



North Carolina Department of Transportation

Highway Stormwater Program
STORMWATER MANAGEMENT PLAN
FOR NCDOT PROJECTS



(Version 2.07; Released October 2016)

WBS Element: 45572.1.1 TIP No.: B-5617 County(ies): Craven Page 1 of 1

General Project Information

WBS Element:	45572.1.1	TIP Number:	B-5617	Project Type:	Bridge Replacement	Date:	8/2/2017
NCDOT Contact:	Jay B. Johnston		Contractor / Designer:	Wetherill Engineering			
Address:	105 Pactolus Hwy. (NC 33) PO Box 1587 Greenville, NC 27835		Address:	1223 Jones Franklin Road Raleigh, NC 27606			
	Phone:	252-469-2800		Phone:	919-851-8077		
	Email:	jbjohnston@ncdot.gov		Email:	mharvey@wetherilleng.com		
City/Town:	Vanceboro		County(ies):	Craven			
River Basin(s):	Neuse		CAMA County?	Yes			
Wetlands within Project Limits?	No						

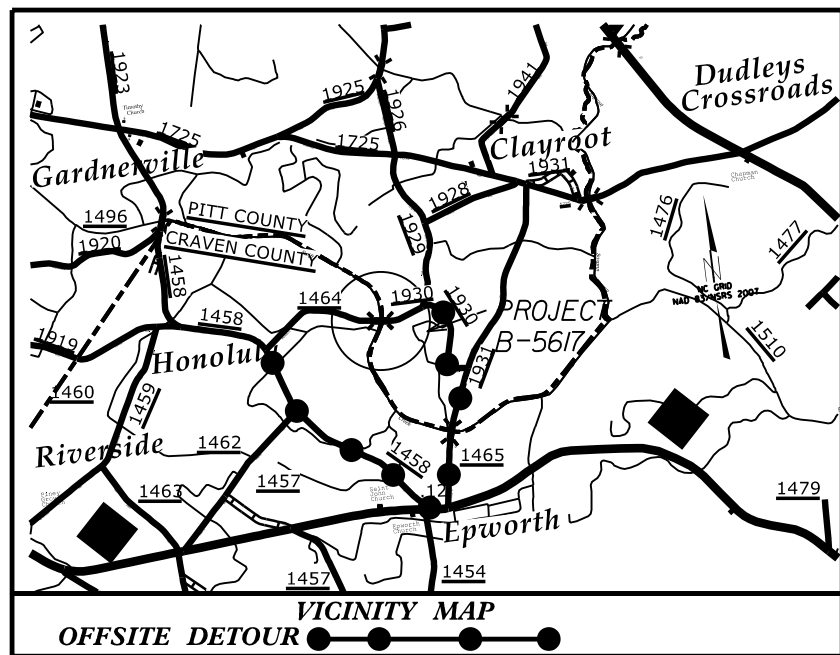
Project Description

Project Length (lin. miles or feet):	0.09	Surrounding Land Use:	Rural, Wooded, Agricultural					
	Proposed Project			Existing Site				
Project Built-Upon Area (ac.)	0.3	ac.	0.2	ac.				
Typical Cross Section Description:	Two 10 foot Travel Lanes with 4 foot grassed shoulders on each side			Two 10 foot Travel Lanes with 4 foot grassed shoulders on each side				
Annual Avg Daily Traffic (veh/hr/day):	Design/Future:	250	Year:	2040	Existing:	200	Year:	2015
General Project Narrative: (Description of Minimization of Water Quality Impacts)	<p>The purpose of the project is to replace Bridge No. 41 on SR 1464 over Swift Creek in Craven County. The existing bridge is 135 feet long. The replacement structure will be a 1 @ 30', 1 @ 70', and 1 @ 40' long bridge, providing a 27.83' clear deck width. The roadway grade of the new structure will be approximately the same as the existing structure. There will be no direct discharge into the stream (deck drains on the bridge). The existing bridge had two bents in the stream, and while the proposed bridge has one bent in the stream and one bent in the stream bank. All existing stormwater drainage patterns were maintained on the project to the fullest extent. The storm drainage systems picking up the bridge deck drainage on the east and west sides of the bridge will both be outleted outside of the Riparian Buffer onto dissipator pads. The storm drain system that outlets to the west will drain into an existing draw in the northwest quadrant of the bridge. The storm drain system that outlets to the east will drain into a proposed ditch that ties into a cross pipe just as the existing drainage did in the northeast quadrant of the bridge. There were no existing or proposed ditches in the southeast and southwest quadrants.</p>							

Waterbody Information

Surface Water Body (1):	Swift Creek		NCDWR Stream Index No.:	27-97-(0.5)			
NCDWR Surface Water Classification for Water Body	Primary Classification:	Class C					
	Supplemental Classification:	Swamp Waters (Sw)		(NSW)			
Other Stream Classification:	None						
Impairments:							
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?	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)						

CONTRACT: TIP PROJECT: B-5617
 8/2/2017 7:46 AM P:\2016\Div 2 B-5617 Craven\638-09\Hydraulics\PERMITS_Environment\Drawings\B5617_hyd.prm_wet_tsh.dgn



See Sheet 1-A For Index of Sheets

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

CRAVEN COUNTY

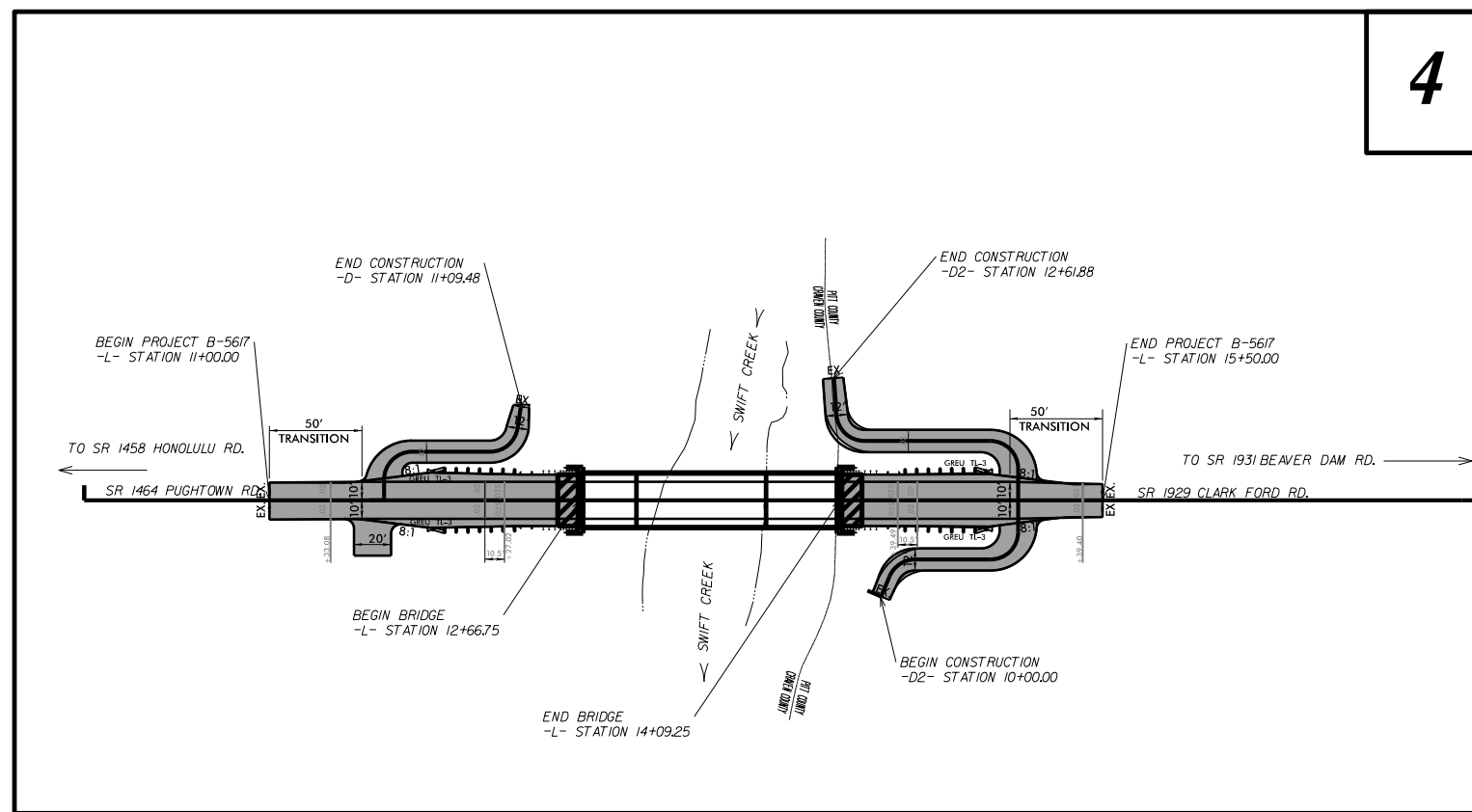
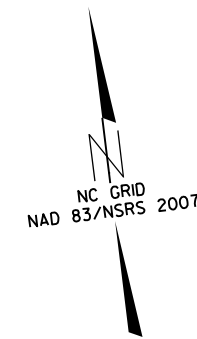
**LOCATION: BRIDGE #41 OVER SWIFT CREEK
ON SR 1464 (PUGHTOWN RD.)**

**TYPE OF WORK: BRIDGE REPLACEMENT, GUARDRAIL,
PAVING, GRADING AND DRAINAGE**

WETLAND AND SURFACE WATER IMPACTS PERMIT

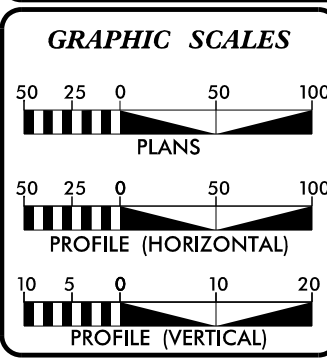
STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	B-5617	1	
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	
45572.1.1		PE	
45572.2.1		RW	
45572.3.1		CONST	

PERMIT DRAWING
SHEET 1 OF 5



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

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



DESIGN DATA

ADT 200	=	2015
ADT 250	=	2040
K	=	%
D	=	%
T	=	% *
V	=	60 MPH
* TTST	=	3% DUAL 3%
FUNC CLASS	=	
RURAL LOCAL TIER		

PROJECT LENGTH

LENGTH ROADWAY PROJECT = 0.052 MILE
 LENGTH STRUCTURE PROJECT = 0.033 MILE
 TOTAL LENGTH PROJECT = 0.085 MILE

Prepared for the North Carolina Department of Transportation in the Office of:

WETHERILL ENGINEERING
 1223 JONES FRANKLIN ROAD
 Raleigh, N.C. 27606
 License No. F-0377
 Site: 919 851 8077
 Fax: 919 851 8107

2012 STANDARD SPECIFICATIONS
RIGHT OF WAY DATE: TBD
LETTING DATE: MARCH 2018
NCDOT CONTACT: LANG JONES
 DIVISION 2 DDC CONTACT

EDWARD G. WETHERILL, PE
PROJECT ENGINEER

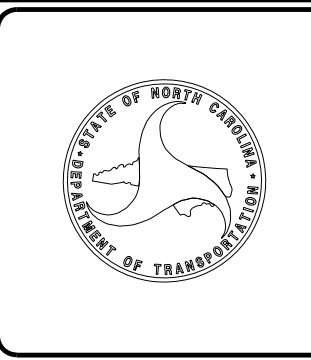
BOB A. MAY, PE
PROJECT DESIGN ENGINEER

HYDRAULICS ENGINEER

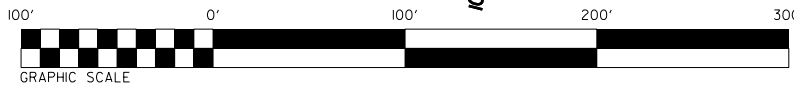
SIGNATURE: _____ P.E.

ROADWAY DESIGN ENGINEER

SIGNATURE: _____ P.E.

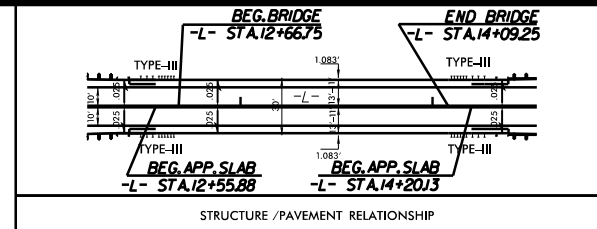


WETLAND AND SURFACE WATER IMPACTS PERMIT



DENOTES TEMPORARY IMPACTS IN SURFACE WATER

NC GRID NAD 83/NSRS 2007

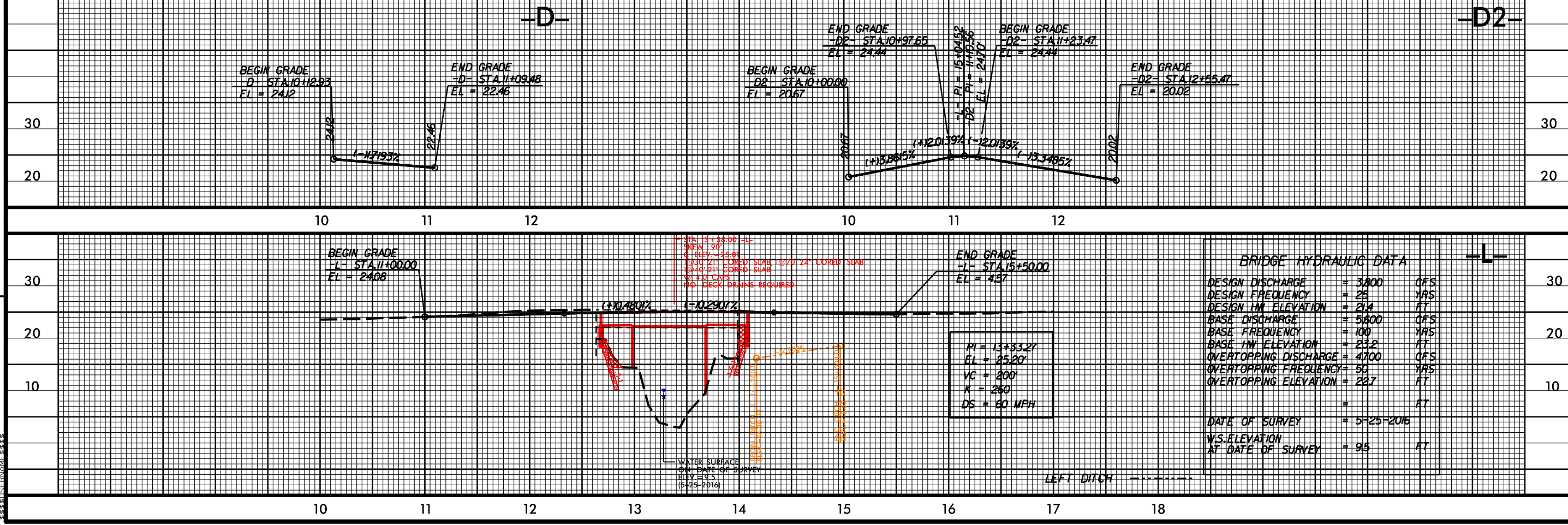
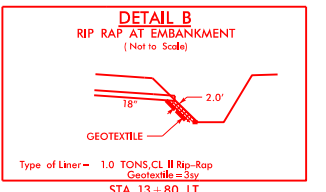
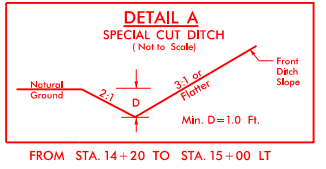
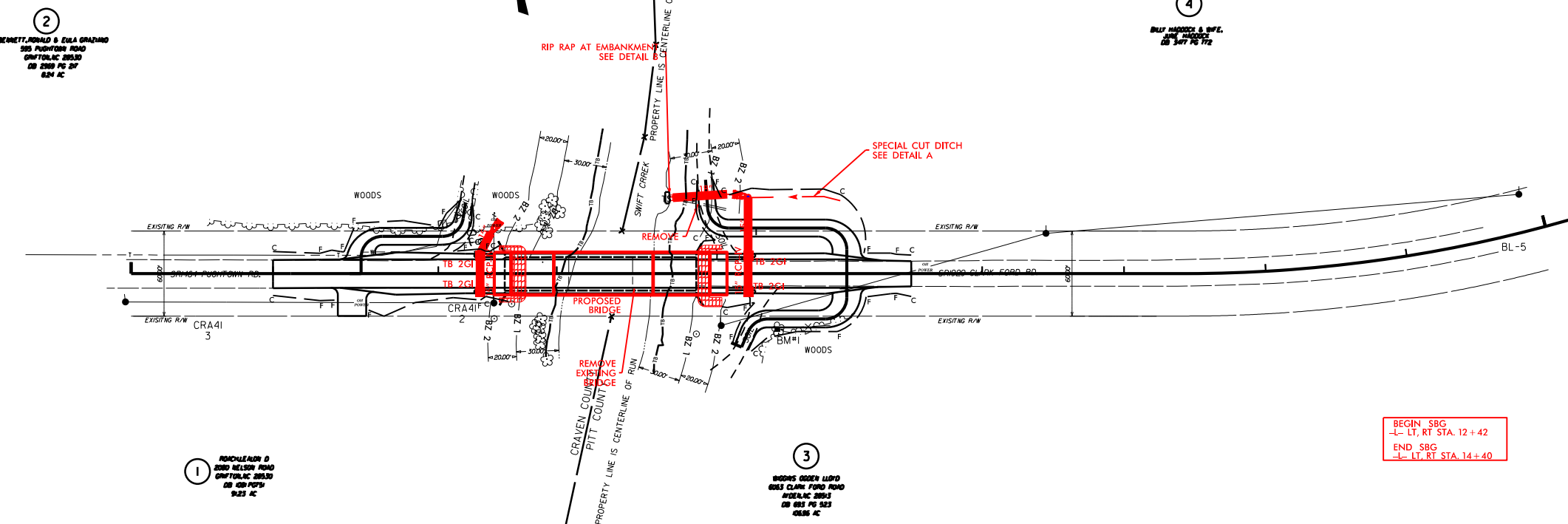


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TRANSPORTATION PLANNING/DESIGN - BRIDGE/STRUCTURE DESIGN
CIVIL/SITE DESIGN - GIS/GPS - CONSTRUCTION OBSERVATION

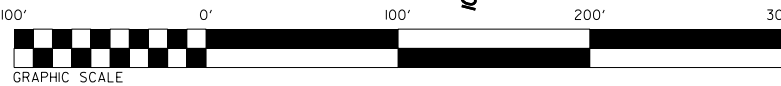
PERMIT DRAWING SHEET 2 OF 5

PROJECT REFERENCE NO.		SHEET NO.	
B-5617		4	
RW SHEET NO.			
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED			



REVISIONS
 R/W REVISION (7-3-17) - UPDATED FINAL SURVEY FILE TO DUE PROPERTY LINE REVISIONS.DWG
 R/W REVISION (7-13-17) - REVISED PROPERTY OWNER NAME ON PARCEL NO. 4.DWG

WETLAND AND SURFACE WATER IMPACTS PERMIT



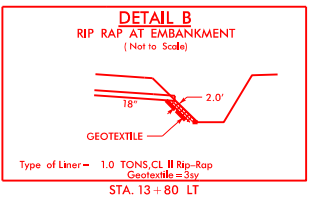
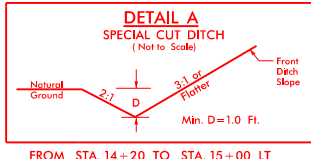
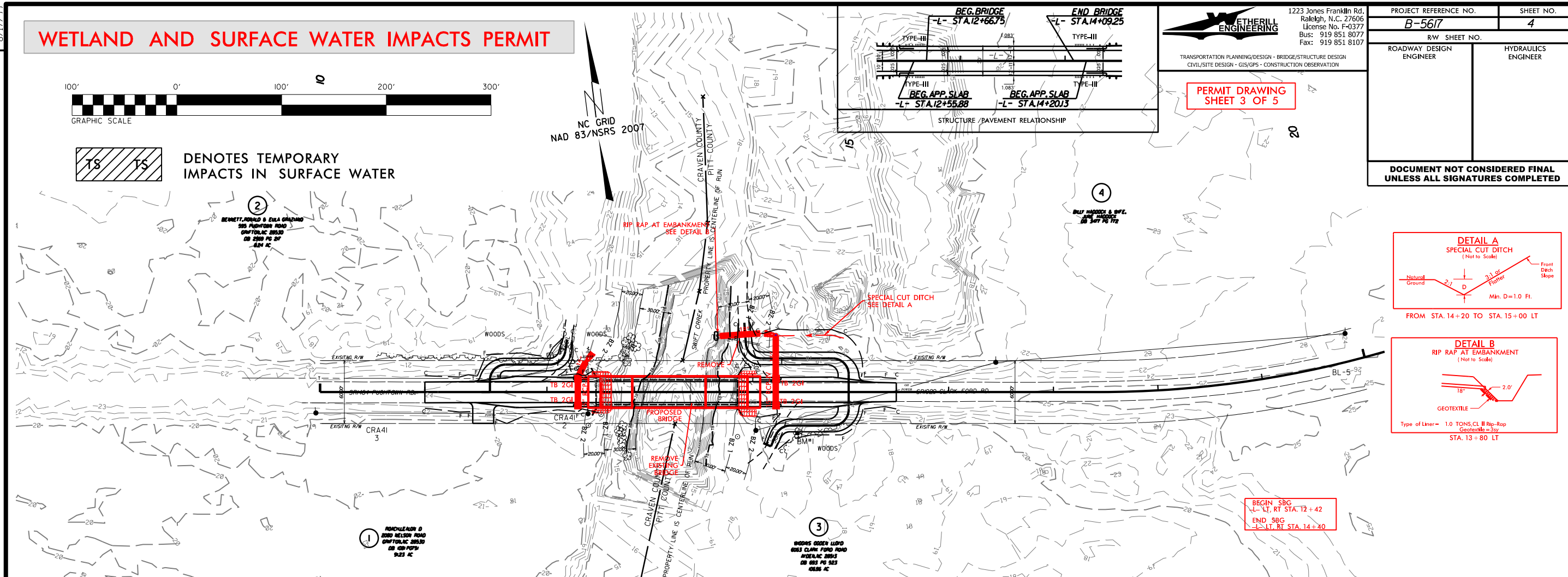
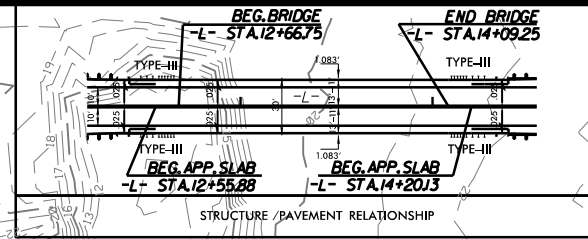
TS DENOTES TEMPORARY IMPACTS IN SURFACE WATER

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 Raleigh, N.C. 27606
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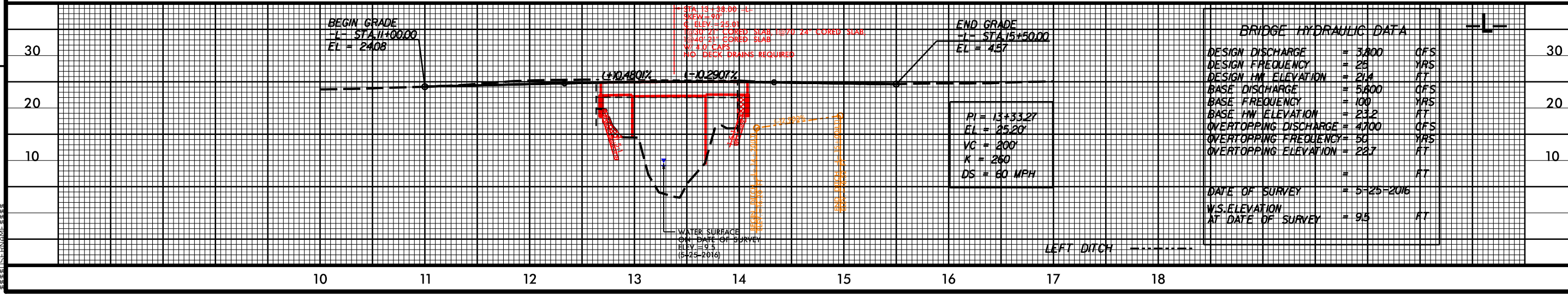
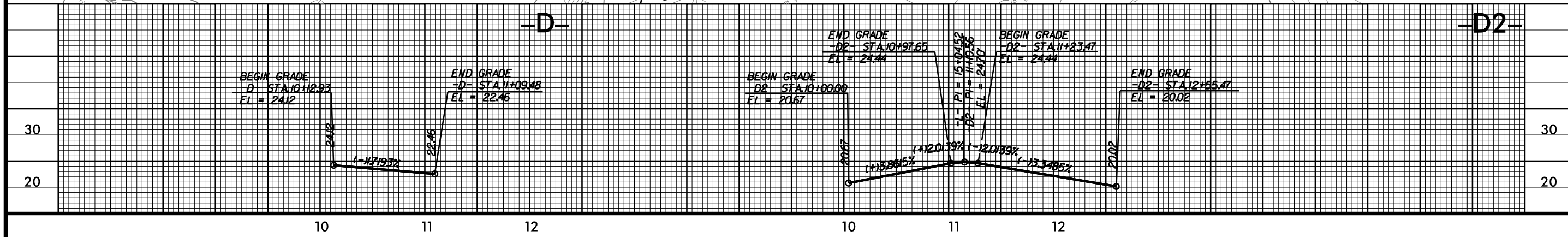
PROJECT REFERENCE NO. B-5617	SHEET NO. 4
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

PERMIT DRAWING SHEET 3 OF 5

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED



BEGIN SBG
 L- STA. 12+42
 END SBG
 L- STA. 14+40



BRIDGE HYDRAULIC DATA

DESIGN DISCHARGE	= 3,800	CFS
DESIGN FREQUENCY	= 25	YRS
DESIGN HM ELEVATION	= 21.4	FT
BASE DISCHARGE	= 5,800	CFS
BASE FREQUENCY	= 100	YRS
BASE HM ELEVATION	= 23.2	FT
OVERTOPPING DISCHARGE	= 4,700	CFS
OVERTOPPING FREQUENCY	= 50	YRS
OVERTOPPING ELEVATION	= 22.7	FT
		FT

DATE OF SURVEY = 5-25-2016
 W.S. ELEVATION AT DATE OF SURVEY = 9.5 FT

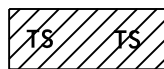
PI = 13+33.27
 EL = 25.20'
 VC = 200'
 K = 260
 DS = 60 MPH

WATER SURFACE ON DATE OF SURVEY
 ELEV = 9.5
 (5-25-2016)

REVISIONS
 R/W REVISION (7-3-17) - UPDATED FINAL SURVEY FILE TO DUE PROPERTY LINE REVISIONS.dwg
 R/W REVISION (7-13-17) - REVISED PROPERTY OWNER NAME ON PARCEL NO. 4.dwg

8/17/99

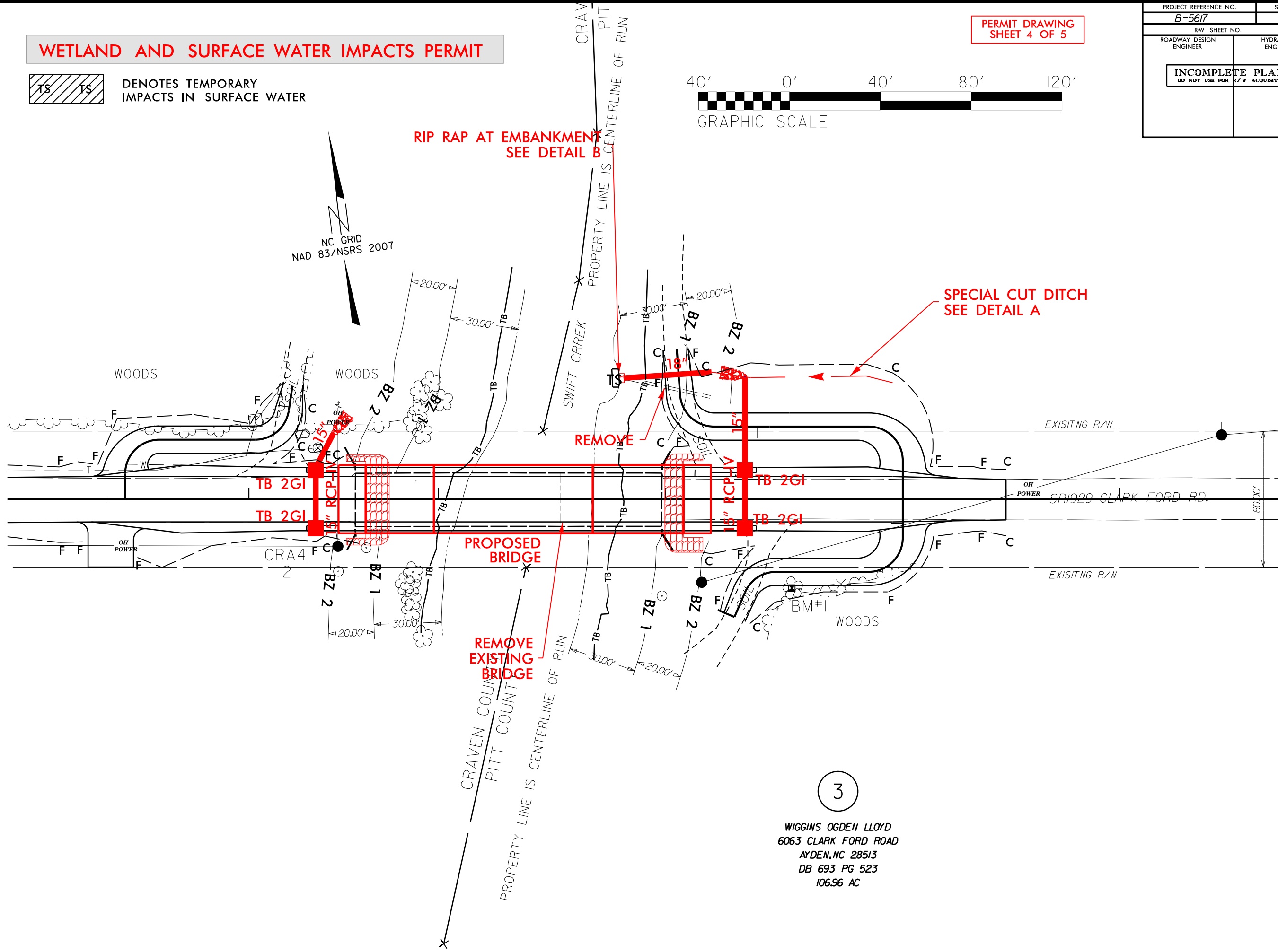
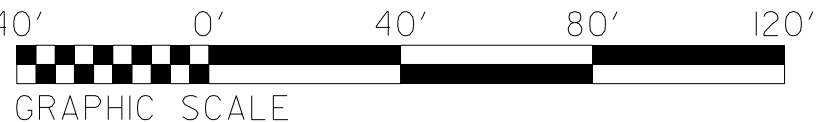
WETLAND AND SURFACE WATER IMPACTS PERMIT



DENOTES TEMPORARY IMPACTS IN SURFACE WATER

PERMIT DRAWING
SHEET 4 OF 5

PROJECT REFERENCE NO. B-5617	SHEET NO. 4
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
INCOMPLETE PLANS DO NOT USE FOR A/W ACQUISITION	



REVISIONS

3

WIGGINS OGDEN LLOYD
 6063 CLARK FORD ROAD
 AYDEN, NC 28513
 DB 693 PG 523
 106.96 AC

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WETLAND AND SURFACE WATER IMPACTS 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)
	13+78 Lt.	Bridge						< 0.01	< 0.01	4	8	
TOTALS*:								< 0.01	< 0.01	4	8	0

*Rounded totals are sum of actual impacts

NOTES:
5 sf of Permanent SF Impacts for the proposed bents in the water.

NC DEPARTMENT OF TRANSPORTATION
 DIVISION OF HIGHWAYS
 7/11/2017
 CRAVEN COUNTY
 B-5617
 45572.2.1
 SHEET 5 OF 5