



STATE OF NORTH CAROLINA  
DEPARTMENT OF TRANSPORTATION

MICHAEL F. EASLEY  
GOVERNOR

LYNDO TIPPETT  
SECRETARY

April 9, 2008

U.S. Army Corps of Engineers  
Raleigh Regulatory Field Office  
3331 Heritage Trade Drive, Suite 105  
Wake Forest, North Carolina 27587

ATTENTION: Mr. John Thomas  
NCDOT Coordinator, Division 9

Dear Sir:

SUBJECT: **Application for Section 404 Nationwide Permit Number 33** for the proposed replacement of Bridge No. 14 over Town Fork Creek and Bridge No. 44 over Town Fork Creek overflow on NC 8, Division 9, Stokes County. Federal Aid Project No. BRSTP – 8 (2), State Project No. 8.1641001, WBS Element 33620.1.1, T.I.P. No. B-4280.

The North Carolina Department of Transportation (NCDOT) proposes to replace Bridge No. 14 over Town Fork Creek and Bridge No. 44 over Town Fork Creek overflow on NC 8 in Stokes County. Both bridges will be replaced on new alignment, just to the east of the existing structures. Bridge No. 44 crosses a non-jurisdictional feature. Bridge No. 14 (seven spans, 206 linear feet) will be replaced with a three span, 222-foot long 54-inch pre-stressed concrete girder bridge. The bridge will have a clear roadway width of 34 feet, with two 12-foot lanes and 5-foot offsets on each side. This new structure will span Town Fork Creek. The proposed approaches for this project will have two 12-foot lanes with 8-foot shoulders. Approximately 4 feet of each shoulder will be paved and 4 feet will be grass-covered. The shoulders along the western side of the approaches will be widened to 11 feet where guardrail is present. Traffic will be maintained on the existing bridges during construction.

Nationwide Permit Numbers 23 and 33 were issued for this project by the U.S. Army Corps of Engineers (USACE) on September 27, 2005 (Action ID No. 200521394 200521395). A Section 401 Water Quality Certification (WQC) was also issued by the N.C. Division of Water Quality (NCDWQ) on June 26, 2007 (DWQ Project No. 05-1666). However, these permits have since expired effective March 18, 2007. Please see Section IV of the enclosed Pre-Construction Notification (PCN) for more details. Also enclosed are copies of the permit drawings, roadway design plans, U.S. Fish and Wildlife Service (USFWS) concurrence letter dated May 2, 2005, and USACE Jurisdictional Determination (Rapanos) form for the above-referenced project. The

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

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

WEBSITE: [WWW.NCDOT.ORG](http://WWW.NCDOT.ORG)

PHYSICAL ADDRESS:  
2728 CAPITAL BLVD, SUITE 240  
RALEIGH, NC 27604

Categorical Exclusion (CE) for this project was completed and signed in March 2005 and distributed shortly thereafter. Additional copies of this document are available upon request.

## IMPACTS TO WATERS OF THE UNITED STATES

### General Description

The project is located in the Roanoke River Basin (sub-basin 03-02-01). This area is part of Hydrologic Cataloging Unit 03010103. Town Fork Creek is the only jurisdictional water resource impacted by this project. Town Fork Creek overflow, which runs underneath Bridge No. 44, is non-jurisdictional. A Jurisdictional Determination (JD) was most recently issued for this project by USACE on September 27, 2005.

Town Fork Creek is a perennial stream that flows west to east underneath Bridge No. 14. The portion of Town Fork Creek that flows through the construction limits is assigned Stream Index Number 22-25 (08/01/1998) by the NCDWQ and has a best usage classification of C. The creek, under normal conditions, exhibits moderate flow, has an approximate depth of 3 feet, and has an average width of 70 feet. The substrate of Town Fork Creek is composed of silt, cobble, and boulders.

**Neither High Quality Waters (HQW), Water Supplies (WS I or WS II), nor Outstanding Resource Waters (ORW) occur within 1.0 mile of the project study area.** Additionally, no portion of Town Fork Creek, its tributaries, or other surface waters within 1.0 mile of the project are listed on the NCDWQ 2006 Final 303(d) List of Impaired Waters. Although Stokes County is listed as a mountain trout county, Town Fork Creek does not support trout and is not designated as a mountain trout stream.

### Permanent Impacts

There are no permanent impacts associated with this project because the structure replacing Bridge No. 14 will span Town Fork Creek.

### Temporary Impacts

A total of four temporary work pads will be constructed for this project, resulting in a total of 0.05 acres of temporary surface water impacts to Town Fork Creek (Site 1). All work pads will be composed of Class II rip rap topped with 1 foot of Class B rip rap. Previous design included the use of two temporary work pads and two temporary work bridges. However, in order to reduce project cost, the NCDOT now proposes to exclusively use work pads.

Two temporary work-pads will be placed into Town Fork Creek to assist in the demolition of the existing structure (Bridge No. 14). One work pad will be constructed on each side of the creek. The work pad on the southern bank (~STA. 19+00LT -L-) will result in 0.022 acres of temporary surface water impacts. The work pad on the northern bank (~STA. 19+53LT -L-) will temporarily impact 0.011 acres of Town Fork Creek.

Two additional temporary work pads will be placed into Town Fork Creek to assist in the construction of the new structure. Specifically, they will be used in the construction of the two interior bents and the superstructure. One work pad will be constructed on each side of the

creek. The work pad on the southern bank (~STA. 18+64 -L-) will result in 0.011 acres of temporary surface water impacts. The work pad on the northern bank (~STA. 19+58 -L-) will temporarily impact 0.006 acres of Town Fork Creek.

### Bridge Demolition

The existing superstructure of Bridge No. 14 consists of an asphalt wearing surface on a reinforced concrete deck atop steel I-beams. The substructure is composed of reinforced concrete caps on timber piles. The asphalt wearing surface will be removed without dropping any portion of it into the water. However, there is potential for components of the bridge to be dropped into Waters of the United States during demolition. The temporary fill associated with the removal of existing bridge components, including the reinforced concrete deck, concrete caps, and timber piles, may be as much as 10 cubic yards.

During the demolition of Bridge No. 14, NCDOT shall adhere to NCDOT's Best Management Practices (BMPs) for Bridge Demolition and Removal.

### Utility Impacts

No impacts to jurisdictional waters will occur as a result of utility work associated with this project. Within the project limits there is an existing 8-inch PVC waterline; however, the line ends before it reaches any jurisdictional features. There are also aerial power and telephone lines located within the project limits, but work on them will result in no jurisdictional impacts.

## **RESTORATION PLAN**

The stone materials used as temporary fill in the construction of the two temporary work pads used to demolish the existing structure will be removed shortly after demolition is completed. The stone materials used to construct the two work pads used during the construction of the new bridge will also be removed, once construction is completed. The temporary fill areas will be restored back to their pre-project elevations. NCDOT will also restore the streambed to its pre-project contours.

## **REMOVAL AND DISPOSAL PLAN**

The temporary work pads will be removed from Town Fork Creek after their purposes have been served. All stone material placed in the stream for construction of the work pads will be removed by the contractor using excavation equipment. The contractor will be required to submit a reclamation plan for the removal of and disposal of all material off-site at an upland location. The contractor will have the option of reusing any of the materials that the engineer deems suitable in the construction of project.

## **AVOIDANCE, MINIMIZATION, AND COMPENSATORY 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 National Environmental Policy Act (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 U.S. The following is a list of the project’s jurisdictional stream avoidance/minimization activities proposed or completed by NCDOT:

Avoidance/Minimization

- Bridge No. 14 was extended from 206 feet to 222 feet. The new bridge will span Town Fork Creek; therefore, no impacts will result from bents in the water.
- In-stream activity will be limited to the use of temporary work pads in Town Fork Creek, two for demolition of the existing structure and two for construction of the new structure.
- During construction, traffic will be maintained on the existing structures.
- Temporary construction impacts due to erosion and sedimentation will be minimized through implementation of stringent erosion control methods and use of NCDOT’s BMPs for Protection of Surface Waters.
- NCDOT will implement its BMP’s for Bridge Demolition and Removal during this project.

Compensatory Mitigation

No permanent impacts will result from the replacement of Bridge No. 14. Therefore, no mitigation is proposed for 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. As of its most recent update on January 31, 2008, the USFWS website lists three federally protected species for Stokes County. These species and their associated biological conclusions are listed below in Table 1.

**Table 1. Federally Protected Species for Stokes County**

Common Name	Scientific Name	Federal Status	Biological Conclusion	Habitat Present
James spiny mussel	<i>Pleurobema collina</i>	E	No Effect	Yes, poor quality
small-anthered bittercress	<i>Cardamine micranthera</i>	E	No Effect	Yes
Schweinitz’s sunflower	<i>Helianthus schweinitzii</i>	E	No Effect	Yes

E - “Endangered”; a species that is threatened with extinction throughout all or a significant portion of its range.

Mussel surveys for the James spiny mussel were conducted on August 1, 2002 by NCDOT biologists Jared Gray, Neil Medlin, and Jeff Burleson. During the survey, no freshwater mussels were found. Although Town Fork Creek has potential habitat for mussels, the fact that no live freshwater mussels of any kind have been found there means that something (either historically or recent) is affecting the water chemistry of the creek. This issue may therefore be limiting mussels from inhabiting the creek. In the past, NCDOT, USFWS, and the N.C. Wildlife Resource Commission (NCWRC) have performed surveys at different crossings of Town Fork Creek. These past surveys were done in April 1992, November 2000, and October 2001. The only evidence of any mussel species found during these surveys was a shell of an eastern floater (*Pyganodon cataracta*). Given the results of all of the surveys, it is apparent that the James

spiny mussel does not occur in the project footprint. In addition to a field survey, a search of the N.C. Natural Heritage Program (NCNHP) database (GIS shapefiles most recently updated on February 13, 2008) on March 25, 2008 revealed no known populations of this species within 1.0 mile of the project. Since no quality habitat is present, no individuals were observed, and no known populations are present within 1.0 mile of the project, a biological conclusion of “No Effect” has been assigned to this species.

The project study area has been surveyed for small-anthered bittercress on three occasions. The first survey was performed on May 23, 2002 by NCDOT biologists Chris Rivenbark and Lindsey Riddick. The second survey was performed by NCDOT biologists Brett Feulner, Chris Underwood, and Eric Adrignola on April 6, 2005. The most recent survey was performed on April 18, 2007 by NCDOT biologists Lance Fontaine, Karen Lynch, and Jim Mason and NCNHP biologist Suzanne Mason. On all occasions, potential habitat was found along the stream banks of Town Fork Creek near Bridge No. 14. Since no jurisdictional features flow underneath Bridge No. 44, surveys were not performed in the vicinity of that structure. No individuals of this species were found during any survey, although specimens of Pennsylvania bittercress (*Cardamine pensylvanica*) and, possibly, Long’s bittercress (*Cardamine longii*) were identified along this portion of Town Fork Creek. In addition to field surveys, a search of the NCNHP database on March 25, 2008 revealed no known populations of this species within 1.0 mile of the project. Since no individuals were observed and no known populations are present within 1.0 mile of the project, a biological conclusion of “No Effect” has been assigned to this species.

The project study area has been surveyed for Schweinitz’s sunflower on three separate occasions. The first survey was performed by NCDOT biologists Chris Rivenbark and Jill Holmes for the Natural Resources Technical Report (NRTR; October 23, 2001). The second survey was performed on October 28, 2003 by NCDOT biologists Brett Feulner and Eric Adrignola. The most recent survey was performed on October 4, 2006 by NCDOT biologists Sara Easterly, Amy James, and Jim Mason. On all occasions, suitable habitat in the form of roadsides existed; however, no Schweinitz’s sunflower individuals were observed during any of the surveys. In addition to field surveys, a search of the NCNHP database on March 25, 2008 revealed no known populations of this species within 1.0 mile of the project. Since no individuals were observed and no known populations are present within 1.0 mile of the project, a biological conclusion of “No Effect” has been assigned to this species.

Since potential habitat existed within the project limits for all three species, concurrence was requested from the USFWS. Concurrence was received on May 2, 2005.

### **MORATORIUM**

The NCWRC has requested a moratorium for Town Fork Creek from February 1<sup>st</sup> to June 30<sup>th</sup> due to the presence of a “unique fish assemblage”. However, NCDOT’s work will not have a significant adverse effect upon water quality nor will it degrade the waters of Town Fork Creek so that existing uses of the stream, associated wetlands, or downstream waters would be precluded. Therefore, NCDOT does not believe that this moratorium is warranted. Nevertheless, in an effort to ensure that the project is completed without further delay in order to maintain safety for the traveling public, NCDOT has rescheduled construction of this project to complete the work within the bounds of the moratorium. NCDOT does so without waiving its right to challenge similar moratorium conditions imposed on future projects.

## SCHEDULE

The project calls for a review date of May 27, 2008, a letting of July 15, 2008, and a date of availability of August 26, 2008. It is expected that the contractor will choose to start construction in August/September 2008.

## REGULATORY APPROVALS

Section 404 Permit: A request is hereby submitted for a Nationwide Permit 33, issued under Section 404 of the CWA, authorizing activities associated with this project that will result in temporary impacts to jurisdictional waters.

Section 401 Permit: We anticipate that Section 401 General WQC 3688 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.

The NCWRC has previously submitted comments (on May 14, 2004) recommending an in-stream work moratorium from May 1<sup>st</sup> to July 15<sup>th</sup>. Through written correspondence from NCDWQ on August 31, 2005, NCDOT was informed that NCDWQ, in consultation with the NCWRC, had lengthened the moratorium to occur from April 1<sup>st</sup> to June 30<sup>th</sup>. Through a second memorandum from NCDWQ on November 8, 2005, again in consultation with the NCWRC, NCDOT was informed that the recommended in-stream work moratorium had again been lengthened to occur between February 1<sup>st</sup> and June 30<sup>th</sup>. Based on these correspondences, NCDOT believes that our requirement for review of this project by the NCWRC has been satisfied and is not requesting further comment. NCDOT therefore considers this application complete as submitted.

A copy of this permit application will be posted on the NCDOT website at: <http://www.ncdot.org/doh/preconstruct/pe/>. If you have any questions or need additional information, please contact Mr. Jim Mason at (919) 715-5531 or [jmason@dot.state.nc.us](mailto:jmason@dot.state.nc.us).

Sincerely,



fev

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

### w/attachment

Mr. Brian Wrenn, NCDWQ (2 Copies)  
Ms. Marla Chambers, NCWRC  
Ms. Marella Buncick, USFWS

### w/o attachment (see website for attachments)

Dr. David Chang, P.E., Hydraulics  
Mr. Mark Staley, Roadside Environmental  
Mr. Victor Barbour, P.E., P. S. Unit  
Mr. Greg Perfetti, P.E., Structure Design

Mr. S. P. Ivey, P.E., Division Engineer

Mr. Kent Boyer, DEO

Mr. Jay Bennett, P.E., Roadway Design

Mr. Majed Alghandour, P. E.,  
Programming and TIP

Mr. Art McMillan, P.E., Highway Design

Mr. Scott McLendon, USACE,  
Wilmington

Mr. Terry Harris, P.E., 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 33

3. If this notification is solely a courtesy copy because written approval for the 401 Certification is not required, check here:

4. If payment into the North Carolina Ecosystem Enhancement Program (NCEEP) is proposed for mitigation of impacts, attach the acceptance letter from NCEEP, complete section VIII, and check here:

5. If your project is located in any of North Carolina's twenty coastal counties (listed on page 4), and the project is within a North Carolina Division of Coastal Management Area of Environmental Concern (see the top of page 2 for further details), check here:

**II. Applicant Information**

1. Owner/Applicant Information

Name: \_\_\_\_\_ Gregory J. Thorpe, Ph.D., Environmental Management Director \_\_\_\_\_  
 Mailing Address: \_\_\_\_\_ North Carolina Department of Transportation \_\_\_\_\_  
 \_\_\_\_\_ 1598 Mail Service Center \_\_\_\_\_  
 \_\_\_\_\_ Raleigh, North Carolina 27699-1598 \_\_\_\_\_

Telephone Number: \_\_\_\_\_ 919-733-3141 \_\_\_\_\_ Fax Number: \_\_\_\_\_ 919-733-9794 \_\_\_\_\_  
 E-mail Address: \_\_\_\_\_ gthorpe@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

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

1. Name of project: Replacement of Bridge No. 14 over Town Fork Creek and Bridge No. 44 over Town Fork Creek Overflow on NC 8
2. T.I.P. Project Number or State Project Number (NCDOT Only): B-4280
3. Property Identification Number (Tax PIN): \_\_\_\_\_
4. Location  
County: Stokes Nearest Town: Germanton  
Subdivision name (include phase/lot number): \_\_\_\_\_  
Directions to site (include road numbers/names, landmarks, etc.): from Rural Hall, take NC 65 north to NC 8, take left onto NC 8, 1<sup>st</sup> two bridges on NC 8
5. Site coordinates (For linear projects, such as a road or utility line, attach a sheet that separately lists the coordinates for each crossing of a distinct waterbody.)  
Decimal Degrees (6 digits minimum): 36.2680 °N 80.2226 °W
6. Property size (acres): Please see attached drawings
7. Name of nearest receiving body of water: Town Fork Creek
8. River Basin: Roanoke  
(Note – this must be one of North Carolina's seventeen designated major river basins. The River Basin map is available at <http://h2o.enr.state.nc.us/admin/maps/>.)
9. Describe the existing conditions on the site and general land use in the vicinity of the project at the time of this application: NC 8 is currently classified as a Rural Major Collector. Land use within the project vicinity is primarily agricultural, with some forested areas, small businesses, and residences.
10. Describe the overall project in detail, including the type of equipment to be used: See attached cover letter for project description. Heavy duty excavation equipment will be used such as trucks, dozers, and other various equipment necessary for bridge and roadway construction.
11. Explain the purpose of the proposed work: Bridge Nos. 14 and No. 44 are considered functionally obsolete and structurally deficient. Replacing them will result in safer traffic operations.

**IV. Prior Project History**

If jurisdictional determinations and/or permits have been requested and/or obtained for this project (including all prior phases of the same subdivision) in the past, please explain. Include the USACE Action ID Number, DWQ Project Number, application date, and date permits and certifications were issued or withdrawn. Provide photocopies of previously issued permits, certifications or other useful information. Describe previously approved wetland, stream and buffer impacts, along with associated mitigation (where applicable). If this is a NCDOT project, list and describe permits issued for prior segments of the same T.I.P. project, along with construction schedules. A Section 404 Nationwide Permit 23/33 was issued by USACE on September 27, 2005 (Action ID No. 200521394 200521395). The application date for this permit was August 29, 2005. The permit application was revised September 16, 2005. A jurisdictional determination was issued along with this permit. A Section 401 Individual Water Quality Certification was issued by NCDWQ on June 26, 2007 (DWQ Project No. 05-1666). This permit was applied for by NCDOT on March 12, 2007. Both permits approved 0.011 acres of temporary, non-mitigable stream impacts to Town Fork Creek. Both the Section 404 and Section 401 permits expired effective March 18, 2007.

---

**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: See attached cover letter.
-

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)					0.0

3. List the total acreage (estimated) of all existing wetlands on the property: 0.0

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	Town Fork Creek	Temporary Work Pad	Perennial	70 ft.		0.022
1	Town Fork Creek	Temporary Work Pad	Perennial	70 ft.		0.011
1	Town Fork Creek	Temporary Work Pad	Perennial	70 ft.		0.011
1	Town Fork Creek	Temporary Work Pad	Perennial	70 ft.		0.006
Total Stream Impact (by length and acreage)						0.05

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)				0.0

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

Stream Impact (acres):	0.05
Wetland Impact (acres):	0.00
Open Water Impact (acres):	0.00
Total Impact to Waters of the U.S. (acres)	0.05
Total Stream Impact (linear feet):	-----

7. Isolated Waters

Do any isolated waters exist on the property?  Yes  No

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

\_\_\_\_\_

8. Pond Creation

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

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

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

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

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

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

## VII. Impact Justification (Avoidance and Minimization)

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

\_\_\_\_\_

**VIII. Mitigation**

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

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

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

N/A  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

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): 0.00  
Amount of Non-riparian wetland mitigation requested (acres): 0.00  
Amount of Coastal wetland mitigation requested (acres): 0.00

**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	0.00		0.00

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

3. If buffer mitigation is required, please discuss what type of mitigation is proposed (i.e., Donation of Property, Riparian Buffer Restoration / Enhancement, or Payment into the Riparian Buffer Restoration Fund). Please attach all appropriate information as identified within 15A NCAC 2B .0242 or .0244, or .0260. N/A

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

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

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

Clearly detail the ultimate treatment methods and disposition (non-discharge or discharge) of wastewater generated from the proposed project, or available capacity of the subject facility.  
N/A

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

Is this site in violation of DWQ Wetland Rules (15A NCAC 2H .0500) or any Buffer Rules?

Yes  No

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

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

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

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

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

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



4.11.08

**Applicant/Agent's Signature**

**Date**

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



# United States Department of the Interior

## FISH AND WILDLIFE SERVICE

Asheville Field Office  
160 Zillicoa Street  
Asheville, North Carolina 28801

May 2, 2005

Ms. Megan Willis  
Office of Natural Environment  
North Carolina Department of Transportation  
1598 Mail Service Center  
Raleigh, North Carolina 27699-1598

Dear Ms. Willis:

Subject: Endangered Species Concurrence for the Replacement of Bridge No. 14 over Town Fork Creek and Bridge No. 44 over Town Creek Overflow, Stokes County, North Carolina (TIP Project B-4280)

We have reviewed the federally listed species survey information that was provided for the subject project and are providing the following comments in accordance with the Fish and Wildlife Coordination Act, as amended (16 U.S.C. 661-667e), and section 7 of the Endangered Species Act of 1973, as amended (16 U.S.C. 1531-1543) (Act).

According to information in the permit application, the North Carolina Department of Transportation (NCDOT) proposes to replace Bridge No. 14 over Town Fork Creek and Bridge No. 44 over Town Creek Overflow in Stokes County.

**Federally Listed Species** - A survey for the federally endangered *Helianthus schweinitzii* (Schweinitz's sunflower) was conducted on October 28, 2003; no plants were discovered during the survey. A survey for the federally endangered small-anthered bittercress (*Cardamine micranthera*), which occurs throughout Stokes County, was conducted on May 23, 2002. According to the information provided potential habitat for small-anthered bittercress does exist along the stream banks of Bridge No. 14; however, no plants were discovered at either bridge.

According to our records all known occurrences of the federally endangered James spiny mussel (*Pleurobema collina*) within the Dan River are more than 18 miles upstream from the confluence point of Town Fork Creek and the Dan River. Surveys for the James spiny mussel were conducted at Bridge No. 14 on August 1, 2002, approximately 200 meters upstream and 150 meters downstream of the project area. No mussels were discovered during the survey.

Given the negative survey results for all three listed species, we do not believe these projects will have an effect on listed species; thus, the requirements under section 7(c) of the Act are fulfilled. However, obligations under section 7 of the Act must be reconsidered if: (1) new information reveals impacts of this identified action that may affect listed species or critical habitat in a manner not previously considered, (2) this action is subsequently modified in a manner that was not considered in this review, or (3) a new species is listed or critical habitat is determined that may be affected by the identified action.

**Fish and Wildlife Resources** - The information provided for these bridge replacement projects does not include detailed descriptions of the structures that will replace the existing bridges. In all cases, we recommend that an existing bridge be replaced with a new bridge. We recommend that each new bridge design include provisions for the roadbed and deck drainage to flow through a vegetated buffer prior to reaching the affected stream. This buffer should be large enough to alleviate any potential effects from the runoff of storm water and pollutants. The bridge designs should not alter the natural stream or stream-bank morphology or impede fish passage. Any piers or bents should be placed outside the bank-full width of the streams. The bridges and approaches should be designed to avoid any fill that will result in the damming or constriction of the channel or floodplain. If spanning the floodplain is not feasible, culverts should be installed in the floodplain portion of the approaches in order to restore some of the hydrological functions of the floodplain and reduce high velocities of floodwaters within the affected areas. Measures to control erosion and sedimentation should be in place prior to any ground-disturbing activities. Wet concrete should never be allowed to come into contact with the streams.

If you have questions about these comments, please contact Ms. Denise Moldenhauer of our staff at 828/258-3939, Ext. 226. In any future correspondence concerning this project, please reference our Log Number 4-2-05-186.

Sincerely,



for Brian P. Cole  
Field Supervisor

cc:

Ms. Diane Hampton, Division 9 Environmental Officer, North Carolina Department of Transportation, 375 Silas Creek Parkway, Winston-Salem, NC 27127

Mr. Ron Linville, Western Piedmont Region Reviewer, North Carolina Wildlife Resources Commission, 3855 Idlewild Road, Kernersville, NC 27284-9180

**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-4280: Replacement of Bridge No. 14 over Town Fork Creek and Bridge No. 44 over Town Fork Creek Overflow on NC 8.**

**C. PROJECT LOCATION AND BACKGROUND INFORMATION: form for Town Fork Creek (only jurisdictional feature impacted).**

State: NC County/parish/borough: Stokes City: Germanton  
Center coordinates of site (lat/long in degree decimal format): Lat. ° Pick List, Long. ° Pick List.  
Universal Transverse Mercator: 17 569826E 4013954N

Name of nearest waterbody: Town Fork Creek

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

Name of watershed or Hydrologic Unit Code (HUC): 03010103

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 **Are 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):<sup>1</sup>**

- TNWs, including territorial seas
- Wetlands adjacent to TNWs
- Relatively permanent waters<sup>2</sup> (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: 168 linear feet: 70 width (ft) and/or acres.

Wetlands: 0.00 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):<sup>3</sup>**

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

Explain:

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

<sup>2</sup> 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).

<sup>3</sup> 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 waterbody<sup>4</sup> 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 TNW<sup>5</sup>:

Tributary stream order, if known:

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

<sup>5</sup> 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):

- |  |  |                                   |
|--|--|-----------------------------------|
| <input type="checkbox"/> Silts           | <input type="checkbox"/> Sands                     | <input type="checkbox"/> Concrete |
| <input type="checkbox"/> Cobbles         | <input type="checkbox"/> Gravel                    | <input type="checkbox"/> Muck     |
| <input type="checkbox"/> Bedrock         | <input type="checkbox"/> Vegetation. Type/% cover: |                                   |
| <input type="checkbox"/> 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):

- |   |   |
|---|---|
| <input type="checkbox"/> Bed and banks  |   |
| <input type="checkbox"/> OHWM <sup>6</sup> (check all indicators that apply): |   |
| <input type="checkbox"/> clear, natural line impressed on the bank            | <input type="checkbox"/> the presence of litter and debris          |
| <input type="checkbox"/> changes in the character of soil                     | <input type="checkbox"/> destruction of terrestrial vegetation      |
| <input type="checkbox"/> shelving   | <input type="checkbox"/> the presence of wrack line                 |
| <input type="checkbox"/> vegetation matted down, bent, or absent              | <input type="checkbox"/> sediment sorting                           |
| <input type="checkbox"/> leaf litter disturbed or washed away                 | <input type="checkbox"/> scour                                      |
| <input type="checkbox"/> sediment deposition                                  | <input type="checkbox"/> multiple observed or predicted flow events |
| <input type="checkbox"/> water staining                                       | <input type="checkbox"/> abrupt change in plant community           |
| <input type="checkbox"/> other (list):  |   |
| <input type="checkbox"/> Discontinuous OHWM. <sup>7</sup> Explain:            |   |

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

- |  |  |
|--|--|
| <input checked="" type="checkbox"/> High Tide Line indicated by:   | <input checked="" type="checkbox"/> Mean High Water Mark indicated by: |
| <input type="checkbox"/> oil or scum line along shore objects      | <input type="checkbox"/> survey to available datum;                    |
| <input type="checkbox"/> fine shell or debris deposits (foreshore) | <input type="checkbox"/> physical markings;                            |
| <input type="checkbox"/> physical markings/characteristics         | <input type="checkbox"/> vegetation lines/changes in vegetation types. |
| <input type="checkbox"/> tidal gauges                              |  |
| <input type="checkbox"/> 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:

<sup>6</sup>A 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.

<sup>7</sup>Ibid.

(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: There is one RPW associated with this project. Water flows within Town Fork Creek year-round. Additionally, the tributary has established, stable banks and possesses several geomorphological and hydrological indicators indicative of perennial tributaries. Town Fork Creek flows into the Dan 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: linear feet width (ft).  
 Other non-wetland waters: acres.  
Identify type(s) of waters: .

**3. Non-RPWs<sup>8</sup> 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.<sup>9</sup>**

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):<sup>10</sup>**

- 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: .

<sup>8</sup>See Footnote # 3.

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

<sup>10</sup>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.

**Identify water body and summarize rationale supporting determination:**

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.

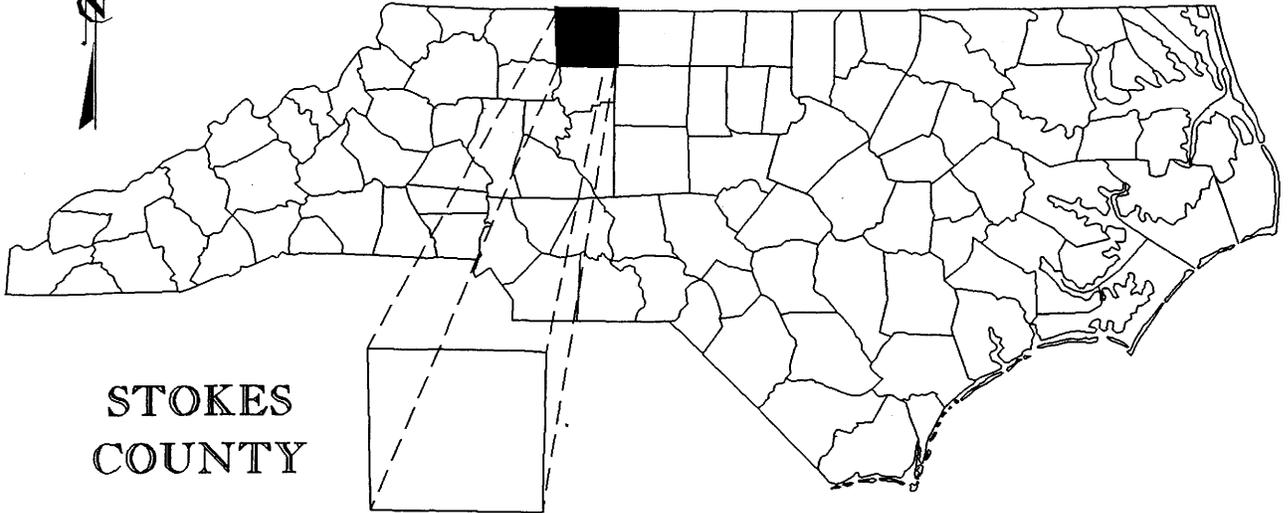
**SECTION IV: DATA SOURCES.**

**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: No wetlands will be impacted by this project.**

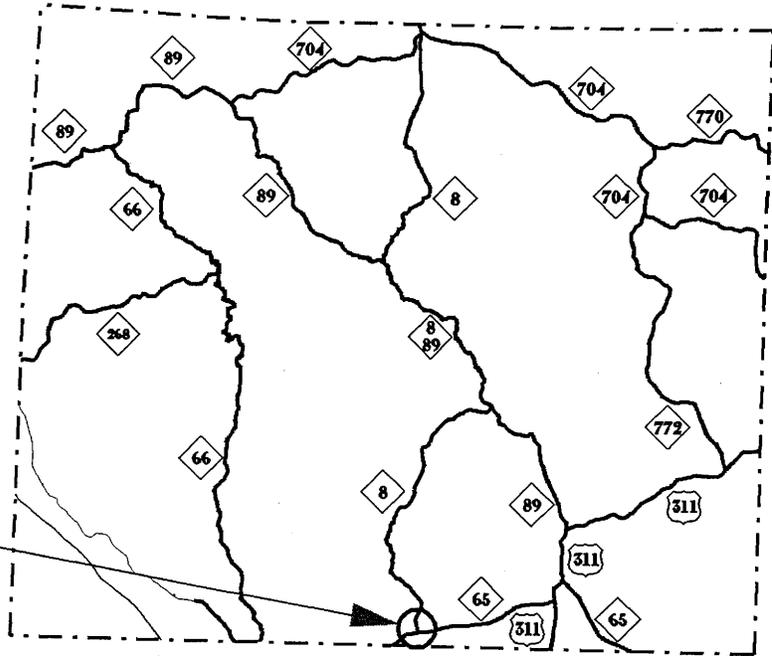
# NORTH CAROLINA



STOKES  
COUNTY



PROJECT  
SITE



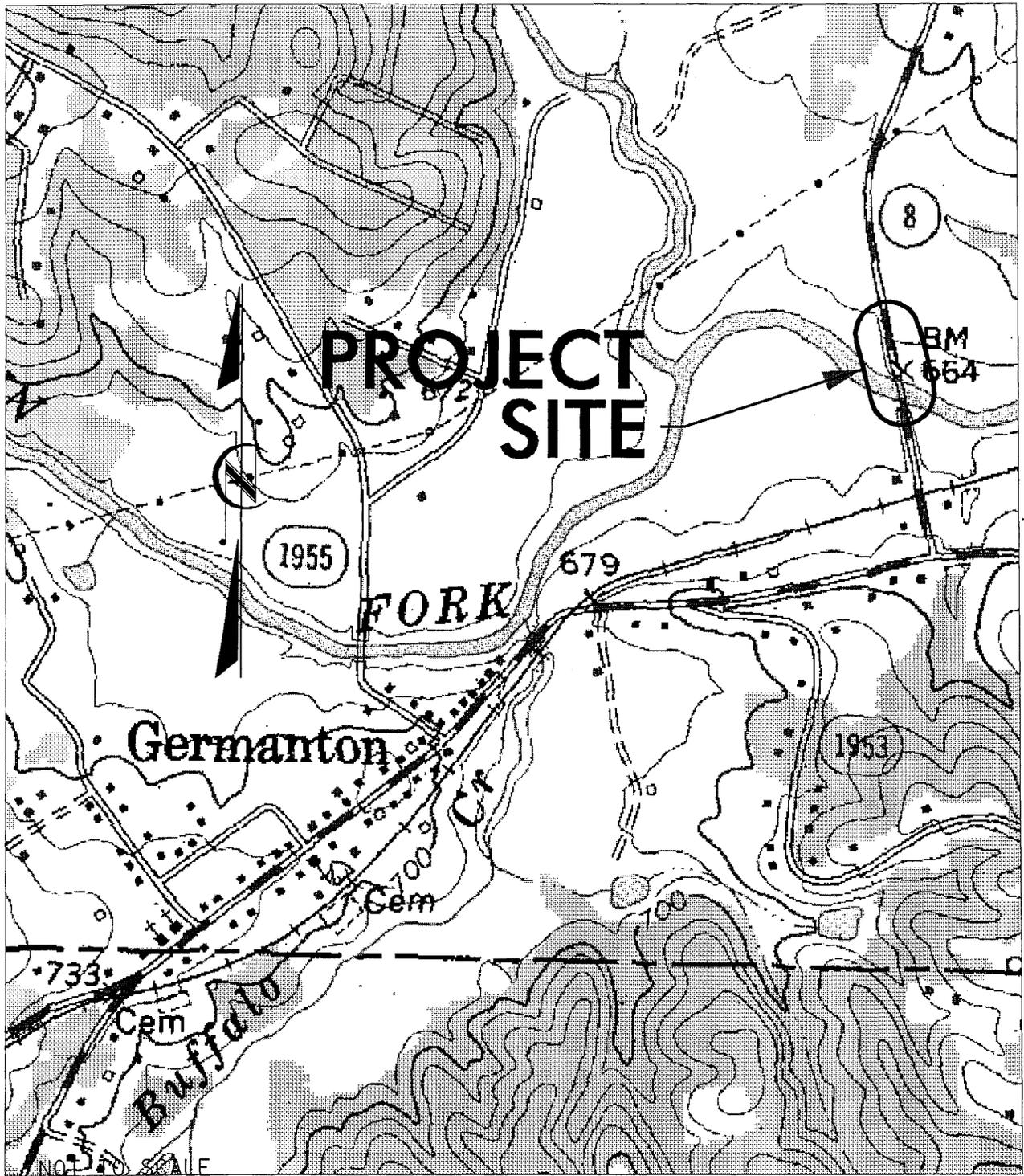
VICINITY  
MAP

NCDOT  
DIVISION OF HIGHWAYS  
STOKES COUNTY  
PROJECT: 33620.1.1 (B-4280)

REPLACE BRIDGE NO'S 14 AND 44 ON  
NC 8 OVER TOWN FORK CREEK  
AND TOWN FORK CREEK OVERFLOW

SHEET 1 OF 8

17 FEB 04



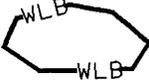
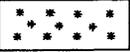
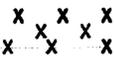
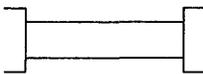
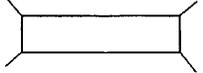
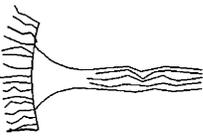
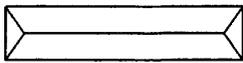
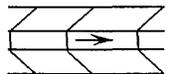
LOCATION  
MAP

NCDOT  
DIVISION OF HIGHWAYS  
STOKES COUNTY

PROJECT: 33620.1.1 (B-4280)

REPLACE BRIDGE NO'S 14 AND 44 ON  
NC 8 OVER TOWN FORK CREEK  
AND TOWN FORK CREEK OVERFLOW

# WETLAND LEGEND

<p>— WLB — WETLAND BOUNDARY</p> <p> WETLAND</p> <p> DENOTES FILL IN WETLAND</p> <p> DENOTES FILL IN SURFACE WATER</p> <p> DENOTES FILL IN SURFACE WATER (POND)</p> <p> DENOTES TEMPORARY FILL IN WETLAND</p> <p> DENOTES EXCAVATION IN WETLAND</p> <p> DENOTES TEMPORARY FILL IN SURFACE WATER</p> <p> DENOTES MECHANIZED CLEARING</p> <p>→ → → FLOW DIRECTION</p> <p>— TB — TOP OF BANK</p> <p>— WE — EDGE OF WATER</p> <p>— C — PROP. LIMIT OF CUT</p> <p>— F — PROP. LIMIT OF FILL</p> <p>—▲— PROP. RIGHT OF WAY</p> <p>— NG — NATURAL GROUND</p> <p>— PL — PROPERTY LINE</p> <p>— TDE — TEMP. DRAINAGE EASEMENT</p> <p>— PDE — PERMANENT DRAINAGE EASEMENT</p> <p>— EAB — EXIST. ENDANGERED ANIMAL BOUNDARY</p> <p>— EPB — EXIST. ENDANGERED PLANT BOUNDARY</p> <p>—▽— WATER SURFACE</p> <p> LIVE STAKES</p> <p> BOULDER</p> <p>— — — COIR FIBER ROLLS</p>	<p> PROPOSED BRIDGE</p> <p> PROPOSED BOX CULVERT</p> <p> PROPOSED PIPE CULVERT 12"-48" PIPES 54" PIPES &amp; ABOVE</p> <p>(DASHED LINES DENOTE EXISTING STRUCTURES)</p> <p> SINGLE TREE</p> <p>— — — WOODS LINE</p> <p> DRAINAGE INLET</p> <p> ROOTWAD</p> <p> RIP RAP</p> <p> ADJACENT PROPERTY OWNER OR PARCEL NUMBER IF AVAILABLE</p> <p> PREFORMED SCOUR HOLE</p> <p> LEVEL SPREADER (LS)</p> <p> DITCH / GRASS SWALE</p>
--	---

**NCDOT**  
 DIVISION OF HIGHWAYS  
 STOKES COUNTY  
 PROJECT: 33620.1.1 (B-4280)

**REPLACE BRIDGE NO'S 14 AND 44 ON  
 NC 8 OVER TOWN FORK CREEK  
 AND TOWN FORK CREEK OVERFLOW**

SHEET 3 OF 8

17 FEB 04

# PROPERTY OWNERS

NAMES AND ADDRESSES

PARCEL NO.	NAMES	ADDRESSES
2	WATTS REALTY	P.O. BOX 400 GERMANTOWN, NC
3	SANDRA BROWDER WATTS	150 CHATEAU ROAD DURHAM, NC

**NCDOT**

DIVISION OF HIGHWAYS

STOKES COUNTY

PROJECT: 33620.1.1 (B-4280)

REPLACE BRIDGE NO'S 14 AND 44 ON  
NC 8 OVER TOWN FORK CREEK  
AND TOWN FORK CREEK OVERFLOW

SHEET 4 OF 8

17 FEB 04

**WETLAND PERMIT IMPACT SUMMARY**

Site No.	Station (From/To)	Structure Size / Type	WETLAND IMPACTS					SURFACE WATER IMPACTS							
			Permanent Fill in Wetlands (ac)	Temp. Fill in Wetlands (ac)	Excavation in Wetlands (ac)	Mechanized Clearing in Wetlands (ac)	Hand Clearing in Wetlands (ac)	Permanent SW impacts (ac)	Temp. SW impacts (ac)	Existing Channel Impacts Permanent (ft)	Existing Channel Impacts Temp. (ft)	Natural Stream Design (ft)			
1	~19+00LT-L-	WORK PAD EXISTING									0.022				
1	~19+53LT-L-	WORK PAD EXISTING									0.011				
1	~18+64-L-	WORK PAD PROPOSED BRIDGE									0.011				
1	~19+58-L-	WORK PAD PROPOSED BRIDGE									0.006				
<b>TOTALS:</b>											0.050				

NC DEPARTMENT OF TRANSPORTATION  
DIVISION OF HIGHWAYS

STOKES COUNTY  
PROJECT 33620.1.1 B-4280

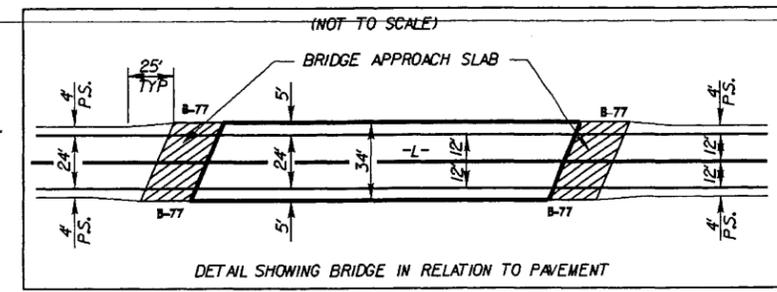
SHEET 5 of 8

3/24/2008

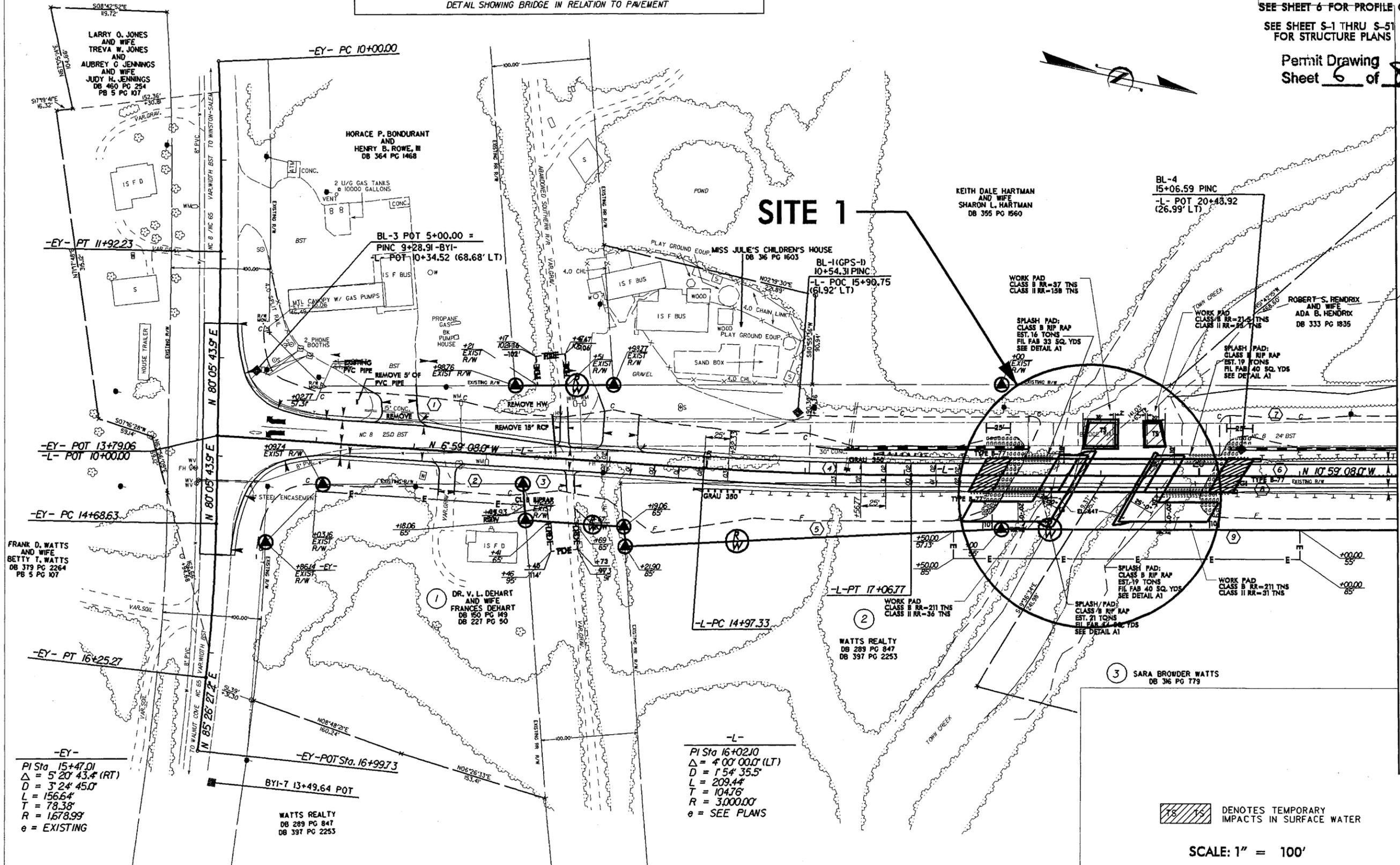
PROJECT REFERENCE NO. B-4280	SHEET NO. 4
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

SEE SHEET 6 FOR PROFILE OF -L-  
SEE SHEET S-1 THRU S-51 FOR STRUCTURE PLANS

Permit Drawing  
Sheet 6 of 8



-EY-  
PI Sta 10+96.14  
Δ = 3°17'34.5" (RT)  
D = 1'42'47.0"  
L = 192.23'  
T = 96.14'  
R = 3,344.66'  
e = EXISTING



-EY-  
PI Sta 15+47.01  
Δ = 5°20'43.4" (RT)  
D = 3'24'45.0"  
L = 156.64'  
T = 78.38'  
R = 1,678.99'  
e = EXISTING

-L-  
PI Sta 16+02.10  
Δ = 4°00'00.0" (LT)  
D = 1'54'35.5"  
L = 209.44'  
T = 104.76'  
R = 3,000.00'  
e = SEE PLANS

15 15 DENOTES TEMPORARY IMPACTS IN SURFACE WATER

SCALE: 1" = 100'

REVISIONS

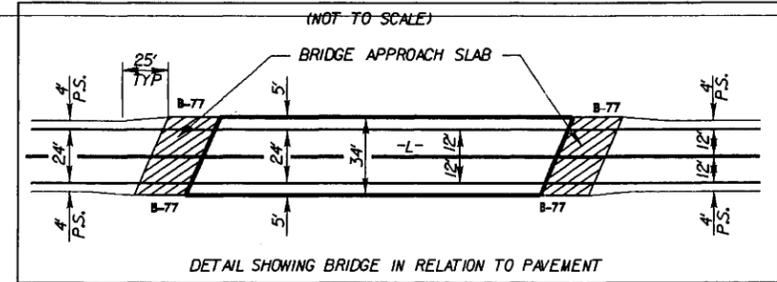
MATCH LINE -L- STA. 22+00.00 SEE SHEET 5

24-MAR-2008 10:23  
 F:\hydrolites\permits\environmental\dr-awings\4280\_hyd\_psh\_perm.dgn  
 8/17/99  
 24-MAR-2008 10:23  
 F:\hydrolites\permits\environmental\dr-awings\4280\_hyd\_psh\_perm.dgn  
 8/17/99

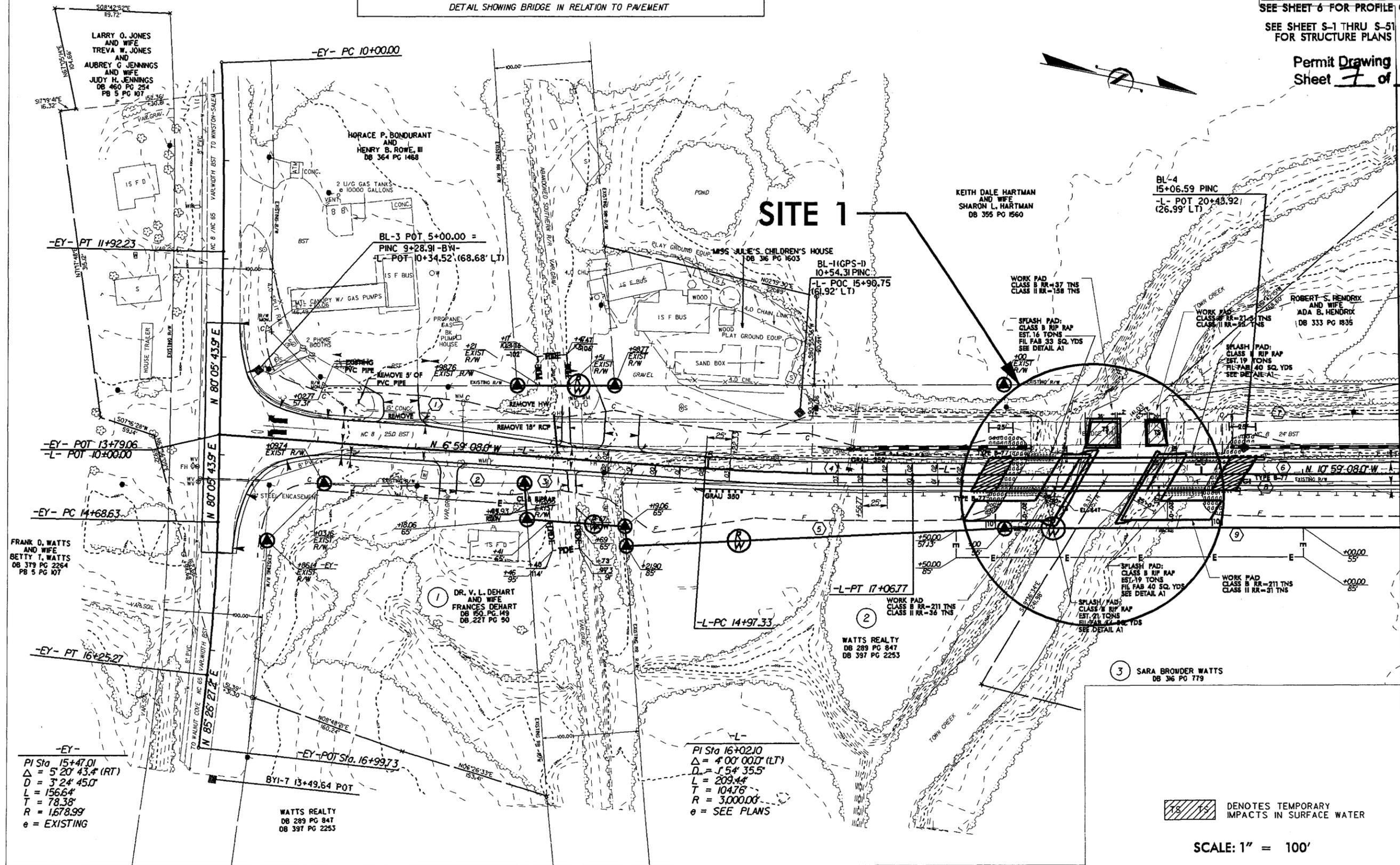
PROJECT REFERENCE NO. B-4280	SHEET NO. 4
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

SEE SHEET 6 FOR PROFILE OF -L-  
SEE SHEET S-1 THRU S-51 FOR STRUCTURE PLANS

Permit Drawing  
Sheet 7 of 8



-EY-  
PI Sta 10+96.14  
Δ = 3'17" 34.5" (RT)  
D = 1'42" 47.0"  
L = 192.23'  
T = 96.14'  
R = 3,344.66'  
e = EXISTING



-EY-  
PI Sta 15+47.01  
Δ = 5'20" 43.4" (RT)  
D = 3'24" 45.0"  
L = 156.64'  
T = 78.38'  
R = 1,678.99'  
e = EXISTING

-L-  
PI Sta 16+02.10  
Δ = 4'00" 00.0" (LT)  
D = 5'54" 35.5"  
L = 209.44'  
T = 104.78'  
R = 3,000.00'  
e = SEE PLANS

▨ DENOTES TEMPORARY IMPACTS IN SURFACE WATER

SCALE: 1" = 100'

REVISIONS

24-MAR-2008 10:24  
F:\high\utility\permits\environmental\drawings\4280\_hyd\_psh\_perm.t.dgn  
8/17/99

MATCH LINE -L- STA 22+00.00 SEE SHEET 5



STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	B-4280	1	
STATE PROJ. NO.	P.A. PROJ. NO.	DESCRIPTION	
33620.1.1	BRSTP-8(2)	PE	
33620.2.2	BRSTP-8(2)	RW & UTL	
33620.3.1	BRSTP-8(6)	CONST.	

STATE OF NORTH CAROLINA  
DIVISION OF HIGHWAYS

---

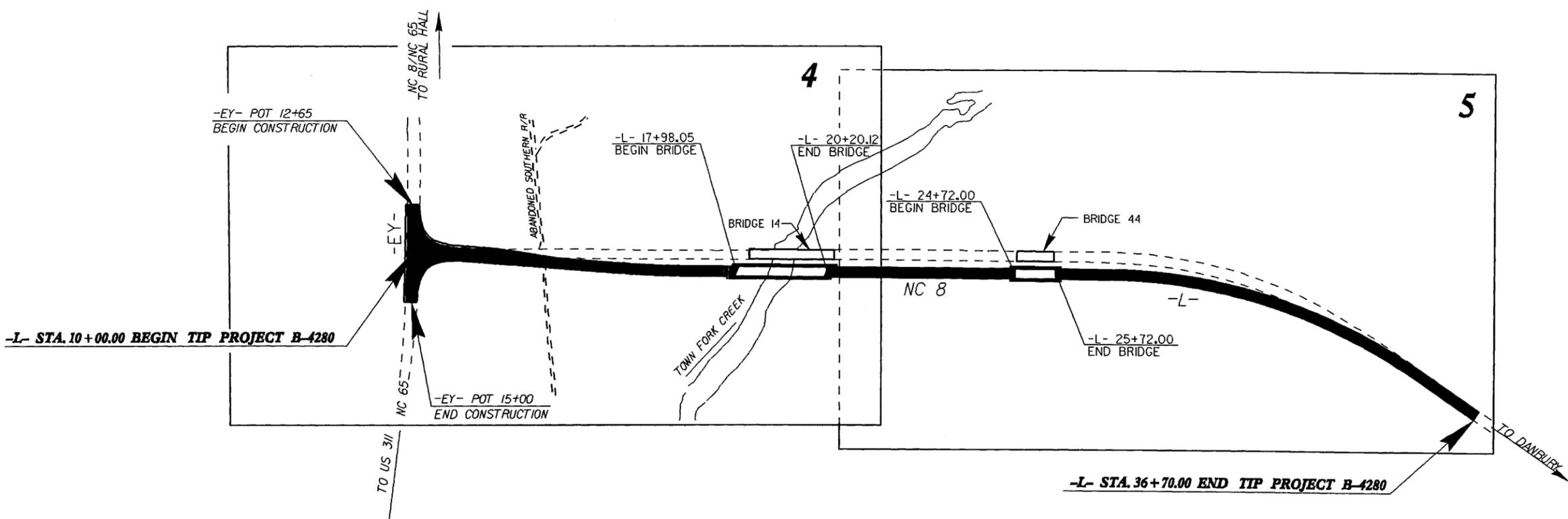
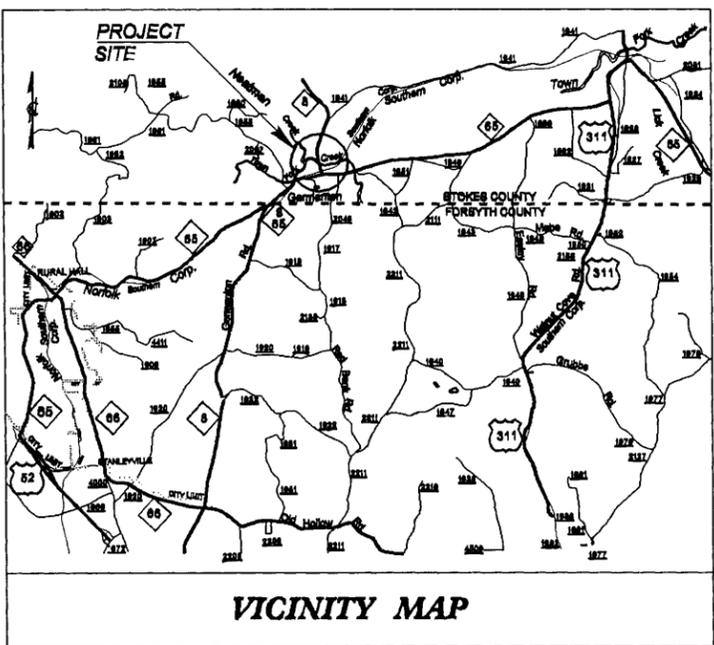
# STOKES COUNTY

---

**LOCATION: BRIDGE 14 AND BRIDGE 44 ON NC 8 OVER TOWN FORK CREEK AND TOWN FORK CREEK OVERFLOW**

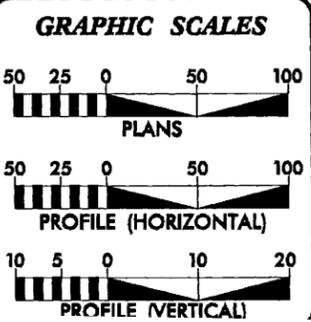
**TYPE OF WORK: GRADING, DRAINAGE, PAVING AND STRUCTURES**

See Sheet 1-A For Index of Sheets



**TIP PROJECT: B-4280**

**CONTRACT: C201500**



**DESIGN DATA**

ADT 2006 =	7,900
ADT 2025 =	12,200
DHV =	13 %
D =	60 %
*T =	6 %
V =	60 MPH
* TTST 1%	DUAL 5%

FUNCTIONAL CLASSIFICATION  
RURAL MAJOR COLLECTOR

**PROJECT LENGTH**

LENGTH ROADWAY TIP PROJECT B-4280 =	0.445 Miles
LENGTH STRUCTURE TIP PROJECT B-4280 =	0.061 Miles
TOTAL LENGTH OF TIP PROJECT B-4280 =	0.506 Miles

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

2006 STANDARD SPECIFICATIONS	
RIGHT OF WAY DATE: MAY 23, 2005	G.E. BREW, PE PROJECT ENGINEER
LETTING DATE: JULY 15, 2008	I.T. YOUNIS PROJECT DESIGN ENGINEER

**HYDRAULICS ENGINEER**

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

**ROADWAY DESIGN ENGINEER**

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

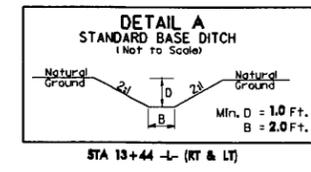
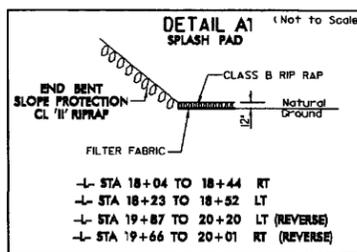
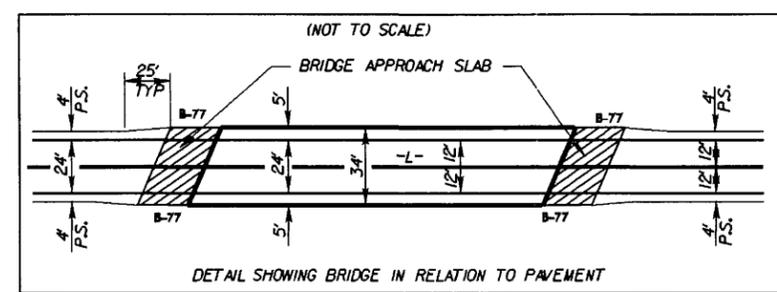
DIVISION OF HIGHWAYS  
STATE OF NORTH CAROLINA

STATE HIGHWAY DESIGN ENGINEER P.E.

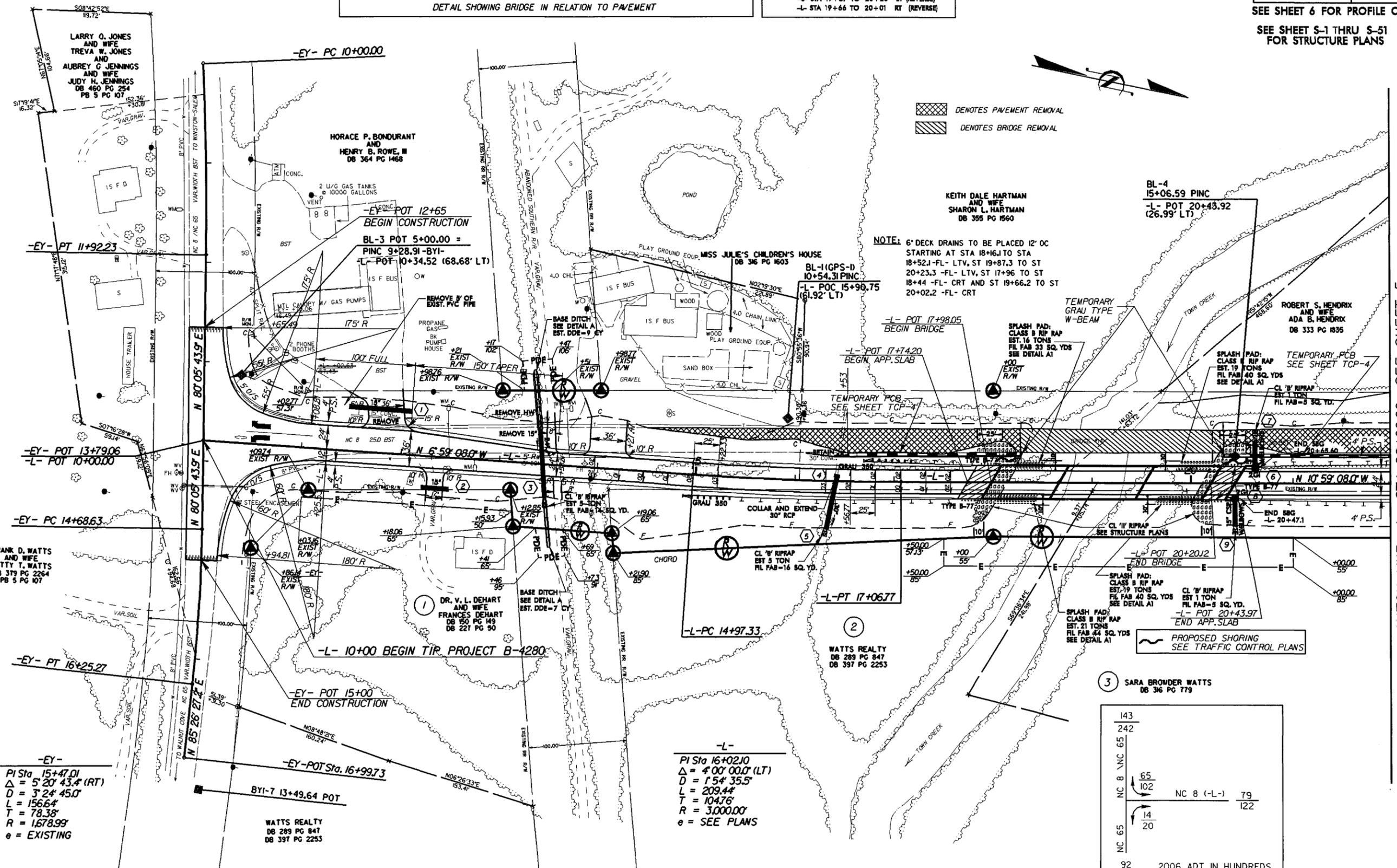
-MAR-2008 08:28  
 T:\PROJECTS\0804280\_rdy\_tsh.dgn  
 \$USER\$

PROJECT REFERENCE NO.	SHEET NO.
B-4280	4
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

SEE SHEET 6 FOR PROFILE OF -L-  
SEE SHEET S-1 THRU S-51 FOR STRUCTURE PLANS



-EY-  
PI Sta 10+96.14  
Δ = 3' 17" 34.5" (RT)  
D = 1' 42" 47.0"  
L = 192.23'  
T = 96.14'  
R = 3,344.66'  
e = EXISTING



REVISIONS

MATCH LINE -L- STA 22+00.00 SEE SHEET 5

143		
242		
65		
NC 8	65	102
		NC 8 (-L-) 79
	14	20
65		
92		
160		

2006 ADT IN HUNDREDS  
2025 ADT IN HUNDREDS

8/17/99

01-APR-2008 08:24  
I:\roadway\proj\B-4280\du-ps\B04.dgn  
Braman



