



STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION

MICHAEL F. EASLEY
GOVERNOR

LYNDO TIPPETT
SECRETARY

June 2, 2008

U. S. Army Corps of Engineers
Wilmington Regulatory Field Office
PO Box 1890
Wilmington, North Carolina 28402-1890

ATTENTION: Mr. Richard Spencer
NCDOT Coordinator, Division 8

Dear Sir:

SUBJECT: **Notice of Intent to Use Section 404 Nationwide Permit 13.** Replacement of Bridge No. 415 on SR 2873 (Riverside Road) over Fork Creek, Randolph County, North Carolina. Federal Aid Project No. BRZ-2873(1), State Project No. 8.2574601, WBS Element 33796.1.1, TIP No. B-4613.

The North Carolina Department of Transportation (NCDOT) proposes to replace Bridge No. 415 on SR 2873 (Riverside Road) over Fork Creek, in Randolph County. The existing 72-foot 2-span bridge was constructed in 1959 and received a sufficiency rating of 23.7 out of a possible 100 for a new structure. This bridge is considered functionally obsolete and structurally deficient due to its structural appraisal and deck geometry rating of 2 out of 9. The project proposes to demolish the existing bridge and replace with a 3-span, 54-inch pre-stressed concrete girder superstructure on concrete caps and drilled piers, spanning Fork Creek. The new bridge will be 170 feet long with a clear roadway width of approximately 26 feet. During construction, traffic will follow an off-site detour. Please see the enclosed permit drawings, design plans, and Jurisdictional Determination forms for the subject project. A Categorical Exclusion (CE) was completed for this project in August of 2007 and distributed shortly thereafter. Additional copies are available upon request.

IMPACTS TO WATERS OF THE UNITED STATES

General Description: The project is located in sub basin 03-0-09 of the Cape Fear River Basin in Randolph County. This area is part of Hydrologic Cataloging Unit 03030003. The project area is located within the Central Piedmont ecoregion of North Carolina.

Fork Creek is the only jurisdictional feature located within the project study area, and has been assigned Stream Index Number 17-25 by the North Carolina Division of Water Quality (NCDWQ). The stretch of Fork Creek in the project study area has been assigned a Best Usage Classification of C.

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

TELEPHONE: 919-715-1334 or
919-715-1335

FAX: 919-715-5501

WEBSITE: WWW.NCDOT.ORG

LOCATION:
2728 CAPITAL BLVD. SUITE 240
RALEIGH NC 27604

Fork Creek enters the study area as a fourth order perennial stream, and is described as having a substrate consisting primarily of bedrock, boulder, cobble, gravel, and sand. Fork Creek meanders in a southeasterly direction about 1.5 miles to its confluence with the Deep River. Within the project study area, Fork Creek is approximately 30 feet wide with banks up to 10 feet high.

No portion of Fork Creek, its tributaries, or other surface waters within 1.0 mile of the project are listed on the North Carolina Division of Water Quality's 2006 Final 303(d) List of Impaired Waters.

No waters classified as High Quality Water (HQW), Water Supplies (WS-I or WS-II), nor Outstanding Resource Waters (ORW) occur within 1.0 mile of the project study area.

Permanent Impacts: There will be 15 linear feet of surface water impacts associated with tying a standard two-foot base ditch into the channel of Fork Creek. The drainage ditch will be located approximately 35-feet northwest of the proposed bridge site. Rip rap will line the bank and tie into the substrate of the channel of Fork Creek. The existing top of bank is approximately 10-feet higher than the plane of ordinary high water, to prevent erosion and scour rip rap is being placed down to the substrate of the stream. No other practicable alternatives exist for this impact.

Temporary Impacts: There will be no temporary impacts associated with this project.

Bridge Demolition: The existing structure has a timber deck on I-beams with an asphalt wearing surface. The substructure is comprised of a concrete bent and vertical concrete abutments. NCDOT will remove the bridge using measures to prevent elements from falling into the water. Currently there is a bent located in the channel of Fork Creek. If feasible, the center bent will be lifted straight up and removed from the stream, resulting in as little disturbance to the substrate as possible. All guidelines for Bridge Demolition and Removal will be followed in addition to Best Management Practices for the Protection of Surface Waters.

Utility Impacts: There are no anticipated utility impacts associated with this project.

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. The United States Fish and Wildlife Service (USFWS) lists two Federally Protected species, as of January 31, 2008, for Randolph County. Table 1 lists the species and their federal status.

Table 1. Federally Protected Species in Randolph County, NC

Common Name	Scientific Name	Federal Status	Biological Conclusion	Habitat Present
Cape Fear shiner	<i>Notropis mekistocholas</i>	E	May Affect, Not Likely to Adversely Affect	Yes
Schweinitz's sunflower	<i>Helianthus schweinitzii</i>	E	No Effect	Yes

On March 4, 2004, a Cape Fear shiner survey was conducted by NCDOT biologists, headed by Neil Medlin and Jared Gray. The sample area extended from approximately 100 meters above the bridge to approximately 400 meters below the crossing. Electrofishing technologies as well as seine techniques were used during the field investigation.

Due to the presence of suitable habitat an additional survey was conducted on April 18, 2005. The survey utilized similar collection techniques to the previous survey. No individuals were observed during either survey.

In addition to NCDOT surveys, the NCDWQ and NC Wildlife Resources Commission (NCWRC) have conducted fish surveys in Fork Creek. Although NC Natural Heritage Program documents Cape Fear shiner just below the bridge in 1985, follow-up surveys have failed to reproduce such findings. Given the results of the recent surveys as well as implementation of Best Management Practices (BMPs), replacement of Bridge No. 415 will have a biological conclusion of “May Affect, Not Likely to Adversely Affect” for the Cape Fear shiner. On May 1, 2007 USFWS issued a letter, included in the CE, concurring with this biological conclusion.

Fork Creek is a federally designated critical habitat for the Cape Fear Shiner. The conclusion for the critical habitat was that there will be “no adverse modification of the critical habitat”. Due to the gravel, cobble, and boulder substrate, removing the existing bent will cause only a slight temporary increase in turbidity, comparable to a storm event. It is believed that with removing the existing bent from the stream, the project will ultimately improve habitat conditions within the stream.

On September 20, 2004, NCDOT biologists Brett Feulner, Matt Haney and Cheryl Gregory surveyed potential habitat for Schweinitz’s sunflower. An additional plant survey was conducted by Earth Tech biologists on October 6, 2004 in areas previously identified as potential habitat. No Schweinitz’s sunflower plants were observed during either survey. A final survey was conducted on September 25, 2007 by NCDOT biologists Ashley Cox, Greg Price, Jim Mason and James Pflaum. The survey took a total of 3 man-hours to complete and resulted in 100 percent coverage. Potential habitat does exist within the study area; however, no Schweinitz’s sunflower individuals were observed during this survey. A Natural Heritage Program (NHP) database search (updated February 2008) revealed no populations of Schweinitz’s sunflower within one mile of the project area. Based on the absence of Schweinitz’s sunflower individuals after multiple surveys and no known populations within 1.0 mile of the project, USFWS concurs that a biological conclusion of No Effect for Schweinitz’s sunflower is warranted.

AVOIDANCE, MINIMIZATION and MITIGATION

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

According to the Clean Water Act (CWA) §404(b)(1) guidelines, NCDOT must avoid, minimize, and mitigate, in sequential order, impacts to waters of the US. The following is a list of the project’s avoidance/minimization activities proposed or completed by NCDOT:

Avoidance/ Minimization: Avoidance examines all appropriate and practicable possibilities of averting impacts to “Waters of the US”. The NCDOT is committed to incorporating all reasonable and practicable design features to avoid and minimize jurisdictional impacts and to minimize impacts as part of the project design.

- Temporary construction impacts due to erosion and sedimentation will be minimized through implementation of stringent erosion control methods and use of BMPs highlighted in NCDOT’s “Best Management Practices for Construction and Maintenance Activities”.
- Best Management Practices for Protection of Surface Waters and Bridge Demolition and Removal will be implemented during the entirety of this project.

- During construction, traffic will utilize an off-site detour.
- There will be no bents placed in Fork Creek due to the longer bridge.
- No construction equipment will enter the stream during the construction of the new structure or demolition of the existing structure.
- NCDOT will use measures to prevent elements from falling into the water
- Access to stream from former road will be limited by guardrail.
- The old road bed will be removed, plowed up and turned over, ditches will be filled and graded, and banks will be seeded to provide stabilization.
- If possible, the footer for the old bridge will be lifted straight up and removed from the stream

Compensatory Mitigation: NCDOT requests no mitigation be required for this bridge replacement because stream impacts to Fork Creek are minimal (15 feet). The anticipated 15 linear feet of impacts to Fork Creek will be a direct result of tying a drainage ditch into the channel. The rip rap will cause no foreseeable loss of aquatic function/habitat in Fork Creek and does not constitute as a loss of Waters of the US.

SCHEDULE

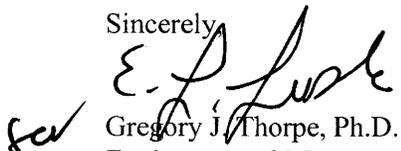
The project calls for a let date of January 20, 2009 and a review date of December 2, 2008. This project has a date of availability of March 1, 2009. It is expected that the contractor will begin construction shortly after that date.

REGULATORY APPROVALS

Section 404 Permit: This document hereby serves as a notice of intent to use Section 404 NWP 13 for bank stabilization. Since the activities associated with this project meet all conditions related to this permit, we are not requesting written authorization.

Section 401 Permit: We anticipate that Section 401 General Water Quality Certification (WQC) 3689 will apply to this project. The NCDOT will adhere to all general conditions of this WQC. Therefore, written concurrence from the NCDWQ is not required. In accordance with 15A NCAC 2H, Section .0500 (a) and 15A NCAC 2B, Section .0200, we are providing two copies of this application to the North Carolina Department of Environment and Natural Resources (NCDENR), NCDWQ, as notification.

A copy of this permit application will be posted on the NCDOT website at:
<http://www.ncdot.org/doh/preconstruct/pe/neu/permit.html>. If you have any questions or need additional information, please contact Ashley Cox at 919-715-5534 or acox@dot.state.nc.us.

Sincerely,

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

Cc:

w/attachment

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

w/o attachment (see website for attachments)

Dr. David Chang, P.E., Hydraulics
Mr. Mark Staley, Roadside Environmental
Mr. Victor Barbour, P.E., Project Services
Mr. Greg Perfetti, P.E., Structure Design
Mr. Tim Johnson, P.E., Division Engineer
Mr. Art King, Division Environmental Officer
Mr. Jay Bennett, P.E., Roadway Design
Mr. Majed Alghandour, P. E., Programming and TIP
Mr. Art McMillan, P.E., Highway Design
Mr. Scott McLendon, USACE, Wilmington
Ms. Natalie Lockhart, PDEA Planning Engineer

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: Wilmington District, Wilmington Regulatory Office, TIP# B-4613

C. PROJECT LOCATION AND BACKGROUND INFORMATION: Fork Creek
State: NC County/parish/borough: Randolph County/ Bennett Quad City: @ 9 miles east of Seagrove
Center coordinates of site (lat/long in degree decimal format): Lat. ° N, Long. ° W.
Universal Transverse Mercator:

Name of nearest waterbody: Fork Creek

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

Name of watershed or Hydrologic Unit Code (HUC): 03030003

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): February 8, 2007

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 **Are** "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: 2,400 linear feet: width (ft) and/or acres.

Wetlands: NA acres.

c. Limits (boundaries) of jurisdiction based on: 1987 Delineation Manual

Elevation of established OHWM (if known): NA.

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 seum 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: Fork Creek is a fourth order perennial stream that flows directly into Deep River.
- 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: **2400** linear feet 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.

¹⁰Prior 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):

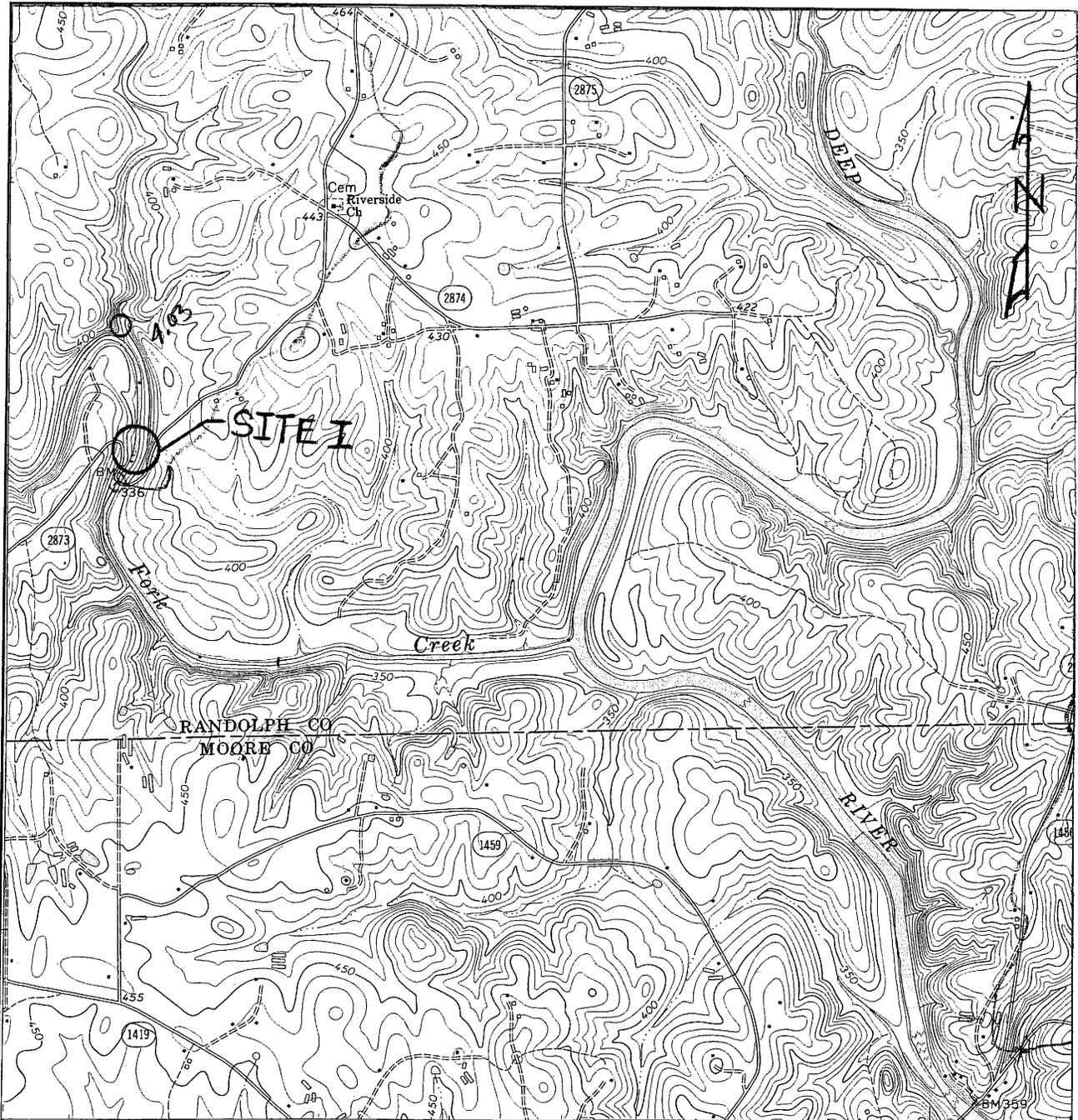
- Non-wetland waters (i.e., rivers, streams): linear feet, width (ft).
- Lakes/ponds: acres.
- Other non-wetland waters: acres. List type of aquatic resource: .
- Wetlands: acres.

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: Bennett Quad.
- 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): 1998 NCDOT Aerial Photography B-4613.
 - 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:



VICINITY MAP

NCDOT
DIVISION OF HIGHWAYS
RANDOLPH COUNTY
PROJECT: 33796.1.1 (B-4613)
BRIDGE No. 415
OVER FORK CREEK
ON SR 2873

PROPERTY OWNERS

NAMES AND ADDRESSES

PARCEL NO.	NAMES	ADDRESSES
4	LARRY CULLER	102 NEEDHAMS GROVE RD. SEAGROVE, NC 27341

NCDOT

DIVISION OF HIGHWAYS

RANDOLPH COUNTY

PROJECT: 33796.1.1 (B-4613)

BRIDGE NO. 415

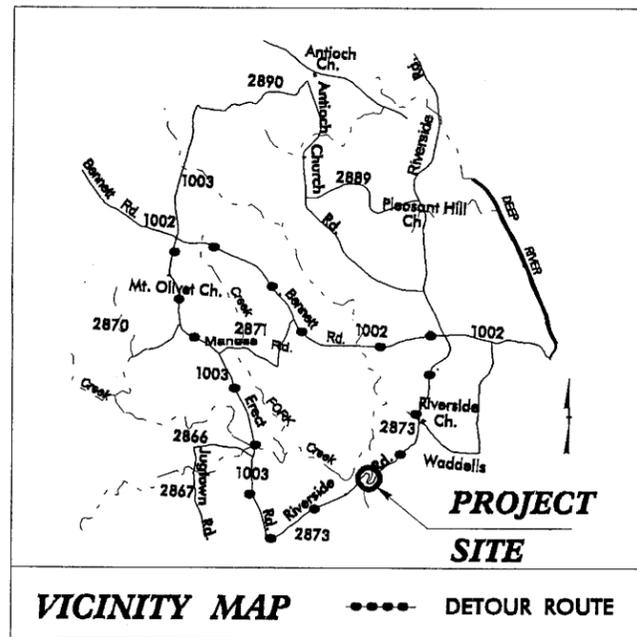
OVER FORK CREEK

ON SR 2873

RANDOLPH COUNTY

STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION
33796.1.1	BRZ-2873(1)	PE
33796.2.1	BRZ-2873(1)	R/W, UTIL

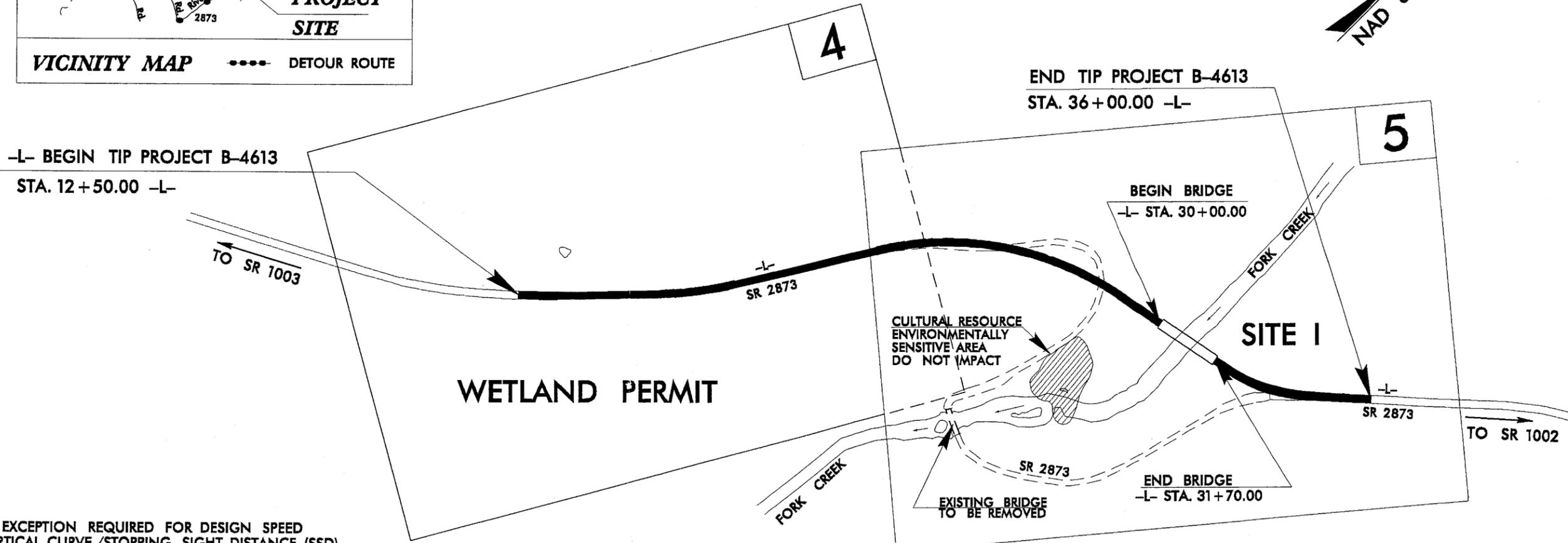
TIP PROJECT: B-4613



**LOCATION: BRIDGE # 415 OVER
FORK CREEK ON SR 2873**

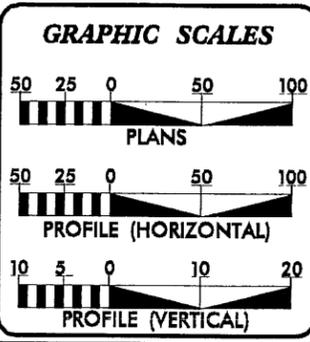
**TYPE OF WORK: GRADING, DRAINAGE, GUARDRAIL
STRUCTURE, AND PAVING**

Permit Drawing
Sheet 4 of 6



DESIGN EXCEPTION REQUIRED FOR DESIGN SPEED AND VERTICAL CURVE /STOPPING SIGHT DISTANCE (SSD) THIS IS NOT A CONTROL OF ACCESS PROJECT THIS PROJECT IS NOT WITHIN ANY MUNICIPAL BOUNDARY. CLEARING ON THIS PROJECT SHALL BE PERFORMED TO THE LIMITS ESTABLISHED BY METHOD II.

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION



DESIGN DATA

ADT 2007 =	115
ADT 2030 =	200
DHV =	11 %
D =	50 %
T =	3 % *
V =	35 MPH
CLASS =	LOCAL
* TTST 1 %	DUAL 2 %

PROJECT LENGTH

LENGTH ROADWAY TIP PROJECT B-4613	= 0.413 MILES
LENGTH STRUCTURE TIP PROJECT B-4613	= 0.032 MILES
TOTAL LENGTH TIP PROJECT B-4613	= 0.445 MILES

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

2006 STANDARD SPECIFICATIONS

RIGHT OF WAY DATE:
JANUARY 18, 2008

LETTING DATE:
JANUARY 20, 2009

JASON MOORE, PE
PROJECT ENGINEER

KEVIN E. MOORE, PE
PROJECT DESIGN ENGINEER

HYDRAULICS ENGINEER

SIGNATURE: _____ P.E.

ROADWAY DESIGN ENGINEER

SIGNATURE: _____ P.E.

DIVISION OF HIGHWAYS
STATE OF NORTH CAROLINA

STATE HIGHWAY DESIGN ENGINEER P.E.

25-FEB-2008 13:41
c:\mydir\autocad\permits\13-b-4613_rdy_tsh.dgn
HYZ39382

CONTRACT:

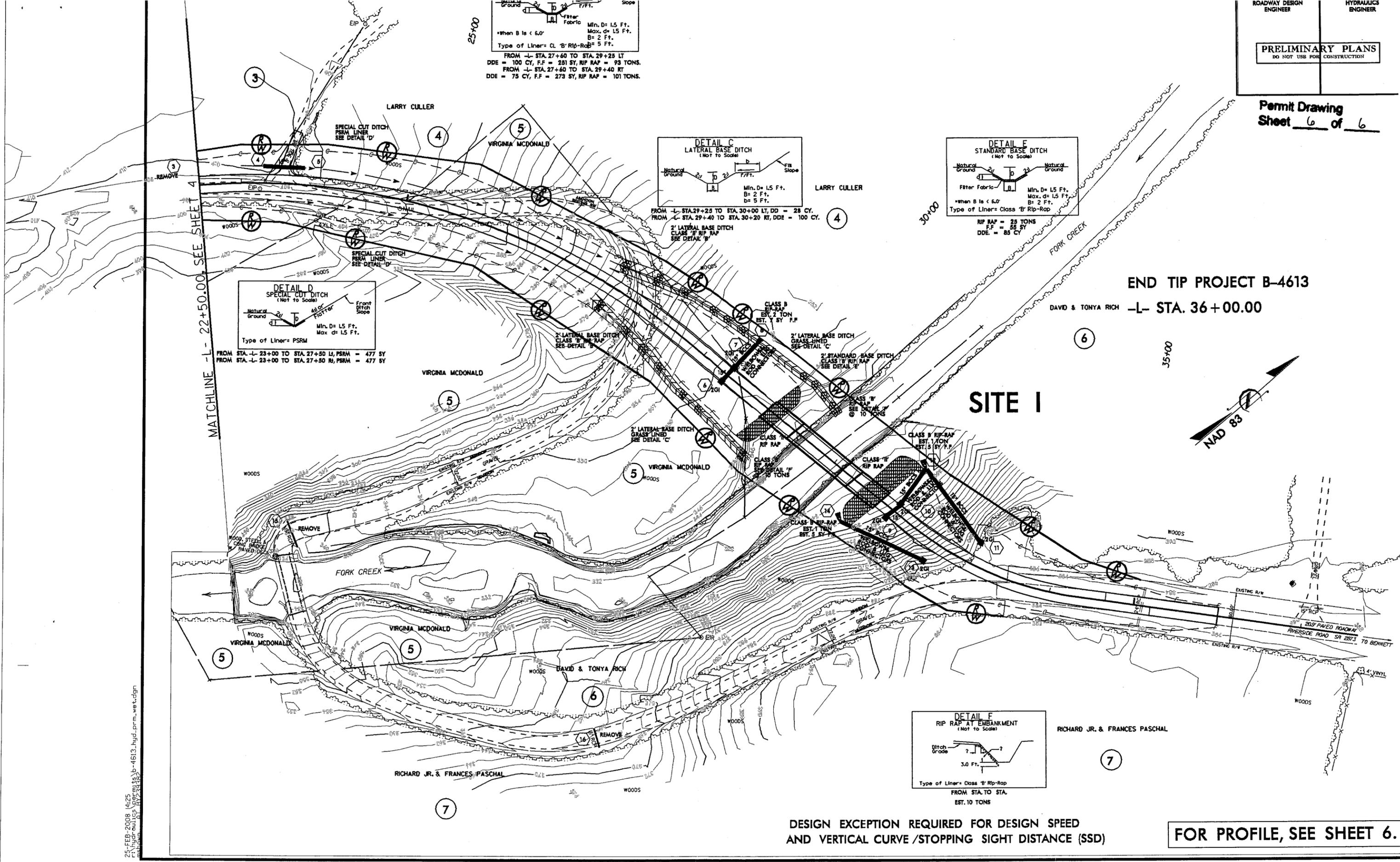
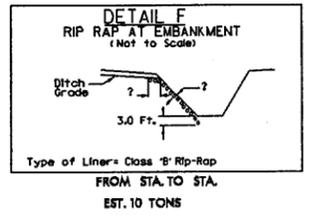
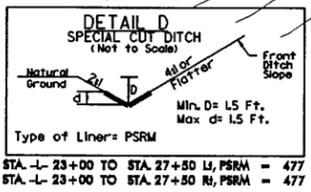
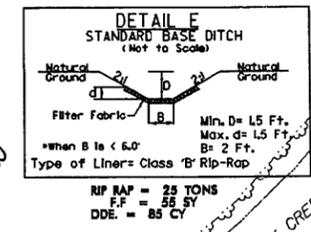
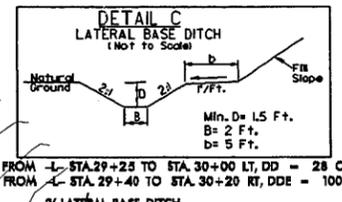
25+00

When B is < 6.0'

Type of Liner: CL 'B' Rip-Rap = 5 Ft.

FROM STA. 27+60 TO STA. 29+25 LT
DDE = 100 CY, F.F. = 231 SY, RIP RAP = 93 TONS.

FROM STA. 27+60 TO STA. 29+40 RT
DDE = 75 CY, F.F. = 273 SY, RIP RAP = 101 TONS.



END TIP PROJECT B-4613
-L- STA. 36+00.00

SITE I

DESIGN EXCEPTION REQUIRED FOR DESIGN SPEED
AND VERTICAL CURVE /STOPPING SIGHT DISTANCE (SSD)

FOR PROFILE, SEE SHEET 6.

25-FEB-2008 04:25
c:\p\source\4613-hyd-prm-wet.dgn

09/08/99

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

STATE OF NORTH CAROLINA
 DIVISION OF HIGHWAYS

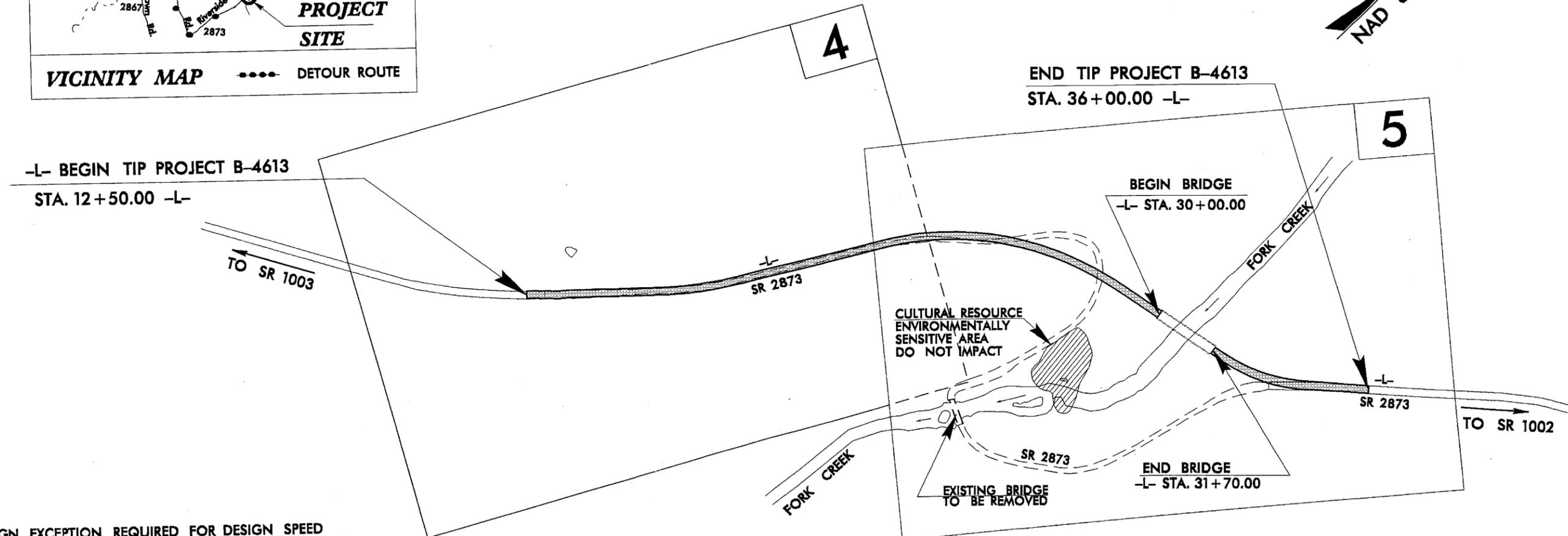
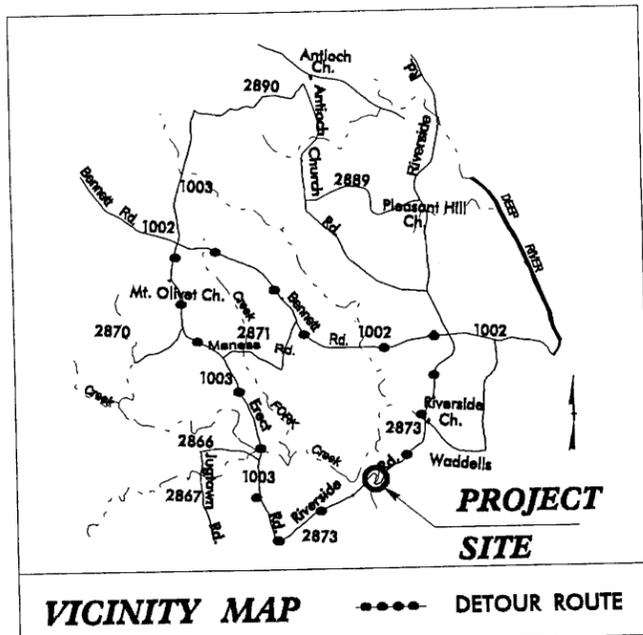
RANDOLPH COUNTY

LOCATION: BRIDGE # 415 OVER
 FORK CREEK ON SR 2873

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

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	B-4613	1	
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	
33796.1.1	BRZ-2873(1)	PE	
33796.2.1	BRZ-2873(1)	R/W, UTIL	

TIP PROJECT: B-4613

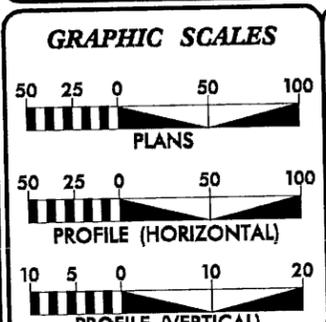


DESIGN EXCEPTION REQUIRED FOR DESIGN SPEED AND VERTICAL CURVE /STOPPING SIGHT DISTANCE (SSD)
 THIS IS NOT A CONTROL OF ACCESS PROJECT
 THIS PROJECT IS NOT WITHIN ANY MUNICIPAL BOUNDARY.
 CLEARING ON THIS PROJECT SHALL BE PERFORMED TO THE LIMITS ESTABLISHED BY METHOD II.

PRELIMINARY PLANS
 DO NOT USE FOR CONSTRUCTION

FEB-2008 09:42
 Y:\odgway\proj\10-b-4613_rdy_tsh.dgn
 \$\$\$USERNAME\$\$\$

CONTRACT:



DESIGN DATA

ADT 2007 = 115
ADT 2030 = 200
DHV = 11 %
D = 50 %
T = 3 % *
V = 35 MPH
CLASS = LOCAL
* TTST 1 % DUAL 2 %

PROJECT LENGTH

LENGTH ROADWAY TIP PROJECT B-4613	= 0.413 MILES
LENGTH STRUCTURE TIP PROJECT B-4613	= 0.032 MILES
TOTAL LENGTH TIP PROJECT B-4613	= 0.445 MILES

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

2006 STANDARD SPECIFICATIONS

RIGHT OF WAY DATE:
 JANUARY 18, 2008

LETTING DATE:
 JANUARY 20, 2009

JASON MOORE, PE
 PROJECT ENGINEER

KEVIN E. MOORE, PE
 PROJECT DESIGN ENGINEER

HYDRAULICS ENGINEER

 P.E.

ROADWAY DESIGN ENGINEER

 P.E.

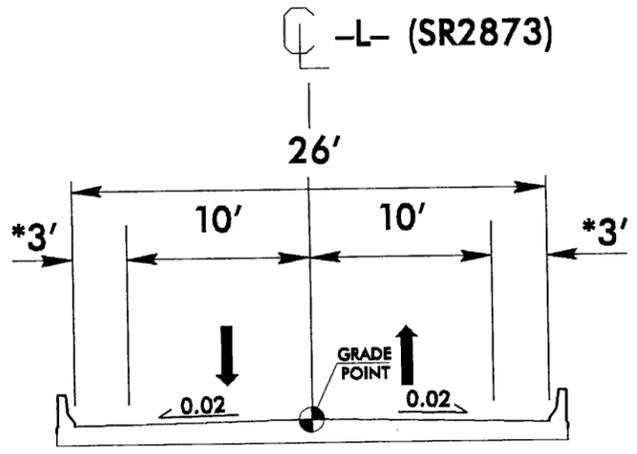
DIVISION OF HIGHWAYS
 STATE OF NORTH CAROLINA

STATE HIGHWAY DESIGN ENGINEER P.E.

PROJECT REFERENCE NO. B-4613	SHEET NO. 2
ROADWAY DESIGN ENGINEER	PAVEMENT DESIGN ENGINEER
PRELIMINARY PLANS <small>DO NOT USE FOR CONSTRUCTION</small>	

PAVEMENT SCHEDULE	
C	PROP. APPROX. 2.5" ASPHALT CONCRETE SURFACE COURSE, TYPE SF9.5A, AT AN AVERAGE RATE OF 137.5 LBS. PER SQ. YD. IN EACH OF TWO LAYERS.
E	PROP. APPROX. 4" ASPHALT CONCRETE BASE COURSE, TYPE B25.0B, AT AN AVERAGE RATE OF 456 LBS. PER SQ. YD.
R1	SHOULDER BERM GUTTER
T	EARTH MATERIAL

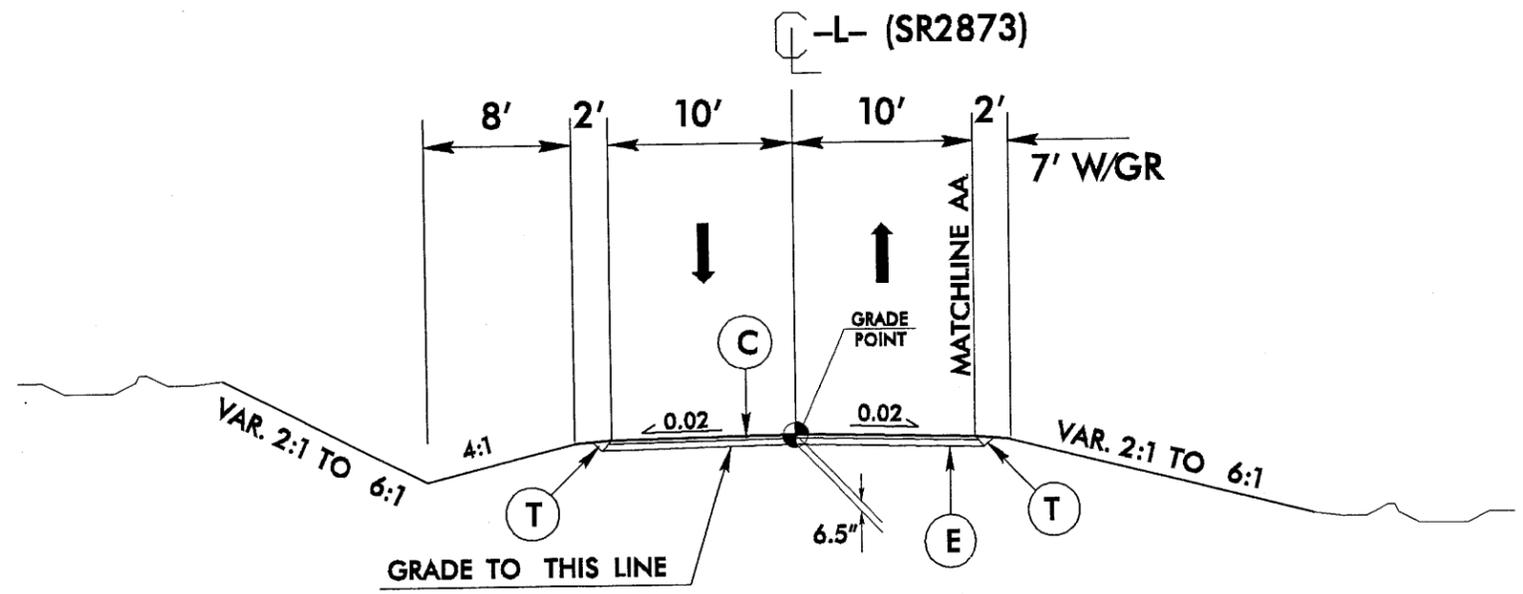
NOTE: PAVEMENT EDGE SLOPES ARE 1:1 UNLESS SHOWN OTHERWISE.



TYPICAL SECTION ON STRUCTURE.

-L- STA. 30+00.00 (BEGIN BRIDGE)
TO STA. 31+70.00 (END BRIDGE)

* WIDTH FOR HYDRAULIC DESIGN SPREAD



TYPICAL SECTION NO. 1

USE TYPICAL SECTION NO. 1

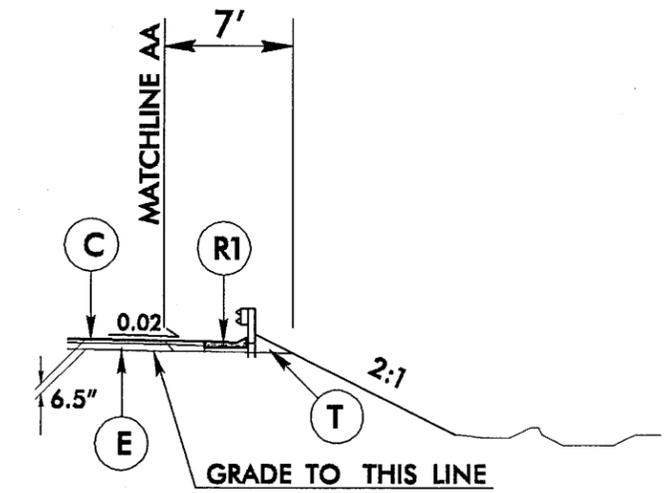
-L- STA. 12+98.00 TO STA. 30+00.00 (BEGIN BRIDGE)
-L- STA. 31+70.00 (END BRIDGE) TO 35+50.00

TRANSITION FROM EXISTING TO T.S. NO. 1

-L- STA. 12+50.00 TO STA. 12+98.00

TRANSITION FROM T.S. NO. 1 TO EXISTING

-L- STA. 35+50.00 TO STA. 36+00.00



TYPICAL SECTION NO. 1A

USE TYPICAL SECTION NO. 1A

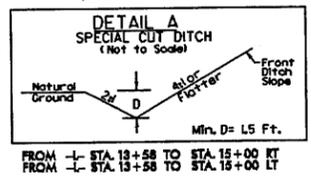
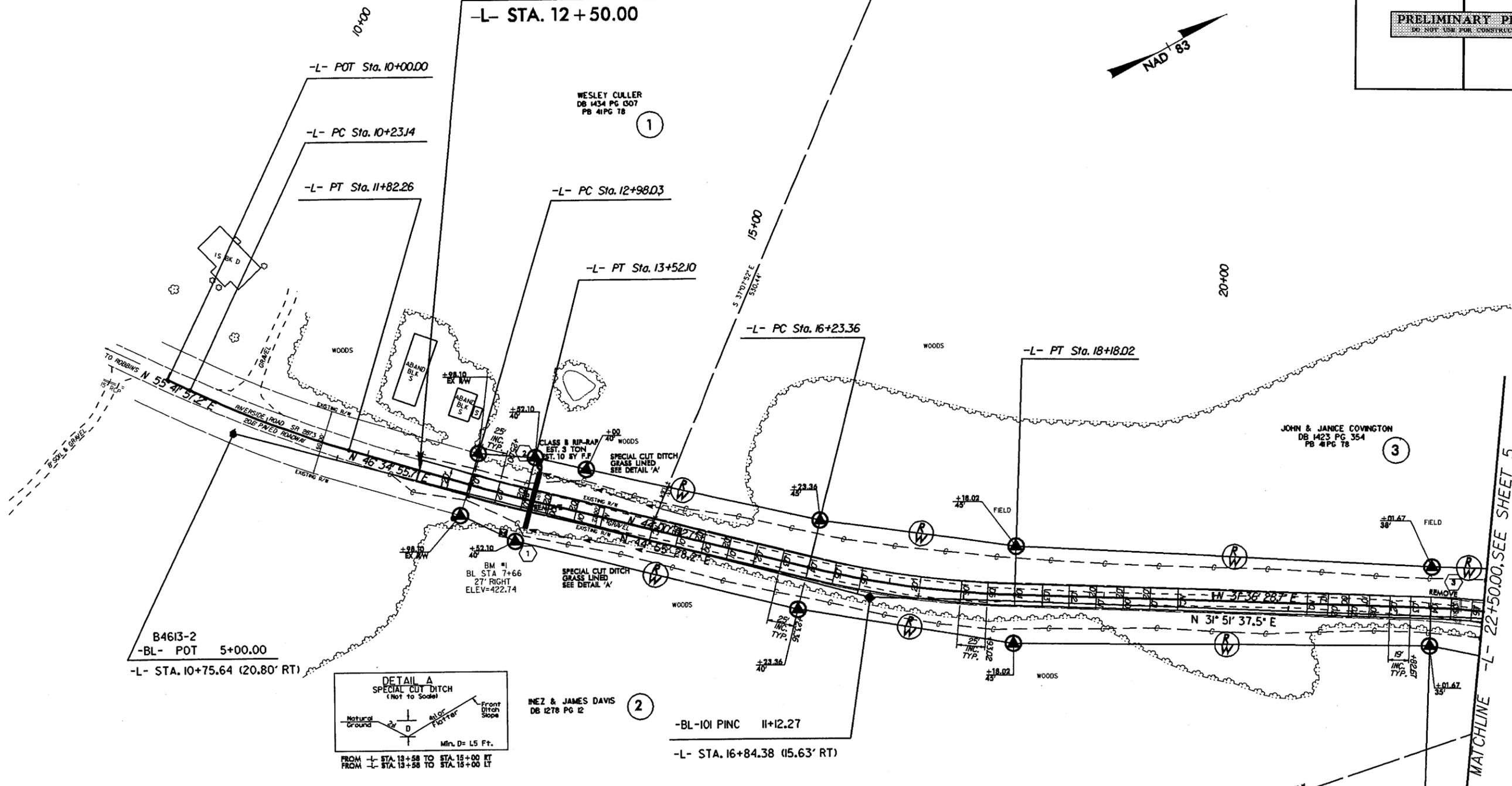
-L- STA. 27+93.00 TO 29+87.55 LT
-L- STA. 31+86.10 TO 32+97.00 LT
-L- STA. 27+93.00 TO 29+83.90 RT
-L- STA. 31+82.33 TO 32+60.96 RT

6/2/99

I:\FEB-2008 09:42 4613_r.dwg - typ.dgn

PROJECT REFERENCE NO. B-4613	SHEET NO. 4
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	

BEGIN TIP PROJECT B-4613



DESIGN EXCEPTION REQUIRED FOR DESIGN SPEED
AND VERTICAL CURVE /STOPPING SIGHT DISTANCE (SSD)

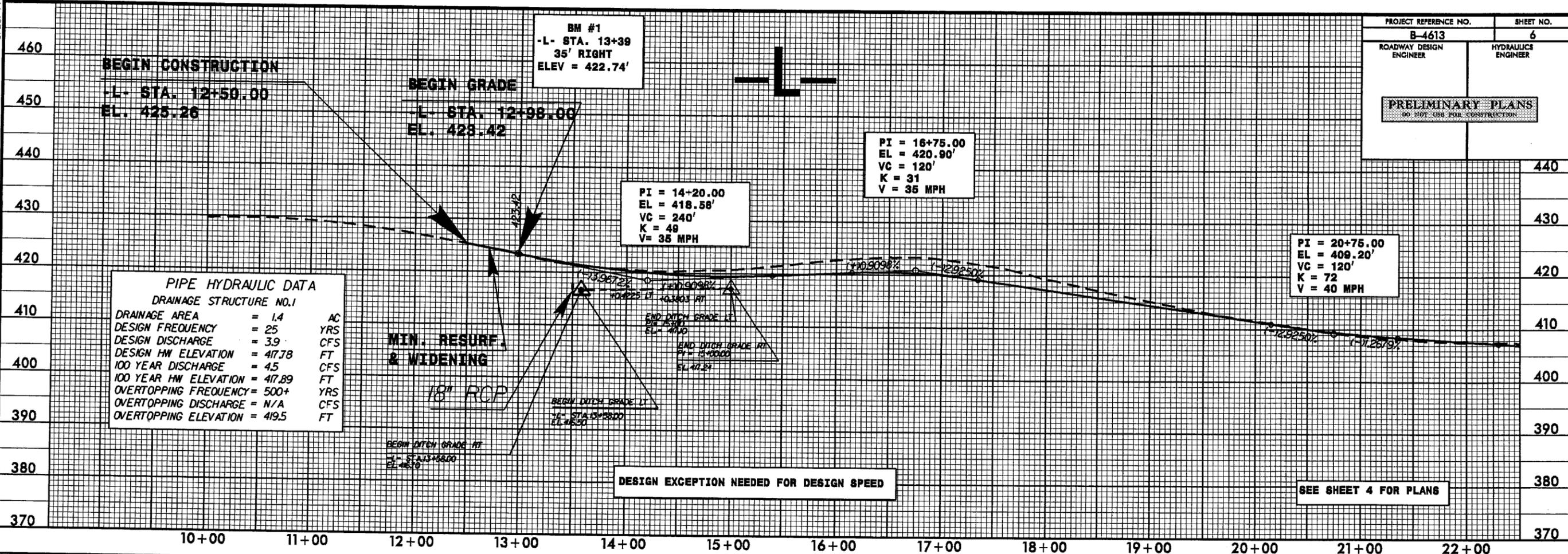
-L-			
PI Sta 11+02.87	PI Sta 13+25.07	PI Sta 17+21.07	PI Sta 25+56.55
$\Delta = 9^{\circ} 07' 01.5''$ (LT)	$\Delta = 2^{\circ} 34' 53.0''$ (LT)	$\Delta = 12^{\circ} 23' 34.0''$ (LT)	$\Delta = 47^{\circ} 50' 42.9''$ (RT)
D = 5' 43' 46.5"	D = 4' 46' 28.7"	D = 6' 21' 58.3"	D = 7' 09' 43.1"
L = 159.12'	L = 54.06'	L = 194.67'	L = 668.05'
T = 79.73'	T = 27.04'	T = 97.71'	T = 354.89'
R = 1,000.00'	R = 1,200.00'	R = 900.00'	R = 800.00'
SE = N/A	SE = SEE PLANS	SE = 0.06	SE = 0.06
	V = 35 mph	V = 35 mph	V = 35 mph

FOR PROFILE, SEE SHEET 6.

8/17/99
 21-FEB-2008 09:42
 4613-rdy-psh-h.dgn
 15:16:00

5/28/09

PROJECT REFERENCE NO. B-4613	SHEET NO. 6
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	

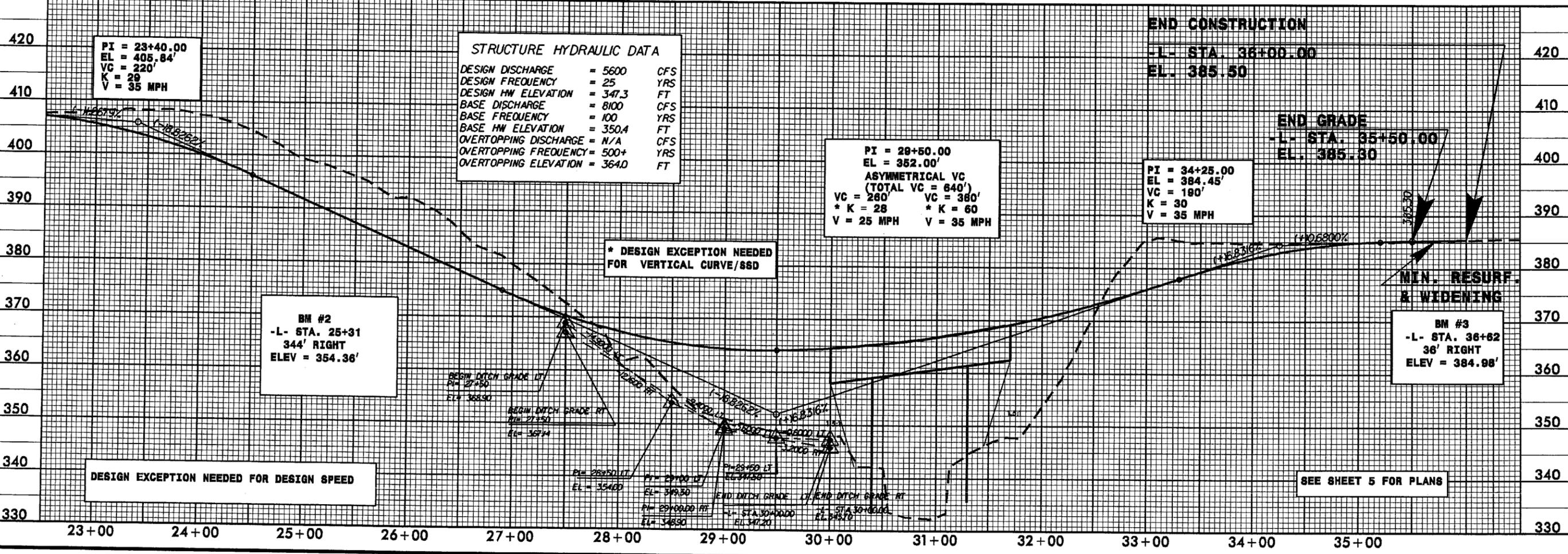


PIPE HYDRAULIC DATA
DRAINAGE STRUCTURE NO.1

DRAINAGE AREA	= 1.4	AC
DESIGN FREQUENCY	= 25	YRS
DESIGN DISCHARGE	= 3.9	CFS
DESIGN HW ELEVATION	= 417.78	FT
100 YEAR DISCHARGE	= 4.5	CFS
100 YEAR HW ELEVATION	= 417.89	FT
OVERTOPPING FREQUENCY	= 500+	YRS
OVERTOPPING DISCHARGE	= N/A	CFS
OVERTOPPING ELEVATION	= 419.5	FT

STRUCTURE HYDRAULIC DATA

DESIGN DISCHARGE	= 5600	CFS
DESIGN FREQUENCY	= 25	YRS
DESIGN HW ELEVATION	= 347.3	FT
BASE DISCHARGE	= 8100	CFS
BASE FREQUENCY	= 100	YRS
BASE HW ELEVATION	= 350.4	FT
OVERTOPPING DISCHARGE	= N/A	CFS
OVERTOPPING FREQUENCY	= 500+	YRS
OVERTOPPING ELEVATION	= 364.0	FT



25-FEB-2008 10:40 b-4613-rdy-p16.dgn