTHING: 925208.7729(ft) EASTING: 1981323.4914(ft)
THE AVERAGE COMBINED GRID FACTOR USED ON THIS PROJECT (GROUND TO GRID) IS: 1.00001303
THE N.C. LAMBERT GRID BEARING AND LOCALIZED HORIZONTAL GROUND DISTANCE FROM "B4600-1" TO -L- STATION 11+40.00 IS
N 28°49'08.4" W 1401.12'
ALL LINEAR DIMENSIONS ARE LOCALIZED HORIZONTAL DISTANCES
VERTICAL DATUM USED IS NAVD 88

NOTE: DRAWING NOT TO SCALE

NOTES:

1. *THE CONTROL DATA FOR THIS PROJECT CAN BE FOUND ELECTRONICALLY BY SELECTING PROJECT CONTROL DATA AT: HTTP://WWW.NCDOT.ORG/DOH/PRECONSTRUCT/HIGHWAY/LOCATION/PROJECT/*

   B4600_ls_control_081105.txt

2. *SITE CALIBRATION INFORMATION HAS NOT BEEN PROVIDED FOR THIS PROJECT. IF FURTHER INFORMATION IS NEEDED, PLEASE CONTACT THE LOCATION AND SURVEYS UNIT.*

○ *INDICATES GEODETIC CONTROL MONUMENTS USED OR SET FOR HORIZONTAL PROJECT CONTROL BY THE NCDOT LOCATION AND SURVEYS UNIT.*

PROJECT CONTROL ESTABLISHED USING GLOBAL POSITIONING SYSTEM.

NETWORK ESTABLISHED FROM NGS ONLINE POSITIONING SERVICE (OPUS)

6/2/99

29-JUL-2009 12:07 b4600_ls_lc_081105.dgn

6/2/99

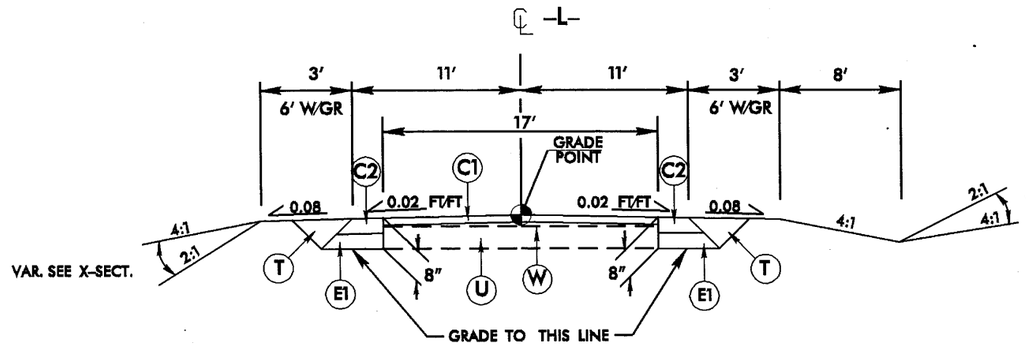
PROJECT REFERENCE NO.	SHEET NO.
B-4600	2
ROADWAY DESIGN ENGINEER	PAVEMENT DESIGN ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

FINAL PAVEMENT SCHEDULE

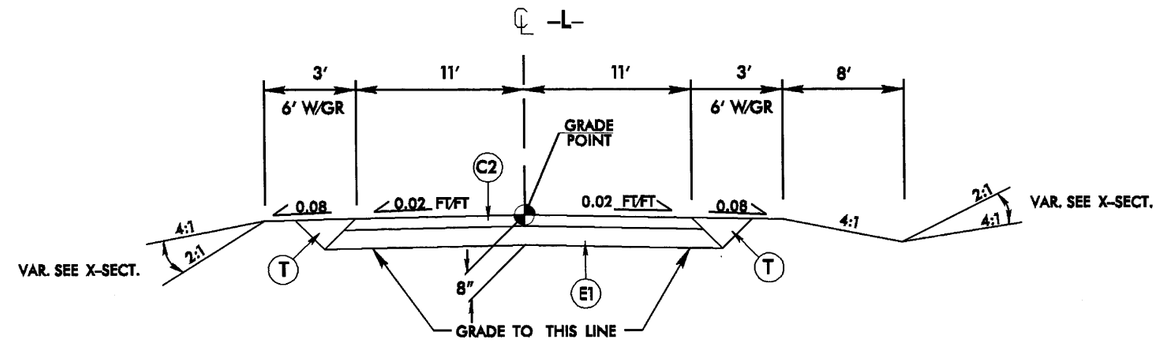
C1	PROP. APPROX. 1¼" ASPHALT CONCRETE SURFACE COURSE, TYPE SF9.5A, AT AN AVERAGE RATE OF 137.5 LBS. PER SQ. YD.
C2	PROP. APPROX. 2½" ASPHALT CONCRETE SURFACE COURSE, TYPE SF9.5A, AT AN AVERAGE RATE OF 137.5 LBS. PER SQ. YD. IN EACH OF TWO LAYERS.
C3	PROP. VAR. DEPTH ASPHALT CONCRETE SURFACE COURSE, TYPE SF9.5A, AT AN AVERAGE RATE OF 110 LBS. PER SQ. YD. PER 1" DEPTH. TO BE PLACED IN LAYERS NOT TO EXCEED 1½" IN DEPTH.
E1	PROP. APPROX. 5½" ASPHALT CONCRETE BASE COURSE, TYPE B25.0B, AT AN AVERAGE RATE OF 627 LBS. PER SQ. YD.
E2	PROP. VAR. DEPTH ASPHALT CONCRETE BASE COURSE, TYPE B25.0B, AT AN AVERAGE RATE OF 114 LBS. PER SQ. YD. PER 1" DEPTH. TO BE PLACED IN LAYERS NOT LESS THAN 3" IN DEPTH OR GREATER THAN 5½" IN DEPTH.
T	EARTH MATERIAL.
U	EXISTING PAVEMENT.
W	VARIABLE DEPTH ASPHALT PAVEMENT (SEE STANDARD WEDGING DETAIL THIS SHEET).

NOTE: PAVEMENT EDGE SLOPES ARE 1:1 UNLESS SHOWN OTHERWISE.



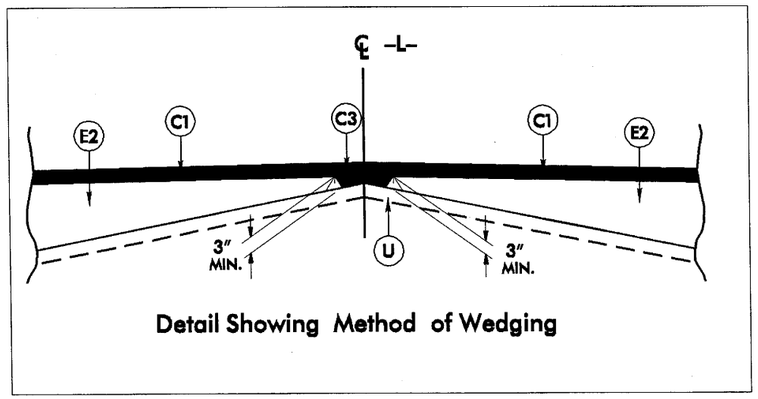
TYPICAL SECTION NO. 1

USE TYPICAL SECTION NO. 1
TRANSITION FROM EXIST. STA. 11+40.00 TO STA. 11+90.00
-L- STA. 11+90.00 TO STA. 12+50.00
-L- STA. 17+50.00 TO STA. 18+00.00
TRANSITION TO EXIST. STA. 18+00.00 TO STA. 18+50.00

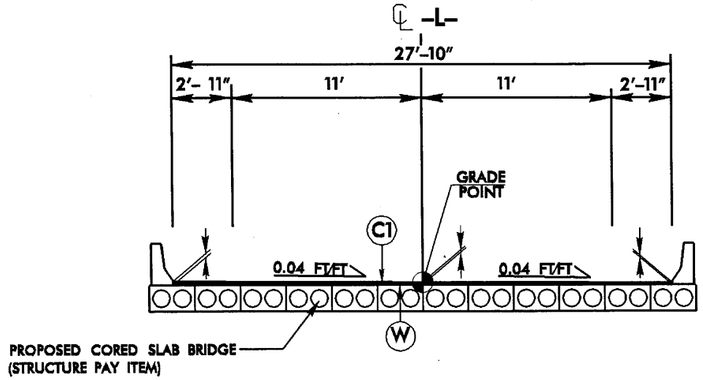


TYPICAL SECTION NO. 2

USE TYPICAL SECTION NO. 2
-L- STA. 12+50.00 TO STA. 14+60.00 (BEGIN BRIDGE)
-L- STA. 15+65.00 (END BRIDGE) TO STA. 17+50.00



Detail Showing Method of Wedging



TYPICAL SECTION ON STRUCTURE

USE TYPICAL SECTION NO. 3
-L- STA. 14+60.00 (BEGIN BRIDGE) TO
-L- STA. 15+65.00 (END BRIDGE)

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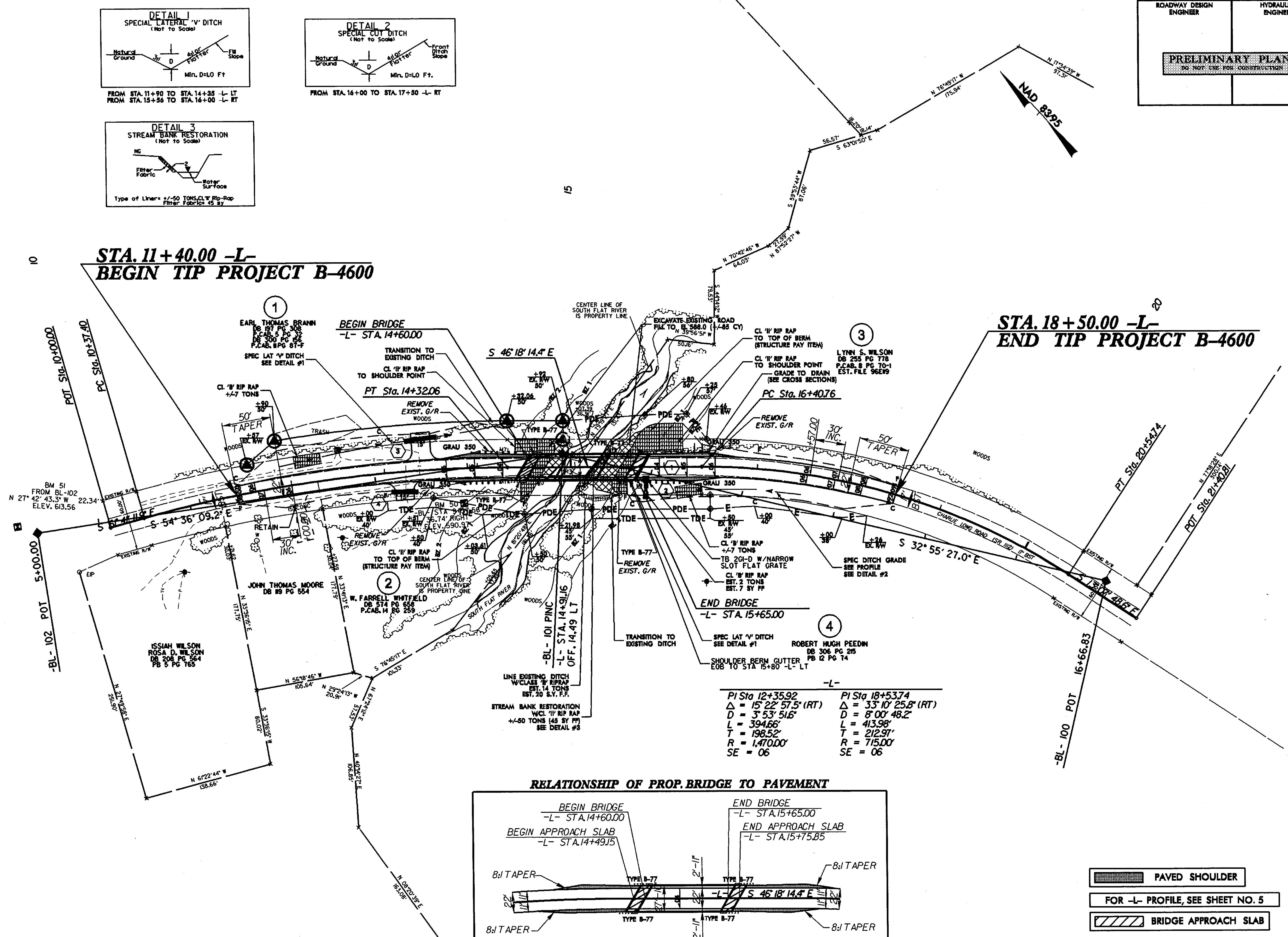
PROJECT REFERENCE NO.	SHEET NO.
B-4600	4
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

REVISIONS

R/W REV. 07/16/09 (BNJ) 1. RECONNECTING DRIVEWAYS AND ADDING DRIVEWAY PIPES FOR PARCELS 1 AND 2.
2. UPDATING PROPERTY OWNER NAME, PLAT AND DEED BOOK INFORMATION FOR PARCELS 1 THRU 3
3. ADDING PDE -L- STA.14+92.50' LT. TO STA.15+80.56' LT. AND -L- STA.14+50.50' RT. TO STA.15+21.98.45' RT. FOR PARCELS 1 THRU 4.

8/17/99



DETAIL 1
SPECIAL LATERAL 'V' DITCH
(Not to Scale)
Natural Ground
Fill Slope
Min. D=1.0 Ft
FROM STA. 11+90 TO STA. 14+35 -L- LT
FROM STA. 15+56 TO STA. 16+00 -L- RT
DETAIL 2
SPECIAL CUT DITCH
(Not to Scale)
Front Ditch Slope
Min. D=1.0 Ft.
FROM STA. 16+00 TO STA. 17+50 -L- RT
DETAIL 3
STREAM BANK RESTORATION
(Not to Scale)
Filter Fabric
Water Surface
Type of Liner= +/-50 TONS,CL'II' Rip-Rap
Filter Fabric= 45 SY
NAD 83/95
STA. 11+40.00 -L-
BEGIN TIP PROJECT B-4600
STA. 18+50.00 -L-
END TIP PROJECT B-4600
BEGIN BRIDGE
-L- STA. 14+60.00
END BRIDGE
-L- STA. 15+65.00
PT Sta. 14+32.06
PC Sta. 16+40.76
S 46° 18' 14.4" E
S 54° 36' 09.2" E
S 32° 55' 27.0" E
EARL THOMAS BRANN
W. FARRELL WHITFIELD
JOHN THOMAS MOORE
ISSIAH WILSON
ROSA D. WILSON
LYNN S. WILSON
ROBERT HUGH PEEDIN
SOUTH FLAT RIVER
CHARLIE LONG ROAD (SR 1112)
-BL- 102 POT 5+00.00
-BL- 100 POT 16+66.83
-BL- 101 PINC -L- STA. 14+91.16 OFF. 14.49 LT
POT Sta. 10+00.00
PC Sta. 10+37.40
PT Sta. 20+54.74
POT Sta. 21+40.81
BM 51 FROM BL-102 N 27° 42' 43.3" W 22.34' ELEV. 613.56
RELATIONSHIP OF PROP. BRIDGE TO PAVEMENT
BEGIN APPROACH SLAB -L- STA.14+49.15
END APPROACH SLAB -L- STA.15+75.85
8:1 TAPER

-L-

PI Sta 12+35.92	PI Sta 18+53.74
Δ = 15° 22' 57.5" (RT)	Δ = 33° 10' 25.8" (RT)
D = 3° 53' 51.6"	D = 8° 00' 48.2"
L = 394.66'	L = 413.98'
T = 198.52'	T = 212.97'
R = 1,470.00'	R = 715.00'
SE = 06	SE = 06

PAVED SHOULDER

FOR -L- PROFILE, SEE SHEET NO. 5

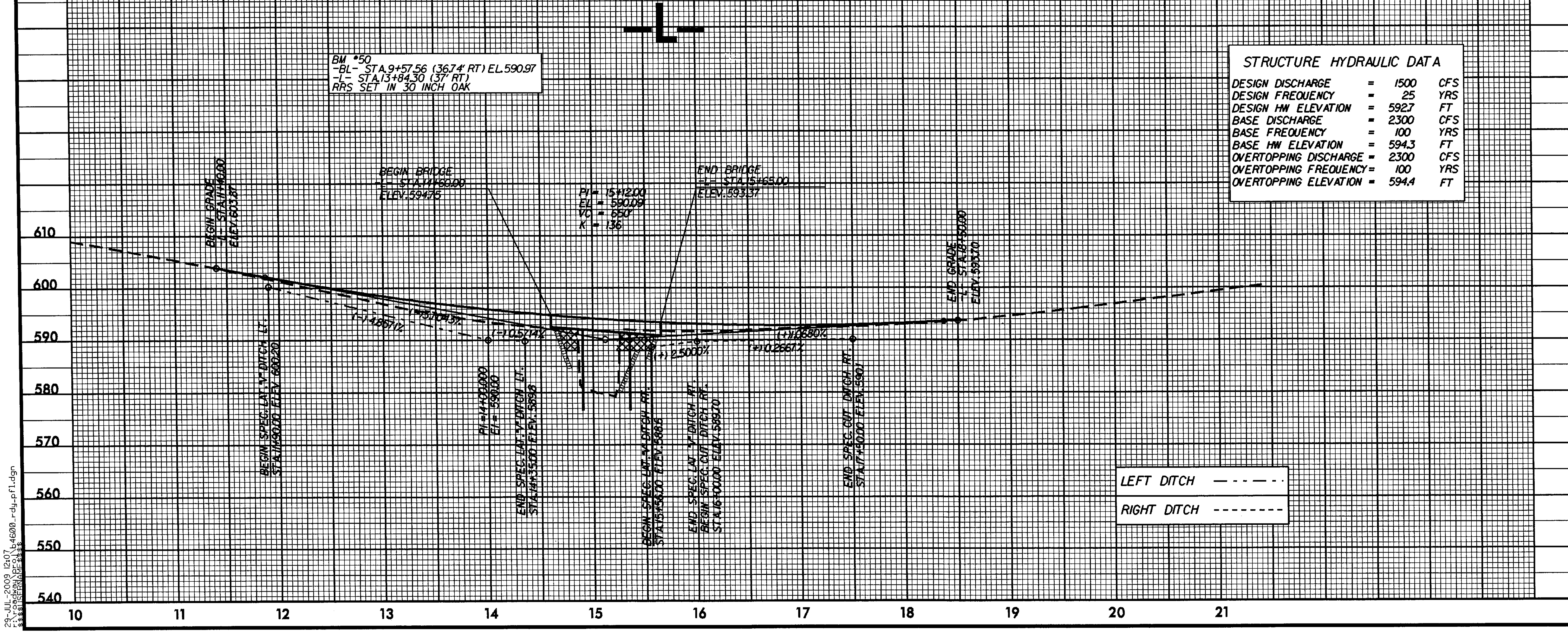
BRIDGE APPROACH SLAB

29-JUL-2009 12:07

PROJECT REFERENCE NO.	SHEET NO.
B-4600	5

ROADWAY DESIGN ENGINEER | HYDRAULICS ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION



-L-
BM #50
-BL- STA.9+57.56 (36.74' RT) EL.590.97
-L- STA.13+84.30 (37' RT)
RRS SET IN 30 INCH OAK
BEGIN GRADE -L- STA.11+40.00 ELEV.603.87
BEGIN BRIDGE -L- STA.14+60.00 ELEV.594.75
PI = 15+12.00
EL = 590.09
VC = 650'
K = 136
END BRIDGE -L- STA.15+65.00 ELEV.593.37
END GRADE -L- STA.18+50.00 ELEV.593.70
(-)4.8571%
(-)3.7043%
(-)1.0571%
(+)2.5000%
(+)0.2667%
(+)1.0680%
BEGIN SPEC. LAT. "V" DITCH LT. STA.11+90.00 ELEV. 600.20
PI=14+00.000 EI= 590.00
END SPEC. LAT. "V" DITCH LT. STA.14+35.00 ELEV. 589.8
BEGIN SPEC. LAT. "V" DITCH RT. STA.15+56.00 ELEV.588.5
END SPEC. LAT. "V" DITCH RT. BEGIN SPEC. CUT DITCH RT. STA.16+00.00 ELEV.589.70
END SPEC. CUT DITCH RT. STA.17+50.00 ELEV.590.1
610
600
590
580
570
560
550
540
10
11
12
13
14
15
16
17
18
19
20
21
LEFT DITCH
RIGHT DITCH

STRUCTURE HYDRAULIC DATA

DESIGN DISCHARGE	=	1500	CFS
DESIGN FREQUENCY	=	25	YRS
DESIGN HW ELEVATION	=	592.7	FT
BASE DISCHARGE	=	2300	CFS
BASE FREQUENCY	=	100	YRS
BASE HW ELEVATION	=	594.3	FT
OVERTOPPING DISCHARGE	=	2300	CFS
OVERTOPPING FREQUENCY	=	100	YRS
OVERTOPPING ELEVATION	=	594.4	FT

5/14/99

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0 2,5 5	PROJ. REFERENCE NO.	SHEET NO.
	B-4600	X-1

3:1 4:1 0.060 0.060 2:1

597.29

599.08

12+50.00

3:1 4:1 0.060 0.063 5.73:1

600.20

601.64

11+90.00

0.067 0.080

603.77

BEGIN CONSTRUCTION -L- STA. 11+40.00

11+40.00

605.32

11+00.00

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

Note: Approximate quantities only. Unclassified Excavation, Borrow Excavation, Fine Grading, Clearing and Grubbing, and Removal of Existing Pavement will be paid for at the contract lump sum price for "Grading."

-L-

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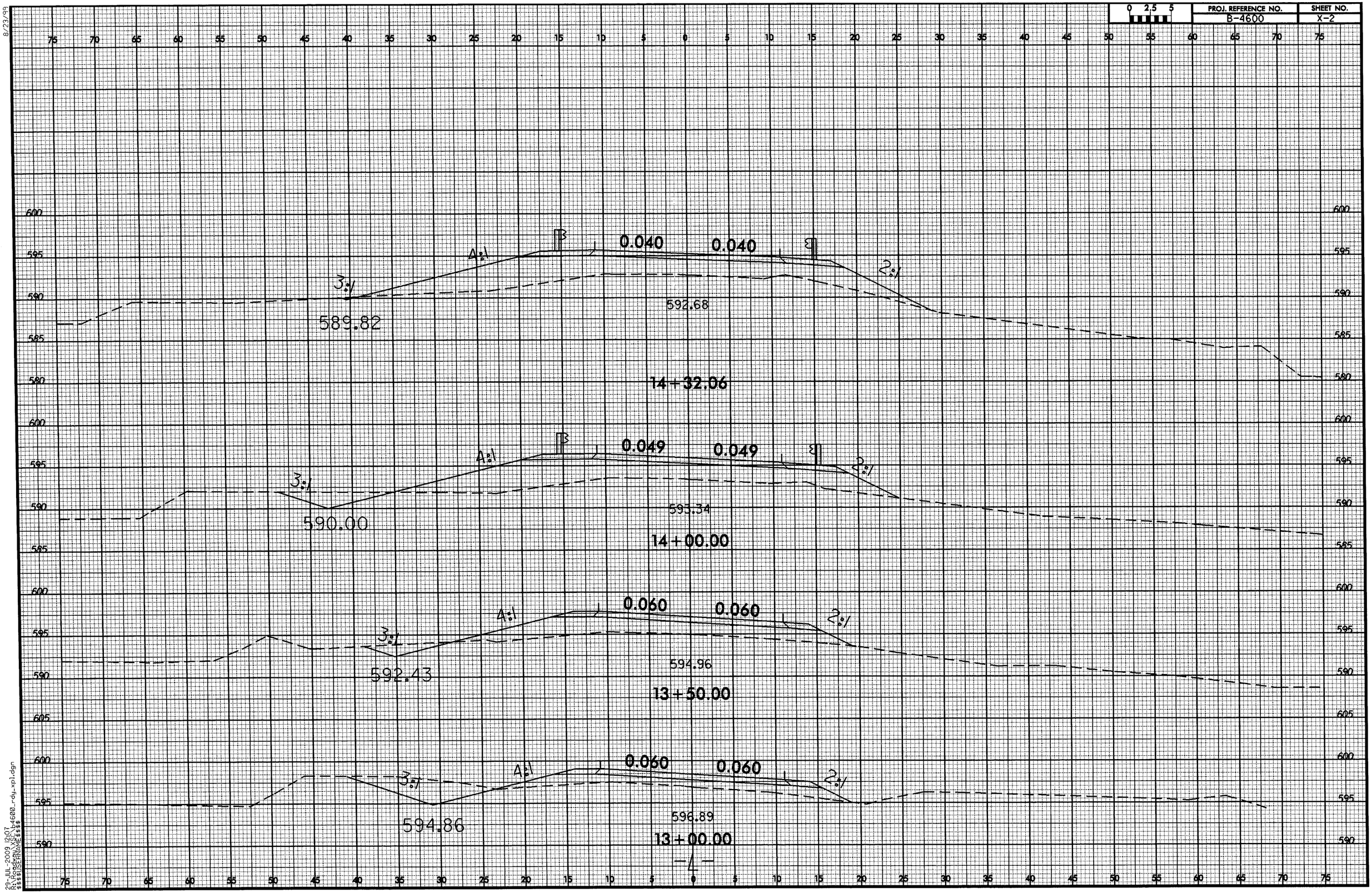
0 2.5 5	PROJ. REFERENCE NO.	SHEET NO.
	B-4600	X-2



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0 2.5 5	PROJ. REFERENCE NO.	SHEET NO.
	B-4600	X-3

592.27

BEGIN BRIDGE -L- STA. 14+60.00
14+60.00

0.040 0.040

2:1 2:1

592.38

14+51.97

0.040 0.040

2:1 2:1

592.43

14+48.24

-L-

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8/23/99

0 2.5 5	PROJ. REFERENCE NO.	SHEET NO.
	B-4600	X-4

0.040 0.040

591.78

15+57.10

0.040 0.040

579.74

15+08.62

0.040 0.040

592.20

14+68.30

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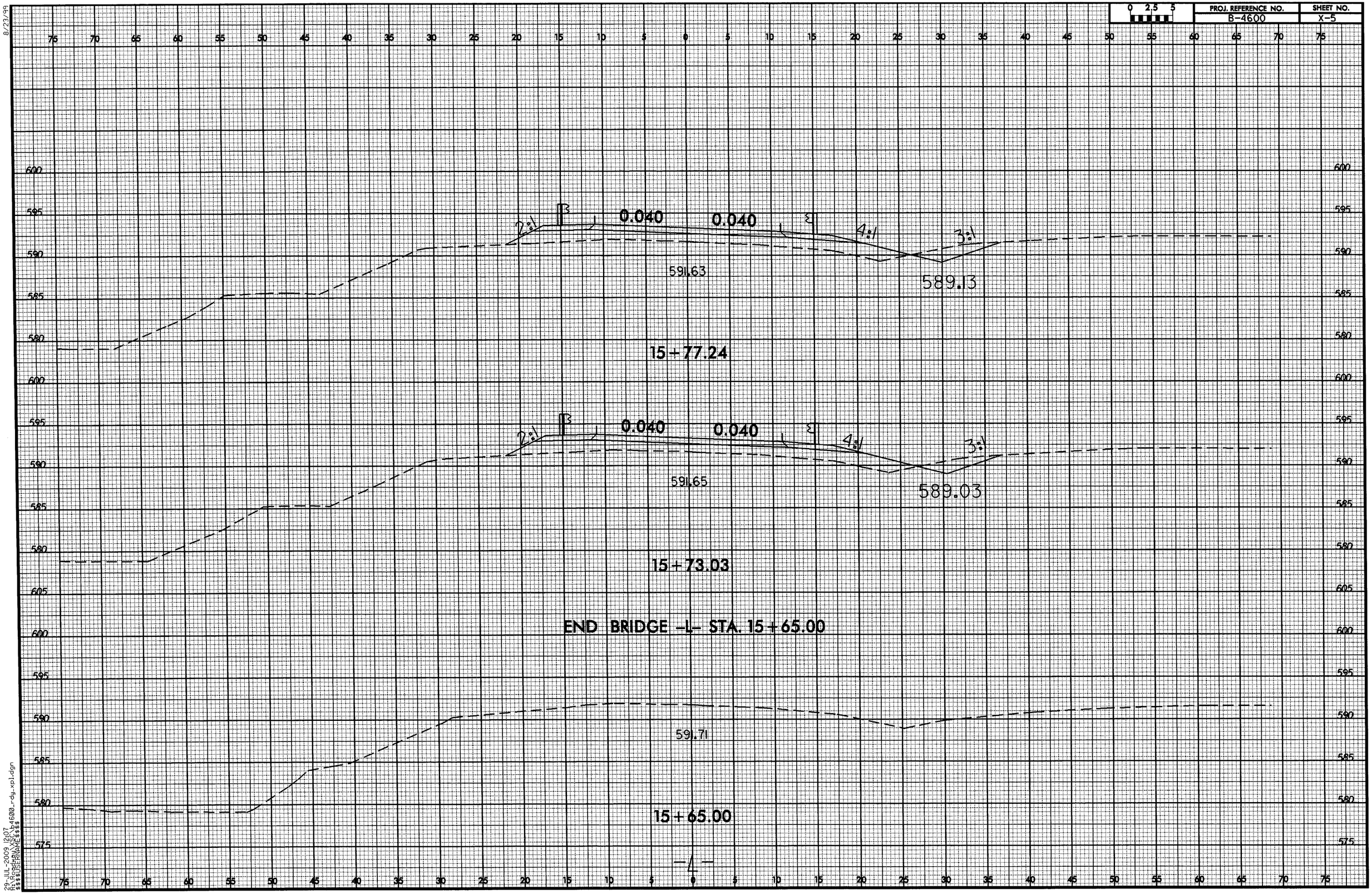
$$$$USERNAME$$$$

8/23/99

0 2.5 5	PROJ. REFERENCE NO.	SHEET NO.
	B-4600	X-5



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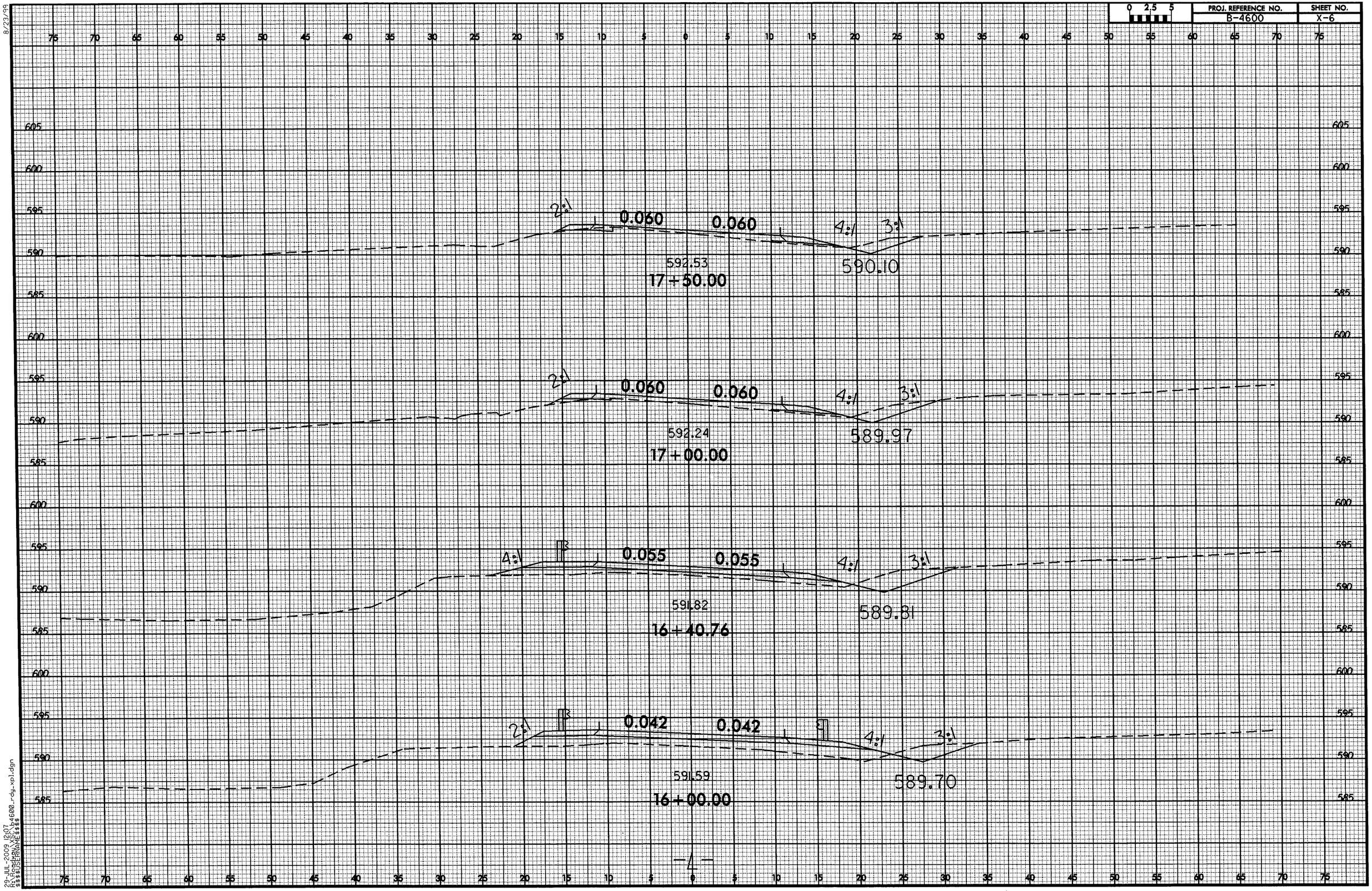

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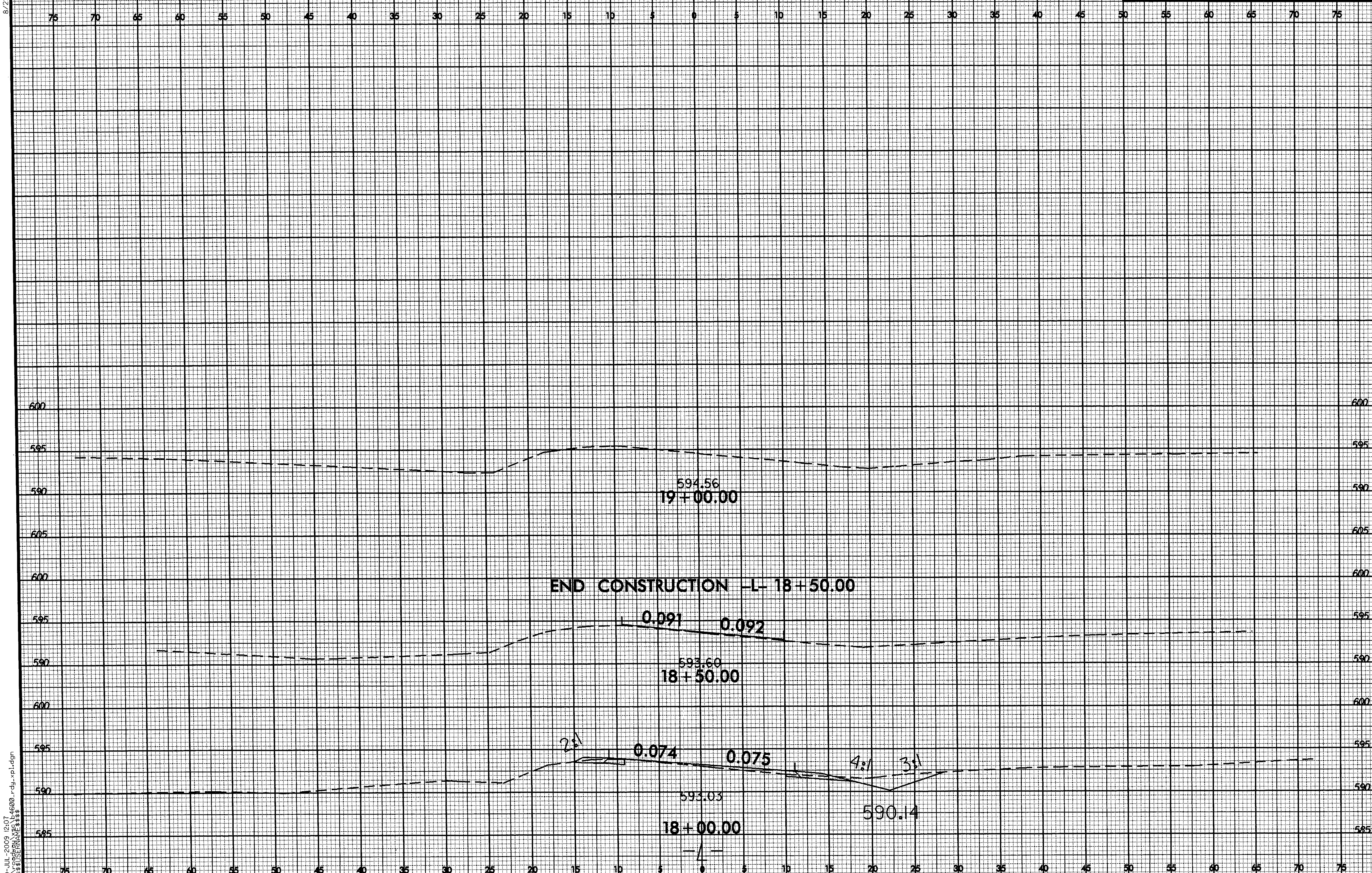

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SOIL

Sampling Point: _____

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ Organic Bodies (A6) **(LRR P, T, U)**
- ___ 5 cm Mucky Mineral (A7) **(LRR P, T, U)**
- ___ Muck Presence (A8) **(LRR U)**
- ___ 1 cm Muck (A9) **(LRR P, T)**
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Coast Prairie Redox (A16) **(MLRA 150A)**
- ___ Sandy Mucky Mineral (S1) **(LRR O, S)**
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7) **(LRR P, S, T, U)**
- ___ Polyvalue Below Surface (S8) **(LRR S, T, U)**
- ___ Thin Dark Surface (S9) **(LRR S, T, U)**
- ___ Loamy Mucky Mineral (F1) **(LRR O)**
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Marl (F10) **(LRR U)**
- ___ Depleted Ochric (F11) **(MLRA 151)**
- ___ Iron-Manganese Masses (F12) **(LRR O, P, T)**
- ___ Umbric Surface (F13) **(LRR P, T, U)**
- ___ Delta Ochric (F17) **(MLRA 151)**
- ___ Reduced Vertic (F18) **(MLRA 150A, 150B)**
- ___ Piedmont Floodplain Soils (F19) **(MLRA 149A)**
- ___ Anomalous Bright Loamy Soils (F20) **(MLRA 149A, 153C, 153D)**

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) **(LRR O)**
- ___ 2 cm Muck (A10) **(LRR S)**
- ___ Reduced Vertic (F18) **(outside MLRA 150A,B)**
- ___ Piedmont Floodplain Soils (F19) **(LRR P, S, T)**
- ___ Anomalous Bright Loamy Soils (F20) **(MLRA 153B)**
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12) **(LRR T, U)**
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No _____

Remarks:

WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: _____ City/County: _____ Sampling Date: _____

Applicant/Owner: _____ State: _____ Sampling Point: _____

Investigator(s): _____ Section, Township, Range: _____

Landform (hillslope, terrace, etc.): _____ Local relief (concave, convex, none): _____ Slope (%): _____

Subregion (LRR or MLRA): _____ Lat: _____ Long: _____ Datum: _____

Soil Map Unit Name: _____ NWI classification: _____

Are climatic / hydrologic conditions on the site typical for this time of year? Yes _____ No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes _____ No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes _____ No _____	**Is the Sampled Area within a Wetland?** **Yes _____ No _____**
Hydric Soil Present?	Yes _____ No _____	
Wetland Hydrology Present?	Yes _____ No _____	

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15) **(LRR U)**
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes _____ No _____ Depth (inches): _____

Water Table Present? Yes _____ No _____ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes _____ No _____ Depth (inches): _____

Wetland Hydrology Present? Yes _____ No _____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

/ coverage

– 30 ft radius plot

VEGETATION – Use scientific names of plants.

Sampling Point: _____

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	_____ = Total Cover		
Sapling Stratum (Plot size: _____)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	_____ = Total Cover		
Shrub Stratum (Plot size: _____)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	_____ = Total Cover		
Herb Stratum (Plot size: _____)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	_____ = Total Cover		
Woody Vine Stratum (Plot size: _____)			
1.			
2.			
3.			
4.			
5.			
	_____ = Total Cover		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: _____ (A)

Total Number of Dominant Species Across All Strata: _____ (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: _____ (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:	
OBL species _____	x 1 =	_____
FACW species _____	x 2 =	_____
FAC species _____	x 3 =	_____
FACU species _____	x 4 =	_____
UPL species _____	x 5 =	_____
Column Totals: _____ (A)		_____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

___ Dominance Test is >50%

___ Prevalence Index is ≤3.0[1] – hydro meets

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).

Sapling – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.

Shrub – Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.

Herb – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size. Includes woody plants, except woody vines, less than approximately 3 ft (1 m) in height.

Woody vine – All woody vines, regardless of height.

Hydrophytic Vegetation Present? **Yes** _____ **No** _____

Remarks: (If observed, list morphological adaptations below).