



STATE OF NORTH CAROLINA  
DEPARTMENT OF TRANSPORTATION

MICHAEL F. EASLEY  
GOVERNOR

LYNDO TIPPETT  
SECRETARY

February 8, 2008

U. S. Army Corps of Engineers  
PO Box 1890  
Wilmington, NC 28402-1890

ATTN: Mr. Richard Spencer  
NCDOT Coordinator

Subject: **Application for Nationwide Permit 23** for the proposed replacement of Bridge No. 14 over Big Shoe Heel Creek on NC 144 in Scotland County, Federal Aid Project No. BRSTP-1405(5); State Project No. 8.2590701; Division 8; TIP No. B-4274

Dear Sir:

The North Carolina Department of Transportation (NCDOT) proposes to replace Bridge No. 14 on NC 144 over Big Shoe Hill Creek with a 90-foot long 36-foot wide deep box beam bridge in approximately the same location and roadway elevation as the existing structure. Approach work will consist of resurfacing and tying into the existing alignment for approximately 250 feet on either end of the new bridge. The new bridge will span Big Shoe Hill Creek, avoiding the need for bents in the creek, and an off-site detour will be used to route traffic during construction. There will be 0.07 acres of permanent riverine wetland impacts due to roadway fill and mechanized clearing. There will be no stream impacts associated with this project.

Please see the enclosed copies of the permit drawings, design plans, and Pre-Construction Notification (PCN) for the above-referenced project. The Categorical Exclusion (CE) was completed for this project in June 2006, the Right of Way Consultation was completed August 2007, and the Construction Consultation was completed September 2007, the documents were distributed shortly thereafter. Additional copies of these documents are available upon request.

**IMPACTS TO WATERS OF THE UNITED STATES**

General Description: The project is located in the Lumber River Basin (sub-basin 03-07-55) with a Hydrologic Unit Code of 03040204. This section of Big Shoe Heel Creek has been assigned a Stream Index Number of 14-34 and a best usage classification of C, Sw.

Big Shoe Heel Creek is a slow flowing perennial stream that has a sand and silt substrate. It flows south exiting North Carolina and eventually flows into the Lumber River. Within the project study area Big Shoe Heel Creek has a channel width of approximately 25 feet and a depth of one to three feet. Big Shoe Heel Creek is not on the 2006 Final 303(d) List of Impaired Waters nor are any streams within 1.0 miles of the project area. There are no High Quality Waters (HQW), Water Supplies (WS-I or WS-II), or Outstanding Resources Waters (ORW) occurring within 1.0 miles of the project area. Big Shoe Heel Creek is not designated as a National Wild and Scenic River, nor as a North Carolina Natural and Scenic River.

Permanent Impacts: There will be 0.01 acres of riverine wetland impacts due to the placement of a 3:1 roadway fill slope at Site 1. Site 1 contains a Coastal Plain Small Stream Swamp wetland. A 3:1 slope in wetlands is proposed at this location, as the fill material for this area is not suitable to support a 2:1 slope. There will also be 0.06 acres of mechanized clearing proposed within 20 feet of the cut fill line. Total riverine wetland impacts will be 0.07 acres. There will be no permanent impacts to surface waters.

Temporary Impacts: An off-site detour will be used to route traffic during construction, and staging of construction equipment will not occur in wetlands. Therefore, there will be no temporary impacts associated with this project.

Utility Impacts: There will be no impacts to surface waters or wetlands from sewer, water, electric or other utilities associated with this bridge replacement project.

Bridge Demolition: Bridge No. 14 is composed of a reinforced concrete deck on timber joists supported by a substructure consisting of end and interior bents, utilizing timber caps and timber piles. The existing bridge will be removed without dropping components into Big Shoe Heel Creek. There is currently one bent located in the stream. Timber piles associated with this bent will be completely removed or cut at the streambed without the use of heavy equipment operating in jurisdictional areas. All guidelines for Bridge Demolition and Removal will be followed in addition to Best Management Practices for the Protection of Surface Waters.

## **FEDERALLY PROTECTED SPECIES**

Plants and animals with federal classifications of Endangered, Threatened, Proposed Endangered, and Proposed Threatened are protected under provisions of Section 7 and Section 9 of the Endangered Species Act of 1973, as amended. As of January 31, 2008 the United States Fish and Wildlife Service (USFWS) lists six federally protected species for Scotland County. Table 1 lists the species, their status, and biological conclusion.

**Table 1. Federally-Protected Species for Scotland County**

<b>Common Name</b>	<b>Scientific Name</b>	<b>Federal Status</b>	<b>Biological Conclusion</b>	<b>Habitat Present</b>
American alligator	<i>Alligator mississippiensis</i>	T(S/A)	Not Applicable	No
Red-cockaded woodpecker	<i>Picoides borealis</i>	E	No Effect	No
American chaffseed	<i>Schwalbea americana</i>	E	No Effect	No
Canby's dropwort	<i>Oxypolis canbyi</i>	E	No Effect	No
Michaux's sumac	<i>Rhus michauxii</i>	E	No Effect	Yes
Rough-leaved loosestrife	<i>Lysimachia asperulaefolia</i>	E	No Effect	No

Biological Conclusions of No Effect have been rendered for red-cockaded woodpecker, American chaffseed, Canby's Dropwort, Michaux's sumac, and rough-leaved loosestrife due to lack of suitable habitat.

Suitable habitat for Michaux's exists within the project area. Surveys were conducted on May 24 and 25, 2004 by LPA Group Biologists and again on July 11, 2007 by NCDOT biologists. Although potential habitat is present in the form of maintained roadside shoulders and utility easements, no individuals of Michaux's sumac were observed. A search of the Natural Heritage Program database (updated June 2007) revealed no occurrences of the species within 1.0 miles of the project area. This project will have "No Effect" on Michaux's sumac.

### **AVOIDANCE, MINIMIZATION, AND MITIGATION**

Avoidance and Minimization: The NCDOT is committed to incorporating all reasonable and practicable design features to avoid and minimize wetland impacts, and to provide full compensatory mitigation of all remaining wetland impacts. Avoidance measures were taken during the planning and NEPA phases; minimization measures were incorporated as part of the project design and include:

- Performed scour holes will be constructed to diffuse stormwater runoff.
- The new bridge will span Big Shoe Heel Creek with no bents in the water
- An off-site detour will be utilized to avoid additional stream impacts.
- NCDOT will implement Best Management Practices for Bridge Demolition and Removal.
- NCDOT BMP's for the protection of surface waters will be strictly enforced during the construction of this project

Compensatory Mitigation: No mitigation is proposed for the riverine wetland impacts because the impacts are minimal (< 0.1 acres).

## MORATORIUM

The Wildlife Resources Commission has rescinded their request for a sunfish moratorium in an email dated December 11, 2007 (attached).

## SCHEDULE

This project calls for a letting date of August 19, 2008 and a review date of July 1, 2008. This project has a date of availability of September 29, 2008. It is expected that the contractor will begin construction shortly after that date.

## REGULATORY APPROVALS

Section 404 Permit: Application is hereby made for the Department of Army Section 404 Nationwide Permit 23 for the above-described activities.

Section 401 Permit: Section 401 General Water Quality Certification (WQC) 3701 will apply to this project. All general conditions of the WQC will be met. Therefore, the NCDOT is not requesting written concurrence. In accordance with 15A NCAC 2H 0.0501(a) and 15A NCAC 2B 0.200 we are providing two copies of this application to the North Carolina Department of Environment and Natural Resources, Division of Water Quality, for their records.

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 James Pflaum at (919) 715-7217.

Sincerely,



gvt

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

w/attachment

Mr. Brian Wrenn, NCDWQ (2 copies)  
Mr. Travis Wilson, NCWRC  
Mr. Gary Jordan, USFWS

w/o attachment (see permit website for attachments)

Dr. David Chang, P.E., Hydraulics  
Mr. Mark Staley, Roadside Environmental  
Mr. Greg Perfetti, P.E., Structure Design  
Mr. Victor Barbour, P.E., Project Services Unit  
Mr. Tim Johnson, P.E., Division 8 Engineer  
Mr. Art King, Division 8 Environmental Officer  
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. Derrick Weaver, PDEA

USACE Action ID No. \_\_\_\_\_ DWQ No. \_\_\_\_\_

(If any particular item is not applicable to this project, please enter "Not Applicable" or "N/A".)

I. Processing

- 1. Check all of the approval(s) requested for this project:
 

<input checked="" type="checkbox"/> Section 404 Permit	<input type="checkbox"/> Riparian or Watershed Buffer Rules
<input type="checkbox"/> Section 10 Permit	<input type="checkbox"/> Isolated Wetland Permit from DWQ
<input type="checkbox"/> 401 Water Quality Certification	<input type="checkbox"/> Express 401 Water Quality Certification
- 2. Nationwide, Regional or General Permit Number(s) Requested: 23
- 3. If this notification is solely a courtesy copy because written approval for the 401 Certification is not required, check here:
- 4. If payment into the North Carolina Ecosystem Enhancement Program (NCEEP) is proposed for mitigation of impacts, attach the acceptance letter from NCEEP, complete section VIII, and check here:
- 5. If your project is located in any of North Carolina's twenty coastal counties (listed on page 4), and the project is within a North Carolina Division of Coastal Management Area of Environmental Concern (see the top of page 2 for further details), check here:

II. Applicant Information

- 1. Owner/Applicant Information
 

Name: Gregory J. Thorpe, Ph.D., Environmental Management Director

Mailing Address: North Carolina Department of Transportation  
1598 Mail Service Center, Raleigh, NC 27699

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Telephone Number: 919-733-3141 Fax Number: 919-715-5501

E-mail Address: \_\_\_\_\_
- 2. Agent/Consultant Information (A signed and dated copy of the Agent Authorization letter must be attached if the Agent has signatory authority for the owner/applicant.)
 

Name: \_\_\_\_\_

Company Affiliation: \_\_\_\_\_

Mailing Address: \_\_\_\_\_

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Telephone Number: \_\_\_\_\_ Fax Number: \_\_\_\_\_

E-mail Address: \_\_\_\_\_

### III. Project Information

Attach a **vicinity map** clearly showing the location of the property with respect to local landmarks such as towns, rivers, and roads. Also provide a detailed **site plan** showing property boundaries and development plans in relation to surrounding properties. Both the vicinity map and site plan must include a scale and north arrow. The specific footprints of all buildings, impervious surfaces, or other facilities must be included. If possible, the maps and plans should include the appropriate USGS Topographic Quad Map and NRCS Soil Survey with the property boundaries outlined. Plan drawings, or other maps may be included at the applicant's discretion, so long as the property is clearly defined. For administrative and distribution purposes, the USACE requires information to be submitted on sheets no larger than 11 by 17-inch format; however, DWQ may accept paperwork of any size. DWQ prefers full-size construction drawings rather than a sequential sheet version of the full-size plans. If full-size plans are reduced to a small scale such that the final version is illegible, the applicant will be informed that the project has been placed on hold until decipherable maps are provided.

1. Name of project: replacement of Bridge No.14 over Big Shoe Heel Creek on NC 144
2. T.I.P. Project Number or State Project Number (NCDOT Only): B-4252
3. Property Identification Number (Tax PIN): \_\_\_\_\_
4. Location  
County: Scotland Nearest Town: Wagram  
Subdivision name (include phase/lot number): \_\_\_\_\_  
Directions to site (include road numbers/names, landmarks, etc.): NC 144 over Big Shoe Heel Creek  
\_\_\_\_\_  
\_\_\_\_\_
5. Site coordinates (For linear projects, such as a road or utility line, attach a sheet that separately lists the coordinates for each crossing of a distinct waterbody.)  
Decimal Degrees (6 digits minimum): \_\_\_\_\_°N \_\_\_\_\_°W
6. Property size (acres): Project Study Area is approximately 4.42 acres.
7. Name of nearest receiving body of water: Lumber River
8. River Basin: Lumber  
(Note – this must be one of North Carolina's seventeen designated major river basins. The River Basin map is available at <http://h2o.enr.state.nc.us/admin/maps/>.)
9. Describe the existing conditions on the site and general land use in the vicinity of the project at the time of this application: Rural residential housing and business development  
\_\_\_\_\_

10. Describe the overall project in detail, including the type of equipment to be used: Replacement of bridge No. 14 with 90-foot long 36-foot wide bridge on NC 144. Heavy duty excavation equipment will be used such as trucks, dozers, cranes and other equipment necessary for roadway construction.

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11. Explain the purpose of the proposed work: Improve safety and efficiency of overall traffic operations.

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#### **IV. Prior Project History**

If jurisdictional determinations and/or permits have been requested and/or obtained for this project (including all prior phases of the same subdivision) in the past, please explain. Include the USACE Action ID Number, DWQ Project Number, application date, and date permits and certifications were issued or withdrawn. Provide photocopies of previously issued permits, certifications or other useful information. Describe previously approved wetland, stream and buffer impacts, along with associated mitigation (where applicable). If this is a NCDOT project, list and describe permits issued for prior segments of the same T.I.P. project, along with construction schedules.

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#### **V. Future Project Plans**

Are any future permit requests anticipated for this project? If so, describe the anticipated work, and provide justification for the exclusion of this work from the current application.

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#### **VI. Proposed Impacts to Waters of the United States/Waters of the State**

It is the applicant's (or agent's) responsibility to determine, delineate and map all impacts to wetlands, open water, and stream channels associated with the project. Each impact must be listed separately in the tables below (e.g., culvert installation should be listed separately from riprap dissipater pads). Be sure to indicate if an impact is temporary. All proposed impacts, permanent and temporary, must be listed, and must be labeled and clearly identifiable on an accompanying site plan. All wetlands and waters, and all streams (intermittent and perennial) should be shown on a delineation map, whether or not impacts are proposed to these systems. Wetland and stream evaluation and delineation forms should be included as appropriate. Photographs may be included at the applicant's discretion. If this proposed impact is strictly for wetland or stream mitigation, list and describe the impact in Section VIII below. If additional space is needed for listing or description, please attach a separate sheet.

1. Provide a written description of the proposed impacts: 0.07 acres of fill in riverine wetland.

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2. Individually list wetland impacts. Types of impacts include, but are not limited to mechanized clearing, grading, fill, excavation, flooding, ditching/drainage, etc. For dams, separately list impacts due to both structure and flooding.

Wetland Impact Site Number (indicate on map)	Type of Impact	Type of Wetland (e.g., forested, marsh, herbaceous, bog, etc.)	Located within 100-year Floodplain (yes/no)	Distance to Nearest Stream (linear feet)	Area of Impact (acres)
Site 1	fill	Small Stream Swamp	Yes	0	0.01
Site 1	Mechanized clearing	Small Stream Swamp	Yes	0	0.06
Total Wetland Impact (acres)					0.07

3. List the total acreage (estimated) of all existing wetlands on the property: 1.42 acres

4. Individually list all intermittent and perennial stream impacts. Be sure to identify temporary impacts. Stream impacts include, but are not limited to placement of fill or culverts, dam construction, flooding, relocation, stabilization activities (e.g., cement walls, rip-rap, crib walls, gabions, etc.), excavation, ditching/straightening, etc. If stream relocation is proposed, plans and profiles showing the linear footprint for both the original and relocated streams must be included. To calculate acreage, multiply length X width, then divide by 43,560.

Stream Impact Number (indicate on map)	Stream Name	Type of Impact	Perennial or Intermittent?	Average Stream Width Before Impact	Impact Length (linear feet)	Area of Impact (acres)
Total Stream Impact (by length and acreage)						

5. Individually list all open water impacts (including lakes, ponds, estuaries, sounds, Atlantic Ocean and any other water of the U.S.). Open water impacts include, but are not limited to fill, excavation, dredging, flooding, drainage, bulkheads, etc.

Open Water Impact Site Number	Name of Waterbody (if applicable)	Type of Impact	Type of Waterbody (lake, pond, estuary, sound, bay,	Area of Impact
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(indicate on map)			ocean, etc.)	(acres)
Total Open Water Impact (acres)				

6. List the cumulative impact to all Waters of the U.S. resulting from the project:

Stream Impact (acres):	0
Wetland Impact (acres):	0.07
Open Water Impact (acres):	0
Total Impact to Waters of the U.S. (acres)	0
Total Stream Impact (linear feet):	0

7. Isolated Waters

Do any isolated waters exist on the property?  Yes  No

Describe all impacts to isolated waters, and include the type of water (wetland or stream) and the size of the proposed impact (acres or linear feet). Please note that this section only applies to waters that have specifically been determined to be isolated by the USACE.

\_\_\_\_\_

\_\_\_\_\_

8. Pond Creation

If construction of a pond is proposed, associated wetland and stream impacts should be included above in the wetland and stream impact sections. Also, the proposed pond should be described here and illustrated on any maps included with this application.

Pond to be created in (check all that apply):  uplands  stream  wetlands

Describe the method of construction (e.g., dam/embankment, excavation, installation of draw-down valve or spillway, etc.): \_\_\_\_\_

Proposed use or purpose of pond (e.g., livestock watering, irrigation, aesthetic, trout pond, local stormwater requirement, etc.): \_\_\_\_\_

Current land use in the vicinity of the pond: \_\_\_\_\_

Size of watershed draining to pond: \_\_\_\_\_ Expected pond surface area: \_\_\_\_\_

**VII. Impact Justification (Avoidance and Minimization)**

Specifically describe measures taken to avoid the proposed impacts. It may be useful to provide information related to site constraints such as topography, building ordinances, accessibility, and financial viability of the project. The applicant may attach drawings of alternative, lower-impact site layouts, and explain why these design options were not feasible. Also discuss how impacts were minimized once the desired site plan was developed. If applicable, discuss construction techniques to be followed during construction to reduce impacts. (see permit cover letter) \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

**VIII. Mitigation**

DWQ - In accordance with 15A NCAC 2H .0500, mitigation may be required by the NC Division of Water Quality for projects involving greater than or equal to one acre of impacts to freshwater wetlands or greater than or equal to 150 linear feet of total impacts to perennial streams.

USACE – In accordance with the Final Notice of Issuance and Modification of Nationwide Permits, published in the Federal Register on January 15, 2002, mitigation will be required when necessary to ensure that adverse effects to the aquatic environment are minimal. Factors including size and type of proposed impact and function and relative value of the impacted aquatic resource will be considered in determining acceptability of appropriate and practicable mitigation as proposed. Examples of mitigation that may be appropriate and practicable include, but are not limited to: reducing the size of the project; establishing and maintaining wetland and/or upland vegetated buffers to protect open waters such as streams; and replacing losses of aquatic resource functions and values by creating, restoring, enhancing, or preserving similar functions and values, preferable in the same watershed.

If mitigation is required for this project, a copy of the mitigation plan must be attached in order for USACE or DWQ to consider the application complete for processing. Any application lacking a required mitigation plan or NCEEP concurrence shall be placed on hold as incomplete. An applicant may also choose to review the current guidelines for stream restoration in DWQ's Draft Technical Guide for Stream Work in North Carolina (see DWQ website for most current version.).

1. Provide a brief description of the proposed mitigation plan. The description should provide as much information as possible, including, but not limited to: site location (attach directions and/or map, if offsite), affected stream and river basin, type and amount (acreage/linear feet) of mitigation proposed (restoration, enhancement, creation, or preservation), a plan view, preservation mechanism (e.g., deed restrictions, conservation easement, etc.), and a description of the current site conditions and proposed method of construction. Please attach a separate sheet if more space is needed.

No mitigation is proposed

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2. Mitigation may also be made by payment into the North Carolina Ecosystem Enhancement Program (NCEEP). Please note it is the applicant's responsibility to contact the NCEEP at (919) 715-0476 to determine availability, and written approval from the NCEEP indicating that they are will to accept payment for the mitigation must be attached to this form. For additional information regarding the application process for the NCEEP, check the NCEEP website at <http://www.nceep.net/pages/inlieureplace.htm>. If use of the NCEEP is proposed, please check the appropriate box on page five and provide the following information:

Amount of stream mitigation requested (linear feet): 0

Amount of buffer mitigation requested (square feet): 0

Amount of Riparian wetland mitigation requested (acres): 0  
 Amount of Non-riparian wetland mitigation requested (acres): 0  
 Amount of Coastal wetland mitigation requested (acres): 0

**IX. Environmental Documentation (required by DWQ)**

1. Does the project involve an expenditure of public (federal/state/local) funds or the use of public (federal/state) land? Yes  No
2. If yes, does the project require preparation of an environmental document pursuant to the requirements of the National or North Carolina Environmental Policy Act (NEPA/SEPA)?  
 Note: If you are not sure whether a NEPA/SEPA document is required, call the SEPA coordinator at (919) 733-5083 to review current thresholds for environmental documentation.  
 Yes  No
3. If yes, has the document review been finalized by the State Clearinghouse? If so, please attach a copy of the NEPA or SEPA final approval letter. Yes  No

**X. Proposed Impacts on Riparian and Watershed Buffers (required by DWQ)**

It is the applicant's (or agent's) responsibility to determine, delineate and map all impacts to required state and local buffers associated with the project. The applicant must also provide justification for these impacts in Section VII above. All proposed impacts must be listed herein, and must be clearly identifiable on the accompanying site plan. All buffers must be shown on a map, whether or not impacts are proposed to the buffers. Correspondence from the DWQ Regional Office may be included as appropriate. Photographs may also be included at the applicant's discretion.

1. Will the project impact protected riparian buffers identified within 15A NCAC 2B .0233 (Neuse), 15A NCAC 2B .0259 (Tar-Pamlico), 15A NCAC 02B .0243 (Catawba) 15A NCAC 2B .0250 (Randleman Rules and Water Supply Buffer Requirements), or other (please identify \_\_\_\_\_)? Yes  No
2. If "yes", identify the square feet and acreage of impact to each zone of the riparian buffers. If buffer mitigation is required calculate the required amount of mitigation by applying the buffer multipliers.

Zone*	Impact (square feet)	Multiplier	Required Mitigation
1		3 (2 for Catawba)	
2		1.5	
Total			

\* Zone 1 extends out 30 feet perpendicular from the top of the near bank of channel; Zone 2 extends an additional 20 feet from the edge of Zone 1.

3. If buffer mitigation is required, please discuss what type of mitigation is proposed (i.e., Donation of Property, Riparian Buffer Restoration / Enhancement, or Payment into the

Riparian Buffer Restoration Fund). Please attach all appropriate information as identified within 15A NCAC 2B .0242 or .0244, or .0260. \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**XI. Stormwater (required by DWQ)**

Describe impervious acreage (existing and proposed) versus total acreage on the site. Discuss stormwater controls proposed in order to protect surface waters and wetlands downstream from the property. If percent impervious surface exceeds 20%, please provide calculations demonstrating total proposed impervious level. \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**XII. Sewage Disposal (required by DWQ)**

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.  
\_\_\_\_\_  
\_\_\_\_\_

**XIII. Violations (required by DWQ)**

Is this site in violation of DWQ Wetland Rules (15A NCAC 2H .0500) or any Buffer Rules?  
Yes  No

Is this an after-the-fact permit application? Yes  No

**XIV. Cumulative Impacts (required by DWQ)**

Will this project (based on past and reasonably anticipated future impacts) result in additional development, which could impact nearby downstream water quality? Yes  No

If yes, please submit a qualitative or quantitative cumulative impact analysis in accordance with the most recent North Carolina Division of Water Quality policy posted on our website at <http://h2o.enr.state.nc.us/ncwetlands>. If no, please provide a short narrative description: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**XV. Other Circumstances (Optional):**

It is the applicant's responsibility to submit the application sufficiently in advance of desired construction dates to allow processing time for these permits. However, an applicant may choose to list constraints associated with construction or sequencing that may impose limits on work schedules (e.g., draw-down schedules for lakes, dates associated with Endangered and Threatened Species, accessibility problems, or other issues outside of the applicant's control).  
\_\_\_\_\_  
\_\_\_\_\_

*E. P. Luck*

2.8.08

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**Applicant/Agent's Signature**

**Date**

(Agent's signature is valid only if an authorization letter from the applicant is provided.)

**Subject: RE: B-4252, B-4274 Sunfish Moratorium**

**Date:** Tue, 11 Dec 2007 14:42:21 -0500

**From:** "Travis Wilson" <travis.wilson@ncwildlife.org>

**To:** "James R Pflaum" <jrpflaum@dot.state.nc.us>

**CC:** "Rachelle Beauregard" <rbeauregard@dot.state.nc.us>, "Elizabeth Lee Lusk" <ellusk@dot.state.nc.us>

WRC no longer request the April 1 to June 30 moratoriums for B-4252 and B-4274; however I do have a couple of comments about your request.

1. Even if a project does not have in-water work proposed and we have requested and in-water work moratorium, the moratorium request is still applicable. The reason is so the contractor, DOT, and the regulatory agencies are aware, if there is a request for a permit modification.
2. There are circumstances where we could still request a sunfish moratorium; however a significant portion of the sunfish moratorium request currently in scoping notices will no longer be applicable. There are also cases where the existing sunfish moratorium dates covered other species, or covered listed species such as Roanoke bass, Carolina pygmy sunfish, etc. At some point in time (August 12, 2002 to be exact) the Corps developed a "cheat sheet" as a list of common moratoriums on that list is an eastern and western Sunfish moratorium; unfortunately the result of that list led to anything that wasn't an anadromous fish moratorium being classified as a sunfish moratorium.

If you have any further question let me know.

Travis W. Wilson

Eastern Region Highway Project Coordinator

Habitat Conservation Program

NC Wildlife Resource Commission

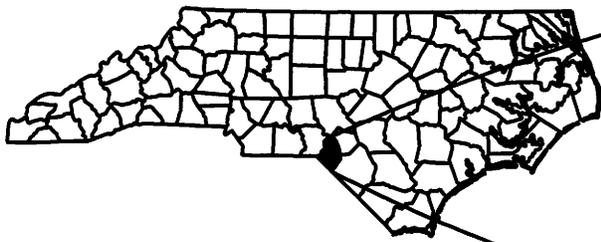
1142 I-85 Service Rd.

Creedmoor, NC 27522

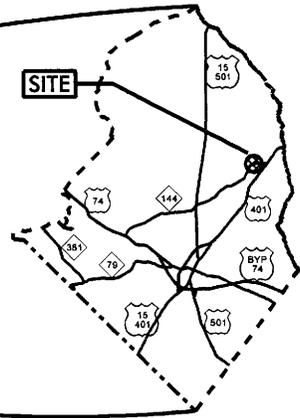
Phone: 919-528-9886

Fax: 919-528-9839

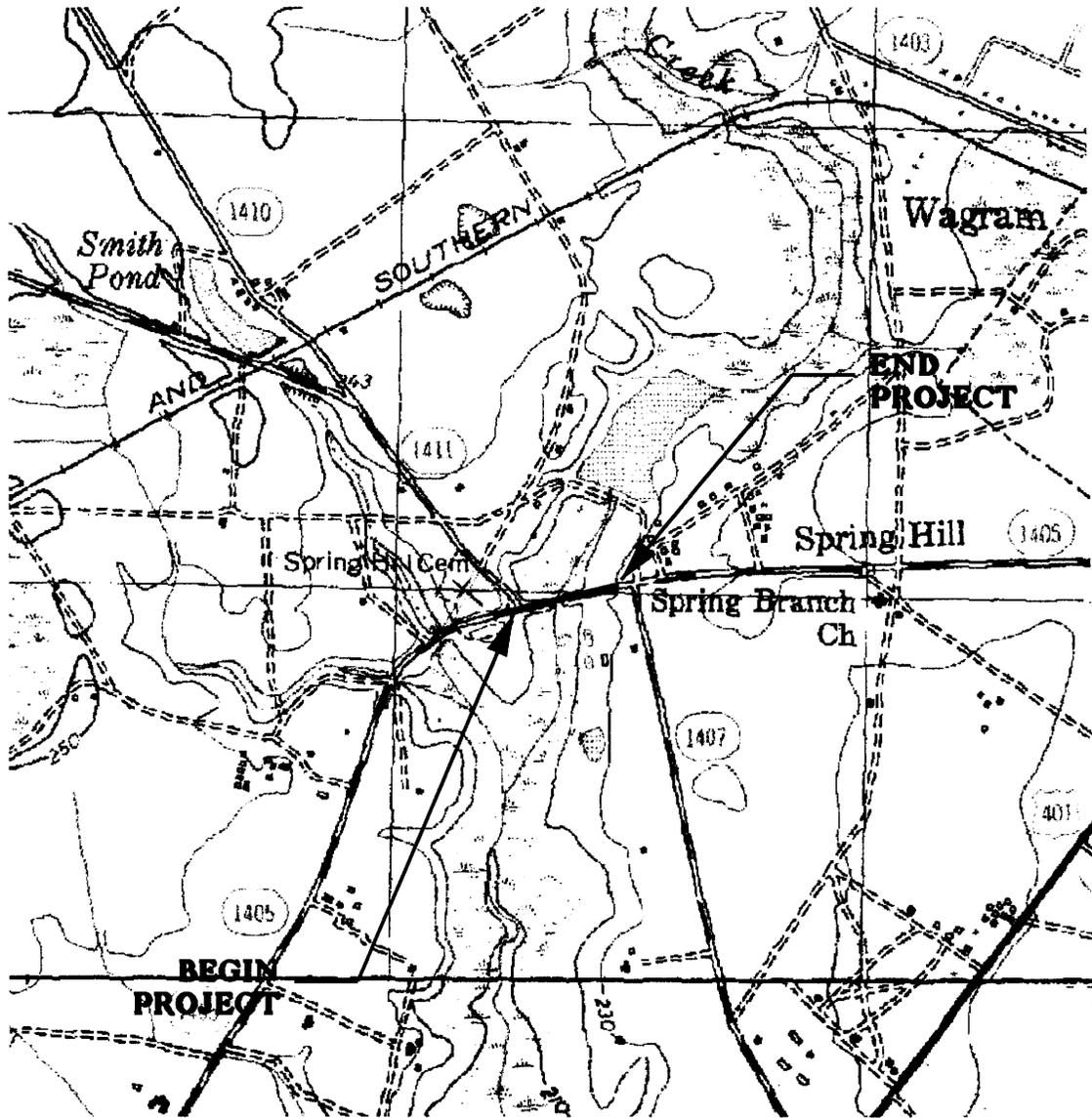
Travis.Wilson@ncwildlife.org



SEE INSET  
BELOW



SCOTLAND COUNTY



WETLAND IMPACTS  
VICINITY MAP

N.C. DEPT. OF TRANSPORTATION  
DIVISION OF HIGHWAYS  
SCOTLAND COUNTY

PROJECT 33615.1.1 (B-4274)  
BRIDGE NO. 14 ON NC 144  
OVER BIG SHOE HEEL CREEK

SHEET 1 OF 7

10 / 26 / 07

**PROPERTY OWNERS**  
**NAMES AND ADDRESSES**

<b>PARCEL NO.</b>	<b>NAMES</b>	<b>ADDRESSES</b>
<b>1</b>	<b>RICHMOND TEMPERANCE &amp; LITERARY SOCIETY COMMISSION INC</b>	<b>PO BOX 666 LAURENBURG, NC 28353</b>

**N.C. DEPT. OF TRANSPORTATION  
DIVISION OF HIGHWAYS**

**SCOTLAND COUNTY**

**PROJECT: 33616.1.1 (B-4274)  
BRIDGE NO 14 ON NC 144  
OVER BIG SHOE HEEL CREEK**

**SHEET 2 OF 7**

**10 / 26 / 07**

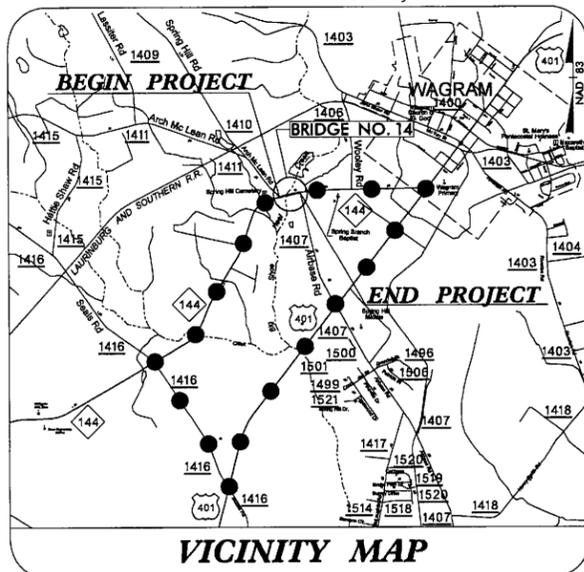


09/08/09

TIP PROJECT: B-4274

CONTRACT:

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



●●● OFFSITE DETOUR  
(THIS PROJECT IS NOT INCLUDED WITHIN ANY MUNICIPAL BOUNDARIES)  
\*\* DESIGN EXCEPTION REQUIRED FOR BRIDGE WIDTH.

STATE OF NORTH CAROLINA  
DIVISION OF HIGHWAYS

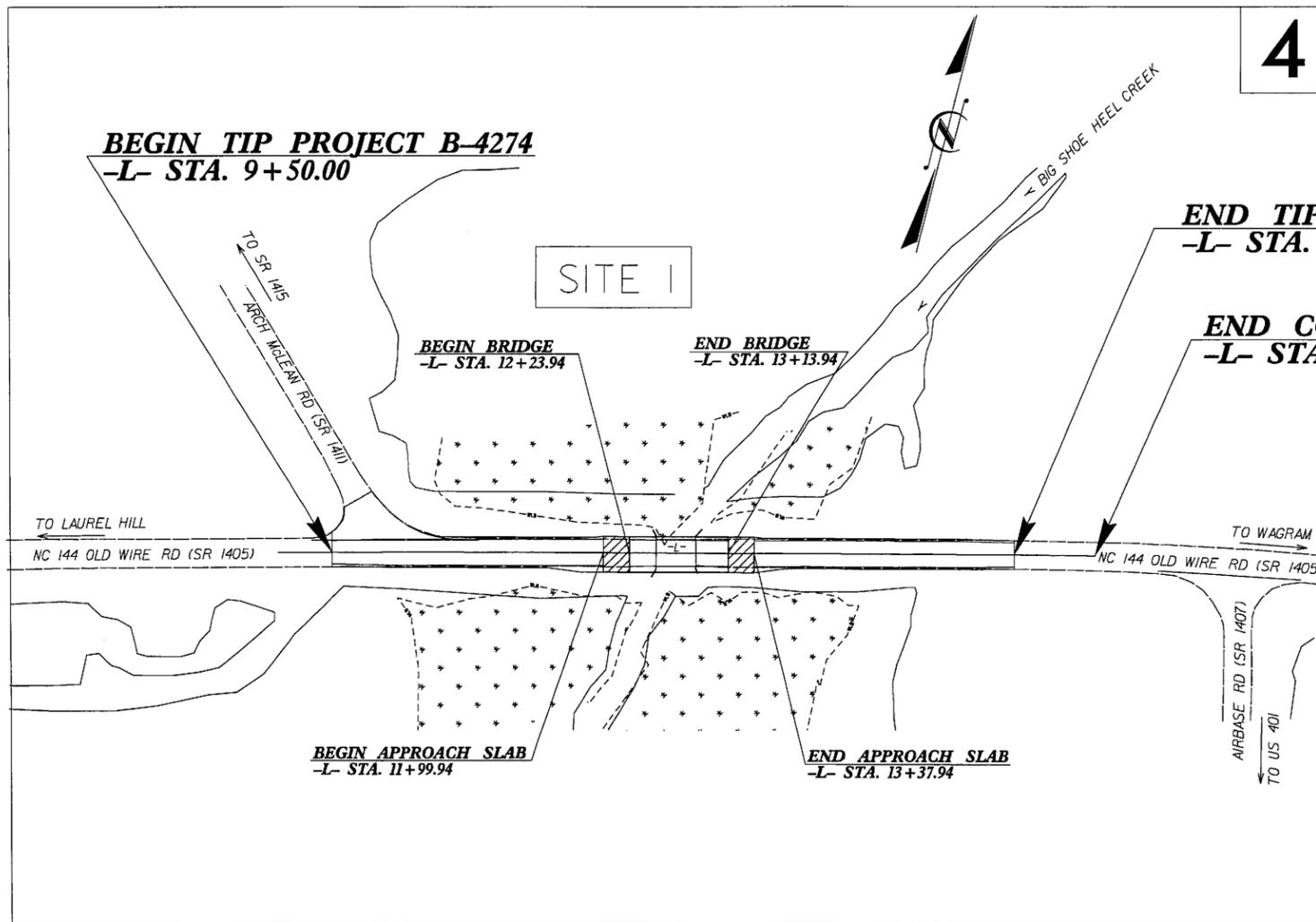
**SCOTLAND COUNTY**

LOCATION: BRIDGE NO. 14 ON NC 144 OVER BIG SHOE HEEL CREEK  
TYPE OF WORK: GRADING, PAVING, DRAINAGE & STRUCTURES

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	B-4274	1	
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	
33615.1.1	BRSTP-1405 (5)	PE	
33615.2.1	BRSTP-1405 (5)	R/W & UTIL.	

**RW PLANS**

Permit Drawing  
Sheet 4 of 7

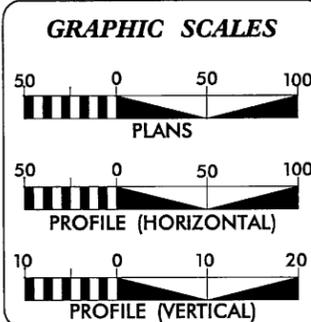


WETLAND/ STREAM  
IMPACT

NCDOT CONTACT : CATHY HOUSER, P.E.  
ROADWAY DESIGN-ENGINEERING COORDINATION

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

PRELIMINARY PLANS  
DO NOT USE FOR CONSTRUCTION



**DESIGN DATA**

ADT 2008 =	3676
ADT 2028 =	5926
DHV =	10 %
D =	60 %
T =	5 % *
V =	60 MPH
* TTST 2% DUAL 3%	
FUNC. CLASS =	RURAL MAJOR COLLECTOR

**PROJECT LENGTH**

Length Roadway TIP Project B-4274 =	0.101 Miles
Length Structure TIP Project B-4274 =	0.017 Miles
Total Length TIP Project B-4274 =	0.118 Miles

Prepared In the Office of:

**THE LPA GROUP**  
TRANSPORTATION CONSULTANTS

2006 STANDARD SPECIFICATIONS

RIGHT OF WAY DATE: AUG. 17, 2007

LETTING DATE: AUG. 19, 2008

THE LPA GROUP of North Carolina, p.a.  
5000 Falls of Neuse Rd., Suite 304  
Raleigh, North Carolina 27609

JEANNE K. RICHTER, P.E.  
PROJECT ENGINEER

JODY L. COLE  
PROJECT DESIGN ENGINEER

**HYDRAULICS ENGINEER**

SIGNATURE: \_\_\_\_\_ P.E.

**ROADWAY DESIGN ENGINEER**

SIGNATURE: \_\_\_\_\_ P.E.

**DIVISION OF HIGHWAYS**  
STATE OF NORTH CAROLINA

STATE HIGHWAY DESIGN ENGINEER

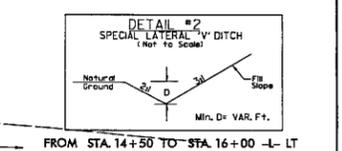
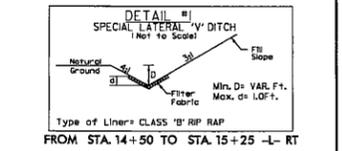
P.E.

\$\$\$\$\$SYTIME\$\$\$\$\$  
\$\$\$\$\$EDGN\$\$\$\$\$  
\$\$\$\$\$USERNAME\$\$\$\$\$

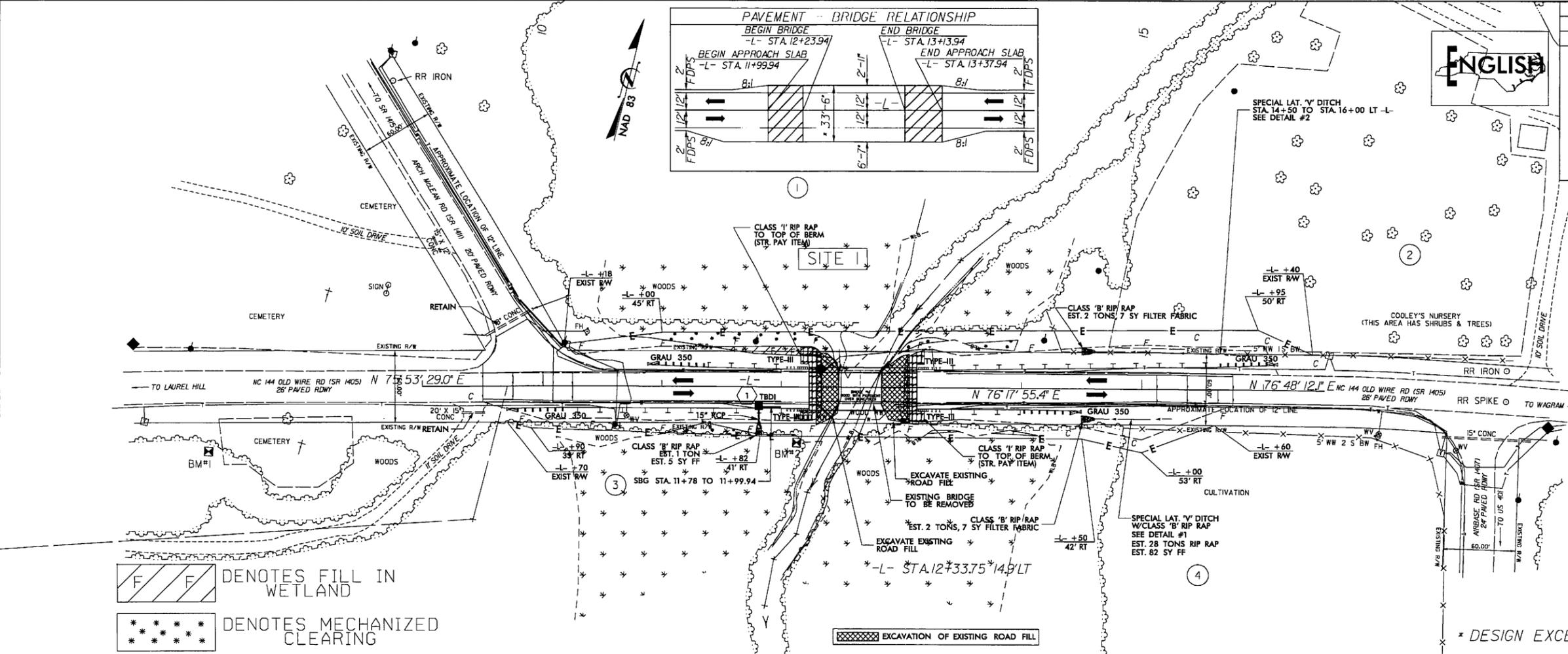
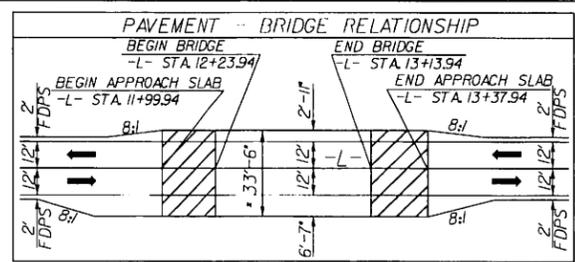
8/17/99

PRELIMINARY PLANS  
DO NOT USE FOR CONSTRUCTION

Permit Drawing  
Sheet 5 of 7



DATUM DESCRIPTION  
THE LOCALIZED COORDINATE SYSTEM DEVELOPED FOR THIS PROJECT IS BASED ON THE STATE PLANE COORDINATES ESTABLISHED BY NCDOT FOR MONUMENT "B4274-1" WITH NAD 1983/95 STATE PLANE GRID COORDINATES OF NORTHING: 412339.2671(±) EASTING: 1884738.8101(±) THE AVERAGE COMBINED GRID FACTOR USED ON THIS PROJECT (GROUND TO GRID) IS: 0.99988110 THE N.C. LAMBERT GRID BEARING AND LOCALIZED HORIZONTAL GROUND DISTANCE FROM "B4274-1" TO "L- STATION 9+50 IS 1295.1051' BEARING N 79° 53' 53" E LOCALIZED HORIZONTAL GROUND DISTANCE FROM "B4274-1" TO "L- STATION 9+50 IS 1295.1051' BEARING N 79° 53' 53" E VERTICAL DATUM USED IS NAVD 83



Denotes FILL IN WETLAND  
Denotes MECHANIZED CLEARING

BMI ELEV. 234.67  
N 412199.2790 E 1883306.6300  
RR SPIKE IN BASE OF 18" PINE  
BL STA. 5+66 88' RT.

-L-

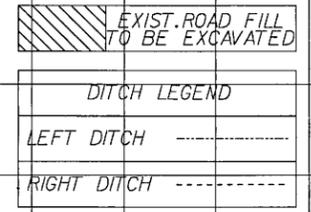
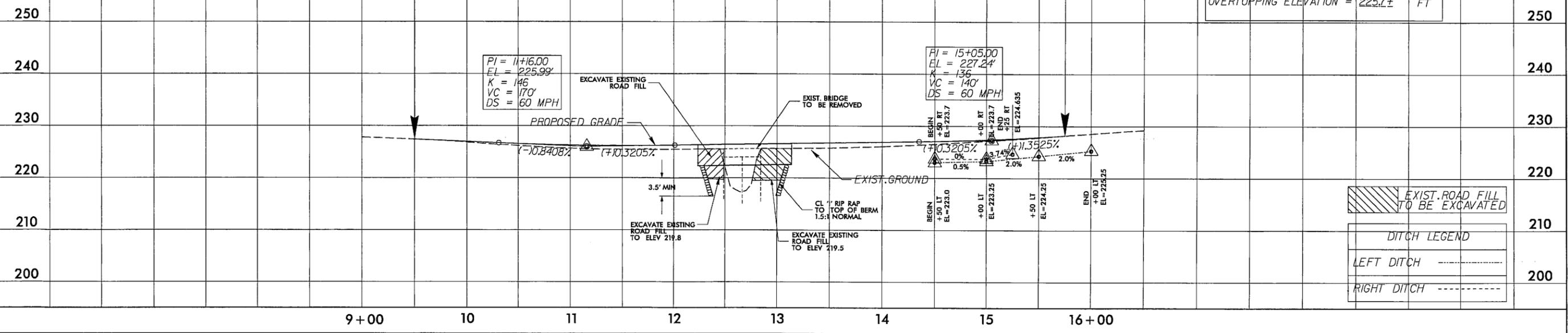
BM2 ELEV. 222.55  
N 412325.6633 E 1883782.3720  
RR SPIKE IN BASE OF 36" POPLAR  
-BL STA. 12+14 62' RT.  
-L- STA. 10+57 46' RT.

BEGIN GRADE B-4274  
-L- STA. 9+50.00  
ELEV. = 227.39

END GRADE B-4274  
-L- STA. 15+75.00  
ELEV. = 228.18

STRUCTURE HYDRAULIC DATA

DESIGN DISCHARGE	= 360	CFS
DESIGN FREQUENCY	= 50	YRS
DESIGN HW ELEVATION	= 221.7	FT
BASE DISCHARGE	= 430	CFS
BASE FREQUENCY	= 100	YRS
BASE HW ELEVATION	= 221.9	FT
OVERTOPPING DISCHARGE	= 600±	CFS
OVERTOPPING FREQUENCY	= 500±	YRS
OVERTOPPING ELEVATION	= 225.7±	FT

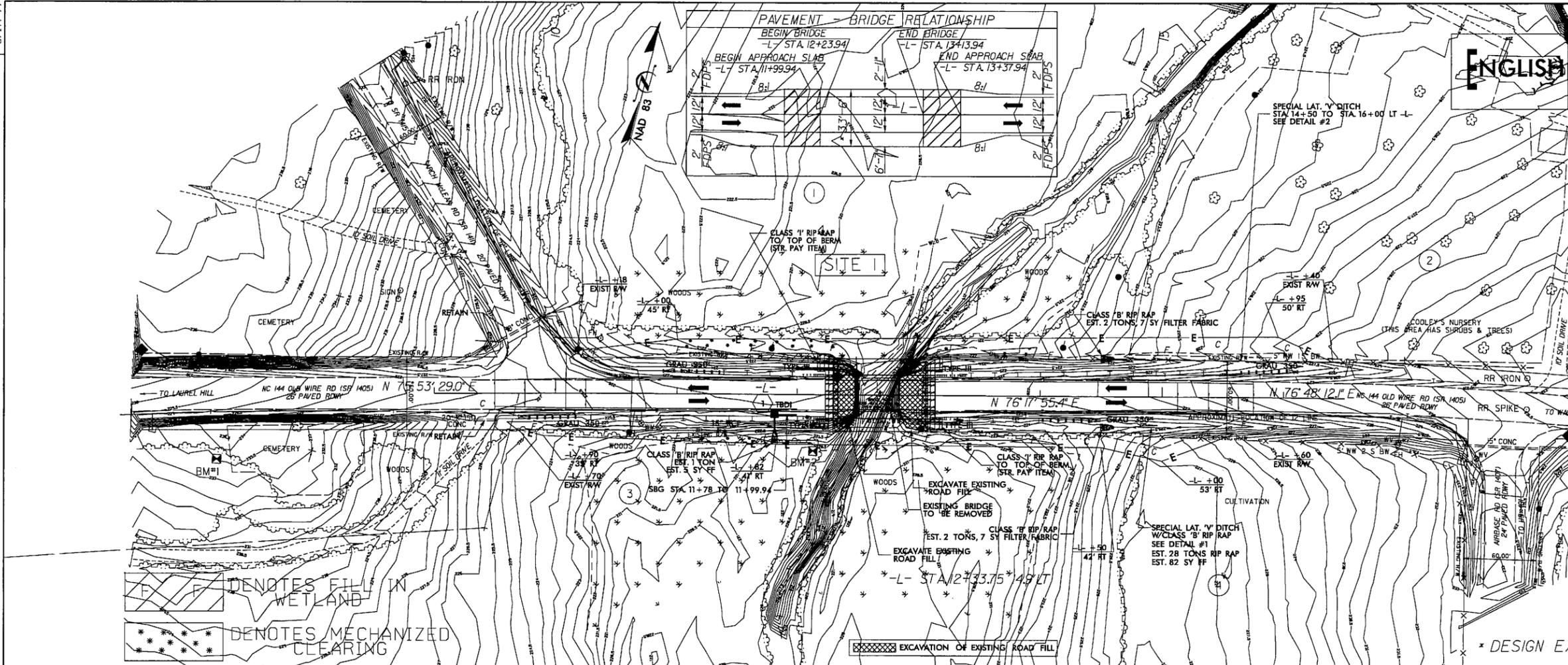


REVISIONS

DATE TIME ENGINEER DRAWN BY CHECKED BY

8/17/99

REVISIONS



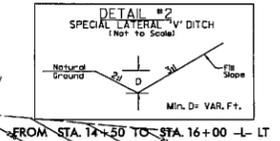
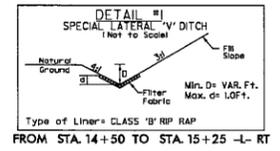
PROJECT REFERENCE NO. **B-4274** SHEET NO. **4**

RW SHEET NO. \_\_\_\_\_

ROADWAY DESIGN ENGINEER \_\_\_\_\_ HYDRAULICS ENGINEER \_\_\_\_\_

**PRELIMINARY PLANS**  
DO NOT USE FOR CONSTRUCTION

**Permit Drawing**  
Sheet **6** of **7**



**DATUM DESCRIPTION**

THE LOCALIZED COORDINATE SYSTEM DEVELOPED FOR THIS PROJECT IS BASED ON THE STATE PLANE COORDINATES ESTABLISHED BY INDOT FOR MONUMENT "B4274-1" WITH NAD 1983/95 STATE PLANE GRID COORDINATES OF NORTHING: 412539.2671 FT. EASTING: 1884138.8101 FT. THE AVERAGE COMBINED GRID FACTOR USED ON THIS PROJECT (GROUND TO GRID) IS: 0.9998710

THE N.C. LAMBERT GRID BEARING AND LOCALIZED HORIZONTAL GROUND DISTANCE FROM "B4274-1" TO "L- STATION 9+50 IS 1295.1059' BEARING N 79° 0' 53" E

\* DESIGN EXCEPTION FOR DITCH DEPTHS AND R/W TO HORIZONTAL DISTANCES. VERTICAL DATUM USED IS NAVD 83

BMI ELEV. 234.67  
N 412199.2790 E 1883306.6300  
RR SPIKE IN BASE OF 18" PINE  
BL STA. 5+66 88' RT.

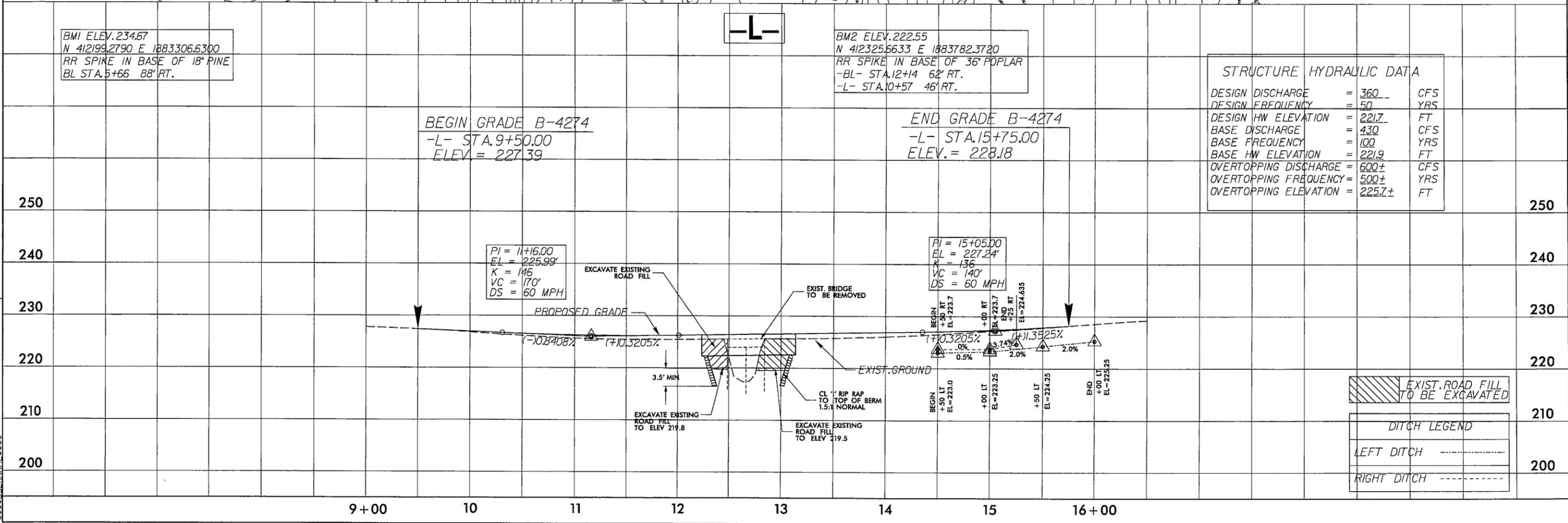
BM2 ELEV. 222.55  
N 412325.6633 E 1883782.3720  
RR SPIKE IN BASE OF 36" POPLAR  
-BL- STA. 12+14 62' RT.  
-L- STA. 10+57 46' RT.

BEGIN GRADE B-4274  
-L- STA. 9+50.00  
ELEV. = 227.39

END GRADE B-4274  
-L- STA. 15+75.00  
ELEV. = 228.18

**STRUCTURE HYDRAULIC DATA**

DESIGN DISCHARGE	= 360	CFS
DESIGN FREQUENCY	= 50	YRS
DESIGN HW ELEVATION	= 221.7	FT
BASE DISCHARGE	= 430	CFS
BASE FREQUENCY	= 100	YRS
BASE HW ELEVATION	= 221.9	FT
OVERTOPPING DISCHARGE	= 600±	CFS
OVERTOPPING FREQUENCY	= 500±	YRS
OVERTOPPING ELEVATION	= 225.7±	FT



**EXIST. ROAD FILL TO BE EXCAVATED**

**DITCH LEGEND**

LEFT DITCH -----

RIGHT DITCH -----

66-67-68-69-70-71-72-73-74-75-76-77-78-79-80-81-82-83-84-85-86-87-88-89-90-91-92-93-94-95-96-97-98-99-00

8/23/99

150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150

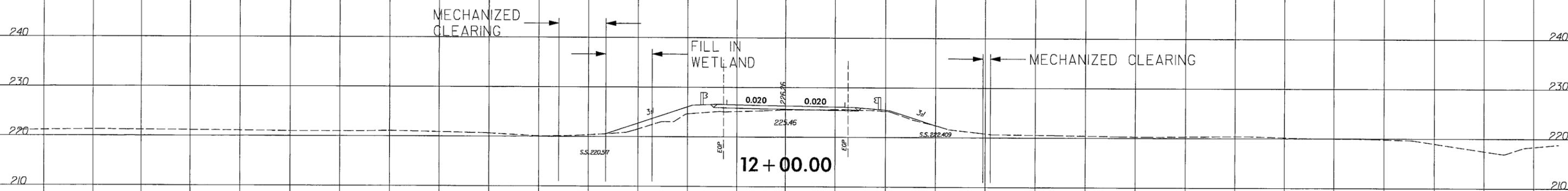
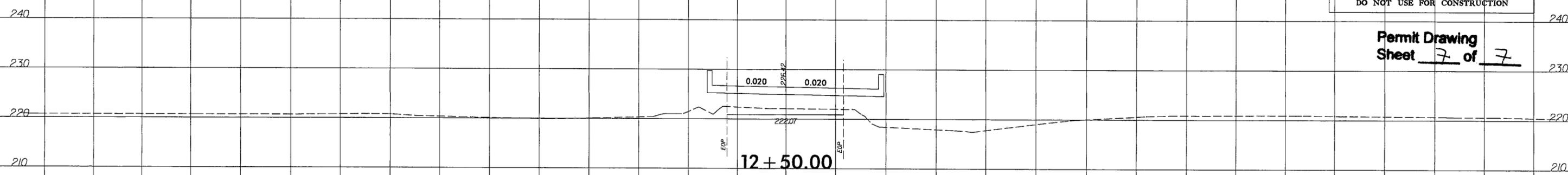


PROJ. REFERENCE NO.  
B-4274

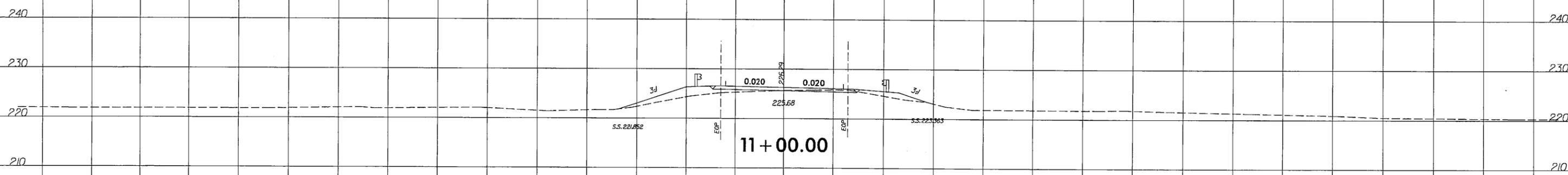
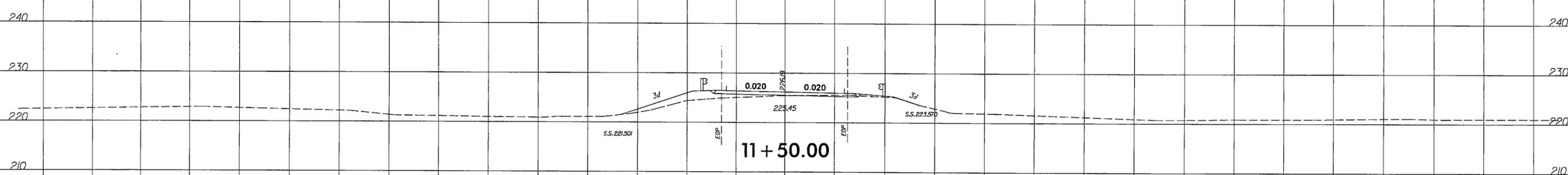
SHEET NO.  
X-3

**PRELIMINARY PLANS**  
DO NOT USE FOR CONSTRUCTION

Permit Drawing  
Sheet 7 of 7



SITE I



\$\$\$\$\$SYTIME\$\$\$\$\$  
\$\$\$\$\$USERNAME\$\$\$\$\$

150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150

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

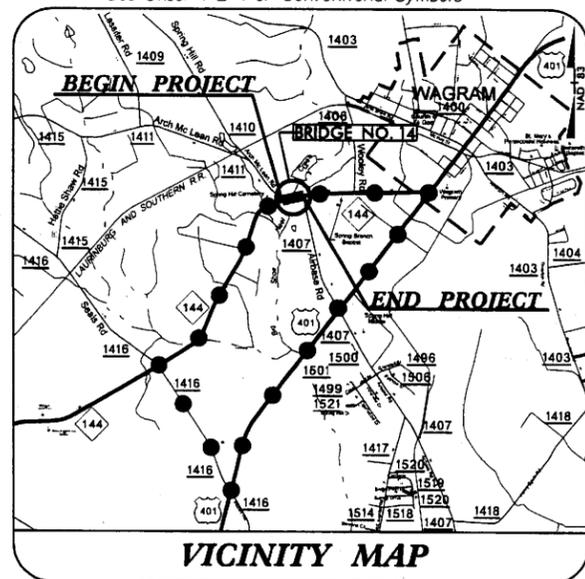
STATE OF NORTH CAROLINA  
DIVISION OF HIGHWAYS

**SCOTLAND COUNTY**

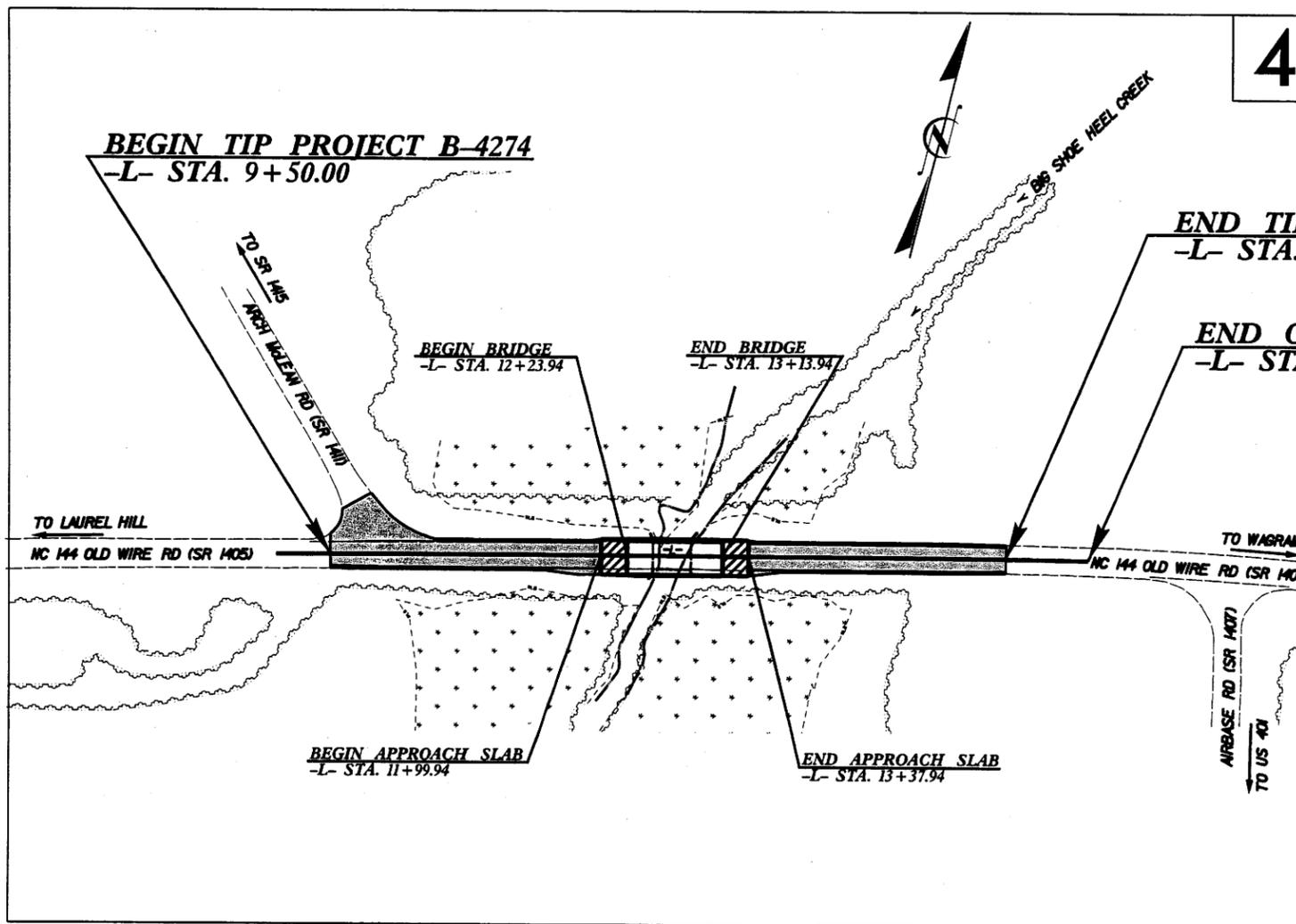
LOCATION: BRIDGE NO. 14 ON NC 144 OVER BIG SHOE HEEL CREEK  
TYPE OF WORK: GRADING, PAVING, DRAINAGE & STRUCTURES

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
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STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	
33615.1.1	BRSTP-1405 (5)	PE	
33615.2.1	BRSTP-1405 (5)	RW & UTIL.	

**RW PLANS**



●●● OFFSITE DETOUR  
(THIS PROJECT IS NOT INCLUDED WITHIN ANY MUNICIPAL BOUNDARIES)  
\*\* DESIGN EXCEPTION REQUIRED FOR BRIDGE WIDTH.

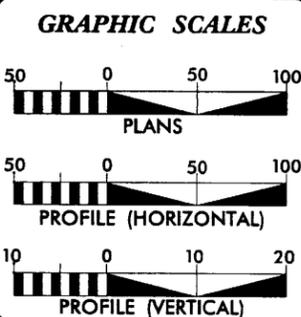


NCDOT CONTACT : CATHY HOUSER, P.E.  
ROADWAY DESIGN-ENGINEERING COORDINATION

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

PRELIMINARY PLANS  
DO NOT USE FOR CONSTRUCTION

**CONTRACT:**



**DESIGN DATA**

ADT 2008 =	3676
ADT 2028 =	5926
DHV =	10 %
D =	60 %
T =	5 % *
V =	60 MPH
* TTST 2% DUAL 3%	
FUNC CLASS =	RURAL MAJOR COLLECTOR

**PROJECT LENGTH**

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Length Structure TIP Project B-4274 =	0.017 Miles
Total Length TIP Project B-4274 =	0.118 Miles

Prepared in the Office of:

**THE LPA GROUP**  
TRANSPORTATION CONSULTANTS

THE LPA GROUP of North Carolina, p.a.  
5000 Falls of Neuse Rd., Suite 304  
Raleigh, North Carolina 27609

2006 STANDARD SPECIFICATIONS

RIGHT OF WAY DATE: AUG. 17, 2007

LETTING DATE: AUG. 19, 2008

JEANNE K. RICHTER, P.E.  
PROJECT ENGINEER

JODY L. COLE  
PROJECT DESIGN ENGINEER

**HYDRAULICS ENGINEER**

SIGNATURE: \_\_\_\_\_ P.E.

**ROADWAY DESIGN ENGINEER**

SIGNATURE: \_\_\_\_\_ P.E.

**DIVISION OF HIGHWAYS**  
STATE OF NORTH CAROLINA

STATE HIGHWAY DESIGN ENGINEER

P.E.

09/28/09  
 12-OCT-2007 11:04  
 I:\Projects\NCDOT\Bridges Group 46 FinalDesign\B4274\Roadway\Proj\B4274\_rdy.tsh.dgn  
 peduair AL LPA30660

3/15/06

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	_____ 
Existing Fence Line	_____ 
Proposed Woven Wire Fence	_____ 
Proposed Chain Link Fence	_____ 
Proposed Barbed Wire Fence	_____ 
Existing Wetland Boundary	_____ 
Proposed Wetland Boundary	_____ 
Existing Endangered Animal Boundary	_____ 
Existing Endangered Plant Boundary	_____ 

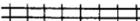
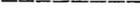
### BUILDINGS AND OTHER CULTURE:

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	_____ 
Buffer Zone 1	_____ 
Buffer Zone 2	_____ 
Flow Arrow	_____ 
Disappearing Stream	_____ 
Spring	_____ 
Wetland	_____ 
Proposed Lateral, Tail, Head Ditch	_____ 
False Sump	_____ 

### RAILROADS:

Standard Gauge	_____ 
RR Signal Milepost	_____ 
Switch	_____ 
RR Abandoned	_____ 
RR Dismantled	_____ 

### RIGHT OF WAY:

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

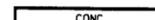
### ROADS AND RELATED FEATURES:

Existing Edge of Pavement	_____ 
Existing Curb	_____ 
Proposed Slope Stakes Cut	_____ 
Proposed Slope Stakes Fill	_____ 
Proposed Wheel Chair Ramp	_____ 
Proposed Wheel Chair Ramp Curb Cut	_____ 
Curb Cut for Future Wheel Chair Ramp	_____ 
Existing Metal Guardrail	_____ 
Proposed Guardrail	_____ 
Existing Cable Guiderail	_____ 
Proposed Cable Guiderail	_____ 
Equality Symbol	_____ 
Pavement Removal	_____ 

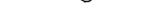
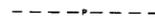
### VEGETATION:

Single Tree	_____ 
Single Shrub	_____ 
Hedge	_____ 
Woods Line	_____ 
Orchard	_____ 
Vineyard	_____ 

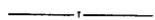
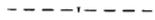
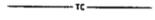
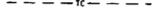
### EXISTING STRUCTURES:

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	_____ 
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	_____ 

### 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	_____ 

### SANITARY SEWER:

Sanitary Sewer Manhole	_____ 
Sanitary Sewer Cleanout	_____ 
U/G 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 U/G Line	_____ 
U/G Tank; Water, Gas, Oil	_____ 
AG Tank; Water, Gas, Oil	_____ 
U/G Test Hole (S.U.E.*)	_____ 
Abandoned According to Utility Records	_____ 
End of Information	_____ 

AATUR  
E.O.I.

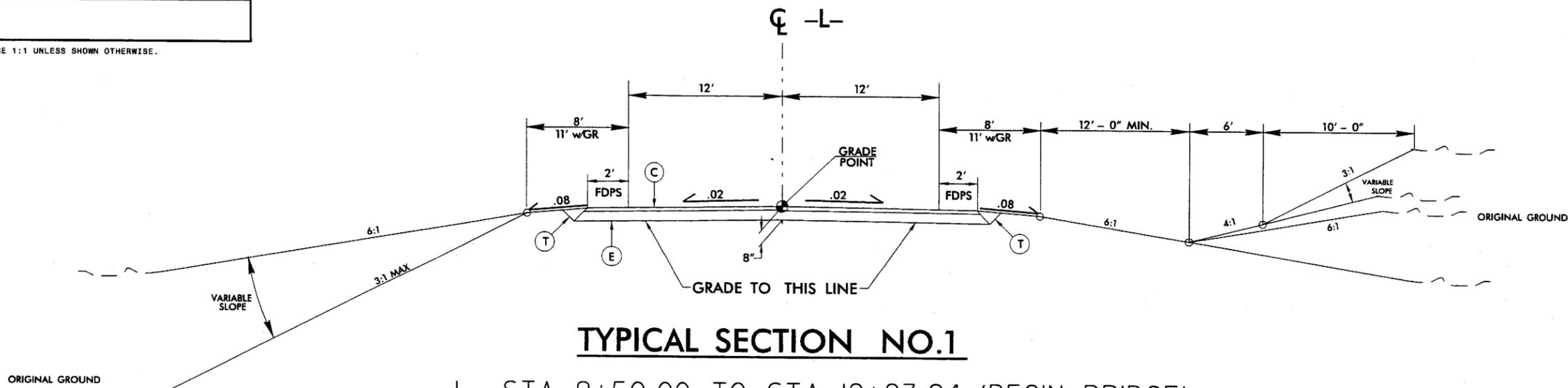


6/2/99

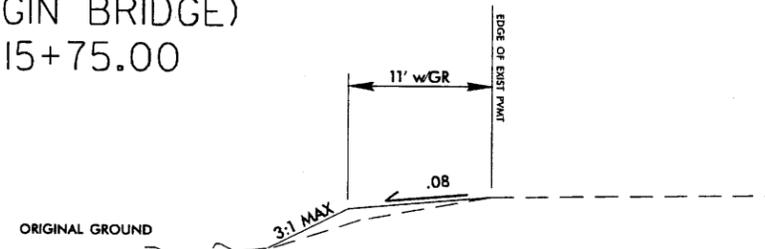
PAVEMENT SCHEDULE	
A	5" PORTLAND CEMENT CONCRETE PAVEMENT
C	PROP. APPROX. 3" ASPHALT CONCRETE SURFACE COURSE, TYPE 99.5B, AT AN AVERAGE RATE OF 168 LBS. PER SQ. YD. IN EACH OF TWO LAYERS.
E	PROP. APPROX. 5" ASPHALT CONCRETE BASE COURSE, TYPE B25.0B, AT AN AVERAGE RATE OF 570 LBS. PER SQ. YD.
T	EARTH MATERIAL.

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

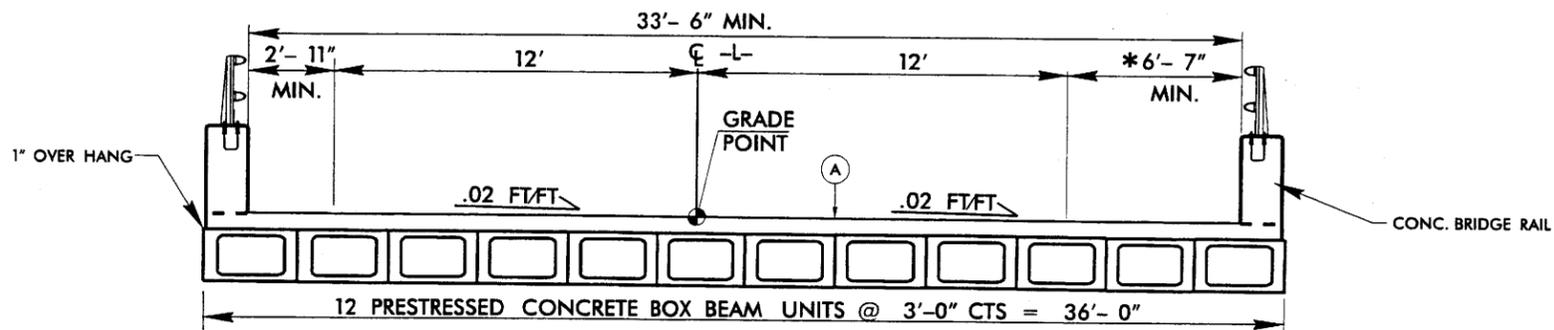
PROJECT REFERENCE NO. <b>B-4274</b>	SHEET NO. <b>2</b>
ROADWAY DESIGN ENGINEER	PAVEMENT DESIGN ENGINEER
<b>PRELIMINARY PLANS</b> DO NOT USE FOR CONSTRUCTION	



-L- STA. 9+50.00 TO STA. 12+23.94 (BEGIN BRIDGE)  
 -L- STA. 13+13.94 (END BRIDGE) TO STA. 15+75.00



**PARTIAL TYPICAL**  
 GRADE SHOULDER ONLY FOR GUARDRAIL PLACEMENT  
 -L- STA. 15+75.00 TO STA. 16+12.11 LT



**TYPICAL BRIDGE SECTION NO.2**

-L- STA. 12+23.94 (BEGIN BRIDGE) TO STA. 13+13.94 (END BRIDGE)  
 \* WIDENED SHOULDER DUE TO HYDRAULIC SPREAD

12-OCT-2007 10:02  
 C:\pup\A1\B4274\Roadway\Proj\B4274\_rdy\_typ.dgn  
 11/18/06

DIVISION OF HIGHWAYS  
 STATE OF NORTH CAROLINA

**SUMMARY OF EARTHWORK**

IN CUBIC YARDS

LOCATION	UNCLASSIFIED EXCAVATION	UNDERCUT	EMBT + 15%	BORROW	WASTE
-L- 9+50.00 TO 12+23.94 (BEGIN BRIDGE)					
	68		307	239	
-L- 13+13.94 (END BRIDGE) TO 15+75.00	141		291	150	
SUBTOTAL	209		598	389	
EST. 5% LOSS DUE TO CLEARING AND GRUBBING	-11			11	
PROJECT TOTALS	198		598	400	
EST. 5% FOR REPLACING TOPSOIL ON ON BORROW PIT				10	
GRAND TOTALS	198			410	
SAY	225			450	

EST. UNDERCUT EXCAVATION = 400 C.Y.  
 EST. SELECT MATERIAL CLASS III = 750 C.Y.

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



Approximate quantities only. Unclassified excavation, fine grading clearing and grubbing, and removal of existing pavement will be paid for at the lump sum price of "Grading"

STATE OF NORTH CAROLINA  
DIVISION OF HIGHWAYS

PROJ. REFERENCE NO.	SHEET NO.
B-4274	X-1

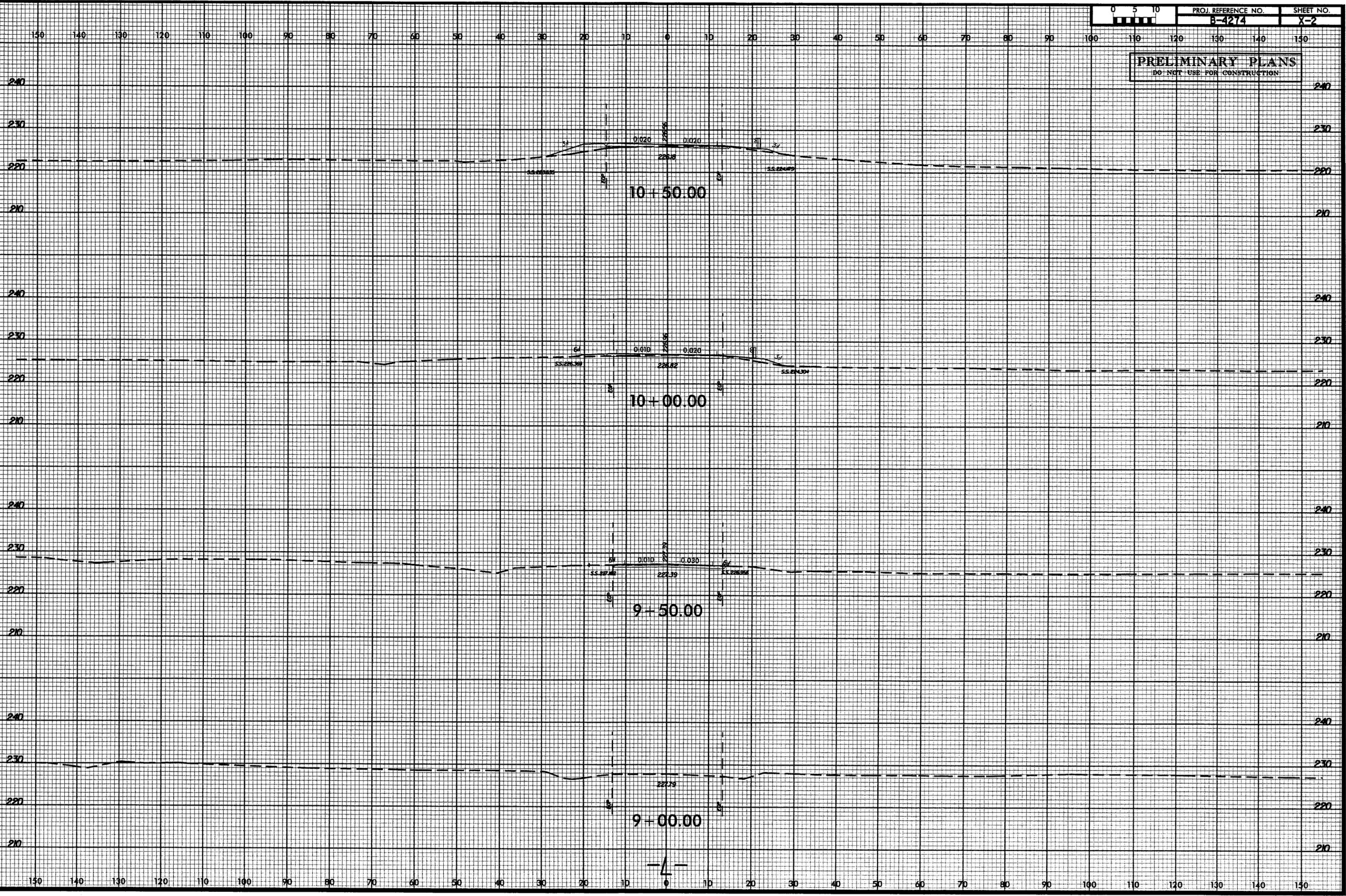
NOTE: EMBANKMENT COLUMN DOES NOT INCLUDE BACKFILL FOR UNDERCUT

**CROSS-SECTION SUMMARY**

Stations L	Uncl. Exc. (cu.yd.)	Embt (cu.yd)
9+50.00	0	0
10+00.00	27	10
10+50.00	20	34
11+00.00	11	66
11+50.00	6	76
12+00.00	3	76
12+23.94	1	45
Stations L	Uncl. Exc. (cu.yd.)	Embt (cu.yd)
13+13.94	0	0
13+50.00	0	55
14+00.00	0	78
14+50.00	5	64
15+00.00	41	46
15+50.00	61	28
16+00.00	34	20

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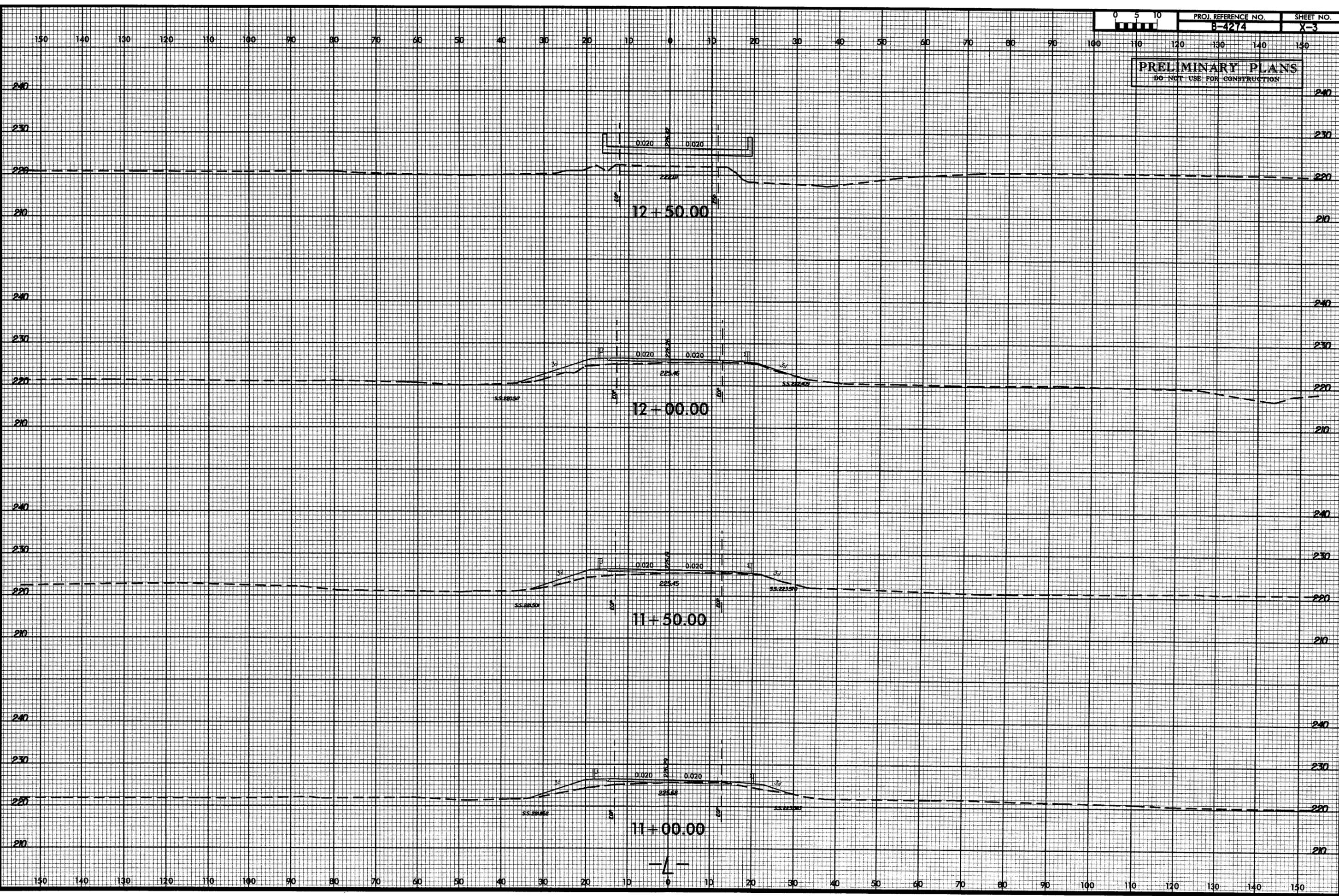
**PRELIMINARY PLANS**  
DO NOT USE FOR CONSTRUCTION



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**PRELIMINARY PLANS**  
DO NOT USE FOR CONSTRUCTION

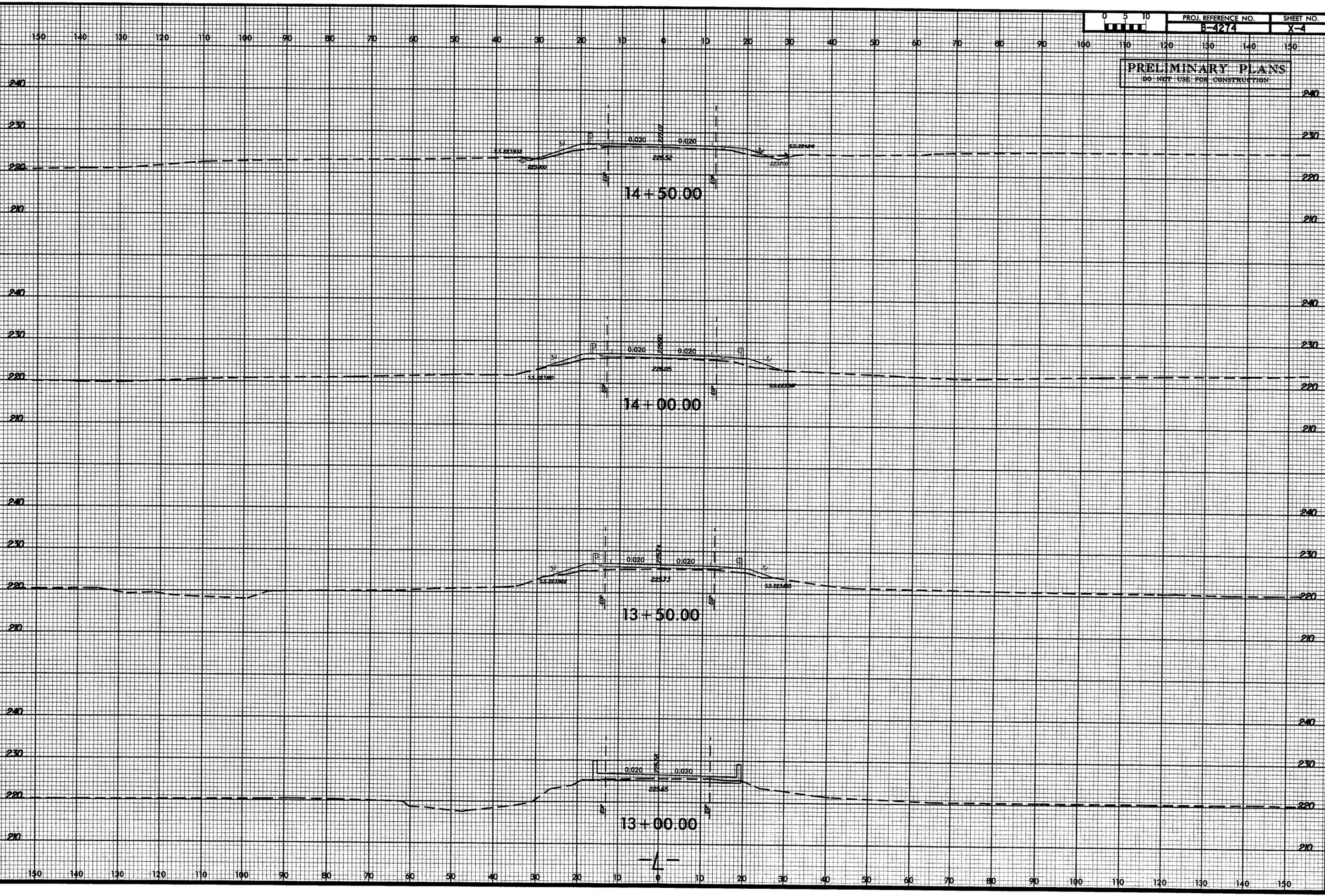


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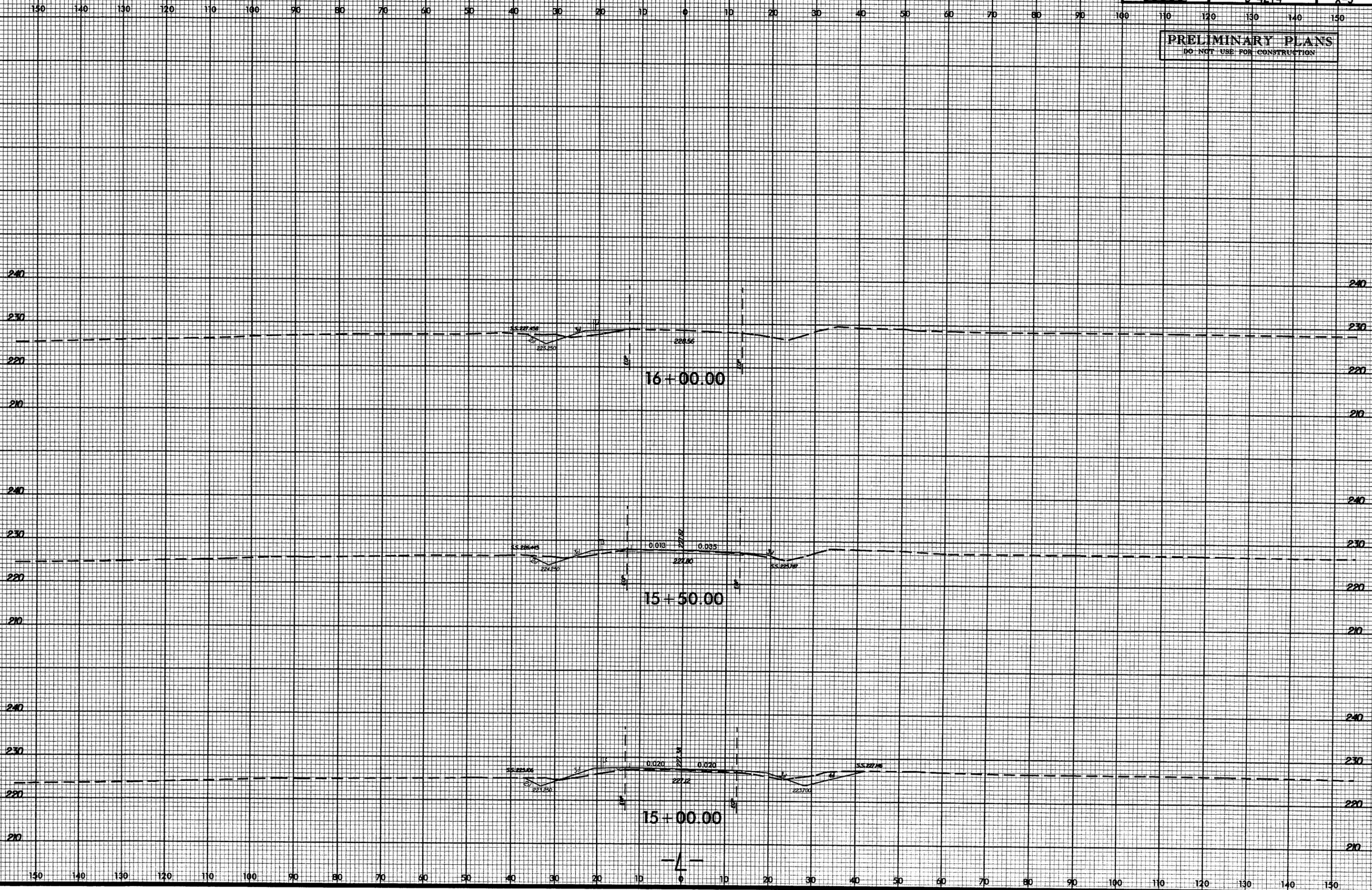
**PRELIMINARY PLANS**  
DO NOT USE FOR CONSTRUCTION



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