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STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION

ROY COOPER
GOVERNOR

J. ERIC BOYETTE
SECRETARY

March 19, 2021

MEMORANDUM TO: Clark Morrison PhD, P.E.
State Pavement Design Engineer

Tatia L. White, P.E. PLS
State Roadway Design Engineer

FROM: J. L. Pilipchuk, P.E., L.G.
State Geotechnical Engineer

DocuSigned by:
John Pilipchuk
52C44B94B8BE444...

STATE PROJECT: 47533.1.2 (I-5987A) Turnkey

COUNTY: Robeson

DESCRIPTION: I-95 Improvements from South of US 301 (Exit 22) to North of SR 1758 (McDuffie Crossing Rd.)

SUBJECT: Pavement and Subgrade Inventory

The Geotechnical Engineering Unit has completed the evaluation of the pavement and subgrade investigation for this project.

I-5987 Pavement and Subgrade Inventory report has been divided into reports for I-5987A and I-5987B. Project limits of I-5987 were modified from the original request and are shown in this report.

JLP/JBB

ATTACHMENT 1: Pavement and Subgrade Inventory 111

cc: Scott Pridgen

Mailing Address:
NC DEPARTMENT OF TRANSPORTATION
GEOTECHNICAL ENGINEERING UNIT
1589 MAIL SERVICE CENTER
RALEIGH NC 27699-1589

Telephone: 919-707-6850
Fax: 919-250-4237
Customer Service: 1-877-368-4968

Website: www.ncdot.gov

Location:
CENTURY CENTER COMPLEX
ENTRANCE B-2
1020 BIRCH RIDGE DRIVE
RALEIGH NC

REFERENCE: I-5987A

PROJECT: 47533.1.2

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	I-5987A	1	111

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

ROADWAY SUBSURFACE INVESTIGATION

COUNTY ROBESON

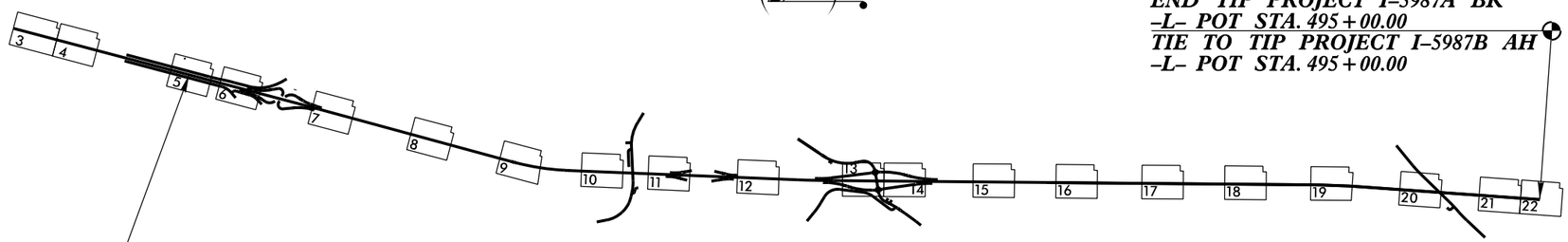
PROJECT DESCRIPTION I-95 IMPROVEMENT FROM SOUTH OF US 301 (EXIT 22) TO NORTH OF SR 1758 (MCDUFFIE CROSSING RD.)

PAVEMENT AND SUBGRADE INVENTORY

CONTENTS

SHEET NO.	DESCRIPTION
1	TITLE SHEET
2	LEGEND (SOIL & ROCK)
3-22	SITE PLANS
23-32	PAVEMENT DATA
33-63	DCP LOGS
64-86	CORE PHOTOS
87-111	LAB SUMMARY

NAD 83/NA 2011



BEGIN TIP PROJECT I-5987A AH
-L- POT STA. 67+00.00
TIE TO TIP PROJECT I-6064 BK
-L- POT STA. XXX+XX.XX

END TIP PROJECT I-5987A BK
-L- POT STA. 495+00.00
TIE TO TIP PROJECT I-5987B AH
-L- POT STA. 495+00.00

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 (919) 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 BOREHOLE. THE LABORATORY SAMPLE DATA AND THE IN SITU (IN-PLACE) TEST DATA CAN BE RELIED ON ONLY TO THE DEGREE OF RELIABILITY INHERENT IN THE STANDARD TEST METHOD. THE OBSERVED WATER LEVELS OR SOIL MOISTURE CONDITIONS INDICATED IN THE SUBSURFACE INVESTIGATIONS ARE AS RECORDED AT THE TIME OF THE INVESTIGATION. THESE WATER LEVELS OR SOIL MOISTURE CONDITIONS MAY VARY CONSIDERABLY WITH TIME ACCORDING TO CLIMATIC CONDITIONS INCLUDING TEMPERATURES, PRECIPITATION AND WIND, AS WELL AS OTHER NON-CLIMATIC FACTORS.

THE BIDDER OR CONTRACTOR IS CAUTIONED THAT DETAILS SHOWN ON THE SUBSURFACE PLANS ARE PRELIMINARY ONLY AND IN MANY CASES THE FINAL DESIGN DETAILS ARE DIFFERENT. FOR BIDDING AND CONSTRUCTION PURPOSES, REFER TO THE CONSTRUCTION PLANS AND DOCUMENTS FOR FINAL DESIGN INFORMATION ON THIS PROJECT. THE DEPARTMENT DOES NOT WARRANT OR GUARANTEE THE SUFFICIENCY OR ACCURACY OF THE INVESTIGATION MADE, NOR THE INTERPRETATIONS MADE, OR OPINION OF THE DEPARTMENT AS TO THE TYPE OF MATERIALS AND CONDITIONS TO BE ENCOUNTERED. THE BIDDER OR CONTRACTOR IS CAUTIONED TO MAKE SUCH INDEPENDENT SUBSURFACE INVESTIGATIONS AS HE DEEMS NECESSARY TO SATISFY HIMSELF AS TO CONDITIONS TO BE ENCOUNTERED ON THE PROJECT. THE CONTRACTOR SHALL HAVE NO CLAIM FOR ADDITIONAL COMPENSATION OR FOR AN EXTENSION OF TIME FOR ANY REASON RESULTING FROM THE ACTUAL CONDITIONS ENCOUNTERED AT THE SITE DIFFERING FROM THOSE INDICATED IN THE SUBSURFACE INFORMATION.

NOTES:
1. THE INFORMATION CONTAINED HEREIN IS NOT IMPLIED OR GUARANTEED BY THE N. C. DEPARTMENT OF TRANSPORTATION AS ACCURATE NOR IS IT CONSIDERED PART OF THE PLANS, SPECIFICATIONS OR CONTRACT FOR THE PROJECT.
2. BY HAVING REQUESTED THIS INFORMATION, THE CONTRACTOR SPECIFICALLY WAIVES ANY CLAIMS FOR INCREASED COMPENSATION OR EXTENSION OF TIME BASED ON DIFFERENCES BETWEEN THE CONDITIONS INDICATED HEREIN AND THE ACTUAL CONDITIONS AT THE PROJECT SITE.

PERSONNEL

J. SWARTLEY
M. RAWLS
V. MITCHEV
S. HARDEE
F. JOHNSON
T. BRYANT
J. FLORES

INVESTIGATED BY D. STROTHER
DRAWN BY J. NELSON
CHECKED BY V. MITCHEV
SUBMITTED BY V. MITCHEV
DATE FEBRUARY 2021

3201 SPRING FOREST ROAD
RALEIGH, NC 27616
(919) 872-2660

NORTH CAROLINA PROFESSIONAL SEAL 031484 ENGINEER VLADIMIR G. MITCHEV

DocuSigned by:
Vladimir G. Mitchev 3/22/2021
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SIGNATURE DATE

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

PROJECT REFERENCE NO.	SHEET NO.
I-5987A	2

NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
GEOTECHNICAL ENGINEERING UNIT

SUBSURFACE INVESTIGATION

SOIL AND ROCK LEGEND, TERMS, SYMBOLS, AND ABBREVIATIONS

SOIL DESCRIPTION

SOIL IS CONSIDERED UNCONSOLIDATED, SEMI-CONSOLIDATED, OR WEATHERED EARTH MATERIALS THAT CAN BE PENETRATED WITH A CONTINUOUS FLIGHT POWER AUGER AND YIELD LESS THAN 100 BLOWS PER FOOT ACCORDING TO THE STANDARD PENETRATION TEST (AASHTO T 206, ASTM D1586). SOIL CLASSIFICATION IS BASED ON THE AASHTO SYSTEM. BASIC DESCRIPTIONS GENERALLY INCLUDE THE FOLLOWING: CONSISTENCY, COLOR, TEXTURE, MOISTURE, AASHTO CLASSIFICATION, AND OTHER PERTINENT FACTORS SUCH AS MINERALOGICAL COMPOSITION, ANGULARITY, STRUCTURE, PLASTICITY, ETC. FOR EXAMPLE,
VERY STIFF, GRAY, SILTY CLAY, MOIST WITH INTERBEDDED FINE SAND LAYERS, HIGHLY PLASTIC, A-7-6

SOIL LEGEND AND AASHTO CLASSIFICATION

GENERAL CLASS.	GRANULAR MATERIALS (≤ 35% PASSING #200)							SILT-CLAY MATERIALS (> 35% PASSING #200)				ORGANIC MATERIALS		
GROUP CLASS.	A-1		A-3	A-2				A-4	A-5	A-6	A-7	A-1, A-2 A-3	A-4, A-5 A-6, A-7	
	A-1-a	A-1-b		A-2-4	A-2-5	A-2-6	A-2-7				A-7-5, A-7-6			
SYMBOL														
% PASSING #10	50 MX													
#40	30 MX	50 MX	51 MN											
#200	15 MX	25 MX	10 MX	35 MX	35 MX	35 MX	35 MX	36 MN	36 MN	36 MN	36 MN	GRANULAR SOILS	SILT-CLAY SOILS	MUCK, PEAT
MATERIAL PASSING #40 LL	—		—	40 MX	41 MN	40 MX	41 MN	40 MX	41 MN	40 MX	41 MN	SOILS WITH LITTLE OR MODERATE AMOUNTS OF ORGANIC MATTER		HIGHLY ORGANIC SOILS
PI	6 MX		NP	10 MX	10 MX	11 MN	11 MN	10 MX	10 MX	11 MN	11 MN			
GROUP INDEX	0		0	0		4 MX		8 MX	12 MX	16 MX	NO MX			
USUAL TYPES OF MAJOR MATERIALS	STONE FRAGS. GRAVEL, AND SAND		FINE SAND	SILTY OR CLAYEY GRAVEL AND SAND				SILTY SOILS		CLAYEY SOILS				
GEN. RATING AS SUBGRADE	EXCELLENT TO GOOD							FAIR TO POOR				FAIR TO POOR	POOR	UNSUITABLE

PI OF A-7-5 SUBGROUP IS ≤ LL - 30 ; PI OF A-7-6 SUBGROUP IS > LL - 30

CONSISTENCY OR DENSENESS

PRIMARY SOIL TYPE	COMPACTNESS OR CONSISTENCY	RANGE OF STANDARD PENETRATION RESISTENCE (N-VALUE)	RANGE OF UNCONFINED COMPRESSIVE STRENGTH ($TONS/FT^2$)
GENERALLY GRANULAR MATERIAL (NON-COHESIVE)	VERY LOOSE	< 4	
	LOOSE	4 TO 10	
	MEDIUM DENSE	10 TO 30	N/A
	DENSE	30 TO 50	
	VERY DENSE	> 50	
GENERALLY SILT-CLAY MATERIAL (COHESIVE)	VERY SOFT	< 2	< 0.25
	SOFT	2 TO 4	0.25 TO 0.5
	MEDIUM STIFF	4 TO 8	0.5 TO 1.0
	STIFF	8 TO 15	1 TO 2
	VERY STIFF	15 TO 30	2 TO 4
	HARD	> 30	> 4

TEXTURE OR GRAIN SIZE

U.S. STD. SIEVE SIZE	4	10	40	60	200	270
OPENING (MM)	4.76	2.00	0.42	0.25	0.075	0.053

BOULDER (BLDR.)	COBBLE (COB.)	GRAVEL (GR.)	COARSE SAND (CSE. SD.)	FINE SAND (F SD.)	SILT (SL.)	CLAY (CL.)

GRAIN SIZE	MM	305	75	2.0	0.25	0.05	0.005
	IN.	12	3				

SOIL MOISTURE - CORRELATION OF TERMS

SOIL MOISTURE SCALE (ATTERBERG LIMITS)	FIELD MOISTURE DESCRIPTION	GUIDE FOR FIELD MOISTURE DESCRIPTION
	- SATURATED - (SAT.)	USUALLY LIQUID; VERY WET, USUALLY FROM BELOW THE GROUND WATER TABLE
LL — LIQUID LIMIT		
PLASTIC RANGE (PI)	- WET - (W)	SEMISOLID; REQUIRES DRYING TO ATTAIN OPTIMUM MOISTURE
PL — PLASTIC LIMIT		
OM — OPTIMUM MOISTURE	- MOIST - (M)	SOLID; AT OR NEAR OPTIMUM MOISTURE
SL — SHRINKAGE LIMIT		
	- DRY - (D)	REQUIRES ADDITIONAL WATER TO ATTAIN OPTIMUM MOISTURE

PLASTICITY

	PLASTICITY INDEX (PI)	DRY STRENGTH
NON PLASTIC	0-5	VERY LOW
SLIGHTLY PLASTIC	6-15	SLIGHT
MODERATELY PLASTIC	16-25	MEDIUM
HIGHLY PLASTIC	26 OR MORE	HIGH

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.

GRADATION

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.

ANGULARITY OF GRAINS

THE ANGULARITY OR ROUNDNESS OF SOIL GRAINS IS DESIGNATED BY THE TERMS: ANGULAR, SUBANGULAR, SUBROUNDED, OR ROUNDED.

MINERALOGICAL COMPOSITION

MINERAL NAMES SUCH AS QUARTZ, FELDSPAR, MICA, TALC, KAOLIN, ETC. ARE USED IN DESCRIPTIONS WHEN THEY ARE CONSIDERED OF SIGNIFICANCE.

COMPRESSIBILITY

SLIGHTLY COMPRESSIBLE	LL < 31
MODERATELY COMPRESSIBLE	LL = 31 - 50
HIGHLY COMPRESSIBLE	LL > 50

PERCENTAGE OF MATERIAL

ORGANIC MATERIAL	GRANULAR SOILS	SILT - CLAY SOILS	OTHER MATERIAL	
TRACE OF ORGANIC MATTER	2 - 3%	3 - 5%	TRACE	1 - 10%
LITTLE ORGANIC MATTER	3 - 5%	5 - 12%	LITTLE	10 - 20%
MODERATELY ORGANIC	5 - 10%	12 - 20%	SOME	20 - 35%
HIGHLY ORGANIC	> 10%	> 20%	HIGHLY	35% AND ABOVE

GROUND WATER

- WATER LEVEL IN BORE HOLE IMMEDIATELY AFTER DRILLING
- STATIC WATER LEVEL AFTER 24 HOURS
- PW — PERCHED WATER, SATURATED ZONE, OR WATER BEARING STRATA
- SPRING OR SEEP

MISCELLANEOUS SYMBOLS

- ROADWAY EMBANKMENT (RE) WITH SOIL DESCRIPTION
- SOIL SYMBOL
- ARTIFICIAL FILL (AF) OTHER THAN ROADWAY EMBANKMENT
- INFERRED SOIL BOUNDARY
- INFERRED ROCK LINE
- ALLUVIAL SOIL BOUNDARY
- 25/025 — DIP & DIP DIRECTION OF ROCK STRUCTURES
- SPT / CPT / DMT / VST / PMT — TEST BORING
- AUGER BORING
- CORE BORING
- MW — MONITORING WELL
- PIEZOMETER INSTALLATION
- SLOPE INDICATOR INSTALLATION
- CONE PENETROMETER TEST
- SOUNDING ROD
- TEST BORING WITH CORE
- SPT N-VALUE

RECOMMENDATION SYMBOLS

- UNDERCUT
- SHALLOW UNDERCUT
- UNCLASSIFIED EXCAVATION - UNSUITABLE WASTE
- UNCLASSIFIED EXCAVATION - ACCEPTABLE DEGRADABLE ROCK
- UNCLASSIFIED EXCAVATION - ACCEPTABLE, BUT NOT TO BE USED IN THE TOP 3 FEET OF EMBANKMENT OR BACKFILL

ABBREVIATIONS

AR - AUGER REFUSAL
BT - BORING TERMINATED
CL. - CLAY
CPT - CONE PENETRATION TEST
CSE. - COARSE
DMT - DILATOMETER TEST
DPT - DYNAMIC PENETRATION TEST
e - VOID RATIO
F - FINE
FOSS. - FOSSILIFEROUS
FRAC. - FRACTURED, FRACTURES
FRAGS. - FRAGMENTS
HI. - HIGHLY
MED. - MEDIUM
MICA. - MICACEOUS
MOD. - MODERATELY
NP - NON PLASTIC
ORG. - ORGANIC
PMT - PRESSUREMETER TEST
SAP. - SAPROLITIC
SD. - SAND, SANDY
SL. - SILT, SILTY
SLI. - SLIGHTLY
TCR - TRICONE REFUSAL
w - MOISTURE CONTENT
V - VERY
VST - VANE SHEAR TEST
WEA. - WEATHERED
γ - UNIT WEIGHT
γ_d - DRY UNIT WEIGHT

SAMPLE ABBREVIATIONS

S - BULK
SS - SPLIT SPOON
ST - SHELBY TUBE
RS - ROCK
RT - RECOMPACTED TRIAXIAL
CBR - CALIFORNIA BEARING RATIO

EQUIPMENT USED ON SUBJECT PROJECT

DRILL UNITS:
- [X] CME-45
- [X] CME-55
- [ ] CME-550
- [ ] VANE SHEAR TEST
- [ ] PORTABLE HOIST
- [ ] _____
- [ ] _____

ADVANCING TOOLS:
- [ ] CLAY BITS
- [ ] 6" CONTINUOUS FLIGHT AUGER
- [ ] 8" HOLLOW AUGERS
- [ ] HARD FACED FINGER BITS
- [ ] TUNG.-CARBIDE INSERTS
- [ ] CASING [ ] W/ ADVANCER
- [ ] TRICONE _____" STEEL TEETH
- [ ] TRICONE _____" TUNG.-CARB.
- [X] CORE BIT (4.0 INCH)
- [X] 3.5 inch auger

HAMMER TYPE:
- [ ] AUTOMATIC [ ] MANUAL

CORE SIZE:
- [ ] -B _____ [ ] -H _____
- [ ] -N _____

HAND TOOLS:
- [ ] POST HOLE DIGGER
- [ ] HAND AUGER
- [ ] SOUNDING ROD
- [ ] VANE SHEAR TEST
- [ ] _____

ROCK DESCRIPTION

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:

WEATHERED ROCK (WR)	NON-COASTAL PLAIN MATERIAL THAT WOULD YIELD SPT N VALUES > 100 BLOWS PER FOOT IF TESTED.
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 YEILD SPT REFUSAL IF TESTED. ROCK TYPE INCLUDES PHYLLITE, SLATE, SANDSTONE, ETC.
COASTAL PLAIN SEDIMENTARY ROCK (CP)	COASTAL PLAIN SEDIMENTS CEMENTED INTO ROCK, BUT MAY NOT YIELD SPT REFUSAL. ROCK TYPE INCLUDES LIMESTONE, SANDSTONE, CEMENTED SHELL BEDS, ETC.

WEATHERING

FRESH	ROCK FRESH, CRYSTALS BRIGHT, FEW JOINTS MAY SHOW SLIGHT STAINING. ROCK RINGS UNDER HAMMER IF CRYSTALLINE.
VERY SLIGHT (V SLI.)	ROCK GENERALLY FRESH, JOINTS STAINED, SOME JOINTS MAY SHOW THIN CLAY COATINGS IF OPEN, CRYSTALS ON A BROKEN SPECIMEN FACE SHINE BRIGHTLY. ROCK RINGS UNDER HAMMER BLOWS IF OF A CRYSTALLINE NATURE.
SLIGHT (SLI.)	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.
MODERATE (MOD.)	SIGNIFICANT PORTIONS OF ROCK SHOW DISCOLORATION AND WEATHERING EFFECTS. IN GRANITOID ROCKS, MOST FELDSPARS ARE DULL AND DISCOLORED, SOME SHOW CLAY. ROCK HAS DULL SOUND UNDER HAMMER BLOWS AND SHOWS SIGNIFICANT LOSS OF STRENGTH AS COMPARED WITH FRESH ROCK.
MODERATELY SEVERE (MOD. SEV.)	ALL ROCK EXCEPT QUARTZ DISCOLORED OR STAINED. IN GRANITOID ROCKS, ALL FELDSPARS DULL AND DISCOLORED AND A MAJORITY SHOW KAOLINIZATION. ROCK SHOWS SEVERE LOSS OF STRENGTH AND CAN BE EXCAVATED WITH A GEOLOGIST'S PICK. ROCK GIVES "CLUNK" SOUND WHEN STRUCK. *IF TESTED, WOULD YIELD SPT REFUSAL*
SEVERE (SEV.)	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 SEVERE (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*
COMPLETE	ROCK REDUCED TO SOIL. ROCK FABRIC NOT DISCERNIBLE, OR DISCERNIBLE ONLY IN SMALL AND SCATTERED CONCENTRATIONS. QUARTZ MAY BE PRESENT AS DIKES OR STRINGERS. SAPROLITE IS ALSO AN EXAMPLE.

ROCK HARDNESS

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.
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 PEICES 1 INCH MAXIMUM SIZE BY HARD BLOWS OF THE POINT OF A GEOLOGIST'S PICK.
SOFT	CAN BE GROVED 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 FINGERNAIL.

FRACTURE SPACING

TERM	SPACING
VERY WIDE	MORE THAN 10 FEET
WIDE	3 TO 10 FEET
MODERATELY CLOSE	1 TO 3 FEET
CLOSE	0.16 TO 1 FOOT
VERY CLOSE	LESS THAN 0.16 FEET

BEDDING

TERM	THICKNESS
VERY THICKLY BEDDED	4 FEET
THICKLY BEDDED	1.5 - 4 FEET
THINLY BEDDED	0.16 - 1.5 FEET
VERY THINLY BEDDED	0.03 - 0.16 FEET
THICKLY LAMINATED	0.008 - 0.03 FEET
THINLY LAMINATED	< 0.008 FEET

INDURATION

FOR SEDIMENTARY ROCKS, INDURATION IS THE HARDENING OF MATERIAL BY CEMENTING, HEAT, PRESSURE, ETC.

FRIABLE	RUBBING WITH FINGER FREES NUMEROUS GRAINS; GENTLE BLOW BY HAMMER DISINTEGRATES SAMPLE.
MODERATELY INDURATED	GRAINS CAN BE SEPARATED FROM SAMPLE WITH STEEL PROBE; BREAKS EASILY WHEN HIT WITH HAMMER.
INDURATED	GRAINS ARE DIFFICULT TO SEPARATE WITH STEEL PROBE; DIFFICULT TO BREAK WITH HAMMER.
EXTREMELY INDURATED	SHARP HAMMER BLOWS REQUIRED TO BREAK SAMPLE; SAMPLE BREAKS ACROSS GRAINS.

TERMS AND DEFINITIONS

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 DISLODGED 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 (RQD) - 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 (SRQD) - 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.

BENCH MARK:

ELEVATION: FEET

NOTES:

NB - Northbound Lane	OSS - Outside Shoulder
SB - Southbound Lane	ISS - Inside Shoulder
OSL - Outside Lane	GM - Grass Median
ISL - Inside Lane	OGS - Outside Grass Shoulder
CL - Center Lane	PS - Paved Shoulder
LTL - Left Turn Lane	RT LN - Right LN
CTL - Center Turn Lane	LT LN - Left Lane
RTL - Right Turn Lane	COL - Collector Lane
DECEL - Deceleration Lane	RT - Right
ACCEL - Acceleration Lane	LT - Left

DATE: 8-15-14

5/14/99

PROJECT REFERENCE NO.	SHEET NO.
I-5987A	3
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

–L– 14+50 SB OSS	
Pavement Structure	
Asphalt	13.5″
ABC	–

–L– 14+50 SB OSL	
Pavement Structure	
Asphalt	15.5″
ABC	–

–L– 23+10 SB OSS	
Pavement Structure	
Asphalt	22″
ABC	–

–L– 13+05 NB ISS	
Pavement Structure	
Asphalt	11.5″
ABC	–

–L– 13+05 NB ISL	
Pavement Structure	
Asphalt	14″
ABC	–

–L– 13+05 NB OSS	
Pavement Structure	
Asphalt	18″
ABC	8″

–L– 21+95 NB ACCEL	
Pavement Structure	
Asphalt	18″
ABC	9″

–L– 21+95 NB OSS	
Pavement Structure	
Asphalt	20.5″
ABC	10.5″

MATCHLINE –L– STA. 24+00 SEE SHEET 4

$$$$$SYSTIME$$$$
$$$$$$$$$$$$DGN$$$$$$$$$$$$$$$$$$$$$$$$$$
$$$$USERNAME$$$$

5/14/99

PROJECT REFERENCE NO.	SHEET NO.
I-5987A	4
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

MATCHLINE -L- STA. 24+00 SEE SHEET 3

-L- 35+90 SB OSS		-L- 35+90 SB ISL		-L- 35+90 SB ISS	
Pavement Structure		Pavement Structure		Pavement Structure	
Asphalt	17.5″	Asphalt	13.5″	Asphalt	11.75″
ABC	8.5″	ABC	–	ABC	–

-L- 35+90 NB ISS		-L- 35+90 NB OSL		-L- 35+90 NB OSS	
Pavement Structure		Pavement Structure		Pavement Structure	
Asphalt	12.75″	Asphalt	16″	Asphalt	16.75″
ABC	–	ABC	–	STBC	9″

MATCHLINE -L- STA. 37+00

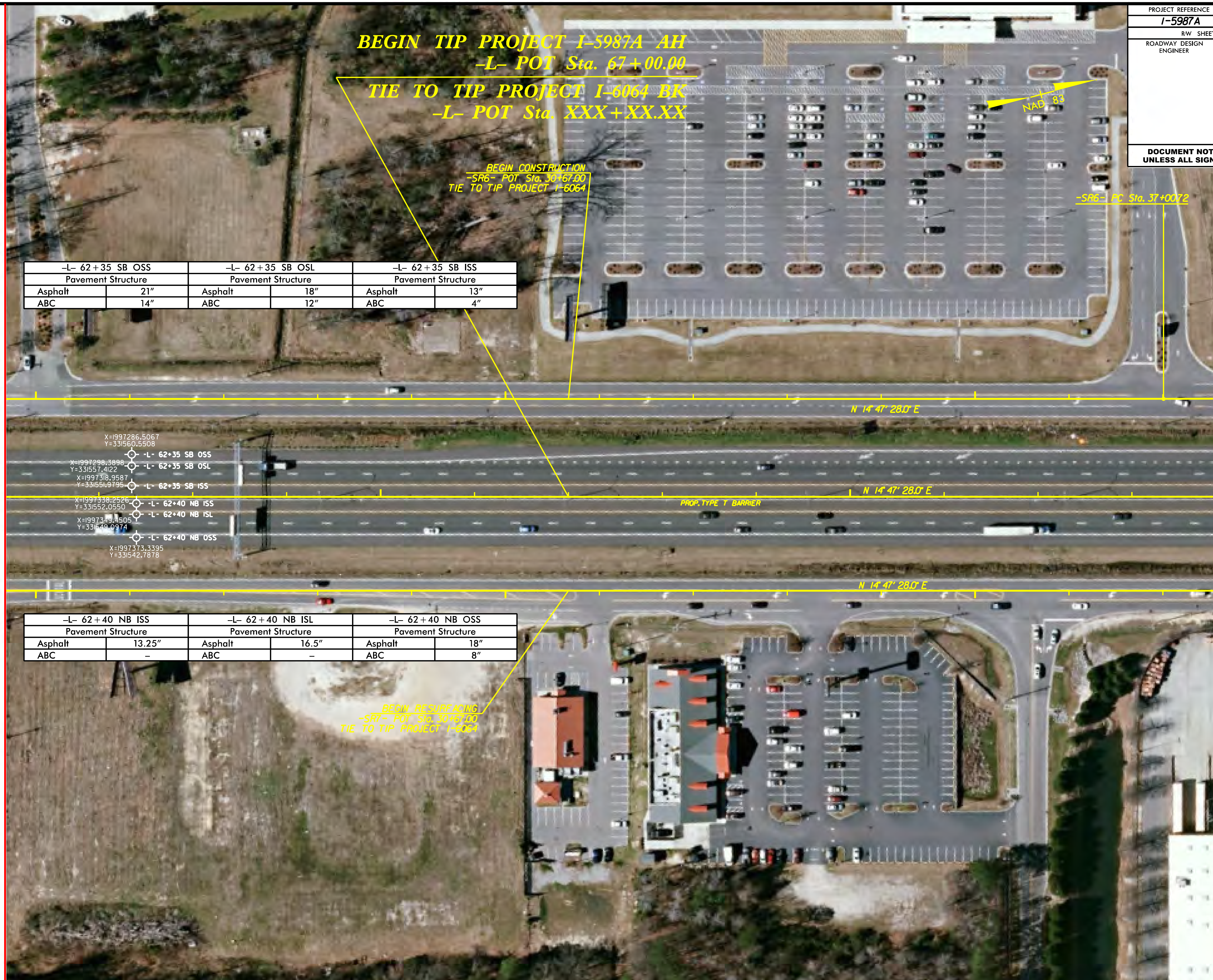
$$$$$$SYSTIME$$$$$
$$$$$$$$$DGN$$$$$$$$$$$$$$$$$$$$
$$$$USERNAME$$$$

5/14/99

PROJECT REFERENCE NO.	SHEET NO.
I-5987A	5
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

MATCHLINE –L– STA. 61+00



–L– 62+35 SB OSS		–L– 62+35 SB OSL		–L– 62+35 SB ISS	
Pavement Structure		Pavement Structure		Pavement Structure	
Asphalt	21″	Asphalt	18″	Asphalt	13″
ABC	14″	ABC	12″	ABC	4″

–L– 62+40 NB ISS		–L– 62+40 NB ISL		–L– 62+40 NB OSS	
Pavement Structure		Pavement Structure		Pavement Structure	
Asphalt	13.25″	Asphalt	16.5″	Asphalt	18″
ABC	–	ABC	–	ABC	8″

MATCHLINE –L– STA. 74+00

$$$$$SYSTIME$$$$$
$$$$$$$$$$$$$$$$DGN$$$$$$$$$$$$$$$$$$$$
$$$$USERNAME$$$$

PROJECT REFERENCE NO.	SHEET NO.
I-5987A	6
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

-L- 84+65 SB OSS	
Pavement Structure	
Asphalt	10.5"
ABC	22"

-L- 84+65 SB ACCEL	
Pavement Structure	
Asphalt	9.5"
ABC	13"

-L- 88+65 SB ISL	
Pavement Structure	
Asphalt	13.5"
ABC	–

-L- 88+65 SB ISS	
Pavement Structure	
Asphalt	12"
ABC	–

-L- 81+00 NB ISS	
Pavement Structure	
Asphalt	12.25"
ABC	–

-L- 81+00 NB OSL	
Pavement Structure	
Asphalt	13.75"
ABC	–

-L- 81+00 NB DECEL	
Pavement Structure	
Asphalt	18.5"
STBC	8.5"

-L- 81+00 NB OSS	
Pavement Structure	
Asphalt	18.5"
STBC	8.5"

5/14/99

$$$$$$SYSTIME$$$$$
$$$$$$$$$$DGN$$$$$$$$$$$$$$$$$$$$
$$$$USERNAME$$$$$

ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

MATCHLINE -L- STA. 107+00

-L- 114+40 SB OSS	
Pavement Structure	
Asphalt	20"
Sand Drainage	8"

-L- 114+40 SB DECEL	
Pavement Structure	
Asphalt	18"
Sand Drainage	8"

-L- 114+40 SB OSL	
Pavement Structure	
Asphalt	16"
Sand Drainage	6"

-L- 114+40 SB ISS	
Pavement Structure	
Asphalt	7"
STBC	4.5"

-L- 108+80 NB ACCEL	
Pavement Structure	
Asphalt	11.5"
ABC	–

-L- 108+80 NB OSS	
Pavement Structure	
Asphalt	11"
ABC	–

-L- 118+45 NB ISS	
Pavement Structure	
Asphalt	8.25"
STBC	2"

-L- 118+45 NB ISL	
Pavement Structure	
Asphalt	13.25"
STBC	2.5"

MATCHLINE -L- STA. 120+00

5/14/99

$$$$$$SYSTIME$$$$$
$$$$$$$$$$DGN$$$$$$$$$$$$$$$$$$
$$$$$USERNAME$$$$$

5/14/99

PROJECT REFERENCE NO.	SHEET NO.
I-5987A	8
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

MATCHLINE –L– STA. 139+00

–L– 142+50 SB ISL		–L– 142+50 SB ISS		–L– 143+50 SB OSS	
Pavement Structure		Pavement Structure		Pavement Structure	
Asphalt	12″	Asphalt	7″	Asphalt	7″
STBC	5″	STBC	1″	Sand Drainage	10″

–L– 142+45 NB ISS		–L– 142+45 NB OSL		–L– 142+45 NB OSS	
Pavement Structure		Pavement Structure		Pavement Structure	
Asphalt	8″	Asphalt	12	Asphalt	7.25″
STBC	3″	STBC	4.5″	STBC	5″

MATCHLINE –L– STA. 152+00

$$$$$$SYSTIME$$$$$
$$$$$$$$$$$$$$$DGN$$$$$$$$$$$$$$$$$$
$$$$$$USERNAME$$$$$

PROJECT REFERENCE NO.	SHEET NO.
I-5987A	9
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

–L– 168+65 SB ISS	
Pavement Structure	
Asphalt	6.5″
STBC	4″

–L– 180+35 SB OSS		–L– 180+35 SB OSL	
Pavement Structure		Pavement Structure	
Asphalt	6.5″	Asphalt	7″
STBC	8″	STBC	7″

–L– 168+65 NB ISS		–L– 168+65 NB ISL		–L– 168+65 NB OSS	
Pavement Structure		Pavement Structure		Pavement Structure	
Asphalt	8″	Asphalt	12.5″	Asphalt	6.5″
STBC	2.5″	STBC	3″	STBC	4.5″

$$$$$$SYSTIME$$$$$$
$$$$$$$$$$$$$$$$DGN$$$$$$$$$$$$$$$$$$$$
$$$$$$USERNAME$$$$$

5/14/99

PROJECT REFERENCE NO.	SHEET NO.
I-5987A	10
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

-L- 196+30 SB OSS	
Pavement Structure	
Asphalt	7"
STBC	7"

-L- 196+30 SB ISL	
Pavement Structure	
Asphalt	12"
STBC	2.5"

-L- 196+30 SB ISS	
Pavement Structure	
Asphalt	7.75"
STBC	1.75"

-L- 196+30 NB ISS	
Pavement Structure	
Asphalt	6.75"
STBC	2.25"

-L- 196+30 NB OSL	
Pavement Structure	
Asphalt	11.25"
STBC	3.5"

-L- 196+30 NB OSS	
Pavement Structure	
Asphalt	6.5"
STBC	3.5"

$$$$$$$SYSTIME$$$$$
$$$$$$$USERNAME$$$$$
$$$$$$$DGN$$$$$$$$$$$$$$$$$$$$$$$$$$$$$

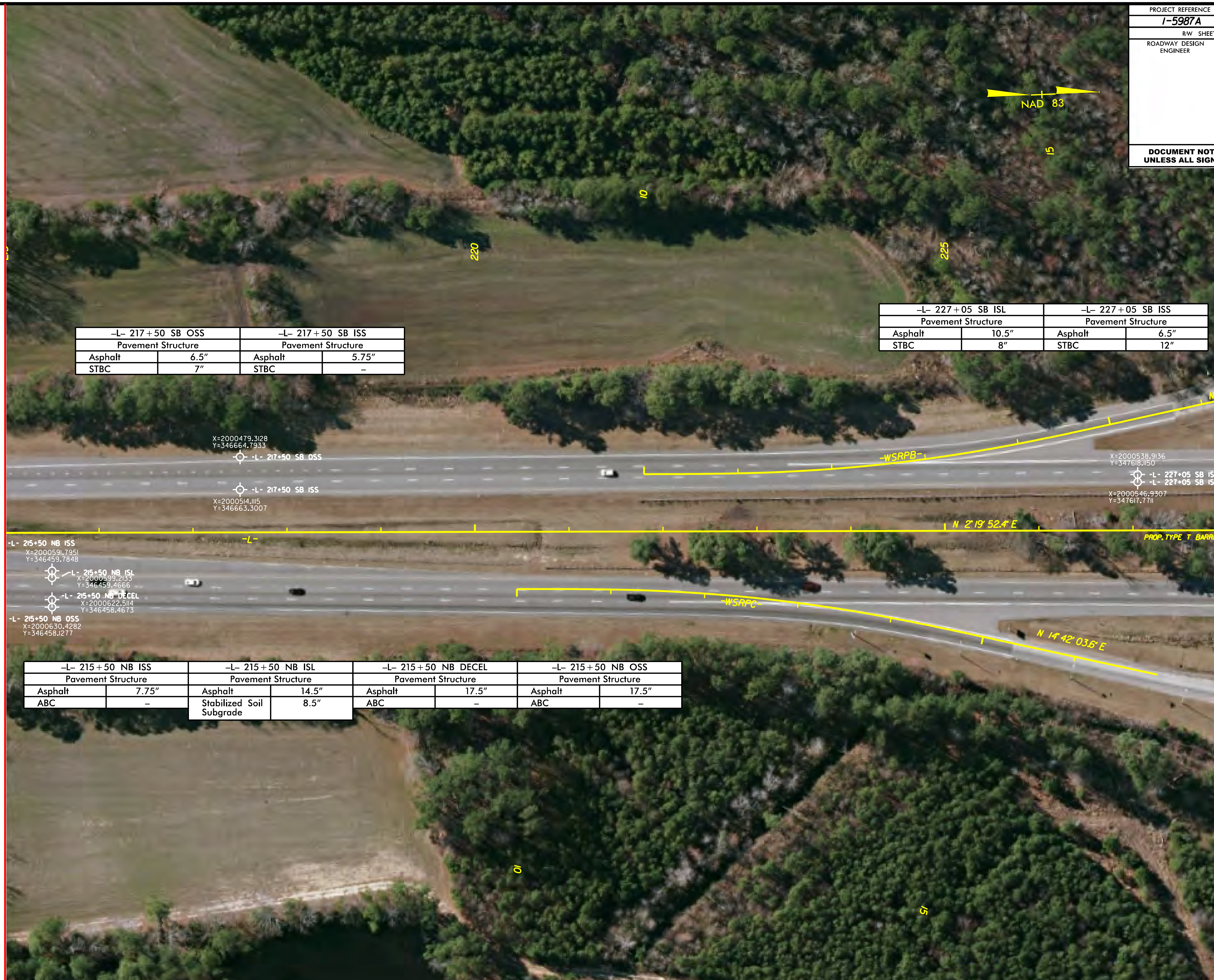
PROJECT REFERENCE NO.	SHEET NO.
I-5987A	11
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

5/14/99

MATCHLINE -L- STA. 215+00

MATCHLINE -L- STA. 228+00



-L- 217+50 SB OSS	
Pavement Structure	
Asphalt	6.5"
STBC	7"

-L- 217+50 SB ISS	
Pavement Structure	
Asphalt	5.75"
STBC	–

-L- 227+05 SB ISL	
Pavement Structure	
Asphalt	10.5"
STBC	8"

-L- 227+05 SB ISS	
Pavement Structure	
Asphalt	6.5"
STBC	12"

-L- 215+50 NB ISS	
Pavement Structure	
Asphalt	7.75"
ABC	–

-L- 215+50 NB ISL	
Pavement Structure	
Asphalt	14.5"
Stabilized Soil Subgrade	8.5"

-L- 215+50 NB DECEL	
Pavement Structure	
Asphalt	17.5"
ABC	–

-L- 215+50 NB OSS	
Pavement Structure	
Asphalt	17.5"
ABC	–

$$$$$$SYSTIME$$$$$
$$$$$$$$$$$$DGN$$$$$$$$$$$$$$$$$$$$$$
$$$$$$USERNAME$$$$$

PROJECT REFERENCE NO.	SHEET NO.
I-5987A	12
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

MATCHLINE -L- STA. 243+00

-L- 247+70 SB OSS	
Pavement Structure	
Asphalt	17"
STBC	4"

-L- 247+60 NB ISS	
Pavement Structure	
Asphalt	6.25"
STBC	1.75"

-L- 247+60 NB OSL	
Pavement Structure	
Asphalt	12.5"
STBC	4"

-L- 247+60 NB ACCEL	
Pavement Structure	
Asphalt	14.5"
STBC	–

-L- 247+60 NB OSS	
Pavement Structure	
Asphalt	5.5"
STBC	6.5"

MATCHLINE -L- STA. 256+00

5/14/99

$$$$$$SYSTIME$$$$$
$$$$$$$$$$$$DGN$$$$$$$$$$$$$$$$$$$$$$
$$$$USERNAME$$$$$

5/14/99

PROJECT REFERENCE NO.	SHEET NO.
I-5987A	13
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

MATCHLINE –L– STA. 276+00

MATCHLINE –L– STA. 289+00 SEE SHEET 14

NAD 83

–L– 277+70 SB OSS	
Pavement Structure	
Asphalt	5.5"
STBC	7"

–L– 277+70 SB DECEL	
Pavement Structure	
Asphalt	13"
STBC	–

–L– 277+70 SB OSL	
Pavement Structure	
Asphalt	13"
STBC	–

–L– 277+70 SB ISS	
Pavement Structure	
Asphalt	6.5"
STBC	8"

–L– 277+70 NB ISS	
Pavement Structure	
Asphalt	6"
STBC	–

–L– 277+70 NB ISL	
Pavement Structure	
Asphalt	13"
Stabilized Soil Subgrade	8.5"

–L– 277+70 NB OSS	
Pavement Structure	
Asphalt	5.5"
STBC	3.5"

X=2000721.1230
Y=352677.6980
X=2000728.4382 –L– 277+70 SB OSS
Y=352677.6246 –L– 277+70 SB DECEL
X=2000735.0606 –L– 277+70 SB OSL
Y=352677.5548
X=2000756.8561 –L– 277+70 SB ISS
Y=352677.3250
X=2000789.4649 –L– 277+70 NB ISS
Y=352677.0524 –L– 277+70 NB ISL
X=2000796.4648
Y=352677.0351
–L– 277+70 NB OSS
X=2000817.8050
Y=352676.7970

-Y1A-
-Y1ARB1-
-Y1ARB2-
-Y1ARPC-
-Y1ARPB-
-L-
PROP. TYPE T BARRIER
20
25
280
295
S 0° 29' 38.5" W
N 0° 29' 38.5" E
N 1° 02' 35.7" E
N 72° 59' 38.5" E
= 80° 00' 00.00"
57' 28.3" W

$$$$$$$$SYSTIME$$$$$
$$$$$$$$USERNAME$$$$
$$$$$$$$DGN$$$$$$$$

PROJECT REFERENCE NO.	SHEET NO.
I-5987A	14
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

MATCHLINE –L– STA. 289+00 SEE SHEET 13

–L– 298+25 SB OSS	
Pavement Structure	
Asphalt	7″
STBC	9″

–L– 298+25 SB ISL	
Pavement Structure	
Asphalt	14″
STBC	3″

–L– 298+25 SB ISS	
Pavement Structure	
Asphalt	6.75″
STBC	6″

–L– 299+40 NB ISS	
Pavement Structure	
Asphalt	6.75″
Stabilized Soil Subgrade	–

–L– 299+40 NB OSL	
Pavement Structure	
Asphalt	14.5″
Stabilized Soil Subgrade	8″

–L– 299+40 NB ACCEL	
Pavement Structure	
Asphalt	14.25″
Stabilized Soil Subgrade	6.75″

–L– 299+40 NB OSS	
Pavement Structure	
Asphalt	13″
Stabilized Soil Subgrade	10.5″

MATCHLINE –L– STA. 302+00

5/14/99

$$$$$SYSTIME$$$$$
$$$$$$$$$DGN$$$$$$$$$$$$$$$$$$
$$$$USERNAME$$$$

5/14/99

PROJECT REFERENCE NO.	SHEET NO.
I-5987A	15
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

NAD 83

MATCHLINE –L– STA. 317+00

MATCHLINE –L– STA. 330+00

320

325

–L– 323+00 SB OSS	
Pavement Structure	
Asphalt	7″
STBC	8″

–L– 323+00 SB OSL	
Pavement Structure	
Asphalt	12″
STBC	7″

–L– 323+00 SB ISS	
Pavement Structure	
Asphalt	6.5″
STBC	8″

X=2000765.5979
Y=357207.5022

X=2000774.3233 –L– 323+00 SB OSS
Y=357207.4102 –L– 323+00 SB OSL

X=2000795.6635
Y=357207.1852 –L– 323+00 SB ISS

N 0° 29' 38.5" E

PROP. TYPE T BARRIER

–L–

–L–

X=2000827.6658
Y=357201.8813 –L– 322+95 NB ISS
–L– 322+95 NB ISL

X=2000833.7206
Y=357201.8289

–L– 322+95 NB OSS

X=2000857.5394
Y=357201.6225

–L– 322+95 NB ISS	
Pavement Structure	
Asphalt	7″
STBC	–

–L– 322+95 NB ISL	
Pavement Structure	
Asphalt	11.5″
STBC	4.5″

–L– 322+95 NB OSS	
Pavement Structure	
Asphalt	6.5″
STBC	3.5″

$$$$$$$SYSTIME$$$$$
$$$$$$$$$$$$$$$$$$$DGN$$$$$$$$$$$$$$$$$$$
$$$$$$$$$$$$$$$$$$$USERNAME$$$$$$$$$$$$$$$$$$$

5/14/99

PROJECT REFERENCE NO.	SHEET NO.
I-5987A	16
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

NAD 83

MATCHLINE –L– STA. 343+00

MATCHLINE –L– STA. 356+00

345

350

355

–L– 349+80 SB OSS	
Pavement Structure	
Asphalt	7″
STBC	9″

–L– 349+80 SB ISL	
Pavement Structure	
Asphalt	11
STBC	4″

–L– 349+80 SB ISS	
Pavement Structure	
Asphalt	7.5″
STBC	5″

X=2000787.8456
Y=359887.2283
-L- 349+80 SB OSS

X=2000811.5977
Y=359886.9779
-L- 349+80 SB ISL

X=2000818.7770
Y=359886.9060
-L- 349+80 SB ISS

N 0° 29' 38.5" E

X=2000851.5030
Y=359876.7074
-L- 349+70 NB ISS

X=2000868.3000
Y=359876.7557
-L- 349+70 NB OSL

-L- 349+70 NB OSS

X=2000879.7002
Y=359876.6355

–L– 349+70 NB ISS	
Pavement Structure	
Asphalt	8.5″
STBC	3″

–L– 349+70 NB OSL	
Pavement Structure	
Asphalt	12″
STBC	3″

–L– 349+70 NB OSS	
Pavement Structure	
Asphalt	7.25″
STBC	3.5″

$$$$$$$$SYSTIME$$$$$
$$$$$$$$$$$$$$$$$$$$DGN$$$$$$$$$$$$$$$$$$$$
$$$
$$$$$$$$USERNAME$$$$$$$$$$$$$$$$$$$$$$$$$$

5/14/99

PROJECT REFERENCE NO.	SHEET NO.
I-5987A	17
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

MATCHLINE –L– STA. 370+00

MATCHLINE –L– STA. 383+00

NAD 83

375

380

–L– 376+30 SB OSS		–L– 376+30 SB OSL		–L– 376+30 SB ISS	
Pavement Structure		Pavement Structure		Pavement Structure	
Asphalt	6″	Asphalt	12″	Asphalt	7.5″
STBC	10″	STBC	11″	STBC	9″

X=2000810.4665
Y=362537.1325

X=2000819.1952 –L– 376+30 SB OSS
Y=362537.0464 –L– 376+30 SB OSL

X=2000842.6264
Y=362536.7994 –L– 376+30 SB ISS

X=2000875.0109
Y=362541.5233 –L– 376+35 NB ISS
–L– 376+35 NB ISL

X=2000881.2108
Y=362541.5060 –L– 376+35 NB OSS

X=2000902.3029
Y=362541.5406

–L– 376+35 NB ISS		–L– 376+35 NB ISL		–L– 376+35 NB OSS	
Pavement Structure		Pavement Structure		Pavement Structure	
Asphalt	8″	Asphalt	12″	Asphalt	7.25″
STBC	4″	STBC	4″	STBC	3.25″

$$$$$$$$SYSTIME$$$$$
$$$$$$$$USERNAME$$$$$DGN$$$$$$$$$$$$$$$$$$

5/14/99

PROJECT REFERENCE NO.	SHEET NO.
I-5987A	18
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

MATCHLINE -L- STA. 396+00

-L- 402+25 SB OSS		-L- 402+25 SB ISL		-L- 402+25 SB ISS	
Pavement Structure		Pavement Structure		Pavement Structure	
Asphalt	7″	Asphalt	10.5″	Asphalt	6.5″
STBC	4″	STBC	6″	STBC	6″

-L- 402+25 NB ISS		-L- 402+25 NB OSL		-L- 402+25 NB OSS	
Pavement Structure		Pavement Structure		Pavement Structure	
Asphalt	7″	Asphalt	11.75″	Asphalt	7″
STBC	3.5″	STBC	4″	STBC	3″

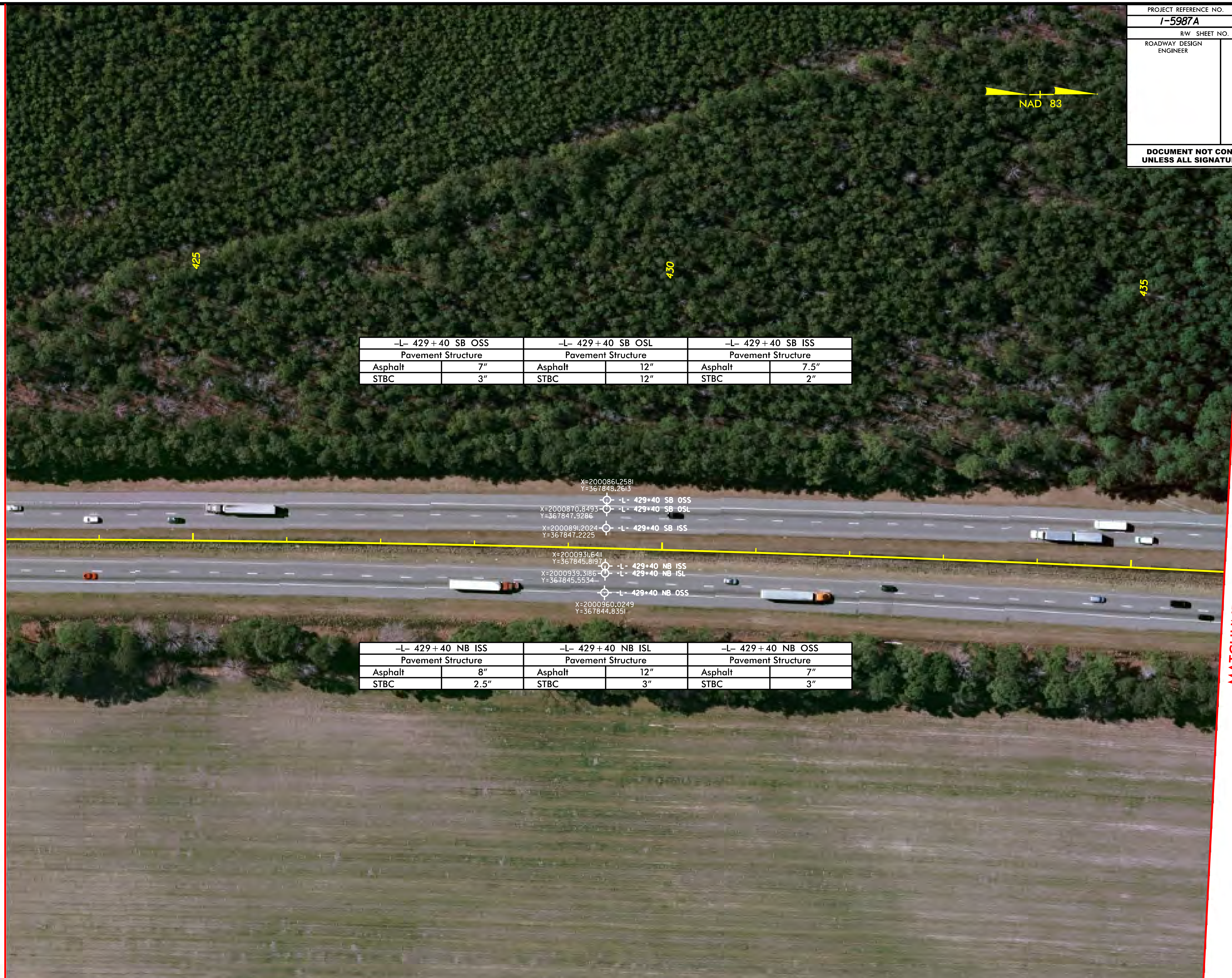
MATCHLINE -L- STA. 409+00

$$$$$$SYSTIME$$$$$
$$$$$$$$$$DGN$$$$$$$$$$$$$$$$$
$$$$USERNAME$$$$

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

5/14/99

MATCHLINE -L- STA. 423+00



-L- 429+40 SB OSS		-L- 429+40 SB OSL		-L- 429+40 SB ISS	
Pavement Structure		Pavement Structure		Pavement Structure	
Asphalt	7″	Asphalt	12″	Asphalt	7.5″
STBC	3″	STBC	12″	STBC	2″

-L- 429+40 NB ISS		-L- 429+40 NB ISL		-L- 429+40 NB OSS	
Pavement Structure		Pavement Structure		Pavement Structure	
Asphalt	8″	Asphalt	12″	Asphalt	7″
STBC	2.5″	STBC	3″	STBC	3″

MATCHLINE -L- STA. 436+00

$$$$$$SYSTIME$$$$$
$$$$$$$$$$$DGN$$$$$$$$$$$$$$$$$
$$$$$USERNAME$$$$

PROJECT REFERENCE NO.	SHEET NO.
I-5987A	20
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

5/14/99

MATCHLINE –L– STA. 451+00

–L– 454+50 SB OSS		–L– 454+50 SB ISL		–L– 454+50 SB ISS	
Pavement Structure		Pavement Structure		Pavement Structure	
Asphalt	7″	Asphalt	12″	Asphalt	7″
STBC	6″	STBC	2″	STBC	6″

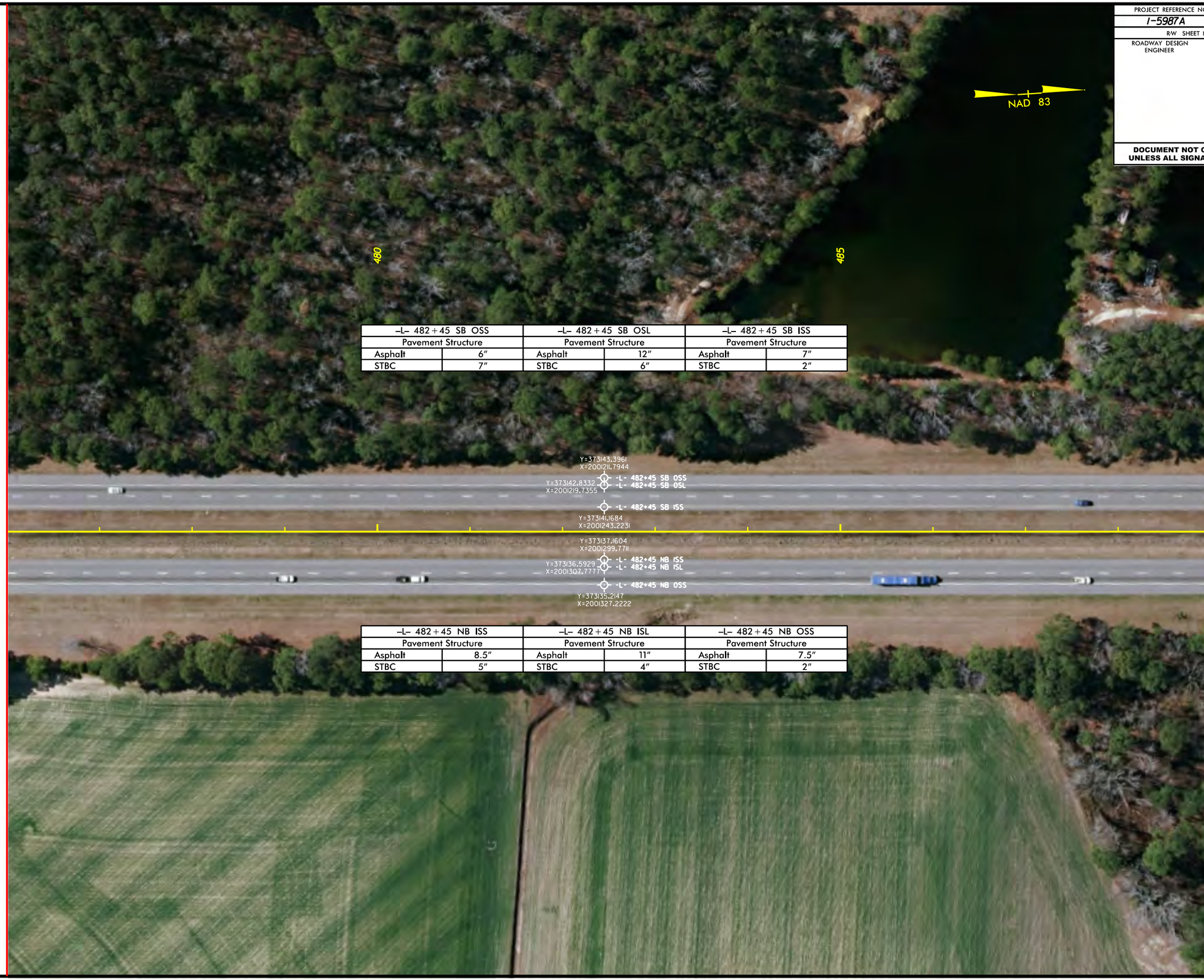
–L– 454+40 NB ISS		–L– 454+40 NB OSL		–L– 454+40 NB OSS	
Pavement Structure		Pavement Structure		Pavement Structure	
Asphalt	6.5″	Asphalt	12.5″	Asphalt	7.75″
STBC	3.5″	STBC	3.5″	STBC	3″

MATCHLINE –L– STA. 464+00

$$$$$SYSTIME$$$$$
$$$$$$$$$$$$$$$DGN$$$$$$$$$$$$$$$$$$$$
$$$$$USERNAME$$$$$

PROJECT REFERENCE NO.	SHEET NO.
I-5987A	21
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED



-L- 482+45 SB OSS		-L- 482+45 SB OSL		-L- 482+45 SB ISS	
Pavement Structure		Pavement Structure		Pavement Structure	
Asphalt	6"	Asphalt	12"	Asphalt	7"
STBC	7"	STBC	6"	STBC	2"

-L- 482+45 NB ISS		-L- 482+45 NB ISL		-L- 482+45 NB OSS	
Pavement Structure		Pavement Structure		Pavement Structure	
Asphalt	8.5"	Asphalt	11"	Asphalt	7.5"
STBC	5"	STBC	4"	STBC	2"

MATCHLINE -L- STA. 476+00

MATCHLINE -L- STA. 489+00 SEE SHEET 22

5/14/99

$$$$$$SYSTIME$$$$$
$$$$$$$$$$$$$$$$DGN$$$$$$$$$$$$$$$$$$
$$$$USERNAME$$$$

PROJECT REFERENCE NO.	SHEET NO.
I-5987A	22
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

MATCHLINE -L- STA. 489+00 SEE SHEET 21

MATCHLINE -L- STA. 502+00

5/14/99

$$$$$$SYSTIME$$$$$
$$$$$$$$$$$$$$$$DGN$$$$$$$$$$$$$$$$$$$
$$$$USERNAME$$$$

PAVEMENT INVESTIGATION DATA SHEET

Project:	47533.1.2	County:	Robeson	Date:	12/03/2019 - 12/19/2019
TIP:	I-5987A	Route:	I-95	Notes By:	D. Strother/J. Swartley/M. Rawls/V. Mitchev

		Width				Thickness						Subgrade						GPS Coordinates	
Position (Sta., Lane, Shldr.)	Cut/Fill (Est. Of Amount) (ft)	Lane(s) (ft)	Shoulder(s) (ft)	Offset Distance (ft)	Crown "C" or Super "S"	Gross to Top of Soil (in)	Asphalt (in)	ABC (in)	Soil Type Base Course (in)	Stabilized Soil Subgrade (in)	Pavement Layering	Description	Sample Number	AASHTO Classification	Soil Moisture	Probe Depth (ft)	Asphalt Notes	Northing	Easting
-L- 13+05 NB ISL	5.0 Fill	11.50	13.50	2.2 FYI	C	14.00	14.00	N/A	N/A	N/A	Asphalt	0.0 - 2.0' = Roadway Embankment, Tan and Orange, Silty-Clayey Sand 2.0 - 5.0' = Roadway Embankment, Tan and Orange, Sandy-Silty Clay	S-78 S-79	A-2-6 A-7-6	M M	5.00	No Distresses Present	326782.3	1996083.0
-L- 13+05 NB ISS	5.0 Fill	N/A	13.50	6.5 FYI	C	11.50	11.50	N/A	N/A	N/A	Asphalt	0.0 - 1.0' = Roadway Embankment, Tan, Silty-Clayey Sand 1.0 - 2.0' = Roadway Embankment, Tan and Orange, Silty-Clayey Sand 2.0 - 5.0' = Roadway Embankment, Tan and Orange, Sandy-Silty Clay	REF S-1 REF S-78 REF S-79	A-2-4 A-2-6 A-7-6	M M M	5.00	No Distresses Present	326778.9	1996076.2
-L- 13+05 NB OSS	5.0 Fill	12.00	13.60	6.5 FWO	C	26.00	18.00	8.00	N/A	N/A	Asphalt ABC	0.0 - 1.5' = Roadway Embankment, Tan, Silty-Clayey Sand 1.5 - 5.0' = Roadway Embankment, Tan and Orange, Sandy Clay	S-1 S-2	A-2-4 A-6	M M	5.00	No Distresses Present	326771.4	1996115.2
-L- 21+95 NB ACCEL	6.0 Fill	10.30	6.40	2.8 FWO	C	27.00	18.00	9.00	N/A	N/A	Asphalt ABC	0.0 - 4.0' = Roadway Embankment, Tan and Orange, Sandy Clay	REF S-3	A-6	M	4.00	No Distresses Present	327631.9	1996336.6
-L- 21+95 NB OSS	6.0 Fill	N/A	6.40	3.0 FWO	C	31.00	20.50	10.50	N/A	N/A	Asphalt ABC	0.0 - 4.0' = Roadway Embankment, Orange, Sandy Clay	S-3	A-6	M	4.00	No Distresses Present	327628.8	1996342.4
-L- 35+90 NB ISS	1.5 Fill	N/A	13.00	6.2 FYI	C	12.75	12.75	N/A	N/A	N/A	Asphalt	0.0 - 0.8' = Roadway Embankment, Brown, Silty Sand 0.8 - 1.5' = Roadway Embankment, Brown and Orange, Sandy Silt 1.5 - 5.0' = Coastal Plain, Tan and Orange, Clayey Silt	REF S-6 S-80 REF S-5	A-2-4 A-4 A-4	M M M	5.00	No Distresses Present	328990.3	1996655.6
-L- 35+90 NB OSL	0.8 Fill	12.00	11.50	2.0 FWO	C	16.00	16.00	N/A	N/A	N/A	Asphalt	0.0 - 0.8' = Roadway Embankment, Brown, Silty Sand 0.8 - 4.0' = Coastal Plain, Tan and Orange, Clayey Silt	S-6 REF S-5	A-2-4 A-4	M M	4.00	No Distresses Present	328988.1	1996685.5
-L- 35+90 NB OSS	AG	N/A	11.50	7.0 FWO	C	25.75	16.75	N/A	9.00	N/A	Asphalt STBC	0.0 - 4.0' = Coastal Plain, Tan and Orange, Clayey Silt	S-4 S-5	A-2-4 A-4	M M	4.00	No Distresses Present	328982.1	1996695.2
-L- 62+40 NB ISL	3.5 Fill	12.00	12.50	2.4 FYI	C	16.50	16.50	N/A	N/A	N/A	Asphalt	0.0 - 1.0' = Roadway Embankment, Gray, Sandy Silt 1.0 - 3.5' = Roadway Embankment, Gray and Brown, Sandy-Silty Clay 3.5 - 5.0' = Coastal Plain, Dark Gray, Sandy-Clayey Silt	REF S-7 S-81 REF S-8	A-4 A-6 A-4	M M M	5.00	No Distresses Present	331547.1	1997342.2
-L- 62+40 NB ISS	3.5 Fill	N/A	12.50	6.0 FYI	C	13.25	13.25	N/A	N/A	N/A	Asphalt	0.0 - 0.8' = Roadway Embankment, Gray, Sandy Silt 0.8 - 3.5' = Roadway Embankment, Gray and Brown, Sandy-Silty Clay 3.5 - 5.0' = Coastal Plain, Dark Gray, Sandy-Clayey Silt	REF S-7 REF S-81 REF S-8	A-4 A-6 A-4	M M M	5.00	No Distresses Present	331552.7	1997331.7
-L- 62+40 NB OSS	2.0 Fill	N/A	10.60	4.8 FWO	C	26.00	18.00	8.00	N/A	N/A	Asphalt ABC	0.0 - 2.0' = Roadway Embankment, Gray, Sandy Silt 2.0 - 4.0' = Coastal Plain, Dark Gray, Sandy-Clayey Silt	S-7 S-8	A-4 A-4	M M	4.00	No Distresses Present	331543.0	1997366.7
-L- 81+00 NB DECEL	1.0 Cut	12.00	11.00	3.0 FWO	C	27.00	18.50	N/A	8.50	N/A	Asphalt STBC	0.0 - 4.0' = Coastal Plain, Brown and Orange, Sandy-Silty Clay	S-10 S-9	A-1-a A-6	M M	4.00	No Distresses Present	333345.2	1997846.8
-L- 81+00 NB ISS	1.0 Fill	N/A	12.80	6.0 FYI	C	12.25	12.25	N/A	N/A	N/A	Asphalt	0.0 - 1.0' = Roadway Embankment, Brown, Silty Sand 1.0 - 5.0' = Coastal Plain, Tan and Orange, Sandy-Silty Clay	REF S-6 S-82	A-2-4 A-7-6	W M	5.00	No Distresses Present	333369.1	1997812.9
-L- 81+00 NB OSL	1.0 Cut	12.00	11.00	3.0 FWO	C	13.75	13.75	N/A	N/A	N/A	Asphalt	0.0 - 1.4' = Coastal Plain, Brown, Silty Sand 1.4 - 5.0' = Coastal Plain, Tan and Orange, Sandy-Silty Clay	REF S-6 S-11	A-2-4 A-6	M M	5.00	No Distresses Present	333317.6	1997828.4
-L- 81+00 NB OSS	1.0 Cut	N/A	7.00	3.2 FWO	C	27.00	18.50	N/A	8.50	N/A	Asphalt ABC	0.0 - 4.0' = Coastal Plain, Brown and Orange, Sandy-Silty Clay	S-10 S-9	A-1-a A-6	M M	4.00	No Distresses Present	333357.0	1997856.8
-L- 108+80 NB ACCEL	AG	12.00	3.00	3.0 FWO	C	11.50	11.50	N/A	N/A	N/A	Asphalt	0.0 - 2.0' = Coastal Plain, Tan and Orange, Silty-Clayey Sand 2.0 - 4.5' = Coastal Plain, Orange, Sandy Clay	S-12 S-13	A-2-4 A-7-6	M M	4.50	No Distresses Present	336021.3	1998571.5

Notes:

OSL = Outside Lane
ISL = Inside Lane
CL = Center Lane
LTL = Left Turn Lane
WP = Wheel Path
IWP = Inside Wheel Path
OWP = Outside Wheel Path
C&G = Curb & Gutter
OSS = Outside Shoulder
ISS = Inside Shoulder
GM = Grass Median
OGS = Outside Grass Shoulder
PS = Paved Shoulder
RT LN = Right Lane
LT LN = Left Lane
COL = Collector Lane
CTL = Center Turn Lane
RTL = Right Turn Lane
DECEL = Deceleration Lane
ACCEL = Acceleration Lane
RT = Right
LT = Left
(I) = Inside
(O) = Outside
NB = Northbound
SB = Southbound
FW = From White
FY = From Yellow
FCG = From Curb & Gutter
AG = At Grade
EOP = Edge of Pavement

Soil Type Base Course: Majority of STBC found within project limits is Rounded Gravel with fine and coarse sand. Limited silt and clay particles.

S&ME, Inc.
3201 Spring Forest Road
Raleigh, North Carolina 27616

PAVEMENT INVESTIGATION DATA SHEET

Project:	47533.1.2	County:	Robeson	Date:	12/03/2019 - 12/19/2019
TIP:	I-5987A	Route:	I-95	Notes By:	D. Strother/J. Swartley/M. Rawls/V. Mitchev

		Width				Thickness						Subgrade						GPS Coordinates	
Position (Sta., Lane, Shldr.)	Cut/Fill (Est. Of Amount) (ft)	Lane(s) (ft)	Shoulder(s) (ft)	Offset Distance (ft)	Crown "C" or Super "S"	Gross to Top of Soil (in)	Asphalt (in)	ABC (in)	Soil Type Base Course (in)	Stabilized Soil Subgrade (in)	Pavement Layering	Description	Sample Number	AASHTO Classification	Soil Moisture	Probe Depth (ft)	Asphalt Notes	Northing	Easting
-L- 108+80 NB OSS	AG	N/A	3.00	2.0 FWO	C	11.00	11.00	N/A	N/A	N/A	Asphalt	0.0 - 2.0' = Coastal Plain, Tan and Orange, Silty-Clayey Sand 2.0 - 4.5' = Coastal Plain, Orange, Sandy Clay	REF S-12 REF S-13	A-2-4 A-7-6	M M	4.50	No Distresses Present	336021.9	1998577.6
-L- 118+45 NB ISL	AG	12.20	3.70	2.0 FYI	C	15.75	13.25	N/A	2.50	N/A	Asphalt STBC	0.0 - 1.0' = Coastal Plain, Orange and Gray, Silty-Clayey Sand 1.0 - 5.0' = Coastal Plain, Orange, Silty-Clayey Sand	REF S-83 REF S-84	A-2-4 A-2-4	M M	5.00	No Distresses Present	336964.4	1998791.3
-L- 118+45 NB ISS	AG	N/A	3.70	2.0 FYI	C	10.25	8.25	N/A	2.00	N/A	Asphalt STBC	0.0 - 1.0' = Coastal Plain, Orange and Gray, Silty-Clayey Sand 1.0 - 5.0' = Coastal Plain, Orange, Silty-Clayey Sand	S-83 S-84	A-2-4 A-2-4	M M	5.00	No Distresses Present	336966.9	1998784.5
-L- 142+45 NB ISS	7.0 Fill	N/A	4.00	2.9 FYI	C	11.00	8.00	N/A	3.00	N/A	Asphalt STBC	0.0 - 1.0' = Roadway Embankment, Brown and Tan, Silty Sand 1.0 - 2.0' = Roadway Embankment, Tan and Orange, Silty-Clayey Sand 2.0 - 5.0' = Roadway Embankment, Tan, Gray and Orange, Clayey Sand	REF S-14 REF S-15 S-85	A-2-4 A-2-4 A-2-6	M M M	5.00	No Distresses Present	339273.2	1999432.7
-L- 142+45 NB OSL	7.0 Fill	12.00	11.00	3.0 FWO	C	16.50	12.00	N/A	4.50	N/A	Asphalt STBC	0.0 - 0.8' = Roadway Embankment, Brown and Tan, Silty Sand 0.8 - 4.5' = Roadway Embankment, Tan and Orange, Silty-Clayey Sand	REF S-14 REF S-15	A-2-4 A-2-4	M M	4.50	Low Severity Transverse Cracking	339275.1	1999454.5
-L- 142+45 NB OSS	7.0 Fill	N/A	11.00	6.2 FWO	C	12.25	7.25	N/A	5.00	N/A	Asphalt STBC	0.0 - 1.0' = Roadway Embankment, Brown and Tan, Silty Sand 1.0 - 4.5' = Roadway Embankment, Tan and Orange, Silty-Clayey Sand	S-14 S-15	A-2-4 A-2-4	M M	4.50	Moderate Severity Longitudinal Cracking 6" from EOP	339268.7	1999465.1
-L- 168+65 NB ISL	8.0 Fill	11.50	4.00	3.0 FYI	C	15.50	12.50	N/A	3.00	N/A	Asphalt STBC	0.0 - 2.0' = Roadway Embankment, Brown and Orange, Silty-Clayey Sand 2.0 - 5.0' = Roadway Embankment, Tan and Orange, Silty-Clayey Sand	REF S-86 REF S-15	A-2-4 A-2-4	M M	5.00	Moderate Severity Longitudinal Cracking at Paving Joint, Low Severity Transverse Cracking at Paving Joint	341796.6	2000141.8
-L- 168+65 NB ISS	6.0 Fill	N/A	4.00	2.3 FYI	C	10.50	8.00	N/A	2.50	N/A	Asphalt STBC	0.0 - 2.0' = Roadway Embankment, Brown and Orange, Silty-Clayey Sand 2.0 - 5.0' = Roadway Embankment, Tan and Orange, Silty-Clayey Sand	S-86 REF S-15	A-2-4 A-2-4	M M	5.00	No Distresses Present	341801.2	2000132.4
-L- 168+65 NB OSS	8.0 Fill	N/A	11.00	5.8 FWO	C	11.00	6.50	N/A	4.50	N/A	Asphalt STBC	0.0 - 1.0' = Roadway Embankment, Gray and Black, Silty Sand 1.0 - 4.5' = Roadway Embankment, Tan and Orange, Silty-Clayey Sand	S-17 REF S-15	A-2-4 A-2-4	M M	4.50	Low Severity Transverse Cracking in OSL	341794.4	2000169.3
-L- 196+30 NB ISS	AG	N/A	4.10	2.5 FYI	C	9.00	6.75	N/A	2.25	N/A	Asphalt STBC	0.0 - 5.0' = Coastal Plain, Brown, Tan and Orange, Silty-Clayey Sand	S-87	A-2-4	M	5.00	No Distresses Present	344508.7	2000490.7
-L- 196+30 NB OSL	AG	12.00	11.00	3.0 FWO	C	14.75	11.25	N/A	3.50	N/A	Asphalt STBC	0.0 - 4.5' = Coastal Plain, Tan and Orange, Silty-Clayey Sand	S-18	A-2-6	M	4.50	Low Severity Transverse Cracking, Low Severity Longitudinal Cracking in OWP	344542.6	2000518.9
-L- 196+30 NB OSS	1.2 Fill	N/A	11.00	5.5 FWO	C	10.00	6.50	N/A	3.50	N/A	Asphalt STBC	0.0 - 1.2' = Roadway Embankment, Gray and Brown, Silty Sand 1.2 - 4.5' = Coastal Plain, Tan and Orange, Silty-Clayey Sand	REF S-17 REF S-18	A-2-4 A-2-6	M M	4.50	Low Severity Transverse Cracking	344537.7	2000525.3
-L- 215+50 NB DECEL	6.0 Fill	10.50	5.80	4.0 FWO	C	17.50	17.50	N/A	N/A	N/A	Asphalt	0.0 - 4.5' = Roadway Embankment, Brown and Gray, Silty Sand	REF S-19	A-2-4	M	4.50	Moderate Severity Longitudinal Cracking @ Inside Pavement Joint	346461.0	2000622.6
-L- 215+50 NB ISL	6.0 Fill	11.30	4.30	2.0 FYI	C	23.00	14.50	N/A	N/A	8.50	Asphalt Stab. Subgr. Soil	0.0 - 2.0' = Roadway Embankment, Brown and Gray, Silty Sand 2.0 - 5.0' = Roadway Embankment, Brown, Tan and Gray, Clayey-Silty Sand	REF S-19 REF S-88	A-2-4 A-2-6	M M	5.00	Moderate Severity Longitudinal Cracking at Paving Joint, Low Severity Transverse Cracking at Paving Joint	346459.2	2000597.2
-L- 215+50 NB ISS	6.0 Fill	N/A	4.30	2.2 FYI	C	7.75	7.75	N/A	N/A	N/A	Asphalt	0.0 - 4.0' = Roadway Embankment, Brown and Gray, Silty Sand 4.0 - 5.0' = Roadway Embankment, Brown, Tan and Gray, Clayey-Silty Sand	REF S-19 S-88	A-2-4 A-2-6	M M	5.00	Moderate Severity Edge Cracking 6.0" from EOP	346459.9	2000591.8
-L- 215+50 NB OSS	6.0 Fill	N/A	5.80	3.3 FWO	C	17.50	17.50	N/A	N/A	N/A	Asphalt	0.0 - 4.5' = Roadway Embankment, Brown and Gray, Silty Sand	S-19	A-2-4	M	4.50	Low Severity Longitudinal Cracking 1' from EOP	346458.9	2000629.5

Notes:

OSL = Outside Lane
ISL = Inside Lane
CL = Center Lane
LTL = Left Turn Lane
WP = Wheel Path
IWP = Inside Wheel Path
OWP = Outside Wheel Path
C&G = Curb & Gutter
OSS = Outside Shoulder
ISS = Inside Shoulder
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OGS = Outside Grass Shoulder
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RT LN = Right Lane
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RTL = Right Turn Lane
DECEL = Deceleration Lane
ACCEL = Acceleration Lane
RT = Right
LT = Left
(I) = Inside
(O) = Outside
NB = Northbound
SB = Southbound
FW = From White
FY = From Yellow
FCG = From Curb & Gutter
AG = At Grade
EOP = Edge of Pavement

Soil Type Base Course: Majority of STBC found within project limits is Rounded Gravel with fine and coarse sand. Limited silt and clay particles.

S&ME, Inc.
3201 Spring Forest Road
Raleigh, North Carolina 27616

PAVEMENT INVESTIGATION DATA SHEET

Project:	47533.1.2	County:	Robeson	Date:	12/03/2019 - 12/19/2019
TIP:	I-5987A	Route:	I-95	Notes By:	D. Strother/J. Swartley/M. Rawls/V. Mitchev

		Width				Thickness						Subgrade						GPS Coordinates	
Position (Sta., Lane, Shldr.)	Cut/Fill (Est. Of Amount) (ft)	Lane(s) (ft)	Shoulder(s) (ft)	Offset Distance (ft)	Crown "C" or Super "S"	Gross to Top of Soil (in)	Asphalt (in)	ABC (in)	Soil Type Base Course (in)	Stabilized Soil Subgrade (in)	Pavement Layering	Description	Sample Number	AASHTO Classification	Soil Moisture	Probe Depth (ft)	Asphalt Notes	Northing	Easting
-L- 247+60 NB ACCEL	15.0 Fill	10.50	6.50	4.0 FWO	C	14.50	14.50	N/A	N/A	N/A	Asphalt	0.0 - 4.5' = Roadway Embankment, Orange and Gray, Clayey-Silty Sand	S-20	A-2-4	M	4.50	Low Severity Longitudinal Cracking 4' FWO, Low Severity Transverse Cracking	349667.0	2000780.5
-L- 247+60 NB ISS	15.0 Fill	N/A	4.10	2.4 FYI	C	8.00	6.25	N/A	1.75	N/A	Asphalt STBC	0.0 - 5.0' = Roadway Embankment, Orange and Gray, Clayey-Silty Sand	REF S-20	A-2-4	M	5.00	No Distresses Present in Shoulder, Moderate Severity Longitudinal Cracking at Paving Joint	349673.2	2000748.8
-L- 247+60 NB OSL	15.0 Fill	11.40	6.50	2.5 FWO	C	16.50	12.50	N/A	4.00	N/A	Asphalt STBC	0.0 - 4.5' = Roadway Embankment, Orange and Gray, Clayey-Silty Sand	REF S-20	A-2-4	M	4.50	Low Severity Transverse Cracking, Low Severity Longitudinal Cracking	349666.2	2000770.5
-L- 247+60 NB OSS	15.0 Fill	N/A	6.50	2.8 FWO	C	12.00	5.50	N/A	6.50	N/A	Asphalt STBC	0.0 - 4.5' = Roadway Embankment, Orange and Gray, Clayey-Silty Sand	REF S-20	A-2-4	M	4.50	Low Severity Transverse Cracking, Core Cracked Top Down 1.75"	349661.1	2000789.4
-L- 277+70 NB ISL	1.0 Fill	11.50	3.20	1.2 FYI	C	21.50	13.00	N/A	N/A	8.50	Asphalt Stab. Subgr. Soil	0.0 - 1.0' = Roadway Embankment, Gray, Clayey Sand 1.0 - 5.0' = Coastal Plain, Tan and Orange, Clayey Sand	S-48 S-49	A-2-6 A-2-6	W W	5.00	Moderate Severity Longitudinal at OSL Paving Joint	352681.1	2000790.4
-L- 277+70 NB ISS	1.0 Fill	N/A	3.20	1.5 FYI	C	6.00	6.00	N/A	N/A	N/A	Asphalt	0.0 - 1.0' = Roadway Embankment, Gray, Clayey Sand 1.0 - 5.0' = Coastal Plain, Gray, Tan and Orange, Clayey Sand	REF S-48 REF S-49	A-2-6 A-2-6	W M	5.00	No Distresses Present, Recently Resurfaced	352682.2	2000785.4
-L- 277+70 NB OSS	1.8 Fill	N/A	11.00	6.2 FWO	C	9.00	5.50	N/A	3.50	N/A	Asphalt STBC	0.0 - 1.8' = Roadway Embankment, Orange and Gray, Clayey-Silty Sand 1.8 - 4.5' = Coastal Plain, Gray, Clayey Sand	REF S-20 S-21	A-2-4 A-2-6	M W	4.50	No Distresses Present	352676.6	2000817.6
-L- 299+40 NB ACCEL	7.0 Fill	10.30	9.10	3.4 FWO	C	21.00	14.25	N/A	N/A	6.75	Asphalt Stab. Subgr. Soil	0.0 - 1.0' = Roadway Embankment, Tan and Orange, Silty-Clayey Sand 1.0 - 4.0' = Roadway Embankment, Gray, Silty Sand	S-23 REF S-22	A-2-4 A-2-4	M M	4.00	Moderate Severity Longitudinal Cracking, Moderate Severity Transverse Cracking, Core Cracked Top Down 1.75"	354849.2	2000832.2
-L- 299+40 NB ISS	7.0 Fill	N/A	3.20	1.8 FYI	C	6.75	6.75	N/A	N/A	N/A	Asphalt	0.0 - 1.0' = Roadway Embankment, Tan and Orange, Silty-Clayey Sand 1.0 - 5.0' = Roadway Embankment, Gray, Silty Sand	REF S-23 REF S-22	A-2-4 A-2-4	M M	5.00	No Distresses Present, Recently Resurfaced	354856.0	2000805.0
-L- 299+40 NB OSL	7.0 Fill	11.50	N/A	2.8 FWO	C	22.50	14.50	N/A	N/A	8.00	Asphalt Stab. Subgr. Soil	0.0 - 4.0' = Roadway Embankment, Gray, Silty Sand	S-22	A-2-4	M	4.00	Moderate To High Severity Transverse Cracking, Low Severity Longitudinal Cracking	354845.4	2000841.5
-L- 299+40 NB OSS	7.0 Fill	N/A	9.10	4.8 FWO	C	23.50	13.00	N/A	N/A	10.50	Asphalt Stab. Subgr. Soil	0.0 - 1.0' = Roadway Embankment, Tan and Orange, Silty-Clayey Sand 1.0 - 4.0' = Roadway Embankment, Gray, Silty Sand	REF S-23 REF S-22	A-2-4 A-2-4	M M	4.00	Low Severity Longitudinal Cracking, High Severity Transverse Cracking, Core Cracked Top Down 1.75"	354847.1	2000841.5
-L- 322+95 NB ISL	1.0 Fill	11.40	3.20	2.0 FYI	C	16.00	11.50	N/A	4.50	N/A	Asphalt STBC	0.0 - 1.0' = Roadway Embankment, Tan and Orange, Silty-Clayey Sand 1.0 - 5.0' = Coastal Plain, Gray, Silty Sand	REF S-50 REF S-24	A-2-4 A-2-4	M M	5.00	Low Severity Transverse Cracking, Moderate Severity Longitudinal Cracking at OSL Paving Joint, Core Cracked Top Down 4.5"	357200.6	2000829.2
-L- 322+95 NB ISS	1.0 Fill	N/A	3.20	2.0 FYI	C	7.00	7.00	N/A	N/A	N/A	Asphalt	0.0 - 1.0' = Roadway Embankment, Tan and Orange, Silty-Clayey Sand 1.0 - 5.0' = Coastal Plain, Gray, Silty Sand	S-50 REF S-24	A-2-4 A-2-4	M M	5.00	Low Severity Transverse Cracking	357201.2	2000825.5
-L- 322+95 NB OSS	0.8 Fill	N/A	11.20	6.0 FWO	C	10.00	6.50	N/A	3.50	N/A	Asphalt STBC	0.0 - 0.8' = Roadway Embankment, Tan and Orange, Silty-Clayey Sand 0.8 - 4.5' = Coastal Plain, Gray, Silty Sand	REF S-23 S-24	A-2-4 A-2-4	M M	4.50	Low Severity Longitudinal Cracking	357198.9	2000857.5
-L- 349+70 NB ISS	5.0 Fill	N/A	3.60	2.0 FYI	C	11.50	8.50	N/A	3.00	N/A	Asphalt STBC	0.0 - 1.3' = Roadway Embankment, Tan and Orange, Silty-Clayey Sand 1.3 - 5.0' = Roadway Embankment, Gray, Silty-Clayey Sand	REF S-50 S-51	A-2-4 A-2-4	M M	5.00	No Distresses Present, Recently Resurfaced	359889.0	2000846.0
-L- 349+70 NB OSL	5.0 Fill	11.70	11.00	2.0 FWO	C	15.00	12.00	N/A	3.00	N/A	Asphalt STBC	0.0 - 1.0' = Roadway Embankment, Tan and Orange, Silty-Clayey Sand 1.0 - 4.5' = Roadway Embankment, Gray, Silty-Clayey Sand	REF S-25 REF S-26	A-2-4 A-2-4	M M	4.50	Low Severity Transverse Cracking, High Severity Longitudinal Cracking at Inside Pavement Joint, Bottom of Core Broke Apart	359873.0	2000868.3

Notes:

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ACCEL = Acceleration Lane
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(I) = Inside
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NB = Northbound
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FW = From White
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AG = At Grade
EOP = Edge of Pavement

Soil Type Base Course: Majority of STBC found within project limits is Rounded Gravel with fine and coarse sand. Limited silt and clay particles.

S&ME, Inc.
3201 Spring Forest Road
Raleigh, North Carolina 27616

PAVEMENT INVESTIGATION DATA SHEET

Project:	47533.1.2	County:	Robeson	Date:	12/03/2019 - 12/19/2019
TIP:	I-5987A	Route:	I-95	Notes By:	D. Strother/J. Swartley/M. Rawls/V. Mitchev

		Width				Thickness						Subgrade						GPS Coordinates	
Position (Sta., Lane, Shldr.)	Cut/Fill (Est. Of Amount) (ft)	Lane(s) (ft)	Shoulder(s) (ft)	Offset Distance (ft)	Crown "C" or Super "S"	Gross to Top of Soil (in)	Asphalt (in)	ABC (in)	Soil Type Base Course (in)	Stabilized Soil Subgrade (in)	Pavement Layering	Description	Sample Number	AASHTO Classification	Soil Moisture	Probe Depth (ft)	Asphalt Notes	Northing	Easting
-L- 349+70 NB OSS	5.0 Fill	N/A	11.00	5.0 FWO	C	10.75	7.25	N/A	3.50	N/A	Asphalt STBC	0.0 - 0.8' = Roadway Embankment, Tan and Orange, Silty-Clayey Sand 0.8 - 4.5' = Roadway Embankment, Gray, Silty-Clayey Sand	S-25 S-26	A-2-4 A-2-4	M M	4.50	No Distresses Present	359876.6	2000879.7
-L- 376+35 NB ISL	2.5 Fill	11.00	3.80	2.0 FYI	C	16.00	12.00	N/A	4.00	N/A	Asphalt STBC	0.0 - 2.5' = Roadway Embankment, Tan and Orange, Silty-Clayey Sand 2.5 - 5.0' = Coastal Plain, Brown and Gray, Silty-Clayey Sand	REF S-25 REF S-52	A-2-4 A-2-6	M M	5.00	Low Severity Transverse Cracking, Low Severity Longitudinal Cracking in OWP, Core Cracked Top Down 2.5"	362540.2	2000877.3
-L- 376+35 NB ISS	2.5 Fill	N/A	3.80	2.2 FYI	C	12.00	8.00	N/A	4.00	N/A	Asphalt STBC	0.0 - 2.5' = Roadway Embankment, Tan and Orange, Silty-Clayey Sand 2.5 - 5.0' = Coastal Plain, Brown and Gray, Silty-Clayey Sand	REF S-25 S-52	A-2-4 A-2-6	M M	5.00	No Distresses Present, Recently Resurfaced	362539.5	2000873.1
-L- 376+35 NB OSS	2.5 Fill	N/A	11.00	7.0 FWO	C	10.50	7.25	N/A	3.25	N/A	Asphalt STBC	0.0 - 0.8' = Roadway Embankment, Tan and Orange, Silty-Clayey Sand 0.8 - 2.5' = Roadway Embankment, Gray, Silty Sand 2.5 - 4.5' = Coastal Plain, Tan and Orange, Sandy-Silty Clay	REF S-23 REF S-24 S-27	A-2-4 A-2-4 A-7-6	M M M	4.50	High Severity Longitudinal Cracking at Pavement Joint on White Line	362542.2	2000902.3
-L- 402+25 NB ISS	8.0 Fill	N/A	4.00	2.4 FYI	C	10.50	7.00	N/A	3.50	N/A	Asphalt STBC	0.0 - 1.2' = Roadway Embankment, Tan and Orange, Silty-Clayey Sand 1.2 - 5.0' = Roadway Embankment, Orange and Gray, Sandy-Silty Clay	S-53 S-54	A-2-4 A-6	M M	5.00	No Distresses Present in Shoulder, Moderate Severity Transverse Cracking in ISL, Moderate Severity Longitudinal Cracking in ISL	365151.9	2000894.3
-L- 402+25 NB OSL	8.0 Fill	11.00	11.00	2.2 FWO	C	15.75	11.75	N/A	4.00	N/A	Asphalt STBC	0.0 - 0.8' = Roadway Embankment, Tan and Orange, Silty-Clayey Sand 0.8 - 4.5' = Roadway Embankment, Gray, Silty Sand	REF S-25 S-28	A-2-4 A-2-6	M M	4.50	Low Severity Transverse Cracking, Moderate Severity Longitudinal Cracking at Both Pavement Joints on White Lines	365124.1	2000914.2
-L- 402+25 NB OSS	8.0 Fill	N/A	11.00	5.0 FWO	C	10.00	7.00	N/A	3.00	N/A	Asphalt STBC	0.0 - 0.8' = Roadway Embankment, Tan and Orange, Silty-Clayey Sand 0.8 - 4.5' = Roadway Embankment, Gray, Silty Sand	REF S-25 REF S-28	A-2-4 A-2-6	M M	4.50	Moderate Severity Longitudinal Cracking at Inside Pavement Joint	365128.1	2000921.4
-L- 429+40 NB ISL	AG	11.20	4.00	3.0 FYI	C	15.00	12.00	N/A	3.00	N/A	Asphalt STBC	0.0 - 2.0' = Coastal Plain, Orange and Brown, Silty-Clayey Sand 2.0 - 5.0' = Coastal Plain, Orange and Gray, Sandy-Silty Clay	S-55 REF S-54	A-2-6 A-6	M M	5.00	Low Severity Transverse Cracking, Low Severity Longitudinal Cracking in both WP, Moderate Severity Longitudinal Cracking at Paving Joint	367850.6	2000934.1
-L- 429+40 NB ISS	AG	N/A	4.00	2.3 FYI	C	10.50	8.00	N/A	2.50	N/A	Asphalt STBC	0.0 - 2.0' = Coastal Plain, Orange and Brown, Silty-Clayey Sand 2.0 - 5.0' = Coastal Plain, Orange and Gray, Sandy-Silty Clay	REF S-55 REF S-54	A-2-6 A-6	M M	5.00	No Distresses Present	367848.4	2000931.5
-L- 429+40 NB OSS	AG	11.00	11.00	4.0 EOP	C	10.00	7.00	N/A	3.00	N/A	Asphalt STBC	0.0 - 2.5' = Coastal Plain, Orange, Clayey Sand 2.5 - 5.0' = Coastal Plain, Gray, Silty Clay	REF S-55 REF S-54	A-2-6 A-6	M M	5.00	Low Severity Transverse Cracking, Pothole on White Line	367845.3	2000958.7
-L- 454+40 NB ISS	3.5 Fill	N/A	3.80	2.0 FYI	C	10.00	6.50	N/A	3.50	N/A	Asphalt STBC	0.0 - 3.5' = Roadway Embankment, Tan and Orange, Silty-Clayey Sand 3.5 - 5.0' = Coastal Plain, Gray, Clayey Sand	REF S-29 REF S-30	A-2-4 A-2-6	M M	5.00	No Distresses Present in Shoulder, Moderate Severity Transverse Cracking at IWP, Moderate Severity Longitudinal Cracking at IWP	370336.2	2001097.7
-L- 454+40 NB OSL	3.0 Fill	12.00	10.50	2.5 FWO	C	16.00	12.50	N/A	3.50	N/A	Asphalt STBC	0.0 - 3.0' = Roadway Embankment, Tan and Orange, Silty-Clayey Sand 3.0 - 4.5' = Coastal Plain, Gray, Clayey Sand	S-29 S-30	A-2-4 A-2-6	M M	4.50	No Distresses Present	370334.1	2001119.7
-L- 454+40 NB OSS	3.0 Fill	N/A	10.50	3.4 FWO	C	10.75	7.75	N/A	3.00	N/A	Asphalt STBC	0.0 - 0.8' = Roadway Embankment, Tan and Orange, Silty-Clayey Sand 0.8 - 3.0' = Roadway Embankment, Dark Gray, Silty Sand 3.0 - 4.5' = Coastal Plan, Gray, Clayey Sand	REF S-25 S-31 REF S-30	A-2-4 A-2-4 A-2-6	M M M	4.50	Low Severity Transverse Cracking, Low Severity Longitudinal Cracking	370340.4	2001131.3
-L- 482+45 NB ISL	5.0 Fill	11.10	4.80	2.0 FWI	C	15.00	11.00	N/A	4.00	N/A	Asphalt STBC	0.0 - 5.0' = Roadway Embankment, Orange, Silty Sand	REF S-202	A-2-4	M	5.00	Minor Separation at Interior Travel Lane Stripe	373137.2	2001297.1
-L- 482+45 NB ISS	5.0 Fill	11.10	4.80	0.5 EOP	C	13.50	8.50	N/A	5.00	N/A	Asphalt STBC	0.0 - 5.0' = Roadway Embankment, Orange, Silty Sand	S-202 (0.0 - 3.0)	A-2-4	M	5.00	Minor Separation at Interior Travel Lane Stripe	373135.7	2001295.0
-L- 482+45 NB OSS	2.0 Fill	N/A	10.10	5.8 FWO	C	9.50	7.50	N/A	2.00	N/A	Asphalt STBC	0.0 - 0.8' = Roadway Embankment, Tan and Orange, Silty-Clayey Sand 0.8 - 2.0' = Roadway Embankment, Gray, Silty Sand 2.0 - 4.5' = Coastal Plain, Tan and Orange, Silty-Clayey Sand	REF S-25 REF S-31 REF S-29	A-2-4 A-2-4 A-2-4	M M M	4.50	Moderate Severity Transverse Cracking at Inside Pavement Joint	373124.3	2001326.5

Notes:

OSL = Outside Lane; ISL = Inside Lane; CL = Center Lane; LTL = Left Turn Lane

WP = Wheel Path; IWP = Inside Wheel Path; OWP = Outside Wheel Path; C&G = Curb & Gutter

OSS = Outside Shoulder; ISS = Inside Shoulder; GM = Grass Median; OGS = Outside Grass Shoulder

PS = Paved Shoulder; RT LN = Right Lane; LT LN = Left Lane; COL = Collector Lane

CTL = Center Turn Lane; RTL = Right Turn Lane; DECEL = Deceleration Lane; ACCEL = Acceleration Lane

RT = Right; LT = Left; (I) = Inside; (O) = Outside

NB = Northbound; SB = Southbound; FW = From White; FY = From Yellow

FCG = From Curb & Gutter; AG = At Grade; EOP = Edge of Pavement

Soil Type Base Course: Majority of STBC found within project limits is Rounded Gravel with fine and coarse sand. Limited silt and clay particles.

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Raleigh, North Carolina 27616

PAVEMENT INVESTIGATION DATA SHEET

Project:	47533.1.2	County:	Robeson	Date:	12/03/2019 - 12/19/2019
TIP:	I-5987A	Route:	I-95	Notes By:	D. Strother/J. Swartley/M. Rawls/V. Mitchev

		Width				Thickness						Subgrade						GPS Coordinates	
Position (Sta., Lane, Shldr.)	Cut/Fill (Est. Of Amount) (ft)	Lane(s) (ft)	Shoulder(s) (ft)	Offset Distance (ft)	Crown "C" or Super "S"	Gross to Top of Soil (in)	Asphalt (in)	ABC (in)	Soil Type Base Course (in)	Stabilized Soil Subgrade (in)	Pavement Layering	Description	Sample Number	AASHTO Classification	Soil Moisture	Probe Depth (ft)	Asphalt Notes	Northing	Easting
-L- 24+55 NB OES	5.0 Fill	N/A	N/A	52 CL	C	0.00	N/A	N/A	N/A	N/A	N/A	0.0-3.17' = Roadway Embankment, Orange, Sandy Clay	Bulk 1 OES NB	A-2-4	M	3.17	N/A	327879.7	1996414.2
-L- 60+65 NB OES	2.0 Fill	N/A	N/A	53 CL	C	0.00	N/A	N/A	N/A	N/A	N/A	0.0-2.67' = Roadway Embankment, Gray, Silty-Clayey Sand	Bulk 2 OES NB	A-1-a	M	2.67	N/A	331467.2	1997363.1
-L- 167+25 NB OES	7.0 Fill	N/A	N/A	94 CL	C	0.00	N/A	N/A	N/A	N/A	N/A	0.0-3.58' = Roadway Embankment, Tan and Orange, Silty-Clayey Sand	Bulk 3 OES NB	A-2-4	M	3.58	N/A	341657.4	2000142.5
-L- 274+05 NB OES	2.0 Fill	N/A	N/A	64 CL	C	0.00	N/A	N/A	N/A	N/A	N/A	0.0-2.5' = Roadway Embankment, Orange and Gray, Clayey-Silty Sand	Bulk 4 OES NB	A-2-4	M	2.50	N/A	352312.7	2000833.7
-L- 324+50 NB IES	1.0 Fill	N/A	N/A	3 CL	C	0.00	N/A	N/A	N/A	N/A	N/A	0.0-3.25' = Roadway Embankment, Tan and Orange, Silty-Clayey Sand	Bulk 8 IES NB	A-2-4	M	3.25	N/A	357356.3	2000816.3
-L- 378+15 NB OES	2.0 Fill	N/A	N/A	58 CL	C	0.00	N/A	N/A	N/A	N/A	N/A	0.0-2.5' = Roadway Embankment, Tan and Orange, Silty-Clayey Sand	Bulk 5 OES NB	A-2-6	M	2.50	N/A	362722.4	2000917.5
-L- 430+35 NB IES	AG	N/A	N/A	8 CL	C	0.00	N/A	N/A	N/A	N/A	N/A	0.0-2.83' = Coastal Plain, Orange and Brown, Silty-Clayey Sand	Bulk 7 IES NB	A-2-6	M	2.83	N/A	367943.0	2000924.3
-L- 483+75 NB OES	1.5 Fill	N/A	N/A	70 CL	C	0.00	N/A	N/A	N/A	N/A	N/A	0.0-2.5' = Roadway Embankment, Tan and Orange, Silty-Clayey Sand	Bulk 6 OES NB	A-2-4	M	2.50	N/A	373264.6	2001350.5

Notes:

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TIP:	I-5987A	Route:	I-95	Notes By:	D. Strother/J. Swartley/M. Rawls/V. Mitchev

		Width				Thickness							Subgrade						GPS Coordinates	
Position (Sta., Lane, Shldr.)	Cut/Fill (Est. Of Amount) (ft)	Lane(s) (ft)	Shoulder(s) (ft)	Offset Distance (ft)	Crown "C" or Super "S"	Gross to Top of Soil (in)	Asphalt (in)	Sand Drainage Base (in)	ABC (in)	Soil Type Base Course (in)	Stabilized Soil Subgrade (in)	Pavement Layering	Description	Sample Number	AASHTO Classification	Soil Moisture	Probe Depth (ft)	Asphalt Notes	Northing	Easting
-L- 14+50 SB OSS	AG	12.00	12.50	6.0 EOP	C	13.50	13.50	N/A	N/A	N/A	N/A	Asphalt	0.0 - 5.0' = Coastal Plain, Gray, Silty Sand	REF S-178	A-2-4	M	5.00	No Distresses Present, Recently Resurfaced	326936.6	1996062.7
-L- 14+50 SB OSL	AG	12.00	12.50	2.0 FWO	C	15.50	15.50	N/A	N/A	N/A	N/A	Asphalt	0.0 - 5.0' = Coastal Plain, Gray, Silty Sand	S-178 (0.0 - 3.0)	A-2-4	M	5.00	No Distresses Present, Recently Resurfaced	326935.6	1996070.8
-L- 23+10 SB OSS	4.0 Fill	5.00	7.50	4.0 EOP	C	N/A	22.00	N/A	N/A	N/A	N/A	Asphalt	Not Augered, Potential Utility	N/A	N/A	N/A	N/A	No Distresses Present, Recently Resurfaced	327767.7	1996279.1
-L- 35+90 SB OSS	AG	12.50	12.00	6.5 EOP	C	26.00	17.50	N/A	8.50	N/A	N/A	Asphalt ABC	0.0 - 2.5' = Coastal Plain, Orange, Sandy Silt 2.5 - 5.0' = Coastal Plain, Orange, Silty Clay	S-176 (0.0 - 2.5) S-177 (2.5 - 5.0)	A-4 A-7-6	M	5.00	No Distresses Present, Recently Resurfaced	329003.5	1996611.9
-L- 35+90 SB ISS	AG	N/A	11.25	6.3 FYI	C	11.75	11.75	N/A	N/A	N/A	N/A	Asphalt	0.0 - 4.5' = Coastal Plain, Tan, Gray and Orange, Clayey Sand	REF S-238	A-2-4	M	4.50	No Distresses Present	328986.4	1996644.2
-L- 35+90 SB ISL	AG	11.65	N/A	3.5 FYI	C	13.50	13.50	N/A	N/A	N/A	N/A	Asphalt	0.0 - 4.5' = Coastal Plain, Tan, Gray and Orange, Clayey Sand	S-239 (0.0-1.5)	A-2-4	M	4.50	No Distresses Present	328996.0	1996636.5
-L- 62+35 SB OSS	5.0 Fill	12.00	12.00	5.0 EOP	C	35.00	21.00	N/A	14.00	N/A	N/A	Asphalt ABC	0.0 - 5.0' = Roadway Embankment, Gray, Sandy Clay	S-175 (0.0 - 3.0)	A-6	M-W	5.00	No Distresses Present, Recently Resurfaced	331563.5	1997285.5
-L- 62+35 SB OSL	5.0 Fill	12.00	12.00	2.0 FWO	C	30.00	18.00	N/A	12.00	N/A	N/A	Asphalt ABC	0.0 - 5.0' = Roadway Embankment, Gray, Sandy Clay	REF S-175	A-6	M	5.00	No Distresses Present, Recently Resurfaced	331558.1	1997293.4
-L- 62+35 SB ISS	AG	N/A	11.60	6.5 FYI	C	17.00	13.00	N/A	4.00	N/A	N/A	Asphalt ABC	0.0 - 4.5' = Coastal Plain, Tan, Gray and Orange, Clayey Sand	S-238 (0.0.-1.5)	A-2-4	M	4.50	No Distresses Present	331551.0	1997318.7
-L- 84+65 SB OSS	AG	7.00	6.00	2.5 EOP	C	32.50	10.50	N/A	22.00	N/A	N/A	Asphalt ABC	ABC Office Sample Collected (OS-4) 0.0 - 5.0' = Coastal Plain, Gray, Sandy Clay, Dispersed Fabric	OS-4 S-174 (0.0 - 3.0)	A-6	W	5.00	No Distresses Present, Recently Resurfaced	333722.2	1997834.2
-L- 84+65 SB ACCEL	AG	7.00	6.00	2.0 FWO	C	22.50	9.50	N/A	13.00	N/A	N/A	Asphalt ABC	0.0 - 5.0' = Coastal Plain, Gray, Sandy Clay, Dispersed Fabric	REF S-174	A-6	W	5.00	No Distresses Present, Recently Resurfaced	333719.0	1997840.7
-L- 88+65 SB ISS	1.5 Fill	12.00	13.50	1.5 FWI	C	N/A	12.00	N/A	N/A	N/A	N/A	Asphalt	DCP Only	N/A	N/A	N/A	N/A	No Distresses Present, Recently Resurfaced	334092.6	1997993.8
-L- 88+65 SB ISL	1.5 Fill	12.00	13.50	1.5 FWI	C	13.50	13.50	N/A	N/A	N/A	N/A	Asphalt	0.0 - 1.5' = Roadway Embankment, Tan, Silty Sand 1.5 - 5.0' = Coastal Plain, Tan and Orange, Clayey Sand	REF S-165 S-212 (1.5 - 3.0)	A-2-4 A-2-6	M M	5.00	No Distresses Present, Recently Resurfaced	334097.0	1997988.3
-L- 114+40 SB OSS	7.0 Fill	6.00	8.50	4.0 EOP	C	28.00	20.00	8.00	N/A	N/A	N/A	Asphalt Sand Drainage Base	Sand Drainage Base (8") 0.0 - 3.0' = Roadway Embankment, Gray, Silty Sand 3.0 - 5.0' = Roadway Embankment, Gray, Sandy Silt	S-173 (0.0 - 3.0) REF S-167	A-2-4 A-4	M W	5.00	No Distresses Present, Recently Resurfaced	336597.6	1998608.1
-L- 114+40 SB OSL	7.0 Fill	11.00	8.50	2.0 FWO	C	22.00	16.00	6.00	N/A	N/A	N/A	Asphalt Sand Drainage Base	0.0 - 2.5' = Roadway Embankment, Gray, Silty Sand 2.5 - 5.0' = Roadway Embankment, Gray, Sandy Silt Compacted Silt Base (6"), Stiff, Tan and Yellow, Desiccated	REF S-173 REF S-167 OS-3	A-2-4 A-4	M W	5.00	No Distresses Present, Recently Resurfaced	336593.4	1998620.9
-L- 114+40 SB ISS	10.0 Fill	N/A	3.30	3.0 FYI	C	11.50	7.00	N/A	N/A	4.50	N/A	Asphalt STBC	0.0 - 4.5' = Roadway Embankment, Tan and Gray, Silty-Clayey Sand	S-237 (0.0-1.5)	A-2-4	M	4.50	Low Severity Transverse Cracking	336589.2	1998642.1

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Soil Type Base Course: Majority of STBC found within project limits is Rounded Gravel with fine and coarse sand. Limited silt and clay particles.

S&ME, Inc.
3201 Spring Forest Road
Raleigh, North Carolina 27616

PAVEMENT INVESTIGATION DATA SHEET

Project:	47533.1.2	County:	Robeson	Date:	12/03/2019 - 12/19/2019
TIP:	I-5987A	Route:	I-95	Notes By:	D. Strother/J. Swartley/M. Rawls/V. Mitchev

		Width				Thickness							Subgrade						GPS Coordinates	
Position (Sta., Lane, Shldr.)	Cut/Fill (Est. Of Amount) (ft)	Lane(s) (ft)	Shoulder(s) (ft)	Offset Distance (ft)	Crown "C" or Super "S"	Gross to Top of Soil (in)	Asphalt (in)	Sand Drainage Base (in)	ABC (in)	Soil Type Base Course (in)	Stabilized Soil Subgrade (in)	Pavement Layering	Description	Sample Number	AASHTO Classification	Soil Moisture	Probe Depth (ft)	Asphalt Notes	Northing	Easting
-L- 114+40 SB DECEL	7.0 Fill	6.00	8.50	2.0 FWO	C	26.00	18.00	8.00	N/A	N/A	N/A	Asphalt Sand Drainage Base	0.0 - 3.0' = Roadway Embankment, Gray, Silty Sand 3.0 - 5.0' = Roadway Embankment, Gray, Sandy Silt Sand Drainage Base (8") with Traces of Gravel	REF S-173 REF S-167 OS-2	A-2-4 A-4	M W	5.00	No Distresses Present, Recently Resurfaced	336592.5	1998614.2
-L- 142+50 SB ISS	4.5 Fill	N/A	3.50	2.1 FYI	C	8.00	7.00	N/A	N/A	1.00	N/A	Asphalt STBC	0.0 - 1.5' = Roadway Embankment, Tan and Gray, Silty Sand 1.5 - 4.5' = Roadway Embankment, Tan and Gray, Clayey Sand	S-235 (0.0-1.5) REF-236	A-2-4 A-2-4	M M	4.50	Low Severity Transverse Cracking	339295.3	1999361.3
-L- 142+50 SB ISL	4.5 Fill	10.75	N/A	3.4 FYI	C	17.00	12.00	N/A	N/A	5.00	N/A	Asphalt STBC	0.0 - 1.5' = Roadway Embankment, Tan and Gray, Silty Sand 1.5 - 4.5' = Roadway Embankment, Tan and Gray, Clayey Sand	REF-235 S-236 (1.5-3.0)	A-2-4 A-2-4	M M	4.50	Low Severity Transverse Cracking	339304.9	1999354.7
-L- 143+50 SB OSS	6.0 Fill	11.50	11.00	4.0 EOP	C	17.00	7.00	10.00	N/A	N/A	N/A	Asphalt Sand Drainage Base	0.0 - 3.0' = Roadway Embankment, Gray, Silty Sand 3.0 - 5.0' = Roadway Embankment, Gray, Sandy Silt Sand Drainage Base (10")	S-172 (0.0 - 3.0) REF S-167	A-2-4 A-4	M M	5.00	No Distresses Present	339406.3	1999353.5
-L- 168+65 SB ISS	5.0 Fill	N/A	3.70	2.3 FYI	C	10.50	6.50	N/A	N/A	4.00	N/A	Asphalt STBC	0.0 - 1.5' = Roadway Embankment, Tan and Gray, Silty Sand 1.5 - 4.5' = Roadway Embankment, Tan and Gray, Clayey Sand	S-234 (0.0-1.5) REF-236	A-2-4 A-2-4	M M	4.50	Low Severity Transverse Cracking	341830.9	2000029.6
-L- 180+35 SB OSS	6.0 Fill	12.00	10.00	6.0 EOP	C	14.50	6.50	N/A	N/A	8.00	N/A	Asphalt STBC	0.0 - 3.5' = Roadway Embankment, Orange, Silty Sand 3.5 - 5.0' = Roadway Embankment, Gray, Clayey Sand	REF S-171 REF S-170	A-2-4 A-2-6	M M	5.00	No Distresses Present	342967.5	2000280.4
-L- 180+35 SB OSL	6.0 Fill	12.00	10.00	3.0 FWO	C	14.00	7.00	N/A	N/A	7.00	N/A	Asphalt STBC	0.0 - 3.0' = Roadway Embankment, Orange, Silty Sand 3.0 - 5.0' = Roadway Embankment, Gray, Clayey Sand	S-171 (0.0 - 3.0) REF S-170	A-2-4 A-2-6	M M	5.00	Low Severity Fatigue Cracking	342964.7	2000284.4
-L- 196+30 SB OSS	5.0 Fill	12.00	10.00	5.5 EOP	C	14.00	7.00	N/A	N/A	7.00	N/A	Asphalt STBC	0.0 - 2.5' = Roadway Embankment, Orange, Clayey Sand 2.5 - 5.0' = Roadway Embankment, Gray, Sandy Silt	S-170 (0.0 - 2.5) REF S-167	A-2-6 A-4	M M-W	5.00	Moderate Severity Fatigue Cracking in OSL	344543.9	2000415.9
-L- 196+30 SB ISS	1.5 Fill	N/A	3.40	2.3 FYI	C	9.50	7.75	N/A	N/A	1.75	N/A	Asphalt STBC	0.0 - 1.5' = Roadway Embankment, Tan and Gray, Silty Sand 1.5 - 5.0' = Coastal Plain, Tan and Gray, Clayey Clay	S-232 (0.0-1.5) REF-231	A-2-4 A-2-4	M M	5.00	No Distresses Present	344549.8	2000451.4
-L- 196+30 SB ISL	1.5 Fill	10.95	N/A	6.5 FYI	C	14.50	12.00	N/A	N/A	2.50	N/A	Asphalt STBC	0.0 - 1.5' = Roadway Embankment, Tan and Gray, Silty Sand 1.5 - 5.0' = Coastal Plain, Tan and Gray, Clayey Sand	REF-232 S-233 (1.5-3.0)	A-2-4 A-2-6	M M	5.00	No Distresses Present	344550.8	2000440.9
-L- 217+50 SB OSS	5.0 Fill	11.00	6.00	3.0 EOP	C	13.50	6.50	N/A	N/A	7.00	N/A	Asphalt STBC	0.0 - 3.0' = Roadway Embankment, Tan, Silty Sand, Minor Clay 3.0 - 5.0' = Roadway Embankment, Gray, Sandy Silt	REF S-163 REF S-167	A-2-4 A-4	M M	5.00	Moderate Severity Fatigue Cracking in Adjacent DECEL	346664.5	2000479.3
-L- 217+50 SB ISS	8.0 Fill	N/A	3.70	2.75 FYI	C	5.75	5.75	N/A	N/A	N/A	N/A	Asphalt	0.0 - 1.5' = Roadway Embankment, Tan and Gray, Silty Sand 1.5 - 4.5' = Roadway Embankment, Tan and Gray, Clayey Sand	REF-232 S-231(1.5-3.0)	A-2-4 A-2-4	M M	4.50	No Distresses Present	346667.7	2000514.3
-L- 227+05 SB ISS	4.0 Fill	11.00	4.00	2.0 EOP	C	18.50	6.50	N/A	N/A	12.00	N/A	Asphalt STBC	0.0 - 4.0' = Roadway Embankment, Tan, Silty Sand 4.0 - 5.0' = Coastal Plain, Tan and Gray, Clayey Sand	REF S-165 REF S-212	A-2-4 A-2-6	M M	5.00	No Distresses Present	347617.1	2000544.9
-L- 227+05 SB ISL	4.0 Fill	11.00	4.00	1.5 FWI	C	18.50	10.50	N/A	N/A	8.00	N/A	Asphalt STBC	0.0 - 4.0' = Roadway Embankment, Tan, Clayey Sand 4.0 - 5.0' = Coastal Plain, Gray, Sandy Clay	S-211 (0.0 - 3.0) REF S-212	A-2-6 A-2-6	M M	5.00	No Distresses Present	347617.8	2000538.9
-L- 247+70 SB OSS	5.0 Fill	6.00	10.00	5.0 EOP	C	21.00	17.00	N/A	N/A	4.00	N/A	Asphalt STBC	0.0 - 2.5' = Roadway Embankment, Tan and Brown, Clayey Sand 2.5 - 5.0' = Roadway Embankment, Dark Gray, Sandy Silt	S-169 (0.0 - 2.5) REF S-167	A-2-6 A-4	M	5.00	Moderate Severity Fatigue Cracking in Adjacent DECEL, Major Oxidation	349682.7	2000599.4
-L- 277+70 SB OSS	5.0 Fill	5.50	9.00	4.5 EOP	C	12.50	5.50	N/A	N/A	7.00	N/A	Asphalt STBC	0.0 - 3.0' = Roadway Embankment, Gray, Silty Sand 3.0 - 5.0' = Roadway Embankment, Gray, Sandy Silt	S-166 (0.0 - 3.0) S-167 (3.0 - 5.0)	A-2-4 A-4	M W	5.00	Low Severity Fatigue Cracking in DECEL	352681.5	2000720.0

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Soil Type Base Course: Majority of STBC found within project limits is Rounded Gravel with fine and coarse sand. Limited silt and clay particles.

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PAVEMENT INVESTIGATION DATA SHEET

Project:	47533.1.2	County:	Robeson	Date:	12/03/2019 - 12/19/2019
TIP:	I-5987A	Route:	I-95	Notes By:	D. Strother/J. Swartley/M. Rawls/V. Mitchev

		Width				Thickness							Subgrade						GPS Coordinates	
Position (Sta., Lane, Shldr.)	Cut/Fill (Est. Of Amount) (ft)	Lane(s) (ft)	Shoulder(s) (ft)	Offset Distance (ft)	Crown "C" or Super "S"	Gross to Top of Soil (in)	Asphalt (in)	Sand Drainage Base (in)	ABC (in)	Soil Type Base Course (in)	Stabilized Soil Subgrade (in)	Pavement Layering	Description	Sample Number	AASHTO Classification	Soil Moisture	Probe Depth (ft)	Asphalt Notes	Northing	Easting
-L- 277+70 SB OSL	5.0 Fill	12.00	9.00	3.0 FWO	C	13.00	13.00	N/A	N/A	N/A	N/A	Asphalt	0.0 - 5.0' = Roadway Embankment, Gray, Clayey Sand, Moderate Plasticity Compacted Silt Base (8"), Very Stiff, White and Tan, Desiccated	REF S-168	A-2-6	M-W	5.00	Low Severity Fatigue Cracking in DECEL	352677.8	2000731.9
-L- 277+70 SB ISS	4.5 Fill	11.00	4.00	1.0 EOP	C	14.50	6.50	N/A	N/A	8.00	N/A	Asphalt STBC	0.0 - 4.5' = Roadway Embankment, Gray and Tan, Clayey Sand 4.5 - 5.0' = Coastal Plain, Black and Brown, Silty Clay	S-210 (0.0 - 3.0) REF S-196	A-2-6 A-7-6	M M	5.00	Low Severity Transverse Cracking, Minor Separation at Middle White Line	352678.0	2000753.7
-L- 277+70 SB DECEL	5.0 Fill	5.50	9.00	2.0 FWO	C	13.00	13.00	N/A	N/A	N/A	N/A	Asphalt	0.0 - 5.0' = Roadway Embankment, Gray, Clayey Sand, Moderate Plasticity Compacted Silt Base (8"), Very Stiff, White and Tan, Desiccated	S-168 (0.0 - 3.0)	A-2-6	M-W	5.00	Low Severity Fatigue Cracking	352680.0	2000725.3
-L- 298+25 SB OSS	4.0 Fill	12.00	11.00	4.0 EOP	C	16.00	7.00	N/A	N/A	9.00	N/A	Asphalt STBC	0.0 - 4.0' = Roadway Embankment, Tan, Silty Sand 4.0 - 5.0' = Coastal Plain, Gray, Clayey Sand	S-165 (0.0 - 3.0) REF S-169	A-2-4 A-2-6	M M	5.00	Low Severity Longitudinal Cracking in OSL, Minor Separation at Both Travel Lane Boundary	354731.4	2000743.7
-L- 298+25 SB ISS	6.0 Fill	11.00	4.00	2.0 EOP	C	12.75	6.75	N/A	N/A	6.00	N/A	Asphalt STBC	0.0 - 2.5' = Roadway Embankment, Orange and Gray, Sandy Silt 2.5 - 5.0' = Roadway Embankment, Gray, Clayey Sand	REF S-197 REF S-212	A-4 A-2-6	M M	5.00	Low Severity Transverse Cracking	354731.4	2000773.2
-L- 298+25 SB ISL	6.0 Fill	11.00	4.00	2.0 FWI	C	17.00	14.00	N/A	N/A	3.00	N/A	Asphalt STBC	0.0 - 5.0' = Roadway Embankment, Gray, Silty Sand	REF S-163	A-2-4	M	5.00	Low Severity Transverse Cracking	354734.1	2000770.3
-L- 323+00 SB OSS	3.0 Fill	12.00	11.00	4.0 EOP	C	15.00	7.00	N/A	N/A	8.00	N/A	Asphalt STBC	0.0 - 3.0' = Roadway Embankment, Gray, Silty Sand 3.0 - 5.0' = Coastal Plain, Tan, Silty Sand	REF S-163 REF S-164	A-2-4 A-2-4	M M	5.00	Minor Separation at Both Travel Lane Boundary	357207.7	2000765.6
-L- 323+00 SB OSL	3.0 Fill	12.00	11.00	2.0 FWO	C	19.00	12.00	N/A	N/A	7.00	N/A	Asphalt STBC	0.0 - 3.0' = Roadway Embankment, Tan, Silty Sand 3.0 - 5.0' = Coastal Plain, Tan, Silty Sand	S-164 (0.0 - 3.0) REF S-164	A-2-4 A-2-4	M M	5.00	Minor Separation at Both Travel Lane Boundary	357205.2	2000774.3
-L- 323+00 SB ISS	5.0 Fill	11.00	4.00	2.0 EOP	C	14.50	6.50	N/A	N/A	8.00	N/A	Asphalt STBC	0.0 - 5.0' = Roadway Embankment, Orange, Silty Sand	S-209 (0.0 - 3.0)	A-2-4	M	5.00	Minor Separation at Middle White Line	357218.6	2000791.7
-L- 349+80 SB OSS	7.0 Fill	12.00	11.00	5.5 EOP	C	16.00	7.00	N/A	N/A	9.00	N/A	Asphalt STBC	0.0 - 5.0' = Roadway Embankment, Gray, Silty Sand, Minor Clay, Low PI	S-163 (0.0 - 3.0)	A-2-4	M	5.00	Minor Separation at Both Travel Lane Boundary	359882.9	2000787.8
-L- 349+80 SB ISS	5.0 Fill	11.00	4.00	2.0 EOP	C	12.50	7.50	N/A	N/A	5.00	N/A	Asphalt STBC	0.0 - 5.0' = Roadway Embankment, Orange, Silty Sand	REF S-208	A-2-4	M	5.00	Minor Separation at Middle White Line	359889.1	2000816.8
-L- 349+80 SB ISL	5.0 Fill	11.00	4.00	1.0 FWI	C	15.00	11.00	N/A	N/A	4.00	N/A	Asphalt STBC	0.0 - 5.0' = Roadway Embankment, Orange, Silty Sand	REF S-208	A-2-4	M	5.00	Minor Separation at Middle White Line	359887.2	2000811.6
-L- 376+30 SB OSS	7.0 Fill	12.00	11.00	3.5 EOP	C	16.00	6.00	N/A	N/A	10.00	N/A	Asphalt STBC	0.0 - 2.0' = Roadway Embankment, Tan, Clayey Sand 2.0 - 5.0' = Roadway Embankment, Gray, Sandy Silt	REF S-161 REF S-167	A-2-6 A-4	M M	5.00	No Distresses Present	362541.7	2000810.5
-L- 376+30 SB OSL	7.0 Fill	12.00	11.00	1.5 FWO	C	23.00	12.00	N/A	N/A	11.00	N/A	Asphalt STBC	0.0 - 2.0' = Roadway Embankment, Tan, Clayey-Silty Sand 2.0 - 5.0' = Roadway Embankment, Gray, Clayey Sand	S-162 (0.0 - 2.0) REF S-168	A-2-4 A-2-6	M M	5.00	Low Severity Longitudinal Cracking, Minor Separation at Travel Lane Boundary	362537.7	2000816.0
-L- 376+30 SB ISS	3.5 Fill	11.00	4.00	0.5 EOP	C	16.50	7.50	N/A	N/A	9.00	N/A	Asphalt STBC	0.0 - 3.5' = Roadway Embankment, Orange, Silty Sand 3.5 - 5.0' = Coastal Plain, Brown, Clayey Sand	S-208 (0.0 - 3.0) REF S-212	A-2-4 A-2-6	M M	5.00	No Distresses Present	362534.5	2000839.4
-L- 402+25 SB OSS	7.0 Fill	12.00	11.00	7.0 EOP	C	11.00	7.00	N/A	N/A	4.00	N/A	Asphalt STBC	0.0 - 3.0' = Roadway Embankment, Tan, Clayey Sand 3.0 - 5.0' = Roadway Embankment, Gray, Silty Sand	S-161 (0.0 - 3.0) REF S-163	A-2-6 A-2-4	M M	5.00	Major Fatigue Cracking in OSL, Minor Fatigue Cracking is OSS	365130.3	2000834.4

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Project:	47533.1.2	County:	Robeson	Date:	12/03/2019 - 12/19/2019
TIP:	I-5987A	Route:	I-95	Notes By:	D. Strother/J. Swartley/M. Rawls/V. Mitchev

		Width				Thickness							Subgrade						GPS Coordinates	
Position (Sta., Lane, Shldr.)	Cut/Fill (Est. Of Amount) (ft)	Lane(s) (ft)	Shoulder(s) (ft)	Offset Distance (ft)	Crown "C" or Super "S"	Gross to Top of Soil (in)	Asphalt (in)	Sand Drainage Base (in)	ABC (in)	Soil Type Base Course (in)	Stabilized Soil Subgrade (in)	Pavement Layering	Description	Sample Number	AASHTO Classification	Soil Moisture	Probe Depth (ft)	Asphalt Notes	Northing	Easting
-L- 402+25 SB ISS	5.0 Fill	11.00	4.00	1.0 EOP	C	12.50	6.50	N/A	N/A	6.00	N/A	Asphalt STBC	0.0 - 5.0' = Roadway Embankment, Orange, Clayey Sand	S-224 (0.0 - 3.0)	A-2-6	M	5.00	Moderate Severity Fatigue Cracking in Outer Travel Lane	365133.2	2000866.8
-L- 402+25 SB ISL	5.0 Fill	11.00	4.00	1.5 FWI	C	16.50	10.50	N/A	N/A	6.00	N/A	Asphalt STBC	0.0 - 5.0' = Roadway Embankment, Orange, Clayey Sand	REF S-224	A-2-6	M	5.00	Moderate Severity Fatigue Cracking in Outer Travel Lane	365134.0	2000854.9
-L- 429+40 SB OSS	6.0 Fill	12.00	11.00	4.5 EOP	C	10.00	7.00	N/A	N/A	3.00	N/A	Asphalt STBC	0.0 - 3.0' = Roadway Embankment, Orange, Silty Sand 3.0 - 5.0' = Roadway Embankment, Orange, Clayey Sand	REF S-158 REF S-160	A-2-4 A-2-6	M M	5.00	No Distresses Present	367845.6	2000861.2
-L- 429+40 SB OSL	7.0 Fill	12.00	11.00	3.5 FWO	C	24.00	12.00	N/A	N/A	12.00	N/A	Asphalt STBC	0.0 - 5.0' = Roadway Embankment, Orange, Clayey Sand	S-160 (0.0 - 3.0) S-159(ABC LYR)	A-2-6 A-1-a	M	5.00	Minor Separation at Travel Lane Boundary	367851.0	2000865.7
-L- 429+40 SB ISS	4.0 Fill	11.00	4.00	1.5 EOP	C	9.50	7.50	N/A	N/A	2.00	N/A	Asphalt STBC	0.0 - 4.0' = Roadway Embankment, Orange, Clayey Sand 4.0 - 5.0' = Coastal Plain, Gray and Brown, Clayey Sand	S-223 (0.0 - 3.0) REF S-224	A-2-6 A-2-6	M	5.00	No Distresses Present	367850.3	2000892.8
-L- 454+50 SB OSS	5.0 Fill	12.00	11.00	4.0 EOP	C	13.00	7.00	N/A	N/A	6.00	N/A	Asphalt STBC	0.0 - 5.0' = Roadway Embankment, Orange, Silty Sand	S-158 (0.0 - 3.0)	A-2-4	M	5.00	Low Severity Fatigue Cracking Along Outside White Line	370363.0	2001009.2
-L- 454+50 SB ISS	6.0 Fill	11.00	4.00	1.0 EOP	C	13.00	7.00	N/A	N/A	6.00	N/A	Asphalt STBC	0.0 - 5.0' = Roadway Embankment, Orange, Clayey Sand	S-222 (0.0 - 3.0)	A-2-6	M	5.00	No Distresses Present	370354.6	2001051.9
-L- 454+50 SB ISL	6.0 Fill	11.00	4.00	2.0 FWI	C	14.00	12.00	N/A	N/A	2.00	N/A	Asphalt STBC	0.0 - 4.0' = Roadway Embankment, Orange, Clayey Sand 4.0 - 5.0' = Roadway Embankment, Gray, Clayey Sand	REF S-222 REF S-223	A-2-6 A-2-6	M	5.00	No Distresses Present	370352.5	2001040.8
-L- 482+45 SB OSS	AG	12.00	11.00	3.5 EOP	C	13.00	6.00	N/A	N/A	7.00	N/A	Asphalt STBC	0.0 - 5.0' = Coastal Plain, Orange, Clayey Sand	S-157 (0.0 - 3.0)	A-2-6	M	5.00	Low Severity Longitudinal Cracking	373142.1	2001210.7
-L- 482+45 SB OSL	AG	12.00	11.00	2.0 FWO	C	18.00	12.00	N/A	N/A	6.00	N/A	Asphalt STBC	0.0 - 5.0' = Coastal Plain, Orange, Clayey Sand	REF S-157	A-2-6	M	5.00	Low Severity Longitudinal Cracking	373146.6	2001219.0
-L- 482+45 SB ISS	2.5 Fill	11.00	4.00	1.0 EOP	C	9.00	7.00	N/A	N/A	2.00	N/A	Asphalt STBC	0.0 - 2.5' = Roadway Embankment, Orange, Clayey Sand 2.5 - 5.0' = Coastal Plain, Brown and Black, Clayey-Silty Sand	S-221 (0.0 - 2.5) REF S-220	A-2-6 A-2-4	M M	5.00	Minor Separation Bisecting Travel Lanes	373143.7	2001242.4
-L- 114+40 SB IES	7.0 Fill	N/A	N/A	2 CL	C	0.00	N/A	N/A	N/A	N/A	N/A	N/A	0.0-3.75' = Roadway Embankment, Tan and Gray, Silty-Clayey Sand	BULK 10 IES SB	A-2-6	M	3.75	N/A	336582.7	1998663.5
-L- 167+10 SB OES	3.0 Fill	N/A	N/A	107 CL	C	0.00	N/A	N/A	N/A	N/A	N/A	N/A	0.0-3.92' = Roadway Embankment, Tan and Gray, Clayey Sand	BULK 10 OES SB	A-2-6	M	3.92	N/A	341694.7	1999944.6
-L- 219+80 SB IES	4.0 Fill	N/A	N/A	1 CL	C	0.00	N/A	N/A	N/A	N/A	N/A	N/A	0.0-4.0' = Roadway Embankment, Tan and Gray, Clayey-Silty Sand	BULK 9 IES SB	A-6	M	4.00	N/A	346890.1	2000574.7
-L- 272+65 SB OES	4.0 Fill	N/A	N/A	63 CL	C	0.00	N/A	N/A	N/A	N/A	N/A	N/A	0.0-3.42' = Roadway Embankment, Gray, Sandy Clay	BULK 9 OES SB	A-6	M	3.42	N/A	352174.9	2000705.1
-L- 378+15 SB OES	6.0 Fill	N/A	N/A	62 CL	C	0.00	N/A	N/A	N/A	N/A	N/A	N/A	0.0-3.92' = Roadway Embankment, Tan and Gray, Clayey-Silty Sand	BULK 8 OES SB	A-2-6	M	3.92	N/A	362724.0	2000798.3

Notes:

OSL = Outside Lane
ISL = Inside Lane
CL = Center Lane
LTL = Left Turn Lane

WP = Wheel Path
IWP = Inside Wheel Path
OWP = Outside Wheel Path
C&G = Curb & Gutter

OSS = Outside Shoulder
ISS = Inside Shoulder
GM = Grass Median
OGS = Outside Grass Shoulder

PS = Paved Shoulder
RT LN = Right Lane
LT LN = Left Lane
COL = Collector Lane

CTL = Center Turn Lane
RTL = Right Turn Lane
DECEL = Deceleration Lane
ACCEL = Acceleration Lane

RT = Right
LT = Left
(I) = Inside
(O) = Outside

NB = Northbound
SB = Southbound
FW = From White
FY = From Yellow

FCG = From Curb & Gutter
AG = At Grade
EOP = Edge of Pavement

Soil Type Base Course: Majority of STBC found within project limits is Rounded Gravel with fine and coarse sand. Limited silt and clay particles.

S&ME, Inc.
3201 Spring Forest Road
Raleigh, North Carolina 27616

PAVEMENT INVESTIGATION DATA SHEET

Project:	47533.1.2	County:	Robeson	Date:	12/03/2019 - 12/19/2019
TIP:	I-5987A	Route:	I-95	Notes By:	D. Strother/J. Swartley/M. Rawls/V. Mitchev

		Width				Thickness							Subgrade						GPS Coordinates	
Position (Sta., Lane, Shldr.)	Cut/Fill (Est. Of Amount) (ft)	Lane(s) (ft)	Shoulder(s) (ft)	Offset Distance (ft)	Crown "C" or Super "S"	Gross to Top of Soil (in)	Asphalt (in)	Sand Drainage Base (in)	ABC (in)	Soil Type Base Course (in)	Stabilized Soil Subgrade (in)	Pavement Layering	Description	Sample Number	AASHTO Classification	Soil Moisture	Probe Depth (ft)	Asphalt Notes	Northing	Easting
-L- 486+65 SB OES	AG	N/A	N/A	79 CL	C	0.00	N/A	N/A	N/A	N/A	N/A	N/A	0.0-4.0' = Coastal Plain, Orange, Clayey Sand	BULK 7 OES SB	A-2-4	M	4.00	N/A	373263.0	2001200.7

Notes:

OSL = Outside Lane	WP = Wheel Path	OSS = Outside Shoulder	PS = Paved Shoulder	CTL = Center Turn Lane	RT = Right	NB = Northbound	FCG = From Curb & Gutter	
ISL = Inside Lane	IWP = Inside Wheel Path	ISS = Inside Shoulder	RT LN = Right Lane	RTL = Right Turn Lane	LT = Left	SB = Southbound	AG = At Grade	
CL = Center Lane	OWP = Outside Wheel Path	GM = Grass Median	LT LN = Left Lane	DECEL = Deceleration Lane	(I) = Inside	FW = From White	EOP = Edge of Pavement	
LTL = Left Turn Lane	C&G = Curb & Gutter	OGS = Outside Grass Shoulder	COL = Collector Lane	ACCEL = Acceleration Lane	(O) = Outside	FY = From Yellow		

Soil Type Base Course: Majority of STBC found within project limits is Rounded Gravel with fine and coarse sand. Limited silt and clay particles.

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Raleigh, North Carolina 27616

CONE PENETROMETER DATA CODE SHEET

TIP	PROJECT I.D.	ROUTE
I-5987A	47533.1.2	I-95
COUNTY	ENGINEER	TECHNICIANS
Robeson	VLAD MITCHEV	D. Strother/J. Swartley

TEST LOCATIONS DESCRIPTION	DATE RUN
-L- 13+05 NB ISL	12/3 to 12/19/2019

DATUM	CUT/ FILL	NORTHING	EASTING
SG	FILL	326782.3	1996083.0

Cumulative Penetration in Centimeters															
2.1	48.3														
3.1	49.2														
3.9	50.1														
4.7	51.3														
5.0	52.2														
5.8	53.2														
6.3	54.2														
6.8	55.1														
7.3	56.0														
8.0	56.9														
8.6	57.8														
9.2	58.6														
9.8	59.5														
10.4															
11.1															
11.9															
12.8															
13.6															
14.3															
15.0															
15.8															
16.8															
17.7															
18.7															
19.8															
20.8															
21.9															
24.6															
25.4															
26.2															
27.0															
27.8															
28.8															
29.7															
30.5															
31.3															
32.2															
33.2															
34.4															
35.3															
36.3															
37.0															
37.9															
38.9															
40.1															
40.9															
41.9															
42.8															
43.7															
44.4															
45.3															
46.4															
47.3															

TEST LOCATIONS DESCRIPTION	DATE RUN
-L- 13+05 NB ISS	12/3 to 12/19/2019

DATUM	CUT/ FILL	NORTHING	EASTING
SG	FILL	326778.9	1996076.2

Cumulative Penetration in Centimeters															
1.6	48.0														
2.3	48.7														
3.0	49.4														
3.7	50.0														
4.4	50.7														
5.1	51.6														
5.8	52.0														
6.6	52.4														
7.3	53.2														
8.0	53.8														
8.7	54.4														
9.3	55.0														
9.9	55.7														
10.7	56.3														
11.2	56.8														
12.0	57.3														
12.6	57.9														
13.4	58.3														
14.1	58.8														
14.9	59.3														
15.9	59.8														
16.6	60.1														
17.6	60.6														
18.7	61.0														
19.8	61.5														
21.0	61.9														
22.2	62.3														
23.4	62.7														
24.7	63.1														
25.9	63.5														
27.1	63.9														
28.2	64.2														
29.4	64.6														
30.6	65.0														
31.7	65.4														
32.8	65.8														
33.8	66.3														
35.0	66.7														
36.0	67.1														
37.0	67.5														
37.9	67.9														
38.8	68.4														
39.7															
40.7															
41.5															
42.5															
43.2															
44.0															
44.8															
45.7															
46.2															
46.9															
47.5															

CONE PENETROMETER DATA CODE SHEET

TIP	PROJECT I.D.	ROUTE
I-5987A	47533.1.2	I-95
COUNTY	ENGINEER	TECHNICIANS
Robeson	VLAD MITCHEV	D. Strother/J. Swartley

TEST LOCATIONS DESCRIPTION	DATE RUN
-L- 13+05 NB OSS	12/3 to 12/19/2019

DATUM	CUT/ FILL	NORTHING	EASTING
ABC	FILL	326771.4	1996115.2

Cumulative Penetration in Centimeters															
1.2	24.0	59.4													
1.9	24.5	61.6													
2.5	25.0	63.9													
3.0	25.5	66.2													
3.5	25.9	68.4													
3.9	26.4														
4.2	26.9														
4.6	27.4														
4.9	28.0														
5.3	28.5														
5.7	29.1														
6.0	29.6														
6.4	30.1														
6.7	30.6														
7.1	31.1														
7.5	31.6														
7.9	32.1														
8.2	32.7														
8.6	33.3														
9.0	34.0														
9.4	34.6														
9.8	35.2														
10.2	35.8														
10.6	36.4														
11.0	37.0														
11.3	37.6														
11.6	38.2														
12.0	38.8														
12.3	39.5														
12.6	40.1														
13.0	40.8														
13.4	41.4														
13.8	42.2														
14.2	43.0														
14.6	43.8														
15.0	44.6														
15.4	45.4														
15.8	45.9														
16.2	46.5														
16.6	47.0														
17.1	47.6														
17.5	48.1														
18.0	49.1														
18.4	50.0														
18.9	51.0														
19.5	51.9														
20.1	52.9														
20.7	53.4														
21.3	53.8														
21.9	54.3														
22.4	54.8														
22.9	55.2														
23.5	57.4														

TEST LOCATIONS DESCRIPTION	DATE RUN
-L- 21+95 NB ACCEL	12/3 to 12/19/2019

DATUM	CUT/ FILL	NORTHING	EASTING
ABC	FILL	327631.9	1996336.6

Cumulative Penetration in Centimeters															
0.6	13.6														
1.3	13.9														
1.7	14.3														
2.1	14.6														
2.3	15.0														
2.6	15.3														
2.8	15.7														
3.1	16.0														
3.3	16.4														
3.6	16.8														
3.8	17.2														
4.0	17.6														
4.2	18.0														
4.4	18.4														
4.6	18.9														
4.8	19.3														
4.9	19.8														
5.1	20.2														
5.2	21.0														
5.4	21.7														
5.5	22.5														
5.8	23.2														
6.1	24.0														
6.4	25.1														
6.7	26.1														
7.0	27.2														
7.2	28.9														
7.4	30.7														
7.5	32.4														
7.7	34.5														
7.9	36.3														
8.1	38.1														
8.3	39.4														
8.4	40.8														
8.6	42.5														
8.8	43.7														
9.0	44.6														
9.3	45.7														
9.5	47.3														
9.8	49.5														
10.0	51.5														
10.2	53.5														
10.5	55.4														
10.7	57.1														
11.0	59.5														
11.2	61.2														
11.5	63.4														
11.7															
12.0															
12.2															
12.5															
12.9															
13.2															

SG = Subgrade
SS = Stabilized Soil
CTBC = Cement-Treated Base Course
ABC = Aggregate Base Course
ESG = Estimated Subgrade
AG = At Grade

RGDL = Rounded Gravel Drainage Layer
STBC = Soil Type Base Course
SDB = Sand Drainage Base

S&ME, Inc.
3201 Spring Forest Road
Raleigh, North Carolina 27616

CONE PENETROMETER DATA CODE SHEET

TIP	PROJECT I.D.	ROUTE
I-5987A	47533.1.2	I-95
COUNTY	ENGINEER	TECHNICIANS
Robeson	VLAD MITCHEV	D. Strother/J. Swartley

TEST LOCATIONS DESCRIPTION	DATE RUN
-L- 21+95 NB OSS	12/3 to 12/19/2019

DATUM	CUT/ FILL	NORTHING	EASTING
ABC	FILL	327628.8	1996342.4

Cumulative Penetration in Centimeters

0.8	14.3	29.9					
1.3	14.4	31.9					
1.8	14.6	34.2					
2.1	14.8	36.5					
2.5	15.0	38.5					
2.8	15.1	40.4					
3.4	15.2	42.2					
3.7	15.3	43.6					
3.9	15.6	44.6					
4.2	15.7	45.5					
4.5	15.8	46.6					
4.8	16.2	47.8					
5.1	16.4	49.6					
5.4	16.6	50.6					
5.6	16.9	52.4					
5.8	17.1	54.2					
6.1	17.3	55.9					
6.4	17.6	57.6					
6.6	17.8	59.3					
6.9	18.1	60.9					
7.1	18.3	62.4					
7.4	18.5						
7.7	18.8						
7.9	18.9						
8.1	19.1						
8.3	19.3						
8.5	19.6						
8.7	19.8						
8.8	20.0						
9.0	20.3						
9.3	20.6						
9.6	20.8						
9.8	21.1						
10.1	21.3						
10.3	21.6						
10.6	21.9						
10.8	22.2						
11.0	22.6						
11.3	22.9						
11.5	23.2						
11.6	23.5						
11.9	23.9						
12.1	24.3						
12.2	24.6						
12.4	24.9						
12.6	25.3						
12.8	25.6						
13.0	25.9						
13.3	26.3						
13.5	26.7						
13.7	27.2						
13.9	27.9						
14.1	28.7						

TEST LOCATION DESCRIPTION	DATE RUN
-L- 35+90 NB ISS	12/3 to 12/19/2019

DATUM	CUT/ FILL	NORTHING	EASTING
SG	FILL	328990.3	1996655.6

Cumulative Penetration in Centimeters

4.2	67.6						
5.8	68.0						
7.1	69.0						
8.7	69.9						
9.9	70.7						
11.4	72.1						
12.7	72.7						
13.9							
14.6							
15.7							
17.0							
18.4							
20.1							
21.9							
23.4							
24.9							
26.2							
27.5							
29.0							
30.3							
31.5							
32.8							
34.0							
35.2							
36.3							
37.5							
38.7							
40.0							
41.0							
42.2							
43.3							
44.5							
45.6							
46.6							
47.8							
48.7							
49.7							
50.6							
52.3							
53.3							
54.3							
55.2							
56.2							
57.2							
58.2							
59.0							
60.2							
61.3							
62.2							
63.3							
64.2							
65.3							
66.1							

CONE PENETROMETER DATA CODE SHEET

TIP	PROJECT I.D.	ROUTE
I-5987A	47533.1.2	I-95
COUNTY	ENGINEER	TECHNICIANS
Robeson	VLAD MITCHEV	D. Strother/J. Swartley

TEST LOCATIONS DESCRIPTION	DATE RUN
-L- 35+90 NB OSL	12/3 to 12/19/2019

DATUM	CUT/ FILL	NORTHING	EASTING
SG	FILL	328988.1	1996685.5

Cumulative Penetration in Centimeters

2.7	21.4	64.1					
4.0	21.9	65.1					
4.7	22.8	65.9					
5.4	23.7	66.6					
6.0	24.5	67.4					
6.6	25.4						
7.0	26.3						
7.7	27.1						
7.9	27.8						
8.3	28.6						
8.6	29.2						
8.9	29.8						
9.2	30.4						
9.5	31.0						
9.8	31.7						
10.1	32.3						
10.4	32.9						
10.7	33.5						
11.0	34.1						
11.3	34.7						
11.6	35.4						
11.8	36.0						
12.1	36.7						
12.3	37.3						
12.5	38.0						
12.7	38.6						
12.9	39.3						
13.1	39.9						
13.4	40.6						
13.6	41.3						
13.8	42.0						
14.1	42.8						
14.3	43.7						
14.6	44.5						
14.8	45.4						
15.1	46.4						
15.4	47.3						
15.6	48.2						
15.9	49.0						
16.2	49.9						
16.5	50.9						
16.9	51.9						
17.2	52.9						
17.6	53.9						
17.9	54.8						
18.2	55.8						
18.5	56.8						
18.9	57.9						
19.2	58.9						
19.5	60.0						
20.0	61.1						
20.5	62.2						
20.9	63.2						

TEST LOCATION DESCRIPTION	DATE RUN
-L- 35+90 NB OSS	12/3 to 12/19/2019

DATUM	CUT/ FILL	NORTHING	EASTING
STBC	AG	328982.1	1996695.2

Cumulative Penetration in Centimeters

1.1	20.9						
2.0	21.6						
2.5	22.1						
3.0	22.6						
3.4	23.0						
3.7	23.5						
3.9	24.0						
4.2	25.2						
4.4	26.3						
4.7	27.5						
4.9	28.6						
5.1	29.8						
5.4	31.2						
5.6	32.6						
5.8	34.0						
6.0	34.9						
6.2	35.9						
6.4	36.8						
6.6	37.6						
6.8	38.5						
7.1	39.3						
7.4	40.1						
7.6	40.9						
7.9	41.7						
8.2	42.6						
8.6	43.4						
8.9	44.3						
9.3	45.3						
9.6	46.2						
10.0	47.2						
10.3	48.2						
10.7	49.3						
11.0	50.3						
11.4	51.3						
11.7	52.4						
12.1	53.4						
12.5	54.6						
12.8	55.9						
13.2	57.1						
13.6	58.3						
14.1	59.6						
14.5	60.8						
15.0	62.8						
15.4	64.7						
15.9	66.0						
16.4	67.2						
16.8	68.5						
17.3	69.7						
17.7	70.8						
18.2	71.8						
18.9							
19.6	`						
20.2							

SG = Subgrade
SS = Stabilized Soil
CTBC = Cement-Treated Base Course
ABC = Aggregate Base Course
ESG = Estimated Subgrade
AG = At Grade

RGDL = Rounded Gravel Drainage Layer
STBC = Soil Type Base Course
SDB = Sand Drainage Base

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CONE PENETROMETER DATA CODE SHEET

TIP	PROJECT I.D.	ROUTE
I-5987A	47533.1.2	I-95
COUNTY	**ENGINEER**	**TECHNICIANS**
Robeson	VLAD MITCHEV	D. Strother/J. Swartley

TEST LOCATIONS DESCRIPTION	DATE RUN
-L- 62+40 NB ISL	12/3 to 12/19/2019

DATUM	CUT/ FILL	NORTHING	EASTING
SG	FILL	331547.1	1997342.2

Cumulative Penetration in Centimeters

3.3									
4.9									
6.2									
7.3									
8.3									
9.2									
10.0									
10.9									
11.6									
12.5									
13.2									
14.3									
15.5									
17.0									
18.5									
19.7									
20.9									
22.5									
23.9									
25.4									
26.9									
28.1									
29.0									
30.0									
31.2									
32.2									
33.0									
34.1									
35.1									
36.2									
37.3									
38.4									
39.6									
40.7									
41.9									
43.2									
44.0									
45.2									
46.1									
47.2									
48.3									
49.5									
50.5									
51.7									
52.7									
53.8									
54.8									
55.9									

TEST LOCATIONS DESCRIPTION	DATE RUN
-L- 62+40 NB ISS	12/3 to 12/19/2019

DATUM	CUT/ FILL	NORTHING	EASTING
SG	FILL	331552.7	1997331.7

Cumulative Penetration in Centimeters

5.8									
6.9									
7.6									
8.7									
9.0									
10.1									
11.4									
12.9									
14.3									
15.7									
17.0									
18.1									
19.1									
19.9									
20.6									
21.6									
22.3									
23.1									
24.1									
25.0									
25.9									
26.7									
27.5									
28.3									
29.1									
30.0									
30.9									
31.9									
32.8									
34.0									
35.5									
36.6									
37.8									
39.0									
40.6									
42.1									
43.6									
45.6									
47.5									
49.8									
52.3									
53.8									
56.0									
58.8									
61.7									
64.1									
66.4									
68.6									
70.5									

CONE PENETROMETER DATA CODE SHEET

TIP	PROJECT I.D.	ROUTE
I-5987A	47533.1.2	I-95
COUNTY	**ENGINEER**	**TECHNICIANS**
Robeson	VLAD MITCHEV	D. Strother/J. Swartley

TEST LOCATIONS DESCRIPTION	DATE RUN
-L- 62+40 NB OSS	12/3 to 12/19/2019

DATUM	CUT/ FILL	NORTHING	EASTING
ABC	FILL	331543.0	1997366.7

Cumulative Penetration in Centimeters

2.8	11.3	24.1							
3.6	11.5	24.7							
4.0	11.6	24.8							
4.4	11.8	24.9							
4.7	11.9	24.9							
5.1	12.0	25.0							
5.4	12.2	25.1							
5.6	12.3	25.2							
5.9	12.5	25.2							
6.1	12.6	25.3							
6.3	12.7	25.3							
6.4	12.9	25.4							
6.7	13.0	25.4							
6.9	13.2	25.5							
7.0	13.3	25.5							
7.2	13.5	25.6							
7.3	13.7	25.6							
7.5	13.9	25.6							
7.6	14.1	25.7							
7.7	14.3	25.7							
7.8	14.4	25.8							
7.9	14.6	25.8							
8.0	14.8								
8.1	15.0								
8.3	15.2								
8.4	15.4								
8.6	15.7								
8.7	15.9								
8.8	16.1								
8.9	16.4								
8.9	16.6								
9.0	16.8								
9.1	17.0								
9.2	17.3								
9.3	17.5								
9.3	17.8								
9.4	18.1								
9.5	18.4								
9.6	18.7								
9.7	19.0								
9.8	19.2								
9.9	19.5								
10.0	19.8								
10.0	20.1								
10.1	20.4								
10.2	20.7								
10.3	20.9								
10.4	21.2								
10.6	21.4								
10.7	21.7								
10.9	22.3								
11.0	22.9								
11.2	23.5								

TEST LOCATIONS DESCRIPTION	DATE RUN
-L- 81+00 NB DECEL	12/3 to 12/19/2019

DATUM	CUT/ FILL	NORTHING	EASTING
STBC	CUT	333345.2	1997846.8

Cumulative Penetration in Centimeters

1.0	8.7	17.6							
1.8	8.8	18.5							
2.1	8.9	19.3							
2.4	9.0	20.1							
2.8	9.1	21.0							
3.1	9.2	21.8							
3.3	9.3	22.6							
3.5	9.4	23.4							
3.7	9.5	24.3							
3.9	9.6	25.1							
4.1	9.7	26.6							
4.3	9.8	28.0							
4.5	9.9	29.6							
4.7	10.1	31.1							
4.9	10.2	32.8							
5.1	10.4	34.5							
5.2	10.5	35.9							
5.3	10.7	37.2							
5.5	10.9	38.3							
5.6	11.0	39.3							
5.7	11.2	40.4							
5.8	11.3	41.4							
5.9	11.5	42.4							
6.1	11.6	43.4							
6.2	11.7	44.5							
6.3	11.8	45.6							
6.4	11.9	46.8							
6.5	12.0	47.9							
6.6	12.1	49.2							
6.7	12.2	50.4							
6.8	12.3	51.6							
6.9	12.4	52.7							
7.0	12.5	53.8							
7.2	12.7	54.8							
7.3	12.9	55.8							
7.4	13.1	56.7							
7.5	13.3	57.6							
7.5	13.5	58.4							
7.6	13.7	59.4							
7.7	13.9	60.3							
7.8	14.1	61.1							
7.8	14.3	61.8							
7.9	14.5	62.7							
8.0	14.7	63.5							
8.0	15.0	64.4							
8.1	15.2	65.3							
8.2	15.4								
8.3	15.7								
8.3	15.9								
8.4	16.1								
8.5	16.3								
8.6	16.6								
8.7	16.8								

SG = Subgrade
SS = Stabilized Soil
CTBC = Cement-Treated Base Course
ABC = Aggregate Base Course
ESG = Estimated Subgrade
AG = At Grade

RGDL = Rounded Gravel Drainage Layer
STBC = Soil Type Base Course
SDB = Sand Drainage Base

S&ME, Inc.
3201 Spring Forest Road
Raleigh, North Carolina 27616

CONE PENETROMETER DATA CODE SHEET

TIP	PROJECT I.D.	ROUTE
I-5987A	47533.1.2	I-95
COUNTY	ENGINEER	TECHNICIANS
Robeson	VLAD MITCHEV	D. Strother/J. Swartley

TEST LOCATIONS DESCRIPTION	DATE RUN
-L- 81+00 NB ISS	12/3 to 12/19/2019

DATUM	CUT/ FILL	NORTHING	EASTING
SG	FILL	333369.1	1997812.9

Cumulative Penetration in Centimeters

2.3									
3.8									
5.4									
7.4									
9.2									
11.1									
12.9									
14.7									
16.9									
19.4									
22.2									
24.9									
27.6									
30.2									
33.9									
36.6									
39.0									
41.3									
43.6									
45.7									
47.8									
49.7									
51.3									
53.0									
54.3									
55.9									
57.4									
59.0									
60.4									
61.9									
63.1									
64.7									
65.8									
66.9									
68.3									
69.4									

TEST LOCATIONS DESCRIPTION	DATE RUN
-L- 81+00 NB OSL	12/3 to 12/19/2019

DATUM	CUT/ FILL	NORTHING	EASTING
SG	CUT	333317.6	1997828.4

Cumulative Penetration in Centimeters

1.8	20.2	48.4							
2.7	20.6	50.4							
3.3	21.0	52.4							
4.0	21.4	54.4							
4.3	21.9	56.7							
4.7	22.3	59.0							
5.0	22.6	61.4							
5.4	22.9	63.6							
5.7	23.2	65.4							
6.1	23.7	66.6							
6.4	24.1	68.0							
6.8	24.6	69.2							
7.2	25.0	70.5							
7.6	25.3	71.8							
7.9	25.7	73.1							
8.3	26.1	74.3							
8.6	26.6								
8.9	27.0								
9.3	27.2								
9.6	27.5								
9.9	27.7								
10.2	28.3								
10.5	28.9								
10.8	29.5								
11.2	30.0								
11.5	30.5								
11.8	31.0								
12.1	31.6								
12.4	32.1								
12.7	32.7								
13.0	33.3								
13.3	33.8								
13.6	34.4								
14.0	34.9								
14.3	35.3								
14.6	35.8								
14.9	36.2								
15.2	36.7								
15.5	37.1								
15.8	37.6								
16.1	38.2								
16.4	38.7								
16.8	39.3								
17.1	39.9								
17.4	40.5								
17.8	41.2								
18.1	41.9								
18.3	42.6								
18.6	43.4								
18.8	44.2								
19.1	45.1								
19.5	46.2								
19.8	47.3								

CONE PENETROMETER DATA CODE SHEET

TIP	PROJECT I.D.	ROUTE
I-5987A	47533.1.2	I-95
COUNTY	ENGINEER	TECHNICIANS
Robeson	VLAD MITCHEV	D. Strother/J. Swartley

TEST LOCATIONS DESCRIPTION	DATE RUN
-L- 81+00 NB OSS	12/3 to 12/19/2019

DATUM	CUT/ FILL	NORTHING	EASTING
STBC	CUT	333357.0	1997856.8

Cumulative Penetration in Centimeters

1.1	9.4	17.8							
1.4	9.6	18.2							
2.0	9.7	18.5							
2.3	9.9	18.8							
2.7	10.0	19.2							
3.0	10.2	19.5							
3.2	10.4	19.9							
3.4	10.5	20.2							
3.7	10.7	20.7							
3.9	10.8	21.3							
4.1	11.0	21.8							
4.3	11.1	23.2							
4.5	11.2	24.6							
4.7	11.3	26.0							
4.8	11.4	27.9							
4.8	11.5	29.7							
4.9	11.5	31.8							
4.9	11.6	33.5							
5.0	11.7	35.2							
5.2	11.8	37.0							
5.4	11.9	38.5							
5.6	12.1	40.1							
5.8	12.3	41.4							
6.0	12.5	42.8							
6.2	12.7	44.1							
6.4	12.9	45.5							
6.7	13.0	47.0							
6.9	13.2	48.6							
7.1	13.4	50.3							
7.2	13.6	51.7							
7.3	13.8	53.0							
7.4	13.9	54.1							
7.5	14.0	55.2							
7.6	14.1	56.3							
7.8	14.2	57.5							
7.9	14.3	58.4							
8.1	14.3	59.6							
8.2	14.4	60.6							
8.4	14.5	61.5							
8.5	14.6	62.6							
8.6	14.7	63.7							
8.7	14.9	64.8							
8.8	15.1								
8.9	15.3								
9.0	15.5								
9.0	15.8								
9.1	16.0								
9.1	16.2								
9.2	16.4								
9.2	16.6								
9.3	16.8								
9.3	17.1								
9.4	17.5								

TEST LOCATIONS DESCRIPTION	DATE RUN
-L- 108+80 NB ACCEL	12/3 to 12/19/2019

DATUM	CUT/ FILL	NORTHING	EASTING
SG	AG	336021.3	1998571.5

Cumulative Penetration in Centimeters

1.9	55.1								
2.9	56.5								
3.8	58.1								
4.7	59.5								
5.6	60.9								
6.5	62.0								
7.5	63.0								
8.4	64.1								
9.2	65.2								
10.2	66.5								
10.9	67.6								
11.6	68.9								
12.2	70.1								
12.9	71.2								
13.6	72.4								
14.5	73.5								
15.0	74.8								
15.8	76.0								
16.6	77.2								
17.7	78.2								
18.8									
20.0									
21.9									
24.7									
27.5									
29.1									
30.3									
31.4									
32.4									
33.4									
34.4									
35.4									
36.3									
37.3									
38.3									
39.3									
40.1									
40.9									
41.7									
42.6									
43.3									
44.1									
45.0									
45.7									
46.6									
47.5									
48.3									
48.9									
49.7									
50.7									
51.6									
52.7									
53.8									

SG = Subgrade
SS = Stabilized Soil
CTBC = Cement-Treated Base Course
ABC = Aggregate Base Course
ESG = Estimated Subgrade
AG = At Grade

RGDL = Rounded Gravel Drainage Layer
STBC = Soil Type Base Course
SDB = Sand Drainage Base

S&ME, Inc.
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CONE PENETROMETER DATA CODE SHEET

TIP	PROJECT I.D.	ROUTE
I-5987A	47533.1.2	I-95
COUNTY	**ENGINEER**	**TECHNICIANS**
Robeson	VLAD MITCHEV	D. Strother/J. Swartley

TEST LOCATIONS DESCRIPTION	DATE RUN
-L- 108+80 NB OSS	12/3 to 12/19/2019

DATUM	CUT/ FILL	NORTHING	EASTING
SG	AG	336021.9	1998577.6

TEST LOCATION DESCRIPTION	DATE RUN
-L- 118+45 NB ISL	12/3 to 12/19/2019

DATUM	CUT/ FILL	NORTHING	EASTING
STBC	AG	336964.4	1998791.3

Cumulative Penetration in Centimeters

2.0	48.5							1.2	14.9	41.7	62.7
2.9	49.5							1.8	15.2	42.3	63.1
4.1	50.5							2.4	15.4	42.8	63.5
5.0	51.4							2.9	15.7	43.4	63.9
5.9	52.2							3.3	16.0	43.9	64.4
6.9	53.2							3.7	16.3	44.3	64.8
7.9	54.1							4.0	16.6	44.7	65.2
8.6	55.1							4.4	16.9	45.2	65.5
9.3	56.1							4.7	17.2	45.6	65.9
10.1	57.3							4.9	17.5	46.0	66.2
10.8	58.4							5.2	17.9	46.3	66.6
11.6	60.3							5.5	18.2	46.7	66.9
12.4	62.1							5.8	18.5	47.0	67.2
13.2	63.7							6.0	18.9	47.4	67.5
14.0	65.3							6.3	19.2	47.7	67.9
14.8	66.8							6.6	19.6	48.0	68.2
15.5	68.2							6.8	19.9	48.4	68.5
16.3	69.6							7.0	20.3	48.7	68.8
17.0	70.8							7.1	20.7	49.1	69.0
17.8	72.2							7.3	21.1	49.4	69.3
18.6	73.4							7.5	21.4	49.7	69.5
19.3	74.6							7.7	21.8	50.1	69.8
20.0	75.8							8.0	22.2	50.4	
20.9	77.0							8.2	22.7	50.8	
21.7	78.2							8.5	23.3	51.1	
22.5	79.5							8.7	23.8	51.5	
23.2	80.8							8.9	24.4	51.8	
24.0	82.0							9.1	24.9	52.2	
24.8	83.2							9.4	25.6	52.5	
25.7	84.5							9.6	26.3	52.9	
26.5								9.8	27.1	53.4	
27.4								10.0	27.8	53.8	
28.2								10.2	28.5	54.3	
29.1								10.3	29.2	54.7	
30.0								10.5	29.9	55.2	
31.2								10.7	30.6	55.7	
32.3								10.9	31.3	56.2	
33.6								11.1	32.0	56.6	
34.8								11.3	32.6	57.1	
35.8								11.5	33.3	57.6	
36.8								11.7	33.9	58.0	
37.6								12.0	34.6	58.4	
38.3								12.2	35.2	58.7	
39.1								12.5	35.8	59.1	
39.9								12.7	36.4	59.5	
40.7								13.0	37.0	59.9	
41.5								13.3	37.6	60.2	
42.3								13.5	38.2	60.6	
43.1								13.8	38.8	60.9	
44.0								14.0	39.4	61.3	
44.8								14.3	40.0	61.7	
45.8								14.5	40.6	62.0	
46.7								14.7	41.2	62.4	

CONE PENETROMETER DATA CODE SHEET

TIP	PROJECT I.D.	ROUTE
I-5987A	47533.1.2	I-95
COUNTY	**ENGINEER**	**TECHNICIANS**
Robeson	VLAD MITCHEV	D. Strother/J. Swartley

TEST LOCATIONS DESCRIPTION	DATE RUN
-L- 118+45 NB ISS	12/3 to 12/19/2019

DATUM	CUT/ FILL	NORTHING	EASTING
STBC	AG	336966.9	1998784.5

TEST LOCATION DESCRIPTION	DATE RUN
-L- 142+45 NB ISS	12/3 to 12/19/2019

DATUM	CUT/ FILL	NORTHING	EASTING
STBC	FILL	339273.2	1999432.7

Cumulative Penetration in Centimeters

2.2	47.8	65.4						6.3	40.8	75.4	
3.8	48.5	65.7						8.0	41.3	76.3	
5.1	49.1	65.9						9.4	41.8	77.2	
6.2	49.5	66.1						10.2	42.2	78.0	
7.1	50.0	66.3						11.1	42.7	78.9	
8.1	50.4	66.6						12.0	43.2	79.8	
9.0	50.8	66.8						12.7	43.5	80.7	
9.9	51.2	67.0						13.4	43.9	81.5	
10.8	51.5	67.2						14.2	44.3		
11.6	51.9	67.4						14.9	44.8		
12.4	52.3	67.7						15.7	45.2		
13.2	52.7	67.9						16.4	45.8		
14.2	53.0	68.1						17.0	46.2		
15.1	53.4	68.3						17.8	46.7		
16.0	53.7	68.5						18.5	47.1		
16.9	54.1	68.7						19.4	47.5		
17.7	54.4	68.9						20.0	48.0		
18.6	54.7	69.1						20.7	48.5		
19.5	55.0	69.3						21.3	49.1		
20.3	55.3	69.5						21.9	49.7		
21.4	55.6	69.8						22.6	50.3		
22.4	55.9	70.0						23.0	50.9		
23.4	56.3	70.2						23.7	51.9		
24.4	56.6	70.4						24.1	52.7		
24.9	57.0	70.6						24.8	53.7		
25.4	57.3	70.9						25.4	54.3		
25.9	57.6	71.1						25.9	54.9		
26.4	57.9	71.3						26.4	55.5		
26.9	58.3	71.5						26.9	56.3		
27.6	58.6	71.8						27.5	57.0		
28.2	58.9	72.0						28.1	57.7		
28.9	59.2	72.3						28.5	58.3		
29.4	59.5	72.5						29.0	59.0		
30.0	59.8	72.7						29.6	59.6		
30.5	60.1	72.9						30.2	60.3		
31.2	60.4	73.2						30.8	61.0		
31.9	60.7	73.4						31.4	61.9		
32.6	60.9	73.6						32.1	62.7		
33.6	61.2	73.9						32.6	63.7		
34.6	61.4	74.2						33.2	64.5		
35.6	61.7	74.4						33.8	65.2		
36.7	62.0	74.7						34.4	66.0		
37.7	62.3	75.0						35.0	66.7		
38.8	62.6	75.3						35.5	67.4		
39.7	62.9	75.5						36.1	68.2		
40.7	63.2	75.8						36.8	68.9		
41.6	63.5	76.0						37.2	69.7		
42.5	63.8	76.3						37.9	70.4		
43.3	64.1	76.5						38.5	71.2		
44.2	64.4	76.8						38.9	72.1		
45.2	64.7	77.0						39.5	72.9		
46.2	64.9	77.3						39.9	73.7		
47.2	65.2	77.5						40.4	74.5		

SG = Subgrade
SS = Stabilized Soil
CTBC = Cement-Treated Base Course
ABC = Aggregate Base Course
ESG = Estimated Subgrade
AG = At Grade

RGDL = Rounded Gravel Drainage Layer
STBC = Soil Type Base Course
SDB = Sand Drainage Base

S&ME, Inc.
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Raleigh, North Carolina 27616

CONE PENETROMETER DATA CODE SHEET

TIP	PROJECT I.D.	ROUTE
I-5987A	47533.1.2	I-95
COUNTY	**ENGINEER**	**TECHNICIANS**
Robeson	VLAD MITCHEV	D. Strother/J. Swartley

TEST LOCATIONS DESCRIPTION	DATE RUN
-L- 142+45 NB OSL	12/3 to 12/19/2019

DATUM	CUT/ FILL	NORTHING	EASTING
STBC	FILL	339275.1	1999454.5

Cumulative Penetration in Centimeters

0.4	11.2	19.4	32.5	75.7	0.8	11.3	19.5	33.1	76.2	1.2	11.5	19.7	33.9	76.8	1.7	11.7	19.8	34.7	77.3
2.1	11.9	20.0	35.4		2.5	12.1	20.1	36.2		2.8	12.3	20.3	37.0		3.1	12.5	20.4	37.9	
3.5	12.6	20.6	38.7		3.8	12.8	20.7	39.6		4.1	12.9	20.9	40.4		4.3	13.1	21.0	41.3	
4.5	13.2	21.2	42.1		4.8	13.3	21.3	42.9		5.0	13.5	21.5	43.7		5.2	13.6	21.7	44.5	
5.4	13.8	21.8	45.4		5.6	13.9	22.0	46.3		5.7	14.0	22.1	47.2		5.9	14.2	22.3	48.1	
6.1	14.3	22.5	48.9		6.3	14.5	22.7	49.8		6.4	14.6	22.8	50.9		6.6	14.7	23.0	52.0	
6.7	14.9	23.2	52.9		6.9	15.0	23.4	54.2		7.0	15.2	23.6	55.4		7.1	15.3	23.8	56.9	
7.3	15.5	24.0	58.4		7.4	15.7	24.2	59.6		7.5	15.9	24.4	60.8		7.6	16.1	24.6	61.9	
7.8	16.3	24.7	63.0		7.9	16.5	24.9	63.8		8.1	16.7	25.1	64.6		8.2	16.8	25.4	65.2	
8.4	17.0	25.7	65.8		8.5	17.2	26.1	66.4		8.7	17.3	26.4	67.0		8.8	17.4	26.7	67.7	
9.0	17.6	27.0	68.4		9.2	17.7	27.4	69.1		9.4	17.8	27.7	69.7		9.5	17.9	28.1	70.4	
9.7	18.1	28.4	71.0		9.9	18.2	28.8	71.5		10.1	18.4	29.2	72.0		10.2	18.5	29.5	72.6	
10.4	18.6	29.9	73.1		10.5	18.8	30.3	73.6		10.7	18.9	30.9	74.1		10.9	19.1	31.4	74.6	
11.0	19.2	32.0	75.1																

TEST LOCATIONS DESCRIPTION	DATE RUN
-L- 142+45 NB OSS	12/3 to 12/19/2019

DATUM	CUT/ FILL	NORTHING	EASTING
STBC	FILL	339268.7	1999465.1

Cumulative Penetration in Centimeters

2.1	27.5	61.9			3.1	27.8	63.0			3.8	28.2	64.1			4.5	28.5	65.2		
5.3	28.9	66.2			6.0	29.4	67.2			6.7	29.8	68.1			7.4	30.1	68.7		
8.1	30.3	69.2			8.7	30.6	69.6			9.3	31.0	70.0			9.9	31.3	70.2		
10.4	31.7	70.4			11.0	32.2	70.7			11.5	32.7	71.0			12.0	33.1	71.3		
12.6	33.6	71.6			13.1	34.1	71.9			13.6	34.6	72.3			14.1	35.0	72.7		
14.6	35.5	73.2			15.1	35.9	73.6			15.5	36.4	74.0			16.0	37.1	74.5		
16.5	37.8	75.0			16.9	38.5	75.4			17.4	39.2	75.9			17.8	39.9	76.4		
18.2	40.5	77.2			18.6	41.2	78.0			19.0	41.8	78.8			19.4	42.6	79.6		
19.8	43.3	80.4			20.2	44.1	81.1			20.5	44.8	81.8			20.9	45.5	82.4		
21.3	46.2	83.1			21.7	47.0	83.8			22.1	47.7	84.5			22.5	48.5	85.2		
22.8	49.3	85.9			23.2	50.1	86.6			23.6	50.9	87.3			24.0	51.7			
24.4	52.5				24.8	53.2				25.1	53.9				25.5	54.8			
25.8	55.6				26.1	56.7				26.4	57.8				26.8	58.8			
27.1	59.8																		

CONE PENETROMETER DATA CODE SHEET

TIP	PROJECT I.D.	ROUTE
I-5987A	47533.1.2	I-95
COUNTY	**ENGINEER**	**TECHNICIANS**
Robeson	VLAD MITCHEV	D. Strother/J. Swartley

TEST LOCATIONS DESCRIPTION	DATE RUN
-L- 168+65 NB ISL	12/3 to 12/19/2019

DATUM	CUT/ FILL	NORTHING	EASTING
STBC	FILL	341796.6	2000141.8

Cumulative Penetration in Centimeters

1.4	13.9	24.8	51.5	70.4	2.1	14.0	25.0	51.9	70.7	2.6	14.2	25.3	52.4	71.1	3.1	14.4	25.7	52.9	71.2
3.3	14.6	25.9	53.4	71.7	3.7	14.7	26.3	53.7	71.8	4.0	15.0	26.5	54.3	72.2	4.3	15.1	26.8	54.7	
4.6	15.2	27.1	55.1		4.9	15.5	27.5	55.4		5.2	15.6	27.7	55.9		5.6	15.7	28.1	56.1	
5.8	16.0	28.4	56.5		6.1	16.2	28.8	57.0		6.4	16.4	29.2	57.3		6.6	16.6	29.6	57.7	
7.0	16.7	30.0	58.2		7.2	17.0	30.4	58.8		7.4	17.1	30.9	59.2		7.6	17.2	31.3	59.7	
7.7	17.4	31.9	60.1		7.9	17.5	32.4	60.5		8.1	17.6	32.8	60.8		8.3	17.9	33.4	61.1	
8.6	18.1	34.1	61.6		8.8	18.2	34.9	62.0		9.1	18.4	35.5	62.2		9.3	18.5	36.2	62.5	
9.6	19.0	36.7	62.7		9.7	19.1	37.5	63.0		9.9	19.3	38.1	63.3		10.0	19.5	38.7	63.6	
10.1	19.6	39.4	63.9		10.3	19.9	40.1	64.2		10.6	20.2	40.7	64.5		10.8	20.3	41.5	64.8	
10.9	20.5	42.2	65.1		11.3	20.8	42.8	65.5		11.5	21.0	43.5	65.7		11.6	21.1	44.1	66.1	
11.9	21.4	44.8	66.4		12.1	21.7	45.4	66.7		12.3	21.9	46.0	67.0		12.5	22.2	46.5	67.3	
12.6	22.4	47.0	67.6		12.8	22.6	47.6	67.9		13.0	22.9	48.1	68.3		13.1	23.2	48.7	68.5	
13.2	23.4	49.1	68.9		13.3	23.7	49.5	69.2		13.5	24.0	50.2	69.5		13.6	24.3	50.5	69.9	
13.8	24.5	51.0	70.2																

TEST LOCATIONS DESCRIPTION	DATE RUN
-L- 168+65 NB ISS	12/3 to 12/19/2019

DATUM	CUT/ FILL	NORTHING	EASTING
STBC	FILL	341801.2	2000132.4

Cumulative Penetration in Centimeters

2.4	24.8	59.5			3.7	25.3	60.0			4.7	26.0	60.6			5.4	26.6	61.2		
6.1	27.2	61.8			6.6	27.9	62.3			7.1	28.4	62.8			7.5	28.9	63.5		
8.1	29.4	64.1			8.6	29.8	64.7			8.9	30.3	65.4			9.1	30.9	65.8		
9.5	31.4	66.5			9.8	32.1	67.3			10.0	32.7	67.9			10.4	33.3	68.9		
10.5	33.9	69.5			10.8	34.6	70.3			11.1	35.2	71.0			11.5	35.9	71.7		
11.8	36.6	72.3			12.1	37.3	73.1			12.5	37.9	73.7			12.9	38.5	74.5		
13.2	39.0	75.4			13.5	39.7	76.1			13.7	40.5	76.8			14.0	41.0	77.7		
14.3	41.7	78.5			14.5	42.4	79.1			14.9	43.1	79.8			15.1	43.9	80.5		
15.4	44.8	81.3			15.6	45.4	81.8			16.0	46.2	82.4			16.4	47.1	83.0		
16.6	48.1	83.6			17.0	49.0	84.1			17.4	49.9				17.8	50.8			
18.2	51.8				18.7	52.4				19.1	53.1				19.5	53.8			
20.0	54.4				20.5	55.1				21.0	55.7				21.4	56.2			
22.0	56.6				22.5	57.2				23.1	57.7				23.6	58.3			
24.2	59.0																		

SG = Subgrade
SS = Stabilized Soil
CTBC = Cement-Treated Base Course
ABC = Aggregate Base Course
ESG = Estimated Subgrade
AG = At Grade

RGDL = Rounded Gravel Drainage Layer
STBC = Soil Type Base Course
SDB = Sand Drainage Base

S&ME, Inc.
3201 Spring Forest Road
Raleigh, North Carolina 27616

CONE PENETROMETER DATA CODE SHEET

TIP	PROJECT I.D.	ROUTE
I-5987A	47533.1.2	I-95
COUNTY	**ENGINEER**	**TECHNICIANS**
Robeson	VLAD MITCHEV	D. Strother/J. Swartley

TEST LOCATIONS DESCRIPTION	DATE RUN
-L- 168+65 NB OSS	12/3 to 12/19/2019

DATUM	CUT/ FILL	NORTHING	EASTING
STBC	FILL	341794.4	2000169.3

Cumulative Penetration in Centimeters

0.7	24.1	48.5	75.2	6.4	41.1						
1.2	24.7	49.0	75.8	8.2	42.0						
1.7	25.4	49.6	76.7	9.3	43.2						
2.2	25.8	50.1	77.5	10.2	44.3						
2.7	26.2	50.6	78.4	10.8	45.5						
3.2	26.6	51.2	79.2	11.4	46.4						
3.6	27.1	51.7	79.9	12.0	47.4						
4.0	27.5	52.3	80.7	12.4	48.3						
4.3	28.0	52.9	81.3	13.1	49.1						
4.7	28.4	53.5	81.8	13.5	50.0						
5.1	28.9	54.0	82.4	14.1	50.8						
5.4	29.3	54.5	83.0	14.6	51.5						
5.7	29.7	55.0	83.7	15.1	52.1						
6.1	30.1	55.6	84.3	15.7	52.9						
6.4	30.5	56.3	84.9	16.3	53.6						
6.7	31.0	56.9	85.6	16.8	54.4						
7.0	31.4	57.5	86.2	17.6	55.1						
7.4	31.9	58.0	86.9	18.1	55.8						
7.7	32.3	58.6	87.6	18.5	56.6						
8.1	32.7	59.2	88.3	19.0	57.4						
8.4	33.1	59.8	88.8	19.6	58.0						
8.7	33.5	60.4	89.4	19.9	58.7						
9.0	34.0	60.9	89.9	20.5	59.3						
9.3	34.4	61.3	90.5	21.1	59.8						
9.6	34.7	61.8	91.2	21.5	60.5						
9.9	35.1	62.2	91.8	21.9	61.0						
10.2	35.4	62.7		22.4							
10.5	35.8	63.1		22.8							
10.8	36.3	63.6		23.2							
11.1	36.7	64.0		23.6							
11.4	37.1	64.5		23.9							
11.8	37.4	64.9		24.3							
12.2	37.8	65.2		24.7							
12.6	38.3	65.6		25.1							
13.0	38.9	66.1		25.6							
13.4	39.4	66.5		26.0							
13.9	39.9	67.0		26.5							
14.4	40.3	67.5		26.8							
14.9	40.8	67.9		27.6							
15.4	41.3	68.4		28.4							
15.9	41.8	68.9		29.2							
16.5	42.3	69.3		29.9							
17.1	42.9	69.8		30.7							
17.7	43.4	70.2		31.5							
18.3	44.0	70.6		32.6							
18.9	44.5	71.0		33.5							
19.5	45.0	71.4		34.3							
20.2	45.5	71.9		35.2							
20.8	46.0	72.3		36.1							
21.5	46.5	72.8		37.0							
22.1	47.0	73.4		38.0							
22.8	47.5	73.9		39.1							
23.4	48.0	74.5		40.0							

CONE PENETROMETER DATA CODE SHEET

TIP	PROJECT I.D.	ROUTE
I-5987A	47533.1.2	I-95
COUNTY	**ENGINEER**	**TECHNICIANS**
Robeson	VLAD MITCHEV	D. Strother/J. Swartley

TEST LOCATIONS DESCRIPTION	DATE RUN	TEST LOCATION DESCRIPTION	DATE RUN
-L- 196+30 NB OSL	12/3 to 12/19/2019	-L- 196+30 NB OSS	12/3 to 12/19/2019

DATUM	CUT/ FILL	NORTHING	EASTING	DATUM	CUT/ FILL	NORTHING	EASTING
STBC	AG	344542.6	2000518.9	STBC	FILL	344537.7	2000525.3

Cumulative Penetration in Centimeters

1.0	7.7	14.0	21.3	31.6	69.1	1.2	26.9	68.8			
1.5	7.8	14.1	21.4	32.0	70.0	2.0	27.3	70.1			
1.7	7.9	14.3	21.5	32.3	71.4	2.5	27.7	71.5			
2.0	8.0	14.4	21.6	32.7	72.8	3.0	28.1	72.6			
2.2	8.1	14.6	21.7	33.0	73.9	3.5	28.5	73.6			
2.5	8.2	14.7	21.8	33.4	74.9	4.1	29.0	74.7			
2.7	8.3	14.9	21.9	33.8	76.0	4.6	29.5	75.9			
2.9	8.5	15.0	22.0	34.2	77.1	5.1	30.1	77.1			
3.1	8.6	15.2	22.1	34.6	78.7	5.6	30.6	78.3			
3.4	8.7	15.3	22.2	35.1	80.4	6.0	31.1	79.4			
3.6	8.8	15.5	22.3	35.5	81.7	6.5	31.7	80.4			
3.8	9.0	15.6	22.4	35.9	83.0	6.9	32.4	81.5			
3.9	9.1	15.8	22.8	36.3	83.7	7.4	33.0	82.7			
4.0	9.2	15.9	22.9	36.7	84.4	7.8	33.7	83.9			
4.1	9.3	16.1	23.0	37.2		8.2	34.3	85.1			
4.2	9.4	16.2	23.1	37.8		8.7	35.0	86.5			
4.3	9.6	16.3	23.2	38.4		9.1	35.8	87.9			
4.4	9.7	16.4	23.3	39.0		9.5	36.5	89.3			
4.5	9.8	16.5	23.4	39.6		10.0	37.3				
4.6	9.9	16.6	23.5	40.0		10.4	38.0				
4.7	10.0	16.7	23.6	40.8		10.9	38.8				
4.8	10.1	16.8	23.7	41.6		11.3	39.5				
4.9	10.2	16.9	24.4	42.4		11.8	40.3				
5.0	10.4	17.0	24.6	43.2		12.3	41.2				
5.0	10.5	17.1	24.8	43.8		12.8	42.2				
5.1	10.6	17.5	25.0	44.5		13.2	43.1				
5.2	10.7	17.7	25.2	45.2		13.7	44.1				
5.3	10.8	17.8	25.4	45.8		14.2	45.1				
5.3	10.9	18.0	25.6	46.4		14.8	46.1				
5.4	11.0	18.1	25.8	47.0		15.3	47.2				
5.4	11.2	18.3	26.0	47.6		15.9	48.2				
5.5	11.3	18.4	26.2	48.4		16.4	49.3				
5.6	11.4	18.6	26.6	49.2		17.0	50.0				
5.7	11.6	18.7	26.7	50.0		17.5	50.8				
5.7	11.7	18.9	26.8	50.8		18.0	51.5				
5.8	11.8	19.1	26.9	51.6		18.5	52.3				
5.9	11.9	19.2	27.0	52.5		19.0	53.0				
6.0	12.1	19.3	27.1	53.3		19.5	53.8				
6.1	12.2	19.4	27.2	54.1		20.0	54.4				
6.1	12.3	19.5	27.3	55.0		20.6	55.1				
6.2	12.4	19.6	27.4	56.4		21.1	55.7				
6.3	12.5	19.7	27.5	57.8		21.7	56.4				
6.4	12.7	19.8	28.3	59.3		22.2	57.1				
6.5	12.8	19.9	28.6	60.4		22.7	57.8				
6.7	12.9	20.0	28.9	61.4		23.1	58.7				
6.8	13.0	20.5	29.2	62.2		23.6	59.5				
6.9	13.2	20.6	29.5	63.0		24.0	60.4				
7.0	13.4	20.7	29.8	63.8		24.5	61.4				
7.1	13.5	20.8	30.1	64.6		24.9	62.3				
7.3	13.6	20.9	30.4	65.3		25.3	63.3				
7.4	13.7	21.0	30.7	66.3		25.7	64.7				
7.5	13.8	21.1	31.0	67.2		26.1	66.0				
7.6	13.9	21.2	31.3	68.1		26.5	67.4				

SG = Subgrade
SS = Stabilized Soil
CTBC = Cement-Treated Base Course
ABC = Aggregate Base Course
ESG = Estimated Subgrade
AG = At Grade

RGDL = Rounded Gravel Drainage Layer
STBC = Soil Type Base Course
SDB = Sand Drainage Base

S&ME, Inc.
3201 Spring Forest Road
Raleigh, North Carolina 27616

CONE PENETROMETER DATA CODE SHEET

TIP	PROJECT I.D.	ROUTE
I-5987A	47533.1.2	I-95
COUNTY	ENGINEER	TECHNICIANS
Robeson	VLAD MITCHEV	D. Strother/J. Swartley

TEST LOCATIONS DESCRIPTION	DATE RUN
-L- 215+50 NB DECEL	12/3 to 12/19/2019

DATUM	CUT/ FILL	NORTHING	EASTING
SG	FILL	346461.0	2000622.6

Cumulative Penetration in Centimeters

1.5	23.2	38.9	57.4
2.4	23.4	39.5	57.6
2.9	23.6	40.0	
3.6	23.9	40.5	
4.3	24.1	40.9	
4.7	24.4	41.3	
5.4	24.6	41.7	
6.1	24.8	42.1	
6.6	25.0	42.5	
7.0	25.2	42.9	
7.4	25.4	43.2	
7.7	25.6	43.6	
8.1	25.8	43.9	
8.6	26.0	44.2	
9.2	26.1	44.5	
9.7	26.3	44.8	
10.0	26.5	45.1	
10.3	26.7	45.4	
10.7	26.9	45.7	
11.1	27.1	46.1	
11.5	27.3	46.5	
11.9	27.5	46.9	
12.3	27.8	47.3	
12.7	28.1	47.6	
13.2	28.3	48.0	
13.7	28.6	48.3	
14.0	28.9	48.6	
14.2	29.1	48.9	
14.7	29.4	49.2	
15.1	29.6	49.6	
15.5	29.9	49.9	
15.9	30.1	50.2	
16.3	30.4	50.5	
16.7	30.6	50.8	
17.1	30.9	51.2	
17.4	31.1	51.6	
17.9	31.4	52.0	
18.3	31.8	52.2	
18.8	32.1	52.5	
19.2	32.5	52.7	
19.7	32.8	53.1	
20.2	33.2	53.4	
20.5	33.6	53.8	
20.7	34.0	54.2	
21.0	34.4	54.5	
21.2	34.8	54.9	
21.5	35.2	55.3	
21.8	35.7	55.7	
22.0	36.3	56.1	
22.2	36.8	56.4	
22.4	37.4	56.6	
22.7	37.9	56.9	
22.9	38.4	57.1	

TEST LOCATION DESCRIPTION	DATE RUN
-L- 215+50 NB ISL	12/3 to 12/19/2019

DATUM	CUT/ FILL	NORTHING	EASTING
SS	FILL	346459.2	2000597.2

Cumulative Penetration in Centimeters

5.4
8.6
11.9
15.8
18.9
20.1
20.7
21.1
21.5
21.8
22.3

CONE PENETROMETER DATA CODE SHEET

TIP	PROJECT I.D.	ROUTE
I-5987A	47533.1.2	I-95
COUNTY	ENGINEER	TECHNICIANS
Robeson	VLAD MITCHEV	D. Strother/J. Swartley

TEST LOCATIONS DESCRIPTION	DATE RUN
-L- 215+50 NB ISS	12/3 to 12/19/2019

DATUM	CUT/ FILL	NORTHING	EASTING
SG	FILL	346459.9	2000591.8

Cumulative Penetration in Centimeters

5.9	34.6
8.2	35.1
9.1	35.6
9.9	36.2
10.7	36.7
11.3	37.2
11.9	37.8
12.4	38.5
13.0	39.1
13.7	39.8
14.6	40.4
15.2	41.3
16.0	42.3
16.7	43.2
17.5	44.2
18.3	45.1
19.1	46.0
19.8	47.0
20.6	47.9
21.3	48.7
21.8	49.5
22.3	50.3
22.7	50.8
23.2	51.2
23.6	51.7
24.1	52.1
24.6	52.5
25.1	52.9
25.4	53.3
25.8	53.8
26.1	54.2
26.4	54.6
26.8	55.0
27.1	55.4
27.4	55.8
27.7	56.2
27.9	56.6
28.2	57.0
28.5	57.5
28.9	57.9
29.2	58.3
29.6	58.7
29.9	59.1
30.3	59.6
30.7	60.0
31.1	60.5
31.4	60.9
31.8	61.2
32.2	61.6
32.7	
33.2	
33.6	
34.1	

TEST LOCATION DESCRIPTION	DATE RUN
-L- 215+50 NB OSS	12/3 to 12/19/2019

DATUM	CUT/ FILL	NORTHING	EASTING
SG	FILL	346458.9	2000629.5

Cumulative Penetration in Centimeters

1.9	39.3
3.3	40.2
4.2	41.1
5.2	41.9
6.0	42.8
6.7	43.6
7.4	44.5
7.9	45.4
8.4	46.3
9.0	47.4
9.5	48.6
10.1	49.7
10.8	50.8
11.4	52.0
12.0	53.1
12.5	54.5
13.1	56.0
13.7	57.4
14.3	60.1
14.9	62.7
15.4	65.4
15.9	
16.4	
17.0	
17.7	
18.3	
19.0	
19.6	
20.3	
20.9	
21.5	
22.1	
22.8	
23.5	
24.2	
25.0	
25.7	
26.5	
27.3	
28.0	
28.8	
29.6	
30.5	
31.3	
32.1	
32.9	
33.7	
34.5	
35.2	
36.0	
36.8	
37.6	
38.4	

SG = Subgrade
SS = Stabilized Soil
CTBC = Cement-Treated Base Course
ABC = Aggregate Base Course
ESG = Estimated Subgrade
AG = At Grade

RGDL = Rounded Gravel Drainage Layer
STBC = Soil Type Base Course
SDB = Sand Drainage Base

S&ME, Inc.
3201 Spring Forest Road
Raleigh, North Carolina 27616

CONE PENETROMETER DATA CODE SHEET

TIP	PROJECT I.D.	ROUTE
I-5987A	47533.1.2	I-95
COUNTY	**ENGINEER**	**TECHNICIANS**
Robeson	VLAD MITCHEV	D. Strother/J. Swartley

TEST LOCATIONS DESCRIPTION	DATE RUN
-L- 247+60 NB ACCEL	12/3 to 12/19/2019

DATUM	CUT/ FILL	NORTHING	EASTING
SG	FILL	349667.0	2000780.5

Cumulative Penetration in Centimeters

2.4	27.9	43.8						18.3	35.8	53.1						27.6	43.4		
4.4	28.3	44.1						18.6	36.1	53.7									
5.1	28.6	44.4						19.0	36.4	54.3									
6.0	29.0	44.7						19.3	36.7	54.9									
6.6	29.3	45.0						19.7	37.0	55.6									
7.2	29.7	45.4						20.0	37.3	56.3									
7.6	30.0	45.7						20.3	37.6	57.0									
8.4	30.3	46.0						20.6	37.8	57.7									
9.4	30.6	46.4						20.9	38.1	58.4									
10.2	30.9	46.7						21.2	38.3	59.6									
10.6	31.2	47.1						21.6	38.6	60.7									
11.3	31.5	47.4						22.0	38.8	61.9									
12.1	31.9	47.8						22.3	39.1	63.0									
12.8	32.2	48.2						22.7	39.4	64.2									
13.6	32.6	48.6						23.1	39.6	64.8									
14.2	32.9	49.1						23.4	39.9	65.5									
14.9	33.2	49.5						23.8	40.2	66.1									
15.4	33.5	49.9						24.1	40.5	66.8									
15.9	33.9	50.3						24.5	40.7	67.4									
16.4	34.2	50.7						24.8	41.0	67.9									
16.7	34.5	51.1						25.1	41.2	68.4									
17.0	34.8	51.5						25.4	41.5	68.9									
17.4	35.1	51.9						25.6	41.8	69.4									
17.9	35.5	52.5						25.9	42.0	69.9									
18.3	35.8	53.1						26.2	42.3										
18.6	36.1	53.7						26.5	42.5										
19.0	36.4	54.3						26.9	42.8										
19.3	36.7	54.9						27.2	43.1										
19.7	37.0	55.6																	
20.0	37.3	56.3																	
20.3	37.6	57.0																	
20.6	37.8	57.7																	
20.9	38.1	58.4																	
21.2	38.3	59.6																	
21.6	38.6	60.7																	
22.0	38.8	61.9																	
22.3	39.1	63.0																	
22.7	39.4	64.2																	
23.1	39.6	64.8																	
23.4	39.9	65.5																	
23.8	40.2	66.1																	
24.1	40.5	66.8																	
24.5	40.7	67.4																	
24.8	41.0	67.9																	
25.1	41.2	68.4																	
25.4	41.5	68.9																	
25.6	41.8	69.4																	
25.9	42.0	69.9																	
26.2	42.3																		
26.5	42.5																		
26.9	42.8																		
27.2	43.1																		
27.6	43.4																		

TEST LOCATIONS DESCRIPTION	DATE RUN
-L- 247+60 NB ISS	12/3 to 12/19/2019

DATUM	CUT/ FILL	NORTHING	EASTING
STBC	FILL	349673.2	2000748.8

Cumulative Penetration in Centimeters

1.6	26.4	58.3						10.6	37.4										
2.9	26.9	58.8						10.9	38.0										
3.6	27.4	59.2						11.4	38.5										
4.0	27.8	59.7						11.9	39.1										
4.4	28.3	60.2						12.3	39.8										
4.8	28.7							12.8	40.4										
5.2	29.2							13.3	41.1										
5.5	29.6							13.8	41.7										
5.8	30.0							14.3	42.4										
6.1	30.5							14.8	43.0										
6.5	30.9							15.3	43.7										
6.8	31.4							15.8	44.3										
7.2	31.8							16.5	45.0										
7.5	32.3							17.1	45.6										
7.7	32.7							17.8	46.3										
8.0	33.2							18.4	46.9										
8.2	33.6							19.1	47.6										
8.5	34.1							19.7	48.2										
8.7	34.5							20.3	48.9										
9.0	35.0							21.0	49.7										
9.2	35.4							21.6	50.5										
9.5	35.9							22.2	51.3										
9.9	36.3							22.8	52.1										
10.2	36.9							23.3	52.9										
10.6	37.4							23.9	53.9										
10.9	38.0							24.4	54.9										
11.4	38.5							25.0	55.8										
11.9	39.1							25.5	56.8										
12.3	39.8							26.0	57.8										
12.8	40.4																		
13.3	41.1																		
13.8	41.7																		
14.3	42.4																		
14.8	43.0																		
15.3	43.7																		
15.8	44.3																		
16.5	45.0																		
17.1	45.6																		
17.8	46.3																		
18.4	46.9																		
19.1	47.6																		
19.7	48.2																		
20.3	48.9																		
21.0	49.7																		
21.6	50.5																		
22.2	51.3																		
22.8	52.1																		
23.3	52.9																		
23.9	53.9																		
24.4	54.9																		
25.0	55.8																		
25.5	56.8																		
26.0	57.8																		

CONE PENETROMETER DATA CODE SHEET

TIP	PROJECT I.D.	ROUTE
I-5987A	47533.1.2	I-95
COUNTY	**ENGINEER**	**TECHNICIANS**
Robeson	VLAD MITCHEV	D. Strother/J. Swartley

TEST LOCATIONS DESCRIPTION	DATE RUN
-L- 247+60 NB OSL	12/3 to 12/19/2019

DATUM	CUT/ FILL	NORTHING	EASTING
STBC	FILL	349666.2	2000770.5

Cumulative Penetration in Centimeters

0.5	8.6	20.8	39.5	53.9				0.3	5.9	28.2	55.6								
0.8	8.7	21.1	39.8	54.3				0.6	6.0	28.6	56.2								
1.0	8.8	21.4	40.2	54.7				1.0	6.0	28.9	56.9								
1.3	Augered 10.9 cm	21.8	40.5	55.1				1.3	6.1	29.3	57.5								
1.5		22.1	40.8	55.5				1.6	6.1	29.6	58.0								
1.8		22.5	41.1	55.8				1.8	6.1	30.1	58.6								
2.0		22.8	41.4	56.3				2.1	6.2	30.5	59.4								
2.3	0.0	23.1	41.7	56.8				2.3	6.2	31.0	60.3								
2.5	2.7	23.4	42.0	57.3				2.6	6.2	31.5	61.1								
2.8	3.7	23.8	42.3	57.8				2.8	6.2	32.0	62.0								
3.0	4.0	24.1	42.5	58.3				2.9	6.3	32.5	62.9								
3.2	4.4	24.4	42.8	59.0				3.0	6.3	33.0	63.8								
3.4	4.7	24.7	43.0	59.7				3.2		33.6	65.6								
3.5	5.1	25.0	43.3	60.4				3.3	Augered 15.1 cm	34.1	67.3								
3.7	5.4	25.4	43.5	61.1				3.4		34.5	69.1								
3.9	5.8	25.7	43.8	61.7				3.5		35.0	71.0								
4.1	6.2	26.0	44.0					3.6	0.0	35.4	72.9								
4.3	6.6	26.3	44.3					3.6	1.1	35.8	74.8								
4.4	7.0	26.5	44.5					3.7	2.6	36.2									
4.6	7.5	26.8	44.8					3.8	3.4	36.6									
4.8	7.9	27.0	45.0					3.9	4.2	37.0									
4.9	8.3	27.3	45.3					3.9	4.8	37.4									
5.1	8.8	27.6	45.5					4.0	5.4	37.8									
5.2	9.2	28.0	45.8					4.0	6.3	38.2									
5.4	9.6	28.3	46.0					4.1	7.2	38.7									
5.5	10.0	28.7	46.3					4.1	8.1	39.1									
5.6	10.5	29.0	46.5					4.2	8.9	39.7									
5.7	10.9	29.3	46.8					4.2	9.8	40.3									
5.8	11.4	29.6	47.0					4.3	10.7	40.9									
5.9	11.8	30.0	47.2					4.3	11.1	41.3									
6.0	12.2	30.3	47.5					4.4	12.4	41.8									
6.1	12.6	30.6	47.7					4.4	13.4	42.2									
6.2	12.9	30.9	48.0					4.5	14.2	42.7									
6.2	13.3	31.3	48.2					4.5	14.9	43.3									
6.3	13.7	31.6	48.4					4.6	15.7	43.8									
6.4	14.1	32.0	48.6					4.7	16.5	44.3									
6.5	14.5	32.3	48.8					4.7	17.3	44.8									
6.6	14.8	32.7	49.0					4.8	18.1	45.3									
6.8	15.2	33.1	49.2					4.8	18.9	46.0									
6.9	15.6	33.6	49.4					4.9	19.7	46.7									
7.0	16.0	34.0	49.7					4.9	20.5	47.4									
7.1	16.4	34.4	49.9					5.0	21.4	47.8									
7.2	16.8	34.9	50.2					5.0	22.2	48.3									
7.2	17.2	35.3	50.4					5.1	22.8	48.7									
7.3	17.6	35.8	50.7					5.1	23.5	49.3									
7.4	18.0	36.2	51.1					5.2	24.1	50.0									
7.6	18.4	36.7	51.4					5.3	24.7	50.6									
7.7	18.8	37.1	51.8					5.4	25.2	51.2									
7.9	19.2	37.5	52.1					5.5	25.8	51.9									
8.0	19.6	38.0	52.5					5.6	26.3	52.5									
8.2	19.9	38.4	52.8					5.6	26.8	53.3									
8.3	20.2	38.8	53.2					5.7	27.3	54.1									
8.4	20.5	39.1	53.5					5.8	27.7	54.9									

SG = Subgrade
SS = Stabilized Soil
CTBC = Cement-Treated Base Course
ABC = Aggregate Base Course
ESG = Estimated Subgrade
AG = At Grade

RGDL = Rounded Gravel Drainage Layer
STBC = Soil Type Base Course
SDB = Sand Drainage Base

S&ME, Inc.
3201 Spring Forest Road
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CONE PENETROMETER DATA CODE SHEET

TIP	PROJECT I.D.	ROUTE
I-5987A	47533.1.2	I-95
COUNTY	ENGINEER	TECHNICIANS
Robeson	VLAD MITCHEV	D. Strother/J. Swartley

TEST LOCATIONS DESCRIPTION	DATE RUN
-L- 277+70 NB ISL	12/3 to 12/19/2019

DATUM	CUT/ FILL	NORTHING	EASTING
SS	FILL	352681.1	2000790.4

Cumulative Penetration in Centimeters

2.1	57.0										
6.2	57.6										
10.3	58.2										
12.2	58.7										
14.3	59.3										
15.7	59.8										
17.0	60.4										
18.1	60.9										
19.2	61.4										
20.5	61.9										
21.7	62.4										
22.9											
24.3											
25.8											
27.4											
29.0											
30.4											
31.4											
32.3											
33.1											
33.9											
34.5											
35.2											
35.8											
36.4											
37.1											
37.7											
38.4											
39.1											
39.9											
40.6											
41.3											
42.1											
42.9											
43.6											
44.4											
45.1											
45.8											
46.6											
47.3											
48.1											
48.8											
49.6											
50.4											
51.2											
52.0											
52.7											
53.3											
54.0											
54.6											
55.3											
55.9											
56.5											

TEST LOCATIONS DESCRIPTION	DATE RUN
-L- 277+70 NB ISS	12/3 to 12/19/2019

DATUM	CUT/ FILL	NORTHING	EASTING
SG	FILL	352682.2	2000785.4

Cumulative Penetration in Centimeters

2.4	42.9	73.8									
3.9	43.4	74.2									
5.2	44.5	74.6									
6.3	45.3	75.0									
7.4	46.1	75.6									
8.4	46.8	76.1									
9.2	47.5	76.7									
10.3	48.3	77.3									
11.5	49.0	77.8									
12.8	49.5	78.4									
13.8	50.0	78.9									
14.7	50.5	79.5									
15.3	50.9	80.0									
15.8	51.3	80.5									
16.4	51.7	81.0									
16.9	52.2	81.5									
17.5	52.6	82.0									
18.0	53.1	82.6									
18.6	53.5	83.1									
19.1	54.0	83.7									
19.7	54.4	84.4									
20.3	55.0	85.0									
20.9	55.6	85.6									
21.5	55.8	86.3									
22.2	56.3	86.9									
22.8	56.7										
23.5	57.2										
24.3	57.6										
25.0	58.1										
25.9	58.5										
26.7	59.0										
27.7	59.4										
28.4	59.9										
29.2	60.5										
30.0	61.0										
30.6	61.6										
31.1	62.0										
31.7	62.3										
32.3	62.7										
32.9	63.3										
33.5	64.0										
34.2	64.6										
35.0	65.4										
35.7	66.1										
36.4	66.9										
37.0	67.7										
37.7	68.6										
38.4	69.4										
39.2	70.2										
39.9	70.9										
40.6	71.7										
41.4	72.4										
42.2	73.1										

CONE PENETROMETER DATA CODE SHEET

TIP	PROJECT I.D.	ROUTE
I-5987A	47533.1.2	I-95
COUNTY	ENGINEER	TECHNICIANS
Robeson	VLAD MITCHEV	D. Strother/J. Swartley

TEST LOCATIONS DESCRIPTION	DATE RUN
-L- 277+70 NB OSS	12/3 to 12/19/2019

DATUM	CUT/ FILL	NORTHING	EASTING
STBC	FILL	352676.6	2000817.6

Cumulative Penetration in Centimeters

1.6	32.1	73.1									
2.4	32.6	74.1									
3.2	33.2	75.2									
4.0	33.8	76.0									
4.8	34.4	76.9									
5.3	35.0	77.7									
6.2	35.4	78.7									
6.7	35.9	79.8									
7.1	36.3	80.9									
7.7	36.8	82.0									
8.2	37.2	83.0									
8.7	37.7	83.8									
9.1	38.2	84.4									
9.5	38.7	85.0									
9.9	39.2	86.0									
10.3	39.8	86.8									
10.8	40.3	87.3									
10.9	40.9	88.0									
11.0	41.7	88.8									
11.2	42.4	89.6									
11.4	43.2	90.5									
11.5	43.9	91.5									
12.0	44.5	92.5									
12.4	45.2	93.4									
12.9	45.9										
13.3	46.7										
13.8	47.4										
14.4	48.2										
14.9	49.1										
15.5	49.9										
16.0	50.6										
16.6	51.4										
17.2	52.1										
17.7	52.8										
18.3	53.4										
19.0	54.1										
19.7	54.8										
20.4	55.6										
21.1	56.3										
21.7	57.4										
22.4	58.5										
23.2	59.6										
23.9	60.8										
24.7	62.0										
25.4	63.2										
26.2	64.3										
26.9	64.9										
27.6	66.1										
28.3	67.0										
29.0	68.1										
29.8	69.3										
30.6	70.8										
31.5	72.0										

TEST LOCATIONS DESCRIPTION	DATE RUN
-L- 299+40 NB ACCEL	12/3 to 12/19/2019

DATUM	CUT/ FILL	NORTHING	EASTING
SS	FILL	354849.2	2000832.2

Cumulative Penetration in Centimeters

2.1	40.7										
3.1	41.2										
4.1	41.7										
5.2	42.2										
6.1	42.6										
7.2	43.1										
8.2	43.5										
8.9	43.9										
9.8	44.4										
10.5	44.8										
11.3	45.3										
12.2	45.7										
13.0	46.2										
13.9	46.7										
14.9	47.2										
15.8	47.8										
16.4	48.4										
17.4	49.1										
18.0	49.8										
18.6	50.4										
19.3	51.1										
19.9											
20.6											
21.4											
22.2											
23.1											
24.1											
25.0											
25.6											
26.0											
26.6											
27.1											
27.7											
28.1											
28.8											
29.7											
30.3											
30.9											
31.5											
32.0											
32.5											
33.0											
33.7											
34.4											
35.0											
35.7											
36.5											
37.1											
37.8											
38.4											
39.0											
39.6											
40.2											

SG = Subgrade
SS = Stabilized Soil
CTBC = Cement-Treated Base Course
ABC = Aggregate Base Course
ESG = Estimated Subgrade
AG = At Grade

RGDL = Rounded Gravel Drainage Layer
STBC = Soil Type Base Course
SDB = Sand Drainage Base

S&ME, Inc.
3201 Spring Forest Road
Raleigh, North Carolina 27616

CONE PENETROMETER DATA CODE SHEET

TIP	PROJECT I.D.	ROUTE
I-5987A	47533.1.2	I-95
COUNTY	ENGINEER	TECHNICIANS
Robeson	VLAD MITCHEV	D. Strother/J. Swartley

TEST LOCATIONS DESCRIPTION	DATE RUN
-L- 299+40 NB ISS	12/3 to 12/19/2019

DATUM	CUT/ FILL	NORTHING	EASTING
SG	FILL	354856.0	2000805.0

Cumulative Penetration in Centimeters

1.1	22.7	49.1	68.7					2.1	23.0	50.1	69.0				
3.1	23.4	51.0	69.3					4.0	23.7	52.0	69.5				
4.7	24.0	52.6	69.8					5.5	24.3	53.3	70.1				
6.3	24.6	53.7	70.5					7.0	24.9	53.8	70.9				
7.5	25.2	53.9	71.3					8.2	25.5	54.0	71.7				
8.8	25.8	54.9	72.1					9.4	26.1	55.8	72.5				
9.9	26.4	56.7	73.0					10.4	26.7	56.9	73.4				
10.9	27.0	57.2	73.9					11.5	27.3	57.4	74.3				
12.0	27.5	57.7	74.8					12.3	27.8	58.1	75.3				
12.7	28.1	58.4	75.7					13.0	28.5	58.7	76.2				
13.5	28.8	59.1	76.7					13.9	29.2	59.3	77.2				
14.4	29.5	59.7	77.7					14.7	29.9	60.0	78.3				
15.1	30.4	60.4	78.8					15.4	30.9	60.7	79.3				
15.7	31.4	61.1	79.8					16.0	31.9	61.3	80.3				
16.3	32.4	61.6	80.7					16.6	33.0	61.8	81.2				
16.8	33.5	62.1	81.7					17.1	34.1	62.4	82.1				
17.3	34.6	62.8	82.6					17.6	35.2	63.0	83.0				
17.8	35.7	63.3	83.5					18.1	36.2	63.7	83.9				
18.3	36.7	64.0	84.3					18.6	37.2	64.3	84.8				
18.9	37.7	64.7	85.2					19.1	38.3	64.9	85.7				
19.4	38.8	65.2	86.1					19.7	39.4	65.4	86.5				
19.9	39.9	65.7	86.9					20.2	40.5	66.0	87.4				
20.4	41.1	66.2	87.8					20.7	41.7	66.5	88.2				
20.9	42.3	66.8	88.7					21.1	42.9	67.2	89.3				
21.3	43.5	67.4	89.8					21.6	44.6	67.7	90.4				
21.8	45.7	67.9	90.9					22.0	46.9	68.2					
22.3	48.0	68.4													

TEST LOCATIONS DESCRIPTION	DATE RUN
-L- 299+40 NB OSL	12/3 to 12/19/2019

DATUM	CUT/ FILL	NORTHING	EASTING
SS	FILL	354845.4	2000841.5

Cumulative Penetration in Centimeters

3.4	29.3	50.8						5.9	29.7	51.2					
7.4	30.0	51.7						8.2	30.4	52.2					
9.1	30.7	52.7						9.7	31.0	53.2					
10.4	31.4							10.9	31.8						
11.7	32.0							12.2	32.5						
12.7	32.9							13.2	33.3						
13.7	33.6							14.2	34.0						
14.6	34.4							15.1	34.8						
15.5	35.2							15.9	35.6						
16.3	36.0							16.7	36.4						
17.0	36.9							17.4	37.4						
17.8	37.8							18.1	38.3						
18.5	38.7							18.9	39.2						
19.2	39.7							19.6	40.1						
19.9	40.6							20.2	41.1						
20.5	41.6							20.8	42.0						
21.1	42.5							21.5	43.0						
21.9	43.5							22.3	43.9						
22.7	44.3							23.1	44.6						
23.6	45.0							24.0	45.4						
24.5	45.8							25.0	46.2						
25.5	46.6							25.9	47.0						
26.3	47.4							26.6	47.8						
27.0	48.2							27.4	48.6						
27.7	49.0							28.0	49.2						
28.3	49.6							28.6	50.0						
29.0	50.4														

CONE PENETROMETER DATA CODE SHEET

TIP	PROJECT I.D.	ROUTE
I-5987A	47533.1.2	I-95
COUNTY	ENGINEER	TECHNICIANS
Robeson	VLAD MITCHEV	D. Strother/J. Swartley

TEST LOCATIONS DESCRIPTION	DATE RUN
-L- 299+40 NB OSS	12/3 to 12/19/2019

DATUM	CUT/ FILL	NORTHING	EASTING
SS	FILL	354847.1	2000841.5

Cumulative Penetration in Centimeters

2.9	40.9							4.6	41.9						
6.0	42.8							7.3	43.8						
8.3								9.3							
10.0								10.9							
11.5								12.3							
13.0								13.8							
14.4								15.0							
15.6								16.3							
17.1								17.8							
18.5								19.3							
20.0								20.8							
21.6								22.4							
23.1								23.7							
24.4								25.0							
25.6								26.2							
26.7								27.2							
27.7								28.2							
28.8								29.3							
29.8								30.3							
30.8								31.3							
31.8								32.3							
32.8								33.4							
33.9								34.5							
35.2								35.8							
36.6								37.3							
38.1								39.0							
40.0															

TEST LOCATIONS DESCRIPTION	DATE RUN
-L- 322+95 NB ISL	12/3 to 12/19/2019

DATUM	CUT/ FILL	NORTHING	EASTING
STBC	FILL	357200.6	2000829.2

Cumulative Penetration in Centimeters

0.8	13.1	26.1	45.7					1.4	13.3	26.3	45.9				
1.8	13.6	26.5	46.1					2.1	13.8	26.7	46.3				
2.5	14.0	26.9	46.4					2.8	14.2	27.2	46.6				
3.2	14.4	27.5	46.7					3.5	14.6	27.8	47.0				
3.8	14.8	28.1	47.2					4.1	15.1	28.4	47.3				
4.4	15.3	28.6	47.5					4.6	15.5	29.0	47.6				
4.8	15.6	29.4	47.8					5.0	15.7	29.8	48.0				
5.2	16.0	30.2	48.1					5.5	16.2	30.6	48.2				
5.7	16.5	31.3	48.4					5.9	16.7	32.0	48.5				
6.1	16.9	32.7	48.6					6.3	17.1	33.4	48.7				
6.5	17.3	34.5	48.8					6.7	17.5	35.4	49.0				
6.9	17.7	36.3	49.1					7.1	18.2	37.1	49.3				
7.3	18.4	38.0	49.5					7.5	18.6	38.9	49.6				
7.7	18.8	39.4	49.8					7.9	19.0	39.8	49.9				
8.0	19.1	40.3						8.2	19.4	40.7					
8.3	19.6	41.1						8.5	19.9	41.4					
8.7	20.1	41.6						8.9	20.4	41.9					
9.1	20.7	42.1						9.3	20.9	42.3					
9.5	21.2	42.5						9.7	21.4	42.7					
10.0	21.6	42.9						10.2	22.0	43.1					
10.5	22.3	43.4						10.7	22.7	43.6					
10.9	23.0	43.8						11.0	23.1	44.0					
11.2	23.4	44.2						11.3	23.6	44.3					
11.5	23.9	44.5						11.7	24.1	44.6					
12.0	24.4	44.8						12.2	24.8	44.9					
12.5	25.2	45.1						12.7	25.6	45.3					
13.0	26.0	45.6													

SG = Subgrade
SS = Stabilized Soil
CTBC = Cement-Treated Base Course
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AG = At Grade

RGDL = Rounded Gravel Drainage Layer
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CONE PENETROMETER DATA CODE SHEET

TIP	PROJECT I.D.	ROUTE
I-5987A	47533.1.2	I-95
COUNTY	**ENGINEER**	**TECHNICIANS**
Robeson	VLAD MITCHEV	D. Strother/J. Swartley

TEST LOCATIONS DESCRIPTION	DATE RUN
-L- 322+95 NB ISS	12/3 to 12/19/2019

DATUM	CUT/ FILL	NORTHING	EASTING
SG	FILL	357201.2	2000825.5

Cumulative Penetration in Centimeters

0.7	18.5	43.0	58.9
1.4	18.8	43.5	59.1
2.0	19.1	44.0	59.3
2.5	19.5	44.5	59.5
3.0	19.9	45.1	59.7
3.4	20.4	45.6	59.9
3.7	20.8	46.1	60.1
4.0	21.3	46.5	60.3
4.6	21.7	46.8	60.5
5.0	22.2	47.2	60.7
5.4	22.8	47.5	61.0
5.8	23.4	47.8	61.2
6.2	23.9	48.2	61.5
6.5	24.5	48.6	61.7
6.9	25.1	49.0	
7.2	25.7	49.4	
7.6	26.2	49.8	
7.9	26.8	50.1	
8.2	27.3	50.5	
8.6	27.9	50.8	
8.9	28.4	51.2	
9.2	28.9	51.5	
9.4	29.3	51.8	
9.7	29.8	52.1	
10.0	30.3	52.4	
10.4	30.7	52.7	
10.7	31.2	53.0	
11.0	31.6	53.2	
11.2	32.1	53.5	
11.5	32.5	53.7	
11.8	32.9	54.0	
12.0	33.3	54.2	
12.2	33.7	54.4	
12.5	34.1	54.6	
12.7	34.5	54.9	
13.0	35.0	55.1	
13.2	35.5	55.3	
13.5	36.0	55.5	
13.8	36.5	55.7	
14.1	37.0	55.9	
14.4	37.5	56.1	
14.7	38.0	56.3	
15.0	38.5	56.4	
15.3	39.0	56.6	
15.6	39.5	56.7	
16.0	40.0	56.9	
16.3	40.4	57.0	
16.6	40.9	57.3	
16.9	41.3	57.6	
17.2	41.8	57.8	
17.6	42.1	58.1	
17.9	42.4	58.4	
18.2	42.7	58.7	

Terminate

TEST LOCATIONS DESCRIPTION	DATE RUN
-L- 322+95 NB OSS	12/3 to 12/19/2019

DATUM	CUT/ FILL	NORTHING	EASTING
STBC	FILL	357198.9	2000857.5

Cumulative Penetration in Centimeters

0.9	27.0	51.9	66.3	80.7
1.8	27.5	52.2	66.6	81.0
2.2	28.1	52.5	66.9	81.3
2.9	28.7	52.8	67.2	81.6
3.2	29.4	53.0	67.5	81.8
3.7	30.0	53.3	67.8	82.1
4.3	30.7	53.5	68.2	82.4
5.0	31.5	53.8	68.5	82.6
5.6	32.2	54.0	68.9	82.8
6.2	32.9	54.3	69.2	83.1
6.5	33.5	54.6	69.5	83.3
7.2	34.2	55.0	69.8	83.5
7.8	34.8	55.3	70.2	83.7
8.3	35.5	55.6	70.5	84.0
8.9	36.1	55.8	70.8	84.2
9.2	36.7	56.1	71.1	84.5
9.7	37.3	56.3	71.4	84.7
10.2	37.9	56.6	71.8	85.1
10.5	38.4	56.9	72.1	85.4
10.9	38.9	57.1	72.4	85.8
11.3	39.4	57.4	72.6	86.1
11.8	39.8	57.6	72.9	86.5
12.2	40.3	57.9	73.1	86.8
12.6	40.7	58.2	73.4	87.0
13.0	41.2	58.5	73.6	87.3
13.4	41.6	58.8	73.8	87.5
13.9	42.1	59.1	74.1	87.8
14.3	42.5	59.4	74.3	88.1
14.7	43.0	59.7	74.6	88.4
15.1	43.4	59.9	74.8	88.8
15.6	43.8	60.2	75.1	89.1
16.0	44.2	60.4	75.3	89.4
16.5	44.6	60.7	75.6	
17.1	44.9	61.0	75.8	
17.6	45.3	61.3	76.1	
18.0	45.6	61.6	76.3	
18.3	46.0	61.9	76.5	
18.7	46.5	62.2	76.8	
19.1	46.9	62.5	77.0	
19.6	47.2	62.8	77.2	
20.0	47.6	63.1	77.5	
20.5	47.9	63.4	77.7	
21.0	48.2	63.7	78.0	
21.5	48.5	63.9	78.2	
22.0	48.8	64.2	78.5	
22.6	49.2	64.4	78.7	
23.1	49.5	64.7	79.0	
23.6	49.9	64.9	79.2	
24.2	50.2	65.1	79.5	
24.7	50.6	65.3	79.7	
25.3	50.9	65.6	80.0	
25.8	51.2	65.8	80.2	
26.4	51.6	66.0	80.5	

CONE PENETROMETER DATA CODE SHEET

TIP	PROJECT I.D.	ROUTE
I-5987A	47533.1.2	I-95
COUNTY	**ENGINEER**	**TECHNICIANS**
Robeson	VLAD MITCHEV	D. Strother/J. Swartley

TEST LOCATIONS DESCRIPTION	DATE RUN
-L- 349+70 NB ISS	12/3 to 12/19/2019

DATUM	CUT/ FILL	NORTHING	EASTING
STBC	FILL	359889.0	2000846.0

Cumulative Penetration in Centimeters

3.6	32.3	68.6	
5.0	32.9	69.0	
5.9	33.4	69.1	
6.6	33.9	69.3	
7.5	34.4	69.5	
8.4	35.0	69.8	
9.2	35.4	70.1	
9.8	35.8	70.4	
10.5	36.4	70.7	
11.1	37.0	71.1	
11.7	37.5	71.4	
12.5	38.1	71.7	
13.3	38.5	72.0	
13.7	38.9	72.3	
14.2	39.5	72.6	
14.7	40.0	72.9	
15.1	40.5	73.2	
15.5	41.4	73.5	
15.9	42.0	73.8	
16.5	42.6	74.3	
16.9	43.3	74.8	
17.3	44.1	75.3	
17.8	44.9	75.8	
18.2	45.4	76.3	
18.6	46.6	76.8	
19.1	47.8	77.1	
19.4	49.0	77.4	
19.7	51.1	77.7	
20.4	53.2	78.0	
20.8	55.0	78.5	
21.2	58.1		
21.6	59.3		
22.1	59.8		
22.6	61.1		
23.0	61.6		
23.5	62.0		
24.0	62.8		
24.4	63.1		
25.2	63.4		
26.0	63.9		
26.8	64.5		
26.9	64.7		
26.9	65.4		
27.0	65.5		
27.5	65.6		
27.9	65.7		
28.4	65.8		
28.9	66.9		
29.4	67.2		
29.9	67.5		
30.5	67.8		
31.1	68.1		
31.7	68.3		

TEST LOCATIONS DESCRIPTION	DATE RUN
-L- 349+70 NB OSL	12/3 to 12/19/2019

DATUM	CUT/ FILL	NORTHING	EASTING
STBC	FILL	359873.0	2000868.3

Cumulative Penetration in Centimeters

4.5	44.9			
6.4	45.2			
9.3	45.4			
10.7	45.7			
11.4	46.0			
12.1	46.3			
12.8	46.6			
13.4	46.9			
13.9	47.2			
14.6	47.5			
15.2	47.7			
15.9	48.0			
16.4	48.2			
17.0	48.5			
17.7	48.8			
18.3	49.1			
18.7	49.4			
19.3	49.6			
19.7	49.9			
20.2	50.2			
20.6	50.4			
21.0	50.7			
21.5	51.0			
21.9	51.2			
22.4	51.5			
22.8	51.7			
23.3	51.9			
23.9	52.1			
24.4	52.3			
25.0	52.5			
26.0	52.7			
26.9	53.0			
27.9	53.4			
29.2	53.7			
30.5	54.0			
31.8	54.3			
33.0	54.6			
34.1				
35.3				
36.2				
37.0				
37.9				
38.9				
40.0				
41.0				
41.7				
42.5				
43.2				
43.4				
43.7				
43.9				
44.2				
44.6				

SG = Subgrade
SS = Stabilized Soil
CTBC = Cement-Treated Base Course
ABC = Aggregate Base Course
ESG = Estimated Subgrade
AG = At Grade

RGDL = Rounded Gravel Drainage Layer
STBC = Soil Type Base Course
SDB = Sand Drainage Base

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CONE PENETROMETER DATA CODE SHEET

TIP	PROJECT I.D.	ROUTE
I-5987A	47533.1.2	I-95
COUNTY	ENGINEER	TECHNICIANS
Robeson	VLAD MITCHEV	D. Strother/J. Swartley

TEST LOCATIONS DESCRIPTION	DATE RUN
-L- 349+70 NB OSS	12/3 to 12/19/2019

DATUM	CUT/ FILL	NORTHING	EASTING
STBC	FILL	359876.6	2000879.7

Cumulative Penetration in Centimeters

1.4	28.4	60.8	87.3
1.8	28.8	61.4	87.6
2.1	29.2	62.2	87.8
2.4	29.7	62.9	88.0
2.7	30.2	63.7	88.2
3.0	30.7	64.4	88.3
3.3	31.1	65.6	88.5
3.7	31.5	66.7	88.6
4.0	31.9	68.0	88.8
4.4	32.3	69.3	
4.6	32.6	70.4	
4.9	33.0	71.4	
5.1	33.4	72.6	
5.5	33.8	73.7	
6.0	34.1	74.8	
6.4	34.7	75.8	
6.7	35.2	76.4	
7.1	35.6	77.0	
7.4	36.0	77.5	
8.3	36.5	77.9	
9.1	36.9	78.4	
9.3	37.4	78.8	
9.6	37.9	79.1	
10.2	38.5	79.4	
10.7	39.1	79.8	
11.3	39.8	80.1	
11.8	40.4	80.4	
12.4	41.0	80.6	
13.0	41.5	81.0	
13.5	42.1	81.4	
14.1	42.6	81.7	
14.7	43.1	82.0	
15.4	43.6	82.3	
16.0	44.2	82.6	
16.6	44.8	82.8	
17.3	45.5	83.1	
17.9	46.2	83.4	
18.8	47.1	83.7	
19.7	47.9	83.9	
20.6	49.3	84.2	
21.4	50.6	84.4	
22.2	51.5	84.7	
22.9	52.4	84.9	
23.6	53.3	85.2	
24.1	54.1	85.4	
24.5	55.1	85.7	
24.8	56.0	85.9	
25.1	56.8	86.1	
25.7	57.6	86.3	
26.2	58.4	86.5	
26.9	59.2	86.7	
27.5	59.7	86.9	
28.0	60.1	87.1	

TEST LOCATION DESCRIPTION	DATE RUN
-L- 376+35 NB ISL	12/3 to 12/19/2019

DATUM	CUT/ FILL	NORTHING	EASTING
STBC	FILL	362540.2	2000877.3

Cumulative Penetration in Centimeters

1.4	33.0	64.3	
2.7	33.4	65.1	
4.3	33.8	65.9	
5.7	34.1	66.9	
7.6	34.5	67.8	
9.3	34.8	68.7	
12.0	35.2	69.7	
13.6	35.5	70.4	
14.9	36.0	71.1	
16.2	36.4	71.8	
17.2	36.7	72.5	
17.7	37.1	73.2	
18.5	37.4	74.0	
19.1	37.9		
19.6	38.3		
20.0	38.7		
20.4	39.1		
20.8	39.5		
21.2	40.0		
21.6	40.4		
22.0	40.7		
22.4	41.1		
22.8	41.4		
23.3	41.9		
23.6	42.3		
23.9	42.7		
24.3	43.1		
24.6	43.5		
24.9	44.0		
25.3	44.6		
25.6	45.1		
25.9	45.7		
26.2	46.2		
26.5	46.8		
26.8	47.4		
27.1	48.0		
27.5	48.6		
27.9	49.2		
28.3	50.9		
28.7	51.6		
29.1	52.3		
29.2	53.1		
29.5	54.2		
29.8	55.1		
30.1	56.2		
30.4	57.1		
30.9	58.0		
31.2	59.1		
31.5	59.9		
31.8	60.7		
32.1	61.6		
32.4	62.5		
32.7	63.4		

CONE PENETROMETER DATA CODE SHEET

TIP	PROJECT I.D.	ROUTE
I-5987A	47533.1.2	I-95
COUNTY	ENGINEER	TECHNICIANS
Robeson	VLAD MITCHEV	D. Strother/J. Swartley

TEST LOCATIONS DESCRIPTION	DATE RUN
-L- 376+35 NB ISS	12/3 to 12/19/2019

DATUM	CUT/ FILL	NORTHING	EASTING
STBC	FILL	362539.5	2000873.1

Cumulative Penetration in Centimeters

0.6	25.9	56.1	
1.2	26.3	57.1	
1.7	27.0	58.2	
2.2	27.4	59.1	
2.7	27.9	60.3	
3.2	28.4	61.2	
3.7	28.9	62.0	
4.3	29.4	62.8	
4.9	29.9	63.6	
5.5	30.5	64.4	
6.0	31.1	65.3	
6.1	31.7	66.0	
6.5	32.3	66.7	
6.9	32.9	67.4	
7.3	33.4	68.1	
7.7	33.9	68.8	
8.5	34.4	69.5	
9.0	34.9	70.2	
9.4	35.7	70.9	
9.9	36.3	71.6	
10.3	36.9	72.6	
10.8	37.5	73.2	
11.2	38.1	73.8	
11.6	38.8	74.4	
12.0	39.4	75.0	
12.4	40.0	76.0	
13.2	40.6	76.7	
13.8	41.2	77.4	
14.4	42.0	78.1	
15.0	42.6	78.8	
15.6	43.2	79.6	
16.2	43.8	80.4	
16.6	44.4	81.2	
17.0	45.4	82.0	
17.4	45.9	82.8	
17.8	46.4	83.7	
18.3	46.9		
18.7	47.4		
19.1	48.0		
19.5	48.3		
19.9	48.6		
20.5	48.9		
20.9	49.2		
21.3	49.7		
21.7	50.2		
22.1	50.7		
22.5	51.2		
22.9	51.7		
23.3	52.1		
23.7	52.9		
24.1	53.7		
24.9	54.5		
25.4	55.3		

TEST LOCATION DESCRIPTION	DATE RUN
-L- 376+35 NB OSS	12/3 to 12/19/2019

DATUM	CUT/ FILL	NORTHING	EASTING
STBC	FILL	362542.2	2000902.3

Cumulative Penetration in Centimeters

1.0	34.1	55.0	
1.5	34.6	55.5	
1.7	34.9	56.2	
2.2	35.2	56.9	
2.8	35.5	57.5	
3.4	35.8	58.2	
4.1	36.1	58.9	
4.8	36.3	59.5	
5.6	36.6	60.2	
6.7	36.9	60.8	
7.9	37.3	61.5	
8.7	37.6	62.1	
9.9	38.0	63.0	
11.0	38.3	63.8	
12.2	38.7	64.7	
13.1	39.0	65.9	
14.0	39.3	67.0	
14.7	39.6	68.3	
15.4	39.9	69.6	
16.1	40.2	70.7	
16.8	40.6	71.7	
17.7	41.0	72.8	
18.6	41.3	73.8	
19.9	41.7	74.9	
21.0	42.1	75.9	
21.8	42.5	77.0	
22.4	42.9	78.0	
22.8	43.2	78.9	
23.5	43.6	79.8	
23.9	44.0	80.7	
24.4	44.4	81.6	
24.8	44.8	82.6	
25.3	45.2	83.6	
25.9	45.6	84.7	
26.4	46.0	85.8	
26.9	46.5	87.1	
27.3	47.1	88.3	
27.8	47.6	89.6	
28.4	48.2	90.8	
28.6	48.7	92.1	
29.1	49.1	93.3	
29.4	49.6		
29.6	50.0		
30.0	50.5		
30.3	50.9		
30.5	51.3		
31.3	51.7		
31.8	52.0		
32.2	52.4		
32.6	52.8		
32.8	53.3		
33.2	53.9		
33.7	54.4		

SG = Subgrade
SS = Stabilized Soil
CTBC = Cement-Treated Base Course
ABC = Aggregate Base Course
ESG = Estimated Subgrade
AG = At Grade

RGDL = Rounded Gravel Drainage Layer
STBC = Soil Type Base Course
SDB = Sand Drainage Base

S&ME, Inc.
3201 Spring Forest Road
Raleigh, North Carolina 27616

CONE PENETROMETER DATA CODE SHEET

TIP	PROJECT I.D.	ROUTE
I-5987A	47533.1.2	I-95
COUNTY	**ENGINEER**	**TECHNICIANS**
Robeson	VLAD MITCHEV	D. Strother/J. Swartley

TEST LOCATIONS DESCRIPTION	DATE RUN
-L- 402+25 NB ISS	12/3 to 12/19/2019

DATUM	CUT/ FILL	NORTHING	EASTING
STBC	FILL	365151.9	2000894.3

Cumulative Penetration in Centimeters

1.2	32.2	80.4						1.1	8.5	24.7						0.6	35.4	59.4	71.2
2.1	33.3	81.1						1.3	8.5	26.0						1.1	35.9	59.7	71.3
2.8	34.1							1.5	8.6	27.2						1.8	36.4	59.9	71.5
3.3	35.3							1.6		29.5						2.5	36.8	60.2	71.8
3.8	36.3							1.8	Augered	31.8						3.3	37.2	60.4	72.1
4.2	37.6							2.0	17.3 cm	33.3						4.0	37.6	60.7	72.3
4.7	39.0							2.1		34.8						4.7	38.0	60.9	72.6
5.2	40.3							2.2	0.0	35.6						5.1	38.4	61.1	72.9
5.8	41.7							2.4	1.3	36.3						5.5	38.8	61.4	73.1
6.5	43.0							2.5	1.7	37.0						6.1	39.2	61.6	73.3
7.1	44.2							2.6	2.0	37.6						6.7	39.6	61.8	73.6
7.8	45.4							2.8	2.4	38.3						7.5	40.0	62.0	73.8
8.4	46.6							3.0	2.7	39.0						8.2	40.3	62.2	74.0
8.9	47.8							3.3	3.0	39.6						8.9	40.5	62.3	74.2
9.4	49.0							3.5	3.3	40.1						9.5	40.9	62.5	74.4
10.0	50.1							3.7	3.7	40.9						10.3	41.2	62.7	74.6
10.5	51.2							3.8	4.2	41.7						11.0	41.5	62.8	74.8
11.0	52.2							3.9	4.6	42.7						11.9	41.8	63.0	75.0
11.6	53.3							4.0	5.1	43.7						12.7	42.2	63.1	75.2
12.2	54.4							4.1	5.6	45.0						13.8	42.6	63.3	75.5
12.7	55.3							4.2	6.1	46.2						14.9	43.0	63.4	75.7
13.3	56.2							4.3	6.7	47.6						16.7	43.4	63.5	76.0
13.9	57.0							4.4	7.4	48.9						18.5	43.9	63.6	76.2
14.3	57.9							4.4	8.0	50.3						20.0	44.3	63.8	76.5
14.7	58.8							4.5	8.5	51.7						21.3	44.5	63.9	76.7
15.2	59.6							4.6	9.1	53.0						21.9	44.7	64.0	77.0
15.6	60.4							4.8	9.6	54.2						22.5	45.2	64.4	77.2
16.0	61.2							4.9	10.2							23.2	45.7	64.7	77.5
16.6	62.0							5.1	10.8							23.8	46.0	65.1	77.8
17.2	62.8							5.2	11.4							24.4	46.3	65.4	78.2
17.8	63.6							5.4	12.0							24.9	46.7	65.8	78.5
18.4	64.4							5.6	12.5							25.6	47.1	66.0	78.9
19.0	65.1							5.8	13.1							26.2	47.5	66.3	79.2
19.5	65.9							6.0	13.6							26.8	47.8	66.5	80.0
20.0	66.7							6.2	14.2							27.3	48.3	66.8	80.8
20.4	67.5							6.4	14.7							27.8	48.8	67.0	81.7
20.9	68.2							6.5	15.1							28.2	49.2	67.3	82.5
21.4	69.0							6.6	15.6							28.7	49.6	67.7	83.3
22.0	69.7							6.8	16.0							29.2	50.2	68.0	84.4
22.6	70.5							6.9	16.5							29.6	50.7	68.4	85.4
23.3	71.3							7.0	16.9							30.0	51.4	68.7	86.5
23.9	72.0							7.2	17.4							30.4	52.1	68.9	87.5
24.5	72.8							7.4	17.9							30.8	52.8	69.1	88.6
25.1	73.5							7.5	18.3							31.1	53.5	69.4	
25.8	74.3							7.7	18.8							31.3	54.4	69.6	
26.4	75.0							7.9	19.3							31.8	55.2	69.8	
27.1	75.7							8.0	19.8							32.2	56.1	70.0	
27.7	76.3							8.0	20.3							32.7	57.0	70.2	
28.4	77.0							8.1	20.9							33.1	57.6	70.3	
29.1	77.7							8.2	21.4							33.5	58.2	70.5	
29.9	78.4							8.3	22.0							33.9	58.7	70.7	
30.6	79.1							8.3	22.9							34.4	59.2	70.9	
31.3	79.7							8.4	23.8							34.8	59.3	71.0	

CONE PENETROMETER DATA CODE SHEET

TIP	PROJECT I.D.	ROUTE
I-5987A	47533.1.2	I-95
COUNTY	**ENGINEER**	**TECHNICIANS**
Robeson	VLAD MITCHEV	D. Strother/J. Swartley

TEST LOCATIONS DESCRIPTION	DATE RUN
-L- 402+25 NB OSL	12/3 to 12/19/2019

DATUM	CUT/ FILL	NORTHING	EASTING
STBC	FILL	365124.1	2000914.2

Cumulative Penetration in Centimeters

CONE PENETROMETER DATA CODE SHEET

TIP	PROJECT I.D.	ROUTE
I-5987A	47533.1.2	I-95
COUNTY	**ENGINEER**	**TECHNICIANS**
Robeson	VLAD MITCHEV	D. Strother/J. Swartley

TEST LOCATIONS DESCRIPTION	DATE RUN
-L- 402+25 NB OSS	12/3 to 12/19/2019

DATUM	CUT/ FILL	NORTHING	EASTING
STBC	FILL	365128.1	2000921.4

Cumulative Penetration in Centimeters

CONE PENETROMETER DATA CODE SHEET

TIP	PROJECT I.D.	ROUTE
I-5987A	47533.1.2	I-95
COUNTY	**ENGINEER**	**TECHNICIANS**
Robeson	VLAD MITCHEV	D. Strother/J. Swartley

TEST LOCATIONS DESCRIPTION	DATE RUN
-L- 429+40 NB ISL	12/3 to 12/19/2019

DATUM	CUT/ FILL	NORTHING	EASTING
STBC	AG	367850.6	2000934.1

Cumulative Penetration in Centimeters

3.3	34.8	69.9																	
5.5	35.7	70.0																	
6.6	36.5	70.2																	
7.4	37.4	70.5																	
8.4	38.2	70.7																	
8.8	39.1																		
9.2	39.9																		
9.6	40.6																		
10.0	41.3																		
10.4	42.0																		
10.8	42.7																		
11.2	43.5																		
11.6	44.2																		
11.9	44.8																		
12.3	45.4																		
12.7	46.0																		
13.1	46.9																		
13.5	47.7																		
13.8	48.6																		
14.2	49.4																		
14.5	50.2																		
14.8	51.0																		
15.1	51.8																		
15.4	52.6																		
15.7	53.4																		
15.9	54.3																		
16.2	55.1																		
16.5	56.0																		
16.7	56.8																		
17.0	57.7																		
17.4	58.5																		
17.8	59.4																		
18.2	60.2																		
18.6	61.1																		
19.1	61.9																		
19.5	62.8																		
20.0	63.6																		
20.5	64.2																		
21.0	64.7																		
21.8	65.3																		
22.6	65.7																		
23.4	66.1																		
24.4	66.5																		
25.4	66.8																		
26.4	67.2																		
27.5	67.5																		
28.5	67.9																		
29.6	68.3																		
30.4	68.7																		
31.3	69.0																		
32.1	69.2																		
33.0	69.5																		
33.9	69.7																		

SG = Subgrade
SS = Stabilized Soil
CTBC = Cement-Treated Base Course
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ESG = Estimated Subgrade
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RGDL = Rounded Gravel Drainage Layer
STBC = Soil Type Base Course
SDB = Sand Drainage Base

S&ME, Inc.
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Raleigh, North Carolina 27616

CONE PENETROMETER DATA CODE SHEET

TIP	PROJECT I.D.	ROUTE
I-5987A	47533.1.2	I-95
COUNTY	ENGINEER	TECHNICIANS
Robeson	VLAD MITCHEV	D. Strother/J. Swartley

TEST LOCATIONS DESCRIPTION	DATE RUN
-L- 429+40 NB ISS	12/3 to 12/19/2019

DATUM	CUT/ FILL	NORTHING	EASTING
STBC	AG	367848.4	2000931.5

Cumulative Penetration in Centimeters

2.5	34.0	72.7			
4.2	34.2	73.3			
5.7	35.1	73.9			
7.1	35.6	74.6			
8.4	36.2	75.2			
9.5	36.8	75.8			
10.2	37.3				
10.9	37.9				
11.6	38.5				
12.1	39.3				
12.7	40.1				
13.1	40.8				
13.6	41.6				
14.0	42.4				
14.5	43.2				
14.9	44.0				
15.4	44.8				
15.8	45.6				
16.2	46.4				
16.6	47.2				
17.0	48.1				
17.5	48.9				
17.9	49.8				
18.4	50.6				
19.0	51.5				
19.5	52.4				
19.9	53.3				
20.2	54.2				
20.6	55.1				
21.2	55.9				
21.8	56.7				
22.6	57.4				
23.0	58.2				
23.4	59.0				
23.7	59.6				
24.1	60.1				
24.5	60.7				
25.1	61.2				
25.7	61.8				
26.3	62.5				
26.9	63.3				
27.5	64.0				
28.0	64.8				
28.5	65.5				
28.9	66.2				
29.4	66.9				
29.9	67.6				
30.5	68.3				
31.1	69.0				
31.7	69.7				
32.3	70.5				
32.9	71.2				
33.4	72.0				

TEST LOCATION DESCRIPTION	DATE RUN
-L- 429+40 NB OSS	12/3 to 12/19/2019

DATUM	CUT/ FILL	NORTHING	EASTING
STBC	AG	367845.3	2000958.7

Cumulative Penetration in Centimeters

1.4	40.9	70.9			
2.2	41.4	71.3			
3.2	41.9	71.7			
4.2	42.4	72.3			
6.0	42.9	72.7			
6.8	43.4	73.2			
7.6	43.8	73.8			
8.5	44.2	74.4			
9.0	44.7	75.2			
9.5	45.3	76.1			
10.0	45.9	77.3			
10.7	46.5	78.5			
11.4	47.2	79.9			
12.1	48.0	81.0			
12.6	48.7	82.2			
13.0	49.2	83.3			
13.5	49.8	84.5			
14.1	50.2	85.4			
14.6	50.8	86.4			
15.1	51.5	87.4			
16.2	52.2	88.6			
17.0	53.0	89.6			
17.8	53.8	90.7			
18.5	54.7	92.0			
19.3	55.6	93.4			
19.8	56.9				
20.4	57.7				
21.0	58.7				
21.6	59.5				
22.2	60.2				
22.8	60.8				
23.4	61.3				
24.1	61.9				
24.7	62.5				
25.4	63.1				
26.0	63.6				
26.7	64.1				
27.3	64.6				
28.0	65.0				
28.7	65.5				
29.5	65.9				
30.4	66.4				
31.2	66.8				
31.9	67.2				
32.7	67.6				
33.6	68.0				
34.5	68.3				
35.7	68.6				
36.5	69.0				
37.5	69.3				
38.4	69.7				
39.3	70.1				
40.1	70.5				

CONE PENETROMETER DATA CODE SHEET

TIP	PROJECT I.D.	ROUTE
I-5987	47533.1.2	I-95
COUNTY	ENGINEER	TECHNICIANS
Robeson	VLAD MITCHEV	D. Strother/J. Swartley

TEST LOCATIONS DESCRIPTION	DATE RUN
-L- 454+40 NB ISS	12/3 to 12/19/2019

DATUM	CUT/ FILL	NORTHING	EASTING
STBC	FILL	370336.2	2001097.7

Cumulative Penetration in Centimeters

1.2	17.2	44.8	66.6		
1.9	17.5	45.5	67.1		
2.7	17.7	46.3	67.6		
3.2	18.0	47.1	68.0		
3.8	18.3	47.8	68.3		
4.4	18.6	48.6	68.7		
4.9	18.9	49.4	69.0		
5.3	19.3	50.1	69.4		
5.5	19.6	50.8	69.7		
5.8	19.9	51.5	70.3		
6.0	20.3	52.2	71.0		
6.3	20.6	52.9	71.6		
6.5	21.0	53.3	72.3		
6.7	21.3	53.7	72.6		
6.9	21.7	54.2	73.0		
7.2	22.1	54.6	73.4		
7.4	22.4	55.0	73.9		
7.6	22.8	55.4	74.3		
7.9	23.1	55.7	74.7		
8.2	23.5	56.1	75.2		
8.5	23.9	56.4	75.6		
8.8	24.4	56.8	76.1		
9.1	24.8	57.1	76.5		
9.3	25.3	57.3	77.0		
9.6	25.7	57.6	77.5		
9.8	26.2	57.8	78.1		
10.1	26.6	58.1	78.6		
10.3	27.1	58.5	79.2		
10.6	27.5	58.9	79.7		
10.8	28.0	59.2	80.2		
11.1	28.5	59.6	80.7		
11.3	29.1	60.0	81.2		
11.6	29.6	60.3	81.7		
11.8	30.2	60.6	82.2		
12.0	30.7	60.8	82.8		
12.3	31.3	61.1	83.3		
12.5	32.0	61.4	83.9		
12.7	32.6	61.7	84.4		
13.0	33.3	62.0	85.0		
13.2	33.9	62.3	85.6		
13.5	34.7	62.6	86.1		
13.7	35.5	62.9	86.7		
14.0	36.4	63.1	87.2		
14.3	37.2	63.3	87.8		
14.6	38.0	63.6			
14.9	38.8	63.8			
15.2	39.6	64.1			
15.5	40.4	64.4			
15.8	41.2	64.7			
16.1	42.0	65.0			
16.3	42.7	65.3			
16.6	43.4	65.6			
16.9	44.1	66.1			

TEST LOCATION DESCRIPTION	DATE RUN
-L- 454+40 NB OSL	12/3 to 12/19/2019

DATUM	CUT/ FILL	NORTHING	EASTING
STBC	FILL	370334.1	2001119.7

Cumulative Penetration in Centimeters

0.7	8.9	19.7	36.6	63.8	
1.0	9.1	19.9	37.0	65.1	
1.2	9.3	20.1	37.3	66.0	
1.5	9.5	20.3	37.6	67.0	
1.7	9.7	20.5	38.0	67.9	
2.0	9.9	20.8	38.3	68.4	
2.2	10.1	21.0	38.6	69.0	
2.4	10.4	21.3	39.0	69.5	
2.7	10.7	21.5	39.4	69.9	
2.9	10.9	21.8	39.7	70.3	
3.1	11.2	22.1	40.1	70.7	
3.2	11.4	22.3	40.5	71.0	
3.3	11.7	22.6	40.9	71.3	
3.5	11.9	22.8	41.4	71.7	
3.6	12.2	23.1	41.8		
3.7	12.4	23.4	42.3		
3.8	12.7	23.7	42.7		
3.9	12.9	23.9	43.1		
3.9	13.1	24.2	43.6		
4.0	13.3	24.5	44.0		
4.1	13.5	24.8	44.5		
4.2	13.7	25.1	44.9		
4.2	13.9	25.5	45.4		
4.3	14.1	25.8	45.8		
4.4	14.2	26.1	46.3		
4.5	14.4	26.5	46.7		
4.5	14.5	26.9	47.2		
4.6	14.7	27.4	47.6		
4.7	14.9	27.8	48.0		
4.7	15.0	28.2	48.4		
4.8	15.2	28.6	48.8		
5.0	15.3	29.0	49.2		
5.1	15.5	29.3	49.6		
5.3	15.7	29.7	49.9		
5.4	15.9	30.1	50.3		
5.6	16.0	30.4	50.6		
5.8	16.2	30.8	51.0		
5.9	16.4	31.1	51.5		
6.1	16.7	31.5	52.0		
6.2	16.9	31.8	52.4		
6.4	17.2	32.1	52.9		
6.6	17.4	32.4	53.4		
6.8	17.5	32.7	54.0		
7.0	17.7	33.0	54.6		
7.2	17.9	33.3	55.2		
7.4	18.1	33.7	55.8		
7.5	18.3	34.0	56.4		
7.7	18.5	34.4	57.4		
7.9	18.7	34.7	58.4		
8.1	18.9	35.1	59.4		
8.3	19.1	35.5	60.4		
8.5	19.3	35.9	61.4		
8.7	19.5	36.2	62.6		

SG = Subgrade
SS = Stabilized Soil
CTBC = Cement-Treated Base Course
ABC = Aggregate Base Course
ESG = Estimated Subgrade
AG = At Grade

RGDL = Rounded Gravel Drainage Layer
STBC = Soil Type Base Course
SDB = Sand Drainage Base

S&ME, Inc.
3201 Spring Forest Road
Raleigh, North Carolina 27616

CONE PENETROMETER DATA CODE SHEET

TIP	PROJECT I.D.	ROUTE
I-5987A	47533.1.2	I-95
COUNTY	**ENGINEER**	**TECHNICIANS**
Robeson	VLAD MITCHEV	D. Strother/J. Swartley

TEST LOCATIONS DESCRIPTION	DATE RUN
-L- 454+40 NB OSS	12/3 to 12/19/2019

DATUM	CUT/ FILL	NORTHING	EASTING
STBC	FILL	370340.4	2001131.3

Cumulative Penetration in Centimeters

1.0	31.3	53.2	81.8
1.7	31.7	53.6	82.2
2.5	32.1	54.0	82.5
3.2	32.5	54.4	82.9
3.8	32.9	54.9	83.2
4.5	33.3	55.3	83.5
5.1	33.6	55.8	83.9
5.6	34.0	56.2	84.4
6.2	34.5	56.7	84.8
6.7	34.9	57.1	85.3
7.2	35.4	57.5	
7.7	35.8	57.9	
8.2	36.2	58.3	
8.8	36.6	58.6	
9.3	37.0	59.0	
9.9	37.5	59.4	
10.5	37.9	59.8	
11.1	38.4	60.2	
11.7	38.8	60.7	
12.4	39.3	61.2	
13.2	39.8	61.7	
13.9	40.2	62.1	
14.6	40.7	62.6	
15.4	41.2	63.0	
16.1	41.7	63.5	
16.7	42.2	63.9	
17.2	42.6	64.4	
17.8	43.1	64.9	
18.4	43.5	65.5	
18.9	43.9	66.0	
19.5	44.4	66.6	
20.1	44.8	67.2	
20.6	45.1	67.8	
21.2	45.4	68.4	
21.9	45.8	69.1	
22.5	46.2	69.7	
23.2	46.6	70.3	
23.9	47.0	71.0	
24.5	47.3	71.6	
25.2	47.7	72.2	
25.8	48.0	72.8	
26.3	48.4	73.4	
26.9	48.7	74.0	
27.4	49.1	74.7	
27.8	49.5	75.3	
28.3	49.8	76.1	
28.7	50.2	76.9	
29.0	50.6	77.7	
29.4	51.0	78.5	
29.8	51.4	79.2	
30.1	51.9	80.0	
30.5	52.3	80.6	
30.9	52.8	81.2	

TEST LOCATIONS DESCRIPTION	DATE RUN
-L- 482+45 NB ISL	12/3 to 12/19/2019

DATUM	CUT/ FILL	NORTHING	EASTING
STBC	FILL	373137.2	2001297.1

Cumulative Penetration in Centimeters

0.5	10.1	10.6	27.5
0.9	10.1	10.8	28.2
1.4	10.2	10.9	29.0
1.8	10.2	11.0	29.7
2.3	10.3	11.1	30.5
2.5	10.4	11.3	31.2
2.7	10.4	11.5	32.0
3.0	Augered 6 cm	11.7	32.6
3.2		11.9	33.2
3.4		12.2	33.8
3.7		12.4	34.4
3.9	0.0	12.6	35.0
4.2	0.7	12.8	35.7
4.4	1.4	13.0	36.4
4.7	2.1	13.2	37.1
4.8	2.4	13.4	37.8
4.9	2.7	13.6	38.4
5.0	3.0	13.8	39.2
5.1	3.3	14.0	40.0
5.2	3.5	14.1	40.8
5.4	3.8	14.4	41.6
5.6	4.0	14.7	42.2
5.9	4.3	15.0	42.9
6.1	4.5	15.3	43.6
6.3	4.7	15.6	44.3
6.5	4.9	15.8	45.0
6.7	5.1	16.0	45.7
6.8	5.3	16.2	46.4
7.0	5.5	16.4	47.1
7.2	5.8	16.7	47.8
7.4	6.0	16.9	48.5
7.6	6.2	17.2	49.3
7.8	6.4	17.4	50.3
8.0	6.6	17.7	51.2
8.2	6.8	17.9	52.2
8.4	7.0	18.2	53.1
8.5	7.3	18.5	54.1
8.7	7.5	18.8	54.8
8.8	7.7	19.2	55.5
9.0	7.8	19.5	56.2
9.1	8.0	19.9	56.9
9.2	8.1	20.3	57.7
9.3	8.3	20.7	58.0
9.3	8.5	21.0	58.4
9.4	8.7	21.3	58.7
9.5	8.9	21.9	59.1
9.6	9.1	22.5	59.4
9.7	9.4	23.1	59.7
9.7	9.6	23.7	60.1
9.8	9.8	24.3	60.4
9.9	10.0	25.1	60.8
9.9	10.3	25.9	61.1
10.0	10.5	26.7	

CONE PENETROMETER DATA CODE SHEET

TIP	PROJECT I.D.	ROUTE
I-5987A	47533.1.2	I-95
COUNTY	**ENGINEER**	**TECHNICIANS**
Robeson	VLAD MITCHEV	D. Strother/J. Swartley

TEST LOCATIONS DESCRIPTION	DATE RUN
-L- 482+45 NB ISS	12/3 to 12/19/2019

DATUM	CUT/ FILL	NORTHING	EASTING
STBC	FILL	373135.7	2001295.0

Cumulative Penetration in Centimeters

0.8	35.2	59.0	
1.6	35.6	59.7	
2.4	36.0	60.3	
3.0	36.3	60.8	
3.6	36.7	61.4	
4.2	37.1	61.9	
4.7	37.5	62.5	
5.3	37.9	63.0	
5.8	38.2	63.5	
6.4	38.6	64.1	
7.1	39.0	64.6	
7.7	39.4	65.2	
8.5	39.7	65.7	
9.2	40.1	66.3	
10.0	40.4	66.8	
11.2	40.8	67.4	
12.3	41.1	67.9	
13.5	41.4	68.5	
14.9	41.8	69.0	
16.4	42.1	69.5	
17.8	42.4	70.1	
19.2	42.7	70.6	
20.6	43.0	71.1	
21.7	43.4	71.8	
22.8	43.7	72.4	
23.5	44.0	73.1	
24.2	44.4	73.7	
24.6	44.8	74.4	
25.2	45.2	75.0	
25.6	45.6	75.7	
26.1	46.0	76.3	
26.5	46.4	77.0	
27.0	46.9	77.6	
27.4	47.3	78.2	
27.8	47.8	78.8	
28.2	48.2	79.5	
28.5	48.8	80.1	
28.9	49.4	80.7	
29.3	50.0	81.4	
29.6	50.6	82.1	
29.9	51.2	82.8	
30.2	51.8	83.5	
30.5	52.4	84.2	
30.8	53.0	84.8	
31.3	53.6	85.4	
31.7	54.0	85.9	
32.2	54.6	86.5	
32.6	55.2	87.1	
33.1	55.9	87.6	
33.5	56.5	88.1	
33.9	57.1	88.5	
34.4	57.7	89.0	
34.8	58.4	89.5	

TEST LOCATIONS DESCRIPTION	DATE RUN
-L- 482+45 NB OSS	12/3 to 12/19/2019

DATUM	CUT/ FILL	NORTHING	EASTING
STBC	FILL	373124.3	2001326.5

Cumulative Penetration in Centimeters

0.8	41.4	64.5	
1.4	41.7	65.3	
2.2	42.1	66.0	
2.9	42.6	66.9	
3.5	43.0	67.8	
4.1	43.7	68.7	
4.8	44.3	69.6	
5.5	45.0	70.6	
6.3	45.5	71.5	
7.0	46.0	72.3	
8.0	46.5	73.1	
9.0	46.8	73.9	
9.9	47.2	74.7	
10.7	47.5	75.5	
11.5	47.8	76.3	
12.5	48.1	77.0	
13.5	48.4	77.8	
14.5	48.7	78.5	
15.5	48.9	79.1	
16.6	49.2	79.7	
18.0	49.5	80.3	
18.3	49.9	80.6	
19.3	50.2	80.9	
22.0	50.5	81.2	
23.3	50.7	81.6	
24.5	51.0	82.0	
25.7	51.5	82.4	
26.8	51.9	82.7	
27.7	52.4	83.0	
28.5	52.8	83.3	
29.2	53.1	83.5	
29.7	53.5	83.7	
30.4	53.9	83.9	
31.0	54.4	84.2	
31.5	54.8	84.5	
32.0	55.2	84.9	
32.5	55.7	85.1	
33.2	56.1	85.4	
33.7	56.5	85.6	
34.3	57.0	85.9	
34.8	57.4	86.2	
35.2	57.8	86.5	
35.8	58.2		
36.3	58.6		
36.8	59.2		
37.3	59.8		
37.8	60.4		
38.3	60.9		
38.9	61.4		
39.4	61.9		
39.9	62.5		
40.4	63.2		
40.9	63.8		

SG = Subgrade
SS = Stabilized Soil
CTBC = Cement-Treated Base Course
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RGDL = Rounded Gravel Drainage Layer
STBC = Soil Type Base Course
SDB = Sand Drainage Base

S&ME, Inc.
3201 Spring Forest Road
Raleigh, North Carolina 27616

CONE PENETROMETER DATA CODE SHEET

TIP	PROJECT I.D.	ROUTE
I-5987A	47533.1.2	I-95
COUNTY	ENGINEER	TECHNICIANS
Robeson	VLAD MITCHEV	D. Strother/J. Swartley

TEST LOCATIONS DESCRIPTION	DATE RUN
-L- 14+50 SB OSS	12/3 to 12/19/2019

DATUM	CUT/ FILL	NORTHING	EASTING
SG	AG	326936.6	1996062.7

Cumulative Penetration in Centimeters

1.8	17.3	27.2	34.2	45.3
2.8	17.5	27.4	34.3	45.9
3.6	17.8	27.5	34.5	46.5
3.9	17.9	27.6	34.6	47.0
4.1	18.2	27.8	34.7	47.4
4.2	18.3	27.9	34.8	48.9
4.8	18.5	28.0	34.9	51.3
5.2	18.7	28.1	35.0	52.1
5.5	18.9	28.3	35.2	52.9
5.9	19.3	28.4	35.3	53.8
6.2	19.6	28.5	35.4	54.7
6.8	19.8	28.7	35.6	56.1
7.5	20.1	28.9	35.8	58.3
7.9	20.2	29.0	35.9	60.2
8.1	20.3	29.1	36.0	62.3
8.5	20.5	29.2	36.1	63.2
8.9	20.8	29.4	36.2	64.6
9.3	20.9	29.6	36.3	65.8
9.6	21.1	29.7	36.4	66.3
9.8	21.3	29.8	36.6	67.3
10.2	21.5	29.9	36.7	68.1
10.4	21.6	30.1	36.8	68.9
10.8	21.8	30.2	36.9	69.5
11.1	22.0	30.3	37.1	70.1
11.4	22.2	30.5	37.2	70.9
11.5	22.5	30.6	37.3	71.5
11.8	22.6	30.7	37.4	72.6
12.0	22.7	30.8	37.8	73.8
12.2	22.8	30.9	37.9	74.6
12.5	22.9	31.1	38.3	75.1
12.7	23.1	31.2	38.5	75.9
12.9	23.2	31.3	38.7	76.3
13.1	23.4	31.4	39.0	77.0
13.3	23.6	31.6	39.4	78.5
13.5	23.7	31.7	39.6	79.0
13.7	23.8	31.9	39.8	79.8
13.9	23.9	32.0	40.2	80.7
14.2	24.0	32.1	40.5	
14.5	24.2	32.2	40.8	
14.7	24.5	32.3	41.2	
14.8	24.7	32.5	41.6	
15.0	24.8	32.6	41.9	
15.3	24.9	32.7	42.1	
15.5	25.0	32.8	42.3	
15.6	25.2	32.9	42.8	
15.8	25.4	33.0	43.0	
16.0	25.8	33.2	43.3	
16.1	25.9	33.3	43.7	
16.3	26.2	33.5	43.9	
16.5	26.4	33.6	44.2	
16.8	26.8	33.8	44.6	
17.0	27.0	33.9	44.9	
17.1	27.1	34.0	45.1	

TEST LOCATION DESCRIPTION	DATE RUN
-L- 14+50 SB OSL	12/3 to 12/19/2019

DATUM	CUT/ FILL	NORTHING	EASTING
SG	AG	326935.6	1996070.8

Cumulative Penetration in Centimeters

1.2	21.1	44.0	53.0	60.9	68.2
2.0	21.5	44.3	53.2	61.0	68.4
2.5	21.8	44.5	53.3	61.2	68.6
3.1	22.2	44.6	53.5	61.3	68.7
3.6	22.8	44.8	53.6	61.5	68.8
4.0	23.2	44.9	53.7	61.6	68.9
4.5	23.8	45.1	53.8	61.7	69.1
5.0	24.3	45.3	53.9	61.8	69.3
5.5	25.0	45.4	54.1	61.9	69.4
5.8	25.8	45.6	54.3	62.1	69.6
6.1	26.6	45.7	54.5	62.2	69.7
6.5	26.8	45.9	54.7	62.3	69.9
6.9	27.3	46.0	54.8	62.5	70.0
7.2	27.8	46.2	54.9	62.6	70.1
7.5	28.2	46.3	55.1	62.8	70.2
7.8	28.5	46.5	55.3	62.9	70.9
8.2	29.0	46.8	55.4	63.2	71.3
8.5	29.4	46.9	55.6	63.3	71.4
8.9	29.8	47.0	55.7	63.4	71.9
9.3	30.0	47.2	55.9	63.5	72.5
9.7	30.5	47.3	56.0	63.6	72.9
10.0	30.7	47.4	56.2	63.8	73.6
10.3	30.9	47.6	56.3	63.9	73.9
10.8	31.3	47.8	56.5	64.3	74.2
11.1	32.0	47.9	56.6	64.4	74.5
11.6	32.3	48.1	56.8	64.5	74.8
12.3	33.2	48.3	56.9	64.6	75.3
12.5	33.4	48.4	57.0	64.7	75.7
12.8	33.5	48.6	57.2	64.9	76.1
13.1	33.8	48.7	57.3	65.0	
13.4	33.9	48.9	57.5	65.1	
13.8	40.1	49.0	57.7	65.2	
14.1	40.2	49.2	57.9	65.3	
14.3	40.4	49.4	58.0	65.5	
14.5	40.5	49.5	58.2	65.6	
14.7	40.8	49.7	58.3	65.8	
15.0	40.9	49.8	58.5	65.9	
15.3	41.2	50.1	58.6	66.1	
15.7	41.3	50.3	58.8	66.2	
16.0	41.5	50.5	58.9	66.3	
16.4	41.7	50.7	59.0	66.5	
16.7	41.9	50.9	59.2	66.6	
17.1	42.0	51.2	59.3	66.8	
17.5	42.2	51.3	59.4	66.9	
17.9	42.4	51.5	59.6	67.0	
18.3	42.6	51.7	59.7	67.2	
18.6	42.8	51.9	59.8	67.3	
18.9	42.9	52.0	59.9	67.4	
19.3	43.1	52.3	60.1	67.6	
19.7	43.3	52.5	60.2	67.7	
20.0	43.5	52.7	60.4	67.8	
20.2	43.6	52.8	60.5	67.9	
20.6	43.8	52.9	60.6	68.0	

CONE PENETROMETER DATA CODE SHEET

TIP	PROJECT I.D.	ROUTE
I-5987A	47533.1.2	I-95
COUNTY	ENGINEER	TECHNICIANS
Robeson	VLAD MITCHEV	D. Strother/J. Swartley

TEST LOCATIONS DESCRIPTION	DATE RUN
-L- 23+10 SB OSS	12/3 to 12/19/2019

DATUM	CUT/ FILL	NORTHING	EASTING
SG	FILL	327767.7	1996279.1

Cumulative Penetration in Centimeters

1.9	19.9	34.6			
2.1	20.2	35.5			
2.3	20.3	37.0			
2.5	20.5	38.1			
2.9	20.6	38.9			
3.1	20.8	39.6			
3.5	21.0	41.2			
3.9	21.2	42.9			
4.2	21.4	44.4			
4.7	21.5	46.3			
5.3	21.8	48.2			
6.0	21.9	50.3			
6.3	22.1	52.2			
6.8	22.3	53.2			
7.0	22.4	54.3			
7.3	22.5	55.1			
7.5	22.6	55.9			
7.9	22.8	56.3			
8.1	23.0	56.4			
8.3	23.1	56.5			
8.5	23.3	57.0			
8.9	23.4	57.6			
9.4	23.5				
9.6	23.6				
9.8	23.8				
10.3	24.0				
10.5	24.4				
10.7	24.8				
10.9	25.1				
11.2	25.4				
11.5	25.6				
11.9	25.8				
12.2	26.0				
12.7	26.3				
13.0	26.6				
13.3	26.9				
13.6	27.1				
13.8	27.3				
14.0	27.5				
14.6	27.8				
15.1	28.1				
15.6	28.5				
15.9	28.9				
16.3	29.3				
16.8	29.8				
17.2	30.1				
17.8	30.3				
18.4	30.5				
18.9	30.9				
19.1	31.3				
19.3	32.0				
19.5	32.9				
19.6	33.5				

TEST LOCATION DESCRIPTION	DATE RUN
-L- 35+90 SB OSS	12/3 to 12/19/2019

DATUM	CUT/ FILL	NORTHING	EASTING
ABC	AG	329003.5	1996611.9

Cumulative Penetration in Centimeters

2.5	66.0				
4.1	67.5				
5.2	68.7				
6.3	70.0				
7.4	71.1				
8.2	72.3				
9.1	73.4				
9.9	74.6				
10.6	76.0				
11.5					
12.7					
12.9					
13.7					
14.3					
15.0					
15.9					
16.6					
17.3					
18.2					
19.1					
20.0					
21.0					
21.9					
23.1					
24.7					
25.5					
26.7					
28.1					
29.2					
30.6					
32.6					
34.0					
35.4					
37.2					
38.8					
40.4					
42.0					
43.5					
45.2					
46.9					
48.5					
50.1					
51.5					
53.2					
54.6					
56.0					
57.3					
58.4					
59.8					
61.2					
62.4					
63.7					
64.8					

SG = Subgrade
SS = Stabilized Soil
CTBC = Cement-Treated Base Course
ABC = Aggregate Base Course
ESG = Estimated Subgrade
AG = At Grade

RGDL = Rounded Gravel Drainage Layer
STBC = Soil Type Base Course
SDB = Sand Drainage Base

S&ME, Inc.
3201 Spring Forest Road
Raleigh, North Carolina 27616

CONE PENETROMETER DATA CODE SHEET

TIP	PROJECT I.D.	ROUTE
I-5987A	47533.1.2	I-95
COUNTY	ENGINEER	TECHNICIANS
Robeson	VLAD MITCHEV	D. Strother/J. Swartley

TEST LOCATIONS DESCRIPTION	DATE RUN
-L- 35+90 SB ISS	12/3 to 12/19/2019

DATUM	CUT/ FILL	NORTHING	EASTING
SG	AG	328986.4	1996644.2

Cumulative Penetration in Centimeters

2.2	42.5								
2.8	43.6								
3.5	44.7								
4.3	46.1								
4.9	47.4								
5.6	48.6								
6.1	49.6								
6.4	50.8								
6.7	51.9								
7.2	53.1								
7.5	54.2								
7.9	55.6								
8.3	56.6								
8.7	57.7								
9.1	58.5								
9.5	59.6								
9.9	60.5								
10.3	61.3								
10.7	62.6								
11.1	63.7								
11.5									
12.0									
12.3									
12.9									
13.4									
13.8									
14.7									
15.4									
16.1									
16.6									
17.3									
17.9									
18.5									
19.7									
20.3									
21.2									
21.9									
22.5									
23.3									
24.0									
24.8									
25.7									
26.6									
27.6									
28.7									
29.6									
31.1									
32.6									
34.1									
35.8									
37.5									
39.1									
40.6									

TEST LOCATIONS DESCRIPTION	DATE RUN
-L- 35+90 SB ISL	12/3 to 12/19/2019

DATUM	CUT/ FILL	NORTHING	EASTING
SG	AG	328996.0	1996636.5

Cumulative Penetration in Centimeters

1.9	26.1								
2.8	26.6								
3.5	27.4								
4.1	28.0								
5.0	28.7								
5.8	29.5								
6.3	30.2								
6.6	31.1								
6.8	31.6								
7.2	32.3								
7.6	33.2								
8.0	33.9								
8.6	35.0								
9.1	36.2								
9.4	37.5								
10.0	38.6								
10.6	39.7								
11.0	40.9								
11.4	41.9								
11.8	43.3								
12.3	44.3								
12.9	45.5								
13.3									
13.7									
14.2									
14.7									
15.0									
15.4									
15.8									
16.2									
16.4									
16.8									
17.2									
17.5									
17.9									
18.3									
18.8									
19.3									
19.8									
20.3									
20.7									
21.2									
21.6									
22.0									
22.6									
23.0									
23.4									
23.7									
24.2									
24.6									
25.1									
25.4									
25.8									

CONE PENETROMETER DATA CODE SHEET

TIP	PROJECT I.D.	ROUTE
I-5987A	47533.1.2	I-95
COUNTY	ENGINEER	TECHNICIANS
Robeson	VLAD MITCHEV	D. Strother/J. Swartley

TEST LOCATIONS DESCRIPTION	DATE RUN
-L- 62+35 SB OSS	12/3 to 12/19/2019

DATUM	CUT/ FILL	NORTHING	EASTING
ABC	FILL	331563.5	1997285.5

Cumulative Penetration in Centimeters

1.7	27.5								
2.2	29.9								
3.0	31.1								
3.9	32.2								
4.0	33.1								
4.8	34.0								
5.6	34.9								
6.5	35.6								
7.4	36.4								
7.9	37.0								
8.3	37.7								
9.0	38.5								
9.5	39.0								
10.2	39.7								
10.9	40.4								
11.2	41.0								
11.8	41.8								
12.3	42.8								
13.0	43.9								
13.7	45.3								
14.2	47.2								
14.9	49.4								
15.4	51.4								
16.0	53.3								
16.7	55.1								
17.3	57.0								
17.8	58.9								
18.2	60.9								
18.9	62.2								
19.5	63.9								
20.0	65.5								
20.6	67.2								
20.9									
21.4									
21.8									
22.0									
22.6									
22.9									
23.2									
23.4									
23.7									
23.9									
24.2									
24.3									
24.4									
24.5									
24.6									
24.7									
24.9									
25.1									
25.3									
25.5									
26.2									

TEST LOCATION DESCRIPTION	DATE RUN
-L- 62+35 SB OSL	12/3 to 12/19/2019

DATUM	CUT/ FILL	NORTHING	EASTING
ABC	FILL	331558.1	1997293.4

Cumulative Penetration in Centimeters

1.8	27.9	75.8							
2.6	28.2								
3.4	28.7								
4.1	29.2								
4.8	29.7								
5.5	30.1								
6.1	30.6								
6.7	30.9								
7.6	31.2								
8.0	31.8								
8.4	32.4								
8.9	32.9								
9.3	33.3								
9.8	33.7								
10.2	34.4								
10.9	34.9								
11.4	35.2								
11.7	35.7								
12.4	36.1								
12.9	36.9								
13.4	37.4								
14.0	37.8								
14.7	38.2								
15.2	38.9								
15.9	39.3								
16.3	39.8								
16.7	40.2								
17.0	40.7								
17.5	41.0								
17.9	41.6								
18.3	42.1								
18.6	42.8								
18.9	43.3								
19.2	43.9								
19.7	44.4								
20.3	44.7								
20.7	45.1								
20.9	45.6								
21.3	46.0								
21.4	46.3								
21.9	46.9								
22.3	47.3								
22.8	48.2								
23.4	49.1								
23.9	50.4								
24.1	53.1								
24.6	56.1								
24.9	58.9								
25.3	63.1								
25.8	67.8								
26.2	70.9								
26.8	72.5								
27.4	73.9								

SG = Subgrade
SS = Stabilized Soil
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ESG = Estimated Subgrade
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RGDL = Rounded Gravel Drainage Layer
STBC = Soil Type Base Course
SDB = Sand Drainage Base

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CONE PENETROMETER DATA CODE SHEET

TIP	PROJECT I.D.	ROUTE
I-5987A	47533.1.2	I-95
COUNTY	ENGINEER	TECHNICIANS
Robeson	VLAD MITCHEV	D. Strother/J. Swartley

TEST LOCATIONS DESCRIPTION	DATE RUN
-L- 62+35 SB ISS	12/3 to 12/19/2019

DATUM	CUT/ FILL	NORTHING	EASTING
ABC	AG	331551.0	1997318.7

Cumulative Penetration in Centimeters																			
2.0	39.4																		
2.6	40.3																		
3.3	41.2																		
3.9	42.4																		
4.5	43.5																		
5.0	44.5																		
5.7	45.7																		
6.3	46.8																		
7.1	47.8																		
7.6	49.0																		
8.3	50.3																		
9.0	51.5																		
9.5	52.7																		
10.1	53.8																		
10.6	55.8																		
10.9	57.8																		
11.5	59.7																		
12.1																			
12.5																			
13.0																			
13.5																			
14.0																			
14.3																			
14.9																			
15.3																			
15.8																			
16.2																			
16.9																			
17.5																			
18.2																			
18.8																			
19.4																			
20.2																			
20.9																			
21.6																			
22.4																			
23.2																			
24.1																			
25.1																			
26.0																			
26.8																			
27.8																			
28.8																			
29.8																			
30.9																			
32.0																			
33.0																			
33.9																			
34.8																			
35.6																			
36.5																			
37.3																			
38.2																			

Cumulative Penetration in Centimeters																			
5.8																			
7.6																			
8.5																			
9.5																			
10.3																			
11.2																			
12.2																			
13.1																			
14.0																			
14.8																			
15.6																			
16.5																			
17.3																			
18.2																			
18.9																			
19.4																			
20.5																			
21.8																			
23.4																			
27.3																			
30.0																			
31.6																			
32.7																			
33.7																			
34.9																			
36.2																			
37.9																			
39.3																			
40.7																			
41.8																			
43.1																			
44.2																			
45.1																			
45.9																			
46.6																			
47.5																			
48.3																			
49.3																			
50.2																			
51.5																			
52.8																			
54.7																			
56.3																			
57.8																			
59.4																			
60.8																			
62.1																			
63.0																			

CONE PENETROMETER DATA CODE SHEET

TIP	PROJECT I.D.	ROUTE
I-5987A	47533.1.2	I-95
COUNTY	ENGINEER	TECHNICIANS
Robeson	VLAD MITCHEV	D. Strother/J. Swartley

TEST LOCATIONS DESCRIPTION	DATE RUN
-L- 84+65 SB ACCEL	12/3 to 12/19/2019

DATUM	CUT/ FILL	NORTHING	EASTING
ABC	AG	333719.0	1997840.7

Cumulative Penetration in Centimeters																			
0.8	74.8																		
1.1	76.3																		
1.3	77.6																		
1.5	78.7																		
2.3	80.1																		
2.9	81.3																		
4.2	82.5																		
4.9	83.7																		
5.6	84.8																		
6.3	86.0																		
7.5	87.1																		
8.3	88.2																		
9.0	89.1																		
10.2	90.2																		
11.1	91.0																		
11.9	92.0																		
12.3	92.8																		
12.8	94.2																		
13.6																			
14.5																			
15.2																			
15.9																			
16.8																			
17.6																			
18.6																			
20.7																			
21.6																			
25.4																			
28.9																			
30.8																			
32.3																			
33.5																			
34.5																			
35.6																			
37.4																			
39.3																			
41.6																			
44.6																			
47.8																			
50.5																			
52.5																			
54.3																			
56.3																			
57.9																			
59.5																			
61.5																			
63.5																			
65.5																			
67.2																			
69.0																			
70.4																			
72.0																			
73.6																			

TEST LOCATIONS DESCRIPTION	DATE RUN
-L- 88+65 SB ISS	12/3 to 12/19/2019

DATUM	CUT/ FILL	NORTHING	EASTING
SG	FILL	334092.6	1997993.8

Cumulative Penetration in Centimeters																			
0.7	46.5																		
1.2	47.3																		
1.7	48.0																		
2.0	48.6																		
2.5	49.3																		
3.2	49.9																		
3.9	50.5																		
4.5	51.2																		
5.2	52.0																		
5.7	52.5																		
6.2	53.2																		
6.7	53.8																		
7.3	54.4																		
7.7	54.9																		
8.3	55.5																		
9.6	56.1																		
10.7	56.8																		
11.9	57.5																		
13.1	58.1																		
14.3	58.6																		
15.8	59.2																		
17.4	59.8																		
18.7	60.3																		
19.9	60.7																		
21.2	61.2																		
22.3	61.6																		
23.4	62.0																		
24.6	62.4																		
25.6	62.9																		
26.7	63.3																		
27.5	63.6																		
28.3	64.0																		
29.1	64.3																		
30.0	64.9																		
30.7	65.3																		
31.6	65.6																		
32.4	66.1																		
33.3	66.6																		
34.2	66.9																		
35.0	67.3																		
36.1	67.8																		
37.1	68.1																		
38.1	68.5																		
39.0	69.0																		
39.9	69.3																		
40.8	69.8																		
41.6	70.2																		
42.3																			
42.9																			
43.7																			
44.4																			
45.1																			
45.7																			

SG = Subgrade
SS = Stabilized Soil
CTBC = Cement-Treated Base Course
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ESG = Estimated Subgrade
AG = At Grade

RGDL = Rounded Gravel Drainage Layer
STBC = Soil Type Base Course
SDB = Sand Drainage Base

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CONE PENETROMETER DATA CODE SHEET

TIP	PROJECT I.D.	ROUTE
I-5987A	47533.1.2	I-95
COUNTY	ENGINEER	TECHNICIANS
Robeson	VLAD MITCHEV	D. Strother/J. Swartley

TEST LOCATIONS DESCRIPTION			DATE RUN
-L- 88+65 SB ISL			12/3 to 12/19/2019
DATUM	CUT/ FILL	NORTHING	EASTING
SG	FILL	334097.0	1997988.3

Cumulative Penetration in Centimeters

1.5	21.7	57.5						2.1	22.4	58.4					
2.8	22.8	59.1						3.2	23.0	59.9					
3.6	23.4	60.7						4.0	23.8	61.0					
4.7	24.1	62.8						5.4	24.5	64.0					
5.8	24.9	65.4						6.1	25.4	66.1					
6.3	25.8	67.0						6.5	26.5	67.5					
6.9	26.9							7.2	27.4						
7.6	28.0							7.8	28.8						
8.0	29.4							8.1	30.1						
8.3	31.0							8.5	32.9						
8.9	33.5							9.6	34.3						
10.1	35.6							10.5	36.1						
10.7	37.0							11.2	38.2						
11.5	38.9							11.9	39.7						
12.3	40.4							12.6	41.0						
13.0	42.5							13.5	43.1						
14.1	43.8							14.4	44.6						
14.7	45.1							15.0	45.8						
15.6	46.5							15.9	47.0						
16.3	47.7							16.8	48.5						
17.0	48.9							17.5	49.4						
17.8	50.2							18.2	51.0						
18.6	51.8							18.9	52.1						
19.2	52.8							19.5	53.4						
19.9	54.0							20.3	54.7						
20.6	55.3							21.0	55.9						
21.4	56.7														

TEST LOCATIONS DESCRIPTION			DATE RUN
-L- 114+40 SB OSS			12/3 to 12/19/2019
DATUM	CUT/ FILL	NORTHING	EASTING
SDB	FILL	336597.6	1998608.1

Cumulative Penetration in Centimeters

1.6	45.5							2.9	46.4						
4.6	47.2							5.0	47.9						
5.9	48.5							6.2	49.3						
7.1	50.1							8.2	50.7						
8.8	51.3							10.2	52.1						
10.5	52.8							11.5	53.6						
11.9	54.3							12.1	55.0						
12.7	55.8							13.7	56.3						
14.7	57.0							15.8	57.7						
16.7	58.2							17.9	59.1						
18.7	59.8							19.6	60.6						
20.6	61.1							21.6	61.6						
22.9	62.5							24.4	63.2						
25.8	63.8							27.0	64.7						
27.8	65.3							28.0	66.2						
28.6								29.4							
30.2								30.6							
31.4								32.1							
32.6								33.3							
33.7								34.4							
35.0								35.5							
36.0								36.7							
37.4								38.1							
38.9								39.5							
40.5								41.1							
42.0								43.2							
44.7															

CONE PENETROMETER DATA CODE SHEET

TIP	PROJECT I.D.	ROUTE
I-5987A	47533.1.2	I-95
COUNTY	ENGINEER	TECHNICIANS
Robeson	VLAD MITCHEV	D. Strother/J. Swartley

TEST LOCATIONS DESCRIPTION			DATE RUN
-L- 114+40 SB OSL			12/3 to 12/19/2019
DATUM	CUT/ FILL	NORTHING	EASTING
SDB	FILL	336593.4	1998620.9

Cumulative Penetration in Centimeters

1.5	47.2							2.7	48.0						
4.4	48.7							4.7	49.4						
5.7	50.1							6.1	50.8						
7.0	51.4							8.1	52.1						
8.8	52.8							10.1	53.8						
10.4	54.3							11.5	55.0						
11.8	55.8							12.0	56.3						
13.6	57.0							14.5	57.6						
15.7	58.2							16.6	59.1						
17.6	59.8							18.6	60.6						
19.5	61.1							20.6	61.6						
21.5	62.5							22.7	63.2						
24.2	63.7							25.7	64.6						
26.9	65.4							27.7	66.2						
28.5								29.2							
30.0								30.6							
31.2								32.0							
32.5								33.2							
33.7								34.4							
34.9								35.5							
36.0								36.6							
37.3								38.0							
38.8								39.6							
40.5								41.1							
42.0								43.3							
43.8								44.7							
45.5								46.4							

TEST LOCATIONS DESCRIPTION			DATE RUN
-L- 114+40 SB ISS			12/3 to 12/19/2019
DATUM	CUT/ FILL	NORTHING	EASTING
STBC	FILL	336589.2	1998642.1

Cumulative Penetration in Centimeters

1.2	27.0	48.0	58.7					1.6	27.8	48.3	58.9				
2.1	28.7	48.5	59.0					2.5	29.6	48.7	59.2				
3.0	30.2	49.0	59.4					3.4	30.9	49.2	59.7				
3.7	31.6	49.4	60.0					4.2	32.2	49.6	60.2				
4.6	32.9	49.8	60.5					5.0	33.5	50.0	60.8				
5.3	34.1	50.1	60.9					5.8	34.7	50.5	61.2				
6.3	35.2	50.7	61.5					6.7	35.4	50.8	61.9				
7.2	35.8	51.1	62.1					7.7	36.2	51.2	62.5				
8.2	36.6	51.4	62.6					8.5	36.9	51.7	62.9				
9.0	37.3	51.8	63.2					9.5	37.6	52.0	63.3				
9.8	37.8	52.2	63.7					10.3	38.3	52.4	63.9				
10.8	38.5	52.6	64.2					11.3	38.8	52.9	64.5				
11.8	39.0	53.0	64.8					12.2	39.4	53.1	65.0				
12.6	39.6	53.4	65.3					12.9	39.9	53.5	65.5				
13.6	40.2	53.8	65.8					14.0	40.5	53.9	66.1				
14.3	40.8	54.1	66.4					14.8	41.2	54.3	66.6				
15.2	41.5	54.4	67.0					15.5	41.8	54.5	67.1				
15.9	42.1	54.8	67.5					16.3	42.4	54.9	67.7				
16.8	42.8	55.1	68.1					17.3	43.1	55.3	68.3				
17.8	43.5	55.4						18.3	43.9	55.6					
18.8	44.2	55.8						19.2	44.7	56.1					
19.7	45.0	56.3						20.2	45.2	56.4					
20.7	45.6	56.8						21.1	45.9	57.0					
21.6	46.3	57.2						22.4	46.5	57.3					
23.0	46.7	57.6						23.8	47.0	57.8					
24.6	47.4	58.0						25.3	47.5	58.2					
26.1	47.8	58.5													

SG = Subgrade
SS = Stabilized Soil
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ESG = Estimated Subgrade
AG = At Grade

RGDL = Rounded Gravel Drainage Layer
STBC = Soil Type Base Course
SDB = Sand Drainage Base

S&ME, Inc.
3201 Spring Forest Road
Raleigh, North Carolina 27616

CONE PENETROMETER DATA CODE SHEET

TIP	PROJECT I.D.	ROUTE
I-5987A	47533.1.2	I-95
COUNTY	ENGINEER	TECHNICIANS
Robeson	VLAD MITCHEV	D. Strother/J. Swartley

TEST LOCATIONS DESCRIPTION	DATE RUN
-L- 114+40 SB DECEL	12/3 to 12/19/2019

DATUM	CUT/ FILL	NORTHING	EASTING
SDB	FILL	336592.5	1998614.2

Cumulative Penetration in Centimeters

2.5	35.0	56.5			
3.8	35.4	56.8			
4.9	35.9	57.1			
5.8	36.3	57.5			
6.6	36.6	57.8			
7.2	36.9	58.0			
8.3	37.4	58.3			
9.0	37.8	58.6			
10.1	38.1	58.9			
11.3	38.6	59.0			
12.6	39.0	59.3			
13.5	39.4	59.5			
14.2	39.9	59.8			
14.7	40.4	60.1			
15.5	40.9	60.5			
16.1	41.2	60.9			
16.8	42.5	61.2			
17.4	43.0	61.5			
18.0	43.3	61.6			
18.6	43.7	61.9			
19.2	44.0	62.1			
19.7	44.6	62.5			
20.0	45.1	62.8			
20.6	45.6	63.1			
21.0	45.9	63.4			
21.6	47.3	63.6			
22.0	48.3	63.9			
22.5	48.9	64.1			
23.0	49.2	64.6			
23.5	49.9	65.0			
24.1	50.3	65.3			
24.6	50.7	65.8			
24.9	51.0	66.1			
25.4	51.3	66.5			
25.9	51.5	66.9			
26.4	51.8	67.2			
26.9	52.0	67.9			
27.4	52.2	68.1			
28.0	52.5	68.9			
28.5	52.7				
29.0	53.0				
29.6	53.6				
30.4	53.9				
31.0	54.2				
31.4	54.7				
31.8	54.9				
32.2	55.0				
32.6	55.2				
33.1	55.4				
33.6	55.7				
33.9	55.9				
34.2	56.2				
34.9	56.3				

TEST LOCATIONS DESCRIPTION	DATE RUN
-L- 142+50 SB ISS	12/3 to 12/19/2019

DATUM	CUT/ FILL	NORTHING	EASTING
STBC	FILL	339295.3	1999361.3

Cumulative Penetration in Centimeters

1.6	23.6	52.3			
2.5	23.9	53.0			
3.1	24.2	53.9			
3.9	24.6	54.4			
4.6	25.4	55.1			
5.5	25.9	55.9			
6.0	26.1	57.1			
6.3	26.4	58.1			
6.9	26.7	58.9			
7.4	26.9	59.6			
7.8	27.1	60.5			
8.1	27.3	61.7			
8.6	27.6	62.6			
9.1	27.8	63.2			
9.6	28.6	64.5			
9.9	29.0	65.7			
10.4	29.4	66.0			
10.8	29.9	66.3			
11.2	30.4	66.9			
11.7	30.8	67.4			
12.0	31.7	68.3			
12.5	32.0	69.2			
12.9	32.3	70.9			
13.2	32.9				
13.6	33.2				
13.9	34.1				
14.0	34.4				
14.2	34.9				
14.6	35.3				
14.9	35.9				
15.1	36.9				
15.2	37.0				
15.6	37.9				
15.9	38.4				
16.2	39.6				
16.7	40.0				
16.9	40.6				
17.5	41.0				
17.9	41.9				
18.2	42.6				
18.6	43.7				
18.8	44.2				
19.0	44.8				
19.3	45.3				
19.5	46.2				
19.8	47.1				
20.5	47.9				
21.0	48.3				
21.4	49.0				
21.7	49.6				
21.9	50.2				
22.3	50.9				
23.1	51.5				

CONE PENETROMETER DATA CODE SHEET

TIP	PROJECT I.D.	ROUTE
I-5987A	47533.1.2	I-95
COUNTY	ENGINEER	TECHNICIANS
Robeson	VLAD MITCHEV	D. Strother/J. Swartley

TEST LOCATIONS DESCRIPTION	DATE RUN
-L- 142+50 SB ISL	12/3 to 12/19/2019

DATUM	CUT/ FILL	NORTHING	EASTING
STBC	FILL	339304.9	1999354.7

Cumulative Penetration in Centimeters

0.8	15.1	24.8	41.9		
1.1	15.3	25.0	42.2		
1.9	15.4	25.4	42.5		
2.3	15.6	25.7	42.8		
3.5	15.7	25.9	43.6		
4.1	15.9	26.1	44.2		
4.5	16.0	26.4	45.3		
4.8	16.2	26.7	46.6		
5.1	16.4	26.9	47.3		
5.3	16.6	27.0	48.1		
5.5	16.7	27.3	48.9		
5.9	16.9	27.5	49.2		
6.1	17.0	27.9	49.8		
6.4	17.2	28.0	50.3		
6.7	17.4	28.3	51.1		
6.9	17.5	28.5	51.9		
7.2	17.7	28.8	52.6		
7.5	17.8	28.9	53.0		
7.8	18.0	29.2	54.2		
8.1	18.2	29.6	55.1		
8.3	18.4	30.4	55.9		
8.6	18.6	30.7	56.2		
8.9	18.7	30.9	57.6		
9.1	19.0	31.3	58.1		
9.2	19.2	31.5	58.9		
9.4	19.3	31.7	59.3		
9.6	19.5	31.9	61.3		
9.9	19.7	32.3	62.8		
10.2	19.8	32.7			
10.4	19.9	32.9			
10.6	20.1	33.4			
10.9	20.3	33.7			
11.2	20.4	33.9			
11.4	20.6	34.2			
11.5	20.9	34.6			
11.7	21.1	34.9			
11.8	21.3	35.2			
11.9	21.5	35.8			
12.2	21.7	36.1			
12.4	21.9	36.4			
12.5	22.0	36.9			
12.6	22.4	37.0			
12.8	22.5	37.3			
13.0	22.7	37.6			
13.2	22.9	37.9			
13.4	23.0	38.1			
13.6	23.2	38.3			
13.9	23.4	38.6			
14.0	23.5	39.2			
14.3	23.6	39.9			
14.6	23.8	40.7			
14.8	23.9	41.0			
14.9	24.3	41.3			

TEST LOCATIONS DESCRIPTION	DATE RUN
-L- 143+50 SB OSS	12/3 to 12/19/2019

DATUM	CUT/ FILL	NORTHING	EASTING
SDB	FILL	339406.3	1999353.5

Cumulative Penetration in Centimeters

1.5	33.0	77.2			
2.1	33.6	77.9			
2.9	34.2	78.4			
3.4	34.9	78.7			
4.1	35.6	79.1			
4.9	36.4	79.5			
5.2	37.4	80.0			
5.6	38.0	80.6			
6.2	38.7	81.0			
6.7	39.4	81.4			
7.1	39.8	81.7			
7.6	40.7	82.0			
8.0	41.1	82.4			
8.4	41.8	82.8			
9.0	42.5	83.1			
9.6	43.1	83.4			
10.0	43.9	83.8			
10.4	44.4	84.0			
10.7	45.0	84.6			
11.3	45.7	85.0			
11.9	46.2	85.5			
12.6	46.6	85.9			
13.2	47.5	86.3			
13.9	48.3	86.5			
14.2	49.2	86.8			
14.7	50.0	87.1			
15.3	50.8	87.5			
15.7	51.9	87.8			
16.3	52.6	88.0			
16.9	54.3	88.3			
17.6	56.2	88.7			
18.3	57.2	89.0			
19.0	57.9	89.5			
19.7	58.5	89.7			
20.1	59.7	90.2			
20.7	60.2	90.6			
21.6	61.2	91.1			
22.2	62.0	91.7			
22.8	62.9	92.0			
23.4	63.9	92.5			
24.0	64.6	93.1			
24.8	65.6	93.6			
25.2	66.8	93.8			
25.8	67.6				
26.5	68.7				
27.1	69.9				
27.7	71.4				
28.5	72.3				
29.4	73.1				
29.9	73.9				
30.6	74.6				
31.7	75.5				
32.4	76.7				

SG = Subgrade
SS = Stabilized Soil
CTBC = Cement-Treated Base Course
ABC = Aggregate Base Course
ESG = Estimated Subgrade
AG = At Grade

RGDL = Rounded Gravel Drainage Layer
STBC = Soil Type Base Course
SDB = Sand Drainage Base

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CONE PENETROMETER DATA CODE SHEET

TIP	PROJECT I.D.	ROUTE
I-5987A	47533.1.2	I-95
COUNTY	**ENGINEER**	**TECHNICIANS**
Robeson	VLAD MITCHEV	D. Strother/J. Swartley

TEST LOCATIONS DESCRIPTION	DATE RUN
-L- 168+65 SB ISS	12/3 to 12/19/2019

DATUM	CUT/ FILL	NORTHING	EASTING
STBC	FILL	341830.9	2000029.6

Cumulative Penetration in Centimeters

1.2		24.0		53.6						1.5		40.5		70.6					
1.9		24.7		54.1						2.6		41.3		71.3					
2.3		25.0		54.7						3.6		42.0		71.8					
3.1		25.6		54.9						4.5		42.8		72.3					
3.8		26.0		55.0						5.5		43.2		72.9					
4.5		26.4		55.5						6.1		44.0		73.4					
5.1		26.8		55.9						6.9		44.6		73.8					
6.0		27.1		56.2						7.6		45.3		74.6					
6.4		27.5		56.7						8.1		46.0		75.2					
6.8		27.9		57.0						8.7		46.8		75.7					
7.0		28.6		57.3						9.2		47.2		76.1					
7.5		28.9		57.6						9.8		47.9		76.8					
8.1		29.5		57.9						10.4		48.5		77.4					
8.6		30.2		58.0						10.9		49.1		77.7					
8.9		30.9		58.4						11.6		49.5		78.3					
9.2		31.3		58.9						12.0		50.0		78.6					
9.7		31.9		59.0						12.5		50.6		79.4					
9.9		32.5		60.0						13.5		51.2		79.7					
10.3		33.7		60.1						14.8		51.7		80.2					
10.7		34.0		60.2						15.6		52.3		80.5					
10.9		35.1		60.3						16.0		52.8		81.1					
11.1		35.8		60.3						16.9		53.1		81.5					
11.6		36.0		60.7						17.4		53.6		81.9					
12.1		36.8		60.9						18.1		54.2		82.5					
12.7		37.2		61.0						18.6		54.7		83.0					
13.0		37.9		61.6						19.7		55.1		83.4					
13.4		38.3		62.0						20.2		55.5		83.8					
13.9		38.9		62.3						20.9		56.3		84.3					
14.3		39.6		62.5						21.2		56.8		84.8					
14.7		40.2		62.9						22.5		57.2		85.5					
15.2		40.7		63.1						23.4		57.8		86.4					
15.7		41.2		63.6						24.0		58.6		87.2					
16.2		41.9		64.0						25.2		59.0		87.7					
16.5		42.6		64.2						25.8		59.6		88.5					
16.9		43.2		64.5						26.6		60.1		89.3					
17.3		43.8		64.7						27.0		60.8		90.5					
17.7		44.1		64.8						27.8		61.5		91.3					
18.2		44.9		64.9						28.4		62.2		92.0					
18.8		45.3		65.0						28.9		62.8		92.9					
18.9		45.8		65.2						29.6		63.4		93.6					
19.0		46.2		65.4						30.7		64.0		94.7					
19.3		46.9		66.0						31.0		64.3		95.6					
19.5		47.4		66.7						31.8		64.6		96.5					
19.8		48.0		67.1						32.5		65.1		97.8					
20.2		48.6		67.5						34.5		65.8							
20.7		49.1		68.0						35.8		66.7							
21.0		49.9		68.6						36.2		67.1							
21.5		50.5		69.0						36.6		67.8							
21.9		51.1								37.4		68.4							
22.0		51.7								38.2		68.6							
22.6		52.4								38.5		69.2							
23.0		52.9								38.9		69.7							
23.6		53.1								39.3		70.2							

CONE PENETROMETER DATA CODE SHEET

TIP	PROJECT I.D.	ROUTE
I-5987A	47533.1.2	I-95
COUNTY	**ENGINEER**	**TECHNICIANS**
Robeson	VLAD MITCHEV	D. Strother/J. Swartley

TEST LOCATIONS DESCRIPTION	DATE RUN
-L- 180+35 SB OSL	12/3 to 12/19/2019

DATUM	CUT/ FILL	NORTHING	EASTING
STBC	FILL	342964.7	2000284.4

Cumulative Penetration in Centimeters

1.6		Auger		32.4		57.0													
1.8				32.7		57.1													
2.1				32.9		57.7													
2.2				33.2		58.3													
2.3		18.1		33.6		58.7													
2.5		18.7		33.9		59.3													
3.4		19.2		34.2		60.1													
3.6		19.6		34.8		60.5													
3.9		19.9		35.1		61.1													
4.2		20.2		35.4		61.5													
4.5		20.6		35.9		62.2													
4.7		20.9		36.2		62.8													
4.8		21.1		36.7		63.3													
4.9		21.3		37.3		63.6													
5.0		21.6		37.9		64.4													
5.1		21.8		38.2		65.0													
5.2		22.1		38.6		65.8													
5.3		22.4		38.9		66.2													
5.5		22.6		40.0		66.9													
5.6		22.8		40.1		67.3													
5.8		23.1		40.4		67.8													
5.9		23.6		40.7		68.4													
6.0		23.8		41.3		68.9													
6.1		24.1		41.7		69.5													
6.2		24.3		42.5		70.2													
6.3		24.6		42.9		70.8													
6.4		24.7		43.2		71.4													
6.5		24.9		43.7		72.2													
6.6		25.1		44.5		72.7													
6.7		25.3		45.3		73.3													
6.8		25.6		45.9		74.0													
6.9		25.9		46.2		74.6													
7.1		26.2		46.7		75.2													
7.2		26.4		47.1		76.4													
7.3		26.6		47.5		77.1													
7.4		26.8		47.8		77.8													
7.5		27.1		48.2		78.3													
7.6		27.3		48.6		79.7													
7.7		27.5		49.3		80.6													
7.8		27.8		49.7		81.4													
7.9		28.2		50.2		82.5													
8.1		28.3		50.4		83.2													
8.2		28.6		50.8		83.8													
8.3		28.9		51.3		84.3													
8.4		29.2		52.6		85.0													
8.5		29.3		53.0		85.7													
8.6		29.9		53.9		86.1													
8.7		30.3		54.2		86.8													
8.8		30.7		54.7		87.3													
9.0		31.0		55.9		88.0													
9.2		31.3		56.2															
9.4		31.6		56.7															
9.9		32.1		56.9															

CONE PENETROMETER DATA CODE SHEET

TIP	PROJECT I.D.	ROUTE
I-5987A	47533.1.2	I-95
COUNTY	**ENGINEER**	**TECHNICIANS**
Robeson	VLAD MITCHEV	D. Strother/J. Swartley

TEST LOCATIONS DESCRIPTION	DATE RUN
-L- 196+30 SB OSS	12/3 to 12/19/2019

DATUM	CUT/ FILL	NORTHING	EASTING
STBC	FILL	344543.9	2000415.9

Cumulative Penetration in Centimeters

2.6		34.8		80.1															
4.0		35.5		81.0															
4.7		36.1		82.0															
5.7		37.2		83.0															
6.0		37.8		84.0															
6.8		38.0		84.9															
7.1		38.4		86.1															
7.9		38.9		87.2															
8.8		39.5		88.1															
9.2		40.6		89.4															
10.0		41.1		90.0															
10.6		41.9		91.2															
11.0		42.3		92.0															
11.4		43.9		92.8															
12.2		44.7		93.6															
12.9		45.6		94.5															
13.5		46.2		95.5															
14.0		47.3		96.4															
14.5		47.9		97.0															
15.1		48.5		98.0															
15.8		49.3		98.7															
16.3		50.3		99.8															
16.9		51.1																	
17.4		51.9																	
18.3		52.6																	
19.0		53.5																	
19.6		54.2																	
20.2		55.1																	
20.8		55.9																	
21.4		56.5																	
22.0		57.2																	
22.9		58.4																	
23.2		59.2																	
24.0		60.5																	
24.5		61.6																	
24.8		63.1																	
25.5		64.6																	
26.1		65.8																	
26.6		67.0																	
27.3		68.2																	
28.0		69.1																	
28.4		69.9																	
28.8		70.7																	
29.0		71.5																	
29.6		72.4																	
30.3		73.2																	
30.9		74.0																	
31.0		74.9																	
31.6		75.8																	
32.5		76.7																	
33.1		77.7																	
33.6		78.5																	
34.1		79.2																	

SG = Subgrade
SS = Stabilized Soil
CTBC = Cement-Treated Base Course
ABC = Aggregate Base Course
ESG = Estimated Subgrade
AG = At Grade

RGDL = Rounded Gravel Drainage Layer
STBC = Soil Type Base Course
SDB = Sand Drainage Base

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CONE PENETROMETER DATA CODE SHEET

TIP	PROJECT I.D.	ROUTE
I-5987A	47533.1.2	I-95
COUNTY	ENGINEER	TECHNICIANS
Robeson	VLAD MITCHEV	D. Strother/J. Swartley

TEST LOCATIONS DESCRIPTION	DATE RUN
-L- 196+30 SB ISS	12/3 to 12/19/2019

DATUM	CUT/ FILL	NORTHING	EASTING
STBC	FILL	344549.8	2000451.4

Cumulative Penetration in Centimeters

1.7	27.9	65.8																	
2.2	28.5	67.1																	
2.6	29.0	68.0																	
3.0	29.5	68.8																	
3.4	30.2	69.8																	
3.8	30.7																		
4.3	31.4																		
4.7	32.0																		
5.1	32.4																		
5.5	32.9																		
6.0	33.2																		
6.3	33.7																		
6.6	34.1																		
6.9	34.5																		
7.2	34.9																		
7.5	35.5																		
8.2	35.8																		
8.6	36.4																		
9.2	36.8																		
9.8	37.2																		
10.3	37.6																		
11.0	38.1																		
11.5	38.6																		
12.1	39.0																		
12.7	39.4																		
13.2	39.8																		
13.6	40.4																		
14.1	40.9																		
14.7	41.5																		
15.1	42.0																		
15.5	42.7																		
15.8	43.4																		
16.3	44.0																		
16.6	44.8																		
17.2	45.4																		
17.5	46.4																		
18.1	47.3																		
18.6	48.2																		
19.2	49.1																		
19.7	50.2																		
20.3	51.1																		
20.8	52.1																		
21.4	53.0																		
21.8	53.9																		
22.3	54.9																		
22.9	56.0																		
23.5	57.1																		
24.1	58.2																		
24.8	59.4																		
25.5	60.6																		
26.0	61.9																		
26.6	63.0																		
27.3	64.3																		

TEST LOCATIONS DESCRIPTION	DATE RUN
-L- 196+30 SB ISL	12/3 to 12/19/2019

DATUM	CUT/ FILL	NORTHING	EASTING
STBC	FILL	344550.8	2000440.9

Cumulative Penetration in Centimeters

1.6	15.4	28.4																	
1.9	15.6	28.6																	
2.2	15.9	28.9																	
2.5	16.4	29.2																	
3.0	17.4	29.5																	
3.5	17.6	29.7																	
3.9	17.8	30.0																	
4.4	17.9	30.2																	
4.7	18.0	30.5																	
4.9	18.2	30.9																	
5.0	18.4	31.1																	
5.3	18.7	31.6																	
5.7	18.9	32.0																	
6.0	19.0	32.4																	
6.1	19.2	32.7																	
6.5	19.4	32.9																	
6.9	19.5	33.2																	
7.1	19.8	33.6																	
7.3	20.1	33.9																	
7.5	20.6	34.2																	
7.8	20.9	34.7																	
8.2	21.2	35.0																	
8.3	21.3	35.6																	
8.5	21.4	36.2																	
8.8	21.5	36.8																	
9.0	21.7	37.2																	
9.2	21.9	37.7																	
9.7	22.1	38.0																	
9.9	22.4	38.4																	
10.3	22.7	38.9																	
10.6	23.0	39.4																	
10.9	23.1	39.8																	
11.2	23.3	40.2																	
11.4	23.5	40.5																	
11.5	23.9	40.9																	
11.8	24.0	41.3																	
12.0	24.2	42.8																	
12.2	24.3	44.1																	
12.5	24.5	44.9																	
12.7	24.8	46.8																	
12.9	25.0	48.2																	
13.0	25.2	49.3																	
13.2	25.5	51.6																	
13.3	25.9	53.0																	
13.5	26.2	54.1																	
13.8	26.6	57.3																	
14.0	26.9	58.7																	
14.2	27.1																		
14.5	27.3																		
14.6	27.5																		
14.8	27.8																		
15.0	27.9																		
15.1	28.1																		

CONE PENETROMETER DATA CODE SHEET

TIP	PROJECT I.D.	ROUTE
I-5987A	47533.1.2	I-95
COUNTY	ENGINEER	TECHNICIANS
Robeson	VLAD MITCHEV	D. Strother/J. Swartley

TEST LOCATIONS DESCRIPTION	DATE RUN
-L- 217+50 SB OSS	12/3 to 12/19/2019

DATUM	CUT/ FILL	NORTHING	EASTING
STBC	FILL	346664.5	2000479.3

Cumulative Penetration in Centimeters

1.4	47.4	81.9																	
2.0	47.9	82.5																	
2.7	48.3	83.1																	
3.5	48.9	83.7																	
4.3	49.3	84.0																	
5.4	49.7	84.4																	
6.2	50.1	85.0																	
7.0	50.8	85.7																	
7.9	51.5	86.1																	
8.7	52.0	86.5																	
9.5	52.7	87.2																	
10.5	53.0	87.8																	
11.1	53.5	88.5																	
11.9	54.0	89.1																	
12.8	54.8	89.9																	
13.8	55.6	90.1																	
14.6	56.4	90.9																	
15.7	59.1	91.5																	
16.6	60.8	92.2																	
17.6	62.3	93.4																	
19.0	64.7	94.0																	
20.1	67.3	94.8																	
21.2	68.7																		
22.7	69.6																		
24.1	70.4																		
25.7	71.1																		
27.5	71.6																		
29.0	72.2																		
30.6	73.1																		
32.1	73.4																		
33.9	73.9																		
35.6	74.3																		
36.8	74.7																		
37.9	75.1																		
38.5	75.3																		
39.1	76.2																		
39.6	76.3																		
40.3	76.7																		
40.7	76.8																		
41.2	77.2																		
41.7	77.9																		
42.2	78.0																		
42.7	78.2																		
43.1	78.5																		
43.7	78.9																		
44.0	79.0																		
44.5	79.5																		
44.9	79.7																		
45.1	79.9																		
45.7	80.3																		
46.2	80.6																		
46.8	80.9																		
47.0	81.3																		

TEST LOCATIONS DESCRIPTION	DATE RUN
-L- 217+50 SB ISS	12/3 to 12/19/2019

DATUM	CUT/ FILL	NORTHING	EASTING
SG	FILL	346667.7	2000514.3

Cumulative Penetration in Centimeters

1.6	28.0	49.1																	
3.1	28.3	49.7																	
4.0	28.8	50.1																	
4.5	29.2	50.6																	
5.2	29.8	51.0																	
5.9	30.6	51.5																	
6.5	31.2	52.0																	
7.3	31.9	52.6																	
8.0	32.5	53.1																	
8.6	33.0	53.5																	
9.2	33.5	54.0																	
10.0	33.8	54.6																	
10.5	34.2	55.4																	
10.9	34.7	56.1																	
11.5	35.0	56.9																	
12.2	35.3	57.4																	
12.7	35.5	58.2																	
13.2	36.0	58.9																	
13.8	36.1	59.8																	
14.5	36.5	60.5																	
15.0	36.8	61.2																	
15.5	37.1	62.0																	
16.0	37.5	62.5																	
16.5	37.7	63.0																	
17.0	38.1	63.4																	
17.4	38.5	63.9																	
17.8	38.7	64.4																	
18.2	39.0	64.7																	
18.7	39.4	65.3																	
19.2	39.7	65.7																	
19.6	39.9	66.1																	
19.9	40.2	66.5																	
20.4	40.6	66.7																	
20.7	41.0	67.0																	
21.2	41.2	67.3																	
21.5	41.6	67.6																	
22.0	41.9	67.9																	
22.3	42.4	68.2																	
22.7	42.9	68.4																	
22.9	43.2	68.6																	
23.3	43.5	68.7																	
23.7	43.9	69.1																	
24.0	44.4	69.3																	
24.3	44.7	69.6																	
24.7	45.0	69.8																	
25.1	45.3	70.1																	
25.5	45.8	70.3																	
25.9	46.1	70.6																	
26.3	46.7	70.9																	
26.5	47.0	71.1																	
26.9	47.6	71.5																	
27.3	48.1	71.8																	
27.7	48.6	72.0																	

SG = Subgrade
SS = Stabilized Soil
CTBC = Cement-Treated Base Course
ABC = Aggregate Base Course
ESG = Estimated Subgrade
AG = At Grade

RGDL = Rounded Gravel Drainage Layer
STBC = Soil Type Base Course
SDB = Sand Drainage Base

S&ME, Inc.
3201 Spring Forest Road
Raleigh, North Carolina 27616

CONE PENETROMETER DATA CODE SHEET

TIP	PROJECT I.D.	ROUTE
I-5987A	47533.1.2	I-95
COUNTY	**ENGINEER**	**TECHNICIANS**
Robeson	VLAD MITCHEV	D. Strother/J. Swartley

TEST LOCATIONS DESCRIPTION	DATE RUN
-L- 227+05 SB ISS	12/3 to 12/19/2019

DATUM	CUT/ FILL	NORTHING	EASTING
STBC	FILL	347617.1	2000544.9

Cumulative Penetration in Centimeters

1.4	29.9	61.7																	
2.3	30.6	62.1																	
2.9	31.1	62.8																	
3.5	31.9	63.2																	
4.6	32.6	63.9																	
5.1	33.1	64.2																	
6.0	33.8	64.6																	
6.8	34.2	65.0																	
7.3	34.9	65.6																	
7.9	35.6	66.2																	
8.9	37.0	66.8																	
9.6	38.1	67.2																	
10.0	38.8	67.9																	
10.5	39.2	68.3																	
11.1	39.5	68.8																	
11.6	40.0	69.6																	
12.0	40.6	70.2																	
12.7	41.0	70.6																	
12.9	41.7	71.4																	
13.2	42.0	72.0																	
13.7	42.5	72.6																	
14.0	43.1	73.0																	
14.5	43.6																		
14.9	44.0																		
15.2	44.6																		
15.5	45.1																		
15.8	45.7																		
16.0	46.0																		
16.3	46.9																		
16.7	47.5																		
17.1	47.9																		
17.5	48.8																		
17.8	49.4																		
18.5	50.0																		
19.2	51.2																		
19.6	52.1																		
20.3	52.9																		
20.9	54.1																		
21.5	55.2																		
21.9	55.9																		
22.5	56.4																		
22.8	56.9																		
23.6	57.3																		
24.3	57.8																		
24.9	58.1																		
25.4	58.8																		
26.0	59.0																		
26.5	59.2																		
27.0	59.5																		
27.6	60.0																		
28.1	60.5																		
28.9	60.8																		
29.4	61.3																		

TEST LOCATION DESCRIPTION	DATE RUN
-L- 227+05 SB ISL	12/3 to 12/19/2019

DATUM	CUT/ FILL	NORTHING	EASTING
STBC	FILL	347617.8	2000538.9

Cumulative Penetration in Centimeters

0.6	14.5	30.7																	
1.1	14.8	31.0																	
1.6	15.0	31.4																	
1.9	15.3	31.6																	
2.2	15.6	31.9																	
2.7	15.9	32.2																	
3.1	16.2	32.6																	
3.4	16.6	33.0																	
3.8	16.8	33.5																	
4.0	17.0	33.9																	
4.2	17.3	34.5																	
4.5	17.5	34.8																	
4.8	17.7	35.6																	
5.0	17.9	36.0																	
5.2	18.1	36.3																	
5.6	18.4	36.7																	
5.8	18.6	37.0																	
6.1	18.9	37.8																	
6.3	19.2	38.5																	
6.5	19.5	38.9																	
6.8	19.8	39.3																	
7.0	20.2	39.8																	
7.2	20.4	40.6																	
7.4	20.8	41.3																	
7.5	21.0	41.6																	
7.8	21.4	41.8																	
8.0	21.6	42.0																	
8.2	21.8	42.6																	
8.4	22.0	43.2																	
8.5	22.3	43.5																	
8.7	22.7	43.9																	
8.9	23.0	44.4																	
9.2	23.4	45.3																	
9.5	23.7	46.2																	
9.8	23.9	46.8																	
10.1	24.3	47.2																	
10.3	24.5	47.5																	
10.6	24.8	47.9																	
10.8	25.0	48.3																	
11.1	25.3	48.6																	
11.3	25.9	48.9																	
11.6	26.5	49.2																	
11.8	26.8	49.7																	
12.0	27.0	50.0																	
12.2	27.4	50.5																	
12.5	27.8	50.8																	
12.9	28.1	51.1																	
13.1	28.4	51.7																	
13.3	28.9	52.6																	
13.5	29.3																		
13.7	29.7																		
13.9	30.0																		
14.3	30.3																		

CONE PENETROMETER DATA CODE SHEET

TIP	PROJECT I.D.	ROUTE
I-5987A	47533.1.2	I-95
COUNTY	**ENGINEER**	**TECHNICIANS**
Robeson	VLAD MITCHEV	D. Strother/J. Swartley

TEST LOCATIONS DESCRIPTION	DATE RUN
-L- 247+70 SB OSS	12/3 to 12/19/2019

DATUM	CUT/ FILL	NORTHING	EASTING
STBC	FILL	349682.7	2000599.4

Cumulative Penetration in Centimeters

2.8	27.1	50.7																	
4.0	27.6	51.2																	
5.0	27.9	51.7																	
5.8	28.2	52.2																	
6.9	28.7	52.7																	
7.7	29.0	53.1																	
8.5	29.3	53.6																	
9.5	29.5	53.9																	
10.2	30.0	54.5																	
11.2	30.2	55.0																	
11.9	30.6	55.4																	
12.5	30.9	56.1																	
12.9	31.1	56.7																	
13.5	31.6	57.3																	
14.0	31.8	57.8																	
14.5	32.0	58.0																	
14.9	32.4	58.4																	
15.3	32.6	59.3																	
15.7	32.9	60.1																	
15.9	33.2	60.8																	
16.2	33.7	61.3																	
16.8	34.0	61.6																	
17.0	34.5	62.4																	
17.4	35.0	63.0																	
17.9	35.3	63.7																	
18.2	35.8																		
18.5	36.1																		
18.8	36.7																		
19.1	37.2																		
19.5	37.6																		
19.9	38.0																		
20.2	38.6																		
20.5	39.0																		
20.9	39.4																		
21.0	40.1																		
21.4	40.7																		
21.7	41.1																		
22.1	41.9																		
22.8	42.4																		
22.9	42.8																		
23.0	43.3																		
23.3	44.1																		
23.6	44.8																		
24.0	45.0																		
24.4	45.6																		
24.9	46.2																		
25.0	46.9																		
25.3	47.3																		
25.7	47.7																		
25.9	48.1																		
26.1	48.9																		
26.3	49.3																		
26.8	49.7																		

TEST LOCATION DESCRIPTION	DATE RUN
-L- 277+70 SB OSS	12/3 to 12/19/2019

DATUM	CUT/ FILL	NORTHING	EASTING
STBC	FILL	352681.5	2000720.0

Cumulative Penetration in Centimeters

1.4	45.5	88.3																	
2.1	46.4	89.4																	
2.8	47.0	90.0																	
3.4	47.8	90.6																	
3.8	48.5	91.4																	
4.1	49.0	92.8																	
4.9	49.6	93.6																	
5.6	50.3	94.6																	
6.0	51.0	95.8																	
6.3	51.9	96.6																	
6.7	52.6	97.5																	
7.1	53.5	99.2																	
7.6	54.4	100.0																	
8.0	55.1																		
8.3	56.0																		
8.9	56.9																		
9.3	57.8																		
10.4	58.5																		
10.7	59.6																		
11.0	60.3																		
11.8	61.1																		
12.2	62.3																		
12.6	63.3																		
13.1	64.0																		
14.5	64.7																		
15.2	65.8																		
16.4	66.5																		
16.9	67.7																		
17.5	69.0																		
18.2	69.9																		
18.9	71.0																		
19.5	72.4																		
20.3	73.6																		
21.2	74.9																		
22.4	76.0																		
23.4	77.1																		
24.7	78.0																		
26.2	78.9																		
28.0	79.6																		
29.5	80.6																		
30.7	81.0																		
32.1	81.5																		
33.4	82.0																		
35.0	82.6																		
36.4	83.2																		
37.6	83.8																		
38.8	84.2																		
39.9	85.0																		
40.7	85.5																		
41.4	86.0																		
42.6	86.6																		
43.7	87.2																		
44.6	87.7																		

SG = Subgrade
SS = Stabilized Soil
CTBC = Cement-Treated Base Course
ABC = Aggregate Base Course
ESG = Estimated Subgrade
AG = At Grade

RGDL = Rounded Gravel Drainage Layer
STBC = Soil Type Base Course
SDB = Sand Drainage Base

S&ME, Inc.
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Raleigh, North Carolina 27616

CONE PENETROMETER DATA CODE SHEET

TIP	PROJECT I.D.	ROUTE
I-5987A	47533.1.2	**I-95**
COUNTY	ENGINEER	TECHNICIANS
Robeson	VLAD MITCHEV	D. Strother/J. Swartley

TEST LOCATIONS DESCRIPTION	DATE RUN
-L- 277+70 SB OSL	12/3 to 12/19/2019

DATUM	CUT/ FILL	NORTHING	EASTING
SG	FILL	352677.8	2000731.9

Cumulative Penetration in Centimeters

1.1	17.9	67.4
1.6	18.2	68.4
2.0	18.7	69.6
2.1	19.6	70.6
2.3	20.0	72.0
2.5	20.6	73.5
2.7	21.1	74.9
2.9	22.0	76.1
3.0	22.9	77.4
3.1	23.5	78.5
3.2	23.9	79.7
3.3	24.9	80.5
3.4	25.6	81.5
3.4	26.5	82.6
3.5	27.2	83.5
3.5	27.9	84.7
3.6	28.3	85.2
3.6	29.6	85.8
3.7	30.7	86.6
3.7	31.7	
3.8	32.9	
3.8	34.0	
3.8	36.7	
3.9	37.0	
3.9	39.4	
3.9	40.0	
3.9	41.4	
4.0	42.4	
4.0	43.3	
4.0	44.1	
4.1	44.9	
4.1	45.5	
4.2	46.1	
4.2	47.0	
4.2	47.6	
4.2	48.0	
4.2	48.8	
4.3	49.5	
4.3	50.2	
4.3	50.8	
4.3	51.6	
4.4	52.0	
4.4	52.7	
4.4	53.4	
4.5	55.4	
4.5	56.8	
Auger	58.0	
	60.0	
	61.4	
15.4	63.4	
16.7	64.5	
17.1	65.4	
17.6	66.4	

TEST LOCATION DESCRIPTION	DATE RUN
-L- 277+70 SB ISS	12/3 to 12/19/2019

DATUM	CUT/ FILL	NORTHING	EASTING
STBC	FILL	352678.0	2000753.7

Cumulative Penetration in Centimeters

0.5	36.0	71.5
1.2	36.4	72.4
1.9	37.0	73.0
2.6	38.1	73.5
3.1	39.1	74.1
4.2	39.8	74.9
4.9	40.3	75.6
5.7	41.1	76.5
6.5	41.8	77.0
7.2	42.9	77.5
7.9	43.7	77.9
8.7	44.1	78.8
8.9	44.8	79.4
10.0	45.3	79.9
10.8	45.9	80.7
11.4	46.7	81.5
12.1	47.0	82.1
12.8	47.7	82.6
13.2	48.6	
13.9	49.7	
14.4	50.6	
14.8	51.0	
15.5	51.8	
16.0	52.4	
16.3	53.6	
16.9	54.0	
17.5	54.6	
18.0	55.1	
18.8	55.9	
19.2	56.5	
19.6	57.1	
20.8	57.7	
21.4	58.3	
22.0	58.9	
22.6	59.5	
23.1	60.2	
24.0	60.9	
24.7	61.6	
25.5	62.3	
26.1	63.0	
26.9	63.5	
27.6	64.1	
28.5	64.7	
29.3	65.1	
29.9	65.8	
30.6	66.6	
31.2	67.1	
32.0	67.8	
32.7	68.4	
33.3	68.9	
34.6	69.8	
34.9	70.2	
35.5	70.9	

CONE PENETROMETER DATA CODE SHEET

TIP	PROJECT I.D.	ROUTE
I-5987A	47533.1.2	**I-95**
COUNTY	ENGINEER	TECHNICIANS
Robeson	VLAD MITCHEV	D. Strother/J. Swartley

TEST LOCATIONS DESCRIPTION	DATE RUN
-L- 277+70 SB DECEL	12/3 to 12/19/2019

DATUM	CUT/ FILL	NORTHING	EASTING
SG	FILL	352680.0	2000725.3

Cumulative Penetration in Centimeters

0.8	18.9	59.0
1.1	19.4	60.5
1.5	19.8	61.9
1.7	20.2	62.8
1.9	20.4	63.8
2.0	20.6	64.7
2.1	21.0	65.6
2.2	21.9	66.5
2.3	22.5	67.4
2.4	23.1	68.0
2.5	24.3	69.5
2.6	25.0	70.3
2.8	26.4	71.1
2.9	27.0	72.2
3.0	27.9	73.0
3.2	28.5	74.4
3.3	29.2	75.7
3.3	30.5	76.6
3.4	31.5	77.5
3.4	32.6	78.6
3.5	33.5	79.5
3.6	34.4	80.2
3.6	35.0	81.2
3.7	36.1	82.6
3.9	36.7	83.7
4.0	37.3	84.5
4.1	38.0	85.5
4.1	38.5	86.3
4.2	39.2	87.0
4.2	40.0	87.6
4.3	40.6	88.1
4.3	41.6	
4.4	42.3	
4.4	43.1	
4.4	43.7	
4.5	44.4	
4.5	45.0	
4.5	45.5	
4.6	46.1	
4.6	46.8	
4.6	47.5	
Auger	48.0	
	48.7	
	49.6	
14.2	50.5	
15.3	51.4	
15.9	52.1	
16.4	52.9	
17.4	53.8	
17.5	54.6	
17.7	55.5	
17.9	56.4	
18.3	57.4	

TEST LOCATION DESCRIPTION	DATE RUN
-L- 298+25 SB OSS	12/3 to 12/19/2019

DATUM	CUT/ FILL	NORTHING	EASTING
STBC	FILL	354731.4	2000743.7

Cumulative Penetration in Centimeters

0.8	33.8	50.4	70.4	93.1
1.2	34.3	50.8	70.7	93.6
1.5	34.7	51.2	71.1	94.0
1.9	34.9	51.6	71.5	94.2
2.3	35.0	51.8	71.9	94.9
2.8	35.4	52.0	72.2	95.2
3.4	35.9	52.2	72.6	95.4
3.8	36.3	52.5	72.9	95.8
4.2	36.6	52.8	73.1	96.0
4.9	36.9	53.1	73.5	96.3
5.4	37.3	53.5	73.8	96.7
5.8	37.7	53.7	74.0	97.0
6.3	38.0	54.0	74.3	
6.7	38.5	54.2	74.6	
7.2	38.8	54.4	75.0	
7.7	39.0	54.9	75.3	
8.0	39.4	55.1	75.8	
8.4	39.7	55.5	76.0	
8.8	40.1	55.8	76.2	
9.1	40.3	56.1	76.7	
9.6	40.7	56.5	77.0	
10.3	41.1	56.9	77.5	
10.6	41.5	57.3	77.9	
11.2	41.7	57.7	78.3	
11.7	42.0	58.0	78.7	
12.0	42.3	58.4	79.1	
12.6	42.6	58.8	79.9	
13.0	43.2	59.2	80.5	
13.2	43.8	59.5	80.8	
13.9	44.0	59.7	81.6	
14.8	44.2	60.2	82.5	
15.2	44.6	60.7	83.2	
16.2	44.9	61.0	84.0	
16.8	45.2	61.3	84.5	
17.3	45.5	61.8	85.1	
18.4	45.8	62.0	85.8	
19.3	46.1	62.4	86.0	
20.5	46.3	62.9	86.4	
21.7	46.7	63.2	87.0	
22.7	46.9	63.5	87.5	
24.1	47.2	64.0	87.9	
25.9	47.6	64.4	88.2	
26.8	47.9	64.8	88.5	
27.3	48.0	65.2	88.9	
28.5	48.3	65.8	89.6	
29.6	48.5	66.2	89.8	
30.4	48.9	66.9	90.0	
31.0	49.1	67.5	90.6	
31.6	49.3	68.0	90.9	
31.9	49.5	68.6	91.5	
32.2	49.7	69.0	91.8	
32.5	49.9	69.4	92.1	
32.9	50.2	70.0	92.5	

SG = Subgrade
SS = Stabilized Soil
CTBC = Cement-Treated Base Course
ABC = Aggregate Base Course
ESG = Estimated Subgrade
AG = At Grade

RGDL = Rounded Gravel Drainage Layer
STBC = Soil Type Base Course
SDB = Sand Drainage Base

S&ME, Inc.
3201 Spring Forest Road
Raleigh, North Carolina 27616

CONE PENETROMETER DATA CODE SHEET

TIP	PROJECT I.D.	ROUTE
I-5987A	47533.1.2	I-95
COUNTY	ENGINEER	TECHNICIANS
Robeson	VLAD MITCHEV	D. Strother/J. Swartley

TEST LOCATIONS DESCRIPTION	DATE RUN
-L- 298+25 SB ISS	12/3 to 12/19/2019

DATUM	CUT/ FILL	NORTHING	EASTING
STBC	FILL	354731.4	2000773.2

Cumulative Penetration in Centimeters

1.7	24.7	39.5	61.2					0.8	7.2	11.4	16.1	28.4				1.5	24.1	48.2	63.2	94.8				1.0	11.9	21.3	30.9	38.1	45.2
3.0	24.9	39.8	61.8					1.2	7.3	11.5	16.8	28.7				2.2	24.6	48.4	63.5	95.2				1.3	12.1	21.5	31.0	38.3	45.3
4.3	25.1	40.0	62.1					1.6	7.4	11.6	17.0	28.9				2.6	25.3	48.6	64.4	95.3				1.5	12.3	21.6	31.2	38.4	45.4
5.5	25.6	40.2	62.5					1.7	7.5	11.7	17.1	29.0				3.6	25.8	48.9	64.8	96.6				1.9	12.5	21.7	31.3	38.6	45.5
6.5	25.9	40.7	62.8					1.9	7.6	11.8	17.3	29.5				4.0	26.4	49.0	65.2	97.0				2.1	12.6	21.9	31.4	38.7	45.6
7.2	26.1	41.0	63.1					2.2	7.7	11.9	17.4	29.8				4.2	27.0	49.3	65.7	97.8				2.6	12.7	22.0	31.5	38.9	45.7
8.6	26.5	41.5	63.8					2.4	7.8	12.0	17.8	30.0				4.6	27.7	49.6	66.0					2.9	12.8	22.2	31.6	39.0	45.8
9.1	26.8	41.9	64.5					2.5	8.1	12.1	18.0	30.2				5.1	28.2	50.0	66.6					3.1	13.0	22.5	31.7	39.1	45.9
10.5	27.0	42.2	65.2					2.8	8.3	12.2	18.5	30.5				5.6	28.8	50.2	67.0					3.5	13.1	22.7	31.9	39.2	46.0
10.8	27.1	42.8	65.7					3.3	8.5	12.3	18.8	30.9				5.9	29.2	50.3	67.3					3.8	13.2	22.9	32.2	39.3	46.1
11.2	27.4	43.0	66.0					4.0	8.6	12.4	18.9	31.0				6.5	30.1	50.8	67.7					3.9	13.3	23.2	32.3	39.4	46.2
11.7	27.7	43.2	66.8					4.1	8.8	12.4	19.0	31.7				6.8	30.6	51.1	68.1					4.4	13.5	23.4	32.6	39.5	46.3
12.1	27.9	43.8	67.3					4.3	9.1	12.5	19.3	31.9				7.2	31.3	51.4	68.7					4.7	13.7	23.7	32.8	39.7	46.4
12.6	28.0	44.1	68.0					4.5	9.2	12.5	19.6	32.0				7.6	31.7	51.5	69.1					5.0	13.8	23.8	32.9	39.8	46.5
13.1	28.2	44.8	68.6					4.8	9.3	12.6	19.9	32.6				8.2	32.4	51.6	69.5					5.3	13.9	24.0	33.0	40.0	46.6
13.6	28.4	45.1	68.9					5.0	9.4	12.6	20.2	32.9				8.5	32.9	51.9	70.2					5.6	14.1	24.2	33.1	40.1	46.7
14.0	28.6	45.6	69.3					5.1	9.5	12.7	20.5	33.3				9.0	33.5	52.5	70.6					6.1	14.3	24.5	33.2	40.2	46.8
14.3	28.7	46.0	70.1					5.2	9.6	12.7	20.6	33.7				9.4	33.9	52.7	70.9					6.4	14.6	24.7	33.3	40.3	46.9
14.6	29.2	46.4	70.6					5.3	9.7	12.7	20.8	34.0				9.7	34.4	53.0	71.6					6.7	14.8	24.8	33.4	40.5	47.0
15.0	29.7	46.9	71.0					5.4	9.8	12.8	21.0	34.3				10.0	35.0	53.3	72.3					6.9	15.0	24.9	33.5	40.8	47.2
15.3	30.3	47.4	71.5					5.5	9.9	12.9	21.2	34.8				10.3	35.6	53.6	73.0					7.0	15.2	25.1	33.7	41.0	47.3
15.8	30.5	48.0	71.9					5.6	10.0	13.0	21.4	35.5				10.7	36.2	53.9	73.8					7.2	15.5	25.2	33.9	41.1	47.5
16.2	30.7	48.6	72.5					5.7	10.1	13.1	21.5	35.7				11.4	36.8	54.3	74.2					7.3	15.8	25.4	34.0	41.2	47.7
16.7	30.9	49.0	73.3					5.8	10.2	13.2	21.6	36.0				11.7	37.4	54.6	75.0					7.4	15.9	25.5	34.1	41.3	47.9
16.9	31.1	49.3						6.0	10.3	13.3	21.7	36.6				12.1	38.0	54.8	75.6					7.5	16.1	25.7	34.2	41.4	48.0
17.0	31.5	49.9						6.2	10.4	13.3	21.9	37.0				12.3	38.6	55.1	76.1					7.7	16.3	25.9	34.3	41.5	48.2
17.3	31.7	50.6						6.2	10.4	13.4	22.2	37.5				12.6	39.3	55.3	77.2					7.9	16.6	26.1	34.5	41.6	48.3
17.5	31.9	50.9						6.3	10.5	13.4	22.3	37.9				12.9	39.7	55.4	78.1					8.0	16.8	26.3	34.6	41.7	48.5
17.6	32.3	51.0						6.3	10.5	13.5	22.6	38.2				13.5	40.5	55.6	78.8					8.1	16.9	26.6	34.7	41.8	48.7
17.8	33.1	51.2						6.3	10.6	13.6	22.9	38.5				13.9	41.0	56.1	79.4					8.3	17.0	26.9	34.9	41.9	48.9
18.0	33.2	51.5						6.3	10.6	13.7	23.0	39.0				14.3	41.2	56.4	80.2					8.5	17.2	27.1	35.1	41.9	49.1
18.3	33.3	51.8						6.3	10.7	13.8	23.2	39.5				14.6	41.6	56.6	80.7					8.6	17.5	27.3	35.3	42.0	49.4
18.5	33.4	52.0						6.3	10.7	13.9	23.4	40.3				15.0	42.1	56.8	81.4					8.8	17.7	27.5	35.5	42.1	49.7
18.9	33.6	52.6						6.3	10.8	14.0	23.6	40.9				15.4	42.5	57.2	82.3					9.0	17.9	27.6	35.6	42.3	49.8
19.3	33.7	52.9						6.4	10.8	14.1	23.7	41.4				15.8	42.9	57.4	82.8					9.1	18.0	27.8	35.6	42.5	49.9
19.7	33.8	53.0						6.4	10.9	14.2	23.9	42.3				16.2	43.2	57.7	83.6					9.3	18.1	28.0	35.7	42.7	50.3
20.0	33.9	53.5						6.4	10.9	14.3	24.0	43.8				16.7	43.4	58.0	84.3					9.5	18.3	28.1	35.7	42.9	50.8
20.4	34.1	53.8						6.4	11.0	14.4	24.2	43.9				17.0	43.6	58.4	85.2					9.7	18.4	28.2	35.8	43.0	51.0
20.7	34.3	54.1						6.4	11.0	14.5	24.5	44.1				17.5	43.8	58.6	85.6					9.8	18.6	28.3	35.9	43.1	51.4
21.0	34.7	54.8						6.4	11.1	14.5	24.8	44.6				17.9	44.3	58.9	86.3					10.0	18.8	28.4	36.0	43.2	51.7
21.2	35.0	55.1						6.4	11.1	14.6	25.0	45.6				18.3	44.7	59.2	87.1					10.2	18.9	28.6	36.2	43.3	51.9
21.5	35.3	55.6						6.5	11.2	14.8	25.1	46.0				18.7	45.0	59.6	87.9					10.4	19.2	28.7	36.4	43.4	52.5
21.9	35.7	55.9						6.5	11.2	14.9	25.4	46.2				18.8	45.2	59.7	88.7					10.5	19.3	28.9	36.6	43.5	52.9
22.2	35.9	56.2						6.5	11.2	15.1	25.7	46.3				19.3	45.5	60.0	89.2					10.6	19.4	29.1	36.7	43.7	53.3
22.5	36.0	56.7						6.5	11.2	15.2	25.9	46.4				19.6	45.7	60.3	90.5					10.7	19.6	29.3	36.8	43.9	53.7
22.8	36.2	57.0						6.6	11.2	15.2	26.0	46.8				20.1	46.0	60.4	91.4					10.8	19.8	29.4	36.9	44.1	54.1
23.0	36.5	57.3						6.6	11.3	15.3	26.3	47.0				20.5	46.4	60.7	92.1					10.9	19.9	29.6	37.1	44.2	54.8
23.2	36.9	57.9						6.7	11.3	15.3	26.6					20.9	46.6	60.9	92.9					11.1	20.0	29.7	37.2	44.3	55.2
23.3	37.2	58.2						6.7	11.3	15.4	26.8					21.5	46.9	61.4	93.6					11.2	20.2	29.9	37.4	44.4	55.5
23.5	37.9	58.9						6.8	11.3	15.5	27.0					22.0	47.0	61.8	93.8					11.4	20.4	30.2	37.5	44.7	55.8
23.9	38.1	59.4						6.9	11.3	15.6	27.3					22.5	47.4	62.1	93.9					11.5	20.8	30.5	37.7	44.9	56.3
24.2	38.6	60.0						7.0	11.3	15.7	27.8					22.9	47.6	62.6	94.1					11.6	21.0	30.7	37.8	45.0	56.7
24.5	38.9	60.8						7.1	11.3	15.8	28.0					23.5	47.9	62.9	94.6					11.8	21.2	30.8	37.9	45.1	56.9

CONE PENETROMETER DATA CODE SHEET

TIP	PROJECT I.D.	ROUTE
I-5987A	47533.1.2	I-95
COUNTY	ENGINEER	TECHNICIANS
Robeson	VLAD MITCHEV	D. Strother/J. Swartley

TEST LOCATIONS DESCRIPTION	DATE RUN
-L- 323+00 SB OSS	12/3 to 12/19/2019

DATUM	CUT/ FILL	NORTHING	EASTING
STBC	FILL	357207.7	2000765.6

Cumulative Penetration in Centimeters

TEST LOCATION DESCRIPTION	DATE RUN
-L- 298+25 SB ISL	12/3 to 12/19/2019

DATUM	CUT/ FILL	NORTHING	EASTING
STBC	FILL	354734.1	2000770.3

Cumulative Penetration in Centimeters

TEST LOCATION DESCRIPTION	DATE RUN
-L- 323+00 SB OSL	12/3 to 12/19/2019

DATUM	CUT/ FILL	NORTHING	EASTING
STBC	FILL	357205.2	2000774.3

Cumulative Penetration in Centimeters

SG = Subgrade
SS = Stabilized Soil
CTBC = Cement-Treated Base Course
ABC = Aggregate Base Course
ESG = Estimated Subgrade
AG = At Grade

RGDL = Rounded Gravel Drainage Layer
STBC = Soil Type Base Course
SDB = Sand Drainage Base

S&ME, Inc.
3201 Spring Forest Road
Raleigh, North Carolina 27616

CONE PENETROMETER DATA CODE SHEET

TIP	PROJECT I.D.	ROUTE
I-5987A	47533.1.2	I-95
COUNTY	**ENGINEER**	**TECHNICIANS**
Robeson	VLAD MITCHEV	D. Strother/J. Swartley

TEST LOCATIONS DESCRIPTION	DATE RUN
-L- 323+00 SB ISS	12/3 to 12/19/2019

DATUM	CUT/ FILL	NORTHING	EASTING
STBC	FILL	357218.6	2000791.7

Cumulative Penetration in Centimeters

1.3	24.9	43.5	58.5
2.5	25.1	43.8	58.8
3.1	25.5	44.0	59.2
3.6	25.9	44.2	
4.0	26.3	44.4	
4.7	26.9	44.7	
5.0	27.4	44.9	
5.3	28.0	45.1	
5.5	28.6	45.4	
5.9	29.1	45.8	
6.5	29.3	46.0	
6.6	29.5	46.3	
6.7	29.9	46.5	
7.0	30.1	46.9	
7.2	30.5	47.3	
7.7	30.8	47.9	
8.0	31.0	48.1	
8.2	31.5	48.3	
8.5	32.0	48.6	
8.9	32.3	48.9	
9.6	32.6	49.0	
9.9	32.9	49.2	
10.5	33.5	49.3	
11.2	34.1	49.5	
11.6	34.6	49.9	
12.0	34.7	50.4	
12.4	34.9	50.8	
12.8	35.1	51.0	
13.1	35.4	51.3	
13.6	35.8	51.7	
14.1	36.2	51.9	
14.7	36.8	52.0	
14.9	37.2	52.3	
15.2	37.6	52.5	
15.9	37.9	52.8	
16.6	38.1	53.0	
16.9	38.3	53.2	
17.1	38.5	53.6	
17.9	38.7	53.8	
18.3	39.0	54.1	
19.0	39.2	54.4	
19.4	39.6	54.7	
19.8	39.9	54.9	
20.1	40.5	55.2	
20.7	40.9	55.6	
21.1	41.1	56.0	
21.6	41.8	56.2	
21.9	42.0	56.3	
22.2	42.2	56.8	
22.9	42.5	57.3	
23.5	42.8	57.7	
24.0	43.1	57.9	
24.3	43.3	58.2	

TEST LOCATIONS DESCRIPTION	DATE RUN
-L- 349+80 SB OSS	12/3 to 12/19/2019

DATUM	CUT/ FILL	NORTHING	EASTING
STBC	FILL	359882.9	2000787.8

Cumulative Penetration in Centimeters

0.8	34.6	66.9	82.9
1.3	35.4	67.3	83.3
2.0	36.1	67.6	83.7
2.6	36.7	68.0	84.1
3.2	37.3	68.4	84.7
3.8	38.6	68.7	85.2
4.3	39.4	69.1	86.0
4.7	41.2	69.4	86.4
5.2	42.5	70.0	87.0
5.8	43.0	70.3	87.3
6.3	43.7	70.6	87.8
6.9	44.2	71.1	88.2
7.4	44.9	71.4	88.7
7.7	45.6	71.9	89.0
8.1	46.3	72.0	89.4
8.6	47.0	72.4	89.9
9.2	47.9	72.7	90.3
9.7	48.6	73.0	90.6
10.4	49.5	73.6	91.0
11.1	50.0	73.8	91.1
11.7	50.6	74.1	91.2
12.3	51.4	74.5	91.5
13.2	52.0	74.7	92.2
14.2	52.7	75.0	92.8
14.9	53.5	75.3	93.2
15.6	54.0	75.9	93.7
16.5	54.7	76.2	94.0
17.4	55.2	76.4	94.2
18.4	55.8	76.6	94.6
19.0	56.3	76.9	95.1
19.8	56.9	77.2	95.5
20.1	57.5	77.5	95.9
20.4	58.0	77.8	96.4
20.8	58.6	78.0	
21.3	58.9	78.4	
21.8	59.3	78.6	
22.5	59.7	78.9	
23.0	60.2	79.0	
23.6	60.9	79.4	
24.3	61.0	79.5	
25.3	61.4	79.8	
26.1	61.9	80.1	
26.8	62.1	80.4	
27.6	62.6	80.9	
28.6	62.8	81.2	
29.7	63.5	81.6	
30.3	63.9	82.0	
30.9	64.3	82.1	
31.6	64.6	82.2	
32.3	65.1	82.4	
32.8	65.7	82.5	
33.7	66.0	82.6	
34.2	66.5	82.7	

CONE PENETROMETER DATA CODE SHEET

TIP	PROJECT I.D.	ROUTE
I-5987A	47533.1.2	I-95
COUNTY	**ENGINEER**	**TECHNICIANS**
Robeson	VLAD MITCHEV	D. Strother/J. Swartley

TEST LOCATIONS DESCRIPTION	DATE RUN
-L- 349+80 SB ISS	12/3 to 12/19/2019

DATUM	CUT/ FILL	NORTHING	EASTING
STBC	FILL	359889.1	2000816.8

Cumulative Penetration in Centimeters

0.8	35.9	72.4	
1.2	36.6	72.7	
1.6	36.9	73.3	
1.9	37.6	73.9	
2.3	38.4	74.4	
2.8	39.0	75.0	
3.2	39.2	75.5	
3.6	39.5	76.0	
4.2	40.8	76.5	
4.9	41.0	77.0	
5.8	42.0	77.6	
7.5	42.7	78.0	
8.6	43.1	78.3	
9.6	44.4	78.6	
10.3	45.2	79.0	
11.3	46.4	79.3	
12.5	47.1	79.6	
13.6	48.4	80.0	
14.6	49.0	80.4	
15.8	49.8	81.0	
16.4	50.6	81.4	
17.1	51.7	81.8	
18.1	52.0		
19.0	52.9		
19.8	53.7		
20.2	54.4		
20.9	55.3		
21.3	56.1		
21.7	57.0		
22.1	57.7		
22.9	58.3		
23.6	59.5		
24.3	60.2		
24.8	61.4		
25.1	62.2		
25.9	63.0		
26.2	63.9		
26.7	64.3		
27.2	65.0		
28.0	65.5		
28.3	65.9		
29.1	66.4		
29.6	66.8		
30.2	67.0		
30.7	67.4		
31.3	68.0		
32.0	68.6		
32.5	69.5		
33.2	69.9		
33.7	70.2		
34.1	70.8		
34.6	71.3		
35.2	71.8		

TEST LOCATIONS DESCRIPTION	DATE RUN
-L- 349+80 SB ISL	12/3 to 12/19/2019

DATUM	CUT/ FILL	NORTHING	EASTING
STBC	FILL	359887.2	2000811.6

Cumulative Penetration in Centimeters

2.0			
3.5			
4.5			
5.3			
6.6			
7.8			
9.0			
10.1			
11.2			
12.6			
13.6			
14.2			
15.4			
16.5			
17.3			
18.4			
19.4			
20.3			
21.7			
22.5			
23.5			
24.8			
26.0			
27.0			
28.2			
30.0			
31.6			
34.0			
36.5			
38.7			
40.6			
43.0			
44.5			
45.9			
47.5			
48.7			
50.7			
52.2			
54.9			
56.9			
57.5			
58.8			
59.5			
60.6			
61.5			
62.4			

SG = Subgrade
SS = Stabilized Soil
CTBC = Cement-Treated Base Course
ABC = Aggregate Base Course
ESG = Estimated Subgrade
AG = At Grade

RGDL = Rounded Gravel Drainage Layer
STBC = Soil Type Base Course
SDB = Sand Drainage Base

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3201 Spring Forest Road
Raleigh, North Carolina 27616

CONE PENETROMETER DATA CODE SHEET

TIP	PROJECT I.D.	ROUTE
I-5987A	47533.1.2	I-95
COUNTY	**ENGINEER**	**TECHNICIANS**
Robeson	VLAD MITCHEV	D. Strother/J. Swartley

TEST LOCATIONS DESCRIPTION	DATE RUN
-L- 376+30 SB OSS	12/3 to 12/19/2019

DATUM	CUT/ FILL	NORTHING	EASTING
STBC	FILL	362541.7	2000810.5

Cumulative Penetration in Centimeters					
1.4	28.2	71.6			
2.5	29.0	72.3			
3.0	29.6	73.5			
3.9	30.0	74.4			
4.3	30.5	75.3			
4.8	30.9	76.1			
5.5	31.7	77.0			
5.7	32.3	77.9			
5.9	33.0	78.8			
6.3	33.7	79.9			
6.8	34.2	80.5			
7.0	34.6	81.3			
7.6	35.4	82.4			
8.2	36.0	83.2			
8.7	36.5	84.0			
9.1	37.1	85.2			
9.6	37.7	86.2			
9.9	38.2	87.4			
10.3	39.1	88.2			
10.7	40.3	89.1			
11.1	40.8	90.4			
11.6	41.6	91.3			
12.0	42.5	92.6			
12.7	43.6	94.1			
13.1	44.3	95.0			
13.8	45.2	96.2			
14.0	46.3	96.9			
14.6	47.5	97.3			
14.9	48.6	98.2			
15.4	49.8	98.7			
16.0	51.0	99.4			
16.7	51.8	99.8			
17.0	52.7	100.3			
17.5	53.3	100.9			
18.1	54.4	101.3			
18.4	55.0				
18.9	55.7				
19.6	56.1				
19.9	56.8				
20.4	57.5				
20.8	58.3				
21.5	58.8				
21.9	59.4				
22.5	60.7				
22.9	61.6				
23.3	62.8				
23.8	63.4				
24.1	65.0				
24.8	66.3				
25.7	67.2				
26.1	68.4				
26.5	69.5				
27.1	70.8				

TEST LOCATION DESCRIPTION	DATE RUN
-L- 376+30 SB OSL	12/3 to 12/19/2019

DATUM	CUT/ FILL	NORTHING	EASTING
STBC	FILL	362537.7	2000816.0

Cumulative Penetration in Centimeters				
0.6	9.7	20.8	44.0	82.8
0.9	9.8	21.0	44.6	83.4
1.2	10.0	21.1	45.0	83.9
1.5	10.3	21.3	45.7	84.5
1.8	10.6	21.5	46.2	85.0
2.2	10.9	21.6	47.0	85.5
2.4	11.0	21.9	47.7	86.1
2.5	11.3	22.3	48.3	86.4
2.7	11.4	22.5	49.7	86.9
2.9	11.7	22.7	50.9	87.2
3.0	11.9	22.9	51.8	
3.2	12.1	23.0	52.1	
3.4	12.3	23.7	53.6	
3.7	12.4	24.0	54.2	
4.0	12.6	24.2	54.9	
4.2	12.7	24.5	55.0	
4.3	12.9	24.8	55.9	
4.5	13.0	25.0	56.7	
4.7	13.3	25.3	57.1	
4.8	13.5	25.5	57.9	
5.0	13.7	25.8	58.4	
5.1	13.9	26.1	58.9	
5.3	14.0	26.4	59.6	
5.4	14.2	26.7	60.2	
5.6	14.3	26.9	60.8	
5.7	14.6	27.2	61.3	
5.8	14.8	27.5	62.0	
5.9	15.0	27.7	62.8	
6.1	15.2	28.1	63.2	
6.2	15.4	28.5	63.8	
6.3	15.6	28.7	64.6	
6.4	15.9	29.2	65.2	
6.5	16.1	29.6	66.0	
6.7	16.3	30.0	67.0	
6.8	16.5	30.7	67.7	
7.0	16.7	31.1	68.3	
7.2	16.9	31.6	69.7	
7.4	17.0	32.0	71.2	
7.5	17.3	32.8	72.2	
7.7	17.5	33.2	74.3	
7.8	17.8	34.0	75.1	
7.9	18.1	34.6	75.9	
8.1	18.3	35.2	76.6	
8.3	18.6	36.6	77.0	
8.5	18.8	37.7	77.9	
8.6	18.9	38.9	78.4	
8.8	19.0	39.6	79.2	
8.9	19.2	40.8	79.6	
9.2	19.4	41.2	80.4	
9.3	19.7	41.9	80.8	
9.4	20.0	42.6	81.3	
9.5	20.3	43.1	81.9	
9.6	20.6	43.5	82.4	

CONE PENETROMETER DATA CODE SHEET

TIP	PROJECT I.D.	ROUTE
I-5987A	47533.1.2	I-95
COUNTY	**ENGINEER**	**TECHNICIANS**
Robeson	VLAD MITCHEV	D. Strother/J. Swartley

TEST LOCATIONS DESCRIPTION	DATE RUN
-L- 376+30 SB ISS	12/3 to 12/19/2019

DATUM	CUT/ FILL	NORTHING	EASTING
STBC	FILL	362534.5	2000839.4

Cumulative Penetration in Centimeters					
3.7	50.5				
5.4	51.0				
6.6	51.8				
7.7	52.6				
8.9	53.6				
10.1	54.5				
11.3	55.8				
12.6	57.3				
14.1	58.4				
15.3	59.6				
16.6	60.4				
17.9	61.0				
19.2	61.4				
20.0	62.0				
20.8	62.6				
21.5	63.2				
22.3	63.9				
23.1	64.5				
23.7	65.6				
24.5	66.5				
25.2	67.4				
26.1	68.2				
26.8	69.1				
27.4	70.1				
28.0	71.3				
28.8	72.5				
29.6	73.3				
30.3	74.0				
31.0	74.8				
31.7	75.5				
32.4	76.3				
32.9	76.9				
33.5	77.4				
34.5	78.0				
35.2	78.7				
35.7	79.2				
36.3	79.6				
37.1	80.0				
37.7					
38.4					
39.0					
39.8					
40.7					
41.7					
42.8					
43.9					
45.0					
45.9					
46.6					
47.5					
48.2					
49.2					
50.0					

TEST LOCATION DESCRIPTION	DATE RUN
-L- 402+25 SB OSS	12/3 to 12/19/2019

DATUM	CUT/ FILL	NORTHING	EASTING
STBC	FILL	365130.3	2000834.4

Cumulative Penetration in Centimeters				
1.9	31.5	70.5		
2.7	32.4	71.6		
3.5	32.8	72.7		
4.3	33.0	74.0		
5.0	33.5	75.1		
5.5	33.9	76.3		
6.0	34.4	77.4		
6.7	34.8	78.5		
7.2	35.1	79.5		
7.7	35.8	80.6		
8.1	36.0	81.8		
8.5	36.9	82.9		
8.9	37.5	84.0		
9.6	38.0	85.1		
9.9	38.7	86.3		
10.4	39.0	87.4		
10.9	39.6	88.4		
11.3	40.2	89.3		
11.8	40.7	90.4		
12.3	41.0	91.3		
12.8	41.8	92.4		
13.1	42.3	93.5		
13.7	42.9	94.6		
14.0	43.6	95.6		
14.6	44.2	97.0		
14.9	45.0			
15.2	46.3			
15.8	47.1			
16.3	48.6			
16.7	49.5			
17.2	51.2			
17.9	52.2			
18.3	52.7			
18.9	53.4			
19.6	54.0			
20.4	54.7			
20.7	55.5			
21.2	56.0			
21.7	56.8			
22.2	57.2			
22.9	58.0			
23.3	58.6			
24.1	59.2			
24.7	59.9			
25.3	60.6			
26.0	61.3			
26.5	61.8			
27.1	62.5			
27.8	63.7			
28.2	65.1			
29.0	66.5			
29.6	67.7			
30.0	69.2			

SG = Subgrade
SS = Stabilized Soil
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ESG = Estimated Subgrade
AG = At Grade

RGDL = Rounded Gravel Drainage Layer
STBC = Soil Type Base Course
SDB = Sand Drainage Base

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Raleigh, North Carolina 27616

CONE PENETROMETER DATA CODE SHEET

TIP	PROJECT I.D.	ROUTE
I-5987A	47533.1.2	I-95
COUNTY	ENGINEER	TECHNICIANS
Robeson	VLAD MITCHEV	D. Strother/J. Swartley

TEST LOCATIONS DESCRIPTION	DATE RUN
-L- 402+25 SB ISS	12/3 to 12/19/2019

DATUM	CUT/ FILL	NORTHING	EASTING
STBC	FILL	365133.2	2000866.8

Cumulative Penetration in Centimeters

1.3	32.4										
2.3	33.1										
3.5	33.8										
4.2	34.5										
4.8	35.7										
5.3	36.5										
6.4	37.8										
7.2	38.7										
7.8	39.9										
8.2	40.9										
8.5	42.0										
9.4	43.8										
10.2	44.5										
10.9	45.9										
11.5	47.1										
12.0	48.4										
12.6	49.4										
13.2	50.5										
13.8	51.9										
14.3	52.9										
14.8	54.0										
15.6	55.1										
15.9	56.2										
16.8	57.4										
17.4	58.6										
18.0	59.7										
18.6	61.0										
19.3	62.0										
19.9	63.2										
20.5	64.4										
20.9	65.5										
21.4	66.7										
21.9	68.0										
22.4	69.2										
22.9	70.4										
23.0	71.7										
23.7	73.0										
24.2	74.0										
24.7	75.2										
25.0	76.2										
25.4	77.2										
26.0	78.1										
26.4	79.0										
26.8	80.0										
27.2	80.9										
27.6	81.8										
28.1											
28.7											
29.1											
29.7											
30.2											
30.8											
31.6											

TEST LOCATIONS DESCRIPTION	DATE RUN
-L- 402+25 SB ISL	12/3 to 12/19/2019

DATUM	CUT/ FILL	NORTHING	EASTING
STBC	FILL	365134.0	2000854.9

Cumulative Penetration in Centimeters

0.3	14.8	33.7									
0.8	15.0	34.5									
1.1	15.3	35.4									
1.4	15.5	36.3									
1.7	15.8	37.2									
2.0	16.2	38.4									
2.1	16.5	39.3									
2.3	16.8	40.5									
2.6	17.0	41.6									
2.9	17.2	42.7									
3.2	17.5	43.8									
3.5	17.8	45.0									
3.8	18.0	45.9									
4.0	18.2	46.7									
4.1	18.5	47.5									
4.4	18.8	48.4									
4.6	19.0	49.6									
4.9	19.3	50.5									
5.2	19.5	51.2									
5.5	19.8	52.0									
5.8	20.0	52.9									
6.1	20.3	53.8									
6.5	20.6	54.9									
6.8	20.8	56.0									
7.0	21.0	56.9									
7.2	21.3	57.8									
7.3	21.5	58.7									
7.5	21.8	59.8									
7.7	22.0	60.7									
7.8	22.3	61.5									
8.1	22.7	62.8									
8.3	23.0	63.7									
8.6	23.2	64.5									
8.8	23.5	65.7									
9.0	23.7	66.5									
9.2	24.0	67.2									
9.5	24.4	68.3									
9.8	24.8	69.0									
10.1	25.3	69.8									
10.8	25.7	70.9									
11.0	26.2	71.5									
11.3	26.9	72.0									
11.5	27.3	73.1									
11.8	27.7	73.8									
12.0	28.0	74.4									
12.3	28.4	75.3									
12.5	29.0	75.9									
12.8	29.5	76.4									
13.2	30.1	77.1									
13.6	30.7	78.3									
13.9	31.4	79.0									
14.2	32.2										
14.6	33.0										

CONE PENETROMETER DATA CODE SHEET

TIP	PROJECT I.D.	ROUTE
I-5987A	47533.1.2	I-95
COUNTY	ENGINEER	TECHNICIANS
Robeson	VLAD MITCHEV	D. Strother/J. Swartley

TEST LOCATIONS DESCRIPTION	DATE RUN
-L- 429+40 SB OSS	12/3 to 12/19/2019

DATUM	CUT/ FILL	NORTHING	EASTING
STBC	FILL	367845.6	2000861.2

Cumulative Penetration in Centimeters

1.6	36.0										
2.5	36.7										
3.4	37.4										
4.4	38.5										
5.1	39.0										
6.0	39.5										
6.5	40.7										
7.4	41.2										
7.8	42.6										
8.6	43.9										
9.1	45.0										
9.6	45.8										
10.2	46.1										
10.7	47.1										
11.6	48.2										
12.0	49.1										
12.7	50.0										
13.4	51.1										
14.1	52.0										
14.7	52.6										
15.3	53.4										
16.0	54.5										
16.8	55.4										
17.7	56.6										
18.2	57.8										
19.1	58.9										
19.8	61.0										
20.2	61.5										
21.0	62.2										
21.6	63.1										
22.0	64.0										
22.8	65.0										
23.3	65.9										
23.9	66.7										
24.1	67.3										
25.0	67.8										
25.7	68.2										
26.5	69.0										
26.9	71.0										
27.4	72.8										
27.8	74.5										
28.3	76.0										
28.9	77.6										
29.4	79.2										
29.6	81.1										
30.5	82.8										
31.1	83.8										
31.6	85.0										
32.1	86.6										
32.9	88.7										
33.2	90.4										
34.4	91.5										
35.3	92.6										

TEST LOCATIONS DESCRIPTION	DATE RUN
-L- 429+40 SB OSL	12/3 to 12/19/2019

DATUM	CUT/ FILL	NORTHING	EASTING
STBC	FILL	367851.0	2000865.7

Cumulative Penetration in Centimeters

0.7	8.6	26.1	61.0								
1.0	8.7	26.3	61.7								
1.7	8.8	26.5	62.5								
2.1	8.8	26.8	63.1								
2.3	8.9	27.0	63.9								
2.5	8.9	27.2	64.2								
2.7	9.1	27.5	65.7								
2.8	Auger	27.7	66.4								
2.9		28.0	67.5								
3.1		28.3	68.5								
3.2	14.8	28.5	69.0								
3.4	15.0	28.9	69.7								
3.5	15.8	29.4	70.8								
3.7	16.1	29.6	71.4								
3.9	16.3	29.7	72.3								
4.0	16.7	30.2	72.9								
4.1	17.0	30.5	73.5								
4.3	17.2	30.6	74.0								
4.4	17.4	30.9	74.7								
4.6	17.6	31.2	75.2								
4.7	17.9	31.5	76.0								
4.9	18.4	31.8	76.7								
5.1	18.9	32.6	77.1								
5.2	19.1	33.0	77.8								
5.4	19.3	33.7	78.5								
5.6	19.4	34.1	79.0								
5.7	19.5	34.8	79.8								
5.8	19.6	35.8	80.1								
5.9	19.8	37.1	80.7								
6.0	19.9	38.0	81.3								
6.1	20.3	39.0	82.0								
6.2	20.5	39.8	82.4								
6.3	20.9	40.6	83.0								
6.5	21.0	41.5	83.5								
6.7	21.2	42.5	84.1								
6.8	21.5	43.2									
6.8	22.0	44.1									
6.9	22.4	44.9									
6.9	22.6	45.3									
6.9	22.8	46.5									
7.0	22.9	47.7									
7.2	23.2	48.6									
7.3	23.5	49.2									
7.5	23.6	51.0									
7.6	23.8	52.6									
7.7	24.1	53.1									
7.8	24.5	54.7									
7.9	24.8	55.1									
8.0	25.0	56.6									
8.2	25.3	57.2									
8.3	25.6	58.1									
8.4	25.8	59.2									
8.5	26.0	60.3									

SG = Subgrade
SS = Stabilized Soil
CTBC = Cement-Treated Base Course
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AG = At Grade

RGDL = Rounded Gravel Drainage Layer
STBC = Soil Type Base Course
SDB = Sand Drainage Base

S&ME, Inc.
3201 Spring Forest Road
Raleigh, North Carolina 27616

CONE PENETROMETER DATA CODE SHEET

TIP	PROJECT I.D.	ROUTE
I-5987A	47533.1.2	I-95
COUNTY	**ENGINEER**	**TECHNICIANS**
Robeson	VLAD MITCHEV	D. Strother/J. Swartley

TEST LOCATIONS DESCRIPTION	DATE RUN
-L- 429+40 SB ISS	12/3 to 12/19/2019

DATUM	CUT/ FILL	NORTHING	EASTING
STBC	FILL	367850.3	2000892.8

Cumulative Penetration in Centimeters																			
0.4	29.7	74.0																	
0.7	30.8	74.5																	
1.0	31.5	75.0																	
1.5	32.4	75.7																	
1.8	33.7	76.1																	
2.2	34.5	76.8																	
2.6	35.4	77.2																	
2.9	36.7	77.7																	
3.3	37.5	78.0																	
3.8	38.3	78.5																	
4.1	39.2	78.8																	
4.4	40.3																		
4.6	41.5																		
4.8	42.6																		
5.0	44.1																		
5.2	45.5																		
5.3	46.8																		
5.6	48.0																		
5.8	49.1																		
5.9	50.4																		
6.1	51.2																		
6.3	52.0																		
6.5	52.8																		
6.8	53.5																		
6.9	54.1																		
7.2	54.8																		
7.5	55.5																		
7.7	56.2																		
8.1	56.9																		
8.7	57.5																		
9.9	58.0																		
11.2	58.6																		
12.1	59.1																		
13.3	60.0																		
14.2	60.8																		
15.1	61.3																		
16.1	61.9																		
17.0	62.7																		
17.9	63.5																		
18.7	64.1																		
19.7	64.6																		
20.4	65.6																		
21.3	66.2																		
21.6	67.0																		
22.3	67.8																		
23.5	68.3																		
24.0	68.9																		
24.8	69.8																		
25.4	70.5																		
26.1	71.0																		
27.3	71.8																		
27.9	72.5																		
28.6	73.2																		

Cumulative Penetration in Centimeters																			
1.4	28.3	66.0	82.0	93.4															
2.6	28.7	66.2	82.2	93.7															
3.4	29.2	66.3	82.5	93.9															
4.1	30.1	66.8	82.9	94.1															
4.6	30.8	67.3	83.0	94.5															
5.3	31.6	67.8	83.2	94.6															
5.7	32.5	68.4	83.5	94.7															
6.1	33.4	68.7	83.7	94.8															
6.6	34.3	69.0	83.8	94.9															
7.0	35.2	69.5	83.8	95.0															
7.6	36.0	69.8	83.9																
8.1	36.5	70.0	83.9																
8.5	37.1	70.2	84.0																
8.8	37.6	70.7	84.2																
9.0	38.3	71.3	84.5																
9.4	38.5	71.8	84.8																
9.9	39.1	72.0	85.1																
10.2	39.9	72.3	85.3																
10.5	40.6	72.6	85.7																
10.9	41.0	72.9	85.9																
11.9	41.7	73.0	86.0																
12.3	42.4	73.2	86.1																
12.7	43.2	73.3	86.2																
13.2	44.0	73.6	86.5																
13.8	44.8	73.8	86.8																
14.1	45.6	73.9	87.1																
14.6	46.6	74.0	87.4																
15.1	47.7	74.5	87.6																
15.7	48.2	75.3	87.9																
16.0	49.5	75.9	88.0																
16.5	50.7	76.4	88.3																
17.1	51.0	76.7	88.5																
17.6	51.6	76.9	88.7																
18.2	52.7	77.2	89.0																
18.6	53.3	77.4	89.2																
19.0	54.3	77.6	89.4																
19.3	55.0	77.8	89.7																
19.9	55.8	77.9	89.9																
20.4	56.3	78.2	90.0																
20.7	56.7	78.3	90.1																
21.2	57.5	78.5	90.3																
21.9	58.0	78.9	90.4																
22.1	58.6	79.3	90.5																
22.9	59.1	79.5	90.8																
23.4	59.9	79.8	91.0																
23.9	60.6	80.0	91.2																
24.2	61.0	80.3	91.9																
24.8	62.3	80.6	92.3																
25.3	63.0	80.8	92.5																
25.9	64.0	81.0	92.7																
26.6	64.6	81.2	92.9																
27.1	65.1	81.5	93.0																
27.8	65.5	81.8	93.2																

CONE PENETROMETER DATA CODE SHEET

TIP	PROJECT I.D.	ROUTE
I-5987A	47533.1.2	I-95
COUNTY	**ENGINEER**	**TECHNICIANS**
Robeson	VLAD MITCHEV	D. Strother/J. Swartley

TEST LOCATIONS DESCRIPTION	DATE RUN
-L- 454+50 SB ISS	12/3 to 12/19/2019

DATUM	CUT/ FILL	NORTHING	EASTING
STBC	FILL	370354.6	2001051.9

Cumulative Penetration in Centimeters																			
0.8	23.5	44.2	67.1																
2.1	23.9	45.0	67.3																
3.3	24.4	45.5	67.5																
4.1	24.8	46.1	67.9																
4.9	25.1	46.8	68.0																
5.6	25.3	47.2	68.3																
6.3	25.5	48.0	68.8																
6.9	25.6	48.4	69.2																
7.5	25.9	48.9	69.5																
8.0	26.0	49.3	69.7																
8.9	26.3	50.5	69.9																
9.6	26.9	51.3	70.2																
10.3	27.3	52.0	70.3																
10.8	27.8	52.6	70.6																
11.4	28.1	53.4	70.9																
11.8	28.4	53.7	71.2																
12.1	28.8	54.4	71.6																
12.6	29.3	55.1	72.0																
13.0	29.7	55.8	72.6																
13.6	30.3	56.0	73.0																
14.5	30.5	56.5	73.4																
14.9	30.8	56.9	73.9																
15.2	31.0	57.3	74.0																
15.6	31.3	57.8	74.3																
15.7	31.6	58.1	74.8																
15.7	32.0	58.6	75.2																
15.8	32.7	59.0	75.7																
16.3	33.6	59.5	75.8																
17.1	34.1	59.7	76.0																
17.8	34.8	59.9	76.3																
17.9	35.3	60.0	76.7																
18.0	35.8	60.1	76.9																
18.2	36.0	60.5	77.2																
18.5	36.4	60.9	77.6																
18.8	36.9	61.0	78.0																
19.0	37.3	61.2	78.3																
19.3	37.8	61.5	78.8																
19.4	37.9	62.0	79.1																
19.6	38.0	62.4	79.5																
19.9	38.1	62.8	79.9																
20.0	38.2	63.0	80.2																
20.2	38.3	63.1	80.5																
20.5	38.4	63.4	80.8																
20.9	38.7	63.8	81.0																
21.1	39.0	64.0																	
21.5	39.2	64.2																	
21.9	39.5	64.5																	
22.2	40.2	64.8																	
22.4	41.2	65.0																	
22.7	42.1	65.6																	
23.0	42.3	66.0																	
23.2	42.6	66.5																	
23.3	43.1	66.9																	

Cumulative Penetration in Centimeters																			
0.5	24.5	44.3	56.0																
0.9	24.9	44.7	56.1																
1.3	25.4	44.9																	
2.0	25.8	45.2																	
2.6	26.2	45.5																	
2.8	26.7	45.8																	
2.9	27.0	46.1																	
3.2	27.9	46.3																	
3.4	28.6	46.5																	
3.5	29.0	46.7																	
3.7	30.1	46.9																	
3.9	31.0	47.2																	
4.3	31.3	47.4																	
4.5	32.0	47.6																	
4.7	32.8	47.7																	
4.9	33.4	47.9																	
5.3	33.8	48.2																	
5.7	34.0	48.4																	
6.1	34.3	48.6																	
6.5	34.7	48.7																	
6.8	34.9	49.0																	
7.1	35.4	49.2																	
7.4	35.9	49.4																	
7.9	36.3	49.6																	
8.4	36.8	49.7																	
8.8	37.1	49.9																	
9.1	37.3	50.1																	
9.5	37.5	50.3																	
9.8	37.9	50.6																	
10.2	38.4	50.8																	
11.5	38.7	51.0																	
12.6	39.0	51.3																	
12.9	39.2	51.4																	
13.5	39.5	51.6																	
14.9	39.9	51.8																	
15.3	40.3	52.1																	
15.8	40.5	52.3																	
16.2	40.7	52.5																	
16.8	41.0	52.7																	
17.1	41.3	52.9																	
17.5	41.8	53.2																	
17.8	42.0	53.4																	
18.4	42.1	53.7																	
19.0	42.4	53.9																	
19.7	42.6	54.1																	
20.1	42.9	54.3																	
20.4	43.1	54.6																	
20.9	43.2	54.9																	
21.5	43.5	55.0																	
22.2	43.7	55.2																	
22.9	43.9	55.4																	
23.1	44.0	55.6																	
23.9	44.2	55.9																	

SG = Subgrade
SS = Stabilized Soil
CTBC = Cement-Treated Base Course
ABC = Aggregate Base Course
ESG = Estimated Subgrade
AG = At Grade

RGDL = Rounded Gravel Drainage Layer
STBC = Soil Type Base Course
SDB = Sand Drainage Base

S&ME, Inc.
3201 Spring Forest Road
Raleigh, North Carolina 27616

CONE PENETROMETER DATA CODE SHEET

TIP	PROJECT I.D.	ROUTE
I-5987A	47533.1.2	I-95
COUNTY	**ENGINEER**	**TECHNICIANS**
Robeson	VLAD MITCHEV	D. Strother/J. Swartley

TEST LOCATIONS DESCRIPTION	DATE RUN
-L- 482+45 SB OSS	12/3 to 12/19/2019

DATUM	CUT/ FILL	NORTHING	EASTING
STBC	AG	373142.1	2001210.7

Cumulative Penetration in Centimeters

1.6	37.2	83.0																					
2.5	38.0	84.1																					
3.5	38.7	85.0																					
4.3	39.4	86.0																					
4.8	39.7	87.0																					
5.4	40.3	87.7																					
5.9	40.6	88.8																					
6.5	41.2	89.5																					
6.9	41.7	90.2																					
7.5	42.3	91.0																					
8.0	43.5	92.1																					
8.6	44.4	92.6																					
9.0	45.1	93.6																					
9.6	46.1	94.4																					
10.0	47.2	95.0																					
10.4	48.2	96.1																					
11.1	49.4	97.4																					
11.5	50.3	98.0																					
12.1	51.1	99.2																					
12.5	52.2																						
13.0	52.8																						
13.6	53.5																						
14.1	54.0																						
14.6	54.7																						
15.0	55.5																						
15.3	56.0																						
15.9	57.0																						
16.9	58.0																						
17.4	59.1																						
18.1	60.0																						
18.5	61.1																						
19.1	62.0																						
19.2	63.0																						
19.4	64.1																						
20.6	65.2																						
21.6	65.8																						
22.5	66.5																						
23.6	67.6																						
24.3	68.6																						
25.2	69.7																						
26.0	70.7																						
26.7	71.7																						
27.3	72.5																						
28.0	73.5																						
28.7	74.2																						
29.9	75.2																						
30.6	76.1																						
31.5	77.0																						
32.7	78.0																						
33.0	79.0																						
33.9	80.1																						
34.9	81.2																						
36.6	82.1																						

TEST LOCATIONS DESCRIPTION	DATE RUN
-L- 482+45 SB OSL	12/3 to 12/19/2019

DATUM	CUT/ FILL	NORTHING	EASTING
STBC	AG	373146.6	2001219.0

Cumulative Penetration in Centimeters

1.2	9.1	70.8																					
1.8	9.1	71.0																					
2.4	9.2	71.6																					
2.8	9.2	72.3																					
3.1	Auger	72.9																					
3.3		73.2																					
3.6		73.8																					
3.8	37.8	74.5																					
3.9	39.9	74.9																					
4.1	41.1	75.2																					
4.3	42.5	75.5																					
4.6	43.6	75.9																					
4.9	44.7	76.3																					
5.1	45.8	77.0																					
5.3	46.5	77.5																					
5.5	47.6	77.9																					
5.7	48.5	78.2																					
5.9	49.5	78.7																					
6.0	50.6	79.0																					
6.1	51.3	79.4																					
6.2	52.5	79.8																					
6.3	53.8	80.2																					
6.4	54.7	80.8																					
6.5	55.9	81.2																					
6.6	56.6	81.6																					
6.7	57.7	82.1																					
6.8	58.6	82.5																					
6.9	59.4	83.0																					
7.0	60.1	83.5																					
7.1	61.3	84.0																					
7.2	61.5	84.5																					
7.5	62.1	84.8																					
7.6	62.3																						
7.6	63.1																						
7.7	63.5																						
7.8	64.0																						
7.8	64.6																						
7.9	64.8																						
7.9	65.1																						
8.0	65.5																						
8.0	65.9																						
8.1	66.3																						
8.2	66.7																						
8.3	66.9																						
8.3	67.3																						
8.4	68.0																						
8.5	68.4																						
8.6	68.9																						
8.7	69.0																						
8.8	69.2																						
8.9	69.8																						
9.0	70.2																						
9.1	70.4																						

CONE PENETROMETER DATA CODE SHEET

TIP	PROJECT I.D.	ROUTE
I-5987A	47533.1.2	I-95
COUNTY	**ENGINEER**	**TECHNICIANS**
Robeson	VLAD MITCHEV	D. Strother/J. Swartley

TEST LOCATIONS DESCRIPTION	DATE RUN
-L- 482+45 SB ISS	12/3 to 12/19/2019

DATUM	CUT/ FILL	NORTHING	EASTING
STBC	FILL	373143.7	2001242.4

Cumulative Penetration in Centimeters

3.0	27.6	59.0																					
4.2	27.9	59.5																					
5.1	28.1	59.9																					
5.8	28.5	60.4																					
6.4	28.7	61.3																					
7.0	29.1	62.0																					
7.5	29.5	62.7																					
8.5	30.0	63.1																					
9.0	30.4	63.8																					
9.7	30.8	64.5																					
10.2	31.0	65.2																					
11.0	31.3	66.0																					
11.6	31.6	66.7																					
12.1	32.0	67.0																					
12.7	32.4	67.2																					
13.6	32.9	67.6																					
14.3	33.3	68.3																					
15.1	34.1	68.7																					
15.6	35.2	69.0																					
16.1	35.9	69.2																					
16.7	36.4	69.8																					
17.2	37.0	70.2																					
17.6	37.6	70.8																					
18.1	38.2	71.0																					
18.6	39.1	71.3																					
19.0	40.0	71.7																					
19.3	40.9																						
19.4	41.6																						
19.6	42.2																						
20.1	43.0																						
20.7	44.2																						
21.2	45.0																						
21.4	45.7																						
21.8	46.1																						
22.0	46.5																						
22.3	47.3																						
22.4	48.0																						
22.6	48.7																						
22.7	49.2																						
22.9	50.0																						
23.0	50.6																						
23.3	51.2																						
23.6	52.1																						
23.9	53.0																						
24.1	53.8																						
24.7	54.6																						
25.1	55.0																						
25.4	55.8																						
25.8	56.3																						
26.0	57.2																						
26.4	57.7																						
27.0	58.0																						
27.4	58.5																						

SG = Subgrade
SS = Stabilized Soil
CTBC = Cement-Treated Base Course
ABC = Aggregate Base Course
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RGDL = Rounded Gravel Drainage Layer
STBC = Soil Type Base Course
SDB = Sand Drainage Base

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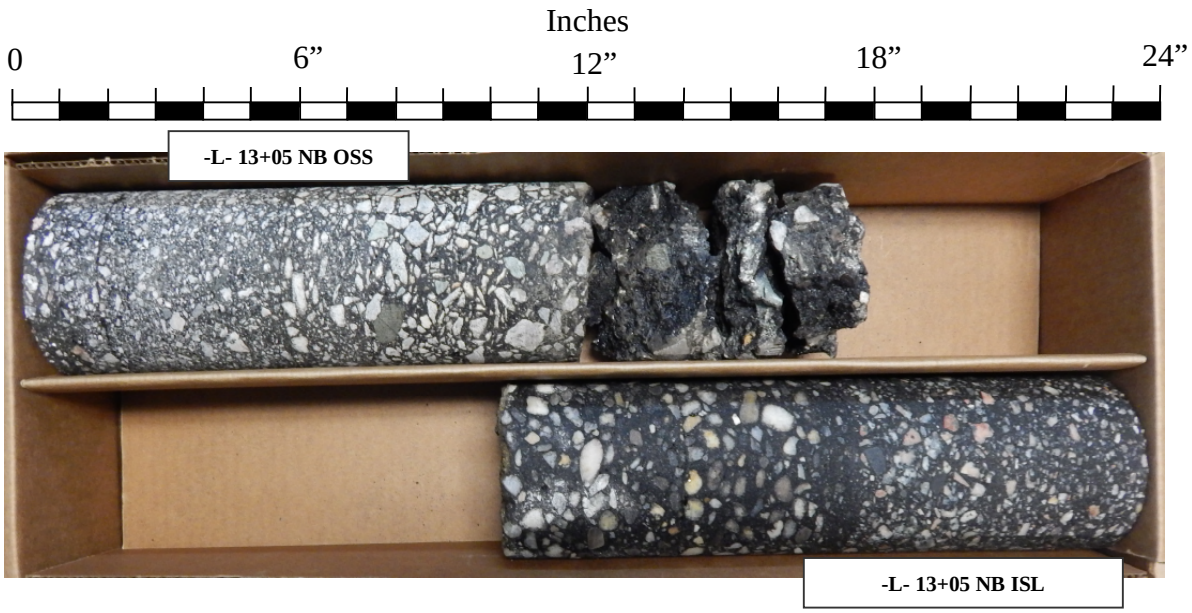
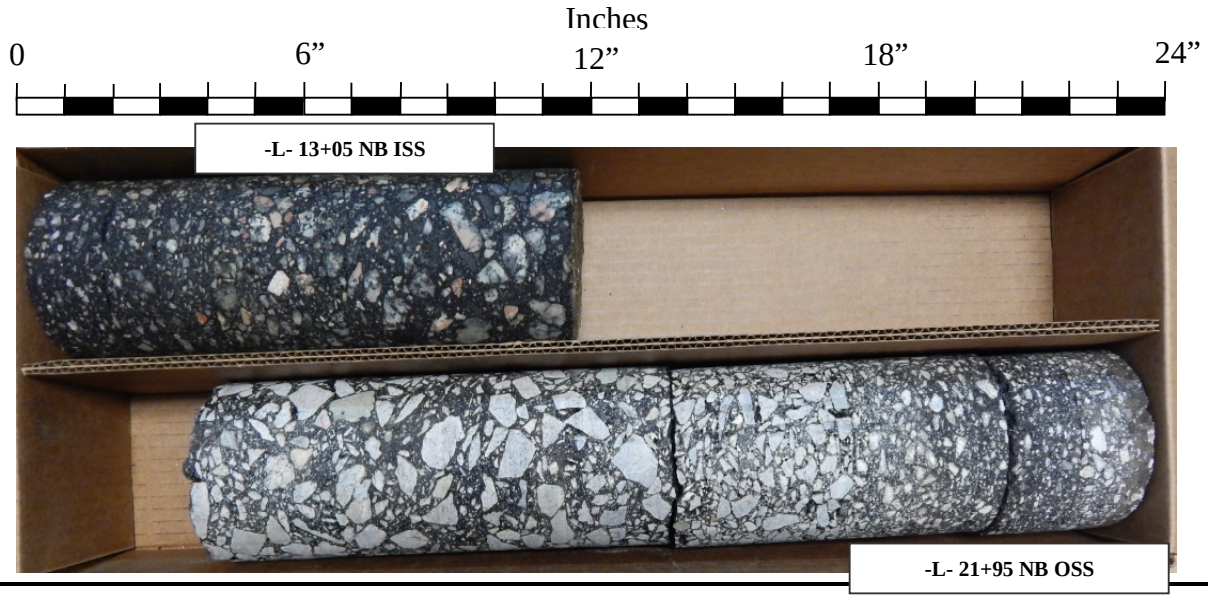
3201 Spring Forest Road
Raleigh, North Carolina 27616

Project No.: 47533.1.2	*I.D. No.*: I-5987A	*County*: Robeson	*Dates:12/3/19-12/19/19*
Site Description: I-95 from North of NC 211 to South of NC 20			
Consultant: S&ME, Inc.	*Core Size*: 4 - inch	*Drill Machine:* CME-55	
Geologist / Engineer: Darin Strother, Jarett Swartley, Mary Rawls, Vladimir Mitchev			





Notes:

OSL = Outside Lane
ISL = Inside Lane
RTL = Right Turn Lane
OSS = Outside Shoulder

ACCEL = Acceleration Lane
PS = Paved Shoulder
LTL = Left Turn Lane
ISS = Inside Shoulder

DECEL = Deceleration Lane
MED = Median

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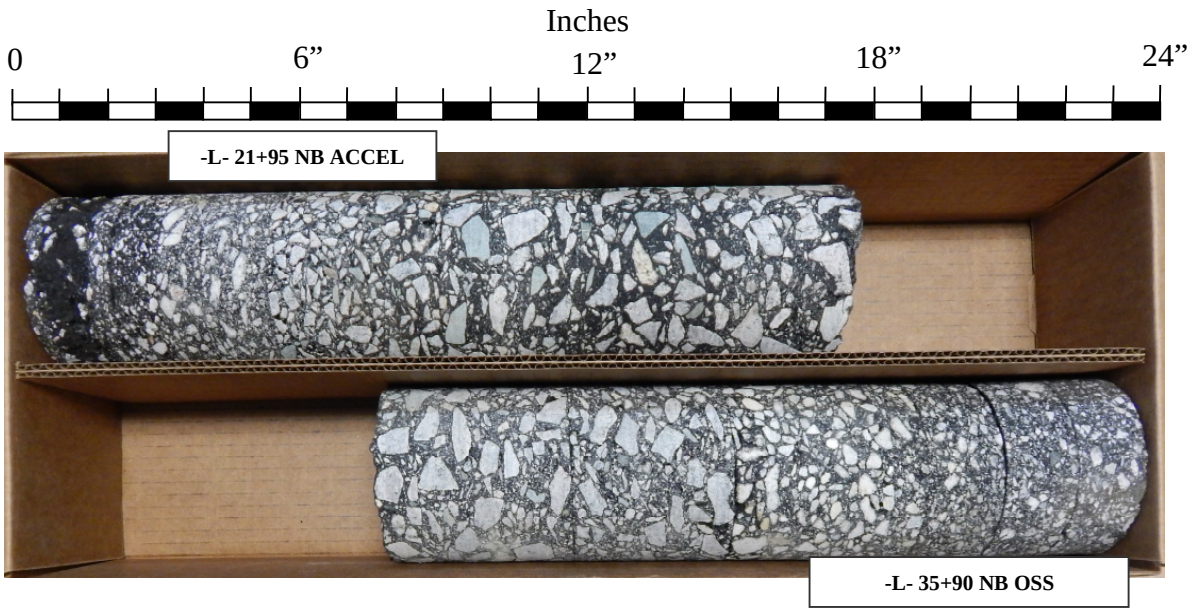
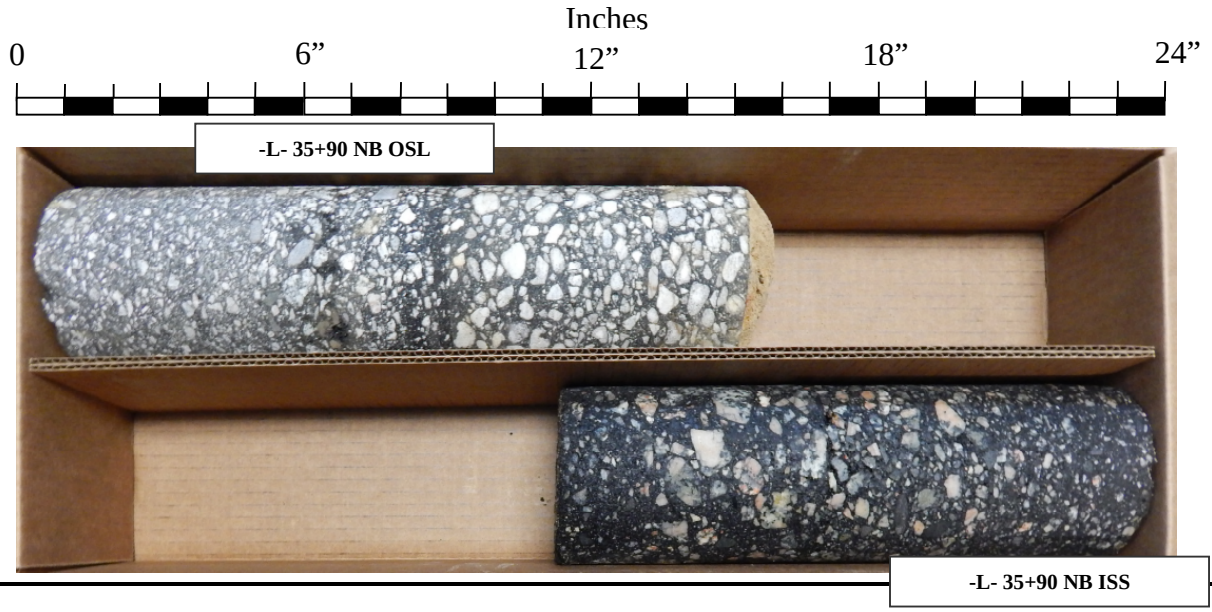
3201 Spring Forest Road
Raleigh, North Carolina 27616

Project No.: 47533.1.2	*I.D. No.*: I-5987A	*County*: Robeson	*Dates:12/3/19-12/19/19*
Site Description: I-95 from North of NC 211 to South of NC 20			
Consultant: S&ME, Inc.	*Core Size*: 4 - inch	*Drill Machine:* CME-55	
Geologist / Engineer: Darin Strother, Jarett Swartley, Mary Rawls, Vladimir Mitchev			





Notes:

OSL = Outside Lane
ISL = Inside Lane
RTL = Right Turn Lane
OSS = Outside Shoulder

ACCEL = Acceleration Lane
PS = Paved Shoulder
LTL = Left Turn Lane
ISS = Inside Shoulder

DECEL = Deceleration Lane
MED = Median

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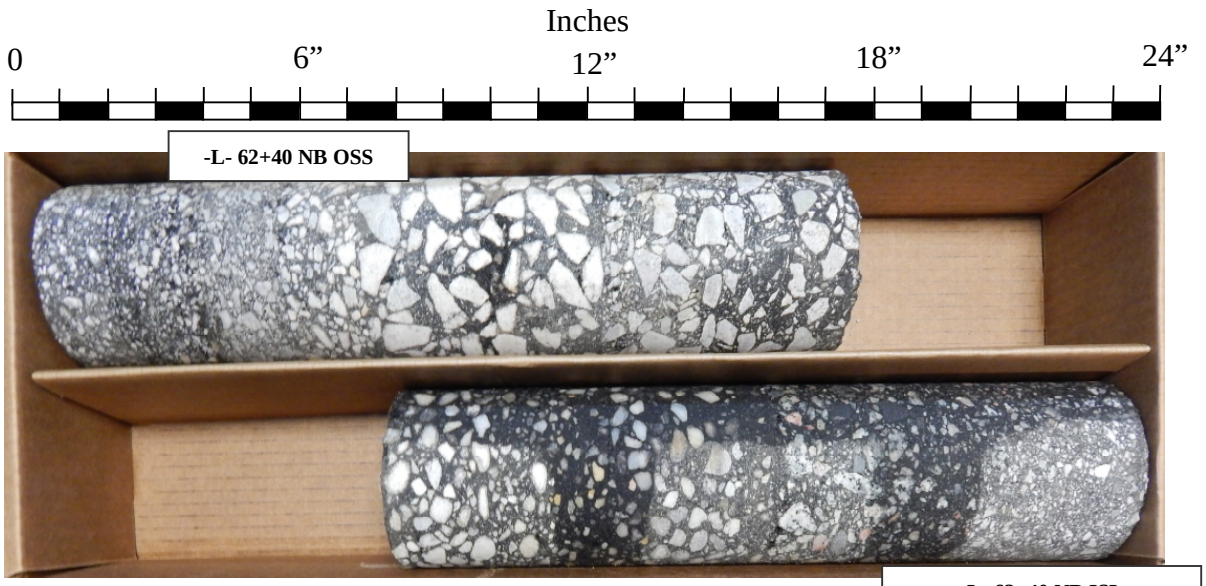
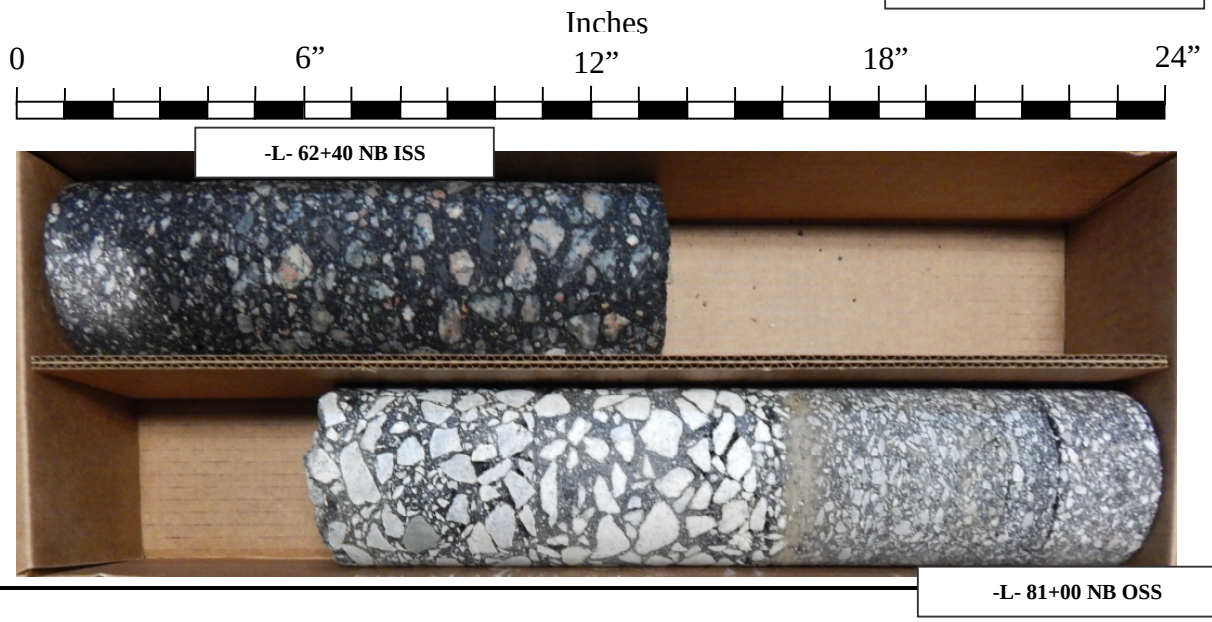
Project No.: 47533.1.2	*I.D. No.*: I-5987A	*County*: Robeson	*Dates:12/3/19-12/19/19*
Site Description: I-95 from North of NC 211 to South of NC 20			
Consultant: S&ME, Inc.	*Core Size*: 4 - inch	*Drill Machine:* CME-55	
Geologist / Engineer: Darin Strother, Jarett Swartley, Mary Rawls, Vladimir Mitchev			





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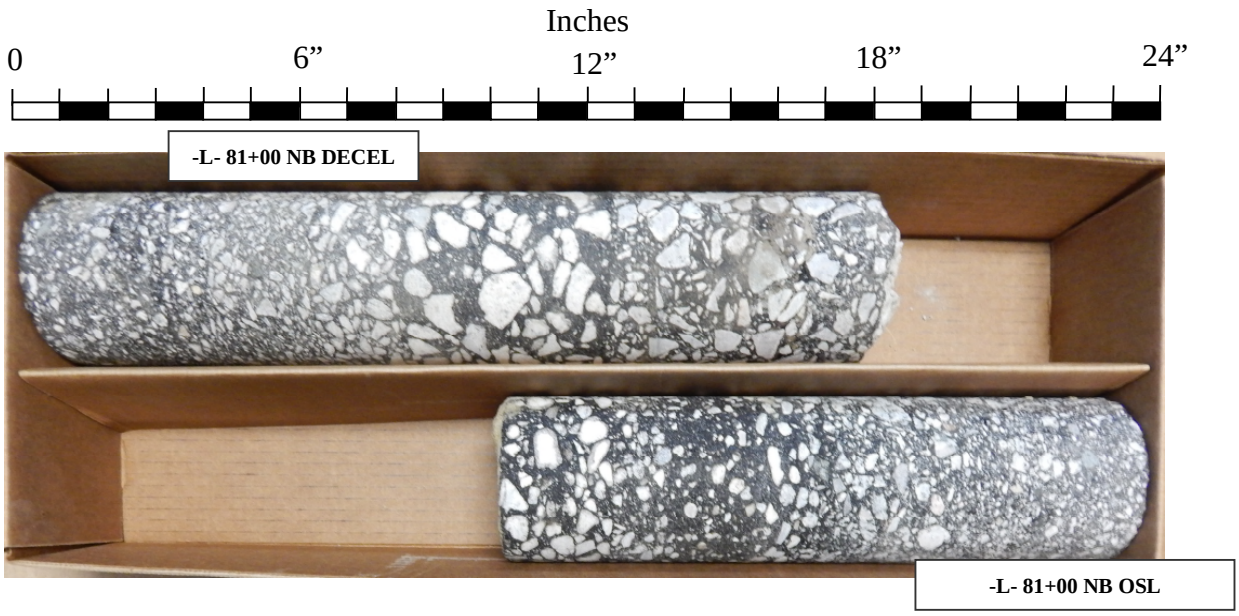

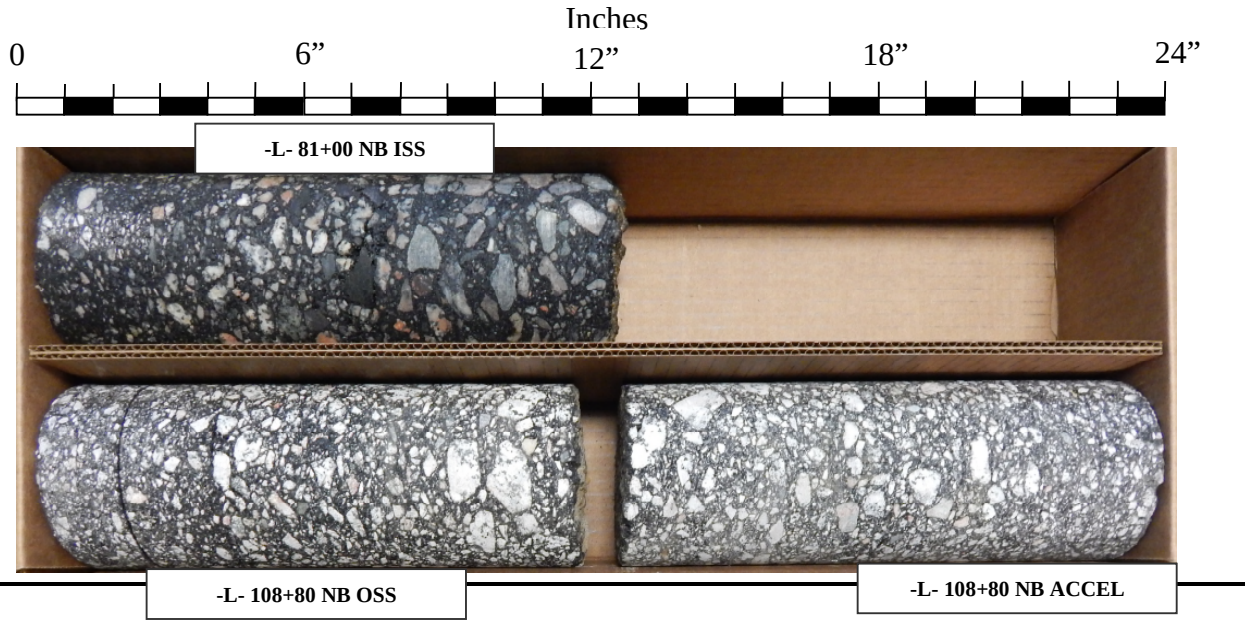

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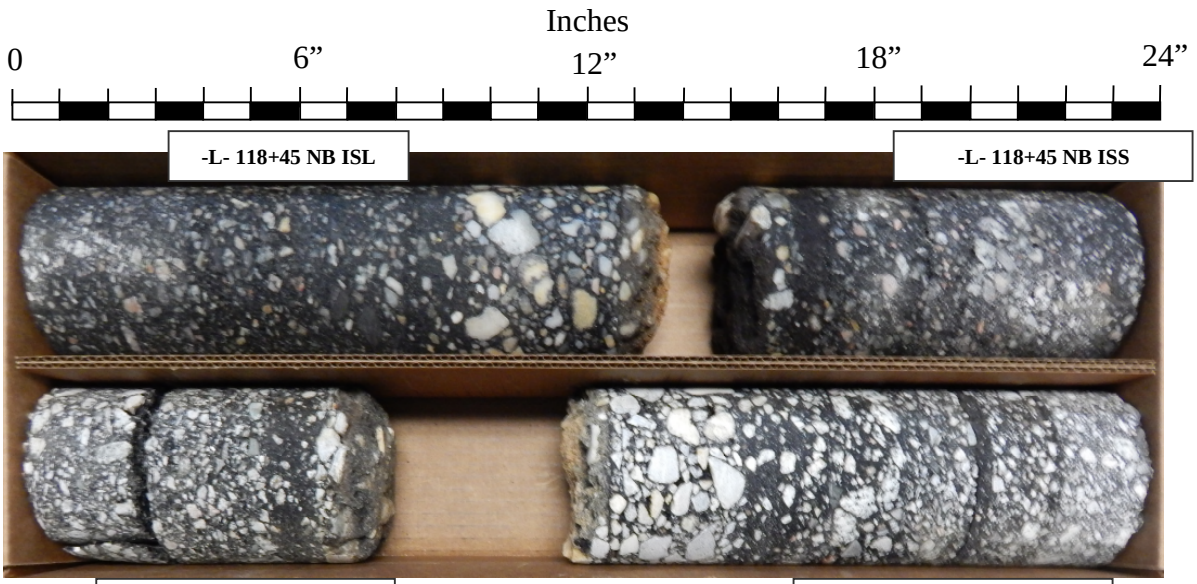

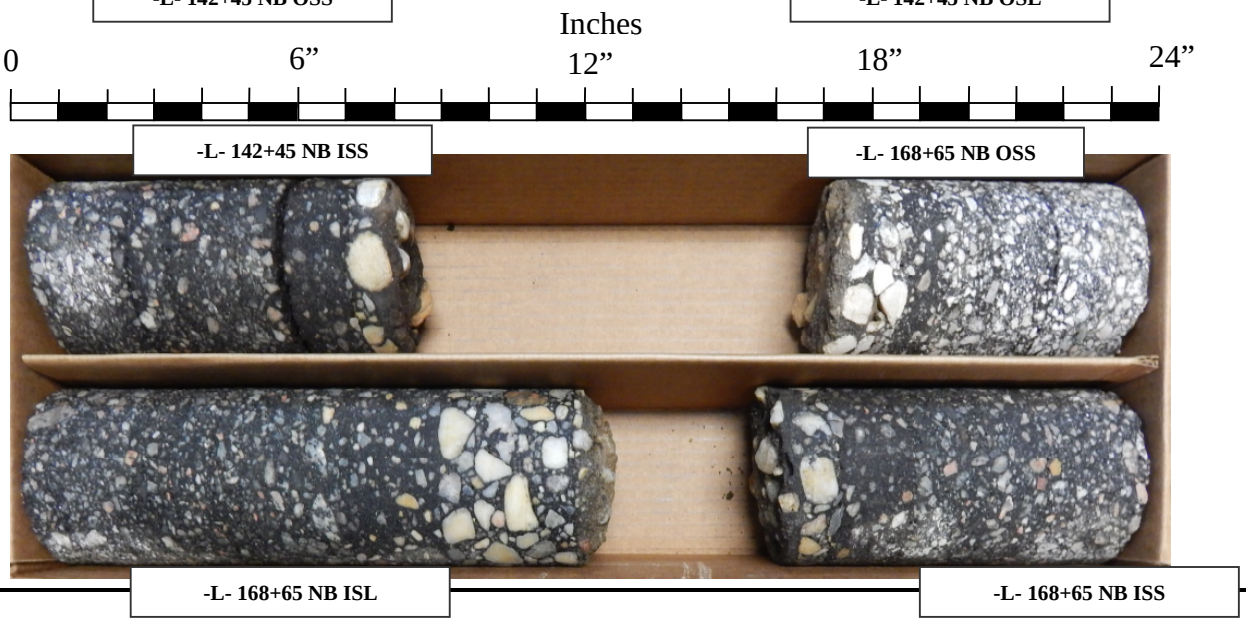

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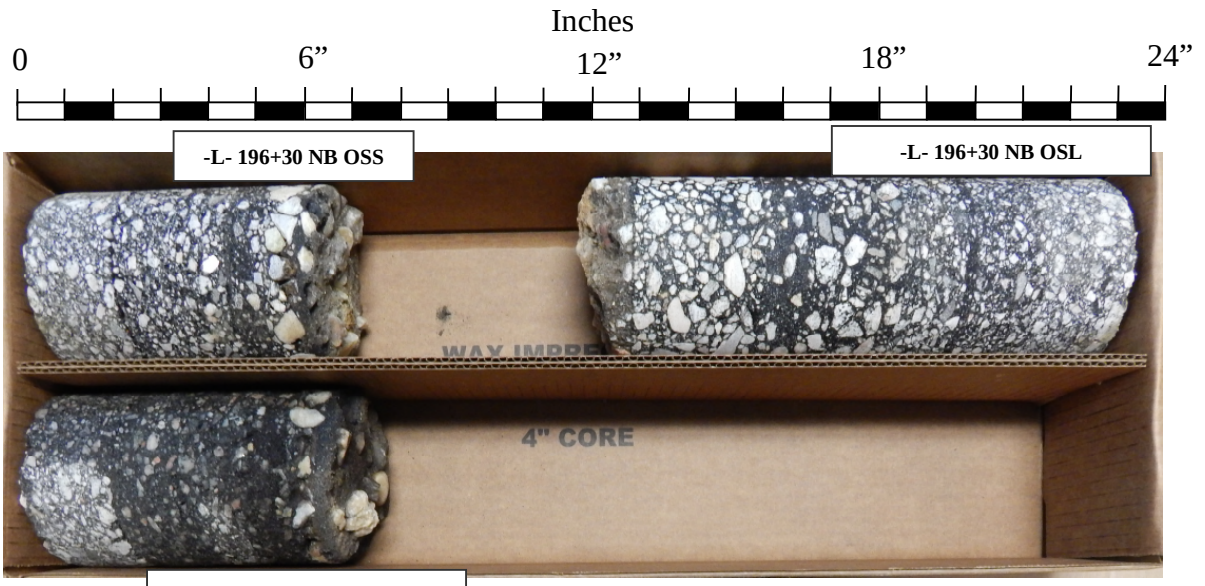

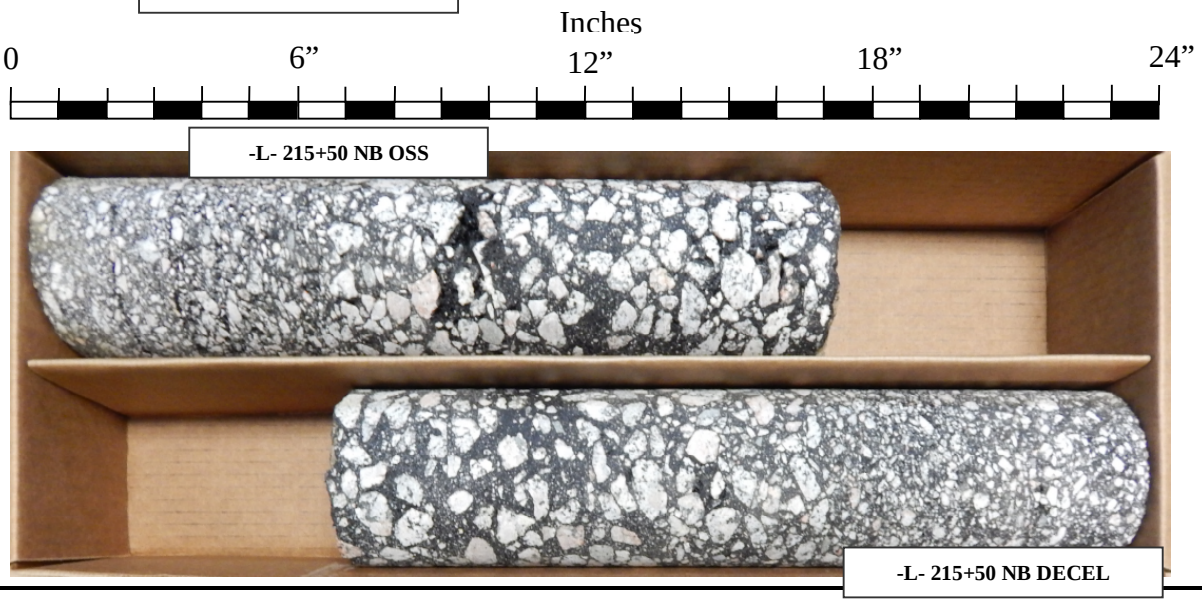

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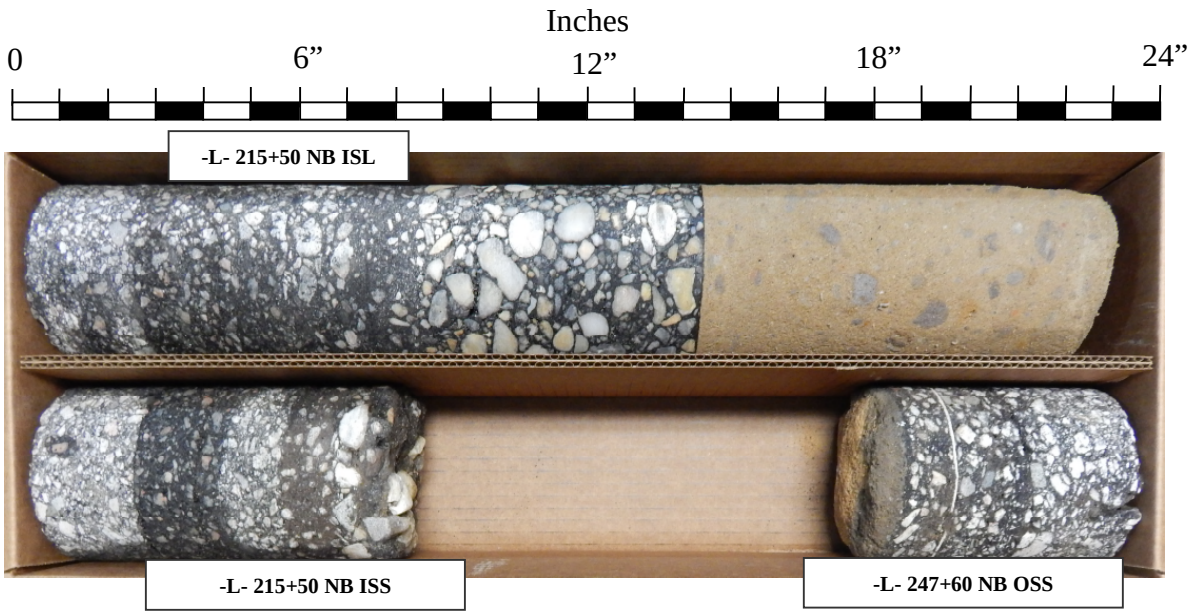

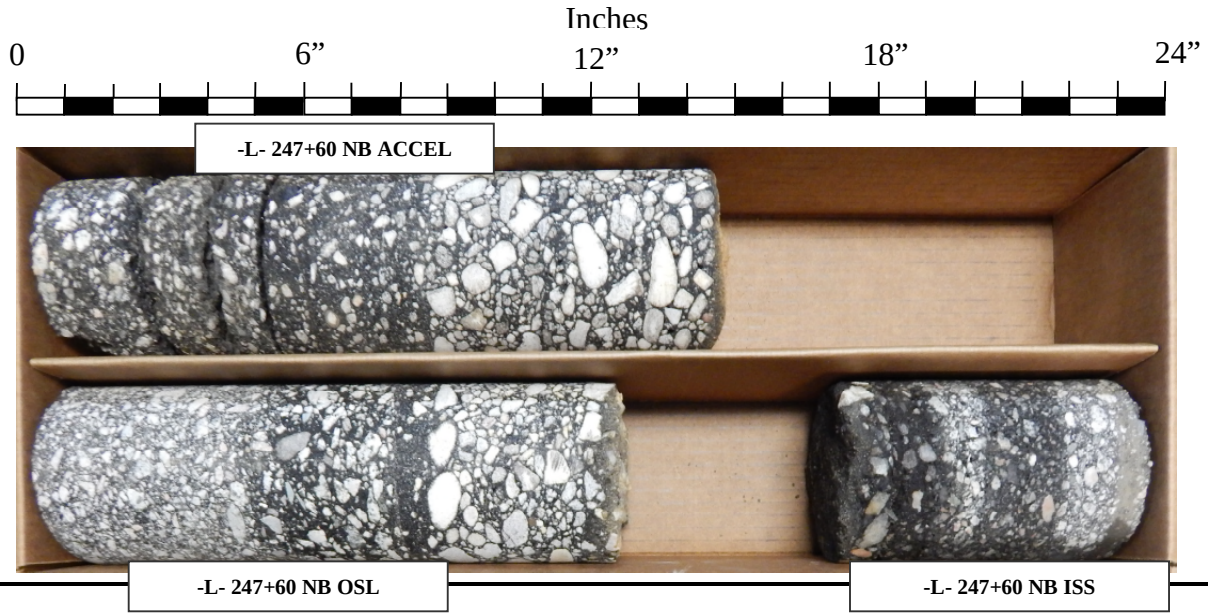

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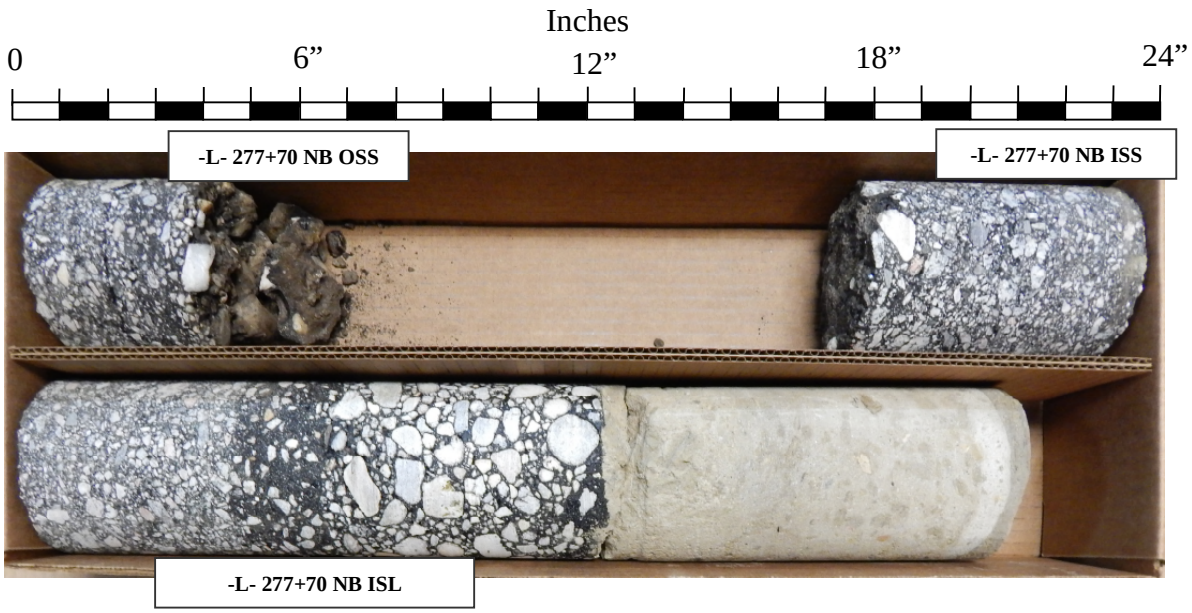

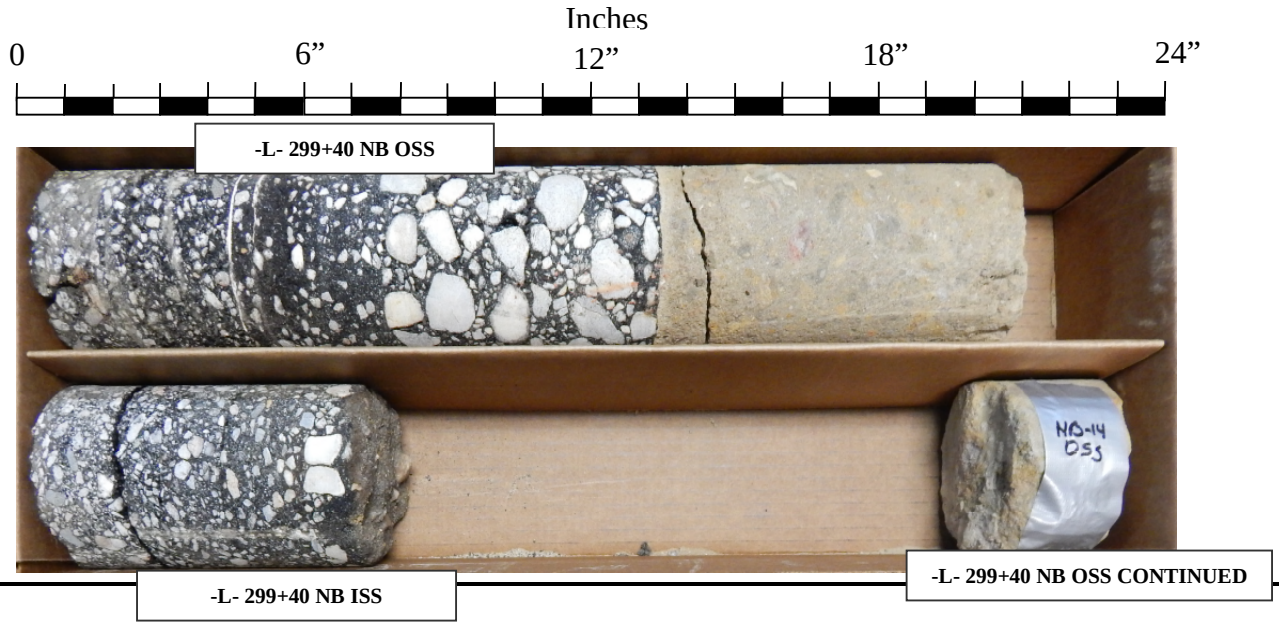

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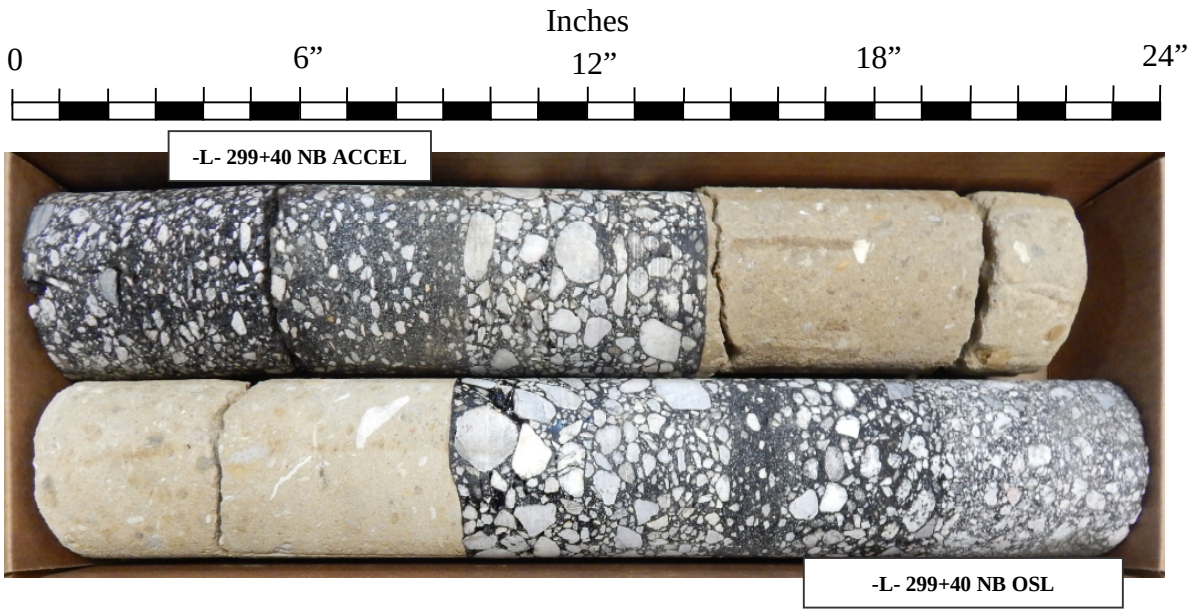

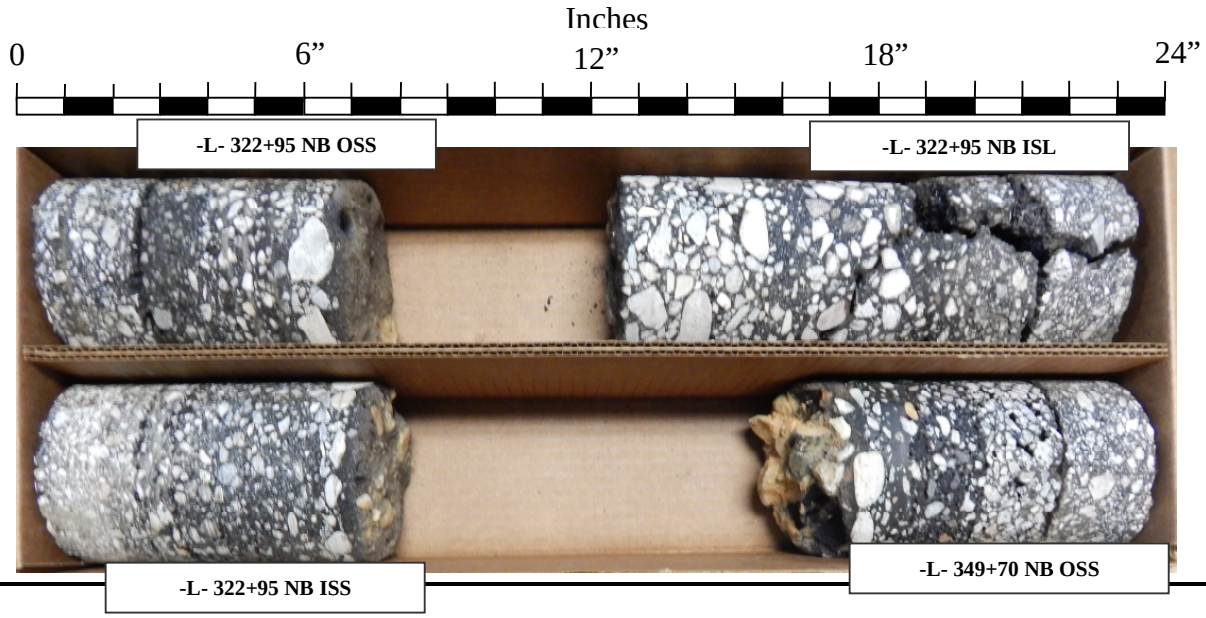

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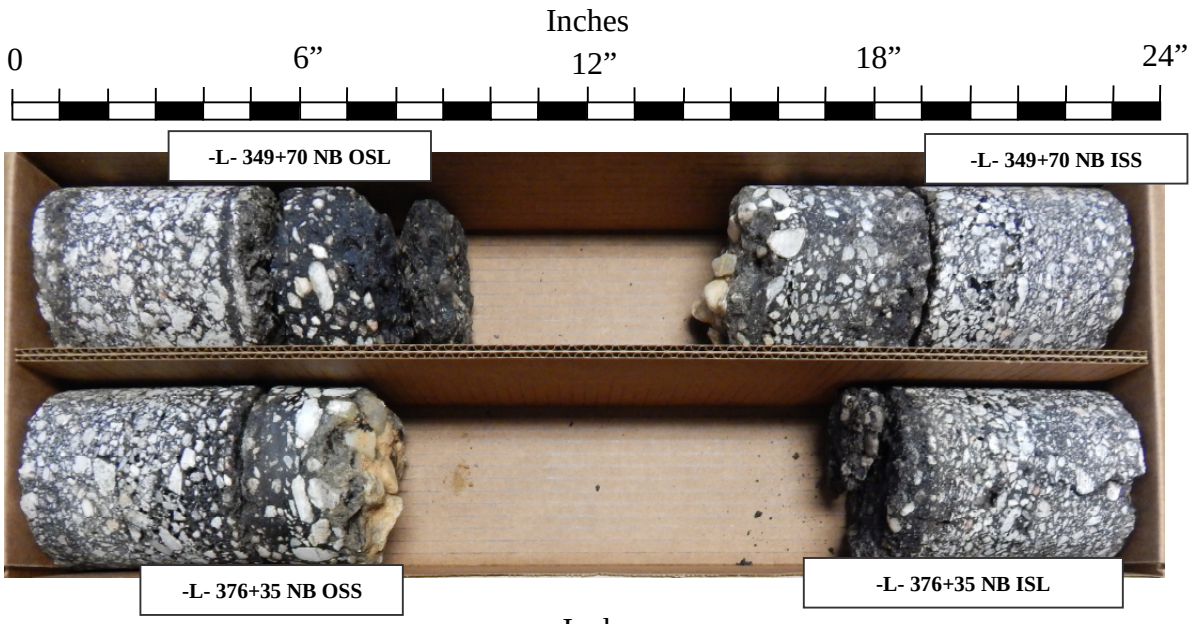

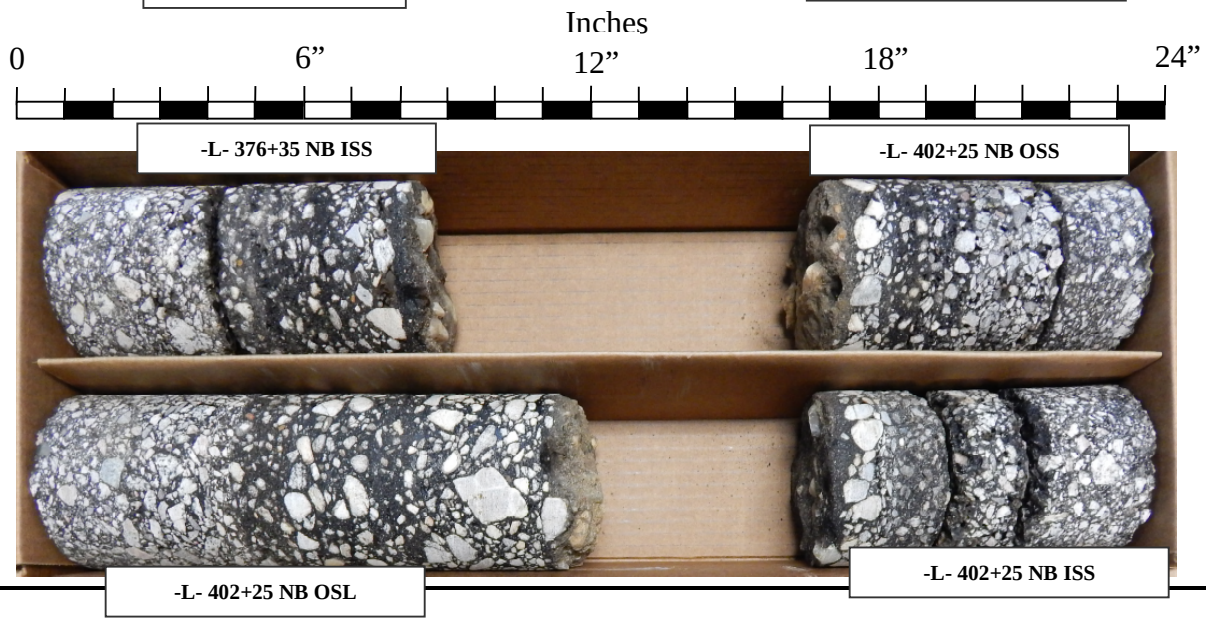

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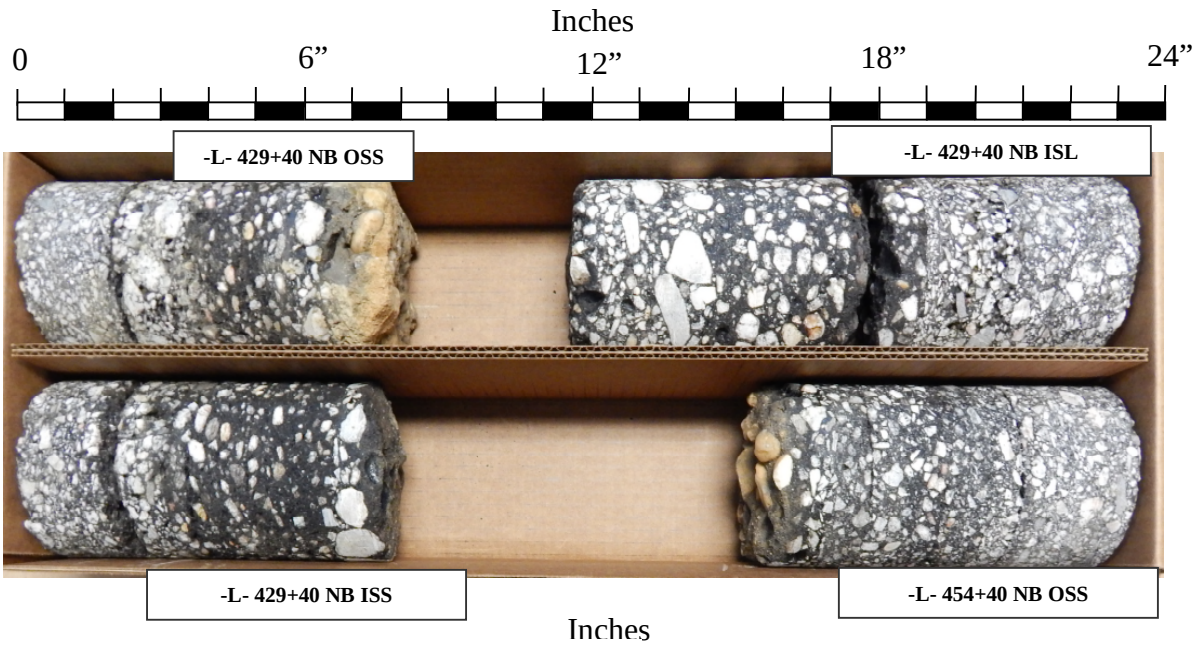

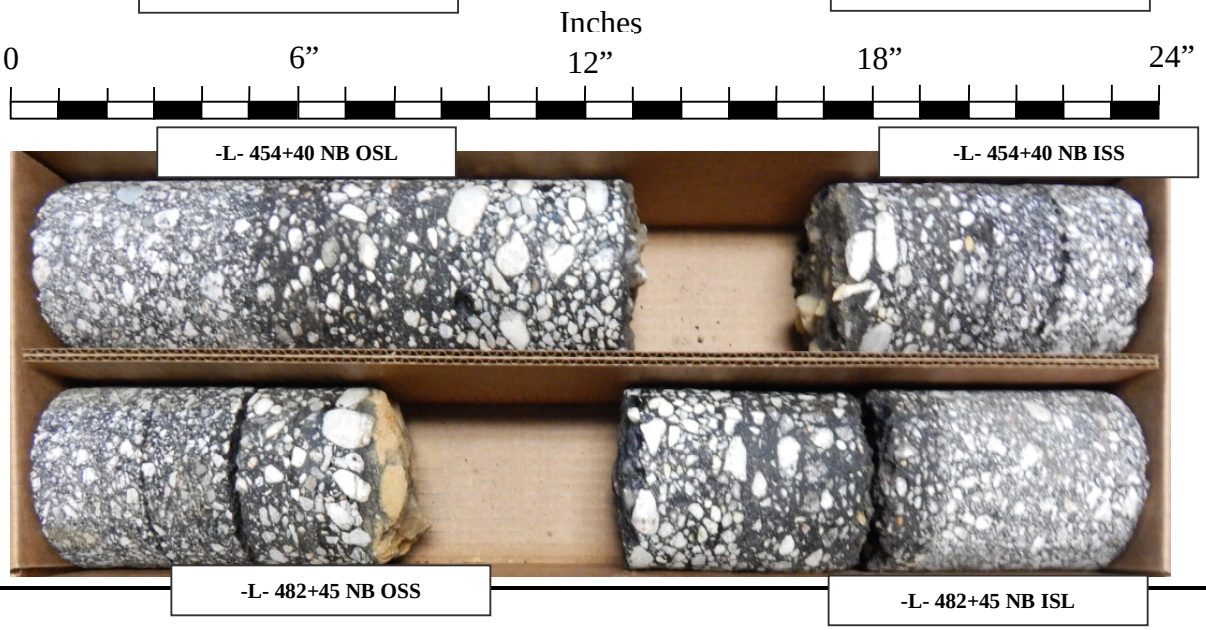

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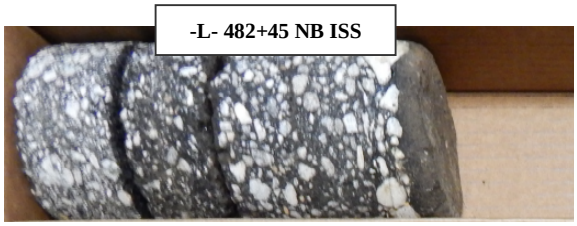
Inches

0 6” 12” 18” 24”



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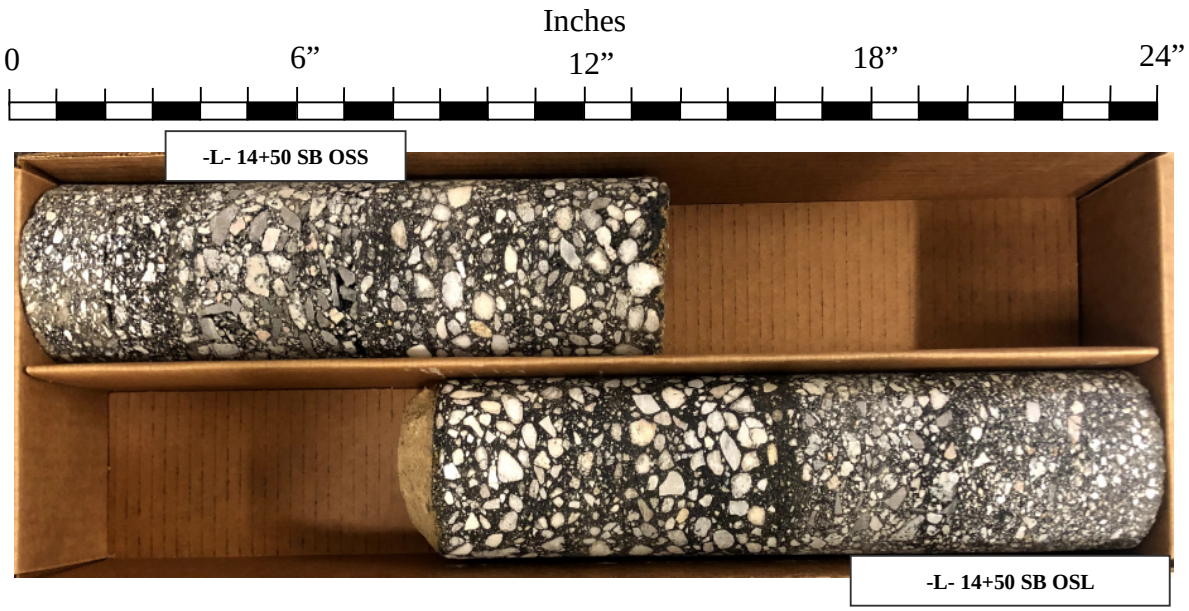

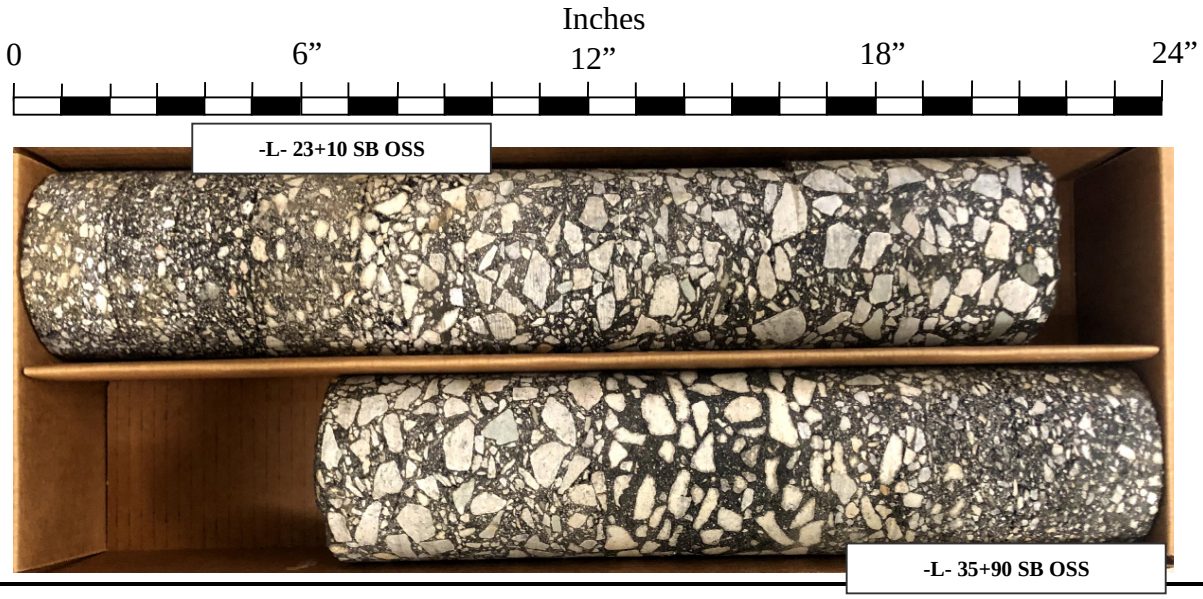

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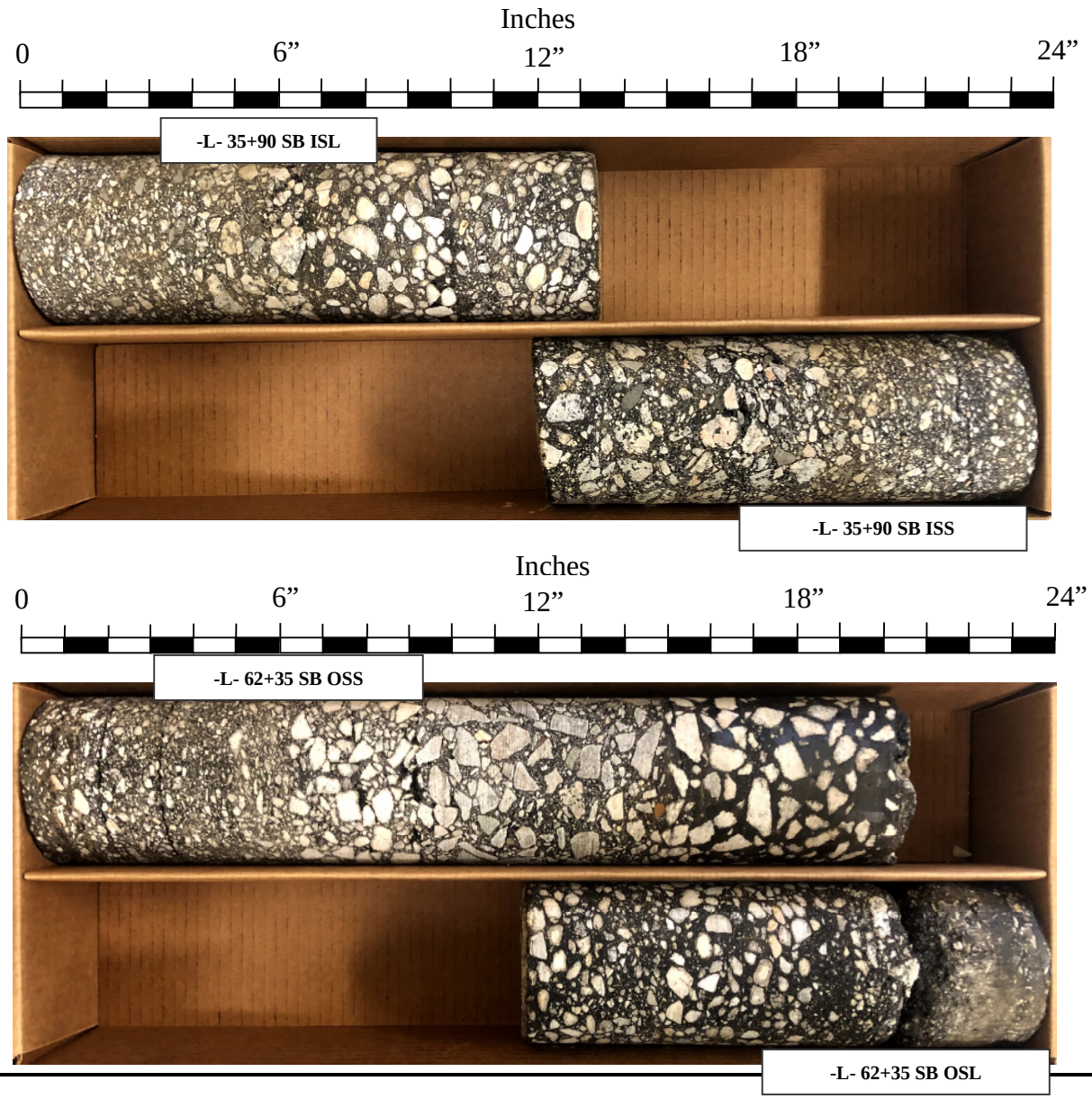

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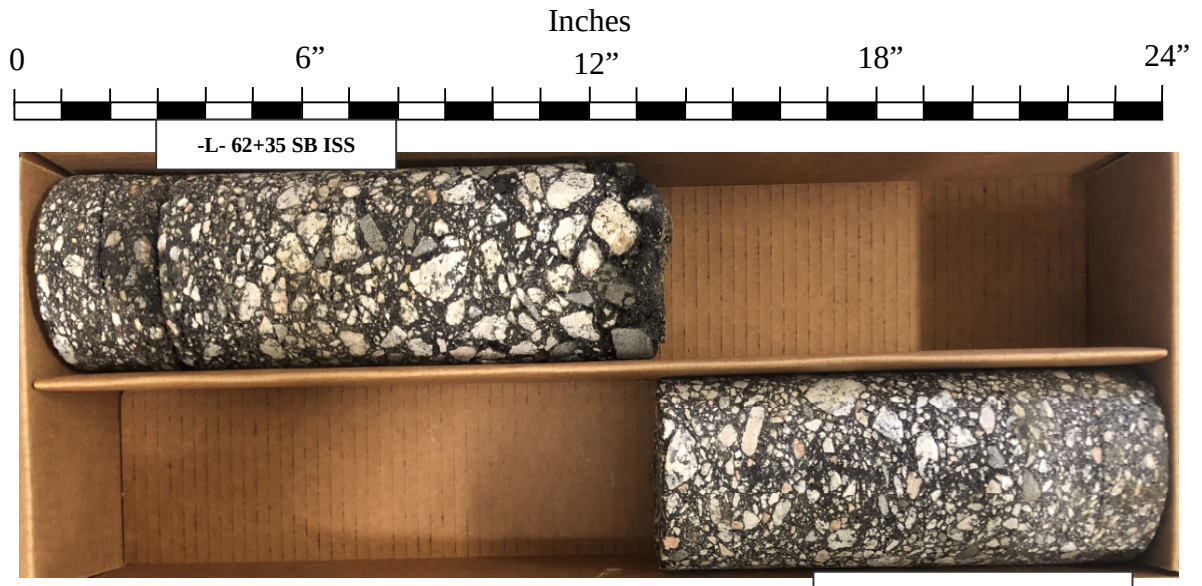

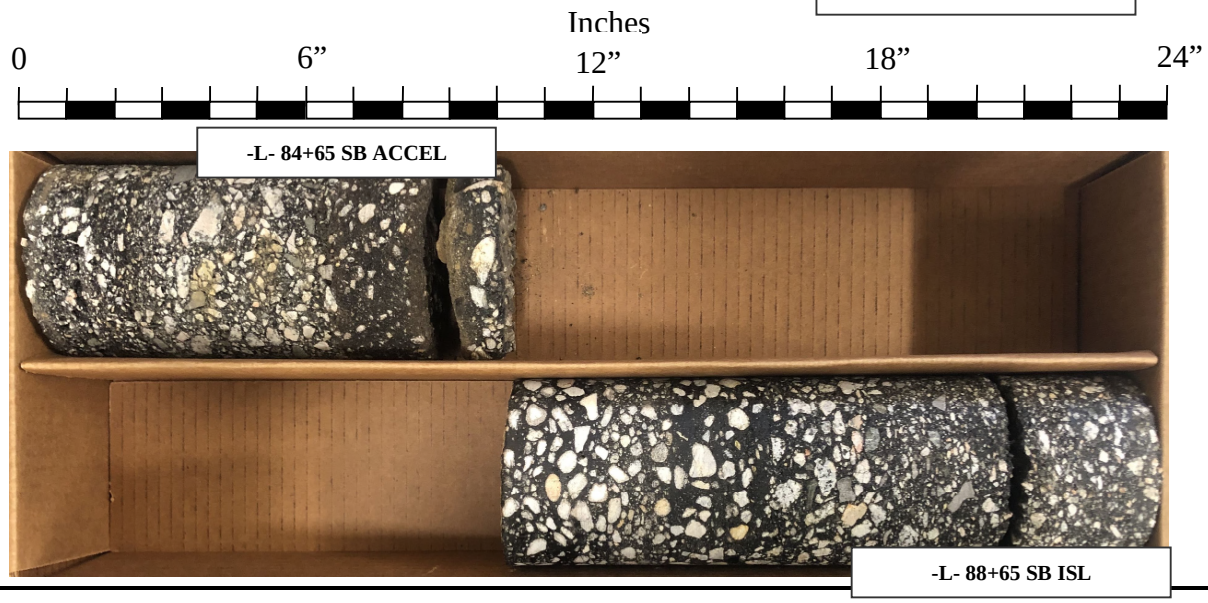

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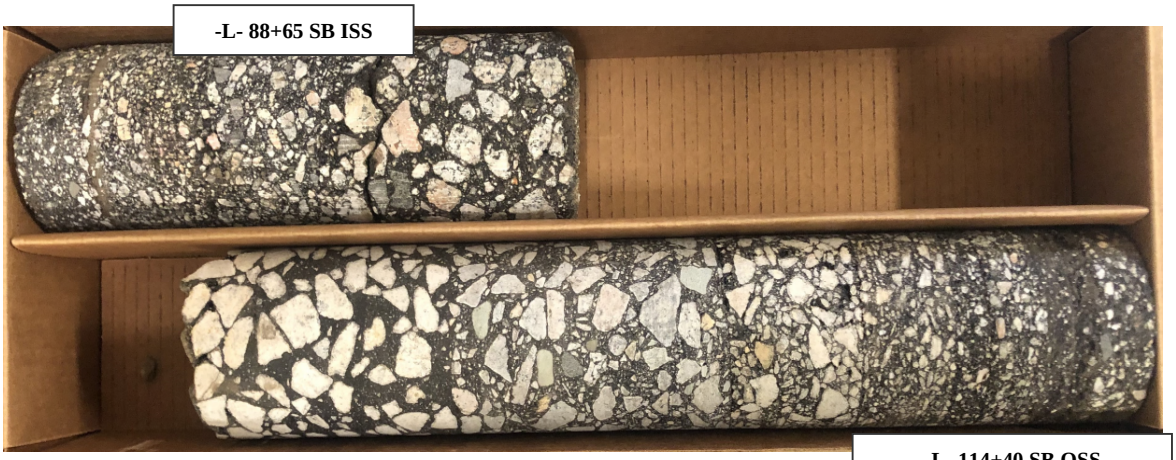
-L- 88+65 SB ISS

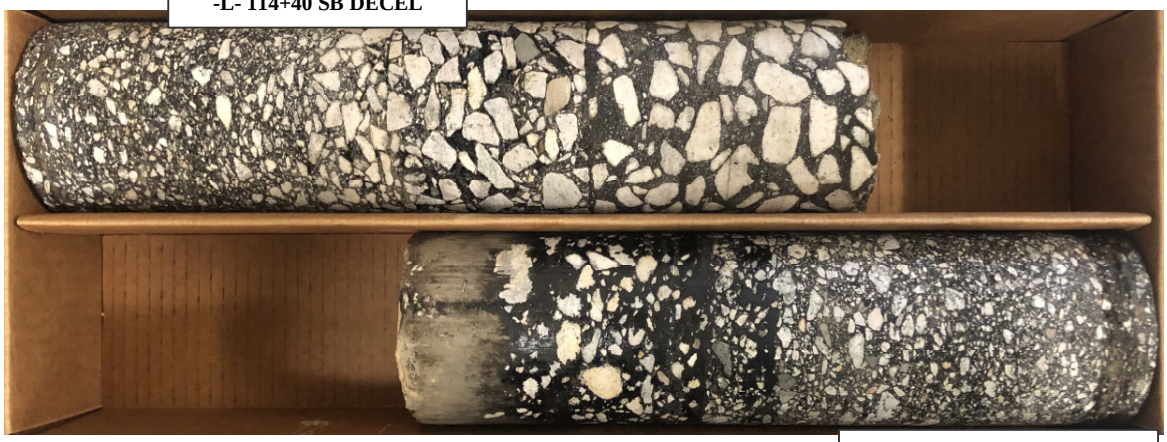


-L- 114+40 SB OSS

Inches

0 6” 12” 18” 24”

-L- 114+40 SB DECEL



-L- 114+40 SB OSL

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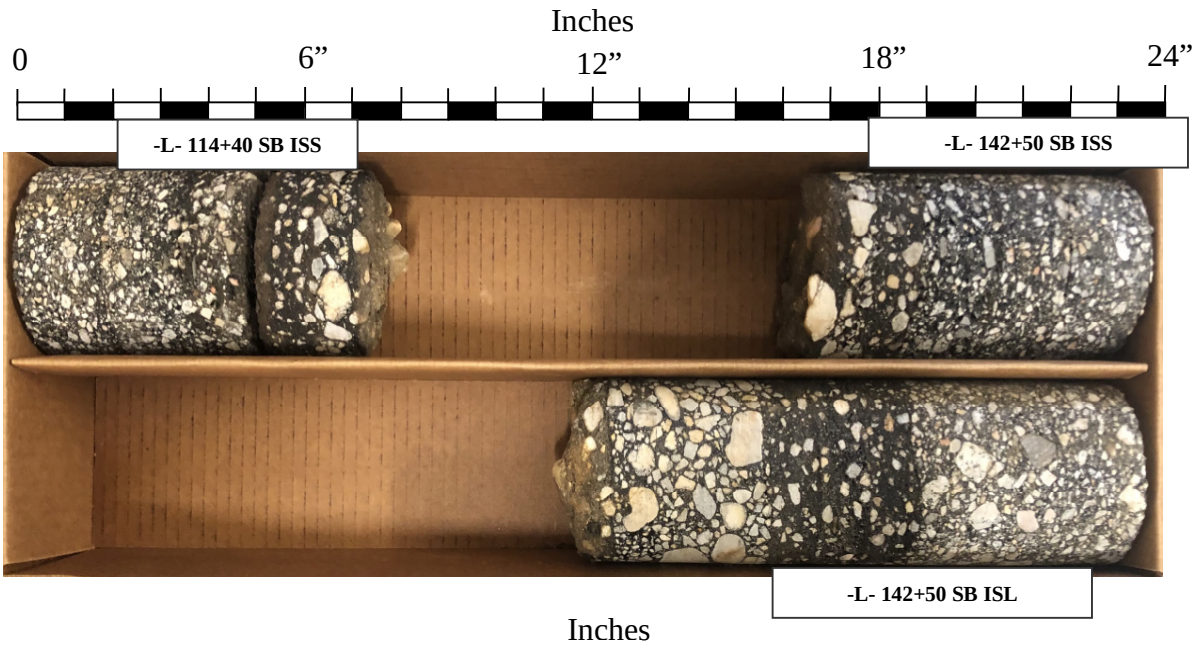

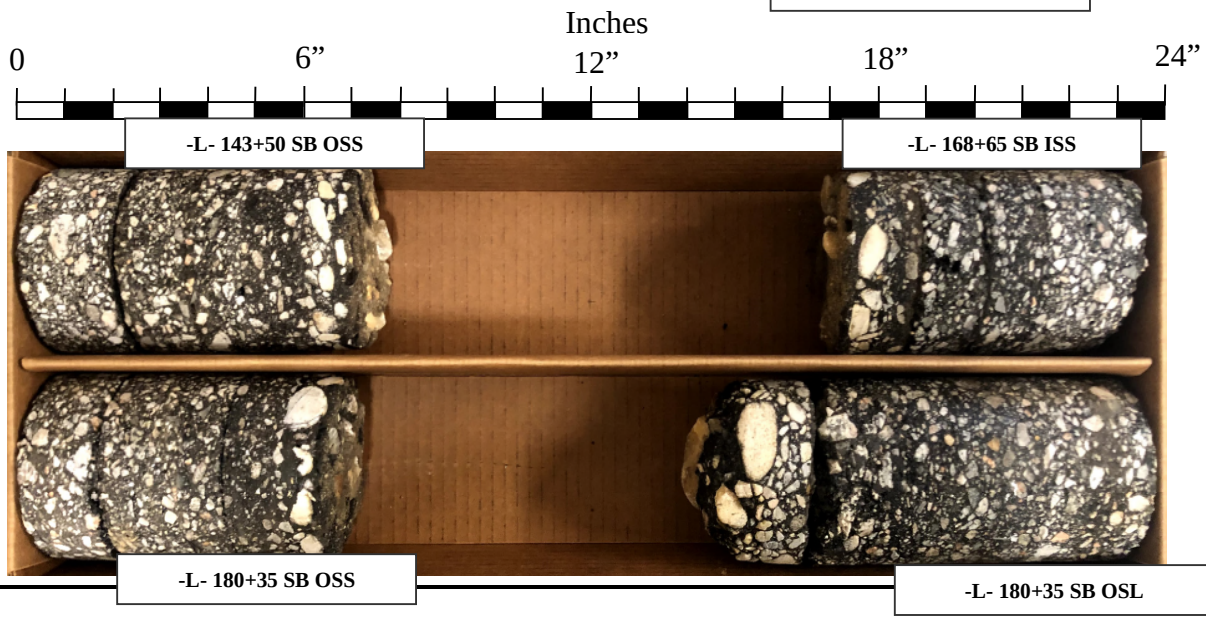

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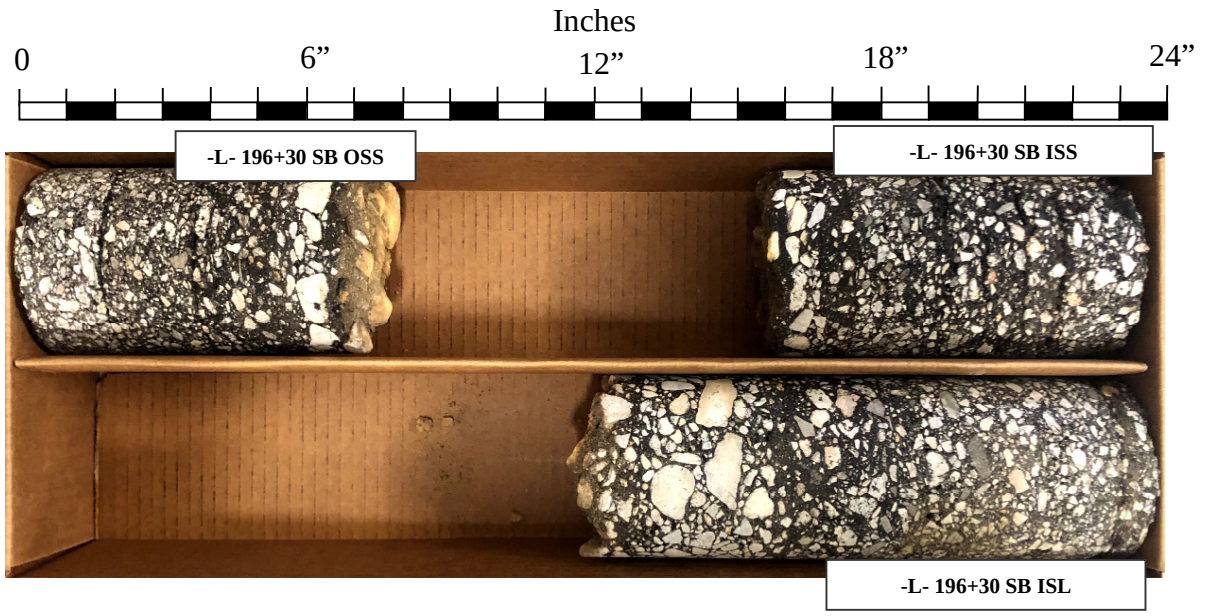

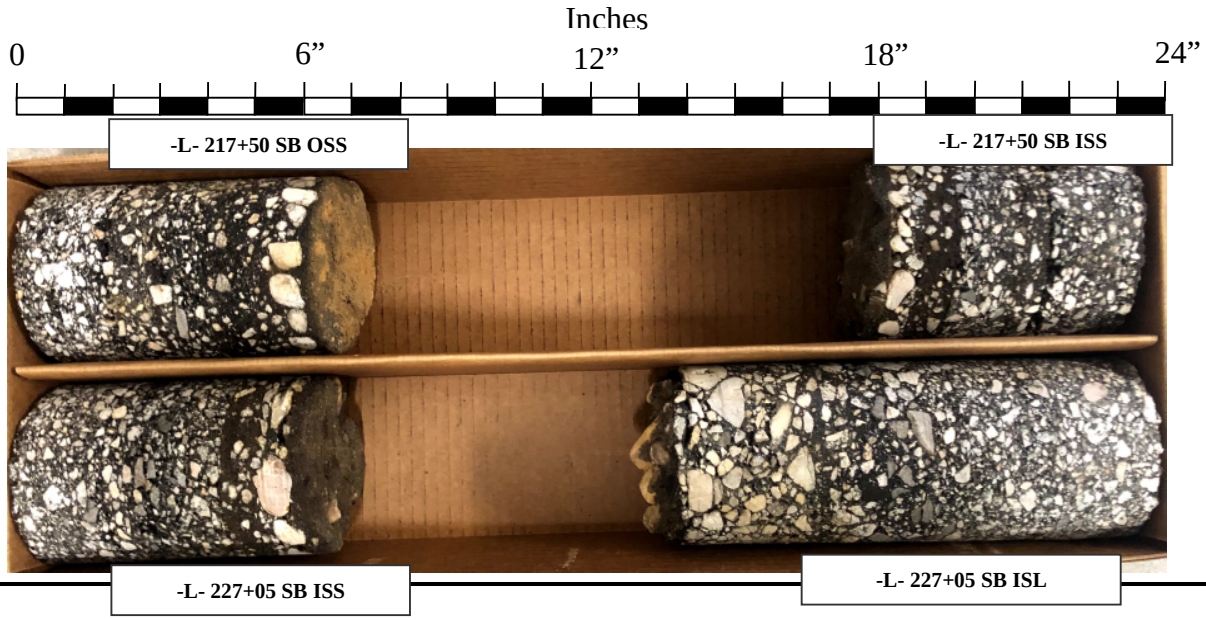

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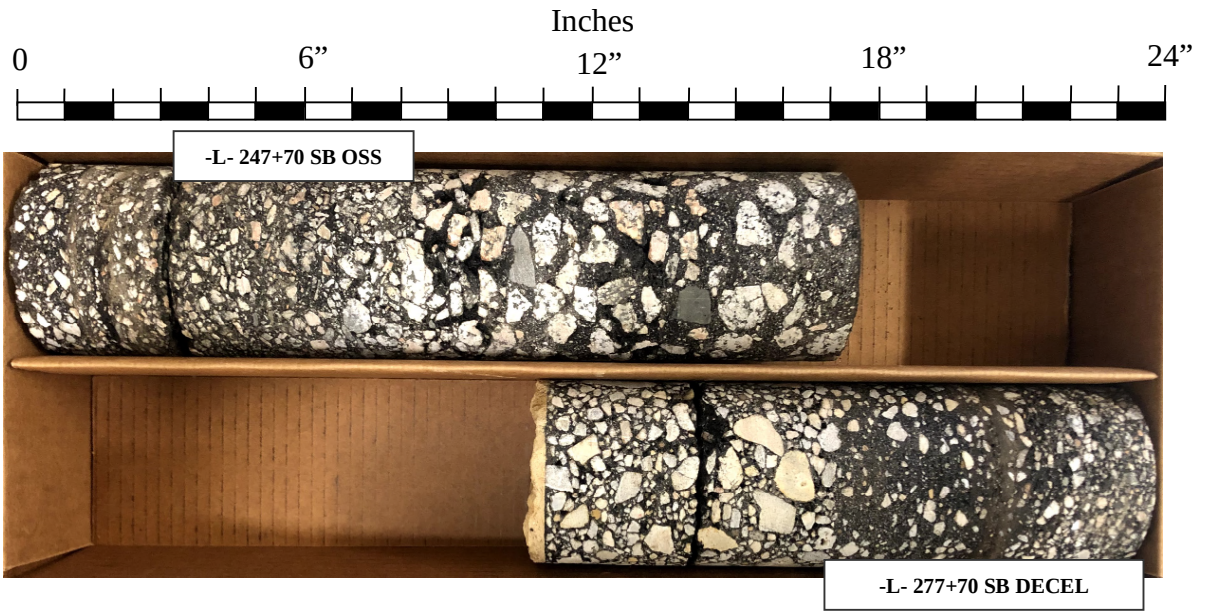

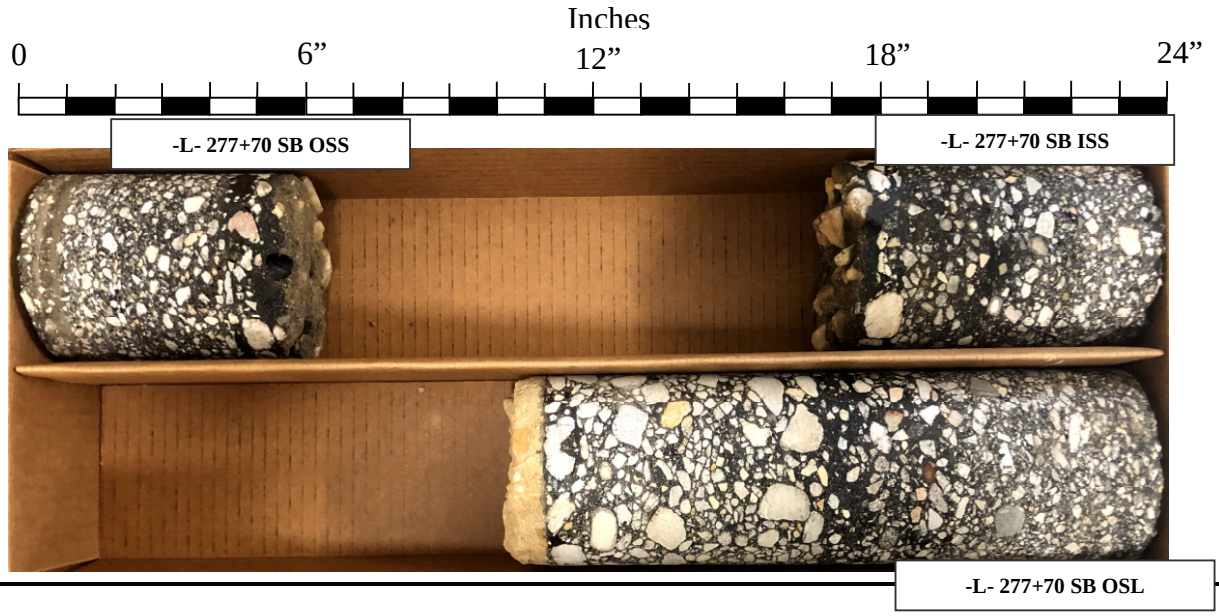

Notes:

OSL = Outside Lane
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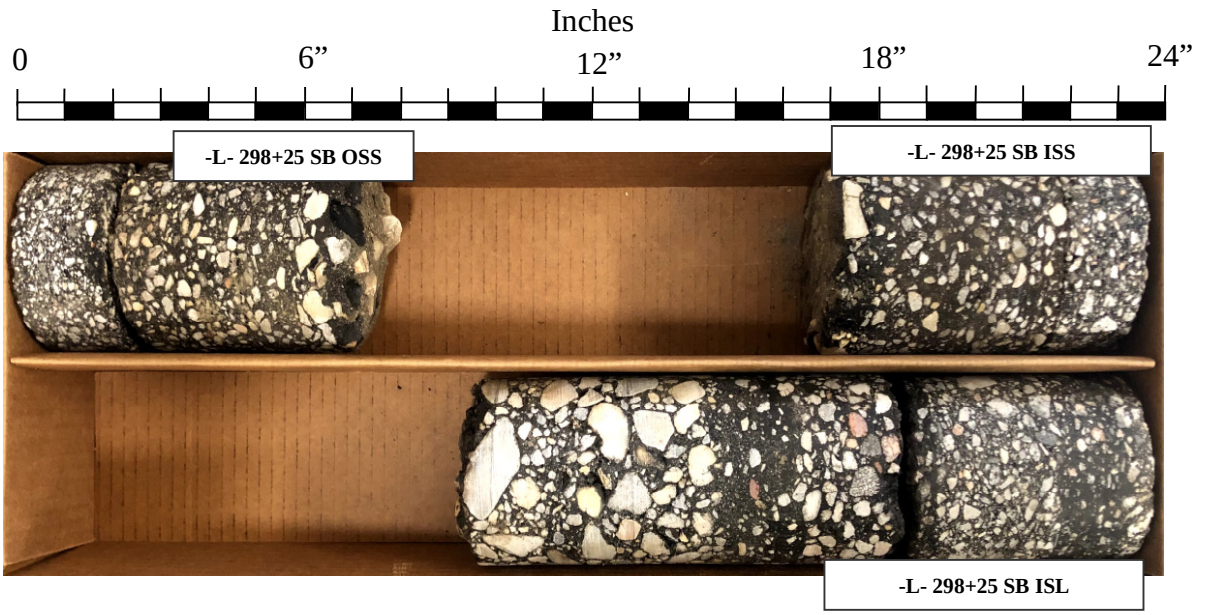
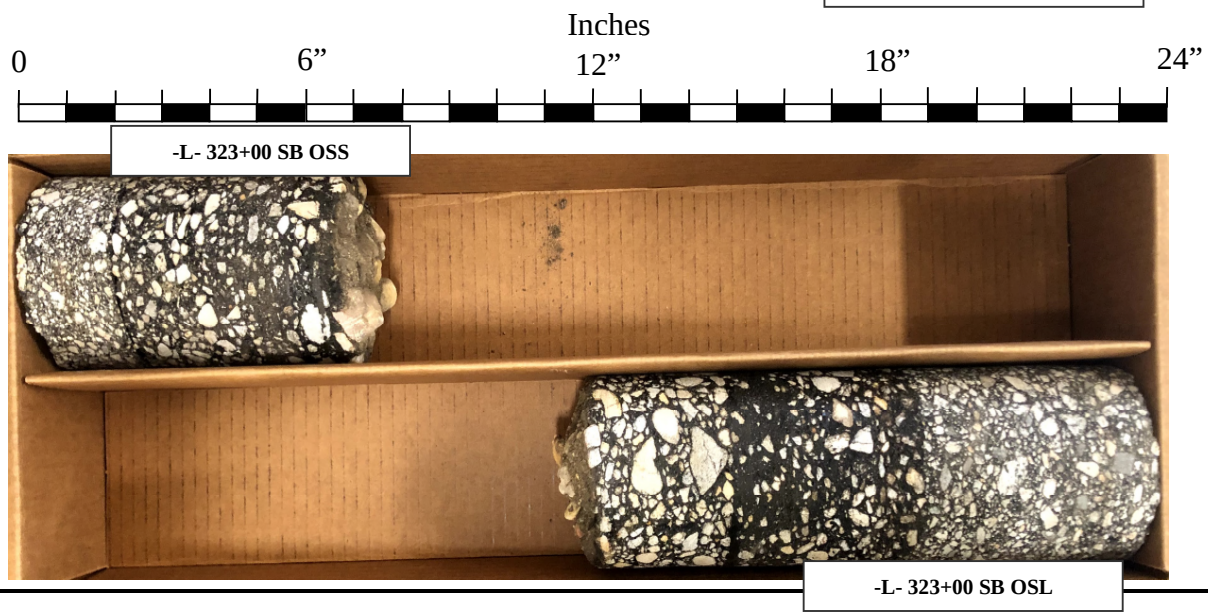
DECEL = Deceleration Lane
MED = Median

S&ME, Inc.
3201 Spring Forest Road
Raleigh, North Carolina 27616

Project No.: 47533.1.2	*I.D. No.*: I-5987A	*County*: Robeson	*Dates:12/3/19-12/19/19*
Site Description: I-95 from North of NC 211 to South of NC 20			
Consultant: S&ME, Inc.	*Core Size*: 4 - inch	*Drill Machine:* CME-55	
Geologist / Engineer: Darin Strother, Jarett Swartley, Mary Rawls, Vladimir Mitchev			





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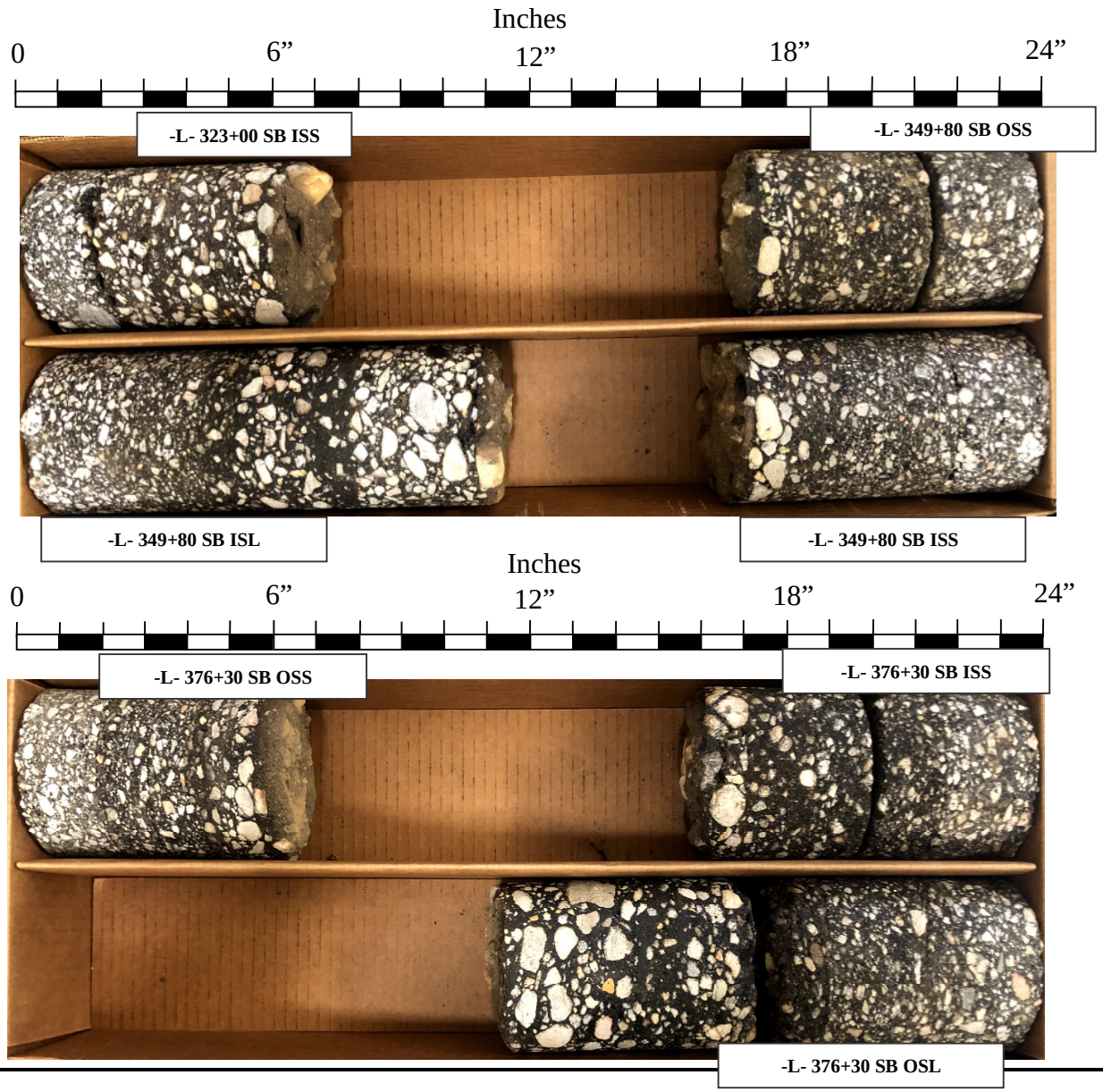

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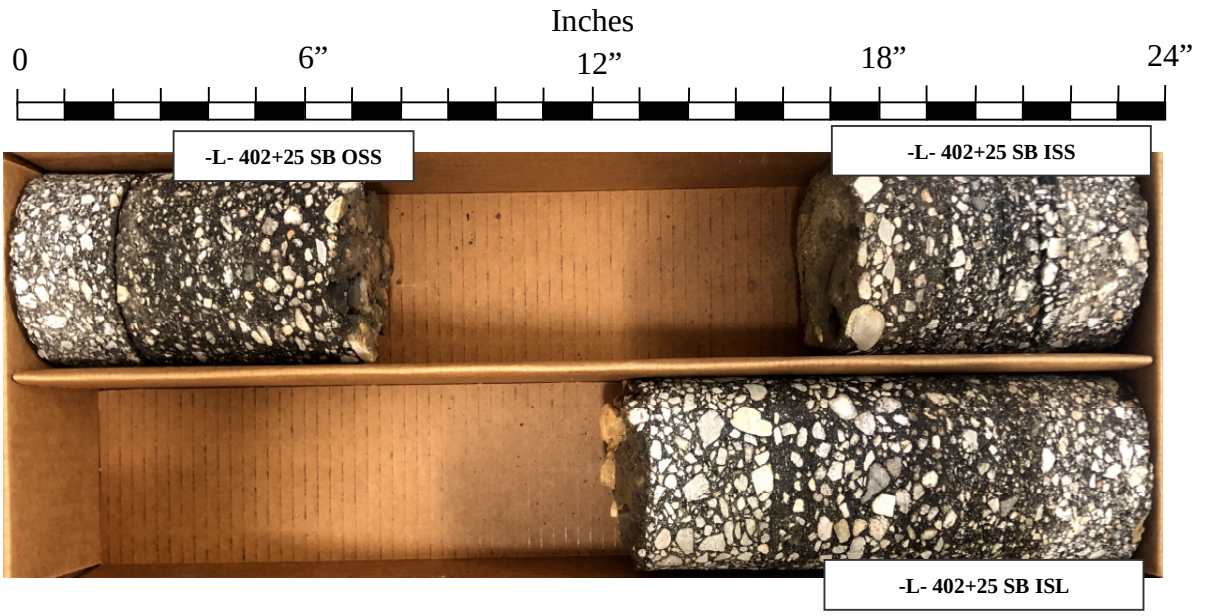
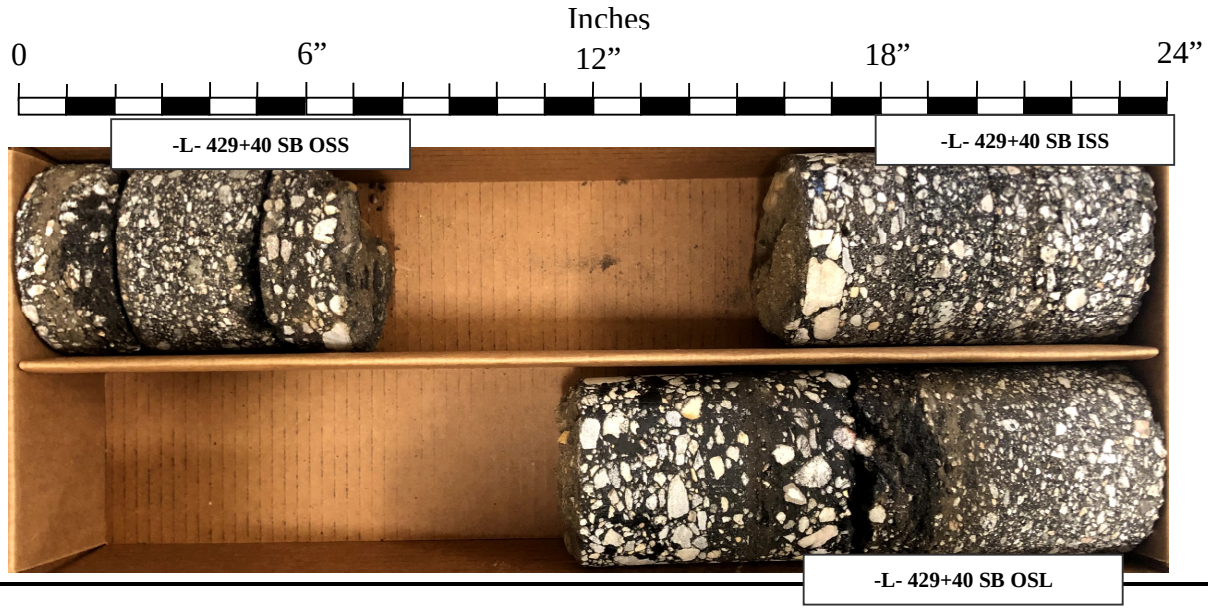
Geologist / Engineer: Darin Strother, Jarett Swartley, Mary Rawls, Vladimir Mitchev			





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Raleigh, North Carolina 27616

Project No.: 47533.1.2	*I.D. No.*: I-5987A	*County*: Robeson	*Dates:12/3/19-12/19/19*
Site Description: I-95 from North of NC 211 to South of NC 20			
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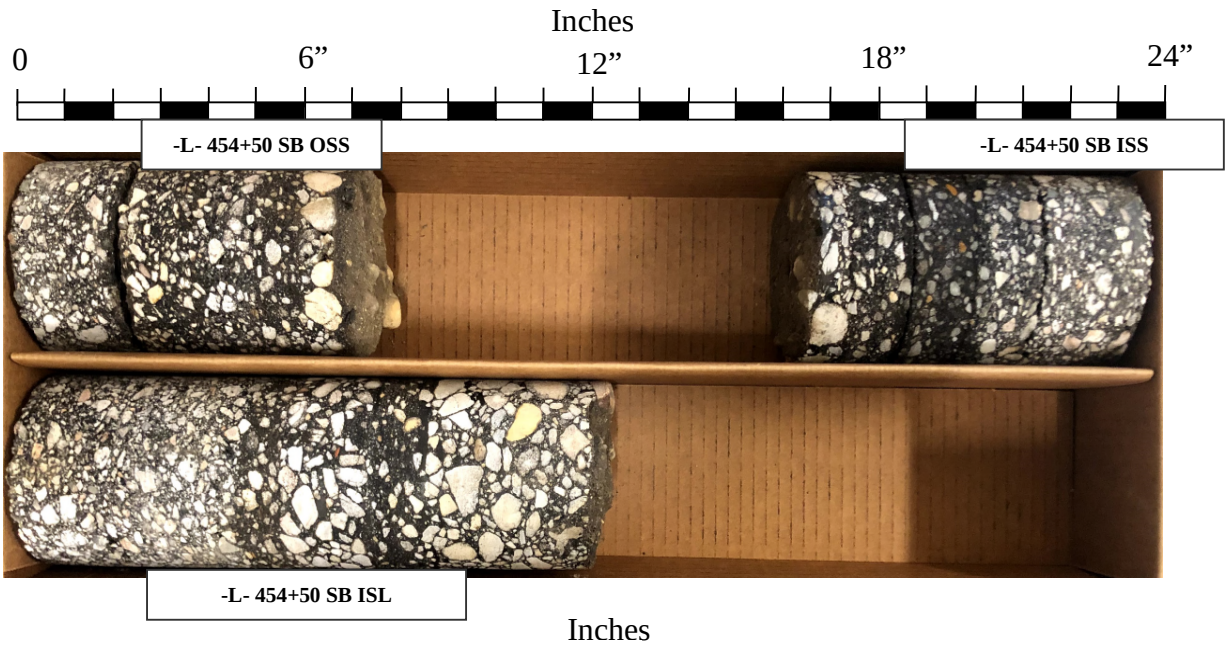

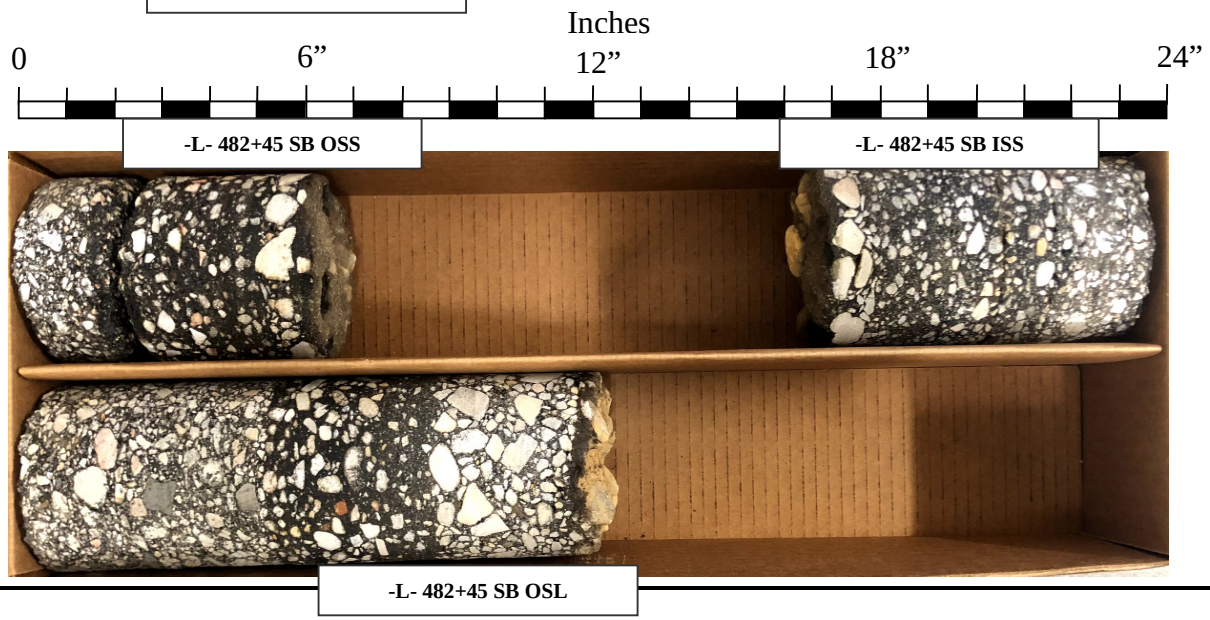

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S&ME, Inc.
3201 Spring Forest Road
Raleigh, North Carolina 27616

SUMMARY OF LABORATOTY TEST DATA

Soil Classification and Gradation

S&ME, Inc. Raleigh, 3201 Spring Forest Road, Raleigh, North Carolina 27616

S&ME Project #:	210986			Date Report	12/30/2019
State Project No.:	47533.1.2	County:	Robeson	Date Tested	12/6 - 12/30/19
Federal ID No.:		TIP No.:	I-5987A		
Project Name:	I-95 from North of NC 211 to South of NC 20				
Client Name:	NCDOT	Client Address:	Raleigh, NC		

Station No.	Sample No.	Boring No.	Offset	Alignment	Sample Depth (ft)	AASHTO Classification		Total % Passing Sieve #				Total Mortar Fraction (%)				LL	PL	PI	Moist. %
								10	40	60	200	Coarse Sand	Fine Sand	Silt	Clay				
13+05 NB OSS	S-1	NB-01 OSS	N/A	-L-	0.0-1.5	A-2-4	(0)	96	87	74	22.6	23	57	7	13	N.P	N.P	N.P	11.8
13+05 NB OSS	S-2	NB-01 OSS	N/A	-L-	1.5-4.0	A-6	(3)	99	93	82	40.0	17	45	11	27	40	22	18	18.7
21+95 NB OSS	S-3	NB-02 OSS	N/A	-L-	0.0-4.0	A-6	(2)	99	85	71	35.8	28	38	3	31	40	22	18	20.5
35+90 NB OSS	S-4	NB-03 OSS	N/A	-L-	Subgrade	A-2-4	(0)	50	37	30	18.2	41	26	17	16	23	16	7	7.7
35+90 NB OSS	S-5	NB-03 OSS	N/A	-L-	0.0-4.0	A-4	(1)	99	92	82	42.7	18	43	8	31	33	23	10	16.3
35+90 NB OSL	S-6	NB-03 OSL	N/A	-L-	0.0-0.8	A-2-4	(0)	99	63	41	20.0	59	23	2	16	N.P	N.P	N.P	11.0
62+40 NB OSS	S-7	NB-04 OSS	N/A	-L-	2.0-4.0	A-4	(0)	94	80	70	40.9	26	34	13	27	22	16	6	11.0
62+40 NB OSS	S-8	NB-04 OSS	N/A	-L-	0.0-2.0	A-4	(0)	98	93	85	43.9	14	46	14	26	21	16	5	15.2
81+00 NB DECEL	S-9	NB-05 DECEL	N/A	-L-	0.0-4.0	A-6	(4)	98	94	89	43.9	9	52	6	33	38	19	19	18.2
81+00 NB DECEL	S-10	NB-05 DECEL	N/A	-L-	Subgrade	A-1-a	(0)	32	24	20	12.8	36	28	16	20	N.P	N.P	N.P	7.6
81+00 NB OSL	S-11	NB-05 OSL	N/A	-L-	1.4-5.0	A-6	(1)	100	94	87	38.1	13	54	5	28	31	19	12	15.6
108+80 NB ACCEL	S-12	NB-06 ACCEL	N/A	-L-	0.0-2.0	A-2-4	(0)	99	84	65	25.8	35	41	2	22	27	19	8	14.0
108+80 NB ACCEL	S-13	NB-06 ACCEL	N/A	-L-	2.0-4.5	A-7-6	(6)	100	91	78	41.1	22	39	6	33	47	20	27	18.2
142+45 NB OSS	S-14	NB-07 OSS	N/A	-L-	0.0-1.0	A-2-4	(0)	99	72	50	11.5	50	40	2	8	N.P	N.P	N.P	11.0
142+45 NB OSS	S-15	NB-07 OSS	N/A	-L-	1.0-4.5	A-2-4	(0)	100	82	67	30.6	34	38	5	23	21	19	2	13.8
168+65 NB OSS	S-17	NB-08 OSS	N/A	-L-	0.0-1.0	A-2-4	(0)	99	76	59	16.9	41	44	5	10	N.P	N.P	N.P	9.6
196+30 NB OSL	S-18	NB-09 OSL	N/A	-L-	0.0-4.5	A-2-6	(0)	100	90	80	27.7	20	54	5	21	33	20	13	14.9
215+50 NB OSS	S-19	NB-10 OSS	N/A	-L-	0.0-4.5	A-2-4	(0)	100	74	51	20.9	49	34	3	14	19	17	2	11.1
247+60 NB ACCEL	S-20	NB-11 ACCEL	N/A	-L-	0.0-4.5	A-2-4	(0)	99	71	54	26.7	45	31	7	17	20	16	4	10.0

SUMMARY OF LABORATOTY TEST DATA

Soil Classification and Gradation

S&ME, Inc. Raleigh, 3201 Spring Forest Road, Raleigh, North Carolina 27616

S&ME Project #:	210986			Date Report	12/30/2019
State Project No.:	47533.1.2	County:	Robeson	Date Tested	12/6 - 12/30/19
Federal ID No.:		TIP No.:	I-5987A		
Project Name:	I-95 from North of NC 211 to South of NC 20				
Client Name:	NCDOT	Client Address:	Raleigh, NC		

Station No.	Sample No.	Boring No.	Offset	Alignment	Sample Depth (ft)	AASHTO Classification		Total % Passing Sieve #				Total Mortar Fraction (%)				LL	PL	PI	Moist. %
								10	40	60	200	Coarse Sand	Fine Sand	Silt	Clay				
277+70 NB OSS	S-21	NB-12 OSS	N/A	-L-	1.8-4.5	A-2-6	(0)	100	87	77	28.6	23	51	6	20	33	21	12	14.9
299+40 NB OSL	S-22	NB-14 OSL	N/A	-L-	0.0-4.0	A-2-4	(0)	100	92	76	20.1	24	56	5	15	N.P	N.P	N.P	12.2
299+40 NB ACCEL	S-23	NB-14 ACCEL	N/A	-L-	0.0-1.0	A-2-4	(0)	100	94	79	23.5	22	56	4	18	24	20	4	17.0
322+95 NB OSS	S-24	NB-15 OSS	N/A	-L-	0.8-4.5	A-2-4	(0)	100	86	73	20.1	27	55	3	15	N.P	N.P	N.P	10.8
349+70 NB OSS	S-25	NB-16 OSS	N/A	-L-	0.0-0.8	A-2-4	(0)	78	58	42	20.0	47	30	4	19	26	20	6	11.3
349+70 NB OSS	S-26	NB-16 OSS	N/A	-L-	0.8-4.5	A-2-4	(0)	98	61	42	23.7	57	20	3	20	30	22	8	13.7
376+35 NB OSS	S-27	NB-17 OSS	N/A	-L-	2.5-4.5	A-7-6	(7)	100	73	60	42.1	41	20	5	34	54	26	28	16.8
402+25 NB OSL	S-28	NB-18 OSL	N/A	-L-	0.8-4.5	A-2-6	(0)	98	72	56	33.3	43	27	9	21	29	18	11	8.8
454+40 NB OSL	S-29	NB-20 OSL	N/A	-L-	0.0-3.0	A-2-4	(0)	96	58	38	22.6	60	18	5	17	24	15	9	12.2
454+40 NB OSL	S-30	NB-20 OSL	N/A	-L-	3.0-4.5	A-2-6	(0)	99	63	46	26.8	54	21	4	21	27	14	13	12.6
454+40 NB OSS	S-31	NB-20 OSS	N/A	-L-	0.8-3.0	A-2-4	(0)	94	58	30	12.7	68	20	6	6	N.P	N.P	N.P	9.2
277+70 NB ISL	S-48	NB-12 ISL	N/A	-L-	0.0-1.0	A-2-6	(0)	100	90	76	26.6	24	51	5	20	26	15	11	16.2
277+70 NB ISL	S-49	NB-12 ISL	N/A	-L-	1.0-5.0	A-2-6	(0)	100	87	76	26.5	25	53	4	18	31	17	14	15.1
322+95 NB ISS	S-50	NB-15 ISS	N/A	-L-	0.0-1.0	A-2-4	(0)	88	60	44	18.7	51	30	8	11	18	13	5	8.2
349+70 NB ISS	S-51	NB-16 ISS	N/A	-L-	1.3-5.0	A-2-4	(0)	100	87	75	25.6	25	53	7	15	17	15	2	7.9
376+35 NB ISS	S-52	NB-17 ISS	N/A	-L-	2.5-5.0	A-2-6	(0)	100	72	54	33.0	46	24	10	20	27	14	13	12.0
402+25 NB ISS	S-53	NB-18 ISS	N/A	-L-	0.0-1.2	A-2-4	(0)	94	63	45	18.2	52	32	7	9	17	14	3	8.9
402+25 NB ISS	S-54	NB-18 ISS	N/A	-L-	1.2-5.0	A-6	(3)	100	77	60	39.1	40	24	6	30	36	16	20	12.6
429+40 NB ISL	S-55	NB-19 ISL	N/A	-L-	0.0-2.0	A-2-6	(0)	95	67	51	29.2	47	25	6	22	29	16	13	12.0

SUMMARY OF LABORATOTY TEST DATA

Soil Classification and Gradation

S&ME, Inc. Raleigh, 3201 Spring Forest Road, Raleigh, North Carolina 27616

S&ME Project #:	210986			Date Report	12/30/2019
State Project No.:	47533.1.2	County:	Robeson	Date Tested	12/6 - 12/30/19
Federal ID No.:		TIP No.:	I-5987A		
Project Name:	I-95 from North of NC 211 to South of NC 20				
Client Name:	NCDOT	Client Address:	Raleigh, NC		

Station No.	Sample No.	Boring No.	Offset	Alignment	Sample Depth (ft)	AASHTO Classification		Total % Passing Sieve #				Total Mortar Fraction (%)				LL	PL	PI	Moist. %
								10	40	60	200	Coarse Sand	Fine Sand	Silt	Clay				
13+05 NB ISL	S-78	NB-01 ISL	N/A	-L-	0.0-2.0	A-2-6	(0)	100	81	60	30.4	40	32	3	25	36	17	19	10.6
13+05 NB ISL	S-79	NB-01 ISL	N/A	-L-	2.0-5.0	A-7-6	(3)	99	88	76	36.9	23	42	5	30	41	20	21	16.1
35+90 NB ISS	S-80	NB-03 ISS	N/A	-L-	0.8-1.5	A-4	(0)	100	90	76	36.8	24	43	3	30	24	16	8	13.0
62+40 NB ISL	S-81	NB-04 ISL	N/A	-L-	1.5-3.5	A-6	(4)	100	92	82	49.3	18	36	12	34	32	17	15	15.9
81+00 NB ISS	S-82	NB-05 ISS	N/A	-L-	1.0-5.0	A-7-6	(6)	100	93	85	43.3	15	47	6	32	44	20	24	21.2
118+45 NB ISS	S-83	NB-06 ISS	N/A	-L-	0.0-1.0	A-2-4	(0)	93	71	53	24.9	43	33	6	18	20	14	6	12.1
118+45 NB ISS	S-84	NB-06 ISS	N/A	-L-	1.0-5.0	A-2-4	(0)	94	77	58	23.7	38	40	6	16	20	14	6	10.5
142+45 NB ISS	S-85	NB-07 ISS	N/A	-L-	2.0-5.0	A-2-6	(0)	100	86	71	31.2	29	43	7	21	27	15	12	11.8
168+65 NB ISS	S-86	NB-08 ISS	N/A	-L-	0.0-2.0	A-2-4	(0)	97	71	51	23.0	48	32	5	15	18	13	5	9.7
196+30 NB ISS	S-87	NB-09 ISS	N/A	-L-	0.0-5.0	A-2-4	(0)	97	76	61	21.9	38	42	5	15	21	15	6	14.5
215+50 NB ISS	S-88	NB-10 ISS	N/A	-L-	4.0-5.0	A-2-6	(0)	100	89	77	30.0	23	49	4	24	27	16	11	11.5
482+45 NB ISS	S-202	NB-21 ISS	N/A	-L-	0.0-3.0	A-2-4	(0)	99	72	57	33.9	42	27	11	20	25	15	10	11.1
430+35 NB IES	Bulk-7 IES NB	N/A	N/A	-L-	0-2.83	A-2-6	(0)	99	67	52	32.6	47	22	5	26	34	20	14	14.7
324+50 NB IES	Bulk-8 IES NB	N/A	N/A	-L-	0-3.25	A-2-4	(0)	100	86	74	17.9	26	57	5	12	N.P.	N.P.	N.P.	12.3
24+55 NB OES	Bulk-1 OES NB	N/A	N/A	-L-	0-3.17	A-2-4	(0)	99	82	63	27.0	36	39	5	20	24	16	8	15.0
60+65 NB OES	Bulk-2 OES NB	N/A	N/A	-L-	0-2.67	A-1-a	(1)	35	22	16	9.9	54	20	16	10	N.P.	N.P.	N.P.	7.9
167+25 NB OES	Bulk-3 OES NB	N/A	N/A	-L-	0-3.58	A-2-4	(0)	98	69	50	14.0	49	39	3	9	N.P.	N.P.	N.P.	13.0
274+05 NB OES	Bulk-4 OES NB	N/A	N/A	-L-	0-2.5	A-2-4	(0)	100	87	73	25.6	27	49	9	15	19	16	3	15.2
378+15 NB OES	Bulk-5 OES NB	N/A	N/A	-L-	1.5-2.5	A-2-6	(0)	99	65	48	27.8	51	23	4	22	32	17	15	13.5

SUMMARY OF LABORATOTY TEST DATA

Soil Classification and Gradation

S&ME, Inc. Raleigh, 3201 Spring Forest Road, Raleigh, North Carolina 27616

S&ME Project #:	210986			Date Report	12/30/2019
State Project No.:	47533.1.2	County:	Robeson	Date Tested	12/6 - 12/30/19
Federal ID No.:		TIP No.:	I-5987A		
Project Name:	I-95 from North of NC 211 to South of NC 20				
Client Name:	NCDOT	Client Address:	Raleigh, NC		

Station No.	Sample No.	Boring No.	Offset	Alignment	Sample Depth (ft)	AASHTO Classification		Total % Passing Sieve #				Total Mortar Fraction (%)				LL	PL	PI	Moist. %
								10	40	60	200	Coarse Sand	Fine Sand	Silt	Clay				
483+75 NB OES	Bulk-6 OES NB	N/A	N/A	-L-	1.0-2.5	A-2-4	(0)	99	69	51	27.0	49	26	5	20	27	20	7	13.3

References / Comments / Deviations: NP=Non-Plastic

AASHTO T88: Particle Size Analysis of Soils as Modified by the NCDOT

AASHTO T89: Determining the Liquid Limit of Soils

AASHTO T90: Determining the Plastic Limit & Plasticity Index of Soils

AASHTO T265: Laboratory Determination of Moisture Content of Soils

AASHTO M145: The Classification of Soils and Soil Aggregate Mixtures for Highway Construction Purposes

Mal Krajan, ET		104-01-0703	Vlad Mitchev, P.E.	Project Manager
Technician Name:	Signature	Certification #	Technical Responsibility:	Position

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SUMMARY OF LABORATOTY TEST DATA

Soil Classification and Gradation

S&ME, Inc. Raleigh, 3201 Spring Forest Road, Raleigh, North Carolina 27616

S&ME Project #:	210986			Date Report	1/3-7/2020
State Project No.:	47533.1.2	County:	Robeson	Date Tested	12/16/19-1/7/20
Federal ID No.:		TIP No.:	I-5987A		
Project Name:	I-95 from North of NC 211 to South of NC 20				
Client Name:	NCDOT	Client Address:	Raleigh, NC		

Station No.	Sample No.	Boring No.	Offset	Alignment	Sample Depth (ft)	AASHTO Classification		Total % Passing Sieve #				Total Mortar Fraction (%)				LL	PL	PI	Organic	Moist. %
								10	40	60	200	Coarse Sand	Fine Sand	Silt	Clay					
114+40 SB IES	Bulk 10	BULK-10 SB IES	NI	-L-	0-3.75	A-2-6	(1)	100	82	66	35.4	34	33	12	21	26	13	13	NI	18.4
167+10 SB OES	Bulk 10	BULK-10 SB OES	NI	-L-	0-3.92	A-2-6	(0)	100	89	73	35.0	27	41	10	23	23	11	12	NI	16.6
486+65 SB OES	Bulk 7	BULK-7 SB OES	NI	-L-	0-4.0	A-2-4	(0)	99	61	43	25.2	57	20	5	18	24	15	19	NI	13.9
378+15 SB OES	Bulk 8	BULK-8 SB OES	NI	-L-	0-3.92	A-2-6	(1)	99	70	53	34.9	46	21	10	23	27	13	14	NI	15.0
219+80 SB IES	Bulk 9	BULK-9 SB IES	NI	-L-	0-4.0	A-6	(2)	100	83	69	41.6	31	31	12	26	25	11	14	NI	15.5
272+65 SB OES	Bulk 9	BULK-9 SB OES	NI	-L-	0-3.42	A-6	(4)	100	92	81	48.9	19	35	15	31	29	12	17	NI	13.9
482+45 SB OSS	S-157	SB-28 OSS	NI	-L-	0-3.0	A-2-6	(0)	96	63	47	29.9	51	20	8	21	28	17	11	NI	13.4
454+50 SB OSS	S-158	SB-29 OSS	NI	-L-	0-3.0	A-2-4	(0)	99	67	50	30.1	50	23	9	19	24	15	9	NI	10.0
429+40 SB OSL	S-159	SB-30 OSL	NI	-L-	ABC-LYR	A-1-a	(1)	46	24	15	6.5	68	19	6	7	NP	NP	NP	NI	11.9
429+40 SB OSL	S-160	SB-30 OSL	NI	-L-	0-3.0	A-2-6	(1)	99	69	52	34.0	47	21	9	23	34	18	16	NI	12.9
402+25 SB OSS	S-161	SB-31 OSS	NI	-L-	0-3.0	A-2-6	(1)	99	71	54	33.3	45	24	11	20	29	14	15	NI	12.2
376+30 SB OSL	S-162	SB-32 OSL	NI	-L-	0-2.0	A-2-4	(0)	99	71	54	32.4	46	25	12	18	24	14	10	NI	9.2
349+80 SB OSS	S-163	SB-33 OSS	NI	-L-	0-3.0	A-2-4	(0)	100	92	77	27.5	23	51	6	20	NP	NP	NP	NI	12.0
323+00 SB OSL	S-164	SB-34 OSL	NI	-L-	0-3.0	A-2-4	(0)	100	91	78	30.8	22	50	12	16	16	7	9	NI	8.8
298+25 SB OSS	S-165	SB-35 OSS	NI	-L-	0-3.0	A-2-4	(0)	99	65	50	25.9	50	26	8	16	18	13	5	NI	8.8
277+70 SB OSS	S-166	SB-36 OSS	NI	-L-	0-3.0	A-2-4	(0)	100	93	78	33.1	22	45	19	14	14	12	2	NI	11.4
277+70 SB OSS	S-167	SB-36 OSS	NI	-L-	3.0-5.0	A-4	(0)	100	91	78	38.7	22	41	16	20	16	12	4	NI	14.8
277+70 SB DECEL	S-168	SB-36 DECEL	NI	-L-	0-3.0	A-2-6	(0)	100	91	80	33.4	20	49	9	22	25	14	11	NI	13.3
247+70 SB OSS	S-169	SB-38 OSS	NI	-L-	0-2.5	A-2-6	(0)	100	74	54	28.5	46	29	11	15	28	12	16	NI	10.1
196+30 SB OSS	S-170	SB-40 OSS	NI	-L-	0-2.5	A-2-6	(0)	100	88	74	27.2	26	48	6	20	32	19	13	NI	15.1
180+35 SB OSL	S-171	SB-41 OSL	NI	-L-	0-3.0	A-2-4	(0)	99	85	66	27.6	34	40	6	20	23	16	7	NI	13.4
143+50 SB OSS	S-172	SB-42 OSS	NI	-L-	0-3.0	A-2-4	(0)	99	79	54	26.5	45	30	7	18	19	14	5	NI	11.0
114+40 SB OSS	S-173	SB-43 OSS	NI	-L-	0-3.0	A-2-4	(0)	100	89	67	26.6	33	42	5	20	24	16	8	NI	12.5
84+65 SB OSS	S-174	SB-44 OSS	NI	-L-	0-3.0	A-6	(5)	99	95	88	56.3	11	38	24	27	27	11	16	NI	19.3

SUMMARY OF LABORATOTY TEST DATA

Soil Classification and Gradation

S&ME, Inc. Raleigh, 3201 Spring Forest Road, Raleigh, North Carolina 27616

S&ME Project #:	210986			Date Report	1/3-7/2020
State Project No.:	47533.1.2	County:	Robeson	Date Tested	12/16/19-1/7/20
Federal ID No.:		TIP No.:	I-5987A		
Project Name:	I-95 from North of NC 211 to South of NC 20				
Client Name:	NCDOT	Client Address:	Raleigh, NC		

Station No.	Sample No.	Boring No.	Offset	Alignment	Sample Depth (ft)	AASHTO Classification	Total % Passing Sieve #				Total Mortar Fraction (%)				LL	PL	PI	Organic	Moist. %
							10	40	60	200	Coarse Sand	Fine Sand	Silt	Clay					
62+35 SB OSS	S-175	SB-45 OSS	NI	-L-	0-3.0	A-6 (1)	100	91	78	40.6	22	42	15	22	25	13	12	NI	16.7
35+90 SB OSS	S-176	SB-46 OSS	NI	-L-	0-2.5	A-4 (0)	100	92	78	38.9	22	42	12	24	28	20	8	NI	13.6
35+90 SB OSS	S-177	SB-46 OSS	NI	-L-	2.5-5.0	A-7-6 (7)	100	92	77	44.2	23	34	6	37	46	18	28	NI	21.9
14+50 SB OSL	S-178	SB-48 OSL	NI	-L-	0-3.0	A-2-4 (0)	100	91	77	28.4	23	54	15	9	NP	NP	NP	NI	6.1
376+30 SB ISS	S-208	SB-32 ISS	NI	-L-	0-3.0	A-2-4 (0)	99	71	54	28.6	46	29	11	15	21	13	8	NI	10.5
323+00 SB ISS	S-209	SB-34 ISS	NI	-L-	0-3.0	A-2-4 (0)	98	88	78	35.4	21	47	16	16	17	13	4	NI	8.9
277+70 SB ISS	S-210	SB-36 ISS	NI	-L-	0-3.0	A-2-6 (0)	100	89	77	31.4	23	48	9	20	29	14	15	NI	12.9
227+05 SB ISL	S-211	SB-38 ISL	NI	-L-	0-3.0	A-2-6 (0)	100	70	53	28.5	48	27	10	16	24	12	12	NI	11.0
88+65 SB ISL	S-212	SB-44 ISL	NI	-L-	1.5-30	A-2-6 (2)	100	79	55	33.3	45	23	8	24	40	15	25	NI	13.2
482+45 SB ISS	S-221	SB-28 ISS	NI	-L-	0-2.5	A-2-6 (0)	93	61	45	27.0	52	22	4	22	28	16	12	NI	10.8
454+50 SB ISS	S-222	SB-29 ISS	NI	-L-	0-3.0	A-2-6 (0)	97	66	49	28.2	50	24	8	18	22	11	11	NI	9.8
429+40 SB ISS	S-223	SB-30 ISS	NI	-L-	0-3.0	A-2-6 (0)	99	71	53	33.4	47	22	7	24	32	19	13	NI	13.3
402+25 SB ISS	S-224	SB-31 ISS	NI	-L-	0-3.0	A-2-6 (0)	99	70	53	31.9	47	24	9	21	28	13	15	NI	11.8
217+50 SB ISS	S-231	SB-39 ISS	NI	-L-	1.5-3.0	A-2-4 (0)	98	71	52	24.5	47	31	6	16	17	13	4	NI	10.5
196+30 SB ISS	S-232	SB-40 ISS	NI	-L-	0-1.5	A-2-4 (0)	97	63	46	20.3	53	28	5	14	18	13	5	NI	9.8
196+30 SB ISL	S-233	SB-40 ISL	NI	-L-	1.5-3.0	A-2-6 (0)	97	79	64	26.9	34	40	8	18	24	13	11	NI	13.1
168+65 SB ISS	S-234	SB-41 ISS	NI	-L-	0-1.5	A-2-4 (0)	95	52	35	16.2	63	22	5	11	NP	NP	NP	NI	9.2
142+50 SB ISS	S-235	SB-42 ISS	NI	-L-	0-1.5	A-2-4 (0)	99	68	50	26.9	49	26	9	16	22	16	6	NI	10.9
142+50 SB ISL	S-236	SB-42 ISL	NI	-L-	1.5-3	A-2-4 (0)	99	62	44	23.3	55	23	7	14	23	16	7	NI	9.8
114+40 SB ISS	S-237	SB-43 ISS	NI	-L-	0-1.5	A-2-4 (0)	98	79	60	27.1	38	36	10	16	18	13	5	NI	10.7
62+35 SB ISS	S-238	SB-45 ISS	NI	-L-	0-1.5	A-2-4 (0)	98	58	40	22.5	59	20	5	17	23	14	9	NI	15.3
35+90 SB ISL	S-239	SB-46 ISL	NI	-L-	0-1.5	A-2-4 (0)	100	85	68	33.6	32	37	13	18	19	14	5	NI	13.9

SUMMARY OF LABORATOTY TEST DATA

Soil Classification and Gradation

S&ME, Inc. Raleigh, 3201 Spring Forest Road, Raleigh, North Carolina 27616

S&ME Project #:	210986			Date Report	1/3-7/2020
State Project No.:	47533.1.2	County:	Robeson	Date Tested	12/16/19-1/7/20
Federal ID No.:		TIP No.:	I-5987A		
Project Name:	I-95 from North of NC 211 to South of NC 20				
Client Name:	NCDOT	Client Address:	Raleigh, NC		

Station No.	Sample No.	Boring No.	Offset	Alignment	Sample Depth (ft)	AASHTO Classification		Total % Passing Sieve #				Total Mortar Fraction (%)				LL	PL	PI	Organic	Moist. %
								10	40	60	200	Coarse Sand	Fine Sand	Silt	Clay					

References / Comments / Deviations: ND=Not Detemined.

AASHTO T88: Particle Size Analysis of Soils as Modified by the NCDOT

AASHTO T89: Determining the Liquid Limit of Soils

AASHTO T90: Determining the Plastic Limit & Plasticity Index of Soils

AASHTO T265: Laboratory Determination of Moisture Content of Soils

AASHTO M145: The Classification of Soils and Soil Aggregate Mixtures for Highway Construction Purposes

Technician Name: _____ Signature Certification # Technical Responsibility: Project Manager Position

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Form No. TR-D698-2
Revision No. : 1
Revision Date: 07/25/17

MOISTURE - DENSITY REPORT

Quality Assurance

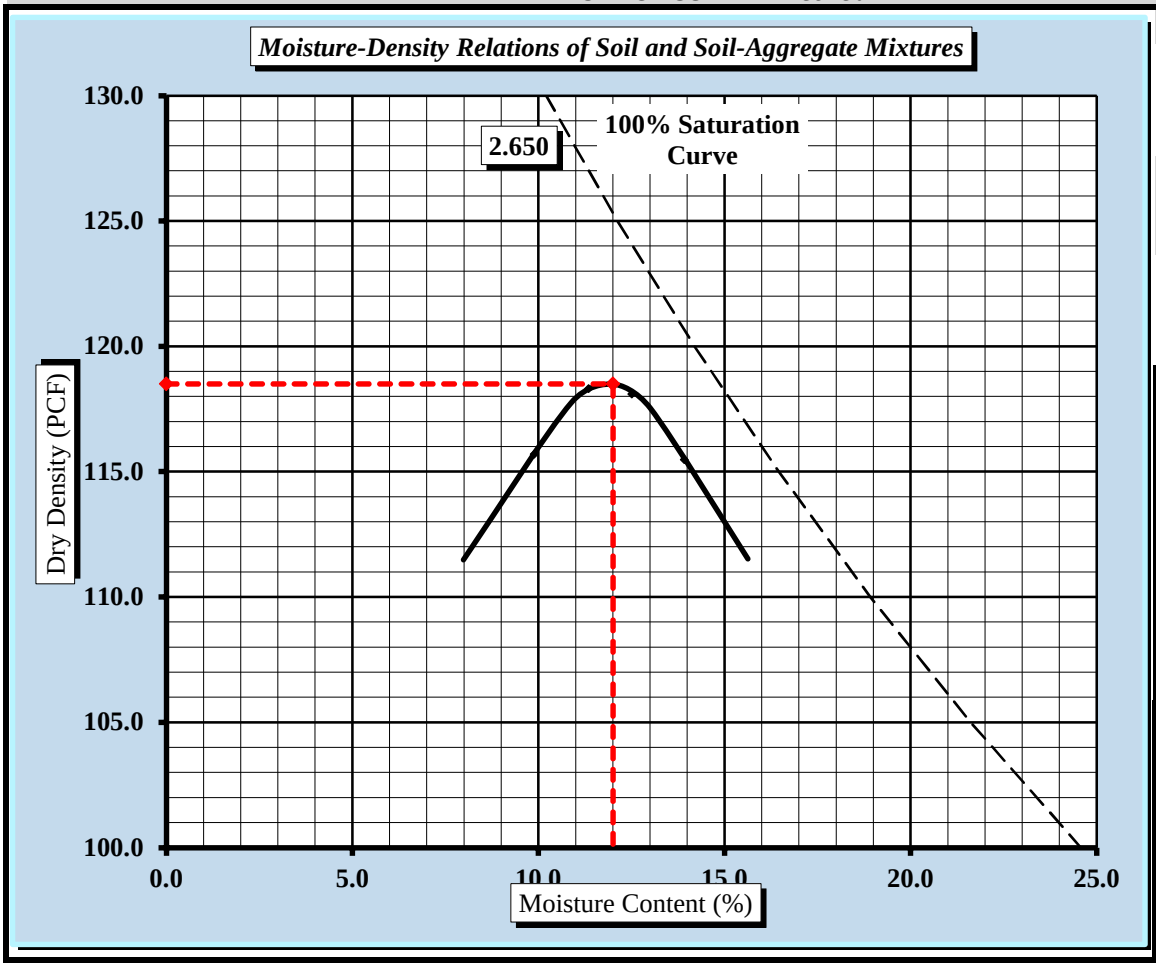
S&ME, Inc. Raleigh: 3201 Spring Forest Road, Raleigh, NC 27616

S&ME Project #:	210986	Report Date:	1/19/20
Project Name:	I-95 from North of NC 211 to South of NC 20	Test Date(s):	1/17 - 1/19/20
Client Name:	NCDOT		
Client Address:			

Boring #:	N/A	Sample #:	Bulk 4 OES NB	Sample Date:	1/15/2020
Location:	-L- 274+05 NB OES	Offset:	N/A	Depth (ft):	N/A
Sample Description:	Gray Silty Clayey Coarse to Fine SAND (A-2-4) (0)				

Maximum Dry Density 118.5 PCF. Optimum Moisture Content 12.0%

AASHTO T99 - - Method A



Soil Properties	
Natural Moisture Content	15.2%
Assumed Specific Gravity	2.650
Liquid Limit	19
Plastic Limit	16
Plastic Index	3
% Passing	
3/4"	100.0%
3/8"	100.0%
#4	100.0%
#10	100.0%
#40	87.0%
#60	73.0%
#200	25.6%

Oversize Fraction
Bulk Gravity
% Moisture
% Oversize
MDD
Opt. MC

Moisture-Density Curve Displayed: Fine Fraction ☒ Corrected for Oversize Fraction (ASTM D 4718) ☐

Sieve Size used to separate the Oversize Fraction: #4 Sieve ☒ 3/8 inch Sieve ☐ 3/4 inch Sieve ☐

Mechanical Rammer ☐ Manual Rammer ☒ Moist Preparation ☐ Dry Preparation ☒

References / Comments / Deviations:

AASHTO T265: Laboratory Determination of Moisture Content of Soils

AASHTO T 99: Moisture-Density Relations of Soil Using a 5.5 Lb. Rammer and a 12" Drop

Mal Krajan, ET		Laboratory Manager	1/20/2020
Technical Responsibility	*Signature*	*Position*	*Date*

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MOISTURE - DENSITY REPORT

Quality Assurance

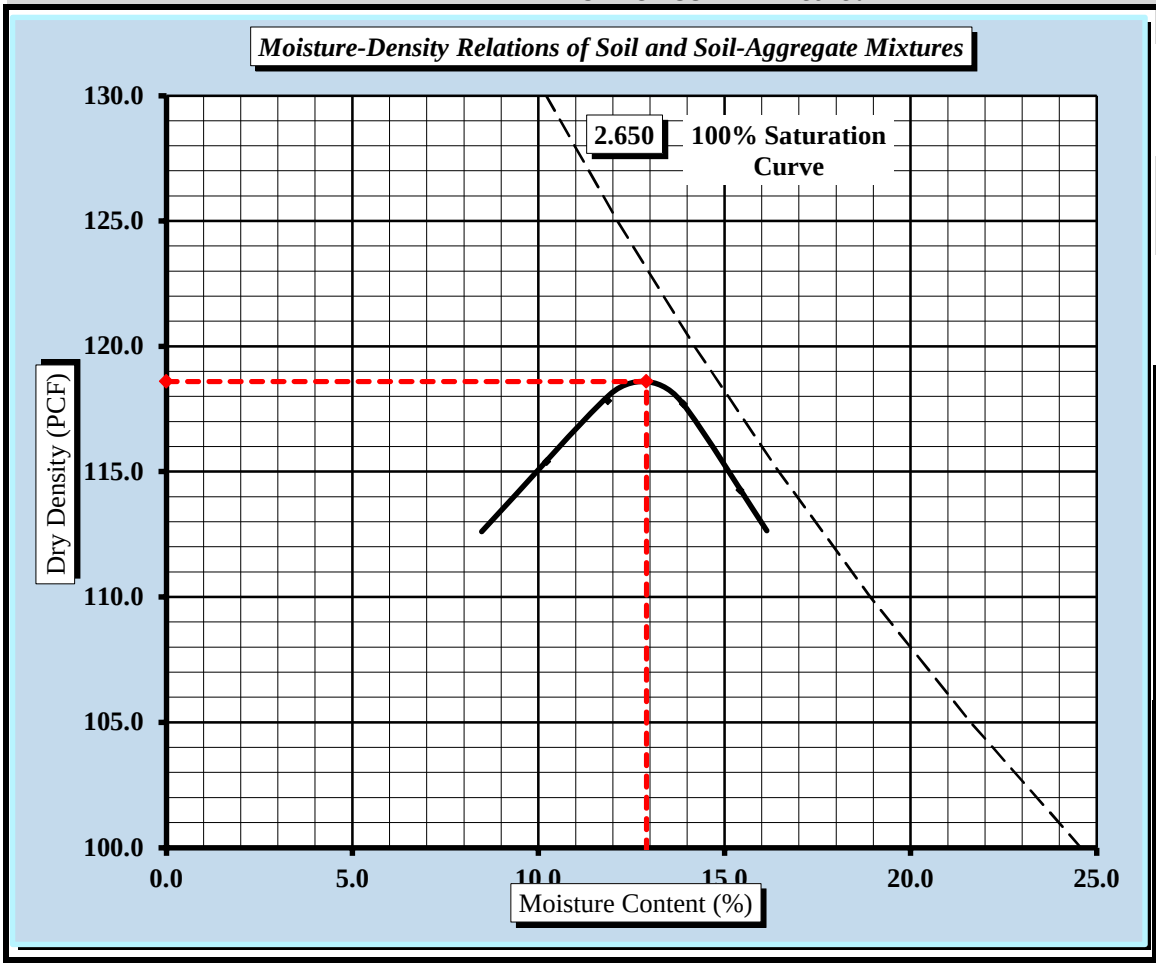
S&ME, Inc. Raleigh: 3201 Spring Forest Road, Raleigh, NC 27616

S&ME Project #:	210986	Report Date:	1/14/2020
Project Name:	I-95 from North of NC 211 to South of NC 20	Test Date(s):	1/10 - 1/14/20
Client Name:	NCDOT		
Client Address:			

Boring #:	N/A	Sample #:	Bulk 8 IES NB	Sample Date:	N/A
Location:	-L- 324+50 NB IES	Offset:	N/A	Depth (ft):	N/A
Sample Description:	Tan Silty Clayey Coarse to Fine SAND (A-2-4) (0)				

Maximum Dry Density 118.6 PCF. Optimum Moisture Content 12.9%

AASHTO T99 - - Method A



Soil Properties	
Natural Moisture Content	12.3%
Assumed Specific Gravity	2.650
Liquid Limit	N.P.
Plastic Limit	N.P.
Plastic Index	N.P.

% Passing	
3/4"	100.0%
3/8"	100.0%
#4	100.0%
#10	100.0%
#40	86.0%
#60	74.0%
#200	17.9%

Oversize Fraction
Bulk Gravity
% Moisture
% Oversize
MDD
Opt. MC

Moisture-Density Curve Displayed: Fine Fraction ☒ Corrected for Oversize Fraction (ASTM D 4718) ☐

Sieve Size used to separate the Oversize Fraction: #4 Sieve ☒ 3/8 inch Sieve ☐ 3/4 inch Sieve ☐

Mechanical Rammer ☐ Manual Rammer ☒ Moist Preparation ☐ Dry Preparation ☒

References / Comments / Deviations:

AASHTO T265: Laboratory Determination of Moisture Content of Soils

AASHTO T 99: Moisture-Density Relations of Soil Using a 5.5 Lb. Rammer and a 12" Drop

Mal Krajan, ET		Laboratory Manager	1/14/2020
Technical Responsibility	*Signature*	*Position*	*Date*

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MOISTURE - DENSITY REPORT

Quality Assurance

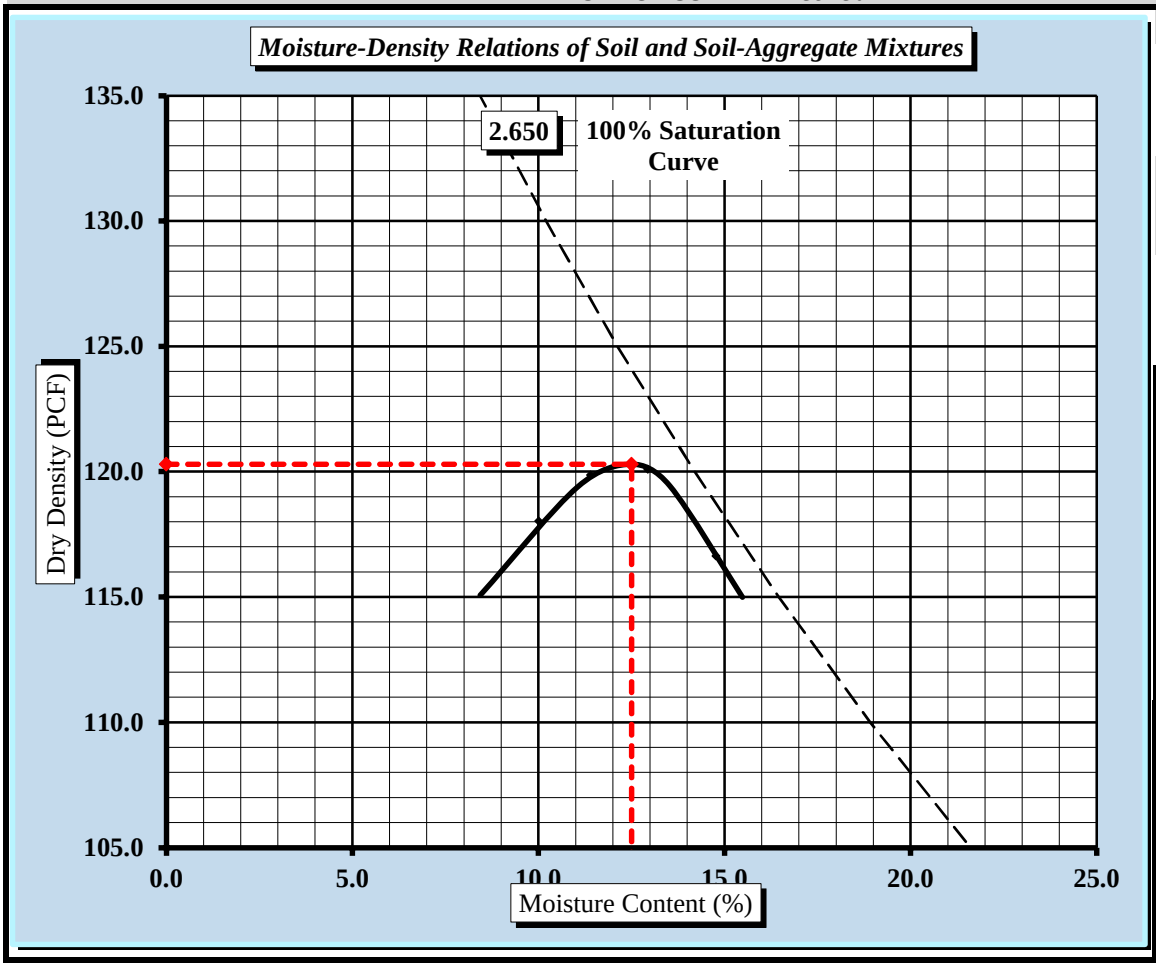
S&ME, Inc. Raleigh: 3201 Spring Forest Road, Raleigh, NC 27616

S&ME Project #:	210986	Report Date:	1/19/20
Project Name:	I-95 from North of NC 211 to South of NC 20	Test Date(s):	1/17 - 1/19/20
Client Name:	NCDOT		
Client Address:			

Boring #:	N/A	Sample #:	Bulk 5 OES NB	Sample Date:	1/15/2020
Location:	-L- 378+15 NB OES	Offset:	N/A	Depth (ft):	1.5-2.5
Sample Description:	Tan-Brown Silty Clayey Fine to Coarse SAND (A-2-6) (0)				

Maximum Dry Density 120.3 PCF. Optimum Moisture Content 12.5%

AASHTO T99 - - Method A



Soil Properties	
Natural Moisture Content	13.5%
Assumed Specific Gravity	2.650
Liquid Limit	32
Plastic Limit	17
Plastic Index	15
% Passing	
3/4"	100.0%
3/8"	100.0%
#4	100.0%
#10	99.0%
#40	65.0%
#60	48.0%
#200	27.8%
Oversize Fraction	
Bulk Gravity	
% Moisture	
% Oversize	
MDD	
Opt. MC	

Moisture-Density Curve Displayed: Fine Fraction ☒ Corrected for Oversize Fraction (ASTM D 4718) ☐

Sieve Size used to separate the Oversize Fraction: #4 Sieve ☒ 3/8 inch Sieve ☐ 3/4 inch Sieve ☐

Mechanical Rammer ☐ Manual Rammer ☒ Moist Preparation ☐ Dry Preparation ☒

References / Comments / Deviations:

AASHTO T265: Laboratory Determination of Moisture Content of Soils

AASHTO T 99: Moisture-Density Relations of Soil Using a 5.5 Lb. Rammer and a 12" Drop

Mal Krajan, ET		Laboratory Manager	1/20/2020
Technical Responsibility	*Signature*	*Position*	*Date*

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MOISTURE - DENSITY REPORT

Quality Assurance

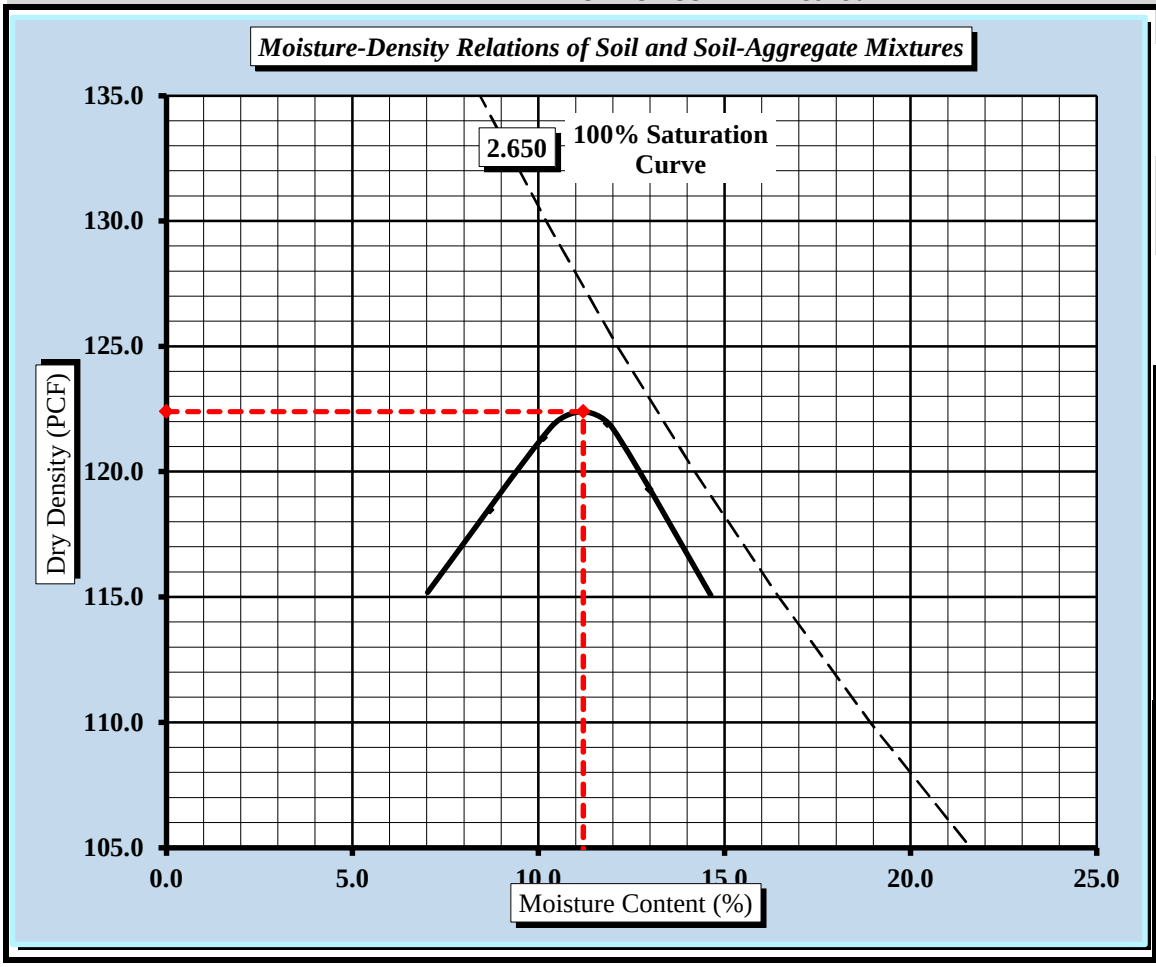
S&ME, Inc. Raleigh: 3201 Spring Forest Road, Raleigh, NC 27616

S&ME Project #:	210986	Report Date:	1/14/2020
Project Name:	I-95 from North of NC 211 to South of NC 20	Test Date(s):	1/10/20 - 1/14/20
Client Name:	NCDOT		
Client Address:			

Boring #:	N/A	Sample #:	Bulk 7 IES NB	Sample Date:	N/A
Location:	-L- 430+35 NB IES	Offset:	N/A	Depth (ft):	N/A
Sample Description:	Tan-Brown Silty Clayey Fine to Coarse SAND (A-2-6) (0)				

Maximum Dry Density 122.4 PCF. Optimum Moisture Content 11.2%

AASHTO T99 - - Method A



Soil Properties	
Natural Moisture Content	14.7%
Assumed Specific Gravity	2.650
Liquid Limit	34
Plastic Limit	20
Plastic Index	14
% Passing	
3/4"	100.0%
3/8"	100.0%
#4	100.0%
#10	99.0%
#40	67.0%
#60	52.0%
#200	32.6%
Oversize Fraction	
Bulk Gravity	
% Moisture	
% Oversize	
MDD	
Opt. MC	

Moisture-Density Curve Displayed: Fine Fraction ☒ Corrected for Oversize Fraction (ASTM D 4718) ☐

Sieve Size used to separate the Oversize Fraction: #4 Sieve ☒ 3/8 inch Sieve ☐ 3/4 inch Sieve ☐

Mechanical Rammer ☐ Manual Rammer ☒ Moist Preparation ☐ Dry Preparation ☒

References / Comments / Deviations:

AASHTO T265: Laboratory Determination of Moisture Content of Soils

AASHTO T 99: Moisture-Density Relations of Soil Using a 5.5 Lb. Rammer and a 12" Drop

Mal Krajan, ET		Laboratory Manager	1/14/2020
Technical Responsibility	*Signature*	*Position*	*Date*

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Revision Date: 07/25/17

MOISTURE - DENSITY REPORT

Quality Assurance

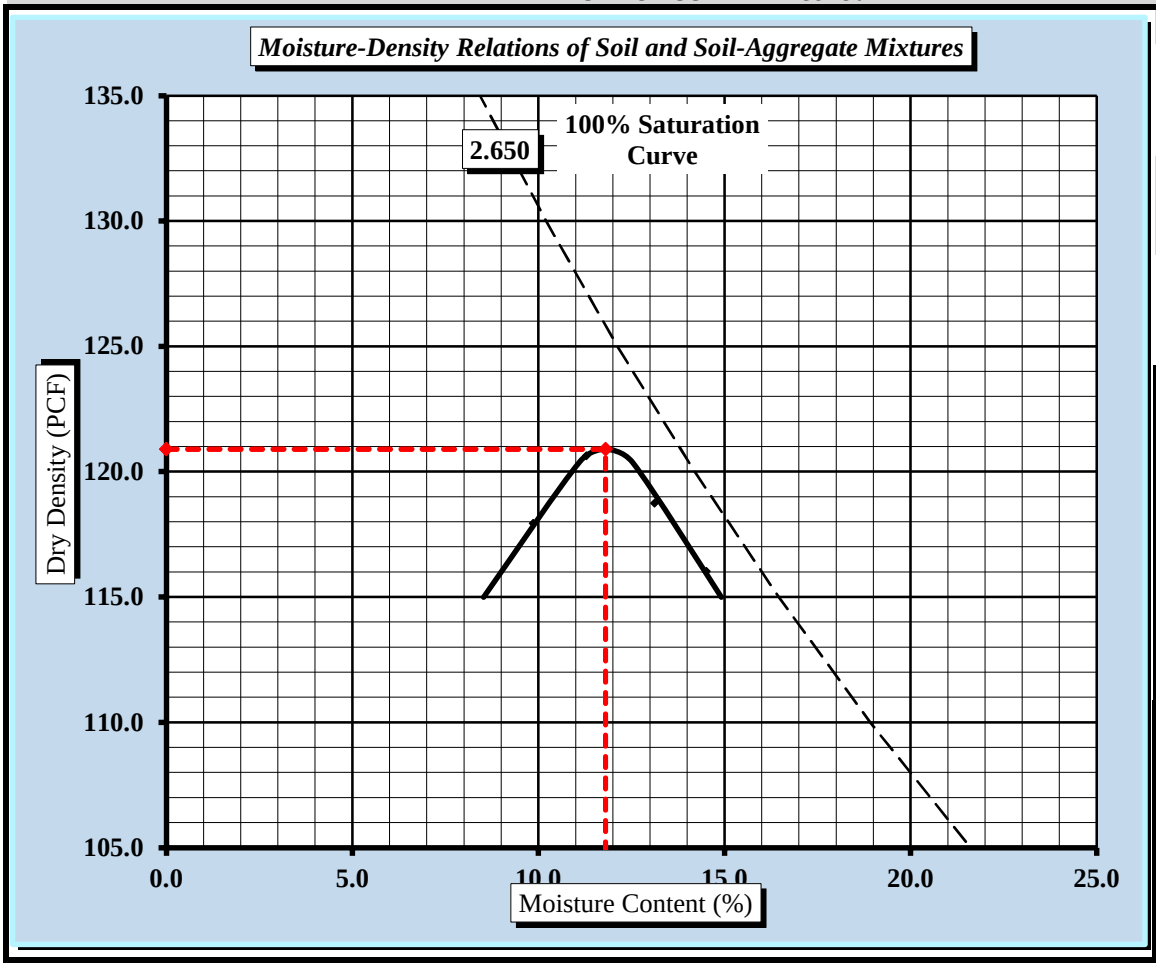
S&ME, Inc. Raleigh: 3201 Spring Forest Road, Raleigh, NC 27616

S&ME Project #:	210986	Report Date:	1/19/20
Project Name:	I-95 from North of NC 211 to South of NC 20	Test Date(s):	1/17 - 1/19/20
Client Name:	NCDOT		
Client Address:			

Boring #:	N/A	Sample #:	Bulk 6 OES NB	Sample Date:	1/15/2020
Location:	-L- 483+75 NB OES	Offset:	N/A	Depth (ft):	1.0-2.5
Sample Description:	Brown Silty Clayey Fine to Coarse SAND (A-2-4) (0)				

Maximum Dry Density 120.9 PCF. Optimum Moisture Content 11.8%

AASHTO T99 - - Method A



Soil Properties	
Natural Moisture Content	13.3%
Assumed Specific Gravity	2.650
Liquid Limit	27
Plastic Limit	20
Plastic Index	7
% Passing	
3/4"	100.0%
3/8"	100.0%
#4	100.0%
#10	99.0%
#40	69.0%
#60	51.0%
#200	27.0%
Oversize Fraction	
Bulk Gravity	
% Moisture	
% Oversize	
MDD	
Opt. MC	

Moisture-Density Curve Displayed: Fine Fraction ☒ Corrected for Oversize Fraction (ASTM D 4718) ☐

Sieve Size used to separate the Oversize Fraction: #4 Sieve ☒ 3/8 inch Sieve ☐ 3/4 inch Sieve ☐

Mechanical Rammer ☐ Manual Rammer ☒ Moist Preparation ☐ Dry Preparation ☒

References / Comments / Deviations:

AASHTO T265: Laboratory Determination of Moisture Content of Soils

AASHTO T 99: Moisture-Density Relations of Soil Using a 5.5 Lb. Rammer and a 12" Drop

Mal Krajan, ET		Laboratory Manager	1/20/2020
Technical Responsibility	*Signature*	*Position*	*Date*

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Form No. TR-D698-2
Revision No. : 1
Revision Date: 07/25/17

MOISTURE - DENSITY REPORT

Quality Assurance

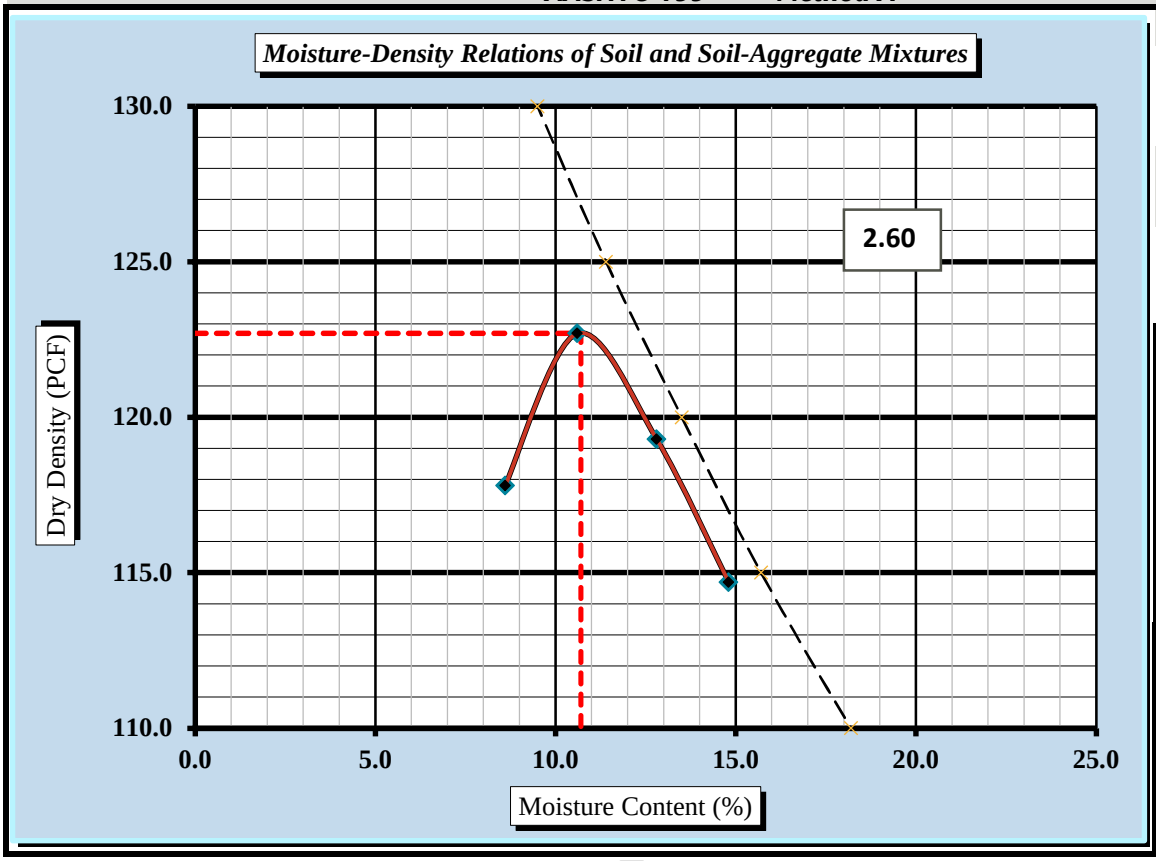
S&ME, Inc. Charlotte: 9751 Southern Pine Boulevard, Charlotte, NC 28273

S&ME Project #:	210986	Report Date:	1/20/20
Project Name:	I-95 from North of NC 211 to South of NC 20	Test Date(s):	1/10-15/20
Client Name:	NCDOT		
Client Address:	Raleigh, NC		

Boring #:	NI	Sample #:	BULK 10 IES SB	Sample Date:	12/15/2019
Location:	-L- 114+40 SB IES	Offset:	NI	Depth:	45"
Sample Description:					A-2-6(1)

Maximum Dry Density **122.7** **PCF.** **Optimum Moisture Content** **10.7%**

AASHTO T99 - - Method A



Soil Properties	
Natural Moisture Content	18.4%
Specific Gravity of Soil	ND
Liquid Limit	26
Plastic Limit	13
Plastic Index	13
% Passing	
#4	100.0%
#10	100.0%
#20	96.0%
#40	82.0%
#60	66.0%
#100	48.0%
#200	35.4%
#270	33.3%
Oversize Fraction	

Moisture-Density Curve Displayed: Fine Fraction ☒ Corrected for Oversize Fraction (ASTM D 4718) ☐

Sieve Size used to separate the Oversize Fraction: #4 Sieve ☒ 3/8 inch Sieve ☐ 3/4 inch Sieve ☐

Mechanical Rammer ☒ Manual Rammer ☐ Moist Preparation ☐ Dry Preparation ☒

References / Comments / Deviations: ND: Not Determined NI: No Information Provided

AASHTO T 99: Moisture-Density Relations of Soil Using a 5.5 Lb. Rammer and a 12" Drop

Vlad Mitchev		Project Manager	
Technical Responsibility	*Signature*	*Position*	*Date*

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Form No. TR-D698-2
Revision No. : 1
Revision Date: 07/25/17

MOISTURE - DENSITY REPORT

Quality Assurance

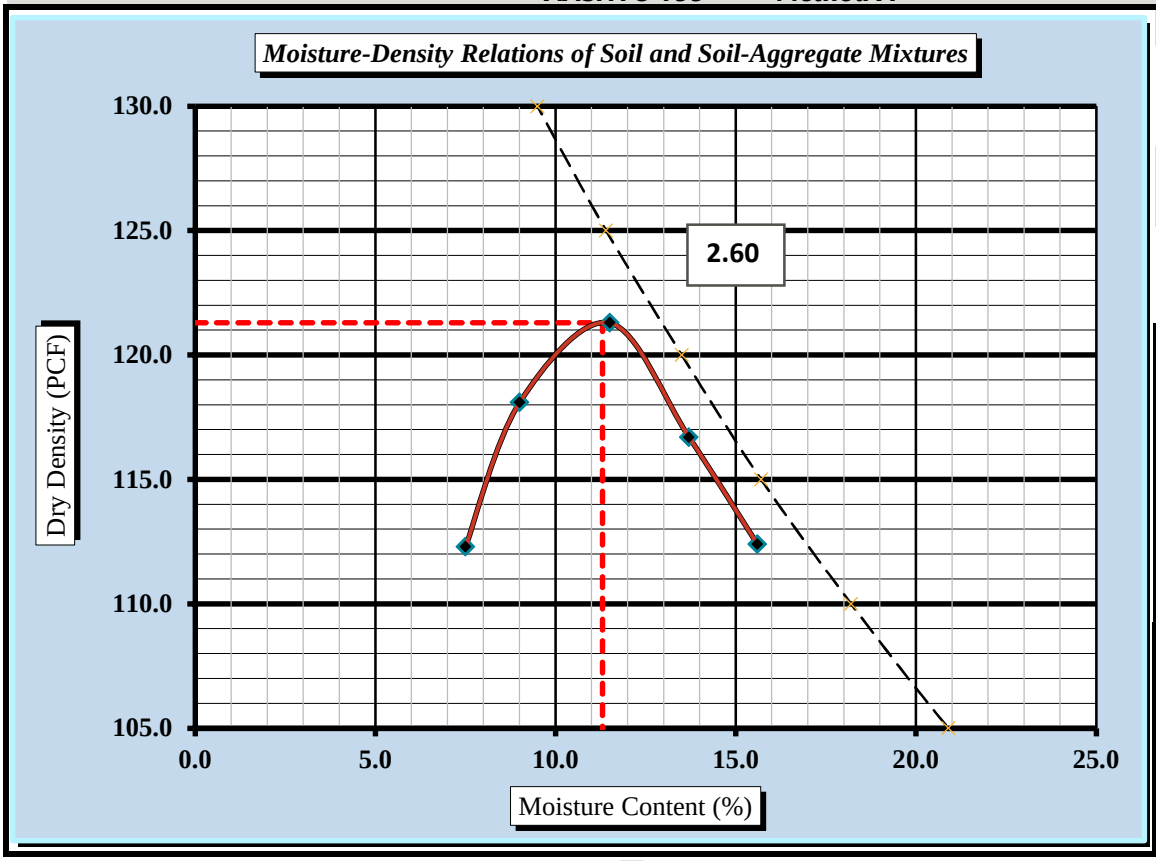
S&ME, Inc. Charlotte: 9751 Southern Pine Boulevard, Charlotte, NC 28273

S&ME Project #:	210986	Report Date:	1/20/20
Project Name:	I-95 from North of NC 211 to South of NC 20	Test Date(s):	1/13-17/20
Client Name:	NCDOT		
Client Address:	Raleigh, NC		

Boring #:	NI	Sample #:	BULK 10 OES SB	Sample Date:	12/12/2019
Location:	-L- 167+10 SB OES	Offset:	NI	Depth:	0-47"
Sample Description:	A-2-6 (0)				

Maximum Dry Density **121.3** **PCF.** **Optimum Moisture Content** **11.3%**

AASHTO T99 - - Method A



Soil Properties	
Natural Moisture Content	16.6%
Specific Gravity of Soil	ND
Liquid Limit	23
Plastic Limit	11
Plastic Index	12
% Passing	
#4	100.0%
#10	100.0%
#20	98.0%
#40	89.0%
#60	73.0%
#100	51.0%
#200	35.0%
#270	32.2%
Oversize Fraction	

Moisture-Density Curve Displayed: Fine Fraction ☒ Corrected for Oversize Fraction (ASTM D 4718) ☐

Sieve Size used to separate the Oversize Fraction: #4 Sieve ☒ 3/8 inch Sieve ☐ 3/4 inch Sieve ☐

Mechanical Rammer ☒ Manual Rammer ☐ Moist Preparation ☐ Dry Preparation ☒

References / Comments / Deviations: ND: Not Determined NI: No Information Provided

AASHTO T 99: Moisture-Density Relations of Soil Using a 5.5 Lb. Rammer and a 12" Drop

Vlad Mitchev		Project Manager	
Technical Responsibility	*Signature*	*Position*	*Date*

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Revision No. : 1
Revision Date: 07/25/17

MOISTURE - DENSITY REPORT

Quality Assurance

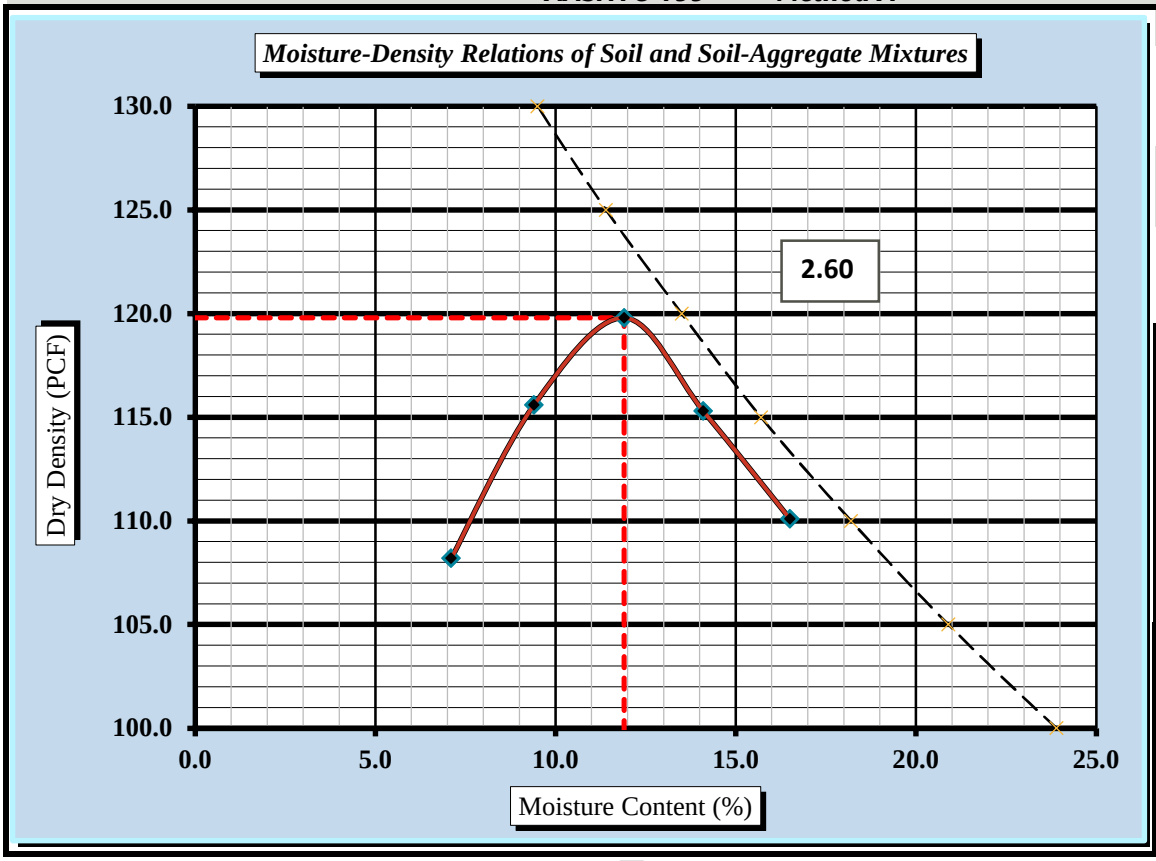
S&ME, Inc. Charlotte: 9751 Southern Pine Boulevard, Charlotte, NC 28273

S&ME Project #:	210986	Report Date:	1/15/20
Project Name:	I-95 from North of NC 211 to South of NC 20	Test Date(s):	1/10-15/20
Client Name:	NCDOT		
Client Address:	Raleigh, NC		

Boring #:	NI	Sample #:	BULK 9 IES SB	Sample Date:	12/15/2019
Location:	-L- 219+80 SB IES	Offset:	NI	Depth:	48"
Sample Description:					A-6 (2)

Maximum Dry Density **119.8** **PCF.** **Optimum Moisture Content** **11.9%**

AASHTO T99 - - Method A



Soil Properties	
Natural Moisture Content	15.5%
Specific Gravity of Soil	ND
Liquid Limit	25
Plastic Limit	11
Plastic Index	14
% Passing	
#4	100.0%
#10	100.0%
#20	95.0%
#40	83.0%
#60	69.0%
#100	55.0%
#200	41.6%
#270	37.8%
Oversize Fraction	

Moisture-Density Curve Displayed: Fine Fraction ☒ Corrected for Oversize Fraction (ASTM D 4718) ☐

Sieve Size used to separate the Oversize Fraction: #4 Sieve ☒ 3/8 inch Sieve ☐ 3/4 inch Sieve ☐

Mechanical Rammer ☒ Manual Rammer ☐ Moist Preparation ☐ Dry Preparation ☒

References / Comments / Deviations: ND: Not Determined NI: No Information Provided

AASHTO T 99: Moisture-Density Relations of Soil Using a 5.5 Lb. Rammer and a 12" Drop

Vlad Mitchev		Project Manager	
Technical Responsibility	*Signature*	*Position*	*Date*

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MOISTURE - DENSITY REPORT

Quality Assurance

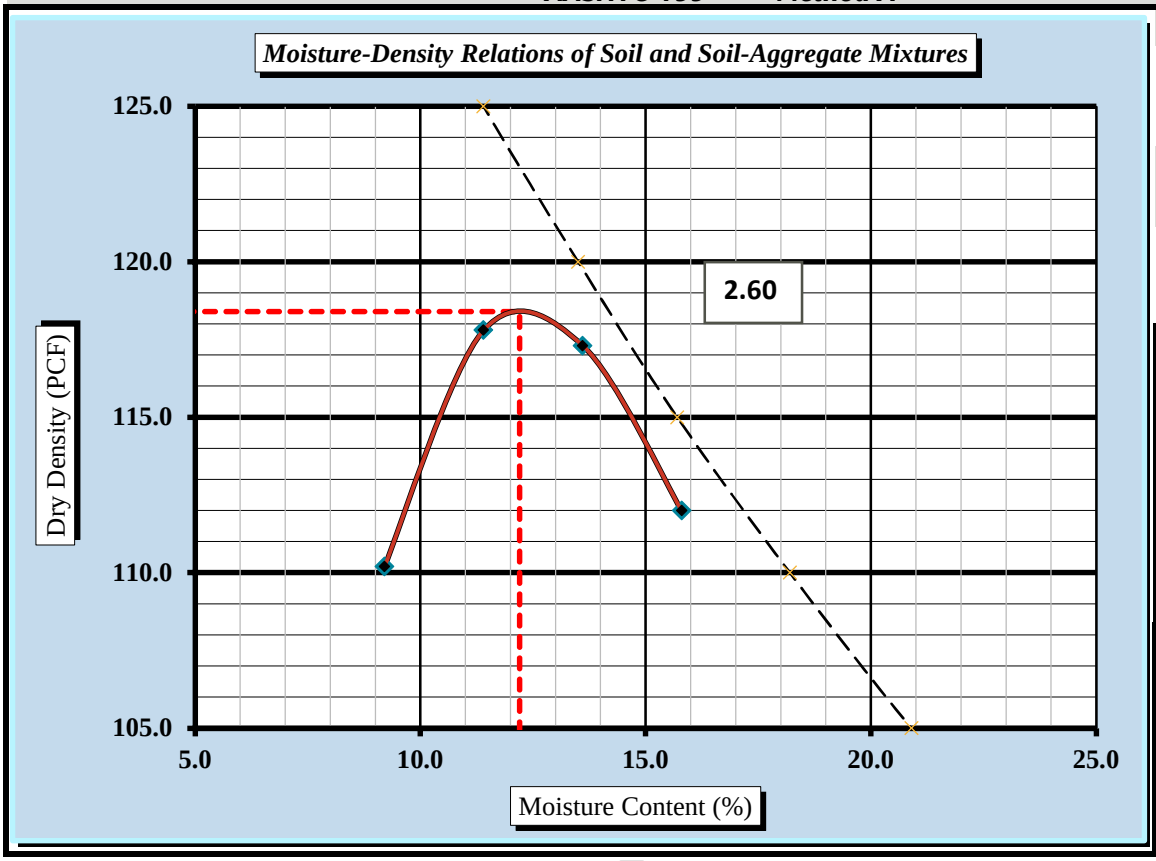
S&ME, Inc. Charlotte: 9751 Southern Pine Boulevard, Charlotte, NC 28273

S&ME Project #:	210986	Report Date:	1/20/20
Project Name:	I-95 from North of NC 211 to South of NC 20	Test Date(s):	1/13-20/20
Client Name:	NCDOT		
Client Address:	Raleigh, NC		

Boring #:	NI	Sample #:	BULK 9 OES SB	Sample Date:	12/18/2019
Location:	-L- 272+65 SB OES	Offset:	NI	Depth:	0-41
Sample Description:	A-6 (4)				

Maximum Dry Density **118.4** **PCF.** **Optimum Moisture Content** **12.2%**

AASHTO T99 - - Method A



Soil Properties	
Natural Moisture Content	13.9%
Specific Gravity of Soil	ND
Liquid Limit	29
Plastic Limit	12
Plastic Index	17
% Passing	
#4	100.0%
#10	100.0%
#20	98.0%
#40	92.0%
#60	81.0%
#100	64.0%
#200	48.9%
#270	46.2%
Oversize Fraction	

Moisture-Density Curve Displayed: Fine Fraction ☒ Corrected for Oversize Fraction (ASTM D 4718) ☐

Sieve Size used to separate the Oversize Fraction: #4 Sieve ☒ 3/8 inch Sieve ☐ 3/4 inch Sieve ☐

Mechanical Rammer ☒ Manual Rammer ☐ Moist Preparation ☐ Dry Preparation ☒

References / Comments / Deviations: ND: Not Determined NI: No Information Provided

AASHTO T 99: Moisture-Density Relations of Soil Using a 5.5 Lb. Rammer and a 12" Drop

Vlad Mitchev		Project Manager	
Technical Responsibility	*Signature*	*Position*	*Date*

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MOISTURE - DENSITY REPORT

Quality Assurance

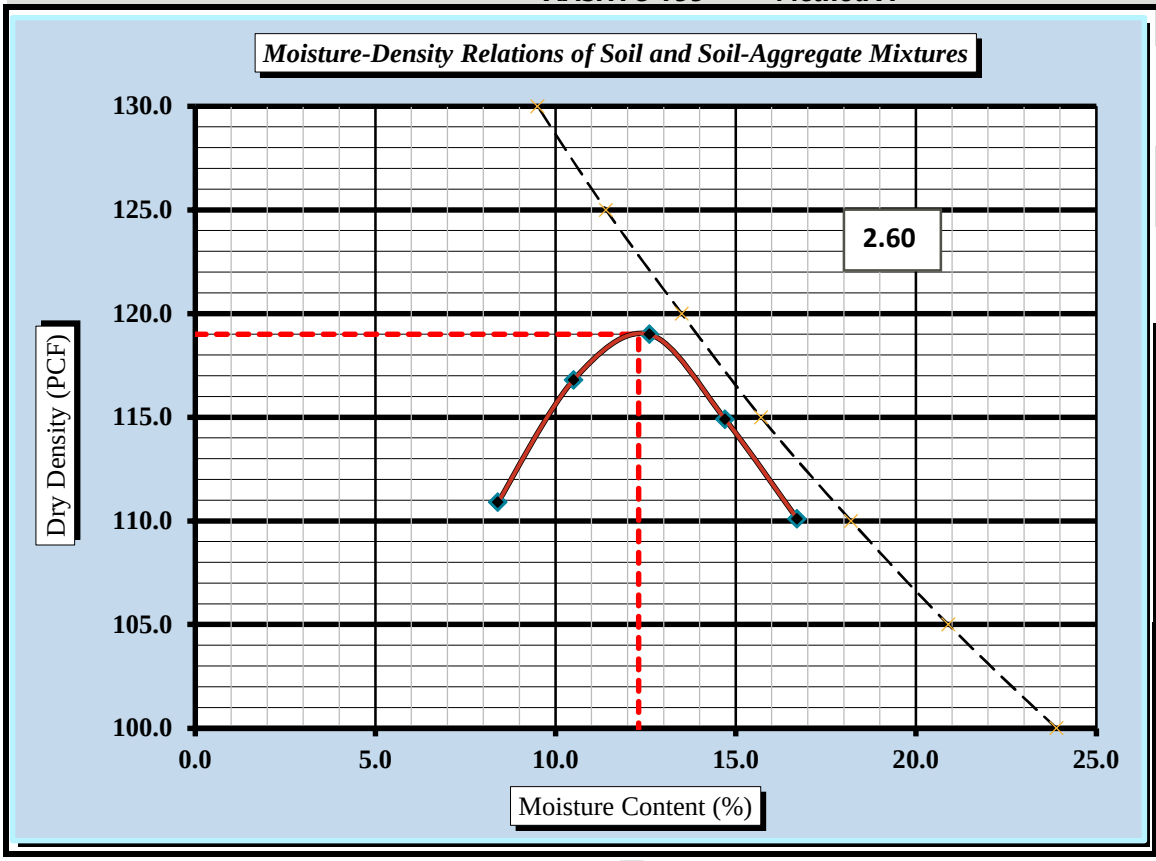
S&ME, Inc. Charlotte: 9751 Southern Pine Boulevard, Charlotte, NC 28273

S&ME Project #:	210986	Report Date:	1/20/20
Project Name:	I-95 from North of NC 211 to South of NC 20	Test Date(s):	1/13-20/20
Client Name:	NCDOT		
Client Address:	Raleigh, NC		

Boring #:	NI	Sample #:	BULK 8 OES SB	Sample Date:	12/18/2019
Location:	-L- 378+15 SB OES	Offset:	NI	Depth:	0-47"
Sample Description:	A-2-6 (1)				

Maximum Dry Density **119.0** **PCF.** **Optimum Moisture Content** **12.3%**

AASHTO T99 - - Method A



Soil Properties	
Natural Moisture Content	15.0%
Specific Gravity of Soil	ND
Liquid Limit	27
Plastic Limit	13
Plastic Index	14
% Passing	
#4	100.0%
#10	99.0%
#20	90.0%
#40	70.0%
#60	53.0%
#100	43.0%
#200	34.9%
#270	32.2%
Oversize Fraction	

Moisture-Density Curve Displayed: Fine Fraction ☒ Corrected for Oversize Fraction (ASTM D 4718) ☐

Sieve Size used to separate the Oversize Fraction: #4 Sieve ☒ 3/8 inch Sieve ☐ 3/4 inch Sieve ☐

Mechanical Rammer ☒ Manual Rammer ☐ Moist Preparation ☐ Dry Preparation ☒

References / Comments / Deviations: ND: Not Determined NI: No Information Provided

AASHTO T 99: Moisture-Density Relations of Soil Using a 5.5 Lb. Rammer and a 12" Drop

Vlad Mitchev		Project Manager	
Technical Responsibility	*Signature*	*Position*	*Date*

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Revision Date: 07/25/17

MOISTURE - DENSITY REPORT

Quality Assurance

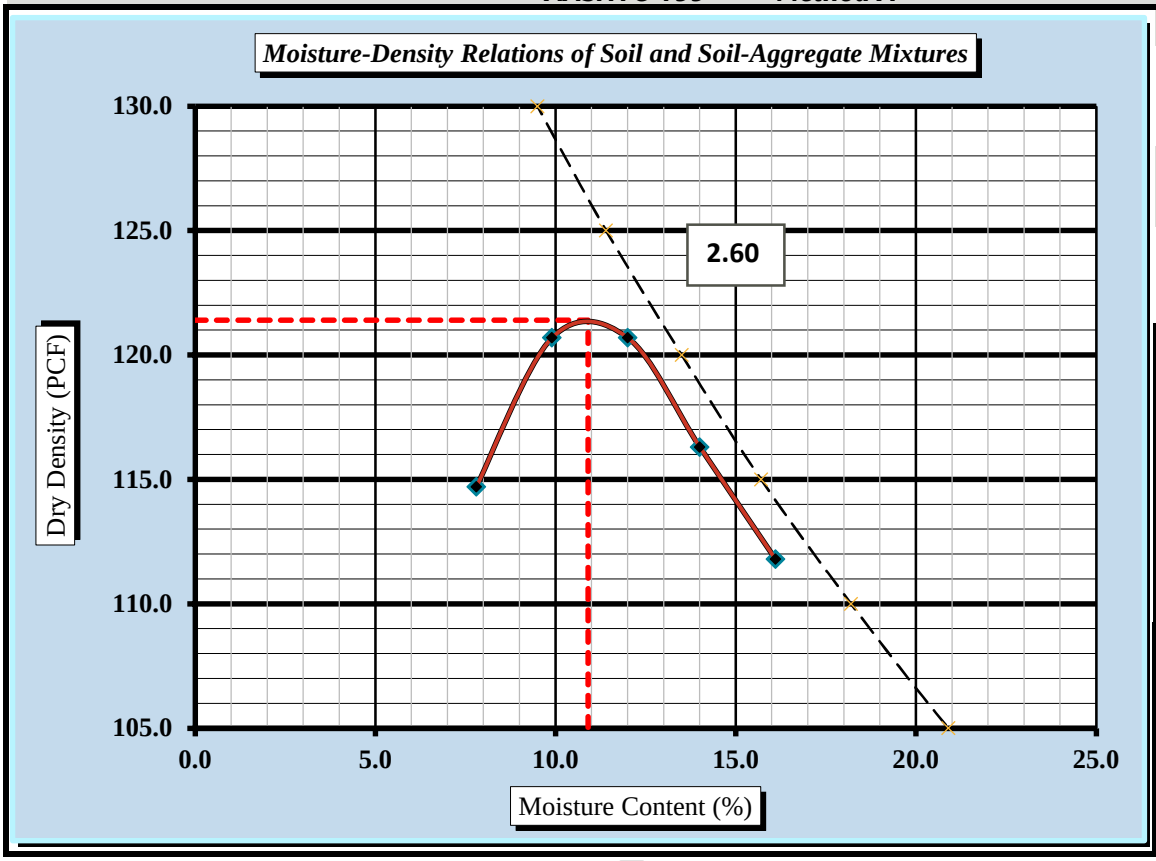
S&ME, Inc. Charlotte: 9751 Southern Pine Boulevard, Charlotte, NC 28273

S&ME Project #:	210986	Report Date:	1/15/20
Project Name:	I-95 from North of NC 211 to South of NC 20	Test Date(s):	1/10-15/20
Client Name:	NCDOT		
Client Address:	Raleigh, NC		

Boring #:	NI	Sample #:	BULK 7 OES SB	Sample Date:	12/15/2019
Location:	-L- 486+65 SB OES	Offset:	NI	Depth:	0-48"
Sample Description:	A-2-4 (0)				

Maximum Dry Density **121.3** **PCF.** **Optimum Moisture Content** **10.9%**

AASHTO T99 - - Method A



Soil Properties	
Natural Moisture Content	13.9%
Specific Gravity of Soil	ND
Liquid Limit	24
Plastic Limit	15
Plastic Index	9
% Passing	
#4	100.0%
#10	99.0%
#20	86.0%
#40	61.0%
#60	43.0%
#100	32.0%
#200	25.2%
#270	23.4%
Oversize Fraction	

Moisture-Density Curve Displayed: Fine Fraction ☒ Corrected for Oversize Fraction (ASTM D 4718) ☐

Sieve Size used to separate the Oversize Fraction: #4 Sieve ☒ 3/8 inch Sieve ☐ 3/4 inch Sieve ☐

Mechanical Rammer ☒ Manual Rammer ☐ Moist Preparation ☐ Dry Preparation ☒

References / Comments / Deviations: ND: Not Determined NI: No Information Provided

AASHTO T 99: Moisture-Density Relations of Soil Using a 5.5 Lb. Rammer and a 12" Drop

Vlad Mitchev		Project Manager	
Technical Responsibility	*Signature*	*Position*	*Date*

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Form No. TR-D1883-T193-3
Revision No. 2
Revision Date: 08/11/17

CBR (CALIFORNIA BEARING RATIO) OF LABORATORY COMPACTED SOIL

AASHTO T 193

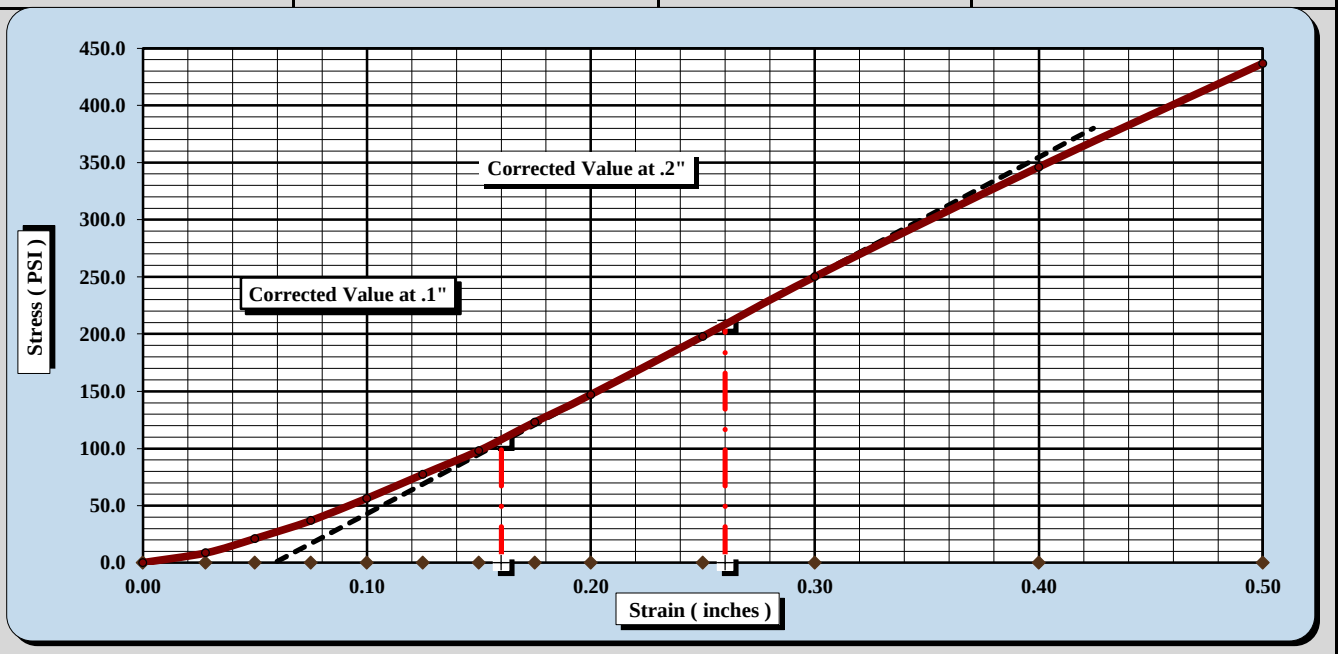
S&ME, Inc. Raleigh: 3201 Spring Forest Road, Raleigh, NC 27616

Project #:	210986	Report Date:	1/25/2020
Project Name:	I-95 from North of NC 211 to South of NC 20	Test Date(s)	1/19 - 1/25/2020
Client Name:	NCDOT		
Client Address:			
Boring #:	N/A	Sample #: Bulk 4 OES NB	Sample Date: 1/15/20
Location:	-L- 274+05 NB OES	Offset: N/A	Depth (ft): N/A
Sample Description:	Gray Silty Clayey Coarse to Fine SAND (A-2-4) (0)		

AASHTO T99 *Method A* Maximum Dry Density: 118.5 PCF Optimum Moisture Content: 12.0%

Compaction Test performed on grading complying with CBR spec. % Retained on the 3/4" sieve: 0.0%

Uncorrected CBR Values		Corrected CBR Values	
CBR at 0.1 in. 5.6	CBR at 0.2 in. 9.8	CBR at 0.1 in. 10.9	CBR at 0.2 in. 14.1



CBR Sample Preparation:

The entire gradation was used and compacted in a 6" CBR mold in accordance with AASHTO T 193, Section 5.1.1

Before Soaking		*After Soaking*	
Compactive Effort (Blows per Layer)	56	Final Dry Density (PCF)	118.4
Initial Dry Density (PCF)	118.2	Average Final Moisture Content	12.3%
Moisture Content of the Compacted Specimen	12.0%	Moisture Content (top 1" after soaking)	13.3%
Percent Compaction	99.7%	Percent Swell	0.0%

Soak Time: 96 hrs. Surcharge Weight 10.0 Surcharge Wt. per sq. Ft. 50.9

Liquid Limit 19 Plastic Index 3

Notes/Deviations/References:

Test specimen compacted to 100% at optimum moisture.

Mal Krajan, ET		Laboratory Manager	1/25/2020
Technical Responsibility	*Signature*	*Position*	*Date*

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Revision No. 2
Revision Date: 08/11/17

CBR (CALIFORNIA BEARING RATIO) OF LABORATORY COMPACTED SOIL

AASHTO T 193

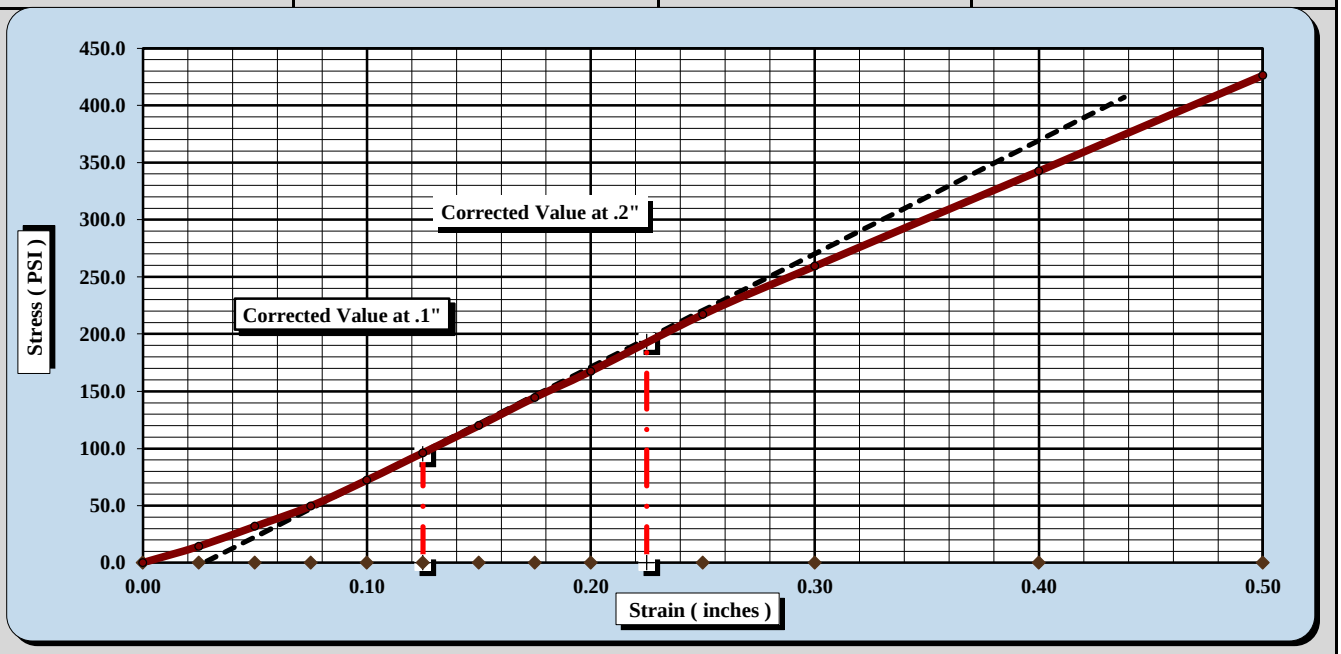
S&ME, Inc. Raleigh: 3201 Spring Forest Road, Raleigh, NC 27616

Project #:	210986	Report Date:	1/21/2020
Project Name:	I-95 from North of NC 211 to South of NC 20	Test Date(s)	1/15 - 1/21/20
Client Name:	NCDOT		
Client Address:			
Boring #:	N/A	Sample #: Bulk 8 IES NB	Sample Date: N/A
Location:	-L- 324+50 NB IES	Offset: N/A	Depth (ft): N/A
Sample Description:	Tan Silty Clayey Coarse to Fine SAND (A-2-4) (0)		

Maximum Dry Density: 118.6 PCF — Optimum Moisture Content: 12.9%

Compaction Test performed on grading complying with CBR spec. — % Retained on the 3/4" sieve: 0.0%

Uncorrected CBR Values		Corrected CBR Values	
CBR at 0.1 in. 7.2	CBR at 0.2 in. 11.2	CBR at 0.1 in. 9.5	CBR at 0.2 in. 12.9



CBR Sample Preparation:

The entire gradation was used and compacted in a 6" CBR mold in accordance with AASHTO T 193, Section 5.1.1

Before Soaking		*After Soaking*	
Compactive Effort (Blows per Layer)	56	Final Dry Density (PCF)	118.4
Initial Dry Density (PCF)	118.2	Average Final Moisture Content	13.3%
Moisture Content of the Compacted Specimen	13.2%	Moisture Content (top 1" after soaking)	14.0%
Percent Compaction	99.7%	Percent Swell	0.1%

Soak Time: 96 hrs. — Surcharge Weight 10.0 — Surcharge Wt. per sq. Ft. 50.9

Liquid Limit N.P. — Plastic Index N.P.

Notes/Deviations/References:

Test specimen compacted to 100% at optimum moisture.

Mal Krajan, ET		Laboratory Manager	1/21/2020
Technical Responsibility	*Signature*	*Position*	*Date*

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CBR (CALIFORNIA BEARING RATIO) OF LABORATORY COMPACTED SOIL

AASHTO T 193

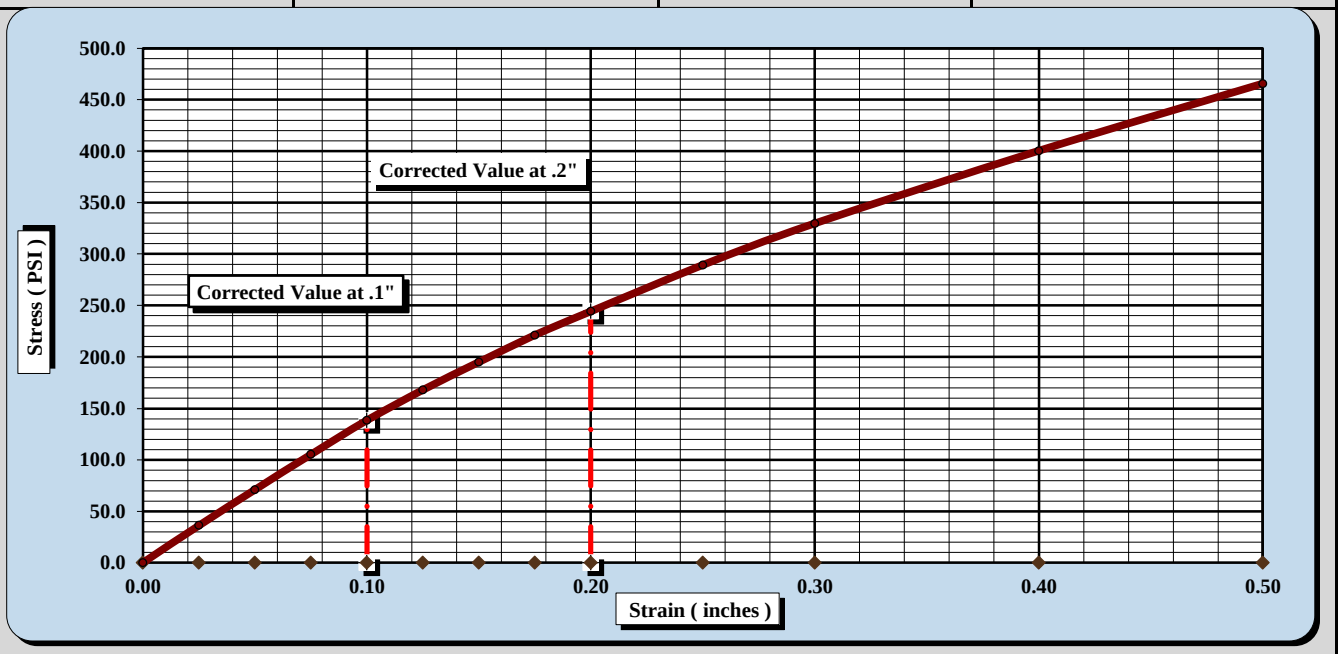
S&ME, Inc. Raleigh: 3201 Spring Forest Road, Raleigh, NC 27616

Project #:	210986	Report Date:	1/25/2020
Project Name:	I-95 from North of NC 211 to South of NC 20	Test Date(s)	1/19 - 1/25/2020
Client Name:	NCDOT		
Client Address:			
Boring #:	N/A	Sample #: Bulk 5 OES NB	Sample Date: 1/15/2020
Location:	-L- 378+15 NB OES	Offset: N/A	Depth (ft): 1.5-2.5
Sample Description:	Tan-Brown Silty Clayey Fine to Coarse SAND (A-2-6) (0)		

AASHTO T99 *Method A* Maximum Dry Density: 120.3 PCF Optimum Moisture Content: 12.5%

Compaction Test performed on grading complying with CBR spec. % Retained on the 3/4" sieve: 0.0%

Uncorrected CBR Values		Corrected CBR Values	
CBR at 0.1 in. 13.8	CBR at 0.2 in. 16.3	CBR at 0.1 in. 13.8	CBR at 0.2 in. 16.3



CBR Sample Preparation:

The entire gradation was used and compacted in a 6" CBR mold in accordance with AASHTO T 193, Section 5.1.1

Before Soaking		*After Soaking*	
Compactive Effort (Blows per Layer)	56	Final Dry Density (PCF)	120.8
Initial Dry Density (PCF)	120.6	Average Final Moisture Content	12.7%
Moisture Content of the Compacted Specimen	12.7%	Moisture Content (top 1" after soaking)	13.1%
Percent Compaction	100.2%	Percent Swell	0.0%

Soak Time:	96 hrs.	Surcharge Weight	10.0	Surcharge Wt. per sq. Ft.	50.9
Liquid Limit	32	Plastic Index	15		

Notes/Deviations/References:

Test specimen compacted to 100% at optimum moisture.

Mal Krajan, ET		Laboratory Manager	1/25/2020
Technical Responsibility	*Signature*	*Position*	*Date*

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CBR (CALIFORNIA BEARING RATIO) OF LABORATORY COMPACTED SOIL

AASHTO T 193

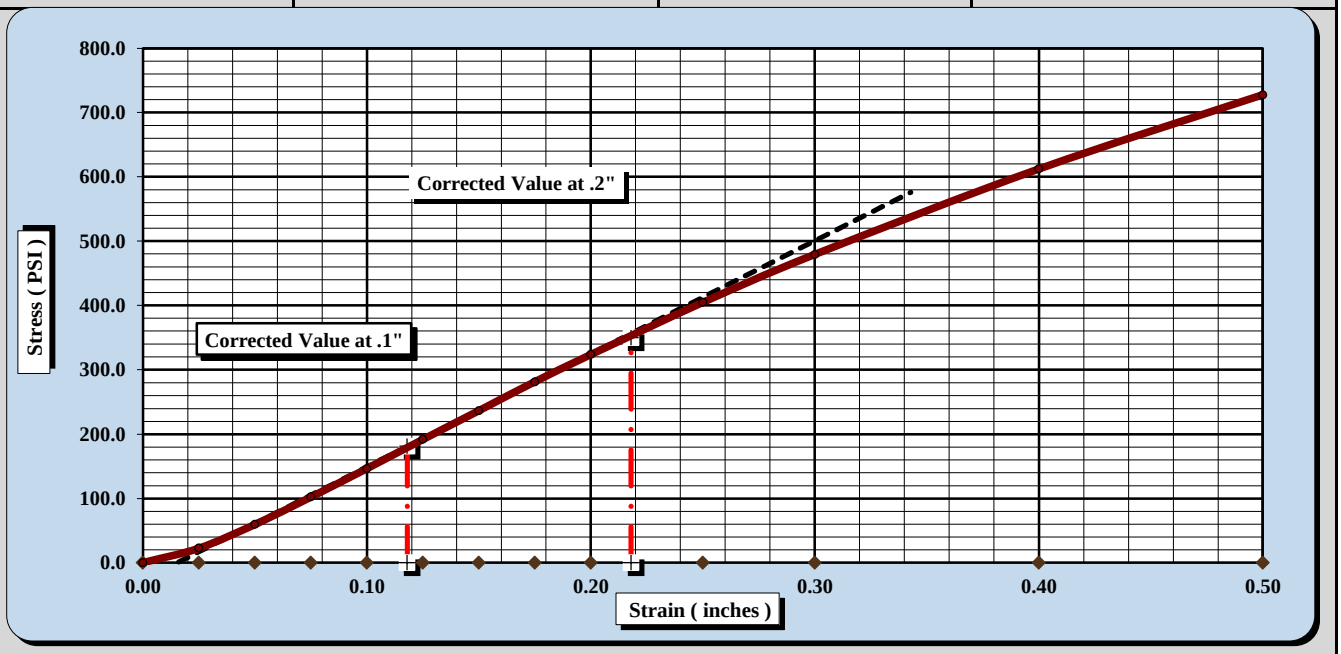
S&ME, Inc. Raleigh: 3201 Spring Forest Road, Raleigh, NC 27616

Project #:	210986	Report Date:	1/21/2020
Project Name:	I-95 from North of NC 211 to South of NC 20	Test Date(s)	1/15 - 1/21/2020
Client Name:	NCDOT		
Client Address:			
Boring #:	N/A	Sample #: Bulk 7 IES NB	Sample Date: N/A
Location:	-L- 430+35 NB IES	Offset: N/A	Depth (ft): N/A
Sample Description:	Tan-Brown Silty Clayey Fine to Coarse SAND (A-2-6) (0)		

AASHTO T99 *Method A* Maximum Dry Density: 122.4 PCF Optimum Moisture Content: 11.2%

Compaction Test performed on grading complying with CBR spec. % Retained on the 3/4" sieve: 0.0%

Uncorrected CBR Values		Corrected CBR Values	
CBR at 0.1 in. 14.6	CBR at 0.2 in. 21.6	CBR at 0.1 in. 18.1	CBR at 0.2 in. 23.3



CBR Sample Preparation:

The entire gradation was used and compacted in a 6" CBR mold in accordance with AASHTO T 193, Section 5.1.1

Before Soaking		*After Soaking*	
Compactive Effort (Blows per Layer)	56	Final Dry Density (PCF)	122.5
Initial Dry Density (PCF)	122.3	Average Final Moisture Content	11.4%
Moisture Content of the Compacted Specimen	11.5%	Moisture Content (top 1" after soaking)	12.0%
Percent Compaction	99.9%	Percent Swell	0.1%

Soak Time: 96 hrs. Surcharge Weight 10.0 Surcharge Wt. per sq. Ft. 50.9

Liquid Limit 34 Plastic Index 14

Notes/Deviations/References:

Test specimen compacted to 100% at optimum moisture.

Mal Krajan, ET		Laboratory Manager	1/21/2020
Technical Responsibility	*Signature*	*Position*	*Date*

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CBR (CALIFORNIA BEARING RATIO) OF LABORATORY COMPACTED SOIL

AASHTO T 193

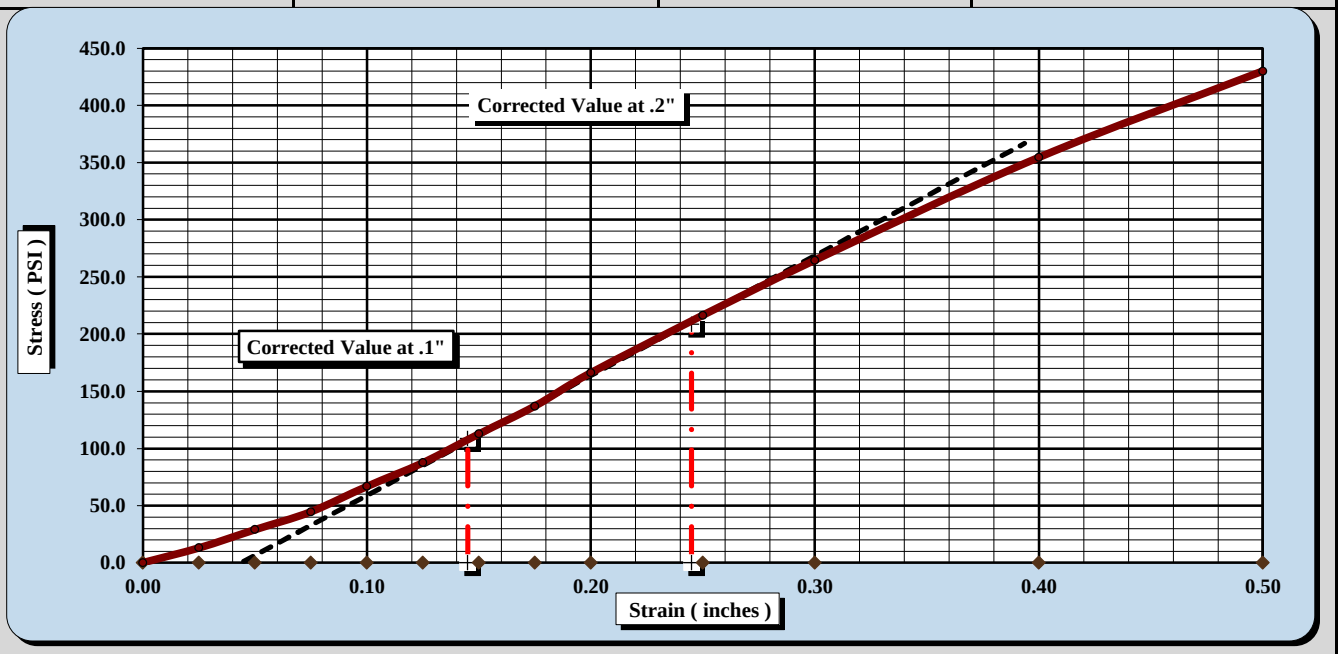
S&ME, Inc. Raleigh: 3201 Spring Forest Road, Raleigh, NC 27616

Project #:	210986	Report Date:	1/25/2020
Project Name:	I-95 from North of NC 211 to South of NC 20	Test Date(s)	1/19 - 1/25/2020
Client Name:	NCDOT		
Client Address:			
Boring #:	N/A	Sample #: Bulk 6 OES NB	Sample Date: 1/15/20
Location:	-L- 483+75 NB OES	Offset: N/A	Depth (ft): 1.0-2.5
Sample Description:	Brown Silty Clayey Fine to Coarse SAND (A-2-4) (0)		

AASHTO T99 *Method A* Maximum Dry Density: 120.9 PCF Optimum Moisture Content: 11.8%

Compaction Test performed on grading complying with CBR spec. % Retained on the 3/4" sieve: 0.0%

Uncorrected CBR Values		Corrected CBR Values	
CBR at 0.1 in. 6.7	CBR at 0.2 in. 11.1	CBR at 0.1 in. 10.9	CBR at 0.2 in. 13.9



CBR Sample Preparation:

The entire gradation was used and compacted in a 6" CBR mold in accordance with AASHTO T 193, Section 5.1.1

Before Soaking		*After Soaking*	
Compactive Effort (Blows per Layer)	56	Final Dry Density (PCF)	121.1
Initial Dry Density (PCF)	121.0	Average Final Moisture Content	12.1%
Moisture Content of the Compacted Specimen	12.1%	Moisture Content (top 1" after soaking)	12.8%
Percent Compaction	100.1%	Percent Swell	0.1%

Soak Time: 96 hrs. Surcharge Weight 10.0 Surcharge Wt. per sq. Ft. 50.9

Liquid Limit 27 Plastic Index 7

Notes/Deviations/References:

Test specimen compacted to 100% at optimum moisture.

Mal Krajan, ET		Laboratory Manager	1/25/2020
Technical Responsibility	*Signature*	*Position*	*Date*

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Form No. TR-D1883-T193-3
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CBR (CALIFORNIA BEARING RATIO) OF LABORATORY COMPACTED SOIL

AASHTO T 193

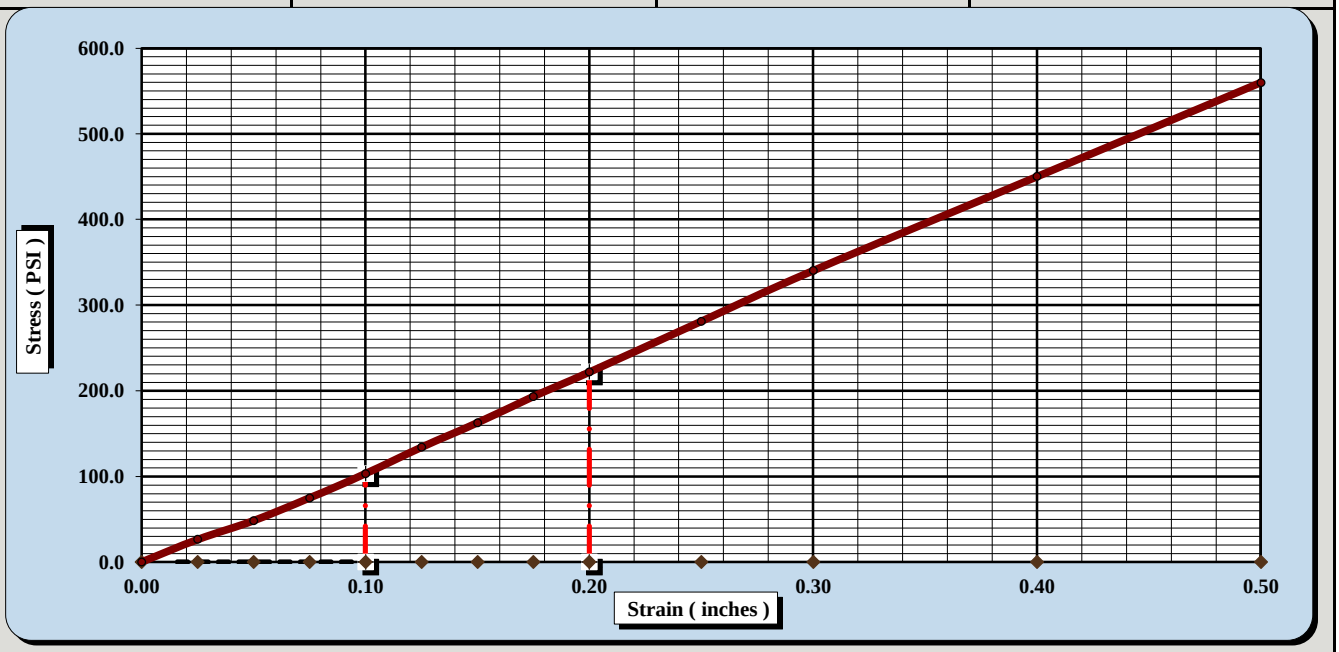
S&ME, Inc. Charlotte: 9751 Southern Pine Boulevard, Charlotte, NC 28273

Project #:	210986	Report Date:	1/20/20
Project Name:	I-95 from North of NC 211 to South of NC 20	Test Date(s)	1/10-20/20
Client Name:	NCDOT		
Client Address:	Raleigh, NC		
Boring #:	NI	Sample #: BULK 10 IES (A)	Sample Date: 12/15/19
Location:	-L- 114+40 SB IES	Offset: NI	Elevation: 0-45"
Sample Description:	A-2-6 (1)		

AASHTO T99 *Method A* Maximum Dry Density: 122.7 PCF Optimum Moisture Content: 10.7%

% Retained on the 3/4" sieve: 0.0%

Uncorrected CBR Values				Corrected CBR Values			
CBR at 0.1 in.	10.3	CBR at 0.2 in.	14.8	CBR at 0.1 in.	10.3	CBR at 0.2 in.	14.8



CBR Sample Preparation:

The entire gradation was used and compacted in a 6" CBR mold in accordance with

Before Soaking		*After Soaking*	
Compactive Effort (Blows per Layer)	56		
Initial Dry Density (PCF)	123.9	Final Dry Density (PCF)	123.6
Moisture Content of the Compacted Specimen	10.7%	Moisture Content (top 1" after soaking)	11.9%
Percent Compaction	101.0%	Percent Swell	0.0%

Soak Time:	96 Hrs.	Surcharge Weight	10.0	Surcharge Wt. per sq. Ft.	50.9
Liquid Limit	26	Plastic Index	13	Assumed Apparent Relative Density	2.600

Notes/Deviations/References:

Test Performed as Modified by NCDOT

Vlad Mitchev — *Technical Responsibility*
_____ — *Signature*
Project Manager — *Position*
_____ — *Date*

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Form No. TR-D1883-T193-3
Revision No. 2
Revision Date: 08/11/17

CBR (CALIFORNIA BEARING RATIO) OF LABORATORY COMPACTED SOIL

AASHTO T 193

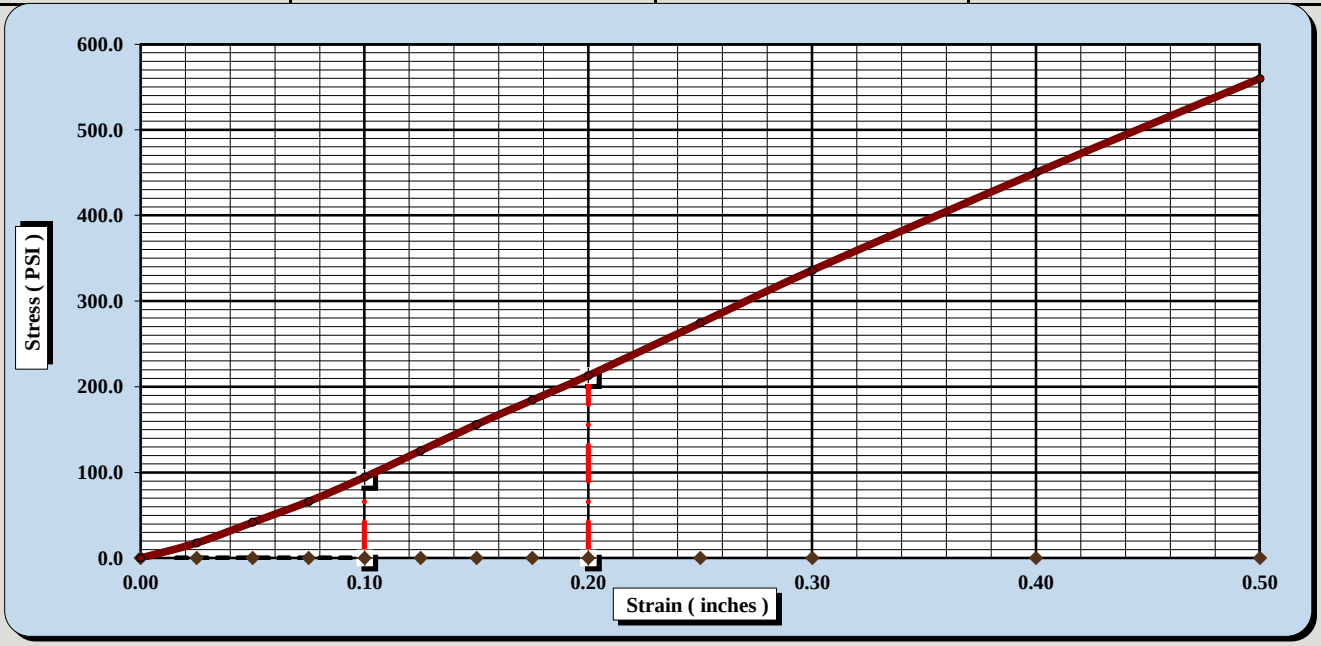
S&ME, Inc. Charlotte: 9751 Southern Pine Boulevard, Charlotte, NC 28273

Project #:	210986	Report Date:	1/20/20
Project Name:	I-95 from North of NC 211 to South of NC 20	Test Date(s)	1/10-20/20
Client Name:	NCDOT		
Client Address:	Raleigh, NC		
Boring #:	NI	Sample #: BULK 10 IES (B)	Sample Date: 12/15/19
Location:	-L- 114+40 SB IES	Offset: NI	Elevation: 0-45"
Sample Description:	A-2-6 (1)		

AASHTO T99 *Method A* Maximum Dry Density: 122.7 PCF Optimum Moisture Content: 10.7%

% Retained on the 3/4" sieve: 0.0%

Uncorrected CBR Values				Corrected CBR Values			
CBR at 0.1 in.	9.4	CBR at 0.2 in.	14.2	CBR at 0.1 in.	9.4	CBR at 0.2 in.	14.2



CBR Sample Preparation:

The entire gradation was used and compacted in a 6" CBR mold in accordance with

Before Soaking		*After Soaking*	
Compactive Effort (Blows per Layer)	56		
Initial Dry Density (PCF)	123.4	Final Dry Density (PCF)	123.4
Moisture Content of the Compacted Specimen	10.8%	Moisture Content (top 1" after soaking)	11.8%
Percent Compaction	100.6%	Percent Swell	0.0%

Soak Time:	96 Hrs.	Surcharge Weight	10.0	Surcharge Wt. per sq. Ft.	50.9
Liquid Limit	26	Plastic Index	13	Assumed Apparent Relative Density	2.600

Notes/Deviations/References:

Test Performed as Modified by NCDOT

Vlad Mitchev — *Technical Responsibility*
_____ — *Signature*
Project Manager — *Position*
_____ — *Date*

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