



STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION

ROY COOPER
GOVERNOR

J.R. "JOEY" HOPKINS
SECRETARY

October 5, 2023

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 40 on NC 226 over North Fork First Broad Creek in Rutherford County, Division 13, **TIP: BR-0100.**

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	May 25, 2025
NC Division of Water Resources Section 401 Water Quality Certification	General Certification No. 4135 [RGP50]	May 25, 2025

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/

PROJECT COMMITMENTS

T.I.P Project No. BR-0100
Replacement of Bridge No. 40 on NC 226
over North Fork First Broad Creek
Rutherford County
WBS Element 67100.1.1

COMMITMENTS FROM PROJECT DEVELOPMENT AND DESIGN

NCDOT Division 13

Prior to construction, Division 13 will determine whether a pre-demolition survey is needed for protected bat species and determine appropriate mitigation measures for the Northern Long-eared bat and Indiana bat, including a potential tree clearing moratorium between April 1 and October 15.

Conservation measures for bridge inspection and tree clearing included in special conditions for permitting as a result of informal concurrence from USFWS.

Division 13 will coordinate with the Cherry Mountain Volunteer Fire Department – Golden Valley Station to communicate the construction schedule and potential disruptions to access.

COMMITMENTS FROM PERMITTING

NCDOT Division 13 Construction

404 Special Condition #2: NCDOT shall adhere to the following ESA/Section 7 commitments/conservation measures:

- a. Tree clearing will not occur from April 1st – October 15th.
- b. NCDOT will inspect the existing bridge for bats or signs of bat use within 14 days of demolition. If bats or signs of bats are observed, NCDOT will immediately notify the USACE and the U.S. Fish and Wildlife Service (Service).
- c. If night work occurs, all construction-related lighting will be limited to whatever is necessary to maintain safety in active work areas closest to the water. Lighting will only be used in areas where active construction is occurring and will not be projected into adjacent wooded areas or over the water surface.
- d. No additional permanent lighting will be added to the roadway.
- e. No blasting will occur.

401 Special Condition #2: Provide advanced notice of construction to Dave McHenry with the North Carolina Wildlife Resources Commission so that he may advise the site contractor about ways to minimize potential impacts to the Broad River spiny crayfish (NC Threatened). [15A NCAC 02H. .0506(b)(1) and (2)]

NCDOT Division 13 Construction, Roadside Environmental Unit

401 Special Condition #4: The permittee shall use Design Standards in Sensitive Watersheds (15A NCAC 4B.0124[a]-[e]) in areas draining to Outstanding Resource Waters. However, due to the size of the project, the NCDOT shall not be required to meet 15A NCAC 4B .0124(a) regarding the maximum amount of uncovered acres.

U.S. ARMY CORPS OF ENGINEERS
WILMINGTON DISTRICT

Action ID.: **SAW-2023- 01104 BR-0100** County: **Rutherford**

GENERAL PERMIT (REGIONAL AND NATIONWIDE) VERIFICATION

Property Owner / Authorized Agent:

North Carolina Department of Transportation

Attn: Mr. Michael A. Turchy

Environmental Coordination and Permitting Group Leader

Address: **1598 Mail Service Center**

Raleigh, North Carolina 27699-1598

919-707-6157

Size and location of property (water body, road name/number, town, etc.): **The project is located at Bridge No. 40 on NC 226 over the North Fork First Broad River in Rutherford County, North Carolina.**

Description of project area and activity: **In order to replace the bridge, the permittee is authorized to impact waters of the U.S. as follows:**

Summary of Authorized Impacts and Required Mitigation

Impact ID #	NWP / GP #	Open Water (ac)		Wetland (ac)		Stream (lf)	
		Temporary	Permanent	Temporary	Permanent	Temporary	Permanent
Site 1 (North Fork First Broad River)	<u>RGP 50</u>					17' (bank stabilization)	51' (bank stabilization)
Site 2 (North Fork First Broad River)	<u>RGP 50</u>					10' (bank stabilization)	14' (bank stabilization)
Site 3 (North Fork First Broad River)	<u>RGP 50</u>					10' (bank stabilization)	19' (bank stabilization)
Site 5 (North Fork First Broad River)	<u>RGP 50</u>					10' (bank stabilization)	12' (bank stabilization)
Site 6 (North Fork First Broad River)	<u>RGP 50</u>					33' (bank stabilization)	
Site 7 (North Fork First Broad River)	<u>RGP 50</u>					21' (bank stabilization)	
Impact Totals		0	0	0	0	101'	96'
Total Loss of waters of the U.S. (wetlands and/or open waters in ac)			0	Total Loss of waters of the U.S. (streams in lf)			0
Required Wetland Mitigation (ac)			0	Required Stream Mitigation (lf)			0

Applicable Law: ☒ Section 404 (Clean Water Act, 33 USC 1344)
☐ Section 10 (Rivers and Harbors Act, 33 USC 403)
Authorization: Regional General Permit Number: **RGP 50**
Nationwide Permit Number:

Your work is authorized by the above referenced permit provided it is accomplished in strict accordance with the attached conditions, your submitted application, and the following special conditions:

Special Conditions

1. All work must be performed in strict compliance with (a) the description of work in the PCN and (b) the Wetland and Surface Water Impact(s) Permit Drawing(s) (Permit Plans) in the application dated May 26, 2023. Any modification to the description of work and/or the permit plans must be approved by the USACE prior to implementation.
2. NCDOT shall adhere to the following ESA/Section 7 commitments/conservation measures:
 - a. Tree clearing will not occur from April 1st - October 15th.
 - b. NCDOT will inspect the existing bridge for bats or signs of bat use within 14 days of demolition. If bats or signs of bats are observed, NCDOT will immediately notify the USACE and the U.S. Fish and Wildlife Service (Service).
 - c. If night work occurs, all construction-related lighting will be limited to whatever is necessary to maintain safety in active work areas closest to the water. Lighting will only be used in areas where active construction is occurring and will not be projected into adjacent wooded areas or over the water surface.
 - d. No additional permanent lighting will be added to the roadway.
 - e. No blasting will occur.
3. NCDOT shall require its contractors and/or agents to comply with the terms and conditions of this authorization letter 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 authorization letter, all conditions, and any authorized modifications. A copy of this authorization letter, all conditions, and any authorized modifications, shall be available at the project site during construction and maintenance of this project.

Any violation of the attached conditions or deviation from your submitted plans may subject the permittee to a stop work order, a restoration order, a Class I administrative penalty, and/or appropriate legal action.

This verification will remain valid until the expiration date identified below unless the nationwide and/or regional general permit authorization is modified, suspended or revoked. If, prior to the expiration date identified below, the nationwide and/or regional general permit authorization is reissued and/or modified, this verification will remain valid until the expiration date identified below, provided it complies with all requirements of the modified nationwide and/or regional general permit. If the nationwide and/or regional general permit authorization expires or is suspended, revoked, or is modified, such that the activity would no longer comply with the terms and conditions of the nationwide and/or regional general permit, activities which have commenced (i.e., are under construction) or are under contract to commence in reliance upon the nationwide and/or regional general permit, will remain authorized provided the activity is completed within twelve months of the date of the nationwide and/or regional general permit's expiration, modification or revocation, unless discretionary authority has been exercised on a case-by-case basis to modify, suspend or revoke the authorization.

Activities subject to Section 404 (as indicated above) may also require an individual Section 401 Water Quality Certification. You should contact the NC Division of Water Resources (telephone 828-296-4500) to determine Section 401 requirements.

This Department of the Army verification does not relieve the permittee of the responsibility to obtain any other required Federal, State or local approvals/permits.

If there are any questions regarding this verification, any of the conditions of the Permit, or the U.S. Army Corps of Engineers regulatory program, please contact Lori Beckwith at loretta.a.beckwith@usace.army.mil or 828-230-0483.

USACE Regulatory Official: Monte Matthews

Monte Matthews 2023.09.28
14:26:50 -04'00'

Date: **September 28, 2023**

Expiration Date of Verification: **May 25, 2025**

Copy furnished:

NCDOT, Ms. Erin Cheely

Action ID Number: SAW-2023-01104 BR-0100

County: Rutherford

Permittee: NCDOT, Mr. Michael A. Turchy
Environmental Coordination and Permitting Group Leader

Project Name: NCDOT / Bridge No. 40 / BR-0100 / NC 226 / Div 13

Regional General Permit: RGP 50

Date Verification Issued: September 28, 2023

Project Manager: Lori Beckwith

Upon completion of the activity authorized by this permit and any mitigation required by the permit, sign this certification and return it to the following address:

US ARMY CORPS OF ENGINEERS
WILMINGTON DISTRICT
Attn: Lori Beckwith
151 Patton Avenue
Room 208
Asheville, NC 28801-5006

Please note that your permitted activity is subject to a compliance inspection by a U. S. Army Corps of Engineers representative. Failure to comply with any terms or conditions of this authorization may result in the U.S. Army Corps of Engineers suspending, modifying or revoking the authorization and/or issuing a Class I administrative penalty, or initiating other appropriate legal action.

I hereby certify that the work authorized by the above referenced permit has been completed in accordance with the terms and condition of the said permit, and required mitigation was completed in accordance with the permit conditions.

Signature of Permittee

Date

ROY COOPER

Governor

ELIZABETH S. BISER

Secretary

RICHARD E. ROGERS, JR.

Director

NORTH CAROLINA
Environmental Quality

June 8, 2023

DWR # 20230750
Rutherford County

Ms. Erin Cheely
NC Department of Transportation
1598 Mail Service Center
Raleigh, NC 27699-1598

Subject: APPROVAL OF 401 WATER QUALITY CERTIFICATION WITH ADDITIONAL CONDITIONS
Replace Bridge 40 on NC 226 (BR-0100)
North Fork First Broad Creek [Broad River Basin, 03050105, C;Tr,ORW]

Dear Ms. Cheely:

You have our approval for the impacts listed below for the purpose described in your application dated May 26, 2023, and received by the Division of Water Resources (Division) on May 26, 2023. These impacts are covered by the attached Water Quality General Certification Number 4135 and the conditions listed below. This certification is associated with the use of General Permit Number 201902350 once it is issued to you by the U.S. Army Corps of Engineers. Please note that you should get any other federal, state, or local permits before proceeding with your project, including those required by (but not limited to) Sediment and Erosion Control, Non-Discharge, and Water Supply Watershed regulations.

The Division has determined that the proposed project will comply with water quality requirements provided that you adhere to the conditions listed in the enclosed certification and to the additional conditions itemized below.

The following proposed impacts are hereby approved. No other impacts are approved, including incidental impacts.
[15A NCAC 02H .0506(b)]

Stream Impacts in the Broad River Basin

Site	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)
S1			51	17	68	
S2			14	10	24	
S3			19	10	29	
S4			12	10	22	
S5			0	33	33	
S6			0	21	21	
TOTAL			96	101	197	0

Total Stream Impact for Project: 96 linear feet of permanent and 101 linear feet of temporary.



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 approval is for the purpose and design described in your application. The plans and specifications for this project are incorporated by reference as part of this 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 new owner must be given a copy of this Certification and is responsible for complying with all conditions. [15A NCAC 02H .0507(d)(2)].

If you are unable to comply with any of the conditions of the attached Water Quality General Certification or with the additional conditions itemized below, you must notify the Asheville Regional Office within 24 hours (or the next business day if a weekend or holiday) from the time the permittee becomes aware of the circumstances.

The permittee shall report to the Asheville 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 a weekend or holiday) from the time the permittee became aware of the non-compliance circumstances.

Condition(s) of Certification:

Project Specific Conditions

1. The NCDOT Division Environmental Officer or Environmental Assistant will conduct a pre-construction meeting with all appropriate staff to ensure that the project supervisor and essential staff understand potential issues at the permitted site. NCDWR staff shall be invited to the pre-construction meeting. [15A NCAC 02H.0506(b)(2) and (b)(3)]
2. Provide advanced notice of construction to Dave McHenry with the North Carolina Wildlife Resources Commission so that he may advise the site contractor about ways to minimize possible impacts to the Broad River spiny crayfish (NC Threatened). [15A NCAC 02H .0506(b)(1) and (2)]
3. For projects impacting waters classified by the NC Environmental Management Commission as Trout (Tr), High Quality Waters (HQW), or Water Supply I or II (WSI, WSII) stormwater shall be directed to vegetated buffer areas, grass-lined ditches or other means appropriate to the site for the purpose of pre-treating storm water runoff prior to discharging directly into streams. Mowing of existing vegetated buffers is strongly discouraged.
4. The permittee shall use Design Standards in Sensitive Watersheds (15A NCAC 4B.0124[a]-[e]) in areas draining to Outstanding Resource Waters. However, due to the size of the project, the NCDOT shall not be required to meet 15A NCAC 4B .0124(a) regarding the maximum amount of uncovered acres.
5. The post-construction removal of any temporary bridge structures must return the project site to its preconstruction contours and elevations. The impacted areas shall be revegetated with appropriate native species. [15A NCAC 02H .0506(b)(2)]
6. As a condition of this 401 Water Quality Certification, the bridge demolition and construction must be accomplished in strict compliance with the most recent version of NCDOT's Best Management Practices for Construction and Maintenance Activities. [15A NCAC 02H .0507(d)(2) and 15A NCAC 02H .0506(b)(5)]

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 hydro seeders 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 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 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)]

This approval and its conditions are final and binding unless contested. [G.S. 143-215.5] This Certification can be contested as provided in Chapter 150B of the North Carolina General Statutes by filing a Petition for a Contested Case Hearing (Petition) with the North Carolina Office of Administrative Hearings (OAH) **within sixty (60) calendar days**. Requirements for filing a Petition are set forth in Chapter 150B of the North Carolina General Statutes and Title 26 of the North Carolina Administrative Code. Additional information regarding requirements for filing a Petition and Petition forms may be accessed at <http://www.ncoah.com/> or by calling the OAH Clerk's Office at (919) 431-3000.



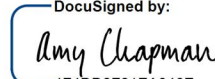
One (1) copy of the Petition must also be served to the North Carolina Department of Environmental Quality:

William F. Lane, General Counsel
Department of Environmental Quality
1601 Mail Service Center
Raleigh, NC 27699-1601

This letter completes the review of the Division under section 401 of the Clean Water Act and 15A NCAC 02H .0500. Please contact Kevin Mitchell at 828-296-4650 or kevin.mitchell@deq.nc.gov if you have any questions or concerns.

Sincerely,

DocuSigned by:



Richard E. Rogers, Jr., Director
Division of Water Resources

cc: Lori Beckwith, US Army Corps of Engineers Asheville Regulatory Field Office (via email)
Michael Turchy, NC Department of Transportation (via email)
Dave McHenry, NC Wildlife Resources Commission (via email)
Holland Youngman, US Fish and Wildlife Service (via email)

File Copy





North Carolina Department of Transportation

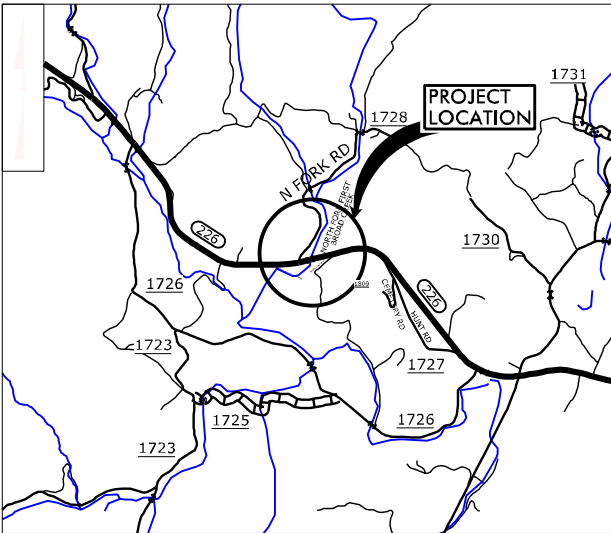
Highway Stormwater Program
STORMWATER MANAGEMENT PLAN
FOR NCDOT PROJECTS

(Version 2.08; Released April 2018)

WBS Element:	67100.1.1	TIP No.:	BR-0100	County(ies):	Rutherford	Page	1	of	1	
General Project Information										
WBS Element:	67100.1.1	TIP Number:	BR-0100	Project Type:	Bridge Replacement	Date:	7/5/2022			
NCDOT Contact:	David Stutts			Contractor / Designer:	WSP-USA / Vidya Mohandas					
Address:	1000 Birch Ridge Drive Raleigh, NC 27610			Address:	434 Fayetteville Rd Suite 1500 Raleigh, NC 27601					
	Phone:	919-707-6442			Phone:	984-269-4668				
	Email:	dstutts@ncdot.gov			Email:	vidya.mohandas@wsp.com				
City/Town:	Bostic			County(ies):	Rutherford					
River Basin(s):	Broad			CAMA County?	No					
Wetlands within Project Limits?	No									
Project Description										
Project Length (lin. miles or feet):	0.21 mi		Surrounding Land Use:	Residential, Agricultural						
	Proposed Project			Existing Site						
Project Built-Up Area (ac.)	5.1 ac.			1.5 ac.						
Typical Cross Section Description:	-L- includes 2-12' paved lanes with 8' grass shoulders and 11' grass shoulders where guardrail is present. Along the length of the project all ditch front and back slopes varies from 2:1 to 4:1. -Y1- includes 2-11' paved shoulders with 4' grass shoulders and 7' grass shoulders where guardrail is present.			-L- includes 2-11' paved lanes with grass shoulders. Along the length of the project all ditch front and back slopes varies from 2:1 to 4:1. -Y1- includes 2-10' paved lanes with grass shoulders.						
Annual Avg Daily Traffic (veh/hr/day):	Design/Future:	2100	Year:	2040	Existing:	2,100	Year:	2017		
General Project Narrative: (Description of Minimization of Water Quality Impacts)	<p>State project BR-0100 involves the replacement of Bridge No. 800040 over North Fork First Broad River on NC226. The existing bridge consists of 3 spans, 1 @ 45'-3", 1 @ 45'-0", 1 @ 45'-3" on concrete girders. It is to be replaced by proposed bridge that consists of 1 @ 45', 1 @ 65', 1 @ 45' on a 45" concrete girders with spill through abutments and 4'-0" end caps. The proposed bridge will be skewed at a 110 degree angle. During construction of the proposed bridge, an onsite detour bridge will be used. The detour bridge consists of 3 spans, 1 @ 46'-3", 1 @ 50', 1 @ 46'-3" on a temporary modular structure with steel H-pile piers.</p> <p>The proposed bridge does not contain deck drains, storm water from the bridge is captured in a closed drainage system at 17+20 LT and 16+98 RT along shoulder berm and gutter and discharged through a rip rap pad prior to entering North Fork First Broad River. Stormwater is also captured before the bridge in a closed system to alleviate spread on the bridge at 19+66 LT and 19+48 RT. From the beginning of the project to the JS, runoff is carried in a 4' base ditch lined with grass and onto class II rip rap at embankment to dissipate velocities before entering the stream. From the end of the project to JS, two 4' base ditches with riprap convey runoff to the JS dispelling water with class II rip rap at embankment to dissipate velocities. Bank stabilization with class II riprap will be installed under the proposed bridge due to existing piers being removed from the top of the bank and an existing swale that will no longer be utilized since the base ditches will be installed.</p> <p>The detour bridge contains deck drains due to spread encroaching on temporary travel lanes. Temporary base ditches on the left side will also be installed to convey existing flows to the JS while construction occurs. Where these base ditches meet with the top of bank, class II rip rap at embankment will be installed to dissipate velocity.</p> <p>Erosion control measures will be implemented on the project site including placement of silt fences around the construction zone, checks and wattles along flow paths, and sediment traps, around existing inlet structures.</p>									
Waterbody Information										
Surface Water Body (1):	North Fork First Broad River			NCDWR Stream Index No.:	9-37					
NCDWR Surface Water Classification for Water Body	Primary Classification:			Class C						
	Supplemental Classification:			(ORW)		Trout Waters (Tr)				
Other Stream Classification:	None									
Impairments:	None									
Aquatic T&E Species?	No	Comments:								
NRTR Stream ID:	N/A			Buffer Rules in Effect:		N/A				
Project Includes Bridge Spanning Water Body?	Yes	Deck Drains Discharge Over Buffer?		No	Dissipator Pads Provided in Buffer?		N/A			
Deck Drains Discharge Over Water Body?	Yes	(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)										

09/08/99

See Sheet 1A For Index of Sheets
See Sheet 1B For Conventional Plan Sheet Symbols



VICINITY MAP

65% PLAN SUBMITTAL

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

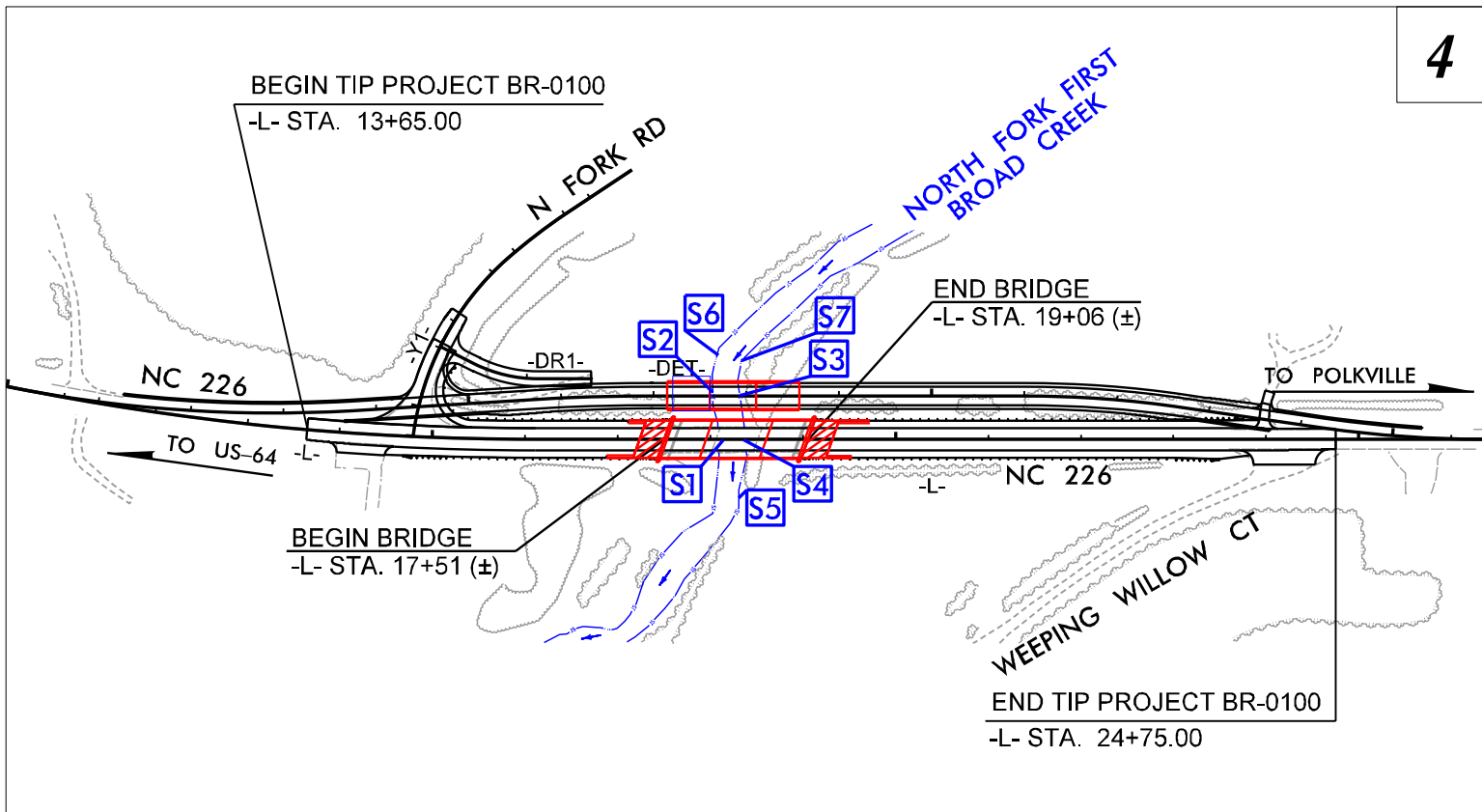
RUTHERFORD COUNTY

**LOCATION: BRIDGE No. 40 ON NC 226 OVER NORTH FORK
FIRST BROAD CREEK**

**TYPE OF WORK: GRADING, DRAINAGE, SIGNING,
TRAFFIC CONTROL AND STRUCTURE**

WETLAND AND SURFACE WATER IMPACTS PERMIT 7-28-2022

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	BR-0100	1	
STATE PROJ. NO.	P.A. PROJ. NO.	DESCRIPTION	
67100.1.1	N/A	PE	

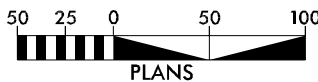


4

**PERMIT DRAWING
SHEET 1 OF 8**

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

GRAPHIC SCALES



DESIGN DATA

ADT 2017 = 2,100
ADT 2040 = 2,100
K = %
D = %
T = 12 % *
V = 60 MPH
* (TTST = 7% + DUAL = 5%)
FUNC CLASS =
RURAL, MAJOR COLLECTOR
* REGIONAL TIER
GUIDELINES

PROJECT LENGTH

LENGTH ROADWAY PROJECT BR-0100 = 0.181 MI
LENGTH STRUCTURE PROJECT BR-0100 = 0.029 MI
TOTAL LENGTH PROJECT BR-0100 = 0.210 MI

PREPARED IN THE OFFICE OF:



WSP USA
134 RAYMOND STREET
SUITE 100
RALEIGH, NC 27601
TEL: 1-800-836-4099
FAX: 1-800-836-4099
LICENSE NO. E-0165

FOR THE NORTH CAROLINA DEPARTMENT OF TRANSPORTATION

2018 STANDARD SPECIFICATIONS

RIGHT OF WAY DATE:
DECEMBER 20, 2022

LETTING DATE:
DECEMBER 19, 2023

NCDOT CONTACT:

HOLLY CHRISTENBURY, PE
PROJECT ENGINEER
DYLAN O'NEAL
PROJECT DESIGN ENGINEER

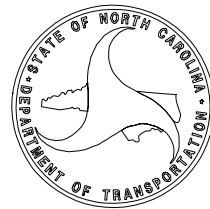
DAVID STUTTS, PE
STRUCTURES MANAGEMENT UNIT

HYDRAULICS ENGINEER

SIGNATURE: _____ P.E.

**ROADWAY DESIGN
ENGINEER**

SIGNATURE: _____ P.E.



PROJECT: BR-0100

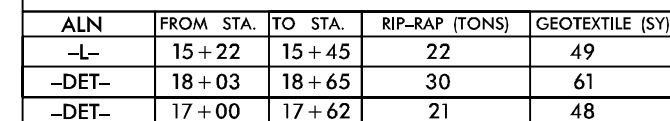
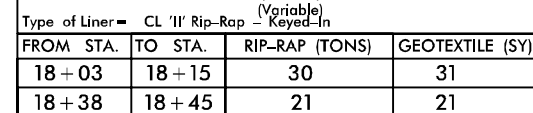
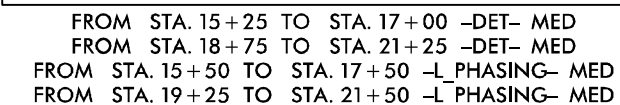
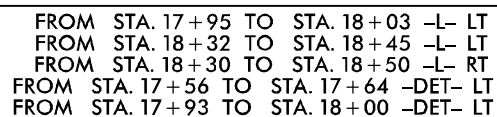
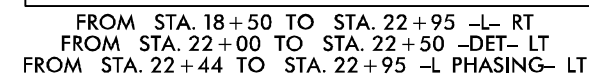
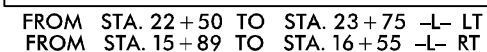
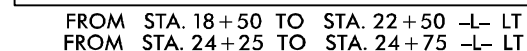
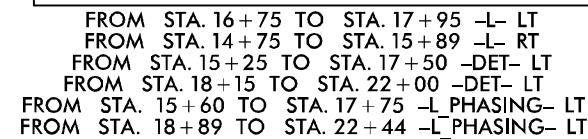
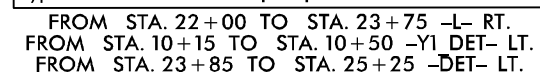
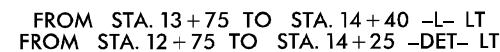
CONTRACT:

\$\$\$\$\$SYTIME\$\$\$\$\$
\$\$\$\$\$DON\$\$\$\$\$
\$\$\$\$\$SERNAME\$\$\$\$\$

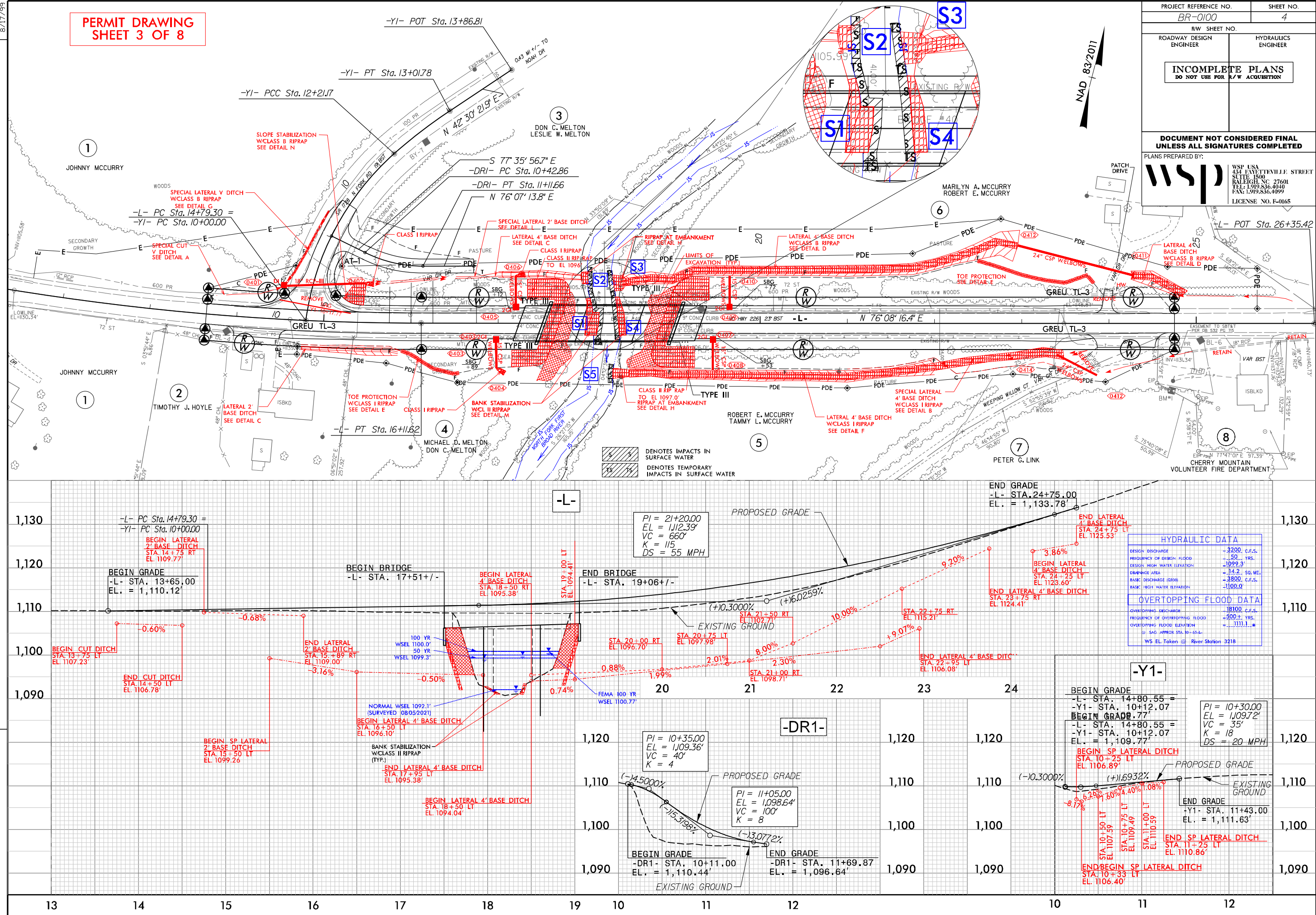
INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

**DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED**

PERMIT DRAWING
SHEET 2 OF 8



REVISIONS



8/17/99

PERMIT DRAWING
SHEET 6 OF 8

PROJECT REFERENCE NO.
BR-0100

SHEET NO.
2B-1

R/W SHEET NO.

ROADWAY DESIGN ENGINEER
ROBERT E. MCCURRY

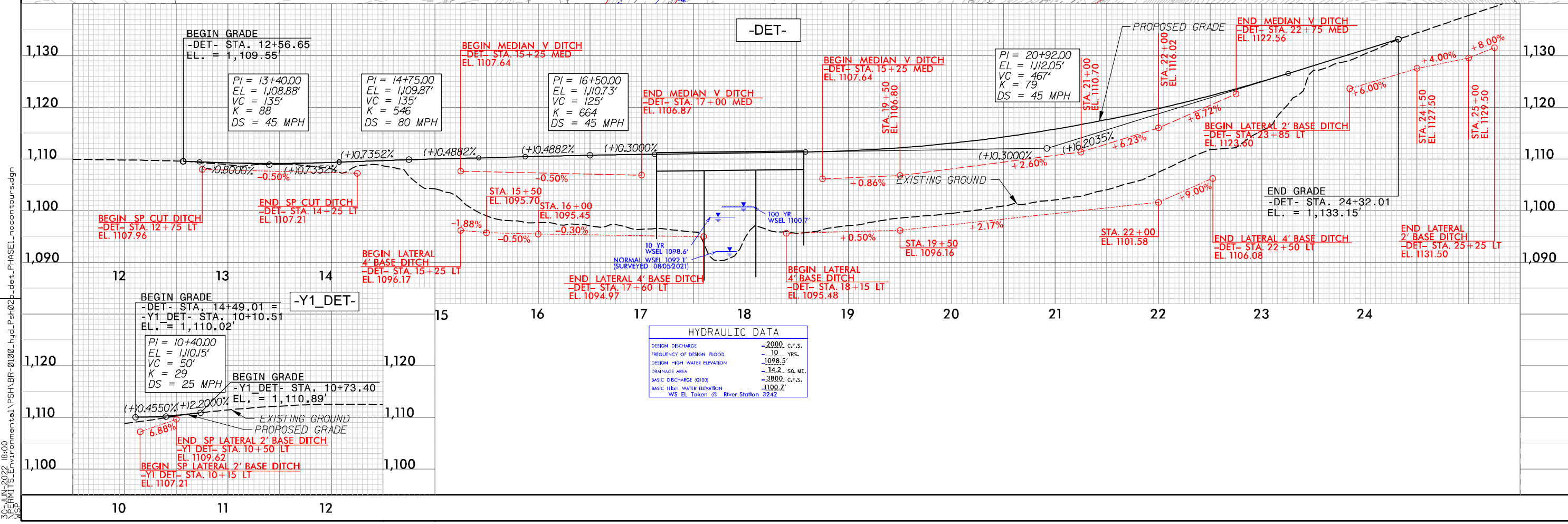
HYDRAULICS ENGINEER

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED

PLANS PREPARED BY:
wsp
WSP USA
434 FAYETTEVILLE STREET
RALEIGH, NC 27601
TEL: 1.919.836.4040
FAX: 1.919.836.4099
LICENSE NO. F-0165

REVISIONS

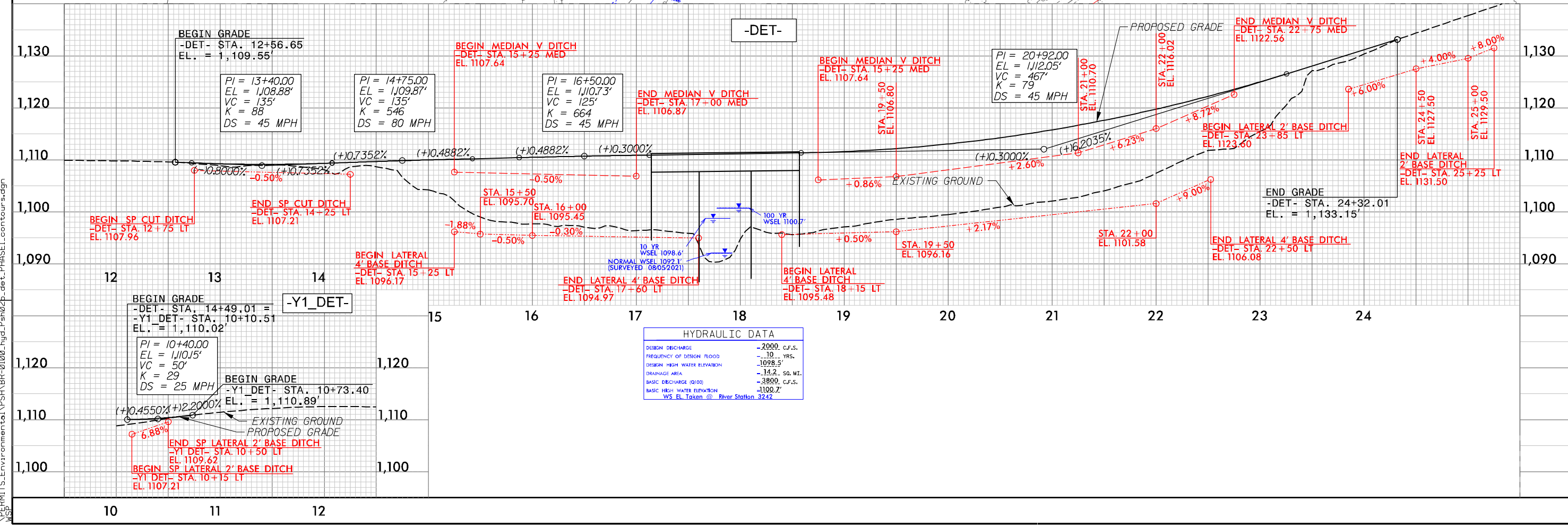
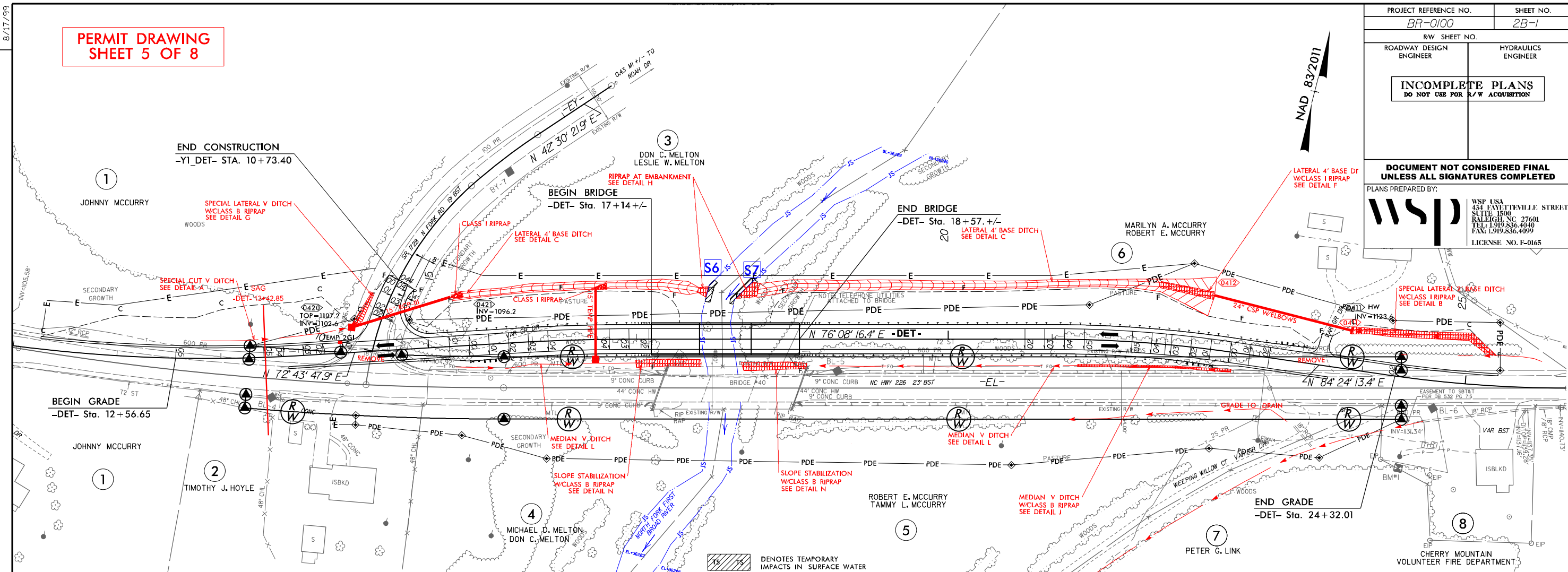


30-JUN-2022 18:00
PERMITS\Environmental\PSH\BR-0100_Hyd_Psh02b_det_PHASE1.necontours.dgn
WSP

PERMIT DRAWING
SHEET 5 OF 8

PROJECT REFERENCE NO. BR-0100		SHEET NO. 2B-1	
RW SHEET NO.		HYDRAULICS ENGINEER	
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER	
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION			
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED			
PLANS PREPARED BY: WSP			
WSP USA 434 FAYETTEVILLE STREET SUITE 1500 RALEIGH, NC 27601 TEL: 1.919.836.4040 FAX: 1.919.836.4099 LICENSE NO. E-0165			

NAD 83/2011



HYDRAULIC DATA	
DESIGN DISCHARGE	2000 C.F.S.
FREQUENCY OF DESIGN FLOOD	10 YRS.
DESIGN HIGH WATER ELEVATION	1098.5'
DRAINAGE AREA	14.2 SQ. MI.
BASIC DISCHARGE (Q100)	3800 C.F.S.
BASIC HIGH WATER ELEVATION	1100.7'
WS EL. Taken @	River Station 3242

8/17/99

PERMIT DRAWING
SHEET 6 OF 8

PROJECT REFERENCE NO.
BR-0100

SHEET NO.
2B-1

R/W SHEET NO.

ROADWAY DESIGN ENGINEER

HYDRAULICS ENGINEER

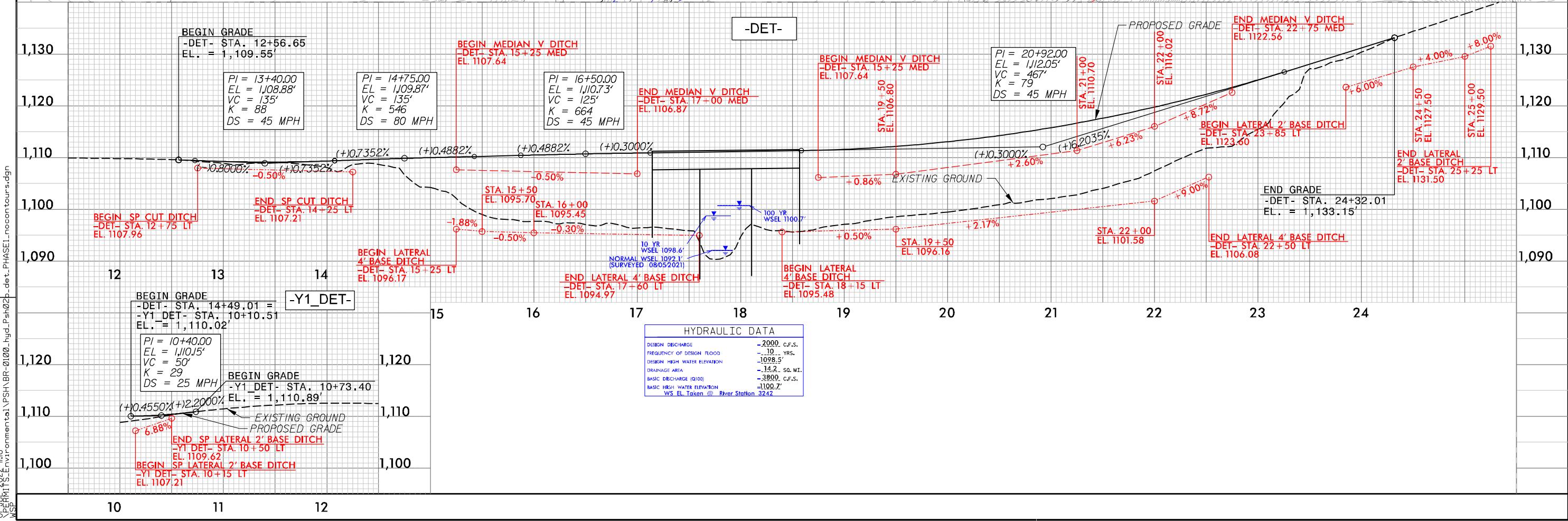
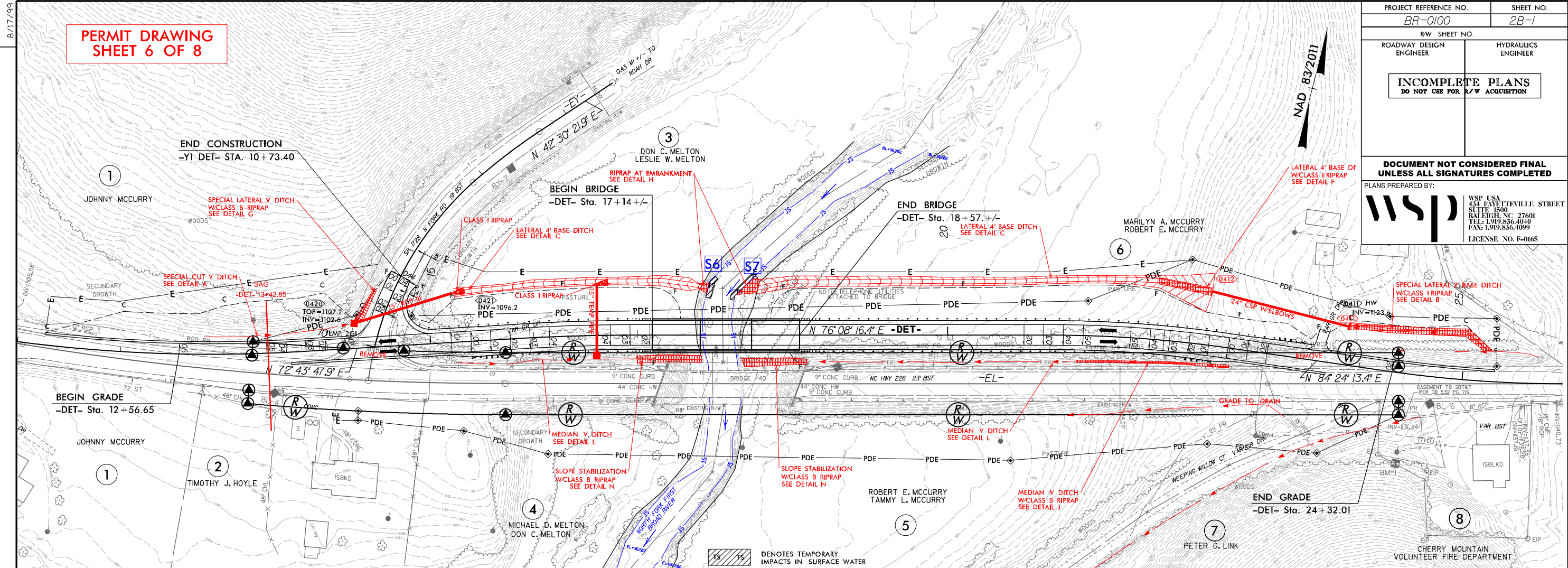
INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

DOCUMENT NOT CONSIDERED FINAL
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PLANS PREPARED BY:
wsp
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REVISIONS

01-JUL-2022 Ild
SPERMIT Environmental\PSH\BR-0100_Hyd_Pst02b_det_PHASE1.ne contours.dgn
WSP



WBS 67100.11
BRIDGE #40 OVER NORTH FORK FIRST BROAD CREEK
ON NC 226

ASPHALT OVERLAY ON CONCRETE DECK
WITH STEEL BEAMS AND CONCRETE PILE BENTS
CONCRETE BULKHEADS AND RAILINGS

PROJECT REFERENCE NO. BR-0100	SHEET NO. EC-04/CONST.04
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

PERMIT DRAWING
SHEET 7 OF 8

CLEARING AND GRUBBING
EROSION CONTROL FOR
CONSTRUCTION SHEET 4

NAD 83/2011

158 x 30 x 3
2.0 inch Skimmer
with 1.875 inch
Orifice Diameter
18 ft. weir
ID 4.3

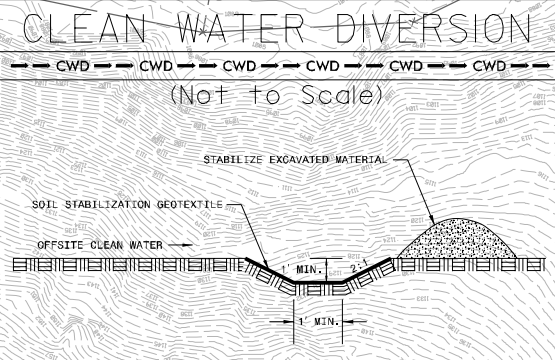
94 x 20 x 3
ID 4.1

DISTURBED AREA
1.06 AC

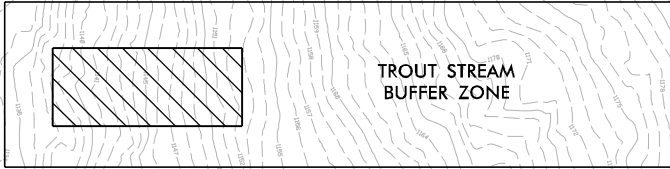
DISTURBED AREA
1.56 AC

52 x 15 x 3
ID 4.2

DISTURBED AREA
0.77 AC



NOTE:
PLACE TEMPORARY ROCK SEDIMENT DAMS TYPE - B
AND TEMPORARY ROCK SILT CHECKS TYPE - A AT
DRAINAGE OUTLETS.



WETLAND AND SURFACE WATER IMPACTS SUMMARY												
			WETLAND IMPACTS					SURFACE WATER IMPACTS				
Site No.	Station (From/To)	Structure Size / Type	Permanent Fill In Wetlands (ac)	Temp. Fill In Wetlands (ac)	Excavation in Wetlands (ac)	Mechanized Clearing in Wetlands (ac)	Hand Clearing in Wetlands (ac)	Permanent SW impacts (ac)	Temp. SW impacts (ac)	Existing Channel Impacts Permanent (ft)	Existing Channel Impacts Temp. (ft)	Natural Stream Design (ft)
S1	L 18+03 to 18+15	Bank Stabilization						< 0.01	< 0.01	51	17	
S2	L 17+95 to 18+03 LT	Riprap at Embankment						< 0.01	< 0.01	14	10	
S3	L 18+32 to 18+45 LT	Riprap at Embankment						< 0.01	< 0.01	19	10	
S4	L 18+38 to 18+45	Bank Stabilization						< 0.01	< 0.01	Note a	Note b	
S5	L 18+30 to 18+50 RT	Riprap at Embankment						< 0.01	< 0.01	12	10	
S6	DET 17+56 to 17+64 LT	Riprap at Embankment							< 0.01		33	
S7	DET 17+93 to 18+00 LT	Riprap at Embankment							< 0.01		21	
TOTALS*:								0.02	0.01	96	101	0

NOTES:

- a. Permanent impacts (LF) are accounted for in Site 1 impacts
- b. Temporary impacts (LF) are accounted for in Site 1 impacts

SHEET 8 OF 8