

REFERENCE: U-4751

PROJECT: 40191

**STATE OF NORTH CAROLINA**  
**DEPARTMENT OF TRANSPORTATION**  
**DIVISION OF HIGHWAYS**  
**GEOTECHNICAL ENGINEERING UNIT**

**STRUCTURE**  
**SUBSURFACE INVESTIGATION**

COUNTY New Hanover  
PROJECT DESCRIPTION SR 1409 (Military Cutoff Rd.) to  
US 17 in Wilmington  
SITE DESCRIPTION Noise Wall 7 at -L- Sta. 71+50 Right

**CONTENTS**

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STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	U-4751	1	29

**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 (IN-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 MAKE SUCH INDEPENDENT SUBSURFACE INVESTIGATIONS AS HE DEEMS NECESSARY TO SATISFY HIMSELF AS TO CONDITIONS TO BE 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:
1. 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.
  2. 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

D. Racey

C. Wang

S. Davis

M. Renza

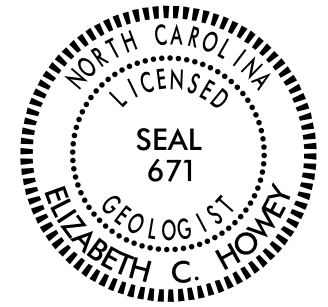
INVESTIGATED BY F&R, Inc.

DRAWN BY D. Racey

CHECKED BY B. Howey, PG, PE

SUBMITTED BY HDR, Inc.

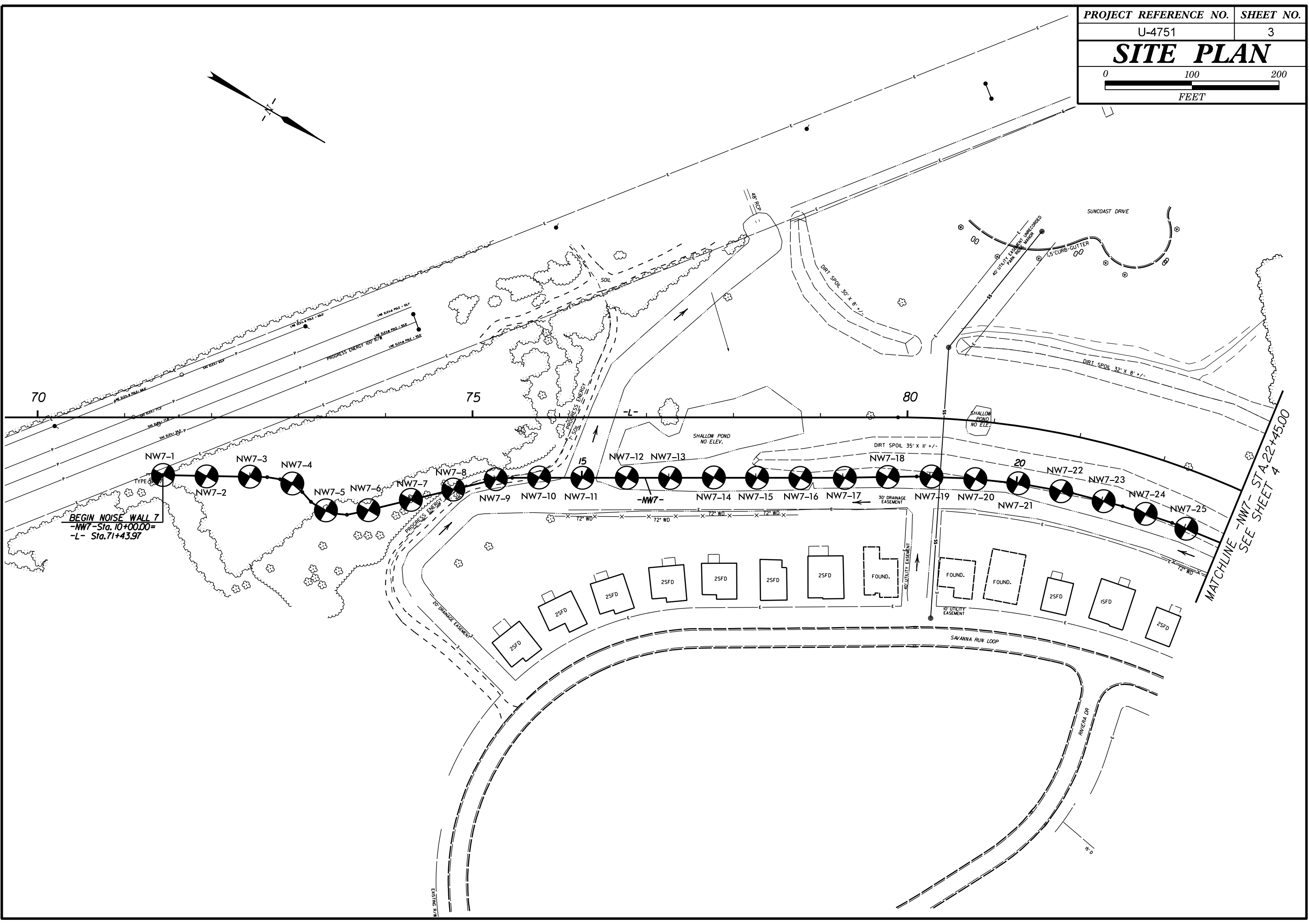
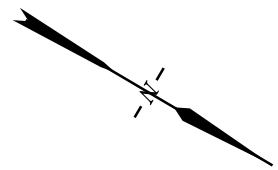
DATE March 2015

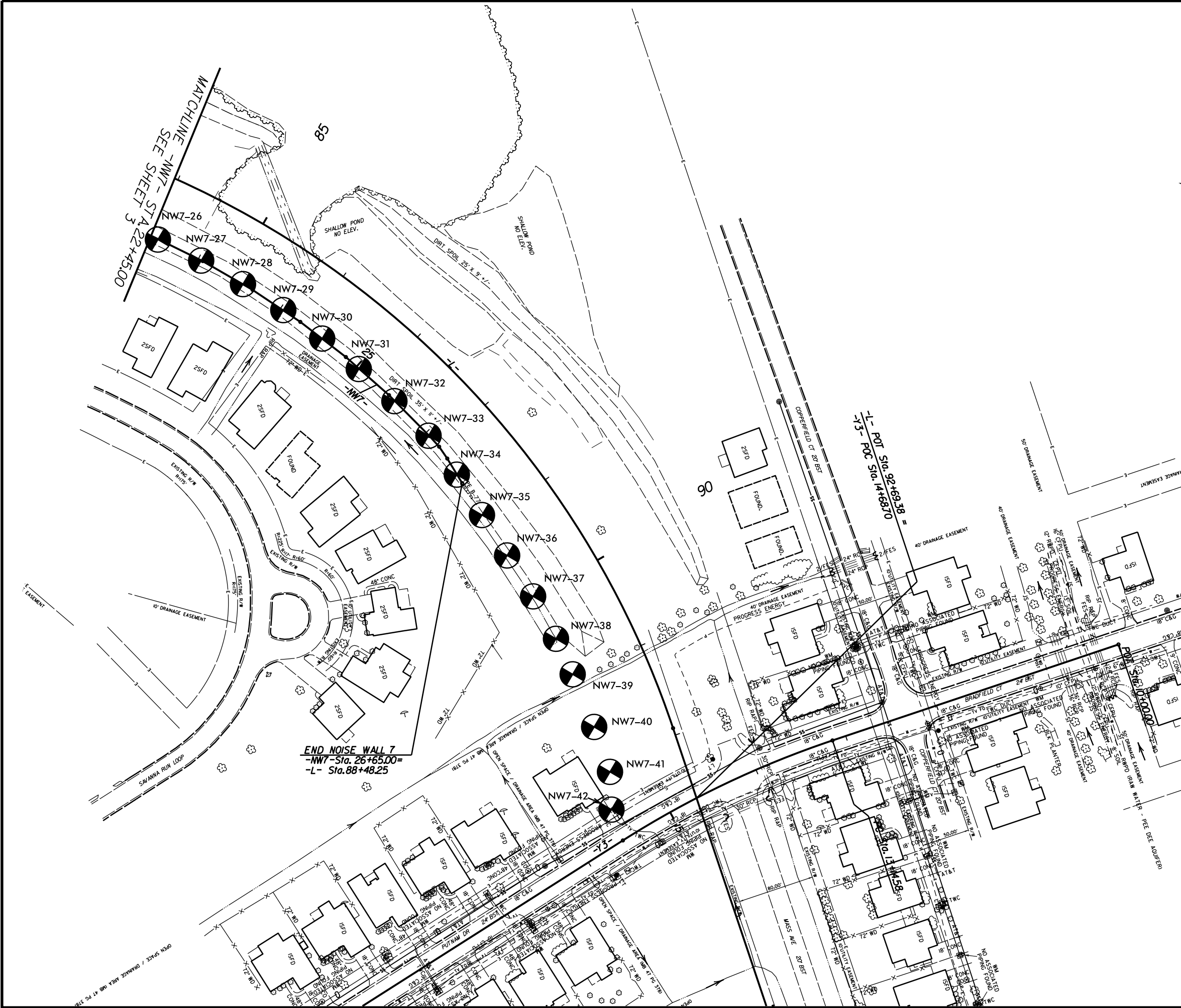
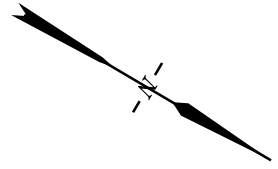


DocuSigned by:  
Elizabeth C. Howey 6/25/2015

F80E690824524F2  
SIGNATURE DATE







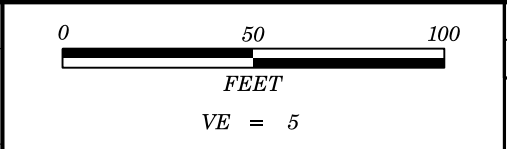
**END NOISE WALL 7**  
 -NW7-Sta. 26+65.00=  
 -L- Sta. 88+48.25

MATCHLINE -NW7- STA. 22+45.00  
 SEE SHEET 3

-L- POI Sta. 92+69.38 =  
 -J- POC Sta. 14+68.70

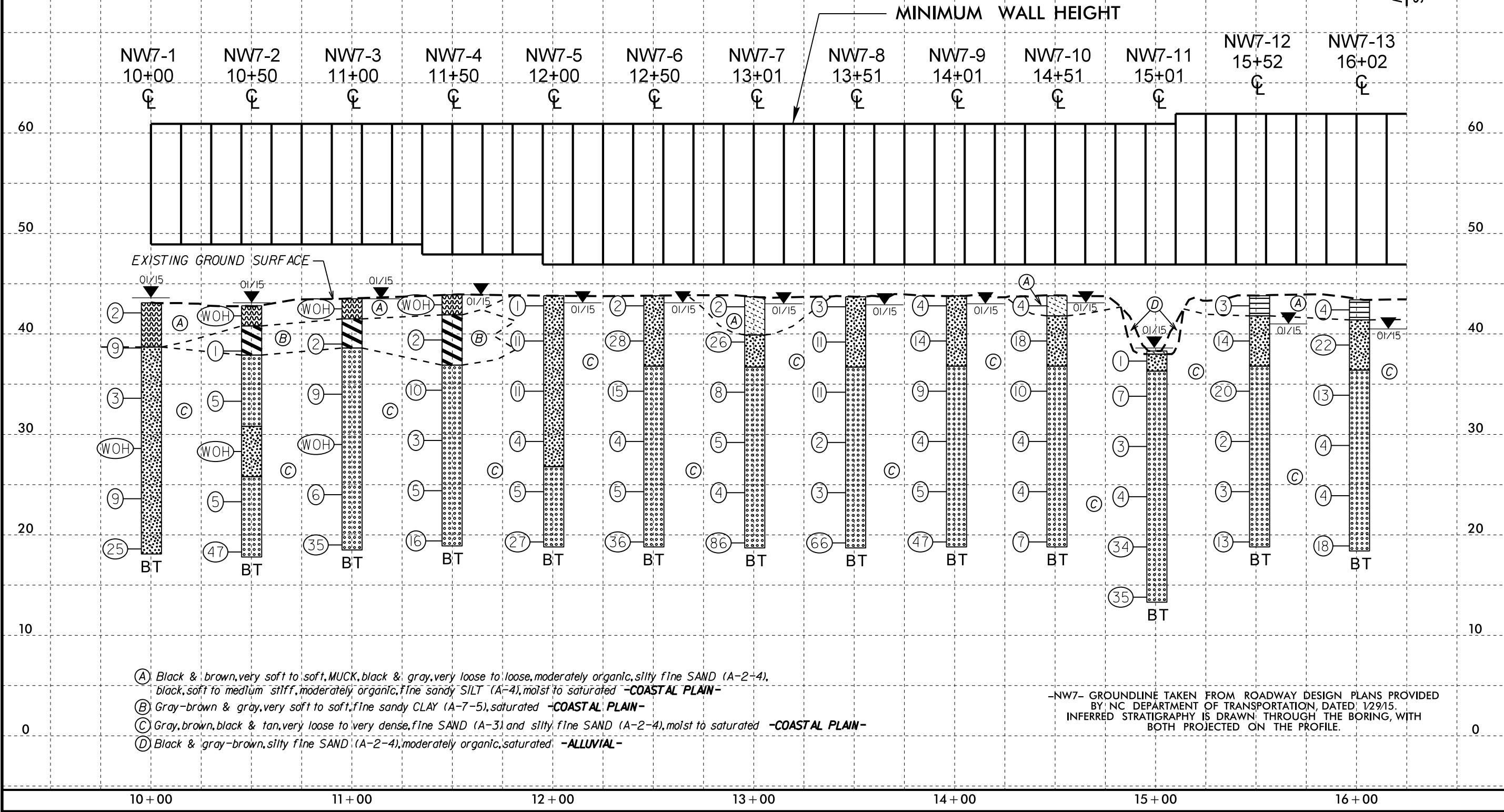
OPEN SPACE / DRAINAGE AREA 47 PG. 318  
 27969 1340

10



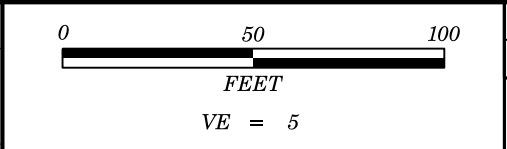
# PROFILE ALONG -NW7-

MATCH LINE  
STA. 16 + 25 SHEET 6



- (A) Black & brown, very soft to soft, MUCK, black & gray, very loose to loose, moderately organic, silty fine SAND (A-2-4), black, soft to medium stiff, moderately organic, fine sandy SILT (A-4), moist to saturated -COASTAL PLAIN-
- (B) Gray-brown & gray, very soft to soft, fine sandy CLAY (A-7-5), saturated -COASTAL PLAIN-
- (C) Gray, brown, black & tan, very loose to very dense, fine SAND (A-3) and silty fine SAND (A-2-4), moist to saturated -COASTAL PLAIN-
- (D) Black & gray-brown, silty fine SAND (A-2-4), moderately organic, saturated -ALLUVIAL-

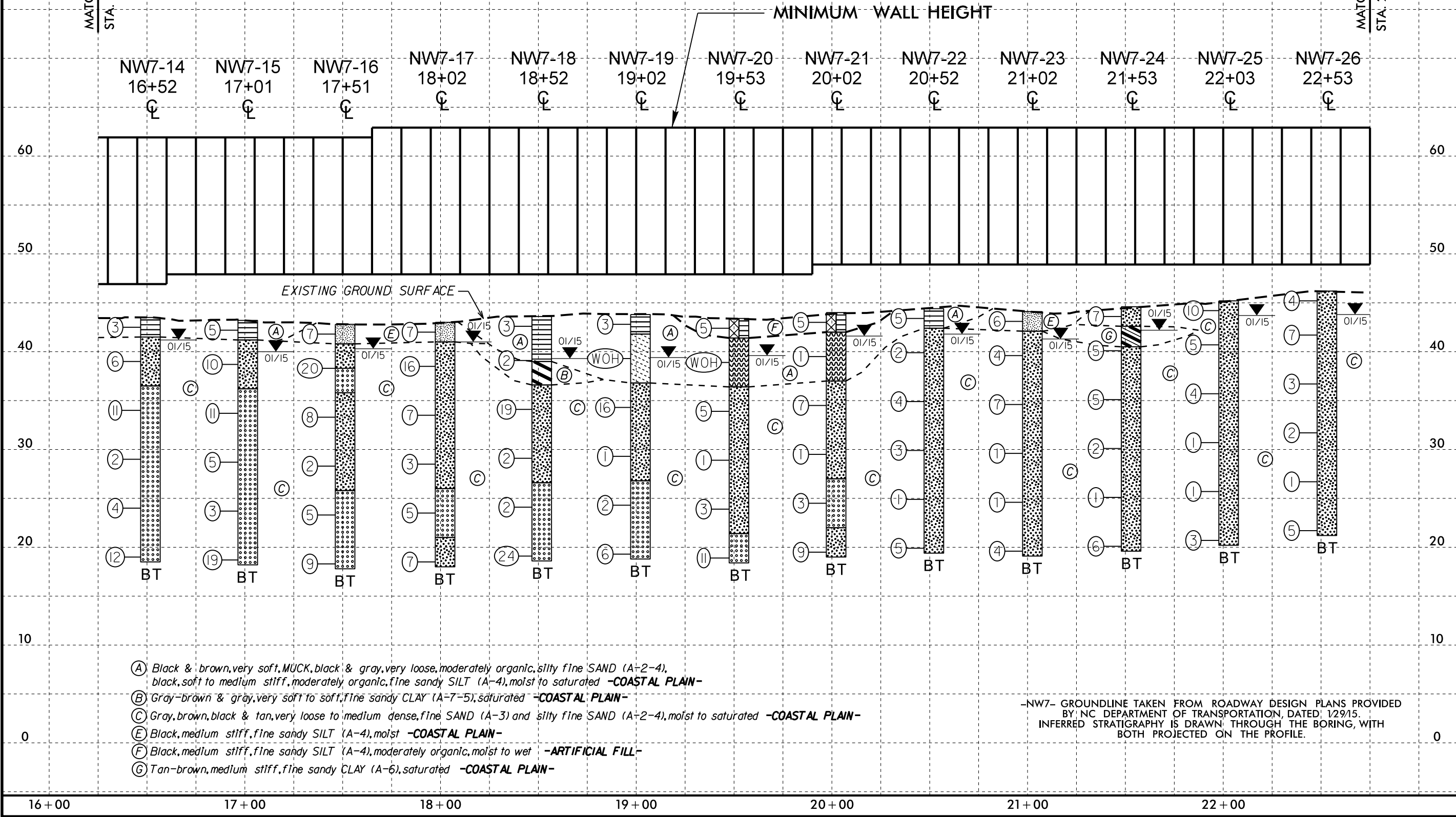
-NW7- GROUNDLINE TAKEN FROM ROADWAY DESIGN PLANS PROVIDED BY NC DEPARTMENT OF TRANSPORTATION, DATED 12/9/15. INFERRED STRATIGRAPHY IS DRAWN THROUGH THE BORING, WITH BOTH PROJECTED ON THE PROFILE.



# PROFILE ALONG -NW7-

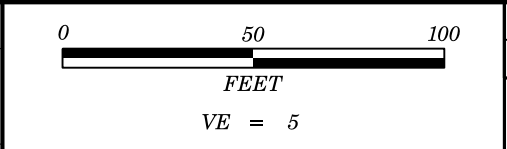
MATCH LINE  
STA. 16+25 SHEET 5

MATCH LINE  
STA. 22+75 SHEET 7



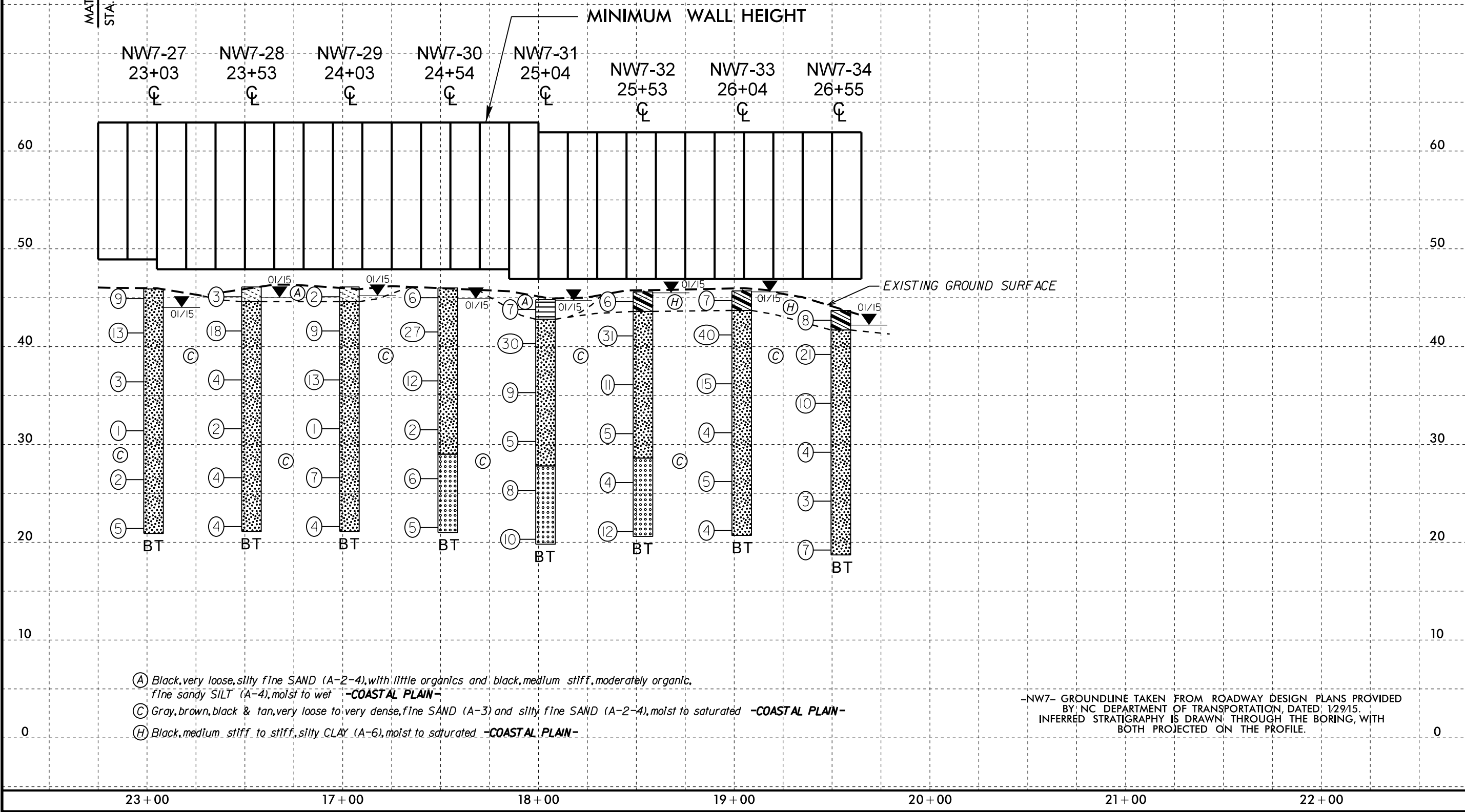
- (A) Black & brown, very soft, MUCK, black & gray, very loose, moderately organic, silty fine SAND (A-2-4), black, soft to medium stiff, moderately organic, fine sandy SILT (A-4), moist to saturated -COASTAL PLAIN-
- (B) Gray-brown & gray, very soft to soft, fine sandy CLAY (A-7-5), saturated -COASTAL PLAIN-
- (C) Gray, brown, black & tan, very loose to medium dense, fine SAND (A-3) and silty fine SAND (A-2-4), moist to saturated -COASTAL PLAIN-
- (E) Black, medium stiff, fine sandy SILT (A-4), moist -COASTAL PLAIN-
- (F) Black, medium stiff, fine sandy SILT (A-4), moderately organic, moist to wet -ARTIFICIAL FILL-
- (G) Tan-brown, medium stiff, fine sandy CLAY (A-6), saturated -COASTAL PLAIN-

-NW7- GROUNDLINE TAKEN FROM ROADWAY DESIGN PLANS PROVIDED BY NC DEPARTMENT OF TRANSPORTATION, DATED 1/29/15. INFERRED STRATIGRAPHY IS DRAWN THROUGH THE BORING, WITH BOTH PROJECTED ON THE PROFILE.



# PROFILE ALONG -NW7-

MATCH LINE  
STA. 22+75 SHEET 6



- (A) Black, very loose, silty fine SAND (A-2-4), with little organics and black, medium stiff, moderately organic, fine sandy SILT (A-4), moist to wet -COASTAL PLAIN-
- (C) Gray, brown, black & tan, very loose to very dense, fine SAND (A-3) and silty fine SAND (A-2-4), moist to saturated -COASTAL PLAIN-
- (H) Black, medium stiff to stiff, silty CLAY (A-6), moist to saturated -COASTAL PLAIN-

-NW7- GROUNDLINE TAKEN FROM ROADWAY DESIGN PLANS PROVIDED BY NC DEPARTMENT OF TRANSPORTATION, DATED 1/29/15. INFERRED STRATIGRAPHY IS DRAWN THROUGH THE BORING, WITH BOTH PROJECTED ON THE PROFILE.







**NCDOT GEOTECHNICAL ENGINEERING UNIT**  
**BORELOG REPORT**

WBS 40191.1.2		TIP U-4751		COUNTY NEW HANOVER		GEOLOGIST D. Racey									
SITE DESCRIPTION SR 1409 (Military Cutoff Road) to US 17 in Wilmington - Noise Wall 7 at -L- Station 71+50 Right							GROUND WTR (ft)								
BORING NO. NW7-5		STATION 12+00		OFFSET CL		ALIGNMENT -NW7-									
COLLAR ELEV. 43.8 ft		TOTAL DEPTH 25.0 ft		NORTHING 192,634		EASTING 2,353,085									
DRILL RIG/HAMMER EFF./DATE F&R5785 CME-55 75% 01/17/2014				DRILL METHOD H.S. Augers		HAMMER TYPE Automatic									
DRILLER S. Davis		START DATE 01/20/15		COMP. DATE 01/20/15		SURFACE WATER DEPTH N/A									
ELEV (ft)	DRIVE ELEV (ft)	DEPTH (ft)	BLOW COUNT			BLOWS PER FOOT					SAMP. NO.	LOG	SOIL AND ROCK DESCRIPTION	DEPTH (ft)	
			0.5ft	0.5ft	0.5ft	0	25	50	75	100					
45	43.8	0.0	1	0	1									43.8	0.0
40	40.3	3.5	6	4	7								W	COASTAL PLAIN Black and gray to gray-brown, silty fine SAND (A-2-4), with trace organics (roots) from 0.2' to 10.0'.	
35	35.3	8.5	9	6	5								Sat.		
30	30.3	13.5	1	2	2								Sat.		
25	25.3	18.5	2	2	3								Sat.	26.8	17.0
20	20.3	23.5	6	12	15								Sat.	18.8	25.0
Boring Terminated at Elevation 18.8 ft in SAND (COASTAL PLAIN)															
NOTES: 1) 0.0-0.2' = Surficial Organic Soils															

WBS 40191.1.2		TIP U-4751		COUNTY NEW HANOVER		GEOLOGIST D. Racey									
SITE DESCRIPTION SR 1409 (Military Cutoff Road) to US 17 in Wilmington - Noise Wall 7 at -L- Station 71+50 Right							GROUND WTR (ft)								
BORING NO. NW7-6		STATION 12+50		OFFSET CL		ALIGNMENT -NW7-									
COLLAR ELEV. 43.8 ft		TOTAL DEPTH 25.0 ft		NORTHING 192,676		EASTING 2,353,060									
DRILL RIG/HAMMER EFF./DATE F&R5785 CME-55 75% 01/17/2014				DRILL METHOD H.S. Augers		HAMMER TYPE Automatic									
DRILLER S. Davis		START DATE 01/19/15		COMP. DATE 01/19/15		SURFACE WATER DEPTH N/A									
ELEV (ft)	DRIVE ELEV (ft)	DEPTH (ft)	BLOW COUNT			BLOWS PER FOOT					SAMP. NO.	LOG	SOIL AND ROCK DESCRIPTION	DEPTH (ft)	
			0.5ft	0.5ft	0.5ft	0	25	50	75	100					
45	43.8	0.0												43.8	0.0
40	40.3	3.5	11	14	14								W	COASTAL PLAIN Black and gray to gray-brown, silty fine SAND (A-2-4), with trace organics (roots) from 0.2' to 1.5'.	
35	35.3	8.5	9	8	7								Sat.	36.8	7.0
30	30.3	13.5	1	2	2								Sat.		
25	25.3	18.5	1	2	3								Sat.		
20	20.3	23.5	10	18	18								Sat.	18.8	25.0
Boring Terminated at Elevation 18.8 ft in SAND (COASTAL PLAIN)															
NOTES: 1) 0.0-0.2' = Surficial Organic Soils															

NCDOT BORE DOUBLE U4751\_GEO\_SWAL7.GPJ NC\_DOT.GDT 3/27/15



# NCDOT GEOTECHNICAL ENGINEERING UNIT

## BORELOG REPORT

WBS 40191.1.2		TIP U-4751		COUNTY NEW HANOVER		GEOLOGIST D. Racey										
SITE DESCRIPTION SR 1409 (Military Cutoff Road) to US 17 in Wilmington - Noise Wall 7 at -L- Station 71+50 Right							GROUND WTR (ft)									
BORING NO. NW7-7		STATION 13+01		OFFSET CL		ALIGNMENT -NW7-										
COLLAR ELEV. 43.7 ft		TOTAL DEPTH 25.0 ft		NORTHING 192,712		EASTING 2,353,025										
DRILL RIG/HAMMER EFF./DATE F&R5785 CME-55 75% 01/17/2014				DRILL METHOD H.S. Augers		HAMMER TYPE Automatic										
DRILLER S. Davis		START DATE 01/19/15		COMP. DATE 01/19/15		SURFACE WATER DEPTH N/A										
ELEV (ft)	DRIVE ELEV (ft)	DEPTH (ft)	BLOW COUNT			BLOWS PER FOOT					SAMP. NO.	LOG	SOIL AND ROCK DESCRIPTION	DEPTH (ft)		
			0.5ft	0.5ft	0.5ft	0	25	50	75	100						
45	43.7	0.0	WOH	1	1									43.7	GROUND SURFACE	0.0
40	40.2	3.5		11	13	13								39.9	<b>COASTAL PLAIN</b> Black and gray, silty fine SAND (A-2-4), with moderate organics (roots, wood fragments).	3.8
35	35.2	8.5		7	4	4								36.7	Gray-brown, silty fine SAND (A-2-4).	7.0
30	30.2	13.5	WOH	2	3										Gray, fine SAND (A-3), with trace silt.	
25	25.2	18.5	WOH	2	2											
20	20.2	23.5		13	43	43										
														18.7	Boring Terminated at Elevation 18.7 ft in SAND (COASTAL PLAIN)	25.0
NOTES: 1) 0.0-0.2' = Surficial Organic Soils 2) Strata break in split spoon at a depth of 3.8'.																

WBS 40191.1.2		TIP U-4751		COUNTY NEW HANOVER		GEOLOGIST D. Racey										
SITE DESCRIPTION SR 1409 (Military Cutoff Road) to US 17 in Wilmington - Noise Wall 7 at -L- Station 71+50 Right							GROUND WTR (ft)									
BORING NO. NW7-8		STATION 13+51		OFFSET CL		ALIGNMENT -NW7-										
COLLAR ELEV. 43.7 ft		TOTAL DEPTH 25.0 ft		NORTHING 192,748		EASTING 2,352,990										
DRILL RIG/HAMMER EFF./DATE F&R5785 CME-55 75% 01/17/2014				DRILL METHOD H.S. Augers		HAMMER TYPE Automatic										
DRILLER S. Davis		START DATE 01/16/15		COMP. DATE 01/16/15		SURFACE WATER DEPTH N/A										
ELEV (ft)	DRIVE ELEV (ft)	DEPTH (ft)	BLOW COUNT			BLOWS PER FOOT					SAMP. NO.	LOG	SOIL AND ROCK DESCRIPTION	DEPTH (ft)		
			0.5ft	0.5ft	0.5ft	0	25	50	75	100						
45	43.7	0.0	WOH	1	2									43.7	GROUND SURFACE	0.0
40	40.2	3.5		8	5	6									<b>COASTAL PLAIN</b> Black & gray, silty fine SAND (A-2-4), with trace organics (roots) from 0.4' to 1.5'.	
35	35.2	8.5		6	6	5								36.7	Gray, fine SAND (A-3), with trace silt, trace organics from 18.5' to 20.0', and sulphur odor from 23.5' to 25.0'.	7.0
30	30.2	13.5		2	1	1										
25	25.2	18.5		1	1	2										
20	20.2	23.5		10	23	43										
														18.7	Boring Terminated at Elevation 18.7 ft in SAND (COASTAL PLAIN)	25.0
NOTES: 1) 0.0-0.4' = Surficial Organic Soils																

NCDOT BORE DOUBLE U4751\_GEO\_SWAL7.GPJ NC\_DOT.GDT 3/27/15

**NCDOT GEOTECHNICAL ENGINEERING UNIT**  
**BORELOG REPORT**

WBS 40191.1.2		TIP U-4751		COUNTY NEW HANOVER		GEOLOGIST D. Racey									
SITE DESCRIPTION SR 1409 (Military Cutoff Road) to US 17 in Wilmington - Noise Wall 7 at -L- Station 71+50 Right							GROUND WTR (ft)								
BORING NO. NW7-9		STATION 14+01		OFFSET CL		ALIGNMENT -NW7-									
COLLAR ELEV. 43.8 ft		TOTAL DEPTH 25.0 ft		NORTHING 192,784		EASTING 2,352,955									
DRILL RIG/HAMMER EFF./DATE F&R5785 CME-55 75% 01/17/2014				DRILL METHOD H.S. Augers		HAMMER TYPE Automatic									
DRILLER S. Davis		START DATE 01/16/15		COMP. DATE 01/16/15		SURFACE WATER DEPTH N/A									
ELEV (ft)	DRIVE ELEV (ft)	DEPTH (ft)	BLOW COUNT			BLOWS PER FOOT					SAMP. NO.	LOG	SOIL AND ROCK DESCRIPTION	DEPTH (ft)	
			0.5ft	0.5ft	0.5ft	0	25	50	75	100					
45	43.8	0.0	1	2	2									43.8	0.0
40	40.3	3.5	8	7	7									41.8	2.0
35	35.3	8.5	5	4	5									36.8	7.0
30	30.3	13.5	WOH	2	2										
25	25.3	18.5	1	2	3										
20	20.3	23.5	6	13	34									18.8	25.0
Boring Terminated at Elevation 18.8 ft in SAND (COASTAL PLAIN)  NOTES: 1) 0.0-0.1' = Surficial Organic Soils															

WBS 40191.1.2		TIP U-4751		COUNTY NEW HANOVER		GEOLOGIST D. Racey									
SITE DESCRIPTION SR 1409 (Military Cutoff Road) to US 17 in Wilmington - Noise Wall 7 at -L- Station 71+50 Right							GROUND WTR (ft)								
BORING NO. NW7-10		STATION 14+51		OFFSET CL		ALIGNMENT -NW7-									
COLLAR ELEV. 43.8 ft		TOTAL DEPTH 25.0 ft		NORTHING 192,826		EASTING 2,352,928									
DRILL RIG/HAMMER EFF./DATE F&R5785 CME-55 75% 01/17/2014				DRILL METHOD H.S. Augers		HAMMER TYPE Automatic									
DRILLER S. Davis		START DATE 01/16/15		COMP. DATE 01/16/15		SURFACE WATER DEPTH N/A									
ELEV (ft)	DRIVE ELEV (ft)	DEPTH (ft)	BLOW COUNT			BLOWS PER FOOT					SAMP. NO.	LOG	SOIL AND ROCK DESCRIPTION	DEPTH (ft)	
			0.5ft	0.5ft	0.5ft	0	25	50	75	100					
45	43.8	0.0	1	2	2									43.8	0.0
40	40.3	3.5	9	9	9									41.8	2.0
35	35.3	8.5	6	5	5									36.8	7.0
30	30.3	13.5	2	2	2										
25	25.3	18.5	2	1	3										
20	20.3	23.5	2	2	5									18.8	25.0
Boring Terminated at Elevation 18.8 ft in SAND (COASTAL PLAIN)  NOTES: 1) 0.0-0.3' = Surficial Organic Soils															

NCDOT BORE DOUBLE U4751\_GEO\_SWAL7.GPJ NC\_DOT.GDT 3/27/15



**NCDOT GEOTECHNICAL ENGINEERING UNIT**  
**BORELOG REPORT**

WBS 40191.1.2		TIP U-4751		COUNTY NEW HANOVER		GEOLOGIST D. Racey										
SITE DESCRIPTION SR 1409 (Military Cutoff Road) to US 17 in Wilmington - Noise Wall 7 at -L- Station 71+50 Right							GROUND WTR (ft)									
BORING NO. NW7-13		STATION 16+02		OFFSET CL		ALIGNMENT -NW7-										
COLLAR ELEV. 43.4 ft		TOTAL DEPTH 25.0 ft		NORTHING 192,956		EASTING 2,352,852										
DRILL RIG/HAMMER EFF./DATE F&R5785 CME-55 75% 01/17/2014				DRILL METHOD H.S. Augers		HAMMER TYPE Automatic										
DRILLER S. Davis		START DATE 01/21/15		COMP. DATE 01/21/15		SURFACE WATER DEPTH N/A										
ELEV (ft)	DRIVE ELEV (ft)	DEPTH (ft)	BLOW COUNT			BLOWS PER FOOT					SAMP. NO.	LOG	SOIL AND ROCK DESCRIPTION	DEPTH (ft)		
			0.5ft	0.5ft	0.5ft	0	25	50	75	100						
45	43.4	0.0	WOH	2	2									43.4	GROUND SURFACE	0.0
														41.4	COASTAL PLAIN Black, fine sandy SILT (A-4), moderately organic.	2.0
40	39.9	3.5		8	9	13								36.4	Gray-brown, silty fine SAND (A-2-4).	7.0
35	34.9	8.5		9	7	6									Gray, fine SAND (A-3), with trace silt and trace organics (wood fragments) from 23.5' to 25.0'.	
30	29.9	13.5	WOH	2	2											
25	24.9	18.5	WOH	2	2											
20	19.9	23.5		3	5	13								18.4		25.0
Boring Terminated at Elevation 18.4 ft in SAND (COASTAL PLAIN)																
NOTES: 1) 0.0-0.3' = Surficial Organic Soils																

WBS 40191.1.2		TIP U-4751		COUNTY NEW HANOVER		GEOLOGIST D. Racey										
SITE DESCRIPTION SR 1409 (Military Cutoff Road) to US 17 in Wilmington - Noise Wall 7 at -L- Station 71+50 Right							GROUND WTR (ft)									
BORING NO. NW7-14		STATION 16+52		OFFSET CL		ALIGNMENT -NW7-										
COLLAR ELEV. 43.5 ft		TOTAL DEPTH 25.0 ft		NORTHING 192,999		EASTING 2,352,826										
DRILL RIG/HAMMER EFF./DATE F&R5785 CME-55 75% 01/17/2014				DRILL METHOD H.S. Augers		HAMMER TYPE Automatic										
DRILLER S. Davis		START DATE 01/21/15		COMP. DATE 01/21/15		SURFACE WATER DEPTH N/A										
ELEV (ft)	DRIVE ELEV (ft)	DEPTH (ft)	BLOW COUNT			BLOWS PER FOOT					SAMP. NO.	LOG	SOIL AND ROCK DESCRIPTION	DEPTH (ft)		
			0.5ft	0.5ft	0.5ft	0	25	50	75	100						
45	43.5	0.0	WOH	1	2									43.5	GROUND SURFACE	0.0
														41.5	COASTAL PLAIN Black, fine sandy SILT (A-4), moderately organic.	2.0
40	40.0	3.5		2	3	3								36.5	Gray-brown, silty fine SAND (A-2-4).	7.0
35	35.0	8.5		6	6	5									Gray, fine SAND (A-3), with trace silt and trace organics (wood fragments) from 18.5' to 25.0'.	
30	30.0	13.5	WOR	1	1											
25	25.0	18.5		1	2	2										
20	20.0	23.5		3	5	7								18.5		25.0
Boring Terminated at Elevation 18.5 ft in SAND (COASTAL PLAIN)																
NOTES: 1) 0.0-0.2' = Surficial Organic Soils																

NCDOT BORE DOUBLE U4751\_GEO\_SWAL7.GPJ NC\_DOT.GDT 3/27/15

**NCDOT GEOTECHNICAL ENGINEERING UNIT**  
**BORELOG REPORT**

WBS 40191.1.2	TIP U-4751	COUNTY NEW HANOVER	GEOLOGIST D. Racey
SITE DESCRIPTION SR 1409 (Military Cutoff Road) to US 17 in Wilmington - Noise Wall 7 at -L- Station 71+50 Right			GROUND WTR (ft)
BORING NO. NW7-15	STATION 17+01	OFFSET CL	ALIGNMENT -NW7- 0 HR. 3.9
COLLAR ELEV. 43.2 ft	TOTAL DEPTH 25.0 ft	NORTHING 193,042	EASTING 2,352,801 24 HR. 3.2
DRILL RIG/HAMMER EFF./DATE F&R5785 CME-55 75% 01/17/2014		DRILL METHOD H.S. Augers	HAMMER TYPE Automatic
DRILLER S. Davis	START DATE 01/22/15	COMP. DATE 01/22/15	SURFACE WATER DEPTH N/A

ELEV (ft)	DRIVE ELEV (ft)	DEPTH (ft)	BLOW COUNT			BLOWS PER FOOT					SAMP. NO.	LOG	SOIL AND ROCK DESCRIPTION	DEPTH (ft)		
			0.5ft	0.5ft	0.5ft	0	25	50	75	100						
45	43.2	0.0	1	2	3									43.2	GROUND SURFACE	0.0
40	39.7	3.5	2	4	6									41.2	COASTAL PLAIN Black, fine sandy SILT (A-4), moderately organic.	2.9
35	34.7	8.5	6	6	5									36.2	Gray-brown, silty fine SAND (A-2-4).	7.0
30	29.7	13.5	WOH	2	3										Gray, fine SAND (A-3), with trace silt and sulphur odor from 18.5' to 25.0'.	
25	24.7	18.5	WOH	1	2											
20	19.7	23.5	5	8	11											

Boring Terminated at Elevation 18.2 ft in SAND (COASTAL PLAIN)

NOTES:  
 1) 0.0-0.1' = Surficial Organic Soils

WBS 40191.1.2	TIP U-4751	COUNTY NEW HANOVER	GEOLOGIST D. Racey
SITE DESCRIPTION SR 1409 (Military Cutoff Road) to US 17 in Wilmington - Noise Wall 7 at -L- Station 71+50 Right			GROUND WTR (ft)
BORING NO. NW7-16	STATION 17+51	OFFSET CL	ALIGNMENT -NW7- 0 HR. 3.6
COLLAR ELEV. 42.8 ft	TOTAL DEPTH 25.0 ft	NORTHING 193,085	EASTING 2,352,776 24 HR. 2.5
DRILL RIG/HAMMER EFF./DATE F&R5785 CME-55 75% 01/17/2014		DRILL METHOD H.S. Augers	HAMMER TYPE Automatic
DRILLER S. Davis	START DATE 01/22/15	COMP. DATE 01/22/15	SURFACE WATER DEPTH N/A

ELEV (ft)	DRIVE ELEV (ft)	DEPTH (ft)	BLOW COUNT			BLOWS PER FOOT					SAMP. NO.	LOG	SOIL AND ROCK DESCRIPTION	DEPTH (ft)		
			0.5ft	0.5ft	0.5ft	0	25	50	75	100						
45	42.8	0.0	2	3	4									42.8	GROUND SURFACE	0.0
40	39.3	3.5	7	11	9									40.8	COASTAL PLAIN Black, fine sandy SILT (A-4), with trace organics (roots).	2.0
35	34.3	8.5	5	5	3									38.3	Gray-brown, silty fine SAND (A-2-4).	4.5
30	29.3	13.5	1	1	1									35.8	Gray, fine SAND (A-3), with trace silt.	7.0
25	24.3	18.5	2	2	3									25.8	Gray, silty fine SAND (A-2-4), with trace organics from 13.5' to 15.0'.	
20	19.3	23.5	3	2	7										Gray, fine SAND (A-3), with trace silt and sulphur odor.	17.0

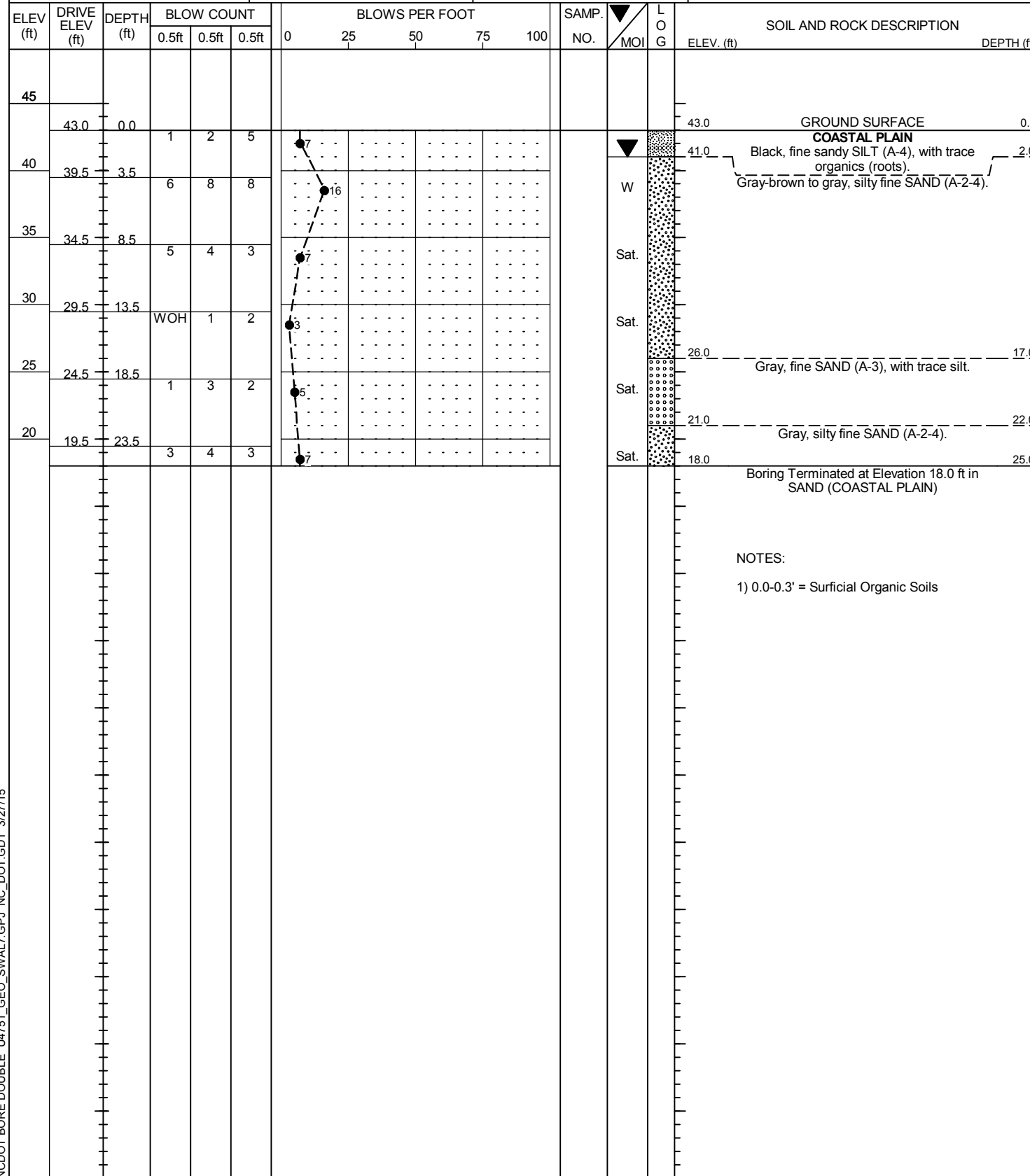
Boring Terminated at Elevation 17.8 ft in SAND (COASTAL PLAIN)

NOTES:  
 1) 0.0-0.3' = Surficial Organic Soils  
 2) Strata break in split spoon at a depth of 4.5'.

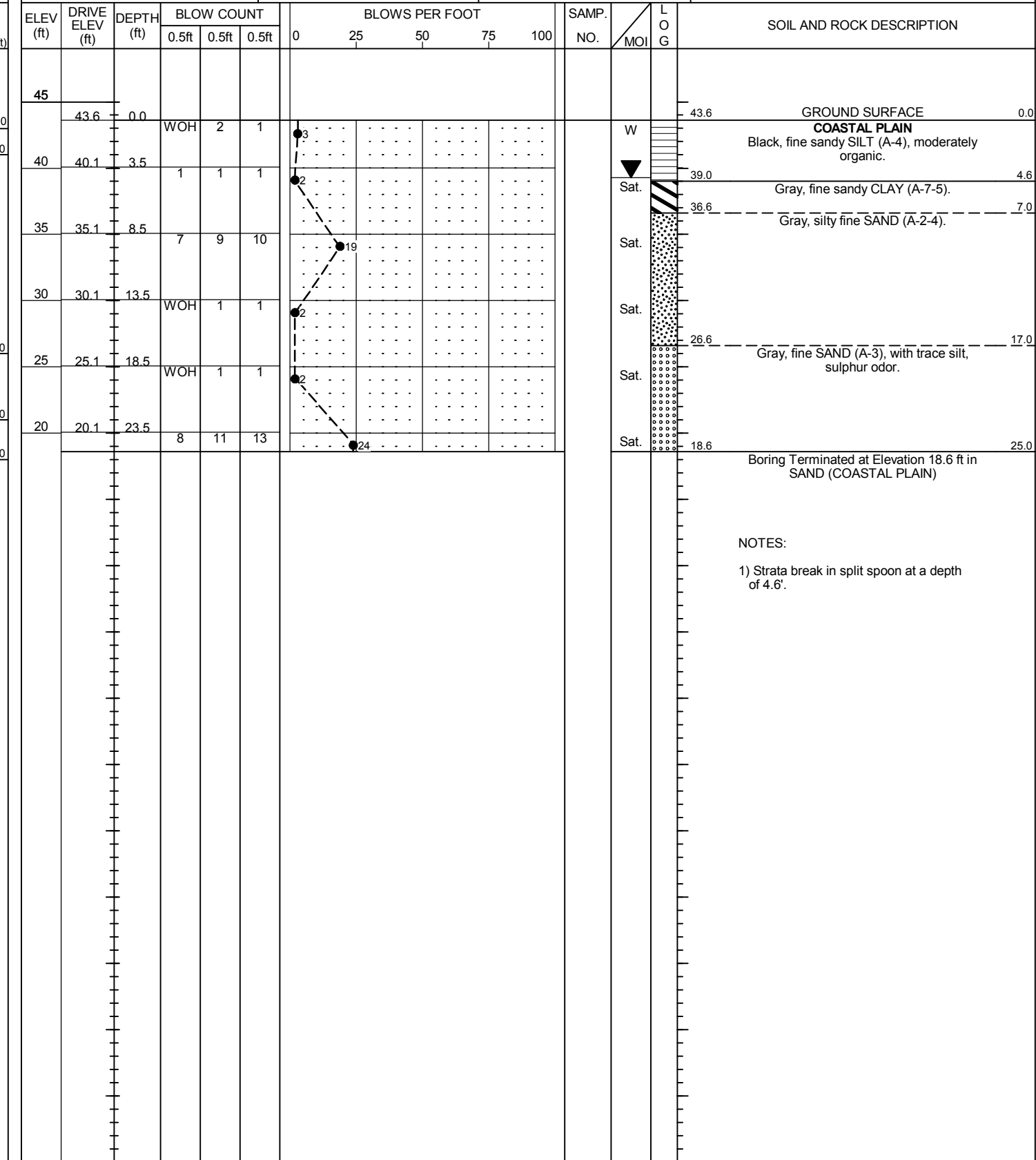
NCDOT BORE DOUBLE U4751\_GEO\_SWAL7.GPJ NC\_DOT.GDT 3/27/15

**NCDOT GEOTECHNICAL ENGINEERING UNIT**  
**BORELOG REPORT**

WBS 40191.1.2	TIP U-4751	COUNTY NEW HANOVER	GEOLOGIST D. Racey
SITE DESCRIPTION SR 1409 (Military Cutoff Road) to US 17 in Wilmington - Noise Wall 7 at -L- Station 71+50 Right			GROUND WTR (ft)
BORING NO. NW7-17	STATION 18+02	OFFSET CL	ALIGNMENT -NW7-
COLLAR ELEV. 43.0 ft	TOTAL DEPTH 25.0 ft	NORTHING 193,129	EASTING 2,352,750
DRILL RIG/HAMMER EFF./DATE F&R5785 CME-55 75% 01/17/2014		DRILL METHOD H.S. Augers	HAMMER TYPE Automatic
DRILLER S. Davis	START DATE 01/22/15	COMP. DATE 01/22/15	SURFACE WATER DEPTH N/A



WBS 40191.1.2	TIP U-4751	COUNTY NEW HANOVER	GEOLOGIST D. Racey
SITE DESCRIPTION SR 1409 (Military Cutoff Road) to US 17 in Wilmington - Noise Wall 7 at -L- Station 71+50 Right			GROUND WTR (ft)
BORING NO. NW7-18	STATION 18+52	OFFSET CL	ALIGNMENT -NW7-
COLLAR ELEV. 43.6 ft	TOTAL DEPTH 25.0 ft	NORTHING 193,171	EASTING 2,352,724
DRILL RIG/HAMMER EFF./DATE F&R5785 CME-55 75% 01/17/2014		DRILL METHOD H.S. Augers	HAMMER TYPE Automatic
DRILLER S. Davis	START DATE 01/22/15	COMP. DATE 01/22/15	SURFACE WATER DEPTH N/A



NCDOT BORE DOUBLE U4751\_GEO\_SWAL7.GPJ NC\_DOT.GDT 3/27/15





# NCDOT GEOTECHNICAL ENGINEERING UNIT

## BORELOG REPORT

WBS 40191.1.2		TIP U-4751		COUNTY NEW HANOVER		GEOLOGIST D. Racey										
SITE DESCRIPTION SR 1409 (Military Cutoff Road) to US 17 in Wilmington - Noise Wall 7 at -L- Station 71+50 Right							GROUND WTR (ft)									
BORING NO. NW7-19		STATION 19+02		OFFSET CL		ALIGNMENT -NW7-										
COLLAR ELEV. 43.8 ft		TOTAL DEPTH 25.0 ft		NORTHING 193,214		EASTING 2,352,698										
DRILL RIG/HAMMER EFF./DATE F&R5785 CME-55 75% 01/17/2014				DRILL METHOD H.S. Augers		HAMMER TYPE Automatic										
DRILLER S. Davis		START DATE 01/22/15		COMP. DATE 01/22/15		SURFACE WATER DEPTH N/A										
ELEV (ft)	DRIVE ELEV (ft)	DEPTH (ft)	BLOW COUNT			BLOWS PER FOOT					SAMP. NO.	LOG	SOIL AND ROCK DESCRIPTION	DEPTH (ft)		
			0.5ft	0.5ft	0.5ft	0	25	50	75	100						
45	43.8	0.0	1	2	1									43.8	GROUND SURFACE	0.0
40	40.3	3.5	WOH	WOH	WOH									41.8	COASTAL PLAIN Black, fine sandy SILT (A-4), moderately organic. Black, silty fine SAND (A-2-4), moderately organic, with some clay.	2.0
35	35.3	8.5	6	8	8									36.8	Gray, silty fine SAND (A-2-4), with trace organics (roots) from 13.5' to 15.0'.	7.0
30	30.3	13.5	WOR	WOH	1									26.8	Gray, fine SAND (A-3), with trace silt and sulphur odor.	17.0
25	25.3	18.5	WOH	WOH	2									18.8	Boring Terminated at Elevation 18.8 ft in SAND (COASTAL PLAIN)	25.0
20	20.3	23.5	2	3	3											

WBS 40191.1.2		TIP U-4751		COUNTY NEW HANOVER		GEOLOGIST D. Racey										
SITE DESCRIPTION SR 1409 (Military Cutoff Road) to US 17 in Wilmington - Noise Wall 7 at -L- Station 71+50 Right							GROUND WTR (ft)									
BORING NO. NW7-20		STATION 19+53		OFFSET CL		ALIGNMENT -NW7-										
COLLAR ELEV. 43.4 ft		TOTAL DEPTH 25.0 ft		NORTHING 193,259		EASTING 2,352,675										
DRILL RIG/HAMMER EFF./DATE F&R5785 CME-55 75% 01/17/2014				DRILL METHOD H.S. Augers		HAMMER TYPE Automatic										
DRILLER S. Davis		START DATE 01/22/15		COMP. DATE 01/22/15		SURFACE WATER DEPTH N/A										
ELEV (ft)	DRIVE ELEV (ft)	DEPTH (ft)	BLOW COUNT			BLOWS PER FOOT					SAMP. NO.	LOG	SOIL AND ROCK DESCRIPTION	DEPTH (ft)		
			0.5ft	0.5ft	0.5ft	0	25	50	75	100						
45	43.4	0.0												43.4	GROUND SURFACE	0.0
40	39.9	3.5	WOH	WOH	WOH									41.4	ARTIFICIAL FILL Black, fine sandy SILT (A-4), moderately organic, with some clay. COASTAL PLAIN Black, MUCK	2.0
35	34.9	8.5	4	3	2									36.4	Tan, silty fine SAND (A-2-4), with strong sulphur odor from 13.5' to 20.0'.	7.0
30	29.9	13.5	WOH	WOH	1									21.4	Gray, fine SAND (A-3), with trace silt, sulphur odor.	22.0
25	24.9	18.5	WOH	1	2									18.4	Boring Terminated at Elevation 18.4 ft in SAND (COASTAL PLAIN)	25.0
20	19.9	23.5	4	5	6											

NOTES:  
1) Small pond located beside boring on the other side of berm

**NCDOT GEOTECHNICAL ENGINEERING UNIT**  
**BORELOG REPORT**

WBS 40191.1.2	TIP U-4751	COUNTY NEW HANOVER	GEOLOGIST D. Racey
SITE DESCRIPTION SR 1409 (Military Cutoff Road) to US 17 in Wilmington - Noise Wall 7 at -L- Station 71+50 Right			GROUND WTR (ft)
BORING NO. NW7-21	STATION 20+02	OFFSET CL	ALIGNMENT -NW7-
COLLAR ELEV. 44.0 ft	TOTAL DEPTH 25.0 ft	NORTHING 193,304	EASTING 2,352,654
DRILL RIG/HAMMER EFF./DATE F&R5785 CME-55 75% 01/17/2014		DRILL METHOD H.S. Augers	HAMMER TYPE Automatic
DRILLER S. Davis	START DATE 01/23/15	COMP. DATE 01/23/15	SURFACE WATER DEPTH N/A

ELEV (ft)	DRIVE ELEV (ft)	DEPTH (ft)	BLOW COUNT			BLOWS PER FOOT					SAMP. NO.	LOG	SOIL AND ROCK DESCRIPTION	DEPTH (ft)
			0.5ft	0.5ft	0.5ft	0	25	50	75	100				
45	44.0	0.0											44.0 GROUND SURFACE 0.0	
40	40.5	3.5	1	2	3							M	42.0 ARTIFICIAL FILL 2.0 Black, fine sandy SILT (A-4), moderately organic, with some clay.	
35	35.5	8.5	4	4	3							Sat.	37.0 COASTAL PLAIN 7.0 Brown and black, MUCK	
30	30.5	13.5	1	1	1							Sat.	Tan, silty fine SAND (A-2-4).	
25	25.5	18.5	1	2								Sat.	27.0 Gray, fine SAND (A-3), with trace silt and a 0.2' thick layer of moderately organic silty clay. 17.0	
20	20.5	23.5	3	4	5							Sat.	22.0 Gray, silty fine SAND (A-2-4), with trace organics. 22.0	
												Sat.	19.0 Boring Terminated at Elevation 19.0 ft in SAND (COASTAL PLAIN) 25.0	

WBS 40191.1.2	TIP U-4751	COUNTY NEW HANOVER	GEOLOGIST D. Racey
SITE DESCRIPTION SR 1409 (Military Cutoff Road) to US 17 in Wilmington - Noise Wall 7 at -L- Station 71+50 Right			GROUND WTR (ft)
BORING NO. NW7-22	STATION 20+52	OFFSET CL	ALIGNMENT -NW7-
COLLAR ELEV. 44.4 ft	TOTAL DEPTH 25.0 ft	NORTHING 193,351	EASTING 2,352,637
DRILL RIG/HAMMER EFF./DATE F&R5785 CME-55 75% 01/17/2014		DRILL METHOD H.S. Augers	HAMMER TYPE Automatic
DRILLER S. Davis	START DATE 01/23/15	COMP. DATE 01/23/15	SURFACE WATER DEPTH N/A

ELEV (ft)	DRIVE ELEV (ft)	DEPTH (ft)	BLOW COUNT			BLOWS PER FOOT					SAMP. NO.	LOG	SOIL AND ROCK DESCRIPTION	DEPTH (ft)
			0.5ft	0.5ft	0.5ft	0	25	50	75	100				
45	44.4	0.0	1	3	2								44.4 GROUND SURFACE 0.0	
40	40.9	3.5	1	1								M	42.4 COASTAL PLAIN 2.0 Black, fine sandy SILT (A-4), moderately organic, with some clay.	
35	35.9	8.5	3	2	2							Sat.	Gray-brown and tan to gray, silty fine SAND (A-2-4), sulphur odor from 8.5' to 20.0'.	
30	30.9	13.5	1	2								Sat.		
25	25.9	18.5	1	0								Sat.		
20	20.9	23.5	2	3								Sat.	19.4 Boring Terminated at Elevation 19.4 ft in SAND (COASTAL PLAIN) 25.0	

NOTES:  
 1) 0.0-0.2' = Surficial Organic Soils

NCDOT BORE DOUBLE U4751\_GEO\_SWAL7.GPJ NC\_DOT.GDT 3/27/15



# NCDOT GEOTECHNICAL ENGINEERING UNIT

## BORELOG REPORT

WBS 40191.1.2		TIP U-4751		COUNTY NEW HANOVER		GEOLOGIST D. Racey											
SITE DESCRIPTION SR 1409 (Military Cutoff Road) to US 17 in Wilmington - Noise Wall 7 at -L- Station 71+50 Right							GROUND WTR (ft)										
BORING NO. NW7-23		STATION 21+02		OFFSET CL		ALIGNMENT -NW7-											
COLLAR ELEV. 44.1 ft		TOTAL DEPTH 25.0 ft		NORTHING 193,399		EASTING 2,352,622											
DRILL RIG/HAMMER EFF./DATE F&R5785 CME-55 75% 01/17/2014				DRILL METHOD H.S. Augers		HAMMER TYPE Automatic											
DRILLER S. Davis		START DATE 01/23/15		COMP. DATE 01/23/15		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	DEPTH (ft)			
			0.5ft	0.5ft	0.5ft	0	25	50	75	100							
45	44.1	0.0	1	3	3									44.1	GROUND SURFACE	0.0	
															42.1	COASTAL PLAIN Black, fine sandy SILT (A-4), with trace clay and organics (roots, wood fragments). Gray-brown to tan, silty fine SAND (A-2-4), with sulphur odor from 8.5' to 25.0'.	2.0
40	40.6	3.5	1	2	2												
35	35.6	8.5	5	4	3												
30	30.6	13.5	WOR	WOR	1												
25	25.6	18.5	WOR	WOH	1												
20	20.6	23.5	WOH	2	2												
															19.1	Boring Terminated at Elevation 19.1 ft in SAND (COASTAL PLAIN)	25.0
NOTES:																	
1) 0.0-0.2' = Surficial Organic Soils																	

WBS 40191.1.2		TIP U-4751		COUNTY NEW HANOVER		GEOLOGIST D. Racey											
SITE DESCRIPTION SR 1409 (Military Cutoff Road) to US 17 in Wilmington - Noise Wall 7 at -L- Station 71+50 Right							GROUND WTR (ft)										
BORING NO. NW7-24		STATION 21+53		OFFSET CL		ALIGNMENT -NW7-											
COLLAR ELEV. 44.6 ft		TOTAL DEPTH 25.0 ft		NORTHING 193,448		EASTING 2,352,610											
DRILL RIG/HAMMER EFF./DATE F&R5785 CME-55 75% 01/17/2014				DRILL METHOD H.S. Augers		HAMMER TYPE Automatic											
DRILLER S. Davis		START DATE 01/26/15		COMP. DATE 01/26/15		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	DEPTH (ft)			
			0.5ft	0.5ft	0.5ft	0	25	50	75	100							
45	44.6	0.0	2	4	3									44.6	GROUND SURFACE	0.0	
															42.6	COASTAL PLAIN Black and gray, silty fine SAND (A-2-4), with trace organics (roots). Tan-brown, fine sandy CLAY (A-6). Black and gray to tan and gray, silty fine SAND (A-2-4).	2.0
40	41.1	3.5	2	2	3										40.5		4.1
35	36.1	8.5	3	3	2												
30	31.1	13.5	WOH	1	1												
25	26.1	18.5	WOH	WOH	1												
20	21.1	23.5	2	3	3												
															19.6	Boring Terminated at Elevation 19.6 ft in SAND (COASTAL PLAIN)	25.0
NOTES:																	
1) 0.0-0.2' = Surficial Organic Soils 2) Strata break in split spoon at a depth of 4.1'.																	

NCDOT BORE DOUBLE U4751\_GEO\_SWAL7.GPJ NC\_DOT.GDT 3/27/15

**NCDOT GEOTECHNICAL ENGINEERING UNIT**  
**BORELOG REPORT**

WBS 40191.1.2	TIP U-4751	COUNTY NEW HANOVER	GEOLOGIST D. Racey
SITE DESCRIPTION SR 1409 (Military Cutoff Road) to US 17 in Wilmington - Noise Wall 7 at -L- Station 71+50 Right			GROUND WTR (ft)
BORING NO. NW7-25	STATION 22+03	OFFSET CL	ALIGNMENT -NW7-
COLLAR ELEV. 45.2 ft	TOTAL DEPTH 25.0 ft	NORTHING 193,497	EASTING 2,352,601
DRILL RIG/HAMMER EFF./DATE F&R5785 CME-55 75% 01/17/2014		DRILL METHOD H.S. Augers	HAMMER TYPE Automatic
DRILLER S. Davis	START DATE 01/26/15	COMP. DATE 01/26/15	SURFACE WATER DEPTH N/A

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				
50														
45	45.2	0.0	2	5	5									GROUND SURFACE 45.2 0.0
40	41.7	3.5	2	2	3									<b>COASTAL PLAIN</b> Black to tan and gray, silty fine SAND (A-2-4), with trace organics (roots, wood fragments) from 0.0' to 1.5' and trace clay from 3.5' to 5.0'.
35	36.7	8.5	2	2	2									
30	31.7	13.5	WOR	WOH	1									
25	26.7	18.5	1	0	1									
	21.7	23.5	1	1	2									

Boring Terminated at Elevation 20.2 ft in SAND (COASTAL PLAIN)

WBS 40191.1.2	TIP U-4751	COUNTY NEW HANOVER	GEOLOGIST D. Racey
SITE DESCRIPTION SR 1409 (Military Cutoff Road) to US 17 in Wilmington - Noise Wall 7 at -L- Station 71+50 Right			GROUND WTR (ft)
BORING NO. NW7-26	STATION 22+53	OFFSET CL	ALIGNMENT -NW7-
COLLAR ELEV. 46.2 ft	TOTAL DEPTH 25.0 ft	NORTHING 193,547	EASTING 2,352,595
DRILL RIG/HAMMER EFF./DATE F&R5785 CME-55 75% 01/17/2014		DRILL METHOD H.S. Augers	HAMMER TYPE Automatic
DRILLER S. Davis	START DATE 01/26/15	COMP. DATE 01/26/15	SURFACE WATER DEPTH N/A

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				
50														
45	46.2	0.0	1	2	2									GROUND SURFACE 46.2 0.0
40	42.7	3.5	3	4	3									<b>COASTAL PLAIN</b> Black to gray and brown, silty fine SAND (A-2-4), with trace organics (roots, wood fragments) from 0.4' to 1.5'.
35	37.7	8.5	2	1	2									
30	32.7	13.5	WOH	1	1									
25	27.7	18.5	WOR	WOH	1									
	22.7	23.5	1	2	3									

Boring Terminated at Elevation 21.2 ft in SAND (COASTAL PLAIN)

NOTES:  
1) 0.0-0.4' = Surficial Organic Soils

NCDOT BORE DOUBLE U4751\_GEO\_SWAL7.GPJ NC\_DOT.GDT 3/27/15



# NCDOT GEOTECHNICAL ENGINEERING UNIT

## BORELOG REPORT

WBS 40191.1.2		TIP U-4751		COUNTY NEW HANOVER		GEOLOGIST D. Racey									
SITE DESCRIPTION SR 1409 (Military Cutoff Road) to US 17 in Wilmington - Noise Wall 7 at -L- Station 71+50 Right							GROUND WTR (ft)								
BORING NO. NW7-27		STATION 23+03		OFFSET CL		ALIGNMENT -NW7-									
COLLAR ELEV. 45.9 ft		TOTAL DEPTH 25.0 ft		NORTHING 193,597		EASTING 2,352,591									
DRILL RIG/HAMMER EFF./DATE F&R5785 CME-55 75% 01/17/2014				DRILL METHOD H.S. Augers		HAMMER TYPE Automatic									
DRILLER S. Davis		START DATE 01/27/15		COMP. DATE 01/27/15		SURFACE WATER DEPTH N/A									
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					
50															
45	45.9	0.0	4	5	4									45.9	GROUND SURFACE
40	42.4	3.5	5	6	7										COASTAL PLAIN Black, brown, and gray, silty fine SAND (A-2-4), with trace organics and roots from 0.2' to 1.5'.
35	37.4	8.5	2	2	1										
30	32.4	13.5	WOH	WOH	1										
25	27.4	18.5	WOH	1	1										
	22.4	23.5	WOH	3	2									20.9	Boring Terminated at Elevation 20.9 ft in SAND (COASTAL PLAIN)
NOTES: 1) 0.0-0.2' = Surficial Organic Soils															

WBS 40191.1.2		TIP U-4751		COUNTY NEW HANOVER		GEOLOGIST D. Racey									
SITE DESCRIPTION SR 1409 (Military Cutoff Road) to US 17 in Wilmington - Noise Wall 7 at -L- Station 71+50 Right							GROUND WTR (ft)								
BORING NO. NW7-28		STATION 23+53		OFFSET CL		ALIGNMENT -NW7-									
COLLAR ELEV. 46.1 ft		TOTAL DEPTH 25.0 ft		NORTHING 193,647		EASTING 2,352,590									
DRILL RIG/HAMMER EFF./DATE F&R5785 CME-55 75% 01/17/2014				DRILL METHOD H.S. Augers		HAMMER TYPE Automatic									
DRILLER S. Davis		START DATE 01/27/15		COMP. DATE 01/27/15		SURFACE WATER DEPTH N/A									
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					
50															
45	46.1	0.0	WOH	1	2									46.1	GROUND SURFACE
40	42.6	3.5	7	9	9									44.6	COASTAL PLAIN Black, silty fine SAND (A-2-4), with little organics (roots, wood fragments). Gray-brown to gray, silty fine SAND (A-2-4).
35	37.6	8.5	2	2	2										
30	32.6	13.5	WOH	1	1										
25	27.6	18.5	WOH	2	2										
	22.6	23.5	2	2	2									21.1	Boring Terminated at Elevation 21.1 ft in SAND (COASTAL PLAIN)

**NCDOT GEOTECHNICAL ENGINEERING UNIT**  
**BORELOG REPORT**

WBS 40191.1.2	TIP U-4751	COUNTY NEW HANOVER	GEOLOGIST D. Racey
SITE DESCRIPTION SR 1409 (Military Cutoff Road) to US 17 in Wilmington - Noise Wall 7 at -L- Station 71+50 Right			GROUND WTR (ft)
BORING NO. NW7-29	STATION 24+03	OFFSET CL	ALIGNMENT -NW7-
COLLAR ELEV. 46.1 ft	TOTAL DEPTH 25.0 ft	NORTHING 193,697	EASTING 2,352,592
DRILL RIG/HAMMER EFF./DATE F&R5785 CME-55 75% 01/17/2014		DRILL METHOD H.S. Augers	HAMMER TYPE Automatic
DRILLER S. Davis	START DATE 01/27/15	COMP. DATE 01/27/15	SURFACE WATER DEPTH N/A

ELEV (ft)	DRIVE ELEV (ft)	DEPTH (ft)	BLOW COUNT			BLOWS PER FOOT					SAMP. NO.	LOG	SOIL AND ROCK DESCRIPTION	DEPTH (ft)	
			0.5ft	0.5ft	0.5ft	0	25	50	75	100					
50															
45	46.1	0.0												46.1	GROUND SURFACE
														44.6	COASTAL PLAIN Black, silty fine SAND (A-2-4), with little organics (roots, wood fragments). Gray-brown, tan-gray & gray, silty fine SAND (A-2-4).
40	42.6	3.5	2	2	7										
35	37.6	8.5	5	7	6										
30	32.6	13.5	WOH	WOH	1										
25	27.6	18.5	1	3	4										
	22.6	23.5	WOH	1	3										
														21.1	Boring Terminated at Elevation 21.1 ft in SAND (COASTAL PLAIN)

WBS 40191.1.2	TIP U-4751	COUNTY NEW HANOVER	GEOLOGIST D. Racey
SITE DESCRIPTION SR 1409 (Military Cutoff Road) to US 17 in Wilmington - Noise Wall 7 at -L- Station 71+50 Right			GROUND WTR (ft)
BORING NO. NW7-30	STATION 24+54	OFFSET CL	ALIGNMENT -NW7-
COLLAR ELEV. 46.0 ft	TOTAL DEPTH 25.0 ft	NORTHING 193,747	EASTING 2,352,597
DRILL RIG/HAMMER EFF./DATE F&R5785 CME-55 75% 01/17/2014		DRILL METHOD H.S. Augers	HAMMER TYPE Automatic
DRILLER S. Davis	START DATE 01/27/15	COMP. DATE 01/27/15	SURFACE WATER DEPTH N/A

ELEV (ft)	DRIVE ELEV (ft)	DEPTH (ft)	BLOW COUNT			BLOWS PER FOOT					SAMP. NO.	LOG	SOIL AND ROCK DESCRIPTION	DEPTH (ft)	
			0.5ft	0.5ft	0.5ft	0	25	50	75	100					
50															
45	46.0	0.0												46.0	GROUND SURFACE
40	42.5	3.5	2	3	3										
35	37.5	8.5	9	13	14										
30	32.5	13.5	6	6	6										
25	27.5	18.5	WOH	WOH	2										
	22.5	23.5	2	2	4										
			WOH	2	3										
														21.0	Boring Terminated at Elevation 21.0 ft in SAND (COASTAL PLAIN)

NCDOT BORE DOUBLE U4751\_GEO\_SWAL7.GPJ NC\_DOT.GDT 3/27/15

**NCDOT GEOTECHNICAL ENGINEERING UNIT**  
**BORELOG REPORT**

WBS 40191.1.2	TIP U-4751	COUNTY NEW HANOVER	GEOLOGIST D. Racey
SITE DESCRIPTION SR 1409 (Military Cutoff Road) to US 17 in Wilmington - Noise Wall 7 at -L- Station 71+50 Right			GROUND WTR (ft)
BORING NO. NW7-31	STATION 25+04	OFFSET CL	ALIGNMENT -NW7-
COLLAR ELEV. 44.8 ft	TOTAL DEPTH 25.0 ft	NORTHING 193,796	EASTING 2,352,605
DRILL RIG/HAMMER EFF./DATE F&R5785 CME-55 75% 01/17/2014		DRILL METHOD H.S. Augers	HAMMER TYPE Automatic
DRILLER S. Davis	START DATE 01/27/15	COMP. DATE 01/27/15	SURFACE WATER DEPTH N/A

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				
45	44.8	0.0	2	3	4								44.8	GROUND SURFACE
	41.3	3.5	6	13	17								42.8	COASTAL PLAIN Black, fine sandy SILT (A-4), with little organics (roots, wood fragments). Brown to gray, silty fine SAND (A-2-4).
40	36.3	8.5	4	4	5								27.8	Gray, fine SAND (A-3), with trace silt.
35	31.3	13.5	WOH	2	3								19.8	Boring Terminated at Elevation 19.8 ft in SAND (COASTAL PLAIN)
30	26.3	18.5	3	4	4									
25	21.3	23.5	3	6	4									

WBS 40191.1.2	TIP U-4751	COUNTY NEW HANOVER	GEOLOGIST D. Racey
SITE DESCRIPTION SR 1409 (Military Cutoff Road) to US 17 in Wilmington - Noise Wall 7 at -L- Station 71+50 Right			GROUND WTR (ft)
BORING NO. NW7-32	STATION 25+53	OFFSET CL	ALIGNMENT -NW7-
COLLAR ELEV. 45.6 ft	TOTAL DEPTH 25.0 ft	NORTHING 193,845	EASTING 2,352,615
DRILL RIG/HAMMER EFF./DATE F&R5785 CME-55 75% 01/17/2014		DRILL METHOD H.S. Augers	HAMMER TYPE Automatic
DRILLER S. Davis	START DATE 01/28/15	COMP. DATE 01/28/15	SURFACE WATER DEPTH 0.2ft

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				
50													45.6	GROUND SURFACE
45	45.6	0.0	2	3	3								43.6	COASTAL PLAIN Black, silty CLAY (A-6), with trace fine sand and organics (roots, wood fragments). Gray-brown to gray, silty fine SAND (A-2-4).
40	42.1	3.5	8	14	17								28.6	Gray, fine SAND (A-3), with trace silt.
35	37.1	8.5	6	5	6								20.6	Boring Terminated at Elevation 20.6 ft in SAND (COASTAL PLAIN)
30	32.1	13.5	1	2	3									
25	27.1	18.5	1	2	2									
	22.1	23.5	2	5	7									

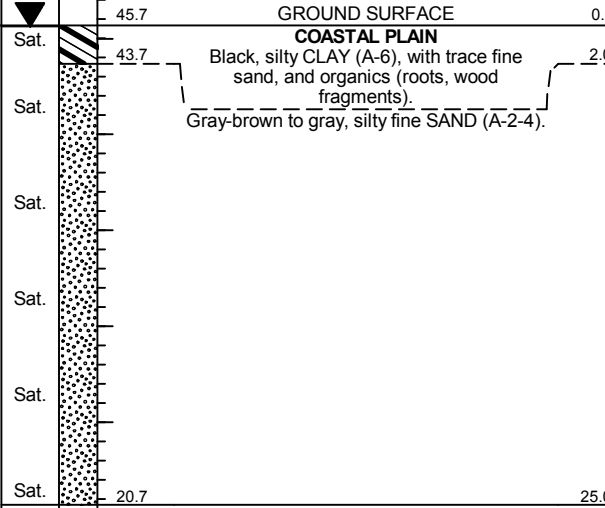
NOTES:  
 1) 0.0-0.2' = Surficial Organic Soils

NCDOT BORE DOUBLE U4751\_GEO\_SWAL7.GPJ NC\_DOT.GDT 3/27/15

**NCDOT GEOTECHNICAL ENGINEERING UNIT**  
**BORELOG REPORT**

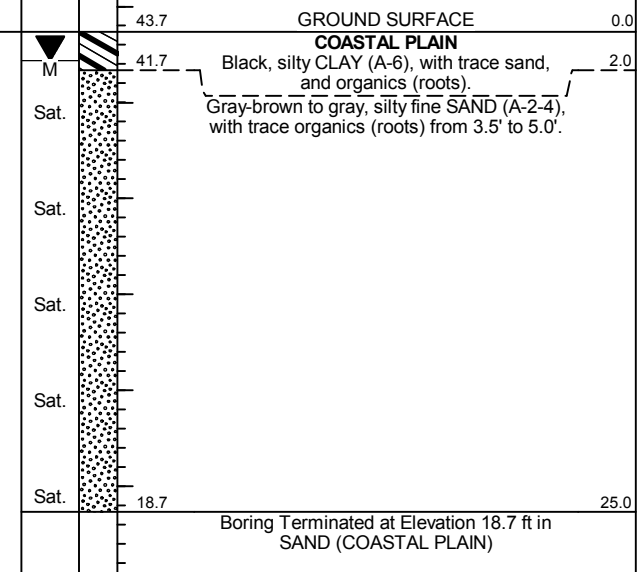
WBS 40191.1.2	TIP U-4751	COUNTY NEW HANOVER	GEOLOGIST D. Racey
SITE DESCRIPTION SR 1409 (Military Cutoff Road) to US 17 in Wilmington - Noise Wall 7 at -L- Station 71+50 Right			GROUND WTR (ft)
BORING NO. NW7-33	STATION 26+04	OFFSET CL	ALIGNMENT -NW7-
COLLAR ELEV. 45.7 ft	TOTAL DEPTH 25.0 ft	NORTHING 193,894	EASTING 2,352,628
DRILL RIG/HAMMER EFF./DATE F&R5785 CME-55 75% 01/17/2014		DRILL METHOD H.S. Augers	HAMMER TYPE Automatic
DRILLER S. Davis	START DATE 01/28/15	COMP. DATE 01/28/15	SURFACE WATER DEPTH N/A

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				
50														
45	45.7	0.0	2	4	3									
40	42.2	3.5	18	19	21									
35	37.2	8.5	6	7	8									
30	32.2	13.5	WOH	2	2									
25	27.2	18.5	1	3	2									
	22.2	23.5	1	2	2									



WBS 40191.1.2	TIP U-4751	COUNTY NEW HANOVER	GEOLOGIST D. Racey
SITE DESCRIPTION SR 1409 (Military Cutoff Road) to US 17 in Wilmington - Noise Wall 7 at -L- Station 71+50 Right			GROUND WTR (ft)
BORING NO. NW7-34	STATION 26+55	OFFSET CL	ALIGNMENT -NW7-
COLLAR ELEV. 43.7 ft	TOTAL DEPTH 25.0 ft	NORTHING 193,940	EASTING 2,352,648
DRILL RIG/HAMMER EFF./DATE F&R5785 CME-55 75% 01/17/2014		DRILL METHOD H.S. Augers	HAMMER TYPE Automatic
DRILLER S. Davis	START DATE 01/28/15	COMP. DATE 01/28/15	SURFACE WATER DEPTH N/A

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				
45														
40	40.2	3.5	5	9	12									
35	35.2	8.5	3	4	6									
30	30.2	13.5	1	2	2									
25	25.2	18.5	2	1	2									
20	20.2	23.5	1	3	4									



NOTES:  
 1) 0.0-0.2' = Surficial Organic Soils

NCDOT BORE DOUBLE U4751\_GEO\_SWAL7.GPJ NC\_DOT.GDT 3/27/15



**NCDOT GEOTECHNICAL ENGINEERING UNIT**  
**BORELOG REPORT**

WBS 40191.1.2	TIP U-4751	COUNTY NEW HANOVER	GEOLOGIST D. Racey
SITE DESCRIPTION SR 1409 (Military Cutoff Road) to US 17 in Wilmington - Noise Wall 7 at -L- Station 71+50 Right			GROUND WTR (ft)
BORING NO. NW7-35	STATION 88+90	OFFSET 75 ft RT	ALIGNMENT -L-
COLLAR ELEV. 42.2 ft	TOTAL DEPTH 25.0 ft	NORTHING 193,984	EASTING 2,352,671
DRILL RIG/HAMMER EFF./DATE F&R5785 CME-55 75% 01/17/2014		DRILL METHOD H.S. Augers	HAMMER TYPE Automatic
DRILLER S. Davis	START DATE 01/28/15	COMP. DATE 01/28/15	SURFACE WATER DEPTH N/A

ELEV (ft)	DRIVE ELEV (ft)	DEPTH (ft)	BLOW COUNT			BLOWS PER FOOT					SAMP. NO.	LOG	SOIL AND ROCK DESCRIPTION	DEPTH (ft)	
			0.5ft	0.5ft	0.5ft	0	25	50	75	100					
45															
42.2	42.2	0.0	1	2	2									42.2	GROUND SURFACE
40	38.7	3.5	2	7	13									40.2	COASTAL PLAIN Black, silty CLAY (A-6), with trace sand, and organics (roots). Gray-brown to gray, silty fine SAND (A-2-4).
35	33.7	8.5	4	5	4										
30	28.7	13.5	WOH	1	2										
25	23.7	18.5	WOH	2	1										
20	18.7	23.5	1	2	3										
														17.2	Boring Terminated at Elevation 17.2 ft in SAND (COASTAL PLAIN)

NOTES:  
1) 0.0-0.3' = Surficial Organic Soils

WBS 40191.1.2	TIP U-4751	COUNTY NEW HANOVER	GEOLOGIST D. Racey
SITE DESCRIPTION SR 1409 (Military Cutoff Road) to US 17 in Wilmington - Noise Wall 7 at -L- Station 71+50 Right			GROUND WTR (ft)
BORING NO. NW7-36	STATION 89+45	OFFSET 77 ft RT	ALIGNMENT -L-
COLLAR ELEV. 42.2 ft	TOTAL DEPTH 25.0 ft	NORTHING 194,028	EASTING 2,352,694
DRILL RIG/HAMMER EFF./DATE F&R5785 CME-55 75% 01/17/2014		DRILL METHOD H.S. Augers	HAMMER TYPE Automatic
DRILLER S. Davis	START DATE 01/29/15	COMP. DATE 01/29/15	SURFACE WATER DEPTH N/A

ELEV (ft)	DRIVE ELEV (ft)	DEPTH (ft)	BLOW COUNT			BLOWS PER FOOT					SAMP. NO.	LOG	SOIL AND ROCK DESCRIPTION	DEPTH (ft)	
			0.5ft	0.5ft	0.5ft	0	25	50	75	100					
45															
42.2	42.2	0.0	1	3	3									42.2	GROUND SURFACE
40	38.7	3.5	2	8	13									40.2	COASTAL PLAIN Black, fine sandy SILT (A-4). Gray-brown to tan & gray, fine SAND (A-2-4).
35	33.7	8.5	3	3	2										
30	28.7	13.5	WOH	1	1										
25	23.7	18.5	1	2	3										
20	18.7	23.5	WOH	1	3										
														17.2	Boring Terminated at Elevation 17.2 ft in SAND (COASTAL PLAIN)

NOTES:  
1) 0.0-0.2' = Surficial Organic Soils



# NCDOT GEOTECHNICAL ENGINEERING UNIT

## BORELOG REPORT

WBS 40191.1.2	TIP U-4751	COUNTY NEW HANOVER	GEOLOGIST D. Racey
SITE DESCRIPTION SR 1409 (Military Cutoff Road) to US 17 in Wilmington - Noise Wall 7 at -L- Station 71+50 Right			GROUND WTR (ft)
BORING NO. NW7-37	STATION 89+99	OFFSET 77 ft RT	ALIGNMENT -L-
COLLAR ELEV. 42.1 ft	TOTAL DEPTH 25.0 ft	NORTHING 194,073	EASTING 2,352,717
DRILL RIG/HAMMER EFF./DATE F&R5785 CME-55 75% 01/17/2014		DRILL METHOD H.S. Augers	HAMMER TYPE Automatic
DRILLER S. Davis	START DATE 01/29/15	COMP. DATE 01/29/15	SURFACE WATER DEPTH N/A

ELEV (ft)	DRIVE ELEV (ft)	DEPTH (ft)	BLOW COUNT			BLOWS PER FOOT					SAMP. NO.	LOG	SOIL AND ROCK DESCRIPTION	DEPTH (ft)		
			0.5ft	0.5ft	0.5ft	0	25	50	75	100						
45																
	42.1	0.0	1	2	4									42.1	GROUND SURFACE	0.0
40	38.6	3.5	3	4	5									40.1	COASTAL PLAIN Black, fine sandy SILT (A-4). Gray-brown, silty fine SAND (A-2-4), moderately organic.	2.0
35	33.6	8.5	4	3	2									37.1	Gray-tan to gray, silty fine SAND (A-2-4), with trace organics from 18.5' to 25.0'.	5.0
30	28.6	13.5	WOH	1	2											
25	23.6	18.5	2	3	2											
20	18.6	23.5	3	4	6											
														17.1	Boring Terminated at Elevation 17.1 ft in SAND (COASTAL PLAIN)	25.0

WBS 40191.1.2	TIP U-4751	COUNTY NEW HANOVER	GEOLOGIST D. Racey
SITE DESCRIPTION SR 1409 (Military Cutoff Road) to US 17 in Wilmington - Noise Wall 7 at -L- Station 71+50 Right			GROUND WTR (ft)
BORING NO. NW7-38	STATION 90+54	OFFSET 77 ft RT	ALIGNMENT -L-
COLLAR ELEV. 42.4 ft	TOTAL DEPTH 24.9 ft	NORTHING 194,116	EASTING 2,352,743
DRILL RIG/HAMMER EFF./DATE F&R5785 CME-55 75% 01/17/2014		DRILL METHOD H.S. Augers	HAMMER TYPE Automatic
DRILLER S. Davis	START DATE 01/29/15	COMP. DATE 01/29/15	SURFACE WATER DEPTH N/A

ELEV (ft)	DRIVE ELEV (ft)	DEPTH (ft)	BLOW COUNT			BLOWS PER FOOT					SAMP. NO.	LOG	SOIL AND ROCK DESCRIPTION	DEPTH (ft)		
			0.5ft	0.5ft	0.5ft	0	25	50	75	100						
45																
	42.4	0.0	WOH	2	2									42.4	GROUND SURFACE	0.0
40	39.0	3.4	2	3	3											
35	34.0	8.4	2	2	2											
30	29.0	13.4	WOR	WOH	1											
25	24.0	18.4	WOR	WOR	WOH											
20	19.0	23.4	WOR	2	4											
														17.5	Boring Terminated at Elevation 17.5 ft in SAND (COASTAL PLAIN)	24.9

NOTES:  
1) 0.0-0.1' = Surficial Organic Soils

NCDOT BORE DOUBLE U4751\_GEO\_SWAL7.GPJ NC\_DOT.GDT 3/27/15



# NCDOT GEOTECHNICAL ENGINEERING UNIT

## BORELOG REPORT

WBS 40191.1.2	TIP U-4751	COUNTY NEW HANOVER	GEOLOGIST D. Racey
SITE DESCRIPTION SR 1409 (Military Cutoff Road) to US 17 in Wilmington - Noise Wall 7 at -L- Station 71+50 Right			GROUND WTR (ft)
BORING NO. NW7-39	STATION 90+98	OFFSET 77 ft RT	ALIGNMENT -L-
COLLAR ELEV. 42.1 ft	TOTAL DEPTH 25.0 ft	NORTHING 194,150	EASTING 2,352,766
DRILL RIG/HAMMER EFF./DATE F&R5785 CME-55 75% 01/17/2014		DRILL METHOD H.S. Augers	HAMMER TYPE Automatic
DRILLER S. Davis	START DATE 01/29/15	COMP. DATE 01/29/15	SURFACE WATER DEPTH N/A

ELEV (ft)	DRIVE ELEV (ft)	DEPTH (ft)	BLOW COUNT			BLOWS PER FOOT					SAMP. NO.	LOG	SOIL AND ROCK DESCRIPTION	DEPTH (ft)		
			0.5ft	0.5ft	0.5ft	0	25	50	75	100						
45																
42.1	42.1	0.0		1	2											42.1
40	38.6	3.5	5	6	7											38.6
35	33.6	8.5	2	2	4											37.1
30	28.6	13.5	2	1	1											
25	23.6	18.5	1	1	2											
20	18.6	23.5	1	3	4											

Boring Terminated at Elevation 17.1 ft in SAND (COASTAL PLAIN)

- NOTES:
- 0.0-0.2' = Surficial Organic Soils
  - Boring offset to top of ditch.

WBS 40191.1.2	TIP U-4751	COUNTY NEW HANOVER	GEOLOGIST D. Racey
SITE DESCRIPTION SR 1409 (Military Cutoff Road) to US 17 in Wilmington - Noise Wall 7 at -L- Station 71+50 Right			GROUND WTR (ft)
BORING NO. NW7-40	STATION 91+62	OFFSET 77 ft RT	ALIGNMENT -L-
COLLAR ELEV. 43.9 ft	TOTAL DEPTH 25.0 ft	NORTHING 194,197	EASTING 2,352,802
DRILL RIG/HAMMER EFF./DATE F&R5785 CME-55 75% 01/17/2014		DRILL METHOD H.S. Augers	HAMMER TYPE Automatic
DRILLER S. Davis	START DATE 01/29/15	COMP. DATE 01/29/15	SURFACE WATER DEPTH N/A

ELEV (ft)	DRIVE ELEV (ft)	DEPTH (ft)	BLOW COUNT			BLOWS PER FOOT					SAMP. NO.	LOG	SOIL AND ROCK DESCRIPTION	DEPTH (ft)		
			0.5ft	0.5ft	0.5ft	0	25	50	75	100						
45																
43.9	43.9	0.0	2	4	4											43.9
40	40.4	3.5	3	1	2											
35	35.4	8.5	2	2	3											
30	30.4	13.5	2	1	2											
25	25.4	18.5	WOR	WOR	1											
20	20.4	23.5	2	2	3											

Boring Terminated at Elevation 18.9 ft in SAND (COASTAL PLAIN)

- NOTES:
- 0.0-0.1' = Surficial Organic Soils

NCDOT BORE DOUBLE U4751\_GEO\_SWAL7.GPJ NC\_DOT.GDT 3/27/15

**NCDOT GEOTECHNICAL ENGINEERING UNIT**  
**BORELOG REPORT**

<b>WBS</b> 40191.1.2	<b>TIP</b> U-4751	<b>COUNTY</b> NEW HANOVER	<b>GEOLOGIST</b> D. Racey
<b>SITE DESCRIPTION</b> SR 1409 (Military Cutoff Road) to US 17 in Wilmington - Noise Wall 7 at -L- Station 71+50 Right			<b>GROUND WTR (ft)</b>
<b>BORING NO.</b> NW7-41	<b>STATION</b> 92+15	<b>OFFSET</b> 77 ft RT	<b>ALIGNMENT</b> -L-
<b>COLLAR ELEV.</b> 44.0 ft	<b>TOTAL DEPTH</b> 25.0 ft	<b>NORTHING</b> 194,235	<b>EASTING</b> 2,352,834
<b>DRILL RIG/HAMMER EFF./DATE</b> F&R5785 CME-55 75% 01/17/2014		<b>DRILL METHOD</b> H.S. Augers	<b>HAMMER TYPE</b> Automatic
<b>DRILLER</b> S. Davis	<b>START DATE</b> 01/30/15	<b>COMP. DATE</b> 01/30/15	<b>SURFACE WATER DEPTH</b> N/A

ELEV (ft)	DRIVE ELEV (ft)	DEPTH (ft)	BLOW COUNT			BLOWS PER FOOT					SAMP. NO.	MOI	LOG	SOIL AND ROCK DESCRIPTION	DEPTH (ft)		
			0.5ft	0.5ft	0.5ft	0	25	50	75	100							
45	44.0	0.0	2	4	6										44.0	GROUND SURFACE	0.0
40	40.5	3.5	5	4	4											COASTAL PLAIN Gray-brown to tan and gray, silty fine SAND (A-2-4), with trace organics (roots, wood fragments) from 0.1' to 1.5'.	
35	35.5	8.5	3	5	6												
30	30.5	13.5	WOH	WOH	1												
25	25.5	18.5	WOR	WOH	1												
20	20.5	23.5	WOR	1	3												

Boring Terminated at Elevation 19.0 ft in SAND (COASTAL PLAIN)

NOTES:  
 1) 0.0-0.1' = Surficial Organic Soils

<b>WBS</b> 40191.1.2	<b>TIP</b> U-4751	<b>COUNTY</b> NEW HANOVER	<b>GEOLOGIST</b> D. Racey
<b>SITE DESCRIPTION</b> SR 1409 (Military Cutoff Road) to US 17 in Wilmington - Noise Wall 7 at -L- Station 71+50 Right			<b>GROUND WTR (ft)</b>
<b>BORING NO.</b> NW7-42	<b>STATION</b> 92+53	<b>OFFSET</b> 88 ft RT	<b>ALIGNMENT</b> -L-
<b>COLLAR ELEV.</b> 43.5 ft	<b>TOTAL DEPTH</b> 25.0 ft	<b>NORTHING</b> 194,256	<b>EASTING</b> 2,352,867
<b>DRILL RIG/HAMMER EFF./DATE</b> F&R5785 CME-55 75% 01/17/2014		<b>DRILL METHOD</b> H.S. Augers	<b>HAMMER TYPE</b> Automatic
<b>DRILLER</b> S. Davis	<b>START DATE</b> 01/30/15	<b>COMP. DATE</b> 01/30/15	<b>SURFACE WATER DEPTH</b> N/A

ELEV (ft)	DRIVE ELEV (ft)	DEPTH (ft)	BLOW COUNT			BLOWS PER FOOT					SAMP. NO.	MOI	LOG	SOIL AND ROCK DESCRIPTION	DEPTH (ft)		
			0.5ft	0.5ft	0.5ft	0	25	50	75	100							
45	43.5	0.0	2	5	6										43.5	GROUND SURFACE	0.0
40	40.0	3.5	2	2	1											COASTAL PLAIN Black to tan-gray, silty fine SAND (A-2-4), with trace organics (roots, wood fragments) from 0.1' to 1.5'.	
35	35.0	8.5	4	5	5												
30	30.0	13.5	WOR	WOH	1												
25	25.0	18.5	WOR	WOH	1												
20	20.0	23.5	WOR	1	2												

Boring Terminated at Elevation 18.5 ft in SAND (COASTAL PLAIN)

NOTES:  
 1) 0.0-0.1' = Surficial Organic Soils  
 2) Boring offset beside driveway.

NCDOT BORE DOUBLE U4751\_GEO\_SWAL7.GPJ NC\_DOT.GDT 3/27/15

**SITE PHOTOGRAPHS**



**Photograph No. 1:** View looking North along proposed Military Cutoff Rd - Proposed NW7 on right



**Photograph No. 3:** View looking North along proposed Military Cutoff Road – Proposed NW7 on right



**Photograph No. 2:** View looking South along proposed Military Cutoff Road – Proposed NW7 on left



**Photograph No. 4:** View looking Northeast toward Proposed NW7