



PAT McCRORY
Governor

NICHOLAS J. TENNYSON
Secretary

December 2, 2016

MEMORANDUM TO: Mr. Mark Stafford, P.E.
Deputy Division 12 Engineer

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

SUBJECT: Gaston County; NC 273 (Sth. Main St.) from Tuckaseege Road
(at Beatty Dr.) to Highland Street (at A&E Dr.) in Mount Holly,
Widen to Multi-Lanes; Federal Aid No. STP-273(1);
WBS 37649.1.1; **TIP U-3633.**

Attached are the US Army Corps of Engineers Individual Permit and N.C. Division of Water Resources (NCDWR) Water Quality Certification. All environmental permits have been received for the construction of this project.

A copy of this permit package will be posted on the NCDOT website at:
<https://connect.ncdot.gov/resources/Environmental/Pages/default.aspx>
Quick Links>Permit Documents> Issued Permits.

cc: w/o attachment (see website for attachments)

Mr. Randy Garris, P.E. State Contract Officer
Ms. Trish Beam, Division Environmental Officer
Dr. Majed Al-Ghandour, P.E., Programming and TIP
Ms. Brenda Moore, P.E., Roadway Design
Mr. Ron Wilkins, P.E., Utilities Unit
Mr. Matthew Lauffer, P.E., Hydraulics
Mr. Tom Koch, P.E., Structure Design
Mr. Mark Staley, Roadside Environmental
Mr. Ron Hancock, P.E., State Roadway Construction Engineer
Mr. Jay McInnis, P.E., PDEA Western Section
Mr. Philip Ayscue, Office of Inspector General
Ms. Beth Harmon, Division of Mitigation Services
Ms. LeiLani Paugh, Natural Environment Section



PROJECT COMMITMENTS

T.I.P Project No. U-3633
NC 273 (South Main Street)
From Tuckaseege Road (at Beatty Drive) to Highland Street (at A&E Drive)
Widen to Multi-Lanes, Mount Holly
Gaston County
Federal Project No. STP-273-(1)
WBS Element 37649.1.1

COMMITMENTS FROM PROJECT DEVELOPMENT AND DESIGN

Division 11 Construction, Resident Engineer's Office

This project involved construction activities on or adjacent to FEMA-regulated streams. Therefore, the Division shall submit sealed as-built construction plans to the Hydraulics Unit upon completion of project construction, certifying that the drainage structures and roadway embankment that are located within the 100-year floodplain were built as shown in the construction plans, both horizontally and vertically.

This commitment will be implemented upon completion of project construction.

Roadside Environmental Unit, Division Resident Engineer

NCDWQ requests Design Standards for Sensitive Watersheds be adhered to in any area that drains to streams with WS-CA classifications.

This commitment has been implemented during preparation of project plans and will be adhered to during project construction.

NCDOT Hydraulics Unit

The Hydraulics Unit will coordinate with the NC Flood Plain Mapping Program (FMP), to determine status of project with regard to applicability of NCDOT's Memorandum of Agreement, or approval of a Conditional Letter of Map Revision (CLOMR) and subsequent final letter of Map Revision (LOMR).

Status: An MOA condition 2a will be applied to this project.

The Best Usage Classifications for the unnamed tributaries (UT-1 and UT-2) to Catawba River are WS-IV;CA and there is a structure located within one half mile of the this Critical Area, therefore Hazardous Spill Basins will be required.

Status: No drainage work will be conducted within the water supply critical area as a part of the project, therefore, no hazardous spill catch basins are proposed.

Roadway Design, Program Development

The construction of a sidewalk, where included in the proposed project, will be dependent upon a cost-sharing and maintenance agreement between NCDOT and the City of Mount Holly as outlined in NCDOT's *Pedestrian Policy Guidelines* dated October 1, 2000.

Status: A municipal agreement is pending partial execution with City of Mount Holly.

Project Development and Environmental Analysis –Natural Environment Section

A survey for Schweinitz's sunflower and any necessary coordination with the USFWS will be completed prior to construction.

Status: The project area was resurveyed for Schweinitz's sunflower October 21, 2015. No individuals of this species were found. It was determined the project will have "No Effect" on this species.

COMMITMENTS FROM PERMITTING

No special project commitments were developed during the permitting process.



**DEPARTMENT OF THE ARMY
WILMINGTON DISTRICT, CORPS OF ENGINEERS
151 PATTON AVENUE
ROOM 208
ASHEVILLE, NORTH CAROLINA 28801-5006**

December 1, 2016

Regulatory Division

Action ID: SAW-2010-00032, TIP No. U-3633

North Carolina Department of Transportation
Project Development and Environmental Analysis Branch
Philip S. Harris III, P.E., C.P.M., Natural Environment Section Head
1598 Mail Service Center
Raleigh, North Carolina 27699-1598

Dear Mr. Harris:

Enclosed is a Department of the Army permit to permanently impact 1,119 linear feet of stream and temporarily impact 186 linear feet of stream along 1.3 miles of NC 273 (South Main Street) to widen the road to a multi-lane facility in Gaston County, North Carolina. (TIP No. U-3633). The Corps is issuing this permit in response to your written request of July 11, 2016, and the ensuing administrative record.

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 conditions require that:

- a. You must complete construction before December 31, 2021.
- 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.
- d. In order to compensate for impacts associated with this permit, mitigation shall be provided in accordance with the provisions outlined in the U.S. Army Corps of Engineers, Wilmington District, Compensatory Mitigation Responsibility Transfer Form. The requirements of this form, including any special conditions listed on this form, are hereby incorporated as special conditions of this permit authorization.

You should address all questions regarding this authorization to Steve Kichefski at the Asheville Regulatory Field Office, telephone (828) 271-7980 extension 234.

Sincerely,

A handwritten signature in black ink, appearing to read "Kevin P. Landers, Sr.", with a long horizontal flourish extending to the right.

Kevin P. Landers, Sr.
Colonel, U.S. Army
District Commander

Handwritten initials "Sar" in black ink, positioned to the left of the typed name.

Enclosures

cc w/encls (via email):

Marella Buncick - U.S. Fish and Wildlife Service
Dr. Cynthia Van Der Wiele - U.S. Environmental Protection Agency
Amy Chapman - NC DENR - Division of Water Resources
Marla Chambers - NC Wildlife Resources Commission

DEPARTMENT OF THE ARMY PERMIT

Permittee: **NC Department of Transportation**

Permit No.: **SAW-2013-00032 TIP No. U-3633**

Issuing Office: **CESAW-RG-A**

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:

Mr. Philip S. Harris III, on behalf of the North Carolina Department of Transportation, is hereby authorized to conduct the following activities in waters of the U.S. for TIP No. U-3633: permanently impact 1,119 linear feet of stream and temporarily impact 186 linear feet of stream along 1.3 miles of NC 273 (South Main Street) to widen the road to a multi-lane facility.

Project Location:

NC 273 (South Main Street) Gaston County, North Carolina

Permit Conditions:

General Conditions:

1. The time limit for completing the work authorized ends on December 31, 2021. 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).
 - 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).
 - b. 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.



 (PERMITTEE) **NC Department of Transportation**
 for **Attn: Philip S. Harris III**

 12-01-2016
 (DATE)

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



 (DISTRICT COMMANDER) **Kevin P. Landers, Sr.**
Colonel, U.S. Army

 01 Dec 2016
 (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)

SPECIAL CONDITIONS
SAW-2010-00032, TIP No. U-3633

Failure to institute and carry out the details of the following special conditions will result in a directive to cease all ongoing and permitted work within waters of the U.S. associated with the permitted project, or such other remedies and/or fine as the Wilmington District Engineer, or his authorized representatives, may seek.

WORK LIMITS

- 1) All work authorized by this permit must be performed in strict compliance with the Wetland and Surface Water Impacts Permit drawings titled "Wetland and Surface Water Impacts Permit – Preliminary Plans," Permit Drawing Sheets 1-11, received via email August 19, 2016 as a response to the NCDWR On-Hold Letter dated July 19, 2016. These drawings, and the description of work in the application and supporting information submitted by NCDOT, are now a part of this permit. Any modification to these plans must be approved by the U.S. Army Corps of Engineers (Corps) prior to implementation.
- 2) Except as authorized by this permit or any Corps 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.
- 3) 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.
- 4) The permittee shall schedule a pre-construction meeting between their representatives, the contractor, and the Corps, Wilmington District, Asheville Regulatory Field Office, NCDOT Regulatory Project Manager (Division 12), prior to any work in jurisdictional waters of the U.S. to ensure that there is a mutual understanding of all terms and conditions contained in this DA permit. The permittee shall provide the NCDOT Regulatory Project Manager with a copy of the final plans at least two (2) weeks prior to the pre-construction 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 pre-construction meeting for a time when the Corps and the North Carolina Division of Water Resources (NCDWR) Project Managers can attend. The permittee shall notify the Corps and NCDWR Project Managers a minimum of thirty (30) days in advance of the meeting.

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- 5) The permittee shall advise the Corps in writing at least two (2) weeks prior to beginning the work authorized by this permit and again upon completion of the work authorized by this permit.
- 6) Prior to commencing construction within jurisdictional waters of the U.S. for any portion of the project, the permittee shall forward the latest version of project construction drawings to the Corps, Asheville Regulatory Field Office NCDOT Regulatory Project Manager (Division 12). Half-size drawings are acceptable.

RELATED LAWS

- 7) If the permittee discovers any previously unknown historic or archaeological sites while accomplishing the authorized work, he shall immediately stop work and notify the Corps, Asheville Regulatory Field Office NCDOT Regulatory Project Manager (Division 12), who will initiate the required State/Federal coordination.
- 8) All necessary precautions and measures will be implemented so that any activity will not kill, injure, capture, harass, or otherwise harm any protected federally listed species. While accomplishing the authorized work, if the permittee discovers or observes a damaged or hurt listed endangered or threatened species, the Corps Wilmington District Engineer will be immediately notified to initiate the required Federal coordination.
- 9) The NCDWR has issued a conditioned Water Quality Certification for this project (Certification No. WQC004075). The conditions of this certification are hereby incorporated as special conditions of this permit. A copy of this certification is attached.
- 10) This Department of the Army permit does not obviate the need to obtain other Federal, State, or local authorizations required by law.

PROJECT MAINTENANCE

- 11) 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. Soils used for fill shall not be contaminated with any toxic substance in concentrations governed by Section 307 of the Clean Water Act.
- 12) 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

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hazardous waste, the permittee shall immediately report it to the NCDWR at (919) 733-3300 or (800) 858-0368 and provisions of the North Carolina Oil Pollution and Hazardous Substances Control Act will be followed.

- 13) 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.
- 14) No fill or excavation impacts for the purposes of sedimentation and erosion control shall occur within jurisdictional waters, including wetlands, unless the impacts are included on the plan drawings and specifically authorized by this permit.
- 15) The permittee shall ensure that the project remains in full compliance with all aspects of the Sedimentation Pollution Control Act of 1973 (North Carolina General Statutes Chapter 113A Article 4). Adequate sedimentation and erosion control measures must be implemented prior to any ground disturbing activities to minimize impacts to downstream aquatic resources. These measures must be inspected and maintained regularly, especially following rainfall events. All fill material must be adequately stabilized at the earliest practicable date to prevent sediment from entering into adjacent waters or wetlands.
- 16) The permittee shall ensure that NCDOT's Best Management Practices for the Protection of Surface Waters and for Construction and Maintenance Activities are utilized and enforced.
- 17) The permittee shall ensure that all excavation and/or construction areas in waters of the U.S. are temporarily dewatered during work.
- 18) 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.
- 19) The permittee shall take measures to prevent live or fresh concrete, including bags of uncured concrete, from coming into contact with any water in or entering into waters of the U.S. Water inside coffer dams or casings that has been in

SPECIAL CONDITIONS
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contact with concrete shall only be returned to waters of the U.S. when it no longer poses a threat to aquatic organisms (concrete is set and cured).

- 20) Unless otherwise requested in the 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. Destabilization of the channel and head cutting upstream should be considered in the placement of the culvert.
- 21) Measures will be included in the construction/installation that will promote the safe passage of fish and other aquatic organisms. The dimension, pattern, and profile of the stream above and below a pipe or culvert should not be modified by widening the stream channel or by reducing the depth of the stream in connection with the construction activity. The width, height, and gradient of a proposed opening should be such as to pass the average historical low flow and spring flow without adversely altering flow velocity. Spring flow should be determined from gauge data, if available. In the absence of such data, bankfull flow can be used as a comparable level.
- 22) Design and placement of culverts and other structures including temporary erosion control measures shall not be conducted in a manner that may result in the disequilibrium of wetlands, streambeds or stream banks adjacent to, upstream of or downstream of the structures. When practicable, riprap armoring of streams at culvert inlets and outlets shall be minimized above ordinary high water elevation in favor of bioengineering techniques such as bank sloping, erosion control matting and revegetation with deep-rooted native woody plants.
- 23) The permittee shall implement all reasonable and practicable measures to ensure that equipment, structures, fill pads, work, and operations associated with this project do not adversely affect upstream and/or downstream reaches. Adverse effects include, but are not limited to, channel instability, flooding, and/or stream bank erosion. The permittee shall routinely monitor for these effects, cease all work when detected, take initial corrective measures to correct actively eroding areas, and notify this office immediately. Permanent corrective measures may require additional authorization by the Corps.
- 24) The permittee shall remove all temporary fills placed in waters of the U.S., to include authorized sediment and erosion control measures, and shall restore natural grades in these areas, prior to project completion. Affected upland areas

SPECIAL CONDITIONS
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must be revegetated with native vegetation within 60 days of completion of project construction. If vegetation cannot be planted due to the time of the year, all disturbed areas will be seeded with a native mix appropriate for the impacted area, and vegetation will be planted in the fall. A native seed mix may contain non-invasive small grain annuals (e.g., millet and rye grain) to ensure adequate cover while native vegetation becomes established.

- 25) 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.
- 26) All reports, documentation and correspondence required by the conditions of this permit shall be submitted to the following address: U.S. Army Corps of Engineers, Asheville Regulatory Field Office, NCDOT Regulatory Project Manager (Division 12), 151 Patton Avenue, Room 208, Asheville, NC 28801-5006, and by telephone at: (828) 271-7980. The permittee shall reference the following permit number on all submittals: SAW-2010-00032, TIP No. U-3633.

COMPENSATORY MITIGATION

- 28) In order to compensate for the impacts associated with this permit, mitigation shall be provided in accordance with the provisions outlined on the most recent version of the attached Compensatory Mitigation Responsibility Transfer Form. The requirements of this form, including any special conditions listed on this form, are hereby incorporated as special conditions of this permit.

ENFORCEMENT

- 29) A representative of the Corps will periodically and randomly inspect the work for compliance with these conditions. Deviations from these procedures may result in an administrative financial penalty and/or directive to cease work until the problem is resolved to the satisfaction of the Corps.
- 30) Violation of these conditions or violation of Section 404 of the Clean Water Act must be reported in writing to the Corps, Wilmington District, within 24 hours of the permittee's discovery of the violation.

Rationale: Inclusion of these special conditions is necessary to ensure that the permittee complies with federal and state requirements (i.e., the CWA, ESA, NHPA, Sedimentation Pollution Control Act of 1973, etc.), and ensures that any project related adverse effects are minimized to the maximum extent practicable.

U.S. ARMY CORPS OF ENGINEERS
Wilmington District
Compensatory Mitigation Responsibility Transfer Form

Permittee: NCDOT/Attention: Mr. Philip S. Harris III
Project Name: NCDOT/NC273/U3633 NCDOT

Action ID: SAW-2010-00032
County: Gaston

Instructions to Permittee: The Permittee must provide a copy of this form to the Mitigation Sponsor, either an approved Mitigation Bank or the North Carolina Division of Mitigation Services (NCDMS), who will then sign the form to verify the transfer of the mitigation responsibility. Once the Sponsor has signed this form, it is the Permittee's responsibility to ensure that to the U.S. Army Corps of Engineers (USACE) Project Manager identified on page two is in receipt of a signed copy of this form before conducting authorized impacts, unless otherwise specified below. If more than one mitigation Sponsor will be used to provide the mitigation associated with the permit, or if the impacts and/or the mitigation will occur in more than one 8-digit Hydrologic Unit Code (HUC), multiple forms will be attached to the permit, and the separate forms for each Sponsor and/or HUC must be provided to the appropriate mitigation Sponsors.

Instructions to Sponsor: The Sponsor must verify that the mitigation requirements (credits) shown below are available at the identified site. By signing below, the Sponsor is accepting full responsibility for the identified mitigation, regardless of whether or not they have received payment from the Permittee. Once the form is signed, the Sponsor must update the bank ledger and provide a copy of the signed form and the updated bank ledger to the Permittee, the USACE Project Manager, and the Wilmington District Mitigation Office (see contact information on page 2). The Sponsor must also comply with all reporting requirements established in their authorizing instrument.

Permitted Impacts and Compensatory Mitigation Requirements:

Permitted Impacts Requiring Mitigation*			8-digit HUC and Basin: 03050101, Catawba River Basin			
Stream Impacts (linear feet)			Wetland Impacts (acres)			
Warm	Cool	Cold	Riparian Riverine	Riparian Non-Riverine	Non-Riparian	Coastal
1133						

*If more than one mitigation sponsor will be used for the permit, only include impacts to be mitigated by this sponsor.

Compensatory Mitigation Requirements:			8-digit HUC and Basin: 03050101, Catawba River Basin			
Stream Mitigation (credits)			Wetland Mitigation (credits)			
Warm	Cool	Cold	Riparian Riverine	Riparian Non-Riverine	Non-Riparian	Coastal
2223						

Mitigation Site Debited: NCDMS

(List the name of the bank to be debited. For umbrella banks, also list the specific site. For NCDMS, list NCDMS. If the NCDMS acceptance letter identifies a specific site, also list the specific site to be debited).

Section to be completed by the Mitigation Sponsor

Statement of Mitigation Liability Acceptance: I, the undersigned, verify that I am authorized to approve mitigation transactions for the Mitigation Sponsor shown below, and I certify that the Sponsor agrees to accept full responsibility for providing the mitigation identified in this document (see the table above), associated with the USACE Permittee and Action ID number shown. I also verify that released credits (and/or advance credits for NCDMS), as approved by the USACE, are currently available at the mitigation site identified above. Further, I understand that if the Sponsor fails to provide the required compensatory mitigation, the USACE Wilmington District Engineer may pursue measures against the Sponsor to ensure compliance associated with the mitigation requirements.

Mitigation Sponsor Name: _____

Name of Sponsor's Authorized Representative: _____

Signature of Sponsor's Authorized Representative

Date of Signature

**USACE Wilmington District
Compensatory Mitigation Responsibility Transfer Form, Page 2**

Conditions for Transfer of Compensatory Mitigation Credit:

- Once this document has been signed by the Mitigation Sponsor and the USACE is in receipt of the signed form, the Permittee is no longer responsible for providing the mitigation identified in this form, though the Permittee remains responsible for any other mitigation requirements stated in the permit conditions.
- Construction within jurisdictional areas authorized by the permit identified on page one of this form can begin only after the USACE is in receipt of a copy of this document signed by the Sponsor, confirming that the Sponsor has accepted responsibility for providing the mitigation requirements listed herein. For authorized impacts conducted by the North Carolina Department of Transportation (NCDOT), construction within jurisdictional areas may proceed upon permit issuance; however, a copy of this form signed by the Sponsor must be provided to the USACE within 30 days of permit issuance. NCDOT remains fully responsible for the mitigation until the USACE has received this form, confirming that the Sponsor has accepted responsibility for providing the mitigation requirements listed herein.
- Signed copies of this document must be retained by the Permittee, Mitigation Sponsor, and in the USACE administrative records for both the permit and the Bank/ILF Instrument. It is the Permittee's responsibility to ensure that the USACE Project Manager (address below) is provided with a signed copy of this form.
- If changes are proposed to the type, amount, or location of mitigation after this form has been signed and returned to the USACE, the Sponsor must obtain case-by-case approval from the USACE Project Manager and/or North Carolina Interagency Review Team (NCIRT). If approved, higher mitigation ratios may be applied, as per current District guidance and a new version of this form must be completed and included in the USACE administrative records for both the permit and the Bank/ILF Instrument.

Comments/Additional Conditions:

This form is not valid unless signed below by the USACE Project Manager and by the Mitigation Sponsor on Page 1. **Once signed, the Sponsor should provide copies of this form along with an updated bank ledger to: 1) the Permittee, 2) the USACE Project Manager at the address below, and 3) the Wilmington District Mitigation Office, Attn: Todd Tugwell, 11405 Falls of Neuse Road, Wake Forest, NC 27587 (email: todd.tugwell@usace.army.mil).** Questions regarding this form or any of the permit conditions may be directed to the USACE Project Manager below.

USACE Project Manager: Steve Kichefski
USACE Field Office: Asheville Regulatory Field Office
US Army Corps of Engineers
151 Patton Avenue, Room 208
Asheville, North Carolina 28801-5006
Email: steven.l.kichefski@usace.army.mil

**KICHEFSKI.STEVEN.L.13
86908539**

Digitally signed by KICHEFSKI.STEVEN.L.1386908539
DN: c=US, o=U.S. Government, ou=DoD, ou=PKI,
ou=USA, cn=KICHEFSKI.STEVEN.L.1386908539
Date: 2016.11.29 00:23:41 -05'00'

USACE Project Manager Signature

**November 29, 2016
Date of Signature**

Current Wilmington District mitigation guidance, including information on mitigation ratios, functional assessments, and mitigation bank location and availability, and credit classifications (including stream temperature and wetland groupings) is available at <http://ribits.usace.army.mil>.



PAT MCCRORY
Governor
DONALD R. VAN DER VAART
Secretary
JAY ZIMMERMAN
DWR Director

October 3, 2016

Mr. Philip S. Harris, III, P.E., CPM
Natural Environment Section Head
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 Highway 273 in Gaston County, Federal Aid Project
No. STP-273-(1), TIP U-3633.
NCDWR Project No. 20160679

Dear Mr. Harris:

Attached hereto is a copy of Certification No. WQC004075 issued to The North Carolina Department of
Transportation (NCDOT) dated October 3, 2016.

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

Sincerely,

S. Jay Zimmerman, Director
Division of Water Resources

Attachments

Electronic copy only distribution:

Steven Kichefski, US Army Corps of Engineers, Asheville Field Office
Trish Beam, Division 12 Environmental Officer
Rodger Rochelle, NC Department of Transportation
Carla Dagnino, NC Department of Transportation
Dr. Cynthia Van Der Wiele, US Environmental Protection Agency
Marella Buncick, US Fish and Wildlife Service
Marla Chambers, NC Wildlife Resources Commission
Beth Harmon, Division of Mitigation Services
File Copy



401 Water Quality Certification Pursuant to Section 401 of the Federal Clean Water 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 Resources (NCDWR) Regulations in 15 NCAC 2H .0500. This certification authorizes the NCDOT to impact 1346 linear feet of jurisdictional streams in Gaston County. The project shall be constructed pursuant to the application dated received July 8, 2016 as well as subsequent information submitted on August 19, 2016 from the additional information request. The authorized impacts are as described below:

Stream Impacts in the Catawba River Basin

Site	Bank Stabilization	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)	Stream Impacts Requiring Mitigation (linear ft)
1	5	15	9		9	38	
2		188				188	
3	6			68	16	90	74
4	21			7	17	45	28
5	24			484	23	531	508
6				223	65	288	223
7				148	18	166	148
Total	56	203	9	930	148	1346	833

Total Stream Impact for Project: 1346 linear feet
Impacts Requiring DWR Mitigation: 833 linear feet
Impacts Requiring USACE Mitigation: 1,133 linear feet

The application provides adequate assurance that the discharge of fill material into the waters of the **Catawba 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 July 8, 2016 as well as subsequent information submitted on August 19, 2016 from the additional information request. Should your project change, you are required to notify the NCDWR 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.

Condition(s) of Certification:

1. Channel relocations shall be completed and stabilized, and approved on site by NCDWR staff, prior to diverting water into the new channel. Natural stream bed material will be salvaged from excavation of the existing stream, stockpiled separately, and subsequently reused as native stream material for the bed of the newly relocated stream. Stream banks shall be matted with coir-fiber matting. Vegetation used for bank stabilization shall be limited to native riparian vegetation, and should include establishment of a vegetated buffer on both sides of the relocated channel to the maximum extent practical. Also, rip-rap may be allowed if it is necessary to maintain the physical integrity of the stream, but the applicant must provide written justification and any calculations used to determine the extent of rip-rap coverage requested. Once the stream has been turned into the new channel, it may be necessary to relocate stranded fish to the new channel to prevent fish kills. [15A NCAC 02H.0506(b)(3)]
2. At locations where ponds will be drained, proper measures will be taken to drain the pond with limited impact to upstream and downstream channel stability as well as to native aquatic species. Proper measures will be taken to avoid sediment release and/or sediment accumulation downstream as a result of pond draining. If typical pond draining techniques will create significant disturbance to native aquatic species, additional measures such as collection and relocation may be necessary to prevent a significant fish kill. NCDOT shall consult with NC Wildlife Resources staff to determine if there are any sensitive species, and the most appropriate measures to limit impacts to these species. The permittee shall observe any natural channel re-establishment, or utilize natural channel construction techniques, to ensure that the jurisdictional stream channel above and below the drained pond remain stable, and that no additional impacts occur within the natural stream channel as a result of draining the pond. [15A NCAC 2H.0506(b)(3)]
3. 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 the NCDWR. If this condition is unable to be met due to bedrock or other limiting features encountered during construction, please contact the NCDWR for guidance on how to proceed and to determine whether or not a permit modification will be required. [15A NCAC 02H.0506(b)(2)]
4. 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. [15A NCAC 02H.0506(b)(2)]
5. 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. [15A NCAC 02H.0506(b)(2)]
6. For the linear feet of streams being impacted due to site dewatering activities, the site shall be graded to its preconstruction contours and revegetated with appropriate native species. [15A NCAC 02H.0506(b)(2)]
7. 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. Any applicable riparian buffer impact for access to stream channel shall be temporary and be revegetated with native riparian species. [15A NCAC 02H.0506(b)(2)]

8. In accordance with commitments made in your application, all clearing of vegetation for purpose of relocating overhead power lines within jurisdictional wetlands shall be performed without the use of mechanized equipment. [15A NCAC 02H.0506(b)(3)]
9. 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 site. NCDWR staff shall be invited to the pre-construction meeting. [15A NCAC 02H.0506(b)(2) and (b)(3)]

General Conditions

1. 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 NCDWR. If this condition is unable to be met due to bedrock or other limiting features encountered during construction, please contact NCDWR for guidance on how to proceed and to determine whether or not a permit modification will be required. [15A NCAC 02H.0506(b)(2)]
2. 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. [15A NCAC 02B.0200]
3. 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. [15A NCAC 02H.0506(b)(2)]
4. 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. [15A NCAC 02H.0506(b)(2)]
5. 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. [15A NCAC 02H.0506(b)(2)]
6. The Permittee shall ensure that the final design drawings adhere to the permit and to the permit drawings submitted for approval. [15A NCAC 02H .0507 (c) and 15A NCAC 02H .0506 (b)(2) and (c)(2)]
7. 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. [15A NCAC 02H.0506(b)(3) and (c)(3)]
8. 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. [15A NCAC 02H.0506(b)(3)]
9. 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. [15A NCAC 02H.0506(b)(3)]

10. No rock, sand or other materials shall be dredged from the stream channel except where authorized by this certification. [15A NCAC 02H.0506(b)(3)]
11. Discharging hydroseed mixtures and washing out hydroseeders and other equipment in or adjacent to surface waters is prohibited. [15A NCAC 02H.0506(b)(3)]
12. 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 the NCDWR 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, the NCDWR may reevaluate and modify this certification. [15A NCAC 02B.0200]
13. All fill slopes located in jurisdictional wetlands shall be placed at slopes no flatter than 3:1, unless otherwise authorized by this certification. [15A NCAC 02H.0506(b)(2)]
14. 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. [15A NCAC 02H .0507(c) and 15A NCAC 02H .0506 (b)(2) and (c)(2)]
15. The outside buffer, wetland or water boundary located within the construction corridor approved by this authorization, including all non-commercial borrow and waste sites associated with the project, 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. [15A NCAC 02H.0501 and .0502]
16. 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.
17. The Permittee shall report any violations of this certification to the Division of Water Resources within 24 hours of discovery. [15A NCAC 02B.0506(b)(2)]
18. 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 the NCDWR when all work included in the 401 Certification has been completed. [15A NCAC 02H.0502(f)]
19. Native riparian vegetation [**ex. Salix nigra, Juncus (spp), Carex (spp), et al.**] 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. [15A NCAC 02B.0506(b)(2)]
20. 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. [15A NCAC 02H.0506(b)(3) and (c)(3)]
21. 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 [15A NCAC 02H.0506(b)(3) and (c)(3):
 - a. 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*.
 - b. 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.

- c. 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*.
- d. The reclamation measures and implementation must comply with the reclamation in accordance with the requirements of the Sedimentation Pollution Control Act.

22. Sediment and erosion control measures shall not be placed in wetlands or waters unless otherwise approved by this Certification. [15A NCAC 02H.0506(b)(3) and (c)(3)]

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) 431-3000, Facsimile: (919) 431-3100

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

Mr. Sam M. Hayes, General Counsel
Department of Environmental Quality
1601 Mail Service Center

This the 3rd day of October 2016

DIVISION OF WATER RESOURCES


S. Jay Zimmerman, Director



Environmental Quality

PAT MCCRORY
Governor
DONALD R. VAN DER VAART
Secretary
JAY ZIMMERMAN
DWR Director

NCDWR 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 Resources, 1617 Mail Service Center, Raleigh, NC, 27699-1617. This form may be returned to NCDWR 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 _____



See Sheet 1A For Index of Sheets
 See Sheet 1B For Conventional Symbols
 See Sheets 1C-1 Thru 1C-6 For Survey Control Sheets

STATE OF NORTH CAROLINA
 DIVISION OF HIGHWAYS

GASTON COUNTY

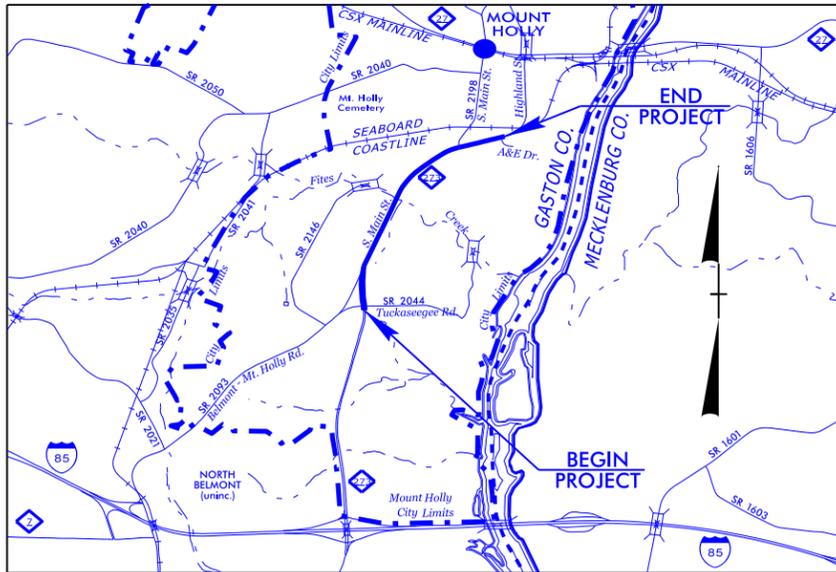
**LOCATION: MOUNT HOLLY - NC 273 (SOUTH MAIN STREET) FROM
 TUCKASEEGE ROAD AT BEATTY DRIVE TO HIGHLAND
 STREET AT A&E DRIVE**

**TYPE OF WORK: WIDENING, GRADING, DRAINAGE, PAVING, RESURFACING,
 & CULVERT.**

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	U-3633	1	
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	
37649.1.1	STP-0273(1)	PE	
37649.2.FRI	STP-0273(1)	R/W	
37649.2.FRUI	STP-0273(1)	UTIL	

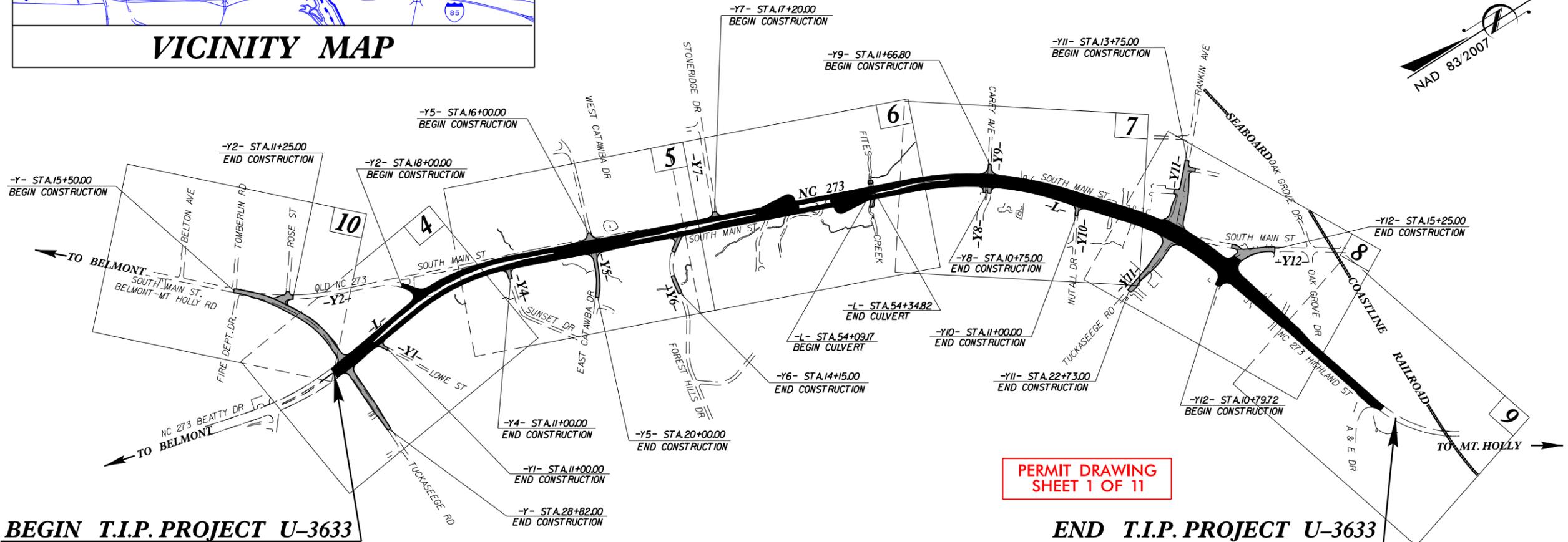


TIP PROJECT: U-3633



VICINITY MAP

WETLAND AND SURFACE WATER IMPACTS PERMIT



BEGIN T.I.P. PROJECT U-3633
-L- STA. 18 + 65.00

END T.I.P. PROJECT U-3633
-L- STA. 91 + 00.00

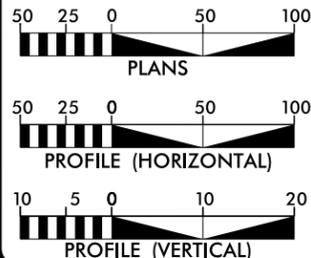
THIS IS NOT A CONTROL OF ACCESS PROJECT
 THIS PROJECT IS WITHIN THE MT. HOLLY MUNICIPAL BOUNDARIES.
 CLEARING ON THIS PROJECT SHALL BE PERFORMED TO THE LIMITS ESTABLISHED BY METHOD III.

**PERMIT DRAWING
 SHEET 1 OF 11**

**PRELIMINARY PLANS
 DO NOT USE FOR CONSTRUCTION**

CONTRACT:

GRAPHIC SCALES



DESIGN DATA

ADT 2014 = 26,800
 ADT 2035 = 42,300
 K = 10 %
 D = 55 %
 T = 4 % *
 V = 50 MPH
 * TTST = 2 DUAL 2
 FUNC CLASS =
 URBAN COLLECTOR
 REGIONAL TIER

PROJECT LENGTH

LENGTH ROADWAY T.I.P. PROJECT U-3633 = 1.365 MI
 LENGTH STRUCTURE T.I.P. PROJECT U-3633 = 0.005 MI
 TOTAL LENGTH OF T.I.P. PROJECT U-3633 = 1.370 MI

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

2012 STANDARD SPECIFICATIONS

RIGHT OF WAY DATE:
 NOVEMBER 25, 2014

LETTING DATE:
 JANUARY 17, 2017

JAMES A. SPEER, PE
 PROJECT ENGINEER

NYA BOAYUE, PE
 PROJECT DESIGN ENGINEER

HYDRAULICS ENGINEER

SIGNATURE: _____ P.E.

**ROADWAY DESIGN
 ENGINEER**

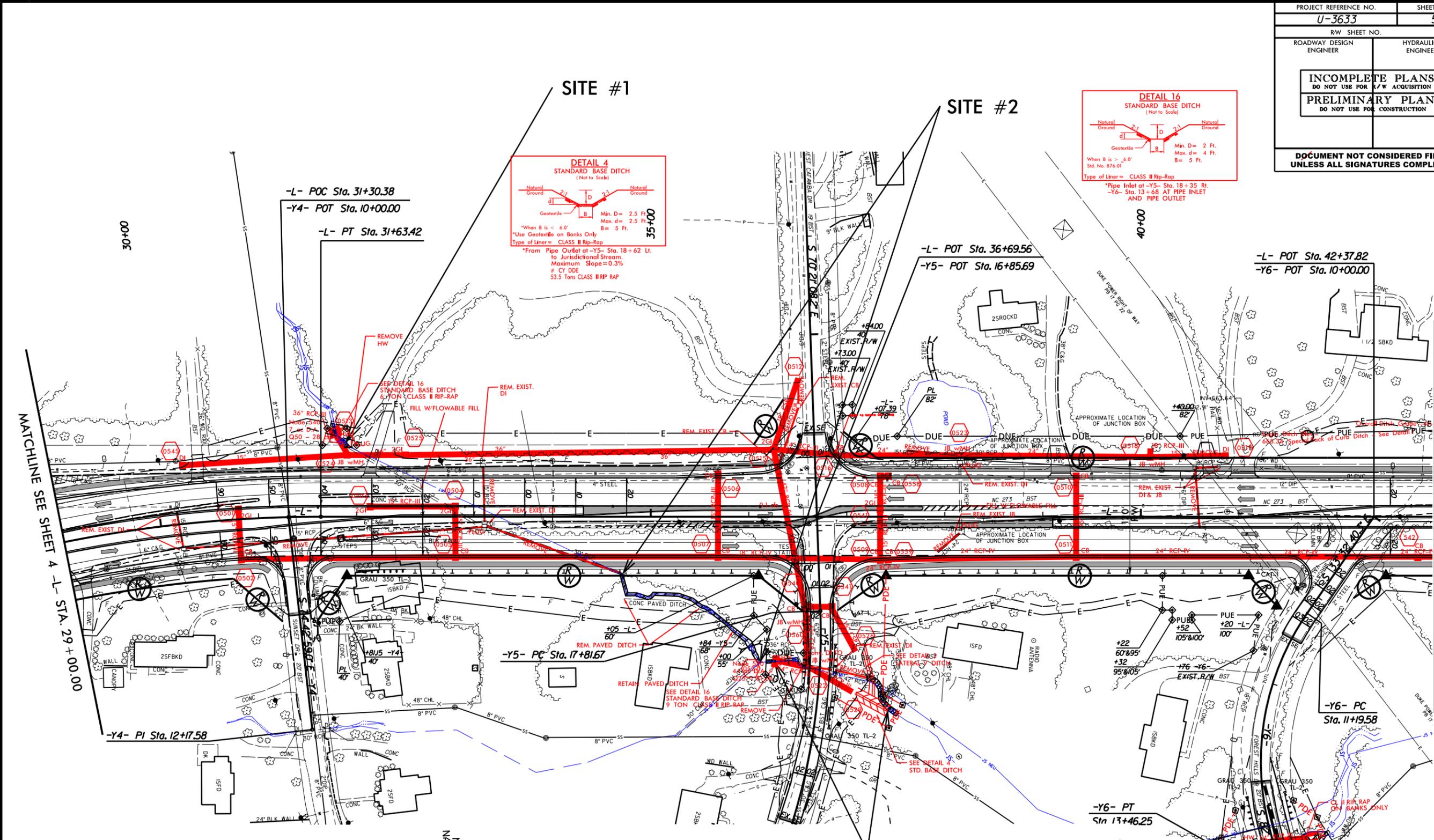
SIGNATURE: _____ P.E.



\$\$\$\$\$SYTIME\$\$\$\$\$
 \$\$\$DCN\$\$\$\$\$
 \$\$\$USERNAME\$\$\$\$\$

PROJECT REFERENCE NO.	SHEET NO.
U-3633	5
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	

REVISIONS
 R/W REV. ADDED REVISED PUE ON PARCEL #25 & REVISED THE PUE TO DUE ON PARCEL 28 Ne 1/30/15
 R/W REV. CHANGE OWNERS NAME FOR PARCEL #23 & #32 Ne 8/14/15
 R/W REV. CONVERTED A PORTION OF THE PROPOSED TCE FOR PARCEL #30 TO A PDE Ne 11/3/15



DENOTES TEMPORARY IMPACTS IN SURFACE WATER
 DENOTES IMPACTS IN SURFACE WATER



PLAN VIEW



Scale: 1" = 100'

PERMIT DRAWING
 SHEET 2 OF 11

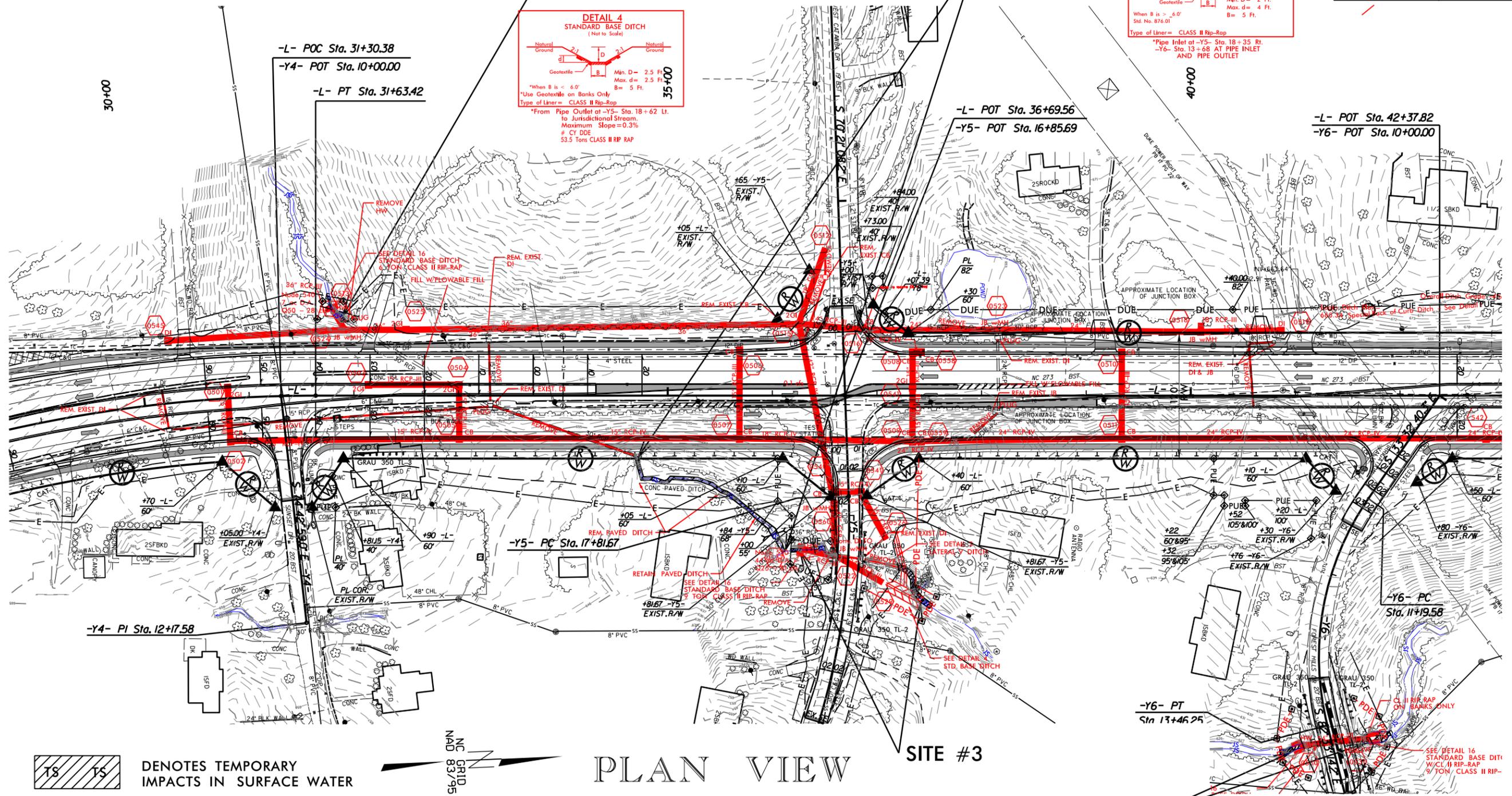
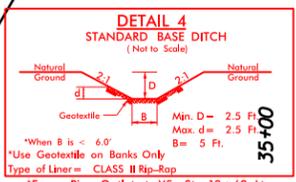
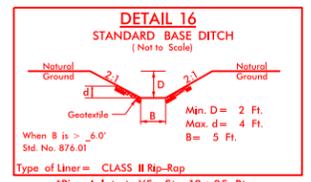
MATCHLINE SEE SHEET 6 -L- STA. 43 + 00.00

MATCHLINE SEE SHEET 4 -L- STA. 29 + 00.00

PROJECT REFERENCE NO.	SHEET NO.
U-3633	5
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

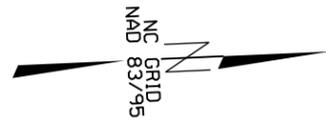
SITE #1

SITE #2



DENOTES TEMPORARY IMPACTS IN SURFACE WATER

DENOTES IMPACTS IN SURFACE WATER



PLAN VIEW

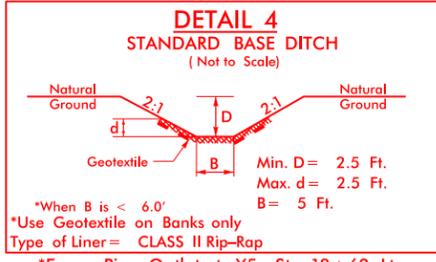
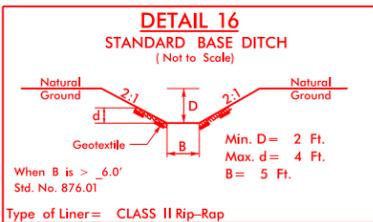


Scale: 1" = 100'

PERMIT DRAWING SHEET 3 OF 11

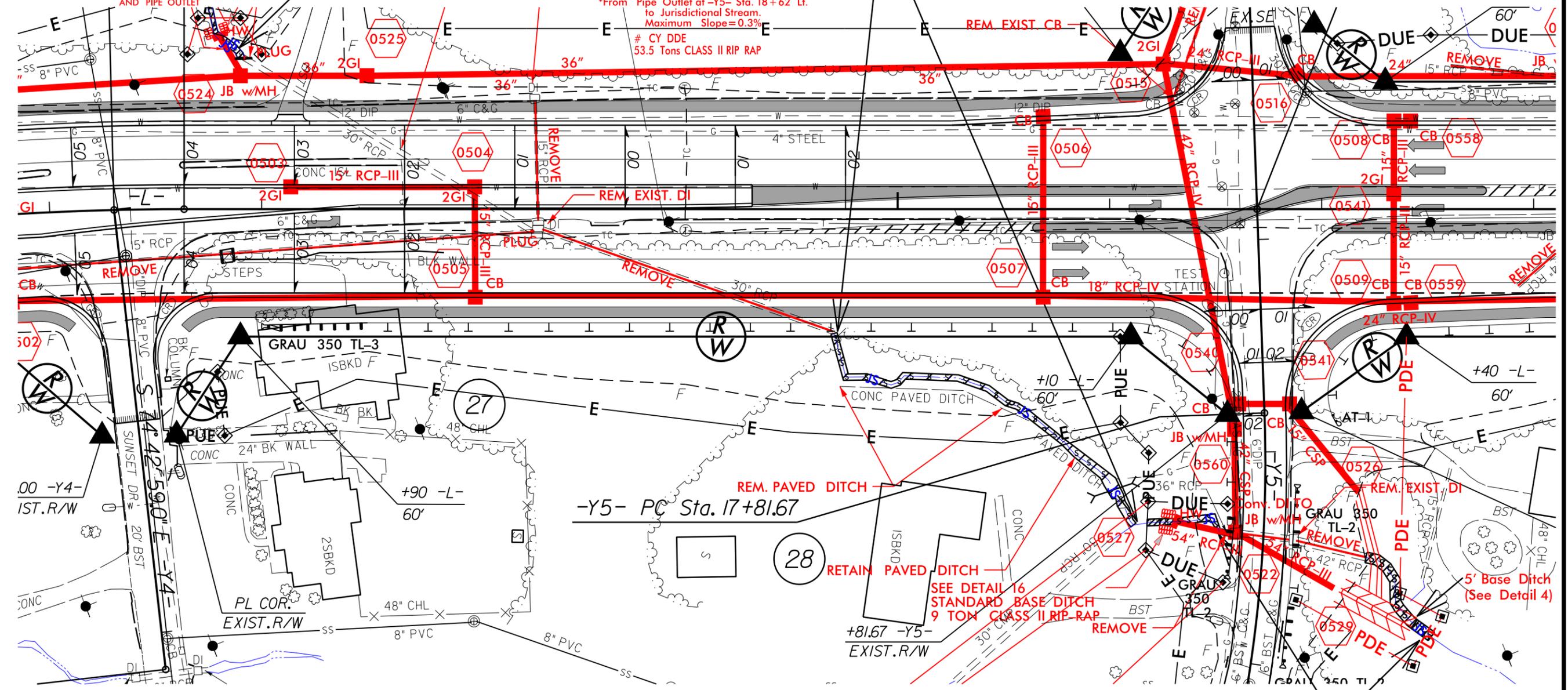
5/14/99

PROJECT REFERENCE NO. U-3633	SHEET NO. 5
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	



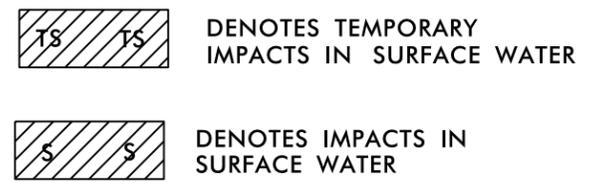
SITE #1

SITE #2



PLAN VIEW ENLARGEMENT

SITE #3

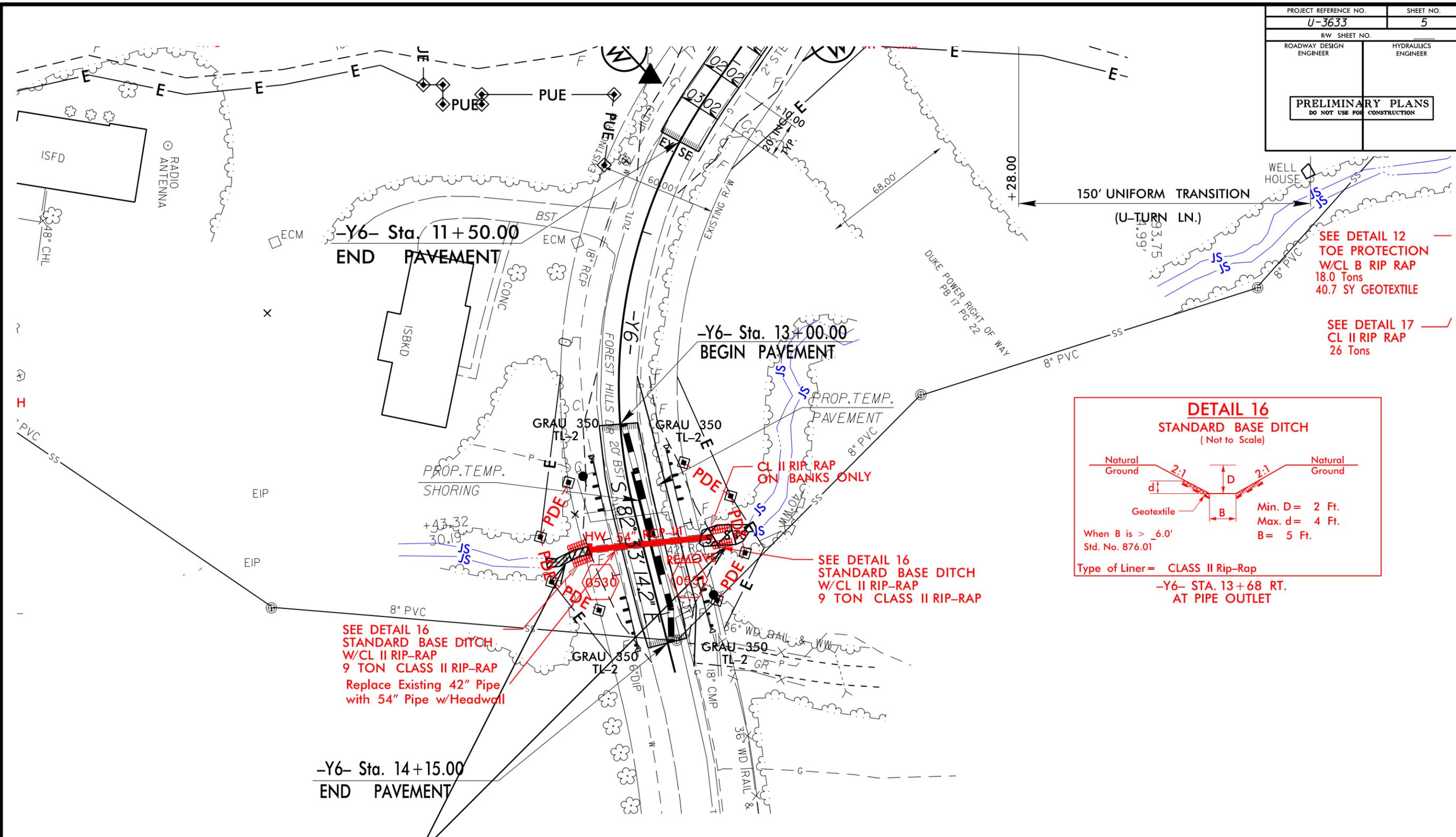


Scale: 1" = 50'

PERMIT DRAWING SHEET 4 OF 11

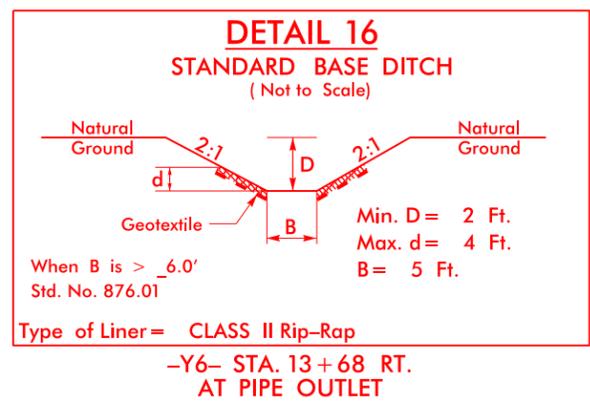
5/14/99

PROJECT REFERENCE NO. U-3633	SHEET NO. 5
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	



SEE DETAIL 12
TOE PROTECTION
W/CL B RIP RAP
18.0 Tons
40.7 SY GEOTEXTILE

SEE DETAIL 17
CL II RIP RAP
26 Tons

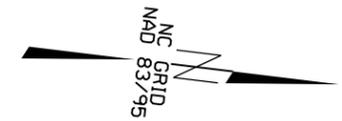


SITE #4
PLAN VIEW
ENLARGEMENT

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



Scale: 1" = 50'



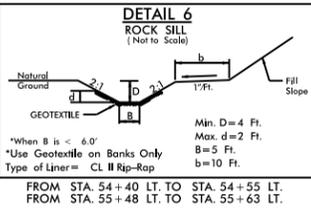
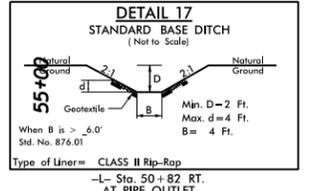
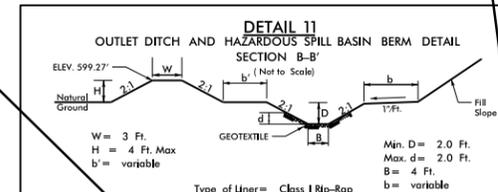
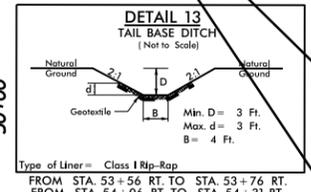
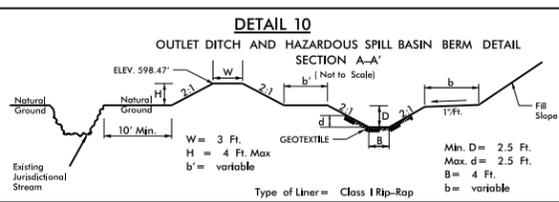
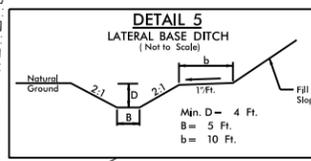
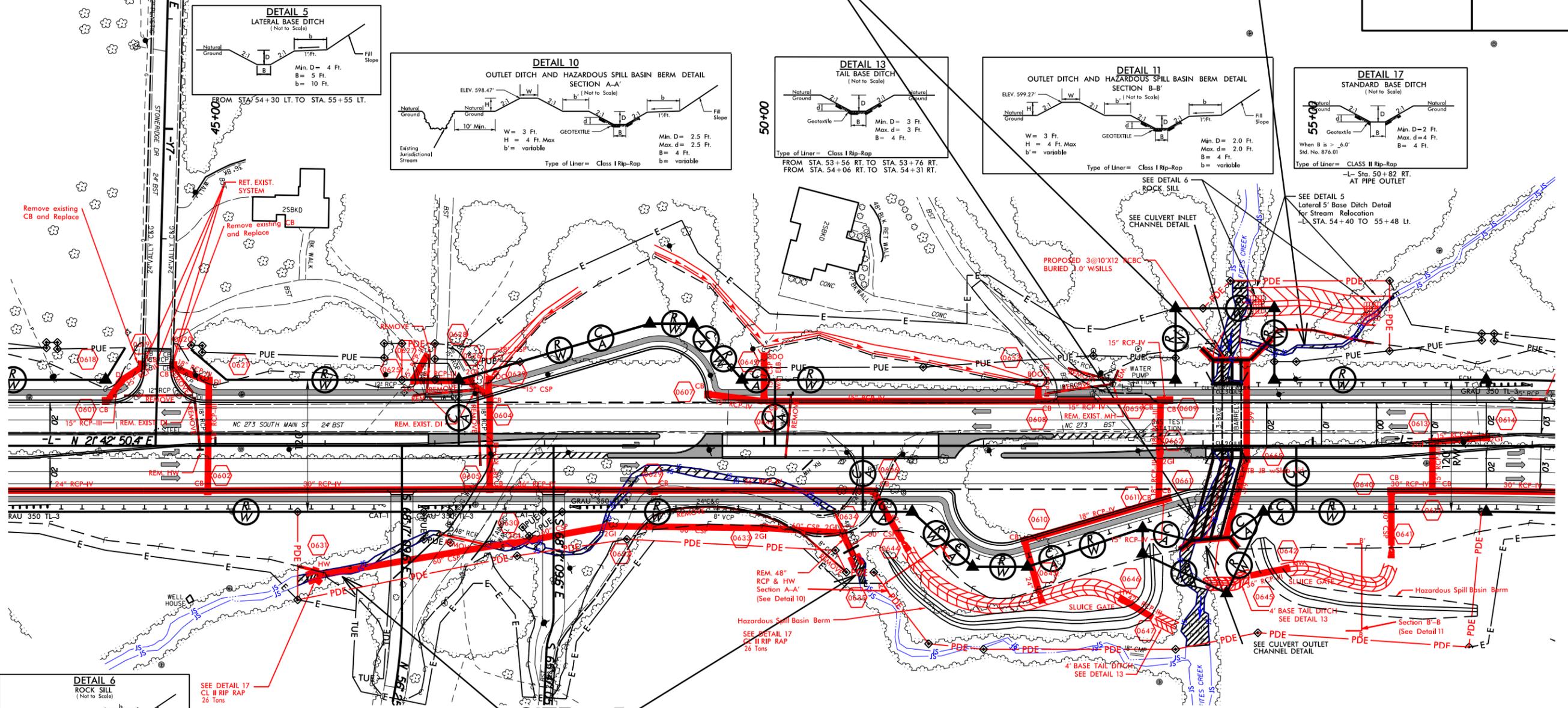
PERMIT DRAWING
SHEET 5 OF 11

5/14/99
SYSTEMS
CONSTRUCTION
DRAWING

PROJECT REFERENCE NO. U-3633	SHEET NO. 6
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

SITE #6

SITE #7



SITE #5
PLAN VIEW

PERMIT DRAWING
SHEET 6 OF 11

DENOTES TEMPORARY IMPACTS IN SURFACE WATER

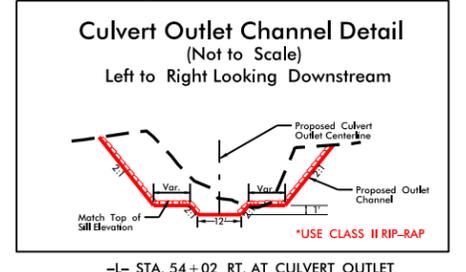
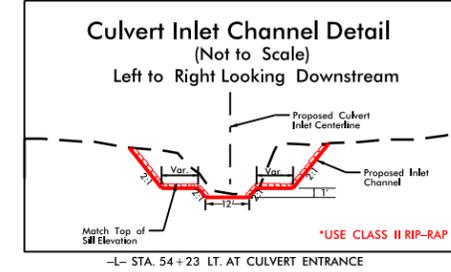
DENOTES IMPACTS IN SURFACE WATER



Scale: 1" = 100'



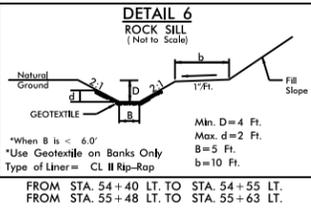
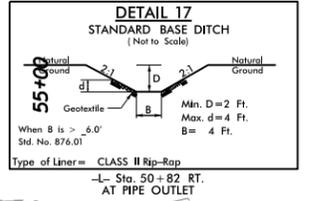
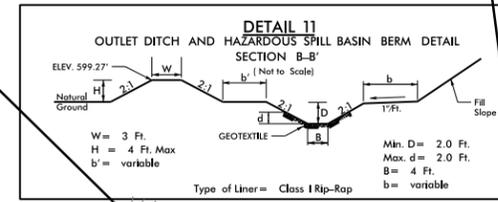
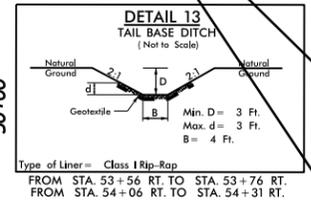
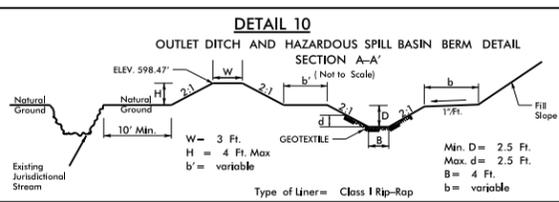
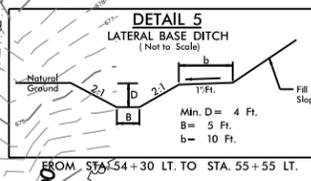
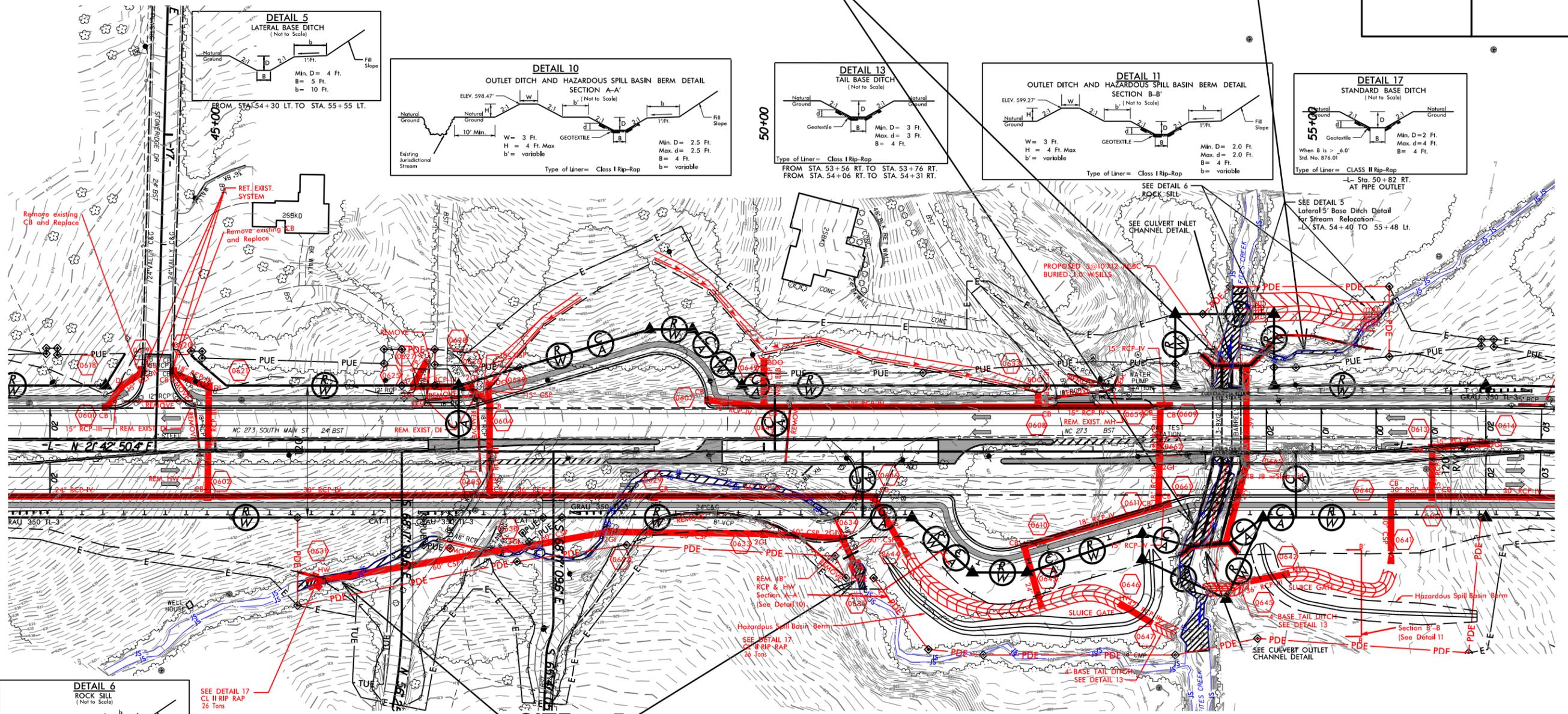
NOTE:
CL II Rip Rap Not Shown
in Plan View for Clarity



PROJECT REFERENCE NO. U-3633	SHEET NO. 6
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

SITE #6

SITE #7



SITE #5
PLAN VIEW

PERMIT DRAWING
SHEET 7 OF 11

DENOTES TEMPORARY IMPACTS IN SURFACE WATER

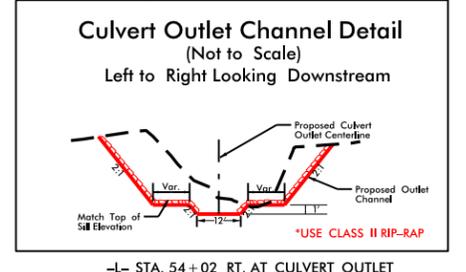
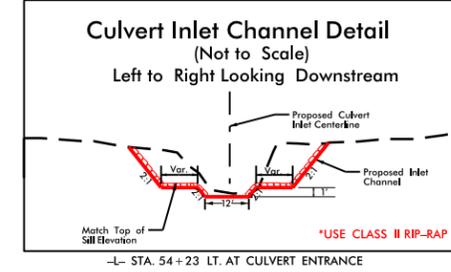
DENOTES IMPACTS IN SURFACE WATER



Scale: 1" = 100'



NOTE:
CL II Rip Rap Not Shown
in Plan View for Clarity



5/14/99

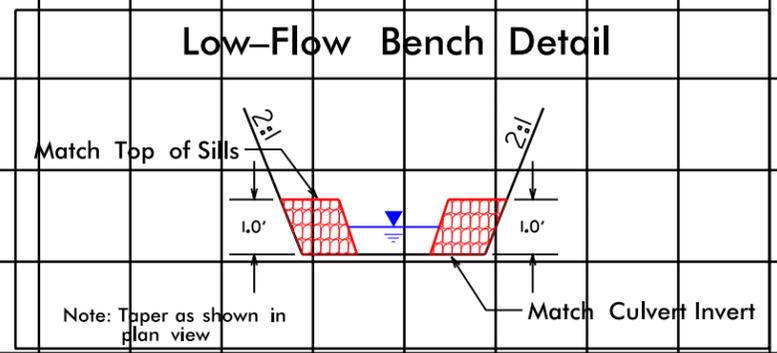
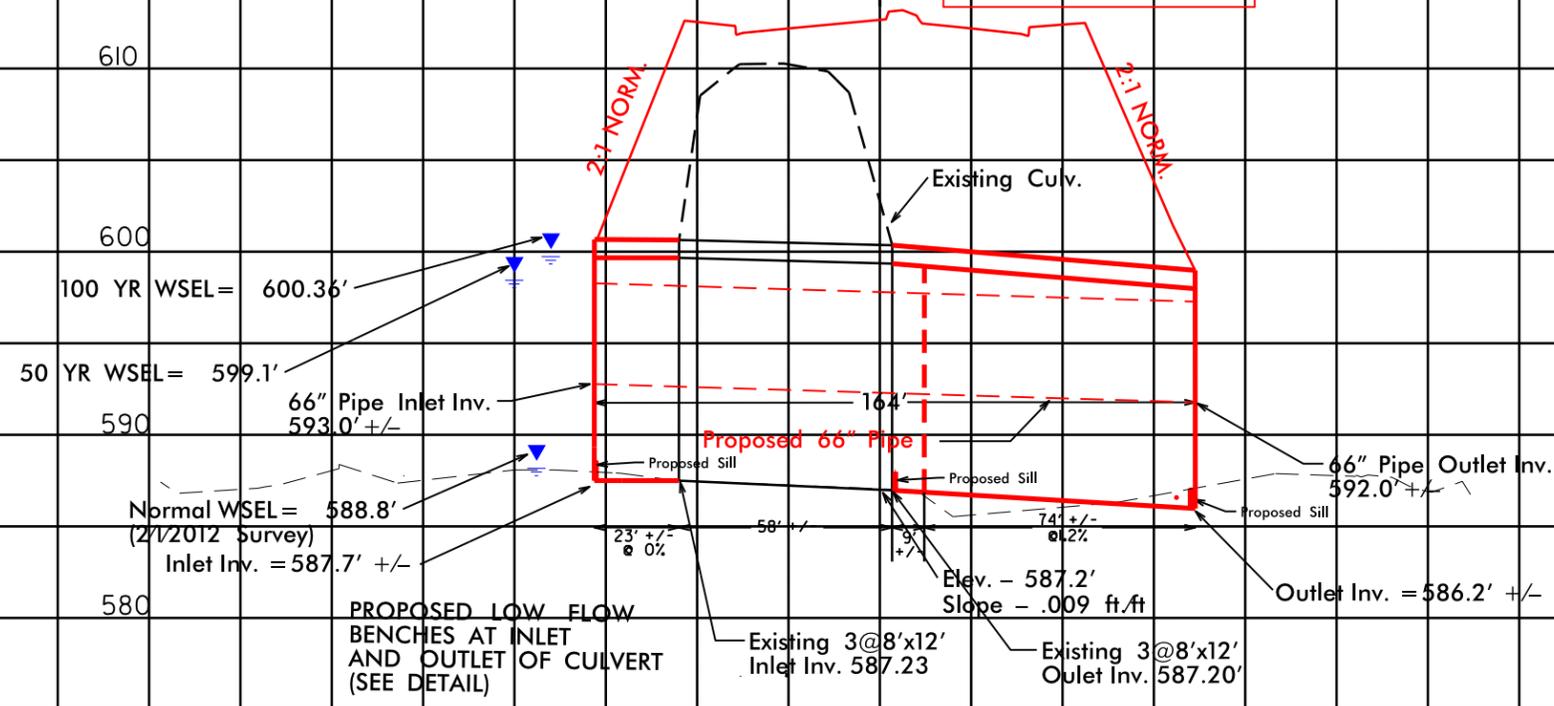
5/14/99

INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION

SITE 6 Profile and Sill Details

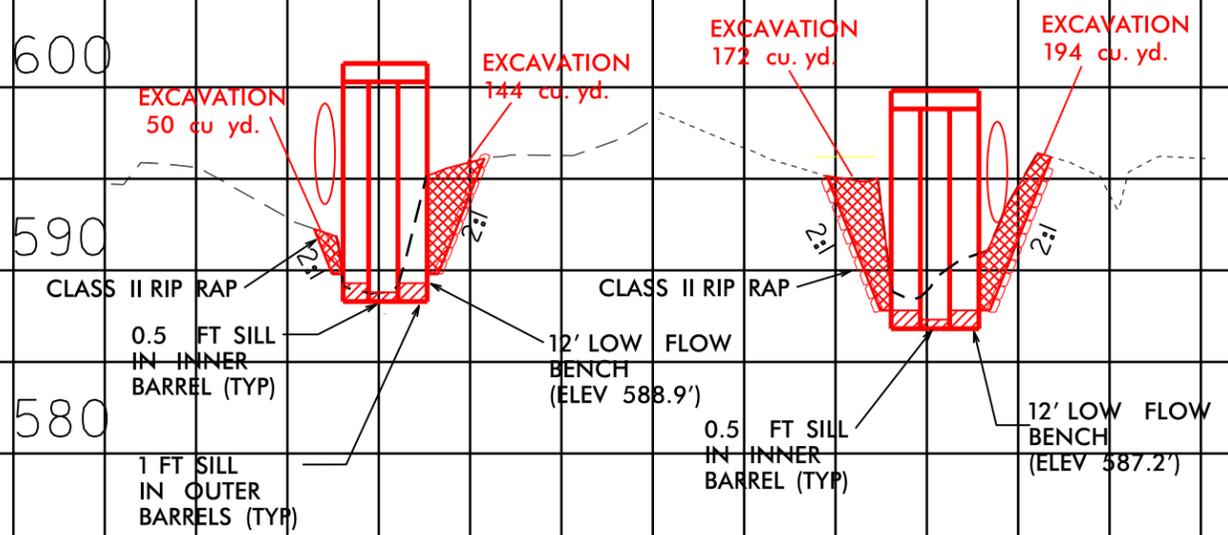
150' LT 100' LT 50' LT C 50' RT 100' RT 150' RT

Station 54+22 -L-
Elevation = 612.72'
3@8'x12' RCBC
Extend 3@8'x12' w/Sills



- Culvert Sill Locations**
1. Place Sills at Culvert Outlet
 2. Place Sills 82' from Culvert Outlet
 3. Place Sills at Culvert Inlet

CULVERT INLET CULVERT OUTLET



PERMIT DRAWING SHEET 8 OF 11

SYSTEMS TIME DESIGN

