

REFERENCE: B-2500AB

PROJECT: 32635.1.3

SEE SHEET 3 FOR PLAN SHEET LAYOUT AT TIME OF INVESTIGATION

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

Table with 4 columns: STATE, STATE PROJECT REFERENCE NO., SHEET NO., TOTAL SHEETS. Values: N.C., B-2500AB, 1, 5

ROADWAY SUBSURFACE INVESTIGATION

COUNTY DARE PROJECT DESCRIPTION PHASE II, NC-12 SHORT-TERM IMPROVEMENTS AT PEA ISLAND

INVENTORY

CONTENTS

Table with 2 columns: SHEET NO., DESCRIPTION. Rows: 1 TITLE SHEET, 2 LEGEND, 3 ROADWAY TSH, 4 INVENTORY REPORT, 5 BORELOGS

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.

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 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.

- 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

JRS JME

INVESTIGATED BY LEE STONE DRAWN BY LEE STONE CHECKED BY DEAN ARGENBRIGHT SUBMITTED BY DEAN ARGENBRIGHT DATE JUNE 2015



DocuSigned by: Lee Stone 6/22/2015 29AA9934F4A2414... SIGNATURE DATE

SIGNATURE DATE

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

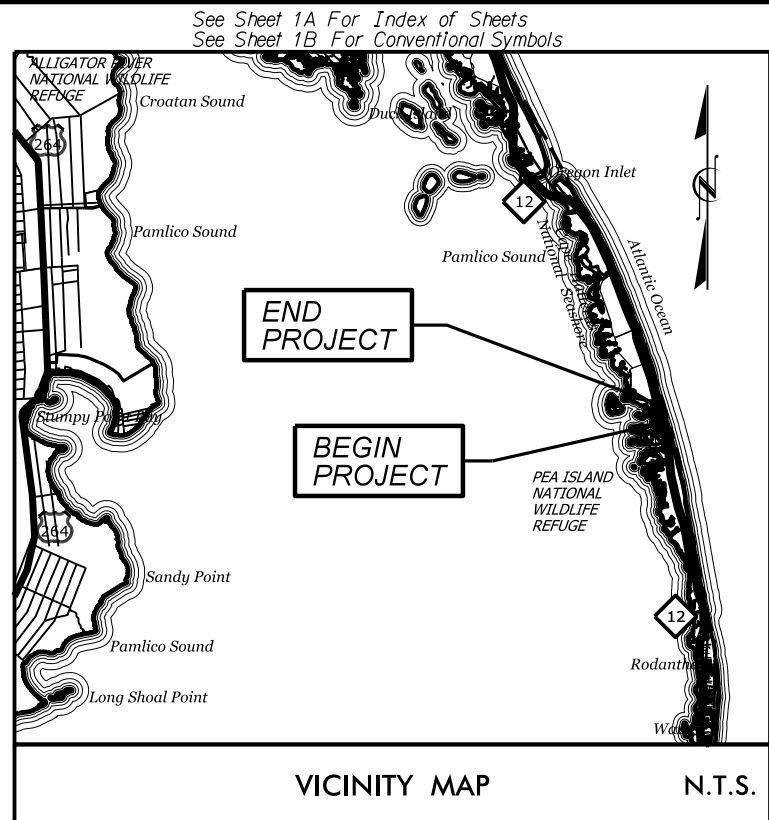
| SOIL DESCRIPTION | | | | | | | | | | GRADATION | | | | | | | | | | ROCK DESCRIPTION | | | | | | | | | | TERMS AND DEFINITIONS | | | | | | | | | | | | | | | | | | | |
|---|--|--|--|--|--|--|--|--|--|---|--|--|--|--|--|--|--|--|--|---|--|--|--|--|--|--|--|--|--|---|--|--|--|--|--|--|--|--|--|---|--|--|--|--|--|--|--|--|--|
| 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 (ASTM 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-CRYSTALLINE ROCK (NCR) | | | | | | | | | | FINE TO COARSE GRAIN METAMORPHIC AND NON-COASTAL PLAIN SEDIMENTARY ROCK THAT WOULD YIELD SPT REFUSAL IF TESTED. ROCK TYPE INCLUDES PHYLLITE, SLATE, SANDSTONE, ETC. | | | | | | | | | |
| COMPRESSION | | | | | | | | | | 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. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| PERCENTAGE OF MATERIAL | | | | | | | | | | WEATHERING | | | | | | | | | | FRESH | | | | | | | | | | ROCK FRESH, CRYSTALS BRIGHT, FEW JOINTS MAY SHOW SLIGHT STAINING. ROCK RINGS UNDER HAMMER IF CRYSTALLINE. | | | | | | | | | | | | | | | | | | | |
| GROUND WATER | | | | | | | | | | VERY SLIGHT (V SL.) | | | | | | | | | | 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. | | | | | | | | | | SLIGHT (SL.) | | | | | | | | | | ROCK GENERALLY FRESH, JOINTS STAINED AND DISCOLORATION EXTENDS INTO ROCK UP TO 1 INCH. OPEN JOINTS MAY CONTAIN CLAY. IN GRANITOID ROCKS SOME OCCASIONAL FELDSPAR CRYSTALS ARE DULL AND DISCOLORED. CRYSTALLINE ROCKS RING UNDER HAMMER BLOWS. | | | | | | | | | |
| MISCELLANEOUS SYMBOLS | | | | | | | | | | MODERATE (MOD.) | | | | | | | | | | MODERATELY SEVERE (MOD. SEV.) | | | | | | | | | | SEVERE (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 | | | | | | | | | |
| RECOMMENDATION SYMBOLS | | | | | | | | | | VERY SEVERE (V 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 (V SEV.) | | | | | | | | | | ALL ROCK EXCEPT QUARTZ DISCOLORED OR STAINED. ROCK FABRIC ELEMENTS ARE DISCERNIBLE BUT MASS IS EFFECTIVELY REDUCED TO SOIL STATUS, WITH ONLY FRAGMENTS OF STRONG ROCK REMAINING. SAPROLITE IS AN EXAMPLE OF ROCK WEATHERED TO A DEGREE THAT ONLY MINOR VESTIGES OF ORIGINAL ROCK FABRIC REMAIN. IF TESTED, WOULD YIELD SPT N VALUES < 100 BPF | | | | | | | | | |
| ROCK HARDNESS | | | | | | | | | | 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. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| TEXTURE OR GRAIN SIZE | | | | | | | | | | VERY HARD | | | | | | | | | | CANNOT BE SCRATCHED BY KNIFE OR SHARP PICK. BREAKING OF HAND SPECIMENS REQUIRES SEVERAL HARD BLOWS OF THE GEOLOGIST'S PICK. | | | | | | | | | | HARD | | | | | | | | | | CAN BE SCRATCHED BY KNIFE OR PICK ONLY WITH DIFFICULTY. HARD HAMMER BLOWS REQUIRED TO DETACH HAND SPECIMEN. | | | | | | | | | |
| SOIL MOISTURE - CORRELATION OF TERMS | | | | | | | | | | 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 | | | | | | | | | | 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. | | | | | | | | | |
| PLASTICITY | | | | | | | | | | 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 | | | | | | | | | | 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. | | | | | | | | | |
| FRACATURE SPACING | | | | | | | | | | VERY WIDE | | | | | | | | | | MORE THAN 10 FEET | | | | | | | | | | VERY THICKLY BEDDED | | | | | | | | | | 4 FEET | | | | | | | | | |
| BEDDING | | | | | | | | | | WIDE | | | | | | | | | | 3 TO 10 FEET | | | | | | | | | | THICKLY BEDDED | | | | | | | | | | 1.5 - 4 FEET | | | | | | | | | |
| INDURATION | | | | | | | | | | MODERATELY CLOSE | | | | | | | | | | 1 TO 3 FEET | | | | | | | | | | THINLY BEDDED | | | | | | | | | | 0.16 - 1.5 FEET | | | | | | | | | |
| FRACATURE SPACING | | | | | | | | | | CLOSE | | | | | | | | | | 0.16 TO 1 FOOT | | | | | | | | | | VERY THINLY BEDDED | | | | | | | | | | 0.03 - 0.16 FEET | | | | | | | | | |
| FRACATURE SPACING | | | | | | | | | | VERY CLOSE | | | | | | | | | | LESS THAN 0.16 FEET | | | | | | | | | | THICKLY LAMINATED | | | | | | | | | | 0.008 - 0.03 FEET | | | | | | | | | |
| FRACATURE SPACING | | | | | | | | | | VERY CLOSE | | | | | | | | | | LESS THAN 0.16 FEET | | | | | | | | | | THINLY LAMINATED | | | | | | | | | | < 0.008 FEET | | | | | | | | | |
| SOIL MOISTURE SCALE (ATTERBERG LIMITS) | | | | | | | | | | FIELD MOISTURE DESCRIPTION | | | | | | | | | | GUIDE FOR FIELD MOISTURE DESCRIPTION | | | | | | | | | | DRILL UNITS: | | | | | | | | | | HAMMER TYPE: | | | | | | | | | |
| LL - LIQUID LIMIT | | | | | | | | | | - SATURATED - (SAT.) | | | | | | | | | | USUALLY LIQUID; VERY WET, USUALLY FROM BELOW THE GROUND WATER TABLE | | | | | | | | | | CME-45C | | | | | | | | | | AUTOMATIC | | | | | | | | | |
| PL - PLASTIC LIMIT | | | | | | | | | | - WET - (W) | | | | | | | | | | SEMISOLID; REQUIRES DRYING TO ATTAIN OPTIMUM MOISTURE | | | | | | | | | | CME-55 | | | | | | | | | | MANUAL | | | | | | | | | |
| OM - OPTIMUM MOISTURE SHRINKAGE LIMIT | | | | | | | | | | - MOIST - (M) | | | | | | | | | | SOLID; AT OR NEAR OPTIMUM MOISTURE | | | | | | | | | | CME-550 | | | | | | | | | | CORE SIZE: | | | | | | | | | |
| SL - SHRINKAGE LIMIT | | | | | | | | | | - DRY - (D) | | | | | | | | | | REQUIRES ADDITIONAL WATER TO ATTAIN OPTIMUM MOISTURE | | | | | | | | | | VANE SHEAR TEST | | | | | | | | | | -B | | | | | | | | | |
| PLASTICITY INDEX (PI) | | | | | | | | | | DRY STRENGTH | | | | | | | | | | VERY LOW | | | | | | | | | | -H | | | | | | | | | | | | | | | | | | | |
| 0-5 | | | | | | | | | | VERY LOW | | | | | | | | | | SLIGHT | | | | | | | | | | -N | | | | | | | | | | | | | | | | | | | |
| 6-15 | | | | | | | | | | SLIGHT | | | | | | | | | | MEDIUM | | | | | | | | | | HAND TOOLS: | | | | | | | | | | | | | | | | | | | |
| 16-25 | | | | | | | | | | MEDIUM | | | | | | | | | | HIGH | | | | | | | | | | POST HOLE DIGGER | | | | | | | | | | | | | | | | | | | |
| 26 OR MORE | | | | | | | | | | HIGH | | | | | | | | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | | | | |
| COLOR | | | | | | | | | | 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. | | | | | | | | | | EQUIPMENT USED ON SUBJECT PROJECT | | | | | | | | | | ADVANCING TOOLS: | | | | | | | | | | | | | | | | | | | |
| DRILL UNITS: | | | | | | | | | | ADVANCING TOOLS: | | | | | | | | | | HAND TOOLS: | | | | | | | | | | CLAY BITS | | | | | | | | | | | | | | | | | | | |
| CME-45C | | | | | | | | | | CLAY BITS | | | | | | | | | | POST HOLE DIGGER | | | | | | | | | | 6" CONTINUOUS FLIGHT AUGER | | | | | | | | | | | | | | | | | | | |
| CME-55 | | | | | | | | | | 6" CONTINUOUS FLIGHT AUGER | | | | | | | | | | HAND AUGER | | | | | | | | | | 8" HOLLOW AUGERS | | | | | | | | | | | | | | | | | | | |
| CME-550 | | | | | | | | | | 8" HOLLOW AUGERS | | | | | | | | | | SOUNDING ROD | | | | | | | | | | HARD FACED FINGER BITS | | | | | | | | | | | | | | | | | | | |
| VANE SHEAR TEST | | | | | | | | | | HARD FACED FINGER BITS | | | | | | | | | | VANE SHEAR TEST | | | | | | | | | | TUNG-CARBIDE INSERTS | | | | | | | | | | | | | | | | | | | |
| PORTABLE MOIST | | | | | | | | | | TUNG-CARBIDE INSERTS | | | | | | | | | | PORTABLE MOIST | | | | | | | | | | CASING | | | | | | | | | | | | | | | | | | | |
| PORTABLE MOIST | | | | | | | | | | CASING | | | | | | | | | | PORTABLE MOIST | | | | | | | | | | W/ ADVANCER | | | | | | | | | | | | | | | | | | | |
| PORTABLE MOIST | | | | | | | | | | W/ ADVANCER | | | | | | | | | | PORTABLE MOIST | | | | | | | | | | TRICONE | | | | | | | | | | | | | | | | | | | |
| PORTABLE MOIST | | | | | | | | | | TRICONE | | | | | | | | | | PORTABLE MOIST | | | | | | | | | | * STEEL TEETH | | | | | | | | | | | | | | | | | | | |
| PORTABLE MOIST | | | | | | | | | | * STEEL TEETH | | | | | | | | | | PORTABLE MOIST | | | | | | | | | | TRICONE | | | | | | | | | | | | | | | | | | | |
| PORTABLE MOIST | | | | | | | | | | TRICONE | | | | | | | | | | PORTABLE MOIST | | | | | | | | | | * TUNG-CARB. | | | | | | | | | | | | | | | | | | | |
| PORTABLE MOIST | | | | | | | | | | * TUNG-CARB. | | | | | | | | | | PORTABLE MOIST | | | | | | | | | | CORE BIT | | | | | | | | | | | | | | | | | | | |
| PORTABLE MOIST | | | | | | | | | | CORE BIT | | | | | | | | | | PORTABLE MOIST | | | | | | | | | | CORE BIT | | | | | | | | | | | | | | | | | | | |

09/08/99

19-JUN-2015 09:48
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jstone AT CEG27728

TIP PROJECT: B-2500AB

CONTRACT:

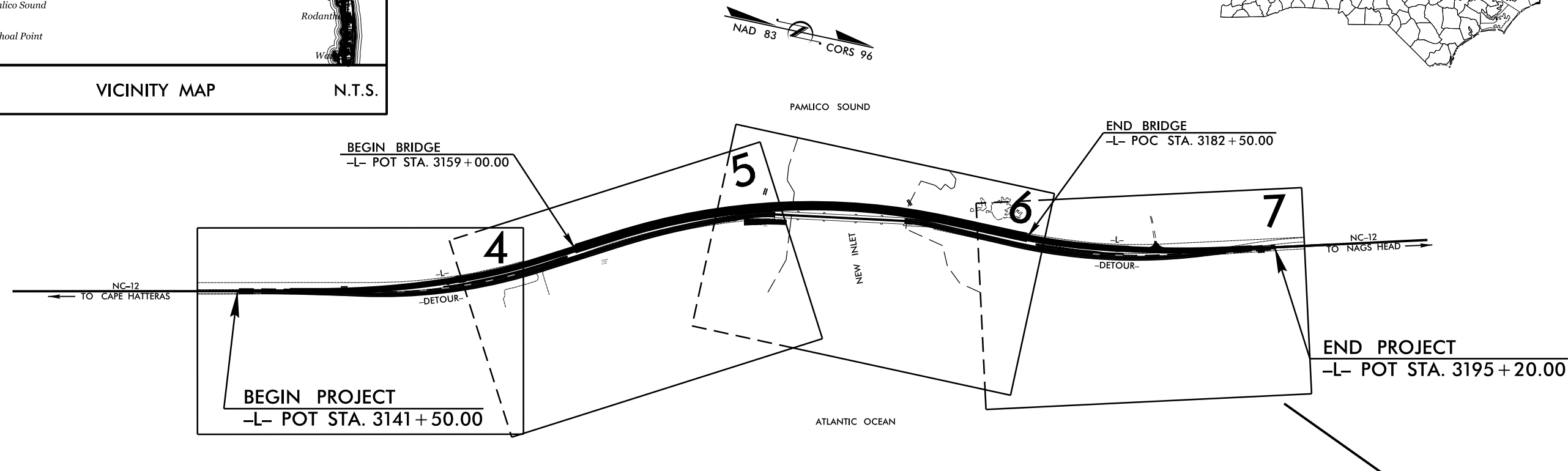


STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS
DARE COUNTY

LOCATION: PHASE II, NC-12 SHORT-TERM IMPROVEMENTS AT PEA ISLAND

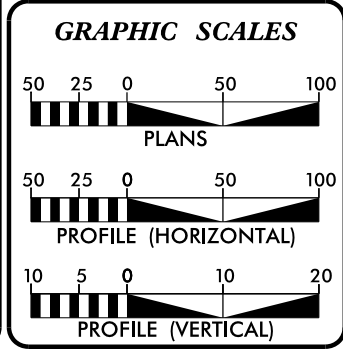
TYPE OF WORK: GRADING, PAVING, DRAINAGE & STRUCTURE

| | | | |
|-----------------|-----------------------------|-------------|--------------|
| STATE | STATE PROJECT REFERENCE NO. | SHEET NO. | TOTAL SHEETS |
| N.C. | B-2500AB | 3 | 5 |
| STATE PROJ. NO. | F.A. PROJ. NO. | DESCRIPTION | |
| | | P.E. | |
| | | CONSTR. | |
| | | | |
| | | | |
| | | | |



* RECOMMENDED POSTED 45 MPH

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION
PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION



DESIGN DATA
(B-2500A DATA)

| | |
|-----------------------|-----------|
| ADT 2012 = | 7,300 |
| ADT 2032 = | 10,900 |
| K = | N/A % |
| D = | N/A % |
| T = | 6% % ** |
| * V = | 55 MPH |
| ** (TTST 1%, DUAL 5%) | |
| FUNC CLASS = | COLLECTOR |
| REGIONAL TIER | |

PROJECT LENGTH

| | |
|--|--------------------|
| LENGTH ROADWAY TIP PROJECT B-2500AB = | 0.572 MILES |
| LENGTH STRUCTURE TIP PROJECT B-2500AB = | 0.445 MILES |
| TOTAL LENGTH TIP PROJECT B-2500AB = | 1.017 MILES |

Prepared in the Office of:
DIVISION OF HIGHWAYS
1000 Birch Ridge Dr., Raleigh, NC 27610

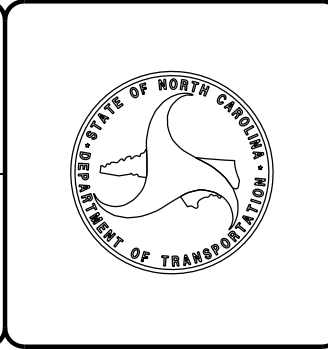
| | |
|------------------------------|---|
| 2012 STANDARD SPECIFICATIONS | |
| RIGHT OF WAY DATE: | N/A |
| LETTING DATE: | |
| | GARY LOVERING, PE PROJECT ENGINEER |
| | CHRISTOPHER H. LEE PROJECT DESIGN ENGINEER |

HYDRAULICS ENGINEER

SIGNATURE: _____ P.E.

ROADWAY DESIGN ENGINEER

SIGNATURE: _____ P.E.





STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION

PAT MCCRORY
GOVERNOR

ANTHONY J. TATA
SECRETARY

June 18, 2015

STATE PROJECT: 32635.1.3 (B-2500AB)
F.A. PROJECT: N/A
COUNTY: Dare
DESCRIPTION: Phase II, NC-12 Short-Term Improvements at Pea Island

SUBJECT: Geotechnical Inventory Report

Project Description

This project begins along NC 12 approximately 3.5 miles north of Rodanthe in Dare County, and extends northward approximately 1.0 mile. This geotechnical investigation was confined to the areas of proposed construction.

Fieldwork was conducted in January and February of 2012. Hand auger borings were completed at various offsets along the project corridor. Representative soil samples were collected for visual classification in the field.

The following alignments were investigated.

| <u>Line</u> | <u>Station(±)</u> |
|-------------|--------------------|
| -L- | 3141+50 to 3195+20 |
| -DET- | 11+57 to 64+02 |

Areas of Special Geotechnical Interest

- 1) The entire project was found to exhibit seasonal high ground water.

Physiography and Geology

This project corridor is located within the Coastal Plain Physiographic Province. Topography along the project is nearly flat to gently sloping. Natural ground elevations ranged from 2± 7± feet above sea level.

Surficial soils in this area are generally classified as undivided coastal plain sediments.

Ground Water

Ground water data was collected in January and February of 2012, during a time of normal precipitation. Ground water elevations ranged from sea level to 1± foot above sea level.

Soils

Soils encountered within this project area have been classified as undivided coastal plain soils, and are comprised of 6 or more feet of loose to dense sand (A-3.)

