




STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION

JOSH STEIN
GOVERNOR

J.R. "JOEY" HOPKINS
SECRETARY

July 23, 2025

MEMORANDUM TO: Division Environmental and Construction Units

FROM:  Michael A. Turchy, ECAP Group Leader
Environmental Analysis Unit

SUBJECT: Environmental Permits for the Replacement of **Bridge 58 0090** over Mill Creek SR 1407 (Mill Creek Road) in McDowell County, Division 13, WBS DF18313.2059015.PR

Environmental approvals for this project:

Agency	Permit Type	Permit Expiration
US Army Corps of Engineers Section 404 Clean Water Act Permit	Nationwide Permits 3 [Non-Written]	March 14, 2026
NC Division of Water Resources Section 401 Water Quality Certification	Water Quality General Certification 7466 [NWP 3]	Expires with 404

Work is authorized by the above referenced documents 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) or accompanying drawings 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/



North Carolina Department of Transportation
Highway Stormwater Program
STORMWATER MANAGEMENT PLAN
FOR NCDOT PROJECTS



(Version 3.02; Released April 23, 2024)

WBS Element: DF18313.2059015.PR TIP/Proj No: 580090 County(ies): McDowell Page 1 of 2

General Project Information

WBS Element:	DF18313.2059015.PR	TIP Number:	580090	Project Type:	Bridge Replacement	Date:	5/13/2025
NCDOT Contact:	Marc Shown, PE			Contractor / Designer:	Justin Davenport, PE		
	Address:	Hydraulics Unit 1000 Birch Ridge Drive Raleigh, NC 27610			Address:	Moffatt & Nichol 4700 Falls of Neuse Rd, Suite 300 Raleigh, NC 27609	
	Phone:	(919)707-6751			Phone:	(919)334-7979	
	Email:	mtshown@ncdot.gov			Email:	jdavenport@moffattnichol.com	
City/Town:	Old Fort			County(ies):	McDowell		
River Basin(s):	Catawba			CAMA County?	No		
Wetlands within Project Limits?	Yes						

Project Description

Project Length (lin. miles or feet):	0.05	Surrounding Land Use:	RURAL, FORESTS, RESIDENTIAL					
	Proposed Project		Existing Site					
Project Built-Up Area (ac.)	0.2	ac.	0.2	ac.				
Typical Cross Section Description:	THE PROPOSED ROADWAY WILL BE A TWO-WAY ALIGNMENT WITH 10' TRAVEL LANES, 1' PAVED SHOULDERS, AND VARYING SLOPES. THE PROPOSED BRIDGE HAS AN OUT TO OUT OF 27' AND CLEAR ROADWAY OF 24'-9". THE BRIDGE WILL HAVE 10' TRAVEL LANES AND 2'-0" PAVED LEFT SHOULDER AND 2'-9" PAVED RIGHT SHOULDER.		THE EXISTING ROADWAY IS A TWO-WAY ALIGNMENT WITH 10' TRAVEL LANES, 1' PAVED SHOULDER, AND 4:1 SLOPES. THE EXISTING BRIDGE HAS AN OUT TO OUT OF 18'-6".					
Annual Avg Daily Traffic (veh/hr/day):	Design/Future:	N/A	Year:	N/A	Existing:	200	Year:	2025

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

The project consists of the replacement of bridge # 580090 in McDowell County. The existing bridge carries SR 1407 (Mill Creek Road) Over Mill Creek between SR 1400 (Old US 70W) and Yates Ave.

The Creek is called Mill Creek on the vicinity map, the final survey file, and at the NCDEQ Surface Waters Classification website and is referring to the same stream. The proposed structure for bridge # 580090 is 97.49' length x 27' width (9 -21" prestressed concrete cored slab units). The proposed alignment is at the same location as the existing alignment. The proposed detour alignment is located to the East and on the upstream side of the project. The detour bridge typical is one 14' travel lane with 2' paved shoulders on both side.

STORMWATER CONTROLS:

The proposed bridge does not utilize deck drains. Runoff from the bridge roadway and paved shoulders at the bridge approaches drains into concrete flume. The stormwater is then diffused at slope prior to discharging into Mill Creek. Shoulders will be paved. Bank Stabilization is planned to prevent erosion of the steambanks.

NOTE:

This is an emergency design bulid caused by Hurricane Helene.



North Carolina Department of Transportation

Highway Stormwater Program
STORMWATER MANAGEMENT PLAN
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(Version 3.02; Released April 23, 2024)

WBS Element: DF18313.2059015.PR TIP/Proj No.: 580090 County(ies): McDowell Page 2 of 2

General Project Information

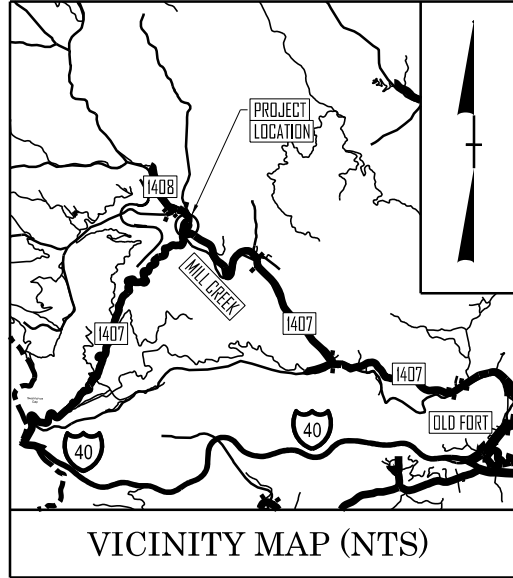
Waterbody Information

Surface Water Body (1):	Mill Creek		NCDWR Stream Index No.:	11-7-(0.5)	
NCDWR Surface Water Classification for Water Body	Primary Classification:		Class C		
	Supplemental Classification:		Trout Waters (Tr) (HQW)		
Other Stream Classification:					
Impairments:	None				
Aquatic T&E Species?	No	Comments:			
NRTR Stream ID:	Mill Creek		Buffer Rules in Effect:	N/A	
Project Includes Bridge Spanning Water Body?	Yes	Deck Drains Discharge Over Buffer?	No	Dissipator Pads Provided in Buffer?	No
Deck Drains Discharge Over Water Body?	No	(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):			NCDWR Stream Index No.:		
NCDWR Surface Water Classification for Water Body	Primary Classification:				
	Supplemental Classification:				
Other Stream Classification:					
Impairments:					
Aquatic T&E Species?		Comments:			
NRTR Stream ID:			Buffer Rules in Effect:		
Project Includes Bridge Spanning Water Body?		Deck Drains Discharge Over Buffer?		Dissipator Pads Provided in Buffer?	
Deck Drains Discharge Over Water Body?		(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):			NCDWR Stream Index No.:		
NCDWR Surface Water Classification for Water Body	Primary Classification:				
	Supplemental Classification:				
Other Stream Classification:					
Impairments:					
Aquatic T&E Species?		Comments:			
NRTR Stream ID:			Buffer Rules in Effect:		
Project Includes Bridge Spanning Water Body?		Deck Drains Discharge Over Buffer?		Dissipator Pads Provided in Buffer?	
Deck Drains Discharge Over Water Body?		(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)					

TIP PROJECT: 580090

CONTRACT: C205021

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



VICINITY MAP (NTS)

STATE OF NORTH CAROLINA DIVISION OF HIGHWAYS

MCDOWELL COUNTY

LOCATION: *REPLACE BRIDGE 580090 OVER MILL CREEK
ON SR 1407 (MILL CREEK RD)*

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

WETLAND AND SURFACE WATER IMPACTS PERMIT

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	580090	11	
STATE PROJ. NO.	F. A. PROJ. NO.	DESCRIPTION	
DF18313.2059015.PR	N/A	PE	
DF18313.2059015.PR	N/A	RW	
DF18313.2059015.PR	N/A	UTIL	
DF18313.2059015.PR	N/A	CONST	

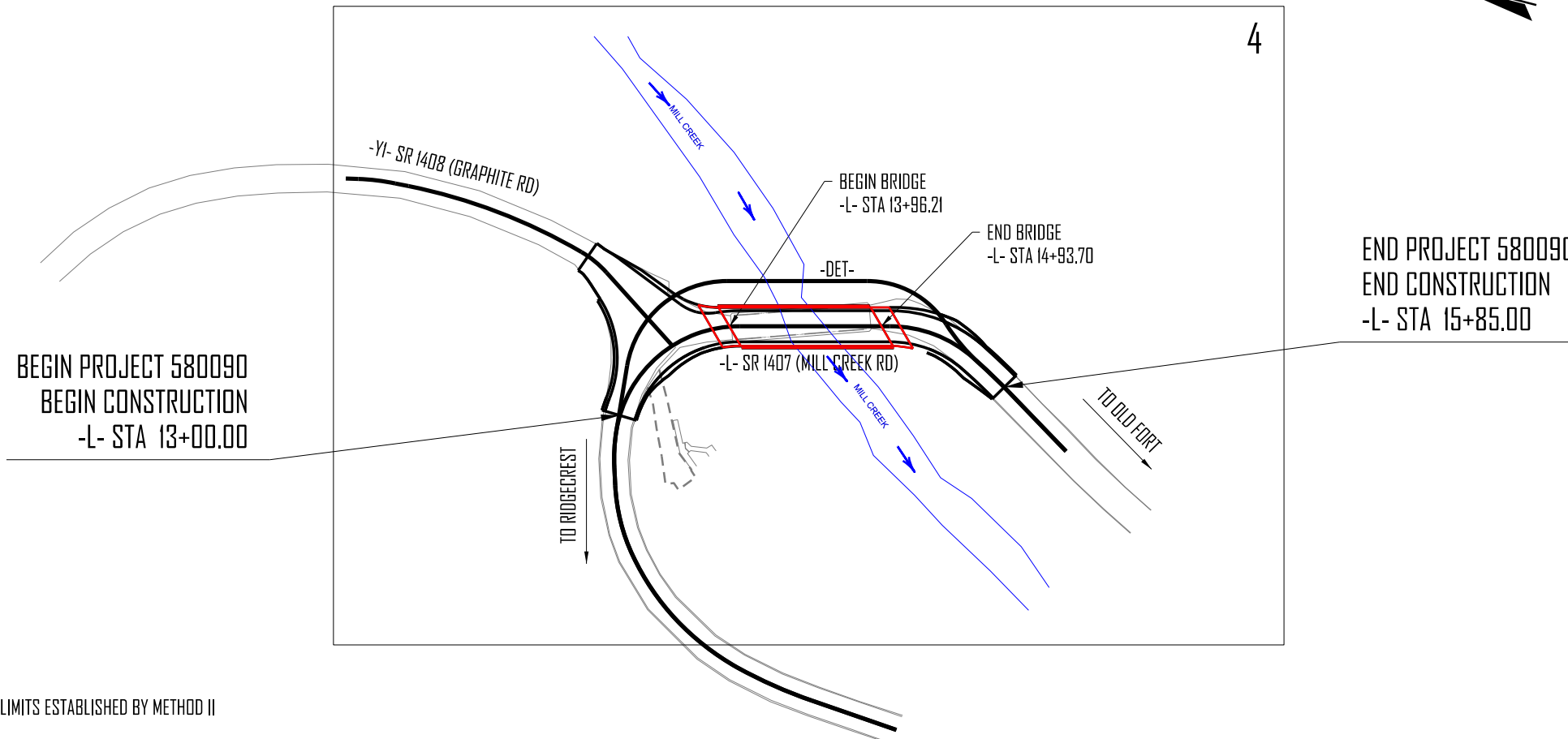
PERMIT DRAWING
SHEET 1 OF 6



S.T. WOOTEN



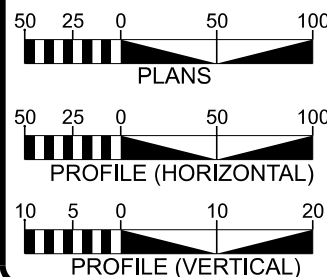
moFFatt & nichol



CLEARING ON THIS PROJECT SHALL BE PERFORMED TO THE LIMITS ESTABLISHED BY METHOD II
THIS PROJECT IS NOT WITHIN ANY MUNICIPAL BOUNDARIES

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION
DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED

GRAPHIC SCALES



DESIGN DATA

ADT 2025 = 200

T = 6 % *
V = 15 MPH
* TTST = 3% DUAL = 3%
FUNC CLASS =
LOCAL
SUBREGIONAL TIER

PROJECT LENGTH

LENGTH OF ROADWAY PROJECT 580090 = 0.036 MILES
LENGTH OF STRUCTURE PROJECT 580090 = 0.018 MILE
TOTAL LENGTH OF PROJECT 580090 = 0.054 MILES



Prepared in the Office of:
moFFatt & nichol

4700 FALLS OF NEUSE ROAD, SUITE 300
RALEIGH, NORTH CAROLINA 27609
(919) 781-4826 VOICE (919) 781-4889 FAX
NC LICENSE NO.: F-0105

2024 STANDARD SPECIFICATIONS

RIGHT OF WAY DATE:
JANUARY 9, 2025

LETTING DATE:
JANUARY 9, 2025

TRENT HUFFMAN, PE
PROJECT ENGINEER

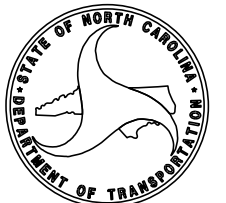
GRAY MODLIN, PE
PROJECT DESIGN ENGINEER

BYRON KYLE, PE
NCDOT CONTACT

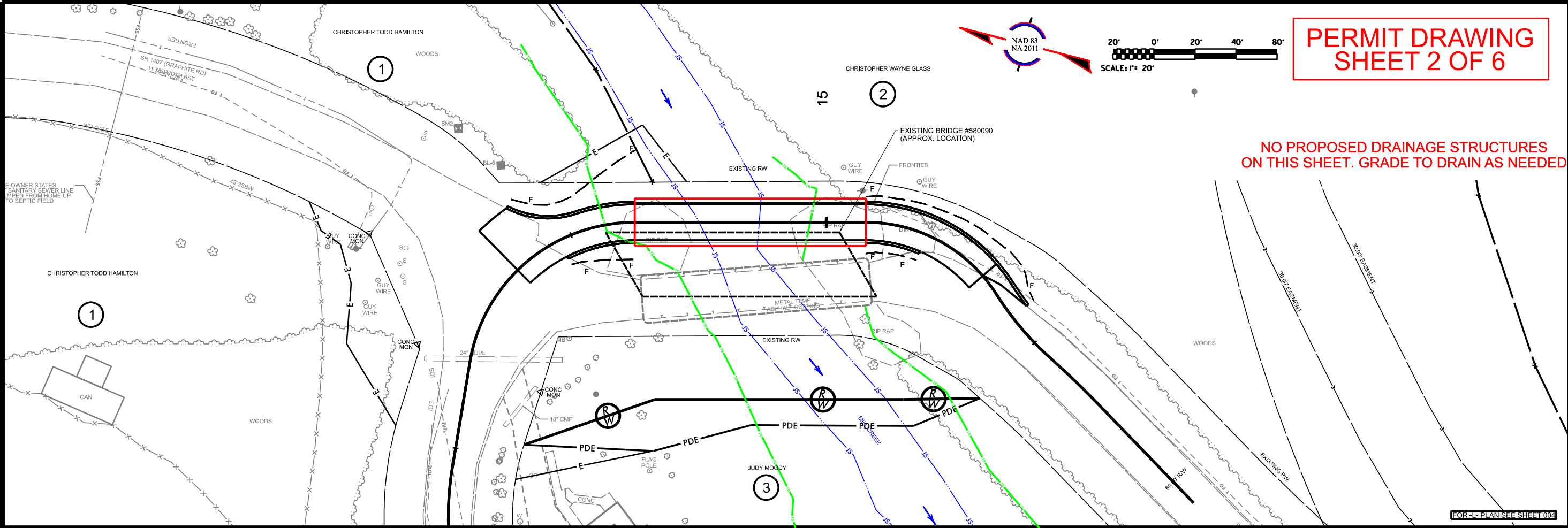
HYDRAULICS ENGINEER

SIGNATURE: _____
ROADWAY DESIGN ENGINEER

SIGNATURE: _____
P.E.



11/11/23



580090

204

NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
WAKE COUNTY

ROADWAY DESIGN UNIT
ROADWAY DESIGN
ENGINEER

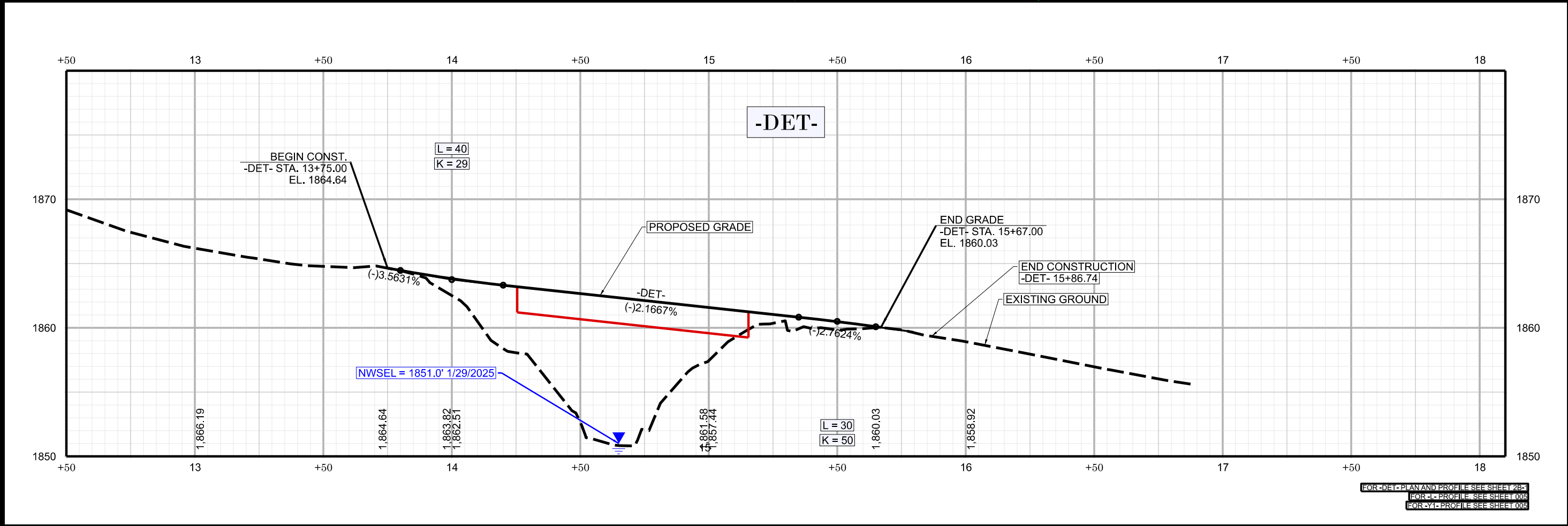
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UNLESS ALL SIGNATURES COMPLETED

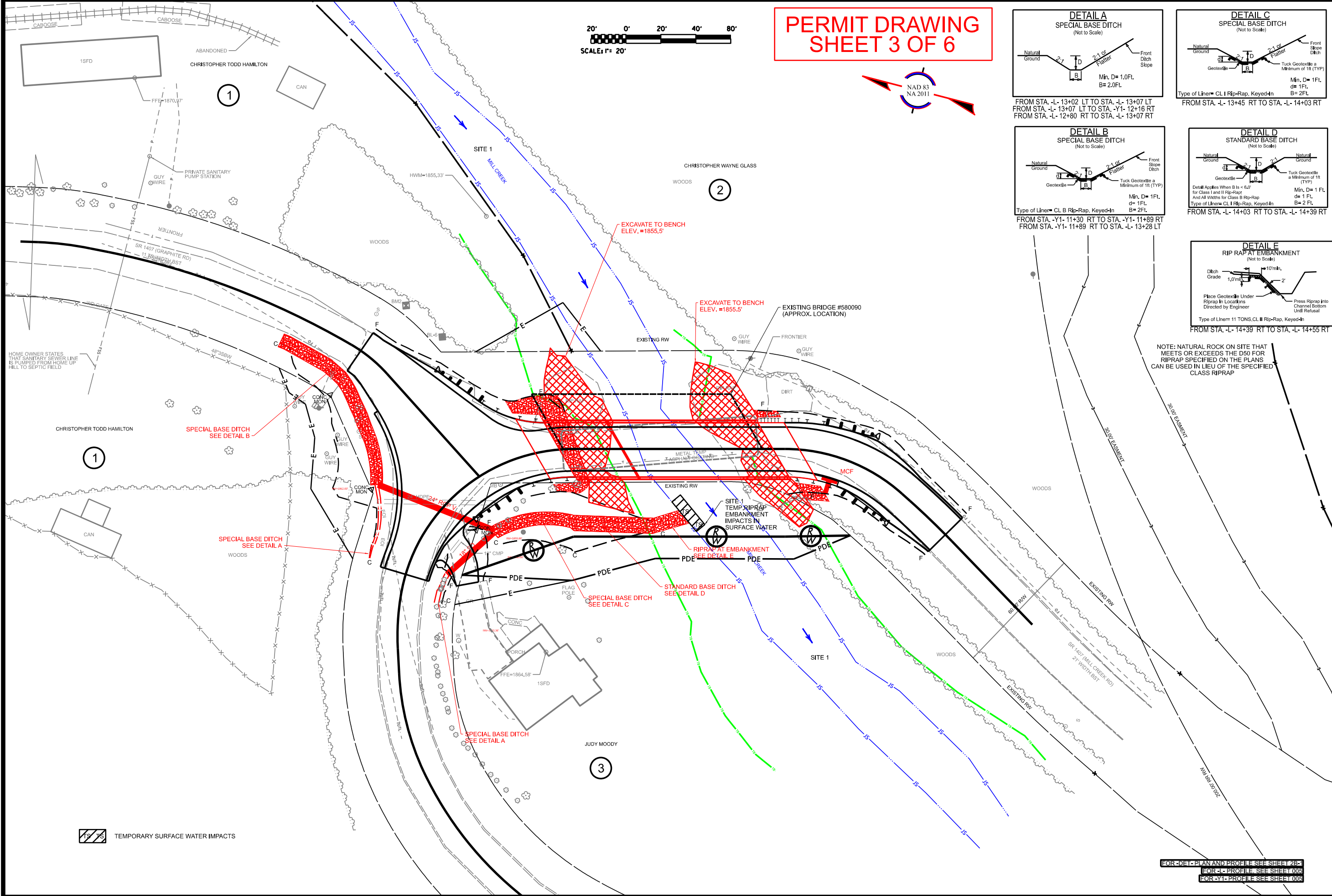
HYDRAULICS
ENGINEER

INCOMPLETE PLANS
DO NOT USE FOR CONSTRUCTION

PREPARED BY

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RALEIGH, NORTH CAROLINA 27609
(919) 781-1100 FAX (919) 781-1101
NC LICENSE NO. 17-0103





580090

004

NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
WAKE COUNTY

ROADWAY DESIGN UNIT
ROADWAY DESIGN
ENGINEER

DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED

HYDRAULICS
ENGINEER

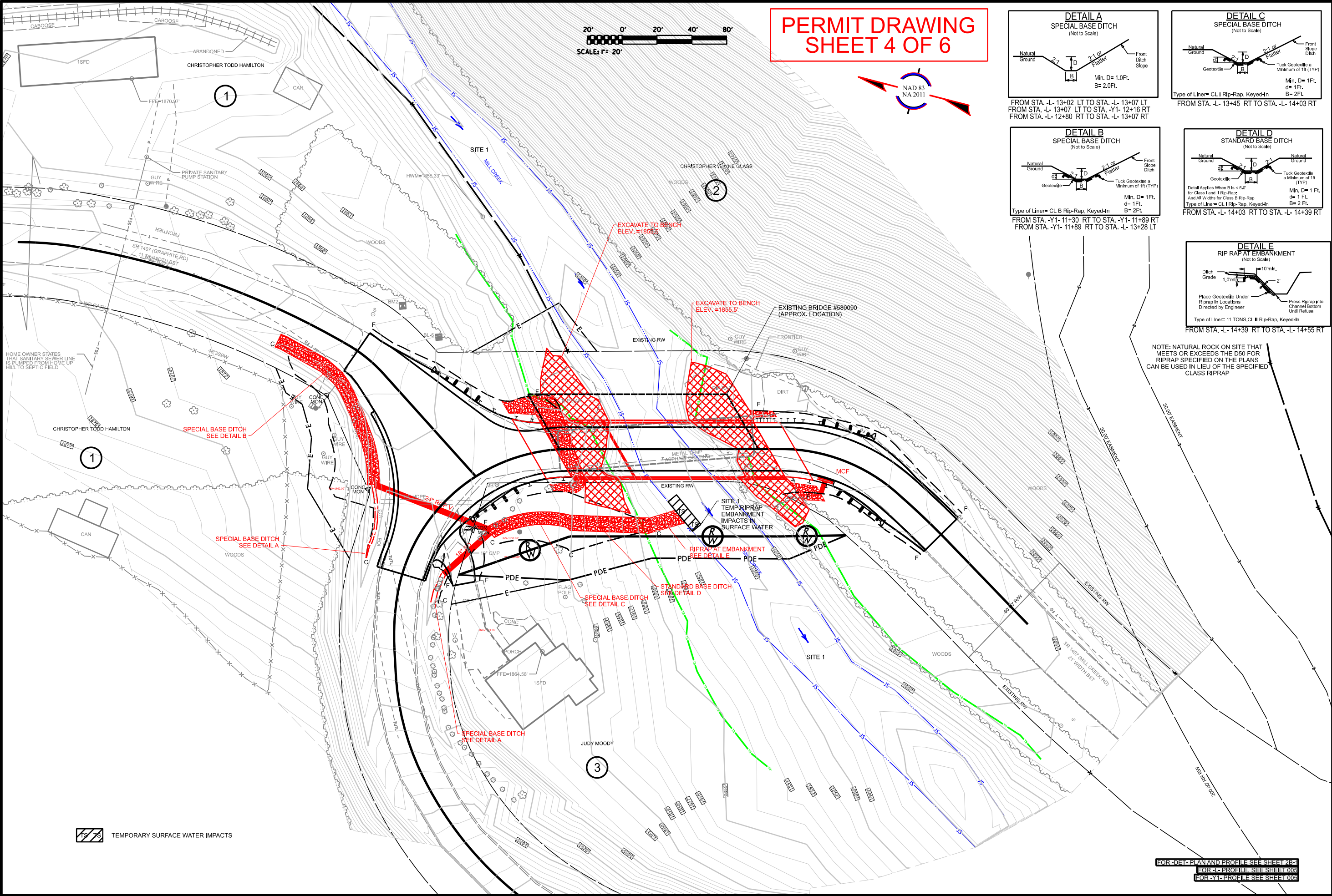
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(DO NOT USE FOR CONSTRUCTION)

PREPARED BY

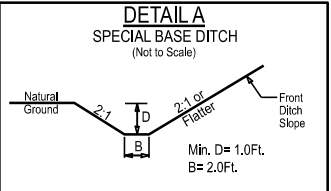
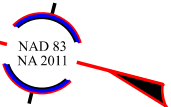
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4700 FALLS OF NEURER ROAD, SUITE 300
RALEIGH, NORTH CAROLINA 27609
(919) 781-9000 FAX (919) 781-9005
NC LICENSE NO. 2174-03

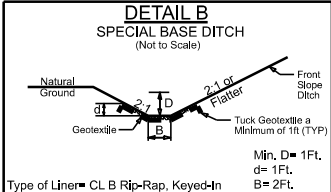
REVISIONS



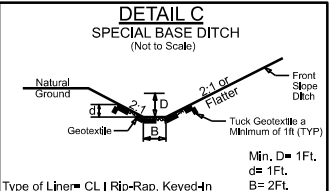
PERMIT DRAWING
SHEET 4 OF 6



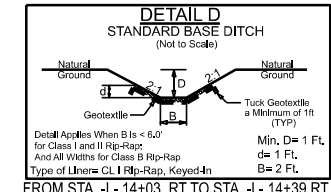
FROM STA. -L- 13+02 LT TO STA. -L- 13+07 LT
FROM STA. -L- 13+07 LT TO STA. -Y1- 12+16 RT
FROM STA. -L- 12+80 RT TO STA. -L- 13+07 RT



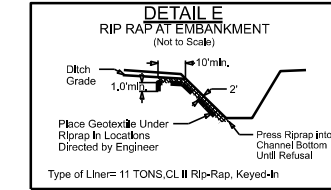
FROM STA. -Y1- 11+30 RT TO STA. -Y1- 11+89 RT
FROM STA. -Y1- 11+89 RT TO STA. -L- 13+28 LT



FROM STA. -L- 14+45 RT TO STA. -L- 14+03 RT



FROM STA. -L- 14+03 RT TO STA. -L- 14+39 RT



FROM STA. -L- 14+39 RT TO STA. -L- 14+55 RT

NOTE: NATURAL ROCK ON SITE THAT MEETS OR EXCEEDS THE D50 FOR RIPRAP SPECIFIED ON THE PLANS CAN BE USED IN LIEU OF THE SPECIFIED CLASS RIPRAP

580090
004

NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
WAKE COUNTY

ROADWAY DESIGN UNIT
ROADWAY DESIGN
ENGINEER

HYDRAULICS
ENGINEER

INCOMPLETE PLANS
DO NOT USE FOR THE E.C. AGREEMENT

PREPARED BY

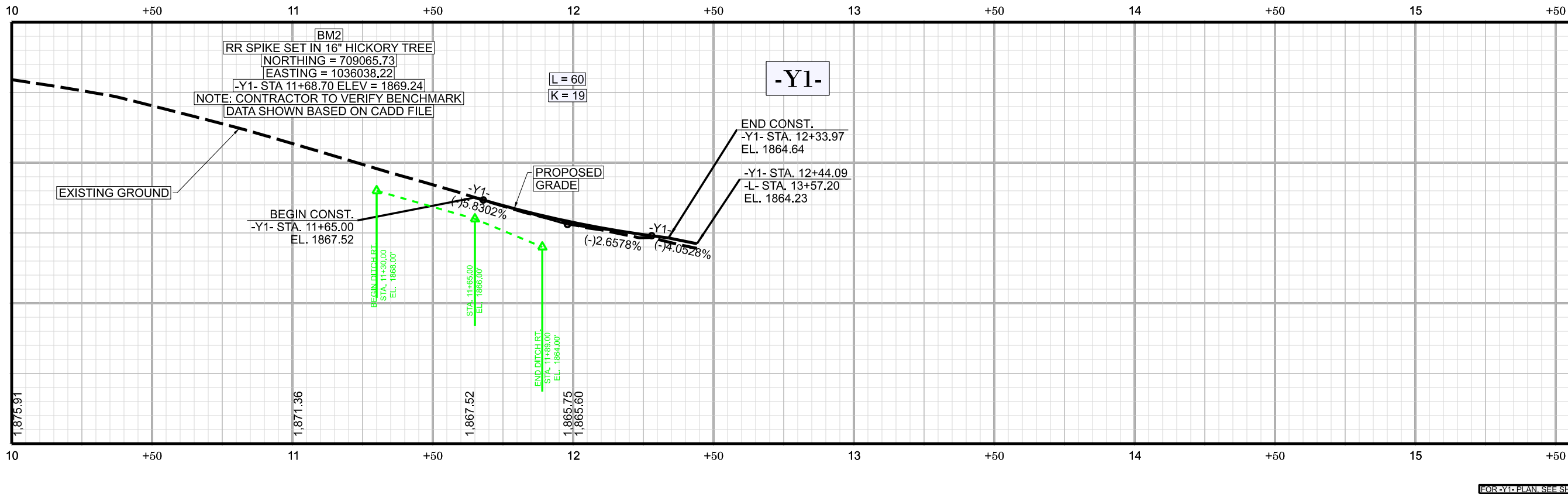
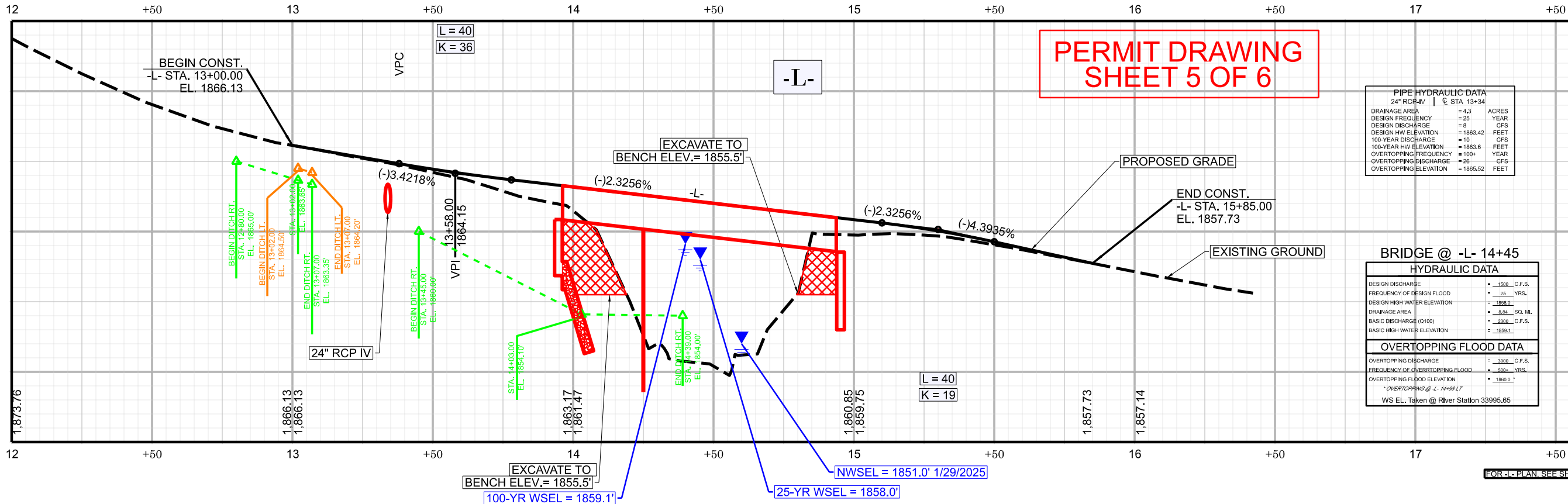
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4700 FALLS OF NEURER ROAD, SUITE 300
RALEIGH, NORTH CAROLINA 27609
(919) 781-0000 FAX (919) 781-0001
NC LICENSE NO. 174-0103

REVISIONS

TEMPORARY SURFACE WATER IMPACTS

FOR DETAIL PLAN AND PROFILE SEE SHEET 2 OF 4
FOR J-1 PROFILE SEE SHEET 005
FOR Y-1 PROFILE SEE SHEET 005



580090
005

NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
WAKE COUNTY

ROADWAY DESIGN UNIT
ROADWAY DESIGN ENGINEER

DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED

HYDRAULICS ENGINEER

INCOMPLETE PLANS
DO NOT USE FOR CONSTRUCTION

PREPARED BY
moffatt & nichols

4700 FALLS OF NEUSE ROAD, SUITE 300
RALEIGH, NORTH CAROLINA 27609
(919) 781-1000 FAX (919) 781-1001
NC LICENSE NO. 2140103

REVISIONS

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)
1	-L- 14+47 RT to 14+63 RT	Riprap at Embankment							< 0.01		18	
TOTALS*:									< 0.01	0	18	0

*Rounded totals are sum of actual impacts

NOTES:

Actual impact 0.002

NC DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
5/21/2025
MCDOWELL COUNTY
580090
DF18313.2059015.PR



North Carolina Department of Transportation
Highway Stormwater Program
STORMWATER MANAGEMENT PLAN
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(Version 3.02; Released April 23, 2024)

WBS Element: DF18313.2059015.PR TIP/Proj No: 580090 County(ies): McDowell Page 1 of 2

General Project Information

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	Phone:	(919)707-6751			Phone:	(919)334-7979	
	Email:	mtshown@ncdot.gov			Email:	jdavenport@moffattnichol.com	
City/Town:	Old Fort			County(ies):	McDowell		
River Basin(s):	Catawba			CAMA County?	No		
Wetlands within Project Limits?	Yes						

Project Description

Project Length (lin. miles or feet):	0.05	Surrounding Land Use:	RURAL, FORESTS, RESIDENTIAL					
	Proposed Project		Existing Site					
Project Built-Up Area (ac.)	0.2	ac.	0.2	ac.				
Typical Cross Section Description:	THE PROPOSED ROADWAY WILL BE A TWO-WAY ALIGNMENT WITH 10' TRAVEL LANES, 1' PAVED SHOULDERS, AND VARYING SLOPES. THE PROPOSED BRIDGE HAS AN OUT TO OUT OF 27' AND CLEAR ROADWAY OF 24'-9". THE BRIDGE WILL HAVE 10' TRAVEL LANES AND 2'-0" PAVED LEFT SHOULDER AND 2'-9" PAVED RIGHT SHOULDER.		THE EXISTING ROADWAY IS A TWO-WAY ALIGNMENT WITH 10' TRAVEL LANES, 1' PAVED SHOULDER, AND 4:1 SLOPES. THE EXISTING BRIDGE HAS AN OUT TO OUT OF 18'-6".					
Annual Avg Daily Traffic (veh/hr/day):	Design/Future:	N/A	Year:	N/A	Existing:	200	Year:	2025

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

The project consists of the replacement of bridge # 580090 in McDowell County. The existing bridge carries SR 1407 (Mill Creek Road) Over Mill Creek between SR 1400 (Old US 70W) and Yates Ave.
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STORMWATER CONTROLS:

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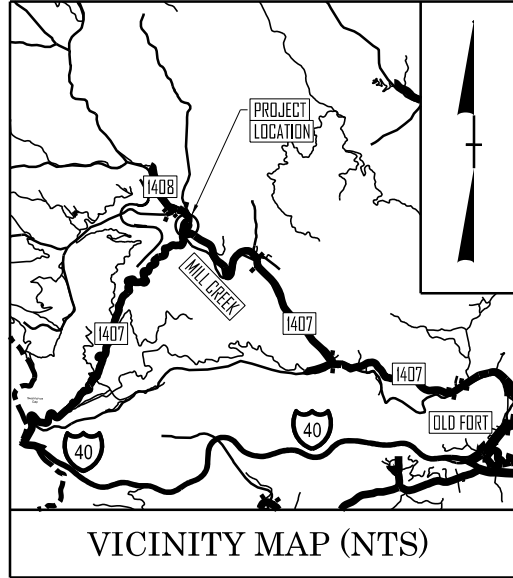
Waterbody Information

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NCDWR Surface Water Classification for Water Body	Primary Classification:		Class C		
	Supplemental Classification:		Trout Waters (Tr) (HQW)		
Other Stream Classification:					
Impairments:	None				
Aquatic T&E Species?	No	Comments:			
NRTR Stream ID:	Mill Creek		Buffer Rules in Effect:	N/A	
Project Includes Bridge Spanning Water Body?	Yes	Deck Drains Discharge Over Buffer?	No	Dissipator Pads Provided in Buffer?	No
Deck Drains Discharge Over Water Body?	No	(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)	
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NCDWR Surface Water Classification for Water Body	Primary Classification:				
	Supplemental Classification:				
Other Stream Classification:					
Impairments:					
Aquatic T&E Species?		Comments:			
NRTR Stream ID:			Buffer Rules in Effect:		
Project Includes Bridge Spanning Water Body?		Deck Drains Discharge Over Buffer?		Dissipator Pads Provided in Buffer?	
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NRTR Stream ID:			Buffer Rules in Effect:		
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TIP PROJECT: 580090

CONTRACT: C205021

See Sheet 1A For Index of Sheets
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VICINITY MAP (NTS)

STATE OF NORTH CAROLINA DIVISION OF HIGHWAYS

MCDOWELL COUNTY

LOCATION: *REPLACE BRIDGE 580090 OVER MILL CREEK
ON SR 1407 (MILL CREEK RD)*

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

WETLAND AND SURFACE WATER IMPACTS PERMIT

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	580090	11	
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DF18313.2059015.PR	N/A	RW	
DF18313.2059015.PR	N/A	UTIL	
DF18313.2059015.PR	N/A	CONST	

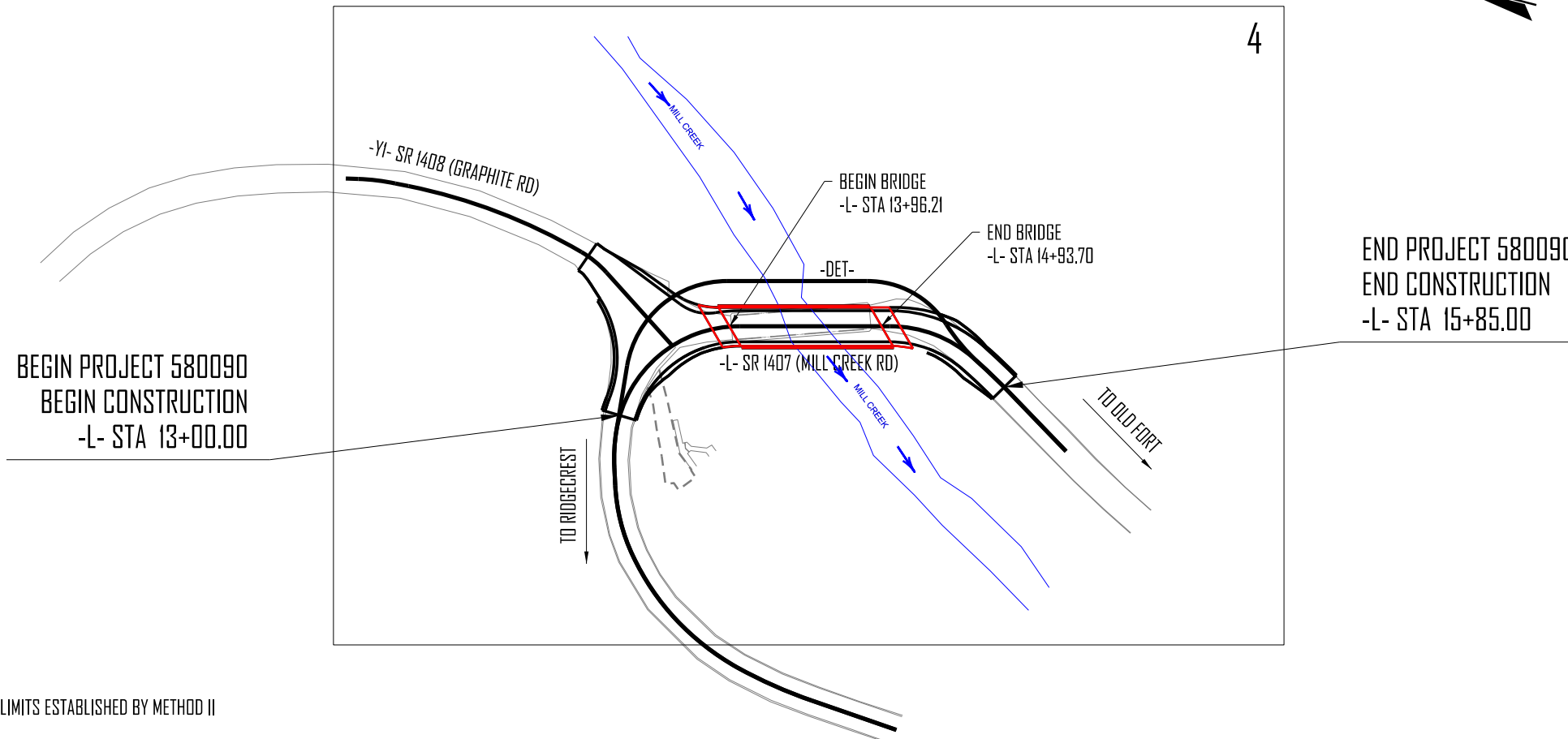
PERMIT DRAWING
SHEET 1 OF 6



S.T. WOOTEN



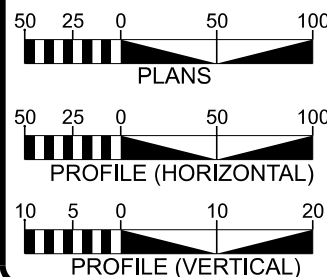
moFFatt & nichol



CLEARING ON THIS PROJECT SHALL BE PERFORMED TO THE LIMITS ESTABLISHED BY METHOD II
THIS PROJECT IS NOT WITHIN ANY MUNICIPAL BOUNDARIES

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION
DOCUMENT NOT CONSIDERED FINAL
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GRAPHIC SCALES



DESIGN DATA

ADT 2025 = 200

T = 6 % *
V = 15 MPH
* TTST = 3% DUAL = 3%
FUNC CLASS =
LOCAL
SUBREGIONAL TIER

PROJECT LENGTH

LENGTH OF ROADWAY PROJECT 580090 = 0.036 MILES
LENGTH OF STRUCTURE PROJECT 580090 = 0.018 MILE
TOTAL LENGTH OF PROJECT 580090 = 0.054 MILES



Prepared in the Office of:
moFFatt & nichol

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(919) 781-4826 VOICE (919) 781-4889 FAX
NC LICENSE NO.: F-0105

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RIGHT OF WAY DATE:
JANUARY 9, 2025

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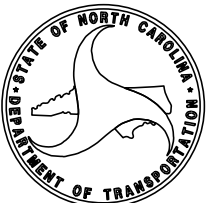
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BYRON KYLE, PE
NCDOT CONTACT

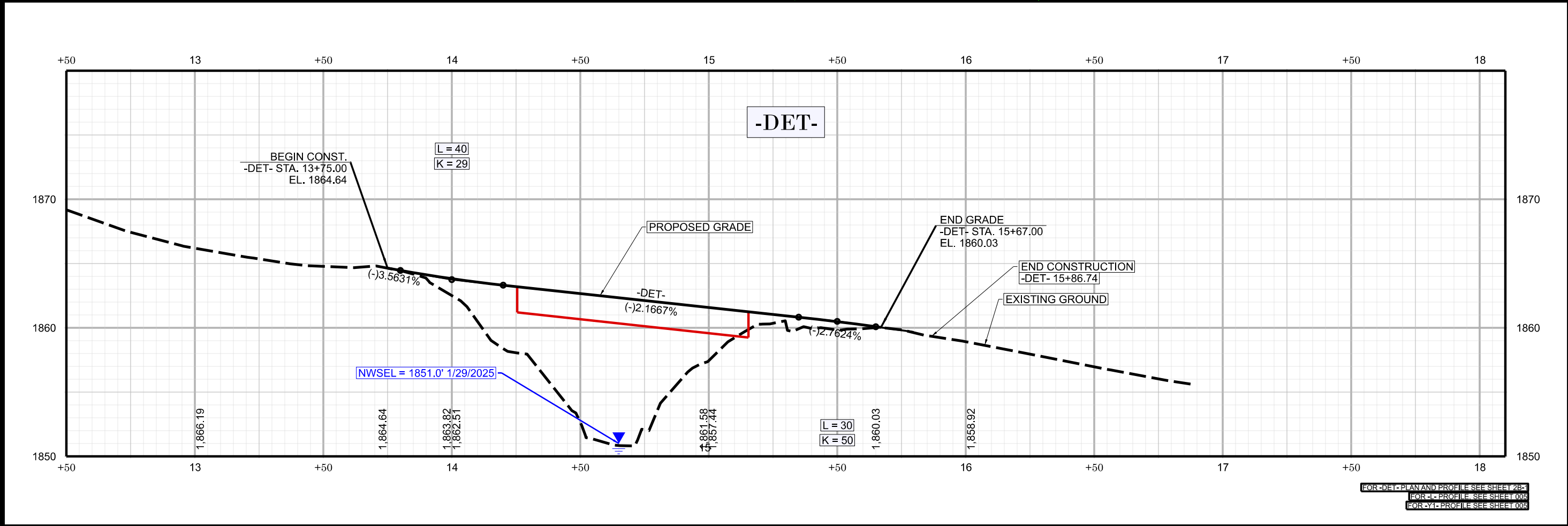
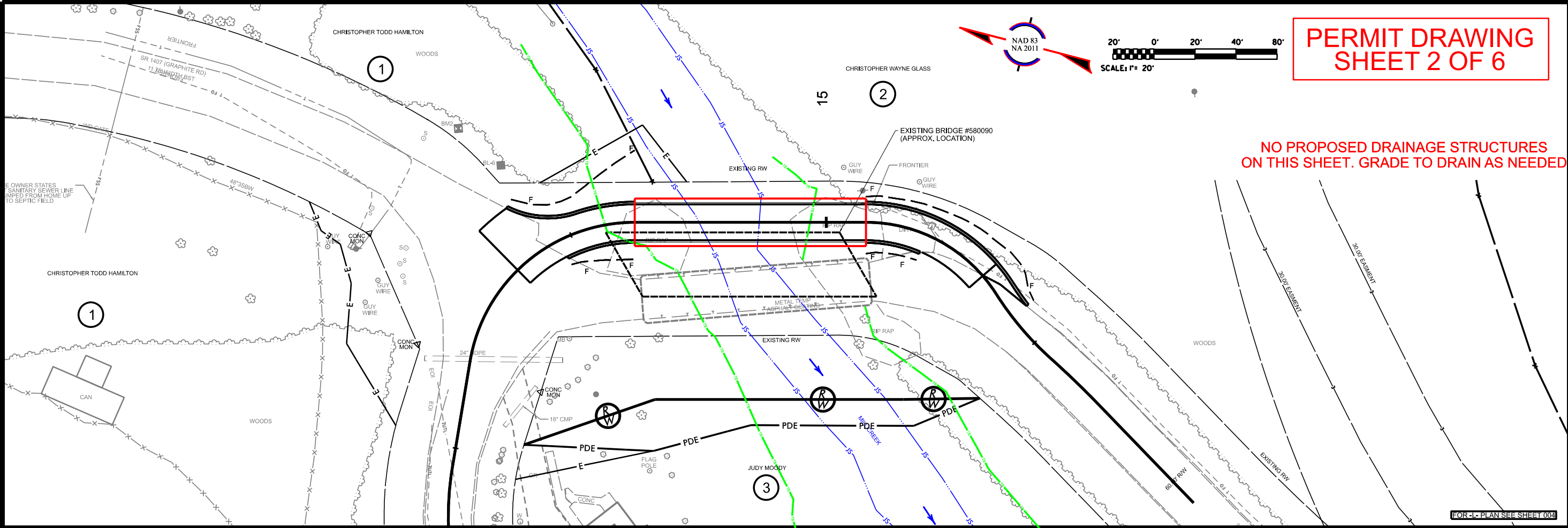
HYDRAULICS ENGINEER

SIGNATURE: _____
ROADWAY DESIGN ENGINEER

SIGNATURE: _____
P.E.



11/11/23



580090

204

NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
WAKE COUNTY

ROADWAY DESIGN UNIT
ROADWAY DESIGN
ENGINEER

DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED

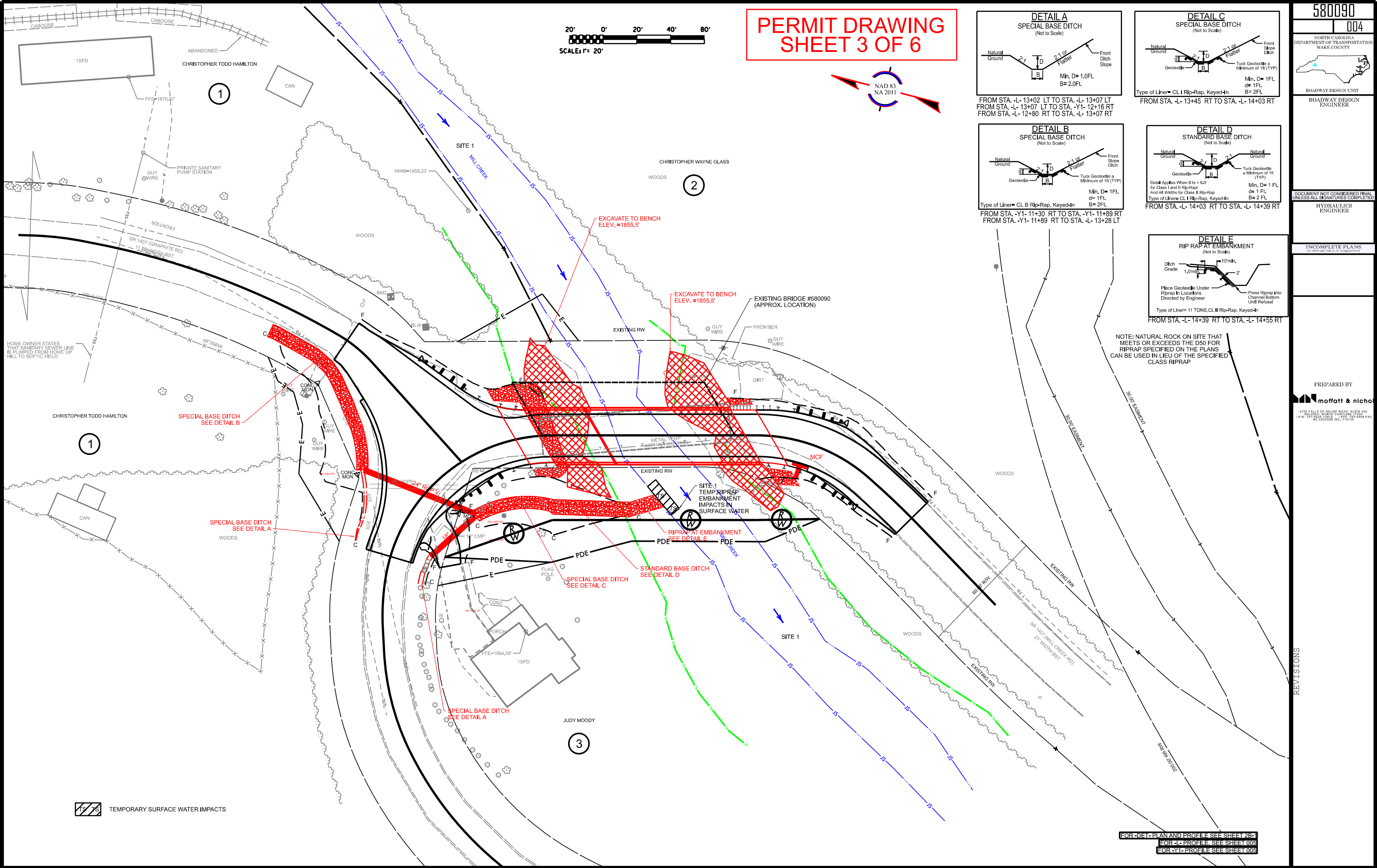
HYDRAULICS
ENGINEER

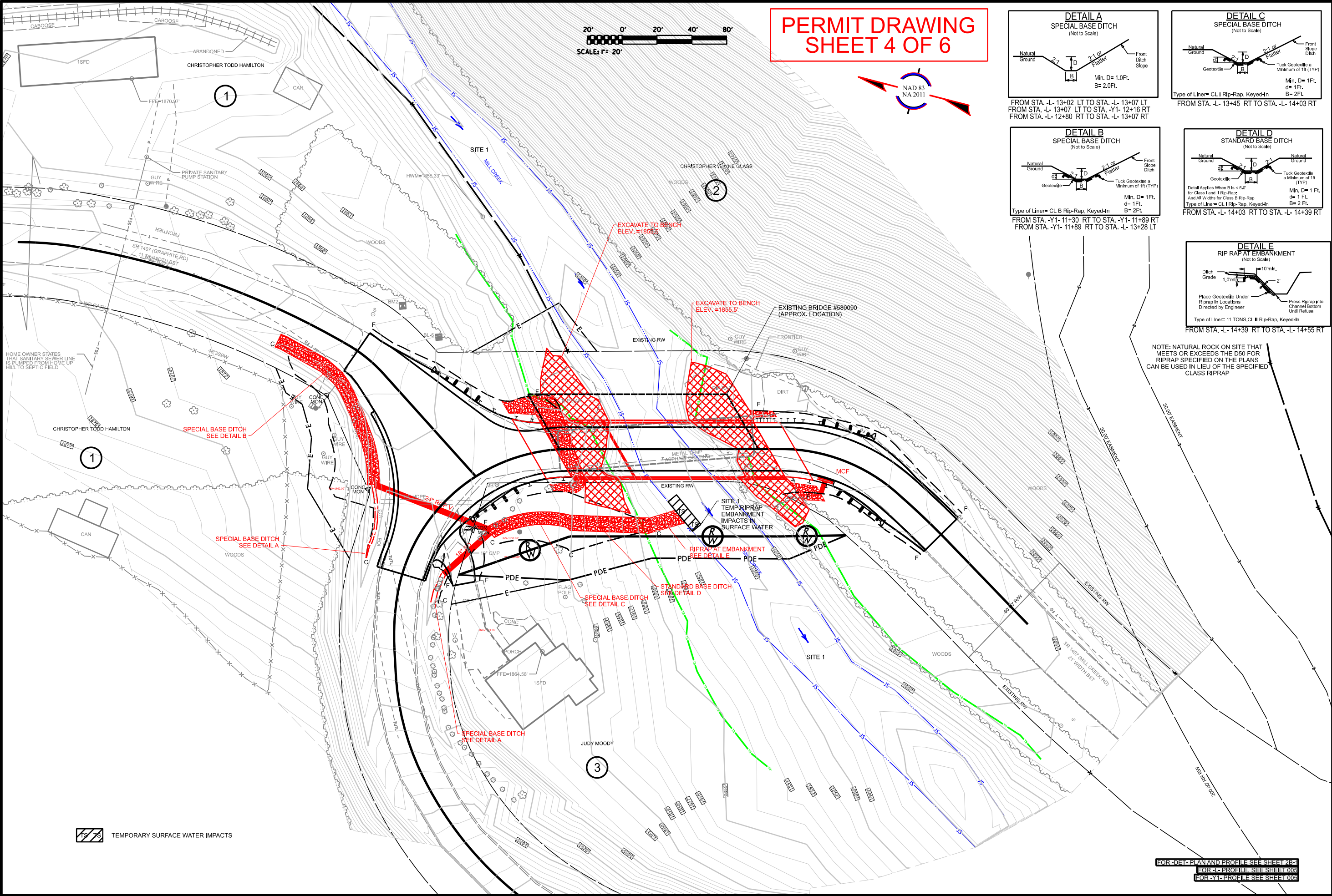
INCOMPLETE PLANS
DO NOT USE FOR CONSTRUCTION

PREPARED BY

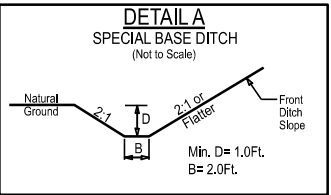
moftatt & nichols

4700 FALLS OF NEUSE ROAD, SUITE 300
RALEIGH, NORTH CAROLINA 27609
(919) 781-1100 FAX (919) 781-1101
NC LICENSE NO. 17-0103

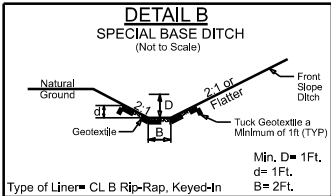




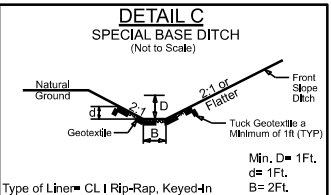
PERMIT DRAWING
SHEET 4 OF 6



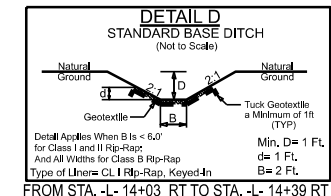
FROM STA. -L- 13+02 LT TO STA. -L- 13+07 LT
FROM STA. -L- 13+07 LT TO STA. -Y1- 12+16 RT
FROM STA. -L- 12+80 RT TO STA. -L- 13+07 RT



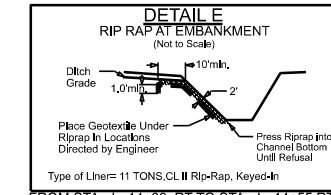
FROM STA. -Y1- 11+30 RT TO STA. -Y1- 11+89 RT
FROM STA. -Y1- 11+89 RT TO STA. -L- 13+28 LT



FROM STA. -L- 14+45 RT TO STA. -L- 14+03 RT



FROM STA. -L- 14+03 RT TO STA. -L- 14+39 RT



FROM STA. -L- 14+39 RT TO STA. -L- 14+55 RT

NOTE: NATURAL ROCK ON SITE THAT MEETS OR EXCEEDS THE D50 FOR RIPRAP SPECIFIED ON THE PLANS CAN BE USED IN LIEU OF THE SPECIFIED CLASS RIPRAP

580090
004

NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
WAKE COUNTY

ROADWAY DESIGN UNIT
ROADWAY DESIGN
ENGINEER

HYDRAULICS
ENGINEER

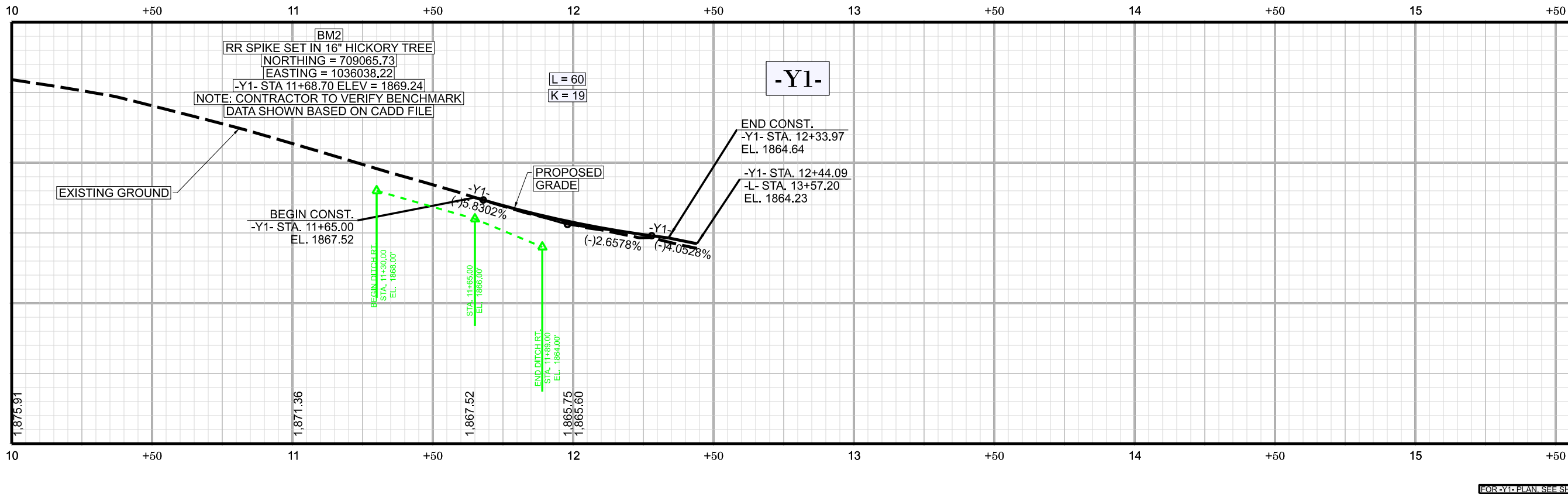
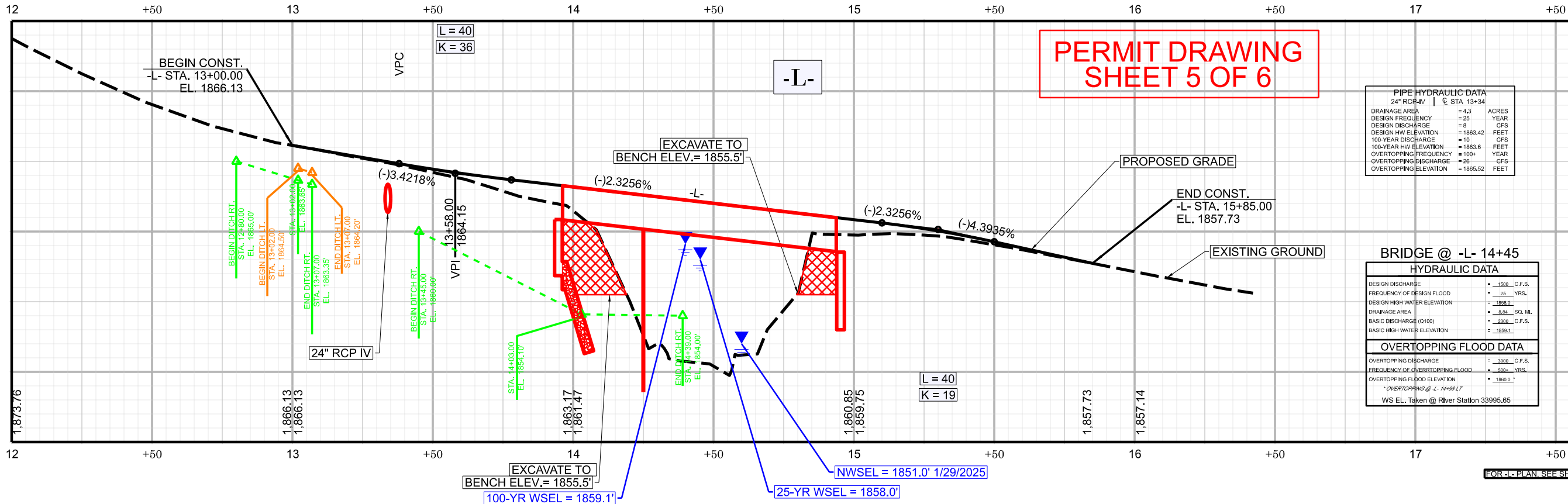
INCOMPLETE PLANS
DO NOT USE FOR THE PROJECT

PREPARED BY
moffatt & nichols
4700 FALLS OF NEUSE ROAD, SUITE 300
RALEIGH, NORTH CAROLINA 27609
(919) 781-0000 FAX (919) 781-0009
NC LICENSE NO. 174-0103

REVISIONS

TEMPORARY SURFACE WATER IMPACTS

FOR DETAIL PLAN AND PROFILE SEE SHEET 2 OF 4
FOR -L- PROFILE SEE SHEET 005
FOR -Y1- PROFILE SEE SHEET 005



580090
005

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HYDRAULICS ENGINEER

INCOMPLETE PLANS
(DO NOT USE FOR CONSTRUCTION)

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moffatt & nichols

4700 FALLS OF NEUSE ROAD, SUITE 300
RALEIGH, NORTH CAROLINA 27609
(919) 781-9000 FAX (919) 781-9001
NC LICENSE NO. 2140103

REVISIONS

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)
1	-L- 14+47 RT to 14+63 RT	Riprap at Embankment							< 0.01		18	
TOTALS*:									< 0.01	0	18	0

*Rounded totals are sum of actual impacts

NOTES:

Actual impact 0.002

NC DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
5/21/2025
MCDOWELL COUNTY
580090
DF18313.2059015.PR