



STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION

MICHAEL F. EASLEY
GOVERNOR

LYNDO TIPPETT
SECRETARY

August 29, 2008

U. S. Army Corps of Engineers
Regulatory Field Office
151 Patton Avenue
Asheville, NC 28801

ATTENTION: Mr. David Baker
NCDOT Coordinator

SUBJECT: **Nationwide Permit 13 and Section 401 Water Quality Certification Application** for the replacement of Bridge No. 4 over Ivy River on SR 1565 in Madison County, Federal Aid Project No. BRZ-1565(5), State Project No. 8.2860801, WBS Element 33531.1.1, **TIP No. B-4184. Debit order \$240.00.**

Dear Sir:

Please see the enclosed Pre-Construction Notification (PCN), Approved Jurisdictional Determination Form, Permit Drawings and Design plans for the above referenced project. A Categorical Exclusion was completed for this project in August 2007 and distributed shortly thereafter. Additional copies are available upon request. NCDOT proposes to replace the existing four-span, 155-foot 5 inches long bridge, with a new 187-foot long single-span bridge. There will be 83 feet of permanent surface water impacts to Ivy River due to the use of riprap for bank stabilization.

IMPACTS TO WATERS OF THE UNITED STATES

General Description:

The single water resource impacted for project B-4184 is Ivy River. Ivy River is located in the French Broad River Basin (Division of Water Quality (DWQ) subbasin 04-03-04) and is approximately 42 feet wide and 1 foot deep within the project area. The DWQ Index number for this section of Ivy River is 6-96-(11.7) and the Hydrological Cataloguing Unit is 06010105. The DWQ classifies Ivy River as "C". Within the project area, Ivy River is not listed as a 303(d) water. There are no 303(d) waters within a mile downstream of the project area.

Permanent Impacts:

There will be 85 linear feet of permanent impacts to Ivy River due to rip rap for bank stabilization

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

TELEPHONE: 919-715-1334
FAX: 919-715-5501

WEBSITE: WWW.NCDOT.ORG

LOCATION:
PARKER LINCOLN BUILDING,
2728 CAPITAL BLVD.
RALEIGH NC 27604

under the bridge.

Temporary Impacts:

There will be no temporary impacts to Ivy River.

Utility Impacts:

There will be no utility impacts to jurisdictional resources.

Bridge Demolition:

The existing bridge's superstructure is a timber deck on I-beams. The substructure has three bents and timber caps and piles with timber posts and concrete sills. Best Management Practices (BMPs) for the Protection of Surface Waters and BMPs for Bridge Demolition and Removal will be followed.

FEDERALLY PROTECTED SPECIES

Plants and animals with federal classifications of Endangered (E), Threatened (T), Proposed Endangered (PE) and Proposed Threatened (PT) 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 three federally protected species for Madison County (Table 1).

The Bald Eagle has been de-listed from the Endangered Species Act as of August 8, 2007 but is still protected under the Bald and Golden Eagle Act. Foraging habitat for the Bald Eagle does not exist within a mile of the project study area.

Table 1. Federally Protected Species for Madison County

Common Name	Scientific Name	Status	Habitat	Biological Conclusion
Bog Turtle	<i>Clemmys muhlenbergii</i>	T (S/A)	Not Subject	N/A
Gray Bat	<i>Myotis grisescens</i>	E	No	No Effect
Spotfin Chub	<i>Erimonax monachus</i>	T	No	No Effect

AVOIDANCE, MINIMIZATION AND MITIGATION

Avoidance and Minimization:

Avoidance examines all appropriate and practicable possibilities of averting impacts to "Waters of the United States." The NCDOT is committed to incorporating all reasonable and practicable design features to avoid and minimize jurisdictional stages; minimization measures were incorporated as part of the project design. In addition, Best Management Practices will be followed as outlined in "NCDOT's Best Management Practices for Construction and Maintenance Activities". In addition, the following measures will be incorporated for this project.

Mitigation:

Due to the minimal impacts of 83 linear feet of permanent impacts from bank stabilization, NCDOT proposes no mitigation because bank stabilization does not constitute a loss of waters.

Schedule:

The project schedule calls for a December 16, 2008 Let date and a review date of **November 28, 2008**.

REGULATORY APPROVALS

Section 404 Permit:

It is anticipated that the permanent impacts to Ivy River will be authorized under Section 404 Nationwide Permit 13 (Bank Stabilization). We are, therefore, requesting the issuance of a Nationwide Permit 13 to encompass the 83 feet of permanent impacts to Ivy River.

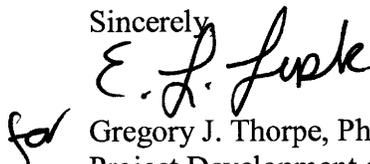
Section 401 Permit:

We anticipate 401 General Certification number 3689 will apply to this project. All general conditions of the General Certification will be adhered to. In accordance with 15A NCAC 2H .0501(a), we are submitting five copies of this permit application to the North Carolina Department of Environmental and Natural Resources, Division of Water Quality, for your approval.

Comments from the North Carolina Wildlife Resources Commission (NCWRC) will be required prior to authorization by the Corps of Engineers. By copy of this letter and attachments, NCDOT hereby requests NCWRC review. NCDOT requests that NCWRC forward their comments to the Corps of Engineers and the NCDOT within 30 calendar days of receipt of this application.

Thank you for your assistance with this project. If you have any questions or need additional information, please contact Jennifer Harrod at jwharrod@dot.state.nc.us or (919) 715-7241. The application will be posted at <http://207.4.62.65/PDEA/PermApps/>.

Sincerely,



Gregory J. Thorpe, Ph.D., Environmental Management Director
Project Development and Environmental Analysis Branch

cc:

W/attachment

Mr. Brian Wrenn, NCDWQ (5 copies)
Ms. Marella Buncick, USFWS
Ms. Marla Chambers, NCWRC
Mr. Harold Draper, TVA

W/o attachment (see website for attachments)

Dr. David Chang, P.E., Hydraulics
Mr. Victor Barbour, P.E., Project Services Unit
Mr. Greg Perfetti, P.E., Structure Design
Mr. Mark Staley, Roadside Environmental
Mr. J.J. Swain, P.E., Division Engineer
Mr. Roger Bryan, DEO
Mr. Jay Bennett, P.E., Roadway Design
Mr. Majed Alghandour, P.E., Programming and TIP
Mr. Art McMillian, P.E., Highway Design
Mr. Scott McLendon, USACE, Wilmington
Ms. Ahmad Al-Sharawneh, Project Planning Engineer

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: Nationwide 13

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

Telephone Number: (919) 733-3141 Fax Number: (919) 733-9794

E-mail Address: jwharrod@dot.state.nc.us

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

11. Explain the purpose of the proposed work: NCDOT Bridge Maintenance Unit records indicate Bridge No. 4 has a sufficiency rating of 47.3 out of a possible 100 for a new structure. The bridge is considered structurally deficient and functionally obsolete. The replacement of this inadequate structure will result in safer and more efficient 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. N/A

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. There will be 83 feet of permanent impacts to Ivy River due to the use of riprap for bank stabilization.. There will be no temporary stream impacts to Ivy River.
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)
Total Wetland Impact (acres)					

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

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)
1	Ivy River	Permanent	Perennial	42''	83'	0.02
Total Stream Impact (by length and acreage)					83	0.02

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)
Total Open Water Impact (acres)				0

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

Stream Impact (acres):	0.02 (perm.)
Wetland Impact (acres):	0
Open Water Impact (acres):	0
Total Impact to Waters of the U.S. (acres)	0.02 (perm)
Total Stream Impact (linear feet):	83' (perm.)

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. The current bridge will be replaced at new location just south of the existing location. During construction traffic will continue to follow the existing alignment. NCDOT Best Management Practices will be implemented during all phases of construction and demolition.

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. NCDOT proposes no mitigation for the 83 linear feet of permanent impacts to Ivy River. These impacts are due to the use of riprap for bank stabilization and are not considered a loss of waters of the United States.
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
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. Stormwater from this bridge replacement will not be directly discharged into Ivy River.

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: _____

This project is limited to a bridge replacement. No indirect or cumulative impacts are anticipated

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).

N/A





Applicant/Agent's Signature

Date

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

APPROVED JURISDICTIONAL DETERMINATION FORM
U.S. Army Corps of Engineers

This form should be completed by following the instructions provided in Section IV of the JD Form Instructional Guidebook.

SECTION I: BACKGROUND INFORMATION

A. REPORT COMPLETION DATE FOR APPROVED JURISDICTIONAL DETERMINATION (JD):

B. DISTRICT OFFICE, FILE NAME, AND NUMBER: B-4184 Bridge No. 4 over Ivy River on SR 1565

C. PROJECT LOCATION AND BACKGROUND INFORMATION:

State: NC County/parish/borough: Madison City: Mars Hill
Center coordinates of site (lat/long in degree decimal format): Lat. 35.78° N, Long. -82.58° W.
Universal Transverse Mercator:

Name of nearest waterbody:
Ivy River

Name of nearest Traditional Navigable Water (TNW) into which the aquatic resource flows: French Broad River

Name of watershed or Hydrologic Unit Code (HUC): 06010105

- Check if map/diagram of review area and/or potential jurisdictional areas is/are available upon request.
 Check if other sites (e.g., offsite mitigation sites, disposal sites, etc...) are associated with this action and are recorded on a different JD form.

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

- Office (Desk) Determination. Date:
 Field Determination. Date(s):

SECTION II: SUMMARY OF FINDINGS

A. RHA SECTION 10 DETERMINATION OF JURISDICTION.

There **Appear to be no** "navigable waters of the U.S." within Rivers and Harbors Act (RHA) jurisdiction (as defined by 33 CFR part 329) in the review area. [Required]

- Waters subject to the ebb and flow of the tide.
 Waters are presently used, or have been used in the past, or may be susceptible for use to transport interstate or foreign commerce.
Explain:

B. CWA SECTION 404 DETERMINATION OF JURISDICTION.

There **Pick List** "waters of the U.S." within Clean Water Act (CWA) jurisdiction (as defined by 33 CFR part 328) in the review area. [Required]

1. Waters of the U.S.

a. Indicate presence of waters of U.S. in review area (check all that apply):¹

- TNWs, including territorial seas
 Wetlands adjacent to TNWs
 Relatively permanent waters² (RPWs) that flow directly or indirectly into TNWs
 Non-RPWs that flow directly or indirectly into TNWs
 Wetlands directly abutting RPWs that flow directly or indirectly into TNWs
 Wetlands adjacent to but not directly abutting RPWs that flow directly or indirectly into TNWs
 Wetlands adjacent to non-RPWs that flow directly or indirectly into TNWs
 Impoundments of jurisdictional waters
 Isolated (interstate or intrastate) waters, including isolated wetlands

b. Identify (estimate) size of waters of the U.S. in the review area:

Non-wetland waters: 1100 linear feet: 42 width (ft) and/or acres.
Wetlands: acres.

c. Limits (boundaries) of jurisdiction based on: **Established by OHWM.**

Elevation of established OHWM (if known):

2. Non-regulated waters/wetlands (check if applicable):³

- Potentially jurisdictional waters and/or wetlands were assessed within the review area and determined to be not jurisdictional.
Explain:

¹ Boxes checked below shall be supported by completing the appropriate sections in Section III below.

² For purposes of this form, an RPW is defined as a tributary that is not a TNW and that typically flows year-round or has continuous flow at least "seasonally" (e.g., typically 3 months).

³ Supporting documentation is presented in Section III.F.

SECTION III: CWA ANALYSIS

A. TNWs AND WETLANDS ADJACENT TO TNWs

The agencies will assert jurisdiction over TNWs and wetlands adjacent to TNWs. If the aquatic resource is a TNW, complete Section III.A.1 and Section III.D.1. only; if the aquatic resource is a wetland adjacent to a TNW, complete Sections III.A.1 and 2 and Section III.D.1.; otherwise, see Section III.B below.

1. TNW

Identify TNW: .

Summarize rationale supporting determination: .

2. Wetland adjacent to TNW

Summarize rationale supporting conclusion that wetland is "adjacent": .

B. CHARACTERISTICS OF TRIBUTARY (THAT IS NOT A TNW) AND ITS ADJACENT WETLANDS (IF ANY):

This section summarizes information regarding characteristics of the tributary and its adjacent wetlands, if any, and it helps determine whether or not the standards for jurisdiction established under *Rapanos* have been met.

The agencies will assert jurisdiction over non-navigable tributaries of TNWs where the tributaries are "relatively permanent waters" (RPWs), i.e. tributaries that typically flow year-round or have continuous flow at least seasonally (e.g., typically 3 months). A wetland that directly abuts an RPW is also jurisdictional. If the aquatic resource is not a TNW, but has year-round (perennial) flow, skip to Section III.D.2. If the aquatic resource is a wetland directly abutting a tributary with perennial flow, skip to Section III.D.4.

A wetland that is adjacent to but that does not directly abut an RPW requires a significant nexus evaluation. Corps districts and EPA regions will include in the record any available information that documents the existence of a significant nexus between a relatively permanent tributary that is not perennial (and its adjacent wetlands if any) and a traditional navigable water, even though a significant nexus finding is not required as a matter of law.

If the waterbody⁴ is not an RPW, or a wetland directly abutting an RPW, a JD will require additional data to determine if the waterbody has a significant nexus with a TNW. If the tributary has adjacent wetlands, the significant nexus evaluation must consider the tributary in combination with all of its adjacent wetlands. This significant nexus evaluation that combines, for analytical purposes, the tributary and all of its adjacent wetlands is used whether the review area identified in the JD request is the tributary, or its adjacent wetlands, or both. If the JD covers a tributary with adjacent wetlands, complete Section III.B.1 for the tributary, Section III.B.2 for any onsite wetlands, and Section III.B.3 for all wetlands adjacent to that tributary, both onsite and offsite. The determination whether a significant nexus exists is determined in Section III.C below.

1. Characteristics of non-TNWs that flow directly or indirectly into TNW

(i) General Area Conditions:

Watershed size: **Pick List**

Drainage area: **Pick List**

Average annual rainfall: inches

Average annual snowfall: inches

(ii) Physical Characteristics:

(a) Relationship with TNW:

Tributary flows directly into TNW.

Tributary flows through **Pick List** tributaries before entering TNW.

Project waters are **Pick List** river miles from TNW.

Project waters are **Pick List** river miles from RPW.

Project waters are **Pick List** aerial (straight) miles from TNW.

Project waters are **Pick List** aerial (straight) miles from RPW.

Project waters cross or serve as state boundaries. Explain:

Identify flow route to TNW⁵: .

Tributary stream order, if known: .

⁴ Note that the Instructional Guidebook contains additional information regarding swales, ditches, washes, and erosional features generally and in the arid West.

⁵ Flow route can be described by identifying, e.g., tributary a, which flows through the review area, to flow into tributary b, which then flows into TNW.

(b) General Tributary Characteristics (check all that apply):

Tributary is: Natural
 Artificial (man-made). Explain:
 Manipulated (man-altered). Explain:

Tributary properties with respect to top of bank (estimate):

Average width: feet
Average depth: feet
Average side slopes: **Pick List**.

Primary tributary substrate composition (check all that apply):

Silts Sands Concrete
 Cobbles Gravel Muck
 Bedrock Vegetation. Type/% cover:
 Other. Explain:

Tributary condition/stability [e.g., highly eroding, sloughing banks]. Explain:

Presence of run/riffle/pool complexes. Explain:

Tributary geometry: **Pick List**

Tributary gradient (approximate average slope): %

(c) Flow:

Tributary provides for: **Pick List**

Estimate average number of flow events in review area/year: **Pick List**

Describe flow regime:

Other information on duration and volume:

Surface flow is: **Pick List**. Characteristics:

Subsurface flow: **Pick List**. Explain findings:

Dye (or other) test performed:

Tributary has (check all that apply):

Bed and banks
 OHWM⁶ (check all indicators that apply):
 clear, natural line impressed on the bank the presence of litter and debris
 changes in the character of soil destruction of terrestrial vegetation
 shelving the presence of wrack line
 vegetation matted down, bent, or absent sediment sorting
 leaf litter disturbed or washed away scour
 sediment deposition multiple observed or predicted flow events
 water staining abrupt change in plant community
 other (list):
 Discontinuous OHWM.⁷ Explain:

If factors other than the OHWM were used to determine lateral extent of CWA jurisdiction (check all that apply):

High Tide Line indicated by: Mean High Water Mark indicated by:
 oil or scum line along shore objects survey to available datum;
 fine shell or debris deposits (foreshore) physical markings;
 physical markings/characteristics vegetation lines/changes in vegetation types.
 tidal gauges
 other (list):

(iii) **Chemical Characteristics:**

Characterize tributary (e.g., water color is clear, discolored, oily film; water quality; general watershed characteristics, etc.).

Explain:

Identify specific pollutants, if known:

⁶A natural or man-made discontinuity in the OHWM does not necessarily sever jurisdiction (e.g., where the stream temporarily flows underground, or where the OHWM has been removed by development or agricultural practices). Where there is a break in the OHWM that is unrelated to the waterbody's flow regime (e.g., flow over a rock outcrop or through a culvert), the agencies will look for indicators of flow above and below the break.

⁷Ibid.

(iv) **Biological Characteristics. Channel supports (check all that apply):**

- Riparian corridor. Characteristics (type, average width):
- Wetland fringe. Characteristics:
- Habitat for:
 - Federally Listed species. Explain findings:
 - Fish/spawn areas. Explain findings:
 - Other environmentally-sensitive species. Explain findings:
 - Aquatic/wildlife diversity. Explain findings:

2. **Characteristics of wetlands adjacent to non-TNW that flow directly or indirectly into TNW**

(i) **Physical Characteristics:**

(a) General Wetland Characteristics:

Properties:

Wetland size: acres

Wetland type. Explain:

Wetland quality. Explain:

Project wetlands cross or serve as state boundaries. Explain:

(b) General Flow Relationship with Non-TNW:

Flow is: **Pick List**. Explain:

Surface flow is: **Pick List**

Characteristics:

Subsurface flow: **Pick List**. Explain findings:

Dye (or other) test performed:

(c) Wetland Adjacency Determination with Non-TNW:

Directly abutting

Not directly abutting

Discrete wetland hydrologic connection. Explain:

Ecological connection. Explain:

Separated by berm/barrier. Explain:

(d) Proximity (Relationship) to TNW

Project wetlands are **Pick List** river miles from TNW.

Project waters are **Pick List** aerial (straight) miles from TNW.

Flow is from: **Pick List**.

Estimate approximate location of wetland as within the **Pick List** floodplain.

(ii) **Chemical Characteristics:**

Characterize wetland system (e.g., water color is clear, brown, oil film on surface; water quality; general watershed characteristics; etc.). Explain:

Identify specific pollutants, if known:

(iii) **Biological Characteristics. Wetland supports (check all that apply):**

- Riparian buffer. Characteristics (type, average width):
- Vegetation type/percent cover. Explain:
- Habitat for:
 - Federally Listed species. Explain findings:
 - Fish/spawn areas. Explain findings:
 - Other environmentally-sensitive species. Explain findings:
 - Aquatic/wildlife diversity. Explain findings:

3. **Characteristics of all wetlands adjacent to the tributary (if any)**

All wetland(s) being considered in the cumulative analysis: **Pick List**

Approximately () acres in total are being considered in the cumulative analysis.

For each wetland, specify the following:

Directly abuts? (Y/N)

Size (in acres)

Directly abuts? (Y/N)

Size (in acres)

Summarize overall biological, chemical and physical functions being performed:

C. SIGNIFICANT NEXUS DETERMINATION

A significant nexus analysis will assess the flow characteristics and functions of the tributary itself and the functions performed by any wetlands adjacent to the tributary to determine if they significantly affect the chemical, physical, and biological integrity of a TNW. For each of the following situations, a significant nexus exists if the tributary, in combination with all of its adjacent wetlands, has more than a speculative or insubstantial effect on the chemical, physical and/or biological integrity of a TNW. Considerations when evaluating significant nexus include, but are not limited to the volume, duration, and frequency of the flow of water in the tributary and its proximity to a TNW, and the functions performed by the tributary and all its adjacent wetlands. It is not appropriate to determine significant nexus based solely on any specific threshold of distance (e.g. between a tributary and its adjacent wetland or between a tributary and the TNW). Similarly, the fact an adjacent wetland lies within or outside of a floodplain is not solely determinative of significant nexus.

Draw connections between the features documented and the effects on the TNW, as identified in the *Rapanos* Guidance and discussed in the Instructional Guidebook. Factors to consider include, for example:

- Does the tributary, in combination with its adjacent wetlands (if any), have the capacity to carry pollutants or flood waters to TNWs, or to reduce the amount of pollutants or flood waters reaching a TNW?
- Does the tributary, in combination with its adjacent wetlands (if any), provide habitat and lifecycle support functions for fish and other species, such as feeding, nesting, spawning, or rearing young for species that are present in the TNW?
- Does the tributary, in combination with its adjacent wetlands (if any), have the capacity to transfer nutrients and organic carbon that support downstream foodwebs?
- Does the tributary, in combination with its adjacent wetlands (if any), have other relationships to the physical, chemical, or biological integrity of the TNW?

Note: the above list of considerations is not inclusive and other functions observed or known to occur should be documented below:

1. **Significant nexus findings for non-RPW that has no adjacent wetlands and flows directly or indirectly into TNWs.** Explain findings of presence or absence of significant nexus below, based on the tributary itself, then go to Section III.D:
2. **Significant nexus findings for non-RPW and its adjacent wetlands, where the non-RPW flows directly or indirectly into TNWs.** Explain findings of presence or absence of significant nexus below, based on the tributary in combination with all of its adjacent wetlands, then go to Section III.D:
3. **Significant nexus findings for wetlands adjacent to an RPW but that do not directly abut the RPW.** Explain findings of presence or absence of significant nexus below, based on the tributary in combination with all of its adjacent wetlands, then go to Section III.D:

D. DETERMINATIONS OF JURISDICTIONAL FINDINGS. THE SUBJECT WATERS/WETLANDS ARE (CHECK ALL THAT APPLY):

1. **TNWs and Adjacent Wetlands.** Check all that apply and provide size estimates in review area:

TNWs: linear feet width (ft), Or, acres.

Wetlands adjacent to TNWs: acres.

2. **RPWs that flow directly or indirectly into TNWs.**

Tributaries of TNWs where tributaries typically flow year-round are jurisdictional. Provide data and rationale indicating that tributary is perennial:

Tributaries of TNW where tributaries have continuous flow "seasonally" (e.g., typically three months each year) are jurisdictional. Data supporting this conclusion is provided at Section III.B. Provide rationale indicating that tributary flows seasonally:

Provide estimates for jurisdictional waters in the review area (check all that apply):

- Tributary waters: **1100** linear feet **42** width (ft).
 Other non-wetland waters: _____ acres.
Identify type(s) of waters: _____

3. Non-RPWs⁸ that flow directly or indirectly into TNWs.

- Waterbody that is not a TNW or an RPW, but flows directly or indirectly into a TNW, and it has a significant nexus with a TNW is jurisdictional. Data supporting this conclusion is provided at Section III.C.

Provide estimates for jurisdictional waters within the review area (check all that apply):

- Tributary waters: _____ linear feet _____ width (ft).
 Other non-wetland waters: _____ acres.
Identify type(s) of waters: _____

4. Wetlands directly abutting an RPW that flow directly or indirectly into TNWs.

- Wetlands directly abut RPW and thus are jurisdictional as adjacent wetlands.
 Wetlands directly abutting an RPW where tributaries typically flow year-round. Provide data and rationale indicating that tributary is perennial in Section III.D.2, above. Provide rationale indicating that wetland is directly abutting an RPW: _____
 Wetlands directly abutting an RPW where tributaries typically flow "seasonally." Provide data indicating that tributary is seasonal in Section III.B and rationale in Section III.D.2, above. Provide rationale indicating that wetland is directly abutting an RPW: _____

Provide acreage estimates for jurisdictional wetlands in the review area: _____ acres.

5. Wetlands adjacent to but not directly abutting an RPW that flow directly or indirectly into TNWs.

- Wetlands that do not directly abut an RPW, but when considered in combination with the tributary to which they are adjacent and with similarly situated adjacent wetlands, have a significant nexus with a TNW are jurisdictional. Data supporting this conclusion is provided at Section III.C.

Provide acreage estimates for jurisdictional wetlands in the review area: _____ acres.

6. Wetlands adjacent to non-RPWs that flow directly or indirectly into TNWs.

- Wetlands adjacent to such waters, and have when considered in combination with the tributary to which they are adjacent and with similarly situated adjacent wetlands, have a significant nexus with a TNW are jurisdictional. Data supporting this conclusion is provided at Section III.C.

Provide estimates for jurisdictional wetlands in the review area: _____ acres.

7. Impoundments of jurisdictional waters.⁹

As a general rule, the impoundment of a jurisdictional tributary remains jurisdictional.

- Demonstrate that impoundment was created from "waters of the U.S.," or
 Demonstrate that water meets the criteria for one of the categories presented above (1-6), or
 Demonstrate that water is isolated with a nexus to commerce (see E below).

E. ISOLATED [INTERSTATE OR INTRA-STATE] WATERS, INCLUDING ISOLATED WETLANDS, THE USE, DEGRADATION OR DESTRUCTION OF WHICH COULD AFFECT INTERSTATE COMMERCE, INCLUDING ANY SUCH WATERS (CHECK ALL THAT APPLY):¹⁰

- which are or could be used by interstate or foreign travelers for recreational or other purposes.
 from which fish or shellfish are or could be taken and sold in interstate or foreign commerce.
 which are or could be used for industrial purposes by industries in interstate commerce.
 Interstate isolated waters. Explain: _____
 Other factors. Explain: _____

Identify water body and summarize rationale supporting determination: _____

⁸See Footnote # 3.

⁹To complete the analysis refer to the key in Section III.D.6 of the Instructional Guidebook.

¹⁰ Prior to asserting or declining CWA jurisdiction based solely on this category, Corps Districts will elevate the action to Corps and EPA HQ for review consistent with the process described in the Corps/EPA Memorandum Regarding CWA Act Jurisdiction Following Rapanos.

Provide estimates for jurisdictional waters in the review area (check all that apply):

- Tributary waters: linear feet width (ft).
- Other non-wetland waters: acres.
Identify type(s) of waters: .
- Wetlands: acres.

F. NON-JURISDICTIONAL WATERS, INCLUDING WETLANDS (CHECK ALL THAT APPLY):

- If potential wetlands were assessed within the review area, these areas did not meet the criteria in the 1987 Corps of Engineers Wetland Delineation Manual and/or appropriate Regional Supplements.
- Review area included isolated waters with no substantial nexus to interstate (or foreign) commerce.
 - Prior to the Jan 2001 Supreme Court decision in "SWANCC," the review area would have been regulated based solely on the "Migratory Bird Rule" (MBR).
- Waters do not meet the "Significant Nexus" standard, where such a finding is required for jurisdiction. Explain: .
- Other: (explain, if not covered above): .

Provide acreage estimates for non-jurisdictional waters in the review area, where the sole potential basis of jurisdiction is the MBR factors (i.e., presence of migratory birds, presence of endangered species, use of water for irrigated agriculture), using best professional judgment (check all that apply):

- Non-wetland waters (i.e., rivers, streams): linear feet width (ft).
- Lakes/ponds: acres.
- Other non-wetland waters: acres. List type of aquatic resource: .
- Wetlands: acres.

Provide acreage estimates for non-jurisdictional waters in the review area that do not meet the "Significant Nexus" standard, where such a finding is required for jurisdiction (check all that apply):

- Non-wetland waters (i.e., rivers, streams): linear feet, width (ft).
- Lakes/ponds: acres.
- Other non-wetland waters: acres. List type of aquatic resource: .
- Wetlands: acres.

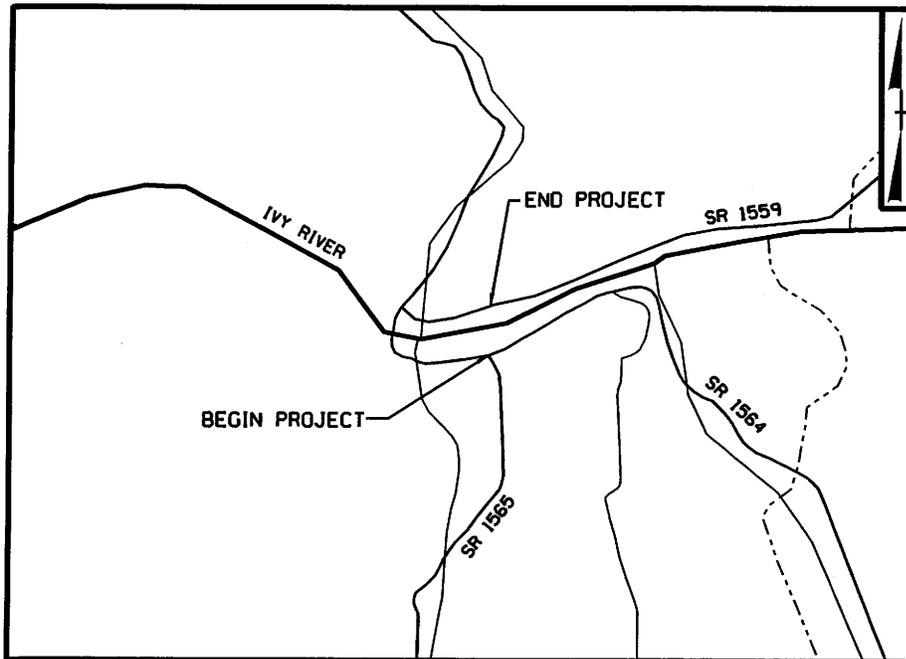
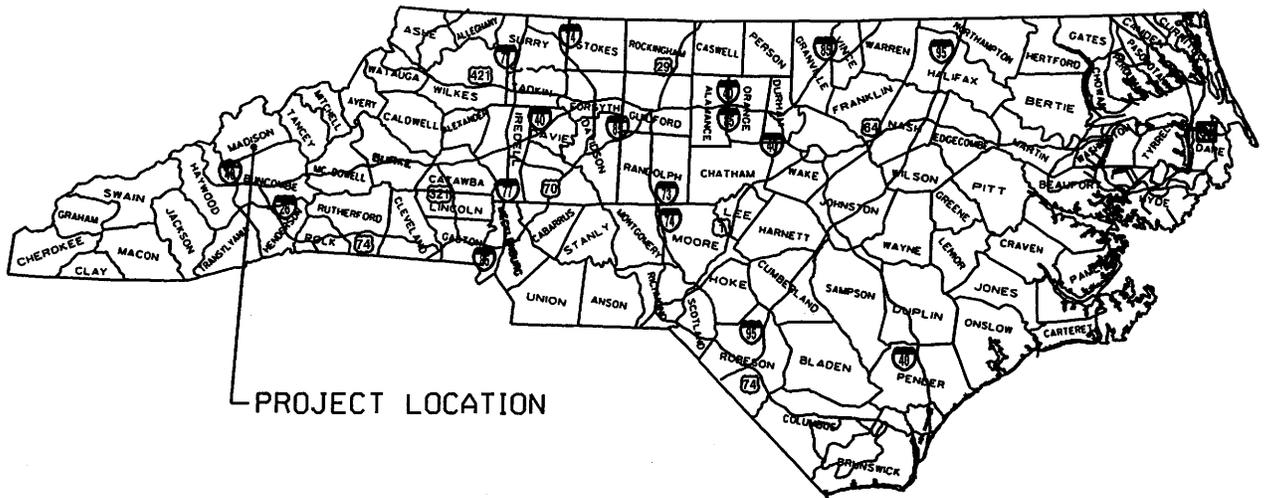
SECTION IV: DATA SOURCES.

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

- Maps, plans, plots or plat submitted by or on behalf of the applicant/consultant: .
- Data sheets prepared/submitted by or on behalf of the applicant/consultant.
 - Office concurs with data sheets/delineation report.
 - Office does not concur with data sheets/delineation report.
- Data sheets prepared by the Corps: .
- Corps navigable waters' study: .
- U.S. Geological Survey Hydrologic Atlas: .
 - USGS NHD data.
 - USGS 8 and 12 digit HUC maps.
- U.S. Geological Survey map(s). Cite scale & quad name: .
- USDA Natural Resources Conservation Service Soil Survey. Citation: .
- National wetlands inventory map(s). Cite name: .
- State/Local wetland inventory map(s): .
- FEMA/FIRM maps: .
- 100-year Floodplain Elevation is: (National Geodetic Vertical Datum of 1929)
- Photographs: Aerial (Name & Date): .
or Other (Name & Date): .
- Previous determination(s). File no. and date of response letter: .
- Applicable/supporting case law: .
- Applicable/supporting scientific literature: .
- Other information (please specify): .

B. ADDITIONAL COMMENTS TO SUPPORT JD: .

MADISON COUNTY, N.C.



VICINITY MAP

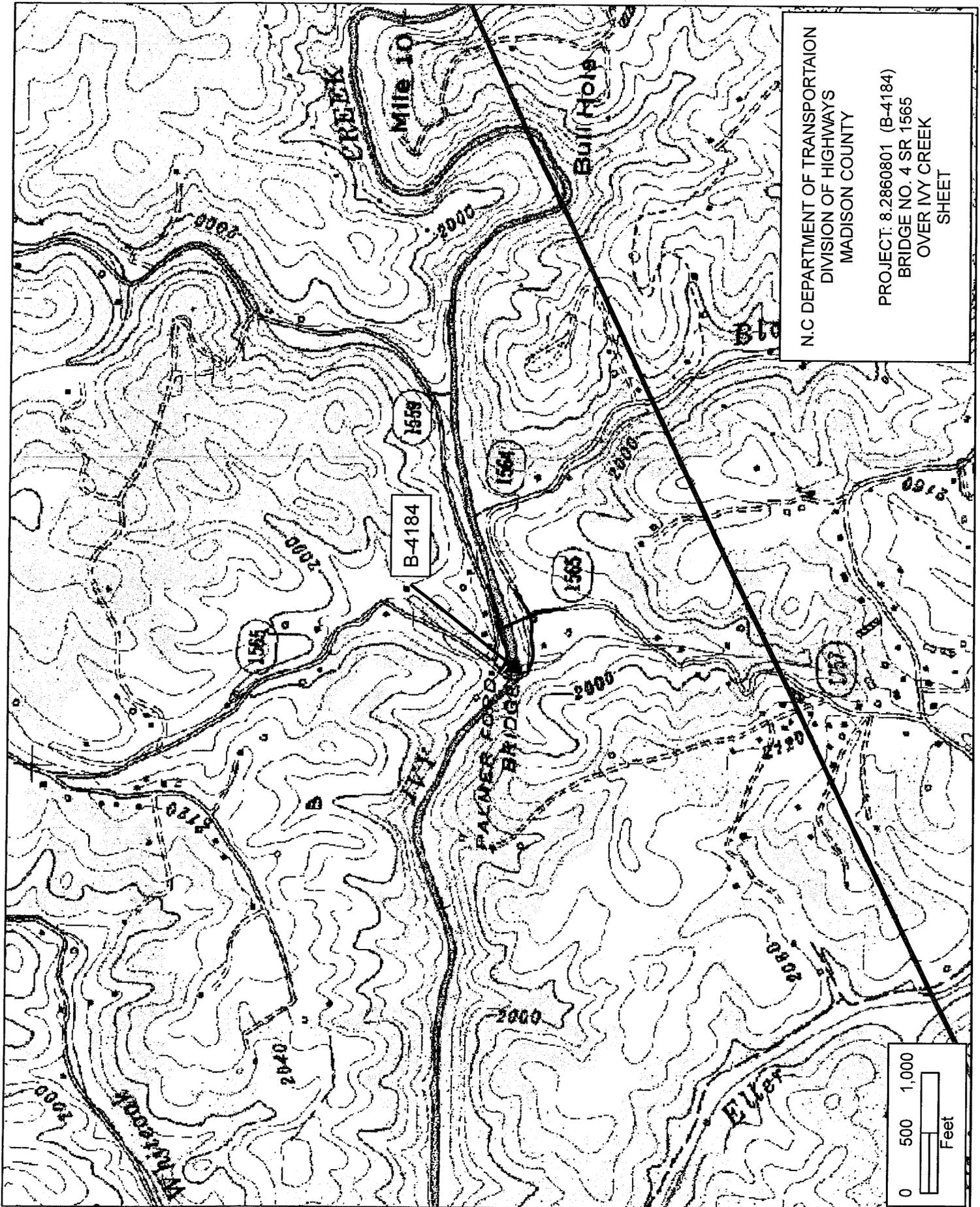
N. C. DEPT. OF TRANSPORTATION

DIVISION OF HIGHWAYS

MADISON COUNTY

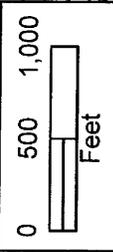
**PROJECT: 8.2860801 (B-4184)
BRIDGE NO. 4 ON SR 1565
OVER IVY RIVER**

SHEET OF June 25, 2008



N.C. DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
MADISON COUNTY

PROJECT: 8.2860801 (B-4184)
BRIDGE NO. 4 SR 1565
OVER IVY CREEK
SHEET



PROPERTY OWNER
NAME AND ADDRESS

PARCEL NO.	OWNER'S NAME & ADDRESS
①	William Osborne 171 Montford Ave. Asheville, NC 28801
②	Jimmie Ledford 350 Palmer Ford Rd. Weaverville, NC 28787
③	Ruby Buckner P.O. Box 1492 Mars Hill, NC 28754
④	Andrew Grindstaff 3660 Lower Gabriels Creek Rd. Mars Hill, NC 28754
⑤	Gene Ball 3349 Gabriels Creek Rd. Mars Hill, NC 28754

N. C. DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS
MADISON COUNTY
PROPERTY OWNERS
PROJECT: 8.2860801 (B-4184)
BRIDGE NO. 4 ON SR 1565
OVER IVY RIVER

SHEET OF June 25, 2008

See Sheet 1-A For Index of Sheets

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

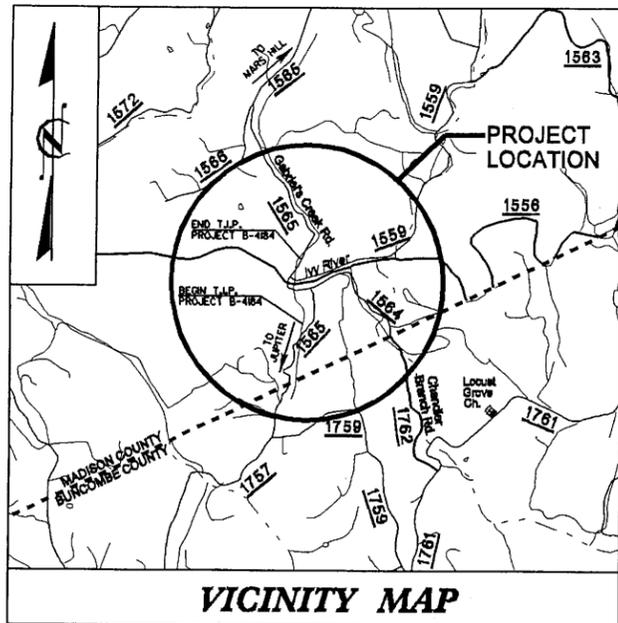
MADISON COUNTY

LOCATION: BRIDGE NO. 4 OVER IVY RIVER ON SR 1565

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

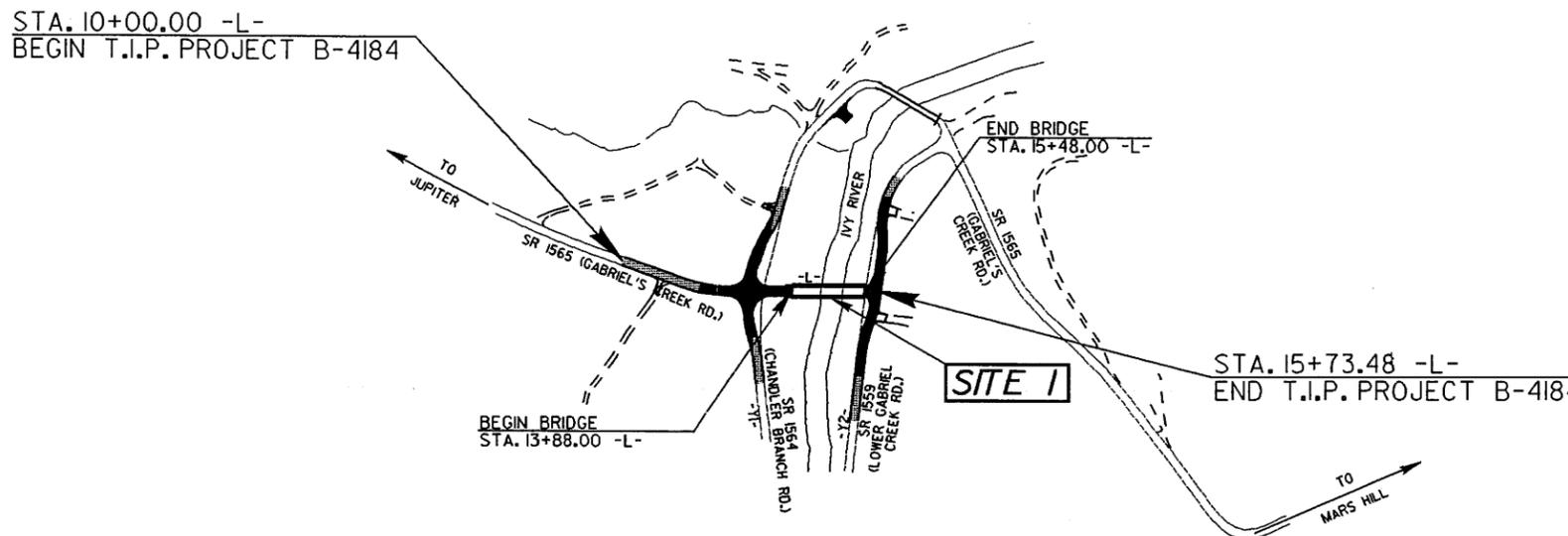
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33531.2.1	BRZ-1565(5)	RW & UTILITIES	
33531.2.1	BRZ-1565(5)	CONSTRUCTION	

90% PLANS



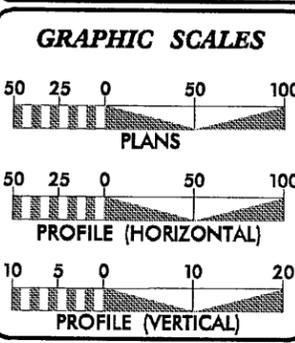
VICINITY MAP

NAD 83 / 95



TIP PROJECT: B-4184

CONTRACT: C202034



DESIGN DATA

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ADT 2030 =	880
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D =	60 %
T =	3 % *
V =	30 MPH
* TTST 2%	DUAL 1%
FUNC CLASS =	RURAL LOCAL

PROJECT LENGTH

LENGTH ROADWAY T.I.P. PROJECT B-4184	=	0.079 MILES
LENGTH STRUCTURES T.I.P. PROJECT B-4184	=	0.030 MILES
TOTAL LENGTH T.I.P. PROJECT B-4184	=	0.109 MILES

* DESIGN EXCEPTION REQUIRED FOR DESIGN SPEED

Prepared in the Office of:

PBSJ 5200 77 CENTER DRIVE, SUITE 500
CHARLOTTE, NORTH CAROLINA 28217
(704) 522-7275

2006 STANDARD SPECIFICATIONS

RIGHT OF WAY DATE:
DECEMBER 21, 2007

LETTING DATE:
DECEMBER 16, 2008

STEVE DRUM, P.E. PROJECT ENGINEER
VIRGINIA SCHAAR, P.E. PROJECT DESIGN ENGINEER
CATHY S. HOUSER, P.E. NCDOT CONTACT

HYDRAULICS ENGINEER

SIGNATURE: _____ P.E.

ROADWAY DESIGN ENGINEER

SIGNATURE: _____ P.E.

**DIVISION OF HIGHWAYS
STATE OF NORTH CAROLINA**

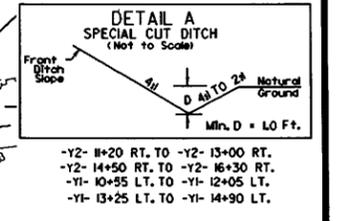
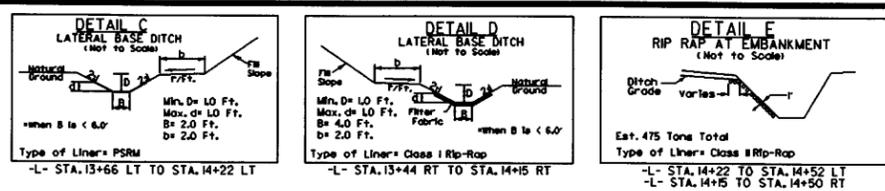
STATE HIGHWAY DESIGN ENGINEER

P.E.

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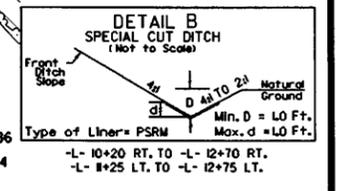
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PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION			
PBSJ 5200 77 CENTER DRIVE, SUITE 500 CHARLOTTE, NORTH CAROLINA 28217 (704) 322-7275			



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Curtis Rice
DB 148 PG 620

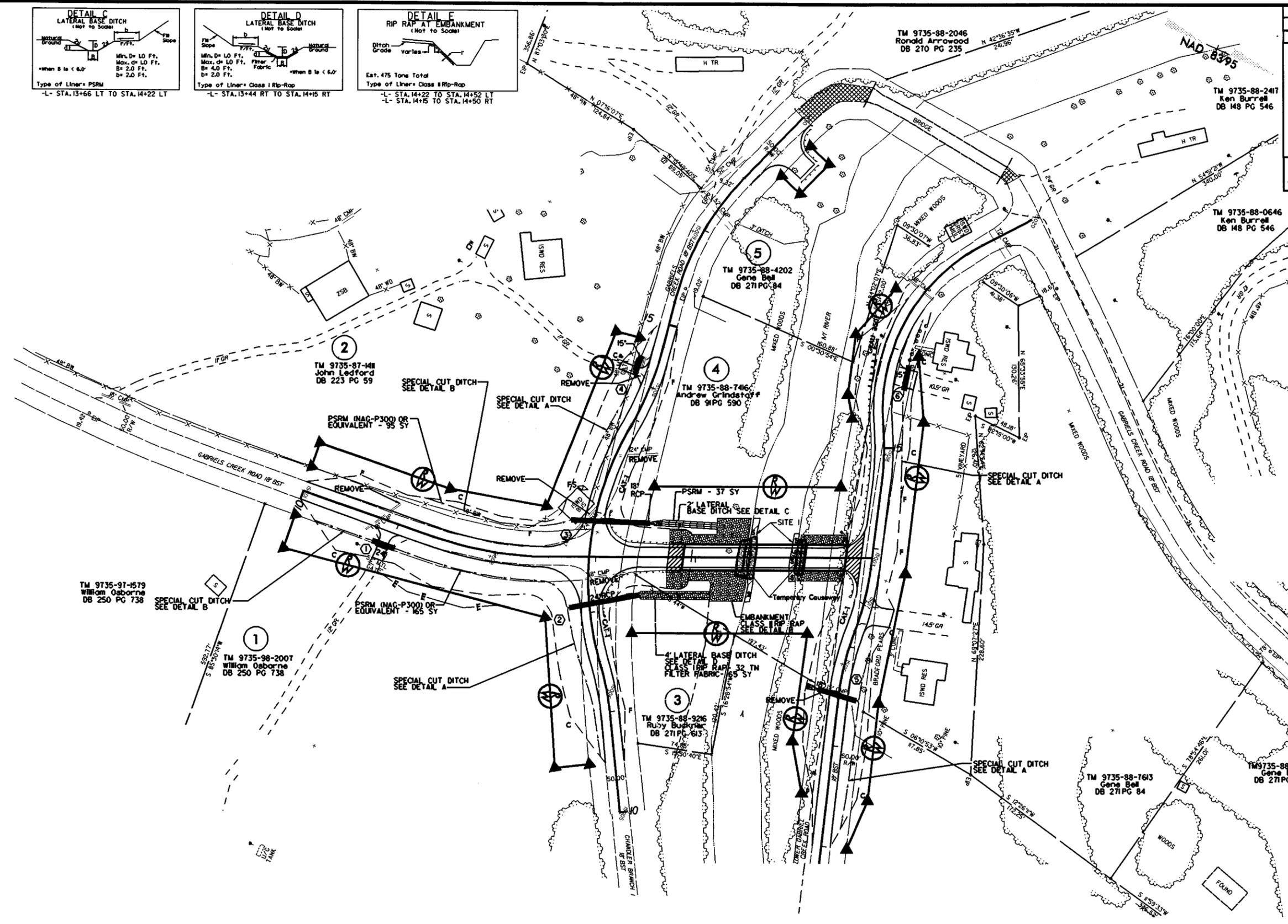
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DENOTES IMPACTS IN SURFACE WATER

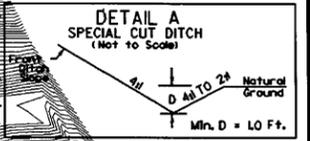
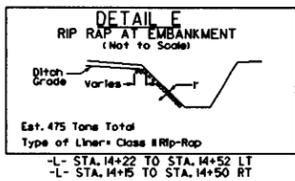
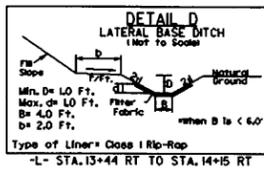
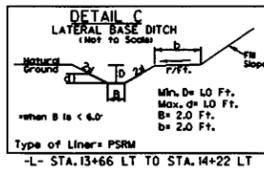
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PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

PBSJ 3200 77 CENTER DRIVE, SUITE 500
CHARLOTTE, NORTH CAROLINA 28217
(704) 322-7275

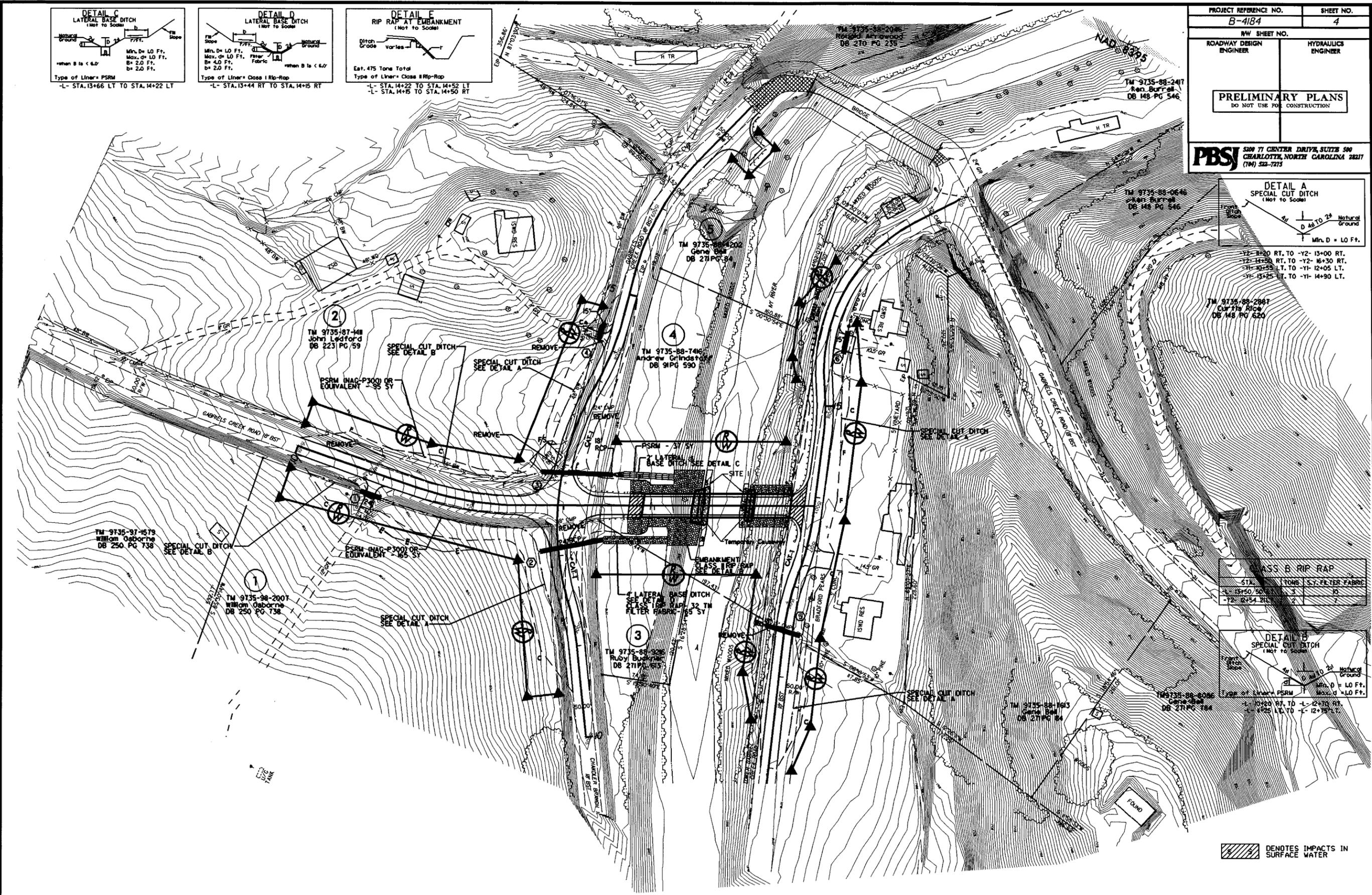


CLASS B RIP RAP

STA.	TONE	S.F. FILTER FABRIC
-L- 13+50	3	10
-Y2- 12+54	2	7



DENOTES IMPACTS IN SURFACE WATER



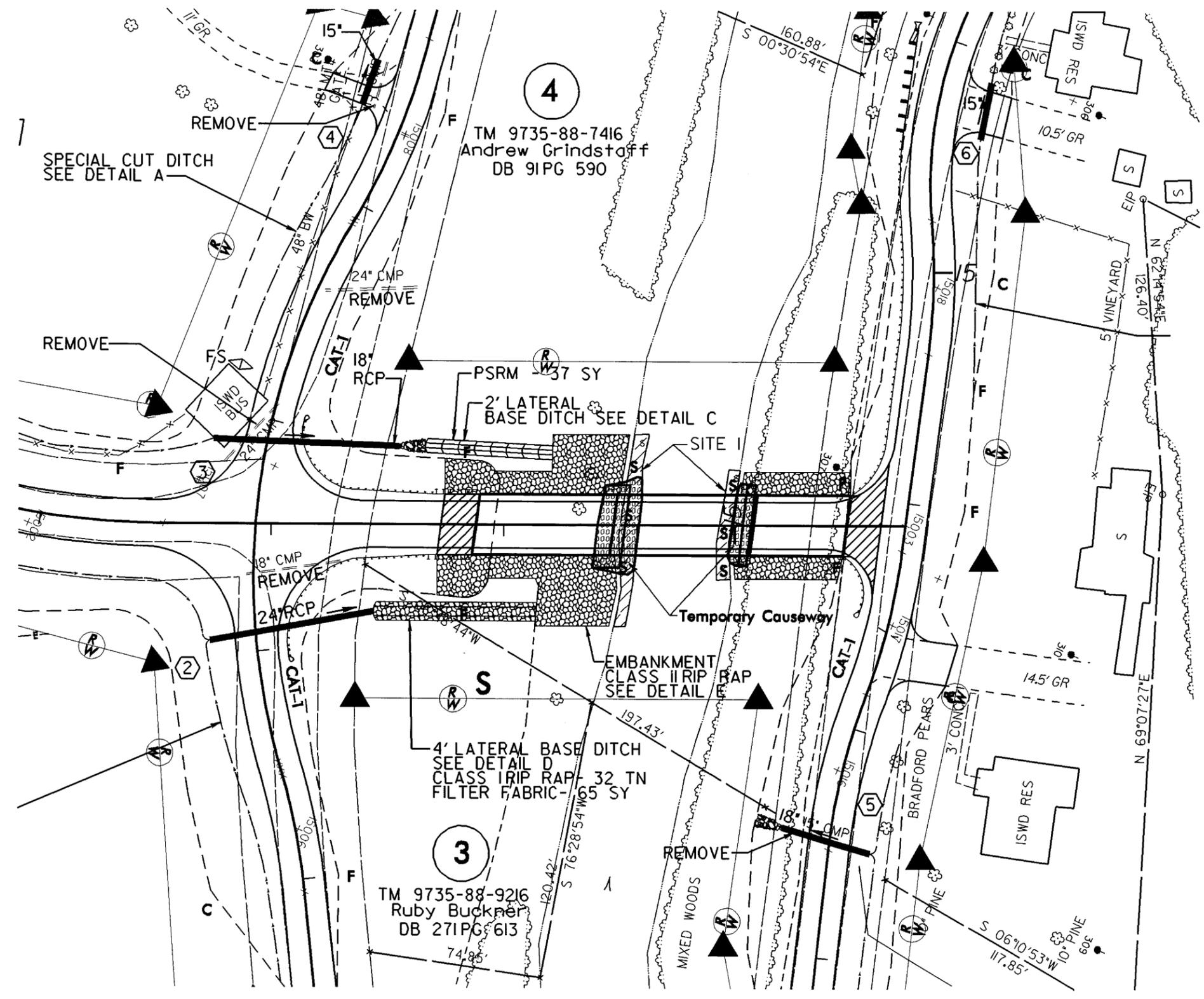
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8/17/99

PROJECT REFERENCE NO. B-4184	SHEET NO. 4
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	
PBSJ 3200 77 CENTER DRIVE, SUITE 500 CHARLOTTE, NORTH CAROLINA 28217 (704) 522-7275	

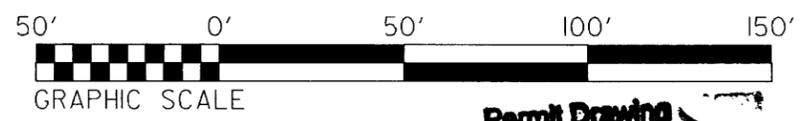
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REVISIONS

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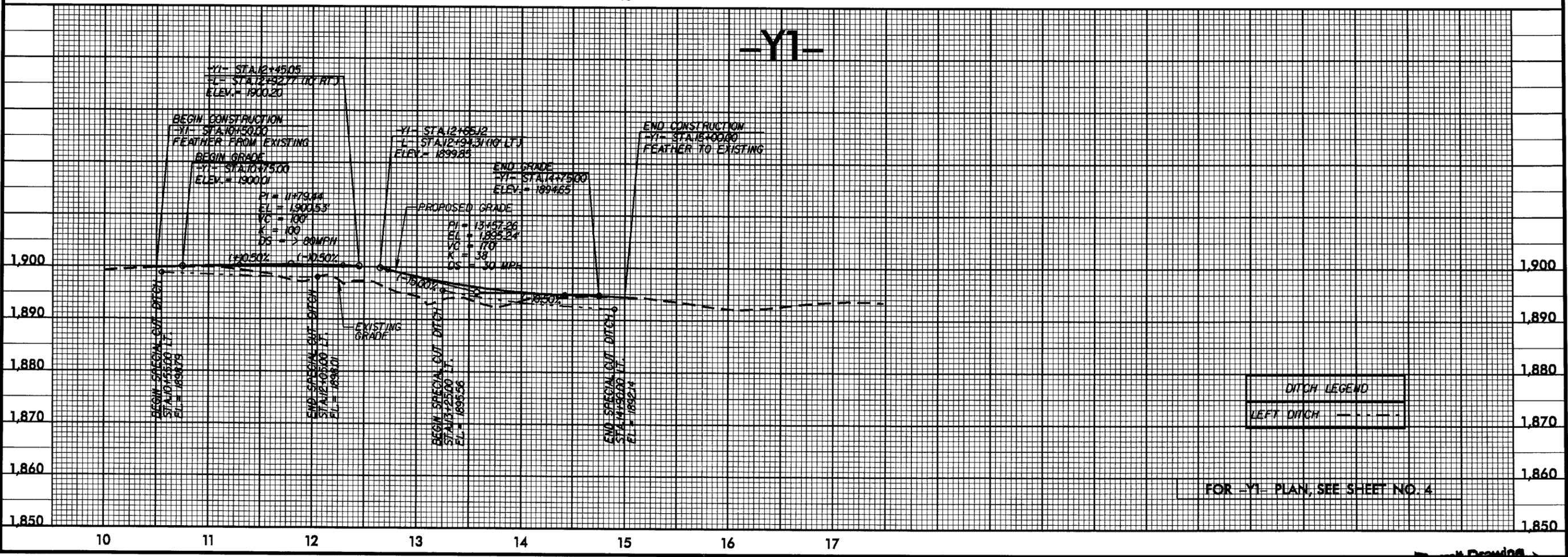
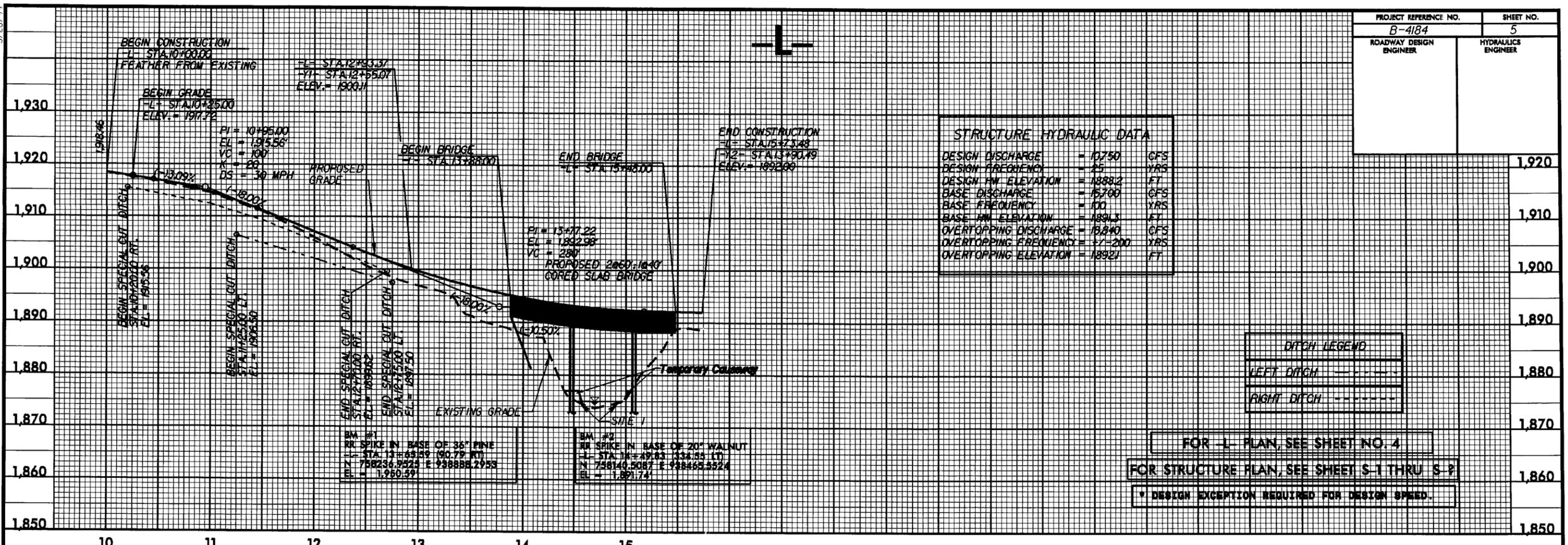
 DENOTES IMPACTS IN SURFACE WATER



Permit Drawing
 Sheet 4 of 7

5/28/99

PROJECT REFERENCE NO. B-4184	SHEET NO. 5
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER



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Permit Drawing

05/08/99

See Sheet 1-A For Index of Sheets

STATE OF NORTH CAROLINA DIVISION OF HIGHWAYS

MADISON COUNTY

LOCATION: BRIDGE NO. 4 OVER IVY RIVER ON SR 1565

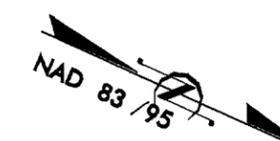
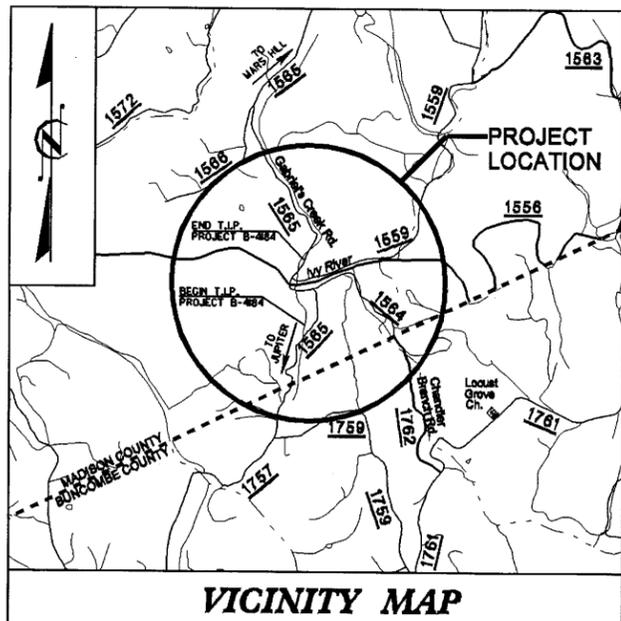
TYPE OF WORK: GRADING, PAVING, DRAINAGE, AND STRUCTURE

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
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W.B.A. NO.	P.A. PROJ. NO.	DESCRIPTION	
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33531.2.1	BRZ-1565(5)	R/W & UTILITIES	
33531.2.1	BRZ-1565(5)	CONSTRUCTION	

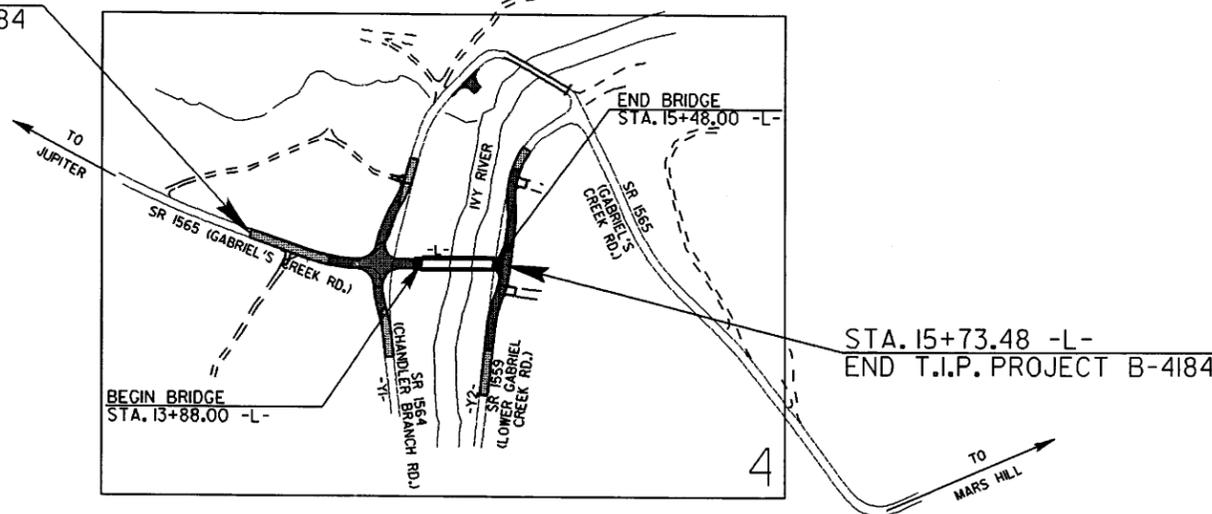
90% PLANS

TIP PROJECT: B-4184

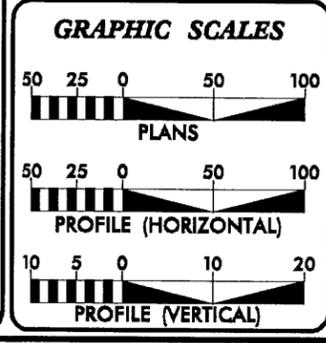
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BEGIN T.I.P. PROJECT B-4184



Roadway



DESIGN DATA	
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ADT 2030 =	880
DHV =	12 %
D =	60 %
T =	3 % *
V =	30 MPH
* TTST 2% DUAL 1%	
FUNC CLASS =	RURAL LOCAL

PROJECT LENGTH	
LENGTH ROADWAY T.I.P. PROJECT B-4184	= 0.079 MILES
LENGTH STRUCTURES T.I.P. PROJECT B-4184	= 0.030 MILES
TOTAL LENGTH T.I.P. PROJECT B-4184	= 0.109 MILES

* DESIGN EXCEPTION REQUIRED FOR DESIGN SPEED

Prepared in the Office of:
PBSJ 5200 77 CENTER DRIVE, SUITE 500
 CHARLOTTE, NORTH CAROLINA 28217
 (704) 522-7275

2006 STANDARD SPECIFICATIONS

RIGHT OF WAY DATE:
DECEMBER 21, 2007

LETTING DATE:
DECEMBER 16, 2008

STEVE DRUM, P.E.
PROJECT ENGINEER

VIRGINIA SCHAAR, P.E.
PROJECT DESIGN ENGINEER

CATHY S. HOUSER, P.E.
NCDOT CONTACT

HYDRAULICS ENGINEER

SIGNATURE: _____ P.E.

ROADWAY DESIGN ENGINEER

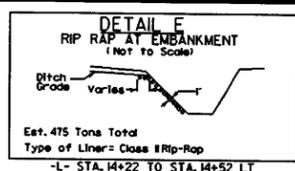
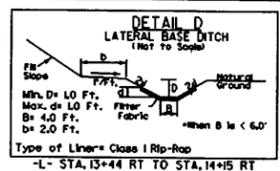
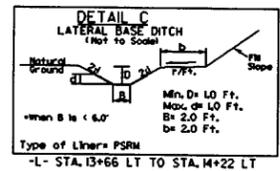
SIGNATURE: _____ P.E.

DIVISION OF HIGHWAYS
STATE OF NORTH CAROLINA

STATE HIGHWAY DESIGN ENGINEER P.E.

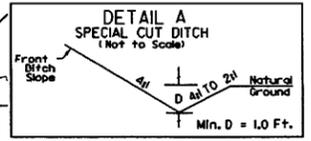
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PROJECT REFERENCE NO. B-4184		SHEET NO. 4	
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER	
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION			
5300 77 CENTER DRIVE, SUITE 300 CHARLOTTE, NORTH CAROLINA 28217 (704) 522-7275			

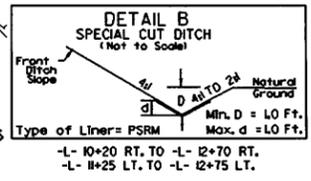
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PI Sta 14+35.24 Δ = 16° 32' 11.7" (LT) D = 19° 25' 20.3" L = 85.14' T = 42.87' R = 295.00' SE = MATCH EXIST. DS = 30 mph	PI Sta 15+95.13 Δ = 29° 37' 35.6" (RT) D = 20° 50' 05.4" L = 142.20' T = 72.73' R = 275.00' SE = MATCH EXIST. DS = 30 mph



-Y2-	
PI Sta 14+93.49 Δ = 12° 03' 57.6" (LT) D = 20° 59' 14.9" L = 57.49' T = 28.85' R = 273.00' SE = 0.04 DS = 30 mph	PI Sta 16+43.96 Δ = 67° 01' 01.4" (RT) D = 31° 08' 20.4" L = 215.22' T = 121.83' R = 184.00' SE = 0.04 DS = 30 mph

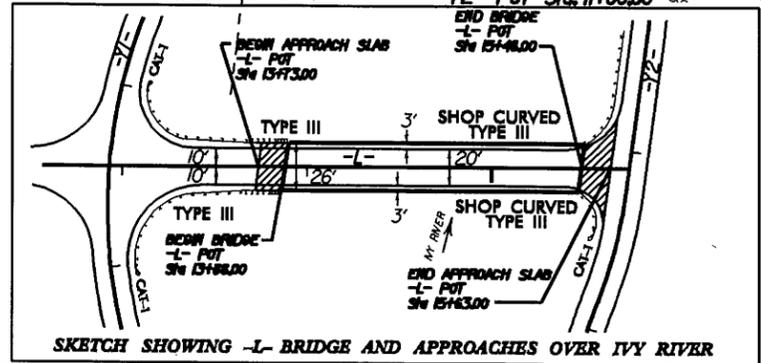
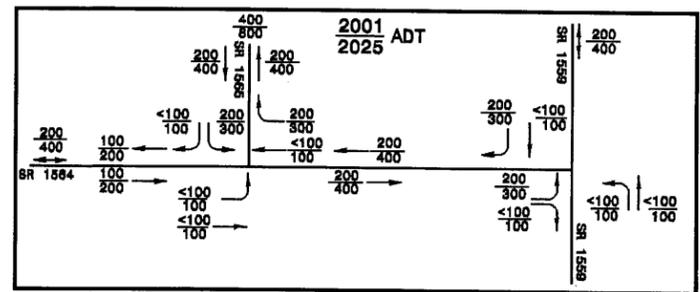
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CLASS B RIP RAP		
STA.	TONS	S.Y. FILTER FABRIC
-L- 13+50 TO 50 LT.	3	10
-Y2- 12+54 21LT.	2	7



-L-	
PI Sta 11+95.79 Δ = 19° 05' 59.8" (LT) D = 16° 22' 12.8" L = 116.67' T = 58.88' R = 350.00' SE = 0.04 DS = 30 mph	

-Y1-	
PI Sta 11+21.50 Δ = 10° 29' 02.2" (LT) D = 19° 25' 20.3" L = 53.98' T = 27.06' R = 295.00' SE = 0.04 DS = 30 mph	PI Sta 12+77.85 Δ = 47° 22' 56.7" (RT) D = 19° 25' 20.3" L = 243.96' T = 129.44' R = 295.00' SE = 0.05 DS = 30 mph



PAVEMENT REMOVAL

BRIDGE APPROACH SLAB

* DESIGN EXCEPTION REQUIRED FOR DESIGN SPEED

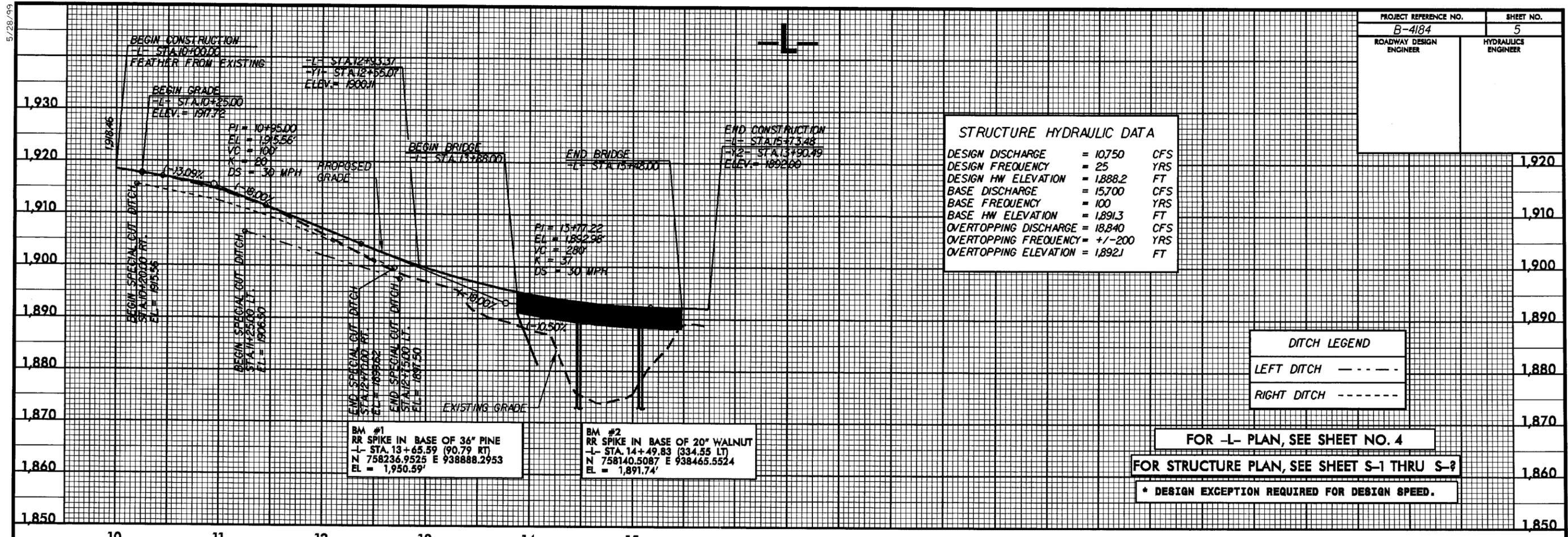
FOR -L- & -Y1- PROFILE, SEE SHEET NO. 5

FOR -Y2- PROFILE, SEE SHEET NO. 6

FOR STRUCTURE PLANS, SEE SHEET S-1 THRU S-7

REVISIONS

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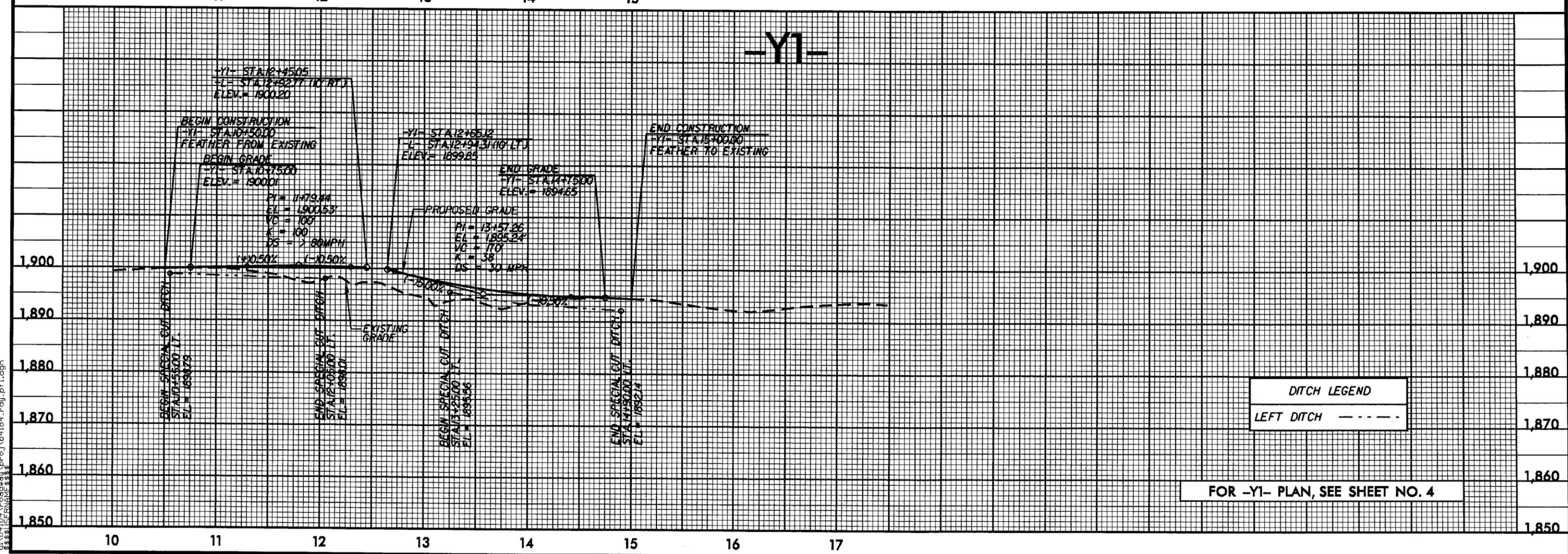
DESIGN DISCHARGE	= 10,750	CFS
DESIGN FREQUENCY	= 25	YRS
DESIGN HW ELEVATION	= 1,888.2	FT
BASE DISCHARGE	= 15,700	CFS
BASE FREQUENCY	= 100	YRS
BASE HW ELEVATION	= 1,891.3	FT
OVERTOPPING DISCHARGE	= 18,840	CFS
OVERTOPPING FREQUENCY	= +/- 200	YRS
OVERTOPPING ELEVATION	= 1,892.1	FT

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

FOR -L- PLAN, SEE SHEET NO. 4

FOR STRUCTURE PLAN, SEE SHEET S-1 THRU S-4

* DESIGN EXCEPTION REQUIRED FOR DESIGN SPEED.



LEFT DITCH	-----
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FOR -YI- PLAN, SEE SHEET NO. 4

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Madison County
Bridge No. 4 on SR 1565 (Gabriel's Creek Road) over Ivy River
Federal-Aid Project No. BRZ-1565(5)
State Project No. 8.2860801
WBS No. 33531.1.1
TIP Project No. B-4184

ADDENDUM TO CATEGORICAL EXCLUSION

UNITED STATES DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
AND
NORTH CAROLINA DEPARTMENT OF
TRANSPORTATION
DIVISION OF HIGHWAYS

APPROVED:

8/13/07
DATE

Gregory Thorpe
Gregory Thorpe, Ph. D., Environmental Management Director
Project Development and Environmental Analysis Branch, NCDOT

8/14/07
DATE

John F. Sullivan, III
John F. Sullivan, III, PE
Division Administrator, FHWA

Madison County
Bridge No. 4 on SR 1565 (Gabriel's Creek Road) over Ivy River
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ADDENDUM TO CATEGORICAL EXCLUSION

AUGUST 2007

Documentation Prepared by:

PBS&J



Jill Gurak Date: 8/12/07
Jill S. Gurak, P.E., A.I.C.P.
Project Manager - NEPA



Steve A. Drum Date: 8/6/07
Steve A. Drum, P.E.
Project Manager – Roadway Design

For the North Carolina Department of Transportation

Ahmad Al-Sharawneh 8/13/07
Ahmad Al-Sharawneh
Project Engineer
Consultant Engineering Unit – Western Region

PROJECT COMMITMENTS

Madison County
Bridge No. 4 on SR 1565 (Gabriel's Creek Road) over Ivy River
Federal-Aid Project No. BRZ-1565(5)
State Project No. 8.2860801
WBS No. 33531.1.1
TIP Project No. B-4184

In addition to the Nationwide Permit No. 3, No. 14, and No. 23 Conditions, the General Nationwide Permit Conditions, Section 404 Only Conditions, Regional Conditions, State Consistency Conditions, Best Management Practices for the Protection of Surface Waters, NCDOT's Guidelines for Best Management Practices for Bridge Demolition and Removal, General Certification Conditions, and Section 401 Conditions of Certification, the following special commitments have been agreed to by NCDOT:

Project Development and Environmental Analysis Branch:

A copy of the environmental planning document will be submitted to the Tennessee Valley Authority (TVA) and United States Army Corps of Engineers (COE).

Highway Design:

An Anodized 1-Bar Railing will be used as the bridge rail type for this project.

Madison County
Bridge No. 4 on SR 1565 (Gabriel's Creek Road) over Ivy River
Federal-Aid Project No. BRZ-1565(5)
State Project No. 8.2860801
WBS No. 33531.1.1
TIP Project No. B-4184

INTRODUCTION: A Categorical Exclusion (CE) for the replacement of Bridge No. 4 was signed on November 8, 2005. Since the approval of the B-4184 CE in November 2005, it was discovered that the Preferred Alternative would impact an unnamed tributary to the Ivy River, located along the eastern side of Gabriel's Creek Road north of the Ivy River. The selection of the Preferred Alternative was reevaluated and a new Preferred Alternative was selected. This Addendum describes the new Preferred Alternative, associated public input, and supporting information.



Bridge No. 4 over Ivy River

I. PREFERRED ALTERNATIVE

The November 2005 Categorical Exclusion evaluated two build alternatives: Alternative 3 (Realignment Upstream, T-intersection) and Alternative 5 (Realignment Upstream). Alternative 5, realigning Gabriel's Creek Road and Lower Gabriel's Creek Road and constructing a new bridge upstream of the existing structure, was identified as the Preferred Alternative. Alternative 5 was selected as the Preferred Alternative because it would provide route continuity for Gabriel's Creek Road (SR 1565). After approval of the CE in November 2005, it was determined that Alternative 5 would impact approximately 445 linear feet of an unnamed tributary to the Ivy River, located parallel to Gabriel's Creek Road along the eastern side of the roadway.

The Alternative 5 design was updated to minimize impacts to the stream by shifting the proposed roadway to the west, away from the stream. The updated design will impact approximately 105 linear feet of the stream, but requires a large cut slope and the relocation of a residential driveway. The updated design for Alternative 5 requires a 72-inch pipe to convey the stream under the road, which is an increase from the 24-inch pipe shown in the preliminary design. This pipe size increase resulted in an increased grade on Gabriel's Creek Road, which reduced the design speed from 25 miles per hour (mph) to 15 mph. Due to these proposed impacts, NCDOT and FHWA selected Alternative 3 as the new

Preferred Alternative for TIP Project B-4184. The Division 13 Engineer concurs with the selection of Alternative 3 as the new Preferred Alternative.

Alternative 3, the new **Preferred Alternative**, is shown on **Figure 2**. Alternative 3 will involve realigning Gabriel's Creek Road and Lower Gabriel's Creek Road and constructing a new bridge upstream of the existing structure. The bridge will be 187 feet long and located approximately 430 feet upstream of the existing structure. An Anodized 1-Bar Railing will be used as the bridge rail type. The approach roadway for the permanent replacement structure will consist of two 10-foot travel lanes and 6-foot grassed shoulders. The roadway approach will extend approximately 235 feet south and 30 feet north. The design speed for the roadway is 30 miles per hour. During construction, traffic will continue to follow the existing alignment.

II. ESTIMATED COSTS

The estimated cost of the Preferred Alternative, based on current prices, is listed in **Table 1**. The estimated cost of the project as shown in NCDOT's *2007-2013 Transportation Improvement Program* (TIP) is \$1,700,000; including \$100,000 for right-of-way, \$1,400,000 for construction, and \$200,000 for prior years costs. Right-of-way acquisition is scheduled for 2007, with construction to follow in 2008.

Table 1
Estimated Costs

Cost Item	Alternative 3 (Preferred) (2007 dollars)
Structure Removal (Existing)	\$21,600
Structure (proposed)	\$545,000
Roadway Approaches	\$307,500
Miscellaneous and Mobilization	\$222,900
Engineering and Contingencies	\$178,000
ROW/Construction Easements	\$55,500
Total	\$1,330,500

III. SUMMARY OF ANTICIPATED IMPACTS

This section provides a summary of anticipated impacts for the Preferred Alternative. Detailed descriptions of the existing conditions and field survey methods are included in the November 2005 Categorical Exclusion.

A. Biotic (Terrestrial and Aquatic) Communities

Table 2 lists the anticipated impacts to biotic communities, including terrestrial and aquatic communities. Impacts are based on the construction limits shown on the preliminary design for the Preferred Alternative

Table 2
Anticipated Impacts to Biotic Communities

Community		Alternative 3 (Preferred)
Montane Alluvial Forest (acres)		0.16
Rich Cove Forest (acres)		0
Successional Forest (acres)		0.21
Agriculture (acres)		0.63
Maintained/Disturbed (acres)		0.11
Aquatic Community (acres)		0
Ivy River (linear feet)		0
Unnamed tributary to Ivy River on eastern side of Gabriel's Creek Road (linear feet)		0
Total	acres	1.11
	linear feet	0

B. Wetlands

Field surveys for natural resources were conducted on July 26, 2001 and November 9, 2001 as part of the November 2005 CE. No jurisdictional wetlands were found within the Project Study Area.

C. Federally Protected Species

As of June 14, 2007, the U.S. Fish and Wildlife Service (USFWS) lists four federally-protected species for Madison County (see **Table 2**).

**Table 2
Federally-Protected Species for Madison County**

Common Name	Scientific Name	Status	Habitat in Project Study Area
<i>Vertebrates</i>			
Gray bat	<i>Myotis grisescens</i>	Endangered	No
Bog turtle	<i>Clemmys muhlenbergii</i>	Threatened S/A	No
Spotfin chub	<i>Hybopsis monacha</i>	Threatened	Yes
<i>Invertebrates</i>			
Oyster mussel	<i>Epioblasma capsaeformis</i>	Endangered	Yes

Endangered species are in danger of becoming extinct throughout all or a significant portion of their range.

Threatened species are likely to become endangered within the foreseeable future throughout all or a significant portion of their range.

Threatened S/A species are threatened due to similarity of appearance with other rare species and is listed for its protection. These species are not biologically endangered or threatened and are not subject to Section 7 consultation.

When the CE was signed in November 2005, biological conclusions of “No Effect” were reached for three of the federally protected species listed in Madison County: Gray bat, Spotfin chub, and Oyster mussel. A biological conclusion was not made for the Bog turtle because it is threatened due to similarity of appearance and not subject to Section 7 consultation.

There is no appropriate habitat in the Project Study Area for the Bog turtle or Gray bat. According to a memorandum from the NCDOT Natural Environment Unit dated January 22, 2007, surveys were conducted in May 2004 for the Spotfin chub and the Oyster mussel, with no specimens found. Though marginal habitat is present, neither species has been collected in the French Broad River Basin in the last 50 years; therefore, no further surveys are warranted at this time.

As of June 14, 2007, there are 15 Federal Species of Concern (FSC) listed for Madison County. Habitat is present for several Federal Species of Concern (FSC) in the Project Study Area. However, the NC Natural Heritage Program database was reviewed on January 18, 2007. There is no documentation of federal or state threatened or endangered species found within one mile of the Project Study Area.

D. Historic Architecture

Field surveys of the Area of Potential Effects (APE) were conducted on June 28, 2001 and December 13, 2001. All structures within the APE were photographed, and later reviewed by the State Historic Preservation Office (HPO).

One structure, the Palmer Ford Mill, is eligible for the National Register of Historic Places (NRHP). Boundaries of the Palmer Ford Mill historic site were located using GPS equipment by a NCDOT historian in 2004. The HPO, FHWA, and NCDOT determined that there will be No Effect on the Palmer Ford Mill for Alternative 2 through Alternative 5, as stated in a concurrence form dated December 13, 2001. The HPO, in a concurrence form dated October 15, 2002, stated there will be an adverse affect on the Palmer Mill under Alternative 1 due to the large amount of right of way required. Copies of both concurrence forms are included in the Appendix of the November 2005 CE.

E. Archaeology

In a memorandum dated June 7, 2001, the State Historic Preservation Officer (SHPO) stated, "There are no recorded archaeological sites within the proposed project area. If the replacement is to be located along the existing alignment, it is unlikely that significant archaeological resources would be affected and no investigations would be recommended. If, however, the replacement is to be in a new location, please forward a map to this office indicating the location of the new alignment so we may evaluate the potential effects of the replacement upon archaeological resources." A map of the Preferred Alternative was forwarded to the SHPO. A copy of the SHPO memorandum is included in the Appendix of the November 2005 CE.

The SHPO responded in a letter dated November 16, 2004 (in Appendix of November 2005 CE). It stated that there are no known recorded archaeological sites within the project boundaries. "However, the project area has never been systematically surveyed to determine the location or significance of archaeological resources." The SHPO recommended "that a comprehensive survey be conducted by an experienced archaeologist to identify and evaluate the significance of archaeological remains that may be damaged or destroyed by the proposed project."

An archaeological survey and evaluation was completed by NCDOT in September 2005 for the project. The survey identified three previously unrecorded archaeological sites within the Area of Potential Effects (APE) of the Preferred Alternative. None of these sites were recommended as eligible for the NRHP, therefore, no further actions are required regarding archaeological resources for this project as currently proposed (see memorandum dated October 13, 2005 included in Appendix of November 2005 CE).

The new Preferred Alternative (Alternative 3) is in the same general location as the previous Preferred Alternative (Alternative 5) and impacts a smaller area. Therefore, the results of the archaeological survey completed for the November 2005 CE would apply to

the new Preferred Alternative. No further actions are anticipated regarding archaeological resources for this project.

F. Community Services and Facilities

No adverse effects on public facilities or services are anticipated. The project is not expected to adversely affect social, economic, or religious opportunities in the area. Alternative 3 (Preferred) does not require an offsite detour; therefore, school bus and emergency vehicle services should not be disrupted.

G. Relocations

No adverse impact on families or communities is anticipated. Right of way acquisition will be limited. No relocations are expected with implementation of the Preferred Alternative.

H. Section 4(f) Resources

There are no publicly owned parks, recreational facilities, or wildlife and waterfowl refuges of national, state, or local significance in the project vicinity. This project does not require right-of-way acquisition or easement from any land protected under Section 4(f) of the Department of Transportation Act of 1966.

I. Utilities

Major existing utilities within the immediate project study area include an overhead telephone line that crosses SR 1565 near the SR 1565/SR 1599 intersection. All utility providers will be contacted and coordinated with to ensure that the proposed design and construction of the project will not disrupt service.

J. Air Quality

This project is an air quality “neutral” project. Therefore, it is not required to be included in the regional emission analysis and a project level CO analysis is not required.

K. Noise

Traffic volumes will not increase or decrease as a result of this project and there are no noise sensitive receptors located in the immediate area; therefore; no noise impacts attributable to this project are expected.

L. Hazardous Materials

No underground storage tank facilities or hazardous waste sites are known to be present in the Project Study Area.

M. Prime and Important Farmland

An assessment was completed using Form AD 1006 to determine if the project's impact on Prime and Important Farmland will require consideration of mitigation. This project was not submitted to NRCS for land evaluation due to the low site assessment criteria score. The completed form is included in the Appendix of the November 2005 CE.

N. Floodplains

Ivy River is not included in the Madison County Flood Insurance Study.

O. Geodetic Survey Markers

No geodetic survey markers will be impacted.

P. Environmental Justice

As part of the November 2005 CE, a review was conducted to determine whether minority or low-income populations would receive disproportionately high and adverse human health or environmental impacts as a result of this project. The investigation concluded the project will not disproportionately impact any minority or low-income populations.

IV. PUBLIC INVOLVEMENT

Citizens Informational Workshop – December 2, 2003. A Citizens Informational Workshop was held on December 2, 2003 at Mars Hill College to present the Preferred Alternative (Alternative 5) to the public for comment. A newsletter was sent to 37 property owners in the project area and the workshop was advertised in the local newspaper. Nine (9) citizens signed in at the workshop and three written comments and one verbal comment were received. Two comments supported Alternative 1, which was shown along with the other alternatives considered during conversations with citizens, and two comments supported Alternative 5 (Preferred Alternative).

Small Group Meeting – January 22, 2004. A small group meeting was requested by a citizen and held on January 22, 2004 at the project site. Ten citizens and one Madison County Commissioner attended the meeting. At the meeting, some citizens requested clarification of the boundaries of the Palmer Ford Mill historic site and that the NCDOT look at another alternative farther upstream.

As a result of these requests, a NCDOT historian visited the site in the fall of 2004 to determine the location of the historic site boundaries using GPS equipment. The boundary is shown on **Figure 2**. The NCDOT also developed an alternative that crosses the river

farther upstream where SR 1564 (Chandler Branch Road) makes a 90-degree turn at Ivy River. NCDOT and FHWA reviewed this alternative and determined it was not feasible due to several issues; including potential stream impacts, relocations, constructability issues, and lack of route continuity.

Citizens Informational Workshop – March 10, 2005. Another Citizens Informational Workshop was held on March 10, 2005 at Mars Hill College to present the information requested at the small group meeting to citizens in the project area. A postcard was sent to 43 property owners in the project area.

Fifteen (15) citizens signed in at the workshop and six (6) written comments were received. In general, none of the attendees indicated at the meeting that they favored Alternative 5 (Preferred Alternative). Many stated they felt Alternative 3 or a modified Alternative 5 (the bridge alignment of Alternative 5, but no extension uphill to the north) would have less impact on their community.

Ten attendees signed their names to the display showing three potential bridge rail types. All ten preferred the Anodized 3-Bar Railing bridge rail type. The Anodized 3-Bar Railing bridge rail type must be used in conjunction with sidewalk due to safety constraints. Sidewalk will not be constructed as part of this bridge replacement project; therefore, an Anodized 1-Bar Railing is proposed.

Citizens Informational Workshop – May 17, 2007. A Citizens Informational Workshop was held on May 17, 2007 at Mars Hill College to present the new Preferred Alternative (Alternative 3) to the public. Workshop announcements were sent on May 4, 2007 to 48 people. Project information displayed at the workshop included:

- The Planning Process (general description of the steps in the planning process)
- Planimetric mapping showing the designs for the previous Preferred Alternative – Alternative #5 and the impacts it would have on the perennial stream.
- Planimetric mapping showing an update to the previous Preferred Alternative – Alternative #5. The update modified the design to minimize the stream impacts.
- Planimetric mapping showing the designs for the new Preferred Alternative - Alternative 3.

Fifteen (15) citizens, including one newspaper reporter, signed in at the workshop. Several verbal and one written comment were received. In addition, one comment was received prior to the meeting on May 10, 2007 via email. In general, most attendees felt the new

Preferred Alternative (Alternative 3) would have less impact on their community than the previously preferred Alternative 5.

Many attendees wanted to know how high the fill would be at the northern terminus of the bridge. NCDOT representatives stated that earlier estimates were 6 to 8 feet, but that this was subject to change as the designs progressed in more detail.

Several attendees stated they thought the existing intersection of Gabriels Creek Road and Lower Gabriels Creek Road was somewhat difficult to drive through due to the steep grades and pavement configuration. Concern also was expressed about vehicles not being able to make this turn and continuing straight where the old bridge is. NCDOT representatives stated a barrier would be placed at this location when the existing bridge is removed.

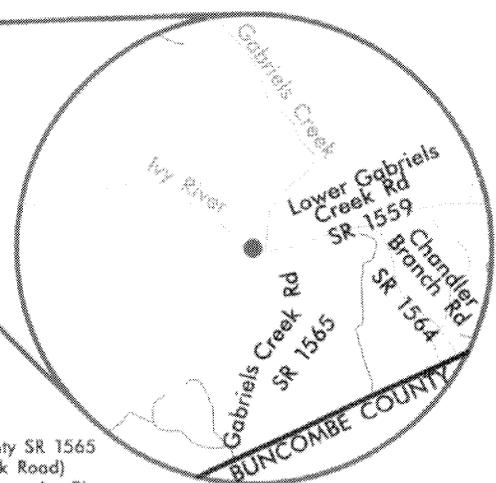
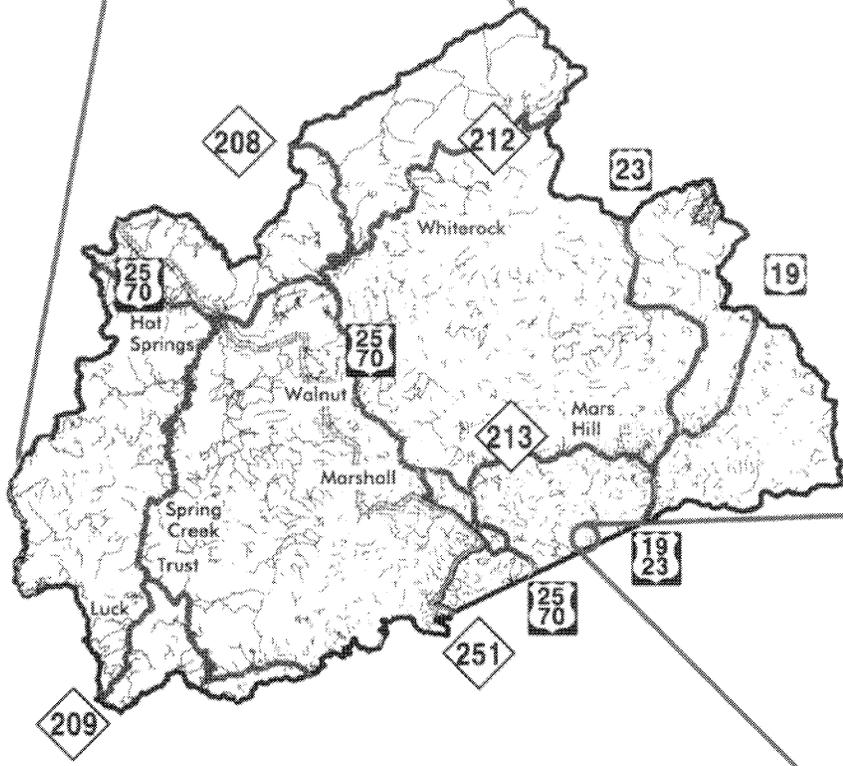
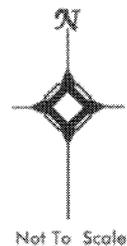
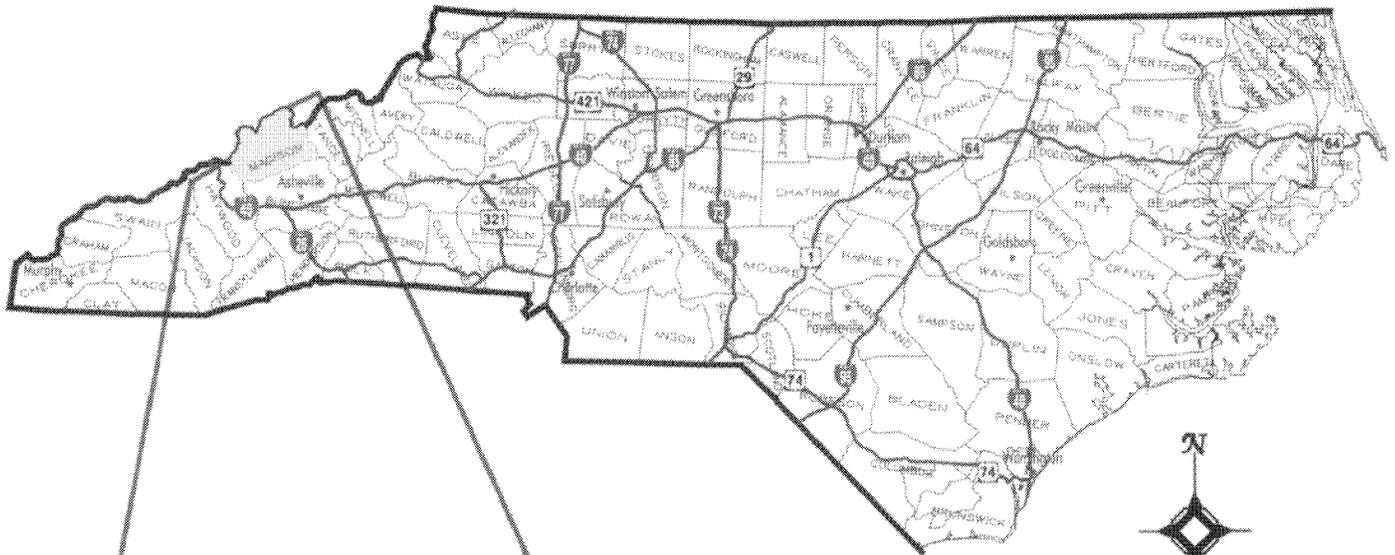
Several attendees agreed that the primary traffic pattern in their area (from north to south) is Gabriels Creek Road, over the existing bridge, then continuing straight along the Ivy River on Chandler Branch Road (rather than turning right up Palmer Ford Mill Road [previously called Gabriels Creek Road]). Chandler Branch Road provides a faster route to Jupiter Road and US 19/23.

Two attendees (Mr. Blake Buckner and Ms. Monica Rice-Buckner) did not prefer Alternative 3 since it would route all traffic past their house (the house across from the Palmer Ford Mill historic site at the northeast corner of the Gabriels Creek Road/Lower Gabriels Creek Road intersection). These property owners were concerned about impacts to their driveway and about vehicle lights shining into their house as vehicles turned left off of the bridge.

There was much discussion with the Grindstaff family regarding property impacts. The family stated they would like NCDOT to try to save, if possible, a maple tree at the front of Hazel Grindstaff's house (the middle tree shown on the mapping). This tree has special meaning to the family. The family also was concerned about minimizing impacts to their large garden (located west of the house) and changes to the driveway. Ms. Hazel Grindstaff also owns property on the south side of the Ivy River between the Ivy River and Gabriels Creek Road. This property is in active agriculture and the family would like access to be maintained. Based on current plans, it appears that access to this field will be maintained.

Mr. Osborne stated that he owns a certified organic farm (Palmer Ford Organics) south of the Ivy River, southeast of the Lower Gabriels Creek Road/Chandler Branch Road

intersection. He is actively farming the land on either side of Chandler Branch Road east of Palmer Ford Mill Road. There currently is a dirt access road he uses off Chandler Branch Road to access his active field located between Chandler Branch Road and the Ivy River. He stated this is very productive bottomland and he would like to have the access to it maintained. He also stated he prefers Alternative 3 over Alternative 5. This Mr. Osborne also noted that his son owns the property to the southwest of the Lower Gabriels Creek Road/Chandler Branch Road intersection. The vacant building at the corner of this intersection currently is used for storage.



Madison County SR 1565
 (Gabriels Creek Road)
 Bridge No. 4 over Ivy River

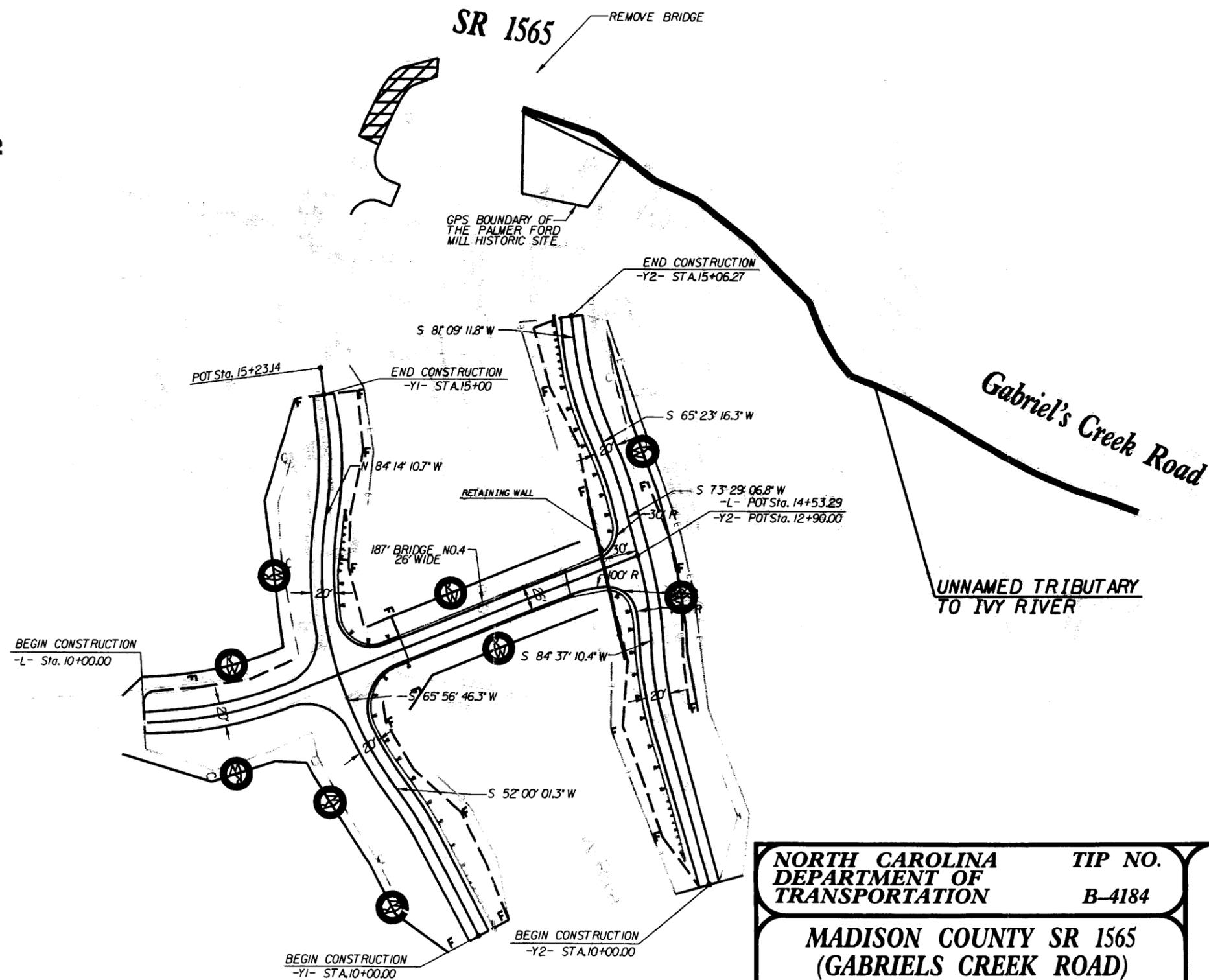
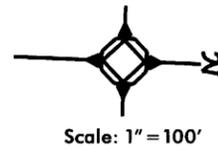
**NORTH CAROLINA
 DEPARTMENT OF
 TRANSPORTATION**

**TIP NO.
 B-4184**

**PROJECT LOCATION
 MAP**

**MADISON COUNTY SR 1565
 (GABRIELS CREEK ROAD)
 BRIDGE NO. 4 OVER IVY RIVER**

FIGURE 1



\TIP\FIGURES\REV\184C.DGN 2/16/05

NORTH CAROLINA DEPARTMENT OF TRANSPORTATION	TIP NO. B-4184
	MADISON COUNTY SR 1565 (GABRIELS CREEK ROAD) BRIDGE NO. 4 OVER IVY RIVER

ALTERNATIVE 3 REALIGNMENT UPSTREAM (T-INTERSECTION)
FIGURE 2