



STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION

BEVERLY EAVES PERDUE
GOVERNOR

EUGENE A. CONTI, JR.
SECRETARY

July 27, 2009

U. S. Army Corps of Engineers
151 Patton Avenue, Room 108
Asheville, NC 28801-5006

ATTN: Mr. Steve Lund
NCDOT Coordinator

Subject: **Application for Section 404 Nationwide Permits 33** for the proposed replacement of Bridge No. 49 over Crowder's Creek on SR 1103 (Crowder's Creek Road) in Gaston County, Federal Aid Project No. BRSTP-1103(15); Division 12; WBS 33741.1.1; TIP No. B-4517

Dear Sir:

The North Carolina Department of Transportation (NCDOT) proposes to replace Bridge No. 49 over Crowder's Creek on SR 1103. There will be 65 feet of temporary surface water impacts.

Please see enclosed copies of the Pre-Construction Notification (PCN), permit drawings, design plans and Stormwater Management Plan for the above-referenced project. The Categorical Exclusion (CE) was completed in January 2009 and distributed shortly thereafter. Additional copies are available upon request.

This project calls for a letting date of May 18, 2010 and a review date of March 30, 2010.

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

Sincerely,



(ev)

Gregory J. Thorpe, Ph.D.

Environmental Management Director, PDEA

w/attachment

Mr. Brian Wrenn, NCDWQ (2 copies)

Ms. Marla Chambers, NCWRC

Ms. Marella Buncick, USFWS

w/o attachment (see permit website for attachments)

Dr. David Chang, P.E., Hydraulics

Mr. Mark Staley, Roadside Environmental

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

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

Mr. M.L. Holder, P.E., Division Engineer

Ms. Trish Simon, DEO

Mr. Jay Bennett, P.E., Roadway Design

Mr. Majed Alghandour, P. E., Programming and TIP

Mr. Art McMillan, P.E., Highway Design

Mr. Scott McLendon, USACE, Wilmington

Mr. Hank Schwab, PDEA Project Planning Engineer

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: 35.19582N (DD.DDDDD) Longitude: - 81.2225 (-DD.DDDDD)
1c. Property size:	860 ft L x 110 ft W = 94,600 sq. ft (94,600) sq. ft. / (43,650) sq. ft = 2.17 acres
2. Surface Waters	
2a. Name of nearest body of water (stream, river, etc.) to proposed project:	Crowder's Creek
2b. Water Quality Classification of nearest receiving water:	C
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: Bridge No. 49 will be replaced with a 190' long cored slab bridge on pile bents. The area is disturbed w/ residential roads and utility easements.	
3b. List the total estimated acreage of all existing wetlands on the property: Wetland B) : (actually less than this since only a small portion of the wetland falls within the project study area) 63 ft L x 32 ft W = 2,016 sq. ft (2,016) sq. ft / (43,650) sq. ft = 0.05 acres	
3c. List the total estimated linear feet of all existing streams (intermittent and perennial) on the property: 381 linear feet (perennial)	
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 161-foot bridge with a 190-foot, 4-span bridge on the existing alignment with an off-site detour. Standard road building equipment, such as trucks, dozers, and cranes will be used.	
4. Jurisdictional Determinations	
4a. Have jurisdictional wetland or stream determinations by the Corps or State been requested or obtained for this property / project (including all prior phases) in the past? Comments:	<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): Steve Lund	Agency/Consultant Company: EcoScience Corporation (Heather Jean Saunders) Other:
4d. If yes, list the dates of the Corps jurisdictional determinations or State determinations and attach documentation. October 22, 2007	
5. Project History	
5a. Have permits or certifications been requested or obtained for this project (including all prior phases) in the past?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Unknown
5b. If yes, explain in detail according to "help file" instructions.	

6. Future Project Plans

6a. Is this a phased project?

Yes

No

6b. If yes, explain.

C. Proposed Impacts Inventory

1. Impacts Summary

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

Wetlands Streams - tributaries Buffers
 Open Waters Pond Construction

2. Wetland Impacts

If there are wetland impacts proposed on the site, then complete this question for each wetland area impacted.

2a. Wetland impact number – Permanent (P) or Temporary (T)	2b. Type of impact	2c. Type of wetland (if known)	2d. Forested	2e. Type of jurisdiction (Corps - 404, 10 DWQ – non-404, other)	2f. Area of impact (acres)
Site 1 <input type="checkbox"/> P <input type="checkbox"/> T			<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Corps <input type="checkbox"/> DWQ	
Site 2 <input type="checkbox"/> P <input type="checkbox"/> T			<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Corps <input type="checkbox"/> DWQ	
Site 3 <input type="checkbox"/> P <input type="checkbox"/> T			<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Corps <input type="checkbox"/> DWQ	
Site 4 <input type="checkbox"/> P <input type="checkbox"/> T			<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Corps <input type="checkbox"/> DWQ	
Site 5 <input type="checkbox"/> P <input type="checkbox"/> T			<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Corps <input type="checkbox"/> DWQ	
Site 6 <input type="checkbox"/> P <input type="checkbox"/> T			<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Corps <input type="checkbox"/> DWQ	
2g. Total wetland impacts					X Permanent X Temporary

2h. Comments:

3. Stream Impacts

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

3a. Stream impact number - Permanent (P) or Temporary (T)	3b. Type of impact	3c. Stream name	3d. Perennial (PER) or intermittent (INT)?	3e. Type of jurisdiction (Corps - 404, 10 DWQ – non-404, other)	3f. Average stream width (feet)	3g. Impact length (linear feet)
Site 1 <input type="checkbox"/> P <input checked="" type="checkbox"/> T	Causeway	Crowder's Creek	<input checked="" type="checkbox"/> PER <input type="checkbox"/> INT	<input checked="" type="checkbox"/> Corps <input type="checkbox"/> DWQ	40	65
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						65 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 <input type="checkbox"/> P <input type="checkbox"/> T				
O2 <input type="checkbox"/> P <input type="checkbox"/> T				
O3 <input type="checkbox"/> P <input type="checkbox"/> T				
O4 <input type="checkbox"/> P <input type="checkbox"/> T				
4f. Total open water impacts				X Permanent X Temporary

4g. Comments:

5. Pond or Lake Construction

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

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

5g. Comments:

5h. Is a dam high hazard permit required?	<input type="checkbox"/> Yes <input type="checkbox"/> No If yes, permit ID no:
5i. Expected pond surface area (acres):	
5j. Size of pond watershed (acres):	
5k. Method of construction:	

6. Buffer Impacts (for DWQ)

If project will impact a protected riparian buffer, then complete the chart below. If yes, then individually list all buffer impacts below. If any impacts require mitigation, then you **MUST** fill out Section D of this form.

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

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 29 feet 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, fencing is being utilized to prevent impacts to the UT coming into Crowder's creek from the west.		
1b. Specifically describe measures taken to avoid or minimize the proposed impacts through construction techniques.		
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: NCDOT does not propose mitigation due to Crowder's Creek is not an ORW, HQW or WS watershed. The 65 linear of temporary impacts are minimal impacts and not considered a "loss of waters".	
2b. If yes, mitigation is required by (check all that apply):	<input type="checkbox"/> DWQ <input type="checkbox"/> Corps	
2c. If yes, which mitigation option will be used for this project?	<input type="checkbox"/> Mitigation bank <input type="checkbox"/> Payment to in-lieu fee program <input type="checkbox"/> Permittee Responsible Mitigation	
3. Complete if Using a Mitigation Bank		
3a. Name of Mitigation Bank: not applicable		
3b. Credits Purchased (attach receipt and letter)	Type	Quantity
3c. Comments:		
4. Complete if Making a Payment to In-lieu Fee Program		
4a. Approval letter from in-lieu fee program is attached.	<input type="checkbox"/> Yes	
4b. Stream mitigation requested:	linear feet	
4c. If using stream mitigation, stream temperature:	<input type="checkbox"/> warm <input type="checkbox"/> cool <input type="checkbox"/> cold	
4d. Buffer mitigation requested (DWQ only):	square feet	
4e. Riparian wetland mitigation requested:	acres	
4f. Non-riparian wetland mitigation requested:	acres	
4g. Coastal (tidal) wetland mitigation requested:	acres	
4h. Comments:		
5. Complete if Using a Permittee Responsible Mitigation Plan		
5a. If using a permittee responsible mitigation plan, provide a description of the proposed mitigation plan.		

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

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

F. Supplementary Information	
1. Environmental Documentation (DWQ Requirement)	
1a. Does the project involve an expenditure of public (federal/state/local) funds or the use of public (federal/state) land?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
1b. If you answered "yes" to the above, does the project require preparation of an environmental document pursuant to the requirements of the National or State (North Carolina) Environmental Policy Act (NEPA/SEPA)?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
1c. If you answered "yes" to the above, has the document review been finalized by the State Clearing House? (If so, attach a copy of the NEPA or SEPA final approval letter.) Comments:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
2. Violations (DWQ Requirement)	
2a. Is the site in violation of DWQ Wetland Rules (15A NCAC 2H .0500), Isolated Wetland Rules (15A NCAC 2H .1300), DWQ Surface Water or Wetland Standards, or Riparian Buffer Rules (15A NCAC 2B .0200)?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
2b. Is this an after-the-fact permit application?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
2c. If you answered "yes" to one or both of the above questions, provide an explanation of the violation(s):	
3. Cumulative Impacts (DWQ Requirement)	
3a. Will this project (based on past and reasonably anticipated future impacts) result in additional development, which could impact nearby downstream water quality?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
3b. If you answered "yes" to the above, submit a qualitative or quantitative cumulative impact analysis in accordance with the most recent DWQ policy. If you answered "no," provide a short narrative description.	
4. Sewage Disposal (DWQ Requirement)	
4a. Clearly detail the ultimate treatment methods and disposition (non-discharge or discharge) of wastewater generated from the proposed project, or available capacity of the subject facility. not applicable	

5. Endangered Species and Designated Critical Habitat (Corps Requirement)		
5a. Will this project occur in or near an area with federally protected species or habitat?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
5b. Have you checked with the USFWS concerning Endangered Species Act impacts?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
5c. If yes, indicate the USFWS Field Office you have contacted.	<input type="checkbox"/> Raleigh	<input checked="" type="checkbox"/> Asheville
5d. What data sources did you use to determine whether your site would impact Endangered Species or Designated Critical Habitat? http://www.fws.gov/nc-es/es/countyfr.html ; Field investigations within the project study area were conducted by NCDOT staff resulting in biological conclusions of No Effect (No Habitat Present) for the Bog turtle and No Effect (Habitat Present) for Schweinitz's Sunflower for Gaston County.		
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 type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
8b. If yes, explain how project meets FEMA requirements:		
8c. What source(s) did you use to make the floodplain determination? FEMA Maps		
Dr. Gregory J. Thorpe, Ph D Applicant/Agent's Printed Name	 Applicant/Agent's Signature (Agent's signature is valid only if an authorization letter from the applicant is provided.)	7-27-09 Date

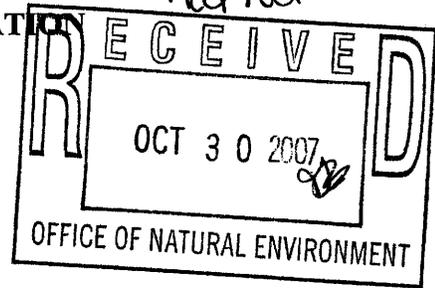
**U.S. ARMY CORPS OF ENGINEERS
WILMINGTON DISTRICT**

Action Id. SAW-2006-32951-318

County: Gaston

U.S.G.S. Quad: Gastonia South

NOTIFICATION OF JURISDICTIONAL DETERMINATION



Property Owner/Agent: Gregory J. Thorpe, Director
Address: Project Development and Environmental Analysis Branch
North Carolina Department of Transportation
1548 Mail Service Center, Raleigh, NC 27699-1548
Telephone No.: 919-733-3141

Property description:

Size (acres)	1 approx.	Nearest Town	Gastonia
Nearest Waterway	Crowder's Creek	River Basin	Catawba
USGS HUC	03050101	Coordinates	N 35.1953 W 81.2231
Location description	Bridge No. 49 on SR 1103 south of Gastonia, TIP B-4517		

Indicate Which of the Following Apply:

- Based on preliminary information, there may be wetlands on the above described property. We strongly suggest you have this property inspected to determine the extent of Department of the Army (DA) jurisdiction. To be considered final, a jurisdictional determination must be verified by the Corps. This preliminary determination is not an appealable action under the Regulatory Program Administrative Appeal Process (Reference 33 CFR Part 331).
- There are Navigable Waters of the United States within the above described property subject to the permit requirements of Section 10 of the Rivers and Harbors Act and Section 404 of the Clean Water Act. Unless there is a change in the law or our published regulations, this determination may be relied upon for a period not to exceed five years from the date of this notification.
- There are wetlands and surface waters on the above described property subject to the permit requirements of Section 404 of the Clean Water Act (CWA)(33 USC § 1344). Unless there is a change in the law or our published regulations, this determination may be relied upon for a period not to exceed five years from the date of this notification.
 - We strongly suggest you have the wetlands on your property delineated. Due to the size of your property and/or our present workload, the Corps may not be able to accomplish this wetland delineation in a timely manner. For a more timely delineation, you may wish to obtain a consultant. To be considered final, any delineation must be verified by the Corps.
 - The wetland on your property have been delineated and the delineation has been verified by the Corps. We strongly suggest you have this delineation surveyed. Upon completion, this survey should be reviewed and verified by the Corps. Once verified, this survey will provide an accurate depiction of all areas subject to CWA jurisdiction on your property which, provided there is no change in the law or our published regulations, may be relied upon for a period not to exceed five years.
- The wetlands and surface waters have been delineated and surveyed and are accurately depicted on the GPS plat provided by EcoScience Corporation and dated 13 March 2006. Unless there is a change in the law or our published regulations, this determination may be relied upon for a period not to exceed five years from the date of this notification.
- There are no waters of the U.S., to include wetlands, present on the above described property which are subject to the permit requirements of Section 404 of the Clean Water Act (33 USC 1344). Unless there is a change in the law or our published regulations, this determination may be relied upon for a period not to exceed five years from the date of this notification.
- The property is located in one of the 20 Coastal Counties subject to regulation under the Coastal Area Management Act (CAMA). You should contact the Division of Coastal Management in Washington, NC, at (252) 946-6481 to determine their requirements.

Action ID: _____
SAW-2006-32951-318

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 Steven Lund at 828-271-7980.

Basis For Determination: Crowder's Creek is a Traditionally Navigable Water that exhibits a distinct ordinary high water mark and flows directly to the Catawba River at Lake Wylie which is a navigable water. Delineated wetlands are adjacent and subject to the regular and unimpeded exchange of water flow with Crowder's Creek, are dominated by hydrophytic vegetation and exhibit wetland hydrology and hydric soil.

Remarks: Consultant's report dated 13 March, 2006 identifies 2 wetlands (#1 and #2), Crowder's Creek and 2 unnamed tributaries in the project area consisting of an approximate 1200-foot long by 400-foot wide corridor centered on the existing bridge site.

Corps Regulatory Official: Steven W. Lund, Project Manager, Asheville Regulatory Field Office

Date: October 22, 2007

Expiration Date: October 22, 2012

Corps Regulatory Official (Initial): *SWL*

FOR OFFICE USE ONLY:

- A plat or sketch of the property and the wetland data form must be attached to the file copy of this form.
- A copy of the "Notification Of Administrative Appeal Options And Process And Request For Appeal" form must be transmitted with the property owner/agent copy of this form.
- If the property contains isolated wetlands/waters, please indicate in "Remarks" section and attach the "Isolated Determination Information Sheet" to the file copy of this form.

Copy Furnished: Ms. Heather Jean Saunders, EcoScience Corporation, 1101 Haynes Street, Suite 101, Raleigh, NC 27604

²The term "adjacent" means bordering, contiguous, or neighboring. Wetlands separated from other waters of the U.S. by man-made dikes or barriers, natural river berms, beach dunes, and the like are also adjacent.

**NOTIFICATION OF ADMINISTRATIVE APPEAL OPTIONS AND PROCESS AND
REQUEST FOR APPEAL**

Applicant: NC Dept. of Transportation	File Number: 2006-32951-318	Date: 22 Oct 2007
Attached is:		See Section below
<input type="checkbox"/>	INITIAL PROFFERED PERMIT (Standard Permit or Letter of permission)	A
<input type="checkbox"/>	PROFFERED PERMIT (Standard Permit or Letter of permission)	B
<input type="checkbox"/>	PERMIT DENIAL	C
<input checked="" type="checkbox"/>	APPROVED JURISDICTIONAL DETERMINATION	D
<input type="checkbox"/>	PRELIMINARY JURISDICTIONAL DETERMINATION	E

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

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

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

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

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

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

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

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

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

SECTION II - REQUEST FOR APPEAL or OBJECTIONS TO AN INITIAL PROFFERED PERMIT

REASONS FOR APPEAL OR OBJECTIONS: (Describe your reasons for appealing the decision or your objections to an initial proffered permit in clear concise statements. You may attach additional information to this form to clarify where your reasons or objections are addressed in the administrative record.)

ADDITIONAL INFORMATION: The appeal is limited to a review of the administrative record, the Corps memorandum for the record of the appeal conference or meeting, and any supplemental information that the review officer has determined is needed to clarify the administrative record. Neither the appellant nor the Corps may add new information or analyses to the record. However, you may provide additional information to clarify the location of information that is already in the administrative record.

POINT OF CONTACT FOR QUESTIONS OR INFORMATION:

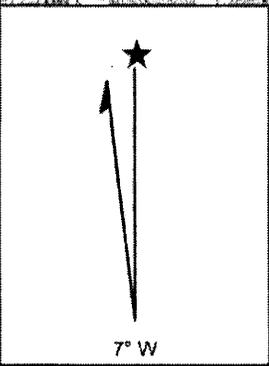
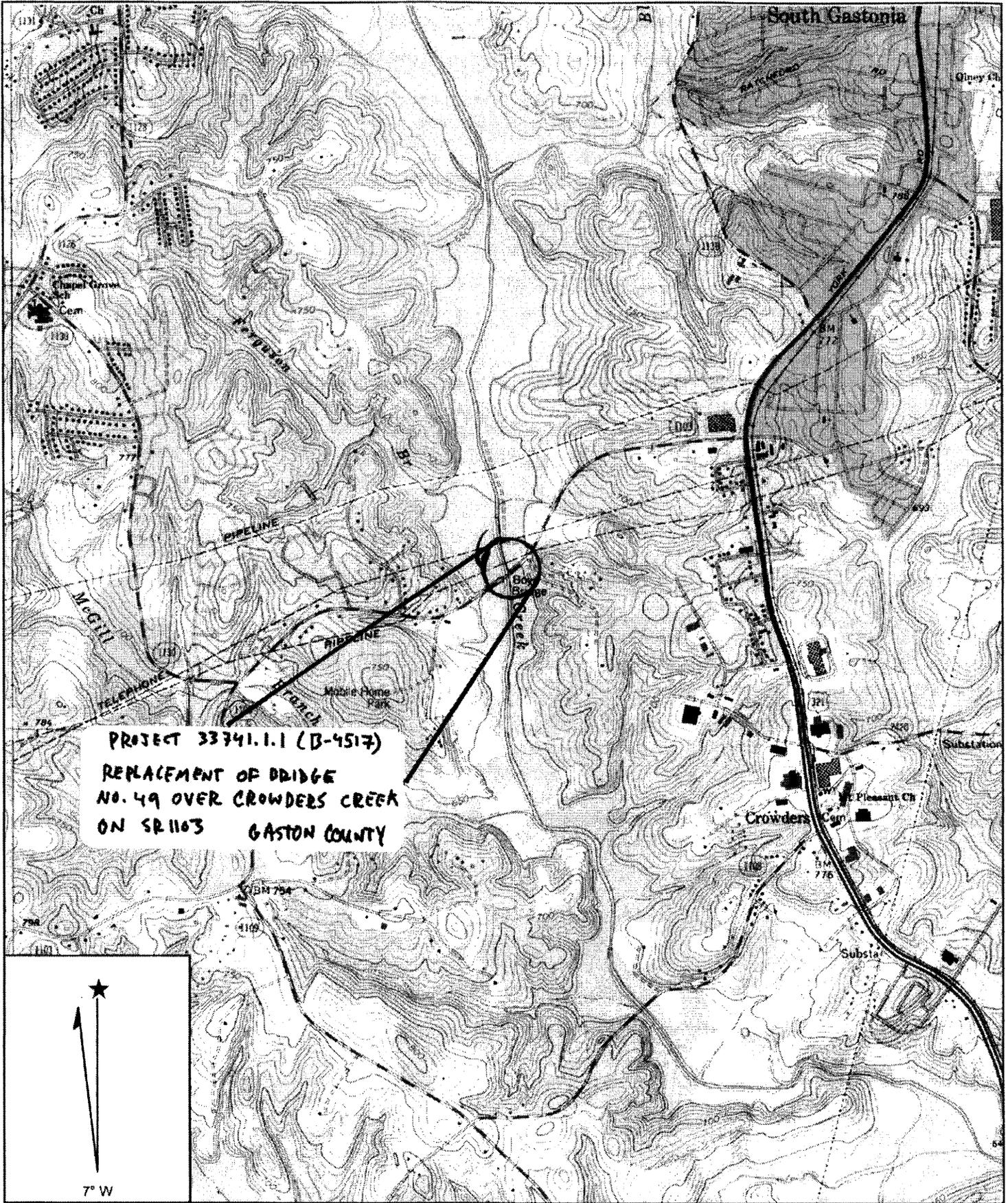
If you have questions regarding this decision and/or the appeal process you may contact:
Mr. Steven W. Lund, Regulatory Project Manager
CESAW-RG-A
Asheville Regulatory Field Office
151 Patton Avenue, Room 208
Asheville, North Carolina 28801-5006

If you only have questions regarding the appeal process you may also contact:
Mr. Michael F. Bell, Administrative Appeal Review Officer
CESAD-ET-CO-R
U.S. Army Corps of Engineers, South Atlantic Division
60 Forsyth Street, Room 9M15
Atlanta, Georgia 30303-8801

RIGHT OF ENTRY: Your signature below grants the right of entry to Corps of Engineers personnel, and any government consultants, to conduct investigations of the project site during the course of the appeal process. You will be provided a 15 day notice of any site investigation, and will have the opportunity to participate in all site investigations.

_____	Date:	Telephone number:
Signature of appellant or agent.		

DIVISION ENGINEER:
Commander
U.S. Army Engineer Division, South Atlantic
60 Forsyth Street, Room 9M15
Atlanta, Georgia 30303-3490



Name: GASTONIA SOUTH
 Date: 6/2/2009
 Scale: 1 inch equals 2000 feet

Location: 035° 11' 39.0" N 081° 13' 24.0" W
 Caption: Project 33741.1.1 (B-4517)
 Gaston County

09/08/99

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

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

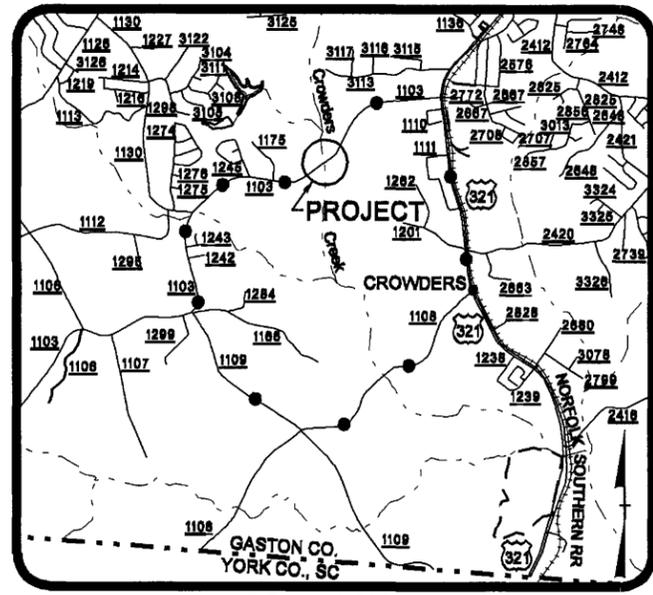
GASTON COUNTY

LOCATION: BRIDGE NO. 49 OVER CROWDERS CREEK
ON SR 1103

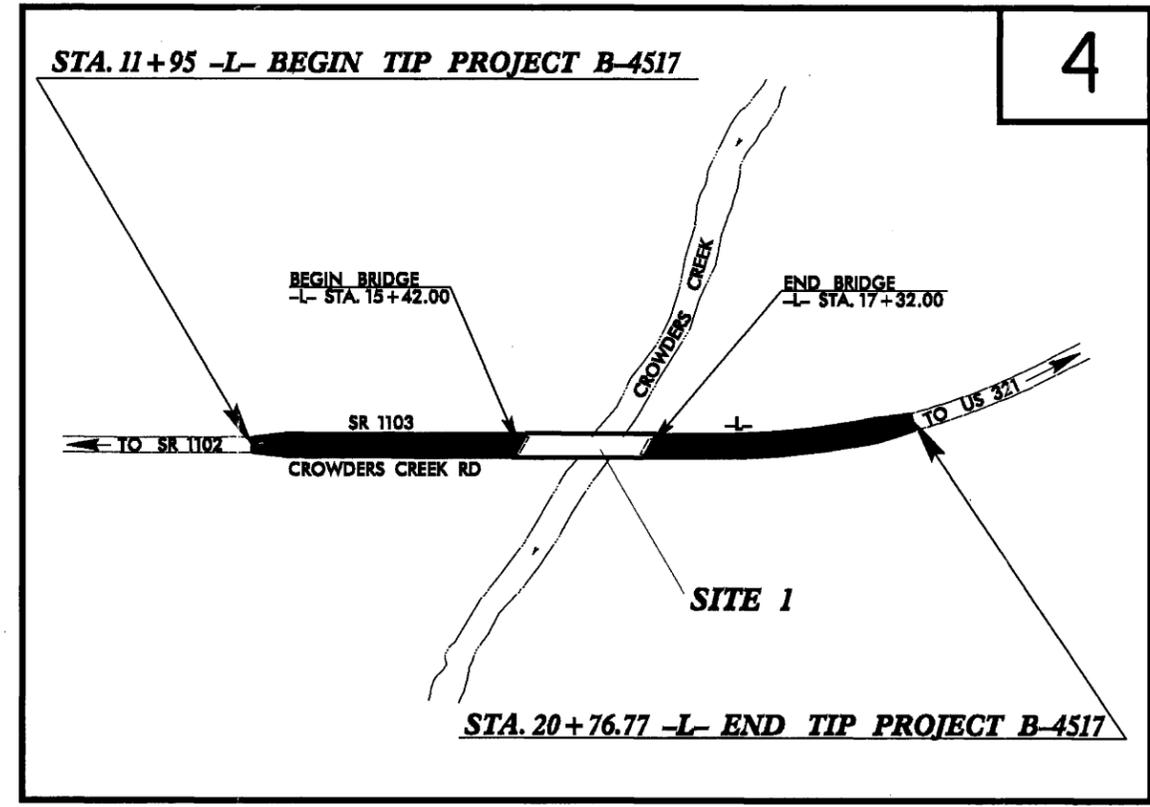
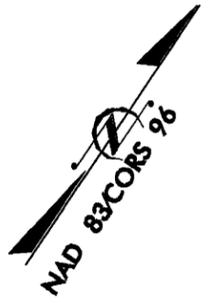
WETLAND /STREAM PERMIT DRAWINGS

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	B-4517	1	
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	
33741.1.1	BRSTP-1103(15)	PE	
33741.2.1	BRSTP-1103(15)	R/W & UTIL	

CONTRACT: TIP PROJECT: B-4517



VICINITY MAP
●●●●● DETOUR ROUTE

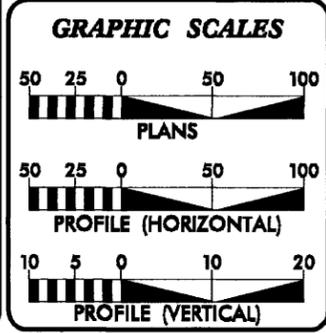


**DESIGN EXCEPTION REQUIRED FOR HORIZONTAL STOPPING SIGHT DISTANCE OF 487'.

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



DESIGN DATA

ADT 2010 =	8,674
ADT 2030 =	14,600
DHV =	10 %
D =	60 %
T =	4 % *
**V =	60 MPH
* TTST 1% DUAL 3%	
FUNC. CLASS =	URBAN COLLECTOR

PROJECT LENGTH

LENGTH ROADWAY TIP PROJECT B-4517	=	0.131 MILES
LENGTH STRUCTURE TIP PROJECT B-4517	=	0.036 MILES
TOTAL LENGTH TIP PROJECT B-4517	=	0.167 MILES

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

2006 STANDARD SPECIFICATIONS

RIGHT OF WAY DATE: **MAY 13, 2009**

LETTING DATE: **MAY 18, 2010**

GARY LOVERING, PE
PROJECT ENGINEER

RON McCOLLUM, PE
PROJECT DESIGN ENGINEER

HYDRAULICS ENGINEER

SIGNATURE: _____ P.E.

ROADWAY DESIGN ENGINEER

SIGNATURE: _____ P.E.

DIVISION OF HIGHWAYS
STATE OF NORTH CAROLINA

Permit Drawing
Sheet **4** of **6**

STATE HIGHWAY DESIGN ENGINEER

23-JUN-2009 11:11 P:\hyd\quiles\permit drawings\b4517_rdy_tsh_wet.dgn
dau\field A HY244565

CONTRACT:

5/14/99

PROJECT REFERENCE NO. B-457	SHEET NO. 5
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	

-L-

UNCLASSIFIED STRUCTURE EXCAVATION
(STRUCTURE FAY LINE SEE STRUCTURE PLANS)

BM #1 8" SPIKE IN BASE OF POWER POLE
OUTSIDE PROJECT LIMITS
ELEV. = 668.88'

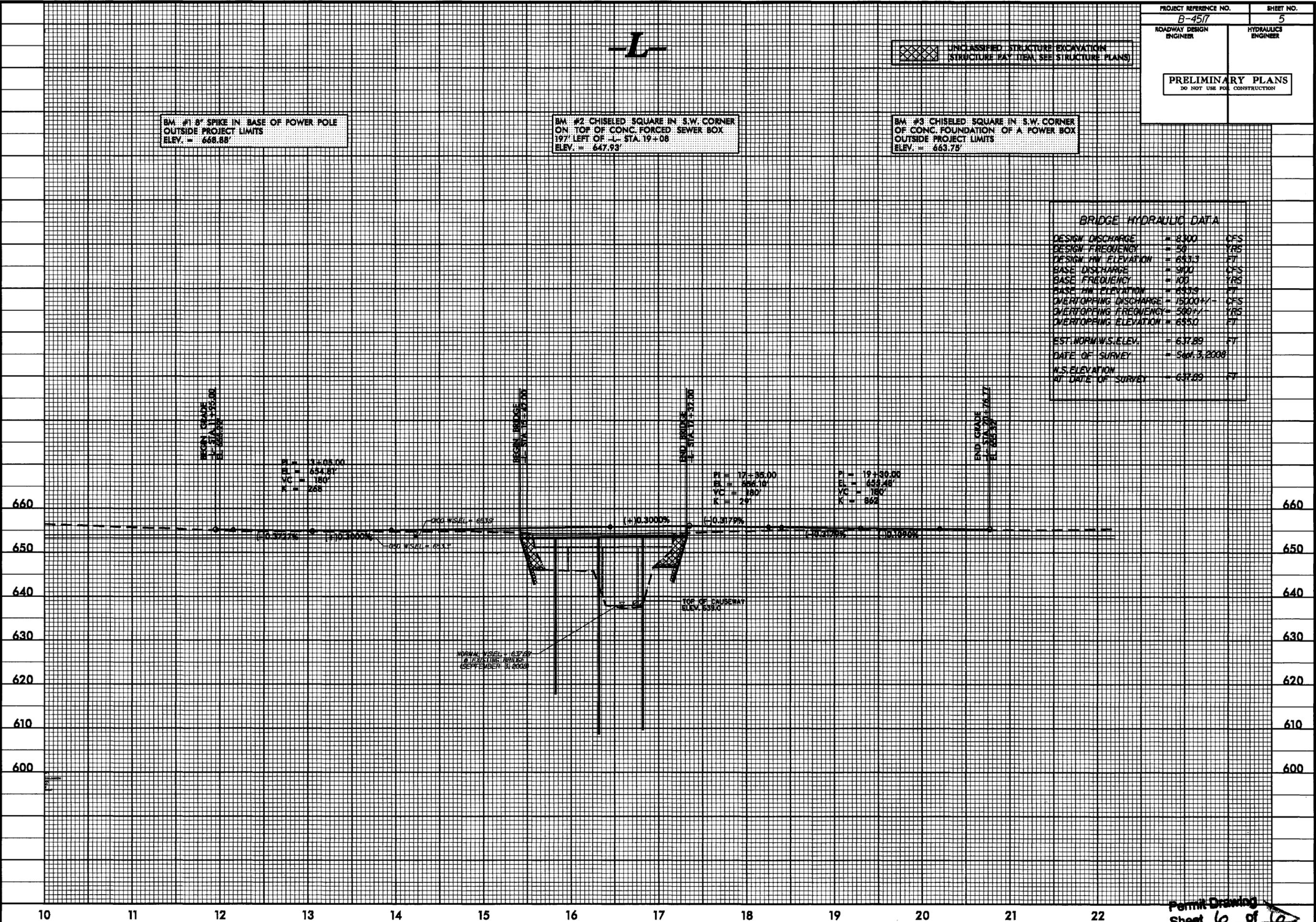
BM #2 CHISELED SQUARE IN S.W. CORNER
ON TOP OF CONC. FORCED SEWER BOX
197' LEFT OF -L- STA. 19+08
ELEV. = 647.93'

BM #3 CHISELED SQUARE IN S.W. CORNER
OF CONC. FOUNDATION OF A POWER BOX
OUTSIDE PROJECT LIMITS
ELEV. = 663.78'

BRIDGE HYDRAULIC DATA

DESIGN DISCHARGE	= 8300	CFS
DESIGN FREQUENCY	= 50	YRS
DESIGN HW ELEVATION	= 653.3	FT
BASE DISCHARGE	= 900	CFS
BASE FREQUENCY	= 100	YRS
BASE HW ELEVATION	= 653.9	FT
OVERTOPPING DISCHARGE	= 15000 +/-	CFS
OVERTOPPING FREQUENCY	= 500 +/-	YRS
OVERTOPPING ELEVATION	= 655.0	FT
EST. NORMALS ELEV.	= 637.89	FT
DATE OF SURVEY	= 5/01.3.2008	
N.S. ELEVATION AT DATE OF SURVEY	= 637.89	FT

23-JUN-2009 15:30
c:\documents and settings\dduffield\local settings\temporary internet files\9\k9\457_hyd.pdf_wet.dgn



STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	B-4517	1	
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	
33741.1.1	BRSTP-1103(15)	PE	
33741.2.1	BRSTP-1103(15)	R/W & UTIL	

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

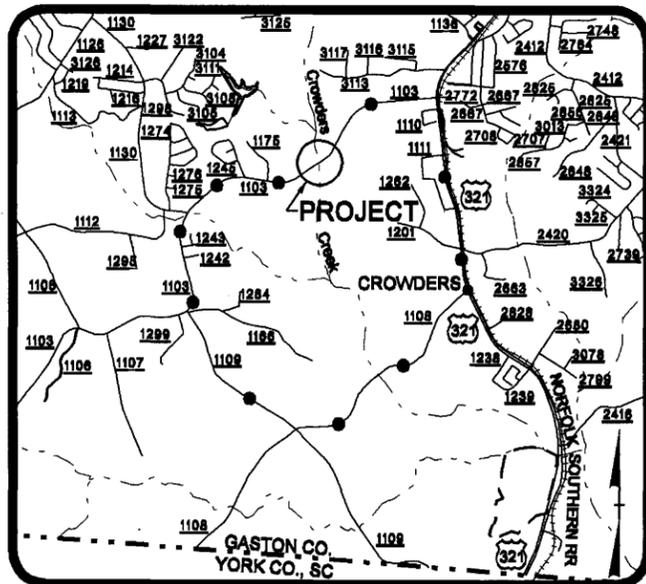
GASTON COUNTY

LOCATION: BRIDGE NO. 49 OVER CROWDERS CREEK
ON SR 1103

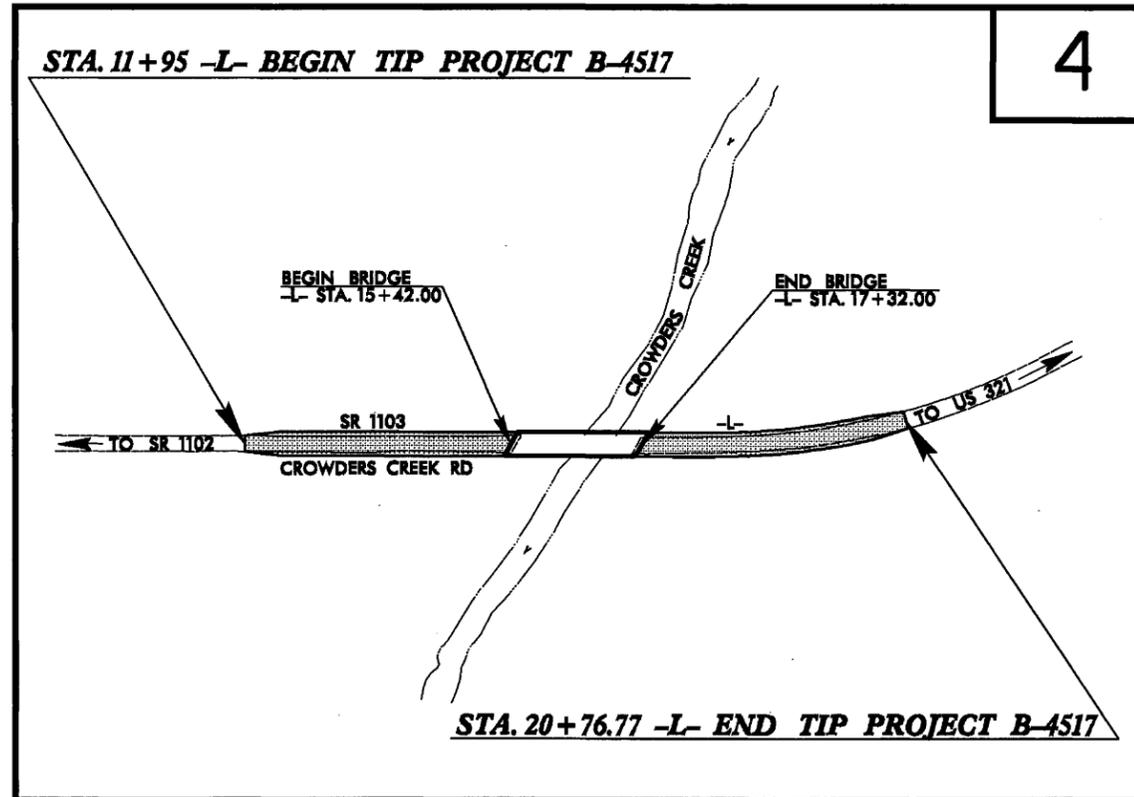
TYPE OF WORK: GRADING, PAVING, DRAINAGE, AND STRUCTURE



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



VICINITY MAP
● ● ● ● DETOUR ROUTE



**DESIGN EXCEPTION REQUIRED FOR HORIZONTAL STOPPING SIGHT DISTANCE OF 487'.

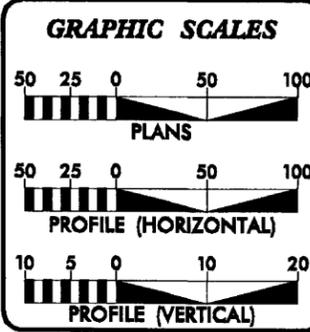
THIS PROJECT IS NOT WITHIN ANY MUNICIPAL BOUNDARIES.

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

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

TIP PROJECT: B-4517

CONTRACT:



DESIGN DATA

ADT 2010	=	8,674
ADT 2030	=	14,600
DHV	=	10 %
D	=	60 %
T	=	4 % *
**V	=	60 MPH
* TTST 1%		DUAL 3%
FUNC. CLASS	=	URBAN COLLECTOR

PROJECT LENGTH

LENGTH ROADWAY TIP PROJECT B-4517	=	0.131 MILES
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TOTAL LENGTH TIP PROJECT B-4517	=	0.167 MILES

Prepared In the Office of:

DIVISION OF HIGHWAYS
1000 Birch Ridge Dr., Raleigh NC, 27610

2006 STANDARD SPECIFICATIONS

RIGHT OF WAY DATE:	MAY 13, 2009	GARY LOVERING, PE PROJECT ENGINEER
LETTING DATE:	MAY 18, 2010	RON McCOLLUM, PE PROJECT DESIGN ENGINEER

HYDRAULICS ENGINEER	
SIGNATURE:	
ROADWAY DESIGN ENGINEER	
SIGNATURE:	

DIVISION OF HIGHWAYS
STATE OF NORTH CAROLINA

STATE HIGHWAY DESIGN ENGINEER

09/03/99
28-MAY-2009 09:31
R:\Roadway\Proj\B4517_rdy_tsh.dgn
\$\$\$\$\$USERNAME\$\$\$\$\$

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	○
Property Corner	⊗
Property Monument	□
Parcel/Sequence Number	②③
Existing Fence Line	-x-x-x-
Proposed Woven Wire Fence	-o-o-o-
Proposed Chain Link Fence	-□-□-□-
Proposed Barbed Wire Fence	-◇-◇-◇-
Existing Wetland Boundary	-w.s.-
Proposed Wetland Boundary	-w.s.-
Existing Endangered Animal Boundary	-EAB-
Existing Endangered Plant Boundary	-EPB-

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	-JS-
Buffer Zone 1	-BZ 1-
Buffer Zone 2	-BZ 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	-E-
Proposed Temporary Construction Easement	-E-
Proposed Temporary Drainage Easement	-TDE-
Proposed Permanent Drainage Easement	-PDE-
Proposed Permanent Utility Easement	-PUE-
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	⊕
Existing Metal Guardrail	-----
Proposed Guardrail	-----
Existing Cable Guiderail	-----
Proposed Cable Guiderail	-----
Equality Symbol	⊕
Pavement Removal	-----

VEGETATION:

Single Tree	⊕
Single Shrub	⊕
Hedge	-----
Woods Line	-----
Orchard	-----
Vineyard	-----

EXISTING STRUCTURES:

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

UTILITIES:

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

TELEPHONE:

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

WATER:

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

TV:

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

GAS:

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

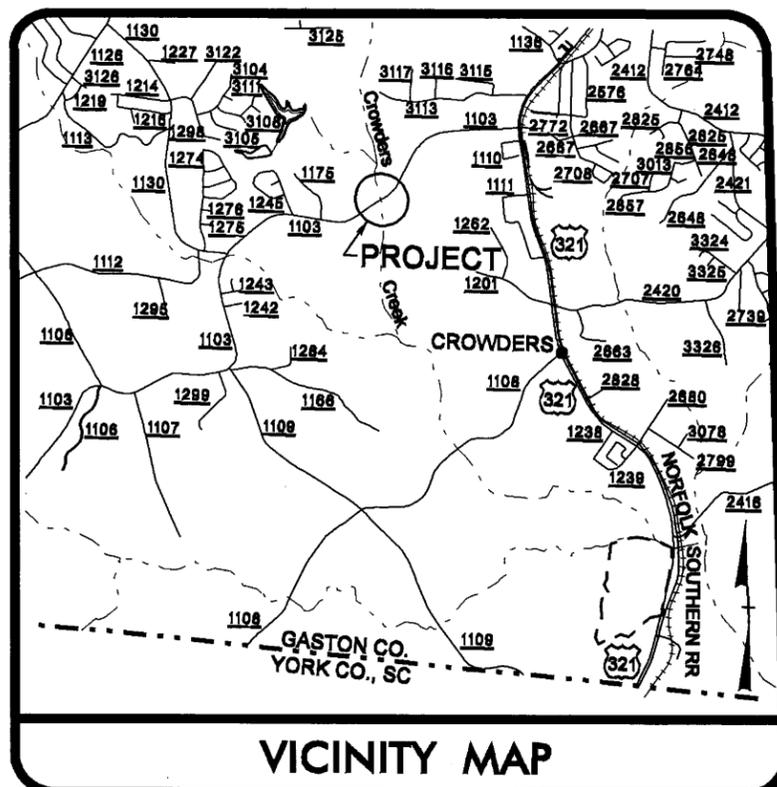
SANITARY SEWER:

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

MISCELLANEOUS:

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

SURVEY CONTROL SHEET B-4517

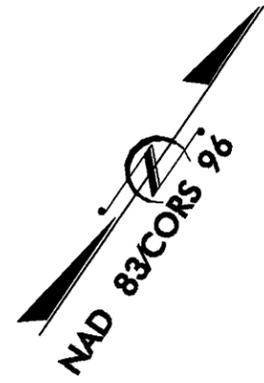


BL POINT	DESC.	NORTH	EAST	ELEVATION	L STATION	OFFSET
BL3	(BL-3)	532832.9260	1334730.8862	676.02'	OUTSIDE PROJECT LIMITS	
B45171	(GPS B4571-1)	532874.1250	1334951.9860	669.64'	OUTSIDE PROJECT LIMITS	
BL4	(BL-4)	533113.1231	1335364.2581	656.40'	OUTSIDE PROJECT LIMITS	
BL5	(BL-5)	533550.3134	1336005.7567	653.85'	17+29.28	15.64' RT
B45172	(GPS B4571-2)	533733.6650	1336238.8450	655.03'	20+23.08	17.47' RT
BL6	(BL-6)	534366.6440	1336611.0969	659.97'	OUTSIDE PROJECT LIMITS	

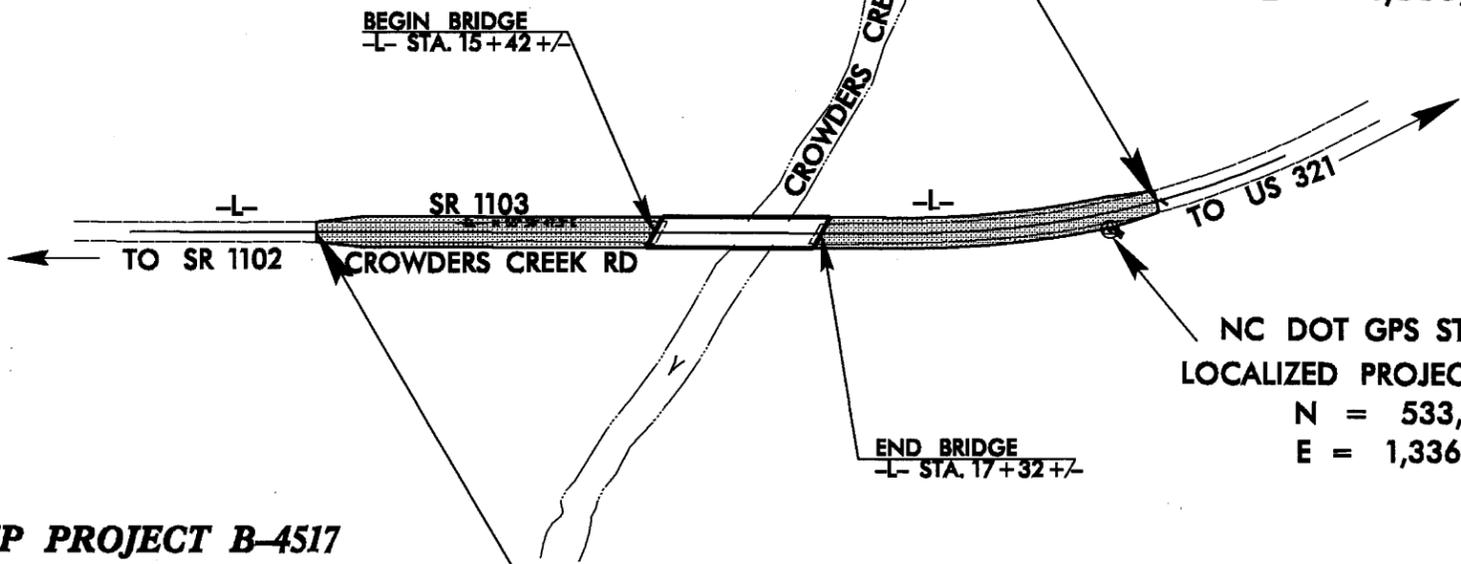
 BM*1 ELEVATION = 668.88'
 N 532763. E 1334798.
 OUTSIDE PROJECT LIMITS
 8" SPIKE IN BASE OF POWER POLE

 BM*2 ELEVATION = 647.93'
 N 533819. E 1336017.
 -L- STATION 19+08 197' LEFT
 CHISELED SQUARE IN S.W. CORNER
 ON TOP OF CONC. FORCED SEWER BOX

 BM*3 ELEVATION = 663.75'
 N 534126. E 1336689.
 OUTSIDE PROJECT LIMITS
 CHISELED SQUARE IN S.W. CORNER
 OF CONC. FOUNDATION OF A POWER BOX



NC DOT GPS STATION B4517-1
 LOCALIZED PROJECT COORDINATES
 N = 532,874.1250
 E = 1,334,951.9860



STA. 20+76.77 -L- END TIP PROJECT B-4517
 N = 533,785.4056
 E = 1,336,262.4966

STA. 11+95 -L- BEGIN TIP PROJECT B-4517
 N = 533,261.8644
 E = 1,335,555.7623

DATUM DESCRIPTION
 THE LOCALIZED COORDINATE SYSTEM DEVELOPED FOR THIS PROJECT IS BASED ON THE STATE PLANE COORDINATES ESTABLISHED BY NCGS FOR MONUMENT "B4517-1" WITH NAD NAD83/CORS96 STATE PLANE GRID COORDINATES OF NORTHING: 532874.125(ff) EASTING: 1334951.986(ff) THE AVERAGE COMBINED GRID FACTOR USED ON THIS PROJECT (GROUND TO GRID) IS: 0.999846 THE N.C. LAMBERT GRID BEARING AND LOCALIZED HORIZONTAL GROUND DISTANCE FROM "B4517-1" TO -L- STATION 11+95 IS N 57°17'31" E 717.56 ALL LINEAR DIMENSIONS ARE LOCALIZED HORIZONTAL DISTANCES VERTICAL DATUM USED IS NAVD 88

- NOTES:**
1. THE CONTROL DATA FOR THIS PROJECT CAN BE FOUND ELECTRONICALLY BY SELECTING PROJECT CONTROL DATA AT:
[HTTP://WWW.NCDOT.ORG/DOEH/PRECONSTRUCT/HIGHWAY/LOCATION/PROJECT/](http://www.ncdot.org/doeh/preconstruct/highway/location/project/)
 THE FILES TO BE FOUND ARE AS FOLLOWS:
 B4517_LS_CONTROL_081008.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

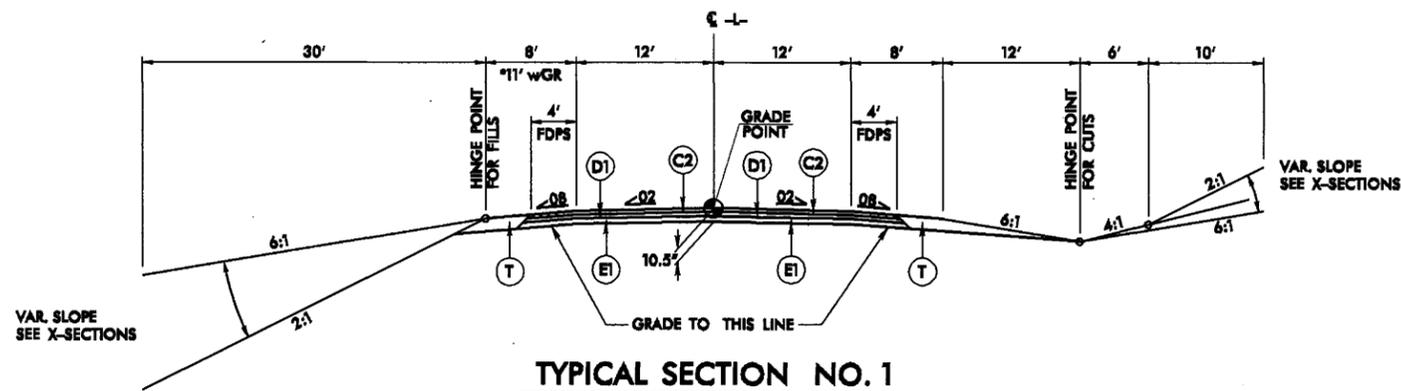
6/2/99
 28-MAY-2008 09:31
 P:\PROJECTS\B4517_1s_1c_081008.dgn

6/2/99

PAVEMENT SCHEDULE FINAL DESIGN	
C1	PROP. APPROX. 1 1/4" ASPHALT CONCRETE SURFACE COURSE, TYPE 89.5B, AT AN AVERAGE RATE OF 186 LBS. PER SQ. YD.
C2	PROP. APPROX. 3" ASPHALT CONCRETE SURFACE COURSE, TYPE 89.5B, AT AN AVERAGE RATE OF 186 LBS. PER SQ. YD. IN EACH OF TWO LAYERS.
C3	PROP. VAR. DEPTH ASPHALT CONCRETE SURFACE COURSE, TYPE 89.5B, AT AN AVERAGE RATE OF 112 LBS. PER SQ. YD. PER 1" DEPTH. TO BE PLACED IN LAYERS NOT TO EXCEED 2" IN DEPTH.
D1	PROP. APPROX. 2 1/2" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 118.0B, AT AN AVERAGE RATE OF 288 LBS. PER SQ. YD.
D2	PROP. VAR. DEPTH ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 118.0B, AT AN AVERAGE RATE OF 114 LBS. PER SQ. YD. PER 1" DEPTH. TO BE PLACED IN LAYERS NOT LESS THAN 2 1/2" IN DEPTH OR GREATER THAN 4" IN DEPTH.
E1	PROP. APPROX. 5" ASPHALT CONCRETE BASE COURSE, TYPE B25.0B, AT AN AVERAGE RATE OF 570 LBS. PER SQ. YD.
E2	PROP. VAR. DEPTH ASPHALT CONCRETE BASE COURSE, TYPE B25.0B, AT AN AVERAGE RATE OF 114 LBS. PER SQ. YD. PER 1" DEPTH. TO BE PLACED IN LAYERS NOT LESS THAN 3" IN DEPTH OR GREATER THAN 8 1/2" IN DEPTH.
T	EARTH MATERIAL.
U	EXISTING PAVEMENT.
W	VARIABLE DEPTH ASPHALT PAVEMENT (SEE WEDGING DETAIL)

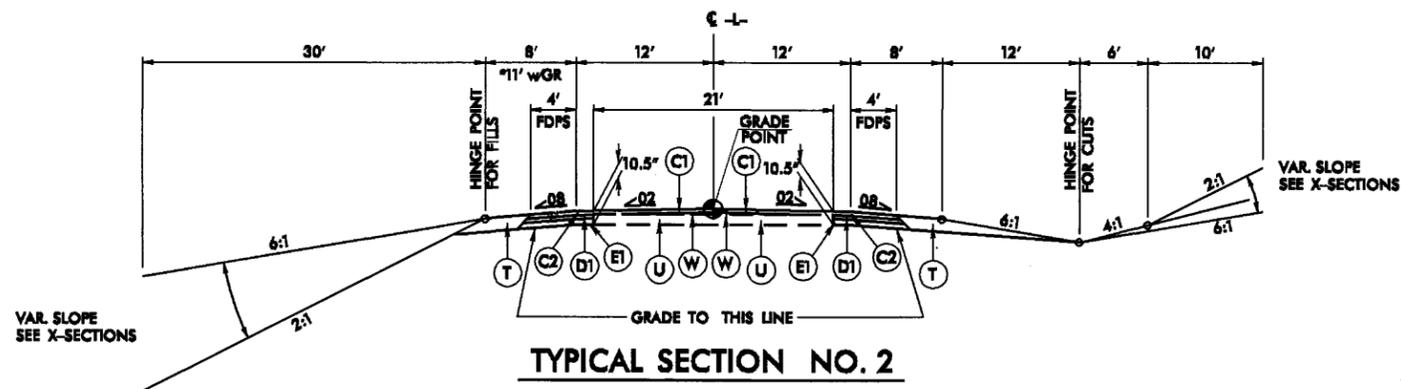
NOTE: PAVEMENT EDGE SLOPES ARE 1:1 UNLESS SHOWN OTHERWISE.

PROJECT REFERENCE NO. B-4517	SHEET NO. 2
ROADWAY DESIGN ENGINEER	PAVEMENT DESIGN ENGINEER
PRELIMINARY PLANS <small>DO NOT USE FOR CONSTRUCTION</small>	



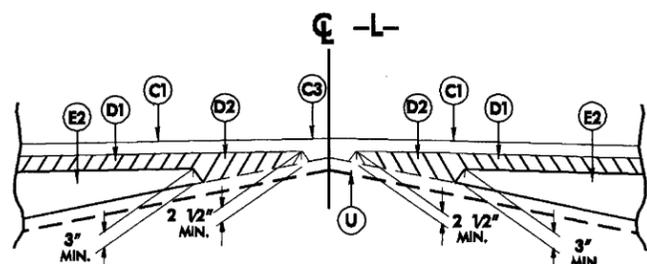
TYPICAL SECTION NO. 1

USE TYPICAL SECTION NO. 1
 -L- STA. 14+92.00 TO -L- STA. 15+42.00 (BEGIN BRIDGE)
 -L- STA. 17+32.00 (END BRIDGE) TO -L- STA. 18+00.00
 *NOTE: SEE ROCK PLATING DETAIL NO. 1

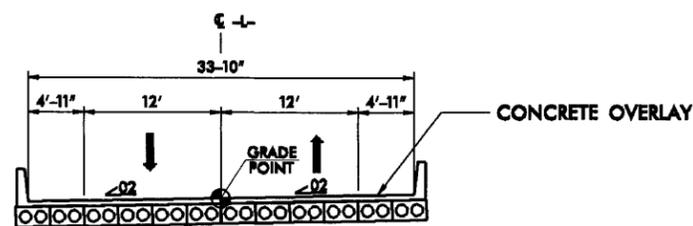


TYPICAL SECTION NO. 2

USE TYPICAL SECTION NO. 2
 -L- STA. 11+95.00 TO -L- STA. 14+92.00
 -L- STA. 18+00.00 TO -L- STA. 20+76.77
 *NOTE: SEE ROCK PLATING DETAIL NO. 1



Wedging Detail



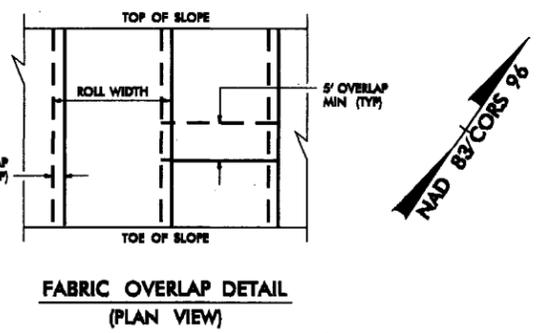
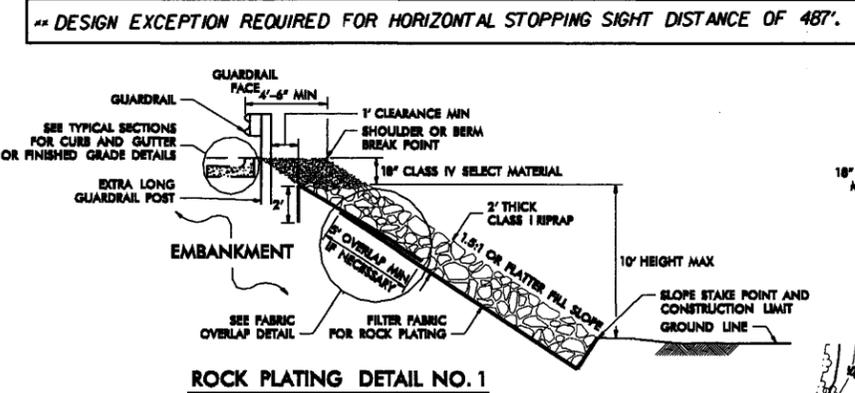
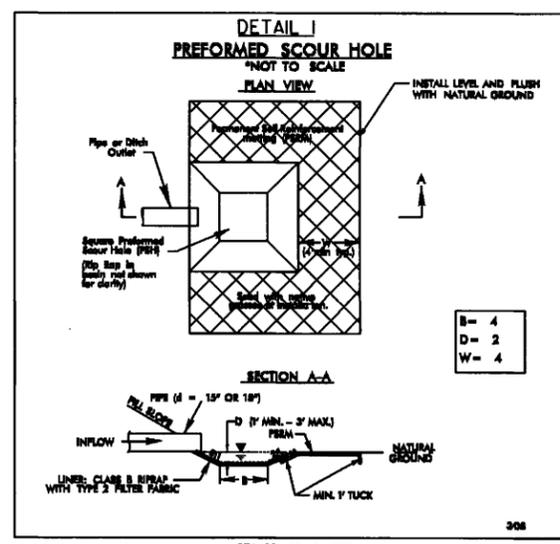
TYPICAL SECTION ON STRUCTURE

USE TYPICAL SECTION ON STRUCTURE
 -L- STA. 15+42.00 (BEGIN BRIDGE)
 TO -L- STA. 17+32.00 (END BRIDGE)

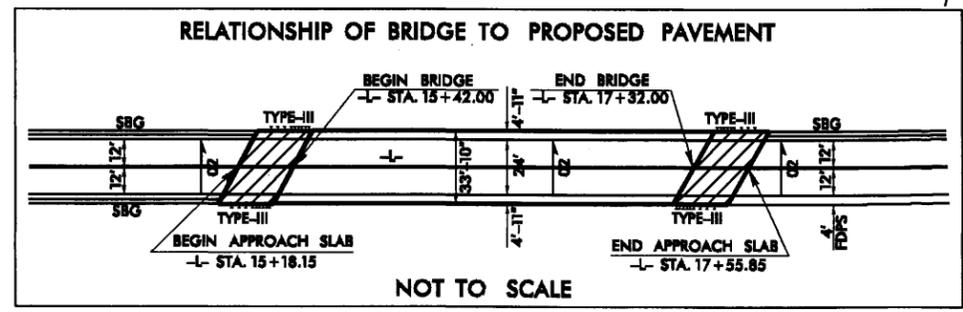
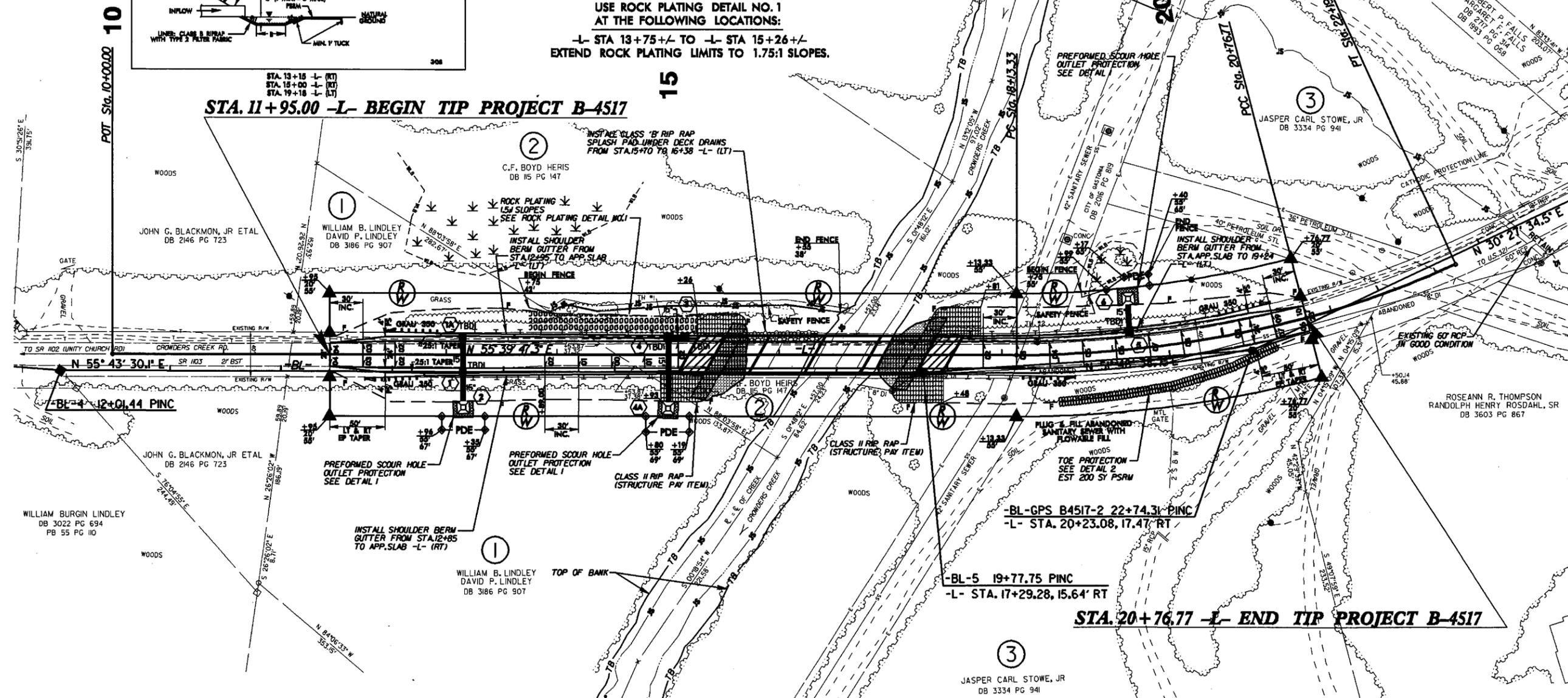
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PROJECT REFERENCE NO.	SHEET NO.
B-4517	4
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	

FOR -L- PROFILE SEE SHEET 5
 [Hatched Pattern] BRIDGE APPROACH SLAB
 [Grid Pattern] UNCLASSIFIED STRUCTURE EXCAVATION (STRUCTURE PAY ITEM)

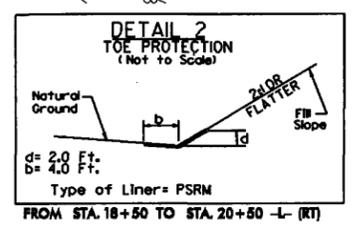


USE ROCK PLATING DETAIL NO. 1 AT THE FOLLOWING LOCATIONS:
 -L- STA 13+75+/- TO -L- STA 15+26+/-
 EXTEND ROCK PLATING LIMITS TO 1.75:1 SLOPES.



-L-
 PI Sta 19+45.78
 $\Delta = 14^\circ 43' 32.9\" (LT)$
 $D = 5' 35\" 23.4'$
 $L = 263.44'$
 $T = 132.45'$
 $R = 1025.00'$
 SE = SEE PLANS
 **DS = 54 mph

PI Sta 21+48.27
 $\Delta = 9^\circ 59' 04.6\" (LT)$
 $D = 7' 00\" 00.0'$
 $L = 142.64'$
 $T = 71.50'$
 $R = 818.51'$



B-4517-99
 REVISIONS
 28 MAY 2006 09:31 B-4517_rdy_psh.dgn
 10
 POT Sta. 10+00.00

5/14/99

28-MAY-2008 09:32
R:\Roadway\Proj\4517_rdy_pf1.dgn
\$\$\$\$\$

PROJECT REFERENCE NO. <i>B-4517</i>	SHEET NO. 5
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	

L

UNCLASSIFIED STRUCTURE EXCAVATION
(STRUCTURE PAY ITEM, SEE STRUCTURE PLANS)

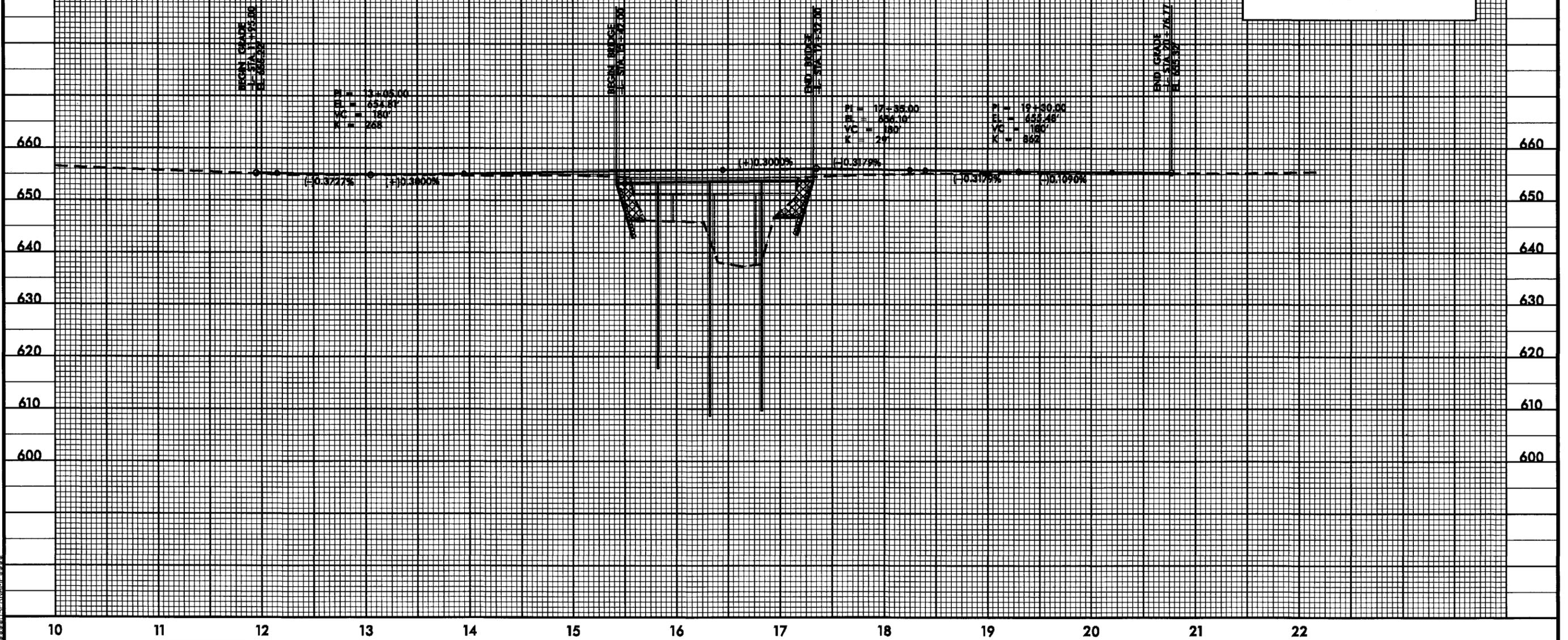
BM #1 8" SPIKE IN BASE OF POWER POLE
OUTSIDE PROJECT LIMITS
ELEV. = 668.88'

BM #2 CHISELED SQUARE IN S.W. CORNER
ON TOP OF CONC. FORCED SEWER BOX
197' LEFT OF -L- STA. 19+08
ELEV. = 647.93'

BM #3 CHISELED SQUARE IN S.W. CORNER
OF CONC. FOUNDATION OF A POWER BOX
OUTSIDE PROJECT LIMITS
ELEV. = 663.75'

BRIDGE HYDRAULIC DATA

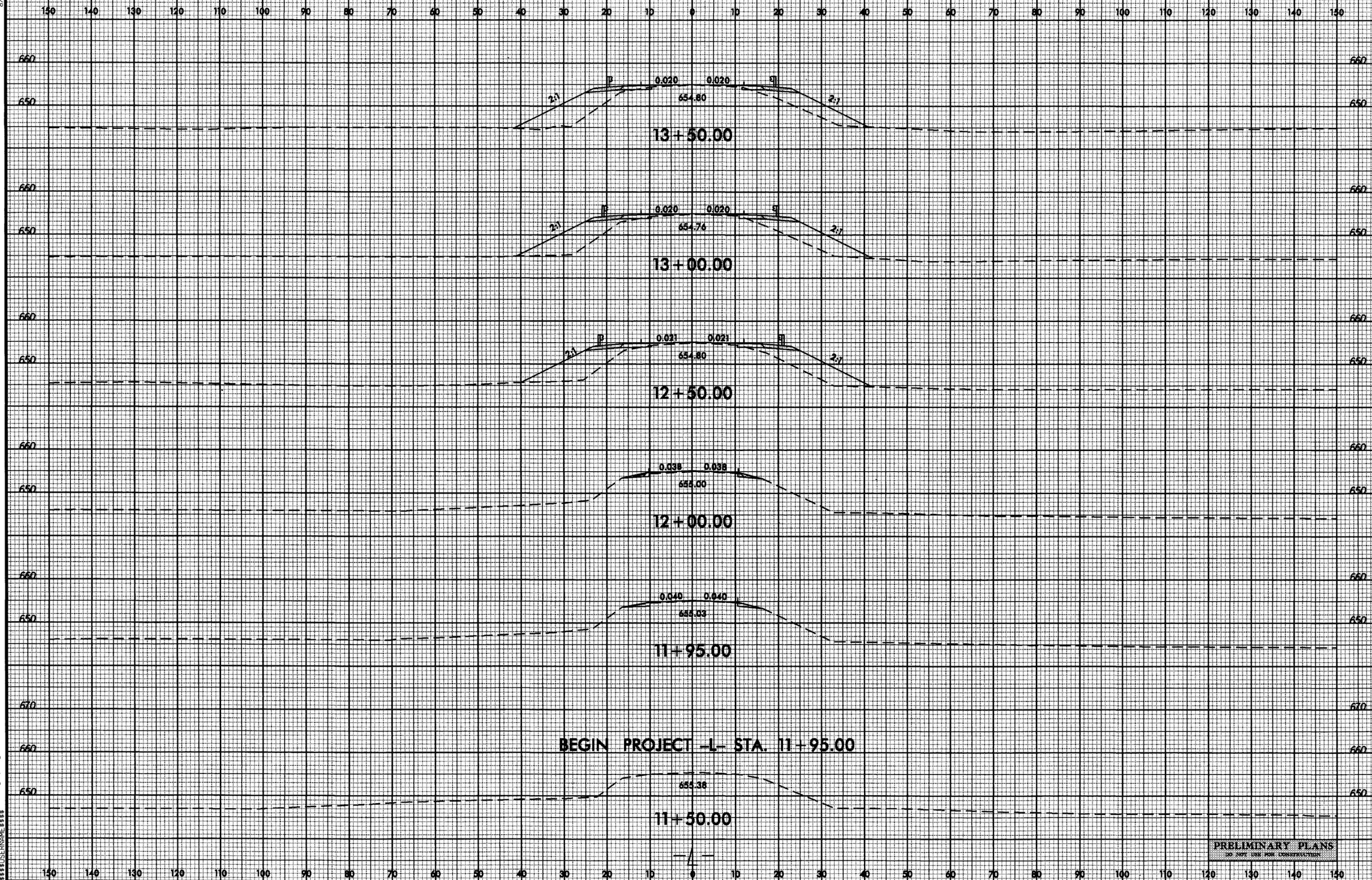
DESIGN DISCHARGE	= 8300	CFS
DESIGN FREQUENCY	= 50	YRS
DESIGN HW ELEVATION	= 653.3	FT
BASE DISCHARGE	= 9100	CFS
BASE FREQUENCY	= 100	YRS
BASE HW ELEVATION	= 653.9	FT
OVERTOPPING DISCHARGE	= 15000+/-	CFS
OVERTOPPING FREQUENCY	= 500+/-	YRS
OVERTOPPING ELEVATION	= 655.0	FT
EST. NORM. W.S. ELEV.	= 637.89	FT
DATE OF SURVEY	= Sept. 3, 2008	
W.S. ELEVATION AT DATE OF SURVEY	= 637.89	FT



8/23/99

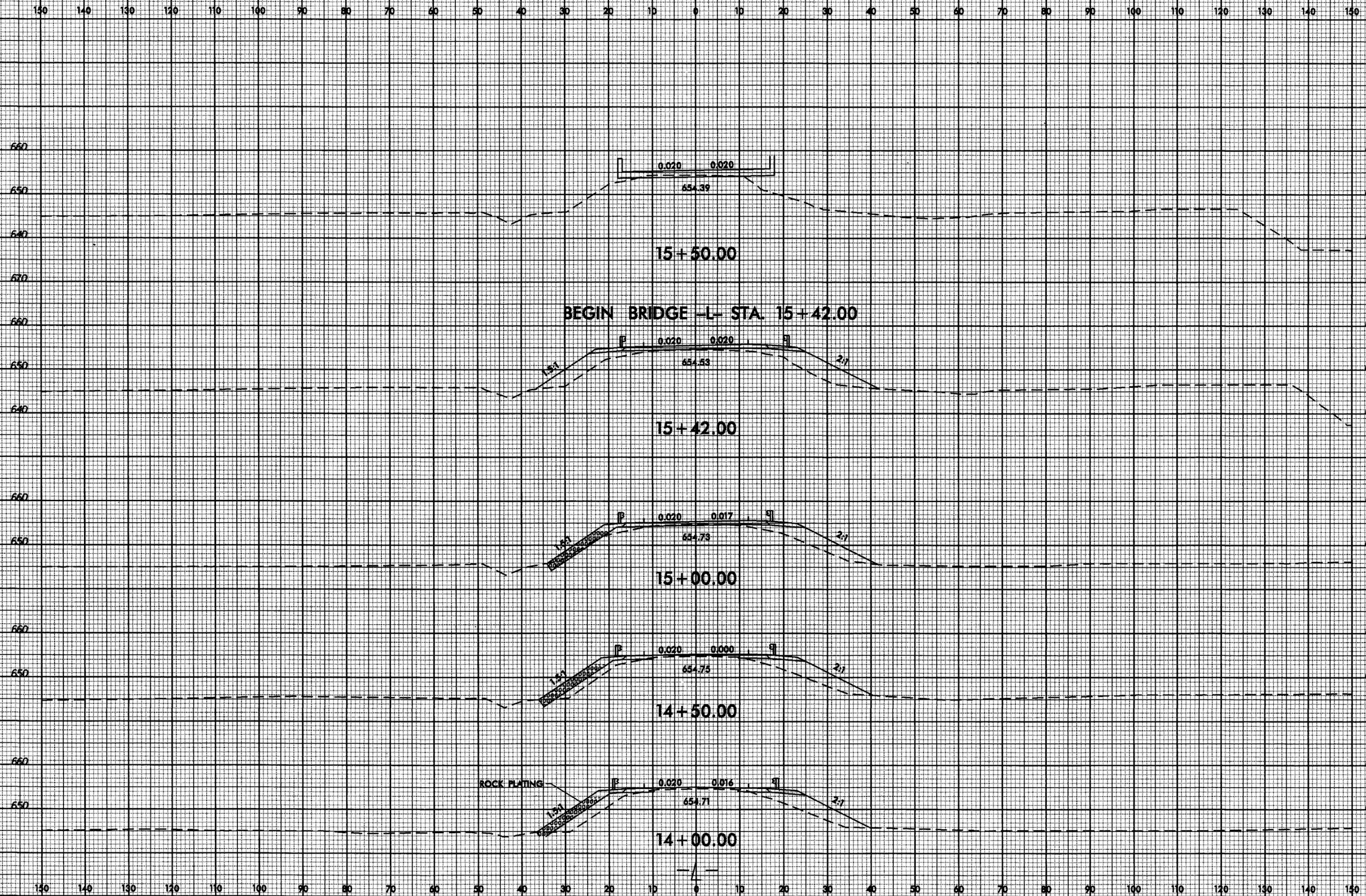


PROJ. REFERENCE NO. B-4517 SHEET NO. X-1



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SUBSEQUENT

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

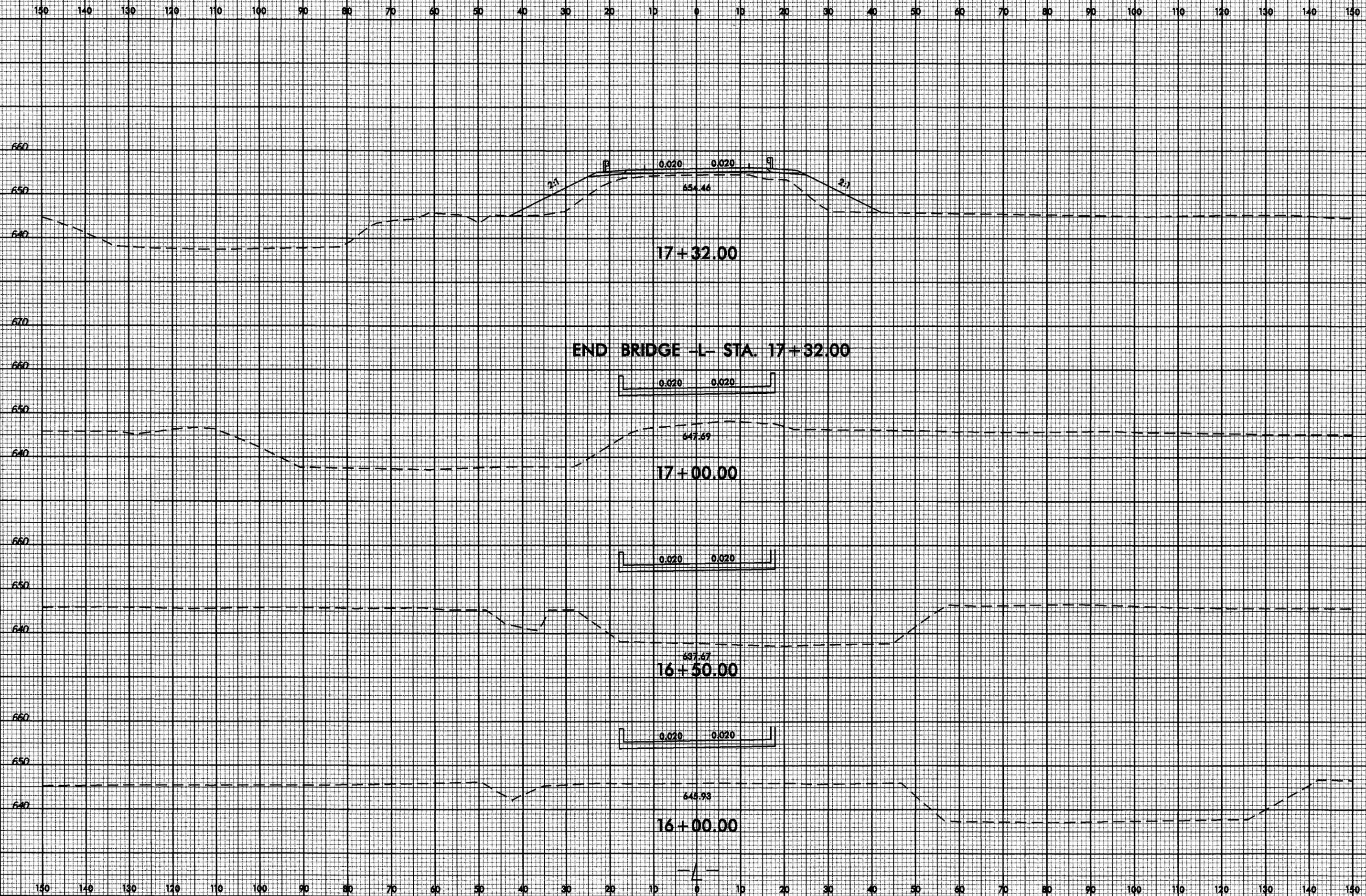


8/23/99



PROJ. REFERENCE NO.
B-4517

SHEET NO.
X-3



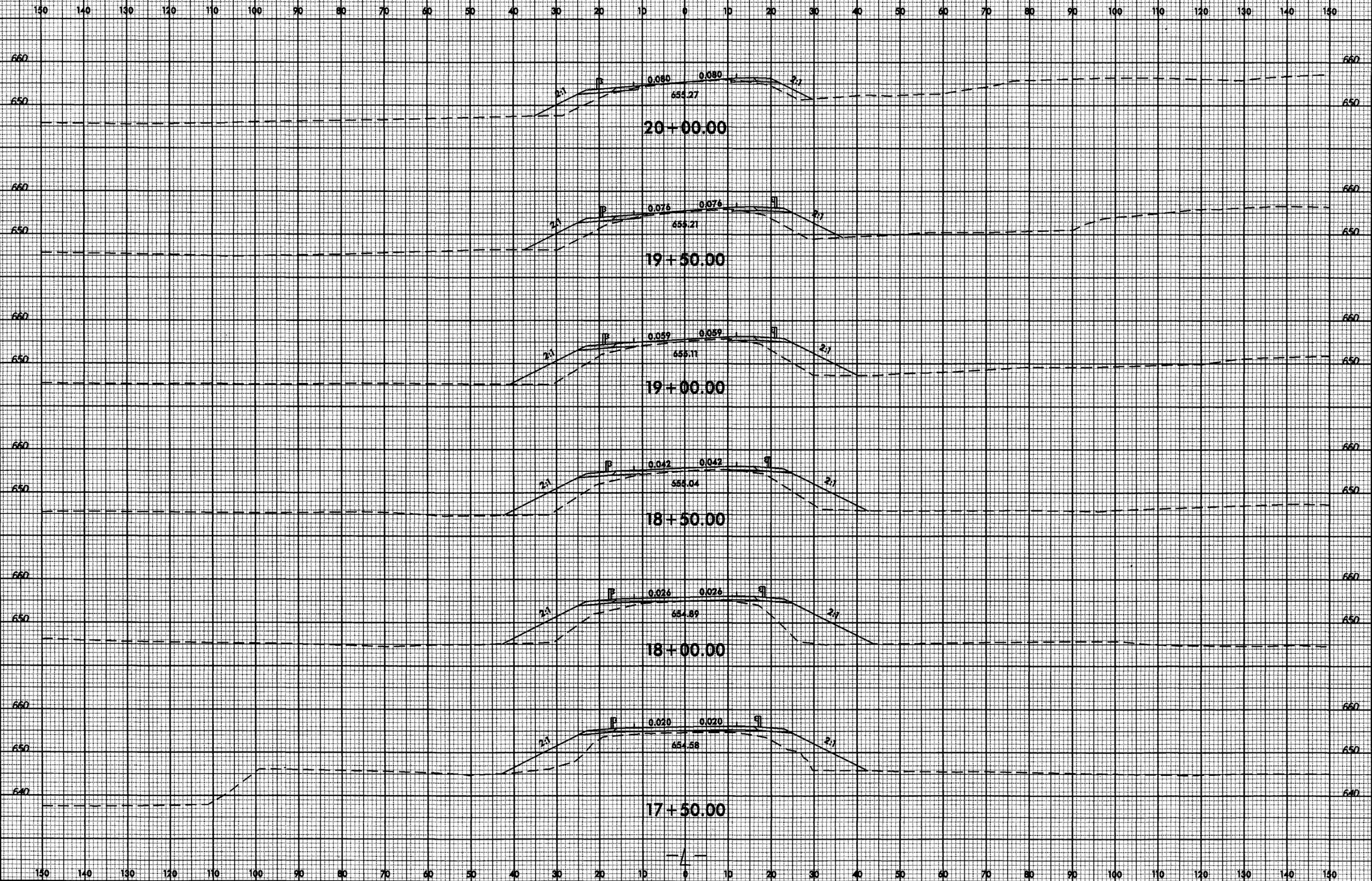
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SUBMIT

8/23/99



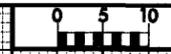
PROJ. REFERENCE NO.
B-4517

SHEET NO.
X-4



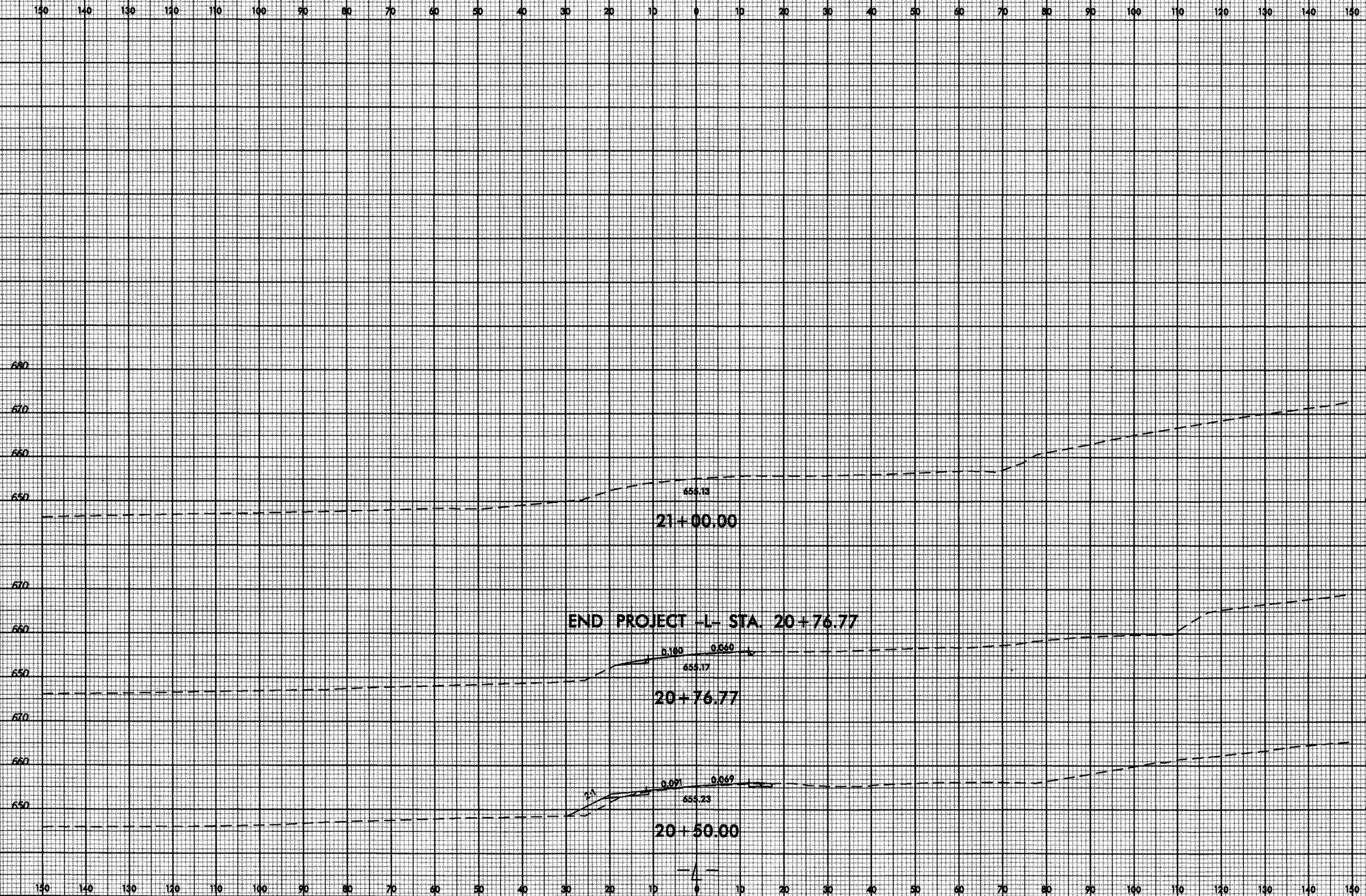
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8/23/99



PROJ. REFERENCE NO.
B-4517

SHEET NO.
X-5



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 \$SUBSTRNAME\$\$\$