



STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION

JOSH STEIN
GOVERNOR

DANIEL H. JOHNSON
SECRETARY

March 30, 2026

MEMORANDUM TO: Division Environmental and Construction Units
FROM: *mat* Michael A. Turchy, ECAP Group Leader
Environmental Analysis Unit
SUBJECT: Environmental Permits for the Replacement of Bridge 29 on US 21
Business over I-77 in Yadkin County, Division 11, **TIP: B-5833.**

Please find enclosed the following permits for this project:

Agency	Permit Type	Permit Expiration
US Army Corps of Engineers Section 404 Clean Water Act Permit	Regional General Permit 50 Originally issued 12/5/22, Renewed 3/30/26	May 25, 2030
NC Division of Water Resources Section 401 Water Quality Certification	Individual Certification No. 8747 Originally issued 11/7/22 under GC 4135, Renewed 3/23/26	May 25, 2030

Work is authorized by the above referenced permit provided it is accomplished in strict accordance with the permitted plans. The Environmental Coordination and Permitting Group or the Division Environmental Office must be consulted if any deviation from the permit(s) is required.

The General Conditions and Certifications for Nationwide and Regional Permits can be referenced at:
https://xfer.services.ncdot.gov/pdea/PermIssued/_General_Conditions_and_Certifications/

The Project Commitments “Greensheet” is located on the Preconstruction SharePoint Dashboard at:
<https://connect.ncdot.gov/site/preconstruction>



DEPARTMENT OF THE ARMY
U.S. ARMY CORPS OF ENGINEERS, WILMINGTON DISTRICT
WRDA / TRANSPORTATION BRANCH
3331 HERITAGE TRADE DR, SUITE 105
WAKE FOREST NC 27587

March 30, 2026

Regulatory Division
 SAW-2022-02123

Sent Via Email: ekcheely@ncdot.gov

Erin Cheely
 NCDOT
 1598 Mail Service Center
 Raleigh, NC 27699

Dear Ms. Cheely:

This letter is in response to the application you submitted to the Wilmington District, WRDA / Transportation Branch on February 13, 2026, for a Department of the Army general permit verification. This project has been assigned the file number SAW-2022-02123 and is known as NCDOT / B-5833 / US HWY 21 Business over I-77 / Bridge 29 / Yadkin County / Div 13. This file number should be referenced in all correspondence concerning this project.

This is a re-verification request for a prior-year RGP, and the impacts have not changed. The applicant proposes to replace the bridge and re-align the exit ramps/approaches, with impacts to waters of the U.S. as follows: .

Impact ID #	NWP / GP #	Open Water (ac)		Wetland (ac)		Stream (lf)	
		Temporary	Permanent	Temporary	Permanent	Temporary	Permanent
Site 1 (Stream SC)	<u>RGP 50</u>					87' / dewater	75' / stabilization 46' / culvert
Site 2 (Stream SC)	<u>RGP 50</u>					21' / dewater	
Site 3 (Stream SA)	<u>RGP 50</u>					19' / dewater	
Site 4 (Stream SA)	<u>RGP 50</u>					99' / dewater	30' / culvert
Site 5 (Wetland WA and Stream SB)	<u>RGP 50</u>				0.02 ac / fill	59' / dewater	10' / fill 13' / stabilization
Site 6 (Stream SC)	<u>RGP 50</u>					15' / dewater	63' / stabilization 127' / culvert
Impact Totals		0	0	0	0.02 ac	300'	364'
Total Loss of waters of the U.S. (wetlands and/or open waters in ac)			0.02 ac	Total Loss of waters of the U.S. (streams in lf)			213'
Required Wetland Mitigation (ac)			0.04 ac	Required Stream Mitigation (lf)			426'

Note: The compensatory mitigation requirement has been satisfied through a mitigation bank payment under the previous verification.

The project area for this determination is illustrated on the enclosed permit drawings. The project is located at Bridge No. 29 on US HWY 21 Business over I-77, at Latitude 36.197310 and Longitude -80.812250, southeast of Jonesville, Yadkin County, North Carolina. Impacted waters are a wetland and unnamed tributaries to Sandyberry Creek.

We have determined that the proposed work is authorized by RGP 50 pursuant to authorities under Section 404 of the Clean Water Act (33 U.S.C § 1344). The proposed work must be accomplished in strict accordance with the enclosed general permit conditions, any regional conditions, the special conditions listed in this letter, the application materials, and the enclosed permit drawings for B-5833, Sheets 1 – 9. If the extent of the project area and/or nature of the authorized impacts to waters are modified, a revised application must be submitted to this office for written approval before work is initiated. Any deviation from the terms and conditions of the permit, or your submitted plans, may subject the permittee to enforcement action.

This verification is valid until May 25, 2030, unless the subject general permit(s) is suspended, revoked, or is modified prior to that date such that the activity no longer complies with the terms and conditions of the general permit.

Project Specific Special Conditions:

1. Western NC Bat PBO: The U.S. Fish and Wildlife Service approved a Programmatic Biological and Conference Opinion [Programmatic Opinion (PO)], and a Programmatic Conference Report titled "Five Imperiled Bat Species in Western North Carolina" on April 1, 2025. This PO contains mandatory terms and conditions to implement the reasonable and prudent measures that are associated with "incidental take" that are specified in the PO. Your authorization under this Corps permit is conditional upon your compliance with all the mandatory terms and conditions associated with incidental take of the PO, which are incorporated by reference in this permit. Failure to comply with the terms and conditions associated with incidental take of the PO, where a take of the listed species occurs, would constitute an unauthorized take, and it would also constitute non-compliance with your Corps permit. The USFWS is the appropriate authority to determine compliance with the terms and conditions of its PO, and with the ESA.

This general permit verification and any associated authorizations does not preclude the necessity to obtain any other Federal, State, or local permits, licenses, and/or certifications, which may be required.

If you have any questions related to this verification or have issues accessing documents referenced in this letter, please contact Eric Alsmeyer, project manager of the WRDA / Transportation Branch at 919-817-1570, by mail at the above address, or by email at eric.c.alsmeyer@usace.army.mil. Please take a moment to complete our customer satisfaction survey located at <https://regulatory.ops.usace.army.mil/customer-service-survey/>.

Sincerely,

A handwritten signature in black ink that reads "M. Scott Jones". The signature is written in a cursive, flowing style.

M. Scott Jones, PWS
WRDA / Transportation Branch Chief

Enclosures

<p>U.S. Army Corps of Engineers (USACE)</p> <p>CERTIFICATION OF COMPLIANCE WITH DEPARTMENT OF THE ARMY PERMIT</p> <p>For use of this form, see Section 404 of the Clean Water Act, Section 10 of the Rivers and Harbors Act of 1899, and Section 103 of the Marine Protection, Research, and Sanctuaries Act; the proponent agency is CECW-COR.</p>	<p><i>Form Approved -</i></p> <p><i>OMB No. 0710-0003</i></p> <p><i>Expires 2027-10-31</i></p>
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The Agency Disclosure Notice (ADN)

The Public reporting burden for this collection of information, 0710-0003, is estimated to average 10 minutes per response, including time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding the burden estimate or burden reduction suggestions to the Department of Defense, Washington Headquarters Services, at whs.mc-alex.esd.mbx.dd-dod-information-collections@mail.mil. Respondents should be aware that notwithstanding any other provision of law, no person shall be subject to any penalty for failing to comply with a collection of information if it does not display a currently valid OMB control number.

PURPOSE: This form is used by recipients of U.S. Army Corps of Engineer Regulatory permits to certify compliance with the permit terms and conditions.

Your permitted activity is subject to a compliance inspection by a U.S. Army Corps of Engineers representative. If you fail to comply with this permit, you are subject to permit suspension, modification, or revocation.

Upon completion of the activity authorized by this permit and any mitigation required by the permit, sign this certification and return it to the U.S. Army Corps of Engineers, Wilmington District, Regulatory Office.

The certification can be submitted by email at Enter Email Name @usace.army.mil or by mail at the below address:

U.S. Army Corps of Engineers
 Wilmington District Office
 Street Address: 3331 Heritage Trade Dr, Suite 105
 City: Wake Forest State: NC Zip Code: 27587

COMPLETED BY THE CORPS

Corps Action Number:	SAW-2022-02123
Permit Type: <u>General Permit</u>	
General Permit Number and Name (if applicable):	<u>RGP 50</u>
Name of Permittee:	<u>NCDOT</u>
Project Name:	<u>NCDOT / B-5833 / US HWY 21 Business over I-77 / Bridge 29 / Yadkin County / Div 13</u>
Project Location (physical address):	<u>US HWY 21 Business over I-77</u> <u>Jonesville, North Carolina</u>

PERMITTEE'S CERTIFICATION

Date Work Started: _____

Date Work Completed: _____

Enclose photographs showing the completed project (if available).

I _____ hereby certify that the work authorized by the above referenced permit has been completed in accordance with all of the permit terms and conditions, and that any required compensatory mitigation has been completed in accordance with the permit conditions.

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

Permittee: North Carolina Department of Transportation
Project Name: B-5833, Bridge No. 29

Action ID: SAW-2022-02123
County: Yadkin

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 Wilmington District 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 verifies that the mitigation requirements (credits) shown below have been released and are available at the identified site. By signing below, the Sponsor is accepting full responsibility for the identified mitigation, regardless of whether 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 ledger to the Permittee, the Project Manager who issued the permit, the Bank Project Manager, and the 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: 03040101, Yadkin River Basin**

Stream Impacts (linear feet)			Wetland Impacts (acres)			
Warm	Cool	Cold	Riparian Riverine	Riparian Non-Riverine	Non-Riparian	Coastal
				0.02		

*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: 03040101, Yadkin River Basin**

Stream Mitigation (credits)			Wetland Mitigation (credits)			
Warm	Cool	Cold	Riparian Riverine	Riparian Non-Riverine	Non-Riparian	Coastal
				0.04		

Mitigation Site Debited: NCDOT, Fisher River Mitigation Site

(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 Wilmington District, 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: NCDOT

Name of Sponsor's Authorized Representative: LeiLani Paugh

DocuSigned by:

Signature of Sponsor's Authorized Representative 12/08/2022
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 District 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 District 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. When NCDMS provides mitigation 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 NCDMS must be provided to the District within 30 days of permit issuance. NCDOT remains fully responsible for the mitigation until the District 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 District 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 District, the Sponsor must obtain case-by-case approval from the District 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 District administrative records for both the permit and the Bank/ILF Instrument.

Comments/Additional Conditions:

This form is not valid unless signed below by the District 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 District Project Manager at the address below, 3) the Bank Manager listed in RIBITS, and 4) the Wilmington District Mitigation Office, 3331 Heritage Trade Drive, Suite 105, Wake Forest, NC 27587 (or by email to SAWMIT@usace.army.mil).***

Questions regarding this form or any of the permit conditions may be directed to the District Mitigation Office.

USACE Project Manager: Lori Beckwith
USACE Field Office: Asheville Regulatory Field Office
US Army Corps of Engineers
151 Patton Avenue, Room 208
Asheville, NC 28801-5006

Email: loretta.a.beckwith@usace.army.mil

Loretta A. Beckwith Digitally signed by Loretta A. Beckwith
Date: 2022.12.05 15:10:03 -05'00'

December 5, 2022

Wilmington District Project Manager Signature

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>.

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

Permittee: North Carolina Department of Transportation
 Project Name: B-5833, Bridge No. 29

Action ID: SAW-2022-02123
 County: Yadkin

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 Wilmington District 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 verifies that the mitigation requirements (credits) shown below have been released and are available at the identified site. By signing below, the Sponsor is accepting full responsibility for the identified mitigation, regardless of whether 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 ledger to the Permittee, the Project Manager who issued the permit, the Bank Project Manager, and the 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: 03040101, Yadkin River Basin

Stream Impacts (linear feet)			Wetland Impacts (acres)			
Warm	Cool	Cold	Riparian Riverine	Riparian Non-Riverine	Non-Riparian	Coastal
	213					

*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: 03040101, Yadkin River Basin

Stream Mitigation (credits)			Wetland Mitigation (credits)			
Warm	Cool	Cold	Riparian Riverine	Riparian Non-Riverine	Non-Riparian	Coastal
	426					

Mitigation Site Debited: Compass Point Mitigation Site, part of the RES Yadkin 01 Umbrella Mitigation Bank

(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 Wilmington District, 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: Environmental Banc & Exchange

Name of Sponsor's Authorized Representative: Amy Staley

Amy Staley
 Signature of Sponsor's Authorized Representative

12/16/22
 Date of Signature



NORTH CAROLINA
Environmental Quality

March 23, 2026

JOSH STEIN
Governor

D. REID WILSON
Secretary

RICHARD E. ROGERS, JR.
Director

DWR #20221363.V2
Yadkin County

Attn: Michael Turchy
NCDOT, Group Leader
Environmental Coordination and Permitting
1598 MSC
Raleigh, NC 27699-1598

Subject: Approval of Individual 401 Water Quality Re-Certification
Replacement of Bridge 29 on US 29 on US Highway 21 Business over
US Interstate 77, Jonesville, Yadkin County, NC. TIP No. B-5833.

Location: 36.19895, -80.82976

Dear Mr. Turchy:

Attached hereto is a copy of Certification No. WQC 8747 issued to NCDOT dated March 23, 2026. This approval is for the purpose and design described in your application. A 401 Water Quality Certification was previously issued for this project on November 7, 2022

This Water Quality Certification does not relieve the Permittee of the responsibility to obtain all other required Federal, State, or Local approvals before proceeding with the project, including those required by, but not limited to, Sediment and Erosion Control, Non-Discharge, Water Supply Watershed, and Trout Buffer regulations.

Upon the presentation of proper credentials, the Division of Water Resources (Division or DWR) may inspect the property.

This Water Quality Certification shall expire on the same day as the expiration date of the corresponding Section 404 Permit that is current at the time this Certification is issued. The conditions shall remain in effect for the life of the project, regardless of the expiration date of this Water Quality Certification.

Non-compliance with or violation of the conditions herein set forth may result in revocation of this Water Quality Certification for the project and may also result in criminal and/or civil penalties.

This approval and its conditions are final and binding unless contested [G.S. 143-215.5]

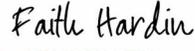
Notice regarding the right to contest this 401 Water Quality Certification decision is provided below.



North Carolina Department of Environmental Quality | Division of Water Resources
512 North Salisbury Street | 1617 Mail Service Center | Raleigh, North Carolina 27699-1617
919.707.9000

This letter completes the DWR's review under Section 401 of the Clean Water Act and 15A NCAC 02H .0500. Please contact Ryan Conchilla at 919-707-9111 or ryan.conchilla@deq.nc.gov if you have any questions or concerns.

Sincerely,

Signed by:

3185423002EA45E...
Faith Hardin, Supervisor
401 & Buffer Permitting Branch / RO

Electronic cc: Lori Beckwith, USACE Asheville Regulatory Field Office
Ben Henegar, TGS Engineers, bhenegar@tgsengineers.com
Dave McHenry, NCWRC
Beth Harmon, DMS
DWR 401 & Buffer Permitting Branch Electronic file



NOTICE REGARDING THE RIGHT TO CONTEST A DWR 401 WATER QUALITY CERTIFICATION DECISION

Right of Persons Aggrieved to File a Contested Case for the issuance of a 401 water quality certification: Pursuant to 15A NCAC 02H .0507(f), the Division's decision on a 401 water quality certification application is subject to review under NCGS 150B-23.

Rights of Persons Aggrieved to File a Contested Case: Pursuant to NCGS 150B, Article 3, a party or person aggrieved may commence a contested case by filing a petition under NCGS 150B-23 in the Office of Administrative Hearings within 60 days after the Division provides notice of its decision on a permit application, as provided in NCGS 150B-23(f). If no contested case is commenced within the required time, the Division's decision is final and is not subject to review.

General Filing Instructions: A petition for contested case hearing must be in the form of a written petition, conforming to NCGS 150B-23, and filed with the Office of Administrative Hearings, 1711 New Hope Church Road, Raleigh NC, 27609, along with a fee in an amount provided in NCGS 150B-23.2. A petition for contested case hearing form may be obtained upon request from the Office of Administrative Hearings or on its website at <https://www.oah.nc.gov/hearings-division/filing/hearing-forms>. Additional specific instructions for filing a petition are set forth at 26 NCAC Chapter 03.

Service Instructions: A party filing a contested case is required to serve a copy of the petition, by any means authorized under 26 NCAC 03 .0102, on the process agent for the Department of Environmental Quality:

Daniel Hirschman, General Counsel
North Carolina Department of Environmental Quality
1601 Mail Service Center
Raleigh, North Carolina 27699-1601

If the party filing the petition is a person aggrieved other than the permittee or permit applicant, the party **must also** serve the permittee in accordance with NCGS 150B-23(a).

Be aware that other rules or laws may apply to the filing of a petition for a contested case. Additional information is available at <https://www.oah.nc.gov/hearings-division/hearing-process/filing-contested-case>. Please contact the Office of Administrative Hearings at (984) 236-1850 with all questions regarding the filing fee and/or the details of the filing process.



NORTH CAROLINA 401 WATER QUALITY CERTIFICATION

CERTIFICATION #WQC008747 is issued in conformity with the requirements of Section 401, Public Laws 92-500 and 95-217 of the United States and subject to North Carolina’s Regulations in 15 NCAC 02H .0500 and 15A NCAC 02B .0200, to NCDOT, who have authorization for the impacts listed below, as described within your application received by the N.C. Division of Water Resources (DWR) on February 16, 2026 and by Public Notice issued by DWR on February 17, 2026 and within the *Reasonable Period of Time* pursuant to 40 CFR Part 121.6.

The State of North Carolina certifies that this activity will comply with water quality requirements and the applicable portions of Sections 301, 302, 303, 306, 307 of the Public Laws 92-500 and PL 95-217 if conducted in accordance with the application, the supporting documentation, and conditions hereinafter set forth. The following impacts are hereby approved. No other impacts are approved, including incidental impacts. [15A NCAC 02H .0506(b)]

Stream Impacts in the Yadkin Pee-Dee River Basin

Site	Permanent Fill in Perennial Stream (linear ft)		Temporary Fill in Perennial Stream (linear ft)		Permanent Fill in Intermittent Stream (linear ft)		Temporary Fill in Intermittent Stream (linear ft)	Total Stream Impact (linear ft)
	Bank Stabilization	Culvert	Dewater	Fill	Bank Stabilization	Culvert	Dewater	
1	75	46	87	-	-	-	-	208
2	-	-	21	-	-	-	-	21
3	-	-	-	19	-	-	-	19
4	-	30	99	-	-	-	-	129
5	-	-	-	-	13	10	59	82
6	63	127	15	-	-	-	-	205
Totals	138	203	222	19	13	10	59	664

Total Stream Impacts: 664 linear feet

Wetland Impacts in the Yadkin Pee-Dee River Basin (Riverine)

Site	Permanent Fill (ac)	Total Impact (ac)
5	0.02	0.02
Totals	0.02	0.02

Total Wetland Impacts: 0.02 acres



This approval requires you to follow the conditions listed in the Certification below.

CONDITIONS OF CERTIFICATION [15A NCAC 02H .0507(c)]:

- Mitigation for this Project was previously secured at the Mitigation Sites listed below:

The Fisher River Mitigation Site, Surry County- ONEID 086-001

Table 1. Mitigation Quantities Approved

HUC	Mitigation Type	Starting Amount	Additional Notes
3040101	Riparian Wetland Creation	9.05	8.1 credits transferred to EEP
3040101	Riparian Wetland Enhancement	0.91	credits transferred to EEP
3040101	Riparian Wetland Restoration	25.87	25.5 credits transferred to EEP
3040101	Stream Restoration	4,752	credits transferred to EEP

Table 2. Mitigation Debits- Riparian Wetland Creation

Mitigation Type	Debit Amount	Status	Site TIP	Action ID#	Notes
Riparian Wetland Creation	8.1	Close-Out	EEP	-	credits Transferred to EEP

Table 3. Mitigation Debits- Riparian Wetland Restoration

Mitigation Type	Debit Amount	Status	Site TIP	Action ID#	Notes
Riparian Wetland Restoration	25.5	Close-Out	EEP	-	credits Transferred to EEP
Riparian Wetland Restoration	0.04	Close-Out	B-5833	-	0.02 impacts at 2:1



The Idols Road Extension Mitigation Site, Forsyth County- ONEID 034-003

Table 1. Mitigation Quantities Approved

HUC	Compensatory Mitigation Required	Starting Amount	River and Sub-basin Number	Additional Notes
3040101	Stream Restoration	1,800	03040101	Restoration (1:1) off 1,800 lf of streams S-JH-A (Reach 1)
3040101	Stream Enhancement	153	03040101	Enhancement (2:1) off 153 lf for streams S-JH-B (Reach 2) generating 76.5 stream mitigation credits

Table 2. Mitigation Debits- Stream Restoration

Mitigation Type	Debit Amount	Status	Site TIP	Action ID#	Notes
Stream Restoration	892	Monitoring	U-2707	19998-20439	-
Stream Restoration	728	Monitoring	B-5833	-	368 lf of impacts at 2:1 Ratio

Citation: 15A NCAC 02H .0506(c); 15A NCAC 02H .0507(c)

- The plans and specifications for this project are incorporated by reference as part of this Water Quality Certification. If you change your project, you must notify the Division, and you may be required to submit a new application package with the appropriate fee.

If the property is sold, the Permittee shall provide the new owner must with a copy of this Water Quality Certification and all plans and specifications incorporated by reference. The Permittee may transfer this Water Quality Certification to the new owner by submitting a letter to the Division with the following statement: *“At the time the property is transferred, the terms and conditions of this 401 Individual Water Quality Certification, including the responsibility to ensure compliance, are binding on the new owner(s) of the property.”* The letter shall be signed and dated by both the transferee and the new owner. *Citation: 15A NCAC 02H .0507(d)(2).*

- Additional stormwater information was requested by DWR and on November 1, 2022 a revised drainage design was provided via email by TGS Engineers with the following details:
 - The drainage system along ramp D was split into two systems and outleted them into rip-rap V ditches in the gore. The existing 1- sided OTCB in the middle of the gore will be replaced with a new 4- sided OTCB and will be surrounded with rip-rap. On loop A, the 0529 was directed into the gore instead of tying it directly to the existing system that crosses I-77. The ditch was not warranted and showed the standard pad at the outlet.

Citation: 15A NCAC 02H .0506(b)(2) and (3); 15A NCAC 02H .0507(c)



4. If the Permittee becomes aware of any inability to comply with any of the conditions of this Water Quality Certification, they must notify the Raleigh Regional Office within 24 hours (or the next business day if it is a weekend or holiday) from the time the Permittee becomes aware of the circumstances. The Permittee may be required to submit a new application package with appropriate fee to initiate modification of this authorization, and/or to conduct corrective actions as determined by the Division.

Citation: 15A NCAC 02H .0506(b); 15A NCAC 02H .0507(c)

5. The Permittee shall report to the Division Raleigh Regional Office any noncompliance with, and/or any violation of, stream or wetland standards [15A NCAC 02B .0200], including but not limited to sediment impacts to streams or wetlands. Information shall be provided orally within 24 hours (or the next business day if it is a weekend or holiday) from the time the Permittee became aware of the non-compliance circumstances.

Citation: 15A NCAC 02H .0506(b); 15A NCAC 02H .0507(c)

6. No waste, spoil, solids, or fill of any kind shall occur in wetlands or waters beyond the footprint of the approved impacts (including temporary impacts).

Citation: 15A NCAC 02H .0506; 15A NCAC 02H .0507(c)

7. All activities shall be in compliance with any applicable State Regulated Riparian Buffer Rules in Chapter 2B of Title 15A in the North Carolina Administrative Code.

Citation: 15A NCAC 02H .0506(b); 15A NCAC 02H .0507(c)

8. When applicable, all construction activities shall be performed and maintained in full compliance with G.S. Chapter 113A Article 4 (Sediment and Pollution Control Act of 1973). Regardless of applicability of the Sediment and Pollution Control Act, all projects shall incorporate appropriate Best Management Practices for the control of sediment and erosion so that no violations of state water quality standards, statutes, or rules occur.

Design, installation, operation, and maintenance of all sediment and erosion control measures shall be equal to or exceed the requirements specified in the most recent version of the *North Carolina Sediment and Erosion Control Manual*, or for linear transportation projects, the *North Carolina Department of Transportation Sediment and Erosion Control Manual*.

All devices shall be maintained on all construction sites, borrow sites, and waste pile (spoil) sites, including contractor-owned or leased borrow pits associated with the project. Sufficient materials required for stabilization and/or repair of erosion control measures and stormwater routing and treatment shall be on site at all times.

For borrow pit sites, the erosion and sediment control measures shall be designed, installed, operated, and maintained in accordance with the most recent version of the *North Carolina Surface Mining Manual*. Reclamation measures and implementation shall comply with the



reclamation in accordance with the requirements of the Sedimentation Pollution Control Act and the Mining Act of 1971.

Citation: 15A NCAC 02H .0506(b); 15A NCAC 02H .0507(c); 15A NCAC02B .0200; 15A NCAC 02B .0231

9. Sediment and erosion control measures shall not be installed in wetland or waters except within the footprint of temporary or permanent impacts otherwise authorized by this Certification. If placed within authorized impact areas, then placement of such measures shall not be conducted in a manner that results in dis-equilibrium of any wetlands, streambeds, or streambanks. Any silt fence installed within wetlands shall be removed from wetlands and the natural grade restored within two (2) months of the date that DEMLR or the locally delegated program has released the specific area within the project to ensure wetland standards are maintained upon completion of the project.

Citation: 15A NCAC 02H .0506(b); 15A NCAC 02H .0507(c); 15A NCAC 02B .0200; 15A NCAC 02B .0231

10. Erosion control matting that incorporates plastic mesh and/or plastic twine shall not be used along streambanks or within wetlands.

Citation: 15A NCAC 02H .0506(b); 15A NCAC 02H .0507(c)

11. If the project is covered by NPDES Construction Stormwater Permit Number NCG010000 or NPDES Construction Stormwater Permit Number NCG250000, full compliance with permit conditions including the erosion & sedimentation control plan, inspections and maintenance, self-monitoring, record keeping, and reporting requirements is required.

Citation: 15A NCAC 02H .0506(b); 15A NCAC 02H .0507(c); 15A NCAC 02B .0200; 15A NCAC 02B .0231

12. All work in or adjacent to streams shall be conducted so that the flowing stream does not come in contact with the disturbed area. Approved best management practices from the most current version of the NC Sediment and Erosion Control Manual, or the NC Department of Transportation Construction and Maintenance Activities Manual, such as sandbags, rock berms, cofferdams, and other diversion structures shall be used to minimize excavation in flowing water.

Citation: 15A NCAC 02H .0506(b); 15A NCAC 02H .0507(c); 15A NCAC 02B .0200

13. Culverts shall be designed and installed in such a manner that the original stream profiles are not altered and allow for aquatic life movement during low flows. The dimension, pattern, and profile of the stream above and below a pipe or culvert shall 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 culvert shall be such as to pass the average historical low flow and spring flow without adversely altering flow velocity. If the width of the culvert is wider than the stream channel, the culvert shall include multiple boxes/pipes, baffles, benches and/or sills to maintain the natural width of the stream channel. If multiple culverts/pipes/barrels



are used, low flows shall be accommodated in one culvert/pipe and additional culverts/pipes shall be installed such that they receive only flows above bankfull.

Placement of culverts and other structures in streams shall be below the elevation of the streambed by one foot for all culverts with a diameter greater than 48 inches, and 20% of the culvert diameter for culverts having a diameter less than or equal to 48 inches, to allow low flow passage of water and aquatic life. If the culvert outlet is submerged within a pool or scour hole and designed to provide for aquatic passage, then culvert burial into the streambed is not required.

For structures less than 72" in diameter/width, and topographic constraints indicate culvert slopes of greater than 2.5% culvert burial is not required, provided that all alternative options for flattening the slope have been investigated and aquatic life movement/connectivity has been provided when possible (e.g., rock ladders, cross-vanes, sills, baffles etc.). Notification, including supporting documentation to include a location map of the culvert, culvert profile drawings, and slope calculations, shall be provided to the Division thirty (30) calendar days prior to the installation of the culvert.

When bedrock is present in culvert locations, culvert burial is not required, provided that there is sufficient documentation of the presence of bedrock. Notification, including supporting documentation such as a location map of the culvert, geotechnical reports, photographs, etc. shall be provided to the Division a minimum of thirty (30) calendar days prior to the installation of the culvert. If bedrock is discovered during construction, then the Division shall be notified by phone or email within 24 hours of discovery.

Installation of culverts in wetlands shall ensure continuity of water movement and be designed to adequately accommodate high water or flood conditions. When roadways, causeways, or other fill projects are constructed across FEMA-designated floodways or wetlands, openings such as culverts or bridges shall be provided to maintain the natural hydrology of the system as well as prevent constriction of the floodway that may result in destabilization of streams or wetlands.

The establishment of native woody vegetation and other soft stream bank stabilization techniques shall be used where practicable instead of rip-rap or other bank hardening methods.

Citation: 15A NCAC 02H .0506(b); 15A NCAC 02H .0507(c)

14. Application of fertilizer to establish planted/seeded vegetation within disturbed riparian areas and/or wetlands shall be conducted at agronomic rates and shall comply with all other Federal, State, and Local regulations. Fertilizer application shall be accomplished in a manner that minimizes the risk of contact between the fertilizer and surface waters.

Citation: 15A 02H .0506(b); 15A NCAC 02H .0507(c); 15A NCAC 02B .0200; 15A NCAC 02B .0231

15. If concrete is used during construction, then all necessary measures shall be taken to prevent direct contact between uncured or curing concrete and waters of the state. Water that inadvertently contacts uncured concrete shall not be discharged to waters of the state.



Citation: 15A NCAC 02H .0506(b); 15A NCAC 02H .0507(c); 15A NCAC 02B .0200; 15A NCAC 02B .0231

16. All proposed and approved temporary fill and culverts shall be removed, and the impacted area shall be returned to natural conditions within sixty (60) calendar days after the temporary impact is no longer necessary. The impacted areas shall be restored to original grade, including each stream's original cross-sectional dimensions, planform pattern, and longitudinal bed profile. All temporarily impacted sites shall be restored and stabilized with native vegetation.

Citation: 15A NCAC 02H.0506(b); 15A NCAC 02H .0507(c)

17. All proposed and approved temporary pipes/culverts/rip-rap pads etc. in streams or wetlands shall be installed as outlined in the most recent edition of the *North Carolina Sediment and Erosion Control Planning and Design Manual* or the *North Carolina Surface Mining Manual* or the *North Carolina Department of Transportation Best Management Practices for Construction and Maintenance Activities* so as not to restrict stream flow or cause dis-equilibrium during use of this Certification.

Citation: 15A NCAC 02H .0506(b); 15A NCAC 02H .0507(c)

18. Any rip-rap required for proper culvert placement, stream stabilization, or restoration of temporarily disturbed areas shall be restricted to the area directly impacted by the approved construction activity. All rip-rap shall be placed such that the original streambed elevation and streambank contours are restored and maintained and shall consist of clean rock or masonry material free of debris or toxic pollutants. Placement of rip-rap or other approved materials shall not result in de-stabilization of the stream bed or banks upstream or downstream of the area or be installed in a manner that precludes aquatic life passage.

Citation: 15A NCAC 02H .0506(b); 15A NCAC 02H .0507(c)

19. Any rip-rap used for stream or shoreline stabilization shall be of a size and density to prevent movement by wave, current action, or stream flows, and shall consist of clean rock or masonry material free of debris or toxic pollutants. Rip-rap shall not be installed in the streambed except in specific areas required for velocity control and to ensure structural integrity of bank stabilization measures.

Citation: 15A NCAC 02H .0506(b); 15A NCAC 02H .0507(c); 15A NCAC 02B .0201

20. All mechanized equipment operated near surface waters shall be inspected and maintained regularly to prevent contamination of surface waters from fuels, lubricants, hydraulic fluids, or other toxic materials. Construction shall be staged in order to minimize the exposure of equipment to surface waters to the maximum extent practicable. Fueling, lubrication, and general equipment maintenance shall be performed in a manner to prevent, to the maximum extent practicable, contamination of surface waters by fuels and oils.

Citation: 15A NCAC 02H .0506(b); 15A NCAC 02H .0507(c); 15A NCAC 02B .0200; 15A NCAC 02B .0231



21. Heavy equipment working in wetlands shall be placed on mats or other measures shall be taken to minimize soil disturbance and compaction.

Citation: 15A NCAC 02H .0506(b); 15A NCAC 02H .0507(c); 15A NCAC 02B .0231

22. In accordance with 143-215.85(b), the Permittee shall report any petroleum spill of 25 gallons or more; any spill regardless of amount that causes a sheen on surface waters; any petroleum spill regardless of amount occurring within 100 feet of surface waters; and any petroleum spill less than 25 gallons that cannot be cleaned up within 24 hours.

Citation: 15A NCAC 02H .0507(c); N.C.G.S 143-215.85(b)

23. The Permittee and their authorized agents shall conduct all 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.

Citation: 15A NCAC 02H .0506(b); 15A NCAC 02H .0507(c)

24. The Permittee shall require its contractors and/or agents to comply with the terms and conditions of this Certification 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 Water Quality Certification. A copy of this Water Quality Certification shall be available at the project site during the construction and maintenance of this project.

Citation: 15A NCAC 02H .0506(b); 15A NCAC 02H .0507(c)

25. This Water Quality Certification neither grants nor affirms any property right, license, or privilege in any lands or waters, or any right of use in any waters. This Water Quality Certification does not authorize any person to interfere with the riparian rights, littoral rights, or water use rights of any other person and does not create any prescriptive right or any right of priority regarding any usage of water. This Water Quality Certification shall not be interposed as a defense in any action respecting the determination of riparian or littoral rights or other rights to water use. No consumptive user is deemed by virtue of this Water Quality Certification to possess any prescriptive or other right of priority with respect to any other consumptive user.

Citation: 15A NCAC 02H .0506(b); 15A NCAC 02H .0507(c)



This Water Quality Certification shall expire on the same day as the expiration date of the corresponding Section 404 Permit that is current at the time this Certification is issued. The conditions shall remain in effect for the life of the project, regardless of the expiration date of this Water Quality Certification.

Upon completion of the proposed project, the applicant shall submit a Certificate of Completion and/or shall provide as-built documentation. Certificates of Completion and/or as-built documentation can be submitted via the DWR website: <https://edocs.deq.nc.gov/Forms/Certificate-of-Completion>.

This, the 23rd day of March, 2026

Signed by:



3185423002EA45E...

Faith Hardin, Supervisor

401 & Buffer Permitting Branch / RO





(Version 3.00; Released August 2021)

FOR NCDOT PROJECTS

WBS Element: 45786.1.1 TIP/Proj No: B-5833 County(ies): Yadkin Page 1 of 3

General Project Information

WBS Element:	45786.1.1	TIP Number:	B-5833	Project Type:	Bridge Replacement	Date:	9/28/2021
NCDOT Contact:	David Stutts, PE			Contractor / Designer:	TGS Engineers (Ben Henegar, PE)		
	Address:	NCDOT - Structures Management Unit 1000 Birch Ridge Drive Raleigh, NC 27610			Address:	706 Hillsborough Street Suite 200 Raleigh, NC 27603	
	Phone:	(919) 707-6442			Phone:	(919) 773-8887 ext. 123	
	Email:	dstutts@ncdot.gov			Email:	bhenegar@tgsengineers.com	
City/Town:	Jonesville, NC			County(ies):	Yadkin		
River Basin(s):	Yadkin-Pee Dee			CAMA County?	No		
Wetlands within Project Limits?	Yes						

Project Description

Project Length (lin. miles or feet):	0.58 miles	Surrounding Land Use:	Rural Residential, Agricultural, & Highway Business					
Project Built-Up Area (ac.)	Proposed Project			Existing Site				
	2.3	ac.		1.5	ac.			
Typical Cross Section Description:	Two 12' wide paved travel lanes, two 5' paved shoulders, 3' grassed shoulders, and grassed side slopes ranging from 6(H):1(V) to 2(H):1(V).			Two 11' wide paved travel lanes with 2' to 4' grassed shoulders and grassed side slopes ranging from 6(H):1(V) to 2(H):1(V).				
Annual Avg Daily Traffic (veh/hr/day):	Design/Future:	4550	Year:	2041	Existing:	4100	Year:	2021

General Project Narrative:
(Description of Minimization of Water Quality Impacts)

B-5833 involves the replacement of bridge No. 980029 on US 21 Bus over I-77 in Yadkin County, NC. The proposed 252' long by 43' wide two-span bridge would replace the existing 400' long by 33' wide six-span bridge. The project will also involve replacing an existing 1 @ 4' x 6' RCBC with a proposed 1@7'x7' RCBC (buried 1') US 21 Bus. An energy dissipator basin is proposed at Str.# 0521 (54" RCP, -RAMPD- 12+92 RT) at the outlet into a jurisdictional stream. This energy dissipator basin is proposed because of the scour hole that was observed at the outlet of the existing 54" RCP (the proposed dimensions of the basin are similar to what was naturally formed).

Project minimum measures include:

- >Maximizing Shoulder Section.
- >Minimizing Roadway Side Slopes.
- >Providing Adequate Ground Cover.
- >Stabilizing Embankments and Drainage Ditches.
- >Providing Adequate Energy Dissipation.
- >Utilizing Natural Features and Drainage Pathways - Existing drainage pathways were utilized to the maximum extent practicable.



North Carolina Department of Transportation

Highway Stormwater Program
STORMWATER MANAGEMENT PLAN
FOR NCDOT PROJECTS



(Version 3.00; Released August 2021)

WBS Element: 45786.1.1 TIP/Proj No.: B-5833 County(ies): Yadkin Page 2 of 3

General Project Information

Waterbody Information

Surface Water Body (1):	UT to Sandyberry Creek		NCDWR Stream Index No.:	12-55	
NCDWR Surface Water Classification for Water Body	Primary Classification:		Class C		
	Supplemental Classification:				
Other Stream Classification:	None				
Impairments:	None				
Aquatic T&E Species?	No	Comments:			
NRTR Stream ID:	SA		Buffer Rules in Effect:	N/A	
Project Includes Bridge Spanning Water Body?	No	Deck Drains Discharge Over Buffer?	N/A		Dissipator Pads Provided in Buffer?
Deck Drains Discharge Over Water Body?	N/A	(If yes, provide justification in the General Project Narrative)		(If yes, describe in the General Project Narrative; if no, justify in the General Project Narrative)	
(If yes, provide justification in the General Project Narrative)					

Surface Water Body (2):	UT to Sandyberry Creek		NCDWR Stream Index No.:	12-55	
NCDWR Surface Water Classification for Water Body	Primary Classification:		Class C		
	Supplemental Classification:		None		
Other Stream Classification:	None				
Impairments:	None				
Aquatic T&E Species?	No	Comments:			
NRTR Stream ID:	SB		Buffer Rules in Effect:	N/A	
Project Includes Bridge Spanning Water Body?	No	Deck Drains Discharge Over Buffer?	N/A		Dissipator Pads Provided in Buffer?
Deck Drains Discharge Over Water Body?	N/A	(If yes, provide justification in the General Project Narrative)		(If yes, describe in the General Project Narrative; if no, justify in the General Project Narrative)	
(If yes, provide justification in the General Project Narrative)					

Surface Water Body (3):	UT to Sandyberry Creek		NCDWR Stream Index No.:	12-55	
NCDWR Surface Water Classification for Water Body	Primary Classification:		Class C		
	Supplemental Classification:		None		
Other Stream Classification:	None				
Impairments:	None				
Aquatic T&E Species?	No	Comments:			
NRTR Stream ID:	SC		Buffer Rules in Effect:	N/A	
Project Includes Bridge Spanning Water Body?	No	Deck Drains Discharge Over Buffer?	N/A		Dissipator Pads Provided in Buffer?
Deck Drains Discharge Over Water Body?	N/A	(If yes, provide justification in the General Project Narrative)		(If yes, describe in the General Project Narrative; if no, justify in the General Project Narrative)	
(If yes, provide justification in the General Project Narrative)					

09/28/2021

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User: bhenegar

TIP PROJECT: B-5833

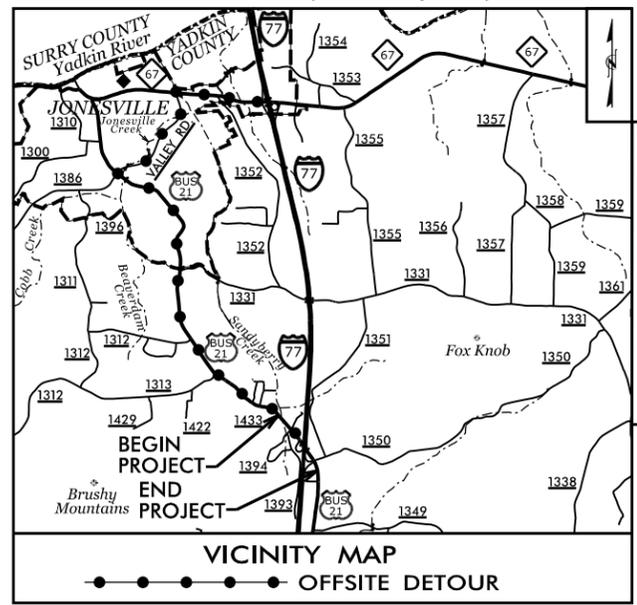
See Sheet 1A For Index of Sheets
See Sheet 1B For Conventional Plan Sheet Symbols
See Sheet RW01 thru RW04 For Survey Control & Right-of-Way Sheets

STATE OF NORTH CAROLINA DIVISION OF HIGHWAYS

YADKIN COUNTY

LOCATION: REPLACE BRIDGE NO. 29 OVER I-77 ON US 21 BUS
TYPE OF WORK: GRADING, DRAINAGE, PAVING, RETAINING WALLS,
AND STRUCTURE

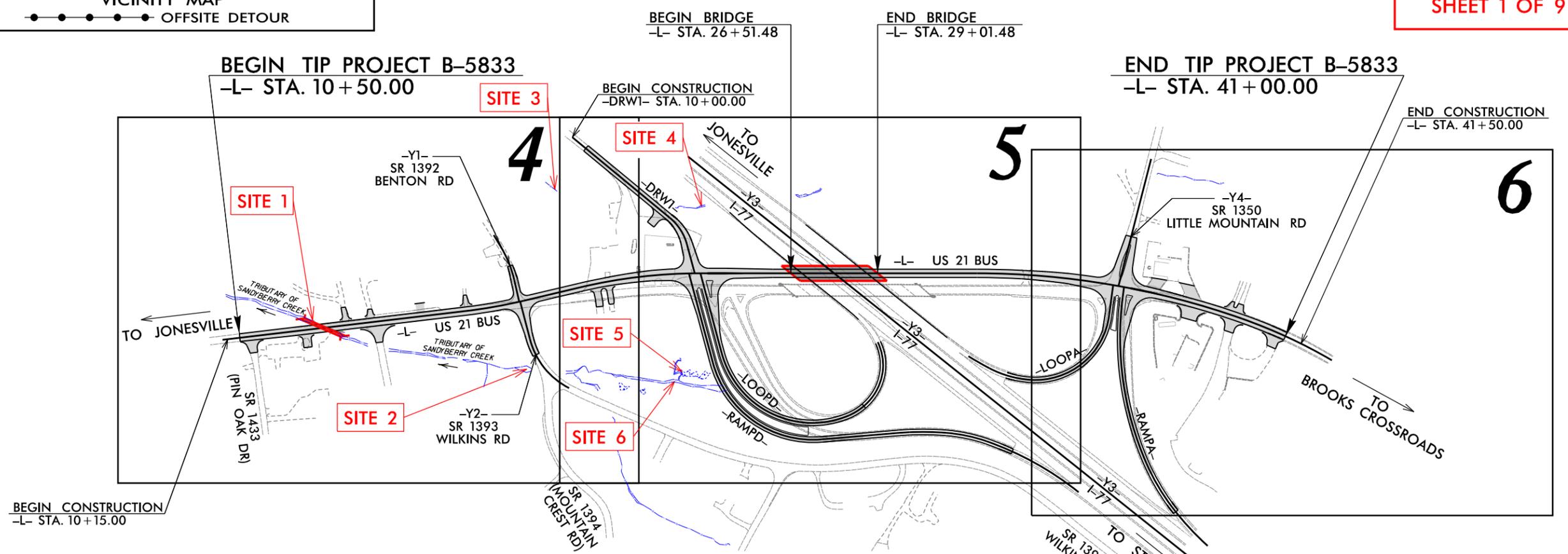
STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	B-5833	1	
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	
45786.1.2	N/A	PE	
45786.2.1	N/A	RW, UTIL	
45786.3.1	NHP-0021(023)	CONST.	



WETLAND AND SURFACE WATER IMPACTS



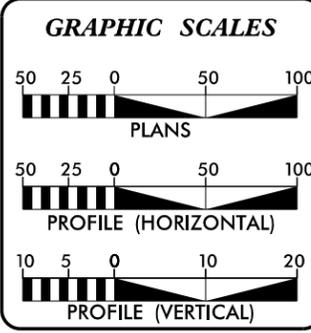
PERMIT DRAWING
SHEET 1 OF 9



CLEARING ON THIS PROJECT SHALL BE PERFORMED TO THE LIMITS ESTABLISHED BY METHOD II.
THIS PROJECT IS NOT WITHIN ANY MUNICIPAL BOUNDARIES.
THIS IS A PARTIAL CONTROLLED-ACCESS PROJECT WITH ACCESS BEING LIMITED TO POINTS AS SHOWN ON THE PLANS.

DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED

CONTRACT:



DESIGN DATA

ADT 2022 =	4150
ADT 2042 =	4550
K =	11 %
D =	65 %
T =	5 % *
V =	50 MPH
* (TTST 1% + DUAL 4%)	
FUNC CLASS = MAJOR COLLECTOR	
STATEWIDE TIER DESIGN	

PROJECT LENGTH

LENGTH ROADWAY TIP PROJECT B-5833	=	0.531 mile
LENGTH STRUCTURES TIP PROJECT B-5833	=	0.047 mile
TOTAL LENGTH TIP PROJECT B-5833	=	0.578 mile

Prepared For:
DIVISION OF HIGHWAYS
1000 Birch Ridge Dr., Raleigh NC, 27610

By:
TGS ENGINEERS
706 HILLSBOROUGH ST.
SUITE 200
RALEIGH, NC 27603

PH (919) 773-8887
CORP. LICENSE NO. C-0275

2018 STANDARD SPECIFICATIONS

RIGHT OF WAY DATE:
AUGUST 17, 2021

LETTING DATE:
AUGUST 16, 2022

V. MARCUS LOWERY, P.E.
PROJECT ENGINEER

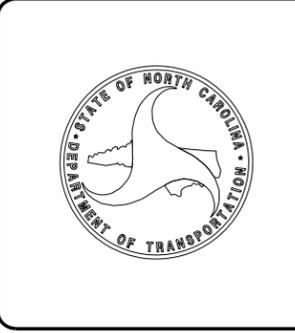
DAVID STUTTS, P.E.
NCDOT CONTACT

HYDRAULICS ENGINEER

SIGNATURE: _____ P.E.

ROADWAY DESIGN ENGINEER

SIGNATURE: _____ P.E.



SEE SHEET 2B-1
FOR INTERSECTION DETAILS

SEE SHEET 07 FOR -L- PROFILE
SEE SHEET 08 FOR -Y1- & -Y2- PROFILES

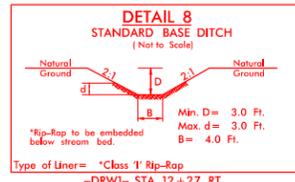
DRIVE RADII ARE 10' UNLESS OTHERWISE NOTED
CHANNELIZATION RADII ARE 3' UNLESS OTHERWISE NOTED
RADII DIMENSIONS ARE TO FACE OF CURB (F/C) UNLESS OTHERWISE NOTED

-L-

PI Sta 17+87.66 Δ = 6° 34' 02.4" (LT) D = 3' 47' 39.9" L = 173.08' T = 86.63' R = 1,510.00' SE = 0.05 Lr = 125'	PI Sta 22+16.73 Δ = 13° 17' 34.0" (RT) D = 3' 47' 39.9" L = 350.32' T = 175.95' R = 1,510.00' SE = 0.05 Lr = 125'
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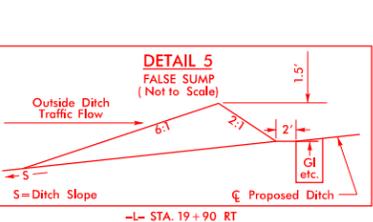
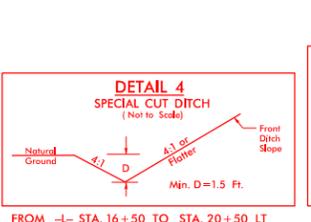
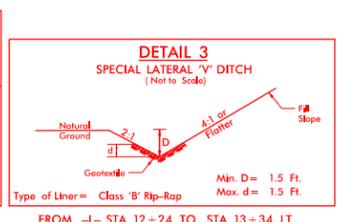
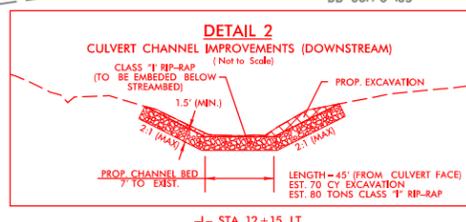
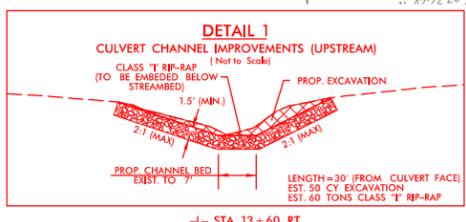
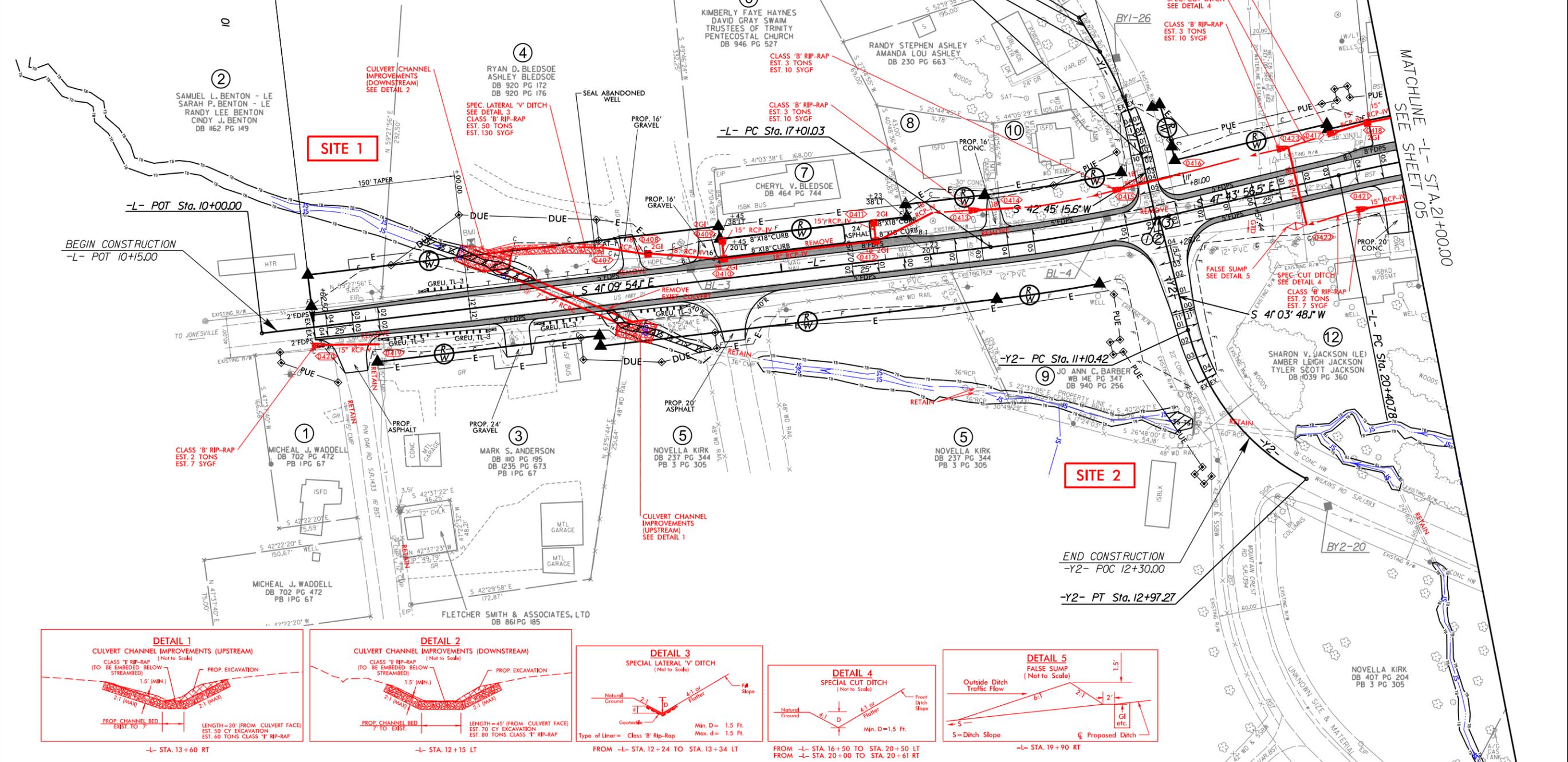
-Y1-	-Y2-
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① = -L- POC Sta. 18+61.28 =
-Y1- POT Sta. 12+06.74
② = -L- POC Sta. 18+64.39 =
-Y2- POT Sta. 10+00.00
③ = -L- PT Sta. 18+74.11



4' STD. BASE DITCH
SEE DETAIL 8
CLASS 1 RIP-RAP
EST. 1,000 CY DDE
L=190 FT
S=1.9%

BEGIN TIP PROJECT B-5833
-L- POT Sta. 10+50.00



PROJECT REFERENCE NO. B-5833	SHEET NO. 04
RW SHEET NO.	HYDRAULICS ENGINEER
ROADWAY DESIGN ENGINEER	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	
TGS ENGINEERS 706 HILLSBOROUGH ST., SUITE 200 RALEIGH, NC 27603 PH (919) 773-8887 CORP. LICENSE NO.: C-0275	

**PERMIT DRAWING
SHEET 2 OF 9**

DENOTES IMPACTS IN SURFACE WATER
 DENOTES TEMPORARY IMPACTS IN SURFACE WATER

8.17/99
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SEE SHEET 2B-1
FOR INTERSECTION DETAILS

SEE SHEET 07 FOR -L- PROFILE
SEE SHEET 08 FOR -Y1- & -Y2- PROFILES

DRIVE RADII ARE 10' UNLESS OTHERWISE NOTED
CHANNELIZATION RADII ARE 3' UNLESS OTHERWISE NOTED
RADII DIMENSIONS ARE TO FACE OF CURB (F/C) UNLESS OTHERWISE NOTED

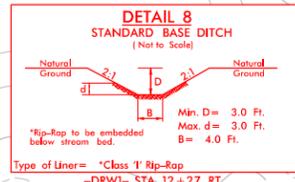
-L-
PI Sta 17+87.66 Δ = 6' 34" 02.4" (LT)
D = 3' 47" 39.9"
L = 173.08'
T = 86.63'
R = 1,510.00'
SE = 0.05
Lr = 125'

PI Sta 22+16.73 Δ = 13' 17" 34.0" (RT)
D = 3' 47" 39.9"
L = 350.32'
T = 175.95'
R = 1,510.00'
SE = 0.05
Lr = 125'

-Y1-
PI Sta 10+91.08 Δ = 18' 34" 00.1" (RT)
D = 17' 37" 46.1"
L = 105.32'
T = 53.12'
R = 325.00'

-Y2-
PI Sta 12+09.78 Δ = 48' 13" 26.2" (LT)
D = 25' 48" 32.1"
L = 186.85'
T = 99.36'
R = 222.00'

① = -L- POC Sta. 18+61.28 =
-Y1- POT Sta. 12+06.74
② = -L- POC Sta. 18+64.39 =
-Y2- POT Sta. 10+00.00
③ = -L- PT Sta. 18+74.11



PROJECT REFERENCE NO. B-5833	SHEET NO. 04
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
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TGS ENGINEERS 706 HILLSBOROUGH ST., SUITE 200 RALEIGH, NC 27603 PH (919) 773-8887 CORP. LICENSE NO.: C-0275	

PERMIT DRAWING
SHEET 3 OF 9

DENOTES IMPACTS IN SURFACE WATER
 DENOTES TEMPORARY IMPACTS IN SURFACE WATER

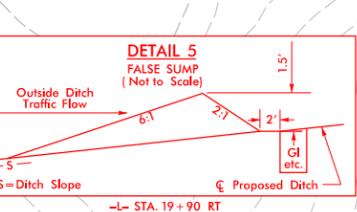
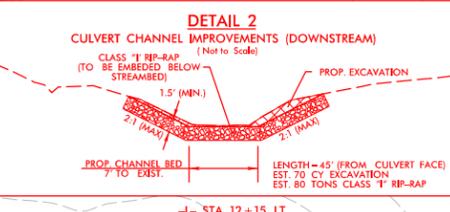
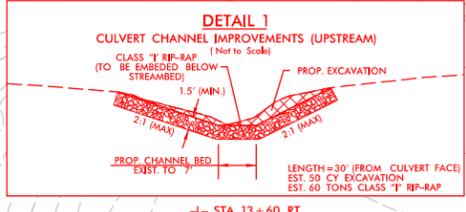
BEGIN TIP PROJECT B-5833
-L- POT Sta. 10+50.00

BEGIN CONSTRUCTION
-L- POT 10+15.00

BEGIN CONSTRUCTION
-Y1- POC 11+00.00

END CONSTRUCTION
-Y2- POC 12+30.00

-Y2- PT Sta. 12+97.27



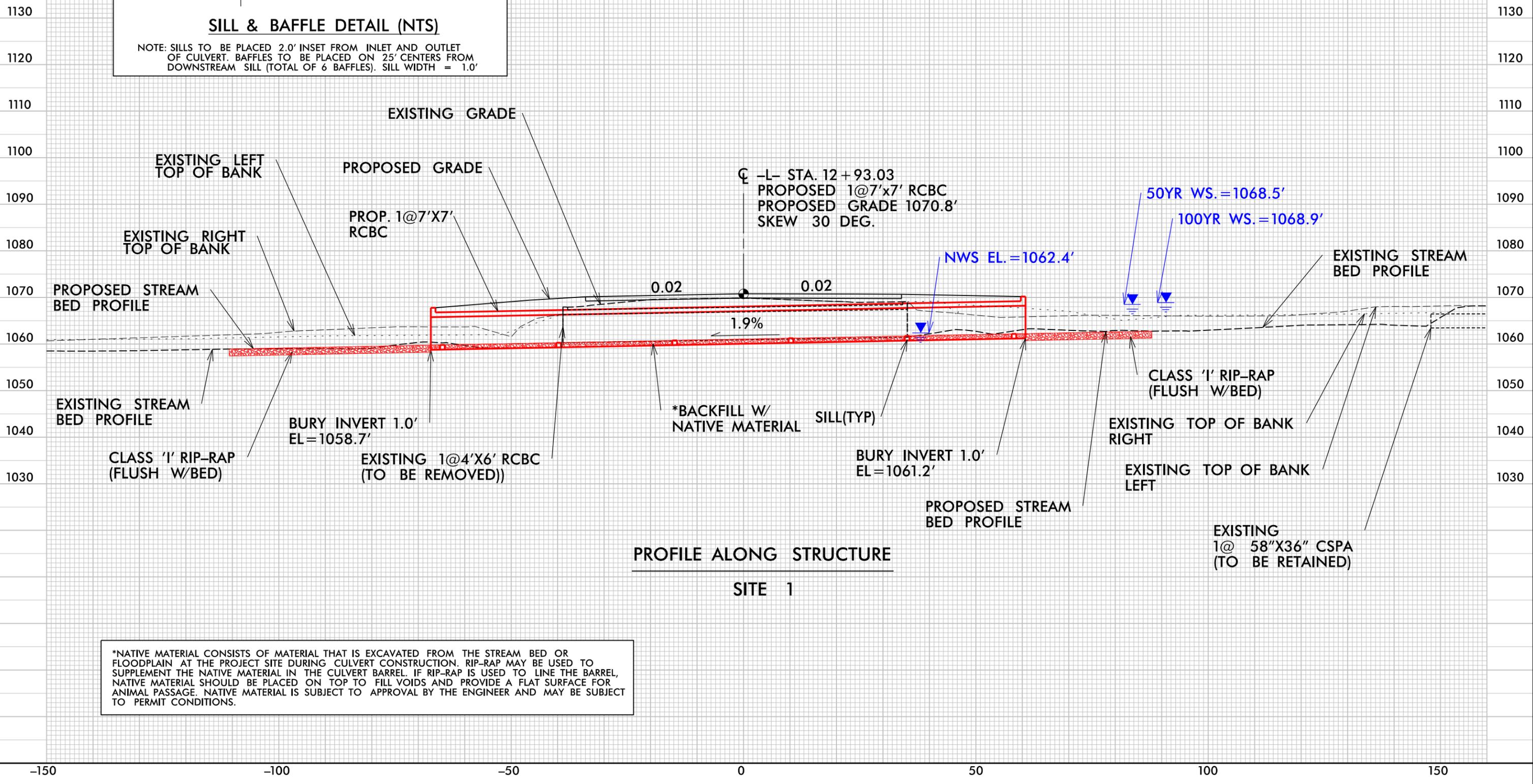
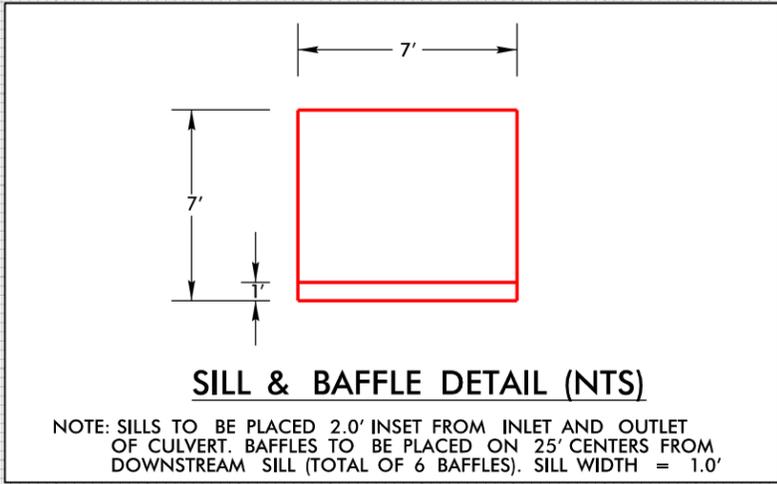
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MATCHLINE -L- STA. 21+00.00
SEE SHEET 05

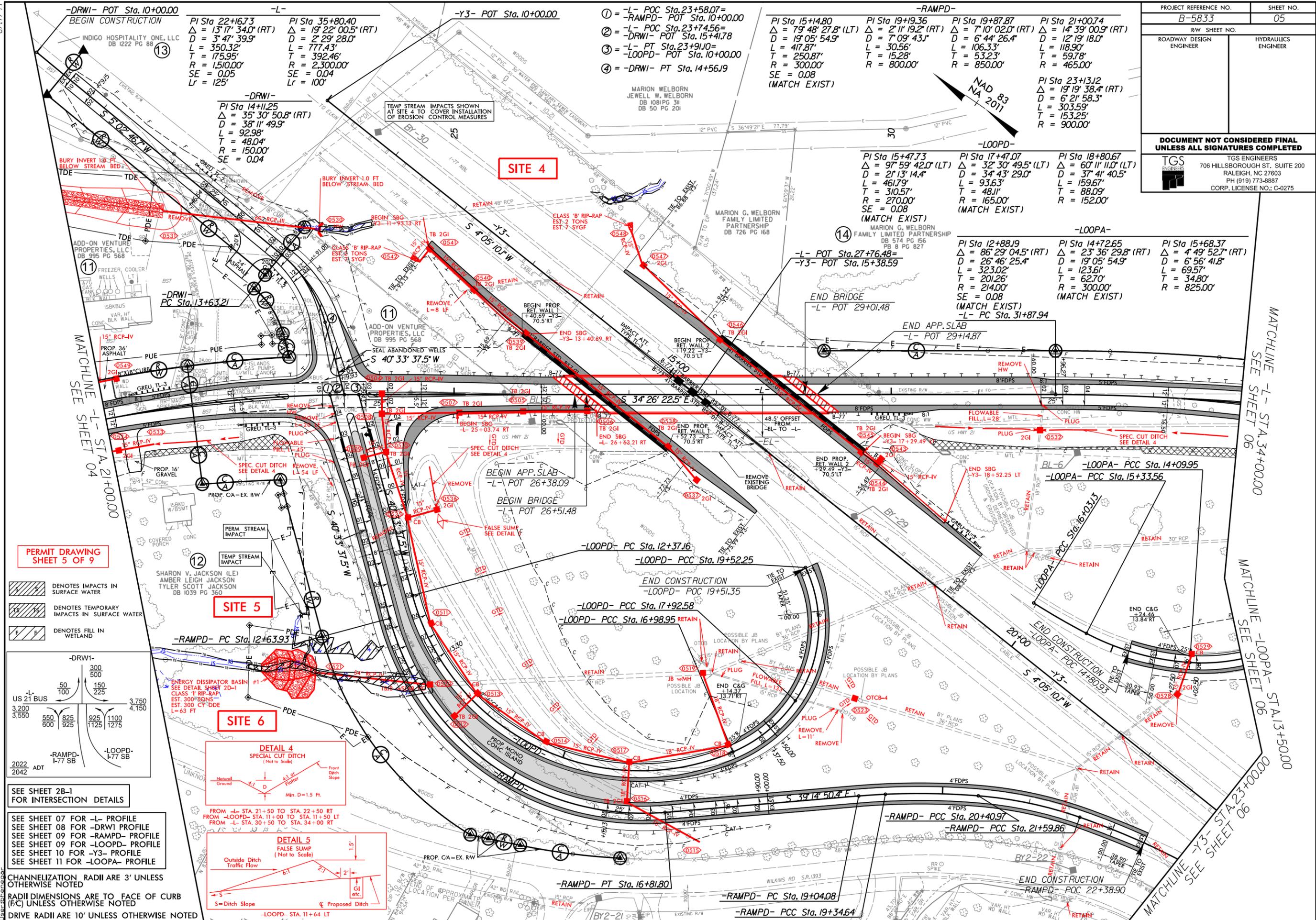
PERMIT DRAWING
SHEET 4 OF 9

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

-L-
US 21

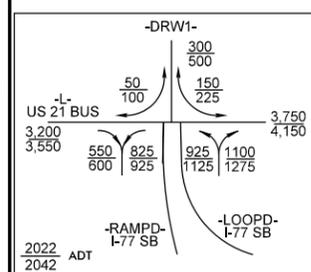


*NATIVE MATERIAL CONSISTS OF MATERIAL THAT IS EXCAVATED FROM THE STREAM BED OR FLOODPLAIN AT THE PROJECT SITE DURING CULVERT CONSTRUCTION. RIP-RAP MAY BE USED TO SUPPLEMENT THE NATIVE MATERIAL IN THE CULVERT BARREL. IF RIP-RAP IS USED TO LINE THE BARREL, NATIVE MATERIAL SHOULD BE PLACED ON TOP TO FILL VOIDS AND PROVIDE A FLAT SURFACE FOR ANIMAL PASSAGE. NATIVE MATERIAL IS SUBJECT TO APPROVAL BY THE ENGINEER AND MAY BE SUBJECT TO PERMIT CONDITIONS.



PERMIT DRAWING SHEET 5 OF 9

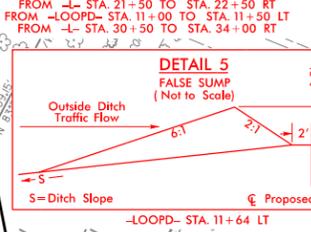
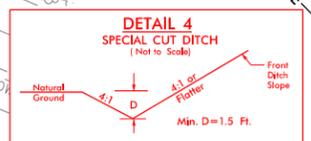
-  DENOTES IMPACTS IN SURFACE WATER
-  DENOTES TEMPORARY IMPACTS IN SURFACE WATER
-  DENOTES FILL IN WETLAND



SEE SHEET 2B-1 FOR INTERSECTION DETAILS

SEE SHEET 07 FOR -L- PROFILE
 SEE SHEET 08 FOR -DRWI- PROFILE
 SEE SHEET 09 FOR -RAMPD- PROFILE
 SEE SHEET 09 FOR -LOOPD- PROFILE
 SEE SHEET 10 FOR -Y3- PROFILE
 SEE SHEET 11 FOR -LOOPA- PROFILE

CHANNELIZATION RADII ARE 3' UNLESS OTHERWISE NOTED
 RADII DIMENSIONS ARE TO FACE OF CURB (FC) UNLESS OTHERWISE NOTED
 DRIVE RADII ARE 10' UNLESS OTHERWISE NOTED

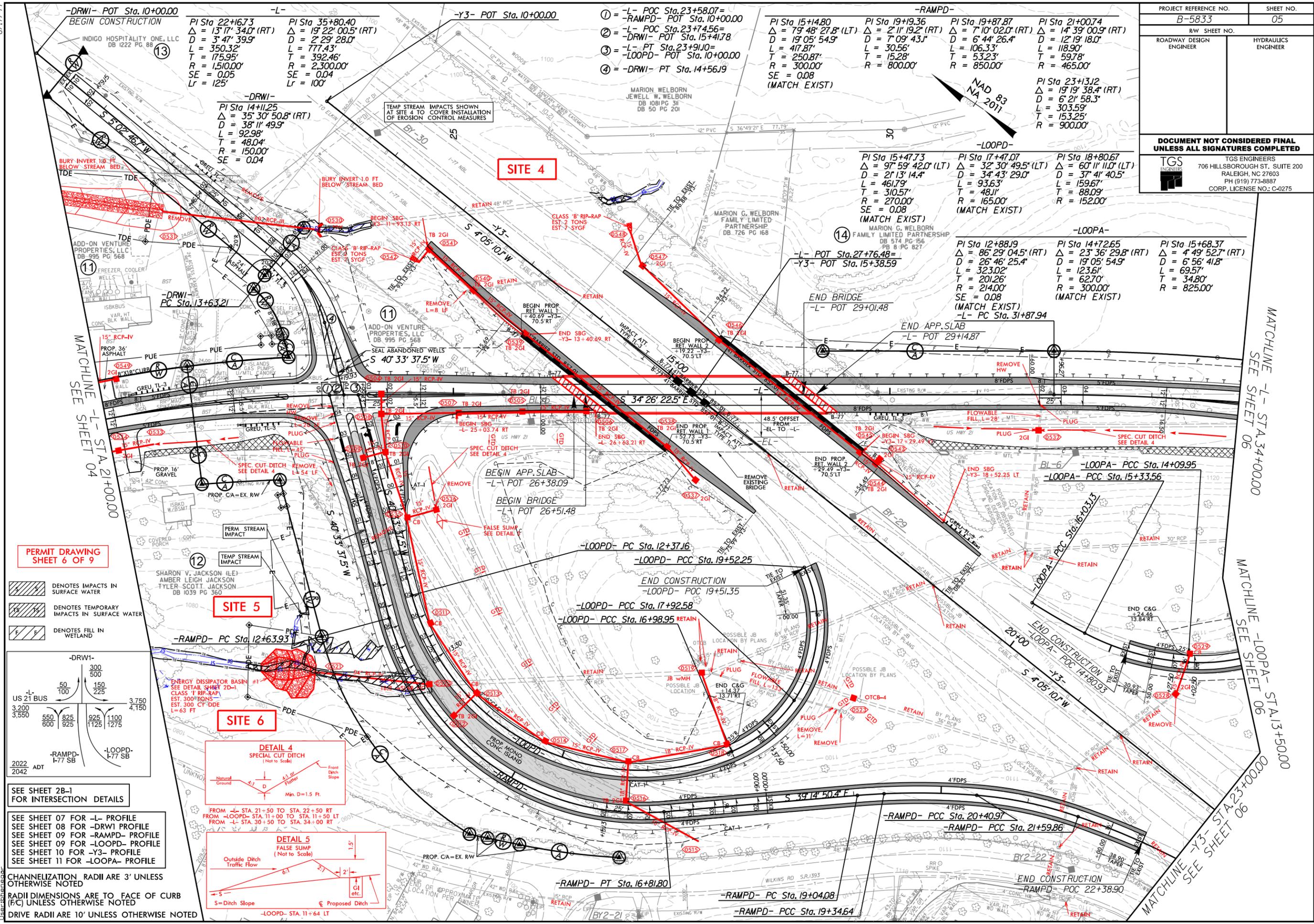


FROM -L- STA. 21+50 TO STA. 22+50 RT
 FROM -LOOPD- STA. 11+00 TO STA. 11+50 LT
 FROM -L- STA. 30+50 TO STA. 34+00 RT

-LOOPD- STA. 11+64 LT

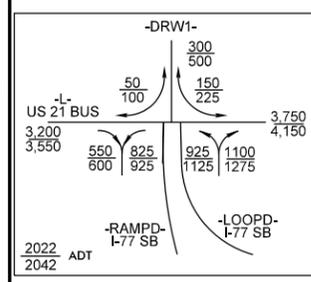
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 User: jshannon

PROJECT REFERENCE NO. B-5833	SHEET NO. 05
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	
 TGS ENGINEERS 706 HILLSBOROUGH ST., SUITE 200 RALEIGH, NC 27603 PH (919) 773-8887 CORP. LICENSE NO.: C-0275	



PERMIT DRAWING SHEET 6 OF 9

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



SEE SHEET 2B-1 FOR INTERSECTION DETAILS

SEE SHEET 07 FOR -L- PROFILE
 SEE SHEET 08 FOR -DRWI- PROFILE
 SEE SHEET 09 FOR -RAMPD- PROFILE
 SEE SHEET 09 FOR -LOOPD- PROFILE
 SEE SHEET 10 FOR -Y3- PROFILE
 SEE SHEET 11 FOR -LOOPA- PROFILE

CHANNELIZATION RADII ARE 3' UNLESS OTHERWISE NOTED
 RADII DIMENSIONS ARE TO FACE OF CURB (FC) UNLESS OTHERWISE NOTED
 DRIVE RADII ARE 10' UNLESS OTHERWISE NOTED

-DRWI- POT Sta. 10+00.00
 BEGIN CONSTRUCTION
 INDIGO HOSPITALITY ONE, LLC
 DB 1222 PG 88
 (13)
 $\Delta = 13' 17'' 34.0''$ (RT)
 $D = 3' 47'' 39.9''$
 $L = 350.32'$
 $T = 175.95'$
 $R = 1510.00'$
 $SE = 0.05$
 $Lr = 125'$

-DRWI-
 PI Sta. 14+11.25
 $\Delta = 35' 30'' 50.8''$ (RT)
 $D = 38' 11'' 49.9''$
 $L = 92.98'$
 $T = 48.04'$
 $R = 150.00'$
 $SE = 0.04$

-DRWI- PC Sta. 13+63.21
 ADD-ON VENTURE PROPERTIES, LLC
 DB 995 PG 568
 (11)
 15" RCP-IV
 PROP. 36" ASPHALT
 2' CI x 18" CURB
 15" RCP-IV
 PROP. 36" ASPHALT
 2' CI x 18" CURB

-DRWI- PC Sta. 13+63.21
 ADD-ON VENTURE PROPERTIES, LLC
 DB 995 PG 568
 (11)
 SEAL ABANDONED WELLS
 $S 40' 33'' 37.5'' W$

-DRWI- PC Sta. 12+63.93
 SHARON V. JACKSON (L-E)
 AMBER LEIGH JACKSON
 TYLER-SCOTT JACKSON
 DB 1039 PG 360
 (12)
 ENERGY DISSIPATOR BASIN
 SEE DETAIL SHEET 2D-1
 CLASS 'I' RIP-RAP
 EST. 300 CY DDE
 $L = 63$ FT

SITE 6
 DETAIL 4
 SPECIAL CUT DITCH
 (Not to Scale)
 FROM -L- STA. 21+50 TO STA. 22+50 RT
 FROM -LOOPD- STA. 11+00 TO STA. 11+50 LT
 FROM -L- STA. 30+50 TO STA. 34+00 RT

SITE 5
 DETAIL 5
 FALSE SUMP
 (Not to Scale)
 Outside Ditch Traffic Flow
 $S =$ Ditch Slope
 $C =$ Proposed Ditch
 -LOOPD- STA. 11+64 LT

-L- POC Sta. 23+58.07 =
 -RAMPD- POT Sta. 10+00.00
 (1)
 $\Delta = 79' 48'' 27.8''$ (LT)
 $D = 19' 05'' 54.9''$
 $L = 417.87'$
 $T = 152.28'$
 $R = 300.00'$
 $SE = 0.08$
 (MATCH EXIST)

-L- POC Sta. 23+74.56 =
 -DRWI- POT Sta. 15+41.78
 (2)
 $\Delta = 7' 09'' 43.1''$ (RT)
 $D = 6' 44'' 26.4''$
 $L = 30.56'$
 $T = 15.28'$
 $R = 800.00'$

-L- PT Sta. 23+91.0 =
 -LOOPD- POT Sta. 10+00.00
 (3)
 $\Delta = 7' 10'' 02.0''$ (RT)
 $D = 6' 44'' 26.4''$
 $L = 106.33'$
 $T = 53.23'$
 $R = 850.00'$

-L- POT Sta. 27+76.48 =
 -Y3- POT Sta. 15+38.59
 (14)
 $\Delta = 97' 59'' 42.0''$ (LT)
 $D = 21' 13'' 14.4''$
 $L = 461.79'$
 $T = 310.57'$
 $R = 270.00'$
 $SE = 0.08$
 (MATCH EXIST)

-L- POT Sta. 29+01.48
 END BRIDGE
 -L- POT 29+01.48
 END APP. SLAB
 -L- POT 29+14.87

-L- POT Sta. 12+37.16
 -LOOPD- PC Sta. 12+37.16
 -LOOPD- PCC Sta. 19+52.25
 END CONSTRUCTION
 -LOOPD- POC 19+51.35

-L- POT Sta. 17+92.58
 -LOOPD- PCC Sta. 17+92.58
 -LOOPD- PCC Sta. 16+98.95
 RETAIN
 -RAMPD- PT Sta. 16+81.80
 -RAMPD- PC Sta. 19+04.08
 -RAMPD- PCC Sta. 19+34.64

-RAMPD-
 PI Sta. 15+14.80
 $\Delta = 79' 48'' 27.8''$ (LT)
 $D = 19' 05'' 54.9''$
 $L = 417.87'$
 $T = 152.28'$
 $R = 300.00'$
 $SE = 0.08$
 (MATCH EXIST)

-RAMPD-
 PI Sta. 19+19.36
 $\Delta = 2' 11'' 19.2''$ (RT)
 $D = 7' 09'' 43.1''$
 $L = 30.56'$
 $T = 15.28'$
 $R = 800.00'$

-RAMPD-
 PI Sta. 19+87.87
 $\Delta = 7' 10'' 02.0''$ (RT)
 $D = 6' 44'' 26.4''$
 $L = 106.33'$
 $T = 53.23'$
 $R = 850.00'$

-RAMPD-
 PI Sta. 21+00.74
 $\Delta = 14' 39'' 00.9''$ (RT)
 $D = 12' 19'' 18.0''$
 $L = 118.90'$
 $T = 59.78'$
 $R = 465.00'$

-RAMPD-
 PI Sta. 23+13.12
 $\Delta = 19' 19'' 38.4''$ (RT)
 $D = 6' 21'' 58.3''$
 $L = 303.59'$
 $T = 153.25'$
 $R = 900.00'$

-RAMPD-
 PI Sta. 17+47.07
 $\Delta = 32' 30'' 49.5''$ (LT)
 $D = 34' 43'' 29.0''$
 $L = 93.63'$
 $T = 48.11'$
 $R = 165.00'$
 (MATCH EXIST)

-RAMPD-
 PI Sta. 18+80.67
 $\Delta = 60' 11'' 11.0''$ (LT)
 $D = 37' 41'' 40.5''$
 $L = 159.67'$
 $T = 88.09'$
 $R = 152.00'$
 (MATCH EXIST)

-RAMPD-
 PI Sta. 12+88.19
 $\Delta = 86' 29'' 04.5''$ (RT)
 $D = 26' 46'' 25.4''$
 $L = 323.02'$
 $T = 201.26'$
 $R = 214.00'$
 $SE = 0.08$
 (MATCH EXIST)

-RAMPD-
 PI Sta. 14+72.65
 $\Delta = 23' 36'' 29.8''$ (RT)
 $D = 19' 05'' 54.9''$
 $L = 123.61'$
 $T = 62.70'$
 $R = 300.00'$
 (MATCH EXIST)

-RAMPD-
 PI Sta. 15+68.37
 $\Delta = 4' 49'' 52.7''$ (RT)
 $D = 6' 56'' 41.8''$
 $L = 69.57'$
 $T = 34.80'$
 $R = 825.00'$
 (MATCH EXIST)

-RAMPD-
 PI Sta. 14+09.95
 -LOOPA- PCC Sta. 14+09.95
 -LOOPA- PCC Sta. 15+33.56

-RAMPD-
 PI Sta. 16+03.13
 -LOOPA- PCC Sta. 16+03.13

-RAMPD-
 PI Sta. 20+40.97
 -RAMPD- PCC Sta. 21+59.86

-RAMPD-
 PI Sta. 22+38.90
 END CONSTRUCTION
 -RAMPD- POC 22+38.90

8/17/2021
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 2022 ADT 2042
 SEE SHEET 2B-1 FOR INTERSECTION DETAILS
 SEE SHEET 07 FOR -L- PROFILE
 SEE SHEET 08 FOR -DRWI- PROFILE
 SEE SHEET 09 FOR -RAMPD- PROFILE
 SEE SHEET 09 FOR -LOOPD- PROFILE
 SEE SHEET 10 FOR -Y3- PROFILE
 SEE SHEET 11 FOR -LOOPA- PROFILE
 CHANNELIZATION RADII ARE 3' UNLESS OTHERWISE NOTED
 RADII DIMENSIONS ARE TO FACE OF CURB (FC) UNLESS OTHERWISE NOTED
 DRIVE RADII ARE 10' UNLESS OTHERWISE NOTED

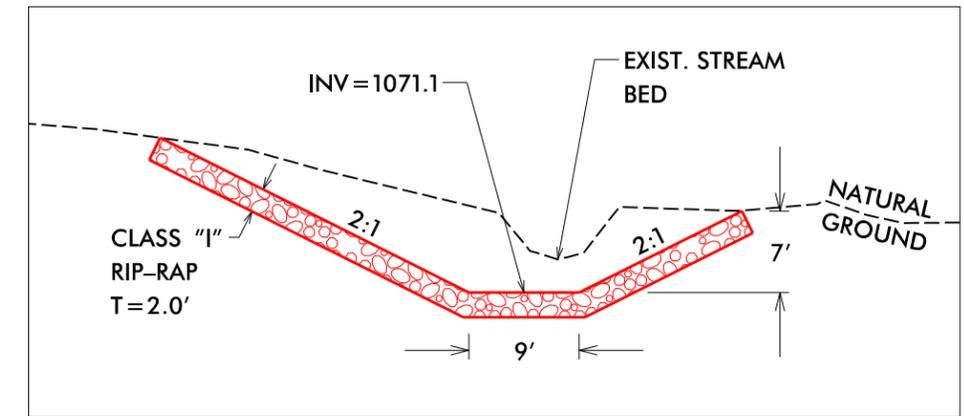
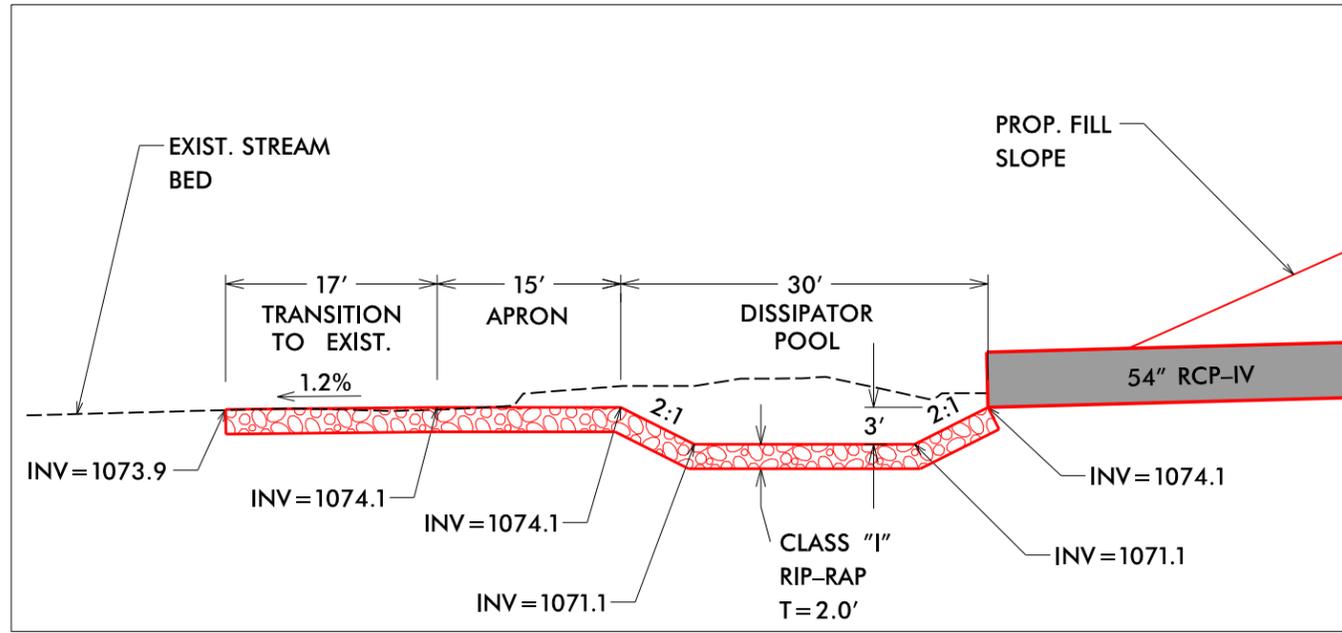
MATCHLINE -L- STA. 34+00.00
 MATCHLINE -LOOPA- STA. 13+50.00
 MATCHLINE -Y3- STA. 42+00.00
 SEE SHEET 06
 SEE SHEET 06
 SEE SHEET 06

ENERGY DISSIPATOR BASIN #1 -RAMPD- 12+92 RT - SITES 5 & 6

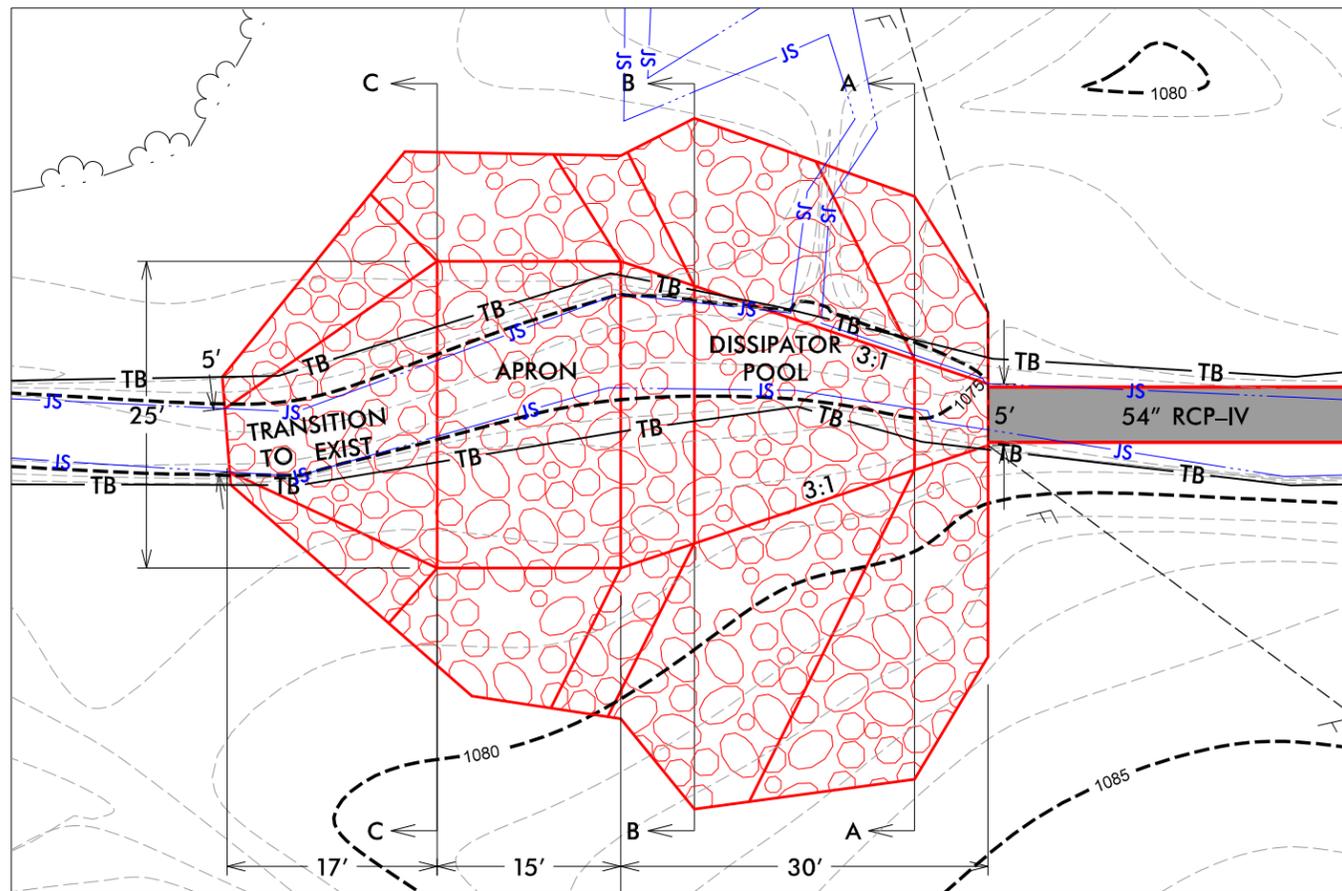
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PERMIT DRAWING
SHEET 7 OF 9

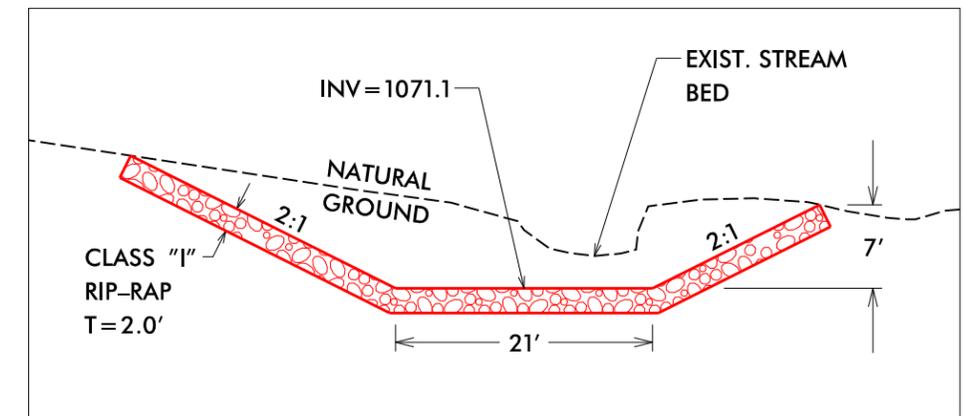
PROJECT REFERENCE NO. B-5833	SHEET NO. 2D-1
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
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 TGS ENGINEERS 706 HILLSBOROUGH ST., SUITE 200 RALEIGH, NC 27603 PH (919) 773-8887 CORP. LICENSE NO.: G-0275	



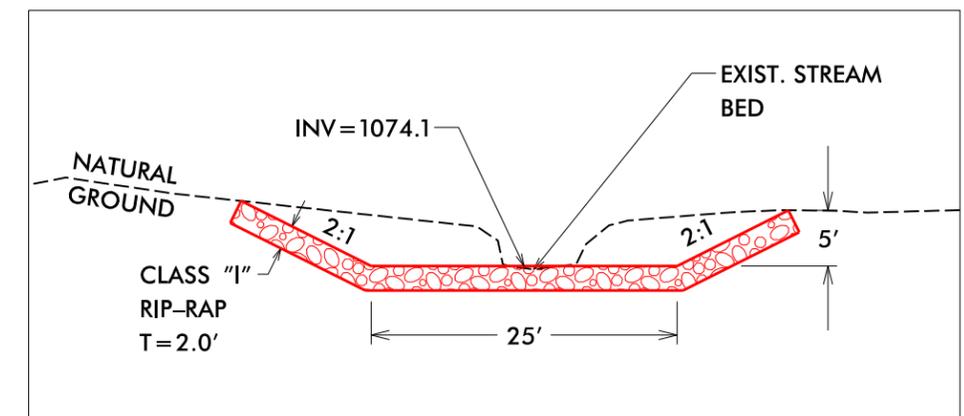
SECTION A-A



PLAN VIEW



SECTION B-B



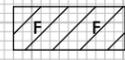
SECTION C-C

8/17/99
 9/28/2021
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5/14/99
9/17/2021
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**PERMIT DRAWING
SHEET 8 OF 9**

PROJECT REFERENCE NO. <i>B-5833</i>	SHEET NO.
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	

 DENOTES FILL IN WETLAND

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

