



STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION

BEVERLY PERDUE
GOVERNOR

EUGENE CONTI
SECRETARY

July 30, 2012

MEMORANDUM TO: Mr. Jerry Jennings, PE
Division 1 Engineer

FROM: Philip S. Harris, III, P.E., Section Head
Natural Environment Section
Project Development and Environmental Analysis Unit

SUBJECT: Hertford County, US 158 from the Murfreesboro Bypass to
US 13 West of Winton; WBS Element 35489.1.1;
TIP R-2583

E. S. Furr

Attached are the U.S. Army Corps of Engineers Section 404 Individual permit, N.C. Division of Water Quality Section 401 Water Quality Certification, Division of Coastal Management CAMA Major Development Permit, and US Coast Guard Advanced Approval. All environmental permits have been received for construction of this project.

A copy of this permit package will be posted on the NCDOT website at:
<http://www.ncdot.gov/doh/preconstruct/pe/neu/permit.html>

cc:

Mr. Randy Garris, Contract Standards and Development Unit
Mr. Rodger Rochelle, P.E., Transportation Program Management
Mr. Majed Alghandour, P. E., Programming and TIP
Mr. Jay Bennett, P.E., Roadway Design Unit
Mr. Dewayne Sykes, P.E. Utilities Unit
Mr. Art McMillan, P.E., Hydraulics Unit
Mr. Greg Perfetti, P.E., Structure Design Unit
Mr. Ron Hancock, P.E., State Roadway Construction Engineer
Mr. Rob Hanson, P.E., PDEA Eastern Planning Region
Mr. Clay Willis, Division Environmental Officer
Ms. Beth Harmon, EEP
Mr. Phillip Ayscue, NCDOT External Audit Branch

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

TELEPHONE: 919-707-6100
FAX: 919-212-5785
WEBSITE: WWW.NCDOT.ORG

LOCATION:
1020 BIRCH RIDGE DRIVE
RALEIGH NC 27610-4328

PROJECT COMMITMENTS

TIP PROJECT R-2583
US 158 from the Murfreesboro Bypass to US 13 West of Winton
Hertford County
WBS Element 35489.1.1

COMMITMENTS FROM PROJECT DEVELOPMENT AND DESIGN

Division 1

A construction moratorium for all in-stream work will be in place between February 15 and June 15 to avoid impacts to anadromous fish.

This applies to Mill Branch, Potecasi Creek, and their associated perennial tributaries. It also applies to adjacent wetlands that may be inundated (during the moratorium period) with an active connection to these tributaries.

Division 1, Project Development & Environmental Analysis Branch

The existing Potecasi Creek Bridge will be removed as mitigation. A portion of the existing US 158 roadbed may be removed east of the old Potecasi Creek crossing as mitigation, pending further investigation.

The existing culvert on US 158 east of Mapleton will be removed (stream Site SD and wetland site WPP). A portion of the existing US 158 roadbed may also be removed for mitigation purposes pending further investigation.

It was determined that due to existing utilities, restoration was not feasible at both of these sites.

Project Development & Environmental Analysis Branch

A detailed archaeological data recovery will be conducted on Site 31HF268 prior to construction. *The archaeological data recovery was conducted even though the USACE later decided that it was not required. Therefore, we have the findings from the dig but we did not get anything back from SHPO agreeing that we have successfully completed the previous requirements.*

A new survey for the Red-cockaded woodpecker will be conducted along the preferred alternative. NCDOT will coordinate with the U.S. Fish and Wildlife Service regarding the Biological Conclusion.

Surveys for the RCW were completed in September of 2010. The biological conclusion is No Effect with only marginal habitat within the project area.

Roadway Design Unit

3:1 side slopes are required in wetland areas.

COMMITMENTS FROM PERMITTING

Division 1

In accordance with the permittee's correspondence dated 5/24/12, prior to project completion, the permittee shall remove the vertical abutment from the western side of the existing bridge over Potecasi Creek and shall grade the remaining bank down to the creek at a 3:1 or flatter slope. The purpose of this is to mitigate for the loss of the informal public trust access on the east side of the existing bridge over Potecasi Creek.

In accordance with design commitments made in the permit application, the vertical navigational clearance of the authorized temporary work bridge shall be a minimum of 7 feet above the normal water level of Potecasi Creek as measured from the bottom of the temporary bridge decking.

The temporary work bridge and the existing bridge shall be removed in their entirety within 90 days after they are no longer needed and disposed of at an approved high ground site. However, if this timeframe occurs while the moratorium referenced in Condition No. 3 of this permit is in effect, and if WRC is opposed to the removal of the temporary work bridge and/or the existing bridge within the moratorium period, then the temporary work bridge and/or the existing bridge shall be removed in their entirety within 30 days of the moratorium end date.

Turbidity curtains and silt fences shall be used to isolate all in-water work areas from Potecasi Creek and the unnamed tributary to Potecasi Creek at Site 2 as depicted on the attached workplan drawings, including pile installation and removal, placement of riprap, and excavation or filling. The turbidity curtains shall be of sufficient length and effectiveness to prevent a visible increase in the amount of suspended sediments in adjacent waters. The turbidity curtains shall isolate and contain in-water work areas with active construction activities in progress, such as installation of bridge pilings. Turbidity curtains shall not impede navigation. Turbidity curtains shall be properly maintained and retained in the water until construction within the area that they are containing is complete. Turbidity curtains shall be removed when turbidity within the curtains reaches ambient levels.

The permittee shall install and maintain at its expense any signal lights or signals prescribed by the U.S. Coast Guard, through regulation or otherwise, on the authorized permanent and temporary bridges over Potecasi Creek. At a minimum, permanent reflectors shall be attached to the structures in order to make them more visible during hours of darkness or inclement weather.

To ensure that all borrow and waste activities occur on high ground and do not result in the degradation of adjacent wetlands and streams, except as authorized by this permit, the permittee shall require its contractors and/or agents to identify all areas to be used to borrow material, or to dispose of dredged, fill, or waste material. The permittee shall provide the USACE with appropriate maps indicating the locations of proposed borrow or waste sites as soon as the permittee has that information. The permittee will coordinate with the USACE before approving any borrow or waste sites that are within 400 feet of any streams or wetlands to ensure that all

such areas comply with the preceding condition (b) of this permit. NCDOT shall require its contractors to complete and execute reclamation plans for each waste and borrow site and provide written documentation that the reclamation plans have been implemented and all work is completed. This documentation will be provided to the Corps of Engineers within 30 days of the completion of the reclamation work.

Division 1,

The permittee shall schedule a preconstruction meeting between its representatives, the contractors representatives, and the Corps of Engineers, Washington Field Office, NCDOT Regulatory Project Manager, prior to any work within jurisdictional waters and wetlands to ensure that there is a mutual understanding of all the terms and conditions contained with this Department of Army Permit. The permittee shall provide the USACE, Washington Field Office, NCDOT Project Manager, with a copy of the final permit plans at least two weeks prior to the preconstruction meeting along with a description of any changes that have been made to the project's design, construction methodology or construction timeframe. The permittee shall schedule the preconstruction meeting for a time frame when the USACE, NCDOT, and NCDWQ Project Managers can attend. The permittee shall invite the Corps, NCDOT, and NCDWQ Project Managers a minimum of thirty (30) days in advance of the scheduled meeting in order to provide those individuals with ample opportunity to schedule and participate in the required meeting.

Project Development & Environmental Analysis

Compensatory mitigation for the unavoidable impacts to 3.96 acres of riparian wetlands, 0.48 acres non-riparian wetlands and 1,832 linear feet of warm stream associated with R-2583 shall be provided by the Ecosystem Enhancement Program (EEP), as outlined in the letter dated February 14, 2012 from Michael Ellison, EEP Deputy Director. Pursuant to the In-Lieu Fee Instrument signed July 28, 2010 between the State of North Carolina, Ecosystem Enhancement Program and the US Army Corps of Engineers the EEP will provide 7.92 acres restoration equivalent riparian wetlands, 0.96 acres restoration equivalent non-riparian wetlands and 3,664 linear feet of restoration equivalent warm water stream channel in the Chowan River basin 03010204 in accordance with Section F of the instrument.

Division 1, Roadside Environmental Unit

With the exception of Red Fescue (*Festuca rubra*), tall fescue shall not be used in the establishment of temporary or permanent groundcover within riparian areas. For the establishment of permanent herbaceous cover, erosion control matting shall be used in conjunction with an appropriate native seed mix on disturbed soils within the riparian area and on disturbed steep slopes with the following exception. Erosion control matting is not necessary if the area is contained by perimeter erosion control devices such as silt fence, temporary sediment ditches, basins, etc. Matting should be secured in place with staples, stakes, or wherever possible, live stakes of native trees. Erosion control matting placed in riparian areas shall not contain a nylon mesh grid, which can impinge and entrap small animals. For the establishment of temporary groundcover within riparian areas, hydroseeding along with wood or cellulose based hydro mulch applied from a fertilizer-and limestone-free tank is allowable at the appropriate rate in conjunction with erosion control measures. Discharging hydroseed mixtures

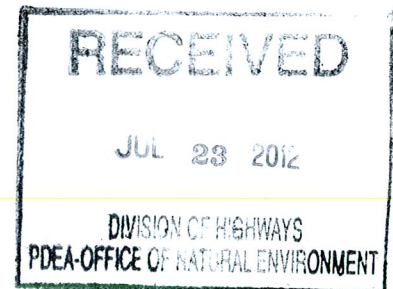
and wood or cellulose mulch into surface waters is prohibited. Riparian areas are defined as a distance 25 feet landward from top of stream bank.



DEPARTMENT OF THE ARMY
WILMINGTON DISTRICT, CORPS OF ENGINEERS
69 DARLINGTON AVENUE
WILMINGTON, NORTH CAROLINA 28403-1343

REPLY TO
ATTENTION OF:

July 18, 2012



Regulatory Division

Action ID: SAW-2002-11081

Dr. Gregory J. Thorpe, Ph.D.
Environmental Management Director, PDEA
1548 Mail Service Center
Raleigh, North Carolina 27699-1548

Dear Dr. Thorpe:

In accordance with your written request of December 6, 2011, and the ensuing administrative record, enclosed is a copy of a Department of the Army (DA) Permit to permanently impact 4.44 acres of wetlands and 1,832 linear feet of stream channel associated with TIP No. R-2583, the widening of US Highway 158 from the Murfreesboro bypass to US Highway 13 just west of Winton in Hertford County, North Carolina.

Any deviation in the authorized work will likely require modification of this permit. If a change in the authorized work is necessary, you should promptly submit revised plans to the Corps showing the proposed changes. You may not undertake the proposed changes until the Corps notifies you that your permit has been modified.

Carefully read your permit. The general and special conditions are important. Your failure to comply with these conditions could result in a violation of Federal law. Certain significant general conditions require that:

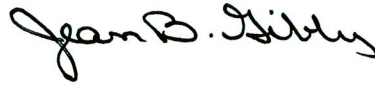
- a. You must complete construction before December 31, 2032.
- b. You must notify this office in advance as to when you intend to commence and complete work.
- c. You must allow representatives from this office to make periodic visits to your worksite as deemed necessary to assure compliance with permit plans and conditions.

You should address all questions regarding this authorization to Mr. Bill Biddlecome in the Washington Regulatory Field Office, telephone (910) 251-4558.

Thank you in advance for completing our Customer Survey Form. This can be accomplished by visiting our web-site at <http://per2.nwp.usace.army.mil.survey.html> and

completing the survey on-line. We value your comments and appreciate your taking the time to complete a survey each time you interact with our office.

Sincerely,



 Steven A. Baker
Colonel, U. S. Army
District Commander

Enclosures

Copies Furnished (with enclosures):

Chief, Source Data Unit
NOAA/National Ocean Service
1315 East-west Hwy., Rm 7316
Silver Spring, MC 20910-3282

Copies Furnished with special conditions
and plans:

U. S. Fish and Wildlife Service
Fish and Wildlife Enhancement
Post Office Box 33726
Raleigh, North Carolina 27636-3726

Mr. Ron Sechler
National Marine Fisheries Service
Pivers Island
Beaufort, North Carolina 28516

Ms. Jennifer Derby, Chief
Wetlands Protection Section – Region IV
Water Management Division
U. S. Environmental Protection Agency
61 Forsyth Street
Atlanta, Georgia 30303

Mr. Jeffrey Garnett
Wetlands and Marine Regulatory Section
Water Protection Division - Region IV
U. S. Environmental Protection Agency
61 Forsyth St. SW
Atlanta, GA 30303-8931

Mr. Doug Huggett
Division of Coastal Management
N.C. Department of Environment
and Natural Resources
400 Commerce Avenue
Morehead City, North Carolina 28557

Mr. Pace Wilber
National Marine Fisheries Service
219 Fort Johnson Road
Charleston, South Carolina 29412-9110

DEPARTMENT OF THE ARMY PERMIT

Permittee **North Carolina Department of Transportation, Dr. Gregory Thorpe.**

Permit No. **SAW 2002-11081**

Issuing Office **CESAW-RG-W**

NOTE: The term "you" and its derivatives, as used in this permit, means the permittee or any future transferee. The term "this office" refers to the appropriate district or division office of the Corps of Engineers having jurisdiction over the permitted activity or the appropriate official of that office acting under the authority of the commanding officer.

You are authorized to perform work in accordance with the terms and conditions specified below.

Project Description: The proposed TIP project R-2583 involves the widening of an existing two lane road facility to a multi-lane facility for approximately 8.1 miles. The project would permanently impact 4.44 acres of wetlands and 1,832 linear feet of stream.

The project would temporarily impact 0.88 acres of wetlands and 222 linear feet of stream.

Project Location: This project is located along US Highway 158 from the Murfreesboro bypass to US Highway 13 just west of Winton, adjacent to jurisdictional wetlands connected to Potecasi Creek, Mill Branch and several unnamed tributaries to these streams as well as one unnamed tributary to the Meherrin River in Hertford County, North Carolina.

Permit Conditions:

General Conditions:

1. The time limit for completing the work authorized ends on **December 31, 2017**. If you find that you need more time to complete the authorized activity, submit your request for a time extension to this office for consideration at least one month before the above date is reached.
2. You must maintain the activity authorized by this permit in good condition and in conformance with the terms and conditions of this permit. You are not relieved of this requirement if you abandon the permitted activity, although you may make a good faith transfer to a third party in compliance with General Condition 4 below. Should you wish to cease to maintain the authorized activity or should you desire to abandon it without a good faith transfer, you must obtain a modification of this permit from this office, which may require restoration of the area.
3. If you discover any previously unknown historic or archeological remains while accomplishing the activity authorized by this permit, you must immediately notify this office of what you have found. We will initiate the Federal and state coordination required to determine if the remains warrant a recovery effort or if the site is eligible for listing in the National Register of Historic Places.

4. If you sell the property associated with this permit, you must obtain the signature of the new owner in the space provided and forward a copy of the permit to this office to validate the transfer of this authorization.
5. If a conditioned water quality certification has been issued for your project, you must comply with the conditions specified in the certification as special conditions to this permit. For your convenience, a copy of the certification is attached if it contains such conditions.
6. You must allow representatives from this office to inspect the authorized activity at any time deemed necessary to ensure that it is being or has been accomplished in accordance with the terms and conditions of your permit,

Special Conditions:

SEE ATTACHED SPECIAL CONDITIONS

Further Information:

1. Congressional Authorities: You have been authorized to undertake the activity described above pursuant to:
 - () Section 10 of the Rivers and Harbors Act of 1899 (33 U.S.C. 403).
 - (X) Section 404 of the Clean Water Act (33 U.S.C. 1344).
 - () Section 103 of the Marine Protection, Research and Sanctuaries Act of 1972 (33 U.S.C. 1413).
2. Limits of this authorization.
 - a. This permit does not obviate the need to obtain other Federal, state, or local authorizations required by law.
 - b. This permit does not grant any property rights or exclusive privileges.
 - c. This permit does not authorize any injury to the property or rights of others.
 - d. This permit does not authorize interference with any existing or proposed Federal project.
3. Limits of Federal Liability. In issuing this permit, the Federal Government does not assume any liability for the following:
 - a. Damages to the permitted project or uses thereof as a result of other permitted or unpermitted activities or from natural causes.
 - b. Damages to the permitted project or uses thereof as a result of current or future activities undertaken by or on behalf of the United States in the public interest.
 - c. Damages to persons, property, or to other permitted or unpermitted activities or structures caused by the activity authorized by this permit.
 - d. Design or construction deficiencies associated with the permitted work.

e. Damage claims associated with any future modification, suspension, or revocation of this permit.

4. Reliance on Applicant's Data: The determination of this office that issuance of this permit is not contrary to the public interest was made in reliance on the information you provided.

5. Reevaluation of Permit Decision. This office may reevaluate its decision on this permit at any time the circumstances warrant. Circumstances that could require a reevaluation include, but are not limited to, the following:

a. You fail to comply with the terms and conditions of this permit.

b. The information provided by you in support of your permit application proves to have been false, incomplete, or inaccurate (See 4 above).

c. Significant new information surfaces which this office did not consider in reaching the original public interest decision.

Such a reevaluation may result in a determination that it is appropriate to use the suspension, modification, and revocation procedures contained in 33 CFR 325.7 or enforcement procedures such as those contained in 33 CFR 326.4 and 326.5. The referenced enforcement procedures provide for the issuance of an administrative order requiring you to comply with the terms and conditions of your permit and for the initiation of legal action where appropriate. You will be required to pay for any corrective measures ordered by this office, and if you fail to comply with such directive, this office may in certain situations (such as those specified in 33 CFR 209.170) accomplish the corrective measures by contract or otherwise and bill you for the cost.

6. Extensions. General condition 1 establishes a time limit for the completion of the activity authorized by this permit, unless there are circumstances requiring either a prompt completion of the authorized activity or a reevaluation of the public interest decision, the Corps will normally give favorable consideration to a request for an extension of this time limit.

Your signature below, as permittee, indicates that you accept and agree to comply with the terms and conditions of this permit.

E. L. Lusk for Gregory J. Thorne, PhD July 17, 2012
(PERMITTEE) **North Carolina Department of Transportation,** (DATE)

This permit becomes effective when the Federal official, designated to act for the Secretary of the Army, has signed below.

Jean B. Hubby 18 June 12
(DISTRICT ENGINEER) **STEVEN A. BAKER, COLONEL** (DATE)

When the structures or work authorized by this permit are still in existence at the time the property is transferred, the terms and conditions of this permit will continue to be binding on the new owner(s) of the property. To validate the transfer of this permit and the associated liabilities associated with compliance with its terms and conditions, have the transferee sign and date below.

(TRANSFeree) (DATE)

COMPLIANCE WITH PLANS

Work Limits

- a) All work authorized by this permit must be performed in strict compliance with the attached plans, which are a part of this permit. Any modification to these plans must be approved by the US Army Corps of Engineers (USACE) prior to implementation.
- b) Except as authorized by this permit or any USACE approved modification to this permit, no excavation, fill or mechanized land-clearing activities shall take place at any time in the construction or maintenance of this project, within waters or wetlands. This permit does not authorize temporary placement or double handling of excavated or fill material within waters or wetlands outside the permitted area. This prohibition applies to all borrow and fill activities connected with this project.
- c) To ensure that all borrow and waste activities occur on high ground and do not result in the degradation of adjacent wetlands and streams, except as authorized by this permit, the permittee shall require its contractors and/or agents to identify all areas to be used to borrow material, or to dispose of dredged, fill, or waste material. The permittee shall provide the USACE with appropriate maps indicating the locations of proposed borrow or waste sites as soon as the permittee has that information. The permittee will coordinate with the USACE before approving any borrow or waste sites that are within 400 feet of any streams or wetlands to ensure that all such areas comply with the preceding condition (b) of this permit. NCDOT shall require its contractors to complete and execute reclamation plans for each waste and borrow site and provide written documentation that the reclamation plans have been implemented and all work is completed. This documentation will be provided to the Corps of Engineers within 30 days of the completion of the reclamation work.
- d) Except as specified in the plans attached to this permit, no excavation, fill or mechanized land-clearing activities shall take place at any time in the construction or maintenance of this project, in such a manner as to impair normal flows and circulation patterns within waters or wetlands or to reduce the reach of waters or wetlands.
- e) The permittee shall schedule a preconstruction meeting between its representatives, the contractors representatives, and the Corps of Engineers, Washington Field Office, NCDOT Regulatory Project Manager, prior to any work within jurisdictional waters and wetlands to ensure that there is a mutual understanding of all the terms and conditions contained with this Department of Army Permit. The permittee shall provide the USACE, Washington Field Office, NCDOT Project Manager, with a copy of the final permit plans at least two weeks prior to the preconstruction meeting along with a description of any changes that have been made to the project's design, construction methodology or construction timeframe. The permittee shall schedule the preconstruction meeting for a time frame when the USACE, NCDOT, and NCDWQ Project Managers can attend. The permittee shall invite the Corps, NCDOT, and NCDWQ Project Managers a minimum of thirty (30) days in advance of the scheduled meeting in order to provide those individuals with ample opportunity to schedule and participate in the required meeting.
- f) To avoid adverse impacts to spawning populations of fish species at this project site, no in-water work will be conducted between February 15 and June 15 at Mill Branch, Potecasi Creek, and their associated perennial tributaries. For the purpose of this moratorium, in water is defined as those waters within Mill Branch, Potecasi Creek, and their associated perennial tributaries and its adjacent wetlands that during periods of inundation have an active connection to these tributaries. The permittee will follow NCDOT adopted anadromous fish stream crossing guidelines.

g) Unless otherwise requested in the applicant's application and depicted on the approved work plans, culverts greater than 48 inches in diameter will be buried at least one foot below the bed of the stream. Culverts 48 inches in diameter and less shall be buried or placed on the stream bed as practicable and appropriate to maintain aquatic passage, and every effort shall be made to maintain existing channel slope. The bottom of the culvert must be placed at a depth below the natural stream bottom to provide for passage during drought or low flow conditions. Destabilizing the channel and head cutting upstream should be considered in the placement of the culvert.

Related Laws

h) The North Carolina Division of Water Quality has issued a conditioned Water Quality Certification for your project. The conditions of that certification are hereby incorporated as special conditions of this permit. For your convenience, a copy of the certification is attached as Exhibit A. These referenced conditions are hereby incorporated as special conditions of this permit.

i) All mechanized equipment will be regularly inspected and maintained to prevent contamination of waters and wetlands from fuels, lubricants, hydraulic fluids, or other toxic materials. In the event of a spill of petroleum products or any other hazardous waste, the permittee shall immediately report it to the N.C. Division of Water Quality at (919) 733-5083, Ext. 526 or (800) 662-7956 and provisions of the North Carolina Oil Pollution and Hazardous Substances Control Act will be followed.

Project Maintenance

j) The permittee shall advise the Corps in writing prior to beginning the work authorized by this permit and again upon completion of the work authorized by this permit.

k) Unless otherwise authorized by this permit, all fill material placed in waters or wetlands shall be generated from an upland source and will be clean and free of any pollutants except in trace quantities. Metal products, organic materials (including debris from land clearing activities), or unsightly debris will not be used.

l) The permittee shall require its contractors and/or agents to comply with the terms and conditions of this permit in the construction and maintenance of this project, and shall provide each of its contractors and/or agents associated with the construction or maintenance of this project with a copy of this permit. A copy of this permit, including all conditions, shall be available at the project site during construction and maintenance of this project.

m) The permittee shall employ all sedimentation and erosion control measures necessary to prevent an increase in sedimentation or turbidity within waters and wetlands outside the permit area. This shall include, but is not limited to, the immediate installation of silt fencing or similar appropriate devices around all areas subject to soil disturbance or the movement of earthen fill, and the immediate stabilization of all disturbed areas. Additionally, the project must remain in full compliance with all aspects of the Sedimentation Pollution Control Act of 1973 (North Carolina General Statutes Chapter 113A Article 4).

n) The permittee shall remove all sediment and erosion control measures placed in wetlands or waters, and shall restore natural grades on those areas, prior to project completion.

o) During the clearing phase of the project, heavy equipment must not be operated in surface waters or stream channels. Temporary stream crossings will be used to access the opposite sides of stream channels. All temporary diversion channels and stream crossings will be constructed of non-erodible materials. Grubbing of riparian vegetation will not occur until immediately before construction begins on a given segment of stream channel.

p) No fill or excavation for the purpose of sedimentation and erosion control shall occur within jurisdictional waters, including wetlands, unless it is included on the plan drawing and specifically authorized by this permit.

q) The permittee, upon receipt of a notice of revocation of this permit or upon its expiration before completion of the work will, without expense to the United States and in such time and manner as the Secretary of the Army or his authorized representative may direct, restore the water or wetland to its pre-project condition.

Enforcement

r) Violations of these conditions or violations of Section 404 of the Clean Water Act or Section 10 of the Rivers and Harbors Act must be reported in writing to the Wilmington District U.S. Army Corps of Engineers within 24 hours of the permittee's discovery of the violation.

s) The permittee shall take measures to prevent live or fresh concrete from coming into contact with any surface waters until the concrete has hardened.

Mitigation

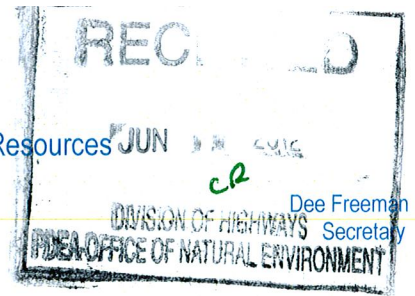
t) Compensatory mitigation for the unavoidable impacts to 3.96 acres of riparian wetlands, 0.48 acres non-riparian wetlands and 1,832 linear feet of warm stream associated with R-2583 shall be provided by the Ecosystem Enhancement Program (EEP), as outlined in the letter dated February 14, 2012 from Michael Ellison, EEP Deputy Director. Pursuant to the In-Lieu Fee Instrument signed July 28, 2010 between the State of North Carolina, Ecosystem Enhancement Program and the US Army Corps of Engineers the EEP will provide 7.92 acres restoration equivalent riparian wetlands, 0.96 acres restoration equivalent non-riparian wetlands and 3,664 linear feet of restoration equivalent warm water stream channel in the Chowan River basin 03010204 in accordance with Section F of the instrument.



North Carolina Department of Environment and Natural Resources

Division of Water Quality
Charles Wakild, P.E.
Director

Beverly Eaves Perdue
Governor



Dee Freeman
Secretary

May 30, 2012

Dr. Greg Thorpe, PhD., Branch Manager
Project Development and Environmental Analysis Branch
North Carolina Department of Transportation
1598 Mail Service Center
Raleigh, North Carolina, 27699-1598

Subject: Correction to 401 Water Quality Certification for R-2583 (US 158 from the Murfreesboro Bypass to US 13 near Winton) in Hertford County, DWQ Project No. 20111075.
WQC No. 003875

Dear Dr. Thorpe:

This letter is in regards to the 401 Water Quality Certification (WQC) issued on January 19, 2012 for US 158 in Hertford County (DWQ Project No. 20111075). Condition No. 3 of the WQC issued on January 19, 2012 contains the following language:

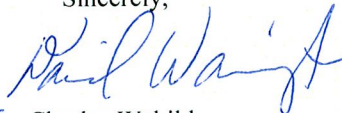
The permittee will need to adhere to all appropriate in-water work moratoria (including the use of pile driving or vibration techniques) prescribed by the National Marine Fisheries Service and the North Carolina Division of Marine Fisheries. No in-water work is permitted between February 15 and June 30 of any year, without prior approval from the NC Division of Water Quality, the National Marine Fisheries Service, and the North Carolina Division of Marine Fisheries. In addition, the permittee shall conform to the NCDOT policy entitled "*Stream Crossing Guidelines for Anadromous Fish Passage*" (dated May 12, 1997) at all times.

This language is hereby corrected to read as follows:

The permittee will need to adhere to all appropriate in-water work moratoria (including the use of pile driving or vibration techniques) prescribed by the National Marine Fisheries Service and the North Carolina Division of Marine Fisheries. No in-water work is permitted between February 15 and June 15 of any year, without prior approval from the NC Division of Water Quality, the National Marine Fisheries Service, and the North Carolina Division of Marine Fisheries. In addition, the permittee shall conform to the NCDOT policy entitled "*Stream Crossing Guidelines for Anadromous Fish Passage*" (dated May 12, 1997) at all times.

Please attach a copy of this letter with any copies of the original Water Quality Certification. All other conditions written into the previous Water Quality Certification for this project dated January 19, 2012 still apply except where superseded by this correction. We are sorry for any inconvenience this may have caused. If you have any questions please contact David Wainwright at (919) 807-6405 or David.wainwright@ncdenr.gov.

Sincerely,


for Charles Wakild,
Director

Transportation Permitting Unit
1650 Mail Service Center, Raleigh, North Carolina 27699-1650
Location: 512 N. Salisbury Street, Raleigh, North Carolina 27604
Phone: 919-807-6300 \ FAX: 919-807-6488
Internet: <http://portal.ncdenr.org/web/wq>

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One
North Carolina
Naturally

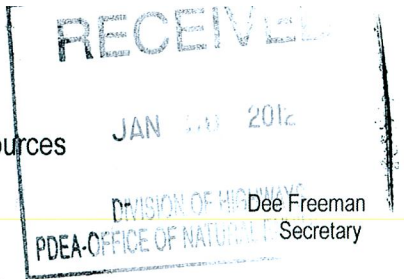
cc: Bill Biddlecome, US Army Corps of Engineers, Washington Field Office (electronic copy)
Jerry Jennings, PE, Division 1 Engineer
Clay Willis, Division 1 Environmental Officer
Chris Militscher, Environmental Protection Agency (electronic copy only)
Travis Wilson, NC Wildlife Resources Commission (electronic copy only)
Cathy Brittingham, Division of Coastal Management (electronic copy)
Stephen Lane, Division of Coastal Management (electronic copy)
Garcy Ward, NCDWQ Washington Regional Office (electronic copy)
File Copy



North Carolina Department of Environment and Natural Resources

Division of Water Quality
Charles Wakild, P.E.
Director

Beverly Eaves Perdue
Governor



January 19, 2012

Dr. Greg Thorpe, PhD., Manager
Project Development and Environmental Analysis
North Carolina Department of Transportation
1598 Mail Service Center
Raleigh, North Carolina, 27699-1598

Subject: 401 Water Quality Certification Pursuant to Section 401 of the Federal Clean Water Act with
ADDITIONAL CONDITIONS for Proposed improvements to U.S. 158 from Murfreesboro Bypass to
U.S. 13 west of Winton in Hertford County, State Project No. 6.079007T, TIP R-2583.
NCDWQ Project No. 20111075

Dear Dr. Thorpe:

Attached hereto is a copy of Certification No. WQC003875 issued to The North Carolina Department of
Transportation (NCDOT) dated January 19, 2012.

If we can be of further assistance, do not hesitate to contact us.

Sincerely,



Charles Wakild, P.E.
Director

Attachments

cc: Bill Biddlecome, US Army Corps of Engineers, Washington Field Office
Jerry Jennings, PE, Division 1 Engineer
Clay Willis, Division 1 Environmental Officer
Chris Militscher, Environmental Protection Agency (electronic copy only)
Travis Wilson, NC Wildlife Resources Commission (electronic copy only)
Cathy Brittingham, Division of Coastal Management
Garcy Ward, NCDWQ Washington Regional Office
File Copy

Transportation Permitting Unit
1650 Mail Service Center, Raleigh, North Carolina 27699-1650
Location: 512 N. Salisbury Street, Raleigh, North Carolina 27604
Phone: 919-807-6300 FAX: 919-807-6494
Internet: <http://portal.ncdenr.org/web/wq>

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401 Water Quality Certification Pursuant to Section 401 of the Federal Clean Water Act with ADDITIONAL CONDITIONS

THIS CERTIFICATION is issued in conformity with the requirements of Section 401 Public Laws 92-500 and 95-217 of the United States and subject to the North Carolina Division of Water Quality (NCDWQ) Regulations in 15 NCAC 2H .0500. This certification authorizes the NCDOT to impact 5.26 acres of jurisdictional wetlands, and 2, 054 linear feet of jurisdictional streams in Hertford County. The project shall be constructed pursuant to the application dated received December 9, 2011. The authorized impacts are as described below:

Stream Impacts in the Chowan River Basin

Site	Station	Permanent Fill in Intermittent Stream (linear ft)	Temporary Fill in Intermittent Stream (linear ft)	Permanent Fill in Perennial Stream (linear ft)	Temporary Fill in Perennial Stream (linear ft)	Total Stream Impact (linear ft)	Permanent Stream Impacts Requiring Mitigation (linear ft)
1	-L- 23+00	--	--	60	34	94	0
2	-L- 146+94 TO 154+23	--	--	230	20	250	230
3	-L- 172+45 TO 176+66	--	--	114	10	124	0
5	-L- 185+51 TO 191+97	--	--	175	20	195	175
6	-L- 209+39	--	--	97	10	107	0
7	-L- 218+25 TO 221+76	240	--	--	--	240	0
7	-L- 218+25 TO 221+76	--	--	378	26	404	378
8	-L- 230+30	190	4	--	--	194	0
9	-L- 237+05 TO 241+50	130	--	--	--	130	0
16	-L- 349+96	--	--	18	10	28	0
16	-L- 351+58	--	--	72	18	90	0
16	-L- 352+44	--	--	70	20	90	0
17	-L- 360+10	58	50	--	--	108	0
TOTAL:		618	54	1,214	168	2,054	783

Total Stream Impact for Project: 2,054 linear feet

Wetland Impacts in the Chowan River Basin

Site	Station	Wetland Type	Permanent Fill (ac)	Temporary Fill (ac)	Excavation (ac)	Mechanized Clearing (ac)	Hand Clearing (ac)	Total Wetland Impact (ac)	Impacts Requiring Mitigation (ac)
1	-L- 23+00	Riparian	0.08	--	0.01	0.02	--	0.11	0.11
2	-L- 146+94 TO 154+23	Riparian	1.25	--	0.45	--	--	1.70	1.70
3	-L- 172+45 TO 176+66	Riparian	0.38	--	--	0.11	0.05	0.54	0.49
4	-L- 177+35 TO 179+36	Riparian	0.01	--	0.09	0.15	0.02	0.27	0.25
5	-L- 185+51 TO 191+97	Riparian	0.12	--	--	0.06	0.10	0.28	0.18
9	-L- 237+05 TO 241+50	Riparian	0.37	--	--	0.04	--	0.41	0.41
10	-L- 241+66 TO 244+75	Riparian	0.01	--	--	0.05	0.62	0.68	0.06
11	-L- 255+75	Riparian	0.05	--	--	0.02	--	0.07	0.07
12	-L- 278+27	Riparian	--	--	0.01	--	0.01	0.02	0.01
13	-L- 283+40	Riparian	--	--	0.01	--	--	0.01	0.01
14	-L- 291+25	Riparian	0.03	--	0.01	--	--	0.04	0.04
15	-L- 337+75 TO 340+00	Riparian	--	--	0.08	0.12	--	0.20	0.20
16	-L- 352+44	Riparian	0.67	--	--	--	--	0.67	0.67
16	-L- 354+21	Riparian	--	--	--	0.22	--	0.22	0.22
17	-L- 360+10	Riparian	--	--	0.01	0.01	0.02	0.04	0.02
TOTAL:			2.97	0.00	0.67	0.80	0.82	5.26	4.44

Total Wetland Impact for Project: 5.26 acres.

The application provides adequate assurance that the discharge of fill material into the waters of the Chowan River Basin in conjunction with the proposed development will not result in a violation of applicable Water Quality Standards and discharge guidelines. Therefore, the State of North Carolina certifies that this activity will not violate the applicable portions of Sections 301, 302, 303, 306, 307 of PL 92-500 and PL 95-217 if conducted in accordance with the application and conditions hereinafter set forth.

This approval is only valid for the purpose and design that you submitted in your application dated received December 9, 2011. Should your project change, you are required to notify the NCDWQ and submit a new application. If the property is sold, the new owner must be given a copy of this Certification and approval letter, and is thereby responsible for complying with all the conditions. If any additional wetland impacts or stream impacts for this project (now or in the future) exceed one acre or 150 linear feet, respectively, additional compensatory mitigation may be required as described in 15A NCAC 2H .0506 (h) (6) and (7). For this approval to remain valid, you are required to comply with all the conditions listed below. In addition, you should obtain all other federal, state or local permits before proceeding with your project including (but not limited to) Sediment and Erosion control, Coastal Stormwater, Non-discharge and Water Supply watershed regulations. This Certification shall expire on the same day as the expiration date of the corresponding Corps of Engineers Permit.

Conditions of Certification:

1. The NCDOT Division Environmental Officer or Environmental Assistant will conduct a pre-construction meeting with all appropriate staff to ensure that the project supervisor and essential staff understand the potential issues with stream and pipe alignment at the permitted sites. NCDWQ staff shall be invited to the pre-construction meeting.
2. Compensatory Mitigation
 - a. Compensatory mitigation for 783 linear feet of impact to streams is required. We understand that you have chosen to perform compensatory mitigation for impacts to streams through the North Carolina Ecosystem Enhancement Program (EEP), and that the EEP has agreed to implement the mitigation for the project. EEP has indicated in a letter dated February 15, 2011 that they will assume responsibility for satisfying the federal Clean Water Act compensatory mitigation requirements for the above-referenced project, in accordance with the North Carolina Department of Environment and Natural Resources' Ecosystem Enhancement Program In-Lieu Fee Instrument signed July 28, 2010.
 - b. Compensatory mitigation for impacts to 4.44 acres of riparian wetlands is required. We understand that you have chosen to perform compensatory mitigation for impacts to wetlands through the North Carolina Ecosystem Enhancement Program (EEP), and that the EEP has agreed to implement the mitigation for the project. EEP has indicated in a letter dated February 15, 2011 that they will assume responsibility for satisfying the federal Clean Water Act compensatory mitigation requirements for the above-referenced project, in accordance with the North Carolina Department of Environment and Natural Resources' Ecosystem Enhancement Program In-Lieu Fee Instrument signed July 28, 2010.
3. The permittee will need to adhere to all appropriate in-water work moratoria (including the use of pile driving or vibration techniques) prescribed by the National Marine Fisheries Service and the North Carolina Division of Marine Fisheries. No in-water work is permitted between February 15 and June 30 of any year, without prior approval from the NC Division of Water Quality, the National Marine Fisheries Service, and the North Carolina Division of Marine Fisheries. In addition, the permittee shall conform to the NCDOT policy entitled "*Stream Crossing Guidelines for Anadromous Fish Passage*" (dated May 12, 1997) at all times.
4. The post-construction removal of any temporary bridge structures must return the project site to its preconstruction contours and elevations. The impacted areas shall be revegetated with appropriate native species.
5. Bridge deck drains shall not discharge directly into the stream. Stormwater shall be directed across the bridge and pre-treated through site-appropriate means (grassed swales, pre-formed scour holes, vegetated buffers,

etc.) before entering the stream. Please refer to the most current version of *Stormwater Best Management Practices*.

6. Bridge piles and bents shall be constructed using driven piles (hammer or vibratory) or drilled shaft construction methods. More specifically, jetting or other methods of pile driving are prohibited without prior written approval from NCDWQ first.
7. No drill slurry or water that has been in contact with uncured concrete shall be allowed to enter surface waters. This water shall be captured, treated, and disposed of properly.
8. All pile driving or drilling activities shall be enclosed in turbidity curtains unless otherwise approved by NCDWQ in this certification.
9. Turbidity curtains shall be used to isolate all work areas from the stream at Potecasi Creek, including pile or casement installation, placement of riprap, excavation or filling. Strict adherence to the Construction and Maintenance Best Management Practices will be required.
10. All bridge construction shall be performed from the existing bridge, temporary work bridges, temporary causeways, or floating or sunken barges. If work conditions require barges, they shall be floated into position and then sunk. The barges shall not be sunk and then dragged into position. Under no circumstances should barges be dragged along the bottom of the surface water.
11. Unless otherwise approved in this certification[®], placement of culverts and other structures in open waters and streams, shall be placed below the elevation of the streambed by one foot for all culverts with a diameter greater than 48 inches, and 20 percent of the culvert diameter for culverts having a diameter less than 48 inches, to allow low flow passage of water and aquatic life. Design and placement of culverts and other structures including temporary erosion control measures shall not be conducted in a manner that may result in dis-equilibrium of wetlands or streambeds or banks, adjacent to or upstream and downstream of the above structures. The applicant is required to provide evidence that the equilibrium is being maintained if requested in writing by NCDWQ. If this condition is unable to be met due to bedrock or other limiting features encountered during construction, please contact NCDWQ for guidance on how to proceed and to determine whether or not a permit modification will be required.
12. If multiple pipes or barrels are required, they shall be designed to mimic natural stream cross section as closely as possible including pipes or barrels at flood plain elevation and/or sills where appropriate. Widening the stream channel should be avoided. Stream channel widening at the inlet or outlet end of structures typically decreases water velocity causing sediment deposition that requires increased maintenance and disrupts aquatic life passage.
13. Pipes and culverts used exclusively to maintain equilibrium in wetlands, where aquatic life passage is not a concern, shall not be buried. These pipes shall be installed at natural ground elevation.
14. Riprap shall not be placed in the active thalweg channel or placed in the streambed in a manner that precludes aquatic life passage. Bioengineering boulders or structures should be properly designed, sized and installed.
15. The stream channel shall be excavated no deeper than the natural bed material of the stream, to the maximum extent practicable. Efforts must be made to minimize impacts to the stream banks, as well as to vegetation responsible for maintaining the stream bank stability.
16. With the exception of Creeping Red Fescue (*Festuca rubra*), tall fescue shall not be used in the establishment of temporary or permanent groundcover within riparian areas. For the establishment of permanent herbaceous cover, erosion control matting shall be used in conjunction with an appropriate native seed mix on disturbed soils within the riparian area and on disturbed steep slopes with the following exception. Erosion control matting is not necessary if the area is contained by perimeter erosion control devices such as silt fence, temporary sediment ditches, basins, etc. Matting should be secured in place with staples, stakes, or wherever possible, live stakes of native trees. Erosion control matting placed in riparian areas shall not contain a nylon mesh grid, which can impinge and entrap small animals. For the establishment of temporary groundcover within riparian areas, hydroseeding along with wood or cellulose based hydro mulch applied from a fertilizer- and limestone-free tank is allowable at the appropriate rate in conjunction with the erosion control measures. Discharging hydroseed mixtures and wood or cellulose

mulch into surface waters in prohibited. Riparian areas are defined as a distance 25 feet landward from top of stream bank.

General Conditions

17. The outside buffer, wetland or water boundary located within the construction corridor approved by this authorization shall be clearly marked by highly visible fencing prior to any land disturbing activities. Impacts to areas within the fencing are prohibited unless otherwise authorized by this certification.
18. If concrete is used during construction, a dry work area shall be maintained to prevent direct contact between curing concrete and stream water. Water that inadvertently contacts uncured concrete shall not be discharged to surface waters due to the potential for elevated pH and possible aquatic life and fish kills.
19. During the construction of the project, no staging of equipment of any kind is permitted in waters of the U.S., or protected riparian buffers.
20. The dimension, pattern and profile of the stream above and below the crossing shall not be modified. Disturbed floodplains and streams shall be restored to natural geomorphic conditions.
21. No rock, sand or other materials shall be dredged from the stream channel except where authorized by this certification.
22. The use of rip-rap above the Normal High Water Mark shall be minimized. Any rip-rap placed for stream stabilization shall be placed in stream channels in such a manner that it does not impede aquatic life passage.
23. The Permittee shall ensure that the final design drawings adhere to the permit and to the permit drawings submitted for approval.
24. All work in or adjacent to stream waters shall be conducted in a dry work area. Approved BMP measures from the most current version of NCDOT Construction and Maintenance Activities manual such as sandbags, rock berms, cofferdams and other diversion structures shall be used to prevent excavation in flowing water.
25. Heavy equipment shall be operated from the banks rather than in the stream channel in order to minimize sedimentation and reduce the introduction of other pollutants into the stream.
26. All mechanized equipment operated near surface waters must be regularly inspected and maintained to prevent contamination of stream waters from fuels, lubricants, hydraulic fluids, or other toxic materials.
27. Discharging hydroseed mixtures and washing out hydroseeders and other equipment in or adjacent to surface waters is prohibited.
28. Sediment and erosion control measures shall not be placed in wetlands or waters unless otherwise approved by this Certification.
29. All fill slopes located in jurisdictional wetlands shall be placed at slopes no flatter than 3:1, unless otherwise authorized by this certification.
30. Native riparian vegetation must be reestablished in the riparian areas within the construction limits of the project by the end of the growing season following completion of construction.
31. There shall be no excavation from, or waste disposal into, jurisdictional wetlands or waters associated with this permit without appropriate modification. Should waste or borrow sites, or access roads to waste or borrow sites, be located in wetlands or streams, compensatory mitigation will be required since that is a direct impact from road construction activities.

32. Erosion and sediment control practices must be in full compliance with all specifications governing the proper design, installation and operation and maintenance of such Best Management Practices in order to protect surface waters standards:
- The erosion and sediment control measures for the project must be designed, installed, operated, and maintained in accordance with the most recent version of the *North Carolina Sediment and Erosion Control Planning and Design Manual*.
 - The design, installation, operation, and maintenance of the sediment and erosion control measures must be such that they equal, or exceed, the requirements specified in the most recent version of the *North Carolina Sediment and Erosion Control Manual*. The devices shall be maintained on all construction sites, borrow sites, and waste pile (spoil) projects, including contractor-owned or leased borrow pits associated with the project.
 - For borrow pit sites, the erosion and sediment control measures must be designed, installed, operated, and maintained in accordance with the most recent version of the *North Carolina Surface Mining Manual*.
 - The reclamation measures and implementation must comply with the reclamation in accordance with the requirements of the Sedimentation Pollution Control Act.
33. The permittee and its authorized agents shall conduct its activities in a manner consistent with State water quality standards (including any requirements resulting from compliance with §303(d) of the Clean Water Act) and any other appropriate requirements of State and Federal law. If NCDWQ determines that such standards or laws are not being met (including the failure to sustain a designated or achieved use) or that State or federal law is being violated, or that further conditions are necessary to assure compliance, NCDWQ may reevaluate and modify this certification.
34. A copy of this Water Quality Certification shall be maintained on the construction site at all times. In addition, the Water Quality Certification and all subsequent modifications, if any, shall be maintained with the Division Engineer and the on-site project manager.
35. The Permittee shall report any violations of this certification to the Division of Water Quality within 24 hours of discovery.
36. The issuance of this certification does not exempt the Permittee from complying with any and all statutes, rules, regulations, or ordinances that may be imposed by other government agencies (i.e. local, state, and federal) having jurisdiction, including but not limited to applicable buffer rules, stormwater management rules, soil erosion and sedimentation control requirements, etc.
37. Upon completion of the project (including any impacts at associated borrow or waste sites), the NCDOT Division Engineer shall complete and return the enclosed "Certification of Completion Form" to notify NCDWQ when all work included in the 401 Certification has been completed.

Violations of any condition herein set forth may result in revocation of this Certification and may result in criminal and/or civil penalties. This Certification shall become null and void unless the above conditions are made conditions of the Federal 404 and/or Coastal Area Management Act Permit. This Certification shall expire upon the expiration of the 404 or CAMA permit.

If you wish to contest any statement in the attached Certification you must file a petition for an administrative hearing. You may obtain the petition form from the office of Administrative hearings. You must file the petition with the office of Administrative Hearings within sixty (60) days of receipt of this notice. A petition is considered filed when it is received in the office of Administrative Hearings during normal office hours. The Office of Administrative Hearings accepts filings Monday through Friday between the hours of 8:00am and 5:00pm, except for official state holidays. The original and one (1) copy of the petition must be filed with the Office of Administrative Hearings.

The petition may be faxed-provided the original and one copy of the document is received by the Office of Administrative Hearings within five (5) business days following the faxed transmission.
The mailing address for the Office of Administrative Hearings is:

Office of Administrative Hearings

6714 Mail Service Center
Raleigh, NC 27699-6714
Telephone: (919)-733-2698, Facsimile: (919)-733-3478

A copy of the petition must also be served on DENR as follows:

Ms. Mary Penny Thompson, General Counsel
Department of Environment and Natural Resources
1601 Mail Service Center
Raleigh, NC 27699-1601

This the 19th day of January 2012

DIVISION OF WATER QUALITY



 Charles Wakild, P.E.
Director

WQC No. 003875



North Carolina Department of Environment and Natural Resources

Division of Water Quality
Charles Wakild, P.E.
Director

Beverly Eaves Perdue
Governor

Dee Freeman
Secretary

NCDWQ Project No.: _____

County: _____

Applicant: _____

Project Name: _____

Date of Issuance of 401 Water Quality Certification: _____

Certificate of Completion

Upon completion of all work approved within the 401 Water Quality Certification or applicable Buffer Rules, and any subsequent modifications, **the applicant is required to return this certificate to the 401 Transportation Permitting Unit, North Carolina Division of Water Quality, 1650 Mail Service Center, Raleigh, NC, 27699-1650.** This form may be returned to NCDWQ by the applicant, the applicant's authorized agent, or the project engineer. It is not necessary to send certificates from all of these.

Applicant's Certification

I, _____, hereby state that, to the best of my abilities, due care and diligence was used in the observation of the construction such that the construction was observed to be built within substantial compliance and intent of the 401 Water Quality Certification and Buffer Rules, the approved plans and specifications, and other supporting materials.

Signature: _____ Date: _____

Agent's Certification

I, _____, hereby state that, to the best of my abilities, due care and diligence was used in the observation of the construction such that the construction was observed to be built within substantial compliance and intent of the 401 Water Quality Certification and Buffer Rules, the approved plans and specifications, and other supporting materials.

Signature: _____ Date: _____

Engineer's Certification

_____ Partial _____ Final

I, _____, as a duly registered Professional Engineer in the State of North Carolina, having been authorized to observe (periodically, weekly, full time) the construction of the project, for the Permittee hereby state that, to the best of my abilities, due care and diligence was used in the observation of the construction such that the construction was observed to be built within substantial compliance and intent of the 401 Water Quality Certification and Buffer Rules, the approved plans and specifications, and other supporting materials.

Signature _____ Registration No. _____

Date _____

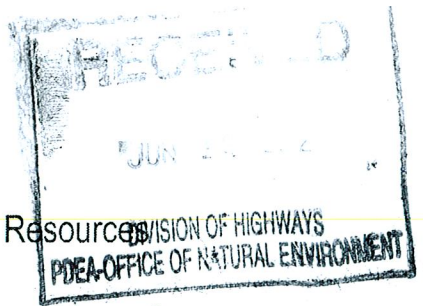
Transportation Permitting Unit
1650 Mail Service Center, Raleigh, North Carolina 27699-1650
Location: 512 N. Salisbury Street, Raleigh, North Carolina 27604
Phone: 919-807-6300 FAX: 919-807-6494
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North Carolina Department of Environment and Natural Resources
Division of Coastal Management



Beverly Eaves Perdue
Governor

Braxton C. Davis
Director

Dee Freeman
Secretary

June 7, 2012

N.C. Department of Transportation
1548 Mail Service Center
Raleigh, NC 27699-1548

Dear Sir or Madam:

The enclosed permit constitutes authorization under the Coastal Area Management Act, and where applicable, the State Dredge and Fill Law, for you to proceed with your project proposal. The original (buff-colored form) is retained by you and it must be available on site when the project is inspected for compliance. Please sign both the original and the copy and return the copy to this office in the enclosed envelope. Signing the permit and proceeding means you have waived your right of appeal described below.

If you object to the permit or any of the conditions, you may request a hearing pursuant to NCGS 113A-121.1 or 113-229. Your petition for a hearing must be filed in accordance with NCGS Chapter 150B with the Office of Administrative Hearings, 6714 Mail Service Center, Raleigh, NC 27611-6714, (919) 733-2698 within twenty (20) days of this decision on your permit. You should also be aware that if another qualified party submits a valid objection to the issuance of this permit within twenty (20) days, the matter must be resolved prior to work initiation. The Coastal Resources Commission makes the final decision on any appeal.

The project plan is subject to those conditions appearing on the permit form. Otherwise, all work must be carried out in accordance with your application. Modifications, time extensions, and future maintenance requires additional approval. Please read your permit carefully prior to starting work and review all project plans, as approved. If you are having the work done by a contractor, it would be to your benefit to be sure that he fully understands all permit requirements.

From time to time, Department personnel will visit the project site. To facilitate this review, we request that you complete and mail the enclosed Notice Card just prior to work initiation. However, if questions arise concerning permit conditions, environmental safeguards, or problem areas, you may contact Department personnel at any time for assistance. By working in accordance with the permit, you will be helping to protect our vitally important coastal resources.

Sincerely,

Douglas V. Huggett
Major Permits and Consistency Manager

Enclosure

Permit Class
NEW

Permit Number
63-12

STATE OF NORTH CAROLINA
Department of Environment and Natural Resources
and
Coastal Resources Commission

Permit

for

☒ Major Development in an Area of Environmental Concern
pursuant to NCGS 113A-118

☐ Excavation and/or filling pursuant to NCGS 113-229

Issued to **N.C. Department of Transportation, 1548 Mail Service Center, Raleigh, NC 27699-1548**

Authorizing development in Hertford County at Potecasi Creek and unnamed tributary to Potecasi Creek, US 158, as requested in the permittee's application dated 3/1/12, and the e-mail dated 5/24/12, including the attached workplan drawings (115) as described in Condition No. 1 below.

This permit, issued on 6/7/12, is subject to compliance with the application (where consistent with the permit), all applicable regulations, special conditions and notes set forth below. Any violation of these terms may be subject to fines, imprisonment or civil action; or may cause the permit to be null and void.

TIP No. R-2583, Roadway Widening with Bridge and Culvert Replacement

- 1) All work authorized by this permit shall be carried out in accordance with the following attached workplan drawings, except as modified herein:

Wetlands and Streams Impacts drawings: 45 dated 10/3/11 and 3 dated 10/21/11

Utilities drawings: 31 dated 3/8/12

Roadway Design drawings: 35 dated 9/15/11 and 1 dated 2/17/12

(See attached sheets for Additional Conditions)

This permit action may be appealed by the permittee or other qualified persons within twenty (20) days of the issuing date. An appeal requires resolution prior to work initiation or continuance as the case may be.

This permit must be accessible on-site to Department personnel when the project is inspected for compliance.

Any maintenance work or project modification not covered hereunder requires further Division approval.

All work must cease when the permit expires on

Signed by the authority of the Secretary of DENR and the Chairman of the Coastal Resources Commission.

Douglas V. Haggatt for

Braxton C. Davis, Director
Division of Coastal Management

This permit and its conditions are hereby accepted.

No expiration date, pursuant to GS 136-44.7B

In issuing this permit, the State of North Carolina agrees that your project is consistent with the North Carolina Coastal Management Program.

E. L. Lucke for Gregory J. Thope, PhD
Signature of Permittee

ADDITIONAL CONDITIONS

- 2) In accordance with the permittee's correspondence dated 5/24/12, prior to project completion, the permittee shall remove the vertical abutment from the western side of the existing bridge over Potecasi Creek and shall grade the remaining bank down to the creek at a 3:1 or flatter slope. The purpose of this is to mitigate for the loss of the informal public trust access on the east side of the existing bridge over Potecasi Creek.
- 3) In order to protect anadromous fisheries resources, no in-water work shall be conducted between February 15 to June 15 of any year in Potecasi Creek and the unnamed tributary to Potecasi Creek at Site 2 as depicted on the attached workplan drawings, without prior approval of the N.C. Division of Coastal Management (DCM), in consultation with the N.C. Wildlife Resources Commission (WRC).
- 4) The permittee shall implement the N.C. Department of Transportation's (NCDOT's) Stream Crossing Guidelines for Anadromous Fish Passage.
- 5) Excavated material may be used in fill areas associated with the project once properly dewatered or shall be removed from the site and taken to a high ground location.
- 6) All excavated materials shall be confined above normal water level and landward of regularly or irregularly flooded wetlands behind adequate dikes or other retaining structures to prevent spillover of solids into any wetlands or surrounding waters, as authorized in the attached workplan drawings.
- 7) The temporary placement and double handling of any excavated or fill material within waters or vegetated wetlands is not authorized, with the exception of that fill necessary for the construction of the temporary work bridge. This condition also applies to the removal of the existing bridge, culverts, roadway asphalt and associated materials.
- 8) No excavation or filling shall take place at any time in any vegetated wetlands or surrounding waters outside of the alignment of the areas indicated on the attached workplan drawings, without permit modification.
- 9) All fill material shall be clean and free of any pollutants except in trace quantities.
- 10) All fill material shall be obtained from an upland source.
- 11) Live concrete shall not be allowed to contact the water in or entering into waters of the State, or the adjacent wetlands.
- 12) The placement of riprap shall be limited to the areas as depicted on the attached workplan drawings. The riprap material shall be clean and free from loose dirt or any pollutant except in trace quantities. The riprap material shall consist of clean rock or masonry materials such as, but not limited to, granite, marl or broken concrete.
- 13) Construction staging areas shall be located only in upland areas, and not in wetlands or Waters of the State.
- 14) All construction access for the new permanent bridges over Potecasi Creek shall be through the authorized temporary work bridge, partially constructed new bridges or existing high ground areas.

ADDITIONAL CONDITIONS

- 15) In accordance with design commitments made in the permit application, the vertical navigational clearance of the authorized temporary work bridge shall be a minimum of 7 feet above the normal water level of Potecasi Creek as measured from the bottom of the temporary bridge decking.
- 16) The installation of the piles for the permanent and temporary bridges shall be accomplished by pile driving and/or the use of a vibratory hammer. Should the permittee and/or its contractor propose to utilize another type of pile installation, such as jetting or drilled shaft construction, additional authorization from DCM shall be required.
- 17) Pilings from the existing bridge and the temporary work bridge, as well as any remnant pilings from previous bridges, shall be removed in their entirety, except that in the event that a bridge piling breaks during removal and cannot be removed in its entirety, it may be cut off flush with the bed of the water body, and DCM shall be notified of each occurrence within one working day.
- 18) The temporary work bridge and the existing bridge shall be removed in their entirety within 90 days after they are no longer needed and disposed of at an approved high ground site. However, if this timeframe occurs while the moratorium referenced in Condition No. 3 of this permit is in effect, and if WRC is opposed to the removal of the temporary work bridge and/or the existing bridge within the moratorium period, then the temporary work bridge and/or the existing bridge shall be removed in their entirety within 30 days of the moratorium end date.
- 19) All materials and debris associated with the removal and/or construction of the existing and/or new bridge, temporary work bridge, existing and/or new culverts, existing and/or new causeway, other existing structures within the Right-of-Way as authorized by the permit and associated materials, shall not enter wetlands or Waters of the State, even temporarily. Any such material shall be disposed of at an approved upland site or shall be recycled in an environmentally appropriate manner provided appropriate authorizations from any relevant state, federal, or local authorities are obtained.

Historical and Cultural Resource Protection

- 20) In accordance with environmental commitments made within the FONSI dated 6/3/08, the permittee shall conduct a detailed archaeological data recovery at Site 31HF268 prior to construction. However, construction may begin outside of the Area of Potential Effect for Site 31HF268 before the detailed archaeological data recovery is complete. The permittee shall provide DCM with documentation that the N.C. State Historic Preservation Office agrees that the archaeological data recovery was successfully completed prior to initiation of construction activities within the Area of Potential Effect for Site 31HF268.

Utility Impacts**NOTE:**

The construction of the new bridge will also require the relocation of gas, forced main sanitary sewer, telephone and water utility lines with associated hand and mechanized clearing. Wetland and stream impacts resulting from the utility relocation have been included in the total wetland and stream impacts for this project.

ADDITIONAL CONDITIONS

NOTE: CAMA General Permit #58370 was issued on 10/20/11 for the relocation of electrical utility lines associated with the R-2583 project, including across Potecasi Creek.

- 21) Any utility work associated with this project that is not specifically depicted on the attached workplan drawings, or described within the attached permit application, shall require approval from DCM, either under the authority of this permit, or by the utility company obtaining separate authorization.
- 22) Utilities that cross the unnamed tributary to Potecasi Creek at Site 2 as depicted on the attached workplan drawings shall be installed using a horizontal directional bore drilling method. Entry and exit points of this activity, including disposal of material from the drilling activity, shall be outside of all wetlands and Waters of the State. The utilities shall be installed at a minimum depth of two feet below the bottom contour.

NOTE: Plans and specifications for the relocation and/or replacement of potable water supply lines must be submitted to the N.C. Division of Environmental Health, Public Water Supply Plan Review Section for approval prior to construction. Final approval must be issued before water mains are placed into service.

NOTE: The permittee is advised to contact the Hertford County Water Department to determine precise locations of existing water mains in the project area.

Impacts to Wetlands and Waters of the State and Compensatory Mitigation

NOTE: This project will permanently impact approximately 4.44 acres of 404 wetlands (2.97 acres due to fill, 0.67 acres due to excavation, 0.80 acres due to mechanized clearing). This project will temporarily impact approximately 0.82 acres of 404 wetlands due to hand clearing. This project will permanently impact approximately 0.25 acres of surface waters and will temporarily impact approximately 0.11 acres of surface waters.

NOTE: This project will permanently impact approximately 1,832 linear feet of streams and will temporarily impact approximately 222 linear feet of streams.

NOTE: In accordance with the Ecosystem Enhancement Program (EEP) letter dated 2/14/12, compensatory mitigation for permanent impacts of 3.96 acres of riparian wetlands, 0.48 acres of non-riparian wetlands and 1,832 linear feet of warm stream associated with the authorized project shall be provided by the EEP in accordance with the EEP In-Lieu Fee Instrument dated 7/28/10.

- 23) Fill slopes in wetlands shall be 3:1 or steeper.
- 24) There shall be no clearing or grubbing of wetlands outside of the areas indicated on the attached workplan drawings without prior approval from DCM.
- 25) Wetland areas to be temporarily impacted by clearing shall not be grubbed.

ADDITIONAL CONDITIONS

- 26) Wetlands shall not be crossed in transporting equipment to the project site, except for the purposes of hand clearing, without prior approval from DCM. The permittee shall minimize the need to cross wetlands in transporting equipment for hand clearing to the maximum extent practicable.

Sedimentation and Erosion Control

- 27) Turbidity curtains and silt fences shall be used to isolate all in-water work areas from Potecasi Creek and the unnamed tributary to Potecasi Creek at Site 2 as depicted on the attached workplan drawings, including pile installation and removal, placement of riprap, and excavation or filling. The turbidity curtains shall be of sufficient length and effectiveness to prevent a visible increase in the amount of suspended sediments in adjacent waters. The turbidity curtains shall isolate and contain in-water work areas with active construction activities in progress, such as installation of bridge pilings. Turbidity curtains shall not impede navigation. Turbidity curtains shall be properly maintained and retained in the water until construction within the area that they are containing is complete. Turbidity curtains shall be removed when turbidity within the curtains reaches ambient levels.
- 28) Appropriate sedimentation and erosion control devices, measures or structures shall be implemented to ensure that eroded materials do not enter adjacent wetlands, watercourses and properties (e.g. silt fence, diversion swales or berms, etc.).
- 29) This project shall conform to all requirements of the N.C. Sedimentation Pollution Control Act and NCDOT's Memorandum of Agreement with the Division of Land Resources.
- 30) In order to protect water quality, runoff from construction shall not visibly increase the amount of suspended sediments in adjacent waters.

Stormwater Management

NOTE: The N.C. Division of Water Quality (DWQ) confirmed in a letter dated 5/4/12 (SW7120209) that the subject project is excluded from State Stormwater permitting requirements as set forth in Section 2(d)(1) of Session Law 2008-211, effective October 1, 2008, and the stormwater rules under Title 15A NCAC 2H .1000, as amended.

- 31) In accordance with Condition No. 4 of the General Water Quality Certification No. 3875 issued by DWQ on 1/19/12 (DWQ Project No. 20111075), bridge deck drains shall not discharge directly into the stream. DWQ issued corrections to this same Water Quality Certification on 2/28/12 and 5/30/12.

General

- 32) No attempt shall be made by the permittee to prevent the full and free use by the public of all navigable waters at or adjacent to the authorized work following completion of construction activities.

ADDITIONAL CONDITIONS

- 33) During bridge construction and demolition, the permittee shall make every attempt not to impede navigation in Potecasi Creek. If this is not possible, then adequate notice shall be provided to the public that navigation will be limited during construction. The notice shall include an estimate of the amount of time that the limited navigation will occur.
- 34) The permittee shall install and maintain at its expense any signal lights or signals prescribed by the U.S. Coast Guard, through regulation or otherwise, on the authorized permanent and temporary bridges over Potecasi Creek. At a minimum, permanent reflectors shall be attached to the structures in order to make them more visible during hours of darkness or inclement weather.
- 35) The permittee shall exercise all available precautions in the day-to-day operation of the facility to prevent waste from entering the adjacent waters and wetlands.
- 36) If it is determined that additional permanent and/or temporary impacts (such as but not limited to temporary access roads, detours, or matting to transport equipment across wetlands) are necessary that are not shown on the attached workplan drawings or described in the authorized permit application, a permit modification and/or additional authorization from DCM shall be required. In addition, any changes in the approved plan may also require a permit modification and/or additional authorization from DCM. The permittee shall contact a representative of DCM prior to commencement of any such activity for this determination and any permit modification.
- 37) Development authorized by this permit shall only be conducted on lands owned by NCDOT and/or its Right-of-Ways and/or easements.
- 38) The permittee and/or his contractor shall contact the DCM Transportation Field Representative in Elizabeth City at (252) 264-3901 to request a preconstruction conference prior to project initiation.
- 39) DWQ authorized the proposed project on 1/19/12 (DWQ Project No. 20111075) under General Water Quality Certification No. 3875. DWQ issued corrections to this same Water Quality Certification on 2/28/12 and 5/30/12. Any violation of the Certification approved by DWQ shall be considered a violation of this CAMA permit.

NOTE: The U.S. Army Corps of Engineers is reviewing this project as an Individual Permit (Action ID No. SAW-2002-11081).

NOTE: This permit does not eliminate the need to obtain any additional permits, approvals or authorizations that may be required.

U.S. Department of
Homeland Security

United States
Coast Guard

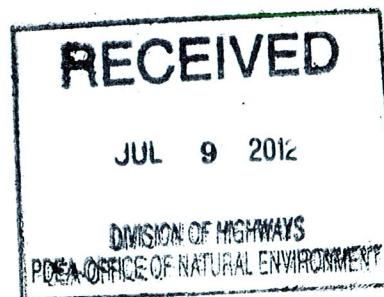


Commander
United States Coast Guard
Fifth Coast Guard District

431 Crawford Street
Portsmouth, Va. 23704-5004
Staff Symbol: dpb
Phone: (757) 398-6587
Fax: (757) 398-6334
Email: terrance.a.knowles@uscg.mil

16591
29 JUN 2012

Mr. Gregory Thorpe, Ph.D, Manager
NC Department of Transportation
Project Development and Environmental Analysis
1598 Mail Service Center
Raleigh, NC 27699-1598



Dear Mr. Thorpe:

This is in response to your June 15, 2012 letter, requesting Coast Guard approval for the proposed construction of the US-158 Bridges over Potecasi Creek in Hertford County, NC.

The Coast Guard Authorization Act of 1982 exempts bridge projects from Coast Guard Bridge Permits when the bridge project crosses non-tidal waters which are not used, susceptible to use in their natural condition, or susceptible to use by reasonable improvement as a means to transport interstate commerce. Your project fits this description, therefore these bridges in this vicinity are exempt, and will not require a Coast Guard Bridge Permit.

This determination is for the proposed construction of dual bridges at this location and **it is valid for five years from the date of this letter.** If construction does not commence within this time period, you must contact this office for reaffirmation of this authorization. Further bridge projects along the same waterway will have to be independently evaluated before they may be considered for this determination.

The requirement to display permanent navigation lights for the proposed bridges is also waived. This waiver may be rescinded at any time in the future should nighttime navigation through these bridges be increased to level determined by the District Commander to warrant lighting.

The fact that a Coast Guard permit is not required does not relieve you of the responsibility for compliance with the requirements of any other Federal, State, or local agency who may have jurisdiction over any aspect of the project.

Sincerely,

WAVERLY W. GREGORY, JR.
Bridge Program Manager
By direction of the Commander
Fifth Coast Guard District

RECEIVED
Division of Highways

JUL 05 2012

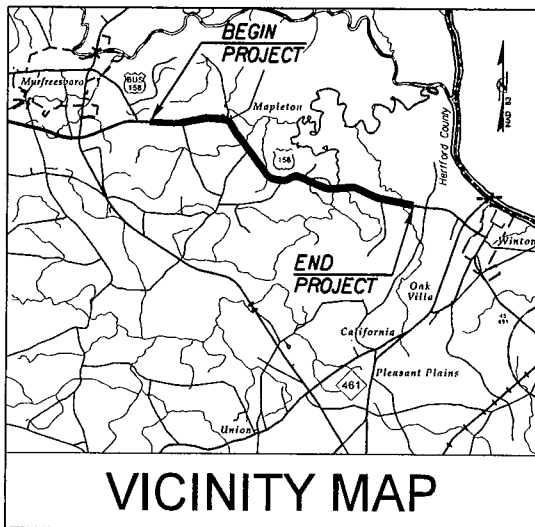
Preconstruction
Project Development and
Environmental Analysis Branch

CONTRACT: C202615

TIP PROJECT: R-2583

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\$\$\$\$\$USERNAME\$\$\$\$\$

See Sheet 1-A For Index of Sheets



STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

HERTFORD COUNTY

LOCATION: US 158 WIDENING FROM THE MURFREESBORO
BYPASS TO US 13 WEST OF WINTON

TYPE OF WORK: GRADING, DRAINAGE, PAVING, WIDENING, RESURFACING,
GUARDRAIL, STRUCTURES & CULVERTS

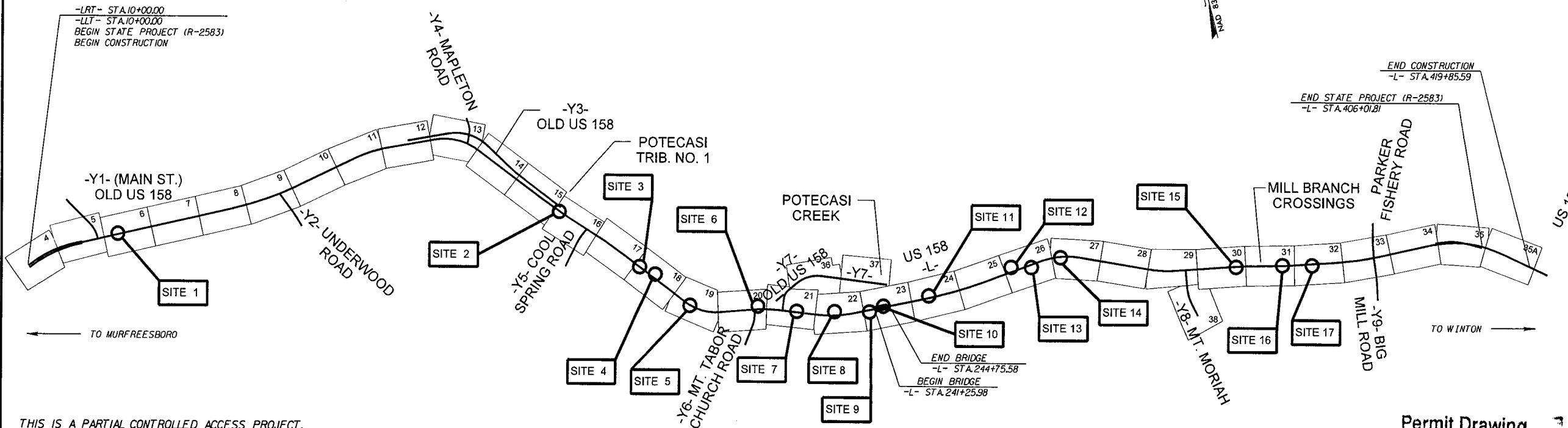
WETLAND & STREAM IMPACTS

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	R-2583	1	
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	
35489.3.1	N/A	CONST.	

S.T. WOOTEN CORPORATION

HNTB HNTB NORTH CAROLINA, P.C.
343 E. Six Forks Road, Suite 200
Raleigh, North Carolina 27609
NC License No: C-1554

DATE: OCTOBER 3, 2011



THIS IS A PARTIAL CONTROLLED ACCESS PROJECT.

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

Permit Drawing
Sheet 1 of 52

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

GRAPHIC SCALES



DESIGN DATA

ADT (2005)= 3600
ADT (2030)= 7500
DHV = 11 %
D = 55 %
T = 20 % *
V = 60 MPH
* TTST = 13% DUAL = 7%
FUNC CLASS =
PRINCIPLE RURAL
ARTERIAL

PROJECT LENGTH

LENGTH ROADWAY TIP PROJECT R-2583 = 7.719 MI.
LENGTH STRUCTURES TIP PROJECT R-2583 = 0.066 MI.

TOTAL LENGTH TIP PROJECT R-2583 = 7.785 MI.

ALL LENGTHS BASED OFF WEST BOUND LANES

Prepared in the Office of:
HNTB NORTH CAROLINA, P.C.
343 E. Six Forks Road, Raleigh NC, 27609

2006 STANDARD SPECIFICATIONS

RIGHT OF WAY DATE:
MARCH 24, 2011

LETTING DATE:
MARCH 24, 2011

ENRICO A. ROQUE, P.E.
PROJECT ENGINEER

ANTHONY THOMPSON, P.E.
PROJECT DESIGN ENGINEER

HYDRAULICS ENGINEER

SIGNATURE: P.E.

ROADWAY DESIGN
ENGINEER

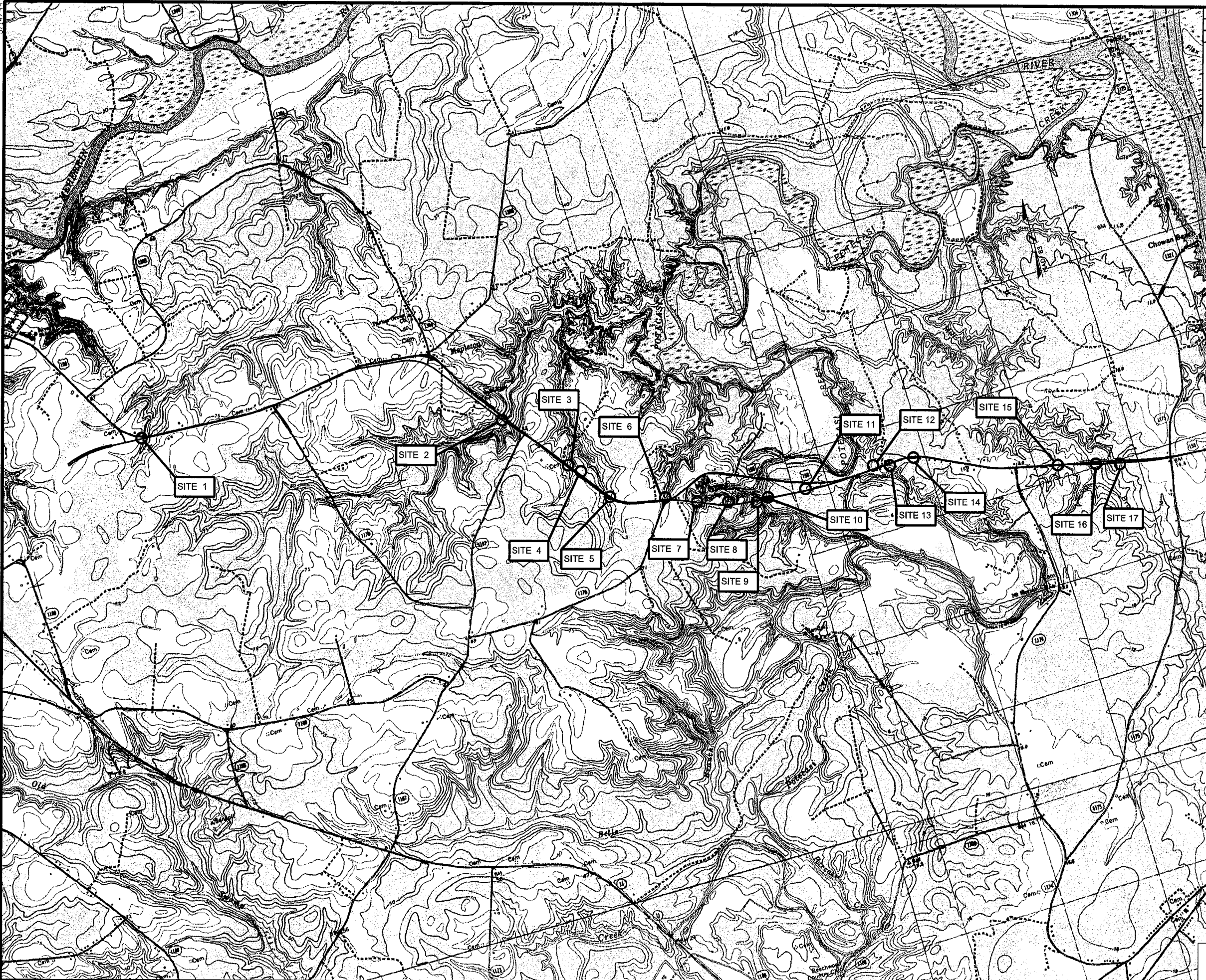
SIGNATURE: P.E.

DIVISION OF HIGHWAYS
STATE OF NORTH CAROLINA



STATE HIGHWAY DESIGN ENGINEER P.E.

12:45:04 PM 12/25/2013 R-2583.prm_0040.dgn



PROJECT REFERENCE NO. R-2583		SHEET NO. 2	
RW SHEET NO.			
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER	
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION			

8/17/99



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NC License No: C-1554

DATE: OCTOBER 3, 2011

PROJECT REFERENCE NO.	SHEET NO.
R-2583	6
SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	

LEGEND	
	DENOTES IMPACTS IN SURFACE WATER
	DENOTES FILL IN WETLAND
	DENOTES MECHANIZED CLEARING
	DENOTES TEMPORARY IMPACTS IN SURFACE WATER
	DENOTES EXCAVATION IN WETLAND



MATCH LINE TO SHEET 5
STA. 17+00

MATCH LINE TO SHEET 7
STA. 30+00

SITE 1

REVISIONS

10/2/28 AM
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FOR -L- PROFILE SEE SHEET 41

PERMIT DRAWINGS
SHEET 3 OF 52

8/17/99



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NC License No: C-1554

DATE: OCTOBER 3, 2011

PROJECT REFERENCE NO. <i>R-2583</i>		SHEET NO. <i>6</i>	
SHEET NO.			
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER	
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION			

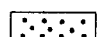
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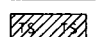
DENOTES IMPACTS IN
SURFACE WATER



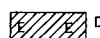
DENOTES FILL IN
WETLAND



DENOTES MECHANIZED
CLEARING



DENOTES TEMPORARY
IMPACTS IN SURFACE WATER



DENOTES EXCAVATION
IN WETLAND

MATCH LINE TO SHEET 5
STA. 17+00

MATCH LINE TO SHEET 7
STA. 30+00

SITE 1

SWALE OUTLET DATA
Q10= 3.9 cfs
V10= 1.9 ft/s

SWALE OUTLET DATA
Q10= 3.8 cfs
V10= 1.4 ft/s

FOR -L- PROFILE, SEE SHEET 41

PERMIT DRAWINGS
SHEET 4 OF 52

REVISIONS

10/4/30 AM
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5/14/99



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343 E. SIX FORKS ROAD, SUITE 200
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NC LICENSE NO. C-1554

PROJECT REFERENCE NO.

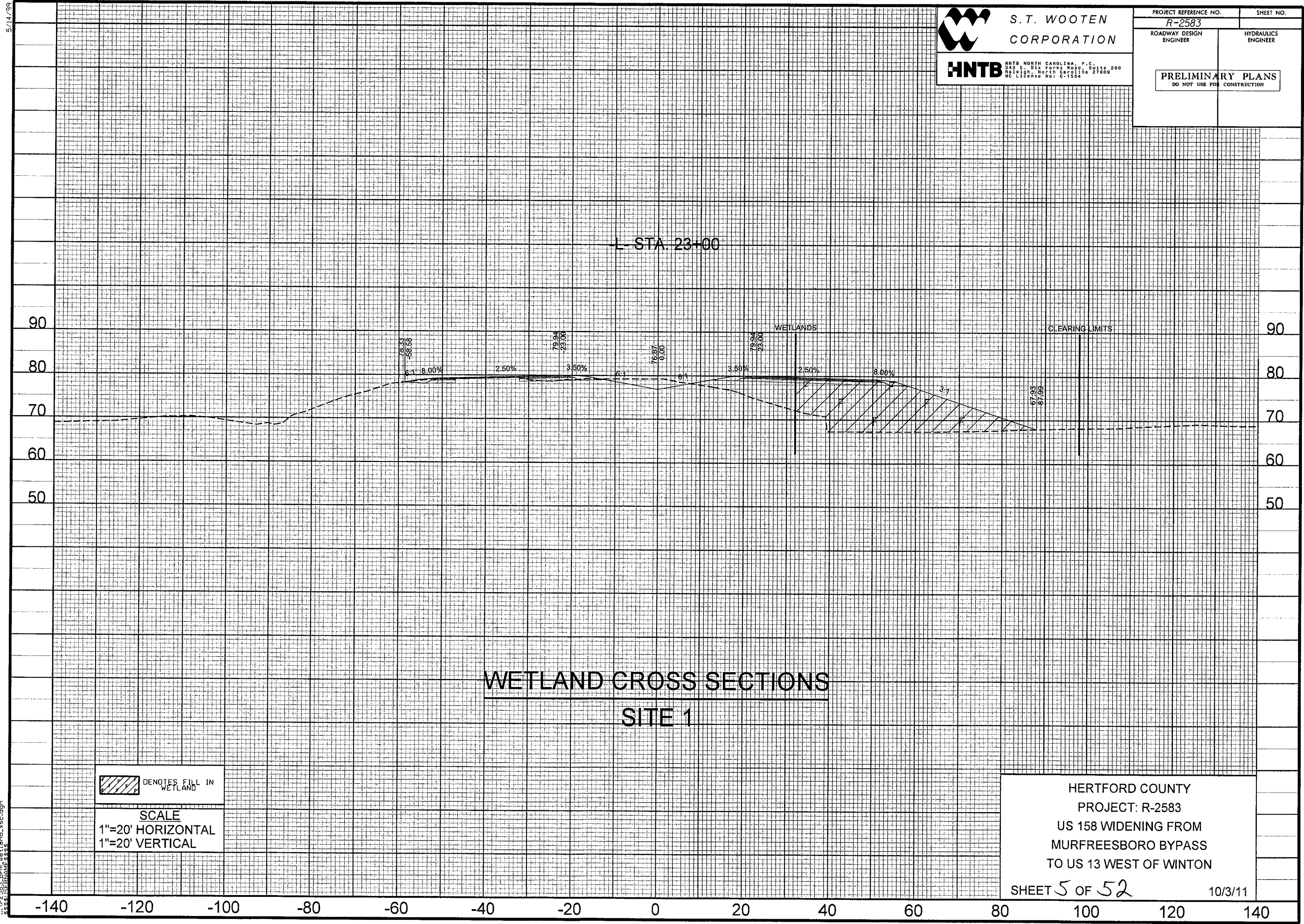
R-2583

SHEET NO.

ROADWAY DESIGN
ENGINEER

HYDRAULICS
ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION



HERTFORD COUNTY
PROJECT: R-2583
US 158 WIDENING FROM
MURFREESBORO BYPASS
TO US 13 WEST OF WINTON
SHEET 5 OF 52
10/3/11

8/17/99



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Raleigh, North Carolina 27609
NC License No: C-1554

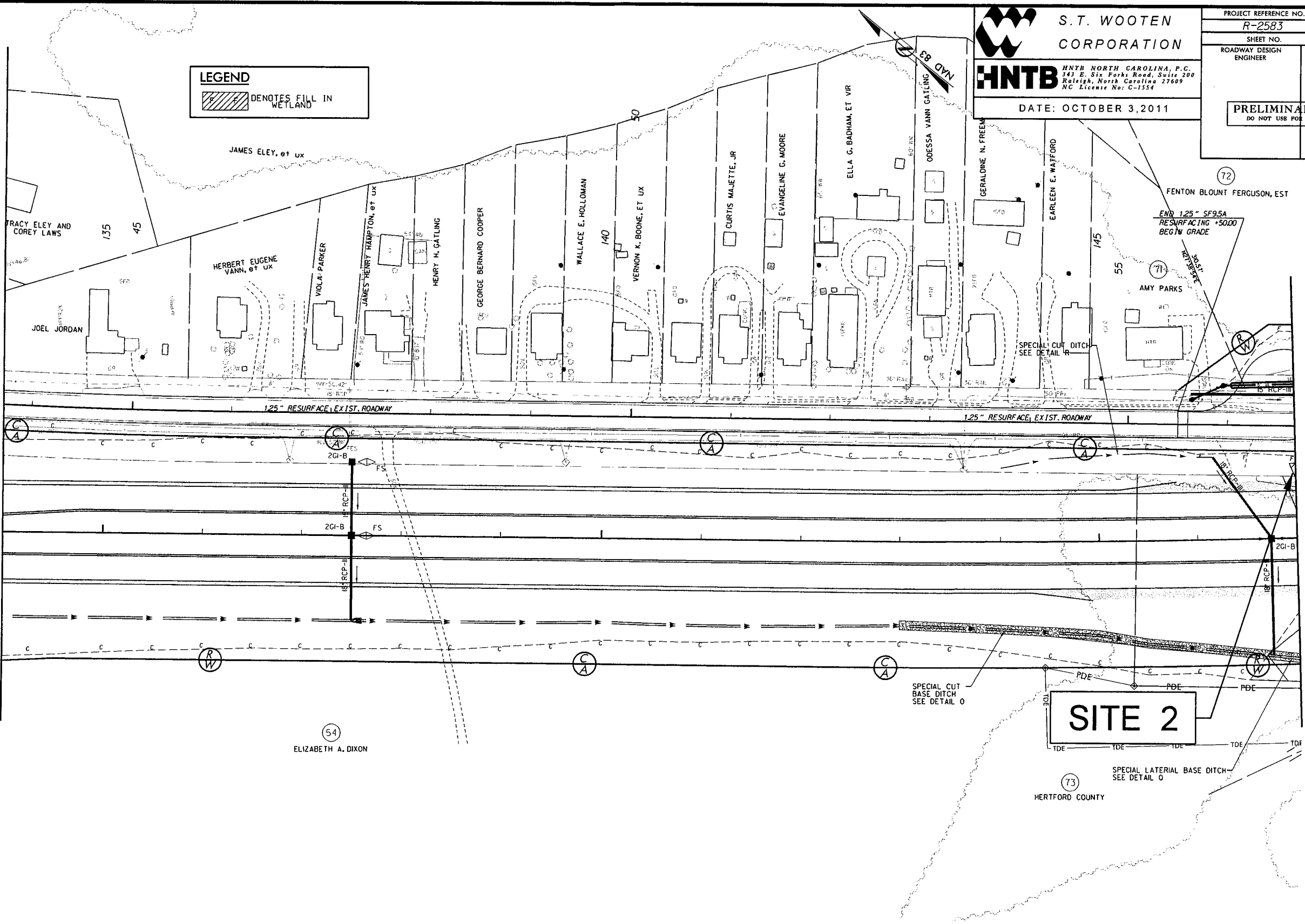
DATE: OCTOBER 3, 2011

PROJECT REFERENCE NO. <i>R-2583</i>		SHEET NO. 15	
SHEET NO.			
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER	
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION			

LEGEND

 DENOTES FILL IN WETLAND

MATCH LINE TO SHEET 14
STA. 134+00



MATCH LINE TO SHEET 16
STA. 147+00

REVISIONS

12:49:43 PM 8/25/02 prm_psh_15A.dgn

FOR -L- (EB) PROFILE, SEE SHEETS 46 & 47
FOR -L- (WB) PROFILE, SEE SHEETS 46 & 47

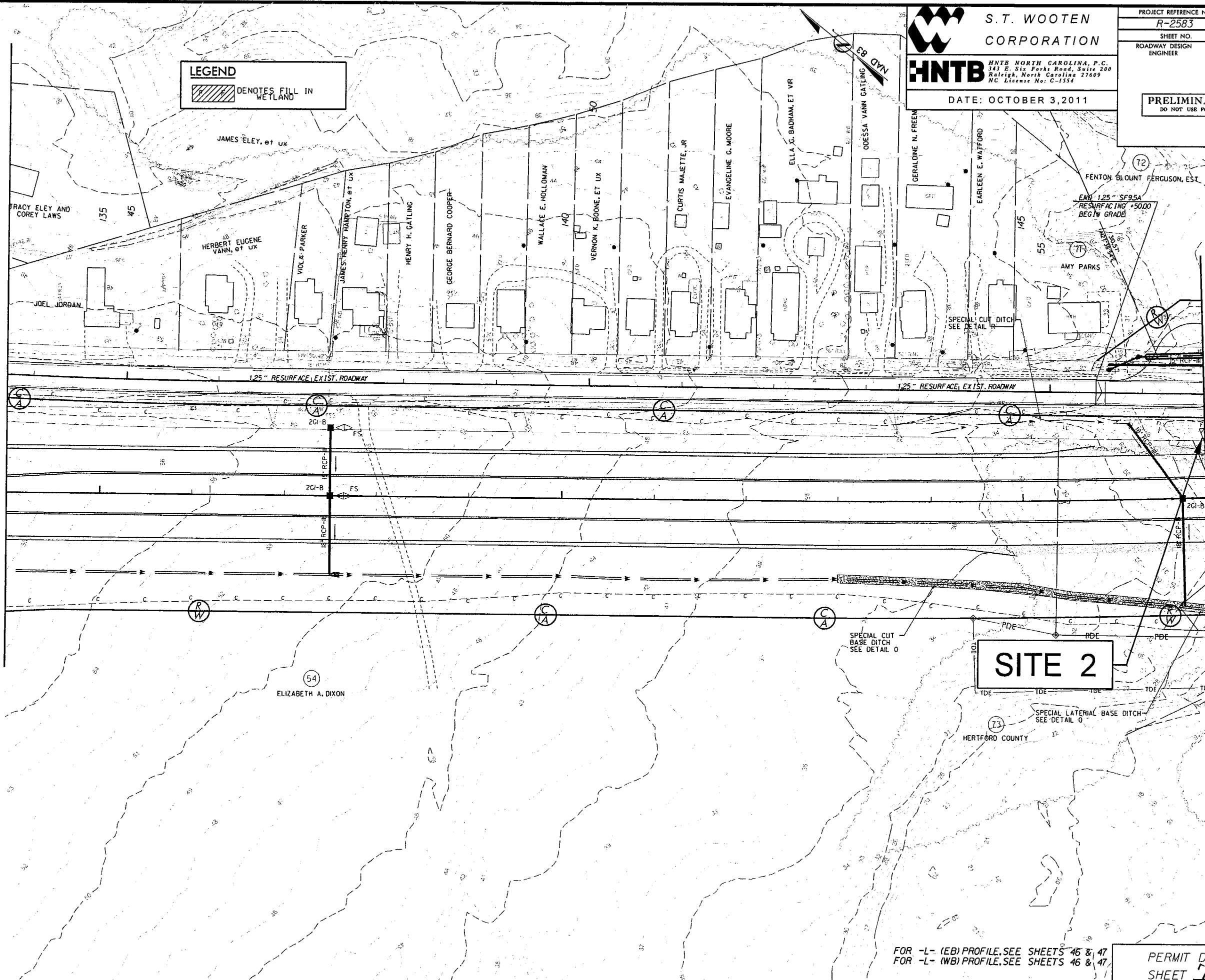
PERMIT DRAWINGS
SHEET 6 OF 52

8/17/99

REVISIONS

12512 P1559-2583-prm-psd-15B.dgn
S:\12512\12512-2583\12512-2583.dgn

MATCH LINE TO SHEET 14
STA. 134+00



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141 E. Six Forks Road, Suite 200
Raleigh, North Carolina 27609
NC License No: C-1554
DATE: OCTOBER 3, 2011

PROJECT REFERENCE NO. R-2583	SHEET NO.
SHEET NO. ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	

SITE 2

FOR -L- (EB) PROFILE, SEE SHEETS 46 & 47
FOR -L- (WB) PROFILE, SEE SHEETS 46 & 47

PERMIT DRAWINGS
SHEET 7 OF 52

MATCH LINE TO SHEET 16
STA. 147+00

8/17/99



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Raleigh, North Carolina 27609
NC License No: C-1554

DATE: OCTOBER 3, 2011

PROJECT REFERENCE NO.

R-2583

SHEET NO.

16

ROADWAY DESIGN
ENGINEER

HYDRAULICS
ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

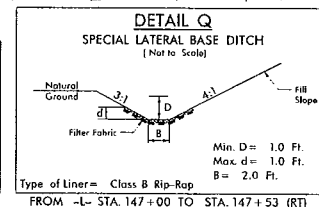
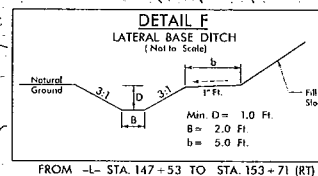
LEGEND

- DENOTES IMPACTS IN SURFACE WATER
- DENOTES FILL IN WETLAND
- DENOTES EXCAVATION IN WETLAND
- DENOTES TEMPORARY IMPACTS IN SURFACE WATER

MATCH LINE TO SHEET 15
STA. 147+00

MATCH LINE TO SHEET 17
STA. 160+00

SITE 2



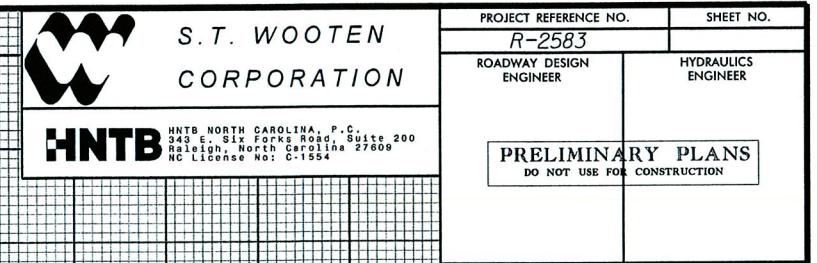
NOTE:
SEE SHEET 2E FOR CROSSOVER DETAILS
FOR -L- PROFILE, SEE SHEETS 47 & 48
FOR -Y5- PROFILE, SEE SHEET 59

PERMIT DRAWINGS
SHEET 9 OF 52

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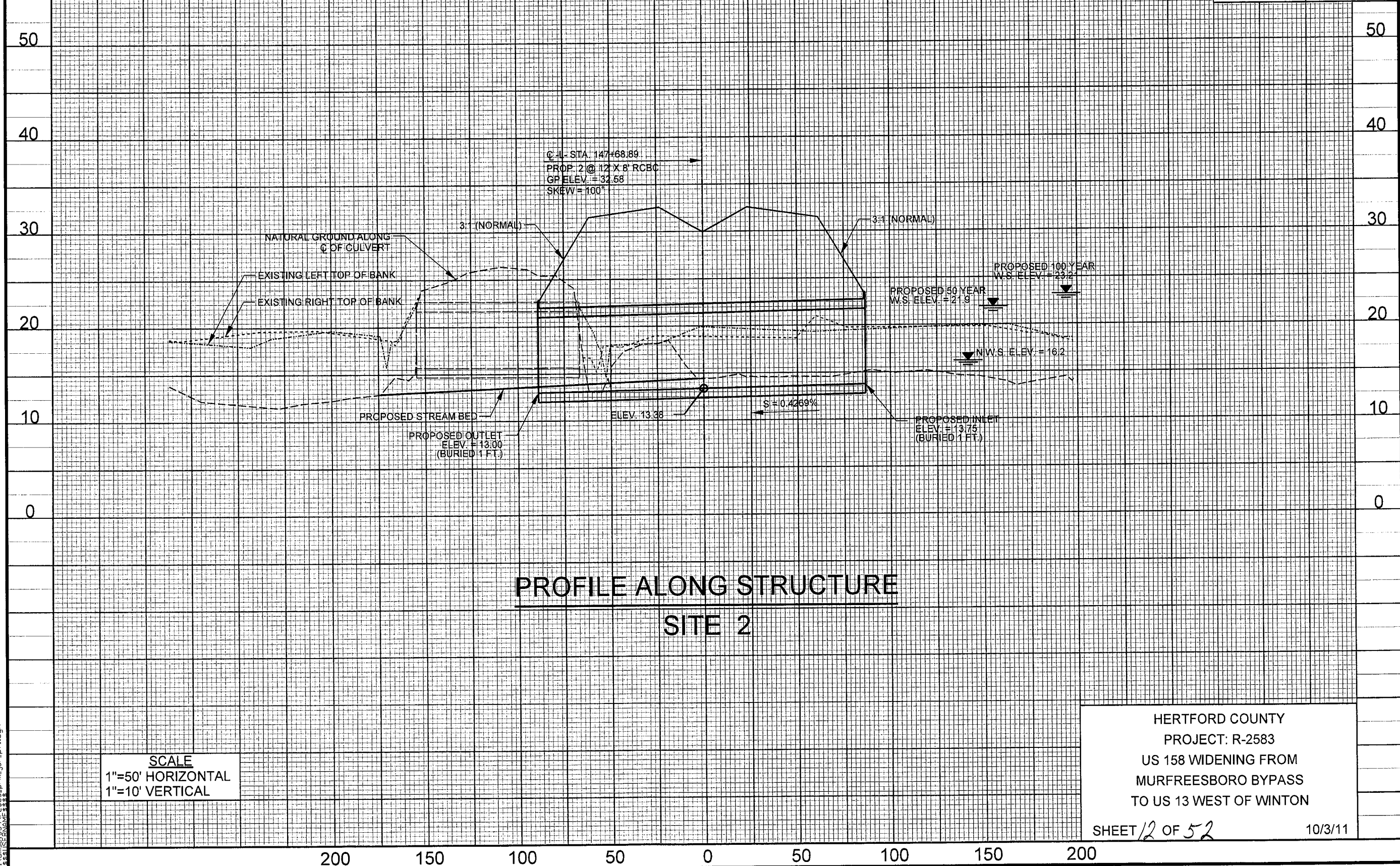
5/14/99



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245 E. SIX FORKS ROAD, SUITE 200
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NC LICENSE NO. C-1554

PROJECT REFERENCE NO.		SHEET NO.
R-2583		
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION		



11/3/94 PM
11/3/94 PM
11/3/94 PM

SCALE
1"=50' HORIZONTAL
1"=10' VERTICAL

HERTFORD COUNTY
PROJECT: R-2583
US 158 WIDENING FROM
MURFREESBORO BYPASS
TO US 13 WEST OF WINTON
SHEET 12 OF 52
10/3/11

8/17/99



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HNTB NORTH CAROLINA, P.C.
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Raleigh, North Carolina 27609
NC License No: C-1554

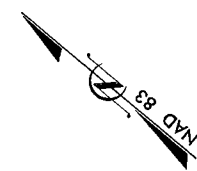
DATE: OCTOBER 3, 2011

PROJECT REFERENCE NO.	SHEET NO.
R-2583	17
SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	

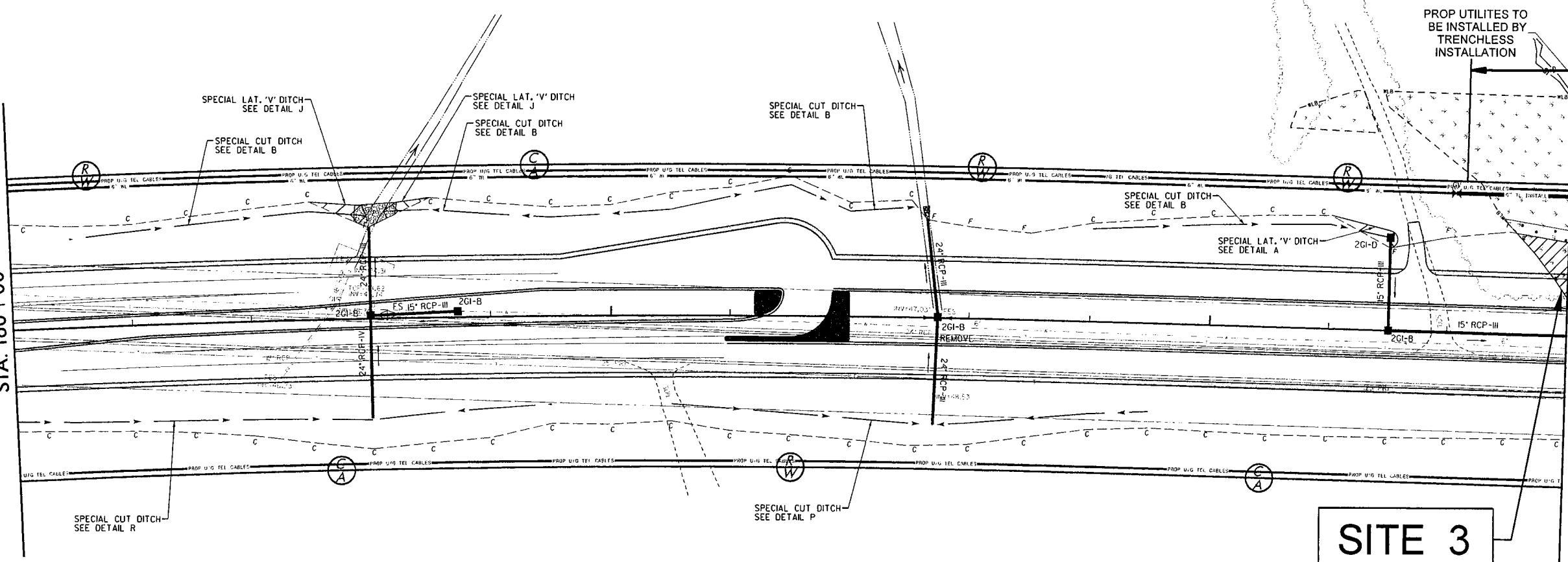
LEGEND

 DENOTES FILL IN WETLAND

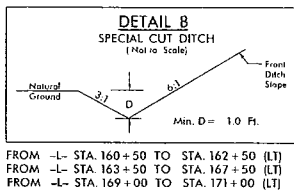
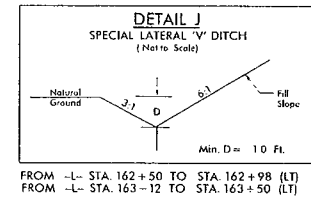
 DENOTES MECHANIZED CLEARING



MATCH LINE TO SHEET 16
STA. 160+00



MATCH LINE TO SHEET 18
STA. 173+00



NOTE:
SEE SHEET 2E FOR CROSSOVER & U-TURN BULBOUT DETAILS
FOR -L- PROFILE, SEE SHEET 4B

PERMIT DRAWINGS
SHEET 13 OF 52

REVISIONS

12:55:40 PM 8/17/99 2583 pr-m-psh-17A.dgn

8/17/99



S.T. WOOTEN
CORPORATION

HNTB

HNTB NORTH CAROLINA, P.C.
143 E. Six Forks Road, Suite 200
Raleigh, North Carolina 27609
NC License No: C-1554

DATE: OCTOBER 3, 2011

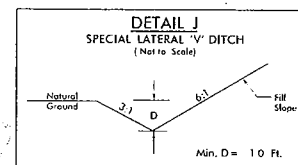
PROJECT REFERENCE NO.		SHEET NO.
R-2583		17
SHEET NO.		HYDRAULICS ENGINEER
ROADWAY DESIGN ENGINEER		
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION		

LEGEND	
	DENOTES FILL IN WETLAND
	DENOTES MECHANIZED CLEARING

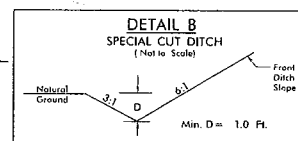
MATCH LINE TO SHEET 16
STA. 160+00

MATCH LINE TO SHEET 18
STA. 173+00

SITE 3



FROM -L- STA. 162+50 TO STA. 162+98 (LT)
FROM -L- STA. 163+12 TO STA. 163+50 (LT)



FROM -L- STA. 160+50 TO STA. 162+50 (LT)
FROM -L- STA. 163+50 TO STA. 167+50 (LT)
FROM -L- STA. 169+00 TO STA. 171+00 (LT)

NOTE:
SEE SHEET 2E FOR CROSSOVER & U-TURN BULBOUT DETAILS
FOR -L- PROFILE SEE SHEET 4B

PERMIT DRAWINGS
SHEET 14 OF 52

REVISIONS

12:51:12 PM 8/17/99 2583 pr-m.psh-17B.dgn
33:35:51 PM 8/17/99 2583 pr-m.psh-17B.dgn

PROJECT REFERENCE NO.	SHEET NO.
R-2583	18
SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	

LEGEND

- | | |
|---|--|
|  | DENOTES IMPACTS IN SURFACE WATER |
|  | DENOTES FILL IN WETLAND |
|  | DENOTES MECHANIZED CLEARING |
|  | DENOTES TEMPORARY IMPACTS IN SURFACE WATER |
|  | DENOTES EXCAVATION IN WETLAND |
|  | DENOTES HAND CLEARING |

SITE 3

(72)
FENTON BLOUNT FERGUSON, EST

PROP UTILITES TO
BE INSTALLED BY
TRENCHLESS INSTALLATION

SPECIAL CUT DITCH-
SEE DETAIL B

-TOE PROTECTION C
SEE DETAIL D

SITE 4

SITE 5

WALLACE G. WHITE, et ux

— PUE ————— PUE ————— P

MATCH LINE TO SHEET 17
STA. 173+00

STA. 173+00

MATCH LINE TO SHEET 19
STA. 186 + 00

LINE 10 ST
STA. 186+00

SWALE OUTLET DATA
Q10 = 1.9 cfs
V10 = 2.0 ft/s

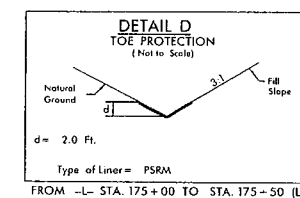
PROP UTILITES TO BE INSTALLED
BY TRENCHLESS INSTALLATION

SPECIAL LAT. 'V' DITCH
SEE DETAIL A

FENTON BLOUNT FERGUSON, EST

EXIST. CONC.
DITCH TO BE
REMOVED

SPECIAL CUT DITCH
SEE DETAIL B



FOR -L- PROFILE, SEE SHEETS 48 & 49

PERMIT DRAWINGS
SHEET 15 OF 52

LEGEND

-  DENOTES IMPACTS IN SURFACE WATER
 DENOTES FILL IN WETLAND
 DENOTES MECHANIZED CLEARING
 DENOTES TEMPORARY IMPACTS IN SURFACE WATER
 DENOTES EXCAVATION IN WETLAND
 DENOTES HAND CLEARING

SITE 3

PROP UTILITIES TO
BE INSTALLED BY
TRENCHLESS INSTALLATION

MATCH LINE TO SHEET 17
STA. 173+00

LINE 1031
STA. 173+00

SITE 4

SITE 5

**MATCH LINE TO SHEET 19
STA. 186+00**

LINE 10 SF
STA. 186+00

SWALE OUTLET DATA
Q10= 1.9 cfs
V10= 2.0 ft/s

PROP UTILITES TO BE INSTALLED
BY TRENCHLESS INSTALLATION

SPECIAL LAT. 'V' DITCH
SEE DETAIL A

FENTON BLOUNT FERGUSON, EST

EXIST. CONC.
DITCH TO BE
REMOVED

SPECIAL CUT DITCH
SEE DETAIL B

(76)
ANN V.
WEATHERSBEE, et vir

DETAIL D
TOE PROTECTION

(Not to Scale)



 Natural Ground

 3:1

 Fill Slope

 $d = 2.0$ Ft.

 Type of Liner = PSRM

 FROM -L STA. 175+00 TO STA. 175+50 (ft)

FOR -L- PROFILE, SEE SHEETS 48 & 49

PERMIT DRAWINGS
SHEET 16 OF 52

0/17/88

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S. T. WOOTEN
CORPORATION

HNTB

DATE: OCTOBER 3, 2011

PROJECT REFERENCE NO.

R-2583

SHEET NO.

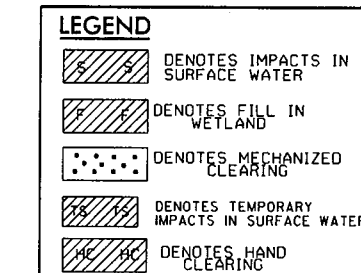
19

SHEET NO.

ROADWAY DESIGN
ENGINEER

**HYDRAULICS
ENGINEER**

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION



SITE 5

MATCH LINE TO SHEET 18
STA. 186+00

MATCH LINE TO SHEET 20
STA. 199+00

REVISIONS

ANN V.
WEATHERSBEE, et vlr

VAR. WIDTH SPECIAL LAT. BASE DITCH—
SEE DETAIL AA

77
ANN V. WEATHERSBEE

E. R. EVANS AND SONS, INC.

JAMES E. WEATHERSBEE, et ux

FOR -L- PROFILE, SEE SHEET 49

PERMIT DRAWINGS
SHEET 18 OF 52

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8/17/99



S.T. WOOTEN
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HNTB NORTH CAROLINA, P.C.
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Raleigh, North Carolina 27609
NC License No: C-1554

DATE: OCTOBER 3, 2011

PROJECT REFERENCE NO.

R-2583

SHEET NO.

19

SHEET NO.

ROADWAY DESIGN
ENGINEER

HYDRAULICS
ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

LEGEND	
	DENOTES IMPACTS IN SURFACE WATER
	DENOTES FILL IN WETLAND
	DENOTES MECHANIZED CLEARING
	DENOTES TEMPORARY IMPACTS IN SURFACE WATER
	DENOTES HAND CLEARING

SITE 5

MATCH LINE TO SHEET 18
STA. 186+00

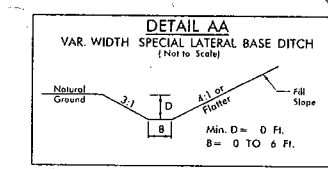
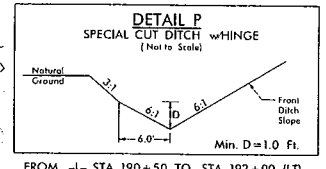
MATCH LINE TO SHEET 20
STA. 199+00

FENTON BLOUNT FERGUSON, EST

E. R. EVANS AND SONS, INC.

ANN V. WEATHERSBEE

ANN V. WEATHERSBEE, et vir



FOR -L- PROFILE, SEE SHEET 49

PERMIT DRAWINGS
SHEET 19 OF 52

REVISIONS

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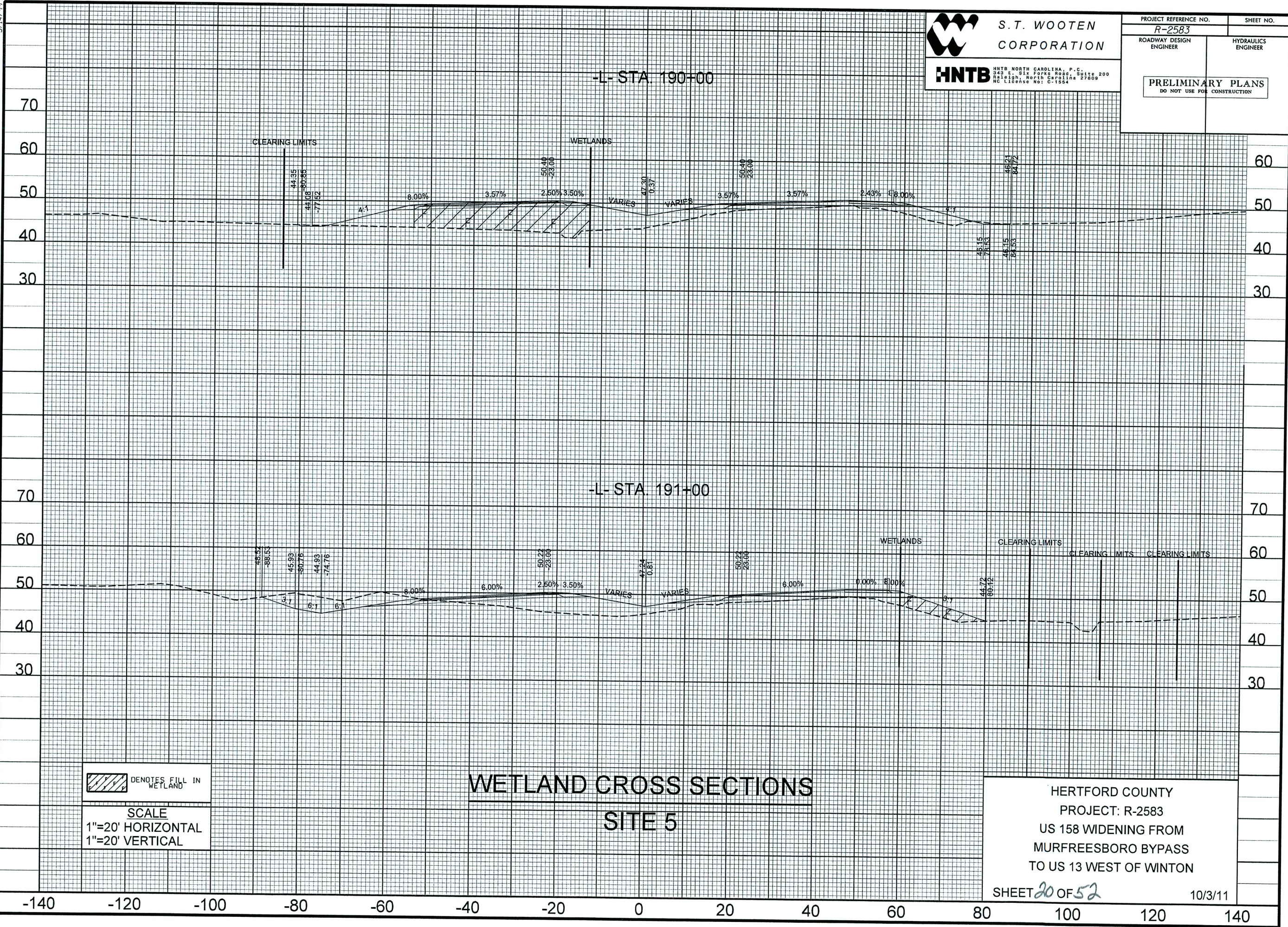
5/14/99



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CORPORATION

HNTB HNTB NORTH CAROLINA, P.C.
343 E. SIX FORKS ROAD, SUITE 200
RALEIGH, NORTH CAROLINA 27609
NC LICENSE NO: C-1554

PROJECT REFERENCE NO. R-2583		SHEET NO.
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION		



 DENOTES FILL IN
WETLAND

SCALE
1"=20' HORIZONTAL
1"=20' VERTICAL

WETLAND CROSS SECTIONS SITE 5

HERTFORD COUNTY
PROJECT: R-2583
US 158 WIDENING FROM
MURFREESBORO BYPASS
TO US 13 WEST OF WINTON

SHEET **20** OF **52** 10/3/11

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LEGEND

	DENOTES TEMPORARY IMPACTS IN SURFACE WATER
	DENOTES IMPACTS IN SURFACE WATER

SITE 6

MATCH LINE TO SHEET 19
STA. 199+00

MATCH LINE TO SHEET 21
STA. 212+00

PUE _____ PLIF _____

DETAIL D
TOE PROTECTION
(Not to Scale)

Natural Ground

3.3

3.3

Fill Slope

$d = 2.0 \text{ Ft.}$

Type of Liner = PSRM

FROM -L- STA. 209+00 TO STA. 210+50 (LT)

NOTE:
SEE SHEET 2E FOR CROSSOVER & U-TURN BULBOUT DETAILS
FOR -L- PROFILE. SEE SHEETS 49 & 50
FOR -Y6- PROFILE. SEE SHEET 60

PERMIT DRAWINGS
SHEET 22 OF 52

REVISIONS

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LEGEND

 DENOTES IMPACTS IN SURFACE WATER

 DENOTES TEMPORARY IMPACTS IN SURFACE WATER

MT. TABOR BAPTIST CHURCH

BEGIN 1.25" SF9.5A
RESURFACING +60.00

MATCH LINE
TO SHEET 36
STA. 16+50

MT. TABOR BAPTIST CHURCH

DETAIL D
TOE PROTECTION
 (Not to Scale)

Natural Ground

3:1

Fill Slope

d = 2.0 Ft.

Type of Liner = PSRM

FROM -L- STA. 216 + 74 TO STA. 220 - 17 (L)
 FROM -L- STA. 221 - 00 TO STA. 222 + 30 (L)
 FROM -L- STA. 219 + 00 TO STA. 220 + 00 (RT)

DETAIL B
SPECIAL CUT DITCH
(Not to Scale)

3:1
D
1:1
Natural Ground
Front Ditch Slope
Min. D = 1.0 Ft.

FROM — STA. 214 + 00 TO STA. 216 + 00 (RT)
FROM — STA. 217 + 00 TO STA. 218 + 64 (RT)
FROM — STA. 220 + 50 TO STA. 221 + 50 (RT)

DETAIL M
SPECIAL LATERAL "V" DITCH
(Not to Scale)

Natural Ground 2:1 D 6:1 Fill Slope

Min. D = 1.0 Ft.
Max. d = 1.0 Ft.

Type of Liner = PSRM

FROM -L STA. 222 + 82 TO STA. 223 + 50 (LT)
FROM -L STA. 221 + 50 TO STA. 222 + 26 (RT)

SITE 7

MATCH LINE TO SHEET 20
STA. 212+00

WATCH LINE TO SHEET 22
STA. 225+00

NOTE:
SEE SHEET 2E FOR CROSSOVER & U-TURN BULBOUT DETAILS
FOR -L- PROFILE. SEE SHEET 50
FOR -Y7- PROFILE. SEE SHEET 60

PERMIT DRAWINGS
SHEET 24 OF 52

8/17/99

REVISIONS

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see also 21B.dgn

8/17/99



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DATE: OCTOBER 3, 2011

PROJECT REFERENCE NO.

R-2583

SHEET NO.

22

SHEET NO.

ROADWAY DESIGN
ENGINEER

HYDRAULICS
ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

LEGEND

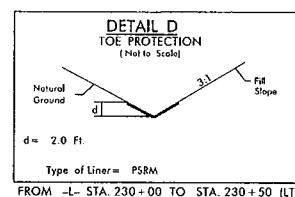
- DENOTES IMPACTS IN SURFACE WATER
- DENOTES TEMPORARY IMPACTS IN SURFACE WATER

SITE 8

SITE 9

MATCH LINE TO SHEET 21
STA. 225+00

MATCH LINE TO SHEET 23
STA. 238+00



FOR -L- PROFILE, SEE SHEETS 50 & 51

PERMIT DRAWINGS
SHEET 25 OF 52

8/17/99



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NC License No: C-1554

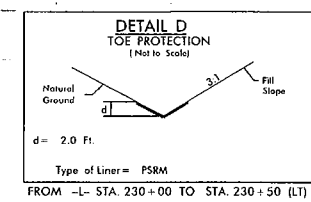
DATE: OCTOBER 3, 2011

PROJECT REFERENCE NO. <i>R-2583</i>		SHEET NO. <i>22</i>	
SHEET NO.			
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER	
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION			

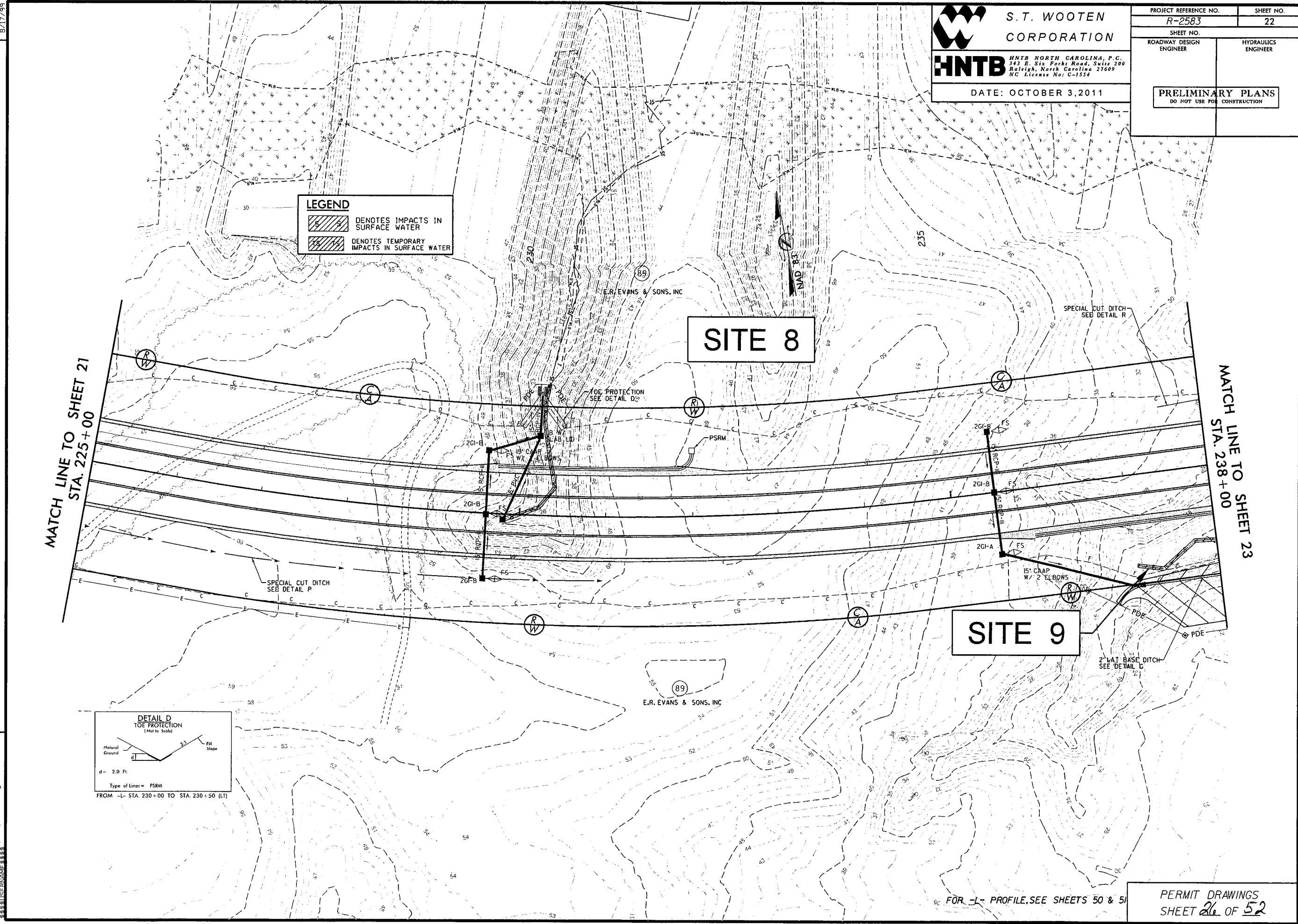
REVISIONS

MATCH LINE TO SHEET 21
STA. 225+00

MATCH LINE TO SHEET 23
STA. 238+00

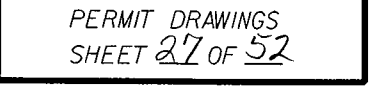


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8/17/99



FOR -L- PROFILE, SEE SHEETS 50 & 51

PERMIT DRAWINGS
SHEET 26 OF 52



8/17/99



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NC License No: C-1554

DATE: OCTOBER 3, 2011

PROJECT REFERENCE NO.

R-2583

SHEET NO.

23

SHEET NO.

ROADWAY DESIGN
ENGINEER

HYDRAULICS
ENGINEER

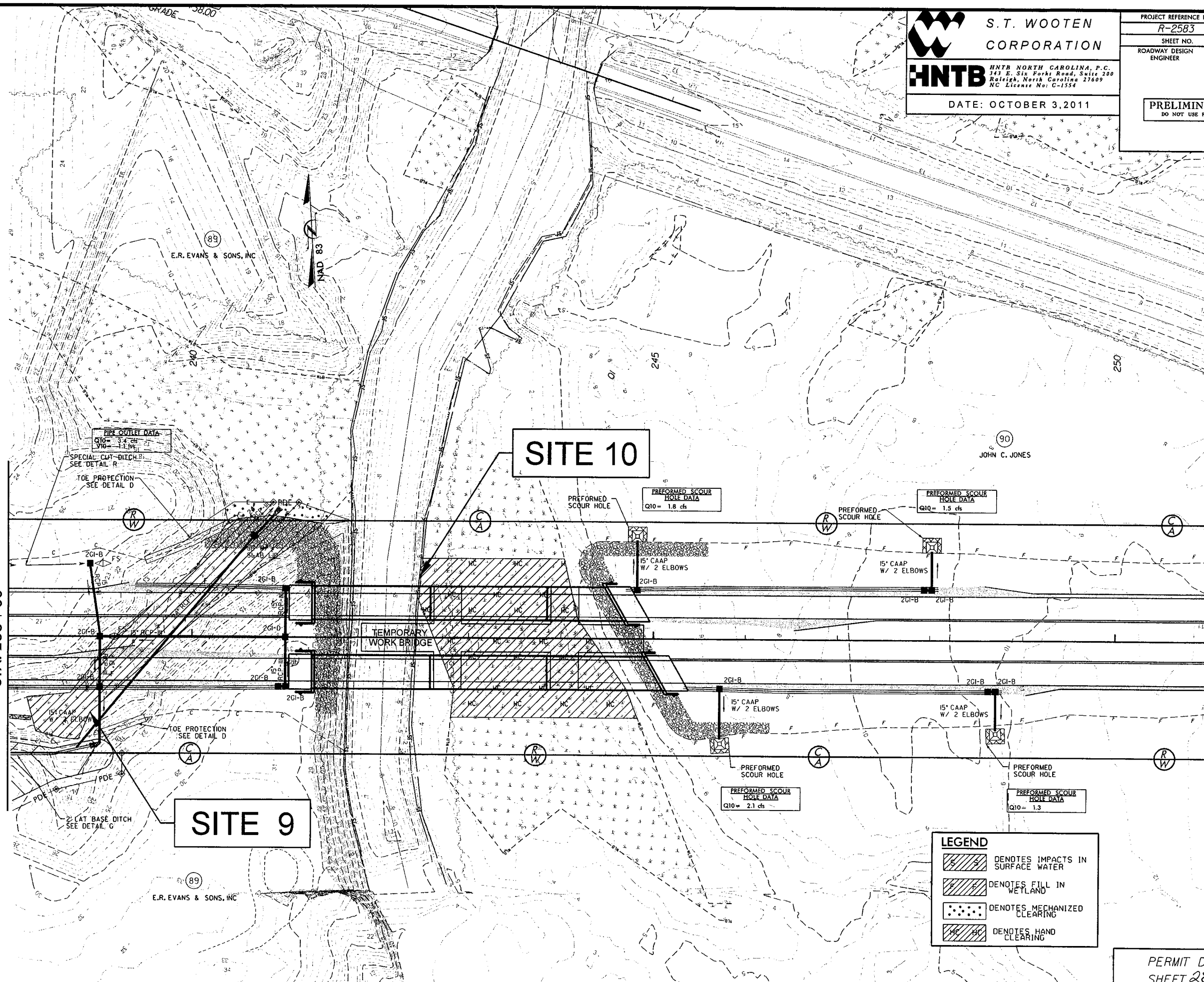
PRELIMINARY PLANS

DO NOT USE FOR CONSTRUCTION

REVISIONS

MATCH LINE TO SHEET 22
STA. 238+00

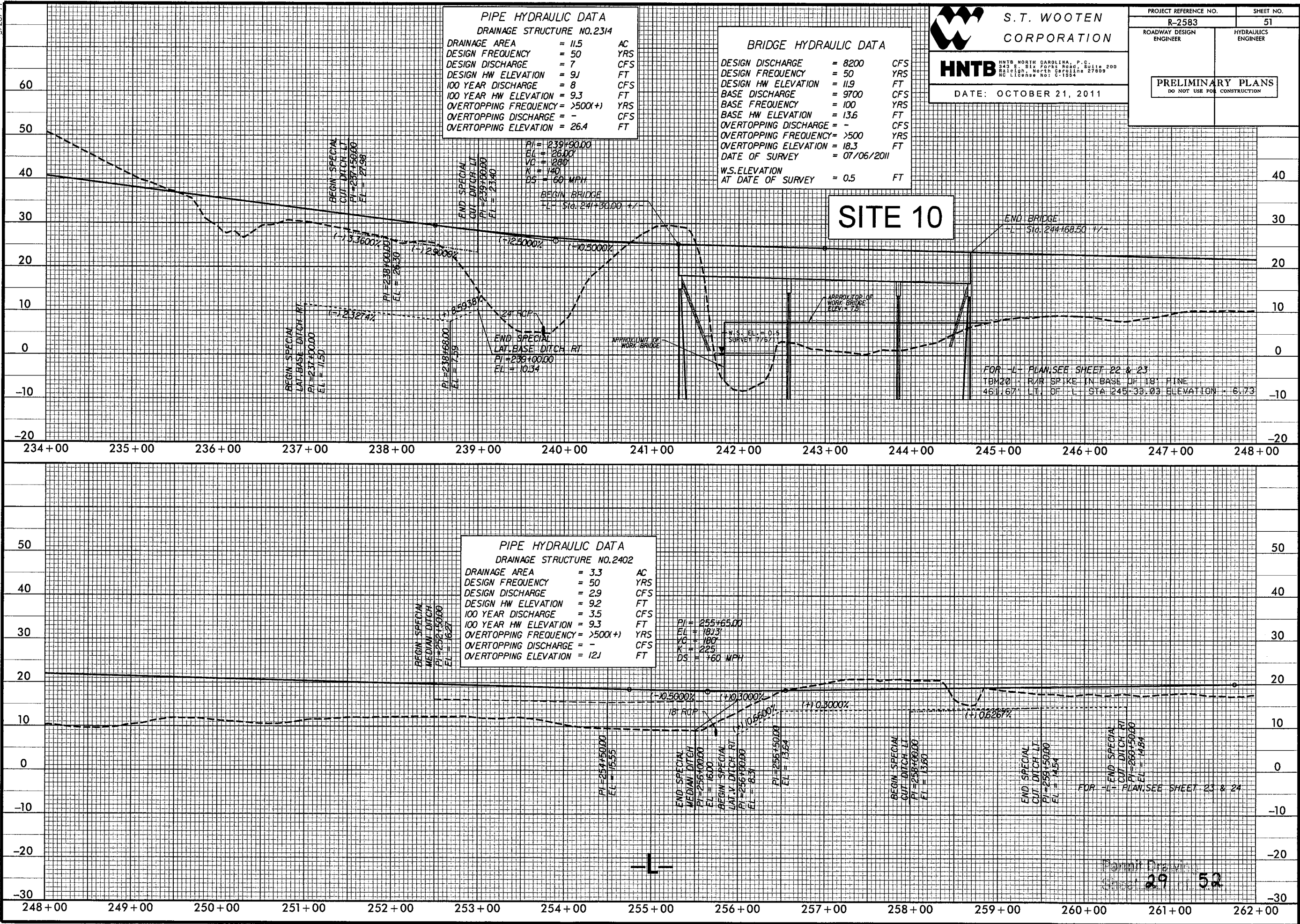
MATCH LINE TO SHEET 24
STA. 251+00



PERMIT DRAWINGS
SHEET 28 OF 52

5/28/99

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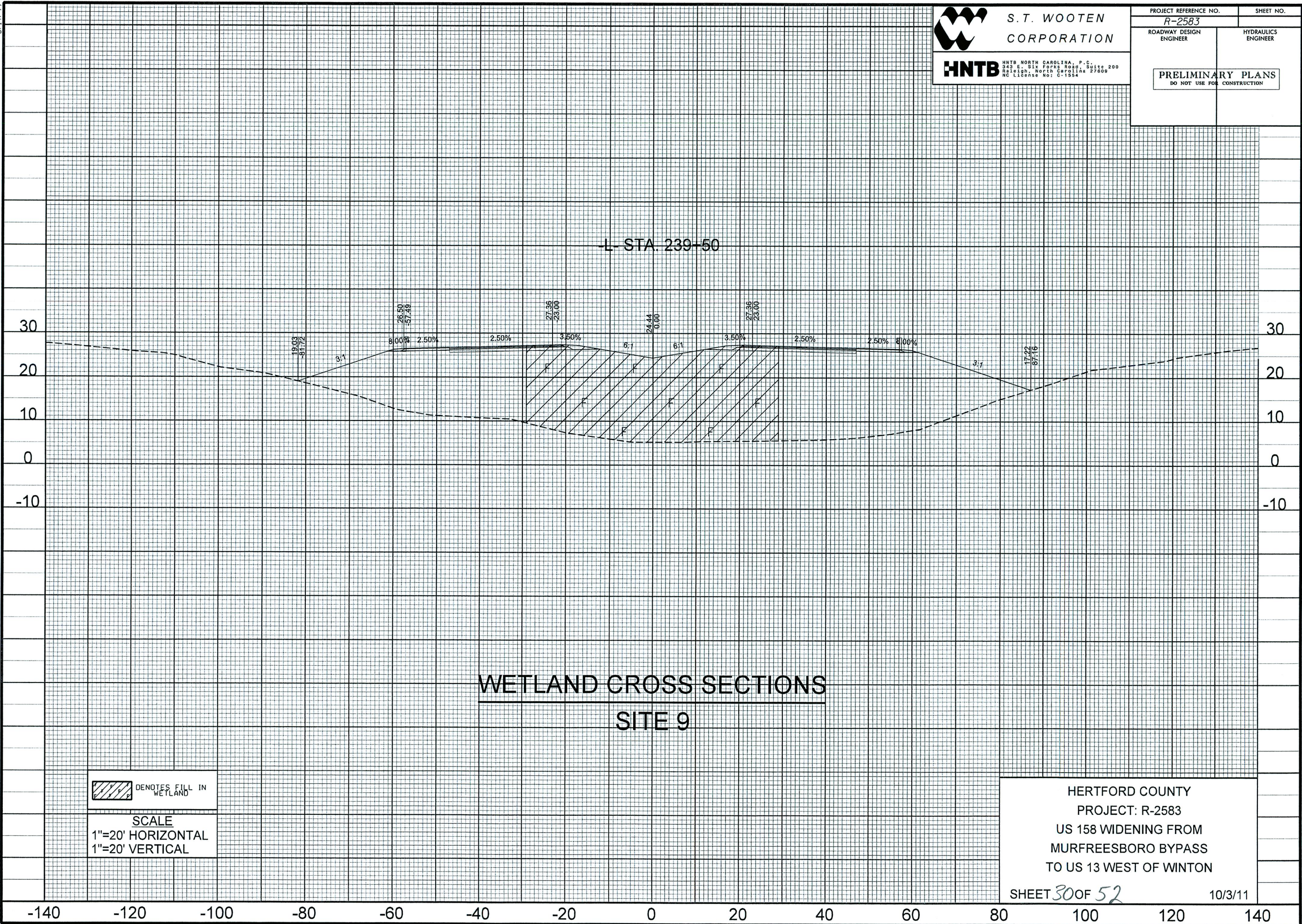


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ROADWAY DESIGN
ENGINEER

HYDRAULICS ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION



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247 E. SIX FORKS ROAD, SUITE 200
RALEIGH, NORTH CAROLINA 27609
NC LICENSE NO: C-1554

DATE: OCTOBER 3, 2011

PROJECT REFERENCE NO.	SHEET NO.
R-2583	24
SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	

REVISIONS

MATCH LINE TO SHEET 23
STA. 251+00

SITE 11

PREFORMED SCOUR
HOLE DATA
Q10 = 1.9 cfs

PREFORMED
SCOUR HOLE

PIPE OUTLET DATA
Q10 = 1.5 cfs
V10 = 3.9 f/s

SPECIAL CUT DITCH
SEE DETAIL B

LAT 'V' DITCH
SEE DETAIL E

SPECIAL CUT DITCH
SEE DETAIL R

LEGEND

- DENOTES FILL IN WETLAND
- DENOTES MECHANIZED CLEARING

NOTE:
SEE SHEET 2E FOR CROSSOVER & U-TURN BULBOUT DETAILS
FOR -L- PROFILE, SEE SHEETS 51 & 52

PERMIT DRAWINGS
SHEET 31 OF 52

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8/17/99



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CORPORATION



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DATE: OCTOBER 3, 2011

PROJECT REFERENCE NO.
R-2583

SHEET NO.
24

SHEET NO.
ROADWAY DESIGN
ENGINEER

HYDRAULICS
ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

REVISIONS

MATCH LINE TO SHEET 23
STA. 251+00

SITE 11

PREFORMED SCOUR
HOLE DATA
Q10 = 1.9 cfs

PREFORMED
SCOUR HOLE

PIPE OUTLET DATA
Q10 = 1.5 cfs
V10 = 3.9 f/s

SPECIAL CUT DITCH
SEE DETAIL B

MATCH LINE TO SHEET 25
STA. 264+00

LEGEND

DENOTES FILL IN
WETLAND

DENOTES MECHANIZED
CLEARING

NOTE:
SEE SHEET 2E FOR Crossover & U-TURN BULBOUT DETAILS
FOR LT PROFILE SEE SHEETS 51 & 52

PERMIT DRAWINGS
SHEET 32 OF 52

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Raleigh, North Carolina 27609
NC License No: C-1554

**HYDRAULICS
ENGINEER**

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

The profile shows a road cross-section with the following details:

- Vertical Scale:** Elevation in feet, ranging from -10 to 30.
- Horizontal Scale:** Stationing from 0+00 to 70+00.
- Clearing Limits:** Indicated by a vertical line at approximately station 10+00.
- Wetlands:** Indicated by a vertical line at approximately station 25+00.
- Grades:**
 - 8.00% (from station 10+00 to 25+00)
 - 2.50% (from station 25+00 to 40+00)
 - 3.60% (from station 40+00 to 45+00)
 - VARIES (from station 45+00 to 50+00)
 - 0.50% (from station 50+00 to 60+00)
 - 2.50% (from station 60+00 to 65+00)
 - 8.00% (from station 65+00 to 70+00)
- Points of Interest:**
 - Station 10+00: Elevation 7.84, Stationing 53.39
 - Station 25+00: Elevation 18.33, Stationing 23.00
 - Station 40+00: Elevation 15.55, Stationing 3.65
 - Station 60+00: Elevation 18.33, Stationing 23.00
 - Station 70+00: Elevation 12.40, Stationing 70.61
- Other Features:**
 - A dashed line representing the existing ground profile.
 - A solid line representing the proposed road profile.
 - A vertical line at station 10+00 labeled "CLEARING LIMITS".
 - A vertical line at station 25+00 labeled "WETLANDS".

WETLAND CROSS SECTIONS

SITE 11

SCALE
1"=20' HORIZONTAL
1"=20' VERTICAL

HERTFORD COUNTY
PROJECT: R-2583
US 158 WIDENING FROM
MURFREESBORO BYPASS
TO US 13 WEST OF WINTON

SHEET 33 OF 52

10/3/11

8/17/99



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CORPORATION

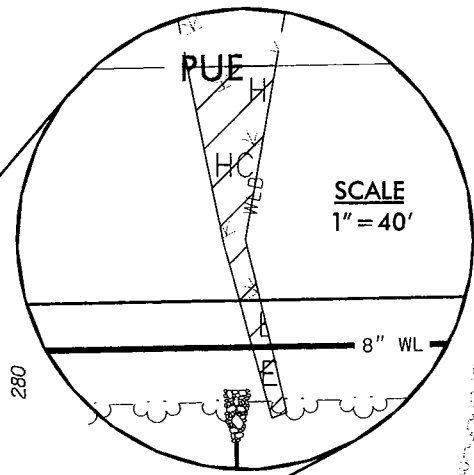


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NC License No: C-1554

DATE: OCTOBER 3, 2011

PROJECT REFERENCE NO. R-2583	SHEET NO. 26
SHEET NO. ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	

LEGEND	
	DENOTES MECHANIZED CLEARING
	DENOTES HAND CLEARING
	DENOTES EXCAVATION IN WETLAND



SITE 12

97
JOHN C. JONES

MATCH LINE TO SHEET 25
STA. 277+00

MATCH LINE TO SHEET 27
STA. 290+00

SITE 13

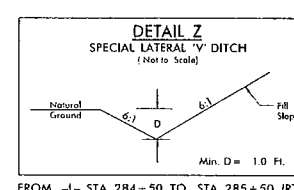
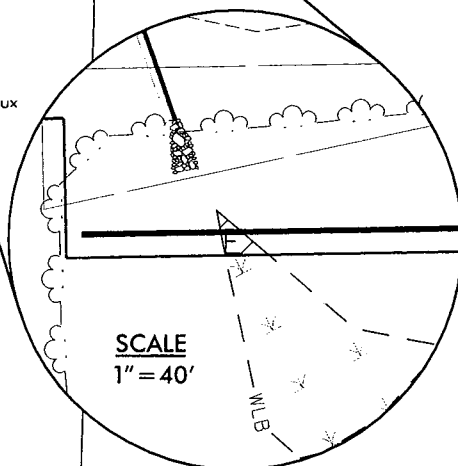
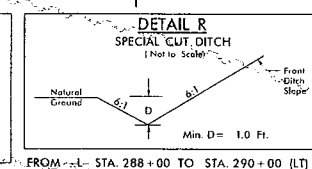
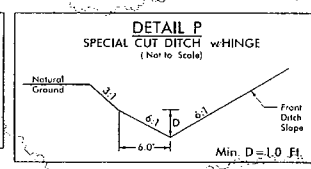
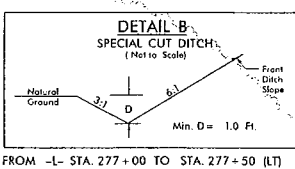
92
AUGUSTINE G. LAMPLEY

93
JOESPH T. SMITH

94
NEVONZA PORTER

95
CARNEY GATLING, et ux

96
LEONE STEPENSON
VERNON STEPENSON



FOR -L- PROFILE SEE SHEET 52

PERMIT DRAWINGS
SHEET 34 OF 52

REVISIONS

10/30/26 AM
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8/17/99

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DATE: OCTOBER 3, 2011

PROJECT REFERENCE NO.		SHEET NO.
R-2583		26
SHEET NO.		
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER
PRELIMINARY PLANS		DO NOT USE FOR CONSTRUCTION

LEGEND

- DENOTES MECHANIZED CLEARING
- HC HC DENOTES HAND CLEARING
- W W DENOTES EXCAVATION IN WETLAND

SITE 12

PUE

SCALE
1"=40'

8" WL

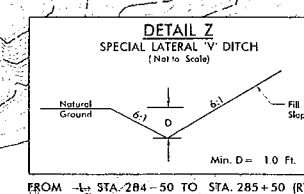
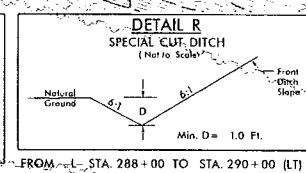
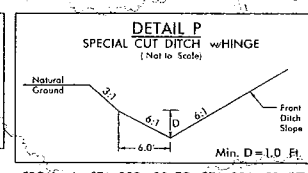
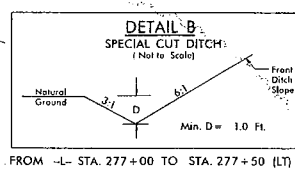
NAD 83

SITE 13

SCALE
1"=40'

MATCH LINE TO SHEET 25
STA. 277+00

MATCH LINE TO SHEET 27
STA. 290+00



FOR -L- PROFILE, SEE SHEET 52

PERMIT DRAWINGS
SHEET 35 OF 52

8/17/99

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CORPORATION



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Raleigh, North Carolina 27609
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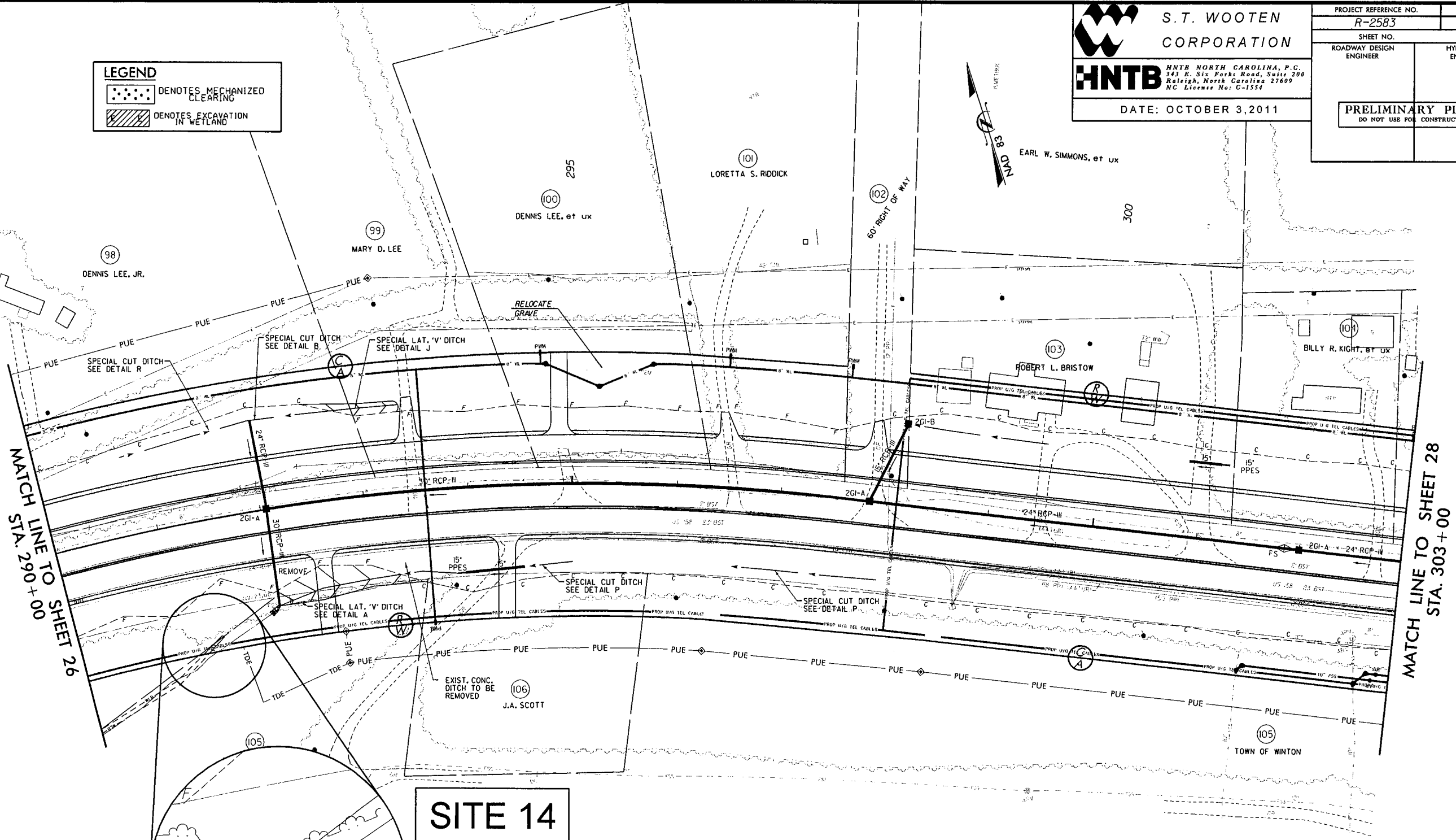
DATE: OCTOBER 3, 2011

PROJECT REFERENCE NO.	SHEET NO.
R-2583	27
SHEET NO.	HYDRAULICS ENGINEER
ROADWAY DESIGN ENGINEER	
PRELIMINARY PLANS	
DO NOT USE FOR CONSTRUCTION	

LEGEND

DENOTES MECHANIZED CLEARING

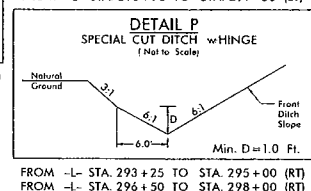
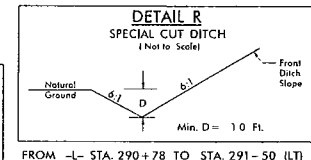
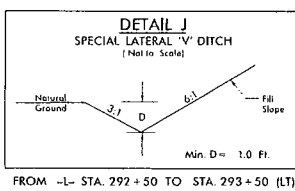
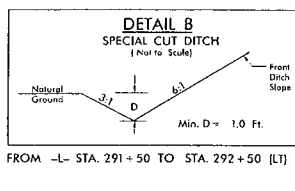
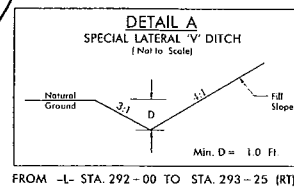
DENOTES EXCAVATION IN WETLAND



MATCH LINE TO SHEET 26
STA. 290+00

MATCH LINE TO SHEET 28
STA. 303+00

SITE 14



FOR -L- PROFILE SEE SHEET 53

PERMIT DRAWINGS
SHEET 36 OF 52

8/17/99

10:36:06 AM 10/3/2011 psh_278.dgn



**S.T. WOOTEN
CORPORATION**
HNTB HNTB NORTH CAROLINA, P.C.
343 E. Six Forks Road, Suite 200
Raleigh, North Carolina 27609
NC License No: C-1554

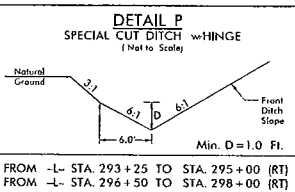
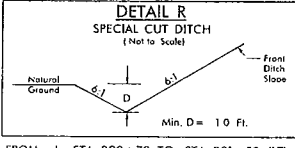
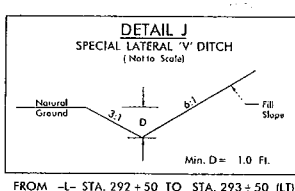
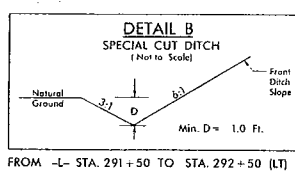
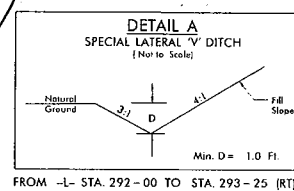
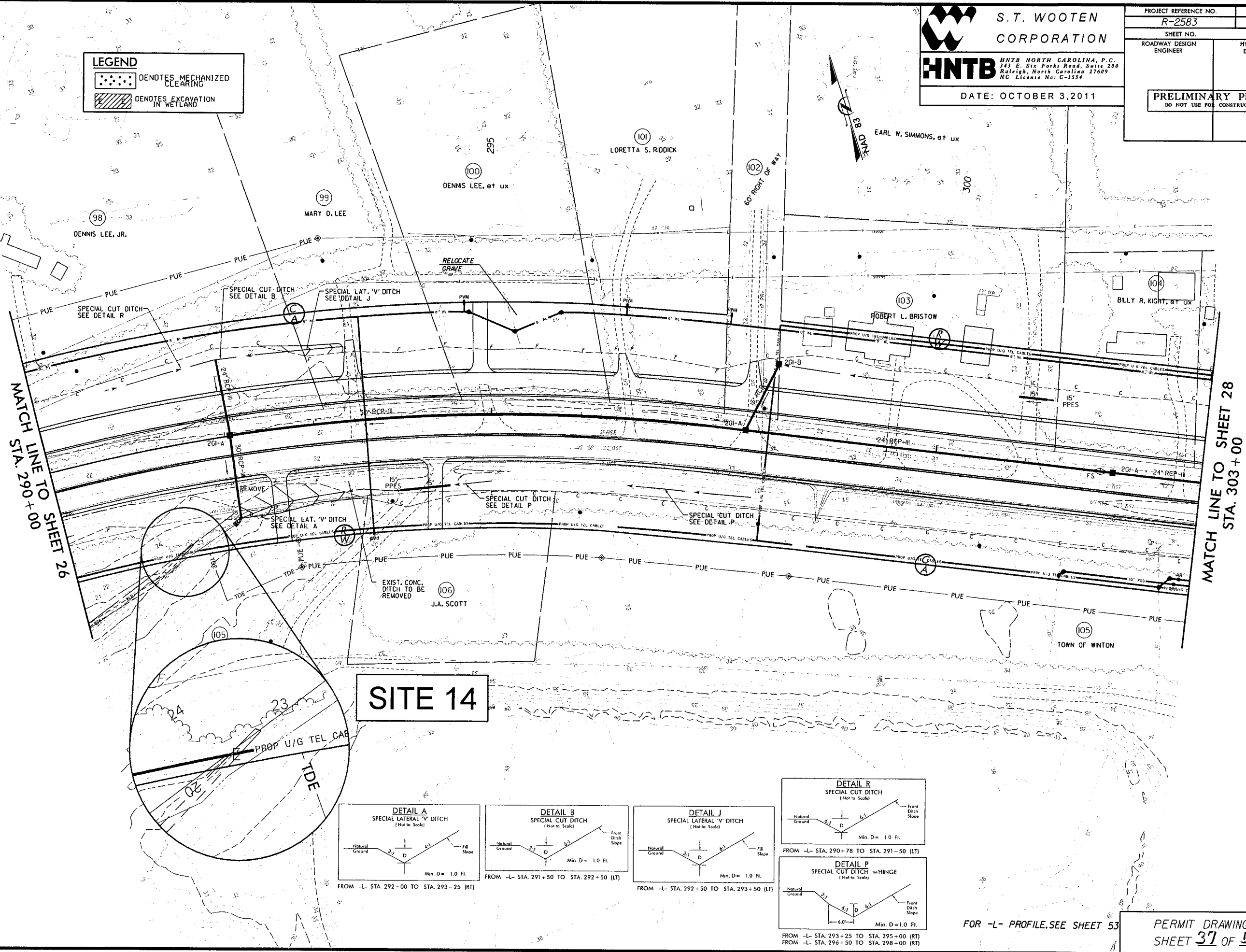
DATE: OCTOBER 3, 2011

PROJECT REFERENCE NO. R-2583	SHEET NO. 27
SHEET NO. ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	

LEGEND

 DENOTES MECHANIZED
CLEARING

 DENOTES EXCAVATION
IN WETLAND



FOR -L- PROFILE SEE SHEET 53

PERMIT DRAWINGS
SHEET 37 OF 52

8/17/99



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CORPORATION

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343 E. Six Forks Road, Suite 200
Raleigh, North Carolina 27609
NC License No. C-1554

DATE: OCTOBER 3, 2011

PROJECT REFERENCE NO.	SHEET NO.
R-2583	30
SHEET NO.	HYDRAULICS ENGINEER
ROADWAY DESIGN ENGINEER	
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	

LEGEND	
	DENOTES FILL IN WETLAND
	DENOTES MECHANIZED CLEARING
	DENOTES EXCAVATION IN WETLAND

SITE 15

MATCH LINE TO SHEET 29
STA. 329+00

MATCH LINE TO SHEET 31
STA. 342+00

NOTE:
SEE SHEET 2E FOR CROSSOVER &
U-TURN BULBOUT DETAILS
FOR "L" PROFILE, SEE SHEET 54

PERMIT DRAWINGS
SHEET 39 OF 52

REVISIONS

10/31/11 5:41 AM
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5/14/99

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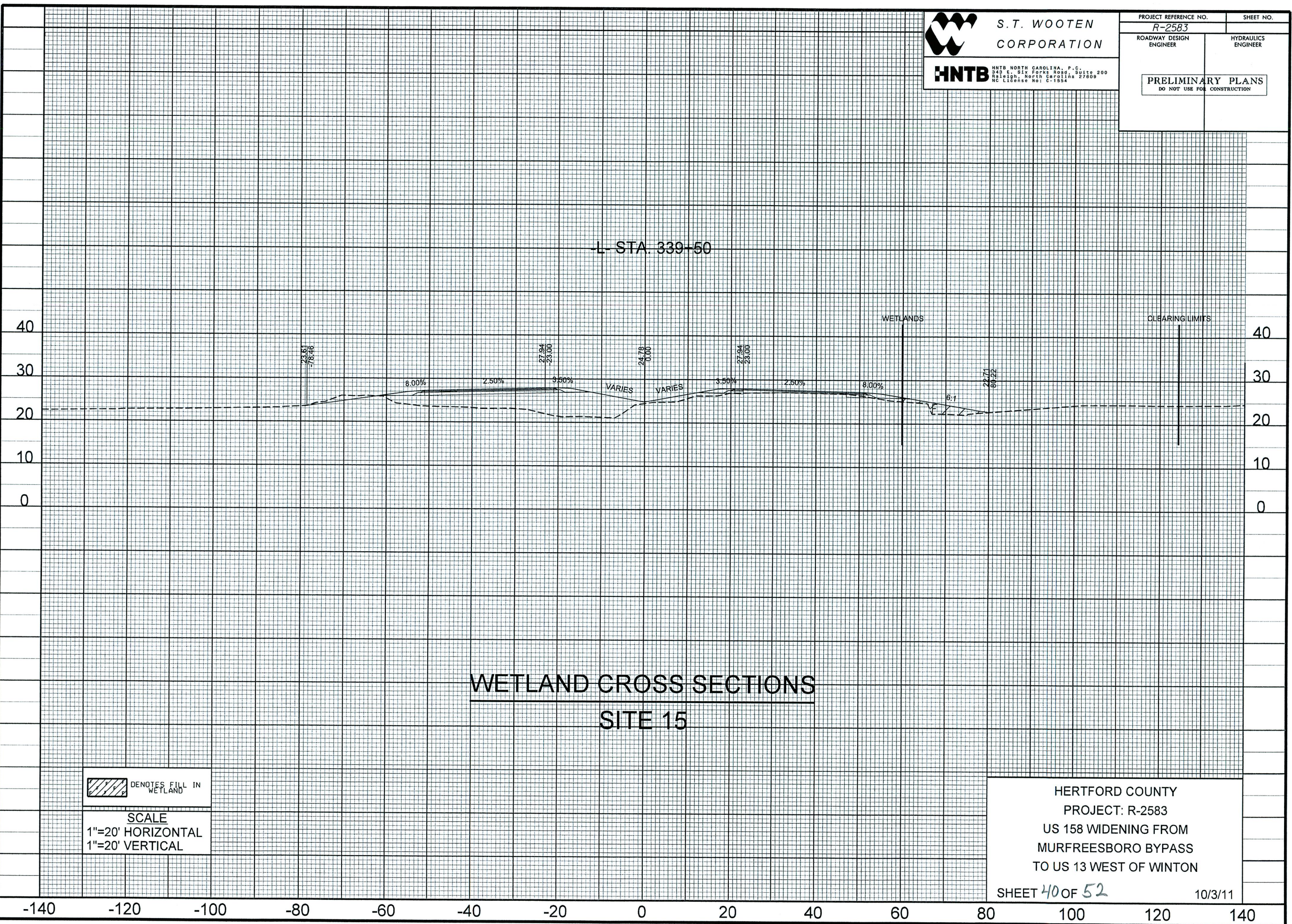


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HNTB NORTH CAROLINA, P.C.
343 E. SIX FORKS ROAD, SUITE 200
RALEIGH, NORTH CAROLINA 27609
NC License No: C-1554

PROJECT REFERENCE NO.	SHEET NO.
R-2583	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	



WETLAND CROSS SECTIONS
SITE 15

DENOTES FILL IN
WETLAND

SCALE
1"=20' HORIZONTAL
1"=20' VERTICAL

HERTFORD COUNTY
PROJECT: R-2583
US 158 WIDENING FROM
MURFREESBORO BYPASS
TO US 13 WEST OF WINTON
SHEET 40 OF 52
10/3/11

8/17/99



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CORPORATION

HNTB

HNTB NORTH CAROLINA, P.C.
143 E. Six Forks Road, Suite 200
Raleigh, North Carolina 27609
NC License No: C-1554

DATE: OCTOBER 3, 2011

PROJECT REFERENCE NO.		SHEET NO.
R-2583		31
SHEET NO.		
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER
PRELIMINARY PLANS		DO NOT USE FOR CONSTRUCTION

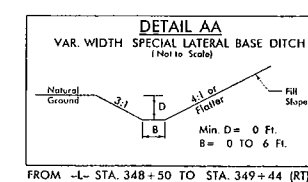
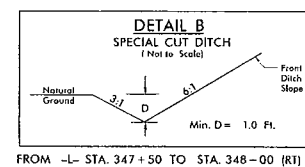
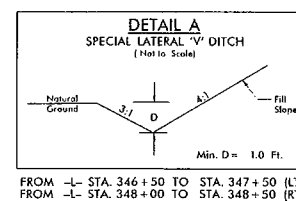
LEGEND	
	DENOTES IMPACTS IN SURFACE WATER
	DENOTES FILL IN WETLAND
	DENOTES MECHANIZED CLEARING
	DENOTES TEMPORARY IMPACTS IN SURFACE WATER

MATCH LINE TO SHEET 30
STA. 342+00

MATCH LINE TO SHEET 32
STA. 355+00

SITE 16

CHERRY F. GODWIN



FOR -L- PROFILE, SEE SHEETS 54 & 55

PERMIT DRAWINGS
SHEET 41 OF 52

8/17/99



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Raleigh, North Carolina 27609
NC License No: C-1554

DATE: OCTOBER 3, 2011

PROJECT REFERENCE NO.	SHEET NO.
R-2583	31
SHEET NO.	HYDRAULICS ENGINEER
ROADWAY DESIGN ENGINEER	
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	

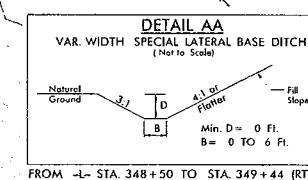
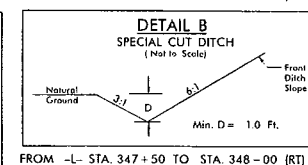
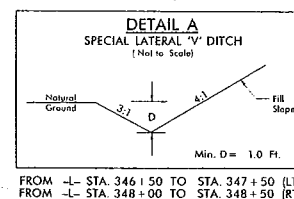
LEGEND	
	DENOTES IMPACTS IN SURFACE WATER
	DENOTES FILL IN WETLAND
	DENOTES MECHANIZED CLEARING
	DENOTES TEMPORARY IMPACTS IN SURFACE WATER

MATCH LINE TO SHEET 30
STA. 342+00

MATCH LINE TO SHEET 32
STA. 355+00

SITE 16

CHERRY F. GODWIN



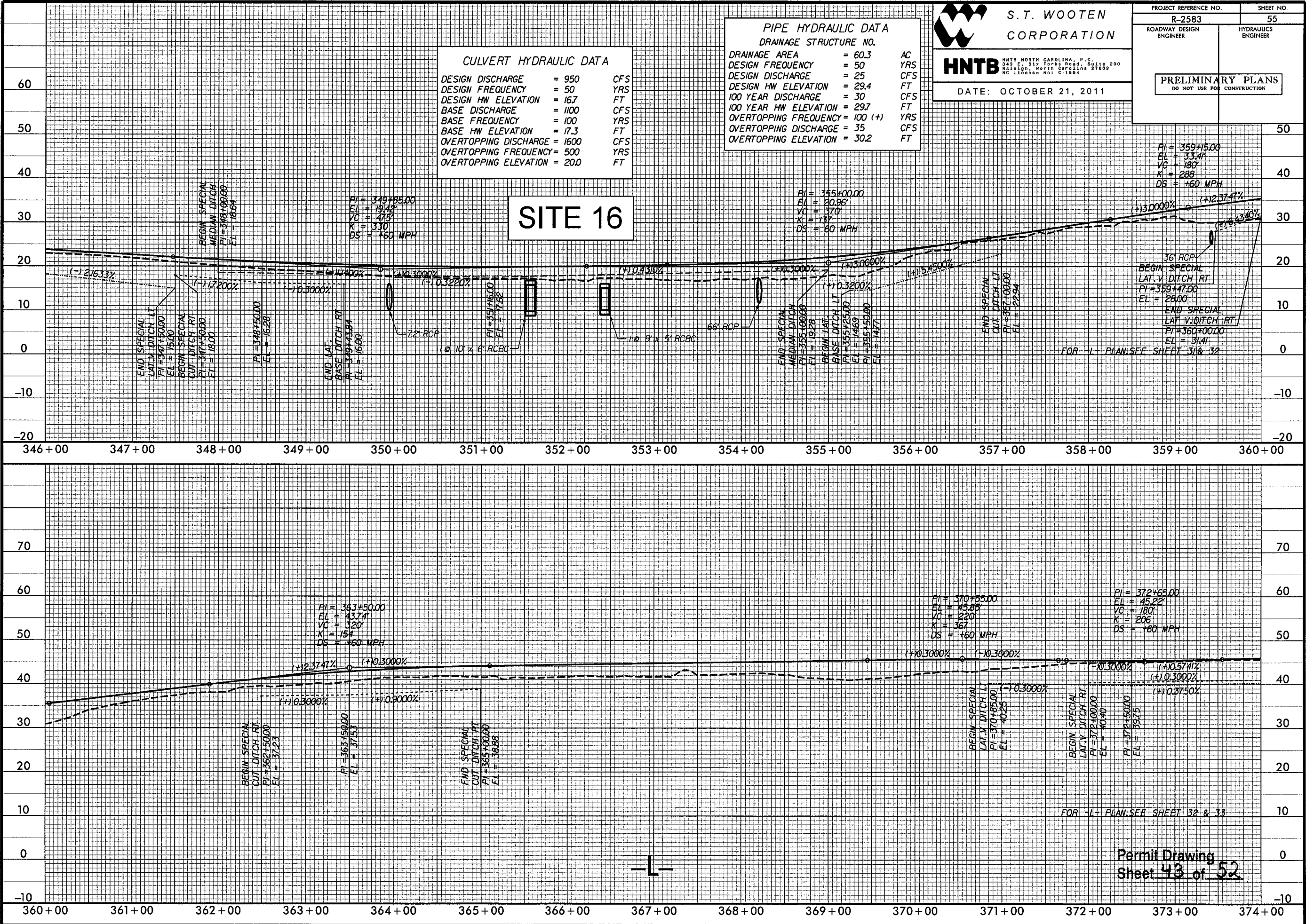
FOR -L- PROFILE, SEE SHEETS 54 & 55

PERMIT DRAWINGS
SHEET 42 OF 52

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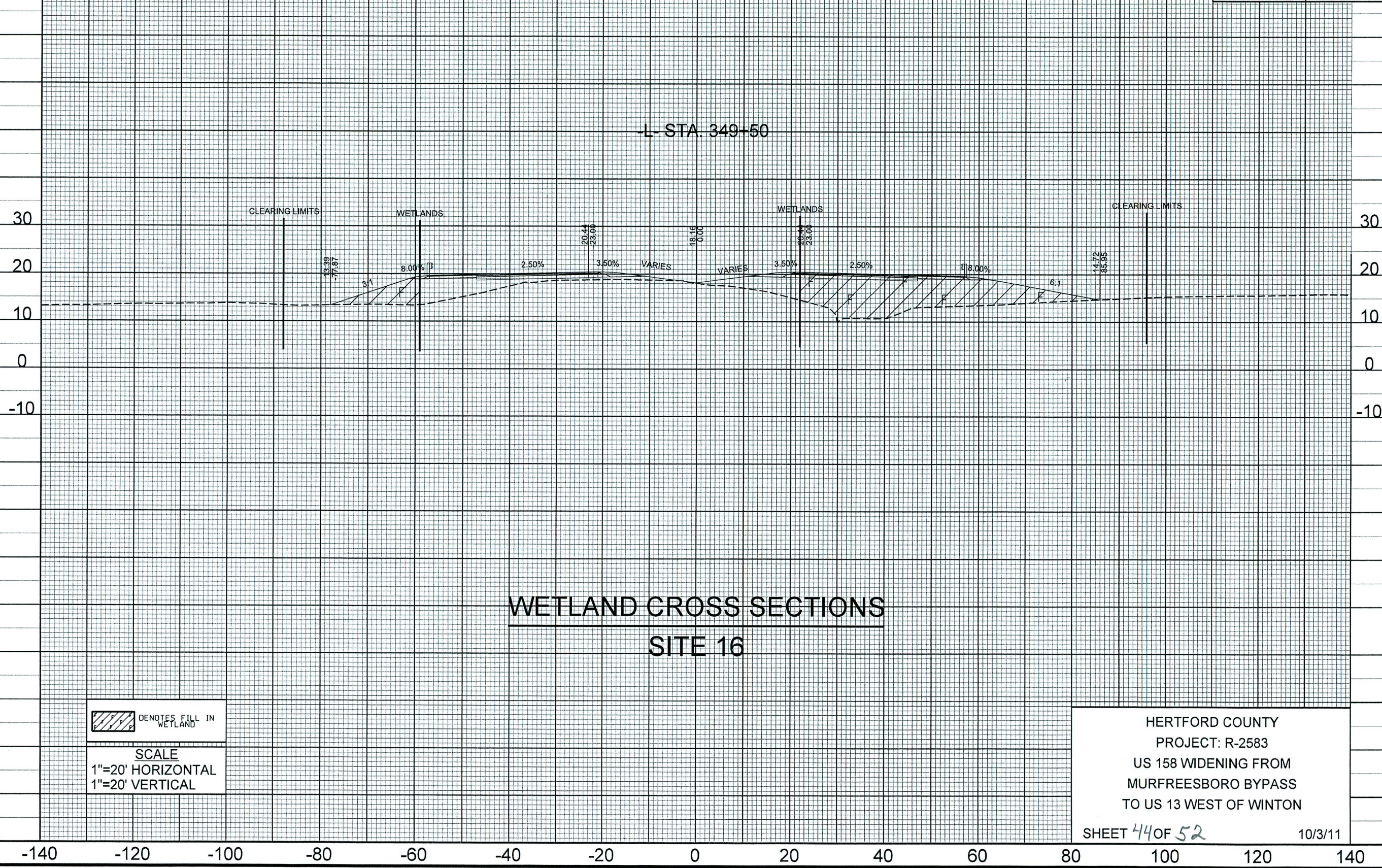


S.T. WOOTEN
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343 E. SIX FORKS ROAD, SUITE 200
RALEIGH, NORTH CAROLINA 27608
NC LICENSE NO. C-1554

PROJECT REFERENCE NO.		SHEET NO.	
R-2583			
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER	
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION			



5/14/99



S.T. WOOTEN
CORPORATION



HNTB NORTH CAROLINA, P.C.
343 E. SIX FORKS ROAD, SUITE 200
RALEIGH, NORTH CAROLINA 27605
NC LICENSE NO: C-1554

PROJECT REFERENCE NO.		SHEET NO.	
R-2583			
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER	
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION			

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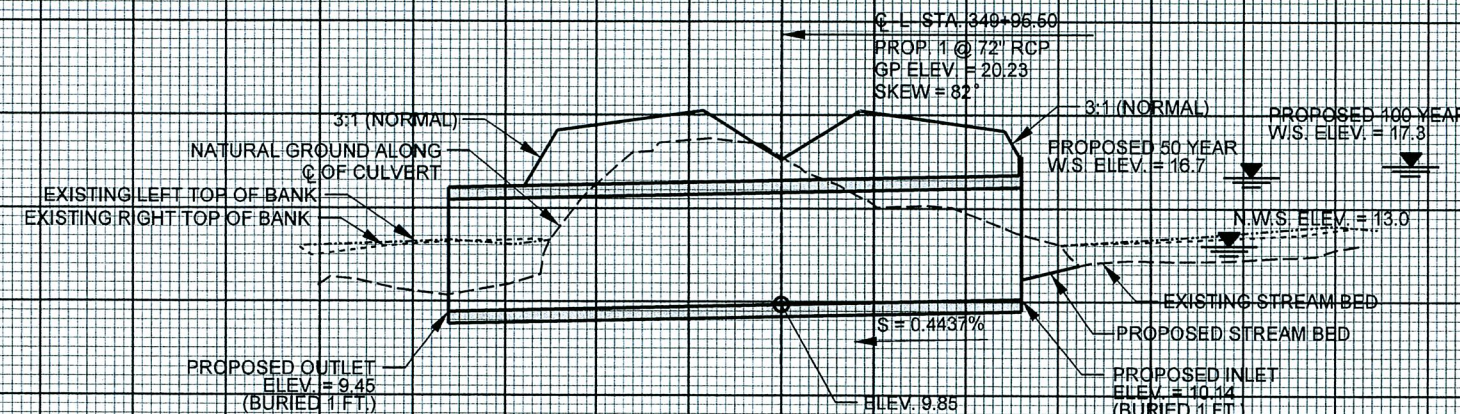
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PROFILE ALONG STRUCTURE

SITE 16

SCALE
1"=50' HORIZONTAL
1"=10' VERTICAL

HERTFORD COUNTY
PROJECT: R-2583
US 158 WIDENING FROM
MURFREESBORO BYPASS
TO US 13 WEST OF WINTON

SHEET 45 OF 52

10/3/11

200

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100

150

200

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11/11/99 11:58:33



S.T. WOOTEN
CORPORATION



HNTB NORTH CAROLINA, P.C.
143 E. SIX FORKS ROAD, SUITE 200
RALEIGH, NORTH CAROLINA 27609
NC LICENSE NO. C-1564

PROJECT REFERENCE NO.	SHEET NO.
R-2583	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	

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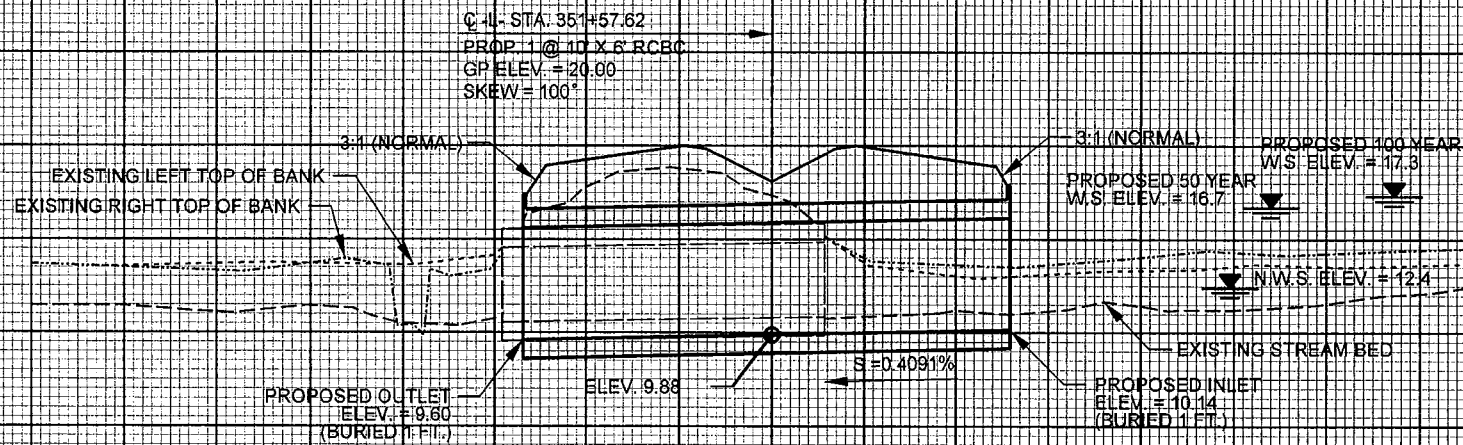
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PROFILE ALONG STRUCTURE
SITE 16

SCALE
1"=50' HORIZONTAL
1"=10' VERTICAL

HERTFORD COUNTY
PROJECT: R-2583
US 158 WIDENING FROM
MURFREESBORO BYPASS
TO US 13 WEST OF WINTON
SHEET 46 OF 52
10/3/11

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5/14/99

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S.T. WOOTEN
CORPORATION

HNTB
HNTB NORTH CAROLINA, P.C.
343 E. SIX FORKS ROAD, SUITE 200
RALEIGH, NORTH CAROLINA 27609
NC License No: C-1554

PROJECT REFERENCE NO.		SHEET NO.
R-2583		
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER	
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION		

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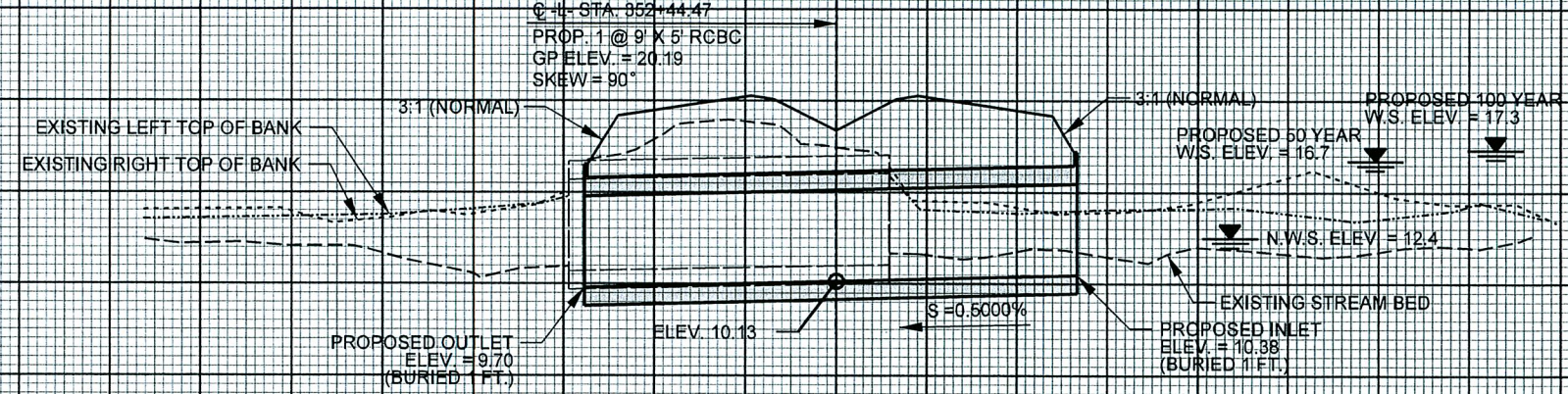
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PROFILE ALONG STRUCTURE
SITE 16

SCALE
1"=50' HORIZONTAL
1"=10' VERTICAL

HERTFORD COUNTY
PROJECT: R-2583
US 158 WIDENING FROM
MURFREESBORO BYPASS
TO US 13 WEST OF WINTON
SHEET 47 OF 52
10/3/11

200 150 100 50 0 50 100 150 200

5/14/99



S.T. WOOTEN
CORPORATION



HNTB NORTH CAROLINA, P.C.
343 E. SIX FORKS ROAD, SUITE 200
RALEIGH, NORTH CAROLINA 27609
NC LICENSE NO. C-1954

PROJECT REFERENCE NO.		SHEET NO.	
R-2583			
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER	
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION			

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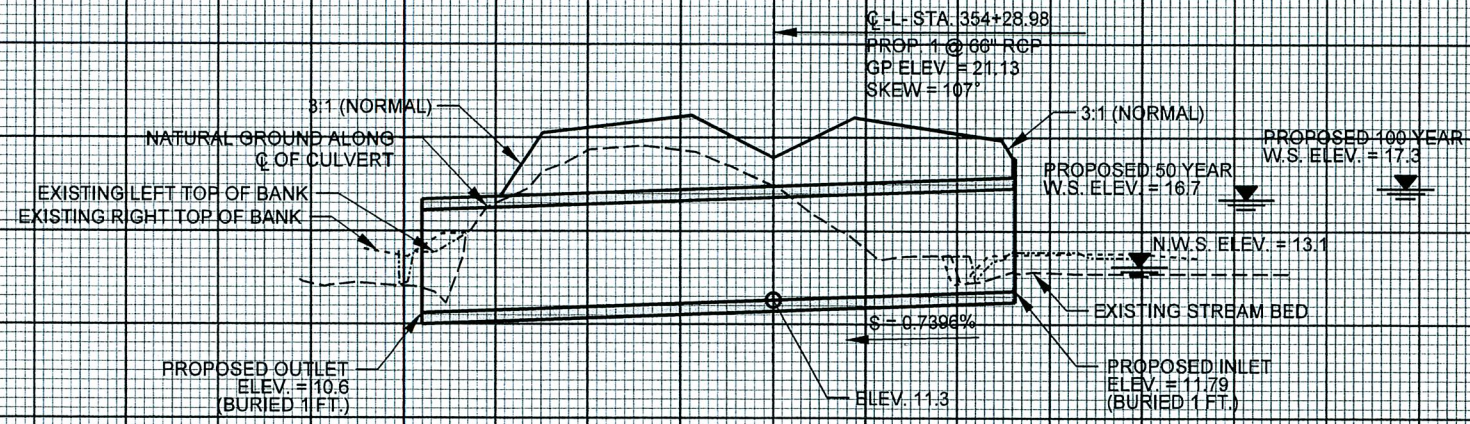
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PROFILE ALONG STRUCTURE
SITE 16

SCALE
1"=50' HORIZONTAL
1"=10' VERTICAL

HERTFORD COUNTY
PROJECT: R-2583
US 158 WIDENING FROM
MURFREESBORO BYPASS
TO US 13 WEST OF WINTON
SHEET 48 OF 52
10/3/11

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8/17/99



S.T. WOOTEN
CORPORATION

HNTB

HNTB NORTH CAROLINA, P.C.
343 E. Six Forks Road, Suite 200
Raleigh, North Carolina 27609
NC License No: C-1554

DATE: OCTOBER 3, 2011

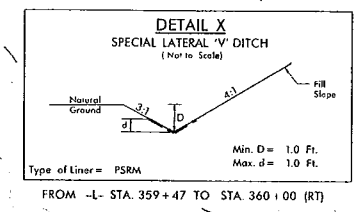
PROJECT REFERENCE NO.	SHEET NO.
R-2583	32
SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	

LEGEND	
	DENOTES FILL IN WETLAND
	DENOTES MECHANIZED CLEARING
	DENOTES HAND CLEARING
	DENOTES TEMPORARY IMPACTS IN SURFACE WATER
	DENOTES IMPACTS IN SURFACE WATER
	DENOTES EXCAVATION IN WETLAND

MATCH LINE TO SHEET 31
STA. 355+00

MATCH LINE TO SHEET 33
STA. 368+00

SITE 17



NOTE:
SEE SHEET 2E FOR CROSSOVER &
U-TURN BULBOUT DETAILS
FOR -L- PROFILE, SEE SHEET 55

PERMIT DRAWINGS
SHEET 50 OF 52

REVISIONS

10-13-10, ALW, R-2583, p.m., psh, 32B.dgn
3:38 PM, 10/13/2010, 10/13/2010

PROPERTY OWNERS

NAMES AND ADDRESSES

PARCEL NO.	NAMES	ADDRESSES
4	JOSEPH E. DIXON	404 MAPLE ST. MURFREESBORO, NC 27855
74	JESSE E. VAUGHAN	105 COLLIN RD. MURFREESBORO, NC 27855
72	FENTON BLOUNT FERGUSON, EST	609 CHOWAN ST. MURFREESBORO, NC 27855
77	ANN V. WEATHERSBEE	915 US 158 WEST MURFREESBORO, NC 27855
81	ROBERT B. HARRELL	507 SPRING AVE. MURFREESBORO, NC 27855
82	SELMA V. MAJETTE	816 US 158 WEST AHOSKI, NC 27910
88	TILMAN VAN HAND Jr.	815 US 158 W AHOSKIE, NC 27910
83	TALL COTTON STABLES, INC	RT 1 BOX 383B MURFREESBORO, NC 27855
89	E.R. EVANS & SONS, INC	434 E WOODROW SCHOOL RD. MURFREESBORO, NC 27855
90	JOHN C. JONES	PO BOX 368 AHOSKIE, NC 27910
95	CARNEY GATLING	35 PRINCESS AVE. MARLTIN, NJ 8053
96	LEONE & VERNON STEPHENSON	31 SPRUCE ST. BRIDGETON, NJ 8302
105	TOWN OF WINTON	PO BOX 134 WINTON, NC 27986
117	CHERRY F. GODWIN	407 US 158 WEST AHOSKIE, NC 27910
119	DARRELL T. BRACY	432 US 158 W AHOSIKE, NC 27910
120	WACKENHUT CORRECTIONS CORP	621 N W 53RD ST. SUITE 700 BOCA RATON, FL 33487
121	ALBERT T. BEVERLY	311 US 158 WEST WINTON, NC 27986

HERTFORD COUNTY
PROJECT: R-2583
US 158 WIDENING FROM
MURFREESBORO BYPASS
TO US 13 WEST OF WINTON

WETLAND PERMIT IMPACT SUMMARY

			WETLAND IMPACTS						SURFACE WATER IMPACTS					
Site No.	Station (From/To)	Structure Size / Type	Permanent Fill In Wetlands (ac)	Temp. Fill In Wetlands (ac)	Excavation in Wetlands (ac)	Mechanized Clearing in Wetlands (ac)	Wetland Type*	Hand Clearing in Wetlands (ac)	Permanent SW impacts (ac)	Temp. SW impacts (ac)	Existing Channel Impacts Permanent (ft)	Existing Channel Impacts Temp. (ft)	Stream Type**	Natural Stream Design (ft)
1	-L- 23+00	1 @ 48" RCP	0.08	-	0.01	0.02	R	-	0.01	0.01	60	34	P	-
2	-L- 146+94 TO 154+23	2 @ 12' x 8' RCBC	1.25	-	0.45	-	R	-	0.08	0.01	230	20	P	-
3	-L- 172+45 TO 176+66	48" RCP	0.38	-	-	0.11	R	0.05	0.01	0.01	114	10	P	-
4	-L- 177+35 TO 179+36	-	0.01	-	0.09	0.15	NR	0.02	-	-	-	-	-	-
5	-L- 185+51 TO 191+97	54" RCP	0.12	-	-	0.06	R	0.10	0.01	0.01	175	20	P	-
6	-L- 209+39	36" RCP	-	-	-	-		-	0.01	0.01	97	10	P	-
7	-L- 218+25 TO 221+76	36" RCP	-	-	-	-		-	0.01	-	240	-	I	-
7	-L- 218+25 TO 221+76	36" RCP	-	-	-	-		-	0.02	0.01	378	26	P	-
8	-L- 230+30	15" RCP	-	-	-	-		-	0.01	0.01	190	4	I	-
9	-L- 237+05 TO 241+50	24" RCP	0.37	-	-	0.04	R	-	0.01	-	130	-	I	-
10	-L- 241+66 TO 244+75	72" Modified Bulb Tee Girder Bridge	0.01	-	-	0.05	R	0.62	-	-	-	-		-
11	-L- 255+75	18" RCP	0.05	-	-	0.02	R	-	-	-	-	-		-
12	-L-278+27	15" RCP	-	-	0.01	-	R	0.01	-	-	-	-		-
13	-L-283+40	24" RCP	-	-	0.01	-	R	-	-	-	-	-		-
14	-L-291+25	-	-	-	0.01	-	R	-	-	-	-	-		-
15	-L- 337+75 TO 340+00	30" RCP	0.03	-	0.08	0.12	NR	-	-	-	-	-		-
16	-L-349+96	72" RCP	-	-	-	-		-	0.01	0.01	18	10	P	-
16	-L- 351+58	1 @ 10' x 6' RCBC	-	-	-	-		-	0.03	0.01	72	18	P	-
16	-L- 352+44	1 @ 9' x 5' RCBC	-	-	-	-		-	0.03	0.01	70	20	P	-
16	-L- 354+21	66" RCP	0.67	-	-	0.22	R	-	-	-	-	-		-
17	-L-360+10	36" RCP	-	-	0.01	0.01	R	0.02	0.01	0.01	58	50	I	-
TOTALS:			2.97	-	0.67	0.80		0.82	0.25	0.11	1832	222		-

* R - Riparian, NR - Non-riparian

** P - Perennial, I - Intermittent

Notes: 1. An additional 0.05 acre of Mechanized Clearing in wetlands is required for installation of temporary and permanent bridge piers at Site 10.
2. The 0.01 acre of Permanent Fill in Wetlands is included to account for the placement of bridge piers at Site 10.

NC DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

HERTFORD COUNTY

PROJECT: 35489.3.1 R-2583

SHEET OF

10/3/2011

revised 2/24/12