



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



(Version 2.08; Released April 2018)

WBS Element: SF-240026 **TIP No.:** BP2.R019 **County(ies):** Craven **Page** 1 **of** 1

General Project Information

WBS Element:	SF-240026	TIP Number:	BP2-R019	Project Type:	Bridge Replacement	Date:	11/22/2021
NCDOT Contact:	Michael Aman, PE			Contractor / Designer:	CDM Smith / Shirshant Sharma		
Address:	1037 W. H. Smith Blvd Greenville, NC,27834			Address:	5400 Glenwood Avenue, Ste. 400 Raleigh,NC 27612		
Phone:	(252) 439-2812			Phone:	(704) 208-2241		
Email:	mcaman@ncdot.gov			Email:	Sharmas2@cdmsmith.com		
City/Town:	New Bern, NC			County(ies):	Craven		
River Basin(s):	Neuse			CAMA County?	Yes		
Wetlands within Project Limits?	Yes						

Project Description

Project Length (lin. miles or feet):	0.11	Surrounding Land Use:	Agricultural, Rural Forest					
	Proposed Project			Existing Site				
Project Built-Upon Area (ac.)	0.4	ac.	0.3	ac.				
Typical Cross Section Description:	Bridge : Two 11' lanes, 4'-5" to the right and 4'-5" to the left paved shoulders Approach: Two 11' lanes, variable paved shoulders			Bridge: Two 11' lanes, 1' to the left and right shoulders Approach: Two 11' lanes, variable shoulders				
Annual Avg Daily Traffic (veh/hr/day):	Design/Future:	960	Year:	2040	Existing:	430	Year:	2014
General Project Narrative: (Description of Minimization of Water Quality Impacts)	<p>The existing 60', 2 span bridge over Beaverdam Swamp on SR 1621 is being replaced with a 1 span bridge with a span arrangement of 1 @ 70' (24" Cored Slab). The bridge will have 1.5:1 or flatter sloping abutments. The bridge will be superelevated 4% to the left with 11' travel lanes with 4'-5" to the right and 4'-5" to the left shoulders, and 33' OTO width. The existing bridge structure will be removed. Overall drainage patterns will be maintained. On the begin bridge side, the roadside drainage patterns will be maintained. Three TB 2GIs will collect water from the pavement and convey it to the stream. On the begin bridge side special lateral base ditch is provided where the capacity was not sufficient and the flow from that ditch dissipates into the floodplain. Class-II riprap abutment protection on both banks of the stream is also proposed to prevent future erosion and stream migration. Deck drains will not required to meet spread criteria on this bridge. Impervious Dikes will be used to prevent sediment from entering the stream during the construction of end bents and installation of Rip-Rap and will be dewatered as needed.</p>							

Waterbody Information

Surface Water Body (1):	Beaverdam Swamp		NCDWR Stream Index No.:	27-97-8-3-1			
NCDWR Surface Water Classification for Water Body	Primary Classification:	Class C					
	Supplemental Classification:	Swamp Waters (Sw)		(NSW)			
Other Stream Classification:	None						
Impairments:	None						
Aquatic T&E Species?	No	Comments:					
NRTR Stream ID:						Buffer Rules in Effect:	Neuse
Project Includes Bridge Spanning Water Body?	Yes	Deck Drains Discharge Over Buffer?	N/A	Dissipater Pads Provided in Buffer?	N/A		
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)						

09/08/09

PROJECT: BP2.R019

CONTRACT:

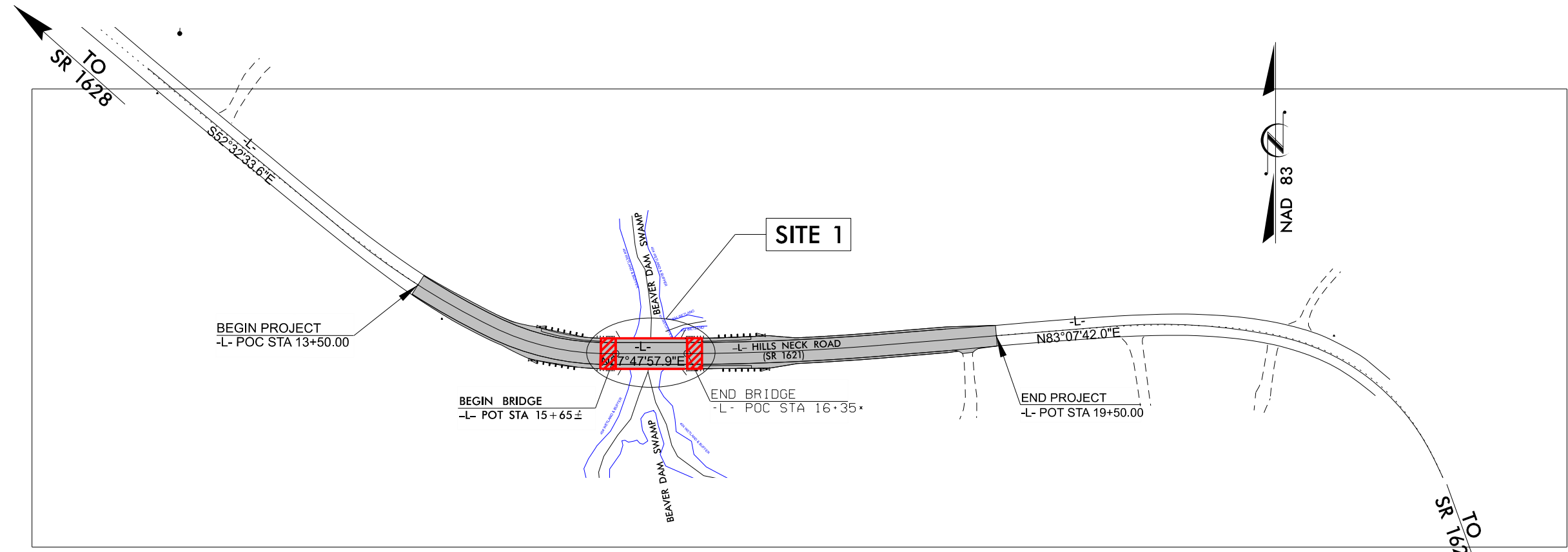
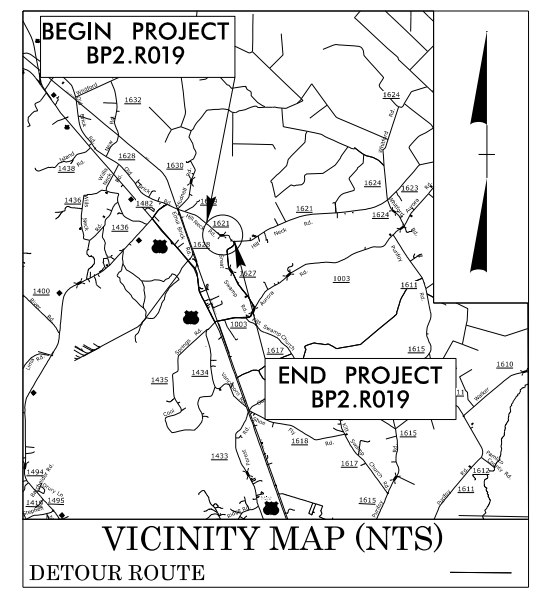
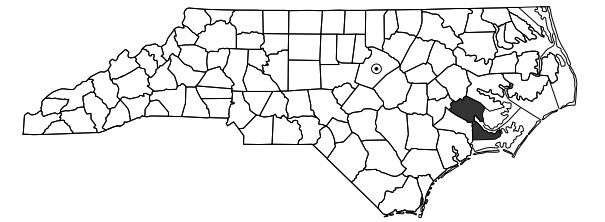
STATE OF NORTH CAROLINA DIVISION OF HIGHWAYS

CRAVEN COUNTY

LOCATION: BRIDGE NO. 240026 OVER BEAVER DAM SWAMP ON SR 1621 (HILLS NECK ROAD)

SURFACE WATER IMPACTS PERMIT

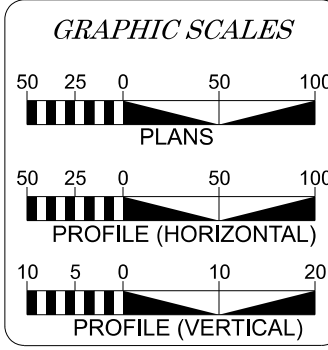
STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	BP2.R019	1	5
STATE PROJ. NO.	F. A. PROJ. NO.	DESCRIPTION	
BP2.R019.1	N/A	PE	
BP2.R019.2	N/A	R/W, UTIL.	
BP2.R019.3	N/A	CONST	



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

Permit Drawing
Sheet 1 of 5

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



DESIGN DATA

ADT 2022 =	860
ADT 2042 =	1550
K =	N/A %
D =	N/A %
T =	6 % *
V =	60 MPH
* TTST = N/A DUAL N/A	
FUNC CLASS = LOCAL	
SUB-REGIONAL TIER	

PROJECT LENGTH

PROJECT LENGTH FOR PROJECT BP2.R019	
LENGTH ROADWAY	= 0.101 MILES
LENGTH STRUCTURE	= 0.013 MILES
TOTAL LENGTH	= 0.114 MILES

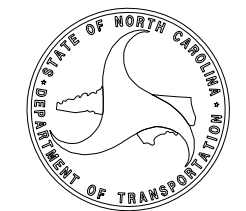
NCDOT CONTACT:	MICHAEL AMAN, PE
PREPARED IN THE OFFICE OF:	CDM Smith CDM Smith Inc. 5400 Glenwood Avenue Suite 400 Raleigh, NC 27612-3228 NC COA No. F-1255
2018 STANDARD SPECIFICATIONS	
RIGHT OF WAY DATE:	ADAM M. CONRAD, PE PROJECT ENGINEER
DECEMBER 03, 2021	
LETTING DATE:	TRUNG T. NGUYEN, PE PROJECT DESIGN ENGINEER
JANUARY 12, 2022	

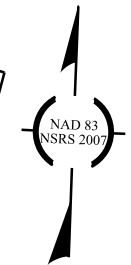
HYDRAULICS ENGINEER

SIGNATURE: P.E.

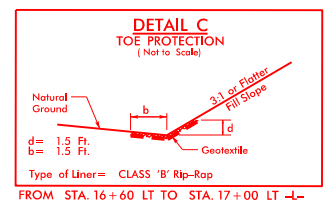
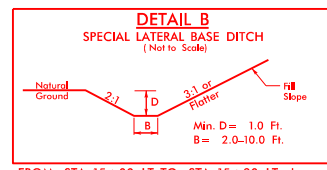
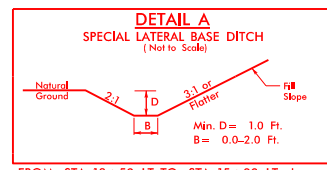
ROADWAY DESIGN ENGINEER

SIGNATURE: P.E.





Permit Drawing Sheet 2 of 5

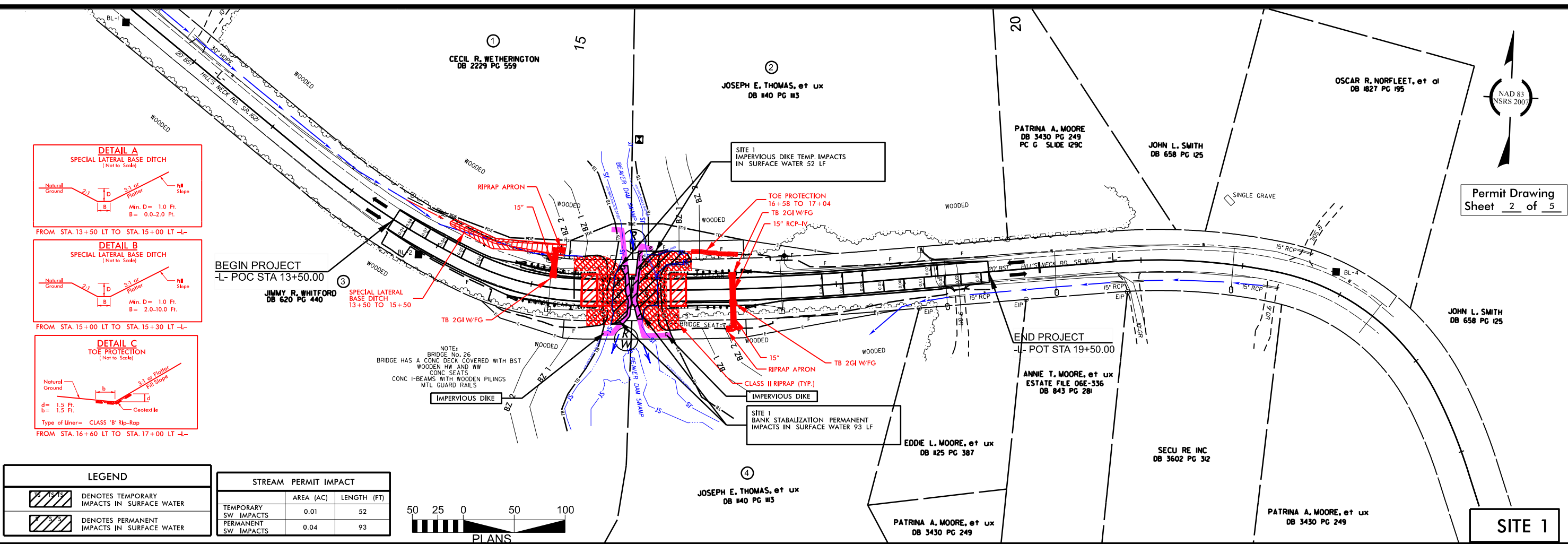
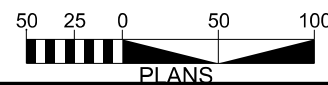


LEGEND

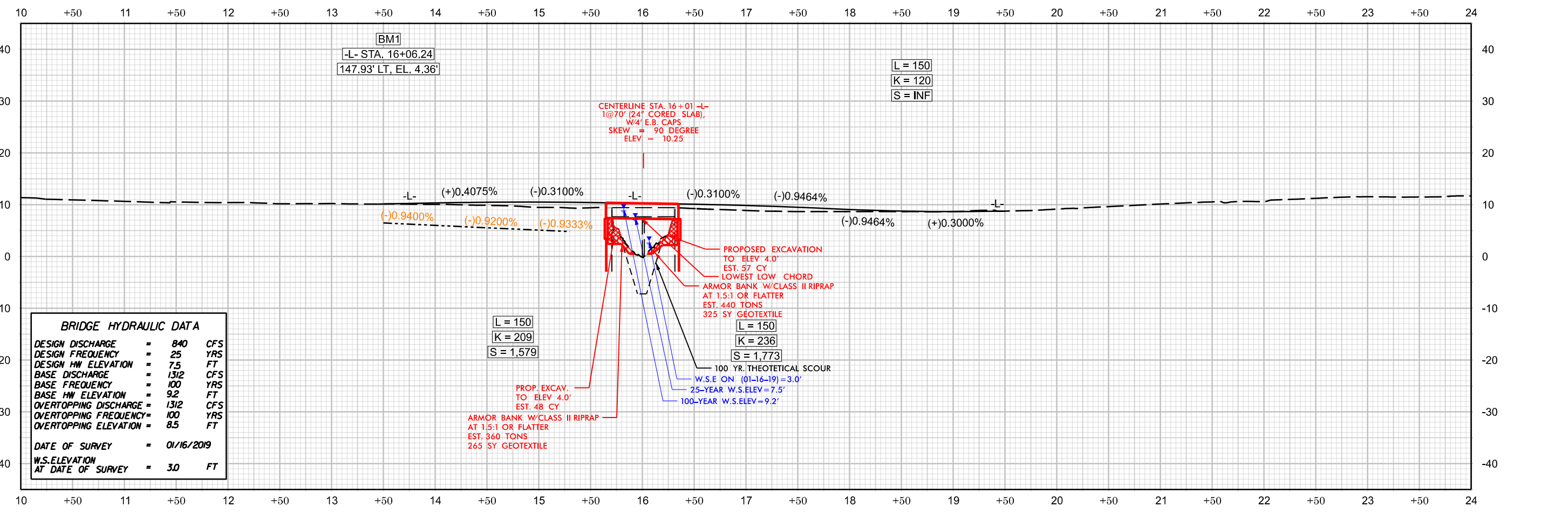
	DENOTES TEMPORARY IMPACTS IN SURFACE WATER
	DENOTES PERMANENT IMPACTS IN SURFACE WATER

STREAM PERMIT IMPACT

	AREA (AC)	LENGTH (FT)
TEMPORARY SW IMPACTS	0.01	52
PERMANENT SW IMPACTS	0.04	93



SITE 1



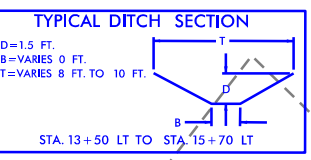
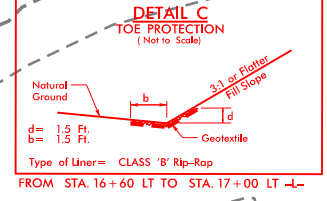
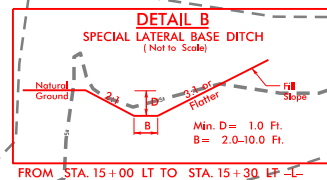
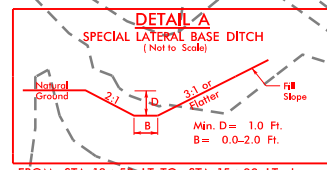
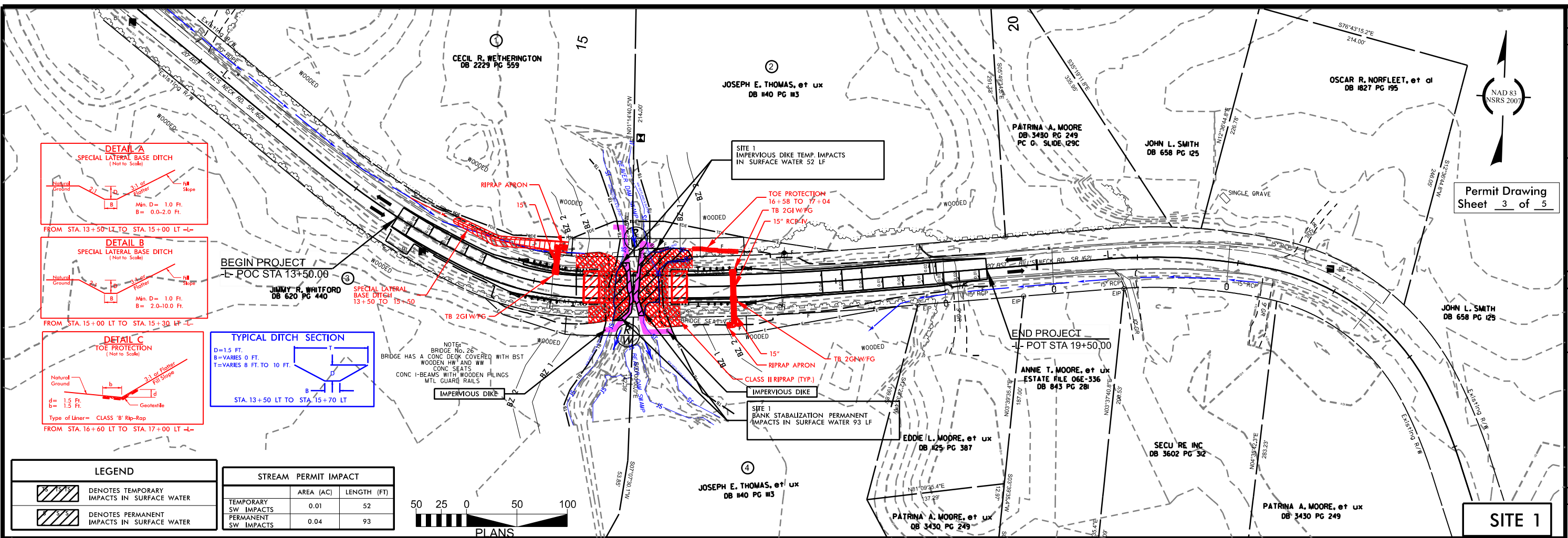
BRIDGE HYDRAULIC DATA

DESIGN DISCHARGE	=	840	CFS
DESIGN FREQUENCY	=	25	YRS
DESIGN HW ELEVATION	=	7.5	FT
BASE DISCHARGE	=	1312	CFS
BASE FREQUENCY	=	100	YRS
BASE HW ELEVATION	=	9.2	FT
OVERTOPPING DISCHARGE	=	1312	CFS
OVERTOPPING FREQUENCY	=	100	YRS
OVERTOPPING ELEVATION	=	8.5	FT
DATE OF SURVEY	=	01/16/2019	
W.S. ELEVATION AT DATE OF SURVEY	=	3.0	FT

REVISIONS

Permit Drawing
Sheet 3 of 5

SITE 1

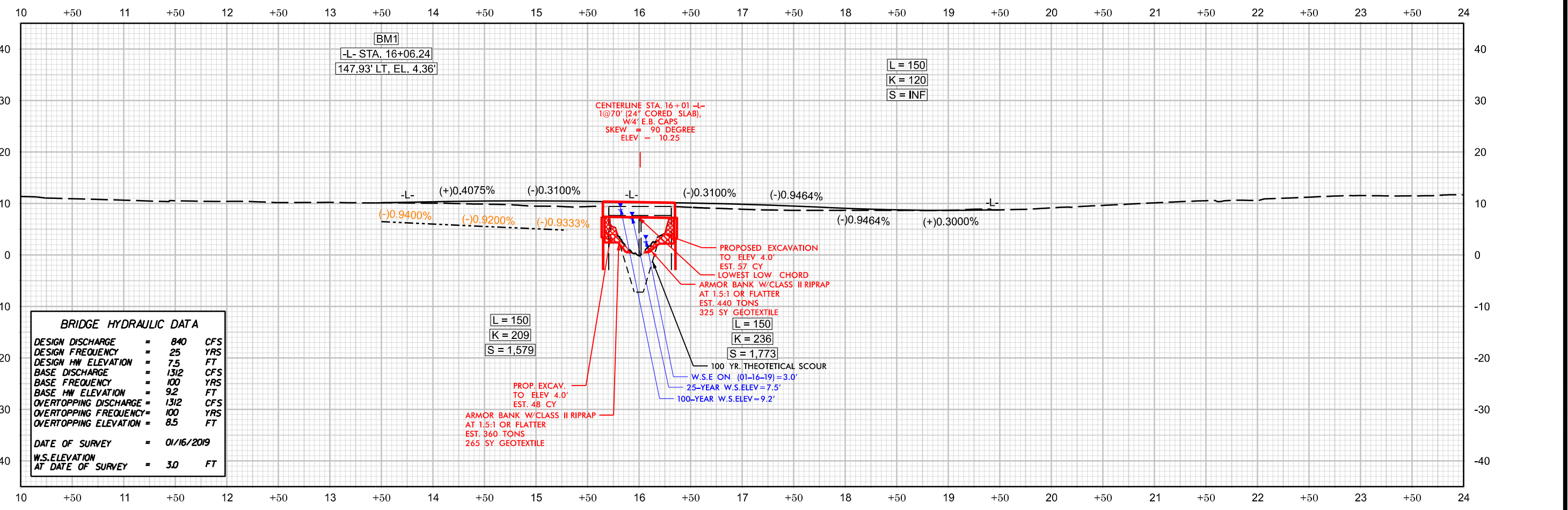
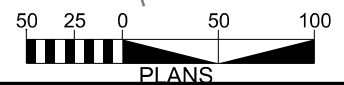


LEGEND

	DENOTES TEMPORARY IMPACTS IN SURFACE WATER
	DENOTES PERMANENT IMPACTS IN SURFACE WATER

STREAM PERMIT IMPACT

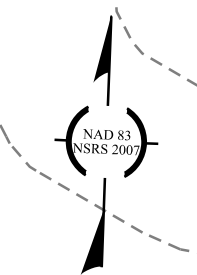
	AREA (AC)	LENGTH (FT)
TEMPORARY SW IMPACTS	0.01	52
PERMANENT SW IMPACTS	0.04	93



BRIDGE HYDRAULIC DATA

DESIGN DISCHARGE	=	840	CFS
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REVISIONS



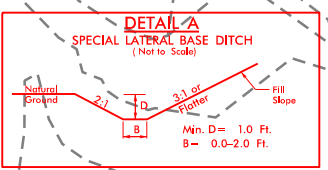
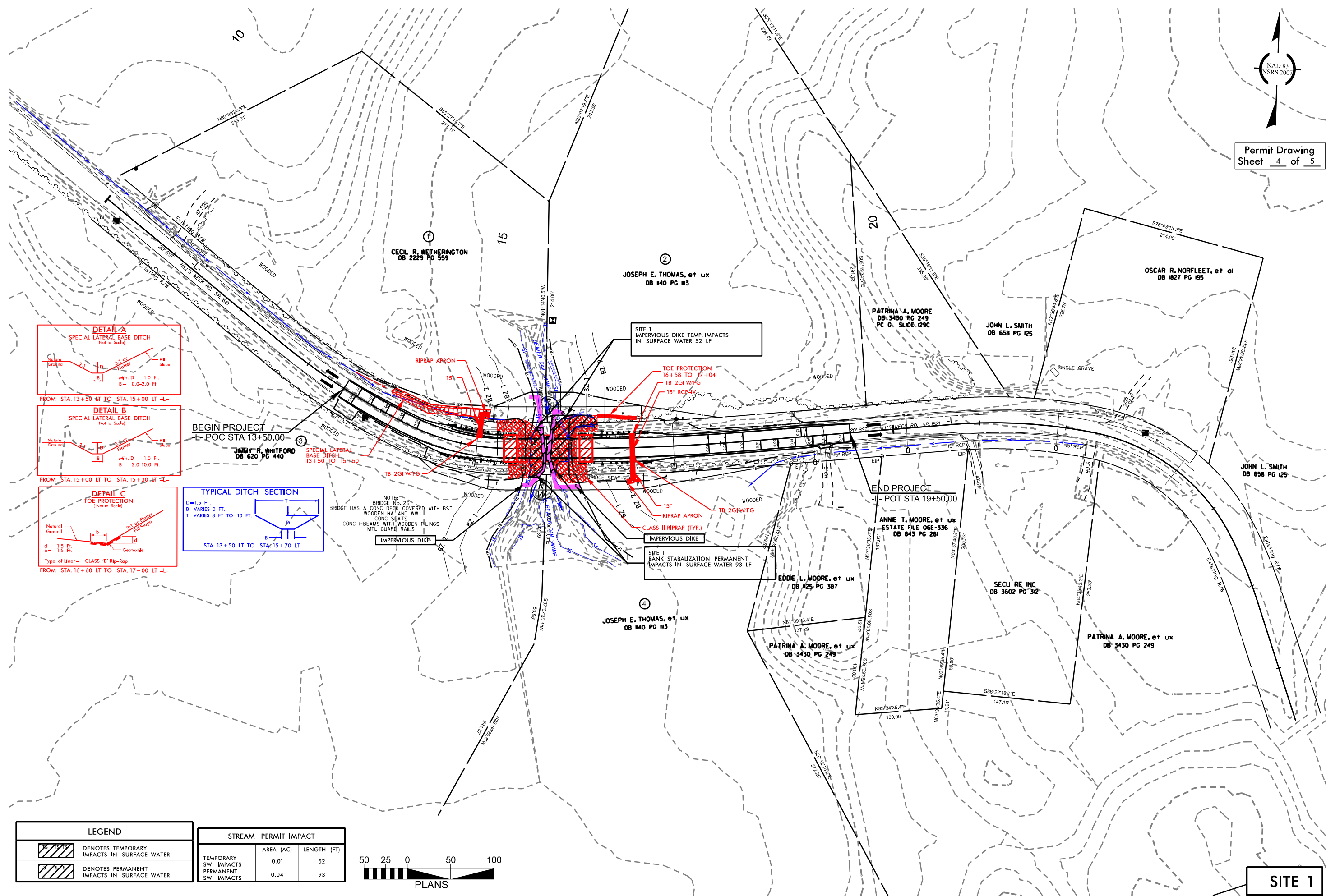
Permit Drawing
Sheet 4 of 5

DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED
STATE OF NORTH CAROLINA
ROADWAY DESIGN UNIT

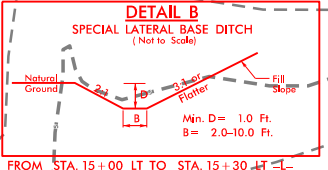
PREPARED BY
CDM Smith
CDM Smith Inc.
5200 Glenwood Avenue
Suite 300
Raleigh, NC 27612-2028
NC CCA No. F-7335

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

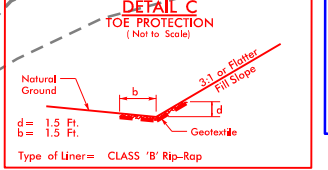
REVISIONS



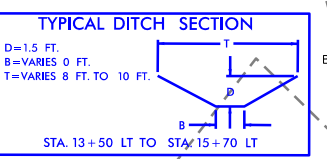
FROM STA. 13+50 LT TO STA. 15+00 LT -L-



FROM STA. 15+00 LT TO STA. 15+30 LT -L-



FROM STA. 16+60 LT TO STA. 17+00 LT -L-



NOTE:
BRIDGE No. 26
BRIDGE HAS A CONC DECK COVERED WITH BST
WOODEN HW AND WW
CONC SEATS
CONC I-BEAMS WITH WOODEN PLINGS
MTL GUARD RAILS

SITE 1 IMPERVIOUS DIKE TEMP IMPACTS
IN SURFACE WATER 52 LF

TOE PROTECTION
16+58 TO 17+04
TB 2GI WFG
15" RCP-IV

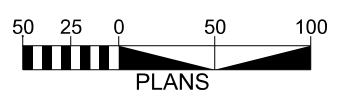
SITE 1 BANK STABILIZATION PERMANENT
IMPACTS IN SURFACE WATER 93 LF

LEGEND

	DENOTES TEMPORARY IMPACTS IN SURFACE WATER
	DENOTES PERMANENT IMPACTS IN SURFACE WATER

STREAM PERMIT IMPACT

	AREA (AC)	LENGTH (FT)
TEMPORARY SW IMPACTS	0.01	52
PERMANENT SW IMPACTS	0.04	93



SITE 1

WETLAND PERMIT IMPACT SUMMARY

Site No.	Station (From/To)	Structure Size / Type	WETLAND IMPACTS					SURFACE WATER IMPACTS				
			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	15+78.50 / 16+57.98	BANK STABILIZATION ON BOTH LEFT AND RIGHT BANKS						0.04		93		
1	15+69.70 / 16+37.67	IMPERVIOUS DIKE ON BOTH LEFT AND RIGHT BANKS							0.01		52	
TOTALS:								0.04	0.01	61	52	

NC DEPARTMENT OF TRANSPORTATION
 DIVISION OF HIGHWAYS
 BRIDGE #026 OVER BEAVER DAM SWAMP
 ON SR 1621 (HILLS NECK ROAD)
 CRAVEN COUNTY
 BP-R019
 SHEET 5 of 5 11/22/2021