



STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION

PAT MCCRORY
GOVERNOR

NICHOLAS J. TENNYSON
SECRETARY

October 15, 2015

U.S. Army Corps of Engineers
Regulatory Field Office
PO Box 1000
Washington, NC 27889-1000

N.C. Division of Coastal Management
1367 US 17 South
Elizabeth City, NC 27909

ATTN: Tracey Wheeler
NCDOT Coordinator

ATTN: Mr. Greg Daisey
NCDOT Coordinator

Subject: **Request for Modification of the Individual Section 404 Permit, Individual Water Quality Certification, and CAMA Major Development Permit** for the Proposed Replacement of Bridge 11 over Oregon Inlet on NC 12 in Dare County, North Carolina; TIP Project B-2500 (Phase I); Federal Aid Projects BRNHF-0012 (48) and BRNHF-0012 (36); Debit \$570 from WBS Element: 32635.1.4

References:

Section 404 Individual Permit, U.S. Army Corps of Engineers Action ID SAW-1993-03077, issued August 14, 2013
Section 401 Individual Water Quality Certification, NCDWQ Project No. 20120629, issued September 7, 2012
CAMA Major Development Permit, NCDOT Permit No. 106-12, issued September 19, 2012

The North Carolina Department of Transportation (NCDOT) requests a modification of the above referenced permits due to revised utility plans. The utility company (Cape Hatteras Electric, or CHEC) is preparing to move underground and overhead electric lines. Originally this was going to be accomplished via an open cut trench on the south end of the project (Site 4). Utility plans have now been revised to directionally bore the underground line work rather than open cut, and plan to access the site from NC 12 roadside. This will reduce the temporary impact footprint but will increase the need for hand clearing of wetlands (for working off of timber mats) around their work area. Additionally, boring rather than trenching will reduce the overall duration of the work, and the duration is a very important factor in being able to perform this work while CHEC provides electricity to Hatteras Island via backup generators.

MAILING ADDRESS:
NC DEPARTMENT OF TRANSPORTATION
PROJECT DEVELOPMENT AND ENVIRONMENTAL ANALYSIS
1548 MAIL SERVICE CENTER
RALEIGH NC 27699-1548

TELEPHONE: 919-707-6000
FAX: 919-250-4224

WEBSITE:
[HTTPS://CONNECT.NCDOT.GOV/RESOURCES/ENVIRONMENTAL/PAGES/DEFAULT.ASPX](https://connect.ncdot.gov/resources/environmental/pages/default.aspx)

LOCATION:
CENTURY CENTER, BUILDING B
1020 BIRCH RIDGE DRIVE
RALEIGH NC 27610

Regulatory Approvals

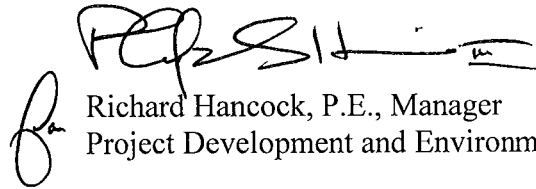
Section 404 Permit: NCDOT requests that the U.S. Army Corps of Engineers (USACE) review this permit modification request and issue a modification for the Individual Section 404 Permit.

Section 401 Permit: NCDOT requests that the N.C. Division of Water Resources review this permit modification request and issue a modification for the Individual 401 Water Quality Certification.

CAMA Permit: NCDOT requests that the N.C. Division of Coastal Management review this permit modification request and issue a modification for the CAMA Major Development Permit.

If you should have any questions regarding this request, please contact Michael Turchy at (919) 707-6157 or maturchy@ncdot.gov. A copy of this request will be posted at: <https://connect.ncdot.gov/resources/Environmental/Pages>

Sincerely,

A handwritten signature in black ink, appearing to read "Richard Hancock". The signature is stylized and includes a large initial "R" on the left side.

Richard Hancock, P.E., Manager
Project Development and Environmental Analysis Unit

cc:
NCDOT Permit Application Standard Distribution List

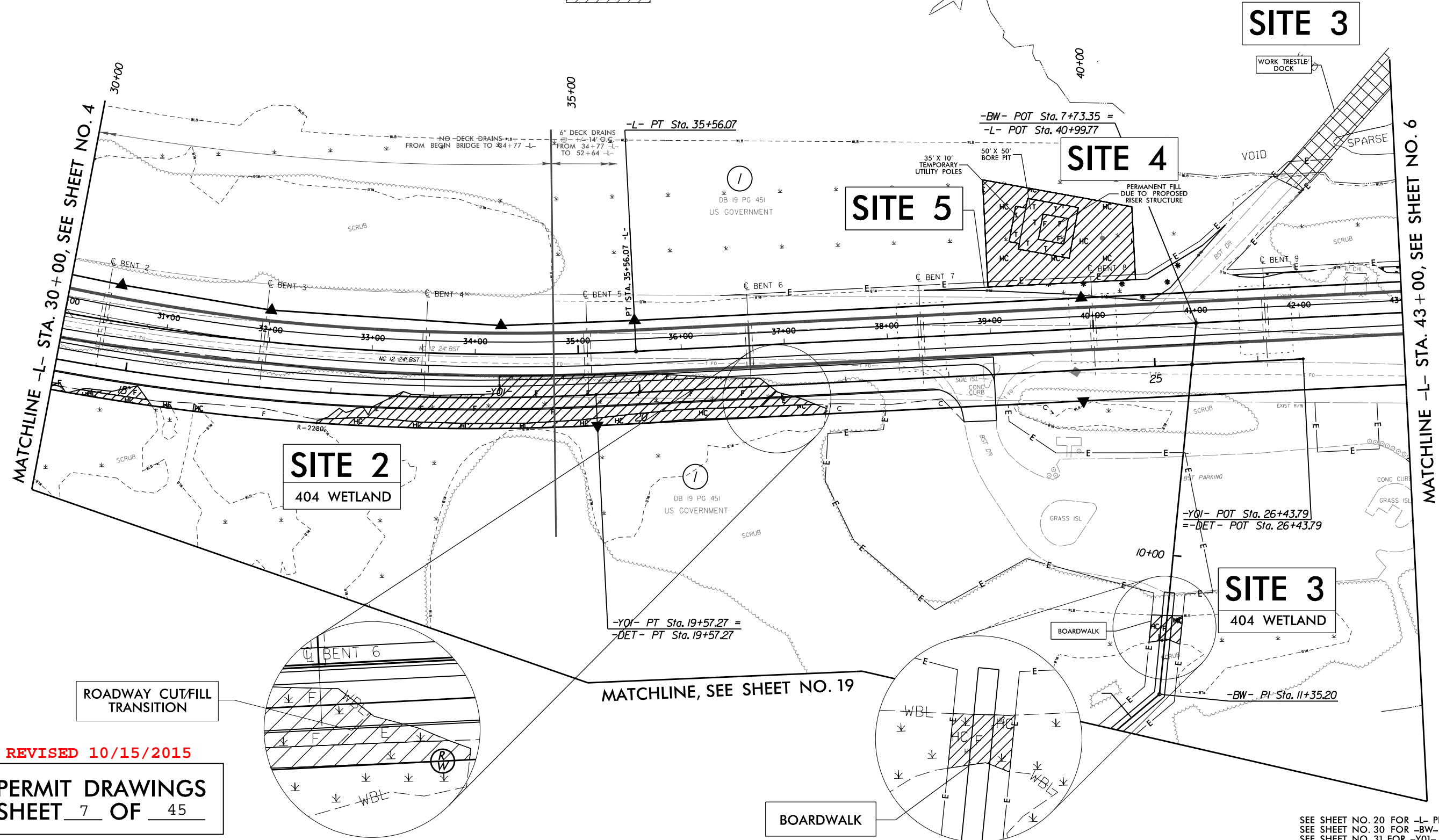
SAV LEGEND

HOMOGENOUS	Uniform in coverage, some anomalies.
PATCHY	Diverse coverage running from almost homogenous to almost sparse.
SPARSE	Limited growth with more void area than growth area.
VOID	Open with little or no growth. Boundary defined by edges of other polygons.

- DENOTES FILL IN WETLAND
- DENOTES EXCAVATION IN WETLAND
- DENOTES MECHANIZED CLEARING
- DENOTES TEMPORARY FILL IN WETLAND
- DENOTES HAND CLEARING

PROJECT REFERENCE NO. B-2500 (PHASE I)	SHEET NO. 5
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
PCL Civil Constructors, Inc. 801 Corporate Center Drive, Suite 130 Raleigh, NC 27607	
HDR Engineering, Inc. of the Carolinas 555 Fayetteville St, Suite 900 Raleigh, N.C. 27601 N.C.B.E.L.S. License Number: F-0116	

NAD 83/NSRS 2007



REVISED 10/15/2015

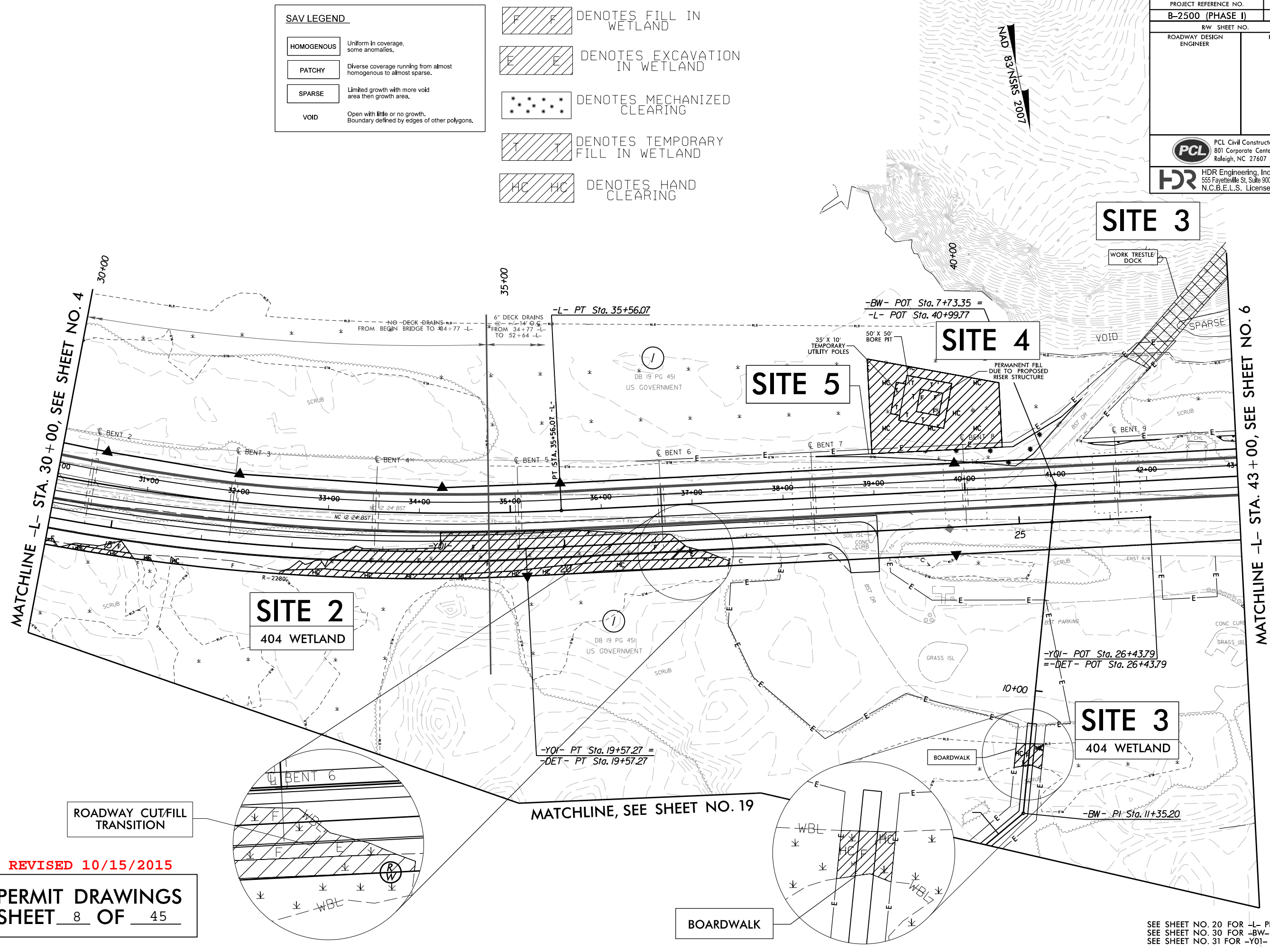
PERMIT DRAWINGS
SHEET 7 OF 45

SEE SHEET NO. 20 FOR -L- PROFILE.
SEE SHEET NO. 30 FOR -BW- PROFILE.
SEE SHEET NO. 31 FOR -Y01- PROFILE.

PLOT DRIVER: NCDOT_color_eng_100.plt
 USER: jmassroc
 FILE: PCL\Civil\Const\B.2500_Bonner_Bridge_Replacement\06.00_NCDOT_File_Structure\B.2500_Roadway\Proj\B2500_R0Y_PSH_05.dgn
 PENTABLE: NCDOT_permits.CON.tbl
 DATE: 10/15/2015
 TIME: 8:40:01 AM
 REVISIONS

PROJECT REFERENCE NO. B-2500 (PHASE I)	SHEET NO. 5
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
PCL Civil Constructors, Inc. 801 Corporate Center Drive, Suite 130 Raleigh, NC 27607	
HDR Engineering, Inc. of the Carolinas 555 Fayetteville St, Suite 900 Raleigh, N.C. 27601 N.C.B.E.L.S. License Number: F-0116	

SAV LEGEND	
	HOMOGENOUS Uniform in coverage, some anomalies.
	PATCHY Diverse coverage running from almost homogenous to almost sparse.
	SPARSE Limited growth with more void area than growth area.
	VOID Open with little or no growth. Boundary defined by edges of other polygons.
	DENOTES FILL IN WETLAND
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	DENOTES TEMPORARY FILL IN WETLAND
	DENOTES HAND CLEARING



REVISED 10/15/2015

PERMIT DRAWINGS
SHEET 8 OF 45

ROADWAY CUT/FILL TRANSITION

BOARDWALK

SEE SHEET NO. 20 FOR -L- PROFILE.
SEE SHEET NO. 30 FOR -BW- PROFILE.
SEE SHEET NO. 31 FOR -Y01- PROFILE.

PLOT DRIVER: NCDOT...eng_100.plt
 USER: jmassroc
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 DATE: 10/15/2015
 TIME: 8:39:24 AM
 REVISIONS

WETLAND PERMIT IMPACT SUMMARY

Site No.	Station (From/To)	Structure Size / Type	Wetland Restoration	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	-L- 19+96 TO 21+66 LT	Roadway						0.01					
2	-Y01- 12+49 TO 21+80 RT	Roadway		0.32		0.01		0.12					
3	-L- 41+86 TO 44+32 LT	Work Trestle/Dock			***					***			
	-BW- 10+58 TO 10+85	Boardwalk		***				0.01					
****4	-L- 39+61 TO 40+57 LT	Utility Relocation		0.01	0.05			0.22					
*5	-L- 38+36 TO 176+68	Prop. Bridge Work Trestle		***	0.65 ***		0.09		***	0.93 ***			
6	-L- 56+40 TO 172+10 RT	Temp. Platform Exist. Bridge Demo			*					*** ***			
7	-L- 191+20 TO 197+80	Roadway		0.06		0.01		0.13					
	Casting Yard	Trestle								0.01			
TOTALS:				0.39	0.70	0.02	0.09	0.49	0.00	0.94	0	0	0

* Permanent surface water and permanent fill in wetland impacts were calculated based on the type of foundation. If the foundation has a pile cap then the cap would be in the water ~ 1.0' based on the mean high water elevation, so the cap dimensions were used instead of the individual pile sizes (giving us a larger footprint). If the foundation has 54" circular piles with no pile cap then the pile surface area was used to calculate the impact, plus a small area immediately around the pile.

**The impacts for the removal of the existing bridge were calculated using the pile window (the extent that the piles project into the water) and not individual pile sizes. The demolition/pile removal in wetlands was considered "Temporary Fill" because "Temporary Excavation" is not a category.

*** Impacts for the temporary work trestle, work bridge, and work platform were calculated as pile impacts. The piles being proposed are 24" circular piles. The work trestle, platforms, and bridge all require two piles per span and spans will be spaced every 32 feet apart. The boardwalk impacts are calculated as the entire footprint of the 10' wide boardwalk.

**** The underground utility relocation going to be installed by bore and jack and the temporary wetland impacts are for the bore pit needed to install the utility lines and the footprint of the temporary riser poles. The permanent fill in wetland hatching represents the permanent riser pole structure footprint.

REVISED 10/15/2015

CAMA vs 404 Wetland Impacts
Mech. Clearing in CAMA Wetlands = 0.01 AC.
Mech. Clearing in 404 Wetlands = 0.08 AC.
Perm. Fill in CAMA Wetlands = 0.01 AC
Perm. Fill in 404 Wetlands = 0.38 AC
Perm. Excavation in 404 Wetlands = 0.02 AC

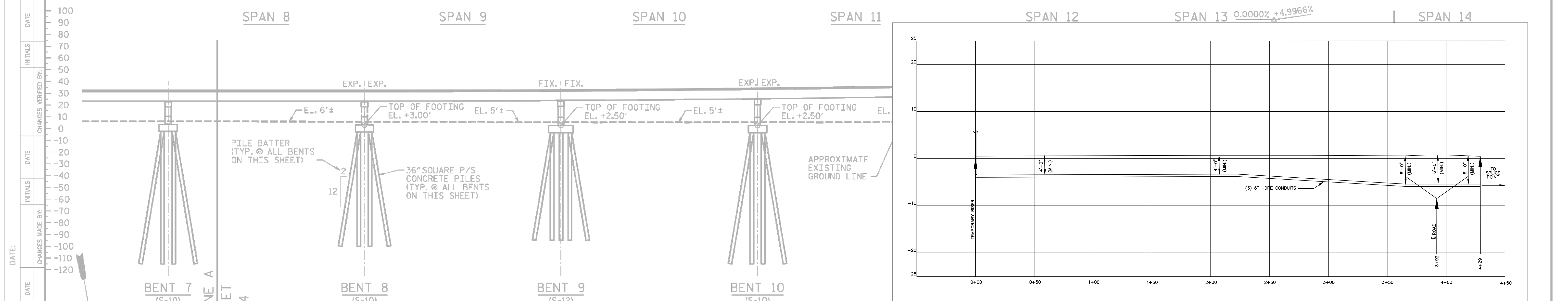
*** Bent Impacts				
Boardwalk	Work Trestle/Dock	Proposed Bridge	Work Trestle/Platform	Existing Bridge Demo
Perm. Fill in 404 Wetlands = <0.01 AC	Temp. SW Impacts = <0.01 AC Temp. Wetland = <0.01 AC	Perm. Fill in CAMA Wetlands = 0.01 AC Perm. SW Impacts = 1.00 AC	Temp. Fill in CAMA Wetlands = 0.02 AC Temp. SW Impacts = 0.04 AC	Temp. Fill in CAMA Wetlands = 0.31 AC Temp. SW Impacts = 2.45 AC

NC DEPARTMENT OF TRANSPORTATION

 DIVISION OF HIGHWAYS

 DARE COUNTY
 WBS - 32635.1.4 and 32635.3.GV3
 B-2500 (Phase I)

 Replacement of Herbert C. Bonner Bridge Across
 Oregon Inlet from Hatteras Island to Bodie Island
 SHEET **45** OF **45**



SUPERELEVATION/CROSS SLOPE DATA

STATION -L-	CROSS SLOPE	STATION -L-	CROSS SLOPE
28+00.00	.050	102+59.84	.030
35+11.07		150+71.46	
35+11.07	VARIES	150+71.46	VARIES
35+78.57		150+84.96	
35+78.57		150+84.96	.025
51+99.00	.025	170+53.32	
51+99.00	VARIES	170+53.32	VARIES
53+81.00		170+66.82	
53+81.00		170+66.82	
70+28.93	.045	176+39.90	.030
70+28.93		176+39.90	VARIES
70+28.93	VARIES	177+20.90	VARIES
70+82.93		177+20.90	0.000
70+82.93	.025		
102+46.34			
102+46.34			
102+59.84	VARIES		
102+59.84	.030		

SEE ROADWAY PLANS FOR SUPERELEVATION DATA NOT SHOWN HERE

PLAN
(PILES NOT SHOWN FOR CLARITY)

ADDED TO B-2500 PACKAGE 10/15/2015

NOTES

▲ = ALONG -L-

ALL STATIONS ARE ALONG -L-

ALL ELEVATIONS ARE IN FEET, NAVD88

ALL BENTS ARE RADIAL

SEE SHEET 1 OF 14 FOR SUPERSTRUCTURE TABLE AND FOUNDATION TABLE

Booth & Associates LLC

PCL Civil Constructors, Inc.
801 Corporate Center Drive, Suite 130
Raleigh, NC 27607

HDR Engineering, Inc. of the Carolinas
535 Fayetteville Street, Suite 900, Raleigh, NC 27601
N.C. E.L.L. License Number: F-0116

PROJECT NO. B-2500 (PHASE I)

DARE COUNTY

STATION: 102+67.76 -L-

SHEET 2 OF 14

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

GENERAL DRAWING FOR BRIDGE ON NC 12 OVER OREGON INLET

REVISIONS			
NO.	BY:	DATE:	NO.
1			3
2			4

SHEET NO. 50-03
TOTAL SHEETS 56