



STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION

PAT L. MCCRORY
GOVERNOR

ANTHONY J. TATA
SECRETARY

March 16, 2015

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

ATTN: Mr. David Bailey
NCDOT Coordinator

Subject: **Application for Section 404 Nationwide Permit 33, 401 Water Quality Certification and Jordan Lake Buffer Certification** for the replacement of Bridge No. 193 on SR 2719 (High Rock Road) over Buffalo Creek in Guilford County, North Carolina. Federal Aid Project No. BRZ-2719(1). TIP No. B-4959.

Debit \$240.00 from WBS Element 40151.1.1.

Please find enclosed the Pre-Construction Notification (PCN) form, Preliminary Jurisdictional Determination Form, stormwater management plan, permit drawings, buffer drawings, and design plans for the above referenced project. For impact totals, please see the PCN.

The proposed let date for the project is October 20, 2015 with a review date of September 1, 2015. However, the let date may advance as additional funds become available.

A copy of this permit application will be posted on the NCDOT Website at <https://connect.ncdot.gov/resources/Environmental/Pages/default.aspx>, under *Quick Links > Permit Applications*. A copy of the CE is also available at the above website address under *Quick Links > Environmental Documents*.

Thank you for your assistance with this project. If you have any questions or need additional information, please contact Jason Dilday at jldilday@ncdot.gov or (919) 707-6111.

Sincerely,

for Richard W. Hancock, P.E., Manager
Project Development and Environmental Analysis Unit

cc: NCDOT Permit Application Standard Distribution List

MAILING ADDRESS:
NC DEPARTMENT OF TRANSPORTATION
PROJECT DEVELOPMENT & ENVIRONMENTAL ANALYSIS UNIT
1598 MAIL SERVICE CENTER
RALEIGH NC 27699-1548

TELEPHONE: 919-707-6000
FAX: 919-212-5785

WEBSITE: NCDOT.GOV

LOCATION:
CENTURY CENTER, BUILDING B
1020 BIRCH RIDGE DRIVE
RALEIGH NC 27610



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: 33 or General Permit (GP) number:		
1c. Has the NWP or GP number been verified by the Corps?	<input checked="" type="checkbox"/> Yes	<input 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 checked="" 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 193 over Buffalo Creek on SR 2719 (High Rock Road)
2b. County:	Guilford
2c. Nearest municipality / town:	Greensboro
2d. Subdivision name:	<i>not applicable</i>
2e. NCDOT only, T.I.P. or state project no.:	B-4959

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) 707-6111
3g. Fax no.:	(919) 212-5785
3h. Email address:	jldilday@ncdot.gov

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

B. Project Information and Prior Project History	
1. Property Identification	
1a. Property identification no. (tax PIN or parcel ID):	<i>not applicable</i>
1b. Site coordinates (in decimal degrees):	Latitude: 36.153046 (DD.DDDDDD) Longitude: - 79.613762 (-DD.DDDDDD)
1c. Property size:	1.8 acres
2. Surface Waters	
2a. Name of nearest body of water (stream, river, etc.) to proposed project:	Buffalo Creek
2b. Water Quality Classification of nearest receiving water:	WS-V; NSW
2c. River basin:	Cape Fear
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: Forest communities, agriculture, historic mill site, minor residential development	
3b. List the total estimated acreage of all existing wetlands on the property: 0.0 acre	
3c. List the total estimated linear feet of all existing streams (intermittent and perennial) on the property: 100 linear feet	
3d. Explain the purpose of the proposed project: To replace a structurally deficient and functionally obsolete bridge.	
3e. Describe the overall project in detail, including the type of equipment to be used: The project involves replacing a three span, 92-foot bridge with a three span, 142-foot bridge on the existing alignment. Traffic will be maintained on an off-site detour. Standard road building equipment, such as trucks, dozers, and cranes will be used. Temporary causeways will be used during removal of the existing bridge and construction of the new structure.	
4. Jurisdictional Determinations	
4a. Have jurisdictional wetland or stream determinations by the Corps or State been requested or obtained for this property / project (including all prior phases) in the past? Comments:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Unknown
4b. If the Corps made the jurisdictional determination, what type of determination was made?	<input type="checkbox"/> Preliminary <input type="checkbox"/> Final
4c. If yes, who delineated the jurisdictional areas? Name (if known):	Agency/Consultant Company: Other:
4d. If yes, list the dates of the Corps jurisdictional determinations or State determinations and attach documentation.	
5. Project History	
5a. Have permits or certifications been requested or obtained for this project (including all prior phases) in the past?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Unknown
5b. If yes, explain in detail according to "help file" instructions.	
6. Future Project Plans	
6a. Is this a phased project?	<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 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 1 <input type="checkbox"/> P <input type="checkbox"/> T Utility Impacts			<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Corps <input type="checkbox"/> DWQ	
2g. Total wetland impacts					

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	Causeways	Buffalo Creek	<input checked="" type="checkbox"/> PER <input type="checkbox"/> INT	<input checked="" type="checkbox"/> Corps <input type="checkbox"/> DWQ	50	100
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		
3h. Total stream and tributary impacts						0 Perm 100 Temp

3i. Comments: Causeways will be placed so that no more than fifty percent of the waterway is obstructed at any time.

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 Permanent 0 Temporary

4g. Comments:

5. Pond or Lake Construction

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

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

5g. Comments:

5h. Is a dam high hazard permit required?	<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 checked="" type="checkbox"/> Other: Jordan
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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	Buffalo Creek	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	1,884	58
B2 <input checked="" type="checkbox"/> P <input type="checkbox"/> T	Road Crossing	Buffalo Creek	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	271	632
B3 <input type="checkbox"/> P <input type="checkbox"/> T			<input type="checkbox"/> Yes <input type="checkbox"/> No		
6h. Total buffer impacts				2,155	690

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. See Stormwater Management Plan. Bridge bents for the new structure will be placed outside of the stream. The new bridge will be built on the same alignment as the existing structure. Riprap pads will be used at pipe outlets. An offsite detour will be used during construction.		
1b. Specifically describe measures taken to avoid or minimize the proposed impacts through construction techniques. Best Management Practices for Surface Waters will be used during all phases of construction.		
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	
	<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:	0 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):	0 square feet	
4e. Riparian wetland mitigation requested:	0 acres	
4f. Non-riparian wetland mitigation requested:	0 acres	
4g. Coastal (tidal) wetland mitigation requested:	0 acres	
4h. Comments:		
5. Complete if Using a Permittee Responsible Mitigation Plan		
5a. If using a permittee responsible mitigation plan, provide a description of the proposed mitigation plan.		

6. Buffer Mitigation (State Regulated Riparian Buffer Rules) – required by DWQ				
6a. Will the project result in an impact within a protected riparian buffer that requires buffer mitigation?				<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				
Zone 2				
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.	
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 checked="" 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 NA
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. 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 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 checked="" 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? N.C. Natural Heritage Program database; USFWS-Raleigh Field Office website; biological surveys for protected species listed for Guilford County, which includes small whorled pogonia. Biological Conclusions of "No Effect" were rendered for this species. Habitat for the species exists, but a survey conducted of the study area on 6/30/2011 resulted in no specimens being found.		
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 checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
7b. What data sources did you use to determine whether your site would impact historic or archeological resources? NEPA Documentation Project designed to avoid impacts to historic property.		
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		
for <u>Richard W. Hancock, P.E.</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.)	3-16-2015 Date

ATTACHMENT A
PRELIMINARY JURISDICTIONAL DETERMINATION FORM

BACKGROUND INFORMATION

- A. **REPORT COMPLETION DATE FOR PRELIMINARY JURISDICTIONAL DETERMINATION (JD):** _____
- B. **NAME AND ADDRESS OF PERSON REQUESTING PRELIMINARY JD:**
North Carolina Department of Transportation
MSC 1598, Raleigh NC 27699
- C. **DISTRICT OFFICE, FILE NAME, AND NUMBER:**

- D. **PROJECT LOCATION(S) AND BACKGROUND INFORMATION:**
B-4959, Replacement of Bridge No. 193 on SR 2719 over Buffalo Creek, Guilford County

(USE THE ATTACHED TABLE TO DOCUMENT MULTIPLE WATERBODIES AT DIFFERENT SITES)

State: NC County/parish/borough: Guilford City: Greensboro

Center coordinates of site (lat/long in degree decimal format):

Lat. 36.15305 °N; Long. -79.61376 °W.
(XX.XXXXX) (XX.XXXXX)

Universal Transverse Mercator: Z: Select E: _____ N: _____

Name of nearest waterbody: Buffalo Creek

Identify (estimate) amount of waters in the review area:

Non-wetland waters:

230 linear feet: 0.5-27 width (ft) and/or _____ acres.

Cowardin Class: Palustrine

Stream Flow: All Perennial

Wetlands: _____ acres.

Cowardin Class: _____

Name of any water bodies on the site that have been identified as Section 10 waters:

Tidal: _____

Non-Tidal: _____ Non-Tidal: _____

E. REVIEW PERFORMED FOR SITE EVALUATION (CHECK ALL THAT APPLY):

Office (Desk) Determination. Date: _____

Field Determination. Date(s): _____

SUPPORTING DATA. Data reviewed for preliminary JD (check all that apply - checked items should be included in case file and, where checked and requested, appropriately reference sources below):

Maps, plans, plots or plat submitted by or on behalf of the applicant/consultant: permit drawings, design plans

Data sheets prepared/submitted by or on behalf of the applicant/consultant.

Office concurs with data sheets/delineation report.

Office does not concur with data sheets/delineation report.

Data sheets prepared by the Corps: _____

Corps navigable waters' study: _____

U.S. Geological Survey Hydrologic Atlas: _____

USGS NHD data

USGS 8 and 12 digit HUC maps

U.S. Geological Survey map(s). Cite scale & quad name: _____

USDA Natural Resources Conservation Service Soil Survey.
Citation: _____

National wetlands inventory map(s). Cite name: _____

State/Local wetland inventory map(s): _____

FEMA/FIRM maps: _____

100-year Floodplain Elevation is: _____
(National Geodetic Vertical Datum of 1929)

Photographs: Aerial (Name & Date): _____ or
 Other (Name & Date): _____

Previous determination(s). File no. and date of response letter: _____

Other information (please specify): _____

1. The Corps of Engineers believes that there may be jurisdictional waters of the United States on the subject site, and the permit applicant or other affected party who requested this preliminary JD is hereby advised of his or her option to request and obtain an approved jurisdictional determination (JD) for that site. Nevertheless, the permit applicant or other person who requested this preliminary JD has declined to exercise the option to obtain an approved JD in this instance and at this time.

2. In any circumstance where a permit applicant obtains an individual permit, or a Nationwide General Permit (NWP) or other general permit verification requiring "pre-construction notification" (PCN), or requests verification for a non-reporting NWP or other general permit, and the permit applicant has not requested an approved JD for the activity, the permit applicant is hereby made aware of the following: (1) the permit applicant has elected to seek a permit authorization based on a preliminary JD, which does not make an official determination of jurisdictional waters; (2) that the applicant has the option to request an approved JD before accepting the terms and conditions of the permit authorization, and that basing a permit authorization on an approved JD could possibly result in less compensatory mitigation being required or different special conditions; (3) that the applicant has the right to request an individual permit rather than accepting the terms and conditions of the NWP or other general permit authorization; (4) that the applicant can accept a permit authorization and thereby agree to comply with all the terms and conditions of that permit, including whatever mitigation requirements the Corps has determined to be necessary; (5) that undertaking any activity in reliance upon the subject permit authorization without requesting an approved JD constitutes the applicant's acceptance of the use of the preliminary JD, but that either form of JD will be processed as soon as is practicable; (6) accepting a permit authorization (e.g., signing a proffered individual permit) or undertaking any activity in reliance on any form of Corps permit authorization based on a preliminary JD constitutes agreement that all wetlands and other water bodies on the site affected in any way by that activity are jurisdictional waters of the United States, and precludes any challenge to such jurisdiction in any administrative or judicial compliance or enforcement action, or in any administrative appeal or in any Federal court; and (7) whether the applicant elects to use either an approved JD or a preliminary JD, that JD will be processed as soon as is practicable. Further, an approved JD, a proffered individual permit (and all terms and conditions contained therein), or individual permit denial can be administratively appealed pursuant to 33 C.F.R. Part 331, and that in any administrative appeal, jurisdictional issues can be raised (see 33 C.F.R. 331.5(a)(2)). If, during that administrative appeal, it becomes necessary to make an official determination whether CWA jurisdiction exists over a site, or to provide an official delineation of jurisdictional waters on the site, the Corps will provide an approved JD to accomplish that result, as soon as is practicable.

This preliminary JD finds that there "may be" waters of the United States on the subject project site, and identifies all aquatic features on the site that could be affected by the proposed activity, based on the following information:

IMPORTANT NOTE: The information recorded on this form has not necessarily been verified by the Corps and should not be relied upon for later jurisdictional determinations.

Signature and date of
Regulatory Project Manager
(REQUIRED)



Signature and date of
person requesting preliminary JD
(REQUIRED, unless obtaining
the signature is impracticable)



General Project Information

Project No.:		B4959		Project Type:		Bridge Replacement		Date:		11/17/2014	
NCDOT Contact:		William S. Zerman		Contractor / Designer:		AMEC Environment & Infrastructure, Inc.					
Address:		Hydraulics Unit 1020 Birch Ridge Drive, Century Center Building B Raleigh, NC 27610		Address:		2801 Yorkmont Road, Suite 100 Charlotte, NC 28208					
Phone:		919-707-6755		Phone:		704-357-5599					
Email:		bzerman@ncdot.gov		Email:		richard.hiner@amec.com					
City/Town:				County(ies):		Guilford					
River Basin(s):		Cape Fear		CAMA County?		No					
Primary Receiving Water:		Buffalo Creek		NCDWQ Stream Index No.:		16-11-14					
NCDWQ Surface Water Classification for Primary Receiving Water			Primary:		Water Supply V (WS-V)		None				
			Supplemental:								
Other Stream Classification:		None									
303(d) Impairments:		None									
Buffer Rules in Effect		Jordan Lake									

Project Description

Project Length (lin. Miles or feet):		665 ft.		Surrounding Land Use:		Farmland and Residential					
		Proposed Project				Existing Site					
Project Built-Upon Area (ac.)		0.56 ac.				0.44 ac.					
Typical Cross Section Description:		36' OTO, 33'-10" clear roadway (2 - 11' lanes w/ 4'-5' Lt., 7'-5' Rt. Shoulders)				Existing roadway consists of 2-10 ft lanes, Timber deck on I Beams					
Average Daily Traffic (veh/hr/day):		Design/Future: -				Existing: -					

General Project Narrative: The existing 92'-5", 3 span bridge will be replaced by a 3 span 24" cored slab structure with spill through abutments and alaska rail. The horizontal location of the new bridge will the same as that of the existing bridge.

References

09/06/14

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

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

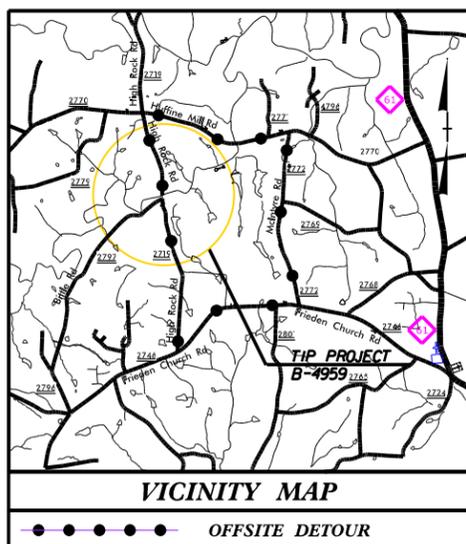
GUILFORD COUNTY

LOCATION: **BRIDGE NO. 193 OVER BUFFALO CREEK ON
SR 2719 (HIGH ROCK ROAD)**

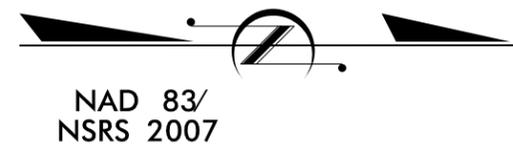
TYPE OF WORK: **GRADING, DRAINAGE, PAVING, AND STRUCTURE**

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	B-4959	1	
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	
40151.1.1	BRZ-2719(1)	PE	
40151.2.FDI	BRZ-2719(1)	R/W & UTIL.	

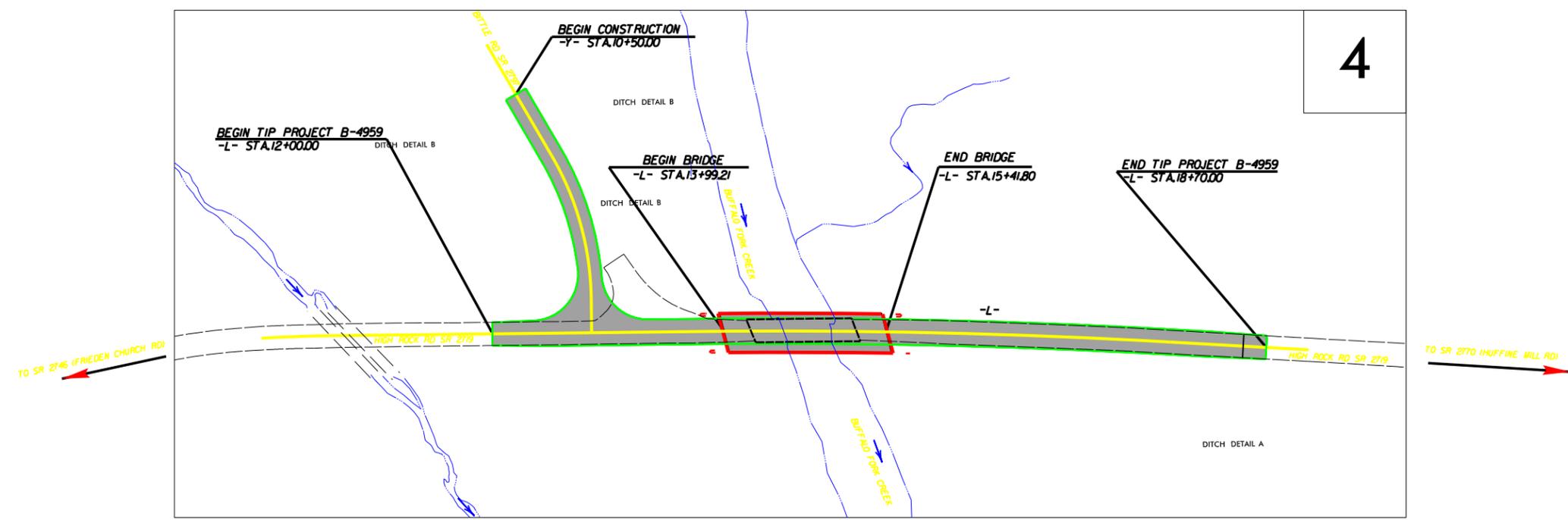
TIP PROJECT: B-4959



**PERMIT DRAWING
SHEET 1 OF 5**



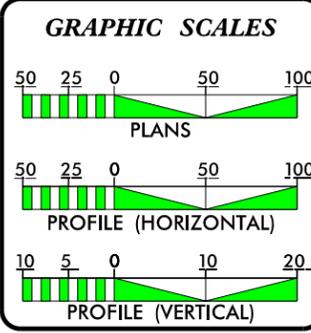
WETLAND AND SURFACE WATER IMPACTS PERMIT



**PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION**

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

CONTRACT:



DESIGN DATA

ADT 2013 =	600 VPD
ADT 2040 =	2900 VPD
K =	11 %
D =	55 %
T =	14 % *
V =	55 MPH
* TTST = 1% DUAL 13%	
FUNC CLASS =	
RURAL LOCAL	
SUB REGIONAL TIER	

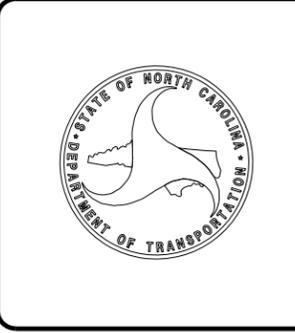
PROJECT LENGTH

LENGTH ROADWAY TIP PROJECT B-4959 =	0.100 MILES
LENGTH STRUCTURE TIP PROJECT B-4959 =	0.027 MILES
TOTAL LENGTH OF TIP PROJECT B-4959 =	0.127 MILES

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

2012 STANDARD SPECIFICATIONS	
RIGHT OF WAY DATE: OCTOBER 16, 2014	JAMES A. SPEER, PE PROJECT ENGINEER
LETTING DATE: OCTOBER 20, 2015	ALLISON K. WHITE PROJECT DESIGN ENGINEER

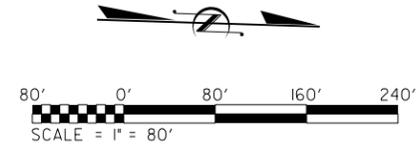
HYDRAULICS ENGINEER	
SIGNATURE: _____	P.E.
ROADWAY DESIGN ENGINEER	
SIGNATURE: _____	P.E.



\$\$\$\$\$SYTIME\$\$\$\$\$
\$\$\$\$\$DGN\$\$\$\$\$
\$\$\$\$\$SERNAME\$\$\$\$\$

 DENOTES TEMPORARY IMPACTS IN SURFACE WATER

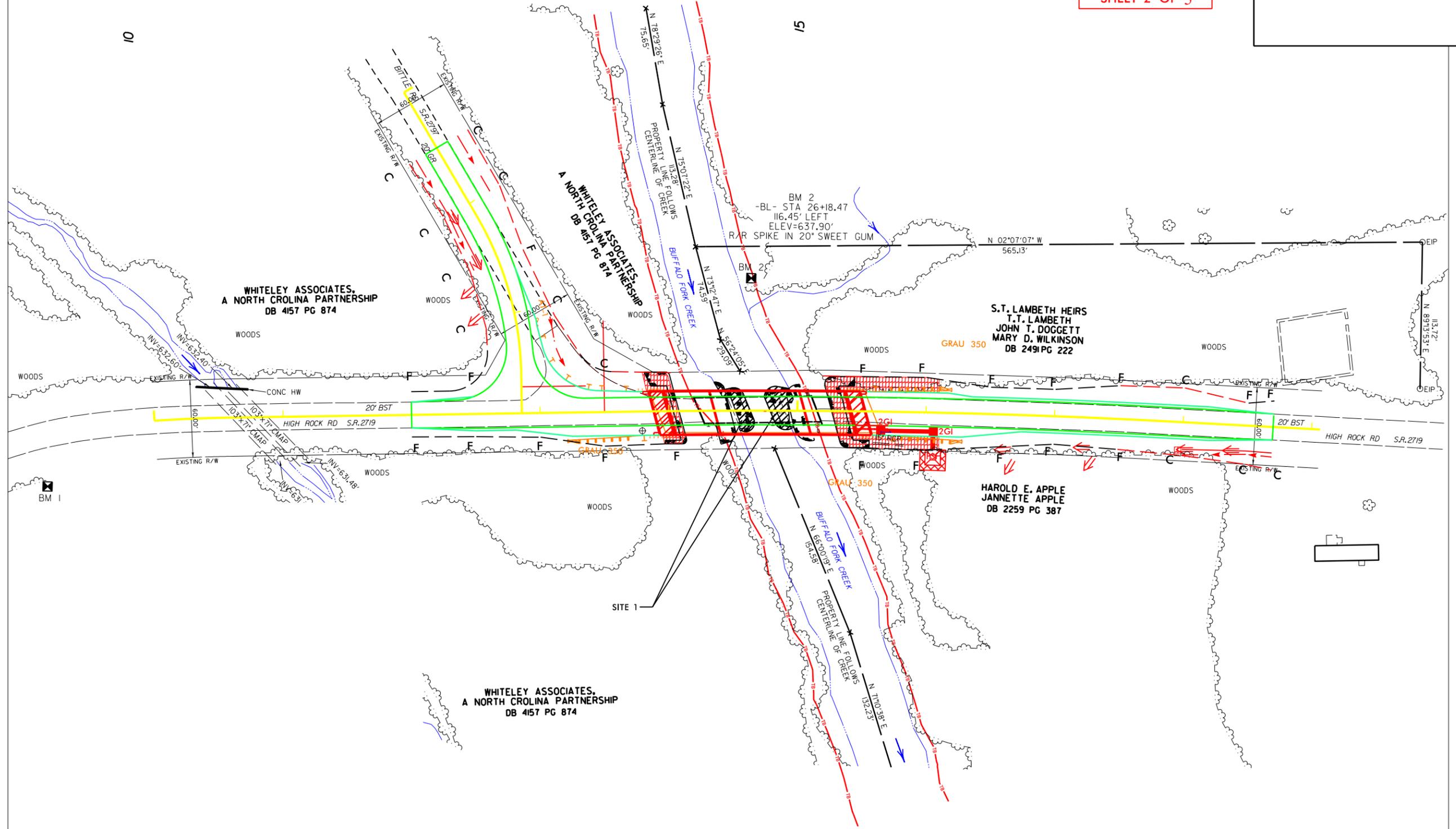
NOTE:
NO MORE THAN FIFTY PERCENT (50%) OF THE WATERWAY BE OBSTRUCTED BY THE TEMPORARY CAUSEWAY AT ANY TIME DURING CONSTRUCTION



PERMIT DRAWING
SHEET 2 OF 5

PROJECT REFERENCE NO. B-4959	SHEET NO. 4A
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
INCOMPLETE PLANS DO NOT USE FOR A/W ACQUISITION	
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	

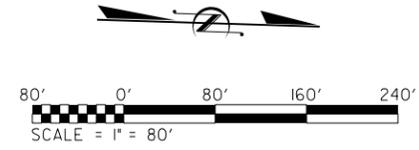
REVISIONS



B-4959 Bridge Replacement
2/18/2015
R:\Hydro\oufcs\PERMITS\Environmental\Drawings\B4959.drn: psht.dgn

 DENOTES TEMPORARY IMPACTS IN SURFACE WATER

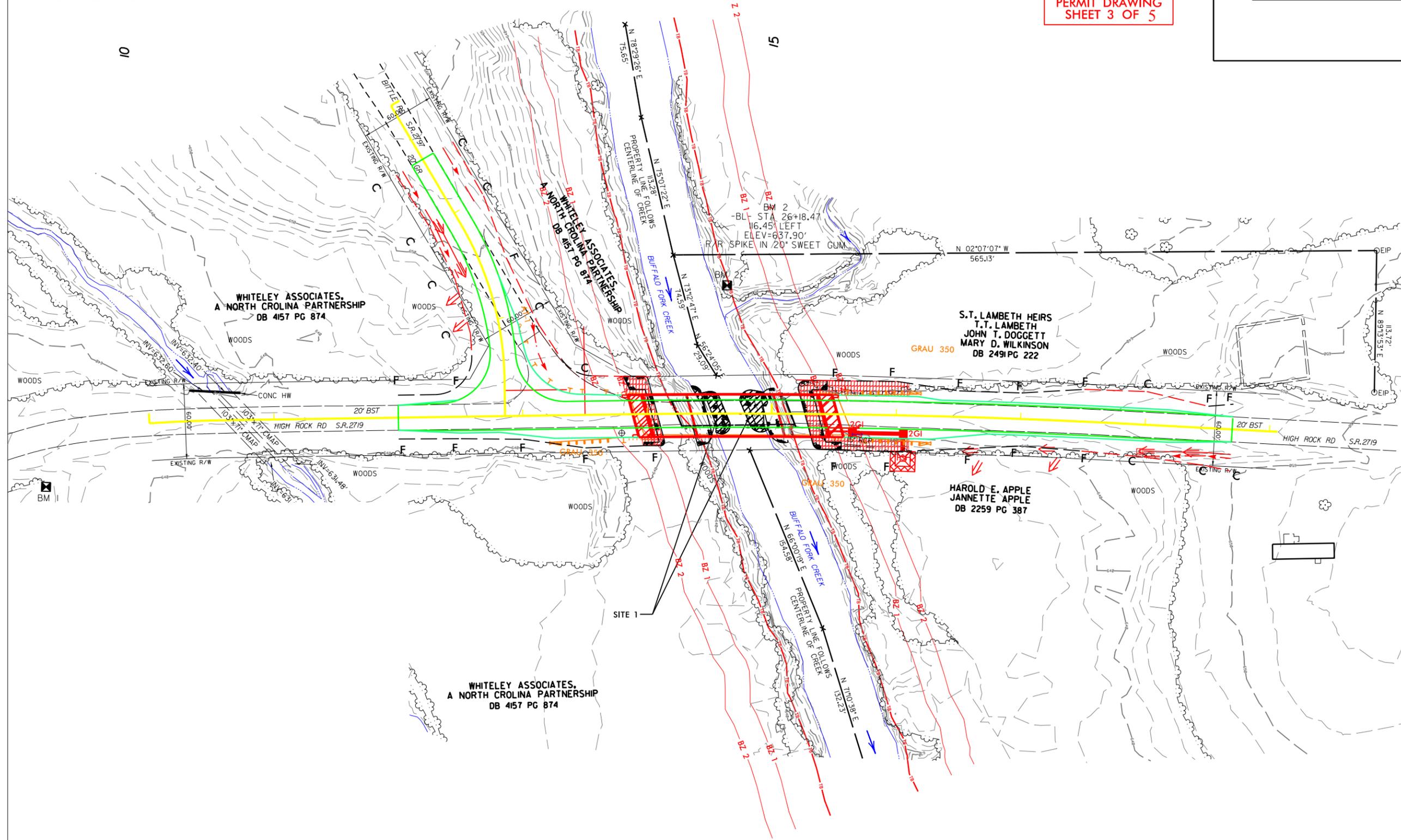
NOTE:
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PERMIT DRAWING
SHEET 3 OF 5

PROJECT REFERENCE NO. B-4959	SHEET NO. 4A
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
INCOMPLETE PLANS DO NOT USE FOR ACQUISITION	
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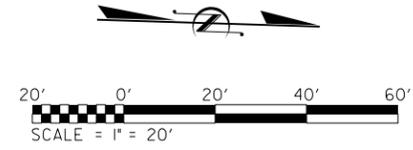
REVISIONS



B-4959 Bridge Replacement
 2/18/2015
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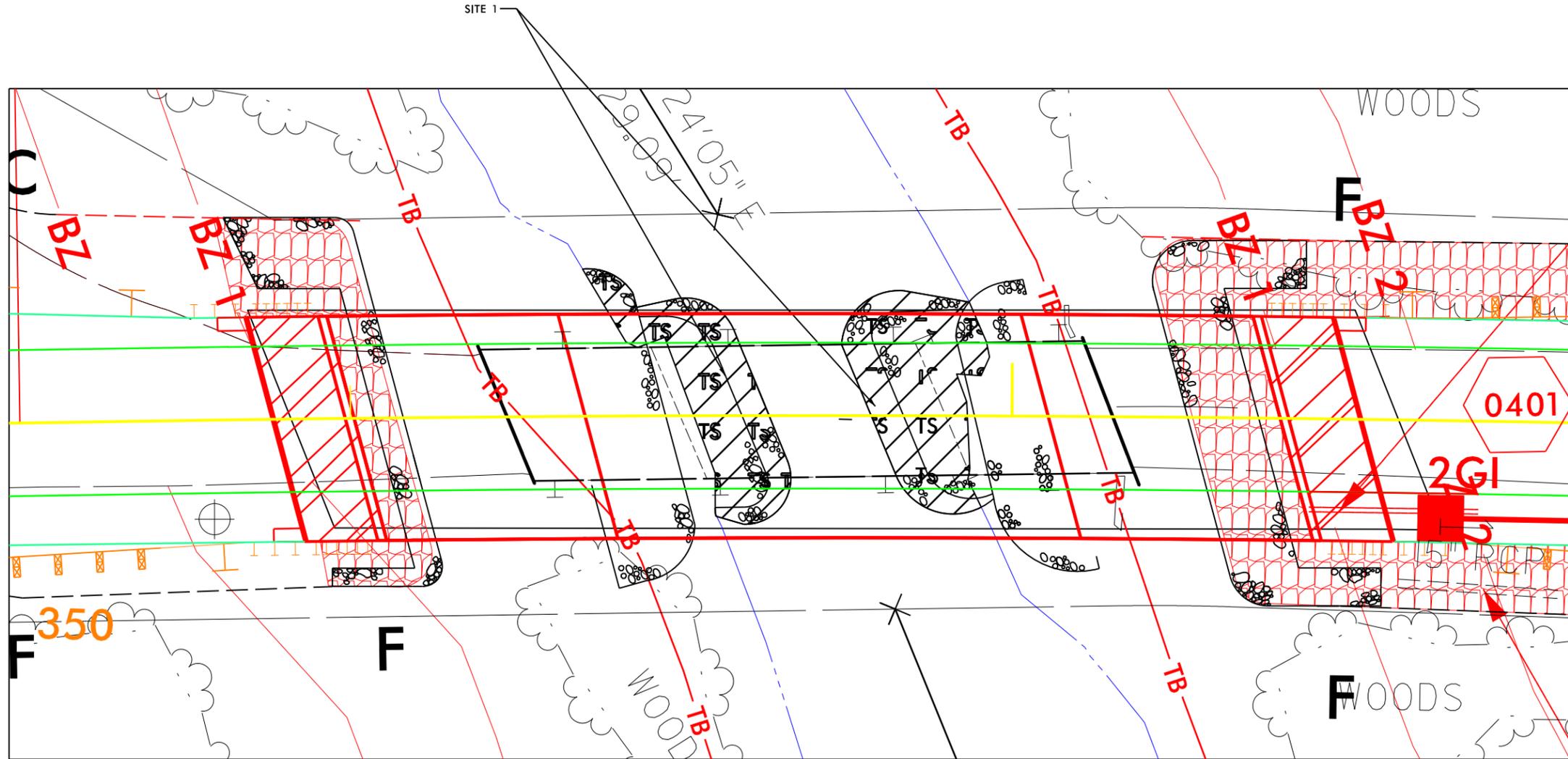
 DENOTES TEMPORARY IMPACTS IN SURFACE WATER

NOTE:
NO MORE THAN FIFTY PERCENT (50%) OF THE WATERWAY BE OBSTRUCTED BY THE TEMPORARY CAUSEWAY AT ANY TIME DURING CONSTRUCTION



PERMIT DRAWING
SHEET 4 OF 5

PROJECT REFERENCE NO. B-4959	SHEET NO. 4A
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
INCOMPLETE PLANS DO NOT USE FOR ACQUISITION	
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	



INSET FOR IMPACT AREAS

REVISIONS
 B-4959 Bridge Replacement
 2/18/2015
 R:\Hydro\utils\PERMITS-Environmental\Drawings\B4959.drn.psh2 - inset.dgn

09/06/14

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

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

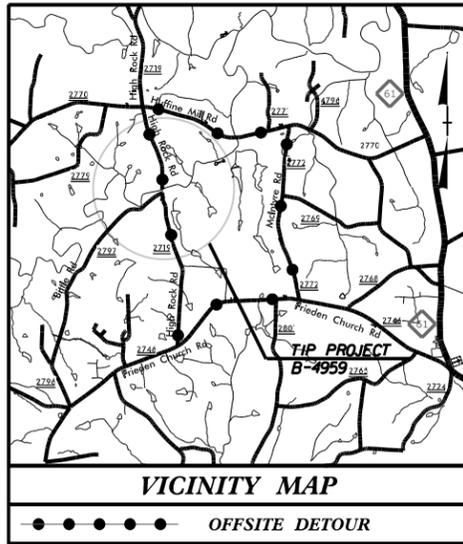
GUILFORD COUNTY

LOCATION: BRIDGE NO. 193 OVER BUFFALO CREEK ON
SR 2719 (HIGH ROCK ROAD)

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

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	B-4959	1	
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	
40151.1.1	BRZ-2719(1)	PE	
40151.2.FDI	BRZ-2719(1)	R/W & UTIL.	

TIP PROJECT: B-4959

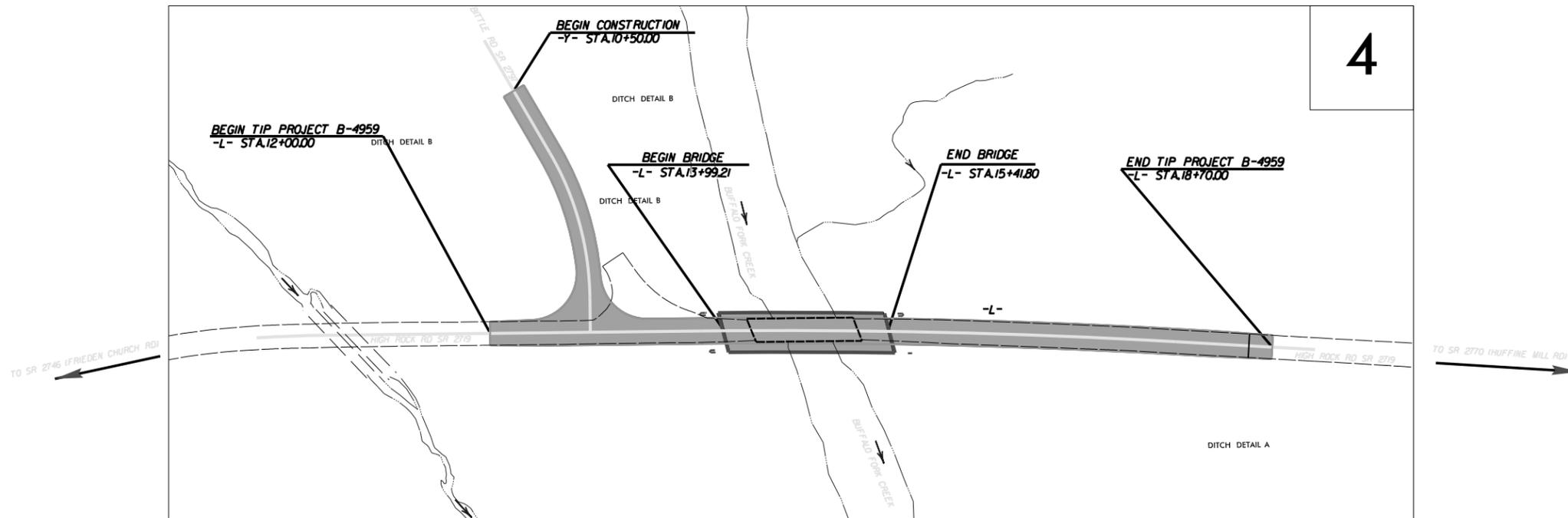


BUFFER DRAWING
SHEET 1 OF 4



NAD 83/
NSRS 2007

BUFFER IMPACTS PERMIT



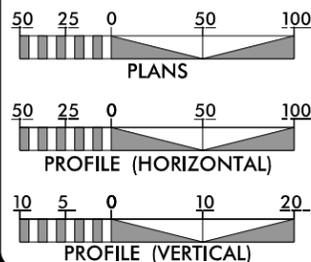
4

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

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THIS PROJECT IS NOT WITHIN ANY MUNICIPAL BOUNDARIES.

CONTRACT:

GRAPHIC SCALES



DESIGN DATA

ADT 2013 = 600 VPD
ADT 2040 = 2900 VPD
K = 11 %
D = 55 %
T = 14 % *
V = 55 MPH
* TTST = 1% DUAL 13%
FUNC CLASS =
RURAL LOCAL
SUB REGIONAL TIER

PROJECT LENGTH

LENGTH ROADWAY TIP PROJECT B-4959 = 0.100 MILES
LENGTH STRUCTURE TIP PROJECT B-4959 = 0.027 MILES
TOTAL LENGTH OF TIP PROJECT B-4959 = 0.127 MILES

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

2012 STANDARD SPECIFICATIONS

RIGHT OF WAY DATE:
OCTOBER 16, 2014

LETTING DATE:
OCTOBER 20, 2015

JAMES A. SPEER, PE
PROJECT ENGINEER

ALLISON K. WHITE
PROJECT DESIGN ENGINEER

HYDRAULICS ENGINEER

SIGNATURE: _____ P.E.

ROADWAY DESIGN
ENGINEER

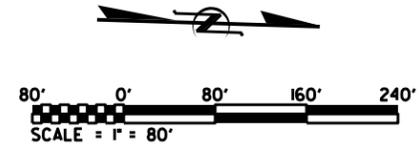
SIGNATURE: _____ P.E.



\$\$\$\$\$SYTIME\$\$\$\$\$
\$\$\$\$\$DGN\$\$\$\$\$
\$\$\$\$\$SERNAME\$\$\$\$\$

-  ALLOWABLE IMPACTS ZONE 1
-  ALLOWABLE IMPACTS ZONE 2

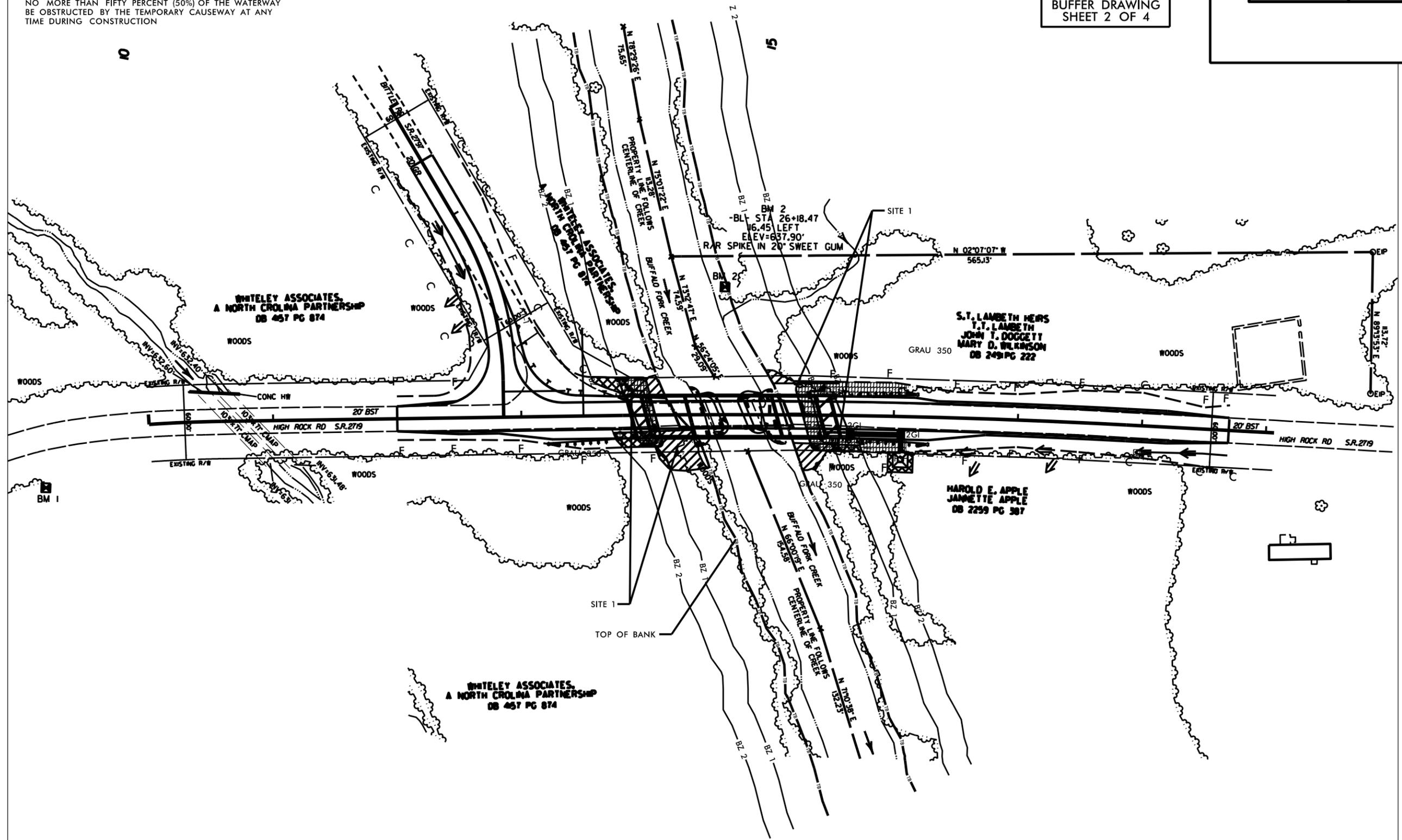
NOTE:
NO MORE THAN FIFTY PERCENT (50%) OF THE WATERWAY
BE OBSTRUCTED BY THE TEMPORARY CAUSEWAY AT ANY
TIME DURING CONSTRUCTION



BUFFER DRAWING
SHEET 2 OF 4

PROJECT REFERENCE NO. B-4959	SHEET NO. 4A
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
INCOMPLETE PLANS DO NOT USE FOR /W ACQUISITION	
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	

REVISIONS

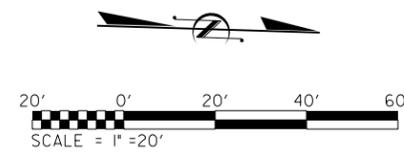


B-4959 Bridge Replacement
DATE'S
SHEET'S

ALLOWABLE IMPACTS ZONE 1

ALLOWABLE IMPACTS ZONE 2

NOTE:
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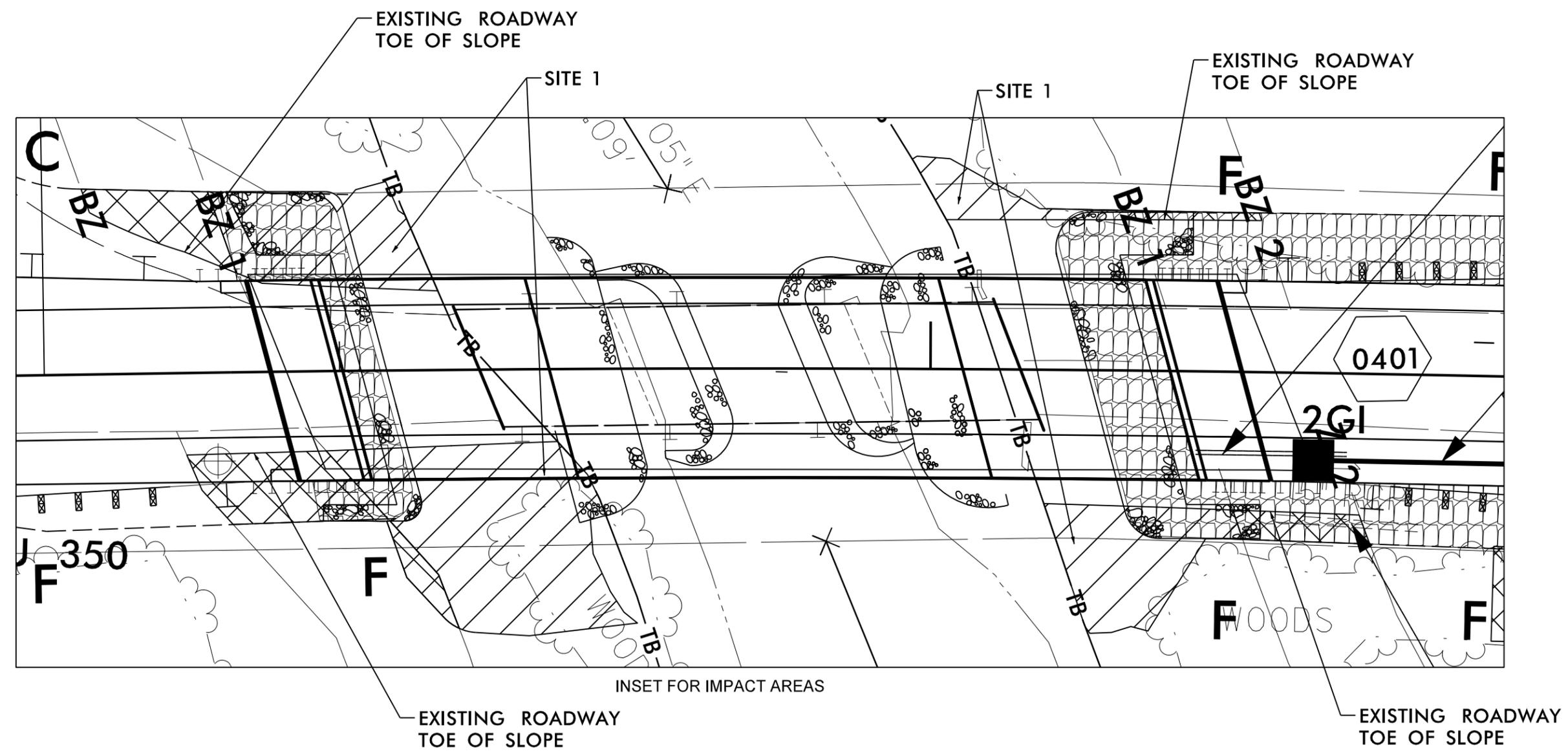


BUFFER DRAWING
SHEET 3 OF 4

PROJECT REFERENCE NO. B-4959	SHEET NO. 4A
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
INCOMPLETE PLANS DO NOT USE FOR A/W ACQUISITION PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	

REVISIONS

B-4959 Bridge Replacement
3/3/2015
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B-4959 Bridge Replacement
3/3/2015
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BUFFER IMPACTS SUMMARY

SITE NO.	STRUCTURE SIZE / TYPE	STATION (FROM/TO)	IMPACT									BUFFER REPLACEMENT	
			TYPE			ALLOWABLE			MITIGABLE			ZONE 1 (ft ²)	ZONE 2 (ft ²)
			ROAD CROSSING	BRIDGE	PARALLEL IMPACT	ZONE 1 (ft ²)	ZONE 2 (ft ²)	TOTAL (ft ²)	ZONE 1 (ft ²)	ZONE 2 (ft ²)	TOTAL (ft ²)		
1	Bridge	13+99.21 - 14+25.80 / 15+38.33 - 15+41.75		X		1884	58	1942					
1	Roadway	13+68.55 - 13+95.03 / 15+40.53 - 15+58.64	X			271	632	903					
TOTAL:						2155	690	2845	0.0	0.0	0.0		

N.C. DEPT. OF TRANSPORTATION
 DIVISION OF HIGHWAYS

 Guilford County
 PROJECT: B-4959

 1/6/2015
 SHEET 4 OF 4

09/08/13

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

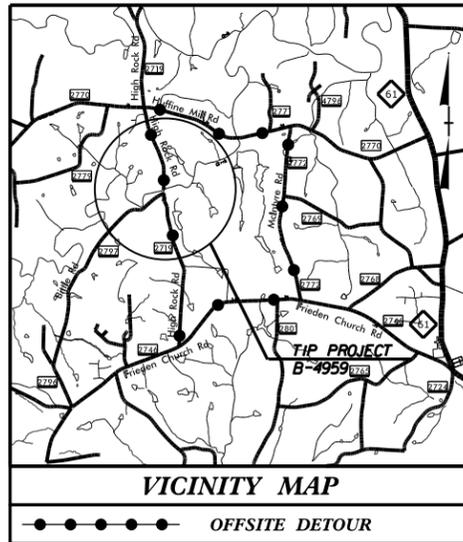
STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

GUILFORD COUNTY

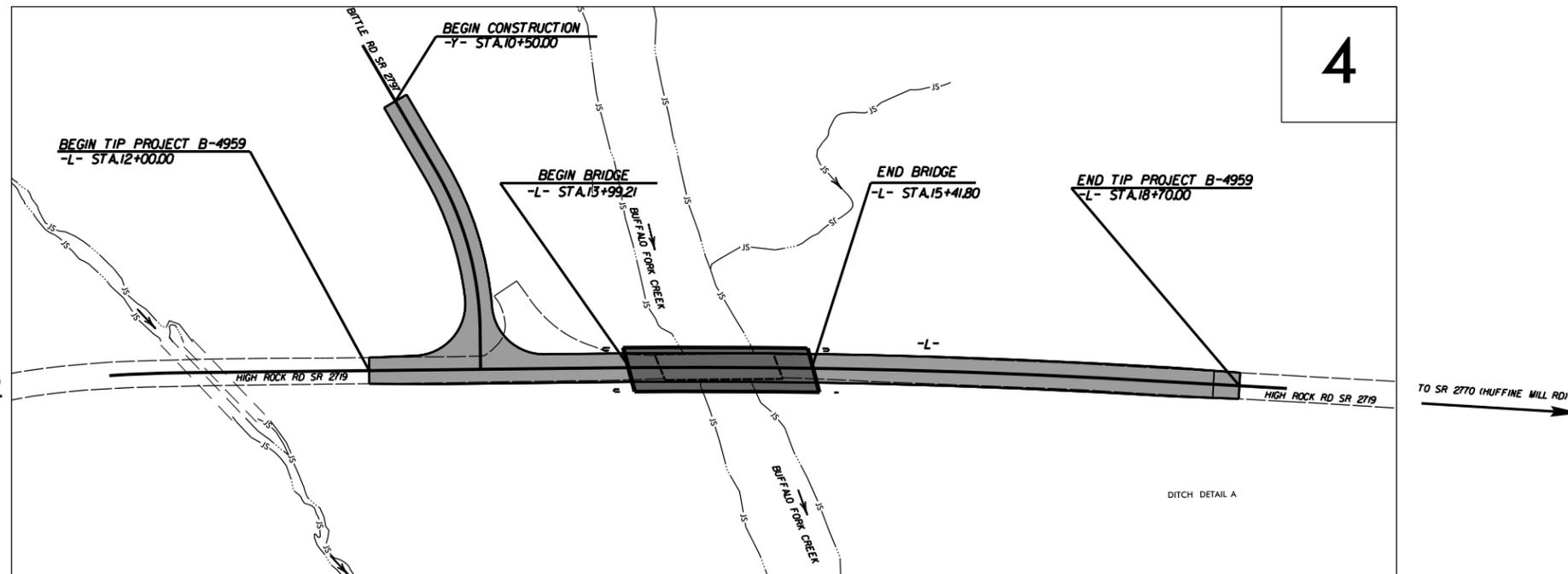
LOCATION: BRIDGE NO. 193 OVER BUFFALO CREEK ON
SR 2719 (HIGH ROCK ROAD)

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

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	B-4959	1	
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	
40151.1.1	BRZ-2719(1)	PE	
40151.2.FDI	BRZ-2719(1)	R/W & UTIL.	



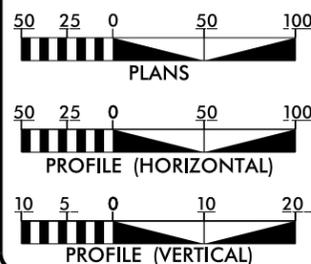
CONTRACT: TIP PROJECT: B-4959



PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

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GRAPHIC SCALES



DESIGN DATA

ADT 2013 = 600 VPD
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 K = 11 %
 D = 55 %
 T = 14 % *
 V = 55 MPH
 * TTST = 1% DUAL 13%
 FUNC CLASS =
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 LENGTH STRUCTURE TIP PROJECT B-4959 = 0.027 MILES
 TOTAL LENGTH OF TIP PROJECT B-4959 = 0.127 MILES

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

2012 STANDARD SPECIFICATIONS

RIGHT OF WAY DATE:
 OCTOBER 16, 2014

LETTING DATE:
 OCTOBER 20, 2015

JAMES A. SPEER, PE
 PROJECT ENGINEER

ALLISON K. WHITE
 PROJECT DESIGN ENGINEER

HYDRAULICS ENGINEER

SIGNATURE: _____ P.E.

ROADWAY DESIGN ENGINEER

SIGNATURE: _____ P.E.



03-FEB-2015 10:18 R:\Roadway\Proj\B4959_Rdy_1.tsh.dgn \$\$\$USERNAME\$\$\$

12/05/11

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	⑬
Existing Fence Line	-x-x-x-
Proposed Woven Wire Fence	○
Proposed Chain Link Fence	□
Proposed Barbed Wire Fence	◇
Existing Wetland Boundary	MLB
Proposed Wetland Boundary	MLB
Existing Endangered Animal Boundary	EAB
Existing Endangered Plant Boundary	EPB
Known Soil Contamination: Area or Site	☠ ☠
Potential Soil Contamination: Area or Site	☠ ?

BUILDINGS AND OTHER CULTURE:

Gas Pump Vent or U/G Tank Cap	○
Sign	○
Well	○
Small Mine	✕
Foundation	□
Area Outline	□
Cemetery	⊕
Building	□
School	□
Church	⊕
Dam	▬

HYDROLOGY:

Stream or Body of Water	-----
Hydro, Pool or Reservoir	□
Jurisdictional Stream	JS
Buffer Zone 1	BZ 1
Buffer Zone 2	BZ 2
Flow Arrow	←
Disappearing Stream	→
Spring	○
Wetland	⋆
Proposed Lateral, Tail, Head Ditch	▬
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 R/W Marker	○
Proposed Control of Access Line with Concrete C/A 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	▬
Single Tree	⊕
Single Shrub	⊕
Hedge	-----
Woods Line	-----

VEGETATION:

Orchard	⊕
Vineyard	□

EXISTING STRUCTURES:

MAJOR:	
Bridge, Tunnel or Box Culvert	CONC
Bridge Wing Wall, Head Wall and End Wall	CONC WW
MINOR:	
Head and End Wall	CONC HW
Pipe Culvert	-----
Footbridge	-----
Drainage Box: Catch Basin, DI or JB	CB
Paved Ditch Gutter	-----
Storm Sewer Manhole	⊕
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	⊗
U/G Power Cable Hand Hole	□
H-Frame Pole	●
Recorded U/G Power Line	-----
Designated U/G Power Line (S.U.E.*)	-----

TELEPHONE:

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

WATER:

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	A/G Water

TV:

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

GAS:

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

SANITARY SEWER:

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

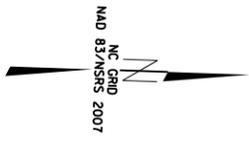
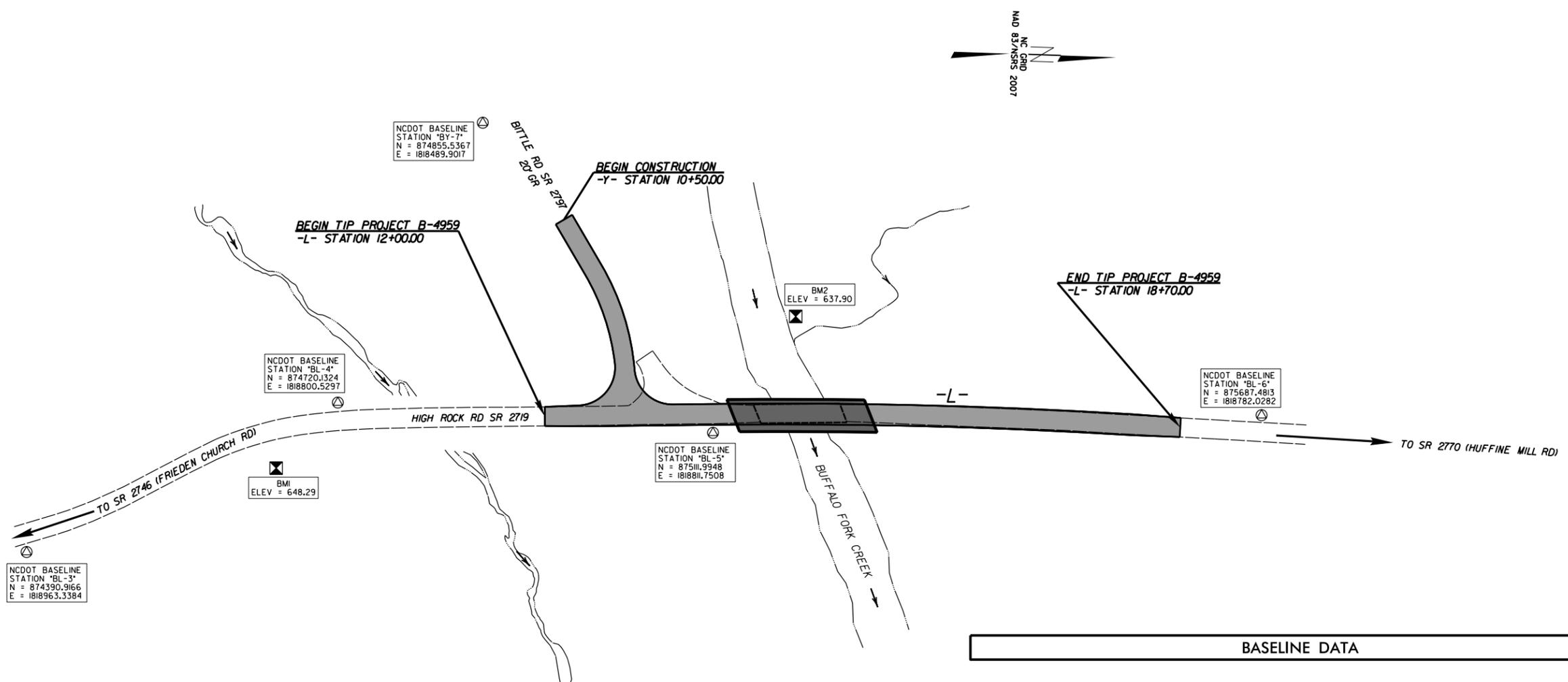
MISCELLANEOUS:

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

12/01/2005

B4959 SURVEY CONTROL SHEET

PROJECT REFERENCE NO.	SHEET NO.
B-4959	1C
Location and Surveys	



BASILINE DATA

BL POINT	DESC.	NORTH	EAST	ELEVATION	L STATION	OFFSET
1	B4959-1	873136.8360	1819143.3580	687.07	OUTSIDE PROJECT LIMITS	
2	B4959-2	874042.8020	1818961.7290	674.05	OUTSIDE PROJECT LIMITS	
3	BL-3	874390.9166	1818963.3384	660.41	OUTSIDE PROJECT LIMITS	
4	BL-4	874720.1324	1818800.5297	643.00	OUTSIDE PROJECT LIMITS	
5	BL-5	875111.9948	1818811.7508	641.48	13+79.22	14.93 RT
6	BL-6	875687.4813	1818782.0282	649.43	OUTSIDE PROJECT LIMITS	

BY POINT	DESC.	NORTH	EAST	ELEVATION	L STATION	OFFSET
7	BY-7	874855.5367	1818489.9017	657.08	11+37.69	318.27 LT
A5	BL-5	875111.9948	1818811.7508	641.48	13+79.22	14.93 RT

BENCHMARK DATA

.....	ELEVATION = 648.29
BM1	
N 874651	E 1818869
BL STATION 20+47.00	31 RIGHT
RR SPIKE IN 15' SWEET GUM	
.....	
BM2	ELEVATION = 637.90
N 875193	E 1818691
BL STATION 26+18.00	116 LEFT
RR SPIKE IN 20' SWEET GUM	
.....	

NOTES

- THE CONTROL DATA FOR THIS PROJECT CAN BE FOUND ELECTRONICALLY BY SELECTING NCDOT PROJECT CONTROL DATA AT:
[HTTPS://CONNECT.NCDOT.GOV/RESOURCES/LOCATION/PAGES/DEFAULT.ASPX](https://connect.ncdot.gov/resources/location/pages/default.aspx)
 - THE FILES TO BE FOUND ARE AS FOLLOWS:
B4959_LS_CONTROL.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.

DATUM DESCRIPTION

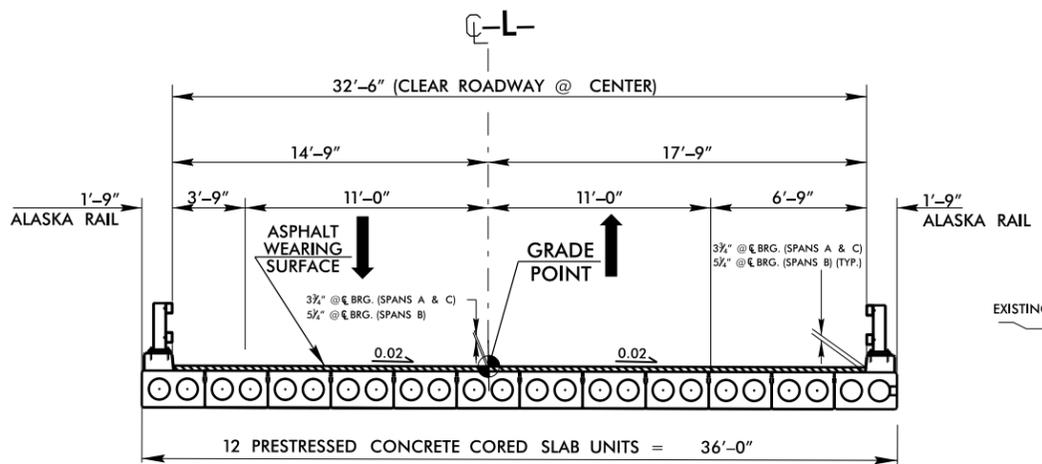
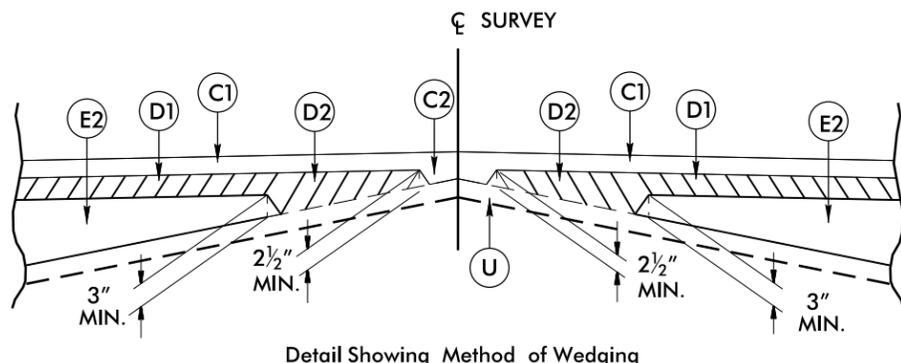
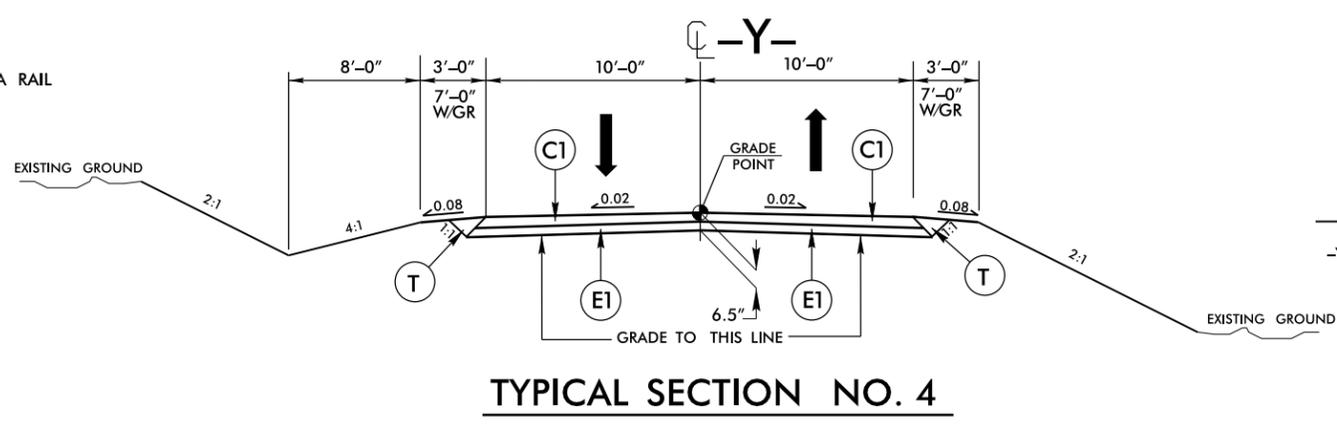
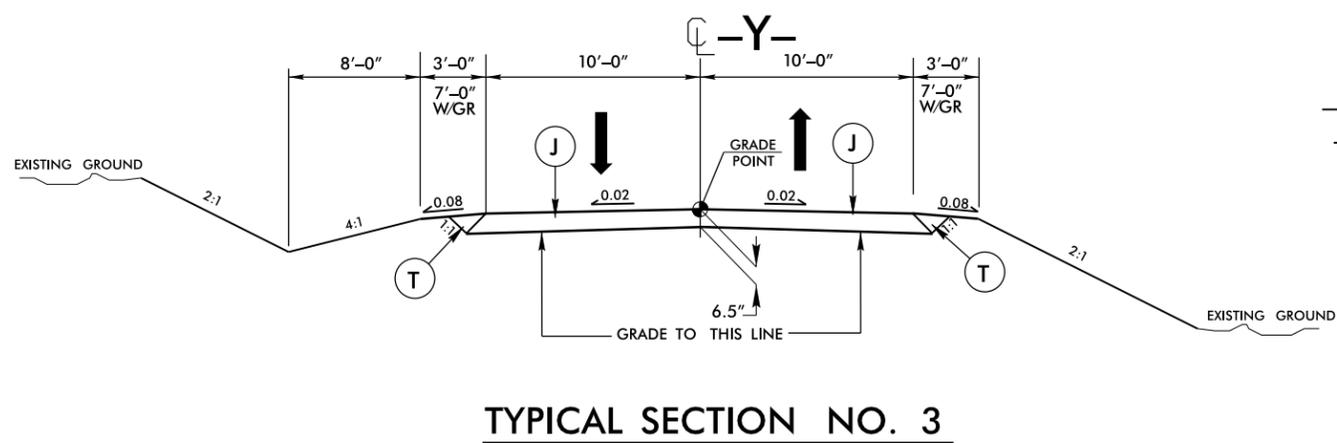
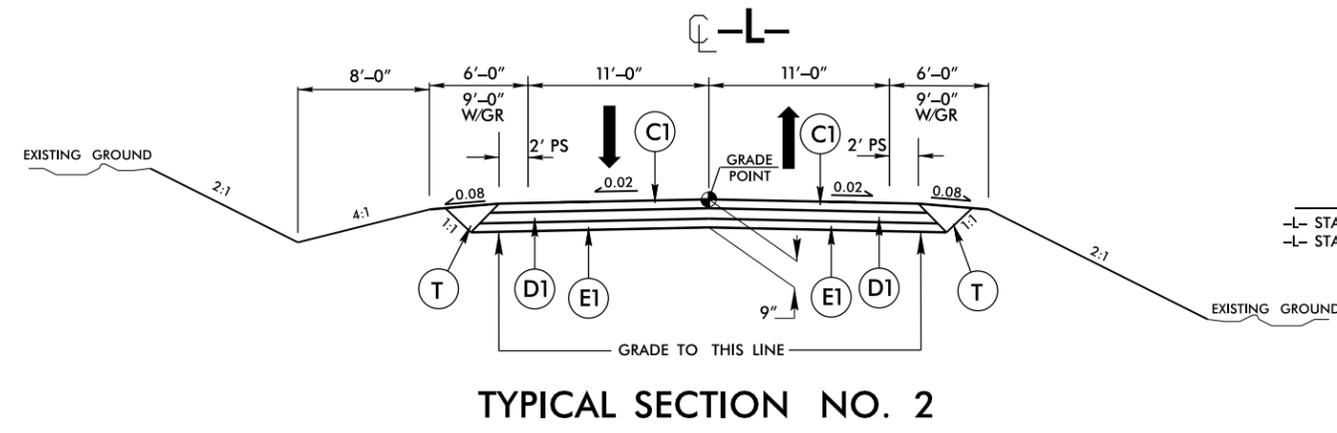
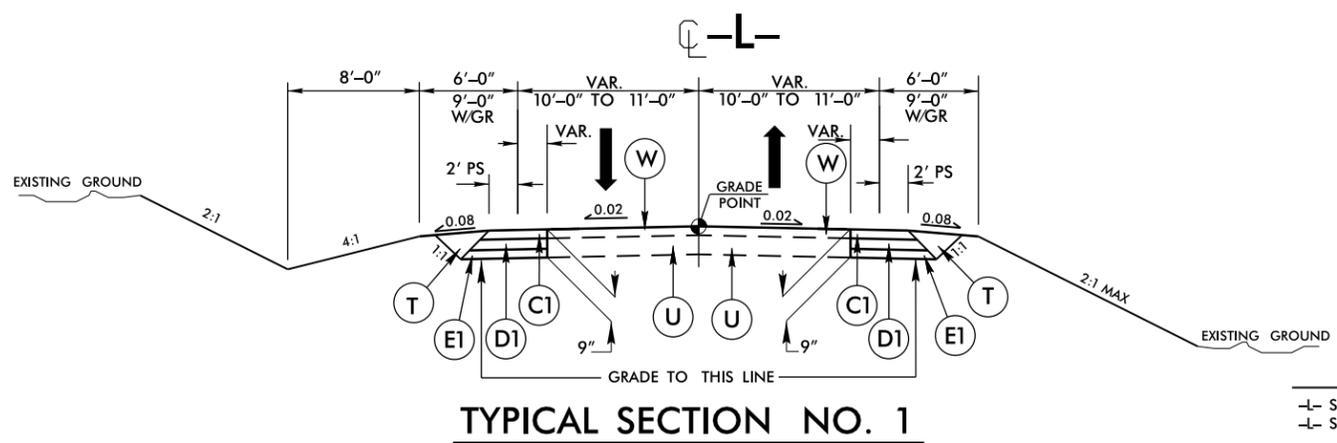
THE LOCALIZED COORDINATE SYSTEM DEVELOPED FOR THIS PROJECT IS BASED ON THE STATE PLANE COORDINATES ESTABLISHED BY NCDOT FOR MONUMENT "B4959-2"
WITH NAD 83/NSRS 2007 STATE PLANE GRID COORDINATES OF
NORTHING: 874042.8020(FT) EASTING: 1818961.7290(FT)
ELEVATION: 674.0500(FT)
THE AVERAGE COMBINED GRID FACTOR USED ON THIS PROJECT (GROUND TO GRID) IS: 1.0000320016
THE N.C. LAMBERT GRID BEARING AND LOCALIZED HORIZONTAL GROUND DISTANCE FROM "B4959-2" TO -L- STATION 12+00.00 IS
N 09°59'34" W 903.18'
ALL LINEAR DIMENSIONS ARE LOCALIZED HORIZONTAL DISTANCES
VERTICAL DATUM USED IS NAVD 88

NOTE: DRAWING NOT TO SCALE

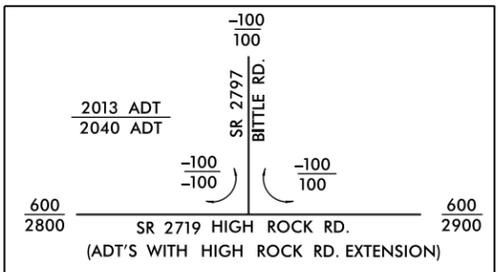
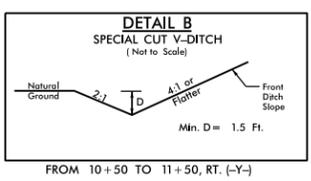
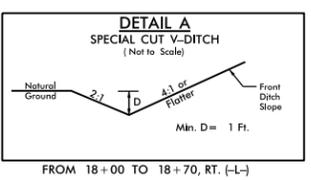
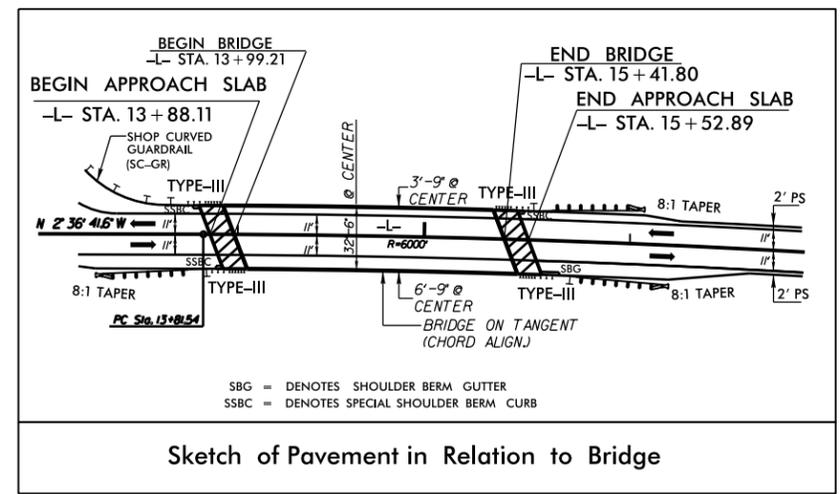
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PAVEMENT SCHEDULE	
C1	PROP. APPROX. 2.5" ASPHALT CONCRETE SURFACE COURSE, TYPE SF9.5A, AT AN AVERAGE RATE OF 137.5 LBS. PER SQ. YD. IN EACH OF TWO LAYERS.
C2	PROP. VAR. DEPTH ASPHALT CONCRETE SURFACE COURSE, TYPE SF9.5A, AT AN AVERAGE RATE OF 110 LBS. PER SQ. YD. PER 1" DEPTH TO BE PLACED IN LAYER NOT TO EXCEED 1.5" IN DEPTH.
D1	PROP. APPROX. 2.5" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE I19.0B' AT AN AVERAGE RATE OF 285 LBS. PER SQ. YD.
D2	PROP. VAR. DEPTH ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE I19.0B, AT AN AVERAGE RATE OF 114 LBS. PER SQ. YD. PER 1" DEPTH TO BE PLACED IN LAYER NOT LESS THAN 2.5" IN DEPTH OR GREATER THAN 4" IN DEPTH.
E1	PROP. APPROX. 4" ASPHALT CONCRETE BASE COURSE, TYPE B25.0B' AT AN AVERAGE RATE OF 456 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 LAYER NOT LESS THAN 3" IN DEPTH OR GREATER THAN 5.5" IN DEPTH.
J_	PROP. 6.5" AGGREGATE BASE COURSE.
T_	EARTH MATERIAL.
U_	EXISTING PAVEMENT.
W_	VARIABLE DEPTH ASPHALT PAVEMENT (SEE STANDARD WEDGING DETAIL)

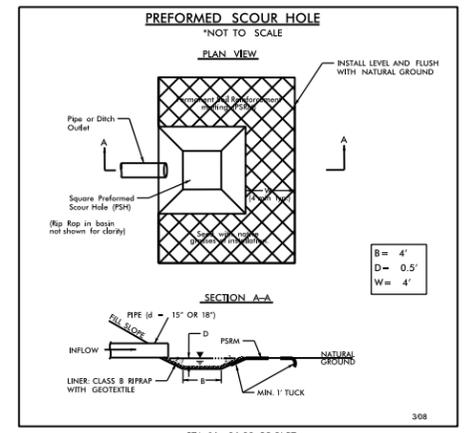
NOTE: PAVEMENT EDGE SLOPES ARE 1:1 UNLESS SHOWN OTHERWISE.



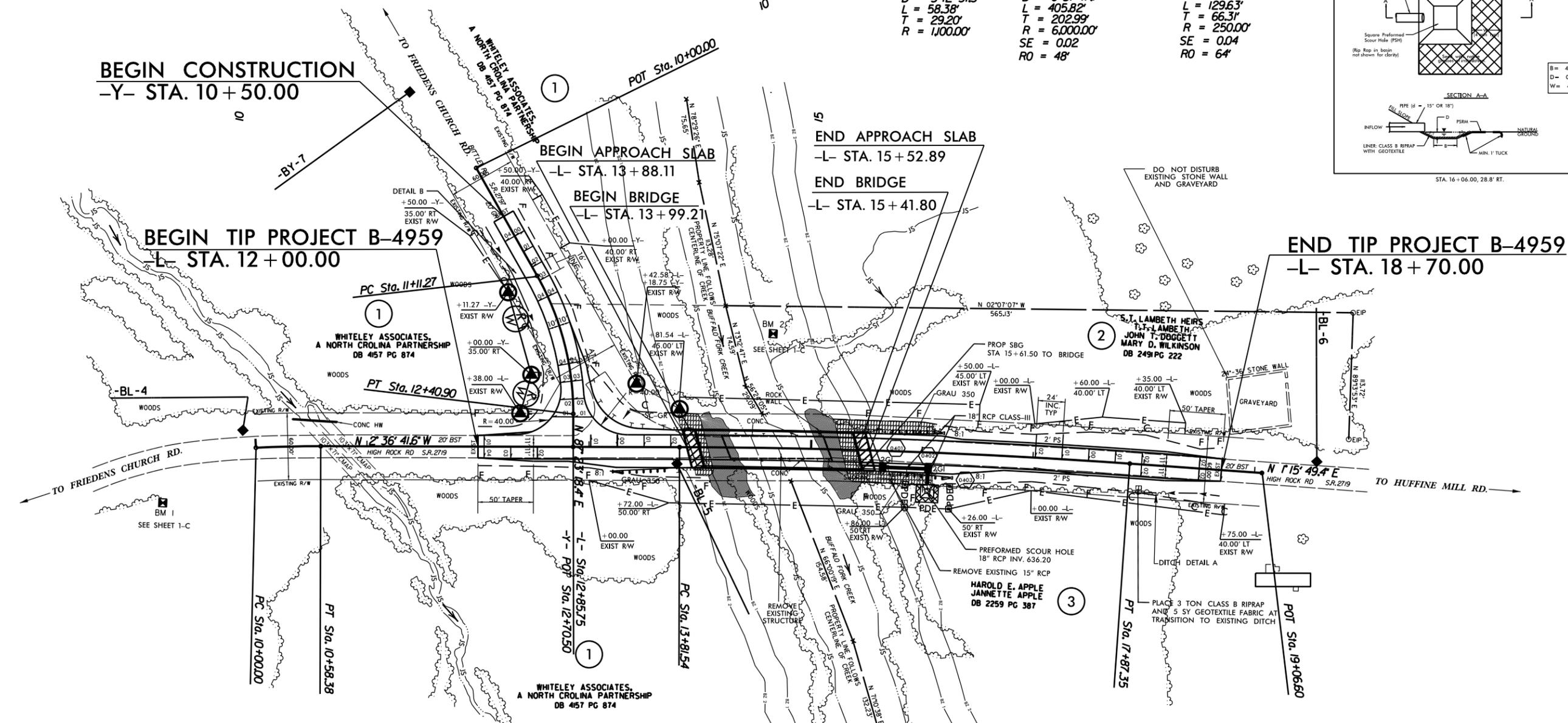
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NAD 83/NSRS 2007



-L-	-Y-
PI Sta 10+29.20	PI Sta 15+84.52
$\Delta = 3^{\circ} 02' 26.7''$ (RT)	$\Delta = 3^{\circ} 52' 31.0''$ (RT)
$D = 5^{\circ} 12' 31.3''$	$D = 0^{\circ} 57' 17.7''$
$L = 58.38'$	$L = 405.82'$
$T = 29.20'$	$T = 202.99'$
$R = 1,000.00'$	$R = 6,000.00'$
	$SE = 0.02$
	$RO = 48'$



SEE SHEET NO. 5 FOR -L- & -Y- PROFILE

REVISIONS

8/17/99

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5/28/99

PROJECT REFERENCE NO. B-4959	SHEET NO. 5
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	

DITCH LEGEND	
LEFT DITCH	-----
RIGHT DITCH	-----

CL STA. 14+70.50
ELEV. = 641.87
SKEW = 75 DEGREES
1@35', 1@70', 1@35' SPAN
24" CORED SLAB BRIDGE, 4' CAPS
(W/Alaska Rail)

BM #2
R/R SPIKE IN 20" SWEET GUM
102.6322' LEFT OF -L- STA. 14+64.16
ELEV=637.90'

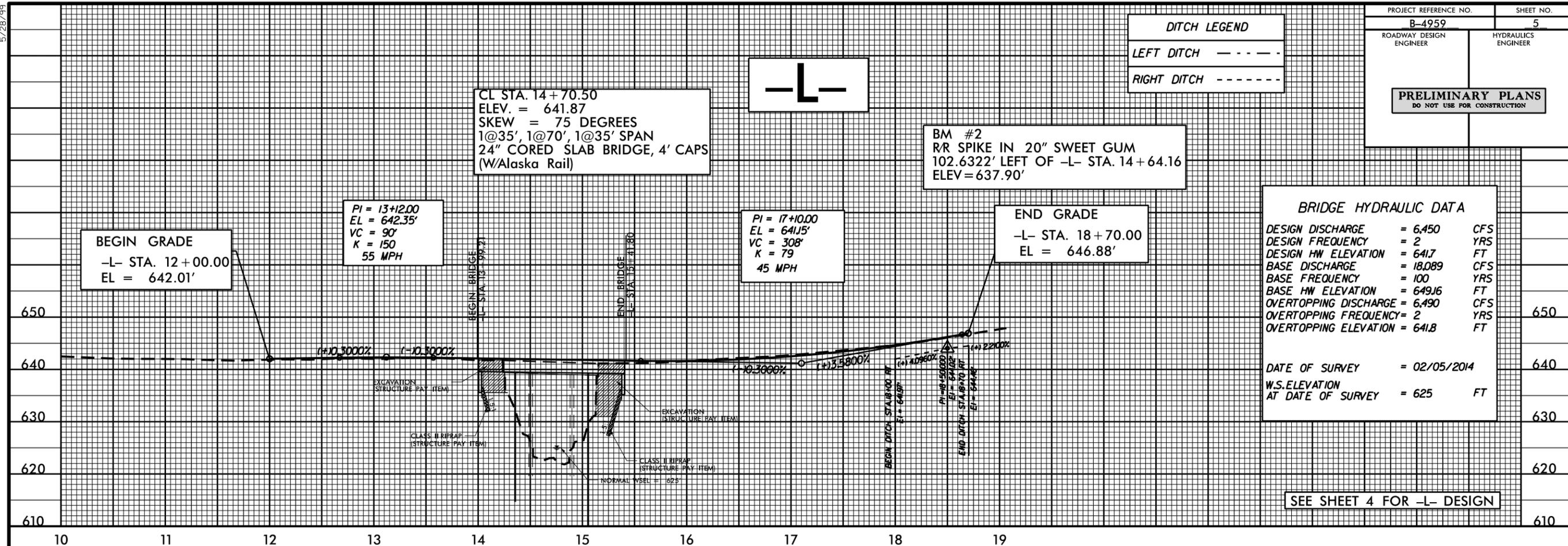
BEGIN GRADE
-L- STA. 12+00.00
EL = 642.01'

PI = 13+12.00
EL = 642.35'
VC = 90'
K = 150
55 MPH

PI = 17+10.00
EL = 641.15'
VC = 308'
K = 79
45 MPH

END GRADE
-L- STA. 18+70.00
EL = 646.88'

BRIDGE HYDRAULIC DATA	
DESIGN DISCHARGE	= 6,450 CFS
DESIGN FREQUENCY	= 2 YRS
DESIGN HW ELEVATION	= 641.7 FT
BASE DISCHARGE	= 18,089 CFS
BASE FREQUENCY	= 100 YRS
BASE HW ELEVATION	= 649.16 FT
OVERTOPPING DISCHARGE	= 6,490 CFS
OVERTOPPING FREQUENCY	= 2 YRS
OVERTOPPING ELEVATION	= 641.8 FT
DATE OF SURVEY	= 02/05/2014
W.S.ELEVATION AT DATE OF SURVEY	= 625 FT



SEE SHEET 4 FOR -L- DESIGN

-Y-

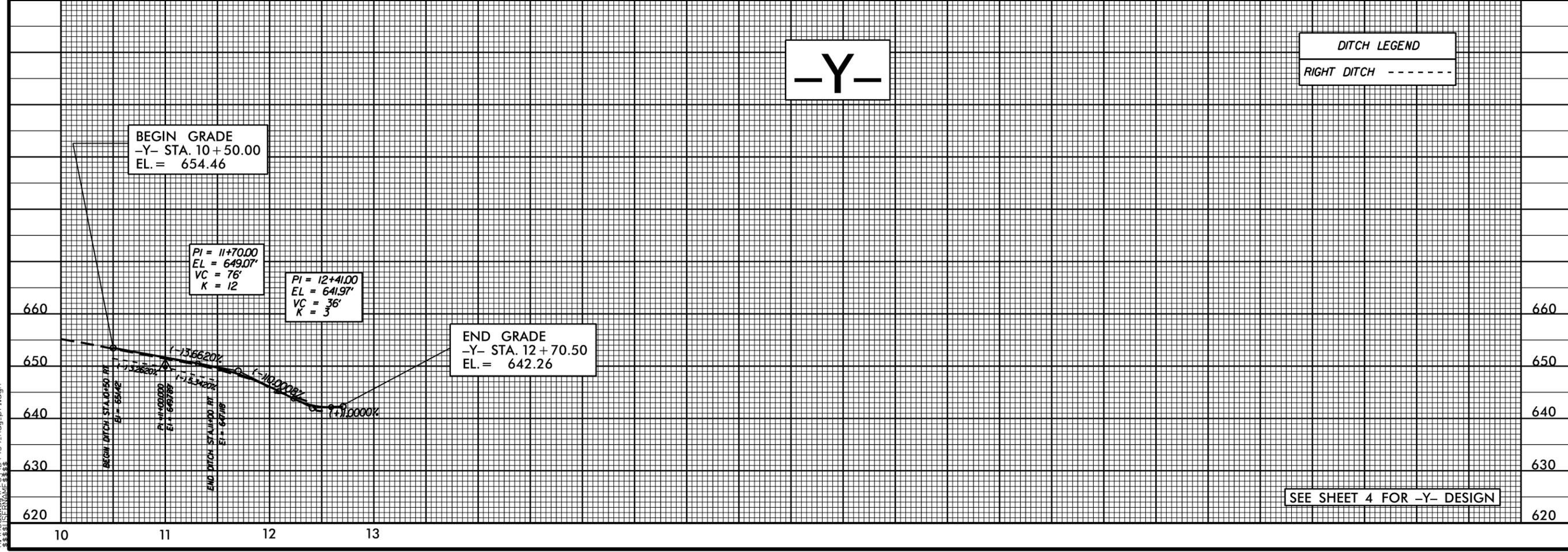
DITCH LEGEND	
RIGHT DITCH	-----

BEGIN GRADE
-Y- STA. 10+50.00
EL. = 654.46

PI = 11+70.00
EL = 649.07'
VC = 76'
K = 12

PI = 12+41.00
EL = 641.97'
VC = 36'
K = 3

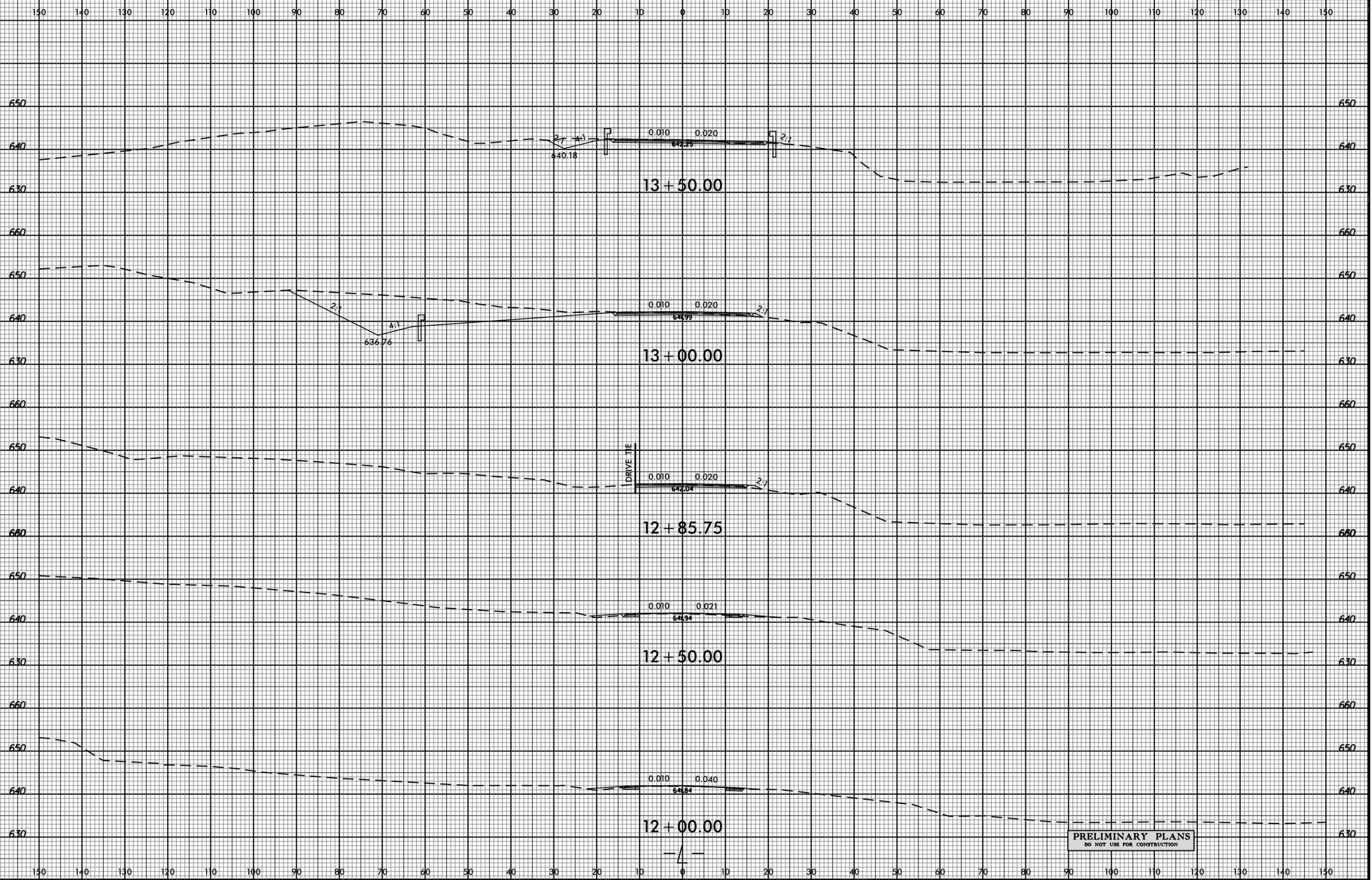
END GRADE
-Y- STA. 12+70.50
EL. = 642.26



SEE SHEET 4 FOR -Y- DESIGN

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8/23/99



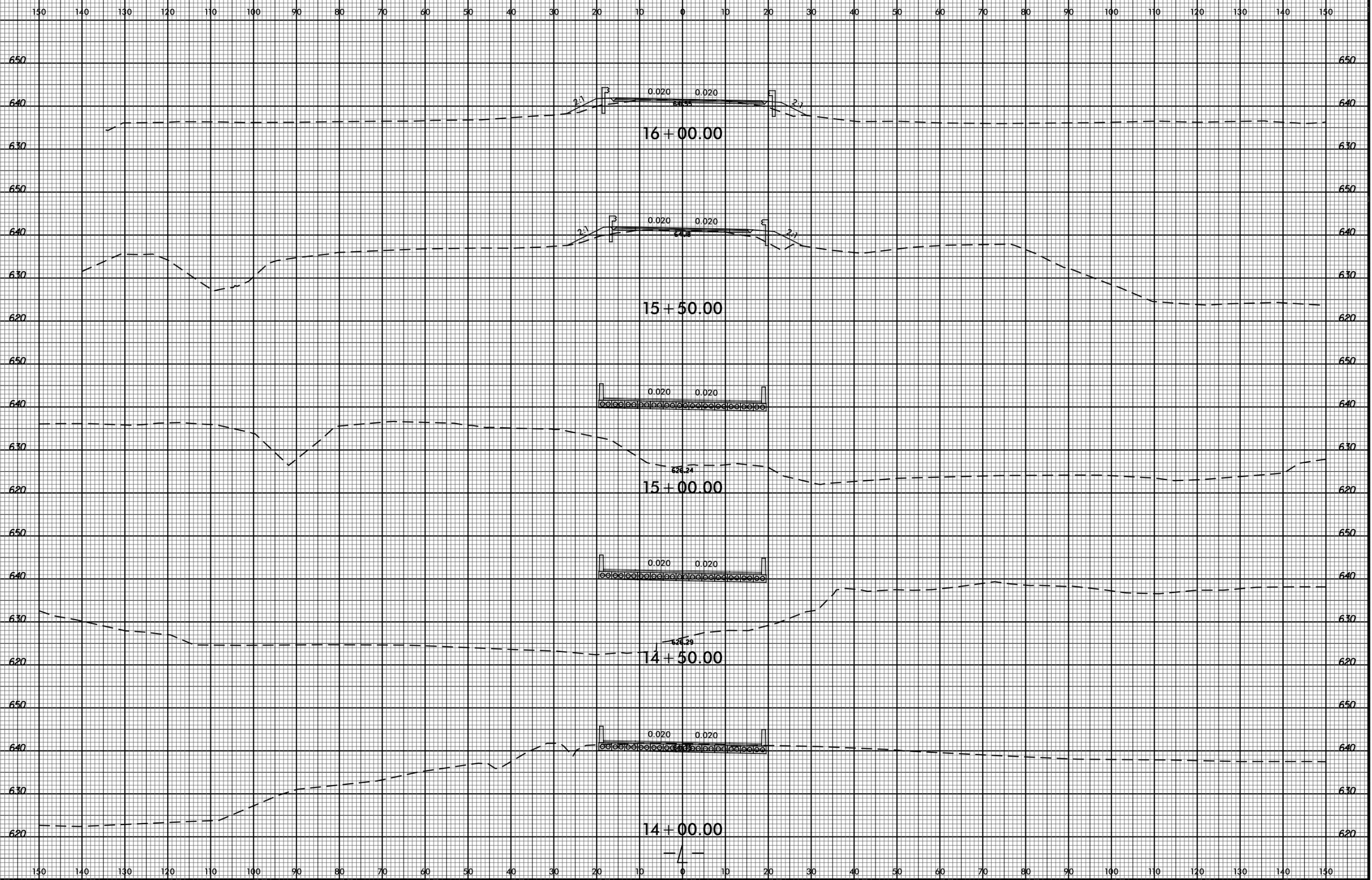
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PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

8/23/99



PROJ. REFERENCE NO. B-4959 SHEET NO. X-2



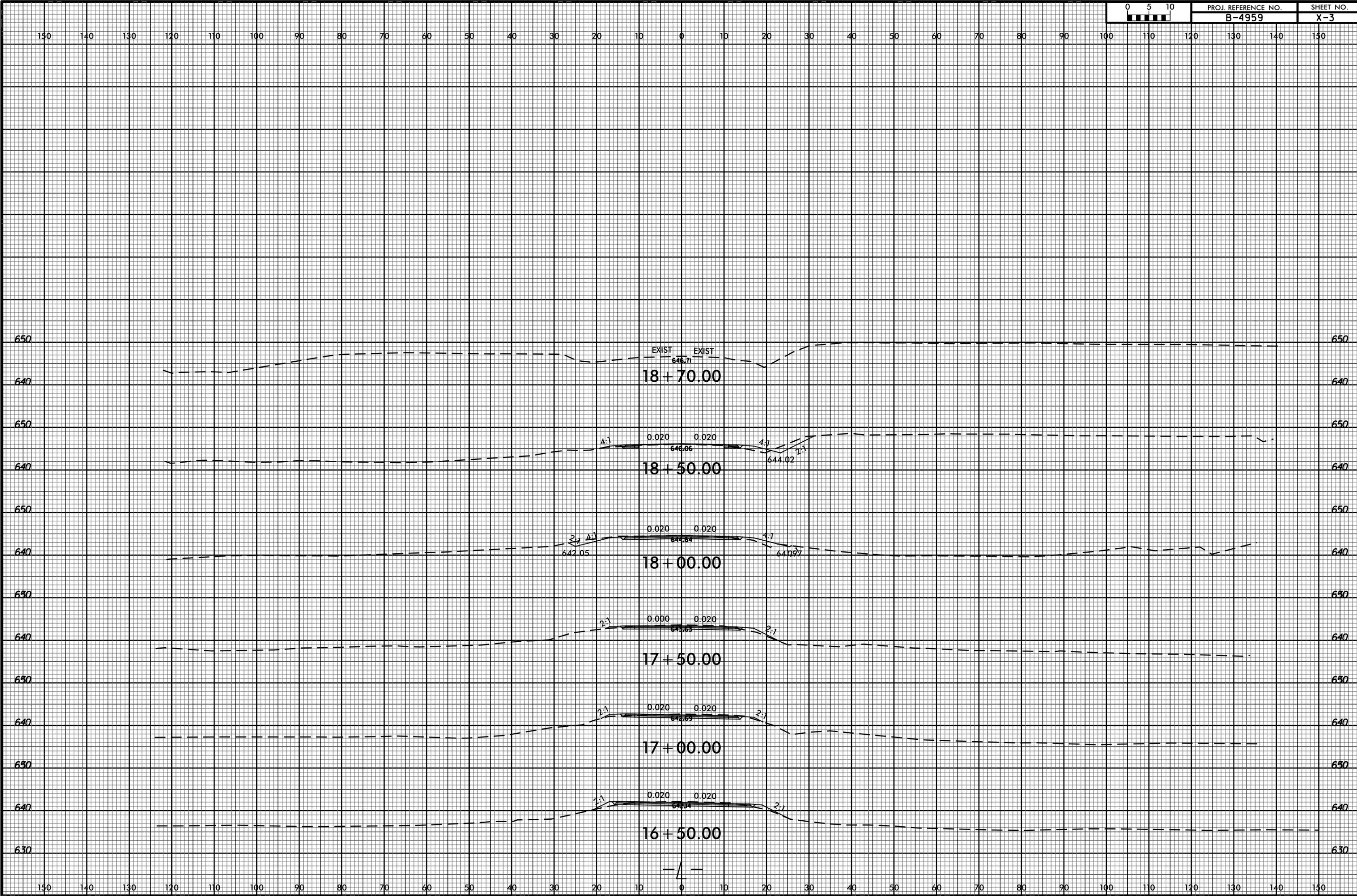
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PROJ. REFERENCE NO.
B-4959

SHEET NO.
X-3



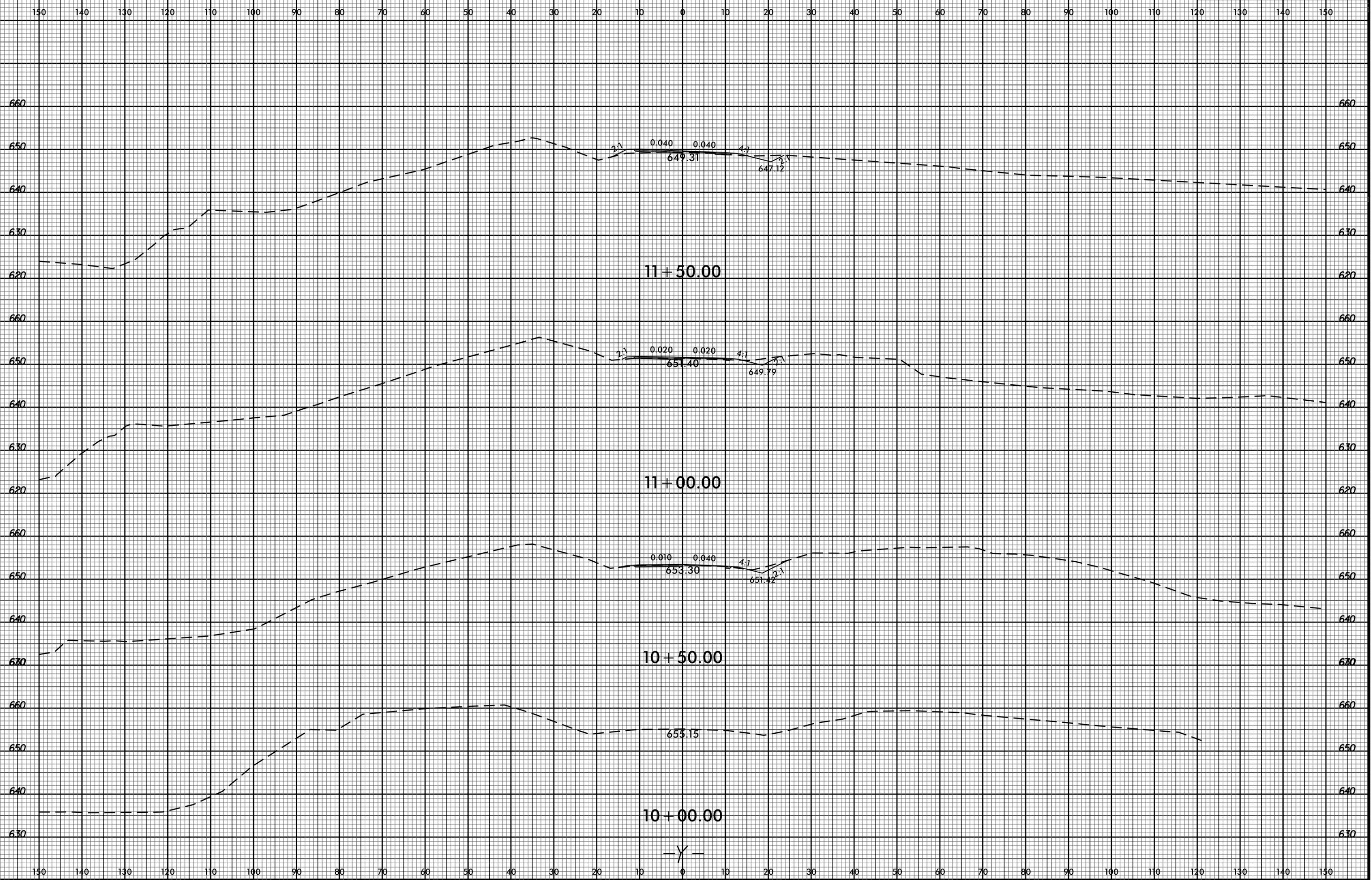
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8/23/99



PROJ. REFERENCE NO.
B-4959

SHEET NO.
X-4



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