

REFERENCE: I-5987A

PROJECT: 47533

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

STRUCTURE
SUBSURFACE INVESTIGATION

COUNTY ROBESON
PROJECT DESCRIPTION I-95 FROM SOUTH OF US 301
TO SOUTH OF NC 20. WIDEN TO EIGHT LANES.
SITE DESCRIPTION NOISE WALL 8 RIGHT OF -YIRPA-

CONTENTS

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7 - 10	BORE LOGS

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	I-5987A	1	10

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 1919 TOTT-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

TURNAGE, J. R.

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DEGON, A. N.

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SUBMITTED BY ALEXANDER, M. J.

DATE NOVEMBER 2021

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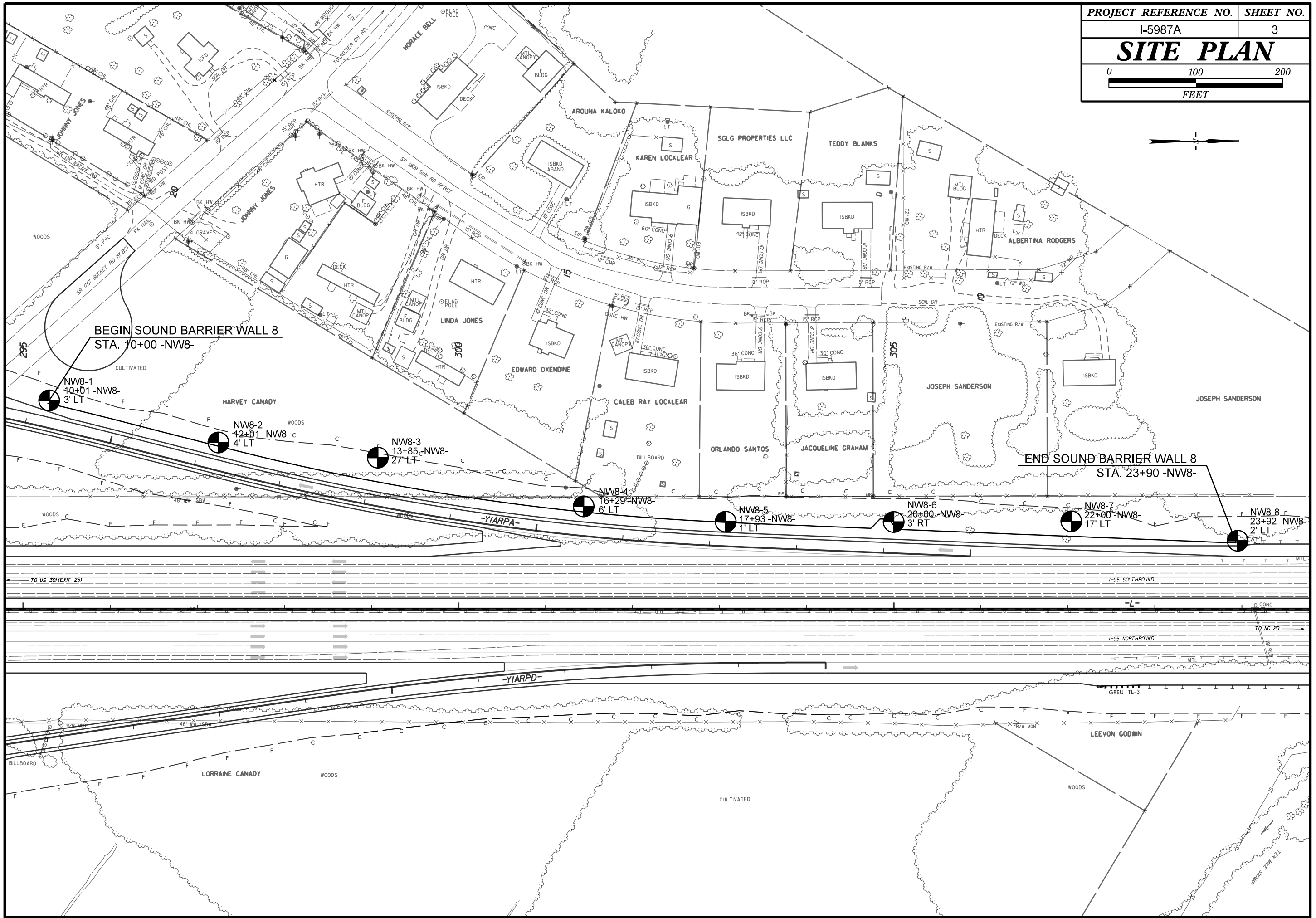
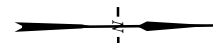
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Matthew J. Alexander 11/22/2021

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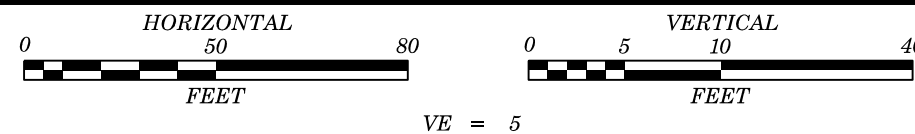
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**NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
GEOTECHNICAL ENGINEERING UNIT
SUBSURFACE INVESTIGATION
SOIL AND ROCK LEGEND, TERMS, SYMBOLS, AND ABBREVIATIONS**

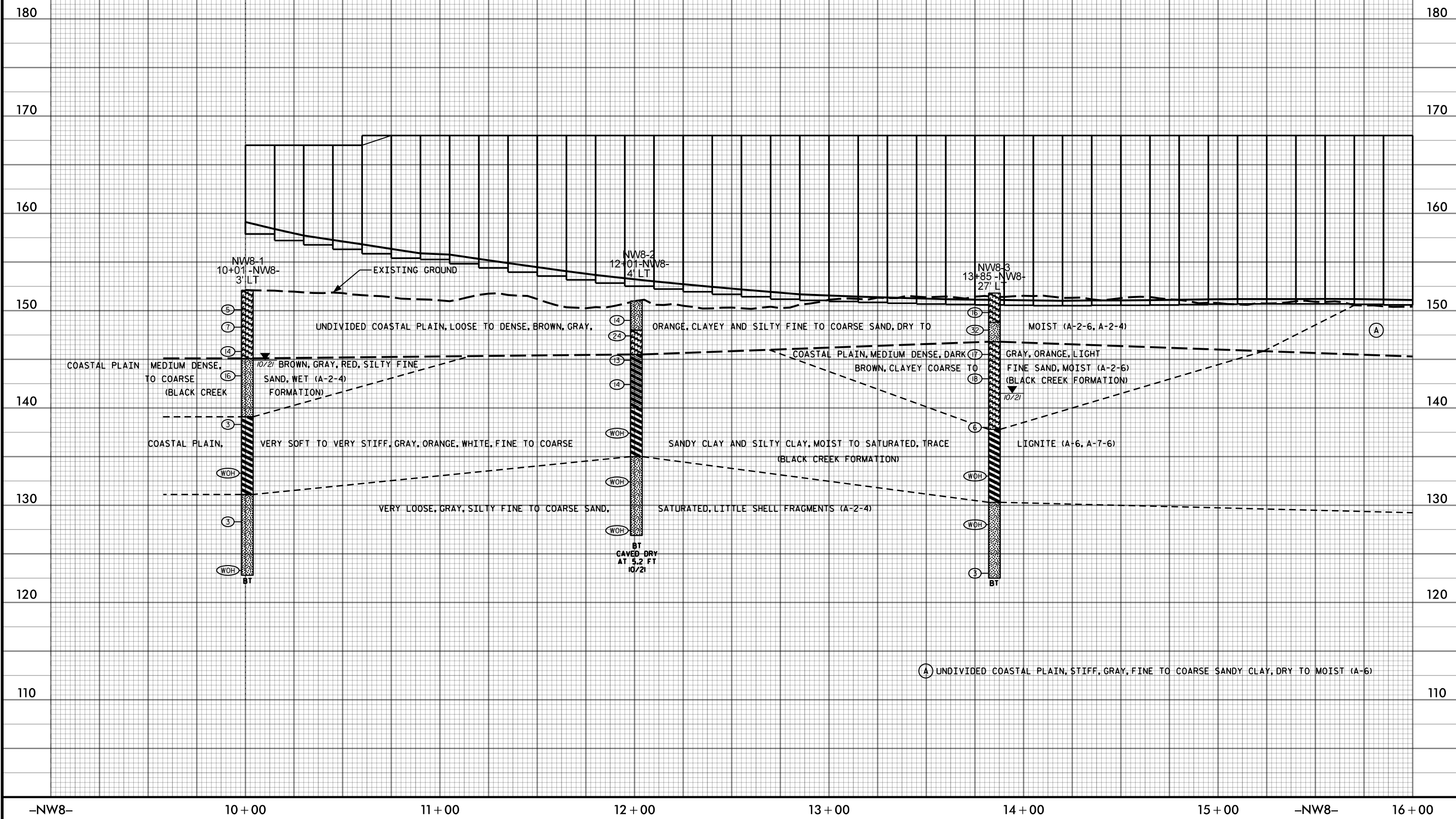
SOIL DESCRIPTION										GRADATION										ROCK DESCRIPTION										TERMS AND DEFINITIONS									
SOIL IS CONSIDERED UNCONSOLIDATED, SEMI-CONSOLIDATED, OR WEATHERED EARTH MATERIALS THAT CAN BE PENETRATED WITH A CONTINUOUS FLIGHT POWER AUGER AND YIELD LESS THAN 100 BLOWS PER FOOT ACCORDING TO THE STANDARD PENETRATION TEST (AASHTO T 206, ASTM D1586). SOIL CLASSIFICATION IS BASED ON THE AASHTO SYSTEM. BASIC DESCRIPTIONS GENERALLY INCLUDE THE FOLLOWING: CONSISTENCY, COLOR, TEXTURE, MOISTURE, AASHTO CLASSIFICATION, AND OTHER PERTINENT FACTORS SUCH AS MINERALOGICAL COMPOSITION, ANGULARITY, STRUCTURE, PLASTICITY, ETC. FOR EXAMPLE, <i>VERY STIFF, GRAY, SILTY CLAY, MOIST WITH INTERBEDDED FINE SAND LAYERS, HIGHLY PLASTIC, A-7-6</i>										WELL GRADED - INDICATES A GOOD REPRESENTATION OF PARTICLE SIZES FROM FINE TO COARSE. UNIFORMLY GRADED - INDICATES THAT SOIL PARTICLES ARE ALL APPROXIMATELY THE SAME SIZE. GAP-GRADED - INDICATES A MIXTURE OF UNIFORM PARTICLE SIZES OF TWO OR MORE SIZES.										HARD ROCK IS NON-COASTAL PLAIN MATERIAL THAT WOULD YIELD SPT REFUSAL IF TESTED, AN INFERRED ROCK LINE INDICATES THE LEVEL AT WHICH NON-COASTAL PLAIN MATERIAL WOULD YIELD SPT REFUSAL. SPT REFUSAL IS PENETRATION BY A SPLIT SPOON SAMPLER EQUAL TO OR LESS THAN 0.1 FOOT PER 60 BLOWS IN NON-COASTAL PLAIN MATERIAL. THE TRANSITION BETWEEN SOIL AND ROCK IS OFTEN REPRESENTED BY A ZONE OF WEATHERED ROCK. ROCK MATERIALS ARE TYPICALLY DIVIDED AS FOLLOWS:										ALLUVIUM (ALLUV.) - SOILS THAT HAVE BEEN TRANSPORTED BY WATER. AQUIFER - A WATER BEARING FORMATION OR STRATA. ARENACEOUS - APPLIED TO ROCKS THAT HAVE BEEN DERIVED FROM SAND OR THAT CONTAIN SAND. ARGILLACEOUS - APPLIED TO ALL ROCKS OR SUBSTANCES COMPOSED OF CLAY MINERALS, OR HAVING A NOTABLE PROPORTION OF CLAY IN THEIR COMPOSITION, SUCH AS SHALE, SLATE, ETC. ARTESIAN - GROUND WATER THAT IS UNDER SUFFICIENT PRESSURE TO RISE ABOVE THE LEVEL AT WHICH IT IS ENCOUNTERED, BUT WHICH DOES NOT NECESSARILY RISE TO OR ABOVE THE GROUND SURFACE. CALCAREOUS (CALC.) - SOILS THAT CONTAIN APPRECIABLE AMOUNTS OF CALCIUM CARBONATE. COLLUVIUM - ROCK FRAGMENTS MIXED WITH SOIL DEPOSITED BY GRAVITY ON SLOPE OR AT BOTTOM OF SLOPE. CORE RECOVERY (REC.) - TOTAL LENGTH OF ALL MATERIAL RECOVERED IN THE CORE BARREL DIVIDED BY TOTAL LENGTH OF CORE RUN AND EXPRESSED AS A PERCENTAGE. DIKE - A TABULAR BODY OF IGNEOUS ROCK THAT CUTS ACROSS THE STRUCTURE OF ADJACENT ROCKS OR CUTS MASSIVE ROCK. DIP - THE ANGLE AT WHICH A STRATUM OR ANY PLANAR FEATURE IS INCLINED FROM THE HORIZONTAL. DIP DIRECTION (DIP AZIMUTH) - THE DIRECTION OR BEARING OF THE HORIZONTAL TRACE OF THE LINE OF DIP, MEASURED CLOCKWISE FROM NORTH. FAULT - A FRACTURE OR FRACTURE ZONE ALONG WHICH THERE HAS BEEN DISPLACEMENT OF THE SIDES RELATIVE TO ONE ANOTHER PARALLEL TO THE FRACTURE. FISSILE - A PROPERTY OF SPLITTING ALONG CLOSELY SPACED PARALLEL PLANES. FLOAT - ROCK FRAGMENTS ON SURFACE NEAR THEIR ORIGINAL POSITION AND DISLOGGED FROM PARENT MATERIAL. FLOOD PLAIN (FP) - LAND BORDERING A STREAM, BUILT OF SEDIMENTS DEPOSITED BY THE STREAM. FORMATION (FM) - A MAPPABLE GEOLOGIC UNIT THAT CAN BE RECOGNIZED AND TRACED IN THE FIELD. JOINT - FRACTURE IN ROCK ALONG WHICH NO APPRECIABLE MOVEMENT HAS OCCURRED. LEDGE - A SHELF-LIKE RIDGE OR PROJECTION OF ROCK WHOSE THICKNESS IS SMALL COMPARED TO ITS LATERAL EXTENT. LENS - A BODY OF SOIL OR ROCK THAT THINS OUT IN ONE OR MORE DIRECTIONS. MOTTLED (MOT.) - IRREGULARLY MARKED WITH SPOTS OF DIFFERENT COLORS. MOTTLING IN SOILS USUALLY INDICATES POOR AERATION AND LACK OF GOOD DRAINAGE. PERCHED WATER - WATER MAINTAINED ABOVE THE NORMAL GROUND WATER LEVEL BY THE PRESENCE OF AN INTERVENING IMPERVIOUS STRATUM. RESIDUAL (RES.) SOIL - SOIL FORMED IN PLACE BY THE WEATHERING OF ROCK. ROCK QUALITY DESIGNATION (ROD) - A MEASURE OF ROCK QUALITY DESCRIBED BY TOTAL LENGTH OF ROCK SEGMENTS EQUAL TO OR GREATER THAN 4 INCHES DIVIDED BY THE TOTAL LENGTH OF CORE RUN AND EXPRESSED AS A PERCENTAGE. SAPROLITE (SAP.) - RESIDUAL SOIL THAT RETAINS THE RELIC STRUCTURE OR FABRIC OF THE PARENT ROCK. SILL - AN INTRUSIVE BODY OF IGNEOUS ROCK OF APPROXIMATELY UNIFORM THICKNESS AND RELATIVELY THIN COMPARED WITH ITS LATERAL EXTENT, THAT HAS BEEN EMPLACED PARALLEL TO THE BEDDING OR SCHISTOSITY OF THE INTRUDED ROCKS. SLICKENSIDE - POLISHED AND STRIATED SURFACE THAT RESULTS FROM FRICTION ALONG A FAULT OR SLIP PLANE. STANDARD PENETRATION TEST (PENETRATION RESISTANCE) (SPT) - NUMBER OF BLOWS (N OR BPF) OF A 140 LB. HAMMER FALLING 30 INCHES REQUIRED TO PRODUCE A PENETRATION OF 1 FOOT INTO SOIL WITH A 2 INCH OUTSIDE DIAMETER SPLIT SPOON SAMPLER. SPT REFUSAL IS PENETRATION EQUAL TO OR LESS THAN 0.1 FOOT PER 60 BLOWS. STRATA CORE RECOVERY (SREC.) - TOTAL LENGTH OF STRATA MATERIAL RECOVERED DIVIDED BY TOTAL LENGTH OF STRATUM AND EXPRESSED AS A PERCENTAGE. STRATA ROCK QUALITY DESIGNATION (SROD) - A MEASURE OF ROCK QUALITY DESCRIBED BY TOTAL LENGTH OF ROCK SEGMENTS WITHIN A STRATUM EQUAL TO OR GREATER THAN 4 INCHES DIVIDED BY THE TOTAL LENGTH OF STRATA AND EXPRESSED AS A PERCENTAGE. TOPSOIL (TS.) - SURFACE SOILS USUALLY CONTAINING ORGANIC MATTER.									
SOIL LEGEND AND AASHTO CLASSIFICATION										ANGULARITY OF GRAINS										WEATHERED ROCK (WR)										NON-COASTAL PLAIN MATERIAL THAT WOULD YIELD SPT N VALUES > 100 BLOWS PER FOOT IF TESTED.									
MINERALOGICAL COMPOSITION										CRYSTALLINE ROCK (CR)										FINE TO COARSE GRAIN IGNEOUS AND METAMORPHIC ROCK THAT WOULD YIELD SPT REFUSAL IF TESTED. ROCK TYPE INCLUDES GRANITE, GNEISS, GABBRO, SCHIST, ETC.										NON-COASTAL PLAIN SEDIMENTARY ROCK THAT WOULD YIELD SPT REFUSAL IF TESTED. ROCK TYPE INCLUDES PHYLLITE, SLATE, SANDSTONE, ETC.									
COMPRESSION										NON-CRYSTALLINE ROCK (NCR)										FINE TO COARSE GRAIN METAMORPHIC AND NON-COASTAL PLAIN SEDIMENTARY ROCK THAT WOULD YIELD SPT REFUSAL IF TESTED.										COASTAL PLAIN SEDIMENTARY ROCK (CP)									
PERCENTAGE OF MATERIAL										COASTAL PLAIN SEDIMENTARY ROCK (CP)										COASTAL PLAIN SEDIMENTS CEMENTED INTO ROCK, BUT MAY NOT YIELD SPT REFUSAL. ROCK TYPE INCLUDES LIMESTONE, SANDSTONE, CEMENTED SHELL BEDS, ETC.										WEATHERING									
GROUND WATER										FRESH										ROCK FRESH, CRYSTALS BRIGHT, FEW JOINTS MAY SHOW SLIGHT STAINING. ROCK RINGS UNDER HAMMER IF CRYSTALLINE.										VERY SLIGHT (IV SLI.)									
MISCELLANEOUS SYMBOLS										SLIGHT (SLI.)										ROCK GENERALLY FRESH, JOINTS STAINED, SOME JOINTS MAY SHOW THIN CLAY COATINGS IF OPEN. CRYSTALS ON A BROKEN SPECIMEN FACE SHINE BRIGHTLY. ROCK RINGS UNDER HAMMER BLOWS IF OF A CRYSTALLINE NATURE.										MODERATE (MOD.)									
RECOMMENDATION SYMBOLS										MODERATELY SEVERE (MOD. SEV.)										ALL ROCK EXCEPT QUARTZ DISCOLORED OR STAINED. IN GRANITOID ROCKS, ALL FELDSPARS DULL AND DISCOLORED AND A MAJORITY SHOW KAOLINIZATION. ROCK SHOWS SEVERE LOSS OF STRENGTH AND CAN BE EXCAVATED WITH A GEOLOGIST'S PICK. ROCK GIVES "CLUNK" SOUND WHEN STRUCK. IF TESTED, WOULD YIELD SPT REFUSAL										SEVERE (SEV.)									
ABBREVIATIONS										VERY SEVERE (IV SEV.)										ALL ROCK EXCEPT QUARTZ DISCOLORED OR STAINED. ROCK FABRIC CLEAR AND EVIDENT BUT REDUCED IN STRENGTH TO STRONG SOIL. IN GRANITOID ROCKS ALL FELDSPARS ARE KAOLINIZED TO SOME EXTENT. SOME FRAGMENTS OF STRONG ROCK USUALLY REMAIN. IF TESTED, WOULD YIELD SPT N VALUES > 100 BPF										VERY COMPLETE									
TEXTURE OR GRAIN SIZE										COMPLETE										ROCK REDUCED TO SOIL. ROCK FABRIC NOT DISCERNIBLE, OR DISCERNIBLE ONLY IN SMALL AND SCATTERED CONCENTRATIONS. QUARTZ MAY BE PRESENT AS DIKES OR STRINGERS. SAPROLITE IS ALSO AN EXAMPLE.										ROCK HARDNESS									
SOIL MOISTURE - CORRELATION OF TERMS										VERY HARD										CANNOT BE SCRATCHED BY KNIFE OR SHARP PICK. BREAKING OF HAND SPECIMENS REQUIRES SEVERAL HARD BLOWS OF THE GEOLOGIST'S PICK.										HARD									
PLASTICITY										HARD										CAN BE SCRATCHED BY KNIFE OR PICK ONLY WITH DIFFICULTY. HARD HAMMER BLOWS REQUIRED TO DETACH HAND SPECIMEN.										MODERATELY HARD									
COLOR										MODERATELY HARD										CAN BE SCRATCHED BY KNIFE OR PICK. GOUGES OR GROOVES TO 0.25 INCHES DEEP CAN BE EXCAVATED BY HARD BLOW OF A GEOLOGIST'S PICK. HAND SPECIMENS CAN BE DETACHED BY MODERATE BLOWS.										MEDIUM HARD									
EQUIPMENT USED ON SUBJECT PROJECT										MEDIUM HARD										CAN BE GROOVED OR GOUGED 0.05 INCHES DEEP BY FIRM PRESSURE OF KNIFE OR PICK POINT. CAN BE EXCAVATED IN SMALL CHIPS TO PIECES 1 INCH MAXIMUM SIZE BY HARD BLOWS OF THE POINT OF A GEOLOGIST'S PICK.										SOFT									
FRACATURE SPACING										SOFT										CAN BE GROOVED OR GOUGED READILY BY KNIFE OR PICK. CAN BE EXCAVATED IN FRAGMENTS FROM CHIPS TO SEVERAL INCHES IN SIZE BY MODERATE BLOWS OF A PICK POINT. SMALL, THIN PIECES CAN BE BROKEN BY FINGER PRESSURE.										VERY SOFT									
BEDDING										VERY SOFT										CAN BE CARVED WITH KNIFE. CAN BE EXCAVATED READILY WITH POINT OF PICK. PIECES 1 INCH OR MORE IN THICKNESS CAN BE BROKEN BY FINGER PRESSURE. CAN BE SCRATCHED READILY BY FINGER NAIL.										INDURATION									
INDURATION										VERY WIDE										FOR SEDIMENTARY ROCKS, INDURATION IS THE HARDENING OF MATERIAL BY CEMENTING, HEAT, PRESSURE, ETC.										FRIABLE									
NOTES:										WIDE										RUBBING WITH FINGER FREES NUMEROUS GRAINS; GENTLE BLOW BY HAMMER DISINTEGRATES SAMPLE.										MODERATELY INDURATED									
ELEVATION: N/A FEET										MODERATELY CLOSE										GRAINS CAN BE SEPARATED FROM SAMPLE WITH STEEL PROBE; BREAKS EASILY WHEN HIT WITH HAMMER.										INDURATED									
FRACATURE SPACING										CLOSE										THICKLY BEDDED 4 FEET										EXTREMELY INDURATED									
BEDDING										VERY CLOSE										THICKLY BEDDED 1.5 - 4 FEET										SHARP HAMMER BLOWS REQUIRED TO BREAK SAMPLE; SAMPLE BREAKS ACROSS GRAINS.									
INDURATION										VERY CLOSE										THINLY BEDDED 0.16 - 1.5 FEET																			
INDURATION										VERY CLOSE										VERY THINLY BEDDED 0.03 - 0.16 FEET																			
INDURATION										VERY CLOSE										THICKLY LAMINATED 0.008 - 0.03 FEET																			
INDURATION										VERY CLOSE										THINLY LAMINATED < 0.008 FEET																			



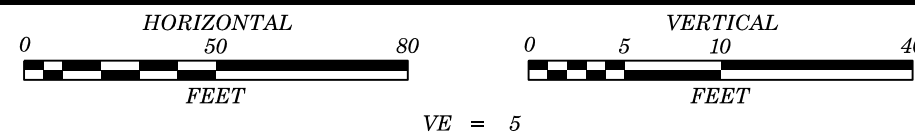
NOTE: INFERRED STRATIGRAPHY IS DRAWN THROUGH THE BORINGS WITH BOTH PROJECTED ON TO THE EXISTING GROUND PROFILE ALONG THE CENTERLINE OF -NW8- TAKEN FROM THE PROVIDED PROJECT TIN FILE (i5987_s_tin1.tin) DATED JUNE 16, 2021.



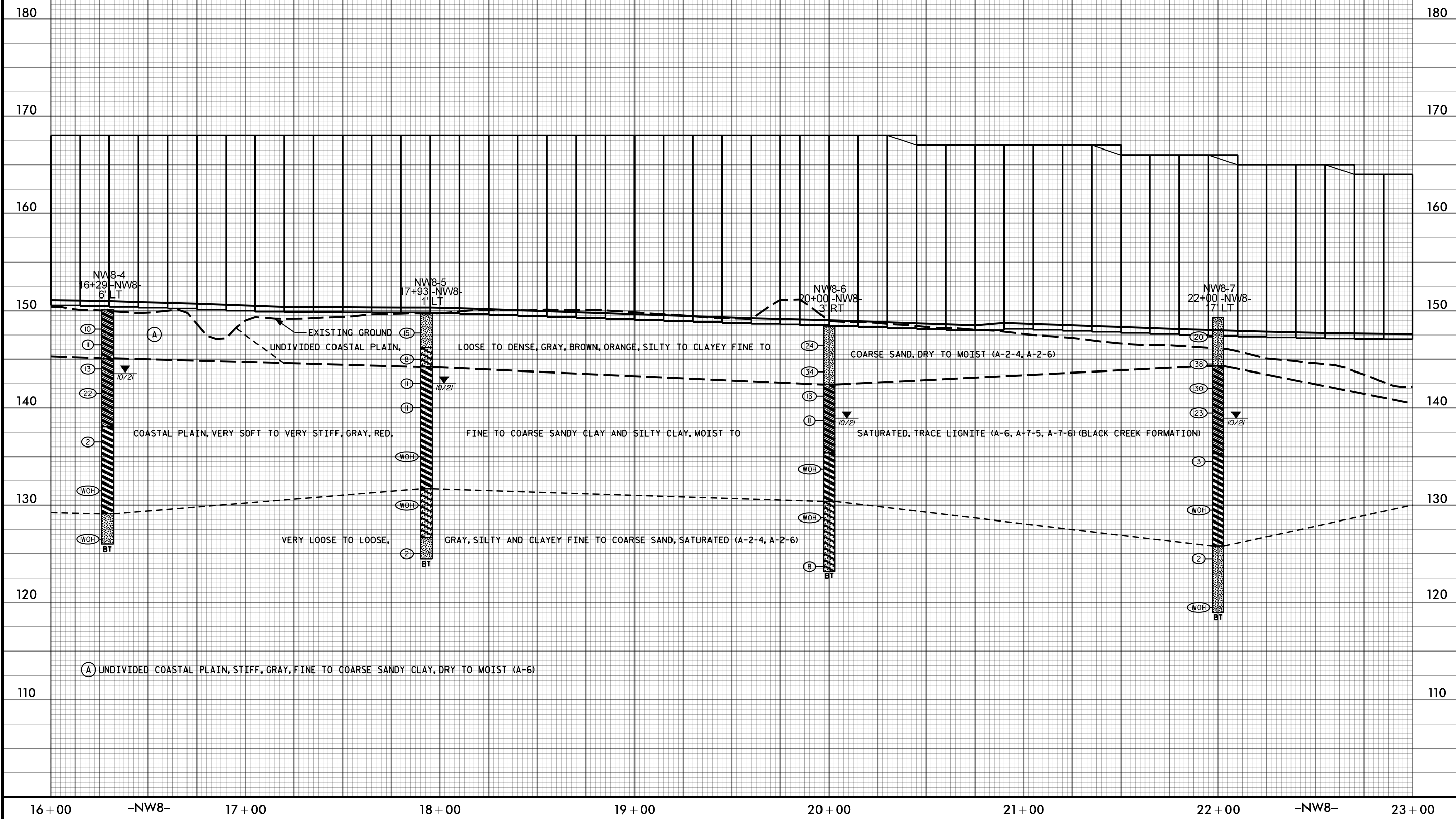
PROJECT REFERENCE NO.	SHEET NO.
I-5987A	4
CENTERLINE PROFILE ALONG NOISE WALL 8	



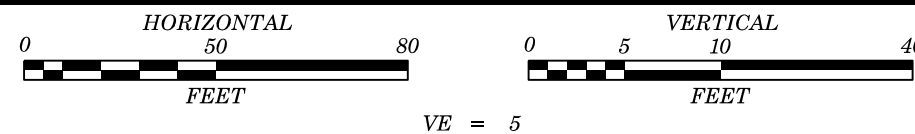
NOTE: INFERRED STRATIGRAPHY IS DRAWN THROUGH THE BORINGS WITH BOTH PROJECTED ON TO THE EXISTING GROUND PROFILE ALONG THE CENTERLINE OF -NW8- TAKEN FROM THE PROVIDED PROJECT TIN FILE (i5987_ls_tin1.tin) DATED JUNE 16, 2021.



PROJECT REFERENCE NO.	SHEET NO.
I-5987A	5
CENTERLINE PROFILE ALONG NOISE WALL 8	



NOTE: INFERRED STRATIGRAPHY IS DRAWN THROUGH THE BORINGS WITH BOTH PROJECTED ON TO THE EXISTING GROUND PROFILE ALONG THE CENTERLINE OF -NW8- TAKEN FROM THE PROVIDED PROJECT TIN FILE (i5987_ls_tin1.tin) DATED JUNE 16,2021.



PROJECT REFERENCE NO.	SHEET NO.
I-5987A	6
CENTERLINE PROFILE ALONG NOISE WALL 8	



WBS 47533.1.2		TIP I-5987A		COUNTY ROBESON		GEOLOGIST DEGON, A.										
SITE DESCRIPTION I-5987A NOISE WALL 8							GROUND WTR (ft)									
BORING NO. NW8-1		STATION 10+01		OFFSET 3 ft LT		ALIGNMENT NW8										
COLLAR ELEV. 152.1 ft		TOTAL DEPTH 29.3 ft		NORTHING 354,439		EASTING 2,000,547										
DRILL RIG/HAMMER EFF./DATE TER373 DIEDRICH D-50 95% 02/06/2021		DRILL METHOD Mud Rotary		HAMMER TYPE Automatic												
DRILLER TURNAGE, J. R.		START DATE 10/21/21		COMP. DATE 10/21/21		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						
155																
	151.1	1.0														
150	149.3	2.8	3	3	2											
	146.8	5.3	3	3	4											
145	144.3	7.8	4	6	8											
	144.3	7.8	8	8	8											
140	139.3	12.8	8	8	8											
	139.3	12.8	1	1	2											
135	134.3	17.8	1	1	2											
	134.3	17.8	WOH	WOH	WOH											
130	129.3	22.8	1	2	1											
	129.3	22.8	1	2	1											
125	124.3	27.8	WOH	WOH	WOH											
	124.3	27.8	WOH	WOH	WOH											

WBS 47533.1.2		TIP I-5987A		COUNTY ROBESON		GEOLOGIST DEGON, A.										
SITE DESCRIPTION I-5987A NOISE WALL 8							GROUND WTR (ft)									
BORING NO. NW8-2		STATION 12+01		OFFSET 4 ft LT		ALIGNMENT NW8										
COLLAR ELEV. 151.0 ft		TOTAL DEPTH 24.1 ft		NORTHING 354,633		EASTING 2,000,597										
DRILL RIG/HAMMER EFF./DATE TER373 DIEDRICH D-50 95% 02/06/2021		DRILL METHOD Mud Rotary		HAMMER TYPE Automatic												
DRILLER TURNAGE, J. R.		START DATE 10/21/21		COMP. DATE 10/21/21		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						
155																
	151.0															
150	150.0	1.0														
	148.4	2.6	6	7	7											
145	145.9	5.1	11	11	13											
	145.9	5.1	6	6	7											
140	143.4	7.6	5	6	8											
	143.4	7.6	5	6	8											
135	138.4	12.6	WOH	WOH	WOH											
	138.4	12.6	WOH	WOH	WOH											
130	133.4	17.6	WOH	WOH	WOH											
	133.4	17.6	WOH	WOH	WOH											
125	128.4	22.6	WOH	WOH	WOH											
	128.4	22.6	WOH	WOH	WOH											

NCDOT BORE DOUBLE I5987A_GEO_SBW_NW8.GPJ NC_DOT.GDT 11/8/21

WBS 47533.1.2	TIP I-5987A	COUNTY ROBESON	GEOLOGIST DEGON, A.
SITE DESCRIPTION I-5987A NOISE WALL 8			GROUND WTR (ft)
BORING NO. NW8-3	STATION 13+85	OFFSET 27 ft LT	ALIGNMENT NW8
COLLAR ELEV. 151.8 ft	TOTAL DEPTH 29.3 ft	NORTHING 354,816	EASTING 2,000,616
DRILL RIG/HAMMER EFF./DATE TER373 DIEDRICH D-50 95% 02/06/2021		DRILL METHOD Mud Rotary	HAMMER TYPE Automatic
DRILLER TURNAGE, J. R.	START DATE 10/21/21	COMP. DATE 10/21/21	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					
155															
150	150.8	1.0	3	6	10									151.8	0.0
	149.0	2.8	11	12	20									148.8	3.0
	146.5	5.3	6	8	9									146.8	5.9
145	144.0	7.8	7	8	10									137.8	14.0
140	139.0	12.8	4	3	3									130.3	21.5
135	134.0	17.8	WOH	WOH	WOH									122.5	29.3
130	129.0	22.8	WOH	WOH	WOH										
125	124.0	27.8	1	2	1										

WBS 47533.1.2	TIP I-5987A	COUNTY ROBESON	GEOLOGIST DEGON, A.
SITE DESCRIPTION I-5987A NOISE WALL 8			GROUND WTR (ft)
BORING NO. NW8-4	STATION 16+29	OFFSET 6 ft LT	ALIGNMENT NW8
COLLAR ELEV. 150.1 ft	TOTAL DEPTH 24.1 ft	NORTHING 355,052	EASTING 2,000,674
DRILL RIG/HAMMER EFF./DATE TER373 DIEDRICH D-50 95% 02/06/2021		DRILL METHOD Mud Rotary	HAMMER TYPE Automatic
DRILLER TURNAGE, J. R.	START DATE 10/21/21	COMP. DATE 10/21/21	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					
155															
150	149.1	1.0	6	6	4									150.1	0.0
	147.5	2.6	2	4	7									145.1	5.0
145	145.0	5.1	3	5	8									138.1	12.0
140	142.5	7.6	8	11	11									129.1	21.0
135	137.5	12.6	2	1	1									126.0	24.1
130	132.5	17.6	WOH	WOH	WOH										
	127.5	22.6	WOH	WOH	WOH										

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WBS 47533.1.2		TIP I-5987A		COUNTY ROBESON		GEOLOGIST DEGON, A.										
SITE DESCRIPTION I-5987A NOISE WALL 8							GROUND WTR (ft)									
BORING NO. NW8-5		STATION 17+93		OFFSET 1 ft LT		ALIGNMENT NW8										
COLLAR ELEV. 149.7 ft		TOTAL DEPTH 25.2 ft		NORTHING 355,215		EASTING 2,000,693										
DRILL RIG/HAMMER EFF./DATE TER373 DIEDRICH D-50 95% 02/06/2021			DRILL METHOD Mud Rotary		HAMMER TYPE Automatic											
DRILLER TURNAGE, J. R.		START DATE 10/20/21		COMP. DATE 10/20/21		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						
150	148.7	1.0	12	8	7									149.7	0.0	GROUND SURFACE
	146.0	3.7	5	4	4									146.2	3.5	UNDIVIDED COASTAL PLAIN MEDIUM DENSE, GRAY, SILTY FINE TO COARSE SAND, MOIST (A-2-4)
145	143.5	6.2	4	6	5									144.2	5.5	LOOSE, GRAY, CLAYEY FINE TO COARSE SAND, MOIST (A-2-6)
140	141.0	8.7	4	5	6									131.7	18.0	COASTAL PLAIN VERY SOFT TO STIFF, GRAY, SILTY CLAY, MOIST TO WET, TRACE TO LITTLE SAND, TRACE LIGNITE, HIGHLY PLASTIC (A-7-6) (BLACK CREEK FORMATION)
135	136.0	13.7	WOH	WOH	WOH									126.7	23.0	VERY LOOSE, DARK GRAY, CLAYEY FINE TO COARSE SAND, SATURATED, TRACE LIGNITE (A-2-7)
130	131.0	18.7	WOH	WOH	WOH									124.5	25.2	VERY LOOSE, DARK GRAY, SILTY COARSE TO FINE SAND, SATURATED, LITTLE SHELLS, TRACE LIGNITE (A-2-4)
125	126.0	23.7	1	1	1											Boring Terminated at Elevation 124.5 ft IN COASTAL PLAIN SILTY SAND (BLACK CREEK FORMATION)

WBS 47533.1.2		TIP I-5987A		COUNTY ROBESON		GEOLOGIST DEGON, A.										
SITE DESCRIPTION I-5987A NOISE WALL 8							GROUND WTR (ft)									
BORING NO. NW8-6		STATION 20+00		OFFSET 3 ft RT		ALIGNMENT NW8										
COLLAR ELEV. 148.4 ft		TOTAL DEPTH 25.2 ft		NORTHING 355,408		EASTING 2,000,695										
DRILL RIG/HAMMER EFF./DATE TER373 DIEDRICH D-50 95% 02/06/2021			DRILL METHOD Mud Rotary		HAMMER TYPE Automatic											
DRILLER TURNAGE, J. R.		START DATE 10/20/21		COMP. DATE 10/20/21		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						
150	147.4	1.0	12	13	11									148.4	0.0	GROUND SURFACE
145	144.7	3.7	17	22	12									142.4	6.0	UNDIVIDED COASTAL PLAIN MEDIUM DENSE TO DENSE, BROWN, ORANGE, SILTY FINE TO COARSE SAND, DRY TO MOIST (A-2-4)
140	142.2	6.2	5	5	8									135.4	13.0	COASTAL PLAIN STIFF, GRAY, RED, COARSE TO FINE SANDY CLAY, MOIST (A-6) (BLACK CREEK FORMATION)
135	139.7	8.7	5	5	6									130.4	18.0	VERY SOFT, DARK GRAY, SILTY CLAY, WET, TRACE LIGNITE, HIGHLY PLASTIC (A-7-6)
130	134.7	13.7	WOH	WOH	WOH									123.2	25.2	VERY LOOSE TO LOOSE, GRAY, CLAYEY COARSE TO FINE SAND, SATURATED (A-2-6)
125	129.7	18.7	WOH	WOH	WOH											Boring Terminated at Elevation 123.2 ft IN COASTAL PLAIN CLAYEY SAND (BLACK CREEK FORMATION)
125	124.7	23.7	3	3	5											

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