STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION

MICHAEL F. EASLEY
GOVERNOR

LYNDO TIPPETT
SECRETARY

September 21, 2006

U. S. Army Corps of Engineers
Regulatory Field Office
Post Office Box 1000
Washington, NC 27889-1000

Attention: Mr. William J. Biddlecome
NCDOT Coordinator

Dear Sir:

Subject: **Nationwide 33 Permit Application and Nationwide 23 Permit Modification Request** for the proposed replacement of Bridge No. 16 over Merchants Millpond on SR 1400, in Gates County. Federal Aid Project No. BRZ-1400(4), State Project No. 8.2060201, WBS 33188.1.1, TIP No. B-3640.

Reference: Action ID No. 200610572, NWP 23 issued March 29, 2006

Please find enclosed revised permit drawings and a Pre-Construction Notification for the above referenced project. As stated in the original application, the North Carolina Department of Transportation (NCDOT) proposes to replace existing Bridge No. 16 on SR 1400 over Merchants Millpond in Gates County. In addition to the permitted permanent impacts there will temporary stream and surface water impacts to facilitate construction of the dam/spillway and fish ladder.

Impacts to Waters of the United States

General Description: The project is located in the Chowan River Basin (Hydrologic Unit 03010203). A best usage classification of "C NSW" has been assigned to Merchants Millpond (Bennetts Creek) [DWQ Index # 25-17]. Neither High Quality Waters (HQW), Water Supplies (WS-I: undeveloped watersheds or WS-II: predominately undeveloped watersheds), listed Section 303(d) impairments, nor Outstanding Resource Waters (ORW) occur within 1.0 mile (1.6 km) of project study area. Neither Merchants Millpond nor Bennetts Creek is designated as a North Carolina Natural or Scenic River, or as a national Wild and Scenic River.

Permanent Impacts: The permitted impacts to jurisdictional wetlands have not changed (0.10-acre of fill, 0.07-acre of mechanized clearing, and 0.02-acre of excavation). However, a hydraulic review of the quantity of rip-rap to be placed at the base of the proposed dam/spillway has been reduced, resulting in a total of 0.14-acre of surface water impacts.

Temporary Impacts: To facilitate and expedite the construction of the proposed spillway/dam and fish ladder, the NCDOT proposes to use sheet-pile downstream to prevent back-flow into the

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

TELEPHONE: 919-733-3141
FAX: 919-733-9794
WEBSITE: WWW.NCDOT.ORG

LOCATION:
TRANSPORTATION BUILDING
1 SOUTH WILMINGTON STREET
RALEIGH NC

project area so that it may remain dry during construction. This will result in 63 ft of temporary stream impacts and 0.14-acre of temporary surface water impacts (see permit drawings).

Utility Impacts: As stated in the original application, no impacts to jurisdictional resources will occur due to the relocation of utilities in the project area. All utility work will be conducted in upland areas and existing road fill.

Bridge Demolition

The existing bridge consists of a timber deck on timber joists with an asphalt-wearing surface. The substructure is a timber abutment design; the interior bents consist of timber caps on timber piles. The spillway for the millpond is a timber structure that is adjacent to the existing bridge. The bridge can be removed without dropping components into Waters of the United States during construction. Best Management Practices for Bridge Demolition and Removal will be followed to avoid any temporary fill from entering Waters of the United States.

Federally Protected Species

As of April 27, 2006 the US Fish and Wildlife Service (USFWS) lists two federally protected species for Gates County. A biological conclusion of "no effect" remains valid for the red-cockaded woodpecker due to lack of suitable habitat. A biological conclusion is not required for the American alligator due to its designation of Threatened (due to similarity of appearance). No species have been added or deleted from the list since the completion of the CE (October 28, 2004).

Avoidance and Minimization

Avoidance examines all appropriate and practicable possibilities of averting impacts to "Waters of the United States". Due to the presence of surface waters and wetlands within the project study area, avoidance of all impacts is not possible. The NCDOT is committed to incorporating all reasonable and practicable design features to avoid and minimize jurisdictional impacts. Minimization measures were incorporated as part of the project design these included:

- Use of an off-site detour during construction.
- Construction of a 29-foot longer bridge
- Construction of a fish ladder for anadromous fish passage
- Best Management Practices will also be utilized during demolition of the existing bridge and construction of the new bridge.
- Installation of sheet piles will dispense the need for an Anadromous Fish Moratorium based on personal communication with NCWRC.

Mitigation

No additional mitigation is proposed for this project.

Regulatory Approvals

Section 404 Permit: It is anticipated that the temporary dewatering and sheet-pile installation will be authorized under Section 404 Nationwide Permit 33 (Temporary Construction Access and Dewatering). We are, therefore, requesting the issuance of a Nationwide Permit 33 authorizing the temporary work. All other aspects of this project are being processed by the Federal Highway Administration as a "Categorical Exclusion" in accordance with 23 CFR 771.115(b).

The NCDOT requests that these activities be authorized by a Nationwide Permit 23 (FR number 10, pages 2020-2095, January 15, 2002).

Section 401 Certification: We anticipate 401 General Water Quality Certification numbers 3403 and 3366 will apply to this project. All general conditions of the Water Quality Certifications will be met. Therefore, in accordance with 15A NCAC 2H, Section .0500(a) and 15A NCAC 2B.0200, we are providing copies of this application to the North Carolina Department of Environmental and Natural Resources, Division of Water Quality for their review.

CAMA: NCDOT has applied for the issuance of a CAMA Major Development Permit Modification from NCDCM under separate cover.

A copy of this application will be posted on the NCDOT website at:
http://www.doh.dot.state.nc.us/preconstruct/pe/neu/permit.html

Thank you for your time and assistance with this project. Please contact Mr. Tyler Stanton at tstanton@dot.state.nc.us or (919) 715-1439 if you have any questions or need additional information.

Sincerely,

E. L. Luck

for

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

Cc W/attachment:
Mr. John Hennessy, NCDWQ (2 Copies)
Mr. Travis Wilson, NCWRC
Mr. Gary Jordan, USFWS
Mr. Ron Sechler, NMFS
Mr. Michael Street, NCDMF
Ms. Cathy Brittingham, NCDCM
Ms. Wanda Gooden, NCDCM
Dr. David Chang, PE, Hydraulics
Mr. Greg Perfetti, PE, Structure Design
Mr. Mark Staley, Roadside Environmental
Mr. Anthony Roper, PE, Division 1 Engineer
Mr. Clay Willis, Division 1 Environmental Officer

Cc W/o attachment:
Mr. Scott McLendon, USACE, Wilmington
Mr. Jay Bennett, PE, Roadway Design
Mr. Majed Alghandour, PE, Programming and TIP
Mr. Art McMillan, PE, Highway Design
Ms. Beth Harmon, EEP
Mr. Todd Jones, NCDOT External Audit Branch
Ms. Stacy Baldwin, PE, PDEA

Office Use Only: Form Version March 05

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:
   - ☒ Section 404 Permit
   - ☐ Section 10 Permit
   - ☒ 401 Water Quality Certification
   - ☐ Riparian or Watershed Buffer Rules
   - ☐ Isolated Wetland Permit from DWQ
   - ☐ Express 401 Water Quality Certification

2. Nationwide, Regional or General Permit Number(s) Requested: NW 23 & 33

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: 1598 Mail Service Center
   Raleigh, NC
   Telephone Number: (919) 733-3141 Fax Number: (919) 733-9794
   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:
   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: _____

2. T.I.P. Project Number or State Project Number (NCDOT Only): B-3640

3. Property Identification Number (Tax PIN): N/A

4. Location
   County: Gates Nearest Town: Gatesville
   Subdivision name (include phase/lot number): N/A
   Directions to site (include road numbers/names, landmarks, etc.): _____
   _____
   _____

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): -76.6987 °N 36.4315 °W

6. Property size (acres): N/A

7. Name of nearest receiving body of water: Bennetts Creek

8. River Basin: Chowan
   (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: State Park, Rural with forested areas and scattered residential and farms.
   _____
   _____

10. Describe the overall project in detail, including the type of equipment to be used: Replacement of the existing bridge structure with a 135-foot cored slab bridge at approximately the same location and slightly higher roadway elevation of the existing structure using top-down construction. Replace existing dam/spillway structure and install fish ladder.

11. Explain the purpose of the proposed work: The bridge is considered to be structurally deficient and functionally obsolete and the replacement will result in safer traffic operations.

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. NWP & CAMA Application dated 2/17/2006; USACE Action ID # 200610572 dated 3/29/2006 ; CAMA Permit # 102-06 dated 6/8/2006

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.
N/A

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: approach fill, excavation, mechanized clearing, sheet-pile installation

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)
14+11-L-	Permanent Fill	Forested/Riverine	Yes		0.10
14+11-L-	Mechanized Clearing	Forested/Riverine	Yes		0.07
14+11-L-	Excavation	Forested/Riverine	Yes		0.02
				Total Wetland Impact (acres)	0.19

3. List the total acreage (estimated) of all existing wetlands on the property: N/A

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)
14+11-L-	Bennetts Creek	Temporary	Perennial	90	63	0.14

Total Stream Impact (by length and acreage)	63	0.14

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 (indicate on map)	Name of Waterbody (if applicable)	Type of Impact	Type of Waterbody (lake, pond, estuary, sound, bay, ocean, etc.)	Area of Impact (acres)
14+11-L-	Merchants Millpond	Fill (rip-rap)	Pond	0.14
Total Open Water Impact (acres)				0.14

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

Stream Impact (acres):	0.14
Wetland Impact (acres):	0.19
Open Water Impact (acres):	0.14
Total Impact to Waters of the U.S. (acres)	0.47
Total Stream Impact (linear feet):	63

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.
   N/A

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.): N/A
   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. Use of an off-site detour during construction, construction of a 29-foot longer single-span bridge, Best Management Practices will also be utilized during demolition of the existing bridge and construction of the new bridge.

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, available at http://h2o.enr.state.nc.us/ncwetlands/strmgide.html.

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.

   The NCEEP will provide compensatory mitigation for impacts from this project

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://h2o.enr.state.nc.us/wrp/index.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): 0.19
   Amount of Non-riparian wetland mitigation requested (acres): 00
   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
N/A		3 (2 for Catawba)	0
		1.5	0
Total			0

* 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.
N/A

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. See Stormwater Management Plan

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.
N/A

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:
N/A

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. Lusk 9.21.06

Applicant/Agent's Signature **Date**

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

STORMWATER MANAGEMENT PLAN

WBS: 33188.1.1 (B-3640) Date: 8/05
Gates County

PROJECT DESCRIPTION

The project involves the bridge replacement of Bridge #16 over Merchants Mill Pond on SR 1400. The overall length of the bridge is 135' and the total project length is 335'. The existing bridge length is 106'. The existing two lane road will be widened from 9' lanes to 11' lanes. The existing bridge will be widened from 29' to 45' to accommodate 5' 9" sidewalks on each side of the proposed bridge. The crossing is within the Chowan River Basin and is part of the Merchants Millpond State Park.

BEST MANAGEMENT PRACTICES AND MAJOR STRUCTURES

Best Management Practices (BMPs) and measures used on the project to reduce the stormwater impacts include the following:

- Approach work was minimized to approximately 100' on each side of the bridge.
- No deck drains proposed for new bridge.
- Concentrated flow minimized to one proposed inlet on west side of crossing. Otherwise allowed sheet flow over grassed shoulders.

Ecosystem Enhancement PROGRAM

January 31, 2006

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

Dear Dr. Thorpe:

Subject: EEP Mitigation Acceptance Letter:

B-3640, Bridge 16 over Merchants Millpond on SR 1400, Gates County

The purpose of this letter is to notify you that the Ecosystem Enhancement Program (EEP) will provide riverine wetland mitigation for the subject project. Based on the information supplied by you in a letter dated June 14, 2005, the impacts are located in CU 03010203 of the Chowan River Basin in the Northern Outer Coastal Plain (NOCP) Eco-Region, and are as follows:

Riverine Wetland Impacts: 0.19 acre

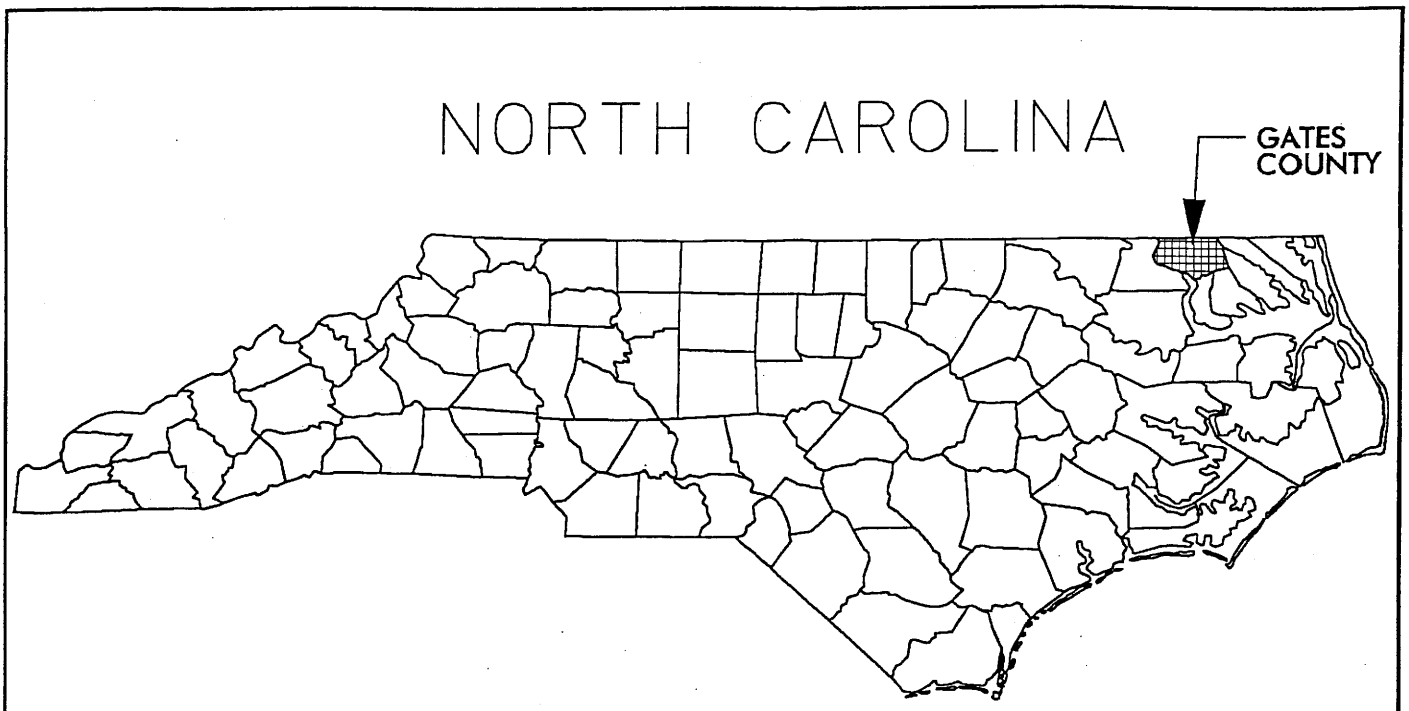
This mitigation acceptance letter replaces the mitigation acceptance letter issued on July 19, 2005. As stated in your letter, the subject project is listed in Exhibit 2 of the Memorandum of Agreement among the North Carolina Department of Environment and Natural Resources, the North Carolina Department of Transportation, and the U. S. Army Corps of Engineers, Wilmington District dated July 22, 2003. The mitigation for the subject project will be provided in accordance with this agreement.

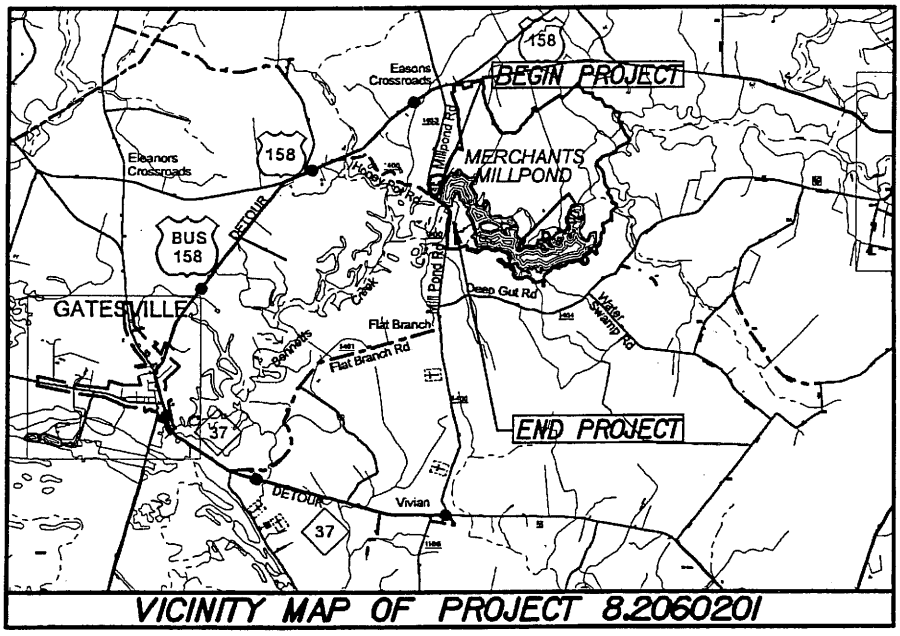
If you have any questions or need additional information, please contact Ms. Beth Harmon at 919-715-1929.

Sincerely,

William D. Gilmore, P.E.
EEP Director

cc: Mr. Bill Biddlecome, USACE-Washington
Mr. John Hennessy, Division of Water Quality, Wetlands/401 Unit
File: B-3640 Revised





VICINITY MAP OF PROJECT 8.2060201

VICINITY MAPS

NCDOT

DIVISION OF HIGHWAYS

GATES COUNTY

PROJECT: 33188.1.1 (B-3640)

SR 1400 MILL POND ROAD FROM EAST OF EASTMAINS CROSSROADS TO FLAT BRANCH

SHEET 1 OF 8

PERMIT DRAWINGS

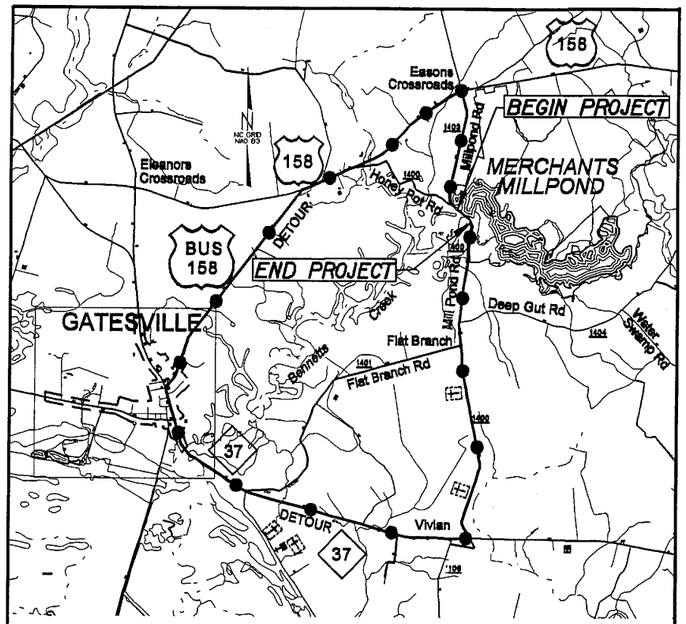
09/08/99

TIP: B-3640

CONTRACT:

$TIME$
$DATE$
$FILE$

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



VICINITY MAP

LEGEND: DETOUR

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

GATES COUNTY

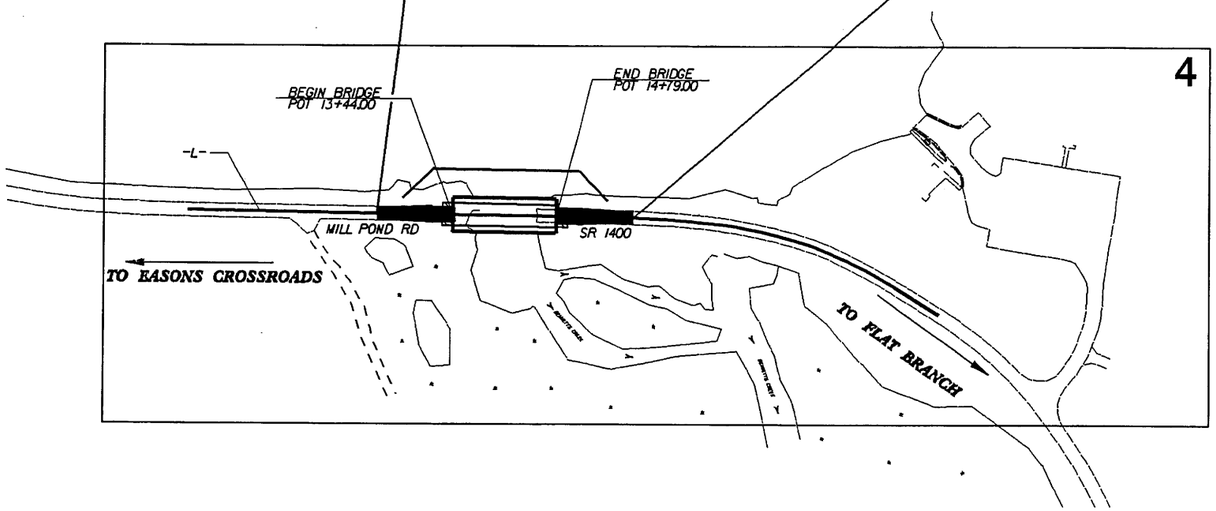
STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	B-3640	1	2 OF 8
WBS NO.	F.A. PROJ. NO.	DESCRIPTION	
33188.1.1	BRZ-1400(4)	P.E.	

LOCATION: BRIDGE NO. 16 OVER MERCHANTS MILLPOND ON SR 1400

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

STA. 12+45.00 -L- BEGIN TIP PROJECT B-3640

STA. 15+80.00 -L- END TIP PROJECT B-3640



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

THIS PROJECT IS NOT LOCATED WITHIN THE BOUNDARIES OF ANY MUNICIPALITY.

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

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

GRAPHIC SCALES

PLANS: 50 25 0 50 100
PROFILE (HORIZONTAL): 50 25 0 50 100
PROFILE (VERTICAL): 5 2.5 0 5 10

DESIGN DATA

ADT 2005 = 1000
ADT 2025 = 1600
DHV = 10 %
D = 55 %
T = 4 % *
V = 50 MPH
* TTST 1% DUAL 3%

PROJECT LENGTH

LENGTH ROADWAY
TIP PROJECT B-3640 = 0.037 MILES

LENGTH STRUCTURE
TIP PROJECT B-3640 = 0.026 MILES

TOTAL LENGTH OF TIP PROJECT B-3640 = 0.063 MILES

Prepared In the Office of:
WILBUR SMITH ASSOCIATES
P.O. BOX 2478 RALEIGH, NC 27602-2478 PHONE (919) 755-0583

2002 STANDARD SPECIFICATIONS

RIGHT OF WAY DATE: MARCH 18, 2005

LETTING DATE: MARCH 21, 2006

THOMAS E. TALLMAN, P.E.
PROJECT ENGINEER

R.D. ODELL, P.E.
PROJECT DESIGN ENGINEER

HYDRAULICS ENGINEER

SIGNATURE: P.E.

ROADWAY DESIGN ENGINEER

SIGNATURE: P.E.

DIVISION OF HIGHWAYS
STATE OF NORTH CAROLINA

STATE DESIGN ENGINEER P.E.

DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION

APPROVED
DIVISION ADMINISTRATOR DATE

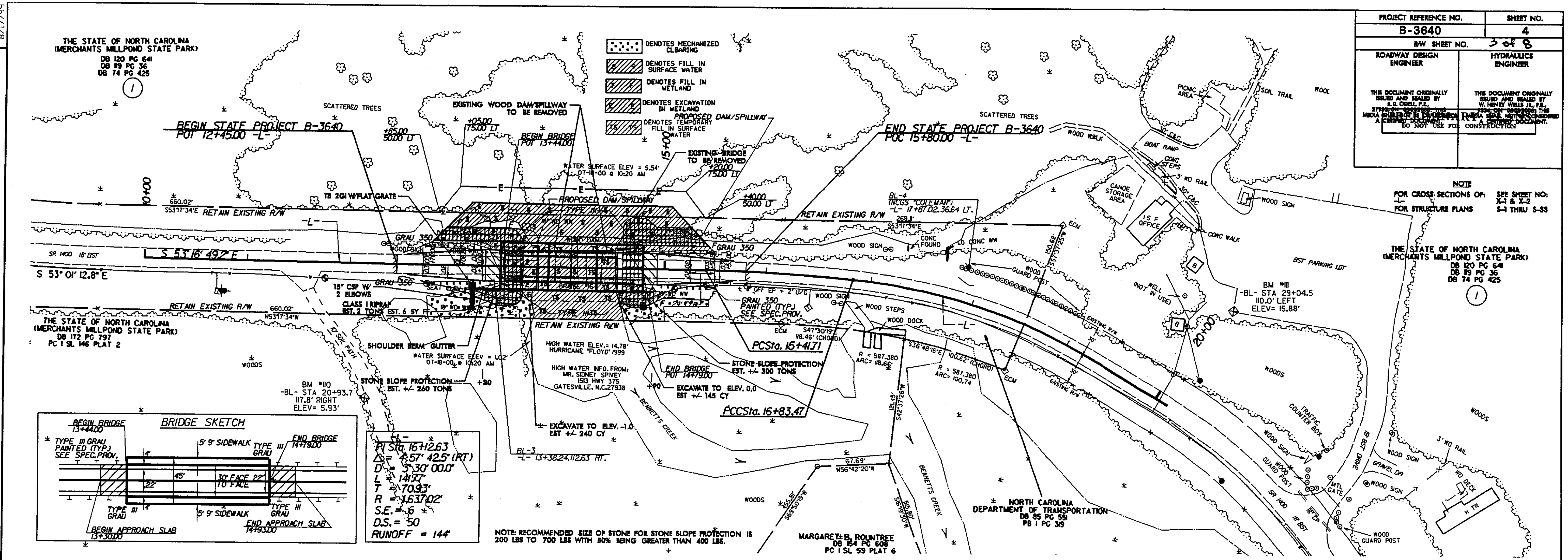
PROJECT REFERENCE NO.	SHEET NO.
B-3640	4
R/W SHEET NO.	3 of 8

ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
THIS DOCUMENT ORIGINALLY ISSUED AND SEALED BY R. D. ODELL, P.E., 27993, ON 03/09/2000. THIS MEDIA SHALL NOT BE CONSIDERED A CERTIFIED DOCUMENT.	THIS DOCUMENT ORIGINALLY ISSUED AND SEALED BY W. HENRY WELLS JR, P.E., 7334, ON 03/09/2000. THIS MEDIA SHALL NOT BE CONSIDERED A CERTIFIED DOCUMENT.

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

NOTE

FOR CROSS SECTIONS OF: -L-	SEE SHEET NO: X-1 & X-2
FOR STRUCTURE PLANS	S-1 THRU S-33



THE STATE OF NORTH CAROLINA (MERCHANTS MILLPOND STATE PARK)
DB 120 PG 641
DB 119 PG 36
DB 74 PG 425
DENOTES MECHANIZED CLEARING
DENOTES FILL IN SURFACE WATER
DENOTES FILL IN WETLAND
DENOTES EXCAVATION IN WETLAND
DENOTES TEMPORARY FILL IN SURFACE WATER
SCATTERED TREES
EXISTING WOOD DAM/SPILLWAY TO BE REMOVED
BEGIN STATE PROJECT B-3640
POT 12+45.00 -L-
END STATE PROJECT B-3640
POC 15+80.00 -L-
BEGIN BRIDGE POT 13+44.00
PROPOSED DAM/SPILLWAY
EXISTING BRIDGE TO BE REMOVED
RETAIN EXISTING R/W
S 53° 16' 49.2" E
S 53° 01' 12.8" E
SR 1400 18' BST
THE STATE OF NORTH CAROLINA (MERCHANTS MILLPOND STATE PARK)
DB 172 PG 797
PC 1 SL 146 PLAT 2
SHOULDER BERM GUTTER
STONE SLOPE PROTECTION EST. +/- 260 TONS
BM #110
-BL- STA 20+93.7
117.8' RIGHT
ELEV= 5.93'
HIGH WATER ELEV.= 14.78' HURRICANE "FLOYD" 1999
HIGH WATER INFO. FROM: MR. SIDNEY SPIVEY 1513 HWY 375 GATESVILLE, N.C.27938
END BRIDGE POT 14+79.00
STONE SLOPE PROTECTION EST. +/- 300 TONS
EXCAVATE TO ELEV. 0.0 EST +/- 145 CY
EXCAVATE TO ELEV. -1.0 EST +/- 240 CY
PCSta. 15+41.71
PCCSta. 16+83.47
BENNETTS CREEK
BRIDGE SKETCH
BEGIN BRIDGE 13+44.00
END BRIDGE 14+79.00
TYPE III GRAU PAINTED (TYP) SEE SPEC.PROV.
5' 9" SIDEWALK
BEGIN APPROACH SLAB 13+30.00
END APPROACH SLAB 14+93.00
PI Sta. 16+12.63
Δ = 4°57' 42.5" (RT)
D = 3° 30' 00.0"
L = 141.77'
T = 70.93'
R = 1637.02'
S.E. = .06
DS = 50
RUNOFF = 144'
NOTE: RECOMMENDED SIZE OF STONE FOR STONE SLOPE PROTECTION IS 200 LBS TO 700 LBS WITH 50% BEING GREATER THAN 400 LBS.
MARGARET B. ROUNTREE
DB 154 PG 608
PC 1 SL 59 PLAT 6
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
DB 85 PG 551
PB 1 PG 319
BM #111
-BL- STA 29+04.5
110.0' LEFT
ELEV= 15.88'
BST PARKING LOT
CANOE STORAGE AREA
BOAT RAMP
PICNIC AREA
WOODS

DATUM DESCRIPTION

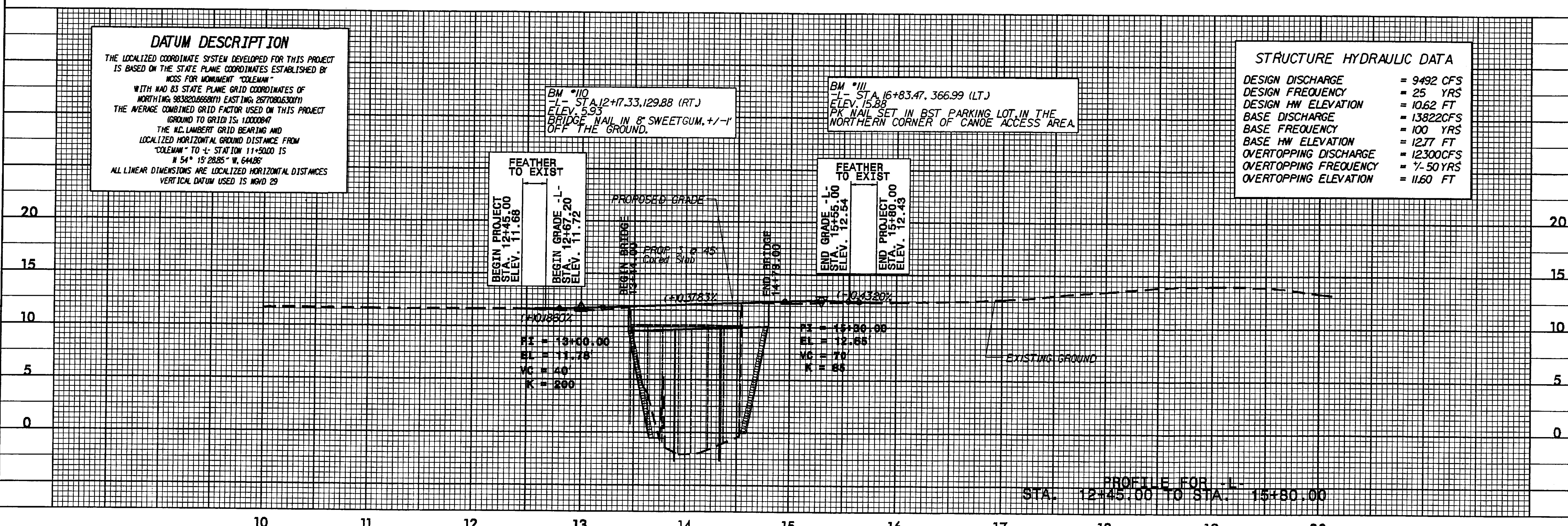
THE LOCALIZED COORDINATE SYSTEM DEVELOPED FOR THIS PROJECT IS BASED ON THE STATE PLANE COORDINATES ESTABLISHED BY NCGS FOR MONUMENT "COLEMAN"
WITH NAD 83 STATE PLANE GRID COORDINATES OF
NORTHING: 983820.6668(ft) EASTING: 2677080.630(ft)
THE AVERAGE COMBINED GRID FACTOR USED ON THIS PROJECT (GROUND TO GRID) IS: 1.0000847
THE N.C. LAMBERT GRID BEARING AND LOCALIZED HORIZONTAL GROUND DISTANCE FROM "COLEMAN" TO -L- STATION 11+50.00 IS
N 54° 15' 28.85" W, 644.86'
ALL LINEAR DIMENSIONS ARE LOCALIZED HORIZONTAL DISTANCES
VERTICAL DATUM USED IS NGVD 29

BM #110
-L- STA. 12+17.33, 129.88 (RT.)
ELEV. 5.93
BRIDGE NAIL IN 8" SWEETGUM, +/-1' OFF THE GROUND.

BM #111
-L- STA. 16+83.47, 366.99 (LT.)
ELEV. 15.88
PK NAIL SET IN BST PARKING LOT IN THE NORTHERN CORNER OF CANOE ACCESS AREA.

STRUCTURE HYDRAULIC DATA

DESIGN DISCHARGE	= 9492 CFS
DESIGN FREQUENCY	= 25 YRS
DESIGN HW ELEVATION	= 10.62 FT
BASE DISCHARGE	= 13822CFS
BASE FREQUENCY	= 100 YRS
BASE HW ELEVATION	= 12.77 FT
OVERTOPPING DISCHARGE	= 12300CFS
OVERTOPPING FREQUENCY	= +/- 50 YRS
OVERTOPPING ELEVATION	= 11.60 FT



FEATHER TO EXIST
BEGIN PROJECT STA. 12+45.00 ELEV. 11.68
BEGIN GRADE -L- STA. 12+67.20 ELEV. 11.72
PROPOSED GRADE
BEGIN BRIDGE 13+44.00
PROP 3 @ 45' Cored Slab
END BRIDGE 14+79.00
FEATHER TO EXIST
END GRADE -L- STA. 15+55.00 ELEV. 12.54
END PROJECT STA. 15+80.00 ELEV. 12.43
(+)0.3783%
(+)0.4380%
(+)0.1880%
PI = 13+00.00
EL = 11.78
VC = 40'
K = 200
PI = 15+30.00
EL = 12.65
VC = 70
K = 86
EXISTING GROUND
20
15
10
5
0
10
11
12
13
14
15
16
17
18
19
20

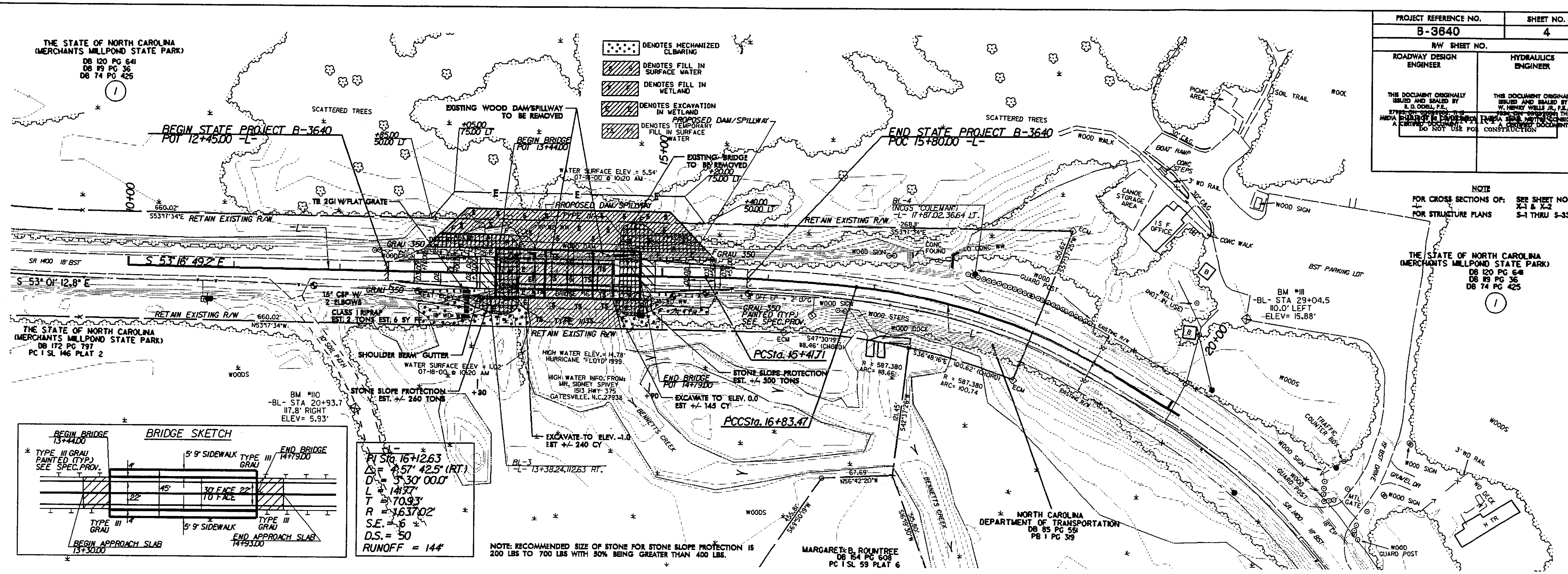
PROFILE FOR -L-
STA. 12+45.00 TO STA. 15+80.00

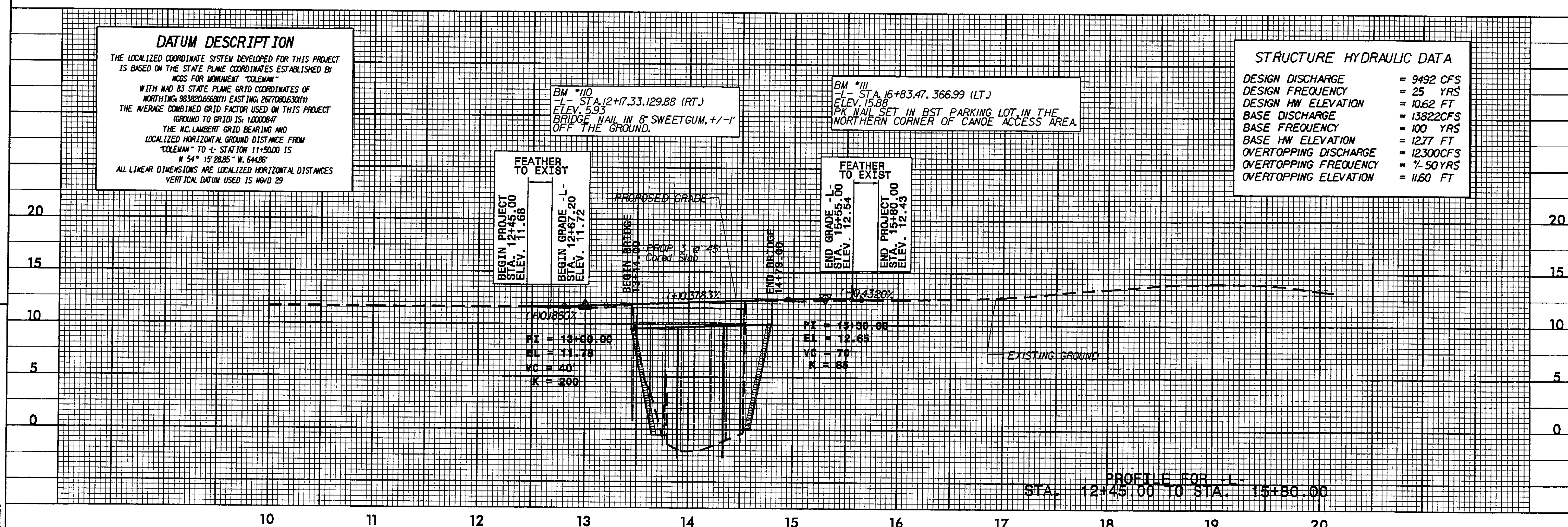
PROJECT REFERENCE NO.	SHEET NO.
B-3640	4
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
THIS DOCUMENT ORIGINALLY ISSUED AND SEALED BY R. D. ODELL, P.E.	THIS DOCUMENT ORIGINALLY ISSUED AND SEALED BY W. HENRY WELLS JR., P.E.

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

NOTE

FOR CROSS SECTIONS OF: -L-	SEE SHEET NO: X-1 & X-2
FOR STRUCTURE PLANS	S-1 THRU S-33





DATUM DESCRIPTION

THE LOCALIZED COORDINATE SYSTEM DEVELOPED FOR THIS PROJECT IS BASED ON THE STATE PLANE COORDINATES ESTABLISHED BY NCGS FOR MONUMENT "COLEMAN" WITH NAD 83 STATE PLANE GRID COORDINATES OF NORTHING: 983820.6668(ft) EASTING: 2677080.6301(ft)

THE AVERAGE COMBINED GRID FACTOR USED ON THIS PROJECT (GROUND TO GRID) IS: 1.0000847

THE N.C. LAMBERT GRID BEARING AND LOCALIZED HORIZONTAL GROUND DISTANCE FROM "COLEMAN" TO -L- STATION 11+50.00 IS N 54° 15' 28.85" W, 644.86'

ALL LINEAR DIMENSIONS ARE LOCALIZED HORIZONTAL DISTANCES

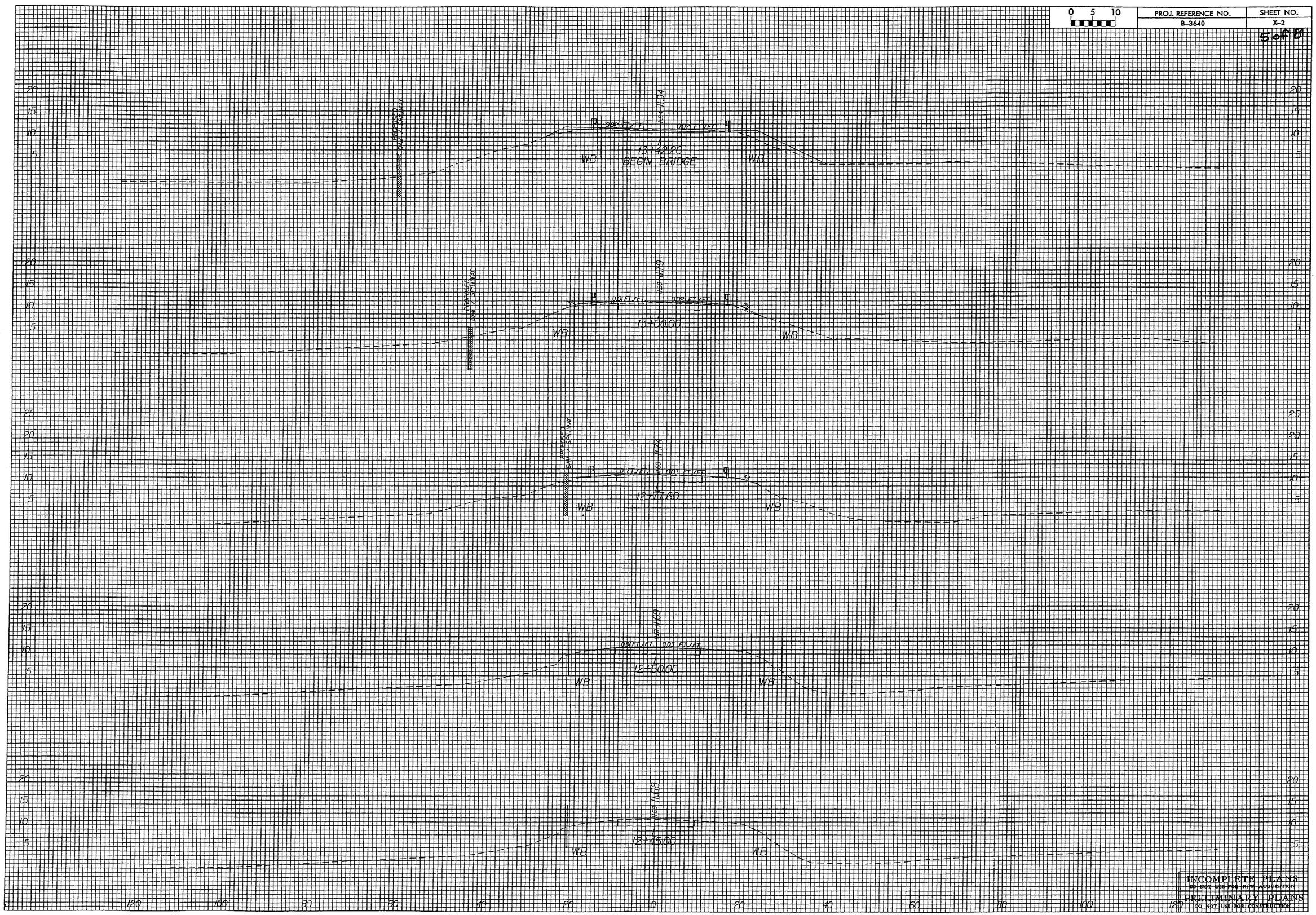
VERTICAL DATUM USED IS NGVD 29

STRUCTURE HYDRAULIC DATA

DESIGN DISCHARGE	= 9492 CFS
DESIGN FREQUENCY	= 25 YRS
DESIGN HW ELEVATION	= 10.62 FT
BASE DISCHARGE	= 13822 CFS
BASE FREQUENCY	= 100 YRS
BASE HW ELEVATION	= 12.77 FT
OVERTOPPING DISCHARGE	= 12300 CFS
OVERTOPPING FREQUENCY	= +/- 50 YRS
OVERTOPPING ELEVATION	= 11.60 FT

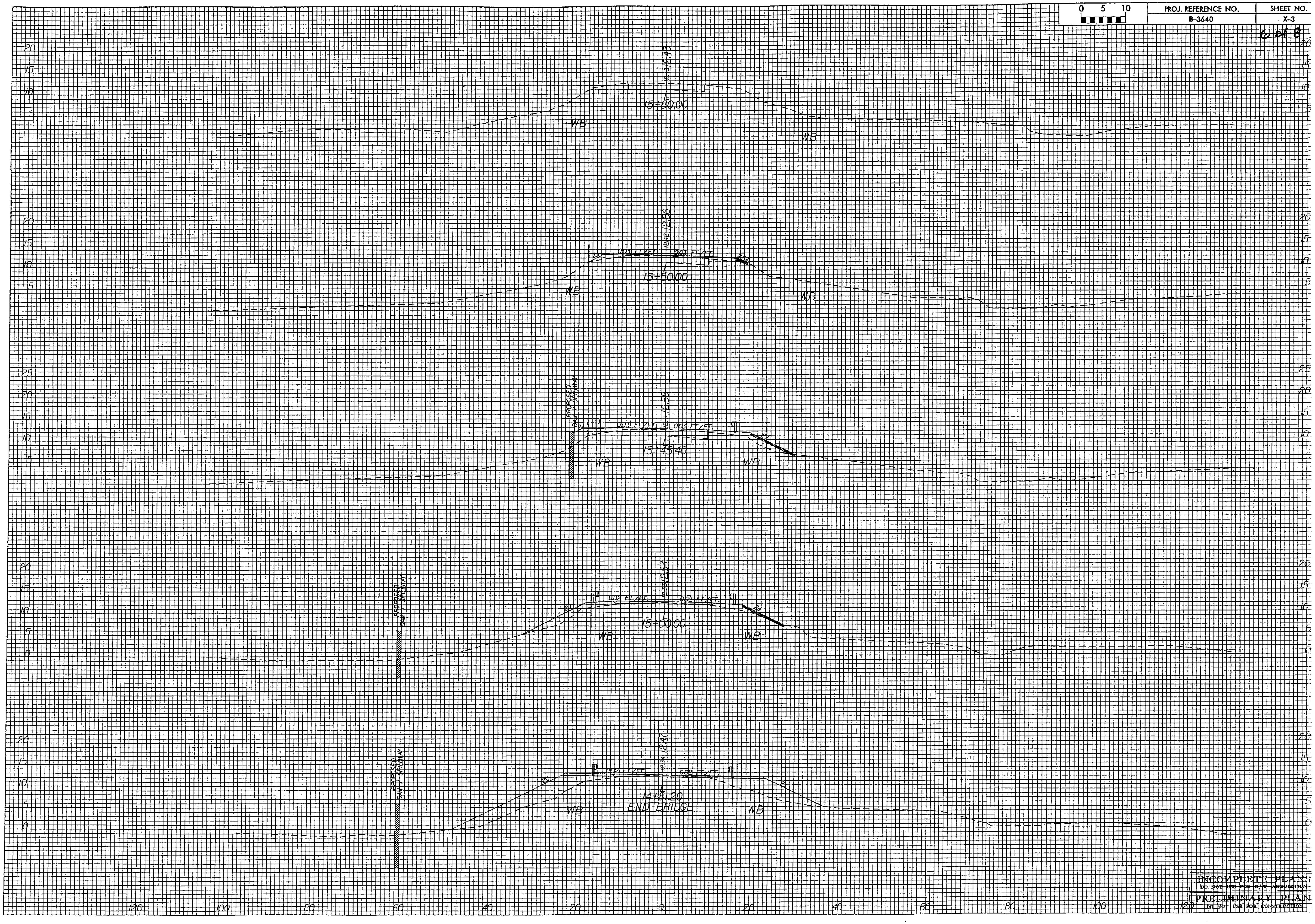
0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	B-3640	X-2

5 of 8



INCOMPLETE PLANS
DO NOT USE FOR RIGHT-OF-WAY ACQUISITION
PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

PROJ. REFERENCE NO.	SHEET NO.
B-3640	X-3



INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

WETLAND PERMIT IMPACT SUMMARY

Site No.	Station (From/To)	Structure Size / Type	WETLAND IMPACTS					SURFACE WATER IMPACTS				
			Permanent Fill In Wetlands (ac)	Temp. Fill In Wetlands (ac)	Excavation in Wetlands (ac)	Mechanized Clearing in Wetlands (ac)	Hand Clearing in Wetlands (ac)	Permanent SW impacts (ac)	Temp. SW impacts (ac)	Existing Channel Impacts Permanent (ft)	Existing Channel Impacts Temp. (ft)	Natural Stream Design (ft)
1	14+11 -L-	3@45" Cored Slab Bridge	0.10		0.02	0.07		0.14				
2	14+11 -L-	Temp Construction							0.14		63	
TOTALS:			0.10	0.00	0.02	0.07	0.00	0.14	0.14	0	63	0

* Note: Linear Surface Water Impact taken from Existing Spillway downstream.

NC DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

GATES COUNTY
B-3640

SHEET 8 of 8 ########

ATN Revised 3/31/05

List of Property Owners:

PARCEL #	PROPERTY OWNER	ADDRESSES
	State of NC Merchants Millpond State Park	
	NCDOT	

NC DEPARTMENT OF TRANSPORTION
DIVISION OF HIGHWAYS
GATES COUNTY
33188.1.1 (B-3640)
Replace Br#16 Over Merchants Millpond
Sheet 7 of 8