STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION

BEVERLY EAVES PERDUE
GOVERNOR

EUGENE A. CONTI, JR.
SECRETARY

March 13, 2012

U. S. Army Corps of Engineers
Regulatory Field Office
151 Patton Avenue, Room 208
Asheville, NC 28805

ATTN: Ms. Liz Hair
NCDOT Coordinator

Subject: **Application for Regional General Permit 198200031, Section 401 Water Quality Certification and Catawba Buffer Authorization** for the proposed replacement of Bridge No. 6 over the South Fork Catawba River on SR 2014 (North Main Street) in Gaston County, Federal Aid Project No. BRSTP-2014(3); Division 12; TIP No. B-4752; Debit $240.00 WBS 38524.1.1

Dear Madam:

The North Carolina Department of Transportation (NCDOT) proposes to replace Bridge No. 6 over the South Fork Catawba River on North Main Street (SR 2014). Bridge No. 6 will be replaced with a 442 feet long four-span bridge. There will be 0.07 acre of permanent fill impact to the pond around the bridge site. In addition there will be 0.01 acre of permanent fill impacts and 0.03 acre of hand clearing in wetlands. The installation of a temporary work pad will incur 0.02 acre of temporary impacts to the river and 0.01 acre of temporary impacts to wetlands on the project site.

This project is located within the full pond elevation of Lake Wylie which is at 569 feet above mean sea level. The main crossing is the South Fork Catawba River, however Lake Wylie is fed by the Catawba River mainstem just upstream of the site, therefore the 15A NCAC 02B.0243 regulations pertaining to the Catawba River Basin buffer rules apply. This project will have 3,321 square feet of "allowable" impacts to zone 1. There will be 1,149 square feet of "allowable with mitigation" impacts to zone 1 and 492 square feet "allowable with mitigation" impacts to zone 2 for a total of 1,641 square feet of mitigable impacts.

According to the Catawba River buffer rules, bridges are "allowable". Uses designated as allowable may proceed within the riparian buffer provided that there are no practical

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

TELEPHONE: 919-707-6100
FAX: 919-212-5785

WEBSITE: WWW.NCDOT.ORG

LOCATION:
1020 BIRCH RIDGE DRIVE
RALEIGH NC 27610-4328

alternatives to the requested use pursuant to Sub-Item (8)(a) of the Rule. These uses require written authorization from the Division or the local government with approved riparian buffer ordinance. Therefore, NCDOT is hereby requesting written authorization for a Buffer Certification from the Division of Water Quality.

Please see enclosed copies of the Pre-Construction Notification (PCN), EEP acceptance letter, Stormwater Management Plan, Permit Drawings, Design Plans and Rapanos forms. The Categorical Exclusion (CE) was completed in December 2011 and distributed shortly thereafter. Additional copies are available upon request.

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 attachments, NCDOT hereby requests NCWRC review. NCDOT requests that NCWRC forward their comments to the Corps of Engineers and the NCDOT within 30 calendar days of receipt of this application.

This project calls for a letting date of August 21, 2012 and a review date of July 3, 2012; however, the let date may advance as additional funding becomes available.

A copy of this permit application and its distribution list will be posted on the NCDOT Website at: http://www.ncdot.org/doh/preconstruct/pe/neu/permit.html. If you have any questions or need additional information, please contact Jennifer Harrod at (919) 707-6124 or jwharrod@ncdot.gov.

Sincerely,

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

cc:
NCDOT Permit Application Standard Distribution List

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

Pre-Construction Notification (PCN) Form

A. Applicant Information

1. Processing

1a. Type(s) of approval sought from the Corps:	☒ Section 404 Permit	☐ Section 10 Permit
1b. Specify Nationwide Permit (NWP) number:	or General Permit (GP) number: 198200031	
1c. Has the N WP 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 ☐ 401 Water Quality Certification – Express ☐ Non-404 Jurisdictional General Permit ☒ 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:	Replacement of Bridge No. 6 over the South Fork Catawba River on SR 2014 (North Main Street).
2b. County:	Gaston
2c. Nearest municipality / town:	Cramerton
2d. Subdivision name:	*not applicable*
2e. NCDOT only, T.I.P. or state project no:	B-4752

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 i f applicable):	*not applicable*
3d. Street address:	1598 Mail Service Center
3e. City, state, zip:	Raleigh, NC 27699-1598
3f. Telephone no.:	(919) 707-6124
3g. Fax no.:	(919) 212-5785
3h. Email address:	jwharrod@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: 35.23566 (DD.DDDDDD)	Longitude: - 81.65465 (-DD.DDDDDD)
1c. Property size:	1.08 acres	
2. Surface Waters		
2a. Name of nearest body of water (stream, river, etc.) to proposed project:	South Fork Catawba River	
2b. Water Quality Classification of nearest receiving water:	South Fork Catawba River: WS-V	
2c. River basin:	Catawba	
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: Heavy urban development around the site; Vegetated riparian buffer along river and ponds identified as Piedmont Bottomoland Forest.		
3b. List the total estimated acreage of all existing wetlands on the property: 0.09 ac		
3c. List the total estimated linear feet of all existing streams (intermittent and perennial) on the property: 86'		
3d. Explain the purpose of the proposed project: To replace a structurally deficient and functionally obselete structure.		
3e. Describe the overall project in detail, including the type of equipment to be used: The project involves replacing one 420-foot six-span bridge with a 442-foot four-span bridge at existing location over the South Fork Catawba River. The bridge replacement will utilize 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: A Jurisdictional Determination memo to Liz Hair and Polly Lespinasse, dated October 24, 2011, requested that a written JD be issued at permit time.	☐ 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: 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?	☐ Yes	☒ No ☐ 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)
Site 1 ☒ P ☐ T	Bridge & Approach	Bottomland Forest	☒ Yes ☐ No	☒ Corps ☐ DWQ	0.014
Site 1 ☐ P ☒ T	Temporary Work Pad	Bottomland Forest	☒ Yes ☐ No	☒ Corps ☐ DWQ	0.013
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	
				2g. **Total wetland impacts**	0.01 Permanent 0.01 Temporary

2h. Comments: There will be 0.03 acre of hand clearing in wetlands.

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	Temporary Work Pad	South Fork Catawba River	☒ PER ☐ INT	☒ Corps ☐ DWQ	120-200	0.02 ac
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**	0 Perm 0.02 ac 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		Bridge & Approach Fill	Pond	0.07
O2 ☐ P ☐ T				
O3 ☐ P ☐ T				
O4 ☐ P ☐ T				
			4f. Total open water impacts	0.07 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	Road Crossing	South Fork Catawba River	☐ Yes ☒ No	35	
B1 ☒ P ☐ T	Bridge	South Fork Catawba River	☐ Yes ☒ No	91	
B2 ☒ P ☐ T	Bridge	South Fork Catawba River	☐ Yes ☒ No	28	
B2 ☒ P ☐ T	Bridge	South Fork Catawba River	☐ Yes ☒ No	3167	
B3 ☒ P ☐ T	Road impacts other than crossings w/ surface waters	South Fork Catawba River	☒ Yes ☐ No	1149	492
			6h. **Total buffer impacts**	4470	492

6i. Comments: Although not on the mainstem Catawba River buffer rules apply to this project. Lake Wylie is fed by the Catawba River and the project site falls within the full pond elevation of Lake Wylie of 569 feet above mean sea level.

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 replacement bridge for No. 6 is 22 feet longer than the existing bridge. Deck drains are absent therefore stormwater will not be directly discharged in the South Fork Catawba River. An off site detour will be used.		
1b. Specifically describe measures taken to avoid or minimize the proposed impacts through construction techniques. Standard construction techniques apply. Bridge No. 6 is constructed entirely of concrete and steel and shoul be possible to remove with no resulting debris in the water based on standard demolition practices.		
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 If no, explain:	
2b. If yes, mitigation is required by (check all that apply):	☒ DWQ ☐ Corps	
2c. If yes, which mitigat ion 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):	Zone 1 - 1149; Zone 2 - 492 square feet	
4e. Riparian wetland mitigation requested:	0.01 acres	
4f. Non-riparian wetland mitigation requested:	acres	
4g. Coastal (tidal) wetland mitigation requested:	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	Road impacts other than crossings w/ surface waters	1149	3 (2 for Catawba)	2298
Zone 2	Road impacts other than crossings w/ surface waters	492	1.5	738
			6f. **Total buffer mitigation required:**	3036
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). The Ecosystem Enhancement Program (EEP) will be providing buffer mitigation for this project.				
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: see the Stormwater Management Plan attached.	☒ 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 see attached permit drawings
5. DWQ 401 Unit Stormwater Review	
5a. Does the Stormwater Management Plan meet the appropriate requirements?	☐ Yes ☐ No N/A
5b. Have all of the 401 Unit submittal requirements been met?	☐ Yes ☐ No N/A

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, ind icate 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? USFWS T/E County Listings and habitat decriptions per the USFWS website; The only T/E species listed with habitat in the project study area is: Schweinitz's sunflower - last surveyed September 28, 2011 and has a biological conclusion of No Effect; No habitat is present for the Bog turtle		
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 Unit coordination with FEMA		
8c. What source(s) did you use to make the floodplain determination? FEMA Maps		

Dr. Gregory J. Thorpe, Ph D Applicant/Agent's Printed Name	E. L. Lupe Applicant/Agent's Signature (Agent's signature is valid only if an authorization letter from the applicant is provided.)	3.14.12 Date

Ecosystem Enhancement PROGRAM

March 6, 2012

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

Dear Dr. Thorpe:

Subject: EEP Mitigation Acceptance Letter:

B-4752, Replace Bridge Number 6 on SR 2014 over the South Fork Catawba River, Gaston County

The purpose of this letter is to notify you that the Ecosystem Enhancement Program (EEP) will provide the riparian wetland mitigation and buffer mitigation for the subject project. Based on the information supplied by you on February 22, and March 6, 2012, the impacts are located in CU 03050102 of the Catawba River Basin in the Southern Piedmont (SP) Eco-Region, and are as follows:

Stream and Wetlands	River Basin	CU Location	Eco-Region	Stream			Wetlands		
				Cold	Cool	Warm	Riparian	Non-Riparian	Coastal Marsh
Impacts	Catawba	03050102	SP	0	0	0	0.01	0	0

All buffer mitigation requests and approvals are administrated through the Riparian Restoration Buffer Fund. The NCDOT will be responsible to ensure that appropriate compensation for the additional buffer mitigation will be provided in the agreed upon method of fund transfer. Upon receipt of the NCDWQ's Buffer Authorization Certification, EEP will transfer funds from NCDOT ILF Fund into the Riparian Buffer ILF Fund. Upon completion of transfer payment, NCDOT will have completed its riparian buffer mitigation responsibility for B-4752. Subsequently, EEP will conduct a review of current NCDOT ILF mitigation projects in the river basin to determine if available buffer mitigation credits exist. If there are buffer mitigation credits available, then the Riparian Buffer ILF Fund will purchase the appropriate amount of buffer mitigation credits from NCDOT ILF Fund. The buffer impacts and anticipated buffer mitigation credits needed are as follows:

Buffer	River Basin	CU Location	Eco-Region	Buffer		
				Zone 1	Zone 2	TOTAL
Impacts	Catawba	03050102	SP	1,149	492	1,641
Mitigation	Catawba	**03050101**	SP	2,298	738	3,036

EEP commits to implementing sufficient compensatory riparian wetland mitigation credits and buffer mitigation credits to offset the impacts associated with this project as determined by the regulatory agencies in accordance with the N.C. Department of Environment and Natural Resources' Ecosystem Enhancement Program In-Lieu Fee Instrument dated July 28, 2010. If the above referenced impact amounts are revised, then this mitigation acceptance letter will no longer be valid and a new mitigation acceptance letter will be required from EEP.

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

Sincerely,

James B. Stanfill for

Michael Ellison
EEP Deputy Director

Cc: Ms. Liz Hair, USACE – Asheville Regulatory Field Office
Mr. Brian Wrenn, NC Division of Water Quality
File: B-4752

North Carolina Department of Transportation

Highway Stormwater Program

STORMWATER MANAGEMENT PLAN

FOR LINEAR ROADWAY PROJECTS

(Version 1.2; Released September 2011)

Project/TIP No.: B-4752 **County(ies):** Gaston

General Project Information

Project No.:	B-4752		**Project Type:**	Bridge Replacement		**Date:**	1/23/2012
NCDOT Contact:	Ray Lovinggood		**Contractor / Designer:**				
Address:	NCDOT Hydraulics Unit 1590 Mail Service Center Raleigh, NC 27699-1590		**Address:**				
Phone:	919.707.6736		**Phone:**				
Email:	rlovinggood@ncdot.gov		**Email:**				
City/Town:	Cramerton		**County(ies):**	Gaston			
River Basin(s):	Catawba		**CAMA County?**	No			
Primary Receiving Water:	South Fork Catawba River		**NCDWQ Stream Index No.:**	11-129-(15.5)			
NCDWQ Surface Water Classification for Primary Receiving Water	**Primary:**		Water Supply V (WS-V)				
	Supplemental:						
Other Stream Classification:	None						
303(d) Impairments:	None						
Buffer Rules in Effect	Catawba						

Project Description

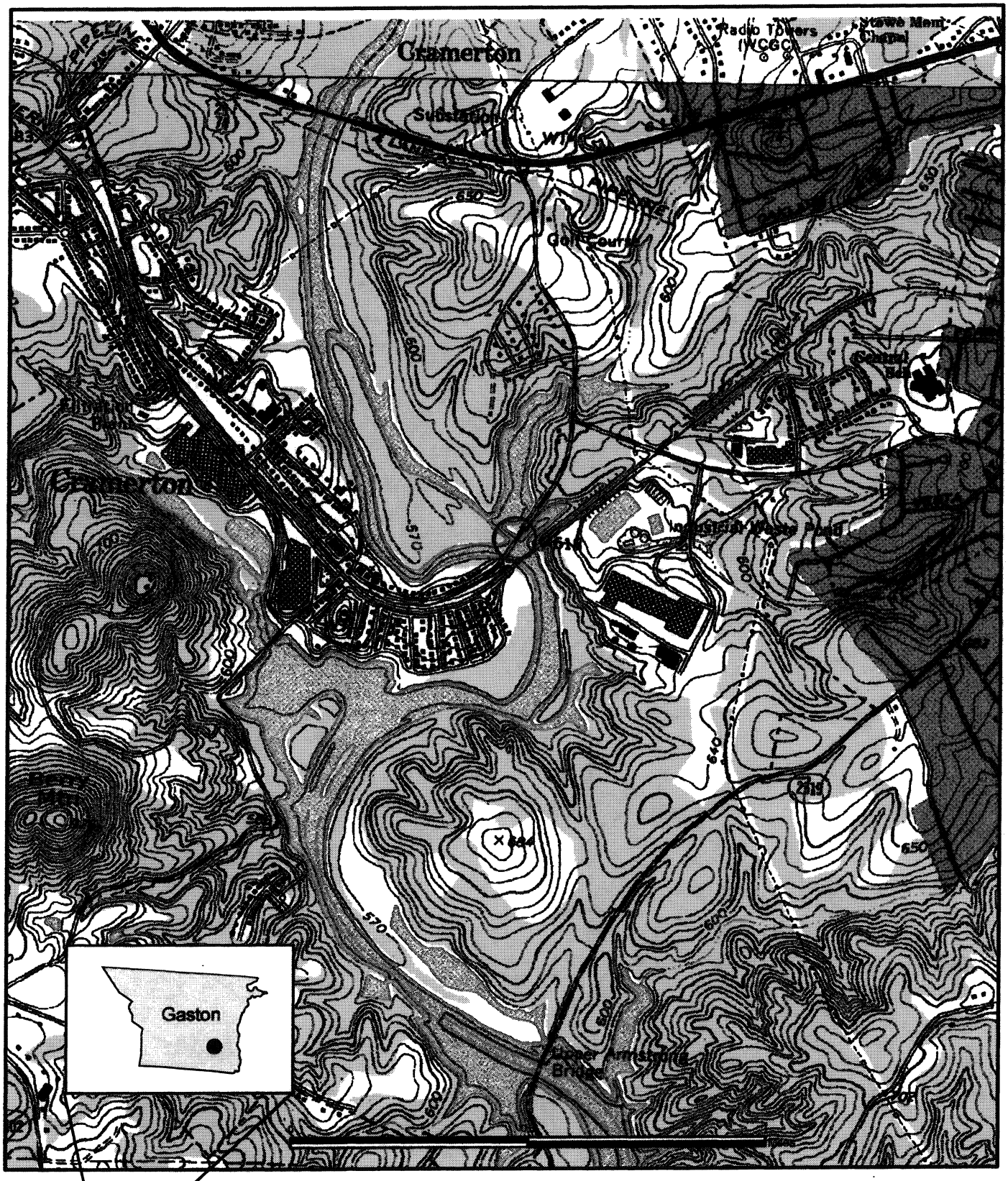
Project Length (lin. Miles or feet):	0.265 miles	**Surrounding Land Use:**	Urban/suburban & Rural

	Proposed Project	**Existing Site**
Project Built-Upon Area (ac.)	1.25 ac.	1.03 ac.
Typical Cross Section Description:	APPROACH: Two lanes with widths varying from 12 ft to 14 ft. BRIDGE: Two 12' lanes, two 4' shoulders, and one 5.5' sidewalk on the upstream side.	APPROACH: Two 11 ft lanes. BRIDGE: Two 12 ft lanes.
Average Daily Traffic (veh/hr/day):	Design/Future: 7,500	Existing: 4,500

General Project Narrative:

This project replaces existing bridge number 6 at the same location and elevation. No deck drains will be used and all runoff from the project will be directed to preformed scour holes. On the south end of the bridge, the existing storm water outfalls will be removed and a new outfall, with a preformed scour hole, will be placed in the floodplain and outside of Buffer Zone 2. On the north side of the bridge, runoff will be collected and discharged into a preformed scour hole near Cramer Pond and outside of Buffer Zone 2. The existing six span bridge will be replaced by a four span bridge. Overall bridge length increases from 420 ft to 442 ft.

References



B-4752

Gaston County

Replace Bridge No. 6 on SR 2014 over
South Fork Catawba River

FIGURE 1

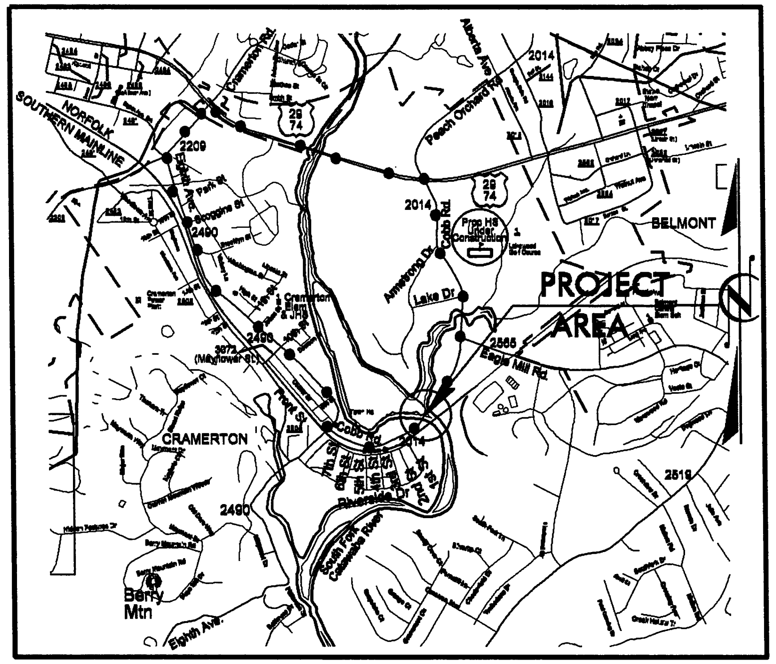
Prepared by the NCDOT
Project Development &
Environmental Analysis Branch
Natural Environment Unit

Permit Drawing
Sheet ___ of ___

09/08/99

TIP PROJECT: B-4752

See Sheet 1-A For Index of Sheets



● ● ● OFFSITE DETOUR

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

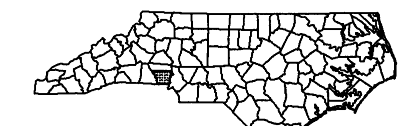
GASTON COUNTY

LOCATION: BRIDGE NO. 6 ON SR 2014 (LAKEWOOD RD) OVER SOUTH FORK CATAWBA RIVER
TYPE OF WORK: GRADING, PAVING, DRAINAGE, AND STRUCTURE

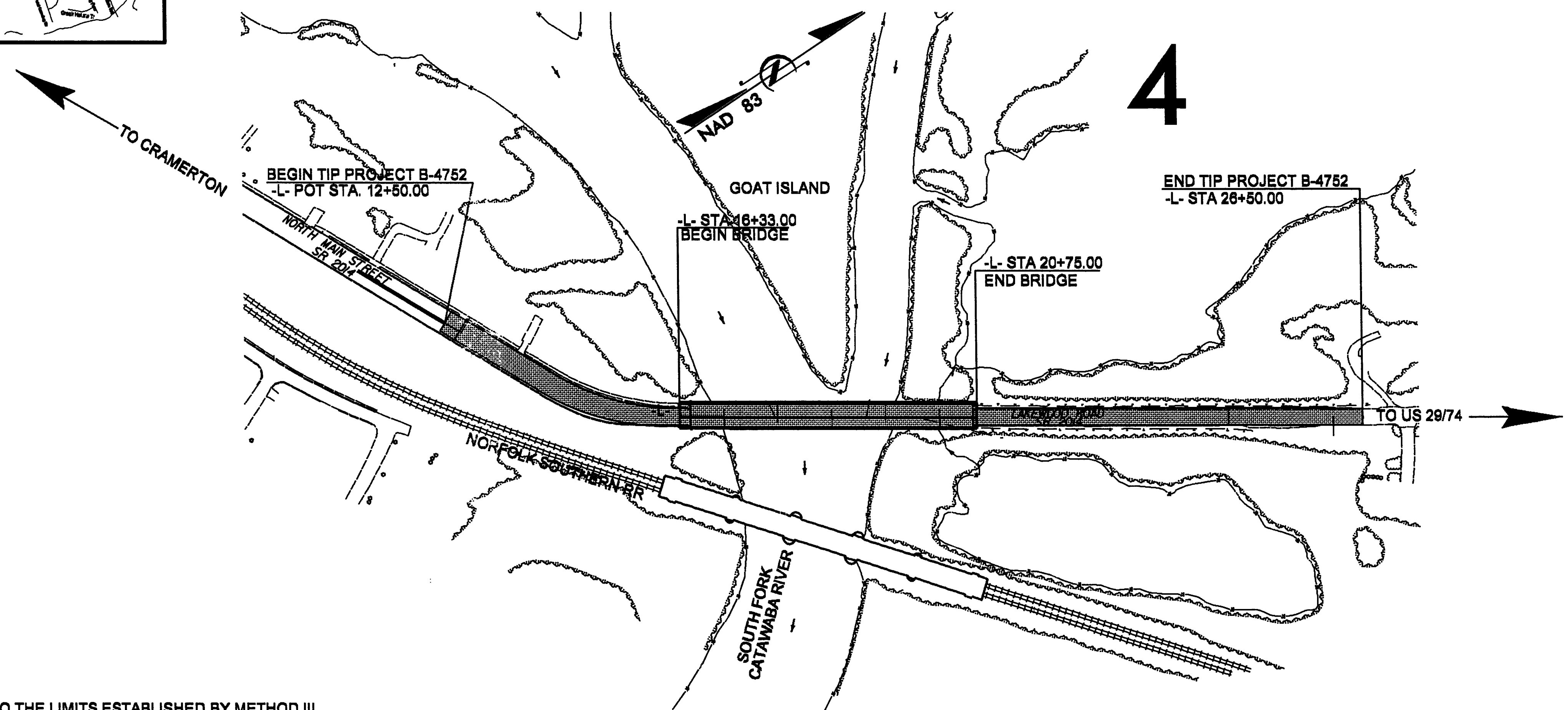
ENGLISH

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	B-4752	1	

STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION
38524.1.1	BRSTP-2014(3)	PE
38524.2.1	BRSTP-2014(3)	R/W,UTIL



WETLAND AND SURFACE WATER IMPACTS PERMIT



CLEARING ON THIS PROJECT SHALL BE PERFORMED TO THE LIMITS ESTABLISHED BY METHOD III.
THIS PROJECT IS WITHIN THE MUNICIPAL BOUNDARIES OF CRAMERTON.

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

CONTRACT:

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

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 = 4500
ADT 2035 = 7500
DHV = 10%
D = 70%
T = 3% *
V = 40 MPH
* TTST 1% DUAL 2%
FUNCTIONAL CLASSIFICATION:
MINOR ARTERIAL

SUBREGIONAL TIER DESIGN

PROJECT LENGTH

LENGTH ROADWAY F.A. PROJECT BRSTP-2014(3) =
LENGTH STRUCTURE F.A. PROJECT BRSTP-2014(3) =
TOTAL LENGTH F.A. PROJECT BRSTP-2014(3) = 0.265

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

2006 STANDARD SPECIFICATIONS

RIGHT OF WAY DATE:
DECEMBER 21, 2011

LETTING DATE:
TBD

JASON MOORE, P.E.
PROJECT ENGINEER

JEANIE TYSON
PROJECT DESIGN ENGINEER

HYDRAULICS ENGINEER

SIGNATURE: P.E.

ROADWAY DESIGN ENGINEER

SIGNATURE: P.E.

DIVISION OF HIGHWAYS
STATE OF NORTH CAROLINA

Permit Drawing
Sheet 2 of 10

P.E.
STATE HIGHWAY DESIGN ENGINEER

8/17/99

R/W REVISION - REVISED PROP. DUAL UTILITY EASEMENT AND MARKERS AT -L- STA. 15+03.00 LT. BETWEEN -L- STA. 20+99.00 THRU STA. 26+00.00 LT. - SEC 12/13/11
REMOVED PROP. SIDEWALK

PROJECT REFERENCE NO.	SHEET NO.
B-4752	4
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

ENGLISH

100' 0' 100' 200' 300'
GRAPHIC SCALE

NAD 83

NICHOLAS RUSSELL ISENHOUR

PINKNEY L. HARRIS

GREGORY A. WEBER
SUSAN D. WEBER

GREGORY S. BOWERS

SOUTH FORK CATAWBA RIVER

NORTH CHANNEL OF SOUTH FORK CATAWBA RIVER

CRAMER POND

CRAMER MEMORIAL UNITED METHODIST CHURCH

MARY E. STROUPE

SHARON K. HICKS

NANCY

NORTH MAIN STREET

NORFOLK SOUTHERN

NORFOLK SOUTHERN RAILWAY

SPRINT

CONC. RAILWAY BRIDGE

SR 2014 LAKEWOOD ROAD (COBB ROAD) 24' BST

HAND CLEARING
GOAT ISLAND
TOWN OF CRAMERTON
4

TEMP FILL IN SURFACE WATER (WORK PAD)

TEMP WORK PAD

FILL IN SURFACE WATER (POND)
(SEE ROCK EMBANKMENT TYPICAL)

TEMPORARY FILL IN WETLAND
5

HAND CLEARING

FILL IN WETLAND (POND)
NORFOLK SOUTHERN
3

SEE DETAIL ON FOLLOWING SHEET

BM #2
-BL- STA 14+08
77 LEFT
ELEV. 590.53'

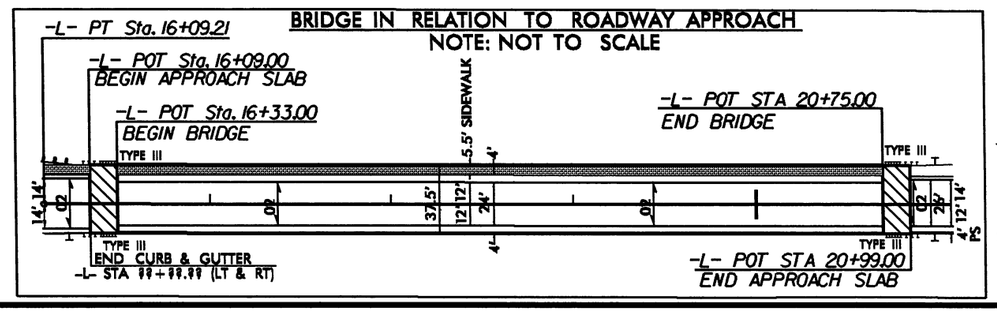
BM #3
-BL- STA 24+74
36 RIGHT
ELEV. 599.92'

ROCK EMBANKMENT
SEE DETAIL SHEET 2-A

BREAK EXIST. CONC. DITCH INTO RUBBLE
ADD CL B R/P RAP
CONSTRUCT STD. V DITCH
SEE DETAIL 1

US ARMY CORPS OF ENGINEERS MONUMENT "88-2"

BRIDGE IN RELATION TO ROADWAY APPROACH
NOTE: NOT TO SCALE



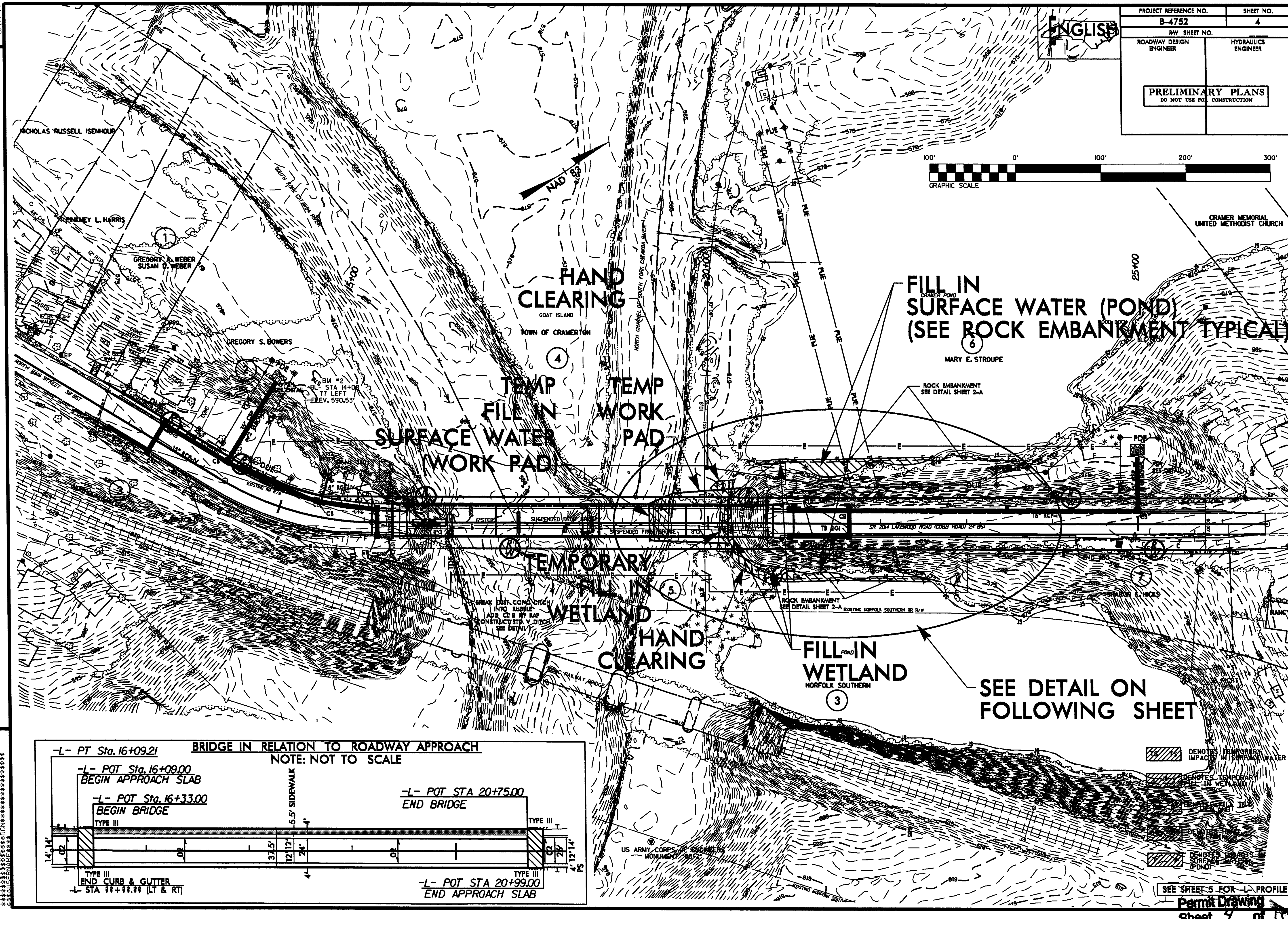
DENOTES TEMPORARY IMPACTS IN SURFACE WATER
DENOTES TEMPORARY FILL IN WETLAND
DENOTES FILL IN WETLAND
DENOTES HAND CLEARING
DENOTES IMPACTS IN SURFACE WATER (POND)

SEE SHEET 5 FOR -L- PROFILE

Permit Drawing
Sheet 3 of 16

8/17/99

RW REVISION - REVISED PROP. DUAL UTILITY EASEMENT AND MARKERS AT -L- STA 15+03.00 LT. REMOVED PROP. SIDEWALK BETWEEN -L- STA. 20+99.00 THRU STA. 26+00.00 LT. - SEC 12/13/11



PROJECT REFERENCE NO.
SHEET NO.
B-4752
4
R/W SHEET NO.
ROADWAY DESIGN ENGINEER
HYDRAULICS ENGINEER
ENGLISH
PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION
GRAPHIC SCALE
NAD 83
NICHOLAS RUSSELL ISENHOUR
PINKNEY L. HARRIS
GREGORY A. WEBER
SUSAN D. WEBER
GREGORY S. BOWERS
BM #2
BL STA 14+08
77 LEFT
ELEV. 590.53
HAND CLEARING
GOAT ISLAND
TOWN OF CRAMERTON
TEMP FILL IN SURFACE WATER (WORK PAD)
TEMP WORK PAD
FILL IN SURFACE WATER (POND) (SEE ROCK EMBANKMENT TYPICAL)
CRAMER POND
MARY E. STROUPE
CRAMER MEMORIAL UNITED METHODIST CHURCH
ROCK EMBANKMENT SEE DETAIL SHEET 2-A
SR 2014 LAKEWOOD ROAD (COBB ROAD)
NORTH MAIN STREET
TEMPORARY FILL IN WETLAND
HAND CLEARING
FILL IN WETLAND
NORFOLK SOUTHERN
SEE DETAIL ON FOLLOWING SHEET
BREAK EXIST. CONC. DITCH INTO RUBBLE ADD. CL B RIP RAP CONSTRUCT STD. V DITCH SEE DETAIL
EXISTING NORFOLK SOUTHERN RR R/W
SHARON E. HICKS
NANCY
US ARMY CORPS OF ENGINEERS MONUMENT
BRIDGE IN RELATION TO ROADWAY APPROACH
NOTE: NOT TO SCALE
-L- PT Sta. 16+09.21
-L- POT Sta. 16+09.00
BEGIN APPROACH SLAB
-L- POT Sta. 16+33.00
BEGIN BRIDGE
-L- POT STA 20+75.00
END BRIDGE
5.5' SIDEWALK
TYPE III
END CURB & GUTTER
-L- STA ##+##.## (LT & RT)
-L- POT STA 20+99.00
END APPROACH SLAB
DENOTES TEMPORARY IMPACTS IN SURFACE WATER
DENOTES TEMPORARY FILL IN WETLAND
DENOTES FILL IN WETLAND
DENOTES IMPACTS IN SURFACE WATER (POND)
SEE SHEET 5 FOR -L- PROFILE
Permit Drawing Sheet 4 of 10

5/14/99

PROJECT REFERENCE NO.	SHEET NO.
B-4752	
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

ENGLISH

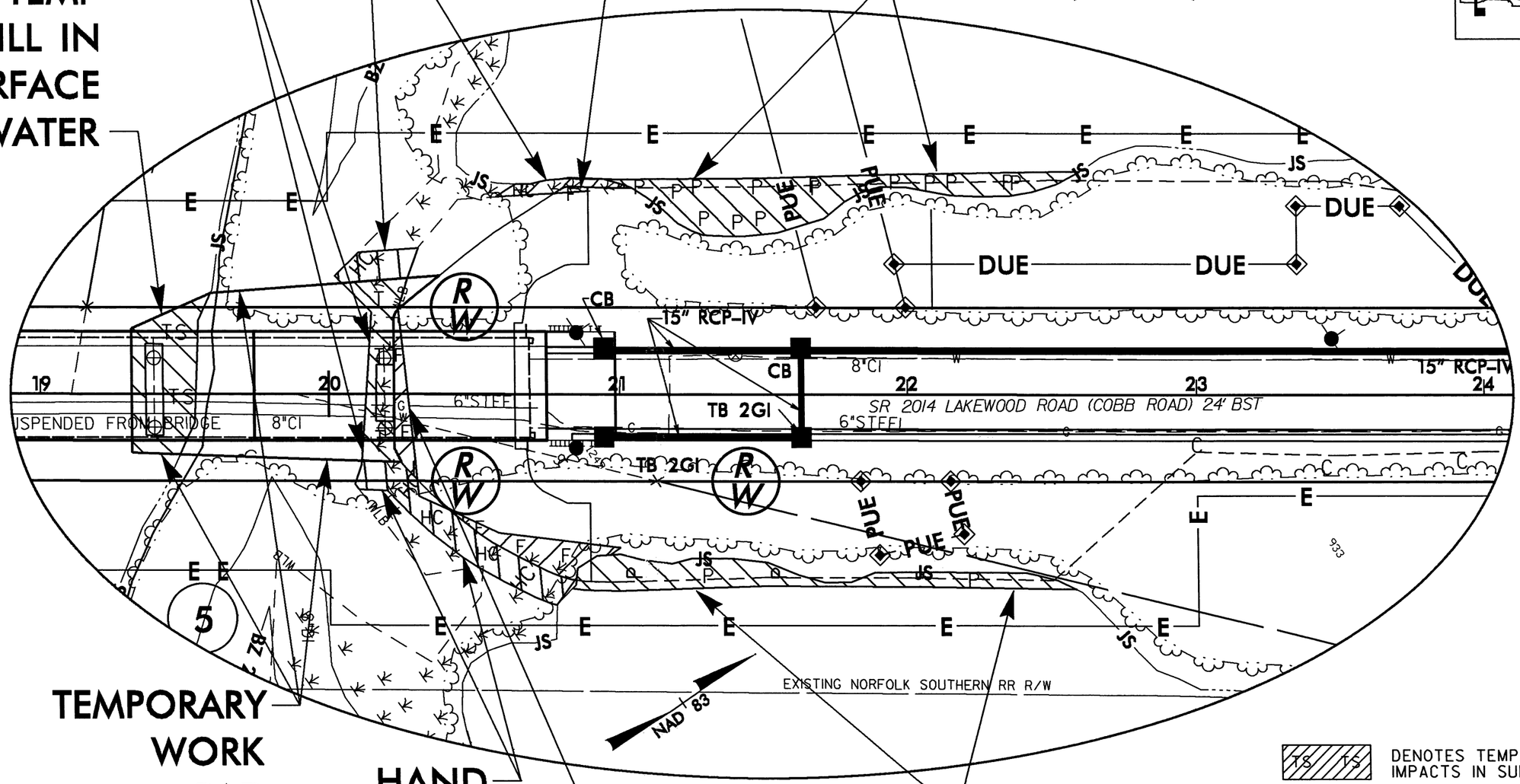
TEMPORARY FILL IN WETLAND

TEMP FILL IN SURFACE WATER

HAND CLEARING

FILL IN WETLANDS

FILL IN SURFACE WATER (POND)



TEMPORARY WORK PAD

HAND CLEARING

FILL IN WETLANDS

FILL IN SURFACE WATER (POND)

40' 0' 40' 80' 120'

GRAPHIC SCALE

TS TS DENOTES TEMPORARY IMPACTS IN SURFACE WATER

T T DENOTES TEMPORARY FILL IN WETLAND

P P DENOTES IMPACTS IN SURFACE WATER (POND)

HC HC DENOTES HAND CLEARING

F F DENOTES FILL IN WETLAND

Permit Drawing Sheet 5 of 17

5/14/99

PROJECT REFERENCE NO.	SHEET NO.
B-4752	
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

ENGLISH

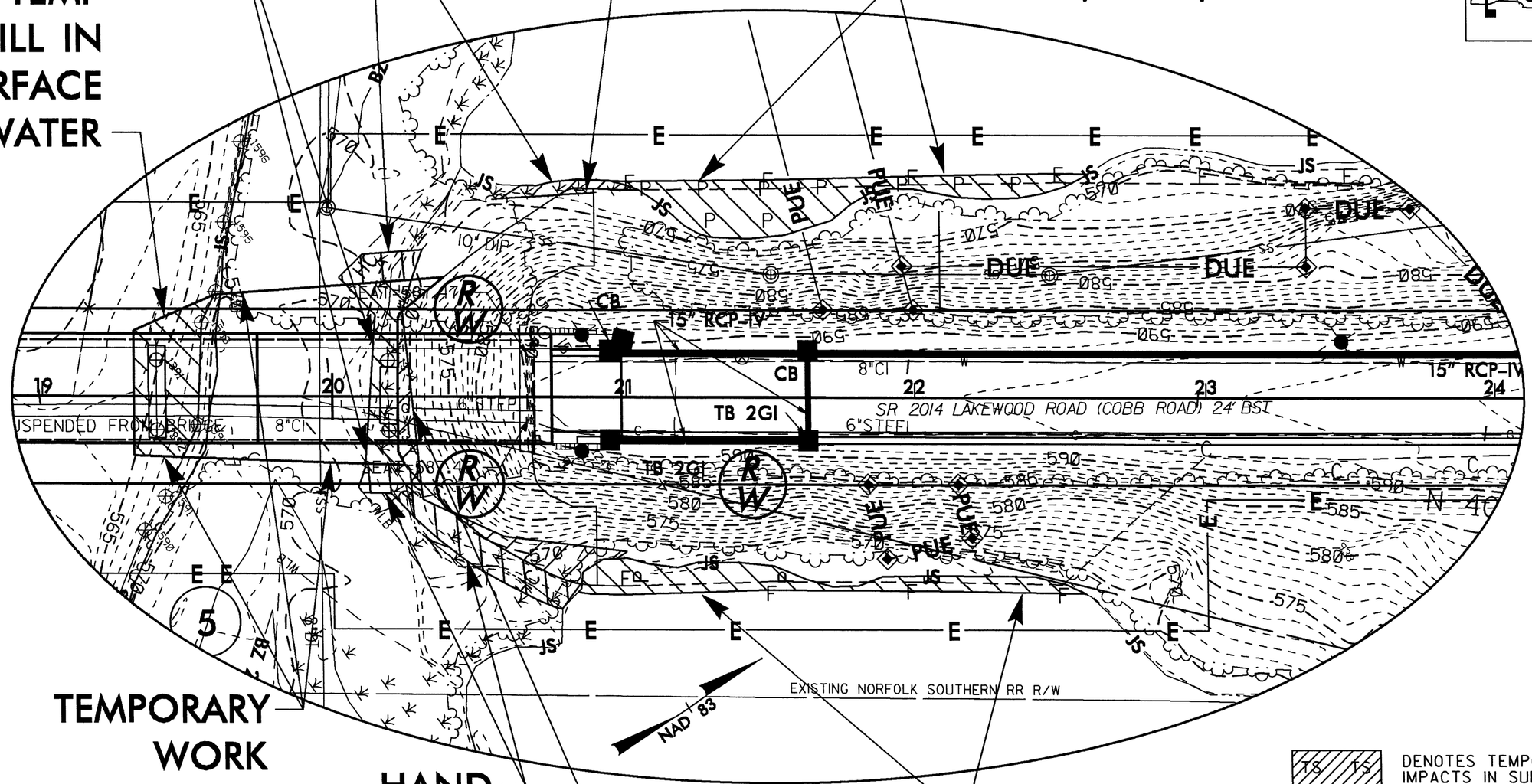
TEMPORARY FILL IN WETLAND

TEMP FILL IN SURFACE WATER

HAND CLEARING

FILL IN WETLANDS

FILL IN SURFACE WATER (POND)



TEMPORARY WORK PAD

HAND CLEARING

FILL IN WETLANDS

FILL IN SURFACE WATER (POND)

40' 0' 40' 80' 120'
GRAPHIC SCALE

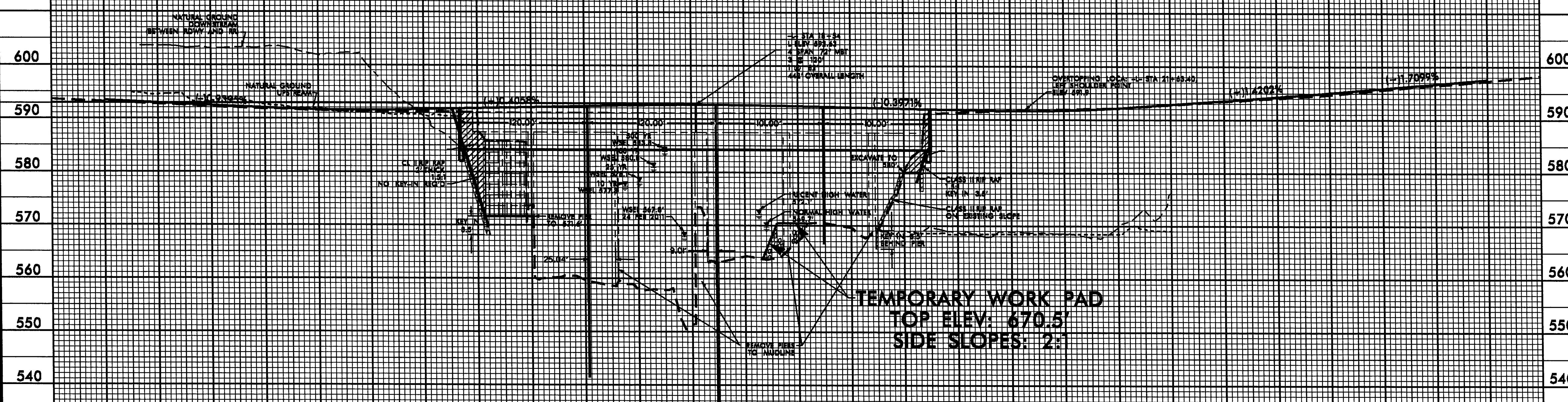
TS / TS	DENOTES TEMPORARY IMPACTS IN SURFACE WATER
T / T	DENOTES TEMPORARY FILL IN WETLAND
F / F	DENOTES IMPACTS IN SURFACE WATER (POND)
HC / HC	DENOTES HAND CLEARING
F / F	DENOTES FILL IN WETLAND

Permit Drawing

PROJECT REFERENCE NO.	SHEET NO.
B-4752	5
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

-L- SR 2014

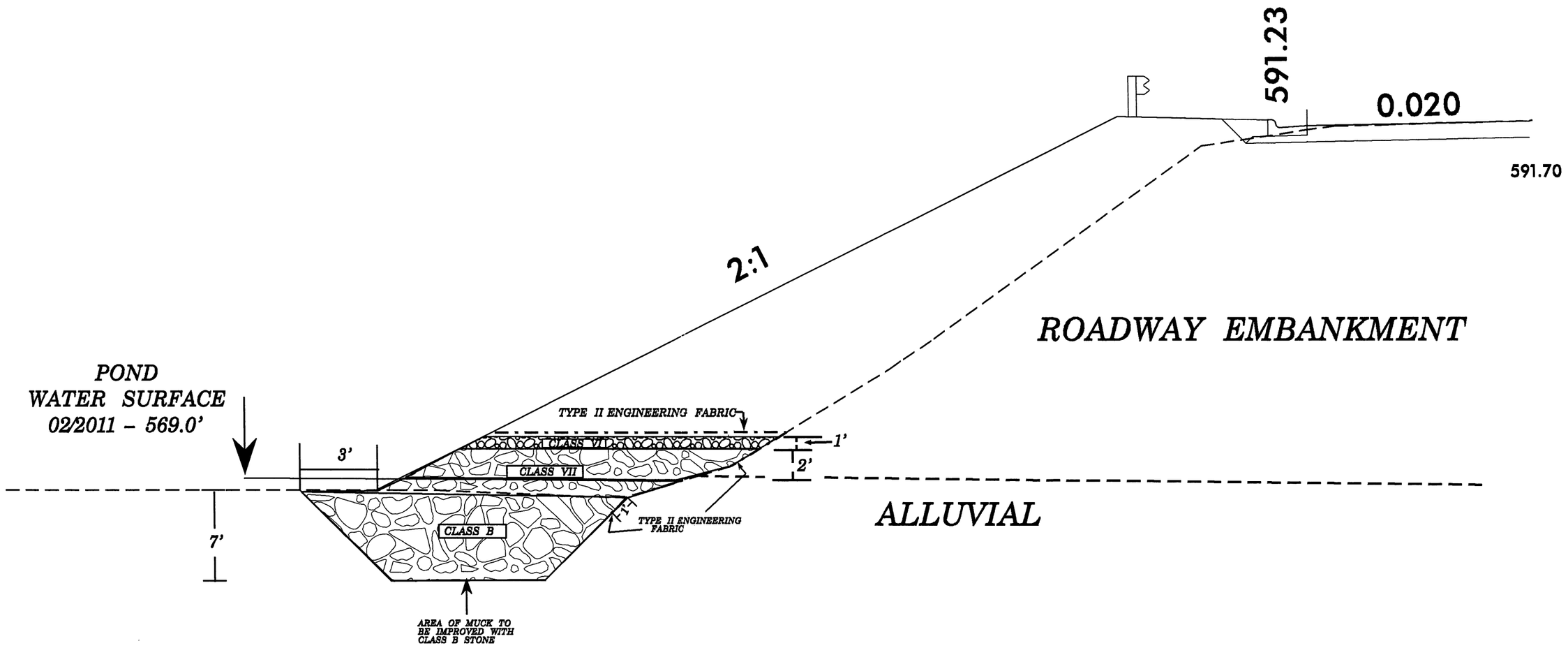


Access for removal of existing bents #2 & #3 and construction of new bents will be provided by barge.
A temporary work pad will be used to aid in removal of bent #4 and launching the barges.

PROJECT REFERENCE NO.	SHEET
B-4752	8

GEOTECHNICAL ENGINEER	ENGINEER
SIGNATURE DATE	SIGNATURE DATE

ROCK EMBANKMENT TYPICAL



PREPARED BY: JP ROGERS	DATE: 03/2011
REVIEWED BY: JS FARGHER	DATE: 03/2011

GEOTECHNICAL ENGINEERING UNIT

- ☐ EASTERN REGIONAL OFFICE
- ☒ WESTERN REGIONAL OFFICE
- ☐ CONTRACT OFFICE

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

BRIDGE #06 ON SR 2014 LAKEWOOD RD. OVER SOUTH FORK OF THE CATAWBA RIVER

REVISIONS

NO.	BY	DATE	NO.	BY	DATE
1			3		
2			4		

Permit Drawing

PROJECT REFERENCE NO.	SHEET NO.
B-4752	
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

PROPERTY OWNERS

NAMES AND ADDRESSES

PARCEL NO.	NAMES	ADDRESSES
5	Town of Cramerton	Cramerton
6	Mary E. Stroupe	310 Lakewood Rd. Belmont NC 28012

PARCEL NO.	NAMES	ADDRESSES

WETLAND PERMIT IMPACT SUMMARY

Site No.	Station (From/To)	Structure Size / Type	WETLAND IMPACTS: CAMA Permanent Fill In Wetlands (ac)	404 Permanent Fill In Wetlands (ac)	Temp. Fill In Wetlands (ac)	Excavation in Wetlands (ac)	Mechanized Clearing in Wetlands (ac)	Hand Clearing in Wetlands (ac)	SURFACE WATER IMPACTS: Permanent SW impacts (ac)	Temp. SW impacts (ac)	Existing Channel Impacts Permanent (ft)	Existing Channel Impacts Temp. (ft)	Natural Stream Design (ft)
1	-L- Sta 20+13 - 22+60	BRIDGE &		0.014				0.027	0.066				
		APPROACH FILL											
1	-L- Sta 19+31 - 20+22	Temporary Work			0.013					0.020			
		Pad											
TOTALS:				0.01	0.01			0.03	0.07	0.02			

NOTE: Permanent Surface Water Impacts include Interior Bents 2 & 3 which will be a single six foot diameter shaft per bent.
Permanent Surface Water Impaces due to bents: 56.5 sq. ft.
Permanent Surface Water (Pond) Impacts due to fill: 2,799 sq. ft.

<0.01 acre of Temporary Fill in Wetlands in the Hand Clearing areas for erosion control measures.

Existing Pier 1: lower portion will remain to stabilize stream bank.
Existing Pier 2 will be removed. Area is 2 @ 3'x3' = 18 sq.ft.
Existing Pier 3 will be removed. Area is 251 sq.ft.
Existing Pier 4 will be removed. Area is 12x21.8 sq.in.=261.6 sq.in.=1.8 sq. ft.
Existing Pier 5 will be removed. Area is 251 sq. ft.
Total area of piers to be removed: 522 sq. ft.

Proposed Piers: 2x28.27 sq.ft.=56.5 sq.ft.

Net decrease of impacts due to piers:
522 sq.ft.-57 sq.ft.=465 sq.ft. less impact with proposed bridge than with existing bridge due to bent design

N.C.D.O.T.
DIVISION OF HIGHWAYS
GASTON COUNTY
PROJECT: 38524.1.1 (B-4752)
BRIDGE NO. 6 ON
SR 2014 (LAKEWOOD RD)
OVER SOUTH FORK CATAWBA RIVER
SHEET 1 OF (1/20/2012)

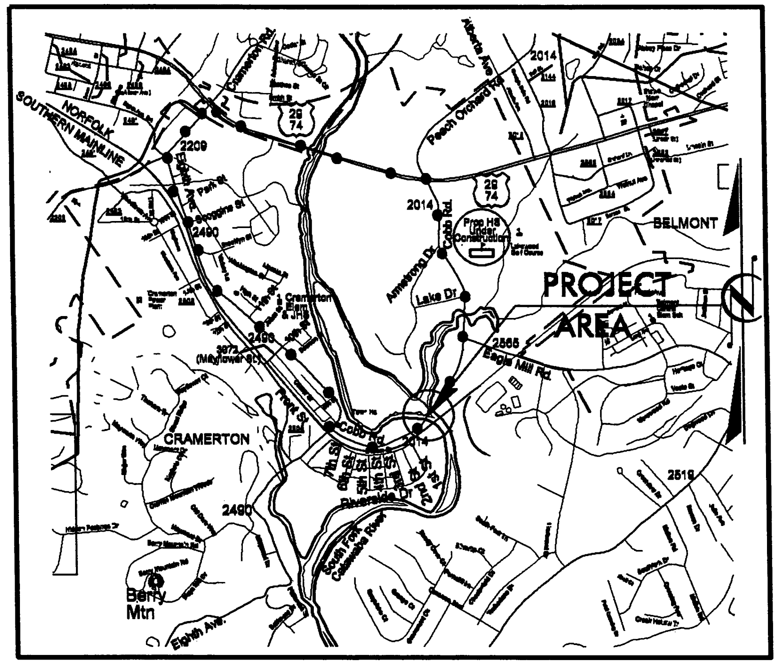
ATN Revised 3/31/05

Permit Drawing Sheet 10 of 10

09/08/99

TIP PROJECT: B-4752

See Sheet 1-A For Index of Sheets



● ● ● OFFSITE DETOUR

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

GASTON COUNTY

LOCATION: BRIDGE NO. 6 ON SR 2014 (LAKEWOOD RD) OVER SOUTH FORK CATAWBA RIVER

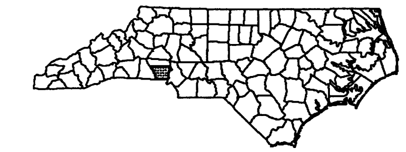
TYPE OF WORK: GRADING, PAVING, DRAINAGE, AND STRUCTURE

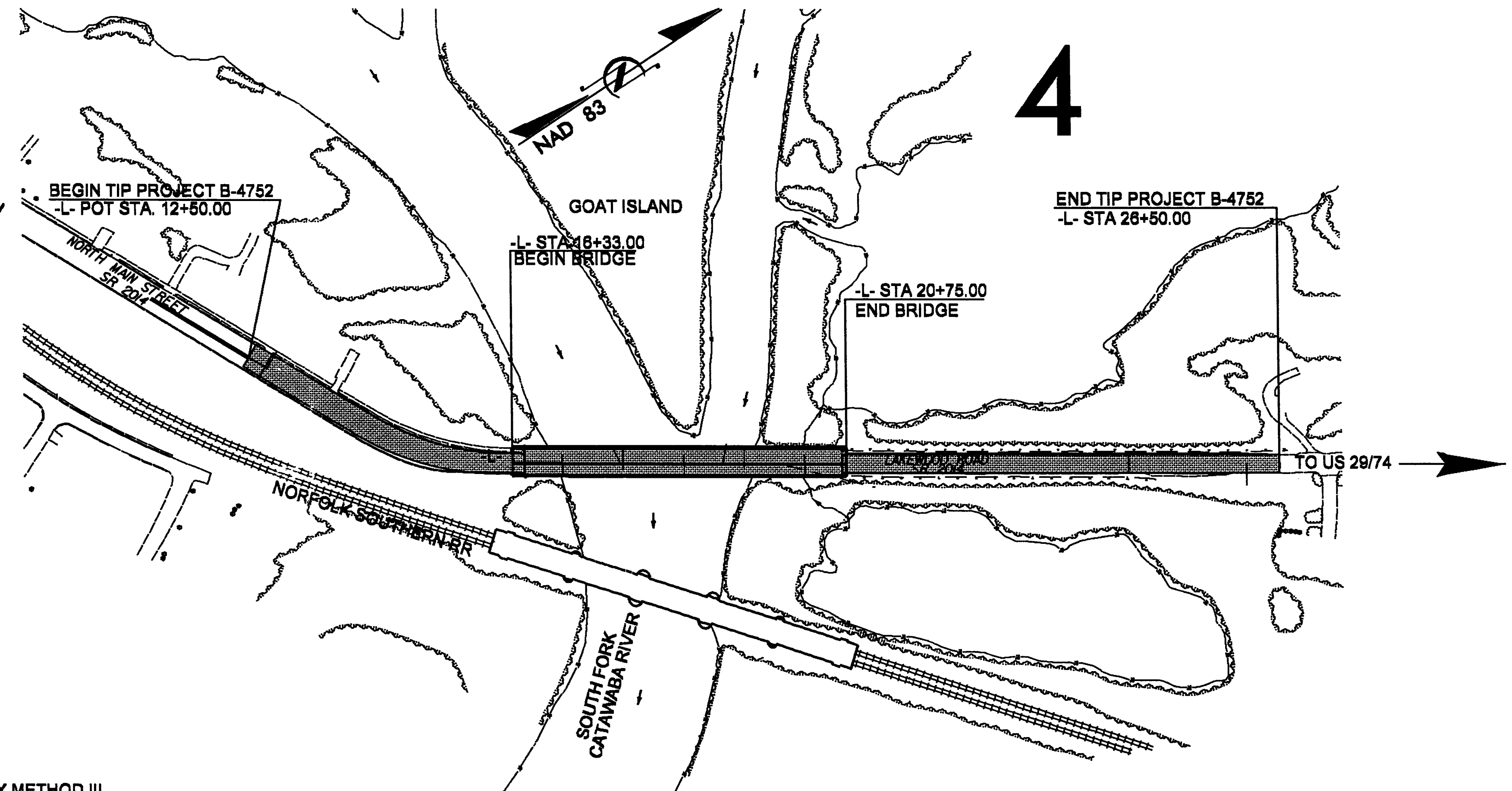
BUFFER IMPACTS PERMIT

ENGLISH

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	B-4752	1	

STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION
38524.1.1	BRSTP-2014(3)	PE
38524.2.1	BRSTP-2014(3)	R/W,UTIL





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

THIS PROJECT IS WITHIN THE MUNICIPAL BOUNDARIES OF CRAMERTON.

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

CONTRACT:

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

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 = 4500
ADT 2035 = 7500
DHV = 10%
D ≐ 70%
T = 3% *
V = 40 MPH
* TTST 1% DUAL 2%

FUNCTIONAL CLASSIFICATION:
MINOR ARTERIAL

SUBREGIONAL TIER DESIGN

PROJECT LENGTH

LENGTH ROADWAY F.A. PROJECT BRSTP-2014(3) =
LENGTH STRUCTURE F.A. PROJECT BRSTP-2014(3) =
TOTAL LENGTH F.A. PROJECT BRSTP-2014(3) = 0.265

Prepared In the Office of:

DIVISION OF HIGHWAYS

1000 Birch Ridge Dr., Raleigh NC, 27610

2006 STANDARD SPECIFICATIONS

RIGHT OF WAY DATE:
DECEMBER 21, 2011

LETTING DATE:
TBD

JASON MOORE, P.E.
PROJECT ENGINEER

JEANIE TYSON
PROJECT DESIGN ENGINEER

HYDRAULICS ENGINEER

P.E.
SIGNATURE:

ROADWAY DESIGN ENGINEER

P.E.
SIGNATURE:

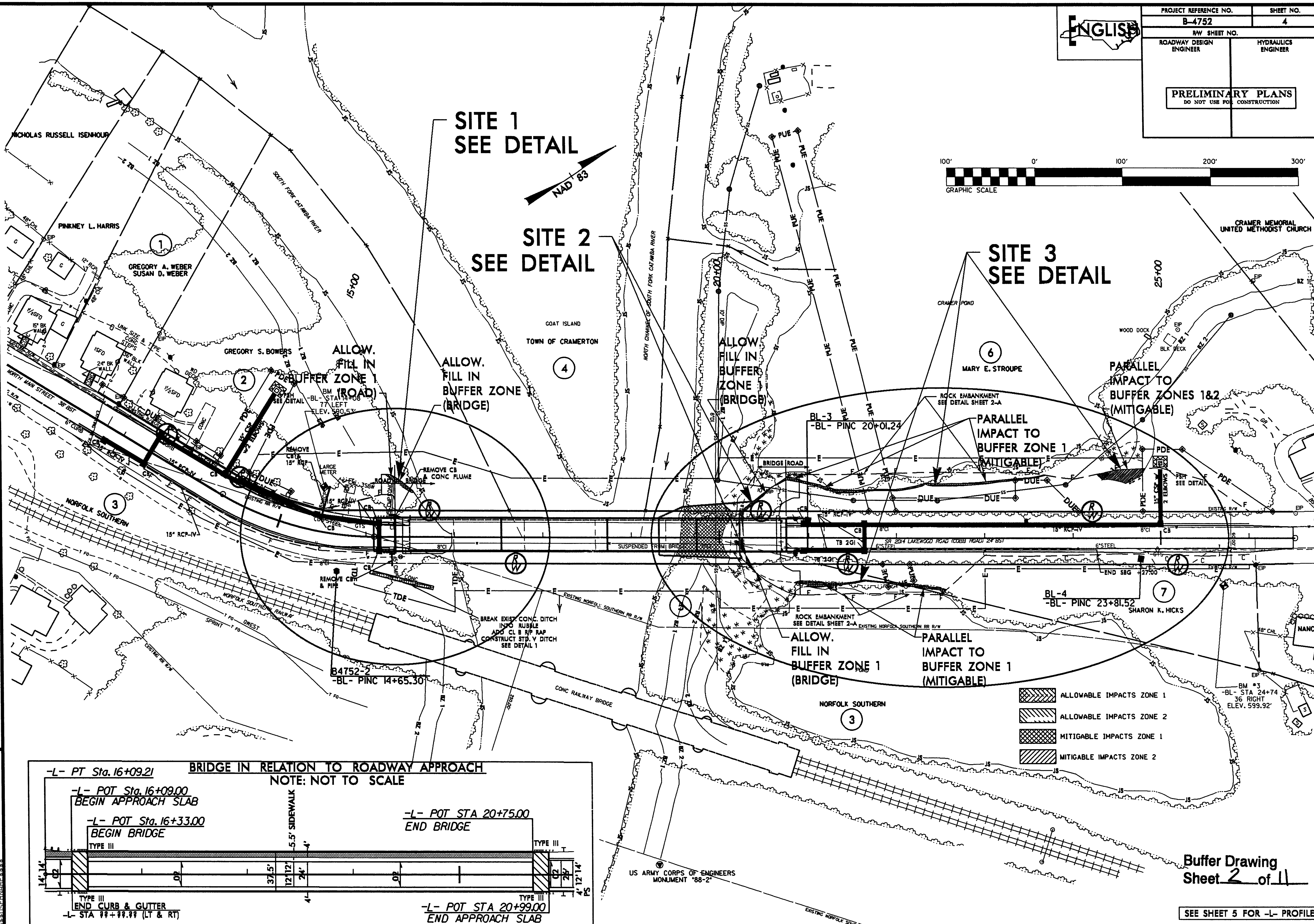
DIVISION OF HIGHWAYS
STATE OF NORTH CAROLINA

Buffer Drawing
Sheet 1 of 11

P.E.
STATE HIGHWAY DESIGN ENGINEER

8/17/99

R/W REVISION – REVISED PROP. DUAL UTILITY EASEMENT AND MARKERS AT -L- STA. 15+03.00 LT. – SEC 12/13/11
REMOVED PROP. SIDEWALK BETWEEN -L- STA. 20+99.00 THRU STA. 26+00.00 LT.

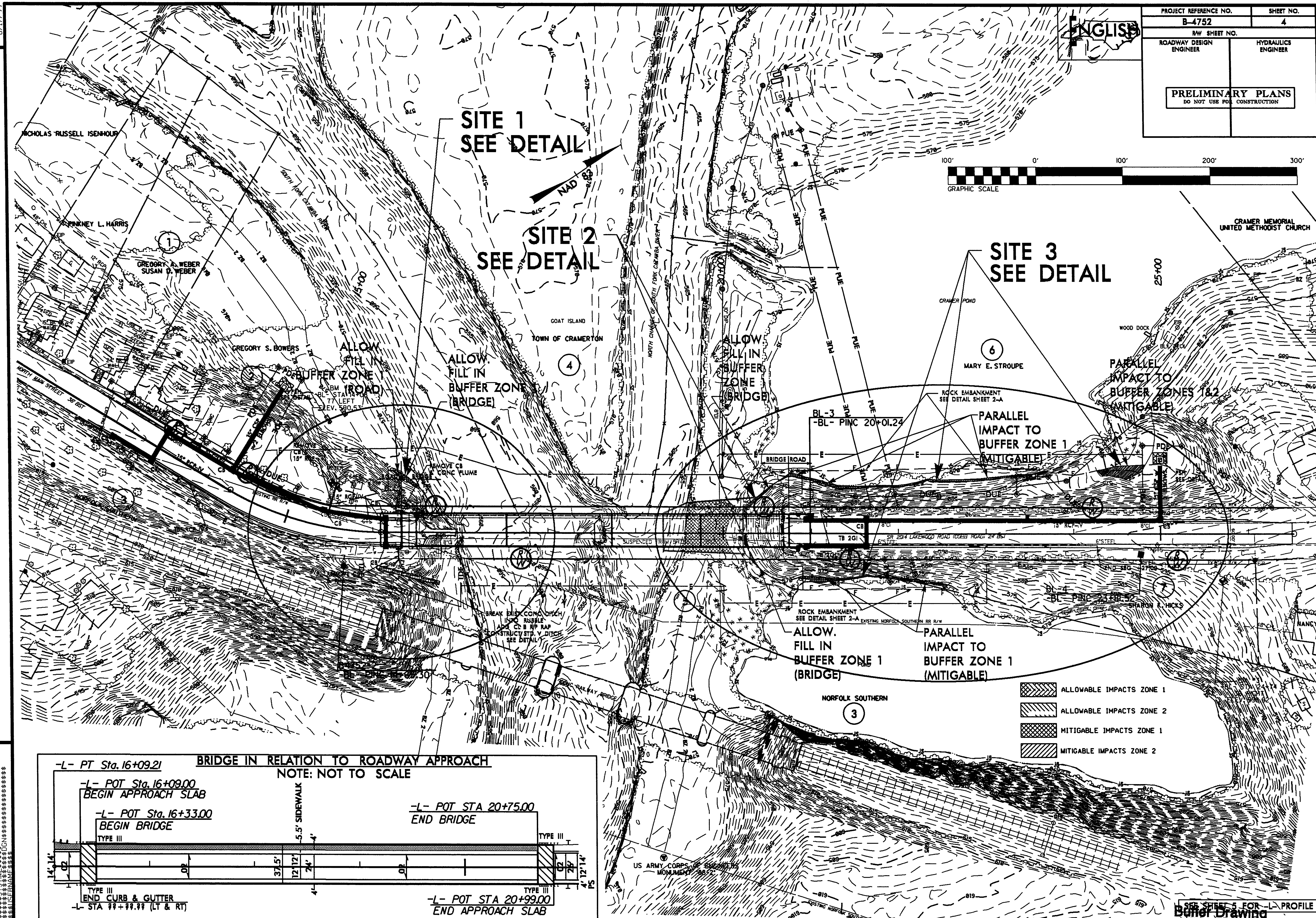


PROJECT REFERENCE NO.
SHEET NO.
B-4752
4
R/W SHEET NO.
ROADWAY DESIGN ENGINEER
HYDRAULICS ENGINEER
ENGLISH
PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION
GRAPHIC SCALE
100'
0'
100'
200'
300'
SITE 1
SEE DETAIL
SITE 2
SEE DETAIL
SITE 3
SEE DETAIL
NAD 83
NICHOLAS RUSSELL ISENHOUR
PINKNEY L. HARRIS
GREGORY A. WEBER
SUSAN D. WEBER
GREGORY S. BOWERS
SOUTH FORK CATAWBA RIVER
NORTH CHANNEL OF SOUTH FORK CATAWBA RIVER
GOAT ISLAND
TOWN OF CRAMERTON
CRAMER POND
MARY E. STROUPE
CRAMER MEMORIAL UNITED METHODIST CHURCH
NORFOLK SOUTHERN
SHARON K. HICKS
NANCY
ALLOW. FILL IN BUFFER ZONE 1 (ROAD)
ALLOW. FILL IN BUFFER ZONE 1 (BRIDGE)
ALLOW. FILL IN BUFFER ZONE (BRIDGE)
PARALLEL IMPACT TO BUFFER ZONE 1 (MITIGABLE)
PARALLEL IMPACT TO BUFFER ZONES 1&2 (MITIGABLE)
ROCK EMBANKMENT SEE DETAIL SHEET 2-A
BM -BL- STA 14+08 77' LEFT ELEV. 580.53'
BL-3 -BL- PINC 20+01.24
BL-4 -BL- PINC 23+81.52
B4752-2 -BL- PINC 14+65.30
BM #3 -BL- STA 24+74 36' RIGHT ELEV. 599.92'
BREAK EXIST. CONC. DITCH INTO RUBBLE ADD CL B RIP RAP CONSTRUCT STD. V DITCH SEE DETAIL 1
REMOVE CB & CONC FLUME
REMOVE CB & PIPE
SR 2014 LAKEWOOD ROAD (COBB ROAD) 24' BST
NORTH MAIN STREET 38' BST
SUSPENDED FRM BRIDGE
BRIDGE ROAD
CONC RAILWAY BRIDGE
EXISTING NORFOLK SOUTHERN RR R/W
US ARMY CORPS OF ENGINEERS MONUMENT "88-2"
15+00
20+00
25+00
ALLOWABLE IMPACTS ZONE 1
ALLOWABLE IMPACTS ZONE 2
MITIGABLE IMPACTS ZONE 1
MITIGABLE IMPACTS ZONE 2
BRIDGE IN RELATION TO ROADWAY APPROACH
NOTE: NOT TO SCALE
-L- PT Sta. 16+09.21
-L- POT Sta. 16+09.00
BEGIN APPROACH SLAB
-L- POT Sta. 16+33.00
BEGIN BRIDGE
-L- POT STA 20+75.00
END BRIDGE
-L- POT STA 20+99.00
END APPROACH SLAB
TYPE III
END CURB & GUTTER
-L- STA ##+##.## (LT & RT)
5.5' SIDEWALK
Buffer Drawing
Sheet 2 of 11
SEE SHEET 5 FOR -L- PROFILE

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

8/17/99

R/W REVISION – REVISED PROP. DUAL UTILITY EASEMENT AND MARKERS AT -L- STA. 15+03.00 LT.
REMOVED PROP. SIDEWALK BETWEEN -L- STA. 20+99.00 THRU STA. 26+00.00 LT. - SEC 12/13/11

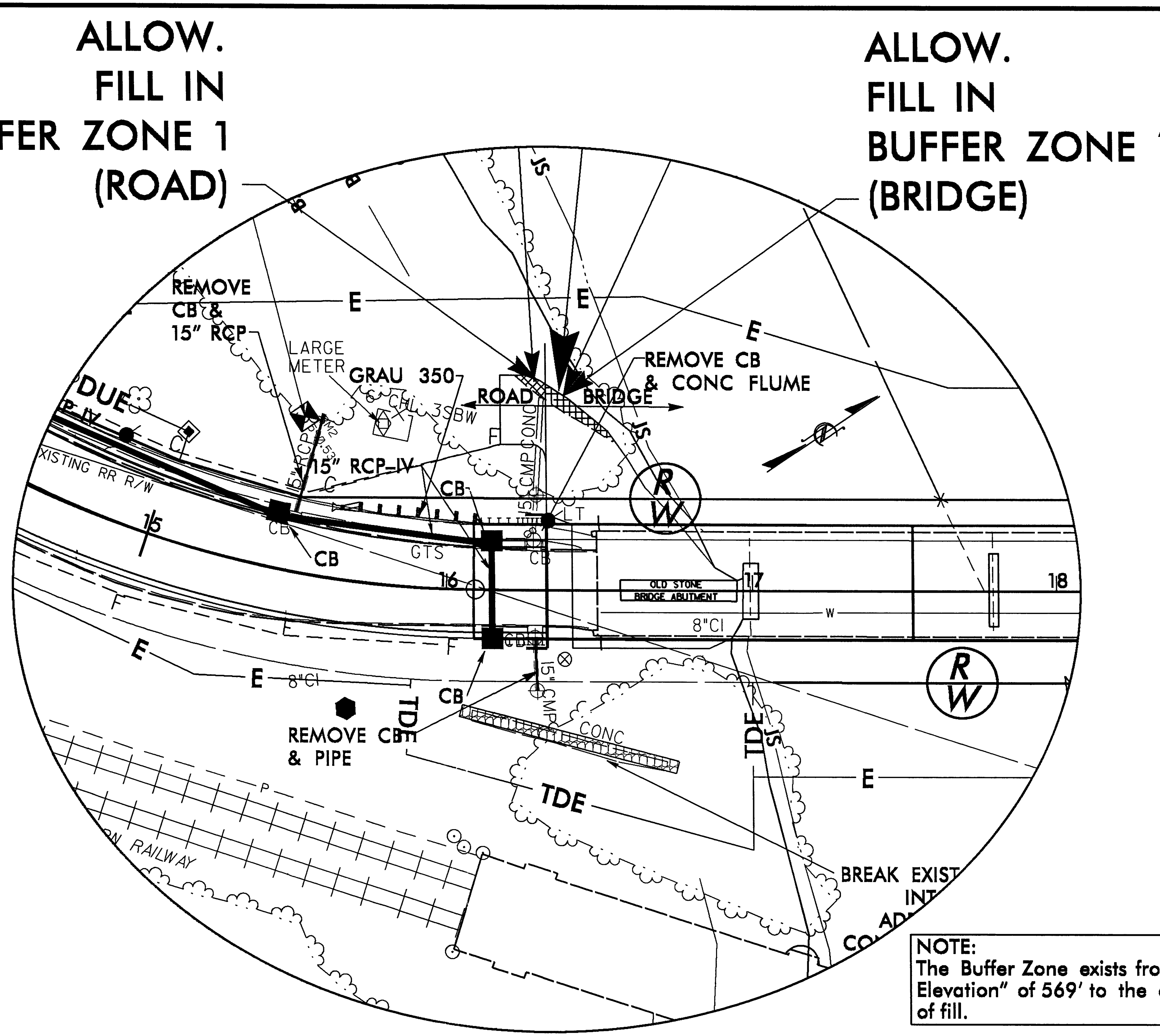


Buffer Drawing
Sheet 3 of 11

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

PROJECT REFERENCE NO.	SHEET NO.
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

ENGLISH



NOTE:
The Buffer Zone exists from "Full Pool Elevation" of 569' to the existing toe of fill.

ALLOWABLE IMPACTS ZONE 1

20' 0' 20' 40' 60'
GRAPHIC SCALE

SITE 1

5/14/99

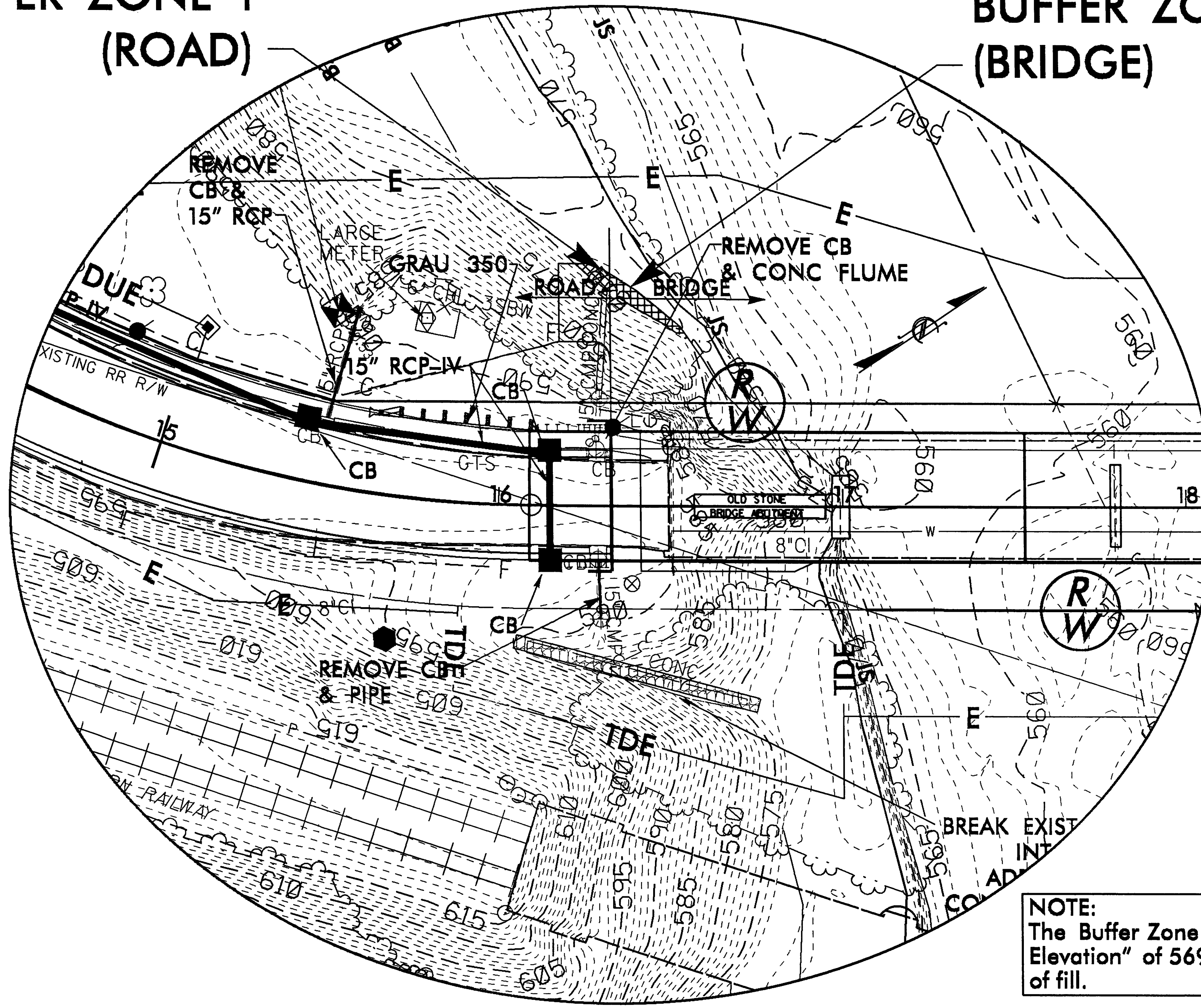
5/14/99

PROJECT REFERENCE NO.	SHEET NO.
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

ENGLISH

ALLOW.
FILL IN
BUFFER ZONE 1
(ROAD)

ALLOW.
FILL IN
BUFFER ZONE 1
(BRIDGE)



NOTE:
The Buffer Zone exists from "Full Pool Elevation" of 569' to the existing toe of fill.

20' 0' 20' 40' 60'
GRAPHIC SCALE

ALLOWABLE IMPACTS ZONE 1

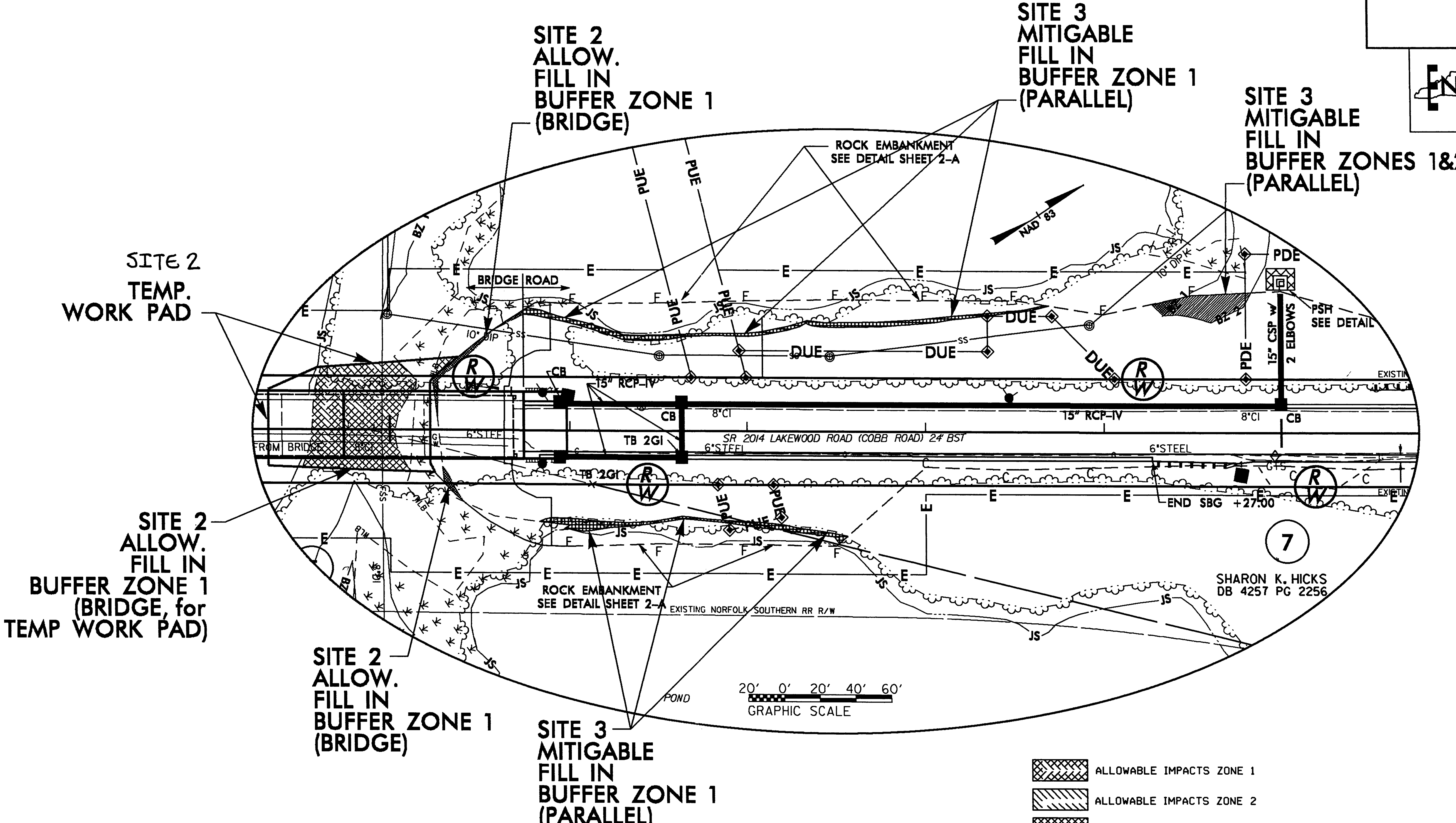
SITE 1

Buffer Drawing
Sheet 5 of 11

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

PROJECT REFERENCE NO.	SHEET NO.
B-4752	
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

ENGLISH



ALLOWABLE IMPACTS ZONE 1

ALLOWABLE IMPACTS ZONE 2

MITIGABLE IMPACTS ZONE 1

MITIGABLE IMPACTS ZONE 2

NOTE:
The Buffer Zone exists from "Full Pool Elevation" of 569' to the existing toe of fill.

Buffer Drawing
Sheet 6 of 11

PROJECT REFERENCE NO.	SHEET NO.
B-4752	
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

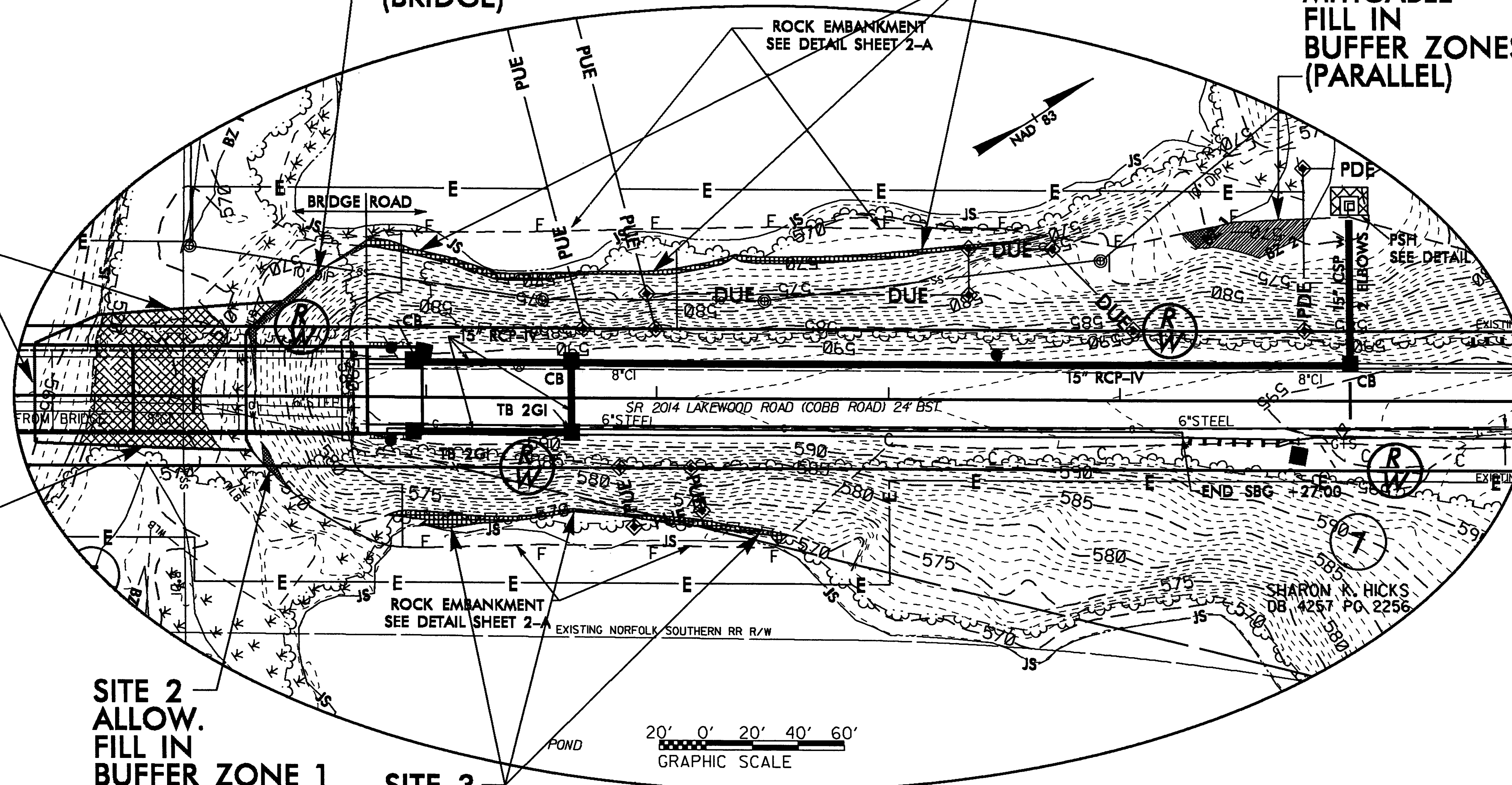
ENGLISH

SITE 2
ALLOW.
FILL IN
BUFFER ZONE 1
(BRIDGE)

SITE 3
MITIGABLE
FILL IN
BUFFER ZONE 1
(PARALLEL)

SITE 3
MITIGABLE
FILL IN
BUFFER ZONES 1&2
(PARALLEL)

SITE 2
TEMP.
WORK PAD



SITE 2
ALLOW.
FILL IN
BUFFER ZONE 1
(BRIDGE, for
TEMP WORK PAD)

SITE 2
ALLOW.
FILL IN
BUFFER ZONE 1
(BRIDGE)

SITE 3
MITIGABLE
FILL IN
BUFFER ZONE 1
(PARALLEL)

ALLOWABLE IMPACTS ZONE 1

ALLOWABLE IMPACTS ZONE 2

MITIGABLE IMPACTS ZONE 1

MITIGABLE IMPACTS ZONE 2

NOTE:
The Buffer Zone exists from "Full Pool Elevation" of 569' to the existing toe of fill.

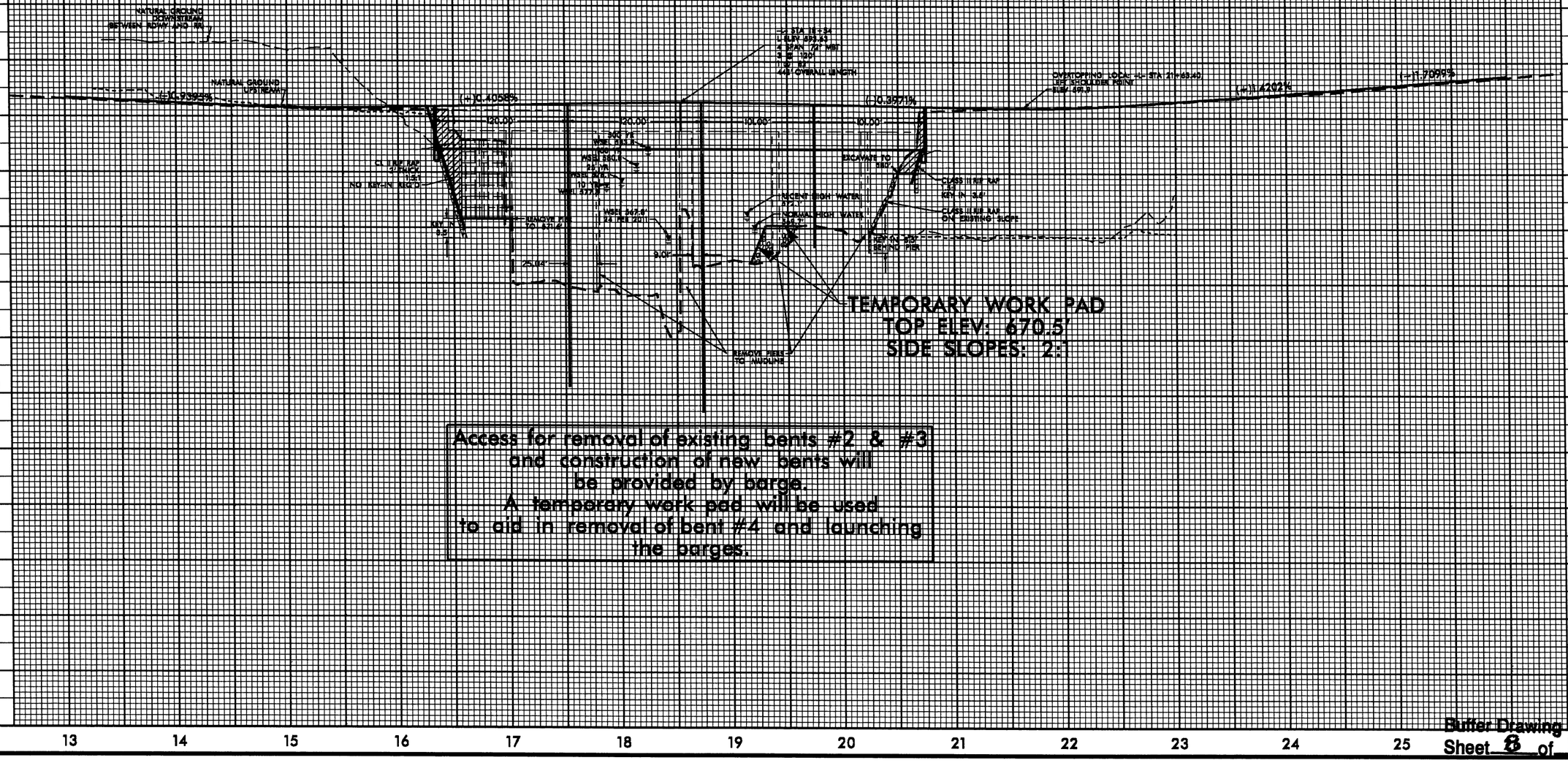
Buffer Drawing
Sheet 7 of 11

5/14/99

PROJECT REFERENCE NO.	SHEET NO.
B-4752	5
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

-L- SR 2014

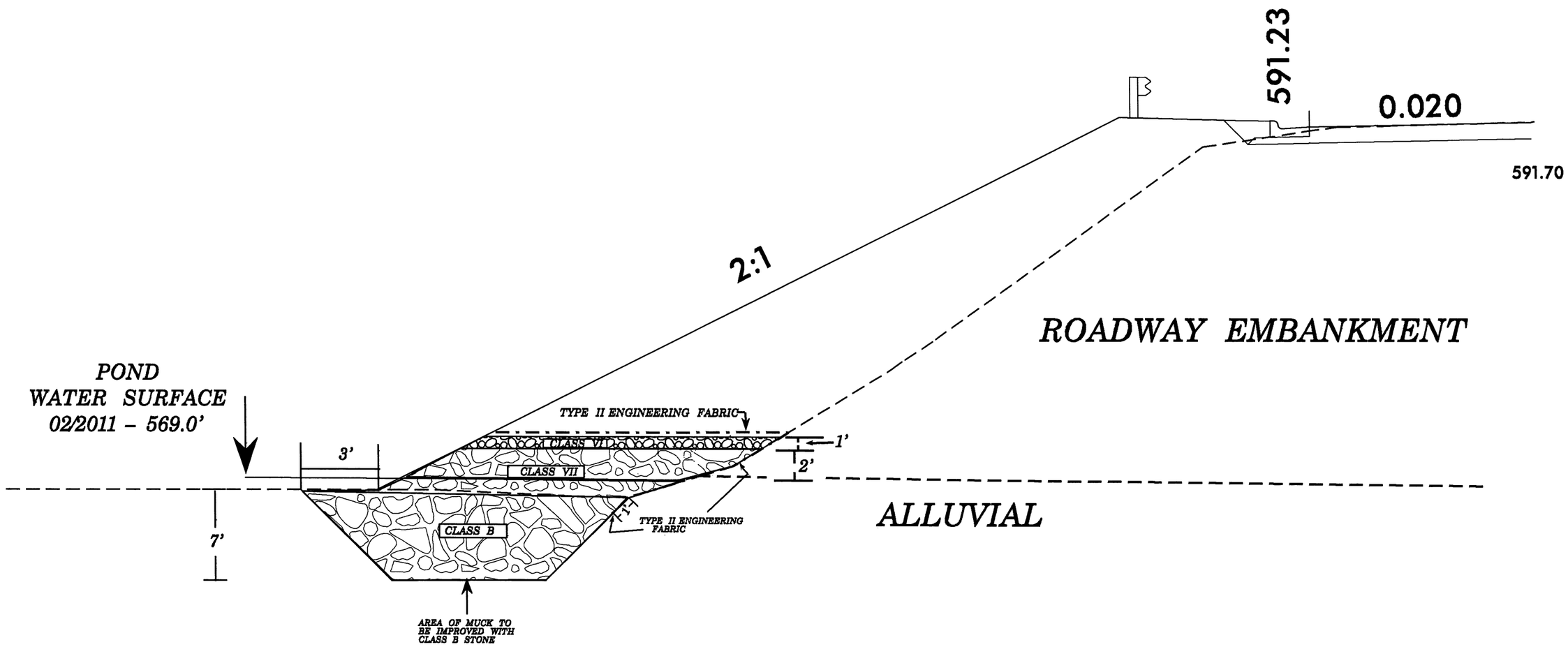


Buffer Drawing
Sheet 8 of 11

PROJECT REFERENCE NO.	SHEET
B-4752	8

GEOTECHNICAL ENGINEER	ENGINEER
SIGNATURE DATE	SIGNATURE DATE

ROCK EMBANKMENT TYPICAL



PREPARED BY: JP ROGERS	DATE: 03/2011
REVIEWED BY: JS FARGHER	DATE: 03/2011

GEOTECHNICAL ENGINEERING UNIT

- ☐ EASTERN REGIONAL OFFICE
- ☒ WESTERN REGIONAL OFFICE
- ☐ CONTRACT OFFICE

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

BRIDGE #06 ON SR 2014 LAKEWOOD RD. OVER SOUTH FORK OF THE CATAWBA RIVER

REVISIONS

NO.	BY	NO.	BY	DATE
1	-	3	-	-
2	-	4	-	-

Buffer Drawing
Sheet 9 of 11

5/14/96

PROJECT REFERENCE NO.	SHEET NO.
B-4752	
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

PROPERTY OWNERS

NAMES AND ADDRESSES

PARCEL NO.	NAMES	ADDRESSES
2	Gregory S. Bowers	139 N. Main St. Cramerton 28032
5	Town of Cramerton	Cramerton
6	Mary E. Stroupe	310 Lakewood Rd. Belmont NC 28012

PARCEL NO.	NAMES	ADDRESSES

$$SYSTIME$$

Buffer Drawing
Sheet 10 of 11

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 Approach	-L- Sta 16+30 Lt.	X			35							
1	Bridge	-L- Sta 16+40 Lt.		X		91							
2	Bridge Pier	-L- Sta 19+74		X		28							
2	Bridge	-L- Sta 20+40 Lt & Rt		X		3167							
3	Roadway Approach	-L- Sta 20+75 - 24 +84			X				1149	492			
	(Parallel)	Lt. & Rt.											
TOTAL:						3321			1149	492			

NOTE:
Site 2:
A Temporary Work Pad will be built under a portion of Span 3 and all of Span 4 to allow construction of the bridge and provide access to the barges. This pad will create temporary impacts to Buffer Zone 1.
The temporary impacts measure 2,973 sq. ft.
The total impact of 3,167 sq. ft. shown for site 2 includes the 2,973 sq. ft. of temporary impact.

N.C. DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS

GASTON COUNTY
PROJECT: 38524.1.1 (B-4752)

1/20/2012
SHEET OF

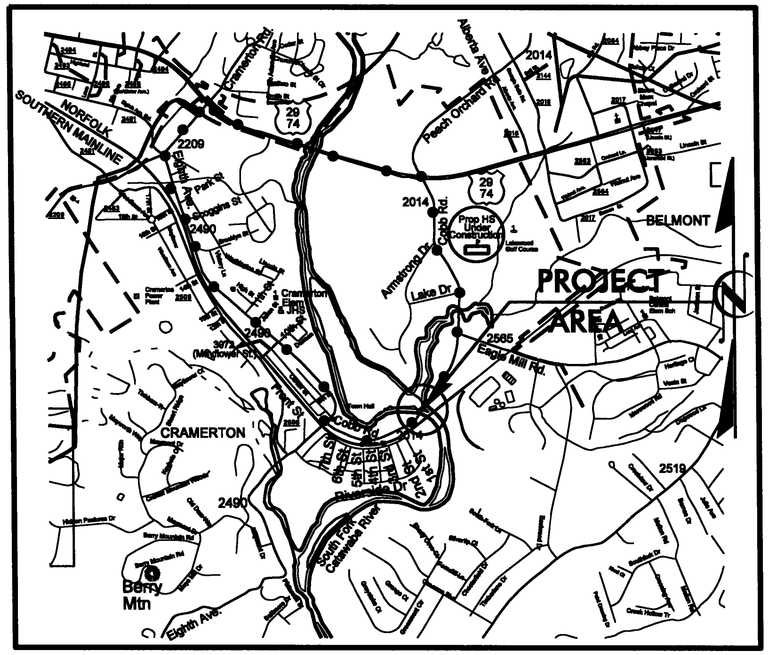
Rev. May 2006

Buffer Drawing
Sheet 11 of 11

09/08/99

TIP PROJECT: B-4752

See Sheet 1-A For Index of Sheets



● ● ● OFFSITE DETOUR

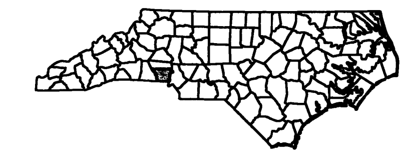
STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

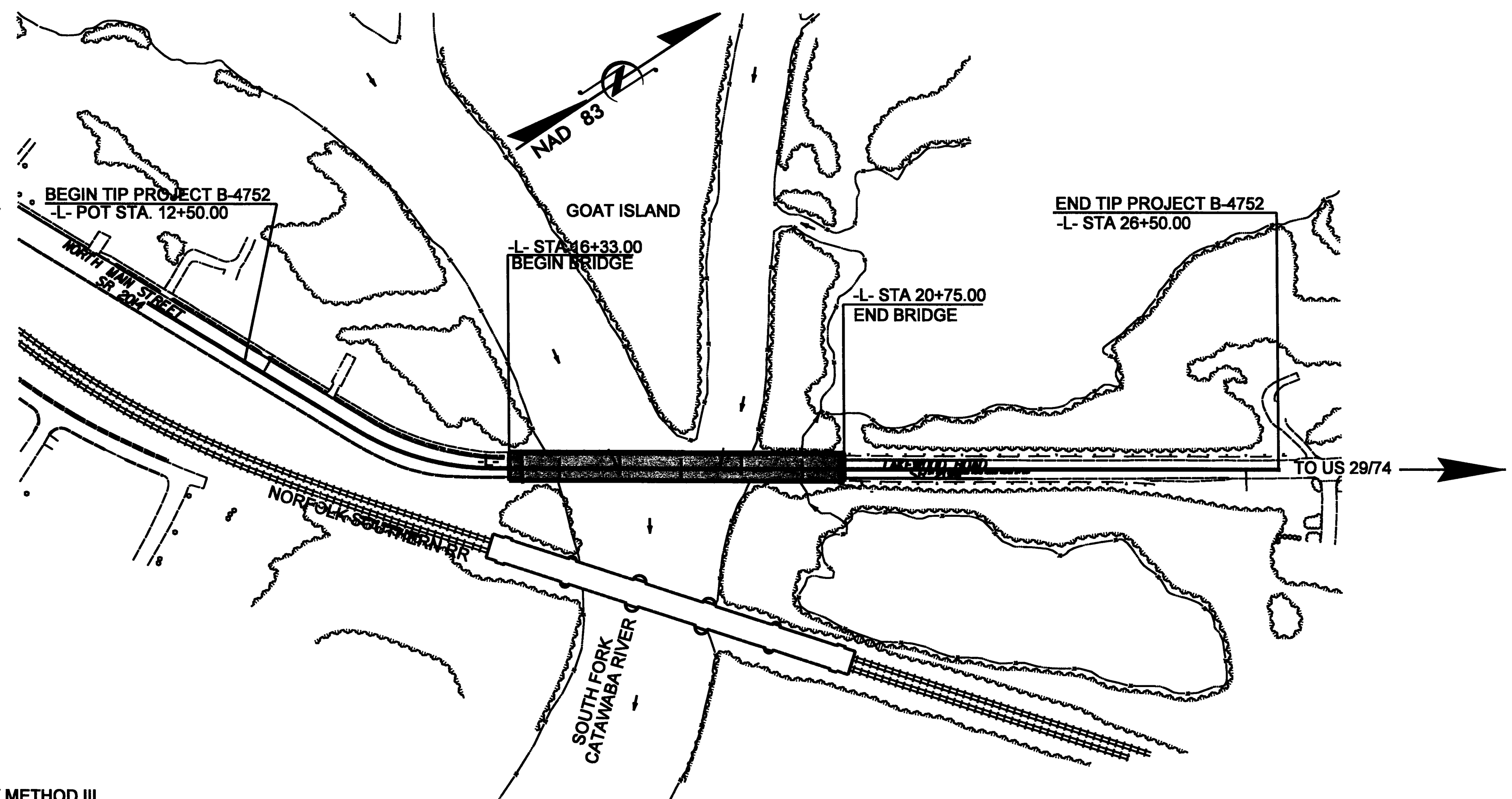
GASTON COUNTY

LOCATION: BRIDGE NO. 6 ON SR 2014 (LAKEWOOD RD) OVER SOUTH FORK CATAWBA RIVER

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

STATE	STATE PROJECT REFERENCE NO.		SHEET NO.	TOTAL SHEETS
N.C.	B-4752		1	
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION		
38524.1.1	BRSTP-2014(3)	PE		
38524.2.1	BRSTP-2014(3)	R/W,UTIL		





CLEARING ON THIS PROJECT SHALL BE PERFORMED TO THE LIMITS ESTABLISHED BY METHOD III.
THIS PROJECT IS WITHIN THE MUNICIPAL BOUNDARIES OF CRAMERTON.

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

31-JAN-2012 11:43
R:\Roadway\Proj\b4752_rdy_tsh.dgn
$$$$USERNAME$$$$

CONTRACT:

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 = 4500
ADT 2035 = 7500
DHV = 10%
D = 70%
T = 3% *
V = 40 MPH
* TTST 1% DUAL 2%

FUNCTIONAL CLASSIFICATION:
MINOR ARTERIAL

SUBREGIONAL TIER DESIGN

PROJECT LENGTH

LENGTH ROADWAY F.A. PROJECT BRSTP-2014(3) =
LENGTH STRUCTURE F.A. PROJECT BRSTP-2014(3) =
TOTAL LENGTH F.A. PROJECT BRSTP-2014(3) = 0.265

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

2006 STANDARD SPECIFICATIONS

RIGHT OF WAY DATE:
DECEMBER 21, 2011

LETTING DATE:
TBD

JASON MOORE, P.E.
PROJECT ENGINEER

JEANIE TYSON
PROJECT DESIGN ENGINEER

HYDRAULICS ENGINEER

P.E.
SIGNATURE:

ROADWAY DESIGN ENGINEER

P.E.
SIGNATURE:

DIVISION OF HIGHWAYS STATE OF NORTH CAROLINA

STATE OF NORTH CAROLINA • DEPARTMENT OF TRANSPORTATION •

P.E.
STATE HIGHWAY DESIGN ENGINEER

09/08/09

PROJECT REFERENCE NO.	SHEET NO.
B-4752	1-A

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 — 23
- 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
- Well
- 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 — Flow
- 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 — RW
- Proposed Right of Way Line with Iron Pin and Cap Marker — RW
- Proposed Right of Way Line with Concrete or Granite Marker — RW
- Existing Control of Access — CA
- Proposed Control of Access — CA
- Existing Easement Line — E
- Proposed Temporary Construction Easement — E
- Proposed Temporary Drainage Easement — TDE
- Proposed Permanent Drainage Easement — PDE
- Proposed Permanent Drainage / Utility Easement — DUE
- 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:

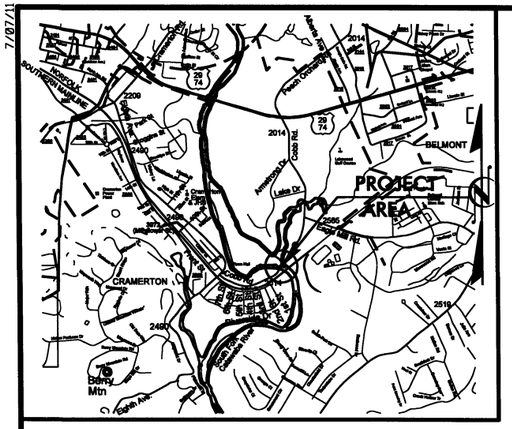
- Sanitary Sewer Manhole
- Sanitary Sewer Cleanout
- U/G Sanitary Sewer Line — SS
- Above Ground Sanitary Sewer — A/G Sanitary Sewer
- Recorded SS Forced Main Line — FSS
- Designated SS Forced Main Line (S.U.E.*) — FSS

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-4752	1 C
Location and Surveys	

SURVEY CONTROL SHEET



BL

POINT	DESC.	NORTH	EAST	ELEVATION	L STATION	OFFSET
6	BL-6	546581.3280	1382157.1640	595.25	OUTSIDE PROJECT LIMITS	
1	B4752-1	546671.0200	1382470.8080	599.74	OUTSIDE PROJECT LIMITS	
2	B4752-2	546963.6000	1383038.9790	595.76	15+71.46	41.93 RT
3	BL-3	547439.0690	1383286.2890	589.90	20+99.39	19.25 LT
4	BL-4	547729.3380	1383531.9730	594.42	24+77.23	23.80 RT
5	BL-5	548047.1330	1383717.8400	602.18	OUTSIDE PROJECT LIMITS	

DATUM DESCRIPTION

THE LOCALIZED COORDINATE SYSTEM DEVELOPED FOR THIS PROJECT IS BASED ON THE STATE PLANE COORDINATES ESTABLISHED BY NCDOT FOR MONUMENT "B4752-1"
WITH NAD 83/CORS96 STATE PLANE GRID COORDINATES OF NORTHING: 546671.020(ft) EASTING: 1382470.808(ft)
ELEVATION: 599.74(ft)
THE AVERAGE COMBINED GRID FACTOR USED ON THIS PROJECT (GROUND TO GRID) IS: 0.999849
THE N.C. LAMBERT GRID BEARING AND LOCALIZED HORIZONTAL GROUND DISTANCE FROM "B4752-1" TO -L- STATION 12+50.00 IS N59°05'09.5"E 305.880'
ALL LINEAR DIMENSIONS ARE LOCALIZED HORIZONTAL DISTANCES
VERTICAL DATUM USED IS NAVD 88

ROW MARKER IRON PIN AND CAP

ALIGN	STATION	OFFSET	NORTH	EAST
L	12+50.00	-26.96	546852.5938	1382721.8314
L	12+50.00	28.69	546802.1683	1382745.3715
L	12+78.12	-26.94	546864.4740	1382747.3170
L	13+73.71	-26.98	546904.9490	1382833.9210
L	14+28.90	28.77	546878.0920	1382908.0078
L	14+51.94	-27.05	546938.1833	1382902.1210
L	15+03.00	-26.04	546963.8192	1382941.7073
L	15+48.15	-24.51	546990.7084	1382973.8217
L	16+09.16	-29.99	547037.6460	1383005.1790
L	16+09.69	30.01	547004.3158	1383055.0699
L	17+06.56	30.00	547005.8730	1383109.0208
L	26+07.79	30.00	547834.4571	1383609.6575
L	26+50.00	-30.00	547902.8823	1383583.2123
L	26+50.00	28.88	547870.1768	1383632.1679

PERMANENT EASEMENT MARKER IRON PIN AND CAP

ALIGN	STATION	OFFSET	NORTH	EAST
L	16+14.00	-80.00	547069.2095	1382966.1342
L	16+14.00	-30.00	547041.4343	1383007.7099
L	16+19.00	30.00	547012.2616	1383060.3782
L	16+19.00	57.00	546997.2630	1383082.8291
L	16+40.00	57.00	547014.7248	1383094.4946
L	16+40.00	30.00	547029.7234	1383072.0438
L	16+50.00	-80.00	547099.1440	1382986.1323
L	16+50.00	-30.00	547071.3688	1383027.7080
L	24+35.00	-30.00	547724.1070	1383463.7790
L	24+35.00	-82.00	547752.9932	1383420.5402
L	24+56.00	-100.00	547780.4541	1383417.2386
L	24+65.00	-30.00	547749.0524	1383480.4441
L	24+65.00	-100.00	547787.9377	1383422.2381

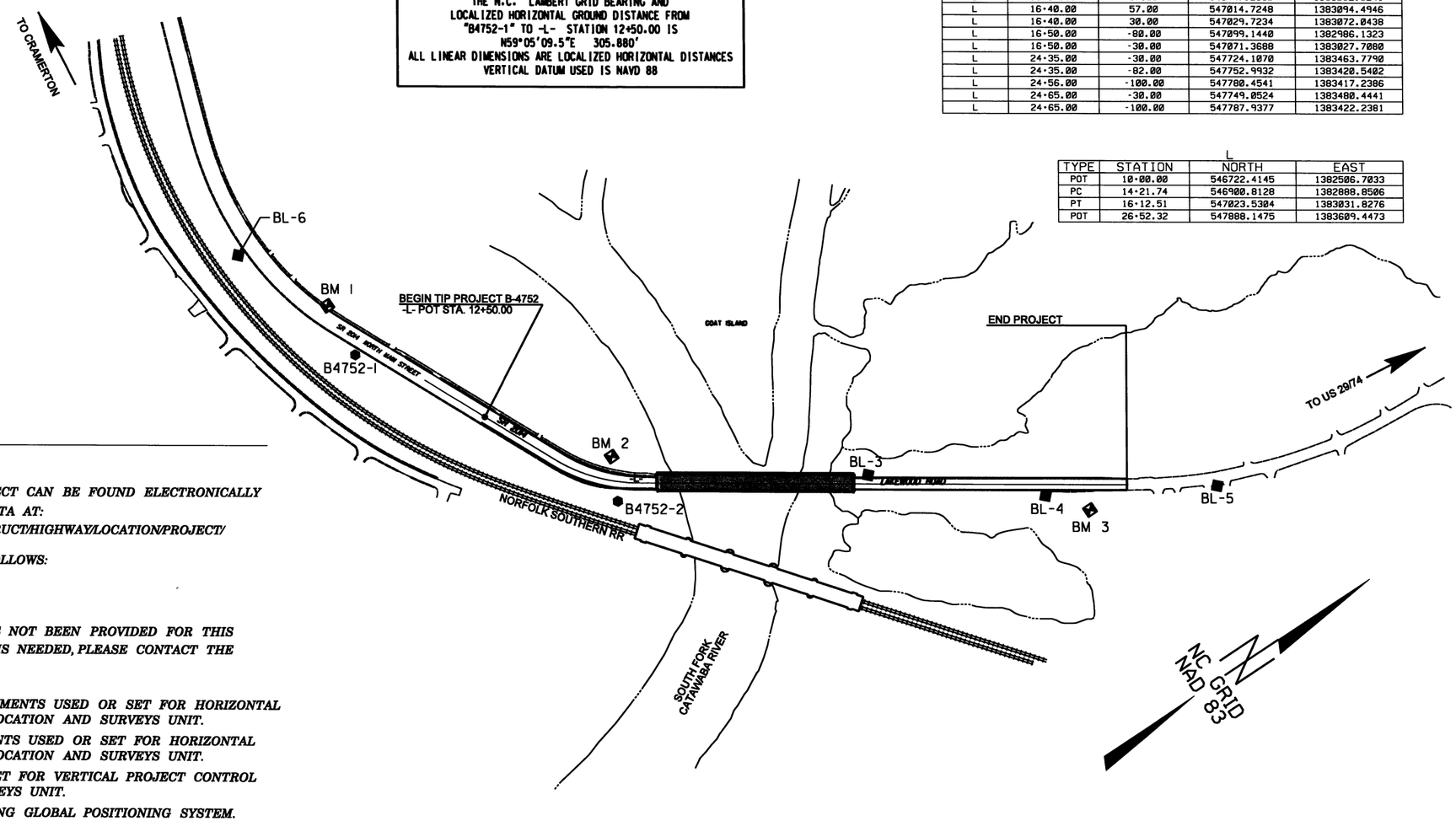
L

TYPE	STATION	NORTH	EAST
POT	10+00.00	546722.4145	1382506.7033
PC	14+21.74	546900.8128	1382888.8506
PT	16+12.51	547023.5304	1383031.8276
POT	26+52.32	547888.1475	1383609.4473

BM1 ELEVATION = 598.01
N 546680 E 1382351
L STATION 10+00
S 74°45'09.66" W DIST 161.28
RR SPIKE IN LIGHT POLE

BM2 ELEVATION = 590.53
N 547006 E 1382953
L STATION 15+44 50 LEFT
RR SPIKE IN 12" HICKORY

BM3 ELEVATION = 599.92
N 547791 E 1383609
L STATION 25+72 54 RIGHT
RR SPIKE IN 20" HICKORY



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/

   THE FILES TO BE FOUND ARE AS FOLLOWS:
   B4752_LS_CONTROL.TXT
   B4752_LS_LOCAL.TXT

   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.*
- ■ *INDICATES LOCAL CONTROL MONUMENTS USED OR SET FOR HORIZONTAL PROJECT CONTROL BY THE NCDOT LOCATION AND SURVEYS UNIT.*
- ◆ *INDICATES BENCHMARKS USED OR SET FOR VERTICAL PROJECT CONTROL BY THE NCDOT LOCATION AND SURVEYS UNIT.*

PROJECT CONTROL ESTABLISHED USING GLOBAL POSITIONING SYSTEM.
NETWORK ESTABLISHED FROM NGS ONLINE POSITIONING SERVICE (OPUS)

NOTE: DRAWING NOT TO SCALE

7/07/11

31-JAN-2012 11:43
N:\Location&Surveys\b4752_ls_lc.dgn
$$$$USERNAME$$$$

6/2/99

PROJECT REFERENCE NO.	SHEET NO.
B-4752	2
ROADWAY DESIGN ENGINEER	PAVEMENT DESIGN ENGINEER

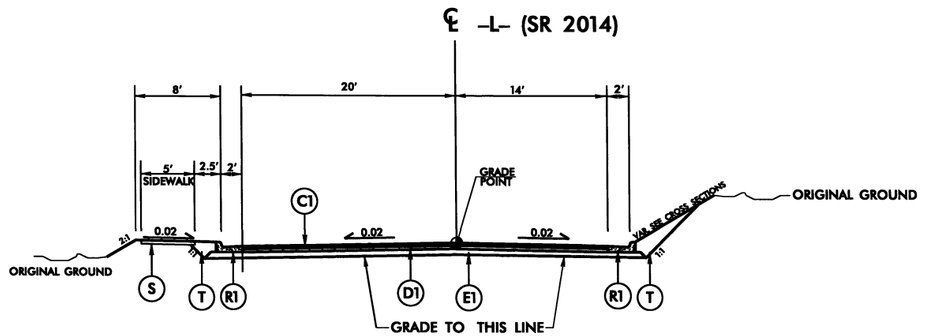
PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

PAVEMENT SCHEDULE
(FINAL PAVEMENT DESIGN)

C1	PROP. APPROX. 3" ASPHALT CONCRETE SURFACE COURSE TYPE S9.5B, AT AN AVERAGE RATE OF 168 LBS. PER SQ. YD. IN EACH OF TWO LAYERS.
D1	PROP. APPROX. 4" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE I19.0B, AT AN AVERAGE RATE OF 456 LBS. PER SQ. YD.
E1	PROP. APPROX. 4" ASPHALT CONCRETE BASE COURSE, TYPE B25.0B, AT AN AVERAGE RATE OF 456 LBS. PER SQ. YD.
R1	2'-6" CONCRETE CURB AND GUTTER.
S	4" CONCRETE SIDEWALK.
T	EARTH MATERIAL.

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

RW REVISION - REMOVED PROP. SIDEWALK FROM TYPICAL SECTION NO. 3. - SEC 12/13/11

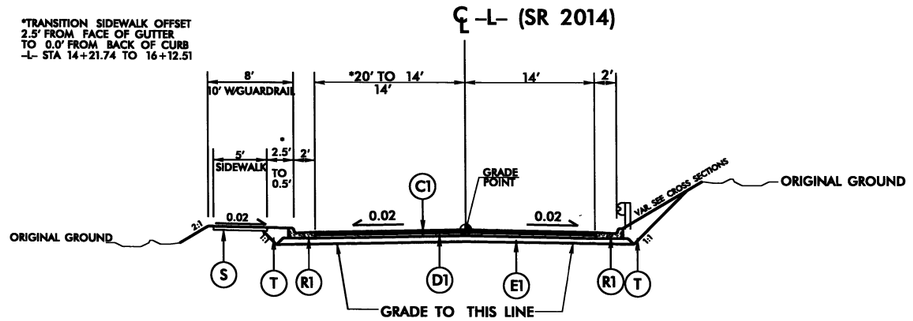


TYPICAL SECTION No. 1

NOTE: TRANSITION FROM EXISTING TO TYPICAL SECTION #1
-L- STA 12+50.00 TO 13+00.00

USE TYPICAL SECTION No. 1

-L- STA 13+00.00 TO STA 14+21.74

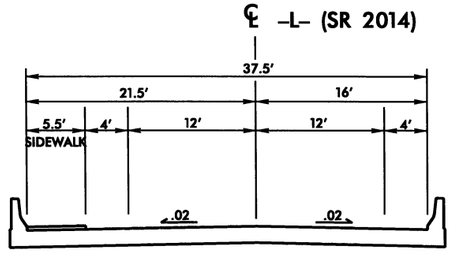


TYPICAL SECTION No. 2

*NOTE: TRANSITION LANE WIDTH AND SIDEWALK OFFSET ON LEFT SIDE FROM
-L- STA 14+21.74 TO -L- STA 16+12.51

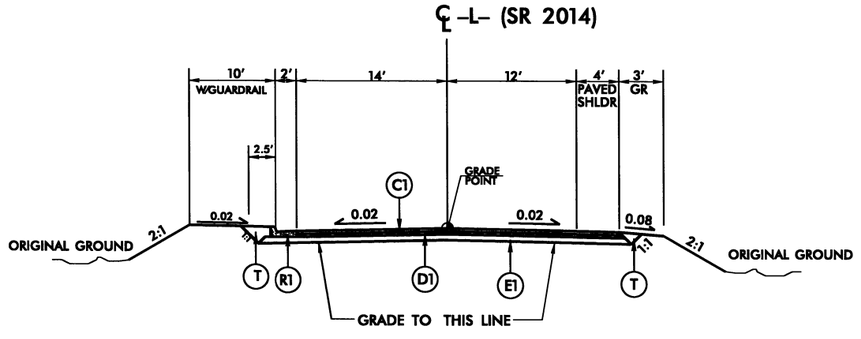
USE TYPICAL SECTION No. 2

-L- STA 14+21.74 TO STA 16+33.00 (BEGIN BRIDGE)



USE TYPICAL SECTION ON STRUCTURE

-L- STA 16+33.00 (BEGIN BRIDGE) TO 20+75.00 (END BRIDGE)



TYPICAL SECTION No. 3

USE TYPICAL SECTION No. 3

-L- STA 20+75.00 (END BRIDGE) TO 26+00.00

NOTE: TRANSITION FROM TYPICAL SECTION #3 TO EXISTING
-L- STA 26+00.00 TO 26+50.00

31-JAN-2012 lk43
N:\roadway\projects\b4752_rdy_typ.dgn

5/28/99

PROJECT REFERENCE NO.	SHEET NO.
B-4752	3

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

SUMMARY OF QUANTITIES

SUMMARY OF EARTHWORK IN CUBIC YARDS

STATION	STATION	UNCL. EXCAV.	EMBANK. +%	BORROW	WASTE
13+00.00	16+48.80	333	28		305
SUBTOTALS:		333	28		305
20+68.80	26+00.00	416	6,465	6,049	
SUBTOTALS:		416	6,465	6,049	
SUBTOTALS:					
SUBTOTALS:					
PROJECT TOTALS:		849	6,493	5,644	
GRAND TOTALS:		849	6,493	5,644	
SAY:		900		6,200	

Earthwork quantities are calculated by the Roadway Design Unit. These earthwork quantities are based in part on subsurface data provided by the Geotechnical Engineering Unit.

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

"N" = DISTANCE FROM EDGE OF LANE TO FACE OF GUARDRAIL.
TOTAL SHOULDER WIDTH = DISTANCE FROM EDGE OF TRAVEL LANE TO SHOULDER BREAK POINT.
FLARE LENGTH = DISTANCE FROM LAST SECTION OF PARALLEL GUARDRAIL TO END OF GUARDRAIL.
W = TOTAL WIDTH OF FLARE FROM BEGINNING OF TAPER TO END OF GUARDRAIL.
G = GATING IMPACT ATTENUATOR TYPE 350
NG = NON-GATING IMPACT ATTENUATOR TYPE 350

GUARDRAIL SUMMARY

SURVEY LINE	BEG. STA.	END STA.	LOCATION	LENGTH			WARRANT POINT		"N" DIST. FROM E.O.L.	TOTAL SHOUL. WIDTH	FLARE LENGTH		W		ANCHORS									IMPACT ATTENUATOR TYPE 350			SINGLE FACED GUARDRAIL	REMOVE EXISTING GUARDRAIL	REMOVE AND STOCKPILE EXISTING GUARDRAIL	REMARKS
				STRAIGHT	SHOP CURVED	DOUBLE FACED	APPROACH END	TRAILING END			APPROACH END	TRAILING END	APPROACH END	TRAILING END	XI MOD	XI	GRAU 350	M-350	XIII	CAT-1	VI MOD	BIC	AT-1	EA	G	NG				
-L-	15+71.08	16+48.80	LT																											
-L-	13+71.74	16+48.80	RT																											
-L-	20+68.80	26+00.00	LT																											
-L-	20+68.80	24+77.29	RT																											

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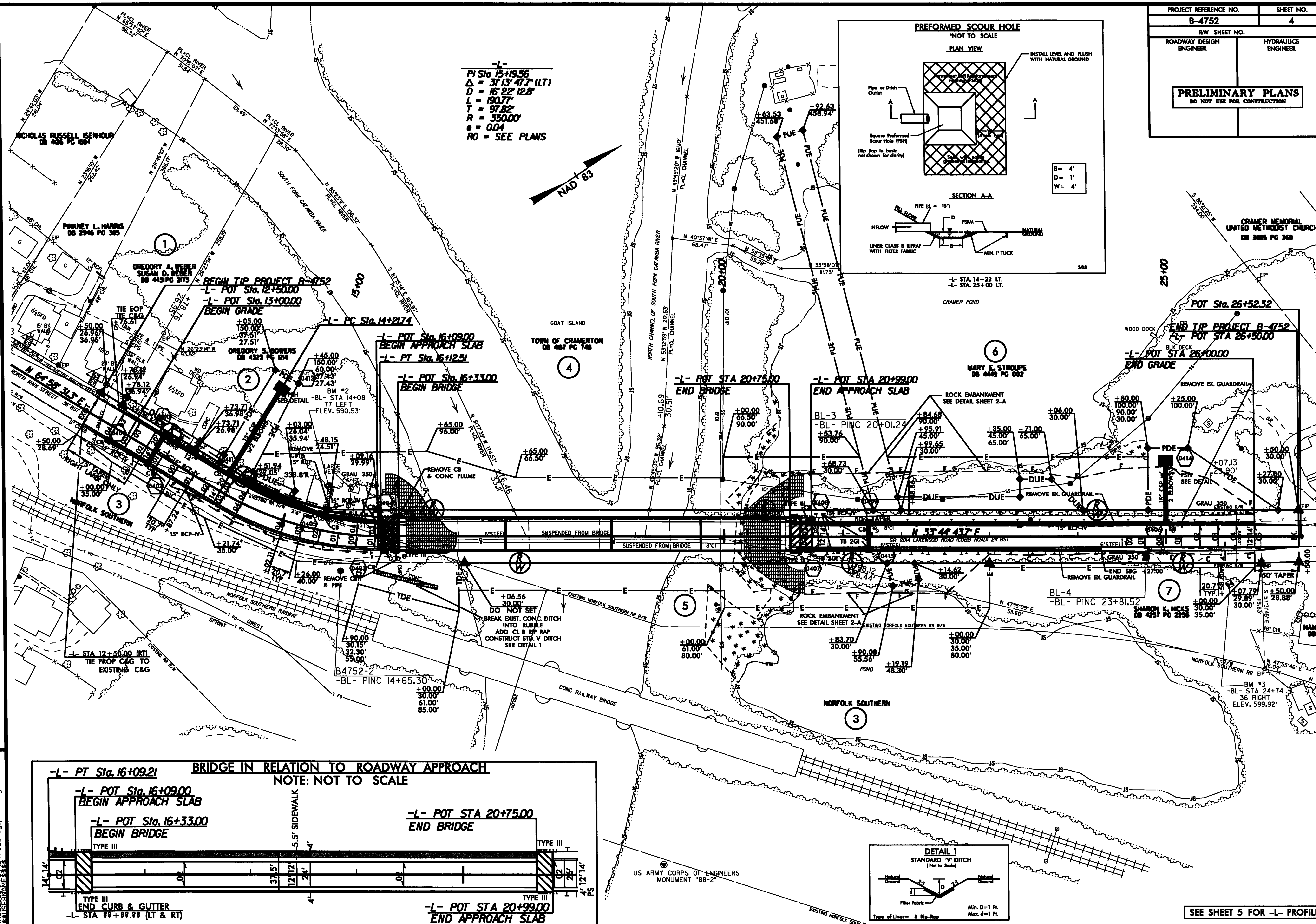
R/W REVISION – REVISED PROP. DUAL UTILITY EASEMENT AND MARKERS AT -L- STA. 15+03.00 LT.
– REMOVED PROP. SIDEWALK BETWEEN -L- STA. 20+99.00 THRU STA. 26+00.00 LT. – SEC 12/13/11

8/17/99

PROJECT REFERENCE NO.	SHEET NO.
B-4752	4
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION



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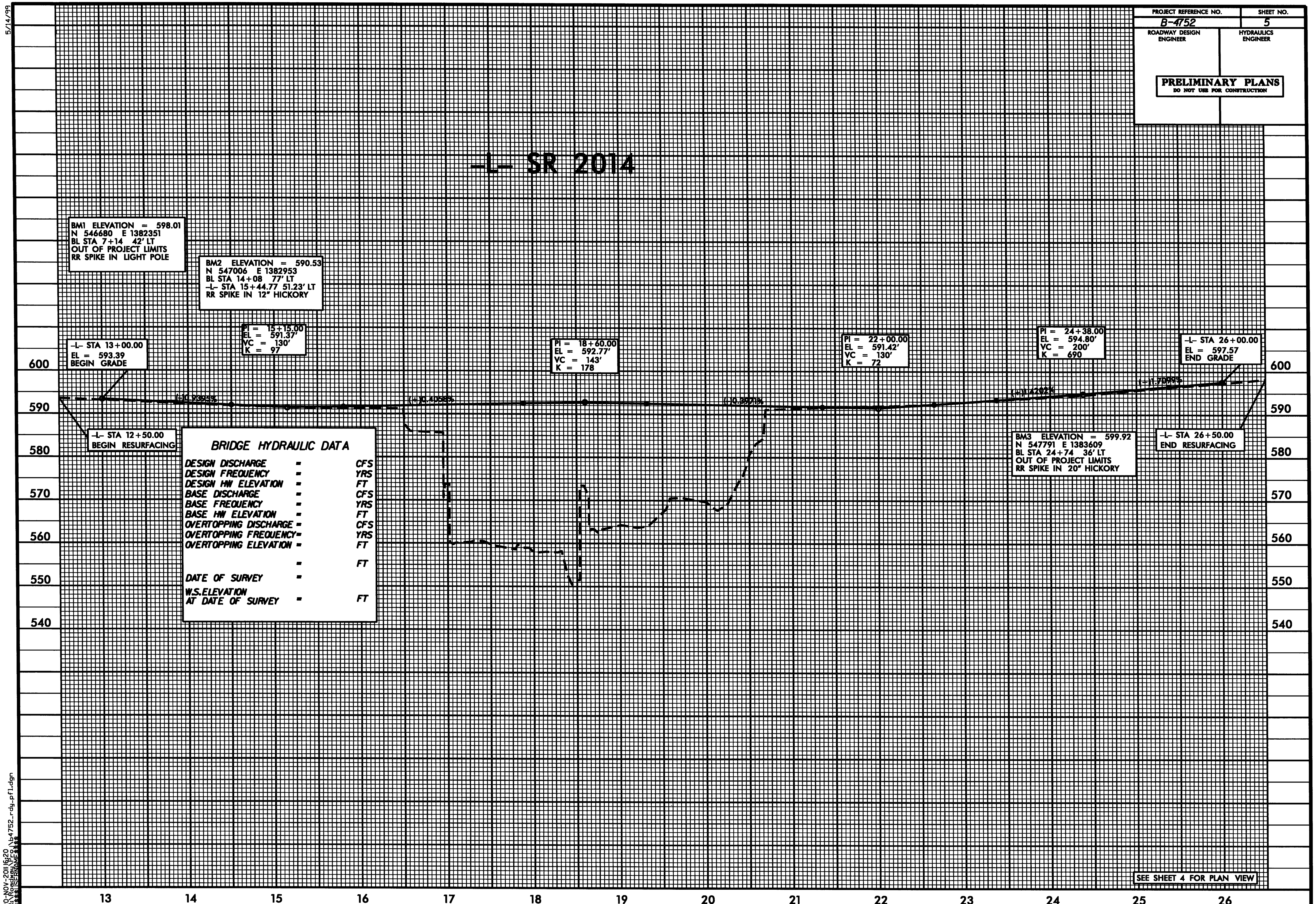
5/14/99



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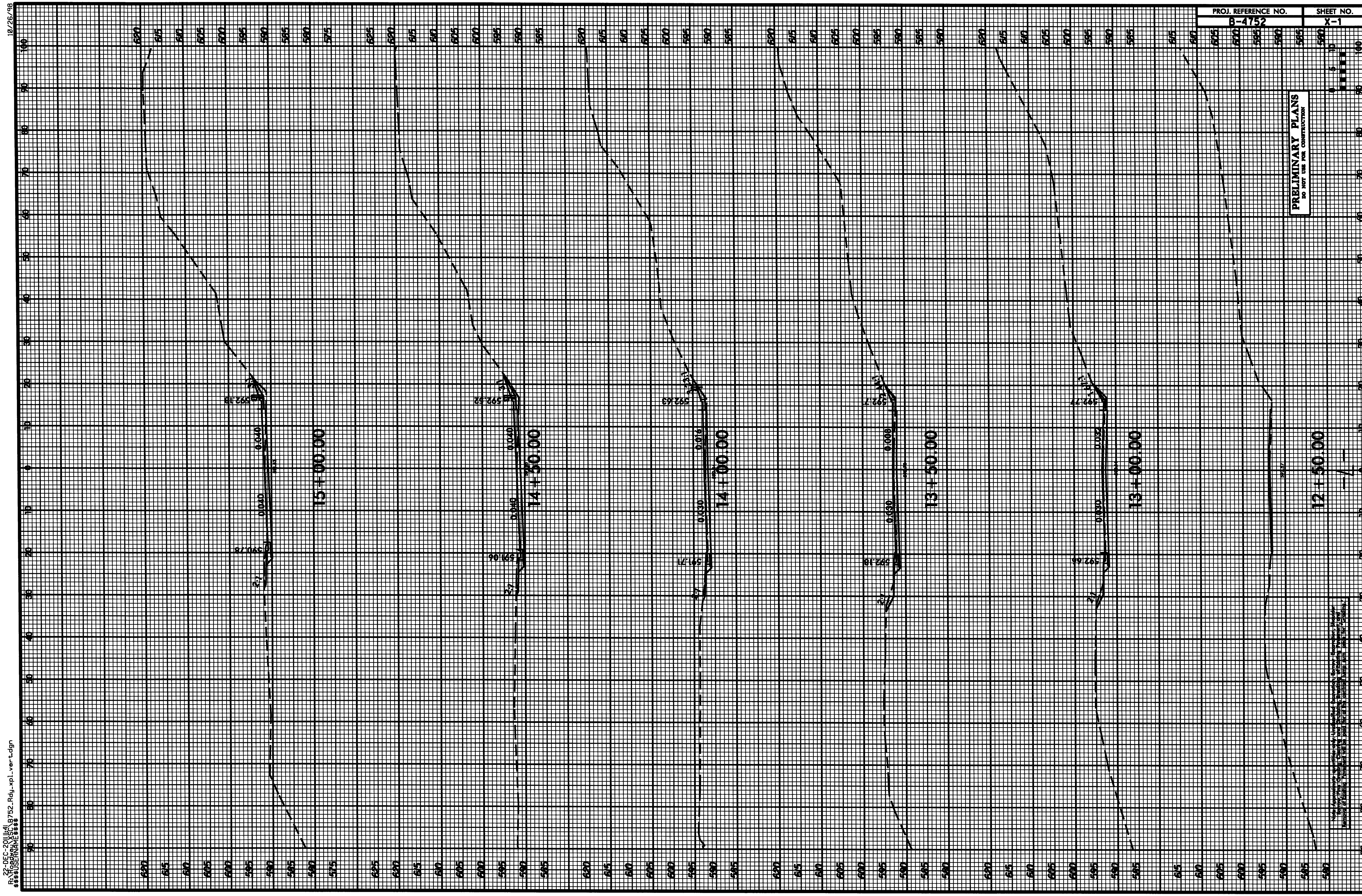
B-4752	X-1



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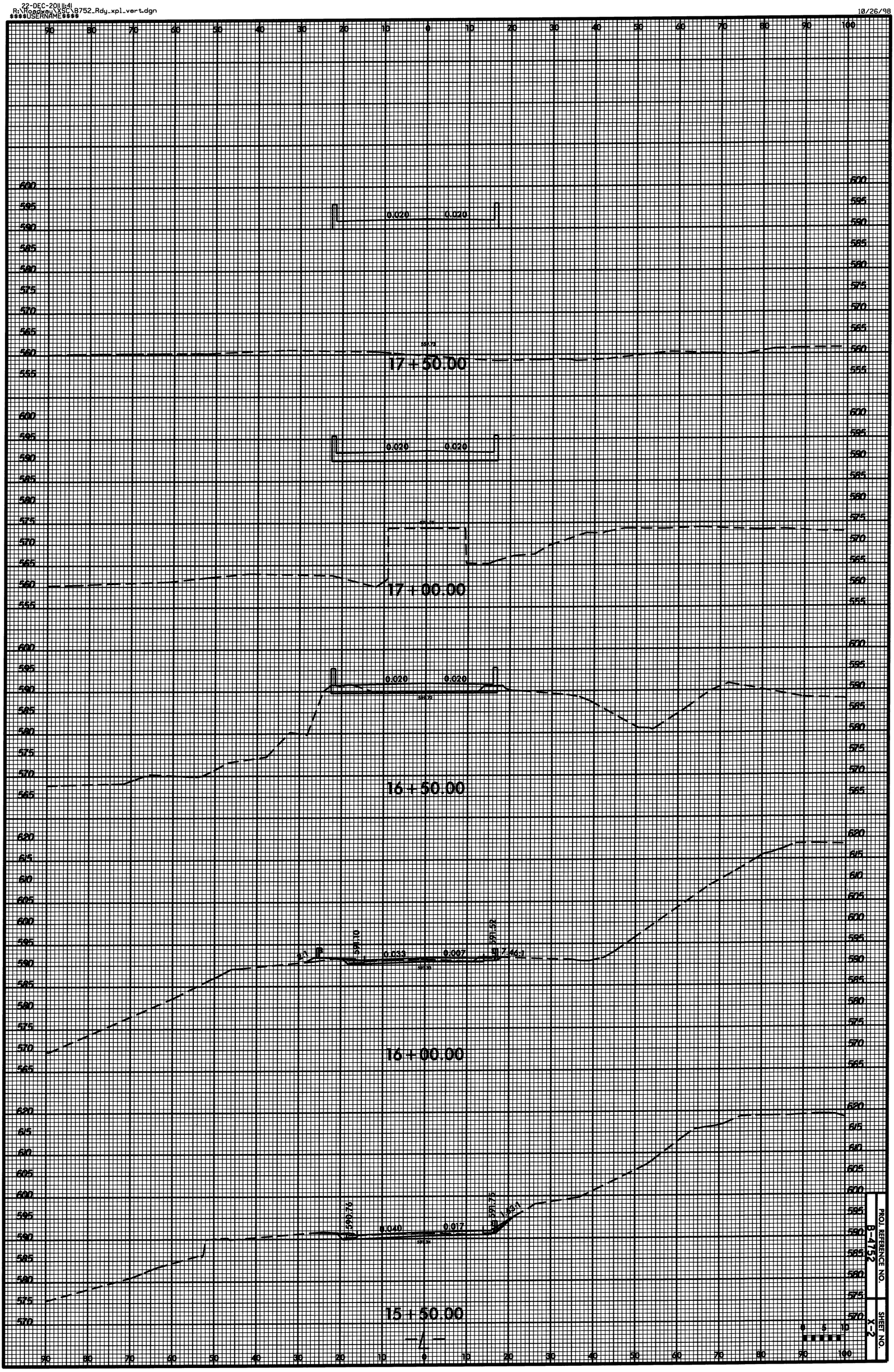
10/26/98



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B-47752

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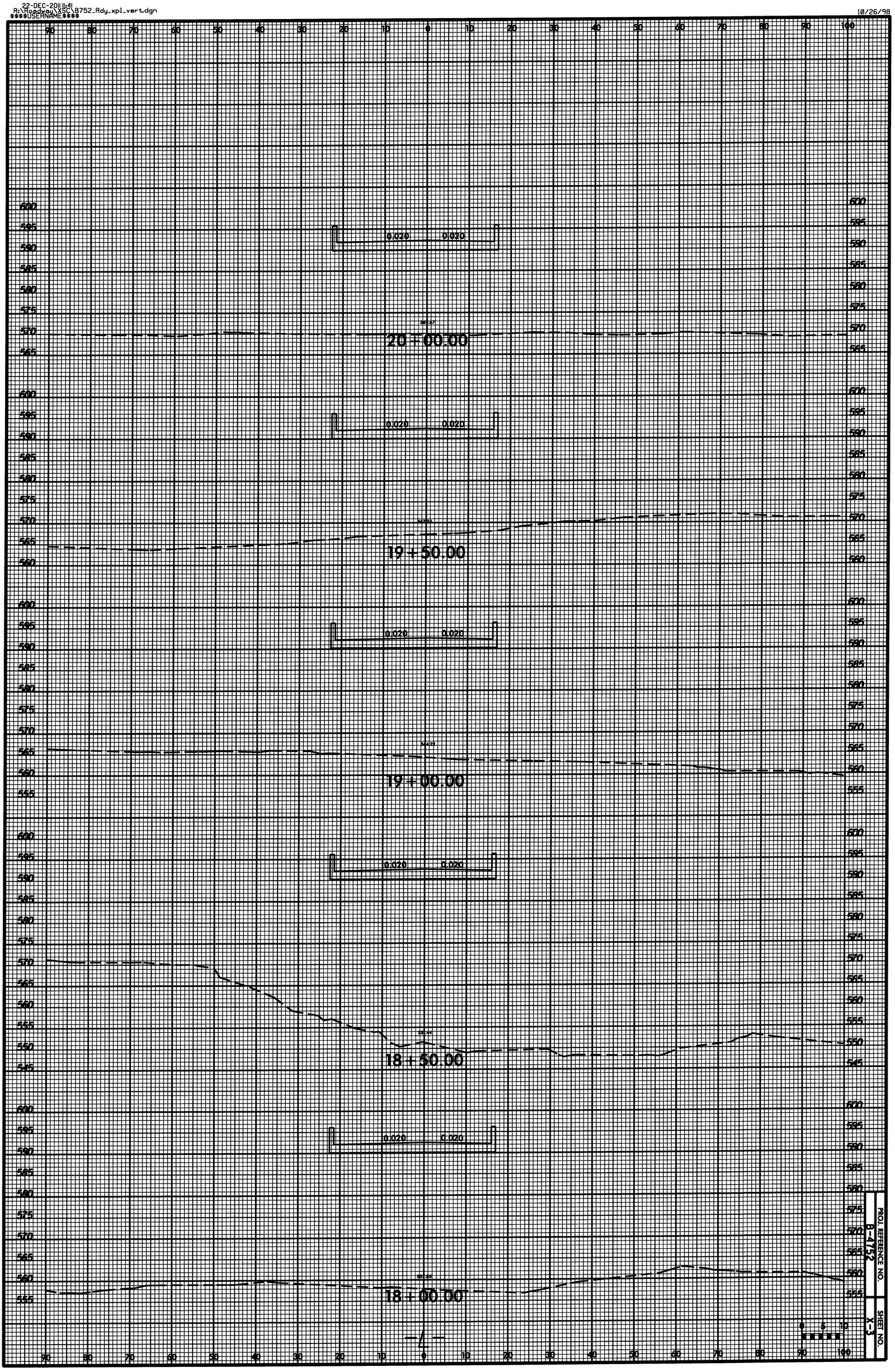
10/26/98



PROJ. REFERENCE NO.
8-4752

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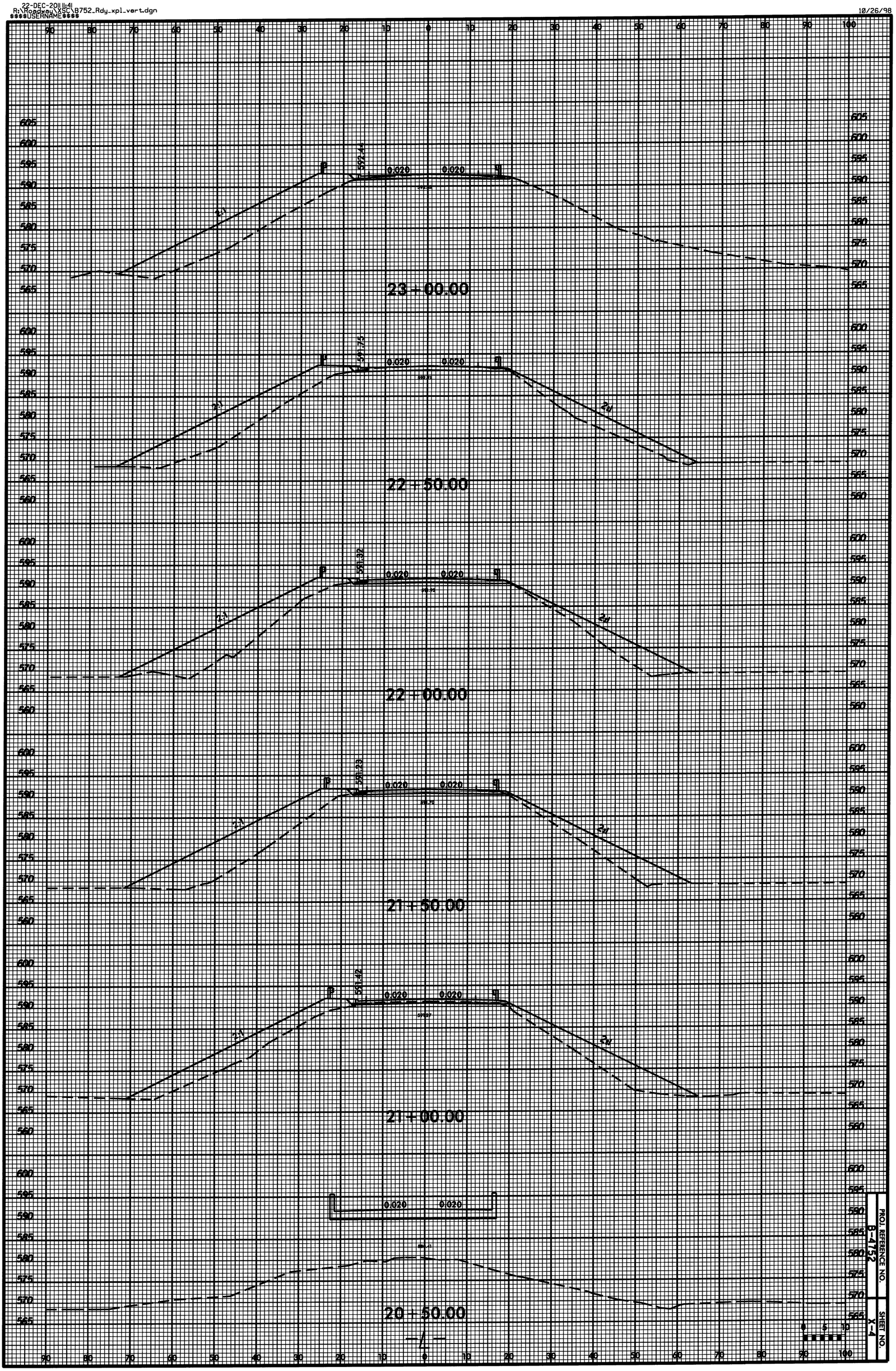
10/26/98



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10/26/98

PROJ. REFERENCE NO.	SHEET NO.
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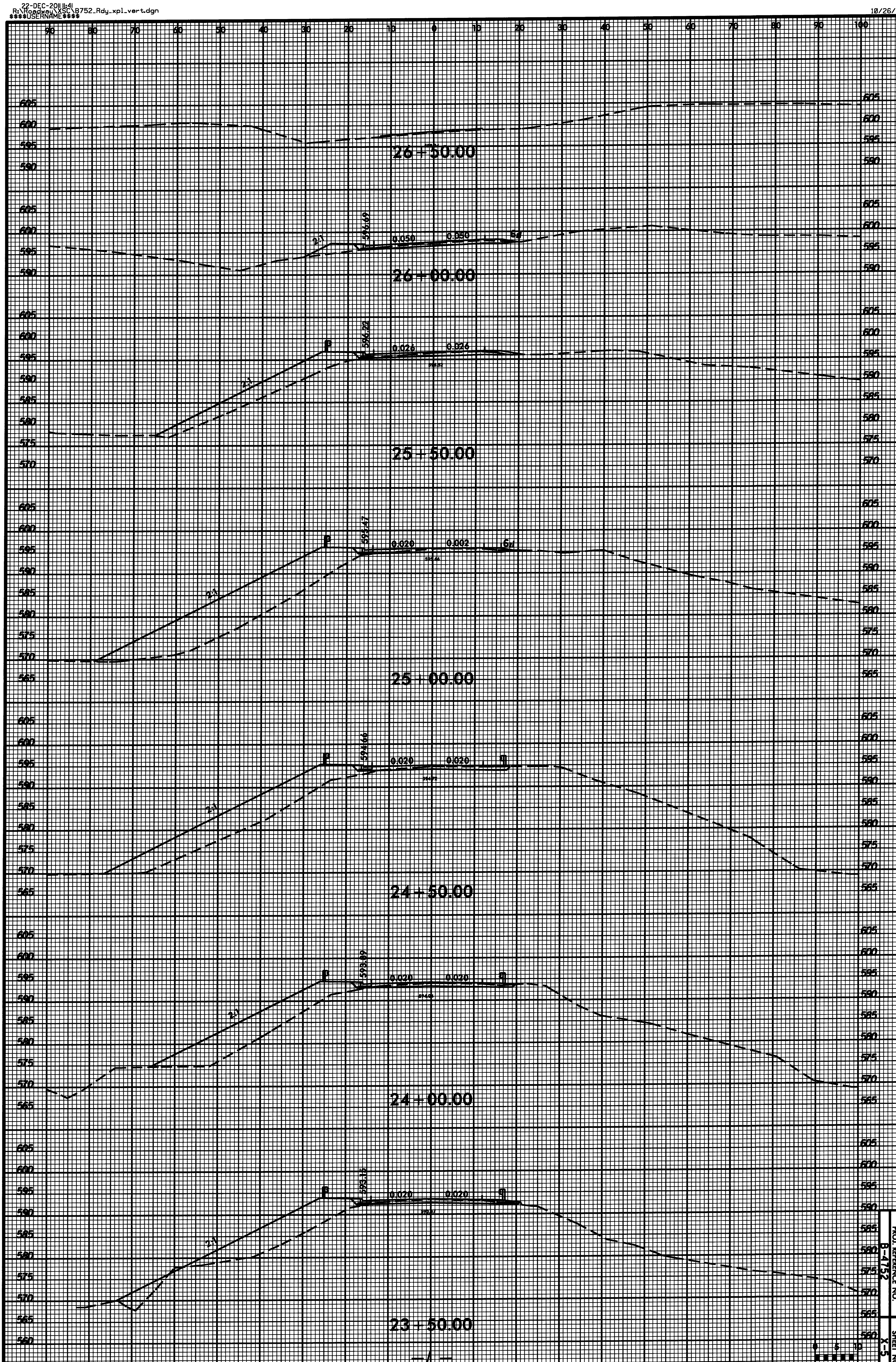

APPROVED JURISDICTIONAL DETERMINATION FORM
U.S. Army Corps of Engineers

This form should be completed by following the instructions provided in Section IV of the JD Form Instructional Guidebook.

SECTION I: BACKGROUND INFORMATION

A. REPORT COMPLETION DATE FOR APPROVED JURISDICTIONAL DETERMINATION (JD):

B. DISTRICT OFFICE, FILE NAME, AND NUMBER: B-4752 (Replacement of Bridge No. 6 on SR 2014)

C. PROJECT LOCATION AND BACKGROUND INFORMATION:
State:NC County/parish/borough: Gaston City: Cramerton
Center coordinates of site (lat/long in degree decimal format): Lat. 35' 14' 09"° N, Long. 81' 03' 58"° W.
Universal Transverse Mercator:
Name of nearest waterbody: South Fork Catawba River
Name of nearest Traditional Navigable Water (TNW) into which the aquatic resource flows: South Fork Catawba River because in backwaters of Lake Wylie which is Section 10 water.
Name of watershed or Hydrologic Unit Code (HUC): 03050102
☒ Check if map/diagram of review area and/or potential jurisdictional areas is/are available upon request.
☐ Check if other sites (e.g., offsite mitigation sites, disposal sites, etc…) are associated with this action and are recorded on a different JD form.

D. REVIEW PERFORMED FOR SITE EVALUATION (CHECK ALL THAT APPLY):
☐ Office (Desk) Determination. Date:
☐ Field Determination. Date(s):

SECTION II: SUMMARY OF FINDINGS

A. RHA SECTION 10 DETERMINATION OF JURISDICTION.

There **Are** "*navigable waters of the U.S.*" within Rivers and Harbors Act (RHA) jurisdiction (as defined by 33 CFR part 329) in the review area. [*Required*]
☐ Waters subject to the ebb and flow of the tide.
☒ Waters are presently used, or have been used in the past, or may be susceptible for use to transport interstate or foreign commerce.
Explain: South Fork Catawba river is open and navigable from project area to Catawba River.

B. CWA SECTION 404 DETERMINATION OF JURISDICTION.

There **Are** "*waters of the U.S.*" within Clean Water Act (CWA) jurisdiction (as defined by 33 CFR part 328) in the review area. [*Required*]

1. **Waters of the U.S.**
   a. **Indicate presence of waters of U.S. in review area (check all that apply):** [1]
      ☒ TNWs, including territorial seas
      ☐ Wetlands adjacent to TNWs
      ☒ Relatively permanent waters[2] (RPWs) that flow directly or indirectly into TNWs
      ☐ Non-RPWs that flow directly or indirectly into TNWs
      ☐ Wetlands directly abutting RPWs that flow directly or indirectly into TNWs
      ☒ Wetlands adjacent to but not directly abutting RPWs that flow directly or indirectly into TNWs
      ☐ Wetlands adjacent to non-RPWs that flow directly or indirectly into TNWs
      ☐ Impoundments of jurisdictional waters
      ☐ Isolated (interstate or intrastate) waters, including isolated wetlands

   b. **Identify (estimate) size of waters of the U.S. in the review area:**
      Non-wetland waters: 84 linear feet: 60-300 width (ft) and/or acres.
      Wetlands: 0.09 acres.

   c. **Limits (boundaries) of jurisdiction** based on: **Established by OHWM.**
      Elevation of established OHWM (if known): .

2. **Non-regulated waters/wetlands (check if applicable):**[3]
   ☐ Potentially jurisdictional waters and/or wetlands were assessed within the review area and determined to be not jurisdictional.
   Explain: .

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[1] Boxes checked below shall be supported by completing the appropriate sections in Section III below.
[2] For purposes of this form, an RPW is defined as a tributary that is not a TNW and that typically flows year-round or has continuous flow at least "seasonally" (e.g., typically 3 months).
[3] Supporting documentation is presented in Section III.F.

SECTION III: CWA ANALYSIS

A. TNWs AND WETLANDS ADJACENT TO TNWs

The agencies will assert jurisdiction over TNWs and wetlands adjacent to TNWs. If the aquatic resource is a TNW, complete Section III.A.1 and Section III.D.1. only; if the aquatic resource is a wetland adjacent to a TNW, complete Sections III.A.1 and 2 and Section III.D.1.; otherwise, see Section III.B below.

1. **TNW**
   Identify TNW: **South Fork Catawba River.**

   Summarize rationale supporting determination: South Fork Catawba River is open and navigable from project area to Catawba River. In an e-mail dated January 30, 2008 Steve Lund explained that all of Lake Wylie is section 10 up to full pond elevation. Since this project falls within the backwaters of Lake Wylie the South Fork Catawba River within the project site is considered a TNW.

2. **Wetland adjacent to TNW**
   Summarize rationale supporting conclusion that wetland is "adjacent": .

B. CHARACTERISTICS OF TRIBUTARY (THAT IS NOT A TNW) AND ITS ADJACENT WETLANDS (IF ANY):

This section summarizes information regarding characteristics of the tributary and its adjacent wetlands, if any, and it helps determine whether or not the standards for jurisdiction established under *Rapanos* have been met.

The agencies will assert jurisdiction over non-navigable tributaries of TNWs where the tributaries are "relatively permanent waters" (RPWs), i.e. tributaries that typically flow year-round or have continuous flow at least seasonally (e.g., typically 3 months). A wetland that directly abuts an RPW is also jurisdictional. If the aquatic resource is not a TNW, but has year-round (perennial) flow, skip to Section III.D.2. If the aquatic resource is a wetland directly abutting a tributary with perennial flow, skip to Section III.D.4.

A wetland that is adjacent to but that does not directly abut an RPW requires a significant nexus evaluation. Corps districts and EPA regions will include in the record any available information that documents the existence of a significant nexus between a relatively permanent tributary that is not perennial (and its adjacent wetlands if any) and a traditional navigable water, even though a significant nexus finding is not required as a matter of law.

If the waterbody[4] is not an RPW, or a wetland directly abutting an RPW, a JD will require additional data to determine if the waterbody has a significant nexus with a TNW. If the tributary has adjacent wetlands, the significant nexus evaluation must consider the tributary in combination with all of its adjacent wetlands. This significant nexus evaluation that combines, for analytical purposes, the tributary and all of its adjacent wetlands is used whether the review area identified in the JD request is the tributary, or its adjacent wetlands, or both. If the JD covers a tributary with adjacent wetlands, complete Section III.B.1 for the tributary, Section III.B.2 for any onsite wetlands, and Section III.B.3 for all wetlands adjacent to that tributary, both onsite and offsite. The determination whether a significant nexus exists is determined in Section III.C below.

1. **Characteristics of non-TNWs that flow directly or indirectly into TNW**

   (i) General Area Conditions:
   Watershed size: 4.09 **square miles**
   Drainage area: 4.09 **square miles**
   Average annual rainfall: 44.8 inches
   Average annual snowfall: inches

   (ii) Physical Characteristics:
   (a) Relationship with TNW:
   ☒ Tributary flows directly into TNW.
   ☐ Tributary flows through **Pick List** tributaries before entering TNW.

   Project waters are **Pick List** river miles from TNW.
   Project waters are **Pick List** river miles from RPW.
   Project waters are **Pick List** aerial (straight) miles from TNW.
   Project waters are **Pick List** aerial (straight) miles from RPW.
   Project waters cross or serve as state boundaries. Explain: .

[4] Note that the Instructional Guidebook contains additional information regarding swales, ditches, washes, and erosional features generally and in the arid West.

Identify flow route to TNW[5]: .
Tributary stream order, if known: .

(b) General Tributary Characteristics (check all that apply):
Tributary is: ☒ Natural
☐ Artificial (man-made). Explain: .
☐ Manipulated (man-altered). Explain: .

Tributary properties with respect to top of bank (estimate):
Average width: 200-300 feet
Average depth: 2-4 feet
Average side slopes: **Vertical (1:1 or less).**

Primary tributary substrate composition (check all that apply):
☒ Silts ☒ Sands ☐ Concrete
☐ Cobbles ☐ Gravel ☐ Muck
☐ Bedrock ☐ Vegetation. Type/% cover:
☐ Other. Explain: .

Tributary condition/stability [e.g., highly eroding, sloughing banks]. Explain: medium erosion.
Presence of run/riffle/pool complexes. Explain: stream portion is very short before becoming Cramer Pond.
Tributary geometry: **Relatively straight**
Tributary gradient (approximate average slope): %

(c) Flow:
Tributary provides for: **Pick List**
Estimate average number of flow events in review area/year: **2-5**
Describe flow regime: .
Other information on duration and volume: .

Surface flow is: **Confined**. Characteristics: .

Subsurface flow: **Unknown**. Explain findings: .
☐ Dye (or other) test performed: .

Tributary has (check all that apply):
☒ Bed and banks
☒ OHWM[6] (check all indicators that apply):
☒ clear, natural line impressed on the bank ☐ the presence of litter and debris
☐ changes in the character of soil ☐ destruction of terrestrial vegetation
☐ shelving ☐ the presence of wrack line
☒ vegetation matted down, bent, or absent ☐ sediment sorting
☐ leaf litter disturbed or washed away ☒ scour
☐ sediment deposition ☐ multiple observed or predicted flow events
☐ water staining ☐ abrupt change in plant community
☐ other (list):
☐ Discontinuous OHWM.[7] Explain: .

If factors other than the OHWM were used to determine lateral extent of CWA jurisdiction (check all that apply):
☒ High Tide Line indicated by: ☒ Mean High Water Mark indicated by:
☐ oil or scum line along shore objects ☐ survey to available datum;
☐ fine shell or debris deposits (foreshore) ☐ physical markings;
☐ physical markings/characteristics ☐ vegetation lines/changes in vegetation types.
☐ tidal gauges
☐ other (list):

(iii) Chemical Characteristics:
Characterize tributary (e.g., water color is clear, discolored, oily film; water quality; general watershed characteristics, etc.).
Explain: Medium clarity, weak flow.

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[5] Flow route can be described by identifying, e.g., tributary a, which flows through the review area, to flow into tributary b, which then flows into TNW.
[6] A natural or man-made discontinuity in the OHWM does not necessarily sever jurisdiction (e.g., where the stream temporarily flows underground, or where the OHWM has been removed by development or agricultural practices). Where there is a break in the OHWM that is unrelated to the waterbody's flow regime (e.g., flow over a rock outcrop or through a culvert), the agencies will look for indicators of flow above and below the break.
[7] Ibid.

Identify specific pollutants, if known: Adjacent to the project study area is the Eagle Road Wastewater Treatment Plant, which is considered a National Pollutant Discharge Elimination System (NPDES) major discharger. The wastewater treatment plant services the town of Cramerton and is licensed under permit number NC0006033..

(iv) Biological Characteristics. Channel supports (check all that apply):

- ☒ Riparian corridor. Characteristics (type, average width): .
- ☐ Wetland fringe. Characteristics: .
- ☐ Habitat for:
  - ☐ Federally Listed species. Explain findings: .
  - ☐ Fish/spawn areas. Explain findings: .
  - ☐ Other environmentally-sensitive species. Explain findings: .
  - ☐ Aquatic/wildlife diversity. Explain findings: .

2. Characteristics of wetlands adjacent to non-TNW that flow directly or indirectly into TNW

(i) Physical Characteristics:

(a) General Wetland Characteristics:

Properties:

Wetland size: W1a: 0.01 ac; W2a: 0.22 acres

Wetland type. Explain: both are Bottomland Forest.

Wetland quality. Explain: Wetland Rating Worksheet W1a:42 and W2a: 47.

Project wetlands cross or serve as state boundaries. Explain: No.

(b) General Flow Relationship with Non-TNW:

Flow is: **Intermittent flow**. Explain: .

Surface flow is: **Discrete**

Characteristics: .

Subsurface flow: **Unknown**. Explain findings: .

- ☐ Dye (or other) test performed: .

(c) Wetland Adjacency Determination with Non-TNW:

- ☐ Directly abutting
- ☒ Not directly abutting
  - ☒ Discrete wetland hydrologic connection. Explain: both wetlands border what are labeled as ponds on the site so they are not directly abutting a stream channel. Cramer Pond has a clear stream at the output end of the pond connecting directly to the S. Fork Catawba River .
  - ☐ Ecological connection. Explain: .
  - ☐ Separated by berm/barrier. Explain: .

(d) Proximity (Relationship) to TNW

Project wetlands are **1 (or less)** river miles from TNW.

Project waters are **1 (or less)** aerial (straight) miles from TNW.

Flow is from: **Navigable waters to wetland.**

Estimate approximate location of wetland as within the **5 - 10-year** floodplain.

(ii) Chemical Characteristics:

Characterize wetland system (e.g., water color is clear, brown, oil film on surface; water quality; general watershed characteristics; etc.). Explain: water color is fairly clear.

Identify specific pollutants, if known: Adjacent to the project study area is the Eagle Road Wastewater Treatment Plant, which is considered a National Pollutant Discharge Elimination System (NPDES) major discharger. The wastewater treatment plant services the town of Cramerton and is licensed under the permit number NC0006033.

(iii) Biological Characteristics. Wetland supports (check all that apply):

- ☒ Riparian buffer. Characteristics (type, average width): .
- ☒ Vegetation type/percent cover. Explain: Tear thumb, giant cane, jewelweed and false nettle.
- ☐ Habitat for:
  - ☐ Federally Listed species. Explain findings: .
  - ☐ Fish/spawn areas. Explain findings: .
  - ☐ Other environmentally-sensitive species. Explain findings: .
  - ☐ Aquatic/wildlife diversity. Explain findings: .

3. Characteristics of all wetlands adjacent to the tributary (if any)

All wetland(s) being considered in the cumulative analysis: **Pick List**

Approximately ( ) acres in total are being considered in the cumulative analysis.

For each wetland, specify the following:

Directly abuts? (Y/N)	Size (in acres)	Directly abuts? (Y/N)	Size (in acres)

Summarize overall biological, chemical and physical functions being performed: .

C. SIGNIFICANT NEXUS DETERMINATION

A significant nexus analysis will assess the flow characteristics and functions of the tributary itself and the functions performed by any wetlands adjacent to the tributary to determine if they significantly affect the chemical, physical, and biological integrity of a TNW. For each of the following situations, a significant nexus exists if the tributary, in combination with all of its adjacent wetlands, has more than a speculative or insubstantial effect on the chemical, physical and/or biological integrity of a TNW. Considerations when evaluating significant nexus include, but are not limited to the volume, duration, and frequency of the flow of water in the tributary and its proximity to a TNW, and the functions performed by the tributary and all its adjacent wetlands. It is not appropriate to determine significant nexus based solely on any specific threshold of distance (e.g. between a tributary and its adjacent wetland or between a tributary and the TNW). Similarly, the fact an adjacent wetland lies within or outside of a floodplain is not solely determinative of significant nexus.

Draw connections between the features documented and the effects on the TNW, as identified in the *Rapanos* Guidance and discussed in the Instructional Guidebook. Factors to consider include, for example:

- Does the tributary, in combination with its adjacent wetlands (if any), have the capacity to carry pollutants or flood waters to TNWs, or to reduce the amount of pollutants or flood waters reaching a TNW?
- Does the tributary, in combination with its adjacent wetlands (if any), provide habitat and lifecycle support functions for fish and other species, such as feeding, nesting, spawning, or rearing young for species that are present in the TNW?
- Does the tributary, in combination with its adjacent wetlands (if any), have the capacity to transfer nutrients and organic carbon that support downstream foodwebs?
- Does the tributary, in combination with its adjacent wetlands (if any), have other relationships to the physical, chemical, or biological integrity of the TNW?

Note: the above list of considerations is not inclusive and other functions observed or known to occur should be documented below:

1. **Significant nexus findings for non-RPW that has no adjacent wetlands and flows directly or indirectly into TNWs.** Explain findings of presence or absence of significant nexus below, based on the tributary itself, then go to Section III.D: .

2. **Significant nexus findings for non-RPW and its adjacent wetlands, where the non-RPW flows directly or indirectly into TNWs.** Explain findings of presence or absence of significant nexus below, based on the tributary in combination with all of its adjacent wetlands, then go to Section III.D: .

3. **Significant nexus findings for wetlands adjacent to an RPW but that do not directly abut the RPW.** Explain findings of presence or absence of significant nexus below, based on the tributary in combination with all of its adjacent wetlands, then go to Section III.D: The two wetlands are located on the outskirts of two ponds where the larger pond has an RPW flowing in and out; the outfall flows directly into the South Fork Catawba River. The larger wetland serves as the main hydrologic connection between the two ponds which then connects them to the South Fork Catawba River. Both wetlands and the RPW are within the floodplain of the South Fork Catawba River and received periodic overbank flooding.

D. DETERMINATIONS OF JURISDICTIONAL FINDINGS. THE SUBJECT WATERS/WETLANDS ARE (CHECK ALL THAT APPLY):

1. **TNWs and Adjacent Wetlands.** Check all that apply and provide size estimates in review area:
   - ☒ TNWs: 220 linear feet 120-300 width (ft), Or, acres.
   - ☒ Wetlands adjacent to TNWs: W1a: 0.01 W2a: 0.22 acres.

2. **RPWs that flow directly or indirectly into TNWs.**
   - ☒ Tributaries of TNWs where tributaries typically flow year-round are jurisdictional. Provide data and rationale indicating that tributary is perennial: the UT to the South Fork Catawba River is a blue line on the topo. and has had clear flow during each site visit.

☐ Tributaries of TNW where tributaries have continuous flow "seasonally" (e.g., typically three months each year) are jurisdictional. Data supporting this conclusion is provided at Section III.B. Provide rationale indicating that tributary flows seasonally: .

Provide estimates for jurisdictional waters in the review area (check all that apply):
☒ Tributary waters: **250** linear feet **350** width (ft).
☒ Other non-wetland waters: **1.26** acres.
Identify type(s) of waters: **Pond directly abutting a TNW (South Fork Catawba River).**

3. **Non-RPWs[8] that flow directly or indirectly into TNWs.**
☐ Waterbody that is not a TNW or an RPW, but flows directly or indirectly into a TNW, and it has a significant nexus with a TNW is jurisdictional. Data supporting this conclusion is provided at Section III.C.

Provide estimates for jurisdictional waters within the review area (check all that apply):
☐ Tributary waters: linear feet width (ft).
☐ Other non-wetland waters: acres.
Identify type(s) of waters: .

4. **Wetlands directly abutting an RPW that flow directly or indirectly into TNWs.**
☐ Wetlands directly abut RPW and thus are jurisdictional as adjacent wetlands.
☐ Wetlands directly abutting an RPW where tributaries typically flow year-round. Provide data and rationale indicating that tributary is perennial in Section III.D.2, above. Provide rationale indicating that wetland is directly abutting an RPW: .

☐ Wetlands directly abutting an RPW where tributaries typically flow "seasonally." Provide data indicating that tributary is seasonal in Section III.B and rationale in Section III.D.2, above. Provide rationale indicating that wetland is directly abutting an RPW: .

Provide acreage estimates for jurisdictional wetlands in the review area: acres.

5. **Wetlands adjacent to but not directly abutting an RPW that flow directly or indirectly into TNWs.**
☒ Wetlands that do not directly abut an RPW, but when considered in combination with the tributary to which they are adjacent and with similarly situated adjacent wetlands, have a significant nexus with a TNW are jurisidictional. Data supporting this conclusion is provided at Section III.C.

Provide acreage estimates for jurisdictional wetlands in the review area: **W1a: 0.01 and W2a: 0.22** acres.

6. **Wetlands adjacent to non-RPWs that flow directly or indirectly into TNWs.**
☐ Wetlands adjacent to such waters, and have when considered in combination with the tributary to which they are adjacent and with similarly situated adjacent wetlands, have a significant nexus with a TNW are jurisdictional. Data supporting this conclusion is provided at Section III.C.

Provide estimates for jurisdictional wetlands in the review area: acres.

7. **Impoundments of jurisdictional waters.[9]**
As a general rule, the impoundment of a jurisdictional tributary remains jurisdictional.
☐ Demonstrate that impoundment was created from "waters of the U.S.," or
☐ Demonstrate that water meets the criteria for one of the categories presented above (1-6), or
☐ Demonstrate that water is isolated with a nexus to commerce (see E below).

E. ISOLATED [INTERSTATE OR INTRA-STATE] WATERS, INCLUDING ISOLATED WETLANDS, THE USE, DEGRADATION OR DESTRUCTION OF WHICH COULD AFFECT INTERSTATE COMMERCE, INCLUDING ANY SUCH WATERS (CHECK ALL THAT APPLY):[10]
☐ which are or could be used by interstate or foreign travelers for recreational or other purposes.

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[8]See Footnote # 3.
[9] To complete the analysis refer to the key in Section III.D.6 of the Instructional Guidebook.
[10] **Prior to asserting or declining CWA jurisdiction based solely on this category, Corps Districts will elevate the action to Corps and EPA HQ for review consistent with the process described in the Corps/EPA *Memorandum Regarding CWA Act Jurisdiction Following Rapanos.***

☐ from which fish or shellfish are or could be taken and sold in interstate or foreign commerce.
☐ which are or could be used for industrial purposes by industries in interstate commerce.
☐ Interstate isolated waters. Explain: .
☐ Other factors. Explain: .

Identify water body and summarize rationale supporting determination: .

Provide estimates for jurisdictional waters in the review area (check all that apply):
☐ Tributary waters: linear feet widt h (ft).
☐ Other non-wetland waters: acres.
Identify type(s) of waters: .
☐ Wetlands: acres.

F. NON-JURISDICTIONAL WATERS, INCLUDING WETLANDS (CHECK ALL THAT APPLY):
☐ If potential wetlands were assessed within the review area, these areas did not meet the criteria in the 1987 Corps of Engineers Wetland Delineation Manual and/or appropriate Regional Supplements.
☐ Review area included isolated waters with no substantial nexus to interstate (or foreign) commerce.
☐ Prior to the Jan 2001 Supreme Court decision in "*SWANCC*," the review area would have been regulated based solely on the "Migratory Bird Rule" (MBR).
☐ Waters do not meet the "Significant Nexus" standard, where such a finding is required for jurisdiction. Explain: .
☐ Other: (explain, if not covered above): .

Provide acreage estimates for non-jurisdictional waters in the review area, where the sole potential basis of jurisdiction is the MBR factors (i.e., presence of migratory birds, presence of endangered species, use of water for irrigated agriculture), using best professional judgment (check all that apply):
☐ Non-wetland waters (i.e., rivers, streams): li near feet width (ft).
☐ Lakes/ponds: acres.
☐ Other non-wetland waters: acres. List type of aquatic resource: .
☐ Wetlands: acres.

Provide acreage estimates for non-jurisdictional waters in the review area that do not meet the "Significant Nexus" standard, where such a finding is required for jurisdiction (check all that apply):
☐ Non-wetland waters (i.e., rivers, streams): li near feet, width (ft).
☐ Lakes/ponds: acres.
☐ Other non-wetland waters: acres. List type of aquatic resource: .
☐ Wetlands: acres.

SECTION IV: DATA SOURCES.

A. SUPPORTING DATA. Data reviewed for JD (check all that apply - checked items shall be included in case file and, where checked and requested, appropriately reference sources below):
☐ Maps, plans, plots or plat submitted by or on behalf of the applicant/consultant: .
☐ Data sheets prepared/submitted by or on behalf of the applicant/consultant.
☐ Office concurs with data sheets/delineation report.
☐ Office does not concur with data sheets/delineation report.
☐ Data sheets prepared by the Corps: .
☐ Corps navigable waters' study: .
☐ U.S. Geological Survey Hydrologic Atlas: .
☐ USGS NHD data.
☐ USGS 8 and 12 digit HUC maps.
☐ U.S. Geological Survey map(s). Cite scale & quad name: .
☐ USDA Natural Resources Conservation Service Soil Survey. Citation: .
☐ National wetlands inventory map(s). Cite name: .
☐ State/Local wetland inventory map(s): .
☐ FEMA/FIRM maps: .
☐ 100-year Floodplain Elevation is: (National Geodectic Vertical Datum of 1929)
☐ Photographs: ☐ Aerial (Name & Date): .
or ☐ Other (Name & Date): .
☐ Previous determination(s). File no. and date of response letter: .
☐ Applicable/supporting case law: .
☐ Applicable/supporting scientific literature: .
☐ Other information (please specify): .