



STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION

BEVERLY EAVES PERDUE
GOVERNOR

EUGENE A. CONTI, JR.
SECRETARY

August 24, 2012

U.S. Army Corps of Engineers
Regulatory Field Office
2407 West 5th St.
Washington, NC 27889

Attention: Thomas Steffens
NCDOT Coordinator

Dear Sir:

Subject: **Application for Section 404 Nationwide Permits (NWP) 23, Section 401 Water Quality Certification & Riparian Buffer Certification** for the replacement of Bridge No. 86 over Stoney Fork Creek on SR 1330 (Raleigh Road) in Johnston County; TIP Project B-4558; Federal Aid Project No. BRZ-1330(6); Debit \$240 from WBS No. 33769.1.1.

Please find enclosed PCN, permit drawings, stormwater management plan, and roadway plans for the above referenced project proposed by the North Carolina Department of Transportation (NCDOT). A Programmatic Categorical Exclusion (PCE) was completed for this project on July 22, 2008 and distributed shortly thereafter. Additional copies are available upon request. The NCDOT proposes to replace existing Bridge No. 86 over Stoney Fork Creek on SR 1330 in Johnston County. The project involves replacement of the existing structurally deficient 53-foot bridge and approaches with a new 95-foot bridge. The new bridge will include two 11-foot lanes and 2.5-foot offsets. The approach roadway will extend approximately 130 feet from the north end of the new bridge and 125 feet from the south end of the new bridge. The approaches will include a 26-foot pavement width, providing two 11-foot lanes and two-foot paved shoulders.

Proposed permanent impacts to riparian wetlands from bridge construction are less than 0.01 acre for fill and 0.05 acre for mechanized clearing. The project will impact riparian buffers due to bridge construction and approach work. Roadway and bridge buffer impacts involve 1,415 sq. ft. in Zone 1 and 354 sq. ft. in Zone 2. Traffic will be detoured off-site during construction.

This project calls for a letting date of March 19, 2013 and a review date of January 29, 2013; however, the let date may advance as additional funding becomes available.

MAILING ADDRESS:

NC DEPARTMENT OF TRANSPORTATION
PROJECT DEVELOPMENT AND ENVIRONMENTAL ANALYSIS
NATURAL ENVIRONMENT SECTION
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

Regulatory Approvals

Section 404 Permit: All aspects of this project are being processed by the Federal Highway Administration as a "Categorical Exclusion" in accordance with 23 CFR 771.115(b). The NCDOT requests that the project be authorized by NWP 23 for bridge construction.

Section 401 Permit: We anticipate 401 General Certification number 3891 will apply to this project. NCDOT is requesting written concurrence from the North Carolina Department of Environmental and Natural Resources, Division of Water Quality. We are providing five copies of this application to the NCDWQ for their approval.

Neuse Riparian Buffer Authorization: NCDOT requests that the NC Division of Water Quality review this application and issue a written approval for a Neuse Riparian Buffer Authorization.

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 Gordon Cashin at (919) 707-6107.

Sincerely,



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

cc

NCDOT Permit Application Standard Distribution List.



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

Pre-Construction Notification (PCN) Form

A. Applicant Information

1. Processing

1a. Type(s) of approval sought from the Corps:	<input checked="" type="checkbox"/> Section 404 Permit	<input type="checkbox"/> Section 10 Permit
1b. Specify Nationwide Permit (NWP) number: 23 or General Permit (GP) number:		
1c. Has the NWP or GP number been verified by the Corps?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
1d. Type(s) of approval sought from the DWQ (check all that apply):		
<input checked="" type="checkbox"/> 401 Water Quality Certification – Regular <input type="checkbox"/> Non-404 Jurisdictional General Permit <input type="checkbox"/> 401 Water Quality Certification – Express <input type="checkbox"/> Riparian Buffer Authorization		
1e. Is this notification solely for the record because written approval is not required?	For the record only for DWQ 401 Certification: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	For the record only for Corps Permit: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
1f. Is payment into a mitigation bank or in-lieu fee program proposed for mitigation of impacts? If so, attach the acceptance letter from mitigation bank or in-lieu fee program.	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
1g. Is the project located in any of NC's twenty coastal counties. If yes, answer 1h below.	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
1h. Is the project located within a NC DCM Area of Environmental Concern (AEC)?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No

2. Project Information

2a. Name of project:	Replacement of Bridge 86 over Stoney Fork Creek on SR 1330 (Raleigh Rd)
2b. County:	Johnston
2c. Nearest municipality / town:	Benson
2d. Subdivision name:	<i>not applicable</i>
2e. NCDOT only, T.I.P. or state project no:	B-4558

3. Owner Information

3a. Name(s) on Recorded Deed:	North Carolina Department of Transportation
3b. Deed Book and Page No.	<i>not applicable</i>
3c. Responsible Party (for LLC if applicable):	<i>not applicable</i>
3d. Street address:	1598 Mail Service Center
3e. City, state, zip:	Raleigh, NC 27699-1598
3f. Telephone no.:	(919) 707-6107
3g. Fax no.:	(919) 431-2002
3h. Email address:	gcashin@ncdot.gov

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

B. Project Information and Prior Project History	
1. Property Identification	
1a. Property identification no. (tax PIN or parcel ID):	<i>not applicable</i>
1b. Site coordinates (in decimal degrees):	Latitude: 35.432281 (DD.DDDDDD) Longitude: -78.503602 (-DD.DDDDDD)
1c. Property size:	4.78 acres
2. Surface Waters	
2a. Name of nearest body of water (stream, river, etc.) to proposed project:	Stoneyfork Creek
2b. Water Quality Classification of nearest receiving water:	C, NSW
2c. River basin:	Neuse River Basin
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: Agriculture, with residential along roadways, and forested stream corridors.	
3b. List the total estimated acreage of all existing wetlands on the property: 0.90	
3c. List the total estimated linear feet of all existing streams (intermittent and perennial) on the property: 208	
3d. Explain the purpose of the proposed project: To replace a structurally deficient bridge.	
3e. Describe the overall project in detail, including the type of equipment to be used: The project involves replacing a 53-foot bridge with a 95-foot bridge on the existing alignment using an off-site detour. Standard road building equipment, such as trucks, dozers, and cranes will be used.	
4. Jurisdictional Determinations	
4a. Have jurisdictional wetland or stream determinations by the Corps or State been requested or obtained for this property / project (including all prior phases) in the past? Comments:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown
4b. If the Corps made the jurisdictional determination, what type of determination was made?	<input type="checkbox"/> Preliminary <input checked="" type="checkbox"/> Final
4c. If yes, who delineated the jurisdictional areas? Name (if known):	Agency/Consultant Company: NCDOT Other: Ralph Whitehead and Associates
4d. If yes, list the dates of the Corps jurisdictional determinations or State determinations and attach documentation. June 24, 2008	
5. Project History	
5a. Have permits or certifications been requested or obtained for this project (including all prior phases) in the past?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Unknown
5b. If yes, explain in detail according to "help file" instructions.	
6. Future Project Plans	
6a. Is this a phased project?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> 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 <input checked="" type="checkbox"/> P <input type="checkbox"/> T	fill	riparian	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input checked="" type="checkbox"/> Corps <input checked="" type="checkbox"/> DWQ	<0.01
Site 1 <input checked="" type="checkbox"/> P <input type="checkbox"/> T	mechanized clearing	riparian	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input checked="" type="checkbox"/> Corps <input checked="" type="checkbox"/> DWQ	0.05
Site 3 <input type="checkbox"/> P <input type="checkbox"/> T			<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Corps <input type="checkbox"/> DWQ	
Site 4 <input type="checkbox"/> P <input type="checkbox"/> T			<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Corps <input type="checkbox"/> DWQ	
Site 5 <input type="checkbox"/> P <input type="checkbox"/> T			<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Corps <input type="checkbox"/> DWQ	
Site 6 <input type="checkbox"/> P <input type="checkbox"/> T			<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Corps <input type="checkbox"/> DWQ	
2g. Total wetland impacts					0.06 Perm.

2h. Comments:

3. Stream Impacts

If there are perennial or intermittent stream impacts (including temporary impacts) proposed on the site, then complete this question for all stream sites impacted.

3a. Stream impact number - Permanent (P) or Temporary (T)	3b. Type of impact	3c. Stream name	3d. Perennial (PER) or intermittent (INT)?	3e. Type of jurisdiction (Corps - 404, 10 DWQ – non-404, other)	3f. Average stream width (feet)	3g. Impact length (linear feet)
Site 1 <input type="checkbox"/> P <input type="checkbox"/> T			<input type="checkbox"/> PER <input type="checkbox"/> INT	<input type="checkbox"/> Corps <input type="checkbox"/> DWQ		
Site 2 <input type="checkbox"/> P <input type="checkbox"/> T			<input type="checkbox"/> PER <input type="checkbox"/> INT	<input type="checkbox"/> Corps <input type="checkbox"/> DWQ		
Site 3 <input type="checkbox"/> P <input type="checkbox"/> T			<input type="checkbox"/> PER <input type="checkbox"/> INT	<input type="checkbox"/> Corps <input type="checkbox"/> DWQ		
Site 4 <input type="checkbox"/> P <input type="checkbox"/> T			<input type="checkbox"/> PER <input type="checkbox"/> INT	<input type="checkbox"/> Corps <input type="checkbox"/> DWQ		
Site 5 <input type="checkbox"/> P <input type="checkbox"/> T			<input type="checkbox"/> PER <input type="checkbox"/> INT	<input type="checkbox"/> Corps <input type="checkbox"/> DWQ		
Site 6 <input type="checkbox"/> P <input type="checkbox"/> T			<input type="checkbox"/> PER <input type="checkbox"/> INT	<input type="checkbox"/> Corps <input type="checkbox"/> DWQ		

3h. Total stream and tributary impacts 0.0 Perm
0.0 Temp

3i. Comments: There will be <0.01 ac of fill in surface waters due to an interior bent.

4. Open Water Impacts

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

4a. Open water impact number – Permanent (P) or Temporary (T)	4b. Name of waterbody (if applicable)	4c. Type of impact	4d. Waterbody type	4e. Area of impact (acres)
O1 <input type="checkbox"/> P <input type="checkbox"/> T				
O2 <input type="checkbox"/> P <input type="checkbox"/> T				
O3 <input type="checkbox"/> P <input type="checkbox"/> T				
O4 <input type="checkbox"/> P <input type="checkbox"/> T				
4f. Total open water impacts				0.0 Permanent 0.0 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?			<input checked="" type="checkbox"/> Neuse <input type="checkbox"/> Catawba	<input type="checkbox"/> Tar-Pamlico <input type="checkbox"/> Randleman	<input type="checkbox"/> Other:
6b. Buffer impact number – Permanent (P) or Temporary (T)	6c. Reason for impact	6d. Stream name	6e. Buffer mitigation required?	6f. Zone 1 impact (square feet)	6g. Zone 2 impact (square feet)
B1 <input checked="" type="checkbox"/> P <input type="checkbox"/> T	Bridge	Stoney Fork Creek	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	938	3
B2 <input checked="" type="checkbox"/> P <input type="checkbox"/> T	Road crossing	Stoney Fork Creek	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	477	351
B3 <input type="checkbox"/> P <input type="checkbox"/> T			<input type="checkbox"/> Yes <input type="checkbox"/> No		
6h. Total buffer impacts				1,415	354
6i. Comments:					

D. Impact Justification and Mitigation

1. Avoidance and Minimization

- 1a. Specifically describe measures taken to avoid or minimize the proposed impacts in designing project.
 The proposed bridge is longer than the existing bridge; the proposed bridge will be at approximately the same grade as the existing structure; an off site detour will be used. Slopes of 3:1 will be constructed in wetlands.
- 1b. Specifically describe measures taken to avoid or minimize the proposed impacts through construction techniques.
 Top-down construction, Design Standards in Sensitive Watersheds will be implemented. An in-water work moratorium will be observed from February 15 to June 15.

2. Compensatory Mitigation for Impacts to Waters of the U.S. or Waters of the State

- | | |
|--|---|
| 2a. Does the project require Compensatory Mitigation for impacts to Waters of the U.S. or Waters of the State? | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
If no, explain: Due to the minimal amount of impacts, compensatory mitigation is not proposed. |
| 2b. If yes, mitigation is required by (check all that apply): | <input type="checkbox"/> DWQ <input type="checkbox"/> Corps |
| 2c. If yes, which mitigation option will be used for this project? | <input type="checkbox"/> Mitigation bank
<input type="checkbox"/> Payment to in-lieu fee program
<input type="checkbox"/> Permittee Responsible Mitigation |

3. Complete if Using a Mitigation Bank

- 3a. Name of Mitigation Bank: not applicable
- | | | |
|---|------|----------|
| 3b. Credits Purchased (attach receipt and letter) | Type | Quantity |
|---|------|----------|
- 3c. Comments:

4. Complete if Making a Payment to In-lieu Fee Program

- | | |
|---|---|
| 4a. Approval letter from in-lieu fee program is attached. | <input type="checkbox"/> Yes |
| 4b. Stream mitigation requested: | linear feet |
| 4c. If using stream mitigation, stream temperature: | <input type="checkbox"/> warm <input type="checkbox"/> cool <input type="checkbox"/> cold |
| 4d. Buffer mitigation requested (DWQ only): | square feet |
| 4e. Riparian wetland mitigation requested: | acres |
| 4f. Non-riparian wetland mitigation requested: | acres |
| 4g. Coastal (tidal) wetland mitigation requested: | acres |
- 4h. Comments:

5. Complete if Using a Permittee Responsible Mitigation Plan

- 5a. If using a permittee responsible mitigation plan, provide a description of the proposed mitigation plan.

6. Buffer Mitigation (State Regulated Riparian Buffer Rules) – required by DWQ					
6a. Will the project result in an impact within a protected riparian buffer that requires buffer mitigation?				<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
6b. If yes, then identify the square feet of impact to each zone of the riparian buffer that requires mitigation. Calculate the amount of mitigation required.					
Zone	6c. Reason for impact	6d. Total impact (square feet)	Multiplier	6e. Required mitigation (square feet)	
Zone 1			3 (2 for Catawba)		
Zone 2			1.5		
			6f. Total buffer mitigation required:		
6g. If buffer mitigation is required, discuss what type of mitigation is proposed (e.g., payment to private mitigation bank, permittee responsible riparian buffer restoration, payment into an approved in-lieu fee fund).					
6h. Comments:					

E. Stormwater Management and Diffuse Flow Plan (required by DWQ)	
1. Diffuse Flow Plan	
1a. Does the project include or is it adjacent to protected riparian buffers identified within one of the NC Riparian Buffer Protection Rules?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
1b. If yes, then is a diffuse flow plan included? If no, explain why. Comments:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
2. Stormwater Management Plan	
2a. What is the overall percent imperviousness of this project?	N/A
2b. Does this project require a Stormwater Management Plan?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
2c. If this project DOES NOT require a Stormwater Management Plan, explain why:	
2d. If this project DOES require a Stormwater Management Plan, then provide a brief, narrative description of the plan: See attached permit drawings.	
2e. Who will be responsible for the review of the Stormwater Management Plan?	<input type="checkbox"/> Certified Local Government <input type="checkbox"/> DWQ Stormwater Program <input checked="" type="checkbox"/> DWQ 401 Unit
3. Certified Local Government Stormwater Review	
3a. In which local government's jurisdiction is this project?	not applicable
3b. Which of the following locally-implemented stormwater management programs apply (check all that apply):	<input type="checkbox"/> Phase II <input type="checkbox"/> NSW <input type="checkbox"/> USMP <input type="checkbox"/> Water Supply Watershed <input type="checkbox"/> Other:
3c. Has the approved Stormwater Management Plan with proof of approval been attached?	<input type="checkbox"/> Yes <input type="checkbox"/> No
4. DWQ Stormwater Program Review	
4a. Which of the following state-implemented stormwater management programs apply (check all that apply):	<input type="checkbox"/> Coastal counties <input type="checkbox"/> HQW <input type="checkbox"/> ORW <input type="checkbox"/> Session Law 2006-246 <input type="checkbox"/> Other:
4b. Has the approved Stormwater Management Plan with proof of approval been attached?	<input type="checkbox"/> Yes <input type="checkbox"/> No
5. DWQ 401 Unit Stormwater Review	
5a. Does the Stormwater Management Plan meet the appropriate requirements?	<input type="checkbox"/> Yes <input type="checkbox"/> No N/A
5b. Have all of the 401 Unit submittal requirements been met?	<input type="checkbox"/> Yes <input type="checkbox"/> 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?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
1b. If you answered "yes" to the above, does the project require preparation of an environmental document pursuant to the requirements of the National or State (North Carolina) Environmental Policy Act (NEPA/SEPA)?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
1c. If you answered "yes" to the above, has the document review been finalized by the State Clearing House? (If so, attach a copy of the NEPA or SEPA final approval letter.) Comments:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
2. Violations (DWQ Requirement)	
2a. Is the site in violation of DWQ Wetland Rules (15A NCAC 2H .0500), Isolated Wetland Rules (15A NCAC 2H .1300), DWQ Surface Water or Wetland Standards, or Riparian Buffer Rules (15A NCAC 2B .0200)?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
2b. Is this an after-the-fact permit application?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
2c. If you answered "yes" to one or both of the above questions, provide an explanation of the violation(s):	
3. Cumulative Impacts (DWQ Requirement)	
3a. Will this project (based on past and reasonably anticipated future impacts) result in additional development, which could impact nearby downstream water quality?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
3b. If you answered "yes" to the above, submit a qualitative or quantitative cumulative impact analysis in accordance with the most recent DWQ policy. If you answered "no," provide a short narrative description. 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?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
5b. Have you checked with the USFWS concerning Endangered Species Act impacts?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
5c. If yes, indicate the USFWS Field Office you have contacted.	<input type="checkbox"/> Raleigh <input type="checkbox"/> Asheville	
5d. What data sources did you use to determine whether your site would impact Endangered Species or Designated Critical Habitat? USFWS County Site, NC Natural Heritage site		
6. Essential Fish Habitat (Corps Requirement)		
6a. Will this project occur in or near an area designated as essential fish habitat?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
6b. What data sources did you use to determine whether your site would impact Essential Fish Habitat? 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)?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
7b. What data sources did you use to determine whether your site would impact historic or archeological resources? NEPA Documentation		
8. Flood Zone Designation (Corps Requirement)		
8a. Will this project occur in a FEMA-designated 100-year floodplain?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
8b. If yes, explain how project meets FEMA requirements: NCDOT Hydraulics Unit coordination with FEMA		
8c. What source(s) did you use to make the floodplain determination? FEMA Maps		
<u>Dr. Gregory J. Thorpe, Ph D</u> Applicant/Agent's Printed Name	 Applicant/Agent's Signature (Agent's signature is valid only if an authorization letter from the applicant is provided.)	<u>8.23.12</u> Date

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

Action Id. SAW-2008-00522

Placement of dredged or fill material within waters of the US and/or wetlands without a Department of the Army permit may constitute a violation of Section 301 of the Clean Water Act (33 USC § 1311). If you have any questions regarding this determination and/or the Corps regulatory program, please contact William Wescott or Emily Jernigan at 252-975-1616.

C. Basis For Determination

This site exhibits wetland criteria as described in the 1987 Corps Wetland Delineation Manual and abuts Stoney Fork Creek, a tributary of the Neuse River.

D. Remarks

E. Appeals Information (This information applies only to approved jurisdictional determinations as indicated in B. above)

This correspondence constitutes an approved jurisdictional determination for the above described site. If you object to this determination, you may request an administrative appeal under Corps regulations at 33 CFR part 331. Enclosed you will find a Notification of Appeal Process (NAP) fact sheet and request for appeal (RFA) form. If you request to appeal this determination you must submit a completed RFA form to the following address:

District Engineer, Wilmington Regulatory Division
Attn: William Wescott, Project Manager,
Washington Regulatory Field Office
Post Office Box 1000
Washington, North Carolina 27889

In order for an RFA to be accepted by the Corps, the Corps must determine that it is complete, that it meets the criteria for appeal under 33 CFR part 331.5, and that it has been received by the District Office within 60 days of the date of the NAP. Should you decide to submit an RFA form, it must be received at the above address by 08/24/2008.

It is not necessary to submit an RFA form to the District Office if you do not object to the determination in this correspondence.

Corps Regulatory Official: Emily N. Jernigan

Date 06/24/2008

Expiration Date 06/24/2013

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

Copy furnished:
Steven Busbee, STV/ Ralph Whitehead Associates



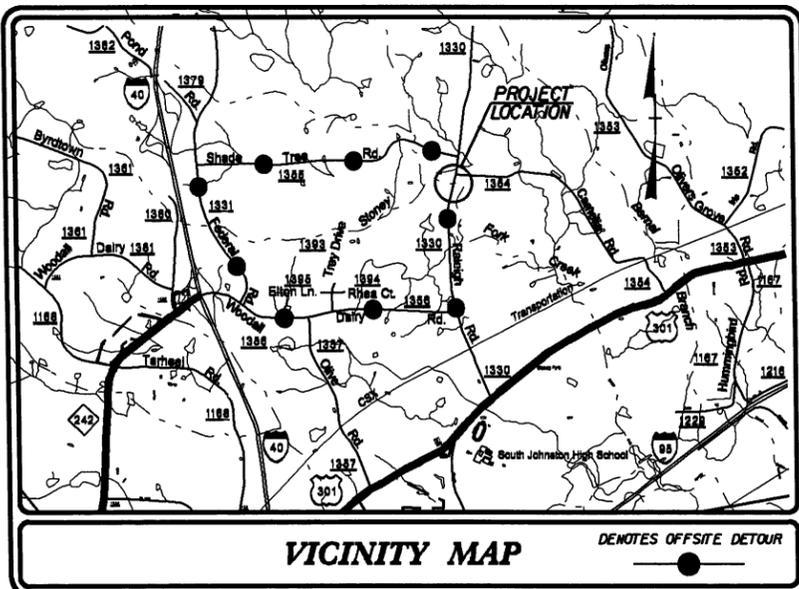
North Carolina Department of Transportation
 Highway Stormwater Program
STORMWATER MANAGEMENT PLAN
 FOR LINEAR ROADWAY PROJECTS

(Version 1.2; Released September, 2011)

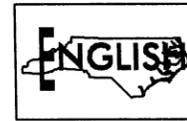
General Project Information	
Project No.: B-4558	Bridge Replacement Date: 4/10/2012
NCDOT Contact: Linda Johns Address: NCDOT 1590 MSC Raleigh, NC 27699-1590 Phone: (919) 707-6700 Email: ljohns@ncdot.gov	Contractor / Designer: NCDOT Division of Highways is the designer Address: (Same as NCDOT contact) Phone: (919) 707-6700 Email:
City/Town: Benson	County(ies): Johnston
River Basin(s): Neuse	CAMA County? No
Primary Receiving Water: Stony Fork Creek	NCDWQ Stream Index No.: 27-52-6-2
NCDWQ Surface Water Classification for Primary Receiving Water:	Primary: Class C
Other Stream Classification:	Supplemental: Nutrient Sensitive Waters (NSW)
303(d) Impairments:	
Buffer Rules in Effect: Neuse	
Project Description	
Project Length (lin. Miles or feet): 0.081 miles	Surrounding Land Use: Agriculture, forests, rural residential and quarry.
Project Built-Upon Area (ac.): 0.30	Proposed Project: 0.22 ac.
Typical Cross Section Description:	Existing Site: 1500 ac. This roadway is a collector using subregional tier design guidelines, with two 11' lanes, and open shoulders except on the bridge and its approaches, where bridge rail and shoulder berm gutter will be installed, respectively.
Average Daily Traffic (veh/hr/day):	Design/Future: 1830/3090
General Project Narrative:	Replace bridge #86 and approaches for SR 1330 (Raleigh Road). The new bridge is located along the same roadway alignment. The proposed bridge deck is widened to accommodate roadway runoff on the bridge and avoid deck drain use. This captured runoff will be diverted to a storm drain system via shoulder berm gutter, which provides an outlet and rip rap pad for energy dissipation outside buffer zone 2. General SCM type for this project is open, grass shoulders. Anadromous fish species were found within Stony Fork Creek. NCDOT will follow stream crossing guidelines for anadromous fish passage, including an in-water work moratorium from February 15 to June 15.
References	

01/08/99
 CONTRACT: B-4558
 \$\$\$SYTIME\$\$\$\$\$
 \$\$\$DDON\$\$\$\$\$
 \$\$\$USERNAME\$\$\$\$\$

See Sheet 1-A For Index of Sheets



STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS



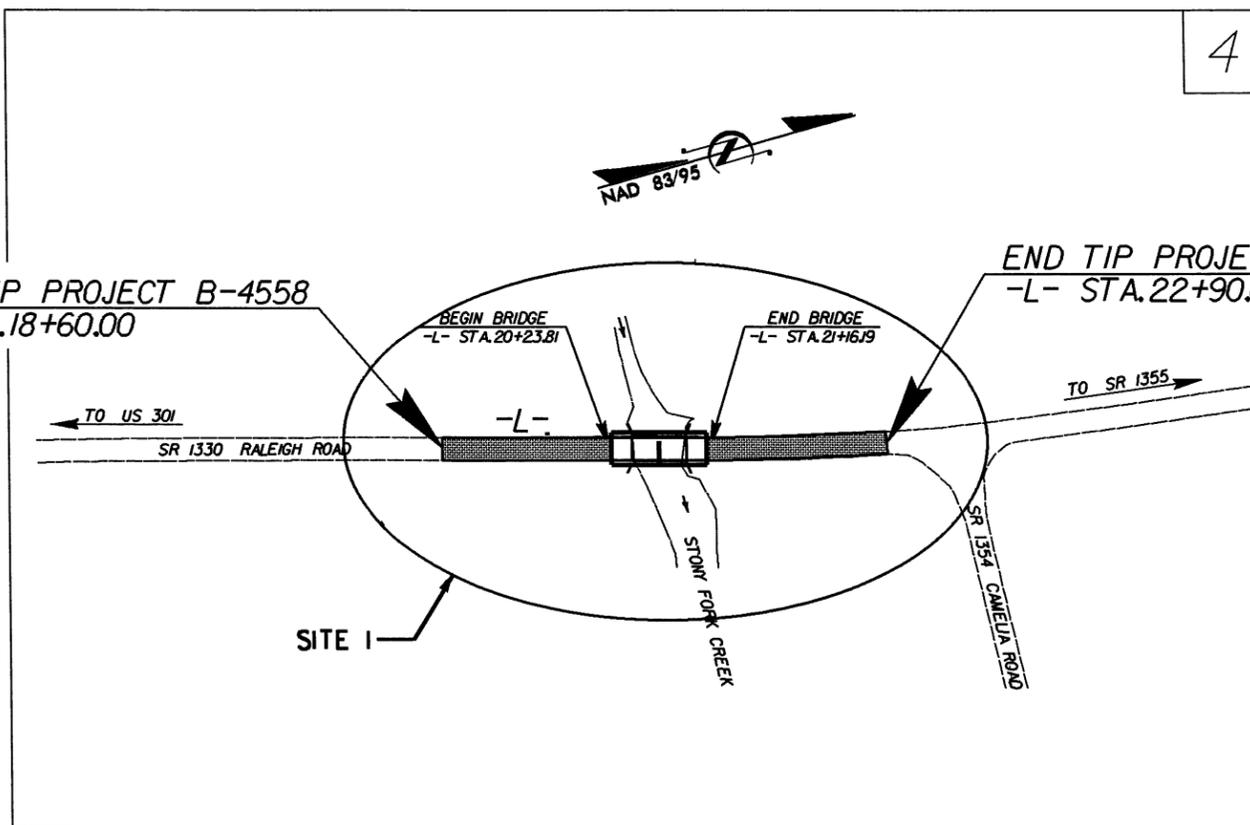
STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	B-4558	1	
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	
33769.1.1	BRZ-1330(6)	P.E.	
33769.2.1	BRZ-1330(6)	RW, UTIL.	

JOHNSTON COUNTY

LOCATION: BRIDGE NO. 86 OVER STONY FORK CREEK AND APPROACHES ON SR 1330 (RALEIGH ROAD)

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

WETLAND & STREAM IMPACTS

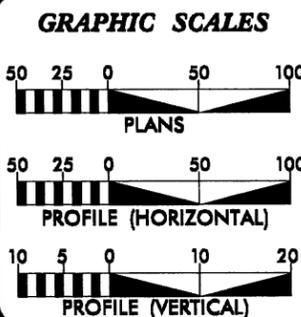


Permit Drawing
Sheet 1 of 8

THIS PROJECT IS NOT WITHIN ANY MUNICIPAL BOUNDARIES.
CLEARING ON THIS PROJECT SHALL BE PERFORMED TO THE LIMITS ESTABLISHED BY METHOD III.

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

CONTRACT:



DESIGN DATA

ADT 2013 =	1830
ADT 2033 =	3090
DHV =	11 %
D =	60 %
T =	7 % *
V =	60 MPH
* (TTST 1% + DUAL 6%)	
FUNC. CLASS. = COLLECTOR	
SUBREGIONAL TIER	

PROJECT LENGTH

LENGTH ROADWAY TIP PROJECT B-4558 =	0.063 MILE
LENGTH STRUCTURE TIP PROJECT B-4558 =	0.018 MILE
TOTAL LENGTH TIP PROJECT B-4558 =	0.081 MILE

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

2012 STANDARD SPECIFICATIONS	
RIGHT OF WAY DATE: JANUARY 17, 2012	REKHA PATEL, PE PROJECT ENGINEER
LETTING DATE: MARCH 19, 2013	SAMUEL L. ST. CLAIR PROJECT DESIGN ENGINEER

HYDRAULICS ENGINEER

SIGNATURE: _____ P.E.

ROADWAY DESIGN ENGINEER

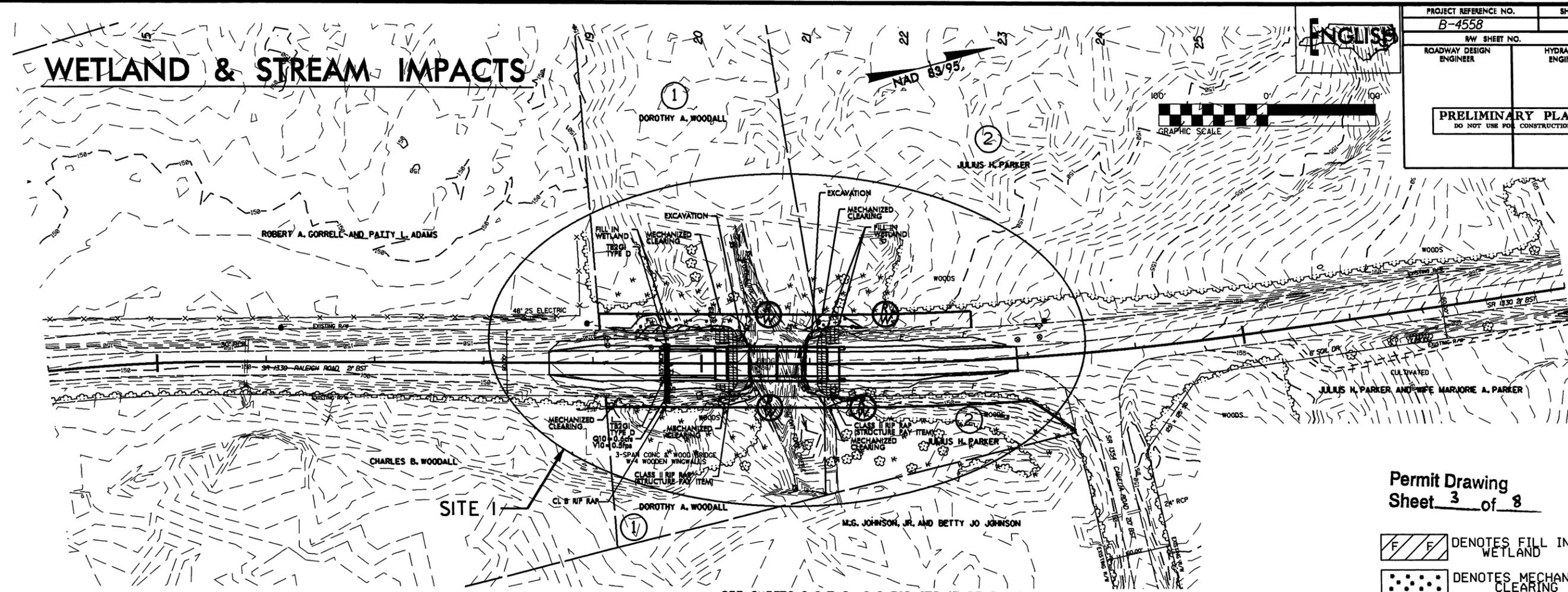
SIGNATURE: _____ P.E.



8/17/99

WETLAND & STREAM IMPACTS

PROJECT REFERENCE NO. B-4558	SHEET NO. 4
RW SHEET NO. ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	



Permit Drawing
Sheet 3 of 8

DENOTES FILL IN WETLAND
 DENOTES MECHANIZED CLEARING

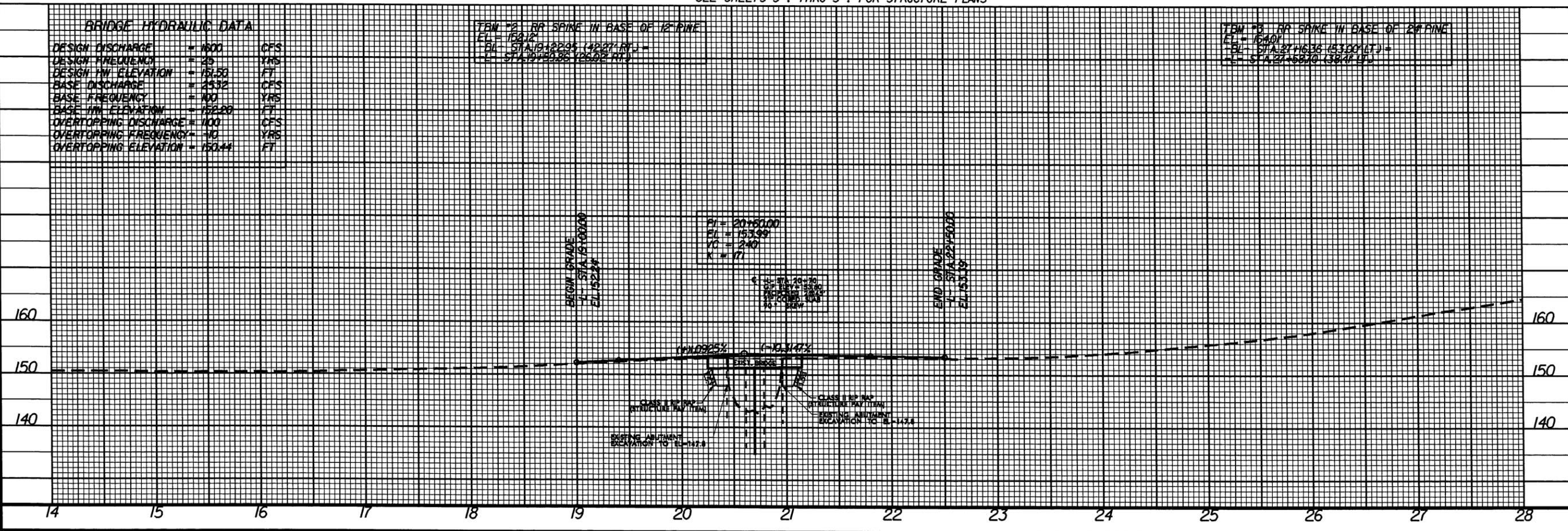
SEE SHEETS S-? THRU S-? FOR STRUCTURE PLANS

BRIDGE HYDRAULIC DATA

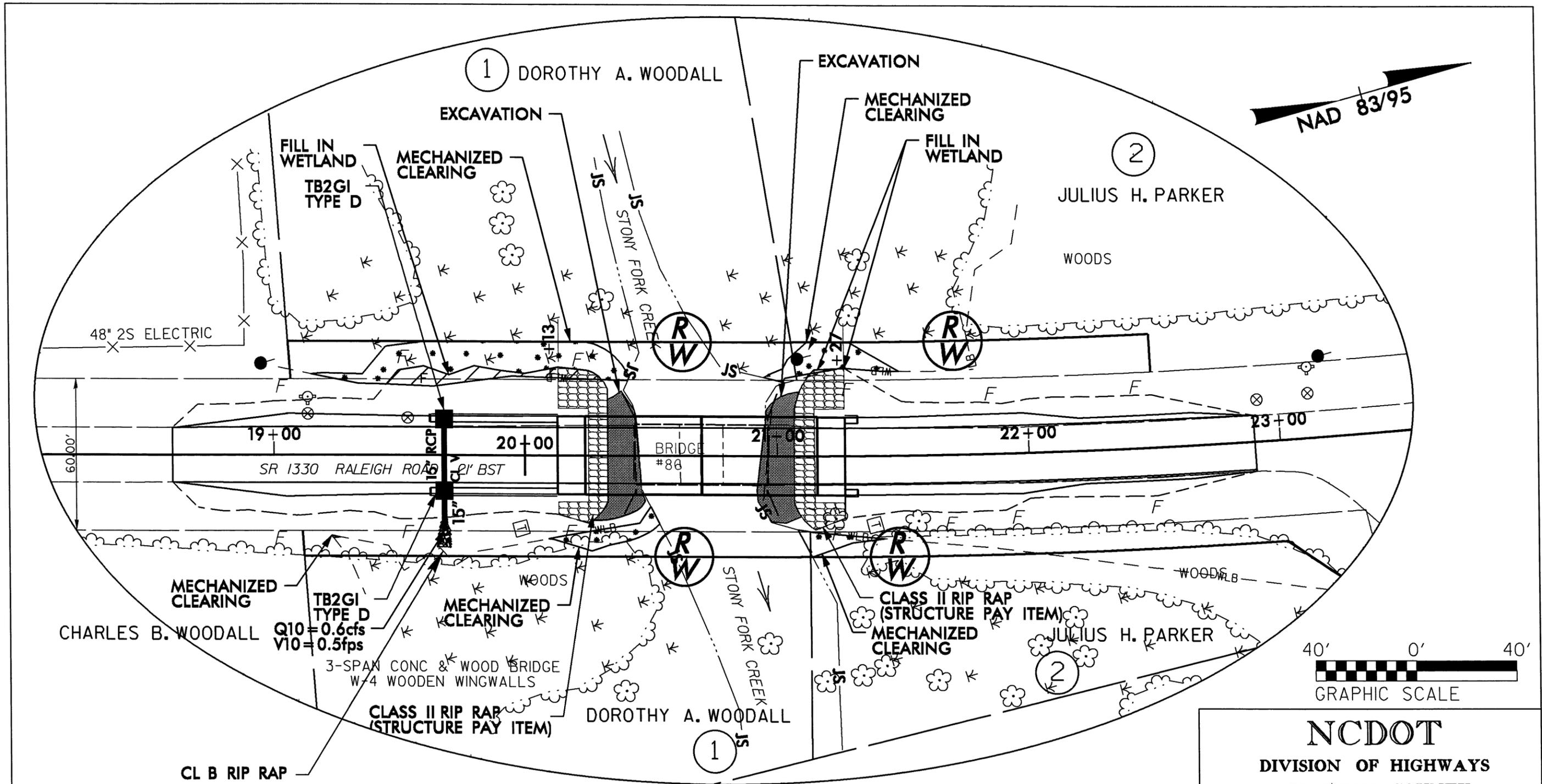
DESIGN DISCHARGE	= 1000	CFS
DESIGN FREQUENCY	= 25	YRS
DESIGN HW ELEVATION	= 151.50	FT
BASE DISCHARGE	= 2532	CFS
BASE FREQUENCY	= 100	YRS
BASE HW ELEVATION	= 152.20	FT
OVERTOPPING DISCHARGE	= 100	CFS
OVERTOPPING FREQUENCY	= 10	YRS
OVERTOPPING ELEVATION	= 150.44	FT

TBM #2 RP SPIKE IN BASE OF 12" PINE
 EL = 150.12
 BL STA 19+22.05 (42.07 FT)
 L STA 19+50.36 (126.02 FT)

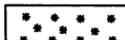
TBM #3 RP SPIKE IN BASE OF 20" PINE
 EL = 164.01
 BL STA 27+16.36 (53.00 FT)
 L STA 27+59.70 (394.11 FT)



*****SYTIME*****
 *****DESIGN*****

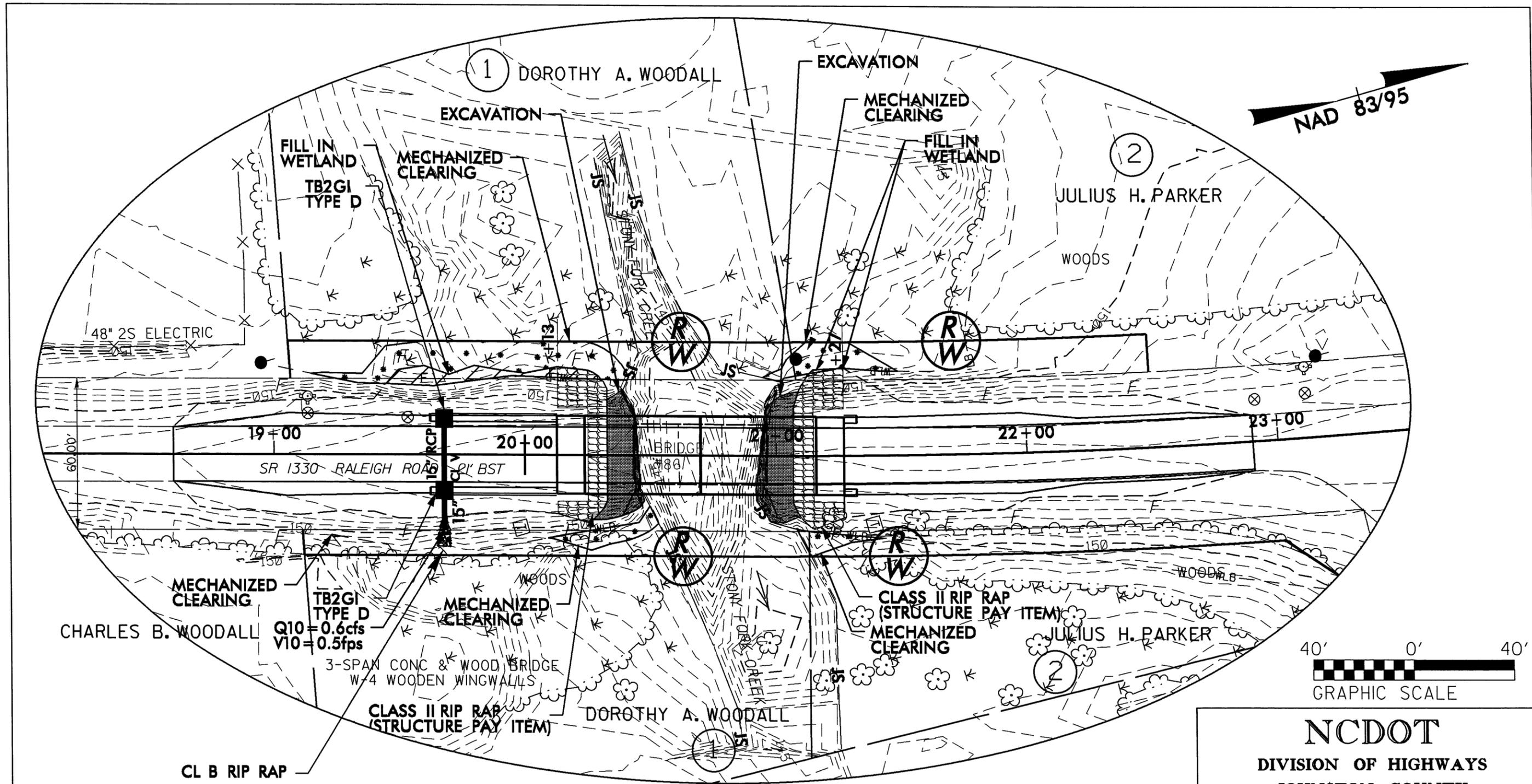


SITE 1 ENLARGEMENT

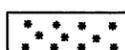
-  DENOTES FILL IN WETLAND
-  DENOTES MECHANIZED CLEARING

Permit Drawing
Sheet 4 of 8

NCDOT
 DIVISION OF HIGHWAYS
 JOHNSTON COUNTY
 PROJECT: 33769.1.1 (B-4558)
 BRIDGE NO. 86 OVER STONY
 FORK CREEK AND APPROACHES
 ON SR 1330 (RALEIGH RD.)
 SHEET OF 4/11/12



SITE 1 ENLARGEMENT

-  DENOTES FILL IN WETLAND
-  DENOTES MECHANIZED CLEARING

Permit Drawing
Sheet 5 of 8

NCDOT
 DIVISION OF HIGHWAYS
 JOHNSTON COUNTY
 PROJECT: 33769.1.1 (B-4558)
 BRIDGE NO. 86 OVER STONY
 FORK CREEK AND APPROACHES
 ON SR 1330 (RALEIGH RD.)
 SHEET OF 4/11/12



PROPERTY OWNERS
NAMES AND ADDRESSES

PARCEL NO.	NAMES	ADDRESSES
1	Woodall, Dorothy Allen	909 E. Main St. Benson, NC 27504
2	Parker, Julius H.	599 Juniper Church Rd. Four Oaks, NC 27524

Permit Drawing
Sheet 8 of 8

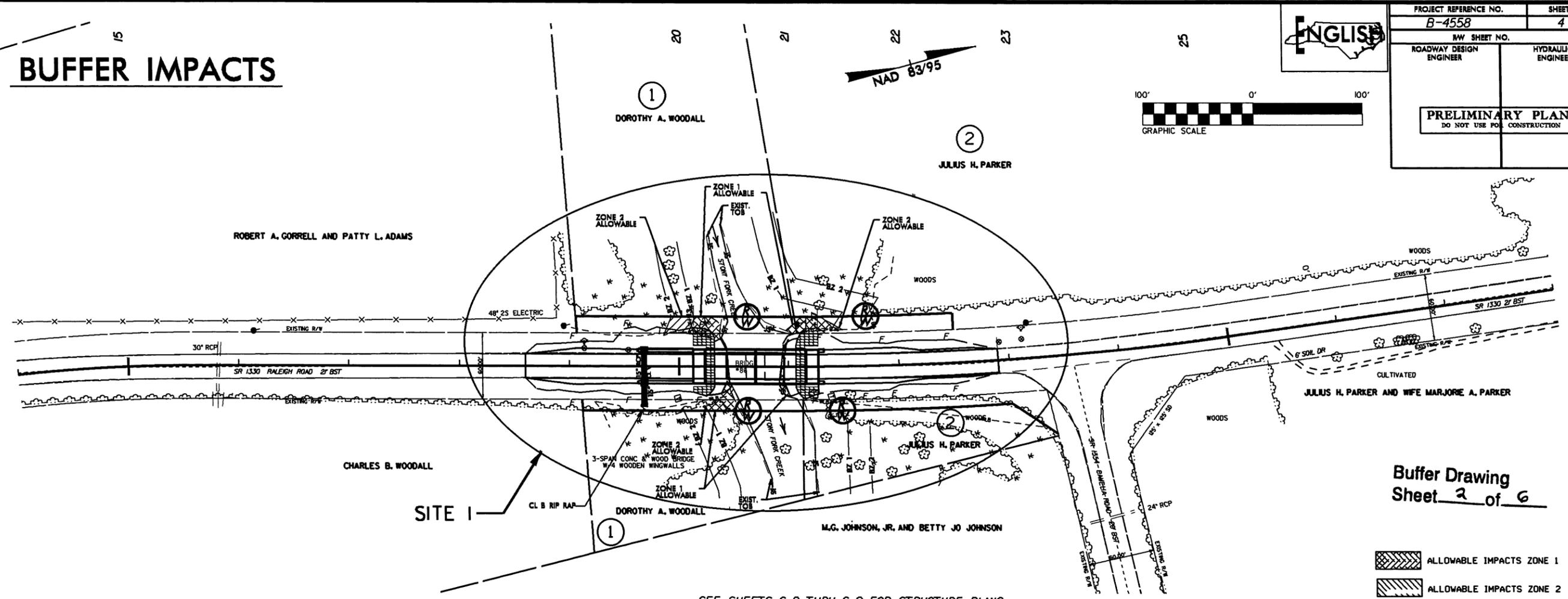
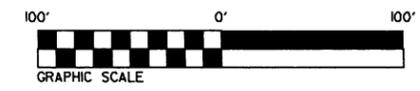
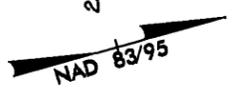
NCDOT
DIVISION OF HIGHWAYS
JOHNSTON COUNTY
PROJECT: 33769.1.1 (B-4558)
BRIDGE NO. 86 OVER STONY
FORK CREEK AND APPROACHES
ON SR 1330 (RALEIGH RD.)
SHEET OF 4/13/12

8/17/99

BUFFER IMPACTS



PROJECT REFERENCE NO. B-4558	SHEET NO. 4
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	



Buffer Drawing Sheet 2 of 6

- ALLOWABLE IMPACTS ZONE 1
- ALLOWABLE IMPACTS ZONE 2

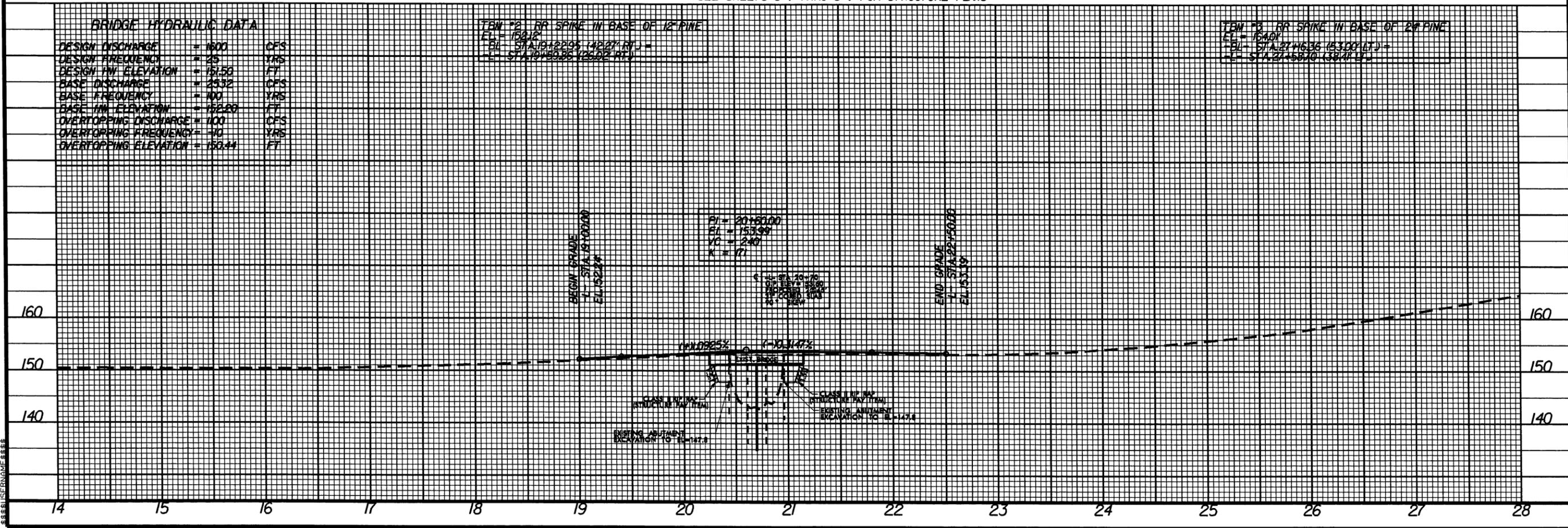
SEE SHEETS S-? THRU S-? FOR STRUCTURE PLANS

BRIDGE HYDRAULIC DATA

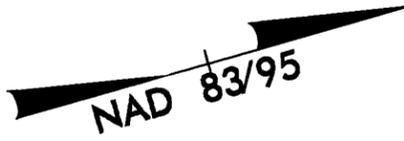
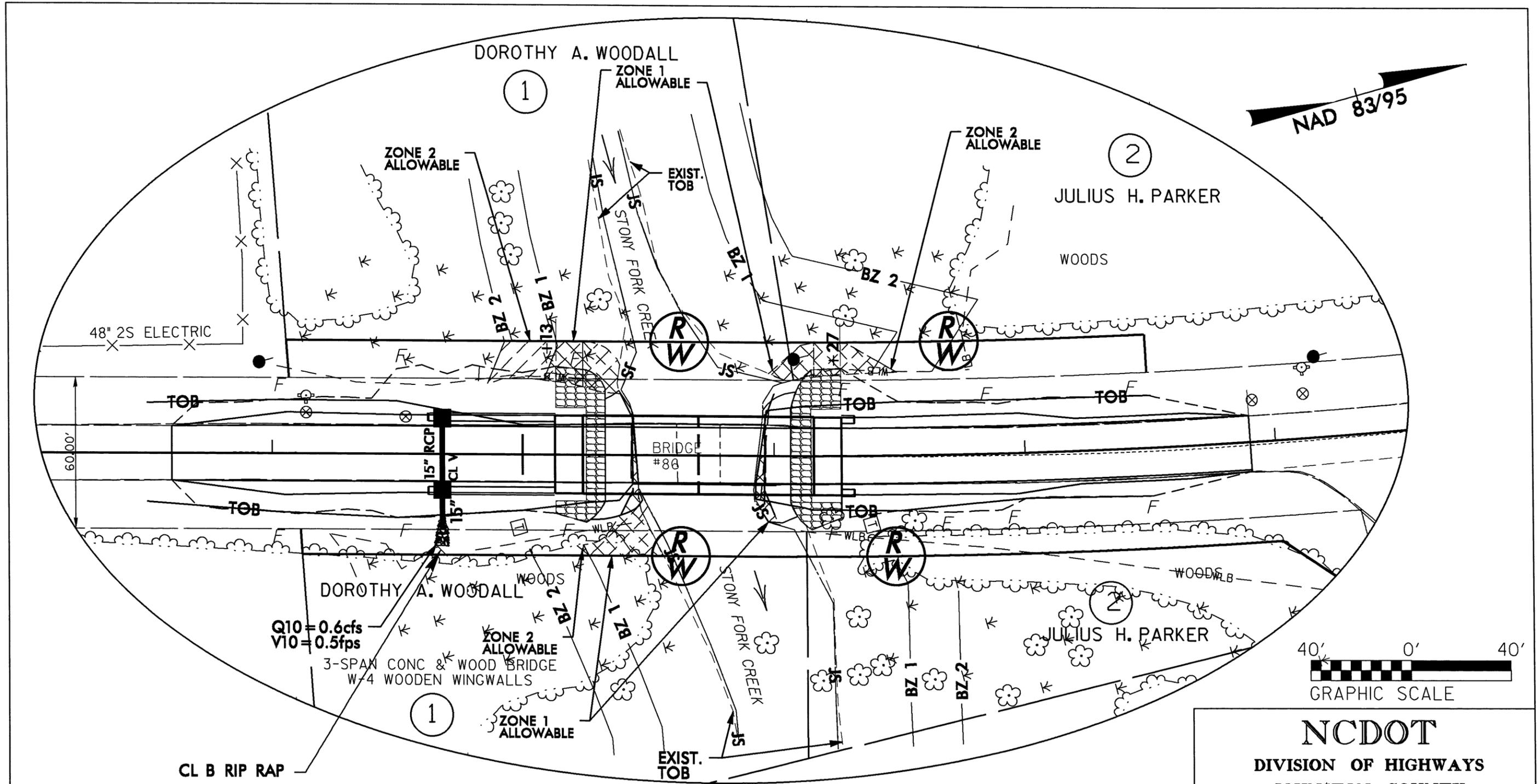
DESIGN DISCHARGE	= 1600	CFS
DESIGN FREQUENCY	= 25	YRS
DESIGN HW ELEVATION	= 151.50	FT
BASE DISCHARGE	= 2532	CFS
BASE FREQUENCY	= 100	YRS
BASE HW ELEVATION	= 150.20	FT
OVERTOPPING DISCHARGE	= 1100	CFS
OVERTOPPING FREQUENCY	= 10	YRS
OVERTOPPING ELEVATION	= 150.44	FT

TBN #2 BR SPIKE IN BASE OF 12" PINE
 EL = 164.8
 BL STA 19+82.05 (12.07' RT) =
 EL = 157.9
 TL STA 19+85.05 (12.02' RT)

TBN #3 BR SPIKE IN BASE OF 20" PINE
 EL = 164.0
 BL STA 21+16.36 (5.30' LT) =
 EL = 158.7
 TL STA 21+58.70 (3.67' LT)



SUSTAINABLE
CONSTRUCTION



-  ALLOWABLE IMPACTS ZONE 1
-  ALLOWABLE IMPACTS ZONE 2

SITE 1 ENLARGEMENT

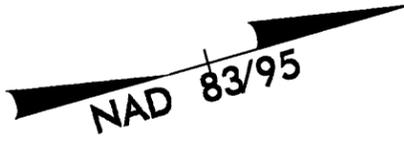
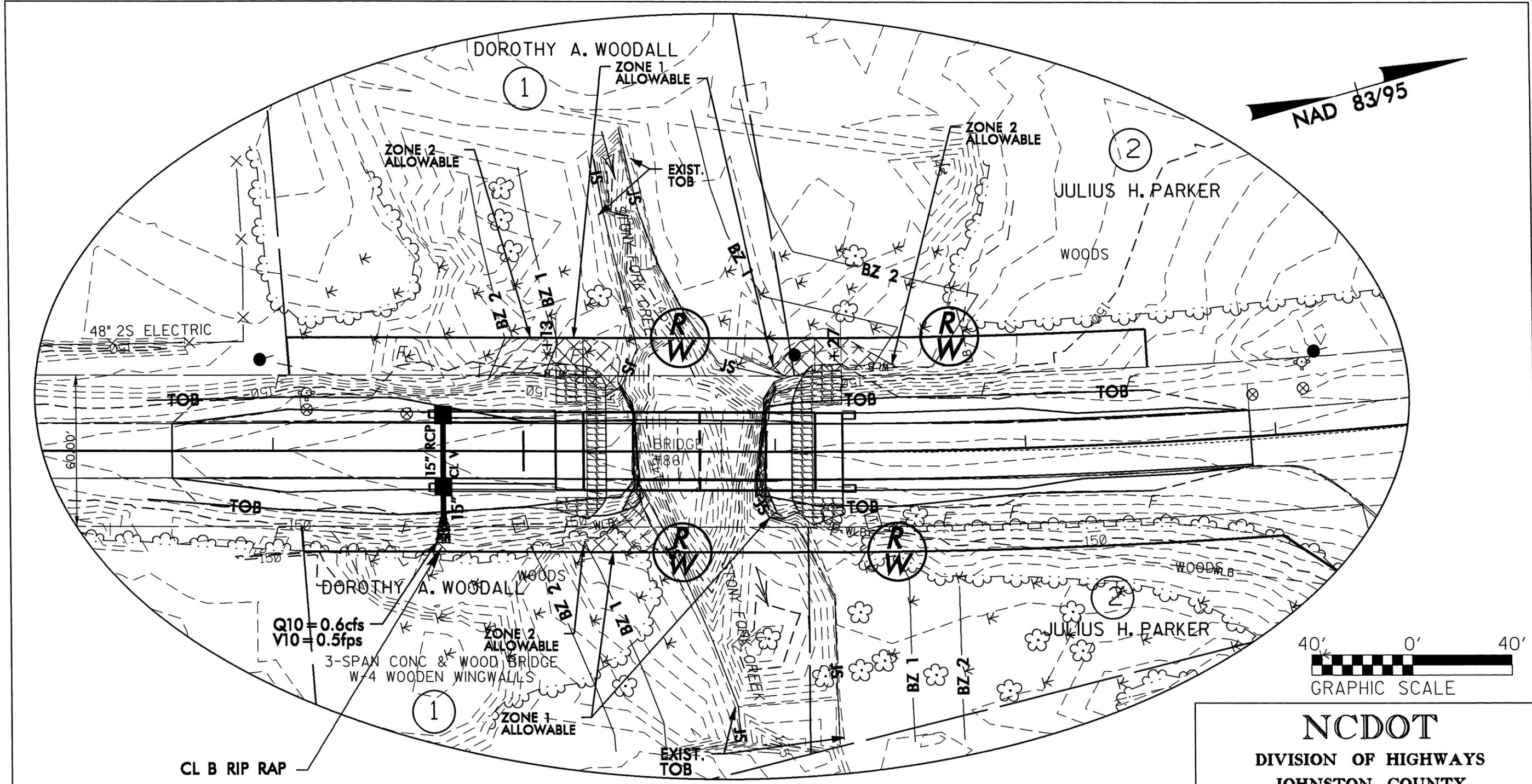
Buffer Drawing
Sheet 4 of 6

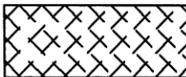
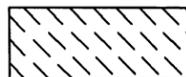
NCDOT

DIVISION OF HIGHWAYS
JOHNSTON COUNTY

PROJECT: 33769.1.1 (B-4558)
BRIDGE NO. 86 OVER STONY
FORK CREEK AND APPROACHES
ON SR 1330 (RALEIGH RD.)

SHEET OF 4 / 11 / 2012



-  ALLOWABLE IMPACTS ZONE 1
-  ALLOWABLE IMPACTS ZONE 2

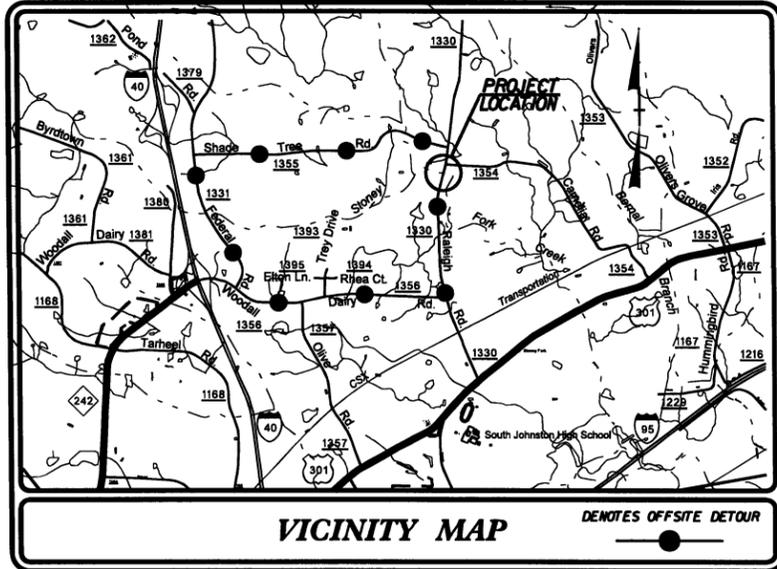
SITE 1 ENLARGEMENT

Buffer Drawing
Sheet 5 of 6

NCDOT
 DIVISION OF HIGHWAYS
 JOHNSTON COUNTY
 PROJECT: 33769.1.1 (B-4558)
 BRIDGE NO. 86 OVER STONY
 FORK CREEK AND APPROACHES
 ON SR 1330 (RALEIGH RD.)
 SHEET OF 4/11/2012

09/08/99

See Sheet 1-A For Index of Sheets



STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

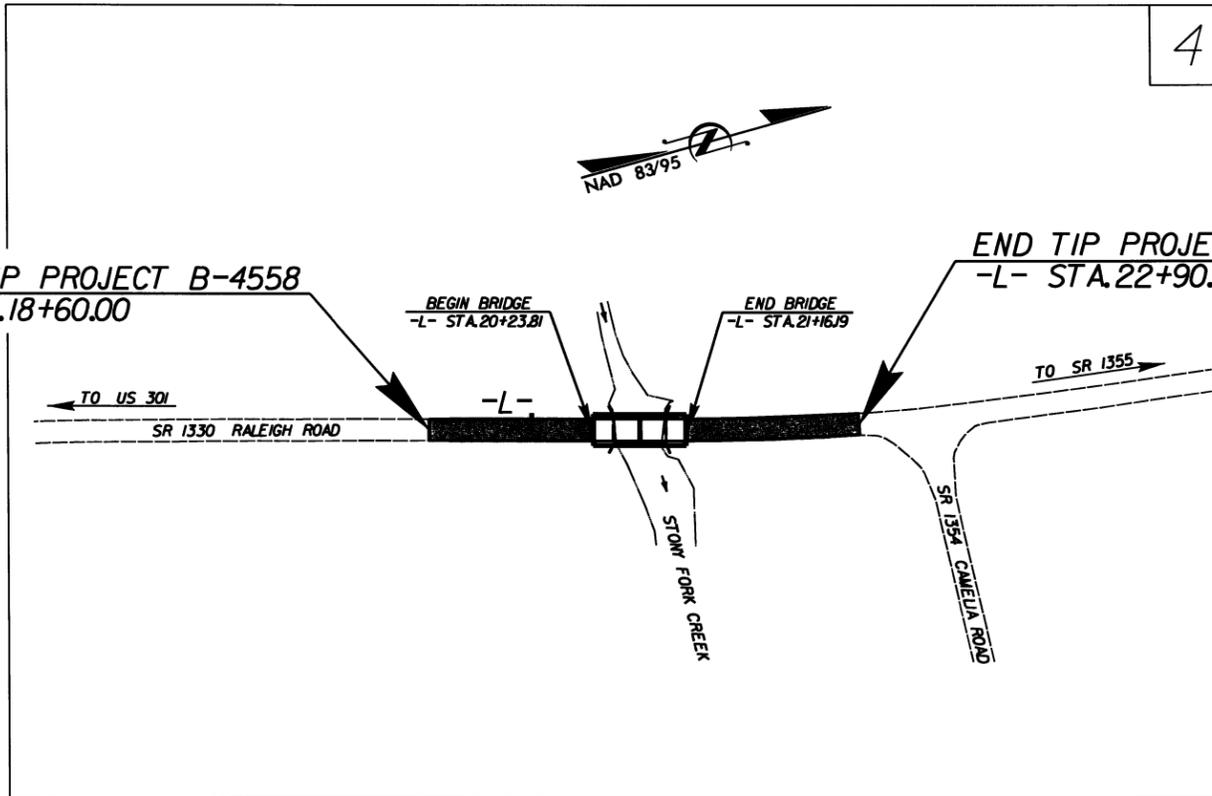
JOHNSTON COUNTY

LOCATION: BRIDGE NO. 86 OVER STONY FORK CREEK AND APPROACHES ON SR 1330 (RALEIGH ROAD)

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

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	B-4558	1	
STATE PROJ. NO.	P.A. PROJ. NO.	DESCRIPTION	
33769.1.1	BRZ-1330(6)	P.E.	
33769.2.1	BRZ-1330(6)	RAW, UTIL.	

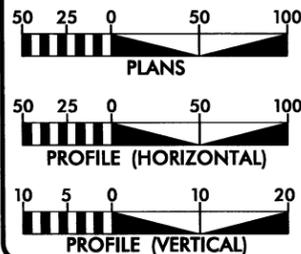
TIP PROJECT: B-4558



THIS PROJECT IS NOT WITHIN ANY MUNICIPAL BOUNDARIES.
CLEARING ON THIS PROJECT SHALL BE PREFORMED TO THE LIMITS ESTABLISHED BY METHOD III.

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

GRAPHIC SCALES



DESIGN DATA

ADT 2013 = 1830
ADT 2033 = 3090
DHV = 11 %
D = 60 %
T = 7 % *
V = 60 MPH
* (TTST 1% + DUAL 6%)
FUNC. CLASS. = COLLECTOR
SUBREGIONAL TIER

PROJECT LENGTH

LENGTH ROADWAY TIP PROJECT B-4558 = 0.063 MILE
LENGTH STRUCTURE TIP PROJECT B-4558 = 0.018 MILE
TOTAL LENGTH TIP PROJECT B-4558 = 0.081 MILE

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

2012 STANDARD SPECIFICATIONS

RIGHT OF WAY DATE:
JANUARY 17, 2012

LETTING DATE:
MARCH 19, 2013

REKHA PATEL, PE
PROJECT ENGINEER

SAMUEL L. ST. CLAIR
PROJECT DESIGN ENGINEER

HYDRAULICS ENGINEER

SIGNATURE: _____ P.E.

ROADWAY DESIGN ENGINEER

SIGNATURE: _____ P.E.



24-MAY-2012 10:04 R:\Roddwcy\Proj\B4558_rdy_tsh.dgn \$\$\$USERNAME\$\$\$

CONTRACT:

04/16/11

Note: Not to Scale

*S.U.E. = Subsurface Utility Engineering

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

PROJECT REFERENCE NO. B-4558
SHEET NO. 1-B

CONVENTIONAL PLAN SHEET SYMBOLS

BOUNDARIES AND PROPERTY:

State Line	-----
County Line	-----
Township Line	-----
City Line	-----
Reservation Line	-----
Property Line	-----
Existing Iron Pin	○
Property Corner	-----
Property Monument	□
Parcel/Sequence Number	②③
Existing Fence Line	-x-x-x-
Proposed Woven Wire Fence	○
Proposed Chain Link Fence	□
Proposed Barbed Wire Fence	◇
Existing Wetland Boundary	-----
Proposed Wetland Boundary	-----
Existing Endangered Animal Boundary	-----
Existing Endangered Plant Boundary	-----
Known Soil Contamination: Area or Site	☠ ☠
Potential Soil Contamination: Area or Site	☠ ?

BUILDINGS AND OTHER CULTURE:

Gas Pump Vent or UG Tank Cap	○
Sign	○
Well	⊕
Small Mine	⊗
Foundation	□
Area Outline	□
Cemetery	⊕
Building	□
School	⊕
Church	⊕
Dam	-----

HYDROLOGY:

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

RAILROADS:

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

RIGHT OF WAY:

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

ROADS AND RELATED FEATURES:

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

VEGETATION:

Single Tree	☼
Single Shrub	○
Hedge	-----
Woods Line	-----

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

EXISTING STRUCTURES:

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

UTILITIES:

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

TELEPHONE:

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

WATER:

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

TV:

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

GAS:

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

SANITARY SEWER:

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

MISCELLANEOUS:

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

6/2/99

PROJECT REFERENCE NO.	SHEET NO.
B-4558	1C
Location and Surveys	

SURVEY CONTROL SHEET B-4558

BENCHMARK DATA

 300 ELEVATION = 151.46
 N 611857 E 2147645
 L STATION 12+91 35 LEFT
 TBM #1 RR SPIKE IN BASE OF POWER POLE

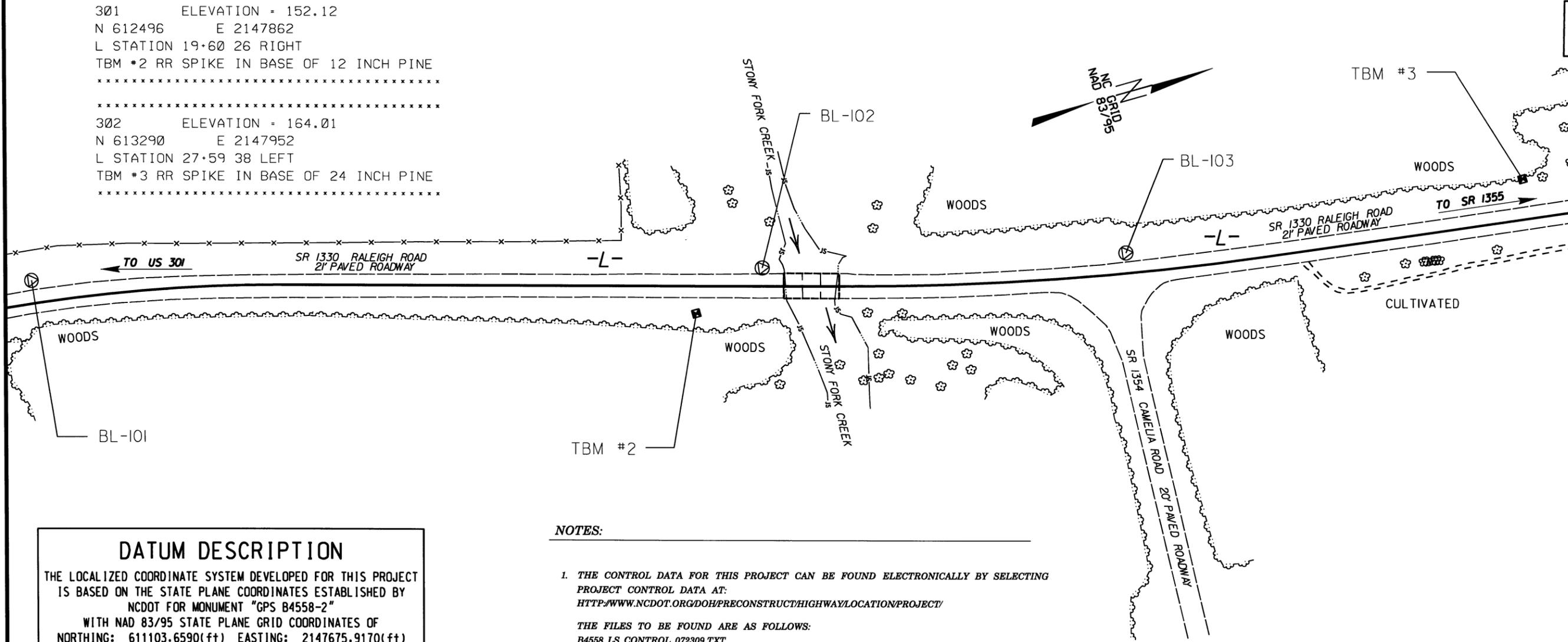
 301 ELEVATION = 152.12
 N 612496 E 2147862
 L STATION 19+60 26 RIGHT
 TBM #2 RR SPIKE IN BASE OF 12 INCH PINE

 302 ELEVATION = 164.01
 N 613290 E 2147952
 L STATION 27+59 38 LEFT
 TBM #3 RR SPIKE IN BASE OF 24 INCH PINE

BL

POINT	DESC.	NORTH	EAST	ELEVATION	L STATION	OFFSET
2	GPS B4558-2	611103.6590	2147675.9170	153.62	OUTSIDE PROJECT LIMITS	
101	BL-101	611892.5770	2147661.9420	150.55	13+27.65	21.98 LT
102	BL-102	612568.2710	2147837.3640	151.88	20+23.20	17.49 LT
103	BL-103	612906.2750	2147916.7180	152.51	23+72.35	19.62 LT
104	BL-104	613439.4330	2148040.5180	167.91	29+18.09	30.37 RT

BASELINE DATA



DATUM DESCRIPTION

THE LOCALIZED COORDINATE SYSTEM DEVELOPED FOR THIS PROJECT IS BASED ON THE STATE PLANE COORDINATES ESTABLISHED BY NCDOT FOR MONUMENT "GPS B4558-2" WITH NAD 83/95 STATE PLANE GRID COORDINATES OF
 NORTHING: 611103.6590(±) EASTING: 2147675.9170(±)
 ELEVATION: 153.6180(±)
 THE AVERAGE COMBINED GRID FACTOR USED ON THIS PROJECT (GROUND TO GRID) IS: .99987494
 THE N.C. LAMBERT GRID BEARING AND LOCALIZED HORIZONTAL GROUND DISTANCE FROM "GPS B4558-2" TO -L- STATION 10+00.00 IS
 S 0°0 01' 09" E 459.12 FT
 ALL LINEAR DIMENSIONS ARE LOCALIZED HORIZONTAL DISTANCES
 VERTICAL DATUM USED IS NAVD 88

NOTES:

- THE CONTROL DATA FOR THIS PROJECT CAN BE FOUND ELECTRONICALLY BY SELECTING PROJECT CONTROL DATA AT:
[HTTP://WWW.NCDOT.ORG/DOH/PRECONSTRUCT/HIGHWAY/LOCATIONPROJECT/](http://www.ncdot.org/DOH/PRECONSTRUCT/HIGHWAY/LOCATIONPROJECT/)
 THE FILES TO BE FOUND ARE AS FOLLOWS:
 B4558_LS_CONTROL_072309.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.
 PROJECT CONTROL ESTABLISHED USING GLOBAL POSITIONING SYSTEM.
 NETWORK ESTABLISHED FROM NGS ONLINE POSITIONING SERVICE (OPUS)

NOTE: DRAWING NOT TO SCALE

24-MAY-2002 10:04 b4558.ls-1c-090723.dgn

6/2/99

SURVEY CONTROL SHEET B-4558

PROJECT REFERENCE NO.	SHEET NO.
B-4558	1D
Location and Surveys	

PRELIMINARY

ROW MARKER CONCRETE OR GRANITE-E

ALIGN	STATION	OFFSET	NORTH	EAST
L	19+10.000	-45.00	612466.7052	2147780.3004
L	19+15.000	40.00	612448.5580	2147863.4910
L	21+01.883	-45.00	612651.4543	2147832.1342
L	21+01.883	40.00	612628.4930	2147913.9741
L	22+50.000	-45.00	612792.7683	2147867.8346
L	22+50.000	-30.00	612789.4747	2147882.4685
L	23+00.000	40.00	612823.6669	2147961.4575
L	23+38.063	70.00	612855.8424	2147998.4732

L

TYPE	STATION	NORTH	EAST
POT	10+00.000	611562.7830	2147675.7645
PC	10+80.000	611642.7335	2147672.9503
PT	15+64.684	612122.0712	2147730.3463
PC	21+01.883	612639.2983	2147875.4612
PT	25+06.978	613035.8034	2147956.7500
POT	33+86.978	613908.2758	2148071.6061

NOTES:

- 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/](http://www.ncdot.org/doh/preconstruct/highway/location/project/)
THE FILES TO BE FOUND ARE AS FOLLOWS:
B4558_LS_CONTROL_072309.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.
PROJECT CONTROL ESTABLISHED USING GLOBAL POSITIONING SYSTEM.
NETWORK ESTABLISHED FROM NGS ONLINE POSITIONING SERVICE (OPUS)

DATUM DESCRIPTION

THE LOCALIZED COORDINATE SYSTEM DEVELOPED FOR THIS PROJECT IS BASED ON THE STATE PLANE COORDINATES ESTABLISHED BY NCDOT FOR MONUMENT "GPS B4558-2"
WITH NAD 83/95 STATE PLANE GRID COORDINATES OF
NORTHING: 611103.6590(ft) EASTING: 2147675.9170(ft)
ELEVATION: 153.6180(ft)
THE AVERAGE COMBINED GRID FACTOR USED ON THIS PROJECT (GROUND TO GRID) IS: .99987494
THE N.C. LAMBERT GRID BEARING AND LOCALIZED HORIZONTAL GROUND DISTANCE FROM "GPS B4558-2" TO -L- STATION 10+00.00 IS
S 0°0 01' 09" E 459.12 FT
ALL LINEAR DIMENSIONS ARE LOCALIZED HORIZONTAL DISTANCES
VERTICAL DATUM USED IS NAVD 88

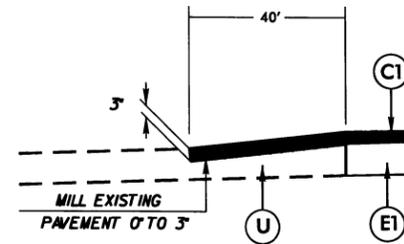
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5/14/99

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
C2	PROP. VAR. DEPTH ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B, AT AN AVERAGE RATE OF 112 LBS. PER SQ. YD. PER 1" DEPTH TO BE PLACED IN LAYERS NOT TO EXCEED 2" IN DEPTH.
E1	PROP. APPROX. 4 1/2" ASPHALT CONCRETE BASE COURSE, TYPE B25.0B, AT AN AVERAGE RATE OF 513 LBS. PER SQ. YD.
R	SHOULDER BERM GUTTER
T	EARTH MATERIAL
U	EXISTING PAVEMENT
W	VARIABLE DEPTH ASPHALT PAVEMENT (SEE WEDGING DETAIL)

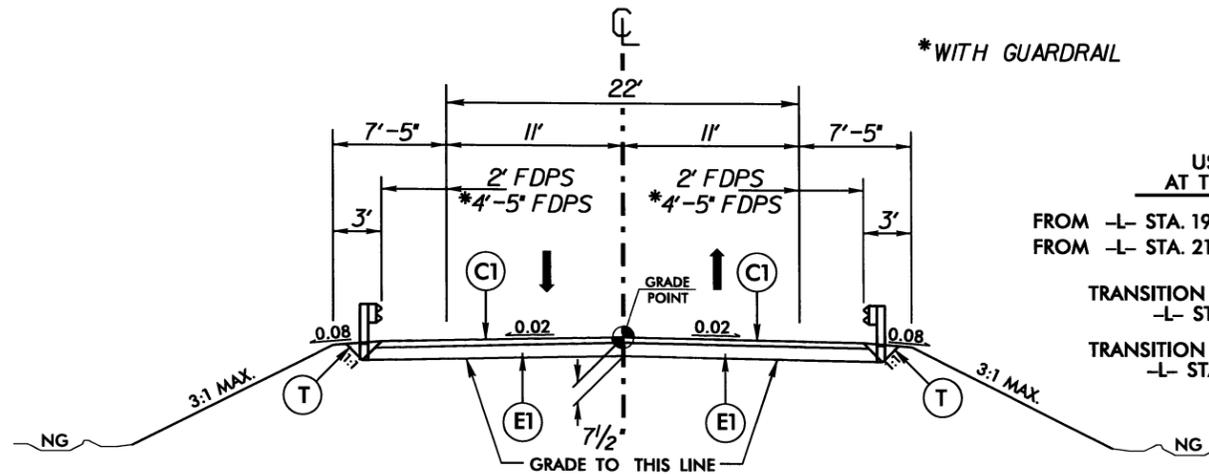
NOTE: PAVEMENT EDGE SLOPES ARE 1:1 UNLESS SHOWN OTHERWISE.

PROJECT REFERENCE NO. B-4558	SHEET NO. 2
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	PAVEMENT DESIGN ENGINEER
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	



**DETAIL OF PAVEMENT TREATMENT
AT BEGIN AND END OF PROJECT**

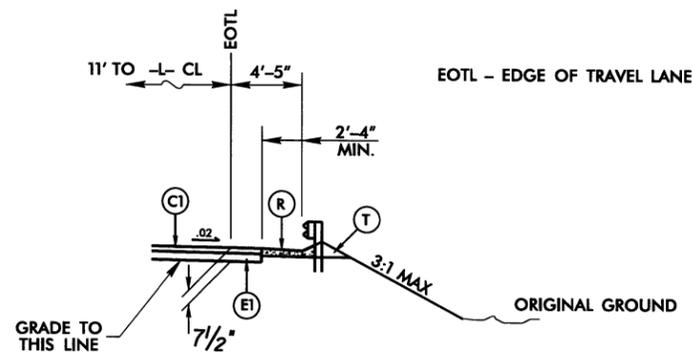
FROM -L- STA. 18+60.00 TO -L- STA. 19+00.00
FROM -L- STA. 22+50.00 TO -L- STA. 22+90.00 (REVERSE)



TYPICAL SECTION NO. 1

*WITH GUARDRAIL

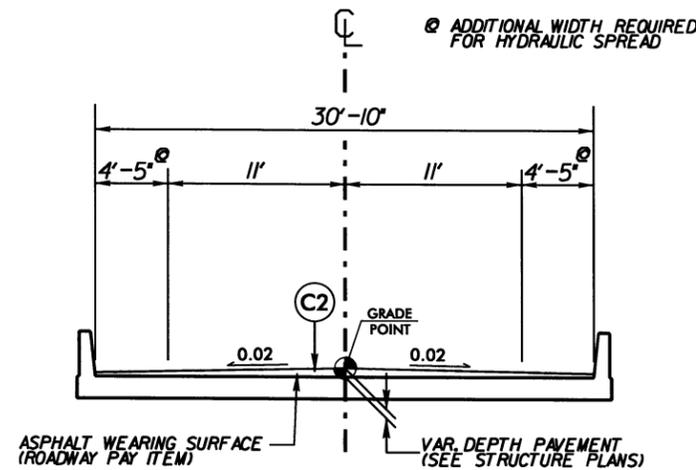
USE TYPICAL SECTION NO. 1
AT THE FOLLOWING LOCATIONS:
FROM -L- STA. 19+00.00 TO STA. 20+23.81 (BEGIN BRIDGE)
FROM -L- STA. 21+16.19 (END BRIDGE) TO STA. 22+50.00
TRANSITION FROM EXISTING TO TYP. SECT. NO. 1
-L- STA. 18+60.00 TO STA. 19+00.00
TRANSITION FROM TYP. SECT. NO. 1 TO EXISTING
-L- STA. 22+50.00 TO STA. 22+90.00



PARTIAL TYPICAL SECTION NO. 1A

USE PARTIAL TYPICAL SECTION NO. 1A
IN CONJUNCTION WITH TYPICAL SECTION NO. 1
AS FOLLOWS:

- L- STA. 19+63.00 RT TO -L- STA. 20+12.81 RT
- L- STA. 19+63.00 LT TO -L- STA. 20+12.81 LT (REVERSE)
- L- STA. 21+27.00 RT TO -L- STA. 21+32.00 RT
- L- STA. 21+27.00 LT TO -L- STA. 21+32.00 LT (REVERSE)



TYPICAL SECTION ON STRUCTURE

FROM -L- STA. 20+23.81 TO STA. 21+16.19

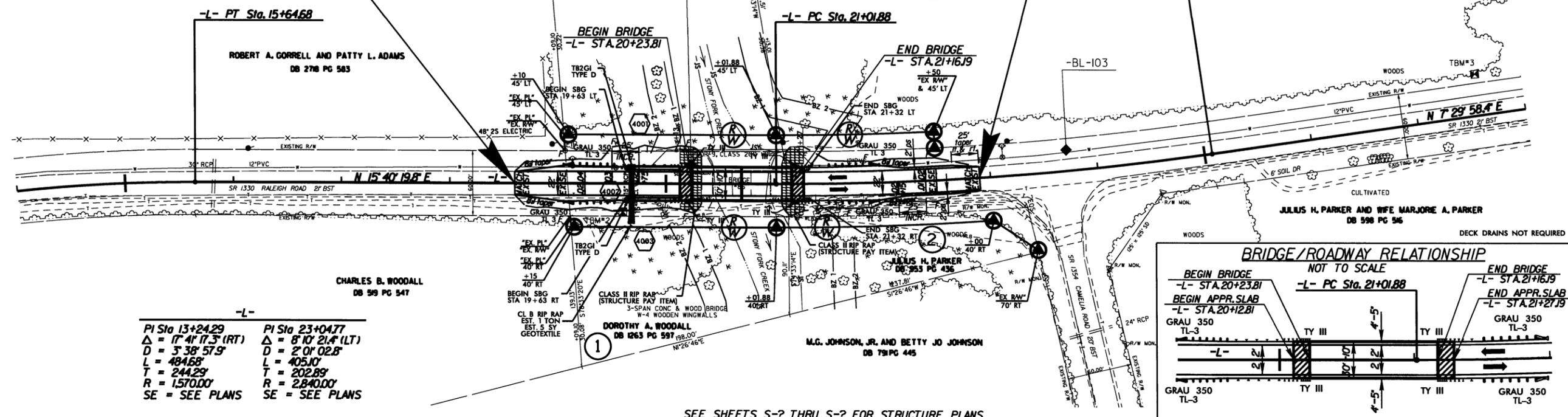
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B-4558

PROJECT REFERENCE NO. B-4558	SHEET NO. 4
RAW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	

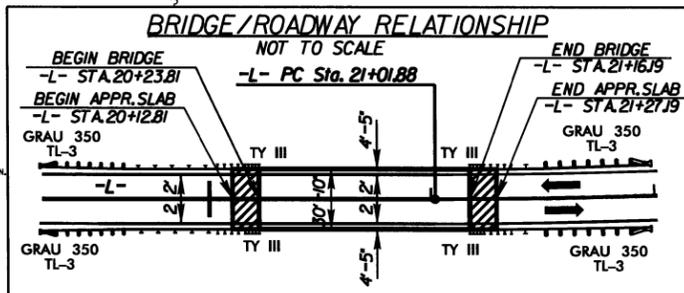
BEGIN TIP PROJECT B-4558
-L- STA.18+60.00

END TIP PROJECT B-4558
-L- STA.22+90.00



-L-

PI Sta 13+24.29	PI Sta 23+04.77
$\Delta = 17' 41.173''$ (RT)	$\Delta = 8' 10' 21.4''$ (LT)
D = 3' 38' 57.9"	D = 2' 01' 02.8"
L = 484.68'	L = 405.10'
T = 244.29'	T = 202.89'
R = 1570.00'	R = 2840.00'
SE = SEE PLANS	SE = SEE PLANS



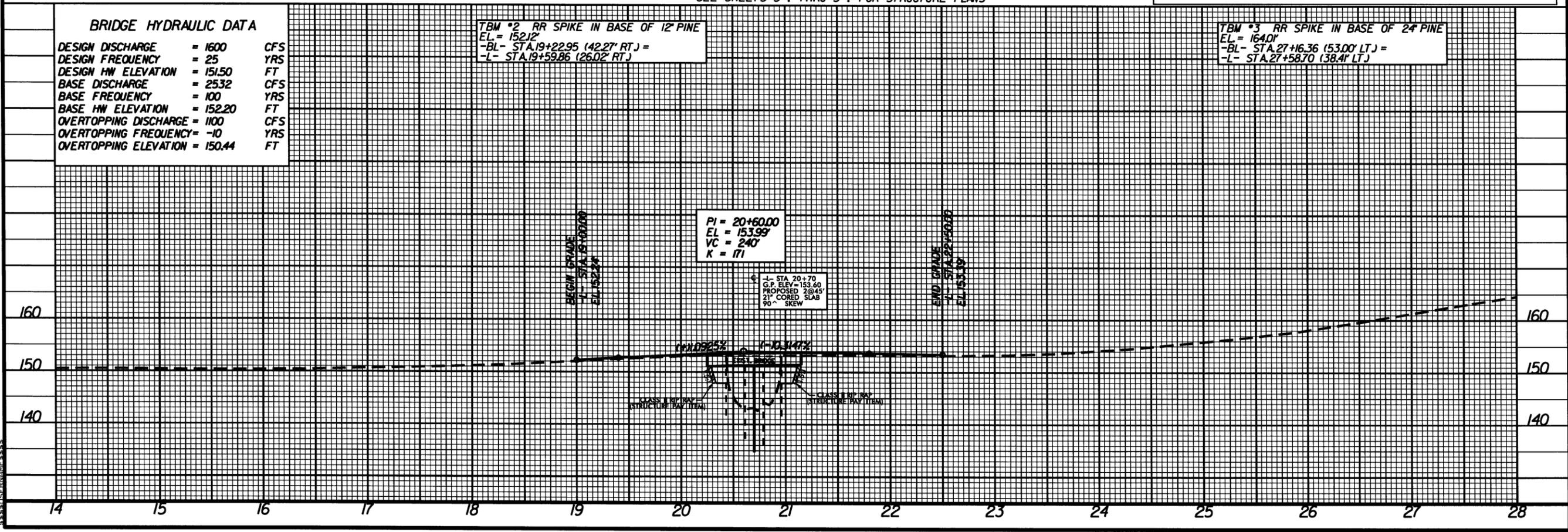
SEE SHEETS S-? THRU S-? FOR STRUCTURE PLANS

BRIDGE HYDRAULIC DATA

DESIGN DISCHARGE = 1600	CFS
DESIGN FREQUENCY = 25	YRS
DESIGN HW ELEVATION = 151.50	FT
BASE DISCHARGE = 2532	CFS
BASE FREQUENCY = 100	YRS
BASE HW ELEVATION = 152.20	FT
OVERTOPPING DISCHARGE = 1100	CFS
OVERTOPPING FREQUENCY = 10	YRS
OVERTOPPING ELEVATION = 150.44	FT

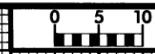
TBM #2 RR SPIKE IN BASE OF 12" PINE
EL = 152.12'
-L- STA.19+22.95 (42.27' RT) =
-L- STA.19+59.86 (26.02' RT)

TBM #3 RR SPIKE IN BASE OF 24" PINE
EL = 164.01'
-L- STA.27+16.36 (53.00' LT) =
-L- STA.27+58.70 (38.41' LT)

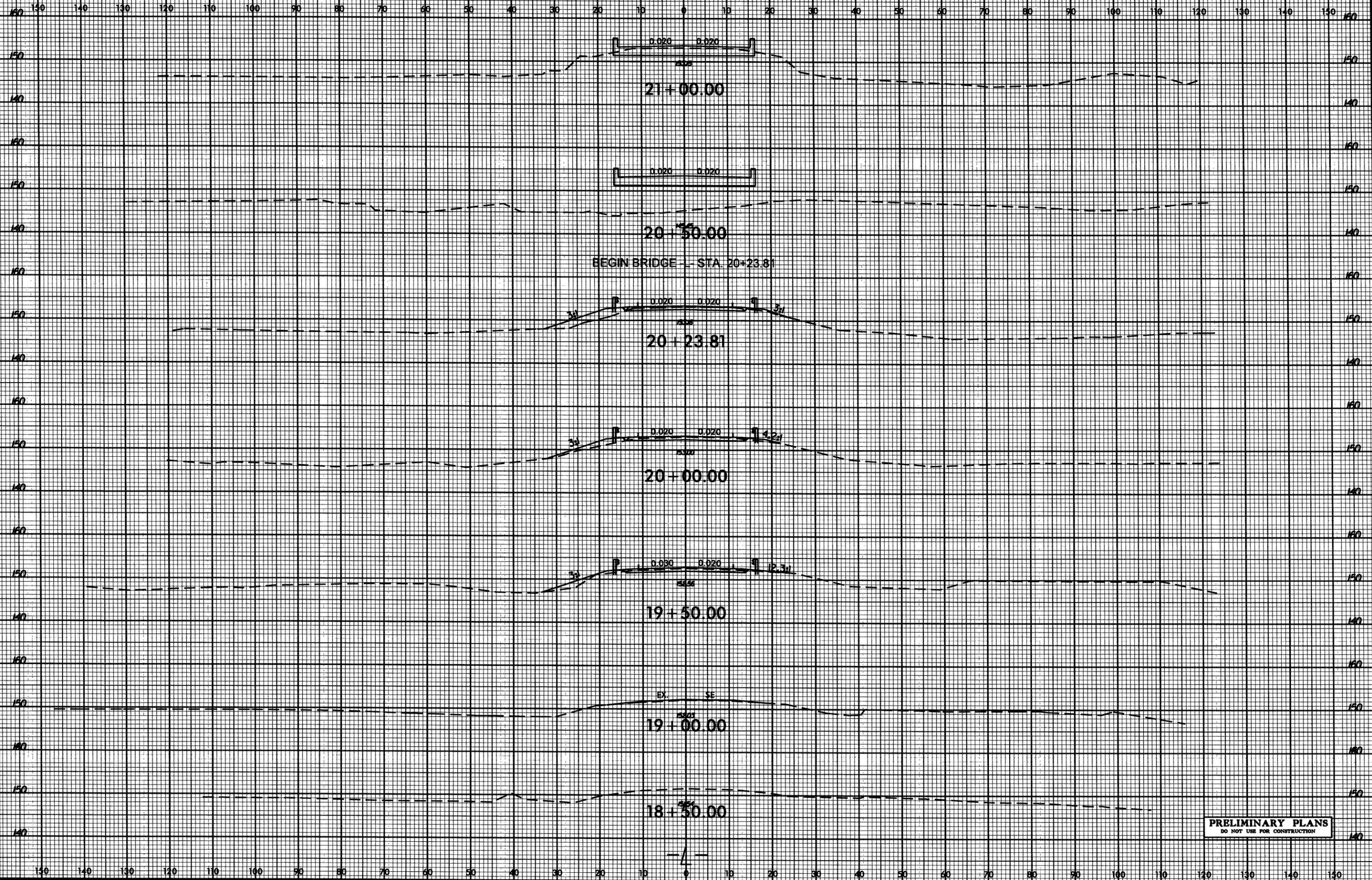


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PROJ. REFERENCE NO. B-4558 SHEET NO. X-1



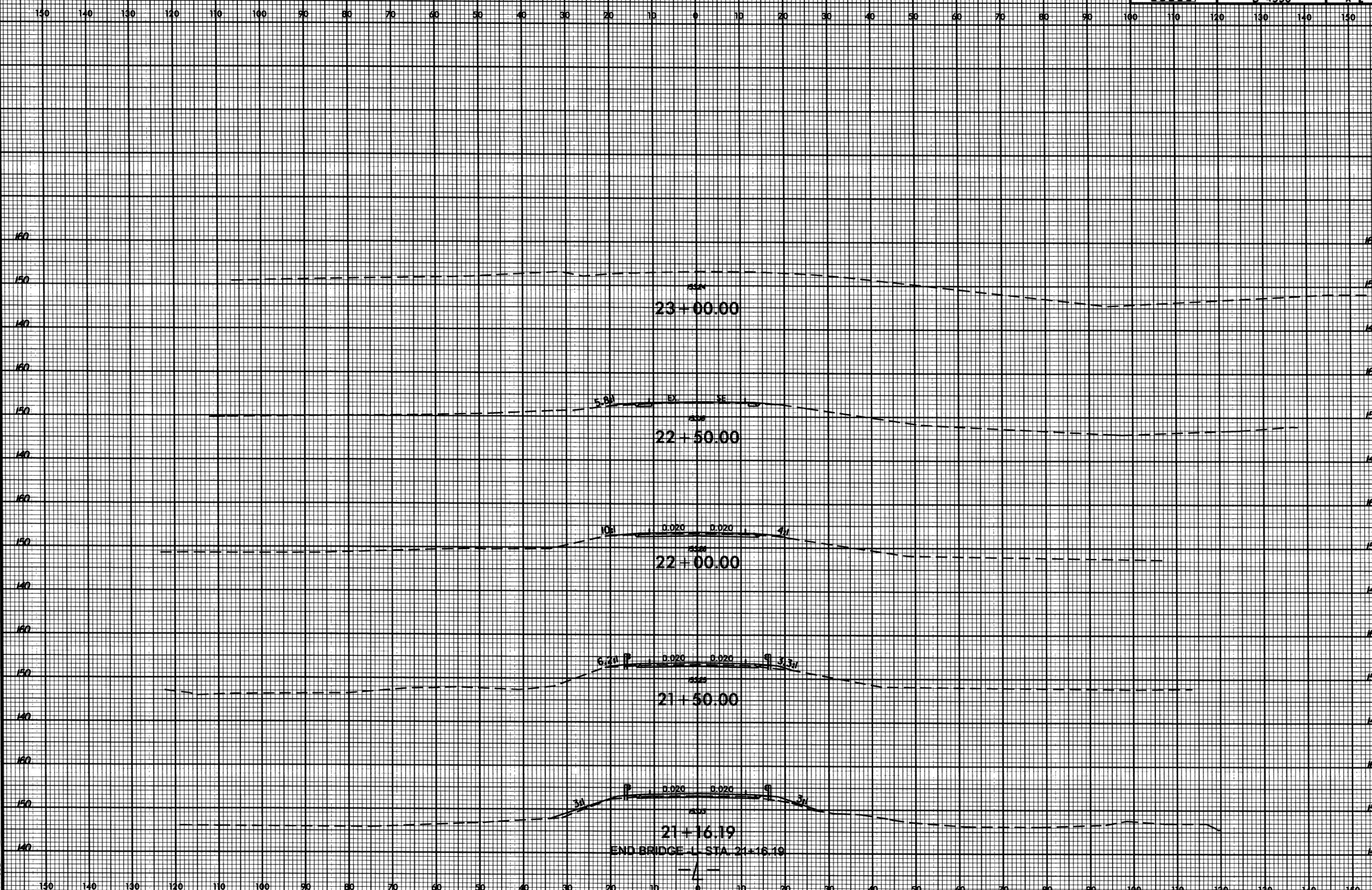
PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

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PROJ. REFERENCE NO. B-4558 SHEET NO. X-2



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