

PROJECT: BP3.R011

REFERENCE:

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SHEET NO.	DESCRIPTION
1	TITLE SHEET
2	LEGEND (SOIL & ROCK)
3	SITE PLAN
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STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
GEOTECHNICAL ENGINEERING UNIT

STRUCTURE
SUBSURFACE INVESTIGATION

COUNTY PENDER
PROJECT DESCRIPTION BRIDGE NUMBER 68 ON -L-
(SR 1306) OVER SILLS CREEK AT STA.15+52.5

INVENTORY

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	BP3.R011	1	6

CAUTION NOTICE

THE SUBSURFACE INFORMATION AND THE SUBSURFACE INVESTIGATION ON WHICH IT IS BASED WERE MADE FOR THE PURPOSE OF STUDY, PLANNING AND DESIGN, AND NOT FOR CONSTRUCTION OR PAY PURPOSES. THE VARIOUS FIELD BORING LOGS, ROCK CORES AND SOIL TEST DATA AVAILABLE MAY BE REVIEWED OR INSPECTED IN RALEIGH BY CONTACTING THE N. C. DEPARTMENT OF TRANSPORTATION, GEOTECHNICAL ENGINEERING UNIT AT (919) 707-6850. THE SUBSURFACE PLANS AND REPORTS, FIELD BORING LOGS, ROCK CORES AND SOIL TEST DATA ARE NOT PART OF THE CONTRACT.

GENERAL SOIL AND ROCK STRATA DESCRIPTIONS AND INDICATED BOUNDARIES ARE BASED ON A GEOTECHNICAL INTERPRETATION OF ALL AVAILABLE SUBSURFACE DATA AND MAY NOT NECESSARILY REFLECT THE ACTUAL SUBSURFACE CONDITIONS BETWEEN BORINGS OR BETWEEN SAMPLED STRATA WITHIN THE BOREHOLE. THE LABORATORY SAMPLE DATA AND THE IN SITU (ON-PLACE) TEST DATA CAN BE RELIED ON ONLY TO THE DEGREE OF RELIABILITY INHERENT IN THE STANDARD TEST METHOD. THE OBSERVED WATER LEVELS OR SOIL MOISTURE CONDITIONS INDICATED IN THE SUBSURFACE INVESTIGATIONS ARE AS RECORDED AT THE TIME OF THE INVESTIGATION. THESE WATER LEVELS OR SOIL MOISTURE CONDITIONS MAY VARY CONSIDERABLY WITH TIME ACCORDING TO CLIMATIC CONDITIONS INCLUDING TEMPERATURES, PRECIPITATION AND WIND, AS WELL AS OTHER NON-CLIMATIC FACTORS.

THE BIDDER OR CONTRACTOR IS CAUTIONED THAT DETAILS SHOWN ON THE SUBSURFACE PLANS ARE PRELIMINARY ONLY AND IN MANY CASES THE FINAL DESIGN DETAILS ARE DIFFERENT. FOR BIDDING AND CONSTRUCTION PURPOSES, REFER TO THE CONSTRUCTION PLANS AND DOCUMENTS FOR FINAL DESIGN INFORMATION ON THIS PROJECT. THE DEPARTMENT DOES NOT WARRANT OR GUARANTEE THE SUFFICIENCY OR ACCURACY OF THE INVESTIGATION MADE, NOR THE INTERPRETATIONS MADE, OR OPINION OF THE DEPARTMENT AS TO THE TYPE OF MATERIALS AND CONDITIONS TO BE ENCOUNTERED. THE BIDDER OR CONTRACTOR IS CAUTIONED TO PERFORM INDEPENDENT SUBSURFACE INVESTIGATIONS AND MAKE INTERPRETATIONS AS NECESSARY TO CONFIRM CONDITIONS ENCOUNTERED ON THE PROJECT. THE CONTRACTOR SHALL HAVE NO CLAIM FOR ADDITIONAL COMPENSATION OR FOR AN EXTENSION OF TIME FOR ANY REASON RESULTING FROM THE ACTUAL CONDITIONS ENCOUNTERED AT THE SITE DIFFERING FROM THOSE INDICATED IN THE SUBSURFACE INFORMATION.

- NOTES:
- THE INFORMATION CONTAINED HEREIN IS NOT IMPLIED OR GUARANTEED BY THE N. C. DEPARTMENT OF TRANSPORTATION AS ACCURATE NOR IS IT CONSIDERED PART OF THE PLANS, SPECIFICATIONS OR CONTRACT FOR THE PROJECT.
 - BY HAVING REQUESTED THIS INFORMATION, THE CONTRACTOR SPECIFICALLY WAIVES ANY CLAIMS FOR INCREASED COMPENSATION OR EXTENSION OF TIME BASED ON DIFFERENCES BETWEEN THE CONDITIONS INDICATED HEREIN AND THE ACTUAL CONDITIONS AT THE PROJECT SITE.

PERSONNEL
<u>S.N. ZIMARINO</u>
<u>T.W. MILLER</u>
<u>C.M. WALKER</u>
<u>J.M. EDMONDSON</u>

INVESTIGATED BY T.C. BOTTOMS
DRAWN BY T.W. MILLER
CHECKED BY T.C. BOTTOMS
SUBMITTED BY T.C. BOTTOMS
DATE SEPTEMBER 2025



DocuSigned by:
Tyler C. Bottoms 09/16/2025
48A2D3BD08C9440E SIGNATURE DATE

DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED

NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
GEOTECHNICAL ENGINEERING UNIT

SUBSURFACE INVESTIGATION

SOIL AND ROCK LEGEND, TERMS, SYMBOLS, AND ABBREVIATIONS

[illegible]

GEOTECHNICAL BORING REPORT
BORE LOG

WBS BP3.R011.1			TIP N/A		COUNTY PENDER		GEOLOGIST Zimarino, S. N.									
SITE DESCRIPTION BRIDGE NUMBER 68 ON -L- (SR 1306) OVER SILLS CREEK									GROUND WTR (ft)							
BORING NO. EB1-A			STATION 14+84		OFFSET 15 ft LT		ALIGNMENT -L-		0 HR.	N/A						
COLLAR ELEV. 34.0 ft			TOTAL DEPTH 103.8 ft		NORTHING 351,263		EASTING 2,297,385		24 HR.	8.7						
DRILL RIG/HAMMER EFF./DATE GFO0074 CME-55 86% 09/19/2024					DRILL METHOD Mud Rotary			HAMMER TYPE Automatic								
DRILLER Walker, C. M.			START DATE 09/09/25		COMP. DATE 09/09/25		SURFACE WATER DEPTH N/A									
ELEV (ft)	DRIVE ELEV (ft)	DEPTH (ft)	BLOW COUNT			BLOWS PER FOOT					SAMP. NO.	MOI	LOG	SOIL AND ROCK DESCRIPTION		
			0.5ft	0.5ft	0.5ft	0	25	50	75	100				ELEV. (ft)	DEPTH (ft)	
35																
	34.0	0.0	1	3	4	7								34.0	0.0	GROUND SURFACE
30																ROADWAY EMBANKMENT
	29.7	4.3	2	2	2	4										BROWN AND TAN SILTY SAND, MOIST
25														27.0	7.0	UNDIVIDED COASTAL PLAIN
	26.0	8.0	4	7	8	15										TAN AND GRAY SILTY SAND, MOIST TO SATURATED
20														23.0	11.0	COASTAL PLAIN
	21.0	13.0	1	3	3	6										GRAY CLAYEY SAND, SATURATED (PEEDEE FORMATION)
15														18.0	16.0	GRAY SILTY SAND, SATURATED (PEEDEE FORMATION)
	16.0	18.0	2	3	3	6										
10																
	11.0	23.0	3	3	4	7										
5														8.0	26.0	GRAY SANDY CLAY, WET (PEEDEE FORMATION)
	6.0	28.0	3	4	7	11										
0																
	1.0	33.0	2	2	2	4										
-5																
	-4.0	38.0	3	3	5	8										
-10																
	-9.0	43.0	3	3	5	8										
-15																
	-14.0	48.0	4	3	4	7										
-20																
	-19.0	53.0	7	10	13	23										
-25																
	-24.0	58.0	8	9	11	20										
-30																
	-29.0	63.0	29	37	50	87										
-35																
	-34.0	68.0	18	40	42	82										
-40																
	-39.0	73.0	46	100/0.5		100/0.5										
-45																
	-44.0	78.0	14	23	30											

NCDOT BORE DOUBLE BP3.R011_GEO_BRDG.GPJ NC_DOT.GDT 9/16/25

WBS BP3.R011.1			TIP N/A		COUNTY PENDER		GEOLOGIST Zimarino, S. N.							
SITE DESCRIPTION BRIDGE NUMBER 68 ON -L- (SR 1306) OVER SILLS CREEK									GROUND WTR (ft)					
BORING NO. EB1-A			STATION 14+84			OFFSET 15 ft LT			ALIGNMENT -L-		0 HR. N/A			
COLLAR ELEV. 34.0 ft			TOTAL DEPTH 103.8 ft			NORTHING 351,263			EASTING 2,297,385		24 HR. 8.7			
DRILL RIG/HAMMER EFF./DATE GFO0074 CME-55 86% 09/19/2024						DRILL METHOD Mud Rotary			HAMMER TYPE Automatic					
DRILLER Walker, C. M.			START DATE 09/09/25			COMP. DATE 09/09/25			SURFACE WATER DEPTH N/A					
ELEV (ft)	DRIVE ELEV (ft)	DEPTH (ft)	BLOW COUNT			BLOWS PER FOOT					SAMP. NO.	LOG MOI	SOIL AND ROCK DESCRIPTION	
			0.5ft	0.5ft	0.5ft	0	25	50	75	100				
-45						Match Line								
	-49.0	83.0	11	21	22	53							GREEN AND GRAY CALCAREOUS SILTY SAND WITH MICA, SHELL FRAGMENTS, AND HARD TO VERY HARD LIMESTONE LAYERS, SATURATED (PEEDEE FORMATION) (continued)	
-50						43							-51.5	85.5
	-54.0	88.0	12	22	23								-53.5	87.5
-55						45							-56.5	90.5
	-59.0	93.0	14	41	59/0.1								-57.9	91.9
-60						100/0.6							-60.0	94.0
	-64.0	98.0	100/0.4			100/0.4							-60.6	94.6
-65						100/0.4							-64.0	98.0
	-69.0	103.0	6	100/0.3		100/0.3							-67.5	101.5
													-69.7	103.7
													-69.8	103.8
													Boring Terminated at Elevation -69.8 ft IN VERY HARD LIMESTONE	

NC DOT BORE DOUBLE BP3.R011_GEO_BRDG.GPJ NC_DOT.GDT 9/16/25

WBS BP3.R011.1				TIP N/A		COUNTY PENDER		GEOLOGIST Miller, T. W.					
SITE DESCRIPTION BRIDGE NUMBER 68 ON -L- (SR 1306) OVER SILLS CREEK								GROUND WTR (ft)					
BORING NO. B1-B			STATION 15+50		OFFSET 7 ft RT		ALIGNMENT -L-		0 HR. N/A				
COLLAR ELEV. 23.4 ft			TOTAL DEPTH 101.8 ft		NORTHING 351,330		EASTING 2,297,367		24 HR. N/A				
DRILL RIG/HAMMER EFF./DATE GFO0074 CME-55 86% 09/19/2024					DRILL METHOD Mud Rotary			HAMMER TYPE Automatic					
DRILLER Walker, C. M.			START DATE 09/11/25		COMP. DATE 09/11/25		SURFACE WATER DEPTH 0.1ft						
ELEV (ft)	DRIVE ELEV (ft)	DEPTH (ft)	BLOW COUNT			BLOWS PER FOOT					SAMP. NO.	LOG	SOIL AND ROCK DESCRIPTION
			0.5ft	0.5ft	0.5ft	0	25	50	75	100			
-55						Match Line							
-60	-58.0	81.4	100/0.2			100/0.2							-57.8 GRAY CALCAREOUS SILTY SAND WITH MICA, SHELL FRAGMENTS, AND HARD TO VERY HARD LIMESTONE LAYERS, SATURATED (PEEDEE FORMATION) 81.2
													-58.6 82.0
-65	-63.0	86.4	23 13 23			36							-59.6 83.0
													-62.1 GRAY SANDY CLAY WITH SHELL AND LIMESTONE FRAGMENTS, WET (PEEDEE FORMATION) 85.5
-70	-68.0	91.4	10 8 92/0.4			100/0.9							-67.5 90.9
													-68.1 GRAY CALCAREOUS SILTY SAND WITH MICA, SHELL FRAGMENTS, AND HARD TO VERY HARD LIMESTONE LAYERS, SATURATED (PEEDEE FORMATION) 91.5
-75	-73.0	96.4	13 100/0.5			100/0.5							-70.4 93.8
													-70.9 94.3
	-78.0	101.4	100/0.4			100/0.4							-78.4 101.8
													Boring Terminated at Elevation -78.4 ft IN VERY DENSE SILTY SAND

NCDOT BORE DOUBLE BP3.R011_GEO_BRDG.GPJ NC_DOT.GDT 9/16/25

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