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5701 Т Г REFERENCE

SHEET NO. **DESCRIPTION** TITLE SHEET LEGEND (SOIL & ROCK) SITE PLAN PROFILE BORE LOGS SOIL TEST RESULTS

STATE OF NORTH CAROLINA

DEPARTMENT OF TRANSPORTATION **DIVISION OF HIGHWAYS GEOTECHNICAL ENGINEERING UNIT**

STRUCTURE SUBSURFACE INVESTIGATION

COUNTY PASQUOTANK

PROJECT DESCRIPTION CULVERT ON -L- (SR 1333) OVER TRIBUTARY TO KNOBBS CREEK AT STA. 21+60

4484 PROJEC

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	W–5701C	1	7

CAUTION NOTICE

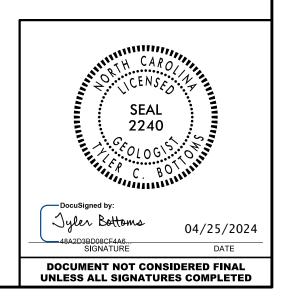
THE SUBSURFACE INFORMATION AND THE SUBSURFACE INVESTIGATION ON WHICH IT IS BASED WERE MADE FOR THE PURPOSE OF STUDY, PLANNIKG AND DESIGN, AND NOT FOR CONSTRUCTION OR PAY PURPOSES. THE VARIOUS FIELD BORING LOGS, ROCK CORES AND SOLI TEST DATA AVAILABLE MAY BE REVEWED OR INSPECTED IN RALEICH BY CONTACTING THE N.C. DEPARTMENT OF TRANSPORTATION, GEOTECHNICAL ENGINEERING UNIT AT 1991 707-6860. THE SUBSIFACE 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 UNPELACED TEST DATA CAN BE RELIED ON ONLY TO THE DEGREE OF RELIABILITY INHERENT IN THE STANDARD TEST METHOD. THE OBSERVED WATER LEVELS OR SOLI MOISTURE CONDITIONS INDICATED IN THE SUBSURFACE INVESTIGATIONS ARE AS RECORDED AT THE TIME OF THE INVESTIGATION. THESE WATER LEVELS OR SOLI MOISTURE CONDITIONS MAY YARY 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 DOS NOT WARRANT OR GUARANTEE THE SUFFICIENCY OR ACCURACY OF THE INVESTIGATION MADE, NOR THE INTERRETATIONS MADE, OR OPNION 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 ACUAL CONDITIONS ENCOUNTERED AT THE SITE DIFFERING FROM THOSE INDICATED IN THE SUBSURFACE INFORMATION.

- NOTES: I. 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.

TENJONNEL
S.N. ZIMARINO
C.M. WALKER
J.M. EDMONDSON
INVESTIGATED BY T.C. BOTTOMS
DRAWN BY
CHECKED BY D.N. ARGENBRIGHT
SUBMITTED BY D.N. ARGENBRIGHT
DATE APRIL 2024



NORTH CAROLINA DEPARTMENT OF TRANSPORTATION DIVISION OF HIGHWAYS GEOTECHNICAL ENGINEERING UNIT SUBSURFACE INVESTIGATION

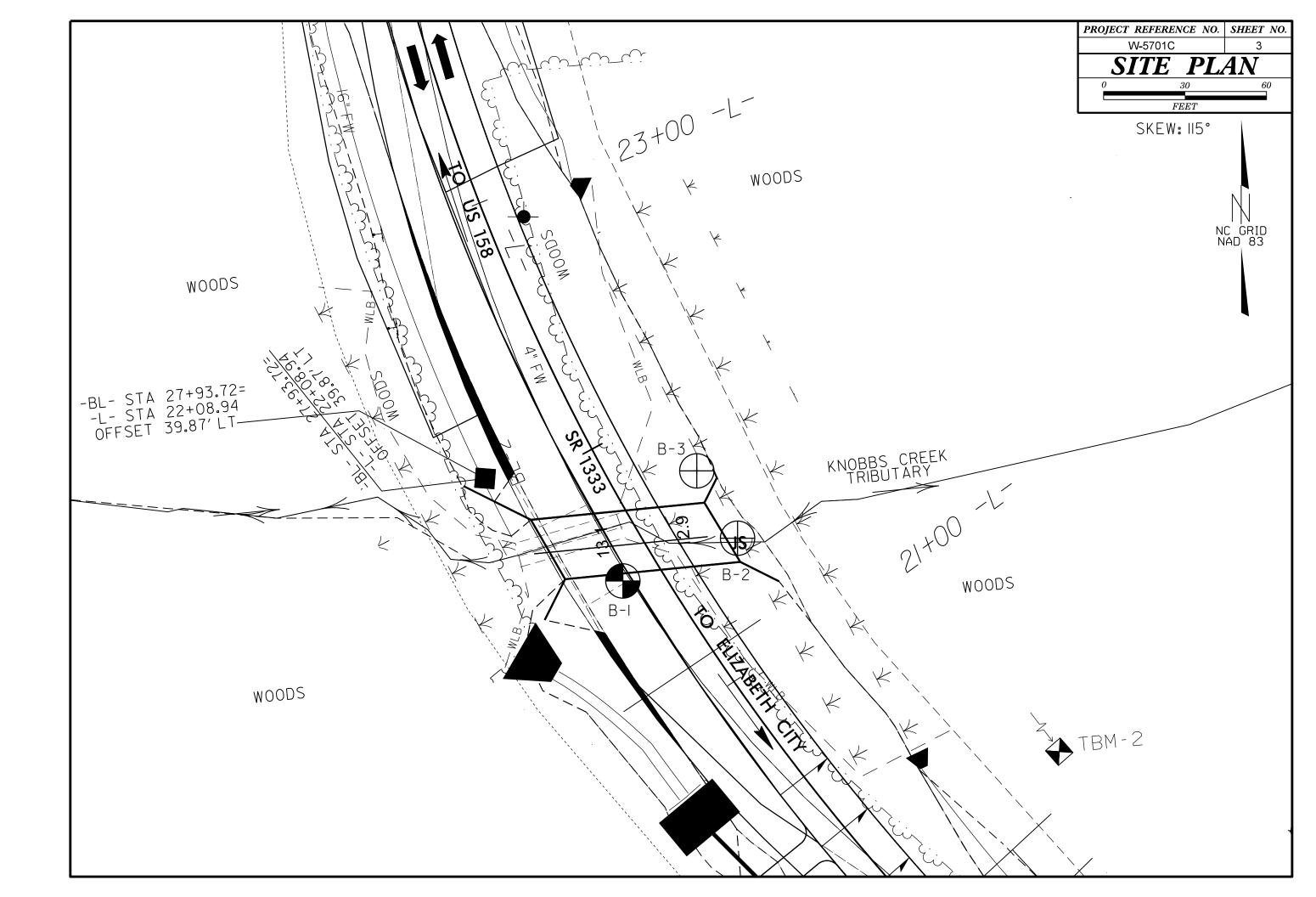
SOIL AND ROCK LEGEND, TERMS, SYMBOLS, AND ABBREVIATIONS

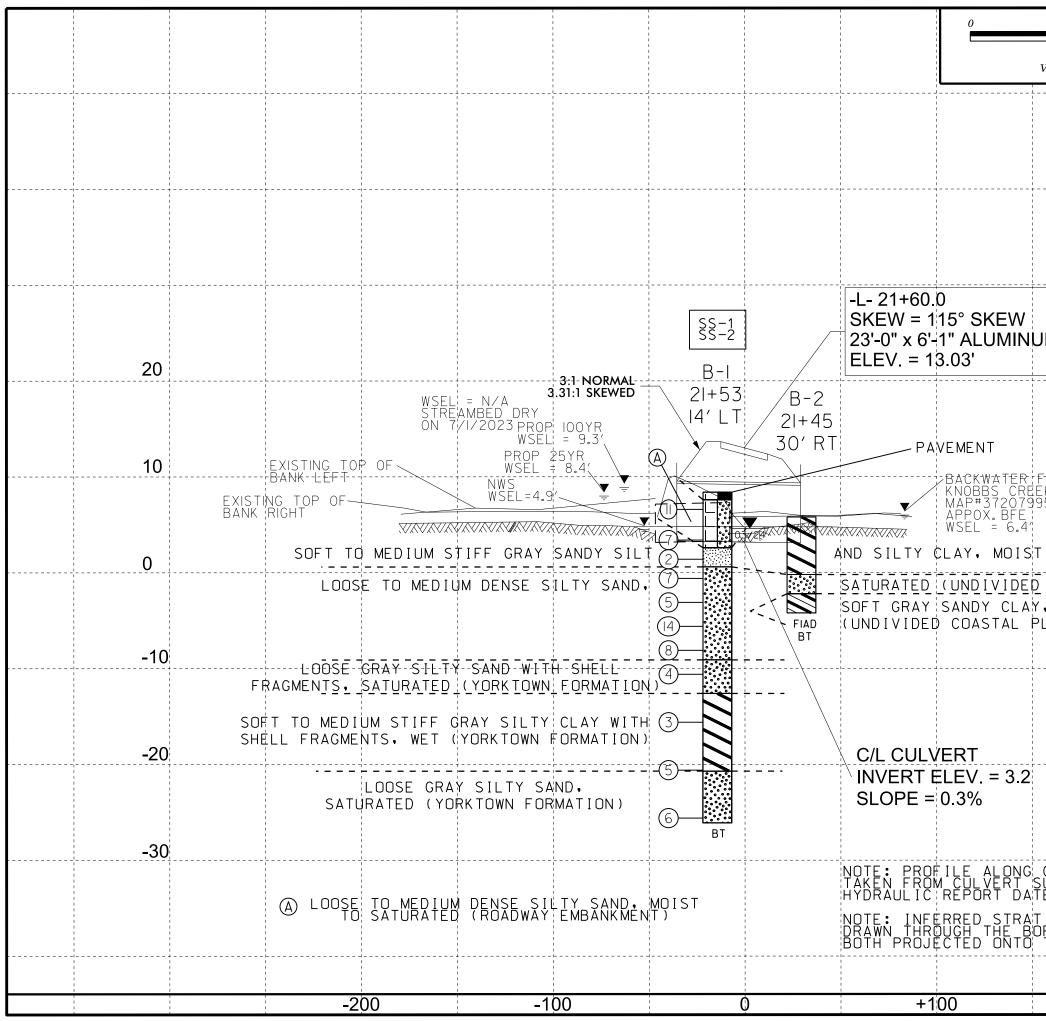
	SOIL DESCRI	PTION			GRADATION				ROCK DES	SCRIPTION		TERMS AND DEFINITIONS
BE PENETRATED WIT ACCORDING TO THE IS BASED ON T CONSISTENCY, COLOR AS MINERALC	D UNCONSOLIDATED, SEMI-CONSOLIDATE H A CONTINUOUS FLIGHT POWER AUGER STANDARD PENETRATION TEST (AASHT HE AASHTO SYSTEM, BASIC DESCRIPTI N, TEXTURE, MOISTURE, AASHTO CLASSIF JGICAL COMPOSITION, ANGULARITY, STRU GRA/SLIT CLAV.MOST WITH MITERBEDED	D, OR WEATHERED EAR R AND YIELD LESS TH TO T 206, ASTM D1586 ONS GENERALLY INCLI ICATION, AND OTHER F JCTURE, PLASTICITY, E	HAN 100 BLOWS PER FOOT 60. SOIL CLASSIFICATION JUDE THE FOLLOWING: PERTINENT FACTORS SUCH ETC. FOR EXAMPLE,	UNIFORMLY GRADED - IN GAP-GRADED - INDICATE THE ANGULARIT	ES A GOOD REPRESENTATION OF PARTIC DICATES THAT SOIL PARTICLES ARE ALL S A MIXTURE OF UNIFORM PARTICLE SIZ ANGULARITY OF GRAIN Y OR ROUNDNESS OF SOIL GRAINS IS DE	. APPROXIMATELY THE SAME SIZE. ES OF TWO OR MORE SIZES.	ROCK LINE IND SPT REFUSAL I BLOWS IN NON REPRESENTED E	ICATES THE LEVEL S PENETRATION BY -COASTAL PLAIN № 3Y A ZONE OF WEA	N MATERIAL THAT W AT WHICH NON-COAS A SPLIT SPOON SAI MATERIAL, THE TRAN THERED ROCK. DIVIDED AS FOLLOWS	WOULD YIELD SPT REFUSAL IF ISTAL PLAIN MATERIAL WOULD AMPLER EQUAL TO OR LESS THI INSITION BETWEEN SOIL AND I	YIELD SPT REFUSAL. AN 0.1 FOOT PER 60 ROCK IS OFTEN	ALLUVIUM (ALLUV.) - SOILS THAT HAVE BEEN TRANSPORTED BY WATER. <u>AQUIFER</u> - A WATER BEARING FORMATION OR STRATA. <u>ARENACEOUS</u> - APPLIED TO ROCKS THAT HAVE BEEN DERIVED FROM SAND OR THAT CONTAIN SAND. <u>ARGILLACEOUS</u> - 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.
S	SOIL LEGEND AND AASHT	O CLASSIFICA	ATION	ANGULAR, SUBAN	GULAR, SUBROUNDED, OR ROUNDED.	TION	ROCK (WR)		100 BLOWS PER FO	DOT IF TESTED.	D SIT IN VALUES /	ARTESIAN - GROUND WATER THAT IS UNDER SUFFICIENT PRESSURE TO RISE ABOVE THE LEVEL AT
	(≤ 35% PASSING 200) (> 35	-CLAY MATERIALS 5% PASSING =200) A-5 A-6 A-7 A-	ORGANIC MATERIALS		MINERALOGICAL COMPOSI IES SUCH AS QUARTZ, FELDSPAR, MICA, TO DESCRIPTIONS WHEN THEY ARE CONSIDI	ALC, KAOLIN, ETC.	CRYSTALLINE ROCK (CR)		WOULD YIELD SPT GNEISS, GABBRO, SCI		PE INCLUDES GRANITE.	WHICH IT IS ENCOUNTERED, BUT WHICH DOES NOT NECESSARILY RISE TO OR ABOVE THE GROUND SURFACE. <u>CALCAREOUS (CALC.)</u> - SOILS THAT CONTAIN APPRECIABLE AMOUNTS OF CALCIUM CARBONATE.
GROUP A-1 CLASS. A-1-a A-1-b			-1, A-2 A-4, A-5 A-3 A-6, A-7		COMPRESSIBILITY		NON-CRYSTALLI ROCK (NCR)	NE	SEDIMENTARY ROCK	GRAIN METAMORPHIC AND NON-C K THAT WOULD YEILD SPT REFU	JSAL IF TESTED.	COLLUVIUM - ROCK FRAGMENTS MIXED WITH SOIL DEPOSITED BY GRAVITY ON SLOPE OR AT BOTTOM
SYMBOL SYMBOL				MODEI	ITLY COMPRESSIBLE RATELY COMPRESSIBLE Y COMPRESSIBLE	LL < 31 LL = 31 - 50 LL > 50	COASTAL PLAIN SEDIMENTARY F		COASTAL PLAIN SEI SPT REFUSAL. ROCK	DES PHYLLITE, SLATE, SANDSTON EDIMENTS CEMENTED INTO ROCK CK TYPE INCLUDES LIMESTONE,	, BUT MAY NOT YIELD	OF SLOPE. <u>CORE RECOVERY (REC.)</u> - TOTAL LENGTH OF ALL MATERIAL RECOVERED IN THE CORE BARREL DIVIDED BY TOTAL LENGTH OF CORE RUN AND EXPRESSED AS A PERCENTAGE.
■10 50 MX ■40 30 MX 50 MX	51 MN		IANULAR SILI MUCK, SOILS CLAY PEAT		PERCENTAGE OF MATER	IAL	(CP)		SHELL BEDS, ETC.	HERING		DIKE - A TABULAR BODY OF IGNEOUS ROCK THAT CUTS ACROSS THE STRUCTURE OF ADJACENT
■200 15 MX 25 MX MATERIAL	10 MX 35 MX 35 MX 35 MX 35 MX 36 MN 3		SOILS	ORGANIC MATERIAL TRACE OF ORGANIC MA LITTLE ORGANIC MATT		<u>OTHER MATERIAL</u> TRACE 1 - 10% LITTLE 10 - 20%		OCK FRESH.CRYSTAL AMMER IF CRYSTALL		TS MAY SHOW SLIGHT STAINING.	ROCK RINGS UNDER	ROCKS OR CUTS MASSIVE ROCK. <u>DIP</u> - THE ANGLE AT WHICH A STRATUM OR ANY PLANAR FEATURE IS INCLINED FROM THE HORIZONTAL.
PASSING #40 LL – PI 6 MX	40 MX 41 MN 40 MX 41 MN 40 MX 41 MN 40 MX 4 NP 10 MX 10 MX 11 MN 11 MN 10 MX 1		SOILS WITH LITTLE OR MODERATE	MODERATELY ORGANIC HIGHLY ORGANIC	5 - 10% 12 - 20% > 10% > 20%	SOME 20 - 35% HIGHLY 35% AND ABOVE	(V SLI.) C		KEN SPECIMEN FACE S	SOME JOINTS MAY SHOW THIN C SHINE BRIGHTLY. ROCK RINGS UN		DIP DIRECTION (DIP AZIMUTH) - THE DIRECTION OR BEARING OF THE HORIZONTAL TRACE OF THE LINE OF DIP, MEASURED CLOCKWISE FROM NORTH.
GROUP INDEX Ø USUAL TYPES STONE FRAGS.		12 MX 16 MX NO MX	AMOUNTS OF SOILS ORGANIC MATTER	∇	GROUND WATER	TELY AFTER DRILLING	(SLI.) 1	INCH. OPEN JOINTS	MAY CONTAIN CLAY.	AND DISCOLORATION EXTENDS IN IN GRANITOID ROCKS SOME OCCA RYSTALLINE ROCKS RING UNDER H	SIONAL FELDSPAR	<u>FAULT</u> - A FRACTURE OR FRACTURE ZONE ALONG WHICH THERE HAS BEEN DISPLACEMENT OF THE SIDES RELATIVE TO ONE ANOTHER PARALLEL TO THE FRACTURE. <u>FISSILE</u> - A PROPERTY OF SPLITTING ALONG CLOSELY SPACED PARALLEL PLANES.
OF MAJOR GRAVEL, AND MATERIALS SAND GEN. RATING	SHIND GREATER HIND SHIND SUIT:	S SOILS	AIR TO POOR UNSUITABLE	▼ ∑pw_	STATIC WATER LEVEL AFTER 24 H PERCHED WATER, SATURATED ZONE, OR		MODERATE S (MOD.) G	IGNIFICANT PORTION RANITOID ROCKS, MO	IS OF ROCK SHOW DIS ST FELDSPARS ARE D	SCOLORATION AND WEATHERING EA DULL AND DISCOLORED, SOME SHO SHOWS SIGNIFICANT LOSS OF STR	FFECTS. IN W CLAY. ROCK HAS	FLDAT - ROCK FRAGMENTS ON SURFACE NEAR THEIR ORIGINAL POSITION AND DISLODGED FROM PARENT MATERIAL.
AS SUBGRADE	EXCELLENT TO GOOD Fi PI OF A-7-5 SUBGROUP IS ≤ LL - 30 ;PI OF	,	PUUR	O-M-	SPRING OR SEEP			ITH FRESH ROCK.	MANALIN BLOWS HIND SI	510W3 510W1 1CHN1 2055 01 511		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
	CONSISTENCY OR		L - 30		MISCELLANEOUS SYMBO	LS	SEVERE A	ND DISCOLORED AND	A MAJORITY SHOW K	R STAINED. IN GRANITOID ROCKS. KAOLINIZATION. ROCK SHOWS SEV	ERE LOSS OF STRENGTH	FIELD.
PRIMARY SOIL TYPE	CUMPACINESS UR PENETRA	E OF STANDARD ATION RESISTENCE	RANGE OF UNCONFINED COMPRESSIVE STRENGTH		ANKMENT (RE) 25/025 DIP & DIP DIR			ND CAN BE EXCAVAT F <u>TESTED, WOULD YI</u>		ST'S PICK. ROCK GIVES "CLUNK" S	DUND WHEN STRUCK.	<u>JOINT</u> - FRACTURE IN ROCK ALONG WHICH NO APPRECIABLE MOVEMENT HAS OCCURRED. <u>LEDGE</u> - A SHELF-LIKE RIDGE OR PROJECTION OF ROCK WHOSE THICKNESS IS SMALL COMPARED TO
GENERALLY	VERY LOOSE	(N-VALUE) < 4	(TONS/FT ²)	WITH SOIL DE	SCRIPTION OF ROCK STRUC	TURES	(SEV.) R	EDUCED IN STRENGT	H TO STRONG SOIL. I	R STAINED. ROCK FABRIC CLEAR IN GRANITOID ROCKS ALL FELDSP TRONG ROCK USUALLY REMAIN.		ITS LATERAL EXTENT. LENS - A BODY OF SOIL OR ROCK THAT THINS OUT IN ONE OR MORE DIRECTIONS.
GRANULAR MATERIAL	MEDIUM DENSE	4 TO 10 10 TO 30	N/A			CONE PENETROMETER			ELD SPT N VALUES >			MOTTLED (MOT.) - IRREGULARLY MARKED WITH SPOTS OF DIFFERENT COLORS. MOTTLING IN SOILS USUALLY INDICATES POOR AERATION AND LACK OF GOOD DRAINAGE.
(NON-COHESIVE)	DENSE VERY DENSE VERY SOFT	30 TO 50 > 50 < 2	< 0.25			 TEST SOUNDING ROD 	SEVERE B (V SEV.) R	UT MASS IS EFFECT EMAINING. SAPROLIT	IVELY REDUCED TO SI E IS AN EXAMPLE OF	R STAINED. ROCK FABRIC ELEMEN SOIL STATUS,WITH ONLY FRAGMEI F ROCK WEATHERED TO A DEGREE	NTS OF STRONG ROCK THAT ONLY MINOR	PERCHED WATER - WATER MAINTAINED ABOVE THE NORMAL GROUND WATER LEVEL BY THE PRESENCE OF AN INTERVENING IMPERVIOUS STRATUM.
GENERALLY SILT-CLAY	SOFT	2 TO 4 4 TO 8	0.25 TO 0.5 0.5 TO 1.0	INFERRED ROC	MW C	TEST BORING				AIN. IF TESTED, WOULD YIELD SF T DISCERNIBLE, OR DISCERNIBLE		RESIDUAL (RES.) SOIL - SOIL FORMED IN PLACE BY THE WEATHERING OF ROCK.
MATERIAL (COHESIVE)	STIFF	8 TO 15 15 TO 30 > 30	1 TO 2 2 TO 4 > 4	ALLUVIAL SOI		SPT N-VALUE	S		RATIONS. QUARTZ MAY	Y BE PRESENT AS DIKES OR STRI		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.
	TEXTURE OR GR				RECOMMENDATION SYMB	DLS				ARDNESS		SAPROLITE (SAP.) - RESIDUAL SOIL THAT RETAINS THE RELIC STRUCTURE OR FABRIC OF THE PARENT ROCK.
U.S. STD. SIEVE SIZE OPENING (MM)	4 10 40 4.76 2.00 0.42		270 0.053			UNCLASSIFIED EXCAVATION - ACCEPTABLE, BUT NOT TO BE USED IN THE TOP 3 FEET OF	HARD C	EVERAL HARD BLOWS	5 OF THE GEOLOGIST'S BY KNIFE OR PICK ONL	RP PICK. BREAKING OF HAND SPE 'S PICK. VLY WITH DIFFICULTY. HARD HAMM		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.
	DBBLE GRAVEL COARSE COB.) (GR.) (CSE. SE	SAND	SILT CLAY (SL.) (CL.)	UNDERCUT	UNCLASSIFIED EXCAVATION - ACCEPTABLE DEGRADABLE ROCK ABBREVIATIONS	EMBANKMENT OR BACKFILL	MODERATELY C		BY KNIFE OR PICK. GO	OUGES OR GROOVES TO 0.25 INCH ST'S PICK. HAND SPECIMENS CAN		<u>SLICKENSIDE</u> - POLISHED AND STRIATED SURFACE THAT RESULTS FROM FRICTION ALONG A FAULT OR SLIP PLANE.
GRAIN MM 305 SIZE IN. 12	75 2.0 3		0.05 0.005	AR - AUGER REFUSAL BT - BORING TERMINATEC CL CLAY	MED MEDIUM MICA MICACEOUS MOD MODERATELY	VST - VANE SHEAR TEST WEA WEATHERED \mathscr{V} - UNIT WEIGHT	MEDIUM C		GOUGED 0.05 INCHES	DEEP BY FIRM PRESSURE OF KN PEICES 1 INCH MAXIMUM SIZE BY		STANDARD PENETRATION TEST (PENETRATION RESISTANCE)(SPI) - 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
SOIL MOISTURE	SOIL MOISTURE - CORREI SCALE FIELD MOISTURE			CPT - CONE PENETRATION CSE COARSE		$\gamma_{ m d}$ - DRY UNIT WEIGHT	P	OINT OF A GEOLOGI	ST'S PICK.			TO OR LESS THAN 0.1 FOOT PER 60 BLOWS. <u>STRATA CORE RECOVERY (SREC.)</u> - TOTAL LENGTH OF STRATA MATERIAL RECOVERED DIVIDED BY
(ATTERBERG LI			LD MOISTURE DESCRIPTION	DMT - DILATOMETER TES DPT - DYNAMIC PENETRA e - VOID RATIO	T PMT - PRESSUREMETER TE	ST <u>SAMPLE ABBREVIATIONS</u> S - BULK SS - SPLIT SPOON	F	ROM CHIPS TO SEVE		KNIFE OR PICK. CAN BE EXCAVAT BY MODERATE BLOWS OF A PICK SURE.		TOTAL LENGTH OF STRATUM AND EXPRESSED AS A PERCENTAGE. STRATA ROCK QUALITY DESIGNATION (SROD) - A MEASURE OF ROCK QUALITY DESCRIBED BY TOTAL
	(SAT.)	FROM BELOW T	HE GROUND WATER TABLE	F - FINE FOSS FOSSILIFEROUS FRAC FRACTURED, FRAC	SL SILT, SILTY SLI SLIGHTLY	ST - SHELBY TUBE RS - ROCK RT - RECOMPACTED TRIAXIAL	SOFT C			AVATED READILY WITH POINT OF BY FINGER PRESSURE. CAN BE SC		LENGTH OF ROCK SECHENTS WITHIN A STRATUM EQUAL TO OR GREATER THAN 4 INCHES DIVIDED BY THE TOTAL LENGTH OF STRATA AND EXPRESSED AS A PERCENTAGE. <u>TOPSOL (TS.)</u> - SURFACE SOILS USUALLY CONTAINING ORGANIC MATTER.
RANGE <	- WET - (W)	SEMISOLID; REOL ATTAIN OPTIMU	IUIRES DRYING TO IM MOISTURE	FRAGS FRAGMENTS	w - MOISTURE CONTENT	CBR - CALIFORNIA BEARING		ACTURE SPA		BEDDI		BENCH MARK: BL-2
" " PL L PLASTI	IC LIMIT			HI HIGHLY	V - VERY		TERM VERY WIDE		SPACING THAN 10 FEET	TERM VERY THICKLY BEDDED	THICKNESS 4 FEET	N: 956207.2227 E: 2796330.5455 ELEVATION: 9.27 FEET
OM OPTIMU SL SHRINK	UM MOISTURE - MOIST - (M) CAGE LIMIT	SOLID; AT OR N	NEAR OPTIMUM MOISTURE	DRILL UNITS:	ADVANCING TOOLS:		WIDE MODERATELY CLOSE	CLOSE 1	TO 10 FEET TO 3 FEET 5 TO 1 FOOT	THICKLY BEDDED THINLY BEDDED VERY THINLY BEDDED	1.5 - 4 FEET 0.16 - 1.5 FEET 0.03 - 0.16 FEET	NOTES:
	- DRY - (D)	ATTAIN OPTIMU	TIONAL WATER TO IM MOISTURE	СМЕ-55	6' CONTINUOUS FLIGHT AUGER 8' HOLLOW AUGERS	CORE SIZE:	VERY CLOSE		THAN 0.16 FEET	THICKLY LAMINATED THINLY LAMINATED	0.008 - 0.03 FEET < 0.008 FEET	FIAD: FILLED IMMEDIATELY AFTER DRILLING
	PLASTICI PLASTICITY IND			CME-550	HARD FACED FINGER BITS	В	FOR SEDIMENTA	RY ROCKS, INDURAT		NING OF MATERIAL BY CEMENTI	NG, HEAT, PRESSURE, ETC.	
NON PLASTIC	0-5		DRY STRENGTH VERY LOW		TUNGCARBIDE INSERTS		FRIABLE			FINGER FREES NUMEROUS GRAI BY HAMMER DISINTEGRATES SA		
SLIGHTLY PLA MODERATELY F	PLASTIC 16-25	-	SLIGHT MEDIUM	VANE SHEAR TEST	X CASING W/ ADVANCER	HAND TOOLS:	100501	ELY INDURATED		E SEPARATED FROM SAMPLE WI		
HIGHLY PLAST		RE	HIGH	PORTABLE HOIST	X TRICONE 2 15/16 STEEL TEETH	X HAND AUGER	MUDERAT	ELT INDURATED	BREAKS EASILY	Y WHEN HIT WITH HAMMER.		
	COLOR			□	TRICONE TUNGCARB.	SOUNDING ROD	INDURAT	ED		IFFICULT TO SEPARATE WITH S BREAK WITH HAMMER.	TEEL PROBE;	
	INCLUDE COLOR OR COLOR COMBINA UCH AS LIGHT, DARK, STREAKED, ETC.				CORE BIT	VANE SHEAR TEST	EXTREME	LY INDURATED		BLOWS REQUIRED TO BREAK S	AMPLE;	DATE: 8-15-14

PROJECT REFERENCE NO.



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50	100	PRO	JECT REFERENC	CE NO.	SHEET	<i>NO</i> .					
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COASTAL	LAIN)										
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GEOTECHNICAL BORING REPORT BORE LOG

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SITE	DESCR	IPTION	CUL	VERT C	DN -L-	· (SR 1	333)	OVE	R TRI	BUT	ARY -	гок	NOBE	S CRE	EK							GROUND	WTR (ft
BOR	NG NO.	B-1			SI	ΓΑΤΙΟ	N 2	1+53				OFF	SET	14 ft L	т			ALIGNME	NT -L-			0 HR.	N/A
COLI	AR ELI	EV. 8.4	4 ft		т) DTAL	DEPT	гн 3	4.5 ft			NORTHING 956,208					EASTING	2,796,3	81	2	24 HR.	3.8	
DRILL	. RIG/HAN	IMER EF	f./Dat	E GFO	0075 C	ME-450	090%	11/21/	/2022		•			DRILL	ME	THOD	Mudi	Rotary			HAMME	RTYPE A	utomatic
DRIL	LER E	dmonds	son, J.	M.	ST	TART	DATE	E 03	/19/24	1		CON	IP. DA	TE 0	3/19	/24		SURFACE	WATER	DEPTI	H N/A		
ELEV (ft)	DRIVE ELEV (ft)	DEPTH (ft)	BLC 0.5ft	0.5ft	INT 0.5ft	0	:	BLC 25	DWS F 5	PER F		75	100	SAM NO		MOI G		ELEV. (ft)	SOIL ANI	D ROCK	(DESCI	RIPTION	DEPTH (
10	7.6	- 0.8						1			<u> </u>	1 -						3.4	GR	OUND : PAVEI	SURFA	CE	C
5	-	4.0	7	6	5	· /	11	· · ·		· · ·	· · ·		 					TAT	N AND GR	WAY EN	MBANKI FY SANI	MENT D, MOIST 1	
0		6.0 8.0	WОН 3	WOH 4	2		· · · ·	 	· · ·	· · · · ·	· · ·	-	· · · ·	SS-	1		∭F ∣	<u>2.6 </u>		DED CO	Y SILT, DASTAL	PLAIN	<u>5</u> 7
-5	-2.1 -	10.5 13.0	2	2	3	↓ 5 - \	· · · · ·			· · · · ·	· · ·	-	· · · ·						GRAY SIL	TY SAN	ND, SAT	URATED	
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10	-		5	2	2	¢4 . 1	· · ·		· · ·	 	· · ·	-	 					<u>.12.6</u>	GRAY SIL FRAGM (YORK	.TY SAN NENTS, TOWN	SATUR	H SHELL RATED (TION)	
15	14.6 	23.0	2	1	2	• 3	· · ·	· · ·		· · ·	· · ·	-	· · ·	SS-	2				GRAY SIL FR		AY WITH NTS, WE		
20	-19.6 - -	28.0	2	2	3	↓ ↓ • • • • • • • •	· ·	· · ·		· · ·	· ·	-	· · ·					20.7	GRAY SIL	TY SAN	ND, SAT	URATED	2
25	-24.6	33.0	2	2	4	1 [●6.	· ·				· · ·	-	· · ·					26.1 Bo	ring Termi	nated a	t Elevati	on -26.1 ft i	<u>3</u>
	-	Ē															Ē	20			ilty Sand		
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SHEET 5 OF 7

GEOTECHNICAL BORING REPORT BORE LOG

COLLAR ELEV. 5.8 ft TOTAL DEPTH 10.0 ft NORTHING 956,223 EASTING 2,796,424 24 HR. FIAD COLLAR ELEV. 5.5 ft TOTAL DEPTH 10.0 ft NOR DRILL RIG/HAMMER EFF/DATE N/A DRILL METHOD Hand Auger HAMMER TYPE N/A DRILL RIG/HAMMER EFF/DATE N/A TOTAL DEPTH 10.0 ft NOR										-																				
BORINO NO. 5-2 STATION 21-45 OPESET 30 RET AUGMENT 1 OHR NA COLLAR ELEV. 5.8 t TOTAL DEPTH 10.0 ft MORTINIS 650;223 EASTINO 276,424 MHR. TYPE, INA DOBLARE EVENT 5.5 ft TOTAL DEPTH 10.0 ft NO NO DOBLARE EVENT 5.5 ft TOTAL DEPTH 10.0 ft NO NO DOBLARE EVENT 5.5 ft TOTAL DEPTH 10.0 ft NO NO DBILLER Edmontance J. M. STARTOR 21-75 DOBLOB NO 21-55 SUPRACE WATER DEPTH NA																GI	EOLOGIST Zimaring	o, S. N.	1											
COLLAR ELEV. 5.8.11 TOTAL DEPTH 10.0.11 NORTHINO 958.222 EASTING 27.98.424 MARE TYPE NA DBILLRE REMAINSER START DATE 0.31924 COM- ACT DBILLRE REMAINSER S of the				CU	LVERT			,		TRIBUT	_								-	WTR (ft)				U CU	LVER	T ON -	L- (SR 13	33) OVER	TRIBUT	ARY 1
DRULE PROVINCE EFF.OUT DRUL PROVINCE COMP. DATE DRUL PROVINCE COMP. DATE DRUL PROVINCE COMP. DATE DRUL PROVINCE DRUL PROVINCE DRUL PROVINCE COMP. DATE DRUL PROVINCE DRUL PROVIN						_					_								-	N/A										OF
DBILLER Estmerdaon, J.M. START DATE 03/19/24 COMP. DATE							OTAL D	DEPTH	1 10.01	ft	NOF	RTHING																NO		
BLOW OUNT BLOWS FEB FOOT BLOWS FEB FOOT BLOW OUNT BLOWS FEB FOOT BLOW OUNT BLOWS FEB FOOT Image: Description on the state of	DRILI	l Rig/Ha	MMER E	FF./DA	TE N/	A							DRILL	METHO	DD	Hand A	uger	HAMM	IER TYPE N	A	DRIL	l Rig/Ha	MMER E	EFF./DA	TE N	/A				
(n) (DRIL							DATE	03/19/2	24	CO	MP. DA	-			ุรเ	JRFACE WATER DEF	PTH N/	/A		DRIL						TART DAT	E 03/19/	24	CO
Image: Normal base in the image: Normal	ELEV	DRIVE ELEV	DEPTH	BLC											0		SOIL AND RO	CK DESC	CRIPTION			DRIVE	DEPTH		-	-				
5 5.8 GROUND SUPFACE 0 0 0 0 0 1 0 0 0 22 0.0 0 22 0.0 0 22 0.0 0 0 0 0 <	(π)		(π)	0.5ft	0.5ft	0.5ft	0	25	Ď	50	75	100	NO.	Имо) G	ELE	V. (ft)			DEPTH (ft)	(π)	(ft)	(π)	0.5ft	0.5ft	0.5ft	0	25	50	75
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Image: Content of the second secon			+													- <u>2.2</u>	LOOSE GRAY SIL	TY SAND	, SATURATED	<u>. 8.0</u>			ŧ							
Image: Sector of the sector		· ·	‡					· · · ·	· · · · ·	•••	· ·	· · · · · ·				-4.2				10.0			‡				1 1			
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SHEET 6 OF 7

T١	YP/	٩S	QL	10.	TANK				GEOLC	GIS	T Zi	marino	, S. N.			
AF	RY T	0 ł	٢N	OE	BBS CR	REEK								GROUN	D W	FR (ft)
	OFF	SE	т	3	0 ft RT				ALIGN	/EN	T-L·	-		0 HR.		N/A
	NOF	RTF	HIN	IG	956,2	48			EASTIN	IG	2,796	6,408		24 HR.		FIAD
					DRILL	/IETHO	DH	land	d Auger				HAMM	ER TYPE	N⁄A	
	CO	٨P.	D	AT	E 03/	19/24			SURFA	CE V	NATE	R DEP	TH N/	A		
T	75		4.04		SAMP.		L O			S	SOIL A	ND RO	CK DESC	RIPTION		
	75 I		100		NO.	<u>/ MOI</u>	G									
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•	·		•	_					4.5 E			inated a	t Elevatio	n -4.5 ft in		10.0
								F					dy Clay			
								F		No	te: Cul		ert Elevat ter Line	ion = 3.2' a	at	
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NORTH CAROLINA DEPARTMENT OF TRANSPORTATION DIVISION OF HIGHWAY MATERIALS & TESTS UNIT SOILS LABORATORY

T. I. P. No. <u>W-5701C</u>

		SOILS FOR QUALITY									
Project	44847.1.10	PASQUOTANK	Owner								
Date: Sampled	3/18/24	Reported		4/17/24							
Sampled from			T.C. B	OTTOMS							
Submitted by	MATT ALEXAND	DER	201	2 Standard Specifications							

819590 TO 819596

4/17/24

TEST RESULTS												
Proj. Sample No.		SS-1	SS-2									
Lab. Sample No.		819591	819593									
Retained #4 Sieve	%	-	-									
Passing #10 Sieve	%	100	99									
Passing #40 Sieve	%	99	93									
Passing #200 Sieve	%	76	74									

MINUS NO. 10 FRACTION

SOIL MORTAR - 100%					
Coarse Sand Ret - #60	%	3.9	9.3		
Fine Sand Ret - #270	%	37.9	20.7		
Silt 0.05 - 0.005 mm	%	33.9	29.5		
Clay < 0.005 mm	%	24.3	40.5		
Passing #40 Sieve	%	-	-		
Passing #200 Sieve	%		-		

L. L.	25	53		
P. I.	10	32		
AASHTO Classification	A-4(5)	A-7-6(23)		
Station	21+53	21+53		
Offset	14' LT	14'LT		
Alignment	-L-	-L-		
Location				
Depth (Ft)	6.00	23.0'		
to	7.50	24.5'		

cc: T.C BOTTOMS

M & T Form 503