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CONTENTS

DESCRIPTION

LEGEND (SOIL & ROCK)

SOIL TEST RESULTS SITE PHOTOS

TITLE SHEET

SITE PLAN

PROFILE BORE LOGS

SHEET NO.

5 - 8

STATE OF NORTH CAROLINA

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

STRUCTURE SUBSURFACE INVESTIGATION

COUNTY ROBESON

PROJECT DESCRIPTION BRIDGE NO. 770175 ON -L-(W. 5TH ST.) OVER LUMBER RIVER AT -L-STA. 22 + 08.00

STATE PROJECT REFERENCE NO. B-5985

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 (1991) 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 BORCHOLE. 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 INCLORDED TO CLIMATIC CONDITIONS INCLORDED TO CLIMATIC CONDITIONS INCLORDING TO CLIMATIC CONDITIONS INCLORDING 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 SATISTY 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.

Lindsay Pugh, LG Thomas Park Jordan Edmondson INVESTIGATED BY S.V. HUDSON, LG

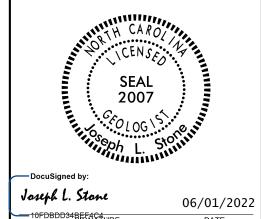
CHECKED BY J. LEE STONE, PG

DRAWN BY S. V. HUDSON, LG

SUBMITTED BY J. LEE STONE, PG

DATE <u>June</u> 2022





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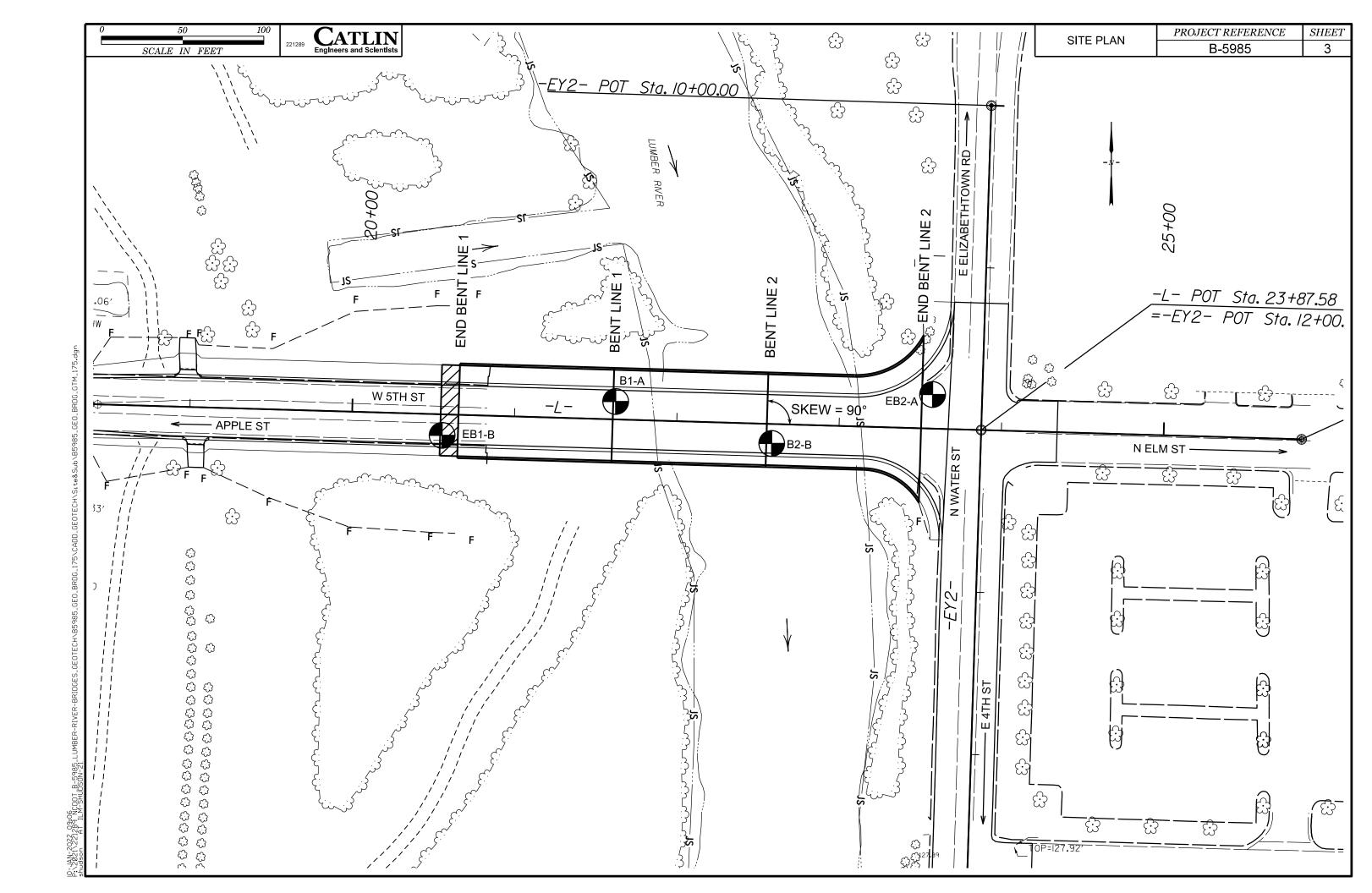
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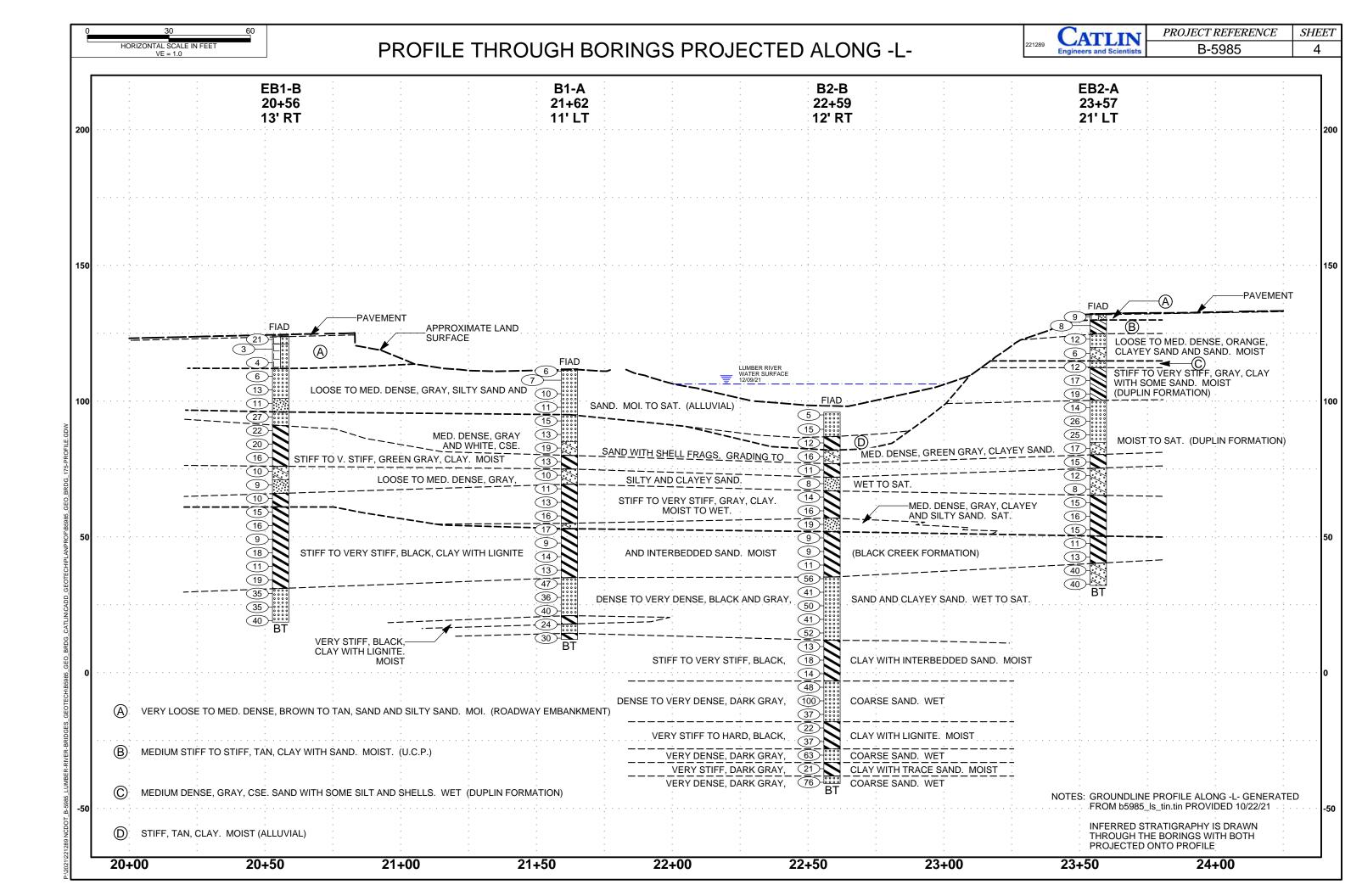
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION DIVISION OF HIGHWAYS GEOTECHNICAL ENGINEERING UNIT

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	WELL GRADED - INDICATES A GOOD REPRESENTATION OF PARTICLE SIZES FROM FINE TO COARSE.	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.	ALLUVIUM (ALLUV.) - SOILS THAT HAVE BEEN TRANSPORTED BY WATER.			
ACCORDING TO THE STANDARD PENETRATION TEST (AASHTO T 206, ASTM D1586). SOIL CLASSIFICATION	<u>UNIFORMLY GRADED</u> - INDICATES THAT SOIL PARTICLES ARE ALL APPROXIMATELY THE SAME SIZE. <u>GAP-GRADED</u> - INDICATES A MIXTURE OF UNIFORM PARTICLE SIZES OF TWO OR MORE SIZES.	SPT REFUSAL IS PENETRATION BY A SPLIT SPOON SAMPLER EQUAL TO OR LESS THAN 0.1 FOOT PER 60	AQUIFER - A WATER BEARING FORMATION OR STRATA.			
IS BASED ON THE AASHTO SYSTEM. BASIC DESCRIPTIONS GENERALLY INCLUDE THE FOLLOWING: CONSISTENCY, COLOR, TEXTURE, MOISTURE, AASHTO CLASSIFICATION, AND OTHER PERTINENT FACTORS SUCH	ANGULARITY OF GRAINS	BLOWS IN NON-COASTAL PLAIN MATERIAL, THE TRANSITION BETWEEN SOIL AND ROCK IS OFTEN REPRESENTED BY A ZONE OF WEATHERED ROCK.	ARENACEOUS - APPLIED TO ROCKS THAT HAVE BEEN DERIVED FROM SAND OR THAT CONTAIN SAND.			
AS MINERALOGICAL COMPOSITION, ANGULARITY, STRUCTURE, PLASTICITY, ETC. FOR EXAMPLE,	THE ANGULARITY OR ROUNDNESS OF SOIL GRAINS IS DESIGNATED BY THE TERMS:	ROCK MATERIALS ARE TYPICALLY DIVIDED AS FOLLOWS:	ARGILLACEOUS - APPLIED TO ALL ROCKS OR SUBSTANCES COMPOSED OF CLAY MINERALS, OR HAVING			
VERY STIFF,GRAY,SILTY CLAY,MOIST WITH INTERBEDDED FINE SAND LAYERS,HIGHLY PLASTIC,A-7-6 SOIL LEGEND AND AASHTO CLASSIFICATION	ANGULAR, SUBANGULAR, SUBROUNDED, OR ROUNDED.	WEATHERED VIOLEN NON-COASTAL PLAIN MATERIAL THAT WOULD YIELD SPT N VALUES > ROCK (WR) 100 BLOWS PER FOOT IF TESTED.	A NOTABLE PROPORTION OF CLAY IN THEIR COMPOSITION, SUCH AS SHALE, SLATE, ETC.			
CENERAL CRAMIII AR MATERIALS SILT-CLAY MATERIALS	MINERALOGICAL COMPOSITION	FINE TO COARSE CRAIN ICNEOUS AND METAMORPHIC ROCK THAT	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			
CLASS. (\(\leq 35% \) PASSING *200) (> 35% PASSING *200) ORGANIC MATERIALS	MINERAL NAMES SUCH AS QUARTZ, FELDSPAR, MICA, TALC, KAOLIN, ETC.	PROFY (CD) WOULD YIELD SPT REFUSAL IF TESTED. ROCK TYPE INCLUDES GRANITE,	SURFACE.			
GROUP A-1 A-3 A-2 A-4 A-5 A-6 A-7 A-1, A-2 A-4, A-5	ARE USED IN DESCRIPTIONS WHEN THEY ARE CONSIDERED OF SIGNIFICANCE.	UNEISS, GABBRU, SCHIST, ETC.	CALCAREOUS (CALC.) - SOILS THAT CONTAIN APPRECIABLE AMOUNTS OF CALCIUM CARBONATE.			
CLASS. A-1-6 A-1-6 A-2-4 A-2-5 A-2-6 A-2-7 A-7-6 A-3 A-6, A-7	COMPRESSIBILITY	NON-CRTSTALLINE SEDIMENTARY ROCK THAT WOULD YIELD SPT REFUSAL IF TESTED.	COLLUVIUM - ROCK FRAGMENTS MIXED WITH SOIL DEPOSITED BY GRAVITY ON SLOPE OR AT BOTTOM OF SLOPE.			
SYMBOL 000000000000000000000000000000000000	SLIGHTLY COMPRESSIBLE LL < 31 MODERATELY COMPRESSIBLE LL = 31 - 50	ROCK TYPE INCLUDES PHYLLITE, SLATE, SANDSTONE, ETC. COASTAL PLAIN COASTAL PLAIN SEDIMENTS CEMENTED INTO ROCK, BUT MAY NOT YIELD				
7. PASSING	HIGHLY COMPRESSIBLE LL > 50	SPT REFUSAL. ROCK TYPE INCLUDES LIMESTONE, SANDSTONE, CEMENTED (CP) SHELL BEDS, ETC.	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.			
*10 50 MX GRANULAR SILI- MUCK, SILIS CLAY PEAT	PERCENTAGE OF MATERIAL	WEATHERING	DIKE - A TABULAR BODY OF IGNEOUS ROCK THAT CUTS ACROSS THE STRUCTURE OF ADJACENT			
*40 30 MX 50 MX 51 MN PEAT ** *200 15 MX 25 MX 10 MX 35 MX 35 MX 35 MX 36 MN 36 MN 36 MN 36 MN 36 MN	GRANULAR SILT - CLAY ORGANIC MATERIAL SOILS SOILS OTHER MATERIAL	FRESH ROCK FRESH, CRYSTALS BRIGHT, FEW JOINTS MAY SHOW SLIGHT STAINING, ROCK RINGS UNDER	ROCKS OR CUTS MASSIVE ROCK.			
MATERIAL	TRACE OF ORGANIC MATTER 2 - 3% 3 - 5% TRACE 1 - 10%	HAMMER IF CRYSTALLINE.	<u>DIP</u> - THE ANGLE AT WHICH A STRATUM OR ANY PLANAR FEATURE IS INCLINED FROM THE HORIZONTAL.			
PASSING *40 SOILS WITH	LITTLE ORGANIC MATTER 3 - 5% 5 - 12% LITTLE 10 - 20% MODERATELY ORGANIC 5 - 10% 12 - 20% SOME 20 - 35%	VERY SLIGHT ROCK GENERALLY FRESH, JOINTS STAINED, SOME JOINTS MAY SHOW THIN CLAY COATINGS IF OPEN,	DIP DIRECTION (DIP AZIMUTH) - THE DIRECTION OR BEARING OF THE HORIZONTAL TRACE OF THE			
LL 40 MX 41 MN LITTLE OR HIGHLY PI 6 MX NP 10 MX 10 MX 11 MN 11 MN 10 MX 10 MX 11 MN 11 MN MODERATE HIGHLY	HIGHLY ORGANIC > 10% > 20% HIGHLY 35% AND ABOVE	(V SLI.) CRYSTALS ON A BROKEN SPECIMEN FACE SHINE BRIGHTLY. ROCK RINGS UNDER HAMMER BLOWS IF OF A CRYSTALLINE NATURE.	LINE OF DIP, MEASURED CLOCKWISE FROM NORTH,			
GROUP INDEX 0 0 0 4 MX 8 MX 12 MX 16 MX NO MX AMOUNTS OF UNCANIL	GROUND WATER	SLIGHT ROCK GENERALLY FRESH, JOINTS STAINED AND DISCOLORATION EXTENDS INTO ROCK UP TO	FAULT - A FRACTURE OR FRACTURE ZONE ALONG WHICH THERE HAS BEEN DISPLACEMENT OF THE			
USUAL TYPES STONE FRAGS. FINE SILTY OR CLAYEY SILTY CLAYEY MATTER	igtriangledown water level in bore hole immediately after drilling	(SLI.) I INCH. OPEN JOINTS MAY CONTAIN CLAY. IN GRANITOID ROCKS SOME OCCASIONAL FELDSPAR	SIDES RELATIVE TO ONE ANOTHER PARALLEL TO THE FRACTURE.			
OF MAJOR GRAVEL, AND MATERIALS SAND GRAVEL AND SAND SOILS SOILS	STATIC WATER LEVEL AFTER 24 HOURS	CRYSTALS ARE DULL AND DISCOLORED, CRYSTALLINE ROCKS RING UNDER HAMMER BLOWS. MODERATE SIGNIFICANT PORTIONS OF ROCK SHOW DISCOLORATION AND WEATHERING EFFECTS. IN	FISSILE - A PROPERTY OF SPLITTING ALONG CLOSELY SPACED PARALLEL PLANES.			
CEN RATING.	─────────────────────────────────────	(MOD.) GRANITOID ROCKS, MOST FELDSPARS ARE DULL AND DISCOLORED, SOME SHOW CLAY. ROCK HAS	FLOAT - ROCK FRAGMENTS ON SURFACE NEAR THEIR ORIGINAL POSITION AND DISLODGED FROM PARENT MATERIAL.			
GEN. RATING AS SUBGRADE EXCELLENT TO GOOD FAIR TO POOR POOR UNSUITABLE	E	DULL SOUND UNDER HAMMER BLOWS AND SHOWS SIGNIFICANT LOSS OF STRENGTH AS COMPARED WITH FRESH ROCK.	FLOOD PLAIN (FP) - LAND BORDERING A STREAM, BUILT OF SEDIMENTS DEPOSITED BY THE STREAM.			
PI OF A-7-5 SUBGROUP IS ≤ LL - 30; PI OF A-7-6 SUBGROUP IS > LL - 30	→ SPRING OR SEEP	MODERATELY ALL ROCK EXCEPT QUARTZ DISCOLORED OR STAINED. IN GRANITOID ROCKS, ALL FELDSPARS DULL	FORMATION (FM.) - A MAPPABLE GEOLOGIC UNIT THAT CAN BE RECOGNIZED AND TRACED IN THE			
CONSISTENCY OR DENSENESS	MISCELLANEOUS SYMBOLS	SEVERE AND DISCOLORED AND A MAJORITY SHOW KAOLINIZATION. ROCK SHOWS SEVERE LOSS OF STRENGTH	FIELD.			
PRIMARY SOIL TYPE COMPACTNESS OR RANGE OF STANDARD RANGE OF UNCONFINED PENETRATION RESISTANCE COMPRESSIVE STRENGTH	ROADWAY EMBANKMENT (RE) 25/025 DIP & DIP DIRECTION	(MOD, SEV.) AND CAN BE EXCAVATED WITH A GEOLOGIST'S PICK, ROCK GIVES 'CLUNK' SOUND WHEN STRUCK, IF TESTED, WOULD YIELD SPT REFUSAL	JOINT - FRACTURE IN ROCK ALONG WHICH NO APPRECIABLE MOVEMENT HAS OCCURRED.			
CONSISTENCY (N-VALUE) COMPRESSIVE STRENGTH	WITH SOIL DESCRIPTION OF ROCK STRUCTURES	SEVERE ALL ROCK EXCEPT QUARTZ DISCOLORED OR STAINED. ROCK FABRIC CLEAR AND EVIDENT BUT	LEDGE - A SHELF-LIKE RIDGE OR PROJECTION OF ROCK WHOSE THICKNESS IS SMALL COMPARED TO ITS LATERAL EXTENT.			
GENERALLY VERY LOOSE < 4	SOIL SYMBOL SOFT ONT TEST BORING SLOPE INDICATOR	(SEV.) REDUCED IN STRENGTH TO STRONG SOIL. IN GRANITOID ROCKS ALL FELDSPARS ARE KAOLINIZED	LENS - A BODY OF SOIL OR ROCK THAT THINS OUT IN ONE OR MORE DIRECTIONS.			
GRANULAR LUUSE 4 10 10 N/A	VST PMT INSTRECENTION	TO SOME EXTENT. SOME FRAGMENTS OF STRONG ROCK USUALLY REMAIN. IF TESTED, WOULD YIELD SPT N VALUES > 100 BPF	MOTTLED (MOT.) - IRREGULARLY MARKED WITH SPOTS OF DIFFERENT COLORS. MOTTLING IN SOILS			
MA LEMAL DENSE 30 TO 50	ARTIFICIAL FILL (AF) OTHER THAN ROADWAY EMBANKMENT AUGER BORING CONE PENETROMETER TEST	VERY ALL ROCK EXCEPT QUARTZ DISCOLORED OR STAINED. ROCK FABRIC ELEMENTS ARE DISCERNIBLE	USUALLY INDICATES POOR AERATION AND LACK OF GOOD DRAINAGE.			
VERT DENSE / 500	A COUNDING DOD	SEVERE BUT MASS IS EFFECTIVELY REDUCED TO SOIL STATUS, WITH ONLY FRAGMENTS OF STRONG ROCK (V SEV.) REMAINING, SAPROLITE IS AN EXAMPLE OF ROCK WEATHERED TO A DEGREE THAT ONLY MINOR	PERCHED WATER - WATER MAINTAINED ABOVE THE NORMAL GROUND WATER LEVEL BY THE PRESENCE OF AN INTERVENING IMPERVIOUS STRATUM.			
VERY SOFT < 2 < 0.25 GENERALLY SOFT 2 TO 4 0.25 TO 0.5	── INFERRED SOIL BOUNDARY ── CORE BORING SOUNDING ROD	VESTIGES OF ORIGINAL ROCK FABRIC REMAIN. <u>IF TESTED, WOULD YIELD SPT N VALUES < 100 BPF</u>	RESIDUAL (RES.) SOIL - SOIL FORMED IN PLACE BY THE WEATHERING OF ROCK.			
SILT-CLAY MEDIUM STIFF 4 TO 8 0.5 TO 1.0	INFERRED ROCK LINE MONITORING WELL TEST BORING WITH CORE	COMPLETE ROCK REDUCED TO SOIL. ROCK FABRIC NOT DISCERNIBLE, OR DISCERNIBLE ONLY IN SMALL AND	ROCK QUALITY DESIGNATION (RQD) - A MEASURE OF ROCK QUALITY DESCRIBED BY TOTAL LENGTH OF			
MATERIAL STIFF 8 TO 15 1 TO 2 (COHESIVE) VERY STIFF 15 TO 30 2 TO 4	TTTT ALLUVIAL SOIL BOUNDARY A PIEZOMETER SPT N-VALUE	SCATTERED CONCENTRATIONS. QUARTZ MAY BE PRESENT AS DIKES OR STRINGERS. SAPROLITE IS ALSO AN EXAMPLE.	ROCK SEGMENTS EQUAL TO OR GREATER THAN 4 INCHES DIVIDED BY THE TOTAL LENGTH OF CORE			
HARD > 30 > 4	INSTALLATION	ROCK HARDNESS	RUN AND EXPRESSED AS A PERCENTAGE. <u>SAPROLITE (SAP.)</u> - RESIDUAL SOIL THAT RETAINS THE RELIC STRUCTURE OR FABRIC OF THE PARENT			
TEXTURE OR GRAIN SIZE	RECOMMENDATION SYMBOLS	VERY HARD CANNOT BE SCRATCHED BY KNIFE OR SHARP PICK, BREAKING OF HAND SPECIMENS REQUIRES	ROCK.			
U.S. STD. SIEVE SIZE 4 10 40 60 200 270	UNDERCUT UNCLASSIFIED EXCAVATION - UNCLASSIFIED EXCAVATION - UNSUITABLE WASTE UNCLASSIFIED EXCAVATION - ACCEPTABLE, BUT NOT TO BE	SEVERAL HARD BLOWS OF THE GEOLOGIST'S PICK.	SILL - AN INTRUSIVE BODY OF IGNEOUS ROCK OF APPROXIMATELY UNIFORM THICKNESS AND			
OPENING (MM) 4.76 2.00 0.42 0.25 0.075 0.053	SHALLOW TO INCLASSIFIED EXCAVATION - USED IN THE TOP 3 FEET OF	HARD CAN BE SCRATCHED BY KNIFE OR PICK ONLY WITH DIFFICULTY. HARD HAMMER BLOWS REQUIRED TO DETACH HAND SPECIMEN.	RELATIVELY THIN COMPARED WITH ITS LATERAL EXTENT, THAT HAS BEEN EMPLACED PARALLEL TO THE BEDDING OR SCHISTOSITY OF THE INTRUDED ROCKS.			
BOULDER COBBLE GRAVEL COARSE FINE SILT CLAY (BLDR.) (COB.) (GR.) (SCR.) (SCR.) (SL.) (CL.)	UNDERCUT ACCEPTABLE DEGRADABLE ROCK EMBANKMENT OF BACKFILL	MODERATELY CAN BE SCRATCHED BY KNIFE OR PICK. GOUGES OR GROOVES TO 0.25 INCHES DEEP CAN BE	SLICKENSIDE - POLISHED AND STRIATED SURFACE THAT RESULTS FROM FRICTION ALONG A FAULT			
(BLDR.) (COB.) (GR.) (CSE. SD.) (F SD.) (SL.) (CL.)	ABBREVIATIONS	HARD EXCAVATED BY HARD BLOW OF A GEOLOGIST'S PICK. HAND SPECIMENS CAN BE DETACHED	OR SLIP PLANE.			
GRAIN MM 305 75 2.0 0.25 0.05 0.005 SIZE IN. 12 3	AR - AUGER REFUSAL MED MEDIUM VST - VANE SHEAR TEST BT - BORING TERMINATED MICA MICACEOUS WEA WEATHERED	BY MODERATE BLOWS.	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			
	CL CLAY MOD MODERATELY γ - UNIT WEIGHT	MEDIUM CAN BE GROOVED OR GOUGED 0.05 INCHES DEEP BY FIRM PRESSURE OF KNIFE OR PICK POINT. HARD CAN BE EXCAVATED IN SMALL CHIPS TO PE ICES I INCH MAXIMUM SIZE BY HARD BLOWS OF THE	WITH A 2 INCH OUTSIDE DIAMETER SPLIT SPOON SAMPLER. SPT REFUSAL IS PENETRATION EQUAL			
SOIL MOISTURE - CORRELATION OF TERMS	$oldsymbol{\bot}$ CPT - CONE PENETRATION TEST NP - NON PLASTIC $oldsymbol{\gamma}_{\! extsf{d}}$ - DRY UNIT WEIGHT	POINT OF A GEOLOGIST'S PICK.	TO OR LESS THAN 0.1 FOOT PER 60 BLOWS.			
SOIL MOISTURE SCALE FIELD MOISTURE GUIDE FOR FIELD MOISTURE DESCRIPTION (ATTERBERG LIMITS) DESCRIPTION	CSE COARSE ORG ORGANIC DMT - DILATOMETER TEST PMT - PRESSUREMETER TEST SAMPLE ABBREVIATIONS	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	STRATA CORE RECOVERY (SREC.) - TOTAL LENGTH OF STRATA MATERIAL RECOVERED DIVIDED BY TOTAL LENGTH OF STRATUM AND EXPRESSED AS A PERCENTAGE.			
- SATURATED - USUALLY LIQUID; VERY WET, USUALLY	DPT - DYNAMIC PENETRATION TEST SAP SAPROLITIC S - BULK	PIECES CAN BE BROKEN BY FINGER PRESSURE.	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			
(SAT.) FROM BELOW THE GROUND WATER TABLE	e - VOID RATIO SD SAND, SANDY SS - SPLIT SPOON F - FINE SL SILT, SILTY ST - SHELBY TUBE	VERY CAN BE CARVED WITH KNIFE. CAN BE EXCAVATED READILY WITH POINT OF PICK, PIECES 1 INCH	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.			
PLASTIC PLOUID LIMIT	─ FOSS FOSSILIFEROUS SLI SLIGHTLY RS - ROCK	SOFT OR MORE IN THICKNESS CAN BE BROKEN BY FINGER PRESSURE. CAN BE SCRATCHED READILY BY FINGERNAIL.	TOPSOIL (TS.) - SURFACE SOILS USUALLY CONTAINING ORGANIC MATTER.			
RANGE - WET - (W) SEMISULIU; REQUIRES DRYING TO	FRAC FRACTURED, FRACTURES TCR - TRICONE REFUSAL RT - RECOMPACTED TRIAXIAL FRAGS FRAGMENTS w - MOISTURE CONTENT CBR - CALIFORNIA BEARING	FRACTURE SPACING BEDDING	BENCH MARK: BORINGS LOCATED WITH REAL TIME KINEMATIC (RTK)			
(PI) PL PLASTIC LIMITATTAIN OPTIMUM MOISTURE	HI HIGHLY V - VERY RATIO	TERM SPACING TERM THICKNESS	GLOBAL POSITIONING SYSTEM (GPS) TO NORTH CAROLINA STATE PLANE			
ON COTTURN MOISTURE - MOIST - (M) SOLID; AT OR NEAR OPTIMUM MOISTURE	EQUIPMENT USED ON SUBJECT PROJECT	VERY WIDE MORE THAN 10 FEET VERY THICKLY BEDDED 4 FEET WIDE 3 TO 10 FEET THICKLY BEDDED 1.5 - 4 FEET	NORTH AMERICAN DATUM 1983 ELEVATION: FEET			
OM OPTIMUM MOISTURE	DRILL UNITS: ADVANCING TOOLS: HAMMER TYPE:	MODERATELY CLOSE 1 TO 3 FEET THINLY BEDDED Ø.16 - 1.5 FEET	NOTES:			
- DRY - (D) REQUIRES ADDITIONAL WATER TO	CME-45C CLAY BITS X AUTOMATIC MANUAL	CLOSE 0.16 TO 1 FOOT VERY THINLY BEDDED 0.03 - 0.16 FEET VERY CLOSE LESS THAN 0.16 FEET THICKLY LAMINATED 0.008 - 0.03 FEET				
- URY - (U) ATTAIN OPTIMUM MOISTURE	X CME-55 G: CONTINUOUS FLIGHT AUGER CORE SIZE:	THINLY LAMINATED < 0.008 FEET	FIAD = FILLED IMMEDIATELY AFTER DRILLING U.C.P. = UNDIVIDED COASTAL PLAIN			
PLASTICITY	B	INDURATION				
PLASTICITY INDEX (PI) DRY STRENGTH	CME-550 HARD FACED FINGER BITS	FOR SEDIMENTARY ROCKS, INDURATION IS THE HARDENING OF MATERIAL BY CEMENTING, HEAT, PRESSURE, ETC.				
NON PLASTIC 0-5 VERY LOW SLIGHTLY PLASTIC 6-15 SLIGHT	TUNGCARBIDE INSERTS	FRIABLE RUBBING WITH FINGER FREES NUMEROUS GRAINS; GENTLE BLOW BY HAMMER DISINTEGRATES SAMPLE.				
MODERATELY PLASTIC 16-25 MEDIUM	THING SHERIT LEST X CASING X W/ ADVANCER HAND TOULS: POST HOLE DIGGER	CRAINC CAN BE SERARATED FROM CAMBLE WITH STEEL PROPE.				
HIGHLY PLASTIC 26 OR MORE HIGH	PORTABLE HOIST X TRICONE 2 15/6 STEEL TEETH HAND AUGER	MODERATELY INDURATED BREAKS EASILY WHEN HIT WITH HAMMER.				
COLOR	TRICONE TUNGCARB. SOUNDING ROD	INDURATED GRAINS ARE DIFFICULT TO SEPARATE WITH STEEL PROBE:				
DESCRIPTIONS MAY INCLUDE COLOR OR COLOR COMBINATIONS (TAN, RED, YELLOW-BROWN, BLUE-GRAY).	CORE BIT VANE SHEAR TEST	DIFFICULT TO BREAK WITH HAMMER.				
MODIFIERS SUCH AS LIGHT, DARK, STREAKED, ETC. ARE USED TO DESCRIBE APPEARANCE.		EXTREMELY INDURATED SHARP HAMMER BLOWS REQUIRED TO BREAK SAMPLE; SAMPLE BREAKS ACROSS GRAINS.	DATE: 8-15-14			
		Same Diction Render of the Property of the Pro	DHTC: 0-10-14			





PROJECT REFERENCE SHEET GEOTECHNICAL BORING REPORT B-5985 5 **BORE LOG TIP**: B-5985 COUNTY: ROBESON **GEOLOGIST:** THOMAS PARK GEOLOGIST: THOMAS PARK **WBS**: 47749.1.1 **WBS**: 47749.1.1 **TIP:** B-5985 COUNTY: ROBESON SITE DESCRIPTION: BRIDGE NO. 770175 ON -L- (W. 5TH ST) OVER LUMBER RIVER AT -L- STA. 22+08.00 **GROUND WTR (ft)** SITE DESCRIPTION: BRIDGE NO. 770175 ON -L- (W. 5TH ST) OVER LUMBER RIVER AT -L- STA. 22+08.00 **GROUND WTR (ft)** OFFSET: 13 ft RT ALIGNMENT: -L-OFFSET: 13 ft RT ALIGNMENT: -L-**BORING NO.:** EB1-B **STATION**: 20+56 0 HR. 2.0 **BORING NO.**: EB1-B **STATION**: 20+56 0 HR. 2.0 COLLAR ELEV.: 124.0 ft TOTAL DEPTH: 105.4 ft **NORTHING**: 316,695 **EASTING:** 1,996,600 COLLAR ELEV.: 124.0 ft TOTAL DEPTH: 105.4 ft **NORTHING:** 316,695 **EASTING:** 1,996,600 24 HR. FIAD 24 HR. FIAD DRILL RIG/HAMMER EFF./DATE: CAT4425 CME-55 83.7% 03/10/2021 **DRILL METHOD:** MUD ROTARY HAMMER TYPE: AUTOMATIC DRILL RIG/HAMMER EFF./DATE: CAT4425 CME-55 83.7% 03/10/2021 DRILL METHOD: MUD ROTARY HAMMER TYPE: AUTOMATIC **DRILLER:** J. EDMONDSON **START DATE:** 12/13/21 COMP. DATE: 12/13/21 SURFACE WATER DEPTH: N/A **DRILLER:** J. EDMONDSON **START DATE:** 12/13/21 COMP. DATE: 12/13/21 SURFACE WATER DEPTH: N/A ELEV DRIVE DEPTH BLOW COUNT ELEV DRIVE DEPTH **BLOWS PER FOOT BLOW COUNT BLOWS PER FOOT** SAMP # SAMP SOIL AND ROCK DESCRIPTION SOIL AND ROCK DESCRIPTION RESULT (ft) RESUL^{*} (ft) 0.5ft 0.5ft 0.5ft 0.5ft 0.5ft 0.5ft 75 100 MOI G (ft) 50 75 100 ELEV. (ft) DEPTH (ft Match Line LAND SURFACE COASTAL PLAIN 123.7 0.3 BLACK, CLAY WITH LIGNITE AND INTERBEDDED SAND. HIGH PLASTICITY PAVEMENT W ROADWAY EMBANKMENT 121.0 (BLACK CREEK) (continued) BROWN, CSE. SAND 120 40 120.1 T TAN, F. SAND М . . - - - -115 <u>115.1 1 8.9</u> 35.1 🕇 88.9 ALLUVIAL BLACK, CSE. SAND 93.0 GRAY, SAND 30.1 T 93.9 20 M W 105 105.1 T 18.9 25.1 T 98.9 GRAY, SILTY SAND 100 100.1 1 23.9 20 20.1 103.9 W Boring Terminated at Elevation 18.6 ft IN DENSE, CSE. SAND. (BLACK CREEK FORMATION) COASTAL PLAIN GRAY AND WHITE, CSE. SAND WITH SHELL FRAGS. W (DUPLIN FORMATION) GREEN-GRAY, CLAY, HIGH PLASTICITY 90.1 T 33.9 10 М - - - -M 80.1 <u>T</u> 6 М GRAY, CLAYEY AND SILTY SAND 75.1 T 48.9 53.0 70.1 <u> </u> W GRAY, CLAY. HIGH PLASTICITY 65.1 T 58.9 М - - - . COASTAL PLAIN 60.1 BLACK, CLAY WITH LIGNITE AND INTERBEDDED SAND. HIGH PLASTICITY (BLACK CREEK) 55.1 T 68.9 50.1 T 73.9

PROJECT REFERENCE SHEET GEOTECHNICAL BORING REPORT B-5985 6 **BORE LOG** COUNTY: ROBESON **GEOLOGIST:** THOMAS PARK COUNTY: ROBESON **GEOLOGIST:** THOMAS PARK **WBS**: 47749.1.1 **TIP**: B-5985 **WBS**: 47749.1.1 **TIP:** B-5985 SITE DESCRIPTION: BRIDGE NO. 770175 ON -L- (W. 5TH ST) OVER LUMBER RIVER AT -L- STA. 22+08.00 SITE DESCRIPTION: BRIDGE NO. 770175 ON -L- (W. 5TH ST) OVER LUMBER RIVER AT -L- STA. 22+08.00 **GROUND WTR (ft) GROUND WTR (ft)** OFFSET: 11 ft LT ALIGNMENT: -L-OFFSET: 11 ft LT BORING NO.: B1-A **STATION**: 21+62 0 HR. 0.0 BORING NO.: B1-A **STATION**: 21+62 ALIGNMENT: -L-0 HR. **EASTING:** 1,996,707 COLLAR ELEV.: 112.0 ft TOTAL DEPTH: 99.8 ft **NORTHING**: 316,716 **EASTING:** 1,996,707 COLLAR ELEV.: 112.0 ft TOTAL DEPTH: 99.8 ft 24 HR. FIAD **NORTHING:** 316,716 24 HR. FIAD HAMMER TYPE: AUTOMATIC DRILL METHOD: NW Casing w/ Advancer DRILL RIG/HAMMER EFF./DATE: CAT4425 CME-55 83.7% 03/10/2021 DRILL METHOD: NW Casing w/ Advancer DRILL RIG/HAMMER EFF./DATE: CAT4425 CME-55 83.7% 03/10/2021 HAMMER TYPE: AUTOMATIC **DRILLER:** J. EDMONDSON **START DATE:** 12/07/21 COMP. DATE: 12/07/21 SURFACE WATER DEPTH: N/A **DRILLER:** J. EDMONDSON **START DATE:** 12/07/21 COMP. DATE: 12/07/21 SURFACE WATER DEPTH: N/A ELEV DRIVE DEPTH BLOW COUNT ELEV DRIVE DEPTH BLOW COUNT **BLOWS PER FOOT BLOWS PER FOOT** SAMP # SOIL AND ROCK DESCRIPTION SOIL AND ROCK DESCRIPTION RESULT (ft) RESUL^{*} (ft) 0.5ft 0.5ft 0.5ft 0.5ft 0.5ft 0.5ft 75 100 MOI G (ft) 50 75 100 ELEV. (ft) DEPTH (ft Match Line DARK GRAY, CSE. SAND 33.7 + 78.3 21 M LAND SURFACE 112.0 I ALLUVIAL GRAY, SAND M 110 108.7 28 7 + 83 3 16 20 М W - - - . 105 103.7 23.7 + 88.3 16 24 W W BLACK, CLAY, WITH LIGNITE. HIGH 100 20 PLASTICITY 98.7 18.7 - 93.3 W BLACK, CSE, SAND 15 COASTAL PLAIN BLACK, CLAY, WITH INTERBEDDED LAYERS OF SAND. HIGH PLASTICITY 13.7 + 98.3 93.7 WHITE, CSE. SAND, WITH SHELL FRAGS 6 12 18 W W (DUPLIN FORMATION) Boring Terminated at Elevation 12.2 ft IN VERY STIFF, CLAY. (BLACK CREEK 90 FORMATION) W GREEN-GRAY, CLAYEY SAND 83.7 М GRAY, CLAY. HIGH PLASTICITY — 32.0 78.7 + 33.3 М - - - -LIGHT GRAY, CLAYEY SAND 73.7 W 70 68.7 GRAY, CLAY 5 М 63.7 М 58.7 M GRAY, CLAYEY SAND 53.7 + 58.3 М COASTAL PLAIN BLACK, CLAY, WITH LIGNITE. HIGH - - - . (BLACK CREEK FORMATION) M 43.7 INTERBEDDED LAYERS OF SAND 6

PROJECT REFERENCE SHEET GEOTECHNICAL BORING REPORT B-5985 **BORE LOG** COUNTY: ROBESON **GEOLOGIST:** THOMAS PARK **GEOLOGIST:** THOMAS PARK **WBS**: 47749.1.1 **TIP**: B-5985 **WBS**: 47749.1.1 **TIP:** B-5985 COUNTY: ROBESON SITE DESCRIPTION: BRIDGE NO. 770175 ON -L- (W. 5TH ST) OVER LUMBER RIVER AT -L- STA. 22+08.00 **GROUND WTR (ft)** SITE DESCRIPTION: BRIDGE NO. 770175 ON -L- (W. 5TH ST) OVER LUMBER RIVER AT -L- STA. 22+08.00 **GROUND WTR (ft)** BORING NO.: B2-B **STATION**: 22+59 OFFSET: 12 ft RT ALIGNMENT: -L-0 HR. FIAD BORING NO.: B2-B **STATION**: 22+59 OFFSET: 12 ft RT ALIGNMENT: -L-0 HR. FIAD COLLAR ELEV.: 95.9 ft TOTAL DEPTH: 136.8 ft **NORTHING:** 316,690 **EASTING:** 1,996,803 TOTAL DEPTH: 136.8 ft **EASTING:** 1,996,803 24 HR. FIAD COLLAR ELEV.: 95.9 ft **NORTHING:** 316,690 24 HR. FIAD DRILL RIG/HAMMER EFF./DATE: CAT4425 CME-55 83.7% 03/10/2021 DRILL METHOD: NW Casing w/ Advancer HAMMER TYPE: AUTOMATIC DRILL RIG/HAMMER EFF./DATE: CAT4425 CME-55 83.7% 03/10/2021 DRILL METHOD: NW Casing w/ Advancer HAMMER TYPE: AUTOMATIC **DRILLER:** J. EDMONDSON **START DATE:** 12/09/21 COMP. DATE: 12/10/21 SURFACE WATER DEPTH: 10.4ft **DRILLER:** J. EDMONDSON **START DATE:** 12/09/21 COMP. DATE: 12/10/21 SURFACE WATER DEPTH: 10.4ft ELEV DRIVE DEPTH BLOW COUNT ELEV DRIVE DEPTH BLOW COUNT **BLOWS PER FOOT BLOWS PER FOOT** SAMP # SOIL AND ROCK DESCRIPTION SOIL AND ROCK DESCRIPTION RESULT RESUL^{*} (ft) 0.5ft 0.5ft 0.5ft (ft) 0.5ft 0.5ft 0.5ft 75 100 MOI G (ft) 50 75 100 ELEV. (ft) DEPTH (ft Match Line 100 20 20 BLACK AND GRAY, SAND (continued) MUD LINE 15.6 ± 80.3 ALLUVIAL Sat. W GRAY, SAND BLACK, CLAY, WITH INTERBEDDED SAND. HIGH PLASTICITY SS-10 A-7-6(49 W TAN, CLAY. HIGH PLASTICITY 85.6 SS-01 COASTAL PLAIN 80.6 GREEN-GRAY, CLAYEY SAND SS-02 (DUPLIN FORMATION) . . A-2-6(0) GREEN-GRAY, CLAY. HIGH PLASTICITY 19.0 DARK GRAY, CSE. SAND 75.6 100.3 23 SS-03 A-7-6(50) W GRAY, SILTY SAND 70.6 W SS-04 W GRAY, CLAY. HIGH PLASTICITY 20 A-7-6(35) BLACK, CLAY, WITH LIGNITE. HIGH 60.6 -19.4 + 115.3 PI ASTICITY 4-7-6(38 GRAY, SILTY SAND 55.6 W A-2-4(0) . . COASTAL PLAIN DARK GRAY, CSE. SAND 50.6 -29.4 BLACK, CLAY. HIGH PLASTICITY 31 32 SS-07 W (BLACK CREEK FORMATION) 4-7-6(53 DARK GRAY, CLAY, WITH TR. SAND. HIGH 45.6 -34.4 **PLASTICITY** SS-12 -39.4 + 135.3 34 42 SS-08 A-7-6(55) Boring Terminated at Elevation -40.9 ft IN VERY DENSE, CSE. SAND. (BLACK CREEK FORMATION) 28 М BLACK AND GRAY, SAND 30.6 21 W 25.6 15 23 W 20.6

PROJECT REFERENCE SHEET GEOTECHNICAL BORING REPORT B-5985 8 **BORE LOG** COUNTY: ROBESON **GEOLOGIST:** THOMAS PARK COUNTY: ROBESON **GEOLOGIST:** THOMAS PARK **WBS**: 47749.1.1 **TIP**: B-5985 **WBS**: 47749.1.1 **TIP:** B-5985 SITE DESCRIPTION: BRIDGE NO. 770175 ON -L- (W. 5TH ST) OVER LUMBER RIVER AT -L- STA. 22+08.00 **GROUND WTR (ft)** SITE DESCRIPTION: BRIDGE NO. 770175 ON -L- (W. 5TH ST) OVER LUMBER RIVER AT -L- STA. 22+08.00 **GROUND WTR (ft) BORING NO.:** EB2-A **STATION**: 23+57 OFFSET: 21 ft LT ALIGNMENT: -L-0 HR. 5.5 BORING NO.: EB2-A **STATION**: 23+57 OFFSET: 21 ft LT ALIGNMENT: -L-0 HR. COLLAR ELEV.: 132.3 ft TOTAL DEPTH: 100.2 ft **NORTHING:** 316,720 **EASTING:** 1,996,902 TOTAL DEPTH: 100.2 ft **EASTING:** 1,996,902 24 HR. FIAD COLLAR ELEV .: 132.3 ft **NORTHING:** 316,720 24 HR. FIAD DRILL RIG/HAMMER EFF./DATE: CAT4425 CME-55 83.7% 03/10/2021 **DRILL METHOD:** MUD ROTARY HAMMER TYPE: AUTOMATIC DRILL RIG/HAMMER EFF./DATE: CAT4425 CME-55 83.7% 03/10/2021 DRILL METHOD: MUD ROTARY HAMMER TYPE: AUTOMATIC **DRILLER:** J. EDMONDSON **START DATE:** 12/06/21 COMP. DATE: 12/06/21 SURFACE WATER DEPTH: N/A **DRILLER:** J. EDMONDSON **START DATE:** 12/06/21 COMP. DATE: 12/06/21 SURFACE WATER DEPTH: N/A ELEV DRIVE DEPTH BLOW COUNT ELEV DRIVE DEPTH BLOW COUNT **BLOWS PER FOOT BLOWS PER FOOT** SAMP # SAMP SOIL AND ROCK DESCRIPTION SOIL AND ROCK DESCRIPTION RESULT (ft) RESUL* (ft) 0.5ft 0.5ft 0.5ft 0.5ft 0.5ft 0.5ft 75 100 MOI G (ft) 50 75 100 ELEV. (ft) DEPTH (ft MOIL G Match Line GRAY, CLAY. HIGH PLASTICITY (continued) 53.6 + 78.7 LAND SURFACE W 132 0 PAVEMENT М 130 ROADWAY EMBANKMENT 50 COASTAL PLAIN BROWN, SILTY SAND 128.8 - 83.7 BLACK, CLAY, HIGH PLASTICITY UNDIVIDED COASTAL PLAIN М (BLACK CREEK FORMATION) TAN, CLAY, WITH SAND 125 45 123.8 43.6 + 88.7 5 W М GRAY, CLAYEY SAND 92.0 120 ORANGE, CLAYEY SAND 118.6 93.7 W W 115 COASTAL PLAIN 113.6 + 18.7 33.6 98.7 6 GRAY, CSE. SAND, WITH SOME SILT AND SHELLS 14 21 19 W W Boring Terminated at Elevation 32.1 ft IN (DUPLIN FORMATION) 110 DENSE, CLAYEY SAND. (BLACK CREEK GRAY, CLAY, WITH SOME SAND FORMATION) 108.6 + 23.7 105 103.6 + 28.7 M 100 GRAY, CSE, SAND, WITH SHELL FRAGS. 98.6 + 33.7 6 W - - - -93.6 + 38.7 W 88.6 12 13 12 W 84.8 GREEN-GRAY, CLAYEY SAND 83 6 М GREEN-GRAY, CLAY. HIGH PLASTICITY 78.6 M GRAY, CLAYEY SAND 73.6 + 58.7 W 70 68 6 4 W GRAY, CLAY. HIGH PLASTICITY ______67.0 63.6 M 58 6

REFERENCE: B-5985

PROJECT: 47749

STATE OF NORTH CAROLINA

DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
GEOTECHNICAL ENGINEERING UNIT

PROJECT REPERENCE NO. SHEET NO. 9

STRUCTURE SUBSURFACE INVESTIGATION

LABORATORY RESULTS

B2-B SOIL TEST RESULTS															
SAMPLE OFFSET STATIO		STATION	DEPTH AASI	AASHTO CLASS.	1 1	.L. P. I.	% BY WEIGHT			% PASSING SIEVES			%	%	
NUMBER	JMBER OFFSET STATION	INTERVAL	L.L.		C. SAND		F. SAND	SILT	CLAY	10	40	200	MOISTURE	ORGANIC	
SS-01	12 ft RT	22+59	10.3 - 11.8	A-7-6(18)	54	39	29.3	18.2	28.0	24.5	91.2	78	57	-	-
SS-02	12 ft RT	22+59	15.3 - 16.8	A-2-6(0)	27	11	51.6	29.2	12.1	7.1	97.8	69	21	-	-
SS-03	12 ft RT	22+59	20.3 - 21.8	A-7-6(50)	74	52	3.0	15.3	25.8	55.9	100	98	88	-	-
SS-04	12 ft RT	22+59	25.8 - 26.8	A-2-4(0)	NP	NP	72.9	15.1	2.6	9.4	99.3	57	13	-	-
SS-05	12 ft RT	22+59	30.3 - 31.8	A-7-6(35)	55	40	1.3	20.1	29.0	49.6	100	100	84	-	-
SS-06	12 ft RT	22+59	40.3 - 41.8	A-2-4(0)	26	6	1.8	73.9	11.8	12.5	100	99	33	-	-
SS-07	12 ft RT	22+59	45.3 - 46.8	A-7-6(53)	73	45	0.6	8.0	84.2	14.4	99.9	100	99	-	-
SS-08	12 ft RT	22+59	55.3 - 56.8	A-7-6(55)	73	49	2.4	1.7	38.2	57.7	100	99	97	-	-
SS-09	12 ft RT	22+59	65.3 - 66.8	A-3(0)	NP	NP	74.8	17.7	3.0	4.6	99.1	51	9	-	-
SS-10	12 ft RT	22+59	85.3 - 86.8	A-7-6(49)	69	44	2.7	1.9	38.2	57.2	100	98	96	-	-
SS-11	12 ft RT	22+59	115.3 - 116.8	A-7-6(38)	59	37	3.1	6.5	33.9	56.6	99.3	98	93	-	-
SS-12	12 ft RT	22+59	130.3 - 131.8	A-7-6(35)	56	35	3.0	7.5	33.0	56.5	99.2	98	92	-	-





 SITE PHOTOS
 PROJECT REFERENCE
 SHEET

 B-5985
 10



NEAR BENT 1 FACING WEST TO END BENT 1



NEAR END BENT 1 LEFT OF -L- FACING EAST TO END BENT 2



NEAR BENT 1 FACING EAST TO END BENT 2



DOWNSTREAM (RIGHT) OF -L-FACING NORTH