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36306.

STATE OF NORTH CAROLINA

DEPARTMENT OF TRANSPORTATION DIVISION OF HIGHWAYS GEOTECHNICAL ENGINEERING UNIT

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STRUCTURE SUBSURFACE INVESTIGATION

PROJ. REFERENCE NO. 36306.1.1 (U-4733) F.A. PROJ. **STP-0332 (15)** COUNTY NEW HANOVER PROJECT DESCRIPTION SR 1411 (WRIGHTSVILLE AVE.) FROM WEST OF FOREST HILLS DR. TO EAST OF SR2313 (WILSHIRE BLVD.) SITE DESCRIPTION NOISEWALL AT -WALL- STATION 10+00

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	36306.1.1 (U-4733)	1	5

CAUTION NOTICE

THE SUBSURFACE INFORMATION AND THE SUBSURFACE INVESTIGATION ON WHICH IT IS BASED WERE MADE FOR THE PURPOSE OF PREPARING THE SCOPE OF WORK TO BE INCLUDED IN THE REQUEST FOR PROPOSAL. THE VARIOUS FIELD BORING LOGS, ROCK CORES, AND SOIL TEST DATA AVAILABLE MAY BE REVIEWED OR INSPECTED IN RALIGIN BY CONTACTING THE N. C. DEPARTMENT OF TRANSPORTATION, GEOTECHNICAL ENGINEERING UNIT AT (9/9) 250-4088. THE SUBSURFACE PLANS, FIELD BORING LOGS, ROCK CORES. AND SOIL TEST DATA ARE NOT PART OF THE CONTRACT.

SOIL AND ROCK BOUNDARIES WITHIN A BOREHOLE ARE BASED ON GEOTECHNICAL INTERPRETATION UNLESS ENCOUNTERED IN A SAMPLE, INTERPRETED BOUNDARIES MAY NOT NECESSARILY REFLECT ACTUAL SUBSURFACE CONDITIONS BETWEEN SAMPLED STRATA, AND BOREHOLE INFORMATION MAY NOT NECESSARILY REFLECT ACTUAL SUBSURFACE CONDITIONS BETWEEN BORNICS, THE LABORATORY SAMPLE DATA AND THE IN STU (IN-PLACE) TEST DATA CAN BE RELIED ON ONLY TO THE DECREE OF RELIABILITY INHERENT IN THE STANDARD REST METHOD. THE OBSERVED WATER LEVELS OR SOIL MOISTURE CONDITIONS NIDICATED IN THE SUBSURFACE INVESTICATIONS ARE AS RECORDED AT THE TIME OF THE INVESTIGATION. THESE WATER LEVELS OR SOIL MOISTURE CONDITIONS MAY CARY CONSIDERABLY WITH TIME ACCORDING TO CLIMATIC CONDITIONS, INCLUDING TEMPERATURES, PRECIPITATION, AND WIND, AS WELL AS OTHER NON-CLIMATIC FACTORS.

THE DEPARTMENT DOES NOT WARRANT OR CHARANTEE THE SUFFICIENCY OR ACCURACY OF THE INVESTIGATION MADE, OR THE OPINION OF THE DEPARTMENT AS TO THE TYPE OF MATERIALS AND CONDITIONS TO BE EXCOUNTERED. THE BIDDER OR CONTRACTOR IS CAUTIONED TO MAKE SUCH INDEPENDENT SUBSURFACE INVESTIGATIONS AS HE DEEMS NECESSARY TO SATISTY HUMSELF 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 PEASON RESULTING FROM THE ACTUAL CONDITIONS ENCOUNTERED AT THE SITE DIFFERING FROM THOSE INDICATED IN THE SUBSURFACE INFORMATION.

- NOTE THE INFORMATION CONTAINED HEREIN IS NOT IMPLIED OR GUARANTEED BY THE N.C. DEPARTMENT OF TRANSPORTATION AS BEING ACCURATE NOR IT IS CONSIDERED TO BE PART OF THE PLANS, SPECIFICATIONS, OR CONTRACT FOR THE PROJECT.
- NOTE 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 J. R. SWARTLEY W. N. CHERRY

R. E. SMITH

C. M. KENT DRAWN BY

INVESTIGATED BY_F. W. WESCOTT III

CHECKED BY

D. N. ARGENBRIGHT

SUBMITTED BY ____ D. N. ARGENBRIGHT

SEPTEMBER 2007



NORTH CAROLINA DEPARTMENT OF TRANSPORTATION

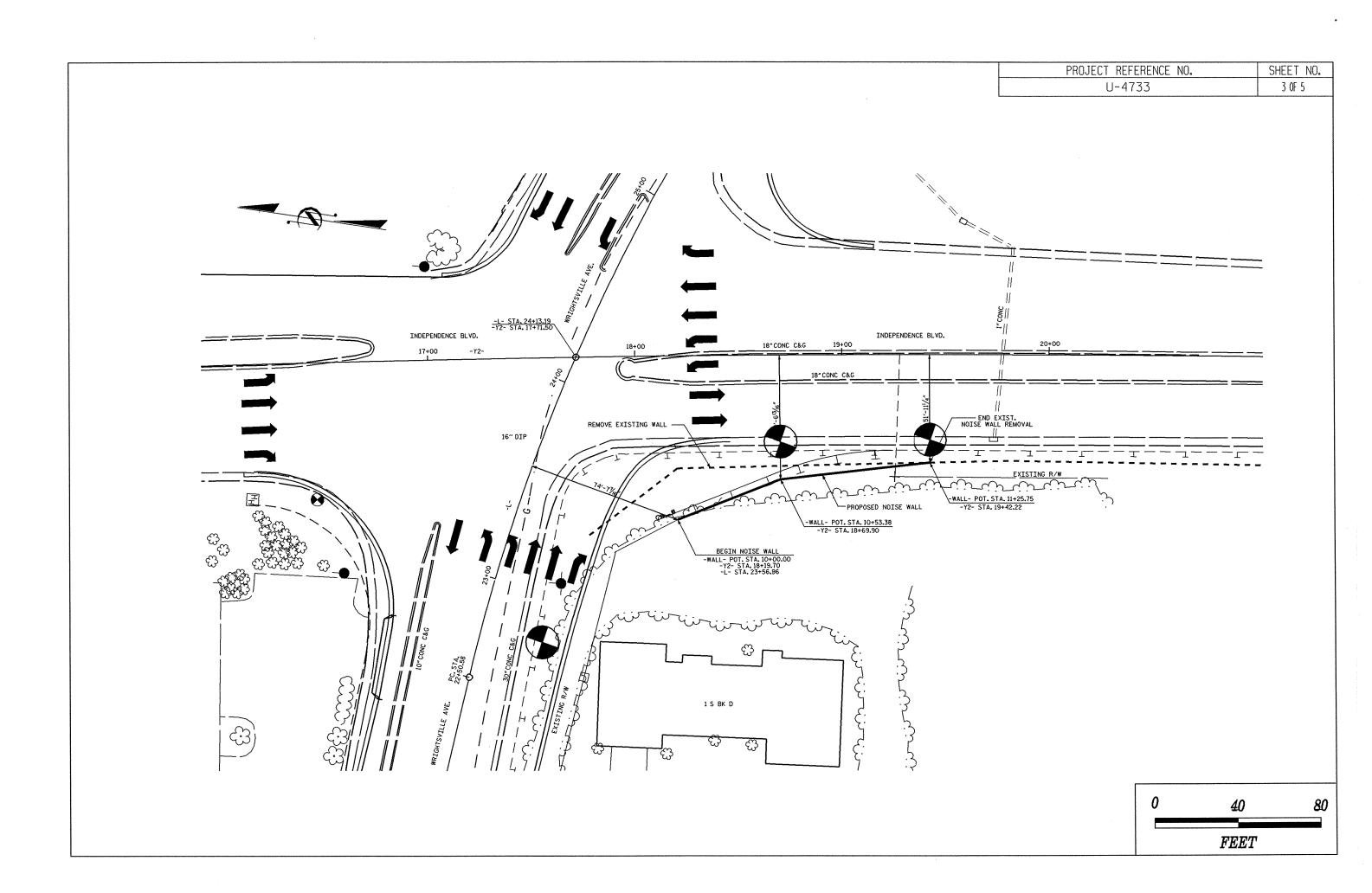
DIVISION OF HIGHWAYS

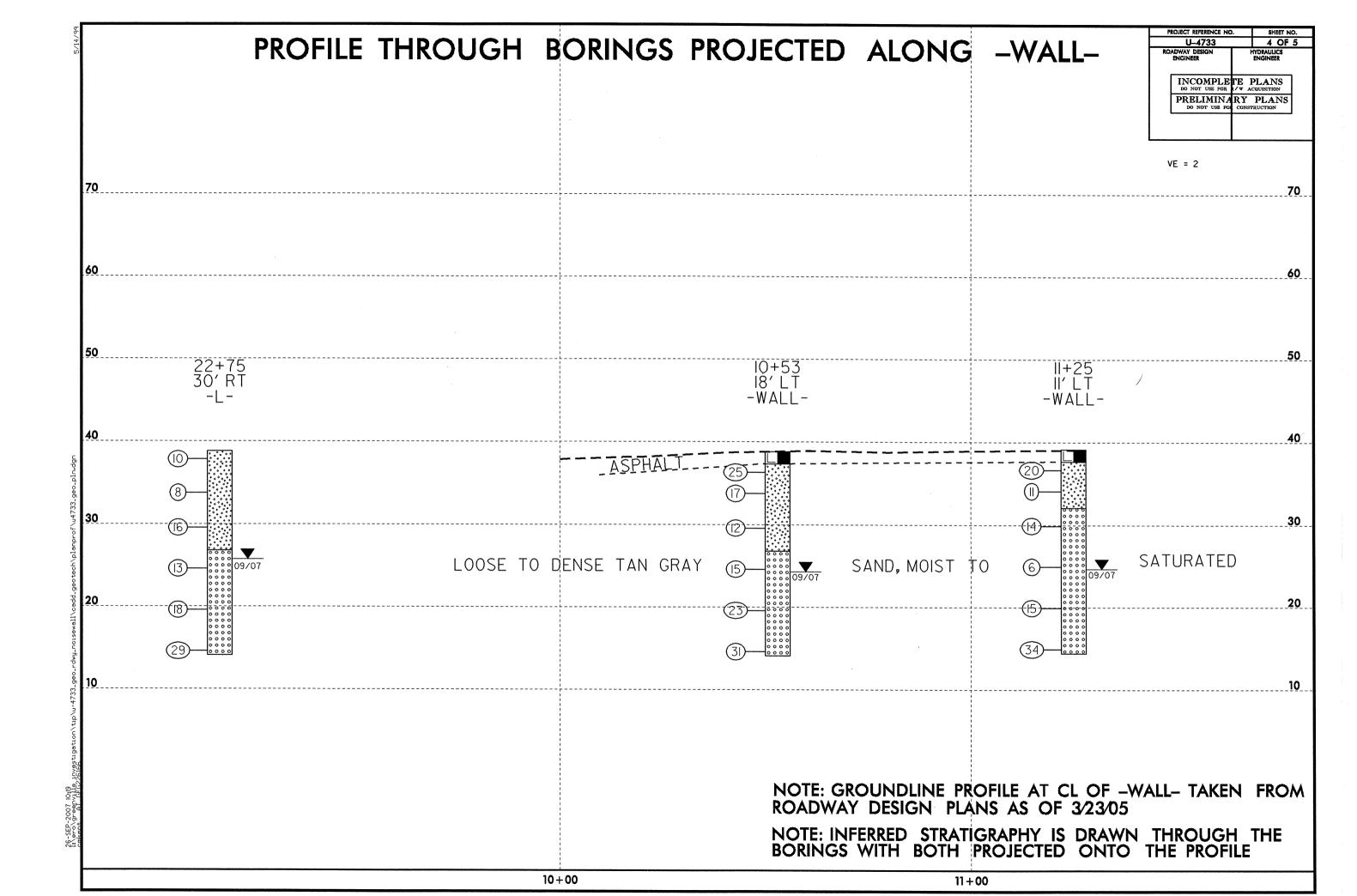
GEOTECHNICAL ENGINEERING UNIT

SUBSURFACE INVESTIGATION

	SOIL AND ROC	K LEGEND, TERMS	S, SYMBOLS,	AND ABBREVI	ATIONS				
SOIL DESCRIPTION GRADATION					DESCRIPTION	TERMS AND DEFINITIONS			
SOIL IS CONSIDERED TO BE THE UNCONSOLIDATED, SEMI-CONSOLIDATED, OR WEATHERED EARTH MATERIALS	WELL GRADED - INDICATES A GOOD REPRESENTATION OF PARTICLE SIZES FRO UNIFORM - INDICATES THAT SOIL PARTICLES ARE ALL APPROXIMATELY THE S	OM FINE TO COARSE. SAME SIZE. (ALSO	HARD ROCK IS NON-O ROCK LINE INDICATE	COASTAL PLAIN MATERIAL THAT S THE LEVEL AT WHICH NON-C	IF TESTED, WOULD YIELD SPT REFUSAL. AN INFERRED OASTAL PLAIN MATERIAL WOULD YIELD SPT REFUSAL.	ALLUVIUM (ALLUV.) - SOILS THAT HAVE BEEN TRANSPORTED BY WATER.			
THAT CAN BE PENETRATED WITH A CONTINUOUS FLIGHT POWER AUGER, AND YIELD LESS THAN 100 BLOWS PER FOOT ACCORDING TO STANDARD PENETRATION TEST (AASHTO T206, ASTM D-1586), SOIL	POORLY GRADEDI GAP-GRADED - INDICATES A MIXTURE OF UNIFORM PARTICLES OF TWO OR MOI		SPT REFUSAL IS PER	NETRATION BY A SPLIT SPOON	SAMPLER EQUAL TO OR LESS THAN 0.1 FOOT PER 60 BLOWS. IN BETWEEN SOIL AND ROCK 1S OFTEN REPRESENTED BY A ZONE	AQUIFER - A WATER BEARING FORMATION OR STRATA.			
CLASSIFICATION IS BASED ON THE AASHTO SYSTEM. BASIC DESCRIPTIONS GENERALLY SHALL INCLUDE: CONSISTENCY, COLOR, TEXTURE, MOISTURE, AASHTO CLASSIFICATION, AND OTHER PERTINENT FACTORS SUCH	ANGULARITY OF GRAINS	×57	OF WEATHERED ROCK	ζ.		ARENACEOUS - APPLIED TO ROCKS THAT HAVE BEEN DERIVED FROM SAND OR THAT CONTAIN SAND.			
AS MINERALOGICAL COMPOSITION, ANGULARITY, STRUCTURE, PLASTICITY, ETC. EXAMPLE:	THE ANGULARITY OR ROUNDNESS OF SOIL GRAINS IS DESIGNATED BY THE TE	ERMS: ANGULAR,		E TYPICALLY DIVIDED AS FOLL		ARGILLACEOUS - APPLIED TO ALL ROCKS OR SUBSTANCES COMPOSED OF CLAY MINERALS, OR HAVING A NOTABLE PROPORTION OF CLAY IN THEIR COMPOSITION, AS SHALE, SLATE, ETC.			
VERV STIFF, GRAY, SULTY CLAY, MOIST WITH INTERBEDDED FINE SAND LAYERS, HIGHLY PLASTIC, A-7-6	SUBANGULAR, SUBROUNDED, OR ROUNDED.		Weathered Rock (WR)	NON-COASTAL PL BLOWS PER FOOT	.AIN MATERIAL THAT WOULD YIELD SPT N VALUES > 100	ARTESIAN - GROUND WATER THAT IS UNDER SUFFICIENT PRESSURE TO RISE ABOVE THE LEVEL			
SOIL LEGEND AND AASHTO CLASSIFICATION	MINERALOGICAL COMPOSITION		CRYSTALLINE	FINE TO COARSE	GRAIN IGNEOUS AND METAMORPHIC ROCK THAT	AT WHICH IT IS ENCOUNTERED, BUT WHICH DOES NOT NECESSARILY RISE TO OR ABOVE THE			
GENERAL GRANULAR MATERIALS SILT-CLAY MATERIALS ORGANIC MATERIALS (≤ 35% PASSING *200) (> 35% PASSING *200)	MINERAL NAMES SUCH AS QUARTZ, FELDSPAR, MICA, TALC, KAOLIN, ETC. ARE USE WHENEVER THEY ARE CONSIDERED OF SIGNIFICANCE.	ED IN DESCRIPTIONS	ROCK (CR)	WOULD YIELD SP GNEISS, GABBRO,	T REFUSAL IF TESTED, ROCK TYPE INCLUDES GRANITE, SCHIST, ETC.	GROUND SURFACE. CALCAREOUS (CALC.) - SOILS THAT CONTAIN APPRECIABLE AMOUNTS OF CALCIUM CARBONATE.			
GROUP A-1 A-3 A-2 A-4 A-5 A-6 A-7 A-1, A-2 A-4, A-5	COMPRESSIBILITY		NON-CRYSTALLINE		GRAIN METAMORPHIC AND NON-CDASTAL PLAIN CK THAT WOULD YEILD SPT REFUSAL IF TESTED, ROCK TYPE	COLLUVIUM - ROCK FRAGMENTS MIXED WITH SOIL DEPOSITED BY GRAVITY ON SLOPE OR AT BOTTOM			
CLASS. A-1-a A-1-b A-2-4 A-2-5 A-2-6 A-2-7 A-7-5 A-3 A-6, A-7	SLIGHTLY COMPRESSIBLE LIQUID LIMIT L		ROCK (NCR)	INCLUDES PHYLLI	ITE, SLATE, SANDSTONE, ETC.	OF SLOPE.			
SYMBOL 000000000000000000000000000000000000	MODERATELY COMPRESSIBLE LIQUID LIMIT E	QUAL TO 31-50 GREATER THAN 50	COASTAL PLAIN SEDIMENTARY ROCK	COASTAL PLAIN S	SEDIMENTS CEMENTED INTO ROCK, BUT MAY NOT YIELD OCK TYPE INCLUDES LIMESTONE, SANDSTONE, CEMENTED	CORE RECOVERY (REC.) - TOTAL LENGTH OF ALL MATERIAL RECOVERED IN THE CORE BARREL DIVIDED BY TOTAL			
X PASSING SILT-	PERCENTAGE OF MATERIAL		(CP)	SHELL BEDS, ETC	•	DIKE - A TABULAR BODY OF JONEOUS ROCK THAT CUTS ACROSS THE STRUCTURE OF ADJACENT			
10 56 MX GRANULAR CLAY MUCK.	ORGANIC MATERIAL GRANULAR SILT - CLAY SDILS SDILS Q	OTHER MATERIAL			ATHERING	ROCKS OR CUTS MASSIVE ROCK.			
■ 200 15 MX 25 MX 10 MX 35 MX 35 MX 35 MX 35 MX 36 MN	TRACE OF ORGANIC MATTER 2 - 3% 3 - 5% TRACE	E 1 - 10%		ESH, CRYSTALS BRIGHT, FEW JO IF CRYSTALLINE.	DINTS MAY SHOW SLIGHT STAINING ROCK RINGS UNDER	DIP - THE ANGLE AT WHICH A STRATUM OR ANY PLANAR FEATURE IS INCLINED FROM THE HORIZONTAL.			
LIQUID LIMIT 48 MX 41 MN 48 MX 41 MN 48 MX 41 MN 48 MX 41 MN SDILS WITH	LITTLE DRGANIC MATTER 3 - 5% 5 - 12% LITTL MODERATELY ORGANIC 5 - 10% 12 - 20% SOME		VERY SLIGHT ROCK GE	NERALLY FRESH, JOINTS STAIN	ED, SOME JOINTS MAY SHOW THIN CLAY COATINGS IF OPEN.	DIP DIRECTION (DIP AZIMUTH) - THE DIRECTION OR BEARING OF THE HORIZONTAL TRACE OF			
PLASTIC INDEX 6 MX NP 18 MX 18 MX 11 MN 11 MN 18 MX 18 MX 11 MN 11 MN LITTLE OR HIGHLY	HIGHLY ORGANIC >10% >20% HIGHL			S ON A BROKEN SPECIMEN FAC	E SHINE BRIGHTLY, ROCK RINGS UNDER HAMMER BLOWS IF	THE LINE OF DIP, MEASURED CLOCKWISE FROM NORTH.			
GROUP INDEX 0 8 0 4 MX 8 MX 12 MX 16 MX No MX MODERATE AMOUNTS OF SOILS	GROUND WATER				ED AND DISCOLORATION EXTENDS INTO ROCK UP TO	FAULT - A FRACTURE OR FRACTURE ZONE ALONG WHICH THERE HAS BEEN DISPLACEMENT OF THE			
OF MAID CRAME AND FINE SILTY OR CLAYEY SILTY CLAYEY ORGANIC	₩ATER LEVEL IN BORE HOLE IMMEDIATELY AFTER DR	RILLING			Y. IN GRANITOID ROCKS SOME OCCASIONAL FELDSPAR CRYSTALLINE ROCKS RING UNDER HAMMER BLOWS.	SIDES RELATIVE TO ONE ANOTHER PARALLEL TO THE FRACTURE. FISSILE - A PROPERTY OF SPLITTING ALONG CLOSELY SPACED PARALLEL PLANES.			
MATERIALS SAND SAND SHAVEL AND SAND SUILS SUILS	STATIC WATER LEVEL AFTER 24 HOURS				DISCOLORATION AND WEATHERING EFFECTS. IN	FLOAT - ROCK FRAGMENTS ON SURFACE NEAR THEIR ORIGINAL POSITION AND DISLODGED FROM			
GEN. RATING AS A EXCELLENT TO GOOD FAIR TO POOR POOR POOR UNSUITABLE	PERCHED WATER, SATURATED ZONE, OR WATER BEARING	G STRATA	(MOD.) GRANITO:	ID ROCKS, MOST FELDSPARS AR	E DULL AND DISCOLORED, SOME SHOW CLAY, ROCK HAS	PARENT MATERIAL.			
SUBGRADE POOR	SPRING OR SEEP			EBH ROCK.	D SHOWS SIGNIFICANT LOSS OF STRENGTH AS COMPARED	FLOOD PLAIN (FP) - LAND BORDERING A STREAM, BUILT OF SEDIMENTS DEPOSITED BY			
PI OF A-7-5 SUBGROUP IS ≤ LL - 30 ; PI OF A-7-6 SUBGROUP IS > LL - 30	J 0 00			K EXCEPT QUARTZ DISCOLORED	OR STAINED. IN GRANITOID ROCKS, ALL FELDSPARS DULL	THE STREAM.			
CONSISTENCY OR DENSENESS RANGE OF STANDARD RANGE OF UNCONFINED	MISCELLANEOUS SYMBOLS	0.4401.5			W KAOLINIZATION. ROCK SHOWS SEVERE LOSS OF STRENGTH GIST'S PICK. ROCK GIVES "CLUNK" SDUND WHEN STRUCK.	FORMATION (FM.) - A MAPPABLE GEOLOGIC UNIT THAT CAN BE RECOGNIZED AND TRACED IN THE FIELD.			
PRIMARY SOIL TYPE COMPACTNESS OR CONSISTENCY PENETRATION RESISTENCE COMPRESSIVE STRENGTH (N-VALUE) (TONS/FT ²)	ROADWAY EMBANKMENT (RE) WITH SOIL DESCRIPTION SPT CPT OPT DATE TEST BORING VST PMT	SAMPLE DESIGNATIONS	-	ED, WOULD YIELD SPT REFUSAL		JOINT - FRACTURE IN ROCK ALONG WHICH NO APPRECIABLE MOVEMENT HAS DCCURRED.			
VERY LOOSE	SOIL SYMBOL AUGER BORING	S - BULK SAMPLE			OR STAINED ROCK FABRIC CLEAR AND EVIDENT BUT REDUCED NITOID ROCKS ALL FELDSPARS ARE KAOLINIZED TO SOME	LEDGE - A SHELF-LIKE RIDGE OR PROJECTION OF ROCK WHOSE THICKNESS IS SMALL COMPARED TO			
GRANII AR LOOSE 4 TO 10		SS - SPLIT SPOON	EXTENT.	SOME FRAGMENTS OF STRONG	ROCK USUALLY REMAIN.	ITS LATERAL EXTENT.			
MATERIAL DENSE 30 TO 50	ARTIFICIAL FILL (AF) OTHER THAN ROADWAY EMBANKMENT CORE BORING	SAMPLE		ED, YIELDS SPT N VALUES > 10		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			
VERY DENSE >50	INFERRED SOIL BOUNDARY	ST - SHELBY TUBE SAMPLE			OR STAINED. ROCK FABRIC ELEMENTS ARE DISCERNIBLE BUT D SOIL STATUS, WITH ONLY FRAGMENTS OF STRONG ROCK	SOILS USUALLY INDICATES POOR AERATION AND LACK OF GOOD DRAINAGE.			
VERY SOFT	MONITORING WELL				OF ROCK WEATHERED TO A DEGREE SUCH THAT ONLY MINDR RIC REMAIN. IF TESTED, YIELDS SPT N VALUES < 100 BPF	PERCHED WATER - WATER MAINTAINED ABOVE THE NORMAL GROUND WATER LEVEL BY THE PRESENCE OF AN INTERVENING IMPERVIOUS STRATUM.			
SILT-CLAY MEDIUM STIFF 4 TO 8 0.5 TO 1.0	INFERRED ROCK LINE PIEZOMETER	RT - RECOMPACTED TRIAXIAL			NOT DISCERNIBLE OR DISCERNIBLE ONLY IN SMALL AND	RESIDUAL (RES.) SOIL - SOIL FORMED IN PLACE BY THE WEATHERING OF ROCK.			
MATERIAL STIFF 8 TO 15 1 TO 2 (COHESIVE) VERY STIFF 15 TO 30 2 TO 4	ALLUVIAL SOIL BOUNDARY INSTALLATION	SAMPLE	SCATTER	ED CONCENTRATIONS. QUARTZ N	MAY BE PRESENT AS DIKES OR STRINGERS. SAPROLITE IS	ROCK QUALITY DESIGNATION (ROD) - A MEASURE OF ROCK QUALITY DESCRIBED BY TOTAL LENGTH OF			
HARD >30 >4	25/825 DIP & DIP DIRECTION OF SLOPE INDICATOR INSTALLATION	CBR - CALIFORNIA BEARING	ALSO AN	EXAMPLE.	HADDNEGG	ROCK SEGMENTS EQUAL TO OR GREATER THAN 4 INCHES DIVIDED BY THE TOTAL LENGTH OF CORE RUN AND			
TEXTURE OR GRAIN SIZE	ROCK STRUCTURES SPT N-VALUE	RATIO SAMPLE			HARDNESS	EXPRESSED AS A PERCENTAGE. SAPROLITE (SAP.) - RESIDUAL SOIL THAT RETAINS THE RELIC STRUCTURE OR FABRIC OF THE			
U.S. STD. SIEVE SIZE 4 10 40 60 200 270	SOUNDING ROD REF SPT REFUSAL			' BE SCRATCHED BY KNIFE OR IL HARD BLOWS OF THE GEOLOG	SHARP PICK. BREAKING OF HAND SPECIMENS REQUIRES	PARENT ROCK.			
OPENING (MM) 4.76 2.00 0.42 0.25 0.075 0.053	ABBREVIATIONS				CONLY WITH DIFFICULTY. HARD HAMMER BLOWS REQUIRED	SILL - AN INTRUSIVE BODY OF IGNEOUS ROCK OF APPROXIMATELY UNIFORM THICKNESS AND			
BOULDER COBBLE GRAVEL COARSE FINE SILT CLAY	AR - AUGER REFUSAL HI HIGHLY	₩ - MOISTURE CONTENT		ACH HAND SPECIMEN.		RELATIVELY THIN COMPARED WITH ITS LATERAL EXTENT, THAT HAS BEEN EMPLACED PARALLEL TO THE BEDDING OR SCHISTOSITY OF THE INTRUDED ROCKS.			
(BLDR.) (COB.) (GR.) (CSE. SD.) (F SD.) (SL.) (CL.)	BT - BORING TERMINATED MED MEDIUM	V - VERY	MODERATELY CAN BE HARD EXCAVA	SCRATCHED BY KNIFE OR PICE	K. GDUGES OR GRODVES TO 0.25 INCHES DEEP CAN BE LOGIST'S PICK. HAND SPECIMENS CAN BE DETACHED	SLICKENSIDE - POLISHED AND STRIATED SURFACE THAT RESULTS FROM FRICTION ALONG A FAULT OR			
GRAIN MM 305 75 2.0 0.25 0.05 0.005	CL CLAY MICA MICACEDUS CPT - CONE PENETRATION TEST MOD MODERATELY	VST - VANE SHEAR TEST WEA WEATHERED	BY MOD	ERATE BLOWS.		SLIP PLANE.			
SIZE IN. 12 3	CSE CDARSE NP - NON PLASTIC DMT - DILATOMETER TEST ORG ORGANIC	7 - UNIT WEIGHT 7 - DRY UNIT WEIGHT			CHES DEEP BY FIRM PRESSURE OF KNIFE OR PICK POINT. TO PEICES 1 INCH MAXIMUM SIZE BY HARD BLOWS OF THE	STANDARD PENETRATION TEST (PENETRATION RESISTANCE) (6PT) - 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			
SOIL MOISTURE - CORRELATION OF TERMS SOIL MOISTURE SCALE FIELD MOISTURE CONTROL OF SCALE FIELD MOISTURE CONTROL OF SCALE CON	DPT - DYNAMIC PENETRATION TEST PMT - PRESSUREMETER TEST	/d_ DKI ONII WEIGHI		OF A GEOLOGIST'S PICK.	TO FETCES I MOST PHANTION SIZE OF THIRD DECWS OF THE	A 2 INCH OUTSIDE DIAMETER SPLIT SPOON SAMPLER. SPT REFUSAL IS PENETRATION EQUAL TO OR LESS THAN 0.1 FOOT PER 60 BLOWS.			
(ATTERBERG LIMITS) GUIDE FOR FIELD MOISTURE DESCRIPTION GUIDE FOR FIELD MOISTURE DESCRIPTIO	e - VOID RATIO SAP SAPROLITIC F - FINE SD SAND, SANDY				BY KNIFE OR PICK. CAN BE EXCAVATED IN FRAGMENTS SIZE BY MODERATE BLOWS OF A PICK POINT. SMALL.THIN	STRATA CORE RECOVERY (SREC.) - TOTAL LENGTH OF STRATA MATERIAL RECOVERED DIVIDED BY TOTAL LENGTH			
- SATURATED - USUALLY LIQUID; VERY WET, USUALLY	FOSS FOSSILIFEROUS SL SILT, SILTY			CAN BE BROKEN BY FINGER PI		OF STRATUM AND EXPRESSED AS A PERCENTAGE.			
(SAT.) FROM BELOW THE GROUND WATER TABLE	FRAC FRACTURED, FRACTURES SLI SLIGHTLY FRAGS FRAGMENTS TCR - TRICONE REFUSAL				EXCAVATED READILY WITH POINT OF PICK. PIECES 1 INCH	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			
PLASTIC	THOSE THROTEINS		FINGER		EN BY FINGER PRESSURE. CAN BE SCRATCHED READILY BY	TOTAL LENGTH OF STRATA AND EXPRESSED AS A PERCENTAGE.			
ATTAIN OPTIMUM MOISTURE	EQUIPMENT USED ON SUBJECT PR	ROJECT	FRACTU	RE SPACING	BEDDING	TOPSOIL (TS.) - SURFACE SOILS USUALLY CONTAINING ORGANIC MATTER.			
PLL + PLASTIC LIMIT	DRILL UNITS: ADVANCING TOOLS:	HAMMER TYPE:	TERM	SPACING	TERM THICKNESS	BENCH MARK: _			
OM OPTIMUM MOISTURE - MOIST - (M) SOLID; AT OR NEAR OPTIMUM MOISTURE		AUTOMATIC MANUAL	VERY WIDE WIDE	MORE THAN 10 FEET 3 TO 10 FEET	VERY THICKLY BEDDED > 4 FEET THICKLY BEDDED 1.5 - 4 FEET				
SL T SHRINKAGE LIMIT	MOBILE B CLMI BITS		MODERATELY CLOSE	E 1 TO 3 FEET	THINLY BEDDED 0.16 - 1.5 FEET VERY THINLY BEDDED 0.03 - 0.16 FEET	ELEVATION:FT.			
- DRY - (D) REQUIRES ADDITIONAL WATER TO ATTAIN OPTIMUM MOISTURE	6° CONTINUOUS FLIGHT AUGER	CORE SIZE:	CLOSE VERY CLOSE	0.16 TO 1 FEET LESS THAN 0.16 FEET	THICKLY LAMINATED 0.008 - 0.03 FEET	NOTES:			
HITHIN OF INOUT POISTORE	- O HOLLOW HOULIS	B			THINLY LAMINATED < 0.008 FEET	 -			
PLASTICITY	CME-45C HARD FACED FINGER BITS	N	FOR SEDIMENTARY POC		URATION ING OF THE MATERIAL BY CEMENTING, HEAT, PRESSURE, ETC.	-			
PLASTICITY INDEX (PI) DRY STRENGTH NONPLASTIC 9-5 VERY LOW	TUNGCARBIDE INSERTS				WITH FINGER FREES NUMEROUS GRAINS:				
LOW PLASTICITY 6-15 SLIGHT	CME-550	HAND TOOLS:	FRIABLE		BLOW BY HAMMER DISINTEGRATES SAMPLE.				
MED. PLASTICITY	PORTABLE HOIST TRICONE 215/16 STEEL TEETH	POST HOLE DIGGER	MODERATELY		CAN BE SEPARATED FROM SAMPLE WITH STEEL PROBE;				
COLOR		HAND AUGER		BREAKS	EASILY WHEN HIT WITH HAMMER.				
	CME-45B CORE BIT	SOUNDING ROD	INDURATED		ARE DIFFICULT TO SEPARATE WITH STEEL PROBE; T TO BREAK WITH HAMMER,				
DESCRIPTIONS MAY INCLUDE COLOR OR COLOR COMBINATIONS (TAN, RED, YELLOW-BROWN, BLUE-GRAY). MODIFIERS SUCH AS LIGHT, DARK, STREAKED, ETC. ARE USED TO DESCRIBE APPEARANCE.		VANE SHEAR TEST	EXTREMELY		I TO BREAK WITH HAMMER. HAMMER BLOWS REQUIRED TO BREAK SAMPLE:				
THE SAME OF THE PROPERTY OF TH			EXIMEMELY		BREAKS ACROSS GRAINS.				

PROJECT REFERENCE NO. U-4733 SHEET NO. 2 OF 5





Proj. No. 36306.1.1 Tip No. U-4733 County: New Hanover

	SAMPLE# SS-1	PASS 10 100	PASS 40 90	PASS 200 16	CSESAND 39.0	FINESAND 48.6					CLASS A-2-4(0)	DEPTH 1.5-3.0	MOIST.	ORG.
11+25 11' LT	SS-2	100	76	7	56.1	37.2	1.7	5.0	19	NP	A-3(0)	13.2-14.7		
22+75 30' RT	SS-3	100	78	4	61.6	36.1	0.3	2.0	20	NP	A-3(0)	23.2-29.7		