

REFERENCE: R-5963A

PROJECT: 48599

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

ROADWAY
SUBSURFACE INVESTIGATION

COUNTY CHATHAM

PROJECT DESCRIPTION NEW ROUTE FROM CHATHAM
PARKWAY, US 15/US 501 SOUTH OF PITTSBORO
TO US 64 BUSINESS, CONSTRUCT ROADWAY
ON NEW LOCATION

PAVEMENT AND SUBGRADE INVESTIGATION

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	R-5963A	1	47

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:
- 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.
 - 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.

FIELD PERSONNEL

CG2 EXPLORATION

T. WENNER, P.G.

INVESTIGATED BY CG2, PLLC.

DRAWN BY T. WENNER, P.G.

CHECKED BY M. BREWER, P.E.

SUBMITTED BY CG2, PLLC.

DATE OCTOBER 2024

Prepared in the Office of:



CAROLINAS
GEOTECHNICAL
GROUP

2400 CROWNPOINT EXECUTIVE DRIVE
SUITE 800
CHARLOTTE, NC 28227
(980) 339-8684



DocuSigned by:
Matt Brewer, PE 11/13/2024
386129C0A4C1462...

SIGNATUREDATE

DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED

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-4, A-5	A-6, A-7	
SYMBOL												
% PASSING #10 #40 #200	50 MX 30 MX 15 MX	50 MX 25 MX	51 MN 10 MX	35 MX	35 MX	35 MX	35 MX	36 MN	36 MN	36 MN	36 MN	
MATERIAL PASSING #40 LL PI	-		-		40 MX 10 MX	41 MN 10 MX	40 MX 11 MN	41 MN 11 MN	40 MX 10 MX	41 MN 11 MN	40 MX 11 MN	
GROUP INDEX	0		0		4 MX		8 MX		12 MX		16 MX	
USUAL TYPES OF MAJOR MATERIALS	STONE FRAGS, GRAVEL, AND SAND		FINE SAND		SILTY OR CLAYEY GRAVEL AND SAND		SILTY SOILS		CLAYEY SOILS		SOILS WITH LITTLE OR MODERATE AMOUNTS OF ORGANIC MATTER	
GEN. RATING AS SUBGRADE	EXCELLENT TO GOOD				FAIR TO POOR				FAIR TO POOR		POOR	

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
MODERATELY COMPRESSIBLE
HIGHLY COMPRESSIBLE

LL < 31
LL = 31 - 50
LL > 50

PERCENTAGE OF MATERIAL

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

GROUND WATER

WATER LEVEL IN BORE HOLE IMMEDIATELY AFTER DRILLING

STATIC WATER LEVEL AFTER 24 HOURS

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

DIP & DIP DIRECTION OF ROCK STRUCTURES

TEST BORING

AUGER BORING

CORE BORING

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
HL - 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:

☐ CME-45C

☐ CME-55

☐ CME-550X

☐ VANE SHEAR TEST

☐ PORTABLE HOIST

☒ MOBILE B-29

☐

ADVANCING TOOLS:

☐ CLAY BITS

☐ 6" CONTINUOUS FLIGHT AUGER

☒ 4" SOLID STEM AUGERS

☐ HARD FACED FINGER BITS

☐ TUNG.-CARBIDE INSERTS

☐ CASING ☐ W/ ADVANCER

☐ TRICONE _____ " STEEL TEETH

☐ TRICONE _____ " TUNG.-CARB.

☒ CORE BIT (4-INCH DIAMETER)

☐

HAMMER TYPE:

☐ AUTOMATIC

☐ MANUAL

CORE SIZE:

☐ -B _____

☐ -N _____

HAND TOOLS:

☐ POST HOLE DIGGER

☐ HAND AUGER

☐ SOUNDING ROD

☐ VANE SHEAR TEST

☒ DUAL MASS DCP

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 YIELD 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 FAB

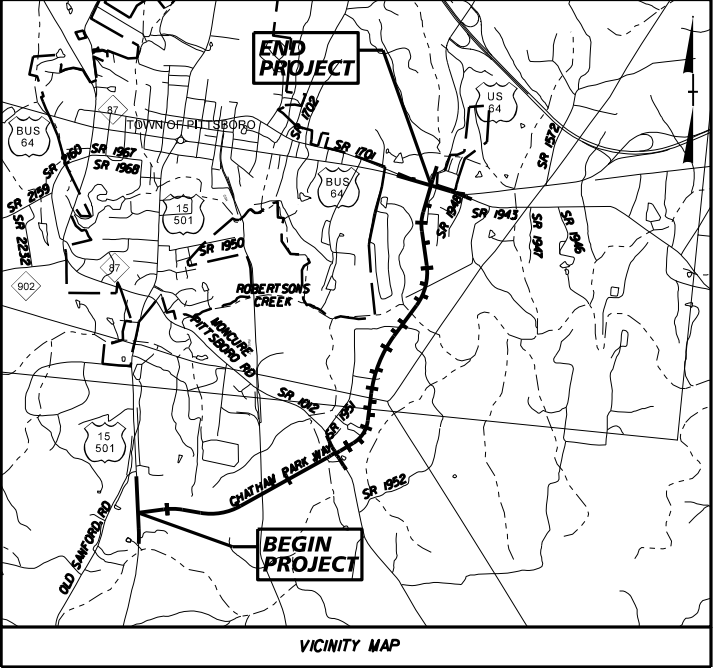
Tip No. R-5963A| WBS No. 48599.1.1| Chatham County

ABBREVIATIONS

RT LN = Right Lane	CR = Crown
LT LN = Left Lane	S = Super
OSL = Outside Lane	C = Cut
ISL = Inside Lane	F = Fill
OSML = Outside Mid-Lane	DCP = Dynamic Cone Penetrometer
ISML = Inside Mid-Lane	M = Moist
PS = Paved Shoulder	W = Wet
LTL = Left Turn Lane	N/A = Not Observed
RTL = Right Turn Lane	NSR = No Sample Recovered
MID = Middle Lane	S- = Soil Grab Sample
CTL = Center Turn Lane	Ref- = Soil Reference Sample
ISWP = Inside Wheel Path	SS- = Split Spoon Sample
OSWP = Outside Wheel Path	RE = Roadway Embankment
PS = Paved Shoulder	F. = Fine
FW = From White Line	Cse. = Coarse
FY = From Yellow Line	ABC = Aggregate Base Course
RT = Right	STBC = Soil Type Base Course
LT = Left	CSS = Cement Stabilized Subgrade
(I) = Inside	SG = Subgrade
(O) = Outside	AF= Artificial Fill
BOC = Back of Curb	FDR = Full Depth Reclamation
C&G = Curb and Gutter	HP = Highly Plastic
EOP = Edge of Pavement	MP = Moderately Plastic
FR = From	SAA = Same as Above
	FEA = Flattened and Elongated Aggregate
	SA = Sand Asphalt

09/08/99

SEE SHEET 1A FOR INDEX OF SHEETS
SEE SHEET 1B FOR CONVENTIONAL PLAN SHEET SYMBOLS



RW PLANS

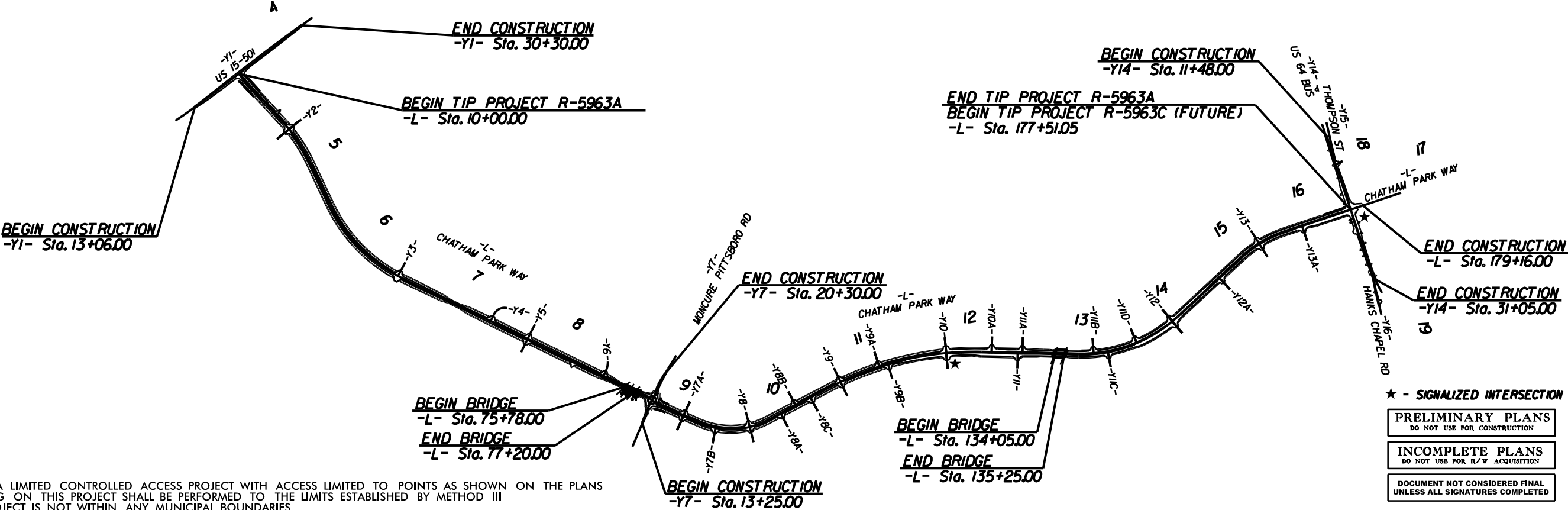
STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS
CHATHAM COUNTY

LOCATION: NEW ROUTE, FROM CHATHAM PARKWAY, US 15/US 501 SOUTH OF PITTSBORO
TO US 64 BUSINESS, CONSTRUCT ROADWAY ON NEW LOCATON

TYPE OF WORK: GRADING, DRAINAGE, BRIDGES, PAVING, SIGNALS, AND RETAINING WALLS



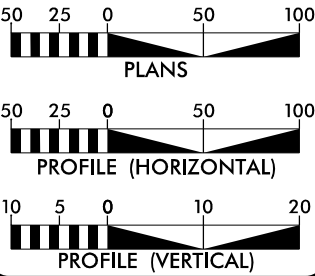
STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	R-5963A	3	47
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	
48599.1.1		P.E.	



THIS IS A LIMITED CONTROLLED ACCESS PROJECT WITH ACCESS LIMITED TO POINTS AS SHOWN ON THE PLANS
CLEARING ON THIS PROJECT SHALL BE PERFORMED TO THE LIMITS ESTABLISHED BY METHOD III
THIS PROJECT IS NOT WITHIN ANY MUNICIPAL BOUNDARIES

★ - SIGNALIZED INTERSECTION
PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION
INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION
DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED

GRAPHIC SCALES



R-5963A DESIGN DATA
ADT 2025 = 0
ADT 2045 = 31000
K = 7%
D = 55
T = 5%*
V = 50 MPH
* (TTST 2% + DUAL 3%)
FUNCTIONAL CLASSIFICATION:
RURAL
MAJOR COLLECTOR

PROJECT LENGTH

LENGTH ROADWAY TIP PROJECT R-5963A = 3.114 MILES
LENGTH STRUCTURE TIP PROJECT R-5963A = 0.059 MILES
TOTAL LENGTH TIP PROJECT R-5963A = 3.173 MILES

PLANS PREPARED FOR
THE NCDOT BY:

Kimley»Horn

2024 STANDARD SPECIFICATIONS
RIGHT OF WAY DATE:
JULY 19, 2024
LETTING DATE:
MARCH 18, 2025

VANCE W. BLANTON, P.E.
PROJECT ENGINEER
TYLER G. SPRING, P.E.
PROJECT DESIGN ENGINEER
JEFFREY A. STRODER, P.E.
PROJECT MANAGER
NCDOT HIGHWAY DIVISION 8

HYDRAULICS ENGINEER

SIGNATURE: _____
ROADWAY DESIGN ENGINEER

SIGNATURE: _____
P.E.



TIP PROJECT: R-5963A

CONTRACT:

\$FILE\$

\$DATE\$



BEGIN TIP PROJECT R-5963A&B
-L- POT Sta.10+00.00
-YI- POT Sta.20+08.41

C-1 -Y1- STA. 16+91	
LT PS 2.0 FT RT FW	
PAVEMENT SECTION	
ASPHALT	10.50 in
ABC	10.00 in

C-2 -Y1- STA. 16+91	
RT LN 2.7 FT LT FW	
PAVEMENT SECTION	
ASPHALT	12.25 in
ABC	8.25 in
C-3 -Y1- STA. 16+91	
RT PS 2.0 FT RT FW	
PAVEMENT SECTION	
ASPHALT	9.25 in
ABC	11.75 in



BEGIN TIP PROJECT R-5963A&B
-L- POT Sta. 10+00.00
-YI- POT Sta. 20+08.41

C-4 -Y1- STA. 24+91	
LT PS 1.5 FT RT FW	
PAVEMENT SECTION	
ASPHALT	9.50 in
ABC	10.50 in
C-5 -Y1- STA. 24+91	
LT LN 2.5 FT LT FW	
PAVEMENT SECTION	
ASPHALT	12.00 in
ABC	9.00 in

25+00

C-4 LT PS
C-5 LT LN

C-6 RT PS

C-6 -Y1- STA. 24+91	
RT PS 2.0 FT RT FW	
PAVEMENT SECTION	
ASPHALT	10.25 in
ABC	10.25 in

CHATHAM PARK

-RBT- POC Sta. 10+00.00 =
-RBT- POC Sta. 13+45.57

C-7 -Y7- STA. 13+84	
LT PS 1.0 FT RT FW	
PAVEMENT SECTION	
ASPHALT	12.50 in

C-8 -Y7- STA. 13+84	
RT LN 2.0 FT LT FW	
PAVEMENT SECTION	
ASPHALT	12.50 in
C-9 -Y7- STA. 13+84	
RT PS 0.7 FT RT FW	
PAVEMENT SECTION	
ASPHALT	10.50 in

C-10 -Y7- STA. 18+65	
LT PS 0.5 FT RT FW	
PAVEMENT SECTION	
ASPHALT	10.25 in
UTILITY PRESENT	
C-11 -Y7- STA. 18+65	
LT LN 2.5 FT LT FW	
PAVEMENT SECTION	
ASPHALT	8.25 in
UTILITY PRESENT	

C-12 -Y7- STA. 18+65	
RT PS 1.2 FT RT FW	
PAVEMENT SECTION	
ASPHALT	12.50 in
UTILITY PRESENT	

-L- POC Sta. 79+66.87 =
-Y7- POT Sta. 16+46.76

-Y14- POT Sta. 10+00.00

-Y15- POT Sta. 10+00.00

-DRWI- POT Sta. 11+00.00

-Y15- POT Sta. 15+00.00 =
-Y14- POT Sta. 15+00.00 (8' LT)

BEGIN CONSTRUCTION
-Y15- Sta. 13+40.00

C-15 -Y15- STA. 12+50	
LANE 5.7 FT LT FW	
PAVEMENT SECTION	
ASPHALT	3.00 in
CONCRETE	6.00 in
SAND	1.50 in

-Y15- SR 1701
THOMPSON ST

C-15 LANE

C-14 LT LN

C-13 RT LN

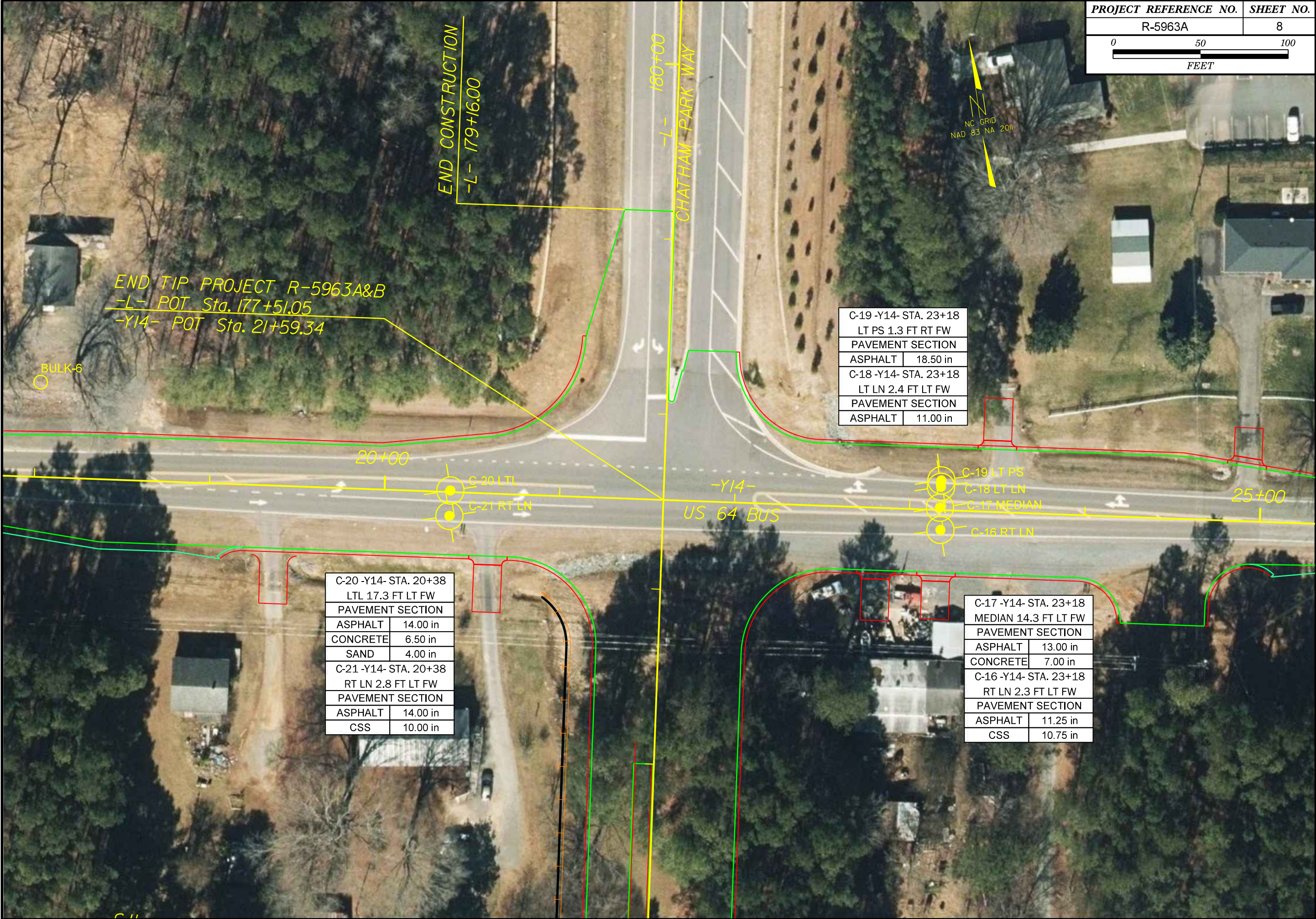
-Y14-
US 64 BUS

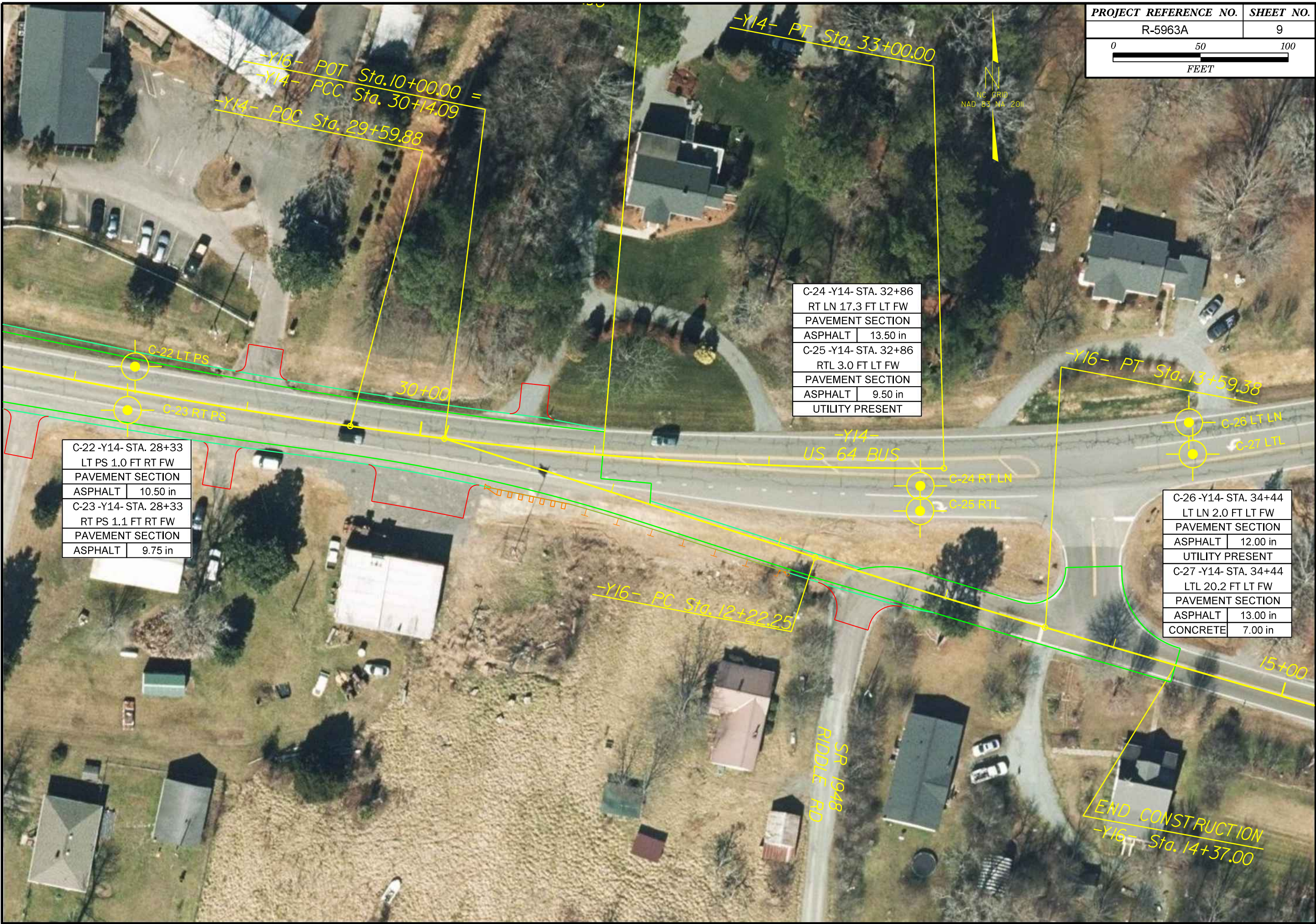
C-14 -Y14- STA. 12+53	
LT LN 2.0 FT LT FW	
PAVEMENT SECTION	
ASPHALT	6.75 in
CONCRETE	8.50 in
SAND	3.00 in

C-13 -Y14- STA. 12+53	
RT LN 2.7 FT LT FW	
PAVEMENT SECTION	
ASPHALT	5.50 in
CONCRETE	8.75 in
SAND	4.00 in

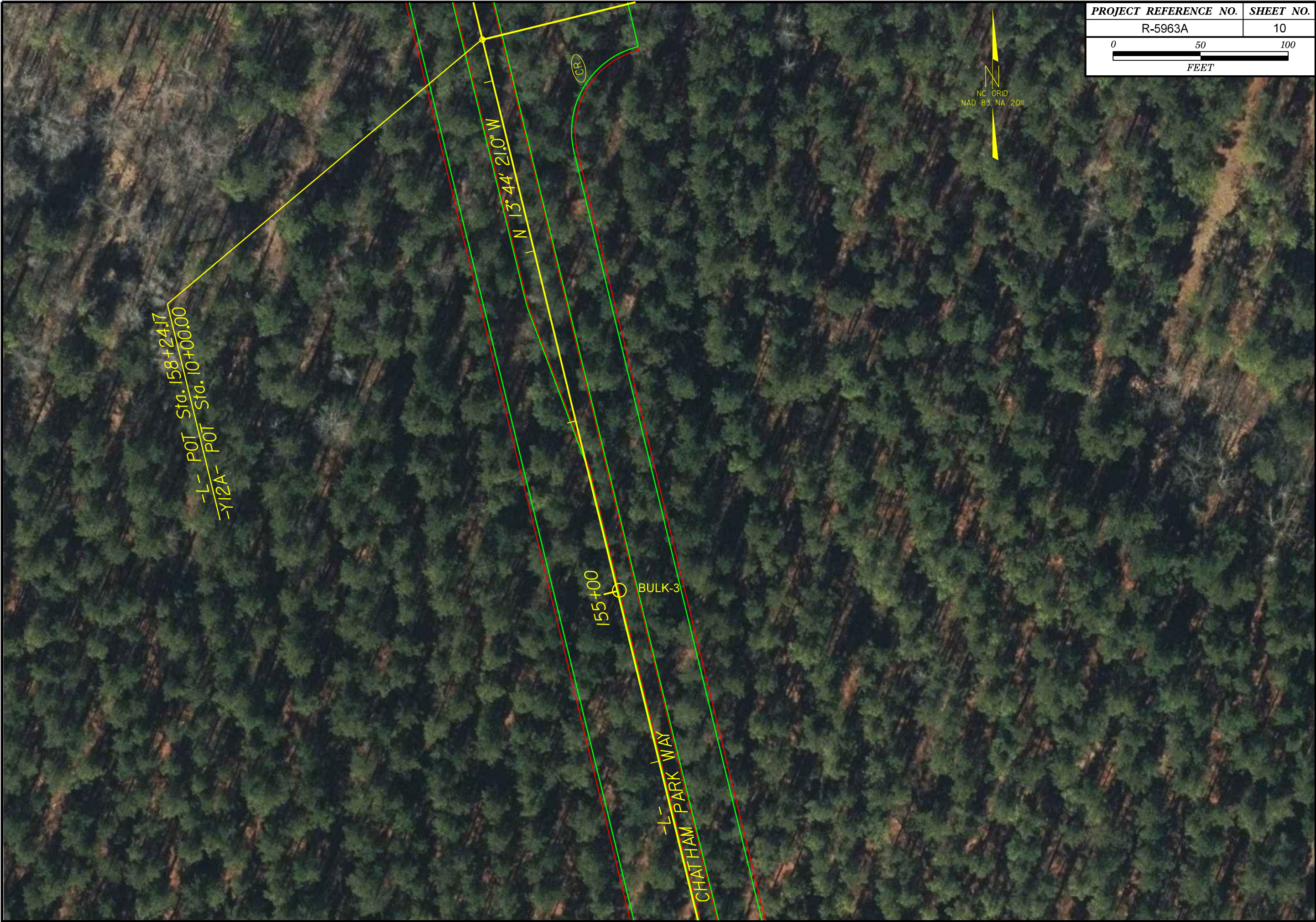
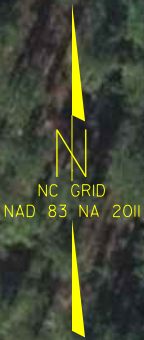
BEGIN CONSTRUCTION
-Y14- Sta. 11+48.00

-Y14- POT Sta. 15+53.97=
-DRWI- POT Sta. 10+00.00





PROJECT REFERENCE NO.	SHEET NO.
R-5963A	10
050100 FEET	



NC GRID
NAD 83 NA 2011

Sta 14+89.77
Δ = 7° 36' 59.6" (LT)
D = 93.05'
L = 46.60'
R = 700.00'

PI Sta 15+70.66
Δ = 15° 41' 01.4" (RT)
D = 22° 55' 05.9"
L = 68.43'
T = 34.43'
R = 250.00'

D L T = 32.4'
R = 250.00'

-Y6- PT Sta. 10+00.00

-Y6- PC Sta. 11+25.53

-L- POT Sta. 72+70.87
-Y6- POT Sta. 12+00.00

BULK-2

(CR)

(CR)

-L- CHATHAM PARK WAY

BEGIN BRIDGE
-L- Sta. 75+78.00

75+00

END BRIDGE
-L- Sta. 77+20.00

SEWER
SSW
INV IN
INV OUT

PAVEMENT INVESTIGATION DATA SHEET

Project:	48599.1.1
TIP:	R-5963A

Route:	New Route from Chatham Parkway, US 15/US 501 South of Pittsboro to US 64 Business, Construct Roadway on New Location
County:	Chatham

Date Performed:	8/14 & 8/15/2024
Field Personnel:	T. Wenner, CG2 Exploration

		Width (ft)		(ft)	(in)	Thickness (in)						Subgrade							GPS Coordinates	
Test Location	Cut/Fill (Est. of Amount) (ft)	Lane	Shoulder	Offset Distance (See Notes)	Crown "Cr" or Super "S"	Gross to Top of Soil	Asphalt	ABC/Drainage Sand	Stabilized Subgrade	Concrete	Pavement Layering	Description (Depth - ft)	Soil Sample Number	AASHTO Classification	Soil Moisture	Boring Depth (ft)	Asphalt Notes	Northing	Easting	
C-1 -Y1- Sta. 16+91 LT PS	12.0 Cut	12.0	4.0 PS	2.0 RT FW	Cr	20.50	10.50	10.00			Asphalt ABC SG	1.7 - 4.0: RES - Tan, Silty CLAY, MP 4.0 - 5.0: WR - Tan, Metavolcanic Rock	S-1	A-7-6(18)	W	5.0	Moderate to High Severity Longitudinal and Transverse Cracking (IS/OSWP), some cracks sealed	704,571	1,947,286	
C-2 -Y1- Sta. 16+91 RT LN	3.0 Cut	12.0	4.0 PS	2.7 LT FW	Cr	20.50	12.25	8.25			Asphalt ABC SG	1.7 - 4.5: RES - Tan, Silty CLAY, MP 4.5 - 5.0: WR - Orange-Tan, Metavolcanic Rock	Ref-1	A-7-6	W	5.0	Moderate to High Severity Longitudinal and Transverse Cracking (IS/OSWP), some cracks sealed	704,574	1,947,308	
C-3 -Y1- Sta. 16+91 RT PS	3.0 Cut	12.0	4.0 PS	2.0 RT FW	Cr	21.00	9.25	11.75			Asphalt ABC SG	1.8 - 5.0: RES - Tan, Fine Sandy CLAY	S-3	A-6(9)	M	5.0	Moderate to High Severity Longitudinal and Transverse Cracking (IS/OSWP), some cracks sealed	704,575	1,947,313	
C-4 -Y1- Sta. 24+91 LT PS	3.5 Fill	12.0	4.0 PS	1.5 RT FW	Cr	20.00	9.50	10.50			Asphalt ABC SG	1.7 - 3.5: RE - Brown, Fine to Coarse Sandy CLAY, with trace gravel 3.5: WR - Metavolcanic Rock	Ref-5	A-6	M	3.5 AR	Moderate to High Severity Longitudinal and Transverse Cracking (IS/OSWP), some cracks sealed 5.5 Inch Top Down Crack in Core	705,363	1,947,169	
C-5 -Y1- Sta. 24+91 LT LN	3.5 Fill	12.0	4.0 PS	2.5 LT FW	Cr	21.00	12.00	9.00			Asphalt ABC SG	1.8 - 3.5: RE - Brown, Fine to Coarse Sandy CLAY, with trace gravel 3.5: WR - Metavolcanic Rock	S-5	A-6(2)	M	3.5 AR	Moderate to High Severity Longitudinal and Transverse Cracking (IS/OSWP), some cracks sealed	705,363	1,947,173	
C-6 -Y1- Sta. 24+91 RT PS	20.0 Cut	12.0	4.0 PS	2.0 RT FW	Cr	20.50	10.25	10.25			Asphalt ABC SG	1.7 - 2.8: RE - Brown, Fine to Coarse Sandy SILT, with trace gravel 2.8: WR - Metavolcanic Rock	S-6	A-4(1)	M	2.8 AR	Moderate to High Severity Longitudinal and Transverse Cracking (IS/OSWP), some cracks sealed	705,367	1,947,197	
C-7 -Y7- Sta. 13+84 LT PS	5.0 Fill	10.0	2.5 PS	1.0 RT FW	Cr	12.50	12.50				Asphalt SG	1.0 - 5.0: RE - Orange-Brown, Silty CLAY, MP, with trace gravel	S-7	A-7-6(6)	M	5.0	Low Severity Longitudinal and Transverse Cracking	707,265	1,953,630	
C-8 -Y7- Sta. 13+84 RT LN	5.0 Fill	10.0	3.0 PS	2.0 LT FW	Cr	12.50	12.50				Asphalt SG	1.0 - 5.0: RE - Orange-Brown, Fine to Coarse Sandy CLAY, MP	S-8	A-6(6)	M	5.0	Low Severity Longitudinal and Transverse Cracking Asphalt Thickness Measured from Borehole, Missing 3.0 Inches of Asphalt	707,277	1,953,644	
C-9 -Y7- Sta. 13+84 RT PS	5.0 Fill	10.0	3.0 PS	0.7 RT FW	Cr	10.50	10.50				Asphalt SG	0.9 - 5.0: RE - Orange-Brown, Fine to Coarse Sandy CLAY, MP	Ref-8	A-6	W	5.0	Low Severity Longitudinal and Transverse Cracking	707,279	1,953,646	
C-10 -Y7- Sta. 18+65 LT PS	3.0 Fill	10.0	2.0 PS	0.5 RT FW	S	10.25	10.25				Asphalt SG	0.8 - 3.0: RE - Orange, Silty CLAY, MP DCP and Auger not performed to full depth due to utility	Ref-11	A-7-6	M	3.0	Low Severity Longitudinal and Transverse Cracking	707,649	1,953,340	
C-11 -Y7- Sta. 18+65 LT LN	3.0 Fill	10.0	2.0 PS	2.5 LT FW	S	8.25	8.25				Asphalt SG	0.7 - 3.0: RE - Orange, Silty CLAY, MP DCP and Auger not performed to full depth due to utility	S-11	A-7-6(16)	M	3.0	Low Severity Longitudinal and Transverse Cracking	707,651	1,953,342	
C-12 -Y7- Sta. 18+65 RT PS	3.0 Fill	10.0	2.0 PS	1.2 RT FW	S	-	12.50				Asphalt SG	RE - Orange, Silty CLAY, MP DCP not performed to full depth and no auger due to utility	Ref-11	A-7-6	M	-	Low Severity Longitudinal and Transverse Cracking	707,661	1,953,359	
C-14 -Y14- Sta. 12+53 LT LN	4.0 Fill	12.0	-	2.0 LT FW	Cr	18.25	6.75	3.00 Drainage Sand		8.50	Asphalt Concrete/SAND SG	1.5 - 4.0: RE - Brown, Fine to Coarse Sandy CLAY 4.0 - 5.0: RES - Orange-Tan, Silty CLAY, MP	Ref-13A Ref-13A	A-6 A-7-6	W M	5.0	Moderate to High Severity Transverse Reflection Cracking (22.0 to 30.0 feet spaced), Moderate to High Severity Joint Cracking Between Lanes	716,658	1,954,812	
C-13 -Y14- Sta. 12+53 RT LN	4.0 Fill	12.0	1.0 PS	2.7 LT FW	Cr	18.25	5.50	4.00 Drainage Sand		8.75	Asphalt Concrete/SAND SG	1.5 - 4.0: RE - Brown, Fine to Coarse Sandy CLAY 4.0 - 5.0: RES - Orange-Tan, Silty CLAY, MP	S-13 S-13A	A-6(9) A-7-6(22)	W M	5.0	Moderate to High Severity Transverse Reflection Cracking (22.0 to 30.0 feet spaced), Moderate to High Severity Joint Cracking Between Lanes	716,642	1,954,809	
C-20 -Y14- Sta. 20+38 LTL	5.0 Fill	12.0	-	17.3 LT FW	Cr	24.50	14.00	4.00 Drainage Sand		6.50	Asphalt Concrete/SAND SG	2.0- 5.0: RE - Brown, Fine to Coarse Sandy CLAY	S-20	A-6(3)	M	5.0	Low to Moderate Severity Longitudinal and Transverse Cracking Two, 2.5 inch Bottom Up Cracks in Core, Bottom of Asphalt Highly Degraded	716,505	1,955,582	

Notes:
Offset Distance: Left and Right Relative to the Direction of Travel

Prepared by:
Reviewed by:

CTW
DMB

PAVEMENT INVESTIGATION DATA SHEET

Project:	48599.1.1
TIP:	R-5963A

Route:	New Route from Chatham Parkway, US 15/US 501 South of Pittsboro to US 64 Business, Construct Roadway on New Location
County:	Chatham

Date Performed:	8/14 & 8/15/2024
Field Personnel:	T. Wenner, CG2 Exploration

		Width (ft)		(ft)	(in)	Thickness (in)						Subgrade						GPS Coordinates	
Test Location	Cut/Fill (Est. of Amount) (ft)	Lane	Shoulder	Offset Distance (See Notes)	Crown "Cr" or Super "S"	Gross to Top of Soil	Asphalt	ABC/Drainage Sand	Stabilized Subgrade	Concrete	Pavement Layering	Description (Depth - ft)	Soil Sample Number	AASHTO Classification	Soil Moisture	Boring Depth (ft)	Asphalt Notes	Northing	Easting
C-21 -Y14- Sta. 20+38 RT LN	5.0 Fill	12.0	2.0 PS	2.8 LT FW	Cr	24.00	14.00		10.00		Asphalt CSS SG	2.0 - 5.0: RE - Brown, Fine to Coarse Sandy SILT	S-21	A-4(5)	M	5.0	Low to Moderate Severity Longitudinal and Transverse Cracking	716,490	1,955,579
C-19 -Y14- Sta. 23+18 LT PS	4.0 Cut	10.0	2.0 PS	1.3 RT FW	Cr	18.50	18.50				Asphalt SG	1.5 - 3.5: RES - Orange-Tan, Silty CLAY, MP	Ref-18	A-7-6	M	3.5	Low Severity Longitudinal Cracking	716,469	1,955,860
C-18 -Y14- Sta. 23+18 LT LN	4.0 Cut	10.0	2.0 PS	2.4 LT FW	Cr	11.00	11.00				Asphalt SG	0.9 - 5.0: RES - Orange-Tan, Silty CLAY, MP	S-18	A-7-6(20)	W	5.0	Low Severity Longitudinal Cracking	716,465	1,955,859
C-17 -Y14- Sta. 23+18 MEDIAN	3.0 Fill	8.0	-	14.3 LT FW	Cr	20.00	13.00			7.00	Asphalt Concrete SG	1.7 - 3.0: RE - Orange-Brown, Silty CLAY, MP 3.0 - 5.0: RES - Orange- Tan, Silty CLAY, HP	S-17 S-17A	A-7-6(21) A-7-6(35)	W M	5.0	Low Severity Longitudinal Cracking	716,454	1,955,857
C-16 -Y14- Sta. 23+18 RT LN	At Grade	12.0	2.5 PS	2.3 LT FW	Cr	22.00	11.25		10.75		Asphalt CSS SG	1.8 - 5.0: RES - Orange-Tan, Silty CLAY, HP	Ref-17A	A-7-6	M	5.0	Low Severity Longitudinal and Transverse Cracking 1.0 Inch Top Down Crack In Core	716,441	1,955,855
C-22 -Y14- Sta. 28+33 LT PS	1.3 Fill	11.0	2.0 PS	1.0 RT FW	Cr	10.50	10.50				Asphalt SG	0.9 - 1.3: RE - Brown, Silty Fine to Coarse SAND, with trace gravel 1.3 - 5.0: RES - Orange-Tan, Silty CLAY, MP	- S-22	A-2-4 A-7-6(20)	M W	5.0	Moderate to High Severity Longitudinal and Transverse Cracking (IS/OSWP), some cracks sealed	716,371	1,956,366
C-23 -Y14- Sta. 28+33 RT PS	1.3 Fill	11.0	2.5 PS	1.1 RT FW	Cr	9.75	9.75				Asphalt SG	0.8 - 1.3: RE - Brown, Silty Fine to Coarse SAND, with trace gravel 1.3 - 5.0: RES - Orange-Tan, Fine to Coarse Sandy CLAY, MP	- S-23	A-2-4 A-6(9)	M M	5.0	Moderate to High Severity Longitudinal and Transverse Cracking (IS/OSWP), some cracks sealed	716,346	1,956,362
C-24 -Y14- Sta. 32+86 RT LN	5.0 Fill	11.0	-	17.3 LT FW	S	13.50	13.50				Asphalt SG	1.1 - 3.0: RE - Orange-Tan, Fine to Coarse Sandy CLAY, MP 3.0 - 5.0: RES - Orange-Brown, Silty CLAY, HP	S-24 S-24A	A-6(9) A-7-6(15)	M M	5.0	Moderate to High Severity Longitudinal and Transverse Cracking (IS/OSWP), some cracks sealed	716,303	1,956,814
C-25 -Y14- Sta. 32+86 RTL	5.0 Fill	12.0	2.5 PS	3.0 LT FW	S	9.50	9.50				Asphalt SG	RE - RE - Orange-Tan, Fine to Coarse Sandy CLAY, MP DCP not performed to full depth and no auger due to utility	Ref-24	A-6	M	-	Low to Moderate Severity Longitudinal and Transverse Cracking	716,289	1,956,814
C-26 -Y14- Sta. 34+44 LT LN	At Grade	12.0	4.0 PS	2.0 LT FW	S	12.00	12.00				Asphalt SG	RE - RES - Orange-Tan, Silty CLAY, HP DCP not performed to full depth and no auger due to utility	Ref-27	A-7-6	W	-	Moderate to High Severity Longitudinal and Transverse Cracking, Moderate to High Severity Fatigue Cracking (IS/OSWP), some cracks sealed 2.0 Inch Top Down Crack in Core, Bottom of Core Disintegrated	716,339	1,956,967
C-27 -Y14- Sta. 34+44 LTL	At Grade	12.0	-	20.2 LT FW	S	20.00	13.00			7.00	Asphalt Concrete SG	1.7 - 5.0: RES - Orange-Tan, Silty CLAY, HP	S-27	A-7-6(29)	W	5.0	High Severity Transverse Cracking, Low to Moderate Severity Longitudinal Cracking, some cracks sealed Full Depth Crack in Core, Asphalt Highly Degraded, Concrete Degraded	716,321	1,956,970
C-15 -Y15- Sta. 12+50 LANE	At Grade	15.0	-	5.7 LT FW	Cr	10.50	3.00	1.50 Drainage Sand		6.00	Asphalt Concrete/SAND SG	0.8 - 5.0: RES - Orange-Tan, Silty CLAY, MP	S-15	A-7-5(26)	W	5.0	Low to Moderate Severity Longitudinal and Transverse Cracking 1.0 Inch Top Down Crack in Core, Asphalt Thickness Measured from Borehole, 3.0 Inch Top Down Crack in Concrete	716,685	1,954,816

Notes:
Offset Distance: Left and Right Relative to the Direction of Travel

Prepared by:
Reviewed by:

CTW
DMB

DUAL MASS DYNAMIC CONE PENETROMETER DATA SHEET					WBS NO.	PROJECT TIP I.D.				ROUTE			
					48599.1.1	R-5963A				New Route from Chatham Parkway, US 15/US 501 South of Pittsboro to US 64 Business, Construct Roadway on New Location			
					COUNTY	FIELD PROFESSIONAL				FIELD CREW			
					Chatham	T. Wenner				CG2 Exploration			
Test Location					Date Run	Test Location				Date Run			
C-1 LT PS -Y1- Sta. 16+91 2.0 RT FW					8/15/2024	C-2 RT LN -Y1- Sta. 16+91 2.7 LT FW				8/15/2024			
Type	Test Interval		Datum		Cut/Fill	Type	Test Interval		Datum	Cut/Fill	Type	Test Interval	
DCP	Cumulative cm per blow		ABC		12.0 Cut	DCP	Cumulative cm per blow		ABC	3.0 Cut			
0.92	19.87	96.74				0.74	8.29	20.64	66.51				
1.33	20.27	97.13				1.01	8.34	21.03	67.44				
1.89	20.75	97.57				1.30	8.38	21.59	68.30				
2.40	21.05	97.96				1.61	8.43	21.76	69.17				
2.85	21.38	98.47				1.78	8.47	21.89	70.02				
3.50	21.75	98.78				1.93	8.52	22.14	71.14				
3.94	22.12	99.15				2.13	8.90	22.85	72.02				
4.37	22.33	99.43				2.26	9.19	23.38	72.89				
4.74	22.84	99.63				2.41	9.39	24.01	73.82				
5.12	23.35	99.83				2.57	9.82	24.56	75.08				
5.51	23.79	100.37				2.65	10.09	25.79	76.16				
5.69	24.14	100.99				2.80	10.21	27.27	77.14				
5.96	24.60	101.42				2.97	10.42	28.89	78.27				
6.37	24.99	101.86				3.09	10.61	30.55	79.36				
6.69	25.39	102.17				3.15	10.77	32.29	80.15				
6.93	26.05	102.33				3.21	10.91	33.34	81.02				
7.34	27.11	102.65				3.26	11.23	34.27	82.18				
7.56	27.64	103.25				3.32	11.41	35.14	82.96				
7.86	28.78	103.74				3.38	11.54	35.68	83.87				
8.33	29.75	103.96				3.44	11.75	36.10	84.44				
8.74	30.68	104.39				3.50	12.10	36.46	85.39				
8.94	31.58	105.09				3.55	12.21	36.80	86.28				
9.13	32.83	105.57				3.61	12.35	37.32	87.15				
9.47	34.29	106.28				3.67	12.46	37.77	88.10				
9.78	36.37	106.59				3.99	12.62	38.01	88.94				
9.95	37.79	107.59				4.21	12.69	38.37	89.54				
10.13	40.56	108.09				4.32	12.85	38.67	90.40				
10.39	43.04	108.93				4.43	13.01	39.15	91.22				
10.80	46.07	109.34				4.53	13.29	39.43	92.03				
10.96	48.57	109.82				4.64	13.51	39.87	92.94				
11.23	51.03	110.47				4.82	13.73	40.26	93.58				
11.39	54.03	110.87				5.08	13.87	40.68	94.26				
11.71	57.76	111.40				5.23	14.05	40.95	95.07				
11.90	62.11	111.61				5.47	14.28	41.45	95.53				
12.08	65.97	112.04				5.68	14.45	41.76	96.09				
12.41	67.44	112.38				5.86	14.57	42.23	96.55				
12.60	69.44	112.46				6.15	14.72	42.58	97.07				
12.77	71.81	112.54				6.32	14.80	42.86	97.55				
13.06	74.09	112.62				6.49	14.95	43.39	97.97				
13.35	76.91	112.70				6.99	15.13	43.92	98.35				
13.55	79.20	112.78				7.14	15.46	44.43	98.66				
13.76	80.57	112.86				7.19	15.71	45.12	98.92				
13.85	81.12	112.94				7.23	15.87	45.72	99.25				
14.08	81.85	113.02				7.28	16.02	46.39	99.83				
14.37	82.18	113.10				7.32	16.19	47.22	100.30				
14.64	82.63	113.18				7.37	16.38	48.52	100.50				
14.92	83.72	113.36				7.42	16.62	49.64	100.94				
15.17	84.50	113.53				7.46	16.79	50.70	101.25				
15.39	85.12	113.71				7.51	16.99	52.02	101.70				
15.64	85.63	113.88				7.55	17.11	52.32	102.07				
15.87	86.16	114.06				7.60	17.27	53.16	102.41				
16.09	86.86	114.23				7.65	17.42	54.10	102.86				
16.30	87.47	114.41				7.69	17.67	55.13	103.43				
16.57	88.51	114.58				7.74	17.79	56.22	103.71				
16.71	89.55	114.76				7.78	18.04	56.95	104.07				
17.02	90.33	114.93				7.83	18.28	57.84	104.24				
17.27	91.07	115.10				7.88	18.49	58.74	104.43				
17.44	91.80	115.26				7.92	18.77	59.51	104.60				
17.73	92.77	115.43				7.97	18.99	60.19	104.92				
18.02	93.10	115.59				8.01	19.12	61.36	105.13				
18.31	93.74	115.76				8.06	19.26	61.96	105.31				
18.54	94.26	116.13				8.11	19.54	62.75	105.71				
18.71	94.89					8.15	19.69	63.70	106.30				
19.00	95.45					8.20	19.98	64.49	106.48				
19.41	96.05					8.24	20.15	65.49	107.01				

DUAL MASS DYNAMIC CONE PENETROMETER DATA SHEET					WBS NO.	PROJECT TIP I.D.				ROUTE			
					48599.1.1	R-5963A				New Route from Chatham Parkway, US 15/US 501 South of Pittsboro to US 64 Business, Construct Roadway on New Location			
					COUNTY	FIELD PROFESSIONAL				FIELD CREW			
					Chatham	T. Wenner				CG2 Exploration			
Test Location					Date Run	Test Location				Date Run			
C-3 RT PS -Y1- Sta. 16+91 2.0 RT FW					8/15/2024	C-4 LT PS -Y1- Sta. 24+91 1.5 RT FW				8/15/2024			
Type	Test Interval			Datum	Cut/Fill	Type	Test Interval			Datum	Cut/Fill		
DCP	Cumulative cm per blow			ABC	3.0 Cut	DCP	Cumulative cm per blow			ABC	3.5 Fill		
2.76	23.30	97.98				6.20	28.99	58.63	87.08				
3.72	23.61	99.48				7.46	29.33	58.93	87.10				
4.14	24.09	100.84				8.98	29.95	59.31	87.12				
4.45	24.38	103.07				9.46	30.51	59.84	87.14				
4.77	24.76	104.48				9.92	31.04	60.08	87.16				
5.14	25.47	106.29				10.50	31.90	60.29	87.18				
5.39	26.09	107.95				10.80	33.23	60.62	87.20				
5.81	26.91	109.70				11.12	35.13	61.00	87.22				
6.14	27.98	110.36				11.51	37.41	61.47	87.24				
6.48	28.91	111.39				11.80	38.58	62.11	87.27				
6.68	30.84	112.33				12.15	39.27	63.05	87.29				
6.90	32.26	113.19				12.41	39.92	64.43	87.31				
7.13	33.74	114.08				12.72	40.59	65.19	87.33				
7.48	35.06	114.71				13.02	40.94	66.11	87.35				
7.69	36.71	115.44				13.22	41.49	66.92	87.37				
7.88	37.93	115.96				13.45	41.88	68.05	87.39				
8.21	38.92	116.48				13.69	42.29	69.25	87.41				
8.48	39.79	117.17				14.01	42.53	70.03	87.43				
8.71	40.54	117.90				14.11	42.77	71.05	87.45				
9.07	41.40	118.44				14.33	42.97	71.44	87.48				
9.49	42.18	119.10				14.63	43.23	72.09	87.50				
9.69	43.29	119.96				14.86	43.57	73.06	87.52				
10.00	45.03	120.60				15.14	43.78	73.97	87.54				
10.37	46.39	121.37				15.43	44.08	74.58	87.56				
10.57	48.07	121.99				15.59	44.39	75.87	87.58				
10.81	49.92	122.71				15.77	44.81	77.04	DCP REF				
11.05	51.71					15.98	45.03	78.42	50/0.5"				
11.38	54.01					16.08	45.29	79.16					
11.67	56.00					16.18	45.55	80.00					
12.02	57.85					16.27	45.98	81.03					
12.24	59.43					16.37	46.17	81.23					
12.43	60.39					16.47	46.44	81.85					
12.67	61.87					16.71	46.80	82.38					
13.00	63.06					16.95	47.23	82.82					
13.26	64.52					17.25	47.52	83.43					
13.91	65.66					17.51	47.65	84.27					
14.25	66.91					17.81	47.97	85.34					
14.43	68.25					18.21	48.26	85.87					
14.66	69.59					18.42	48.58	86.14					
15.05	70.69					18.74	48.94	86.53					
15.30	72.02					19.02	49.21	86.55					
15.56	73.40					19.38	49.53	86.57					
15.69	74.82					19.74	49.80	86.59					
16.04	76.27					20.12	50.15	86.61					
16.41	77.65					20.53	50.42	86.64					
16.64	78.64					20.90	50.68	86.66					
16.91	79.77					21.33	50.99	86.68					
17.36	80.94					21.82	51.39	86.70					
17.57	82.06					22.08	52.01	86.72					
17.70	82.97					22.54	52.30	86.74					
18.06	83.78					22.98	52.67	86.76					
18.44	84.49					23.40	52.99	86.78					
18.83	85.30					23.84	53.36	86.80					
19.03	86.03					24.44	54.02	86.82					
19.41	86.79					24.67	54.64	86.85					
19.79	87.40					24.89	54.93	86.87					
20.17	88.36					25.35	55.47	86.89					
20.61	89.34					25.83	55.65	86.91					
20.99	90.31					26.21	56.22	86.93					
21.44	91.28					26.65	56.69	86.95					
21.55	92.38					27.01	57.04	86.97					
21.94	93.38					27.34	57.35	86.99					
22.21	94.25					27.60	57.53	87.01					
22.54	95.33					28.00	57.78	87.03					
22.89	96.70					28.56	58.12	87.06					

DUAL MASS DYNAMIC CONE PENETROMETER DATA SHEET						WBS NO.	PROJECT TIP I.D.			ROUTE			
						48599.1.1	R-5963A			New Route from Chatham Parkway, US 15/US 501 South of Pittsboro to US 64 Business, Construct Roadway on New Location			
						COUNTY	FIELD PROFESSIONAL			FIELD CREW			
						Chatham	T. Wenner			CG2 Exploration			
Test Location						Date Run	Test Location				Date Run		
C-5 LT LN -Y1- Sta. 24+91 2.5 LT FW						8/15/2024	C-6 RT PS -Y1- Sta. 24+91 2.0 RT FW				8/15/2024		
Type	Test Interval			Datum		Cut/Fill	Type	Test Interval			Datum		Cut/Fill
DCP	Cumulative cm per blow			ABC		3.5 Fill	DCP	Cumulative cm per blow			ABC		20.0 Cut
0.77	23.78	57.52					0.86	18.21	55.13				
1.47	24.02	58.11					1.52	18.45	55.20				
1.81	24.52	58.62					2.09	18.63	55.26				
2.18	25.48	59.20					2.39	18.98	55.33				
2.52	26.25	60.09					2.66	19.41	55.39				
2.79	28.87	60.80					2.99	19.82	55.45				
3.22	31.32	61.98					3.21	20.42	55.52				
3.49	33.09	63.19					3.44	20.62	55.58				
3.68	34.42	64.12					3.62	20.77	55.65				
4.00	35.33	65.29					3.73	21.22	55.71				
4.43	36.16	65.94					3.99	21.83	55.78				
4.74	36.77	66.41					4.29	22.10	55.86				
5.00	37.32	66.84					4.45	22.24	55.93				
5.24	38.12	67.45					4.59	22.85	56.00				
5.76	38.50	68.48					4.94	23.31	56.08				
6.23	38.97	69.11					5.16	23.81	56.15				
6.66	39.27	70.13					5.48	24.31	56.22				
7.00	39.73	70.81					5.71	24.58	56.29				
7.20	40.04	71.40					5.89	25.02	56.37				
7.44	40.38	71.86					6.07	25.63	56.44				
7.76	40.58	DCP REF 50/0.0"					6.26	26.29	56.46				
8.10	41.00						6.69	27.42	56.48				
8.53	41.22						7.07	28.38	56.50				
8.80	41.57						7.39	30.06	56.52				
9.07	41.95						7.69	31.16	56.54				
9.28	42.18						8.17	32.28	56.55				
9.54	42.65						8.37	33.25	56.57				
9.79	43.00						8.65	33.97	56.59				
10.04	43.29						8.90	34.87	56.61				
10.30	43.71						9.06	35.66	56.63				
10.59	43.98						9.27	36.59	56.65				
10.88	44.45						9.51	37.65	56.67				
11.05	44.77						9.79	38.34	56.69				
11.36	45.01						10.00	39.40	56.71				
11.59	45.37						10.17	40.88	56.73				
12.10	45.65						10.40	41.92	56.74				
12.38	45.99						10.68	42.88	56.76				
12.72	46.36						10.90	43.60	56.78				
12.89	46.78						11.20	44.47	56.80				
13.45	47.01						11.44	44.97	56.82				
13.66	47.25						11.83	45.49	56.84				
13.85	47.50						12.06	46.06	56.86				
14.28	47.93						12.24	46.86	56.88				
14.68	48.05						12.44	47.61	56.90				
14.87	48.40						12.63	48.29	56.92				
15.12	48.57						12.76	48.95	56.93				
15.35	48.97						12.94	49.62	56.95				
15.76	49.17						13.12	50.24	56.97				
16.35	49.59						13.61	50.66	56.99				
16.71	50.05						13.88	51.14	57.01				
17.04	50.38						14.22	51.41	DCP REF 50/1.0"				
17.42	50.95						14.42	51.65					
17.75	51.43						14.58	51.92					
18.10	51.79						14.86	52.43					
18.53	52.12						15.10	52.66					
18.90	52.87						15.32	53.04					
19.40	53.37						15.48	53.31					
19.82	53.68						15.80	53.57					
20.27	54.06						16.20	53.69					
20.82	54.39						16.55	53.80					
21.29	54.86						16.70	54.05					
21.84	55.42						16.87	54.35					
22.42	55.85						17.16	54.59					
22.89	56.36						17.53	54.93					
23.52	56.96						17.81	55.07					

DUAL MASS DYNAMIC CONE PENETROMETER DATA SHEET							WBS NO.	PROJECT TIP I.D.				ROUTE			
							48599.1.1	R-5963A				New Route from Chatham Parkway, US 15/US 501 South of Pittsboro to US 64 Business, Construct Roadway on New Location			
							COUNTY	FIELD PROFESSIONAL				FIELD CREW			
							Chatham	T. Wenner				CG2 Exploration			
Test Location							Date Run	Test Location					Date Run		
C-7 LT PS -Y7- Sta. 13+84 1.0 RT FW							8/15/2024	C-8 RT LN -Y7- Sta. 13+84 2.0 LT FW					8/15/2024		
Type	Test Interval			Datum			Cut/Fill	Type	Test Interval			Datum		Cut/Fill	
DCP	Cumulative cm per blow			SG (A-7-6(6))			5.0 Fill	DCP	Cumulative cm per blow			SG (A-6(6))		5.0 Fill	
3.60	114.38							0.36	70.56	114.98					
6.42	115.11							0.64	71.05	115.41					
8.74	115.56							1.12	71.60	115.66					
12.09	116.32							1.45	72.11	116.08					
15.09	117.13							1.85	72.73	116.42					
18.07								2.40	73.07	116.71					
21.42								2.86	73.52	117.11					
24.29								3.17	74.01	117.45					
26.79								3.54	74.27	117.81					
28.82								3.82	74.89	118.34					
29.53								4.15	75.20	118.87					
30.04								4.52	75.56	119.78					
30.65								4.83	76.65	120.44					
31.28								5.42	77.28	121.11					
31.68								6.03	78.38	122.07					
32.30								6.39	79.63	123.11					
33.03								7.07	80.54	123.85					
33.90								8.02	81.85						
35.04								9.64	82.70						
37.77								12.42	83.66						
41.26								15.91	84.81						
44.62								18.80	85.71						
47.15								21.57	86.52						
50.19								24.41	87.39						
52.81								26.85	88.33						
55.62								28.64	88.88						
57.83								30.39	89.40						
61.16								32.26	90.15						
63.56								34.15	90.81						
66.55								35.84	91.55						
67.94								37.50	92.32						
69.43								39.04	93.03						
71.05								40.71	93.90						
72.06								42.29	94.62						
73.45								44.21	95.14						
75.00								45.65	96.07						
76.47								47.31	96.98						
77.93								48.53	98.01						
79.72								49.31	99.35						
81.20								50.54	99.85						
83.05								51.55	100.93						
86.28								52.58	101.87						
89.58								53.61	102.96						
91.78								54.54	103.85						
94.25								55.45	104.85						
96.65								56.53	105.73						
98.63								57.27	106.36						
100.51								58.21	106.69						
101.77								58.91	107.46						
102.70								59.75	107.99						
103.91								60.07	108.49						
104.50								60.58	108.96						
105.15								60.97	109.54						
106.23								61.63	110.21						
107.01								62.08	110.93						
107.47								62.47	111.16						
108.31								63.13	111.46						
109.17								63.72	112.04						
109.77								64.62	112.58						
110.36								65.90	112.89						
110.93								66.96	113.28						
111.77								68.25	113.63						
112.33								68.98	113.82						
113.02								69.40	114.24						
113.58								69.95	114.65						

[illegible]

DUAL MASS DYNAMIC CONE PENETROMETER DATA SHEET					WBS NO.		PROJECT TIP I.D.				ROUTE			
					48599.1.1		R-5963A				New Route from Chatham Parkway, US 15/US 501 South of Pittsboro to US 64 Business, Construct Roadway on New Location			
					COUNTY		FIELD PROFESSIONAL				FIELD CREW			
					Chatham		T. Wenner				CG2 Exploration			
Test Location					Date Run		Test Location						Date Run	
C-14 LT LN -Y14- Sta. 12+53 2.0 LT FW					8/14/2024		C-13 RT LN -Y14- Sta. 12+53 2.7 LT FW						8/14/2024	
Type	Test Interval			Datum	Cut/Fill	Type	Test Interval			Datum	Cut/Fill			
DCP	Cumulative cm per blow			Drainage Sand	4.0 Fill	DCP	Cumulative cm per blow			Drainage Sand	4.0 Fill			
2.65						3.12	108.15							
5.24						4.46	109.32							
9.88						5.79	110.60							
11.76						7.57	111.98							
13.26						11.13								
16.84						17.16								
20.55						24.11								
24.15						30.51								
28.19						36.17								
31.61						39.65								
34.96						41.76								
38.01						43.56								
40.88						45.53								
43.72						47.63								
46.38						49.56								
48.84						51.28								
51.19						52.47								
52.99						54.00								
55.38						55.10								
57.62						57.10								
59.75						58.47								
61.60						60.00								
63.75						61.34								
65.59						62.78								
67.31						64.04								
69.11						65.41								
70.76						66.91								
72.36						68.05								
73.85						69.30								
75.24						70.42								
76.49						71.32								
77.94						72.19								
79.24						73.16								
80.34						74.27								
81.30						75.06								
82.50						76.25								
83.63						76.84								
84.85						77.91								
85.70						78.82								
86.75						79.57								
87.95						80.49								
90.31						81.45								
91.11						82.65								
92.38						83.45								
93.06						84.51								
93.83						85.60								
94.80						86.42								
95.84						87.55								
97.04						90.13								
97.90						91.19								
99.12						91.86								
100.00						92.92								
101.22						94.02								
102.20						95.30								
103.46						96.10								
104.48						96.92								
105.45						98.32								
106.31						99.60								
107.43						100.48								
108.19						101.65								
109.30						102.62								
110.10						103.75								
111.18						104.67								
						105.63								
						107.04								

DUAL MASS DYNAMIC CONE PENETROMETER DATA SHEET					WBS NO.		PROJECT TIP I.D.				ROUTE			
					48599.1.1		R-5963A				New Route from Chatham Parkway, US 15/US 501 South of Pittsboro to US 64 Business, Construct Roadway on New Location			
					COUNTY		FIELD PROFESSIONAL				FIELD CREW			
					Chatham		T. Wenner				CG2 Exploration			
Test Location					Date Run		Test Location						Date Run	
C-20 LTL -Y14- Sta. 20+ 38 17.3 LT FW					8/14/2024		C-21 RT LN -Y14- Sta. 20+ 38 2.8 LT FW						8/14/2024	
Type	Test Interval			Datum	Cut/Fill	Type	Test Interval			Datum	Cut/Fill			
DCP	Cumulative cm per blow			Drainage Sand	5.0 Fill	DCP	Cumulative cm per blow			CSS	5.0 Fill			
9.88						2.03	107.10							
14.88						2.92	109.35							
17.73						3.87	111.27							
20.87						4.77								
24.59						5.54								
28.05						6.22								
31.96						7.41								
35.96						7.84								
39.05						8.62								
41.86						8.90								
43.64						9.38								
45.73						9.80								
47.82						10.30								
49.91						10.80								
52.10						11.29								
54.50						11.79								
56.40						12.40								
58.32						12.91								
60.27						13.60								
61.93						14.25								
63.69						15.06								
65.52						15.48								
67.18						16.08								
69.27						17.03								
71.15						17.84								
72.89						18.95								
74.50						20.14								
76.04						21.30								
77.94						22.69								
79.77						24.37								
81.89						25.98								
83.96						27.36								
86.59						28.80								
89.09						30.24								
91.15						31.59								
93.43						33.26								
95.72						35.68								
98.01						37.60								
						39.13								
						41.02								
						42.55								
						43.67								
						44.36								
						46.04								
						47.96								
						50.31								
						52.23								
						54.52								
						57.32								
						60.50								
						63.85								
						66.65								
						69.96								
						73.36								
						76.70								
						79.62								
						82.64								
						85.04								
						87.99								
						90.98								
						94.05								
						96.64								
						99.52								
						102.19								
						104.58								

DUAL MASS DYNAMIC CONE PENETROMETER DATA SHEET				WBS NO.	PROJECT TIP I.D.				ROUTE			
				48599.1.1	R-5963A				New Route from Chatham Parkway, US 15/US 501 South of Pittsboro to US 64 Business, Construct Roadway on New Location			
				COUNTY	FIELD PROFESSIONAL				FIELD CREW			
				Chatham	T. Wenner				CG2 Exploration			
Test Location				Date Run	Test Location				Date Run			
C-19 LT PS -Y14- Sta. 23+18 1.3 RT FW				8/14/2024	C-18 LT LN -Y14- Sta. 23+18 2.4 LT FW				8/14/2024			
Type	Test Interval		Datum	Cut/Fill	Type	Test Interval		Datum	Cut/Fill		Cut/Fill	
DCP	Cumulative cm per blow		SG (A-7-6)	4.0 Cut	DCP	Cumulative cm per blow		SG (A-7-6(20))	4.0 Cut		4.0 Cut	
5.49					0.38	80.86	112.99					
8.98					0.98	81.50	113.53					
14.34					1.92	81.85	114.51					
17.26					2.80	82.26	115.00					
19.44					3.55	82.62	115.41					
21.49					4.02	82.98	115.72					
23.20					4.46	83.28	116.68					
25.08					5.21	83.80						
27.30					6.24	84.33						
29.32					8.21	84.94						
31.28					11.21	85.27						
33.21					13.73	85.89						
35.14					14.83	86.44						
36.51					16.19	86.94						
38.17					18.74	87.46						
39.19					21.42	87.94						
40.16					23.86	88.58						
41.21					26.62	88.92						
42.11					29.76	89.60						
43.12					32.93	89.87						
44.12					35.62	90.29						
45.11					38.10	90.80						
46.12					39.98	91.30						
47.19					42.01	91.64						
48.22					43.70	92.48						
49.23					45.47	92.85						
50.48					47.40	93.18						
51.82					48.97	93.65						
53.13					50.37	93.98						
54.60					51.99	94.54						
55.59					53.09	95.10						
56.44					54.60	95.57						
57.09					55.70	96.03						
57.64					57.09	96.42						
58.38					58.28	96.88						
59.08					59.72	97.45						
59.47					61.06	98.06						
59.82					62.15	98.56						
60.02					63.10	99.16						
60.76					64.06	99.52						
61.16					65.38	100.00						
61.61					66.51	100.76						
62.15					67.58	101.20						
62.67					68.81	101.66						
Utility					69.72	101.86						
Present					70.40	102.79						
					70.88	103.39						
					71.82	103.92						
					72.07	104.70						
					72.83	104.98						
					73.45	105.33						
					74.02	105.86						
					74.27	106.45						
					74.91	106.96						
					75.37	107.41						
					76.02	107.81						
					76.47	108.41						
					77.02	108.73						
					77.70	109.42						
					78.23	109.81						
					78.59	110.68						
					78.96	111.07						
					79.42	111.62						
					79.99	111.89						
					80.49	112.50						

DUAL MASS DYNAMIC CONE PENETROMETER DATA SHEET				WBS NO.	PROJECT TIP I.D.				ROUTE			
				48599.1.1	R-5963A				New Route from Chatham Parkway, US 15/US 501 South of Pittsboro to US 64 Business, Construct Roadway on New Location			
				COUNTY	FIELD PROFESSIONAL				FIELD CREW			
				Chatham	T. Wenner				CG2 Exploration			
Test Location				Date Run	Test Location				Date Run			
C-17 MEDIAN -Y14- Sta. 23+18 14.3 LT FW				8/14/2024	C-16 RT LN -Y14- Sta. 23+18 2.3 LT FW				8/14/2024			
Type	Test Interval		Datum	Cut/Fill	Type	Test Interval		Datum	Cut/Fill		Cut/Fill	
DCP	Cumulative cm per blow		SG (A-7-6(21))	3.0 Fill	DCP	Cumulative cm per blow		CSS	At Grade		At Grade	
4.15					1.30	84.83						
8.38					2.62	85.39						
12.84					3.56	85.88						
17.22					4.86	86.45						
20.67					6.13	86.75						
24.29					7.86	86.97						
27.15					8.96	87.42						
29.79					10.23	87.88						
31.92					11.71	88.44						
33.41					13.24	88.99						
34.95					14.80	89.71						
36.56					16.17	90.21						
37.56					17.70	90.94						
39.37					19.24	91.63						
40.73					20.37	92.24						
42.17					21.96	92.82						
43.83					22.99	93.60						
45.24					23.82	94.12						
46.67					24.58	94.69						
48.05					25.16	95.21						
49.54					26.19	95.49						
51.14					27.20	96.15						
52.45					28.26	96.78						
53.69					29.33	97.07						
54.62					30.62	97.65						
56.12					31.87	98.12						
57.26					33.62	98.65						
58.42					35.13	99.17						
59.58					37.52	99.80						
60.80					40.72	100.57						
62.33					43.76	101.09						
63.75					46.33	101.74						
65.20					49.18	102.31						
66.51					51.92	103.10						
67.65					54.14	104.02						
68.78					56.92	105.09						
70.12					59.23	105.98						
71.19					61.94	107.03						
72.22					64.52	107.61						
73.28					67.34	108.92						
74.47					69.76	109.88						
75.91					72.35	111.03						
77.08					74.25	111.85						
78.37					75.20	113.00						
79.87					75.75	114.06						
81.29					76.39	114.97						
82.85					76.59	115.76						
84.60					77.15	116.43						
85.99					77.52							
87.32					78.01							
88.61					78.40							
89.66					78.72							
91.26					79.14							
91.93					79.72							
93.25					80.04							
94.19					80.70							
95.28					81.15							
96.60					81.58							
97.34					81.92							
98.45					82.32							
					82.59							
					83.07							
					83.67							
					83.99							
					84.42							

DUAL MASS DYNAMIC CONE PENETROMETER DATA SHEET							WBS NO.		PROJECT TIP I.D.				ROUTE				
							48599.1.1		R-5963A				New Route from Chatham Parkway, US 15/US 501 South of Pittsboro to US 64 Business, Construct Roadway on New Location				
							COUNTY		FIELD PROFESSIONAL				FIELD CREW				
							Chatham		T. Wenner				CG2 Exploration				
Test Location							Date Run		Test Location				Date Run				
C-22 LT PS -Y14- Sta. 28+33 1.0 RT FW							8/14/2024		C-23 RT PS -Y14- Sta. 28+33 1.1 RT FW				8/14/2024				
Type	Test Interval			Datum			Cut/Fill		Type	Test Interval			Datum			Cut/Fill	
DCP	Cumulative cm per blow			SG (A-2-4)			1.3 Fill		DCP	Cumulative cm per blow			SG (A-2-4)			1.3 Fill	
2.68	97.04								1.53	83.88							
3.58	97.58								2.47	84.21							
4.05	98.19								2.90	84.68							
4.50	99.10								3.46	85.46							
5.05	99.53								4.04	86.12							
5.60	100.14								4.52	86.82							
6.90	100.84								5.06	87.58							
7.70	101.32								5.39	88.60							
8.74	101.92								5.83	89.88							
10.38	102.47								6.17	90.65							
12.64	103.06								6.35	91.20							
15.26	103.70								6.51	91.83							
18.30	104.13								6.86	92.72							
21.05	104.79								7.13	93.43							
24.14	105.32								7.38	95.07							
27.54	105.88								7.84	96.16							
30.49	106.43								8.20	97.14							
33.52	107.03								8.73	98.60							
37.25	107.58								9.04	99.66							
39.97	107.98								9.54	100.84							
42.84	108.80								9.88	102.31							
45.95	109.23								10.44	103.21							
49.06	109.76								10.88	104.45							
52.58	109.98								11.53	105.79							
54.83	110.78								12.33	106.84							
56.34	111.40								13.39	107.44							
58.08	111.80								13.75	108.00							
59.85	112.21								14.96	108.96							
61.33	112.82								16.47	109.42							
63.23	113.35								17.60	109.84							
64.42	113.95								18.28	110.38							
65.95	114.45								18.81	110.83							
67.83	114.84								19.49	111.38							
69.36	115.48								19.84	112.36							
70.56	116.21								20.18	113.27							
72.11	116.94								20.68	114.40							
73.28	117.47								21.35	115.68							
74.43	117.74								22.18	116.93							
75.79	118.12								23.22	118.82							
77.19	118.55								24.47	120.35							
78.38	118.93								26.53	121.90							
79.49	119.38								30.09	123.84							
80.58	120.16								34.37								
81.54	120.63								37.34								
82.50	120.87								40.31								
82.96									43.32								
83.68									46.49								
84.42									49.75								
85.31									53.44								
86.07									56.95								
86.97									60.59								
87.54									63.61								
88.29									66.67								
88.85									69.70								
89.69									72.48								
90.34									75.24								
91.14									77.42								
91.84									79.95								
92.53									80.64								
93.16									81.01								
93.96									81.55								
94.61									81.98								
95.20									82.53								
95.60									82.94								
96.42									83.46								

DUAL MASS DYNAMIC CONE PENETROMETER DATA SHEET							WBS NO.	PROJECT TIP I.D.				ROUTE			
							48599.1.1	R-5963A				New Route from Chatham Parkway, US 15/US 501 South of Pittsboro to US 64 Business, Construct Roadway on New Location			
							COUNTY	FIELD PROFESSIONAL				FIELD CREW			
							Chatham	T. Wenner				CG2 Exploration			
Test Location							Date Run	Test Location						Date Run	
C-24 RT LN -Y14- Sta. 32+86 17.3 LT FW							8/14/2024	C-25 RTL -Y14- Sta. 32+86 3.0 LT FW						8/14/2024	
Type	Test Interval			Datum			Cut/Fill	Type	Test Interval			Datum			Cut/Fill
DCP	Cumulative cm per blow			SG (A-6(9))			5.0 Fill	DCP	Cumulative cm per blow			SG (A-6)			5.0 Fill
3.30	103.54							3.48							
5.81	103.98							6.36							
9.10	104.32							8.42							
12.37	104.72							11.23							
15.55	105.05							13.71							
18.34	105.61							16.11							
20.22	105.99							18.60							
22.04	106.55							21.02							
23.74	107.06							22.87							
25.50	107.28							25.10							
27.66	108.21							26.62							
30.51	108.56							27.38							
34.20	108.98							28.40							
37.07	109.55							29.39							
39.93	109.72							30.38							
42.87	110.28							31.45							
45.63	111.03							32.63							
48.14	111.48							33.81							
50.75	112.34							34.84							
52.66	113.06							35.85							
54.22	113.61							36.83							
55.80	114.27							38.27							
57.11	115.01							39.87							
58.28	115.77							41.79							
59.64	116.11							45.39							
61.06	116.51							46.89							
62.71	116.80							48.07							
64.23								Utility							
65.99								Present							
67.58															
69.28															
70.79															
72.52															
73.90															
75.22															
76.38															
77.84															
78.94															
79.85															
80.93															
82.02															
82.96															
83.98															
85.13															
85.93															
86.88															
87.78															
88.92															
89.81															
90.70															
91.48															
92.38															
93.03															
93.86															
95.23															
96.33															
97.09															
98.26															
99.53															
100.41															
101.04															
101.63															
102.00															
102.54															
103.08															

DUAL MASS DYNAMIC CONE PENETROMETER DATA SHEET				WBS NO.	PROJECT TIP I.D.				ROUTE			
				48599.1.1	R-5963A				New Route from Chatham Parkway, US 15/US 501 South of Pittsboro to US 64 Business, Construct Roadway on New Location			
				COUNTY	FIELD PROFESSIONAL				FIELD CREW			
				Chatham	T. Wenner				CG2 Exploration			
Test Location				Date Run	Test Location				Date Run			
C-26 LT LN -Y14- Sta. 34+44 2.0 LT FW				8/14/2024	C-27 LTL -Y14- Sta. 34+44 20.2 LT FW				8/14/2024			
Type	Test Interval		Datum	Cut/Fill	Type	Test Interval		Datum	Cut/Fill			
DCP	Cumulative cm per blow		SG (A-7-6)	At Grade	DCP	Cumulative cm per blow		SG (A-7-6(29))	At Grade			
1.38					6.17	99.92						
3.03					11.99							
4.29					15.63							
6.03					19.16							
7.26					22.98							
7.92					27.27							
8.97					30.91							
9.91					33.66							
11.27					36.10							
13.03					38.17							
15.70					40.08							
18.90					42.07							
20.47					43.91							
21.46					45.45							
22.89					47.34							
24.99					48.91							
26.64					50.22							
28.24					51.65							
30.70					53.01							
34.12					54.12							
38.95					55.37							
43.36					56.64							
48.45					58.05							
53.24					59.25							
Utility					60.63							
Present					62.20							
					63.18							
					64.29							
					65.22							
					66.16							
					67.11							
					68.20							
					68.80							
					70.09							
					70.79							
					71.93							
					72.63							
					73.68							
					74.55							
					75.41							
					76.30							
					77.47							
					78.67							
					79.74							
					80.89							
					81.80							
					82.96							
					84.13							
					85.17							
					85.98							
					86.89							
					87.78							
					88.67							
					89.58							
					90.47							
					91.38							
					92.31							
					93.20							
					93.91							
					94.72							
					95.65							
					96.38							
					97.38							
					98.17							
					98.93							

DUAL MASS DYNAMIC CONE PENETROMETER DATA SHEET					WBS NO.	PROJECT TIP I.D.				ROUTE				
					48599.1.1	R-5963A				New Route from Chatham Parkway, US 15/US 501 South of Pittsboro to US 64 Business, Construct Roadway on New Location				
					COUNTY	FIELD PROFESSIONAL				FIELD CREW				
					Chatham	T. Wenner				CG2 Exploration				
Test Location					Date Run		Test Location						Date Run	
C-15 LANE -Y15- Sta. 12+50 5.7 LT FW					8/14/2024									
Type	Test Interval			Datum	Cut/Fill	Type	Test Interval			Datum		Cut/Fill		
DCP	Cumulative cm per blow			Drainage Sand	At Grade	DCP	Cumulative cm per blow							
3.92	112.90													
5.39	114.78													
6.34	115.83													
7.03	117.28													
7.65	118.79													
8.18	120.34													
8.67	121.68													
9.36	122.87													
10.22	124.33													
11.05	125.69													
12.17	127.26													
14.05	128.78													
16.11														
18.11														
19.26														
20.27														
21.42														
22.18														
23.45														
24.80														
26.70														
28.88														
30.56														
32.33														
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84.50														
86.63														
88.54														
91.21														
93.28														
95.46														
98.02														
99.79														
101.71														
103.57														
104.83														
106.27														
108.00														
109.45														
111.17														



CONE PENETROMETER RESULTS
NCDOT, GEOTECHNICAL ENGINEERING UNIT

PROJECT NO.	48599.1.1
PROJECT ID	R-5963A
ROUTE	New Route from Chatham Parkway, US 15/US 501 South of Pittsboro to US 64 Business, Construct Roadway on New Location
COUNTY	Chatham

GEOLOGIST	T. Wenner
FIELD CREW	CG2 Exploration

FILE	DCP Graphs C-1- to C-16
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CONE PENETROMETER RESULTS
NCDOT, GEOTECHNICAL ENGINEERING UNIT

PROJECT NO.	48599.1.1
PROJECT ID	R-5963A
ROUTE	New Route from Chatham Parkway, US 15/US 501 South of Pittsboro to US 64 Business, Construct Roadway on New Location
COUNTY	Chatham

GEOLOGIST	T. Wenner
FIELD CREW	CG2 Exploration

FILE	DCP Graphs C-1- to C-16
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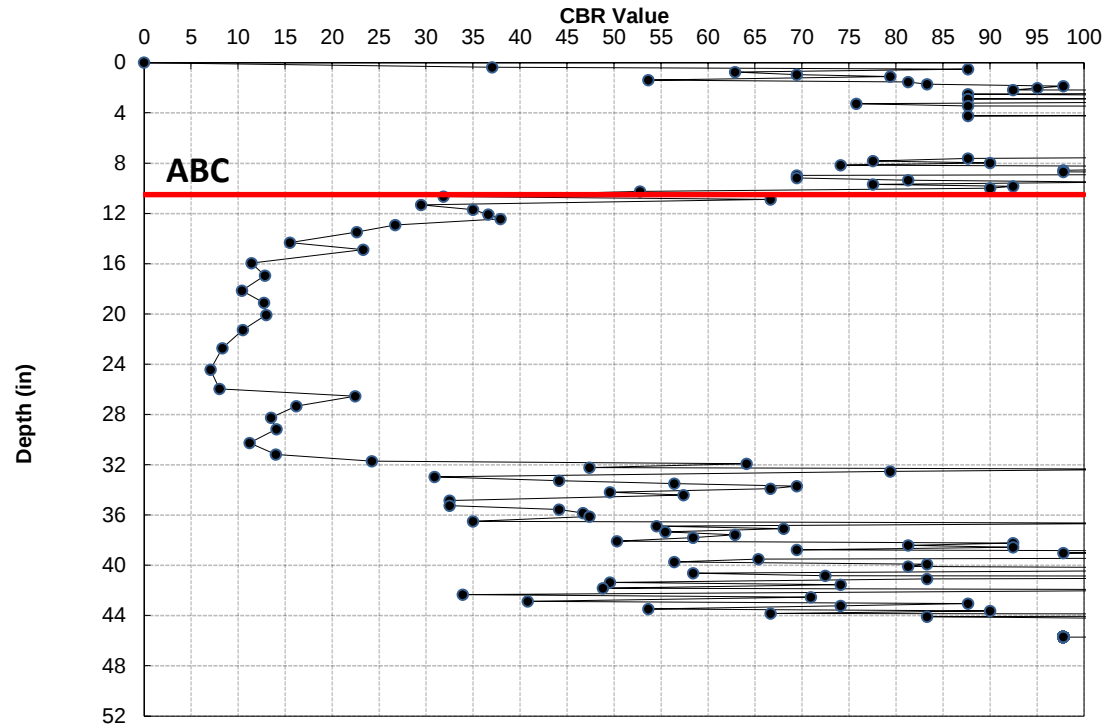
Sheet 21

C-1 LT PS

-Y1- Sta. 16+91 2.0 RT FW
Datum = ABC
DCP
12.0 Cut
08/15/24

Interval 0.0 to 10.7	
# of Values	82
Avg CBR	100+
Wghtd Avg.	100+
Max CBR	100+
Min CBR	31.8

Interval 10.7 to 45.7	
# of Values	110
Avg CBR	100+
Wghtd Avg.	42.5
Max CBR	100+
Min CBR	7.1



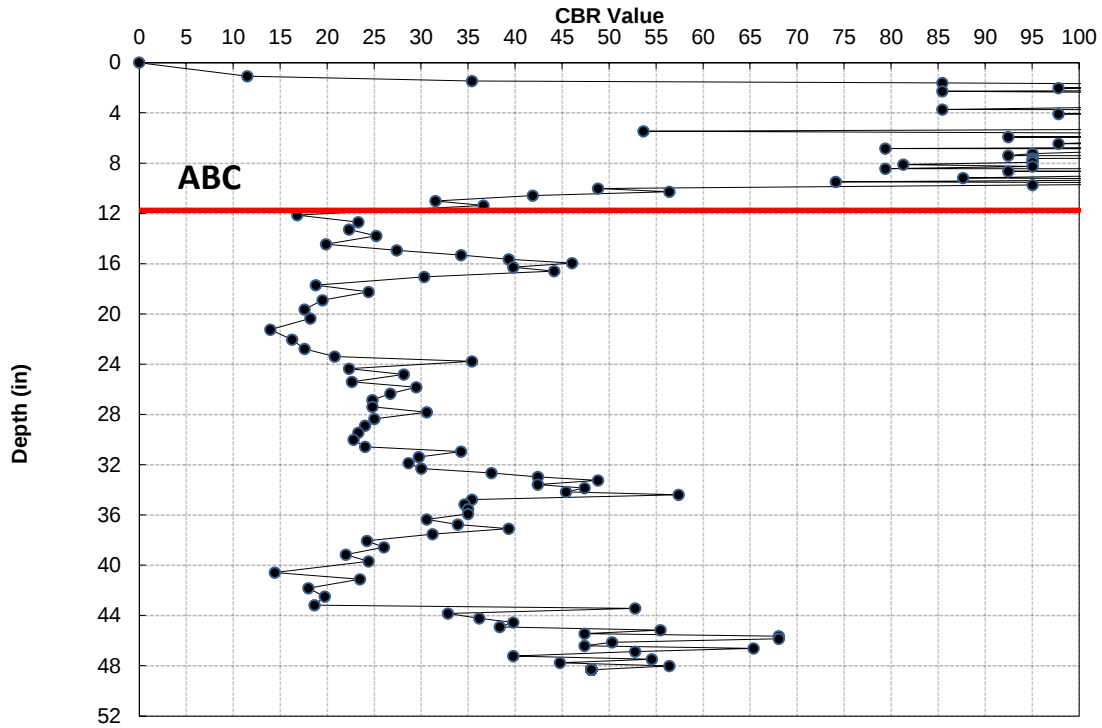
1

C-3 RT PS

-Y1- Sta. 16+91 2.0 RT FW
Datum = ABC
DCP
3.0 Cut
08/15/24

Interval 0.0 to 12.1	
# of Values	76
Avg CBR	100+
Wghtd Avg.	88.6
Max CBR	100+
Min CBR	11.5

Interval 12.1 to 48.3	
# of Values	80
Avg CBR	33.6
Wghtd Avg.	29.2
Max CBR	68.0
Min CBR	13.9



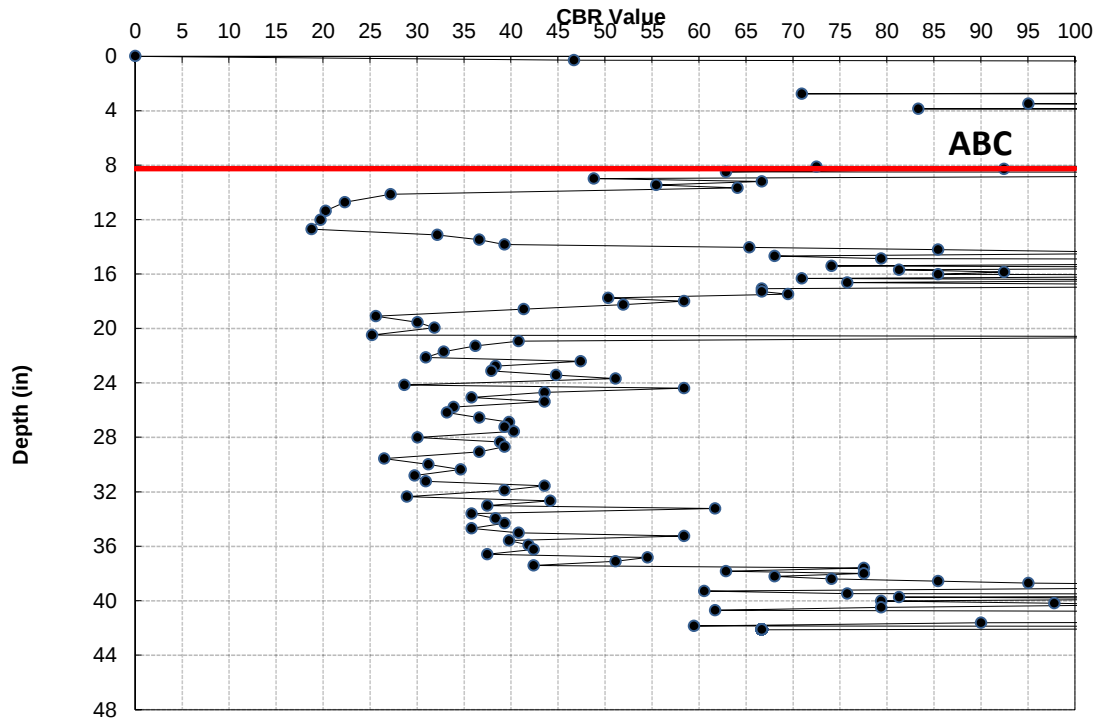
3

C-2 RT LN

-Y1- Sta. 16+91 2.7 LT FW
Datum = ABC
DCP
3.0 Cut
08/15/24

Interval 0.0 to 8.3	
# of Values	132
Avg CBR	100+
Wghtd Avg.	100+
Max CBR	100+
Min CBR	46.7

Interval 8.3 to 42.1	
# of Values	128
Avg CBR	73.3
Wghtd Avg.	51.8
Max CBR	100+
Min CBR	18.8



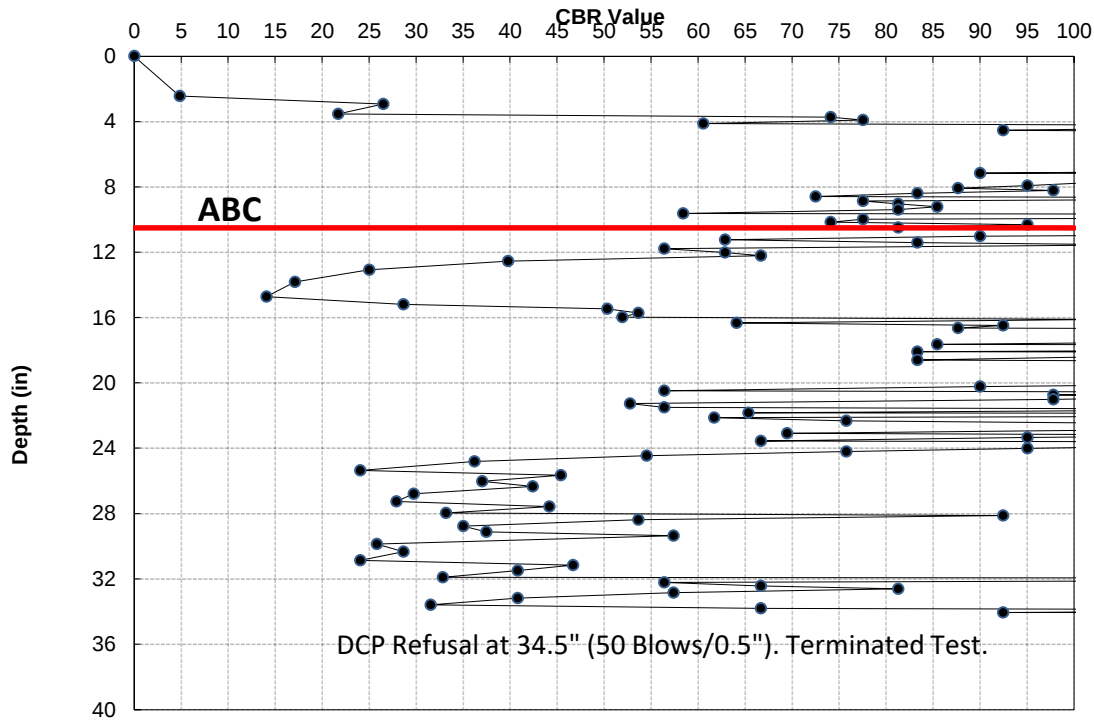
2

C-4 LT PS

-Y1- Sta. 24+91 1.5 RT FW
Datum = ABC
DCP
3.5 Fill
08/15/24

Interval 0.0 to 10.5	
# of Values	60
Avg CBR	100+
Wghtd Avg.	80.5
Max CBR	100+
Min CBR	4.8

Interval 10.5 to 34.5	
# of Values	160
Avg CBR	100+
Wghtd Avg.	94.8
Max CBR	100+
Min CBR	14.1



4



CONE PENETROMETER RESULTS
NCDOT, GEOTECHNICAL ENGINEERING UNIT

PROJECT NO.	48599.1.1
PROJECT ID	R-5963A
ROUTE	New Route from Chatham Parkway, US 15/US 501 South of Pittsboro to US 64 Business, Construct Roadway on New Location
COUNTY	Chatham

GEOLOGIST	T. Wenner
FIELD CREW	CG2 Exploration

FILE	DCP Graphs C-1- to C-16
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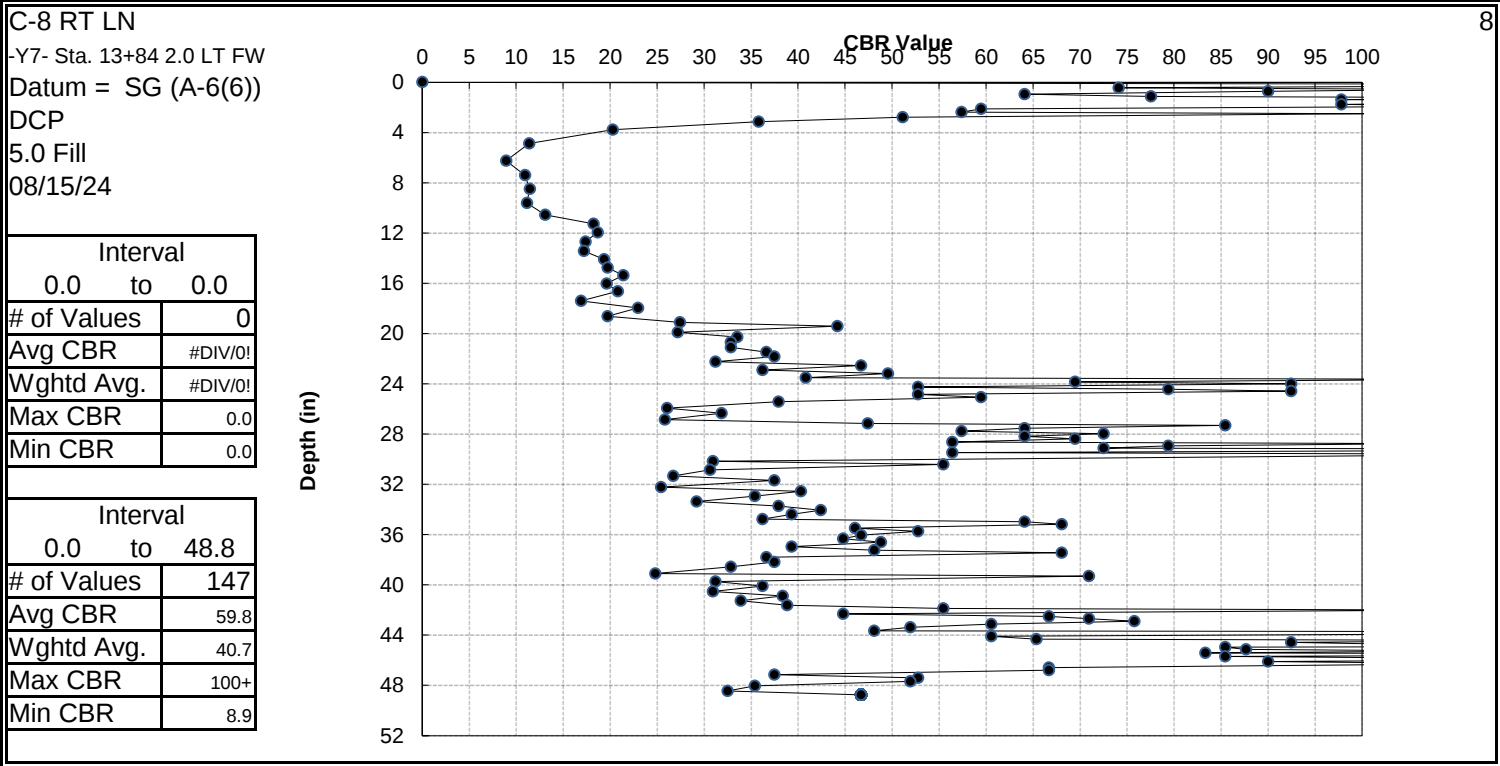
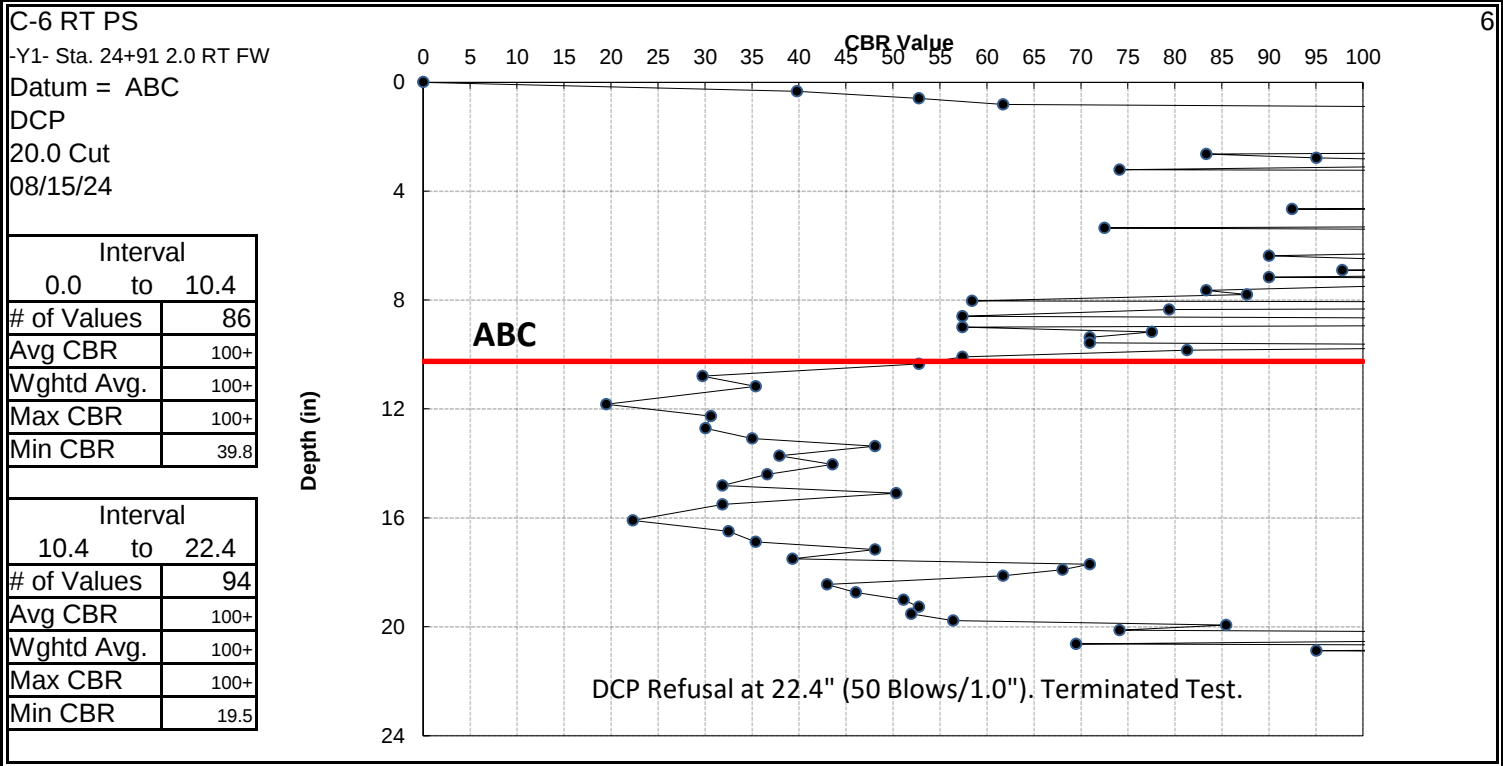
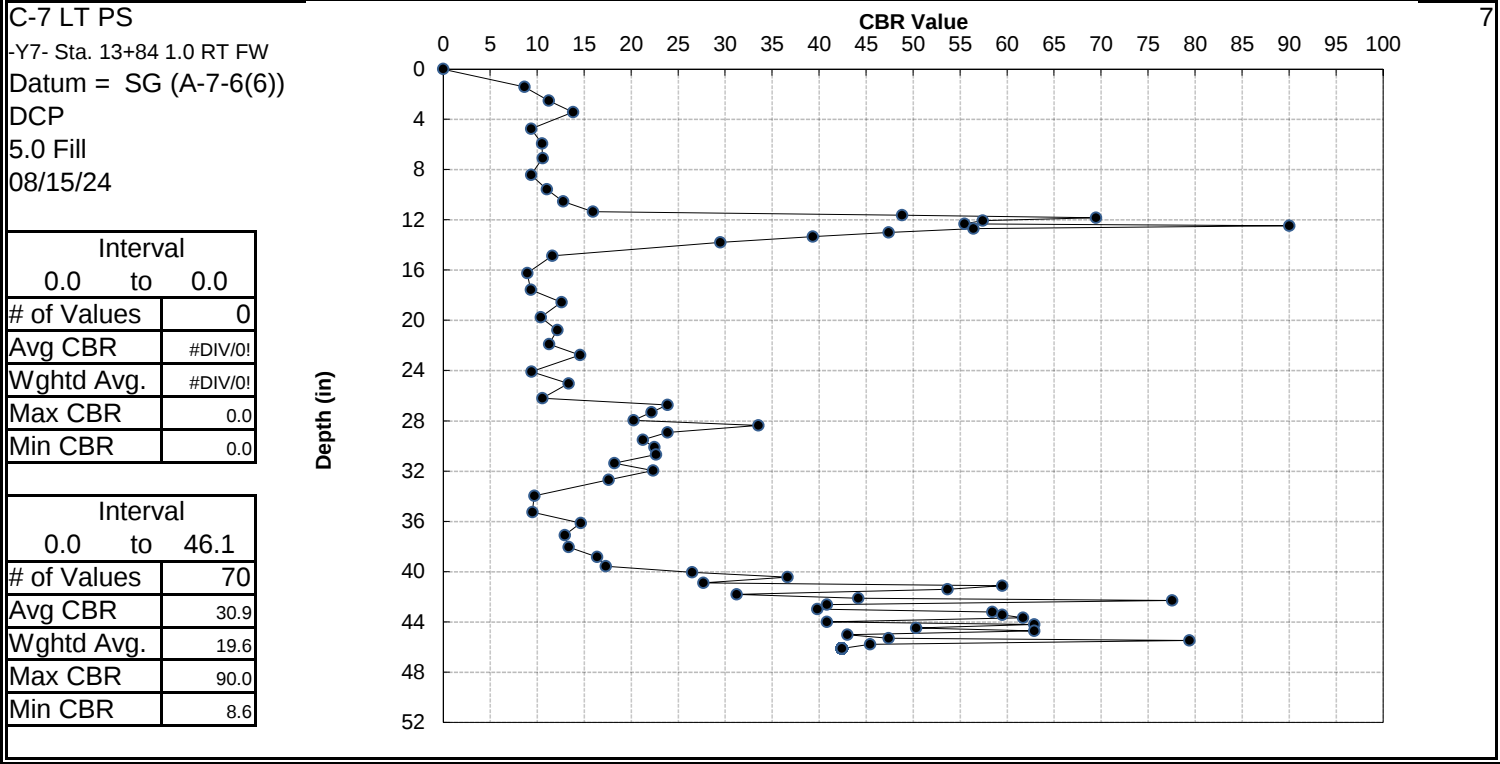
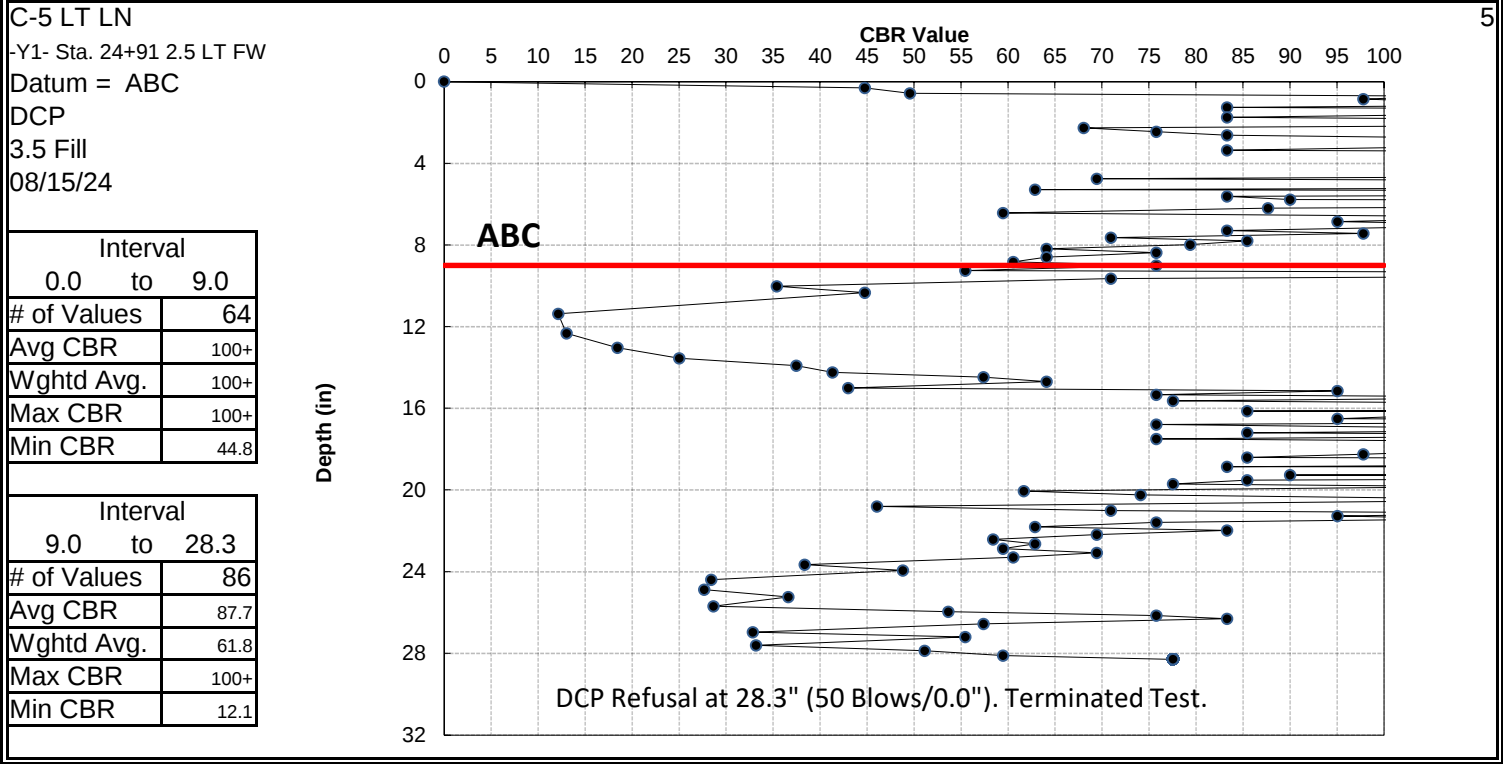
CONE PENETROMETER RESULTS
NCDOT, GEOTECHNICAL ENGINEERING UNIT

Sheet 22

PROJECT NO.	48599.1.1
PROJECT ID	R-5963A
ROUTE	New Route from Chatham Parkway, US 15/US 501 South of Pittsboro to US 64 Business, Construct Roadway on New Location
COUNTY	Chatham

GEOLOGIST	T. Wenner
FIELD CREW	CG2 Exploration

FILE	DCP Graphs C-1- to C-16
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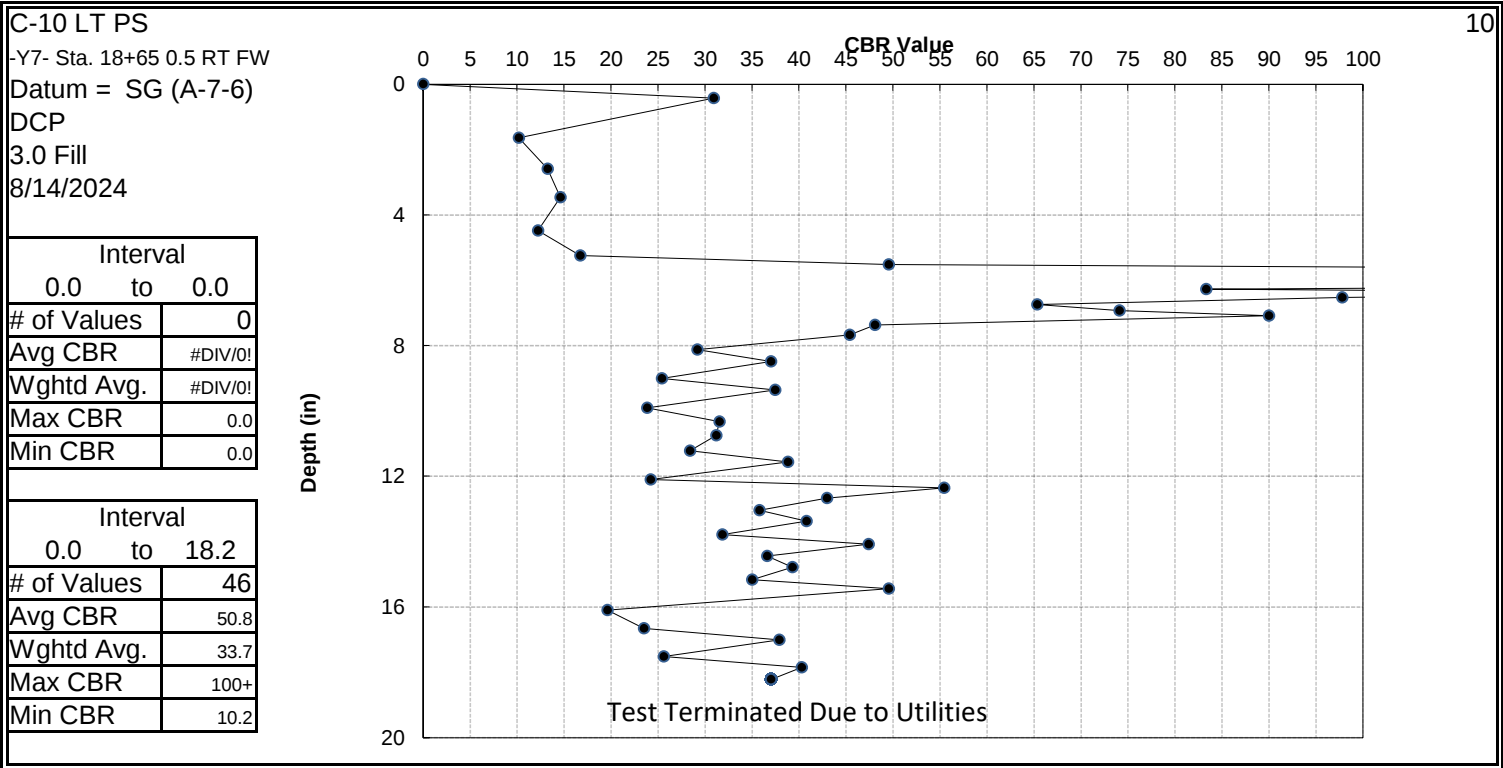
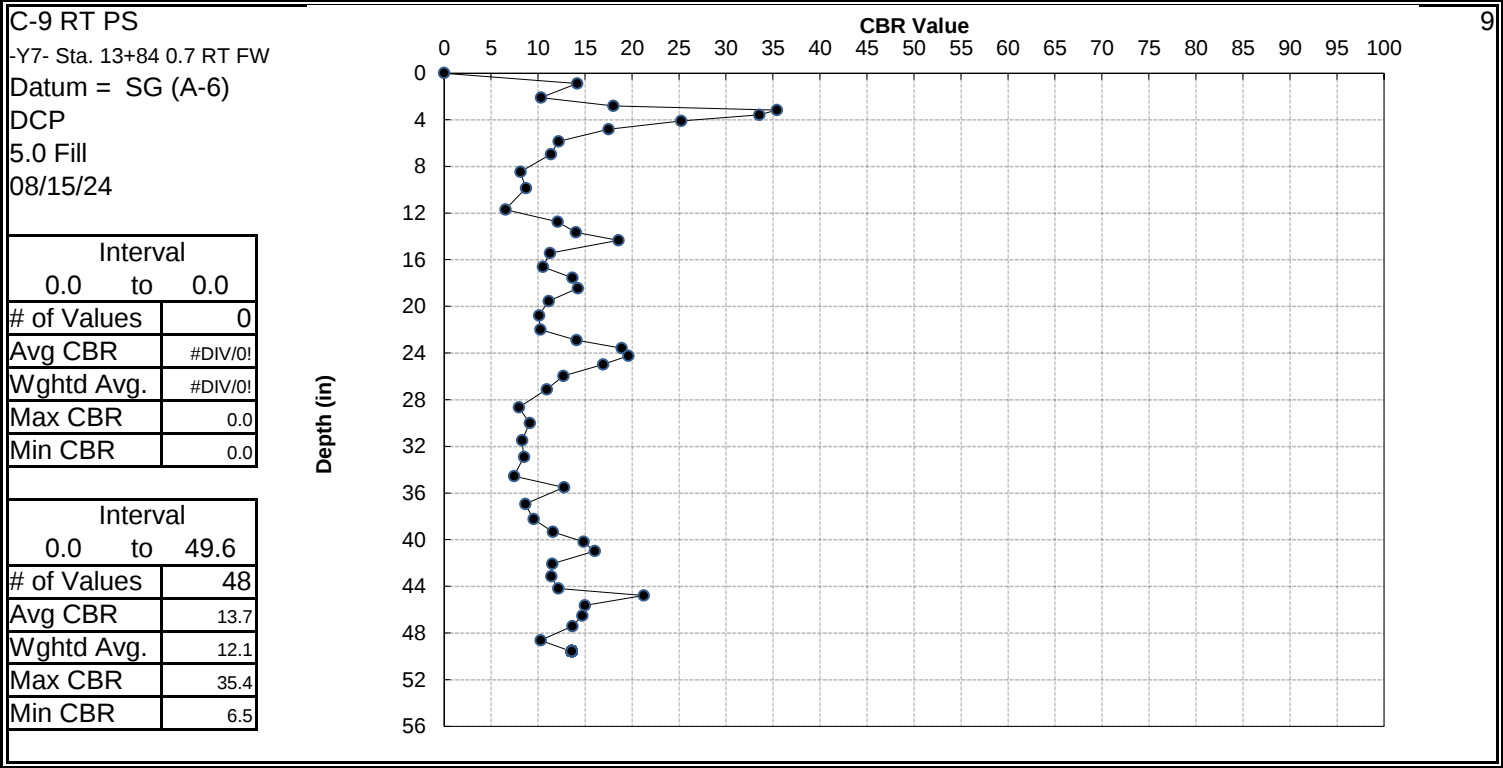


CONE PENETROMETER RESULTS
NCDOT, GEOTECHNICAL ENGINEERING UNIT

PROJECT NO.	48599.1.1
PROJECT ID	R-5963A
ROUTE	New Route from Chatham Parkway, US 15/US 501 South of Pittsboro to US 64 Business, Construct Roadway on New Location
COUNTY	Chatham

GEOLOGIST	T. Wenner
FIELD CREW	CG2 Exploration

FILE	DCP Graphs C-1- to C-16
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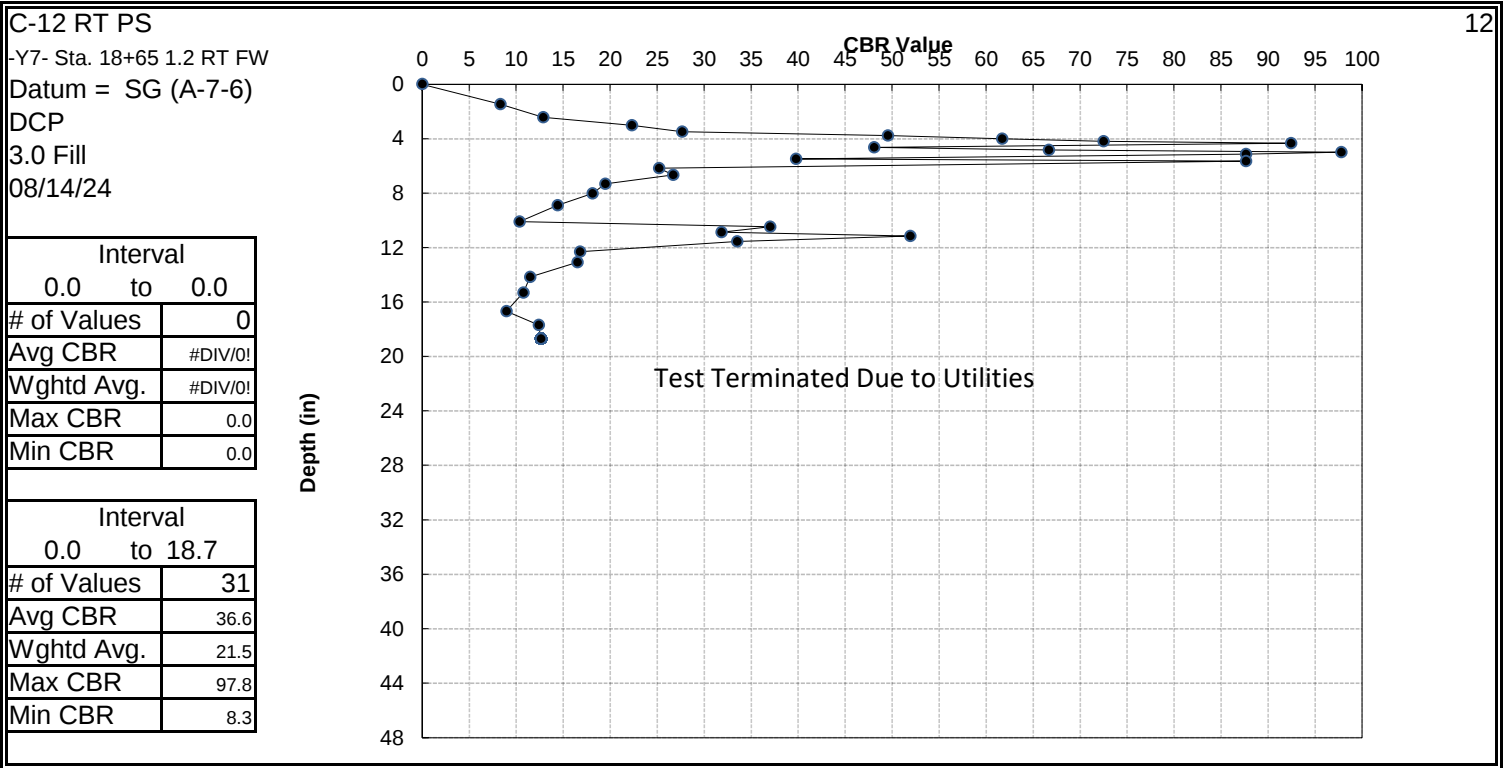
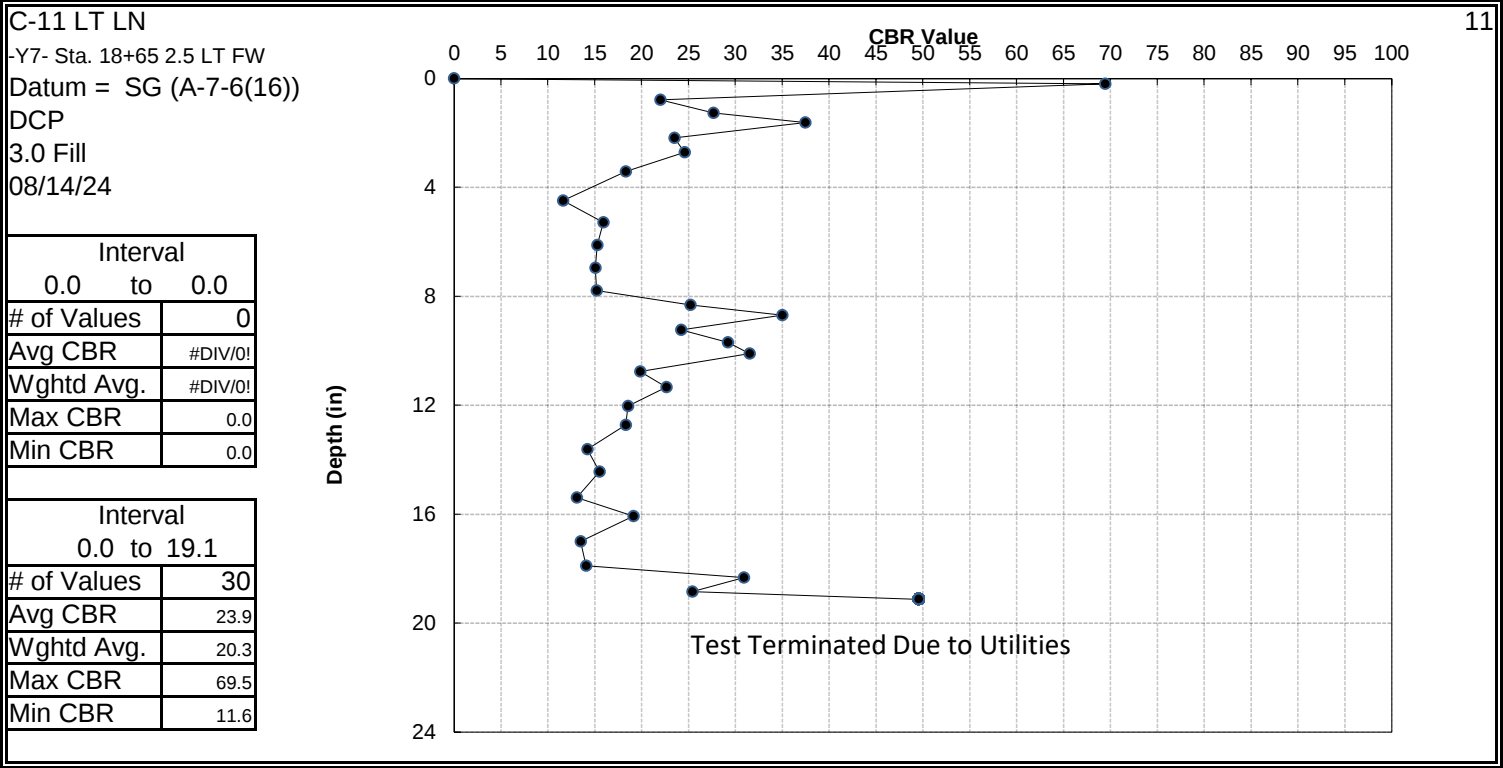


CONE PENETROMETER RESULTS
NCDOT, GEOTECHNICAL ENGINEERING UNIT

PROJECT NO.	48599.1.1
PROJECT ID	R-5963A
ROUTE	New Route from Chatham Parkway, US 15/US 501 South of Pittsboro to US 64 Business, Construct Roadway on New Location
COUNTY	Chatham

GEOLOGIST	T. Wenner
FIELD CREW	CG2 Exploration

FILE	DCP Graphs C-1- to C-16
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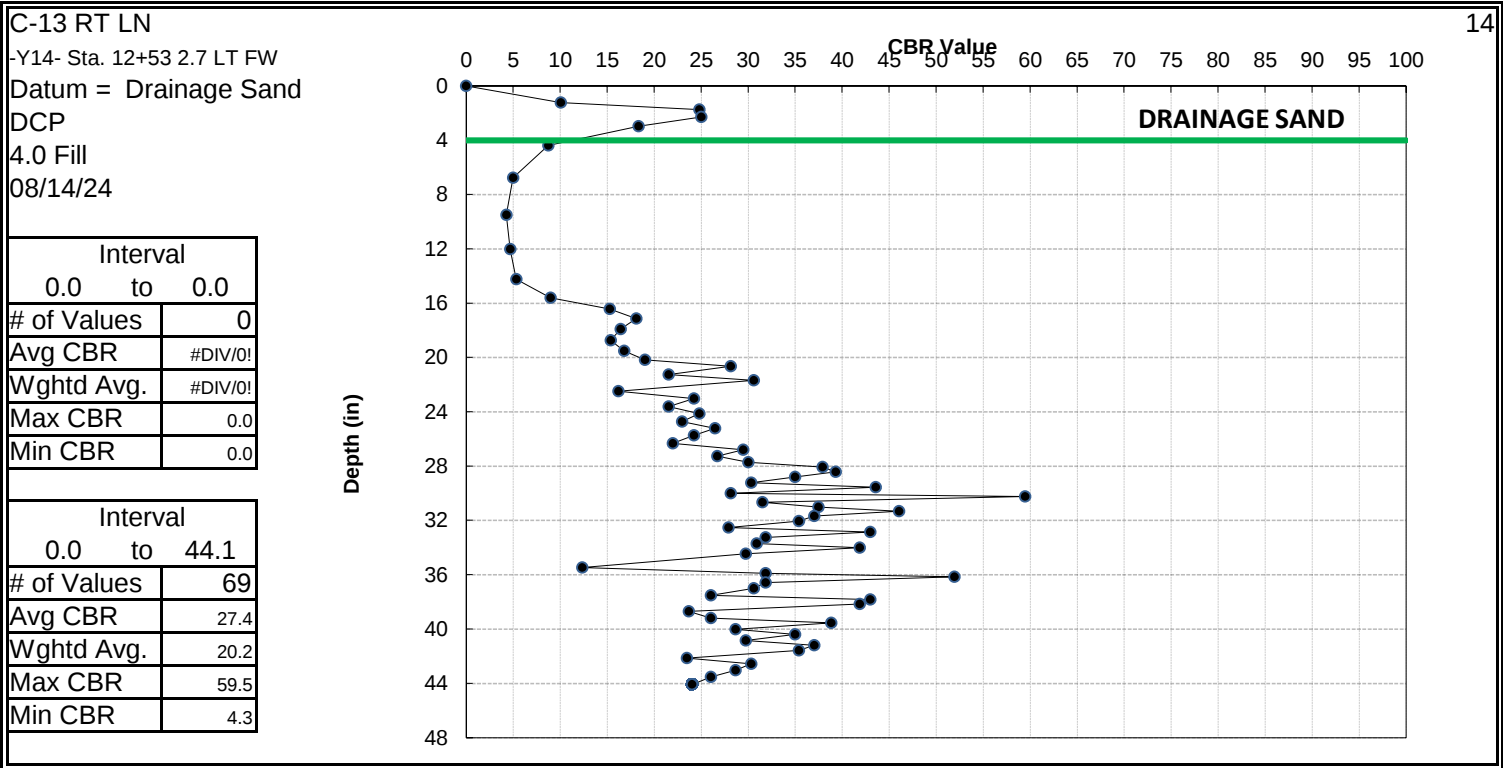
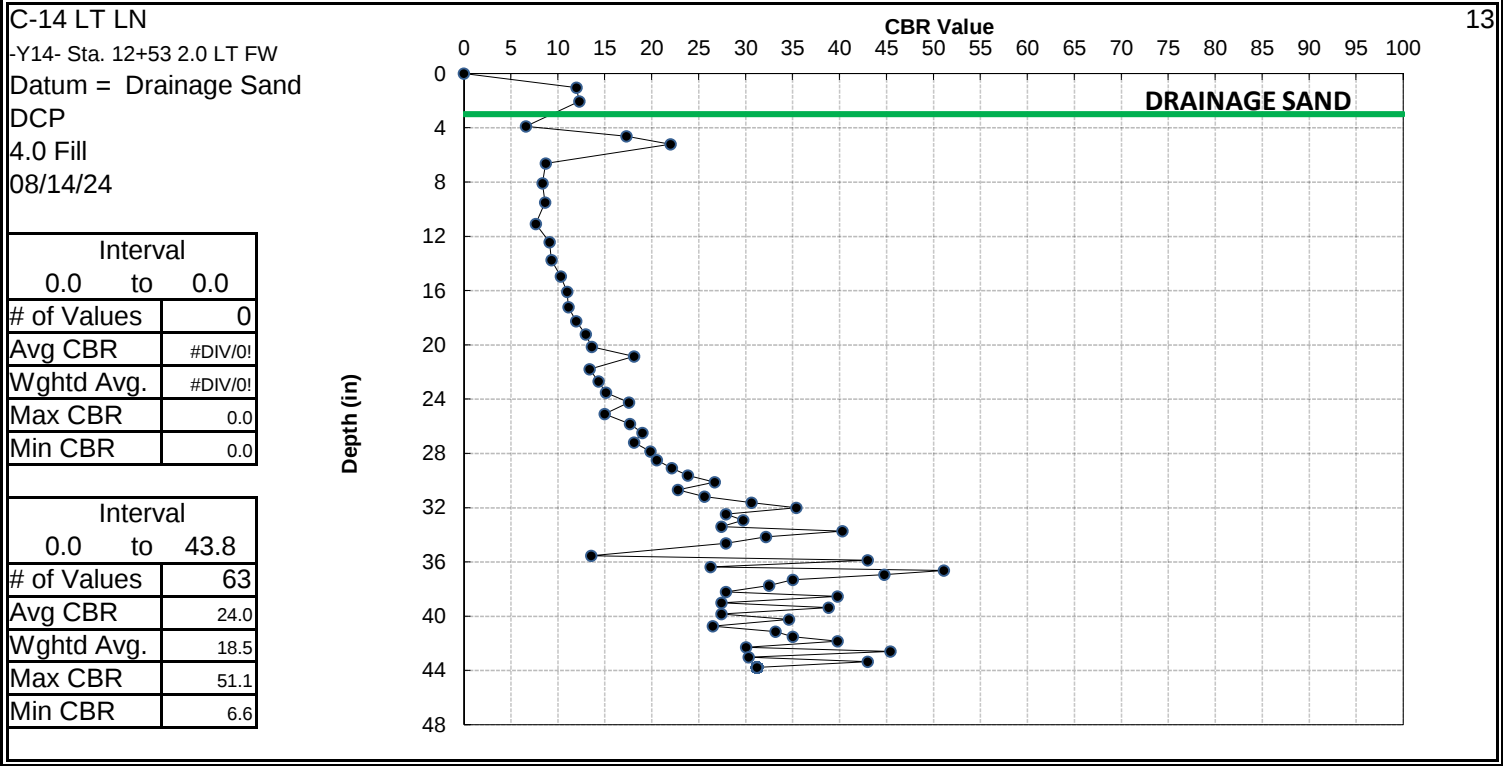


CONE PENETROMETER RESULTS
NCDOT, GEOTECHNICAL ENGINEERING UNIT

PROJECT NO.	48599.1.1
PROJECT ID	R-5963A
ROUTE	New Route from Chatham Parkway, US 15/US 501 South of Pittsboro to US 64 Business, Construct Roadway on New Location
COUNTY	Chatham

GEOLOGIST	T. Wenner
FIELD CREW	CG2 Exploration

FILE	DCP Graphs C-1- to C-16
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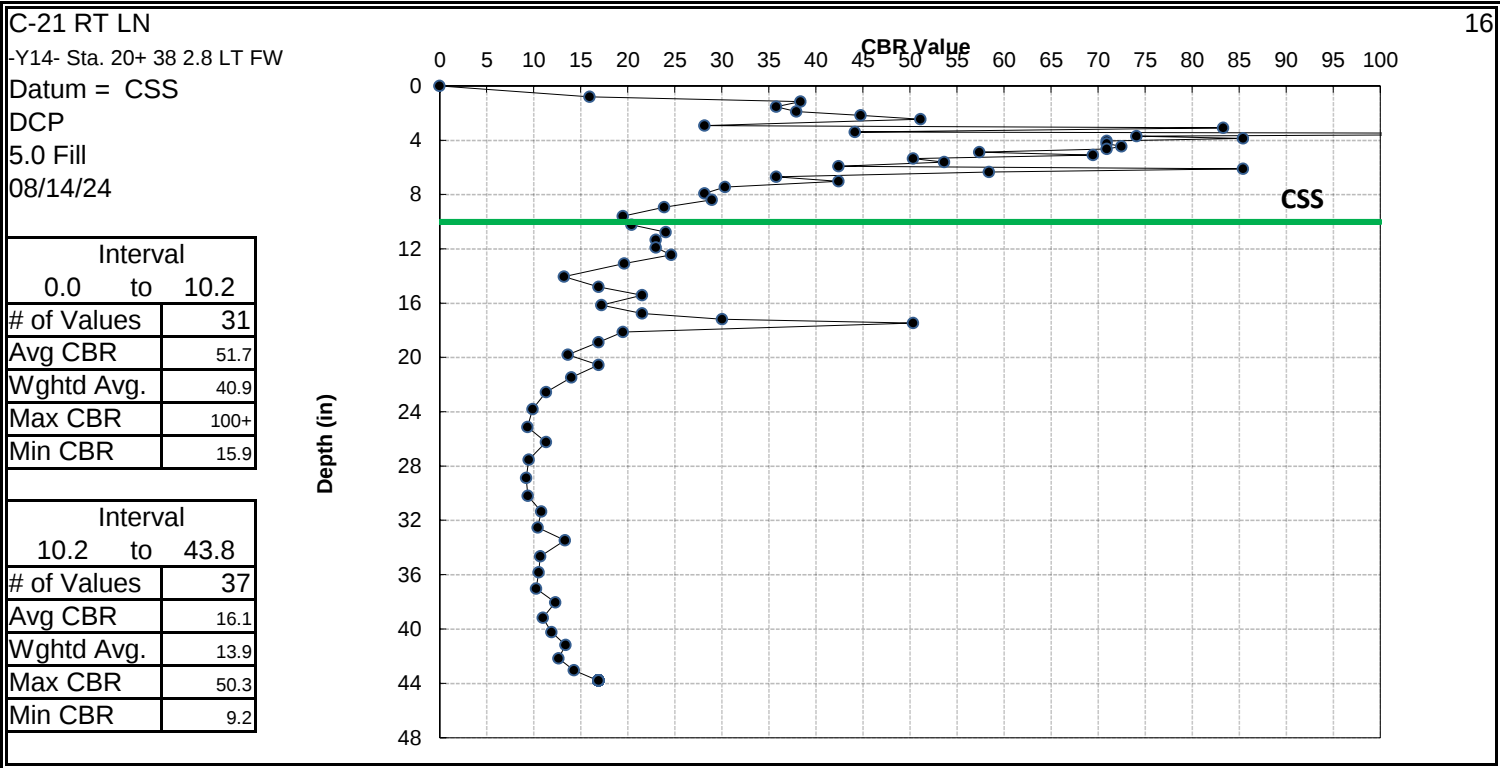
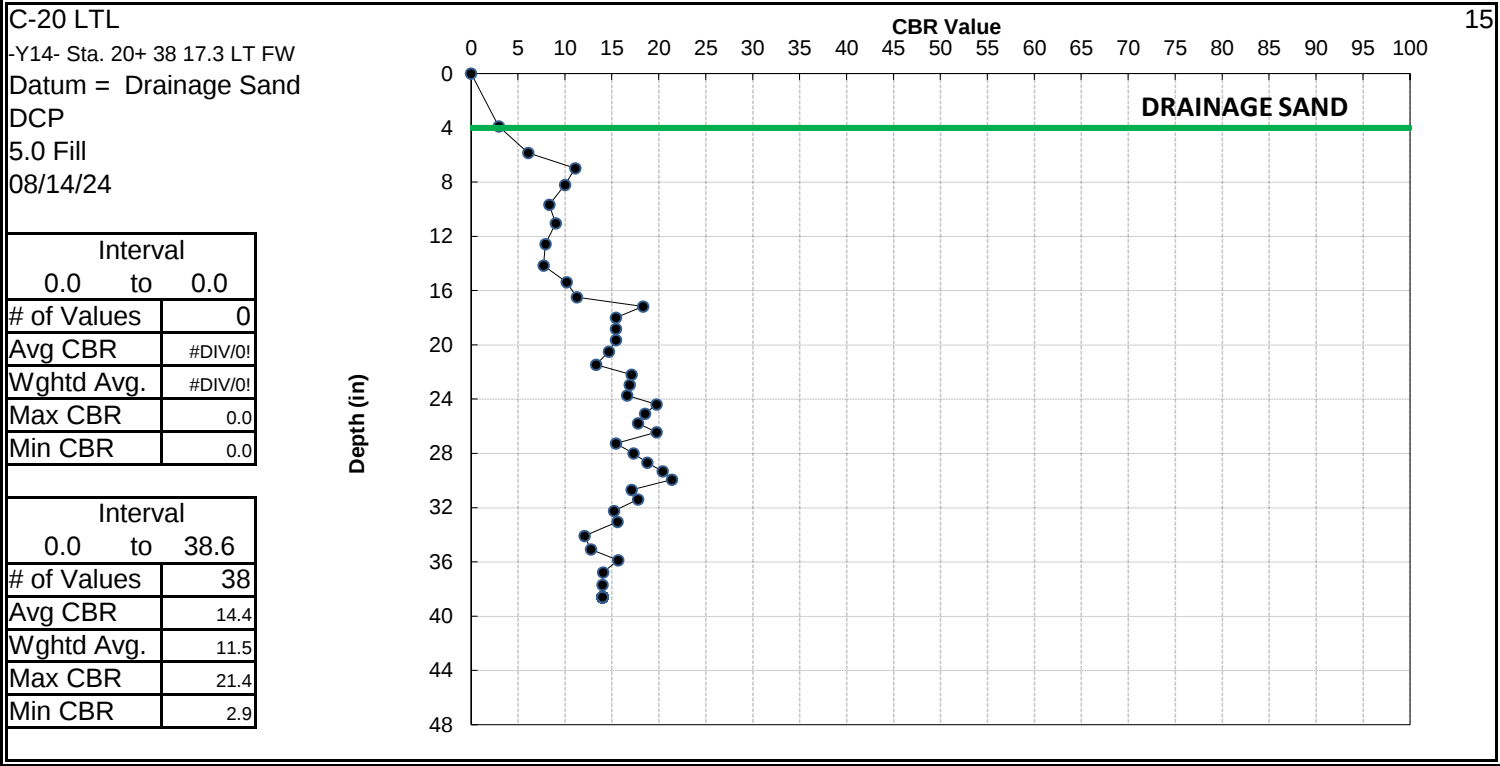
CONE PENETROMETER RESULTS
NCDOT, GEOTECHNICAL ENGINEERING UNIT

Sheet 24

PROJECT NO.	48599.1.1
PROJECT ID	R-5963A
ROUTE	New Route from Chatham Parkway, US 15/US 501 South of Pittsboro to US 64 Business, Construct Roadway on New Location
COUNTY	Chatham

GEOLOGIST	T. Wenner
FIELD CREW	CG2 Exploration

FILE	DCP Graphs C-1- to C-16
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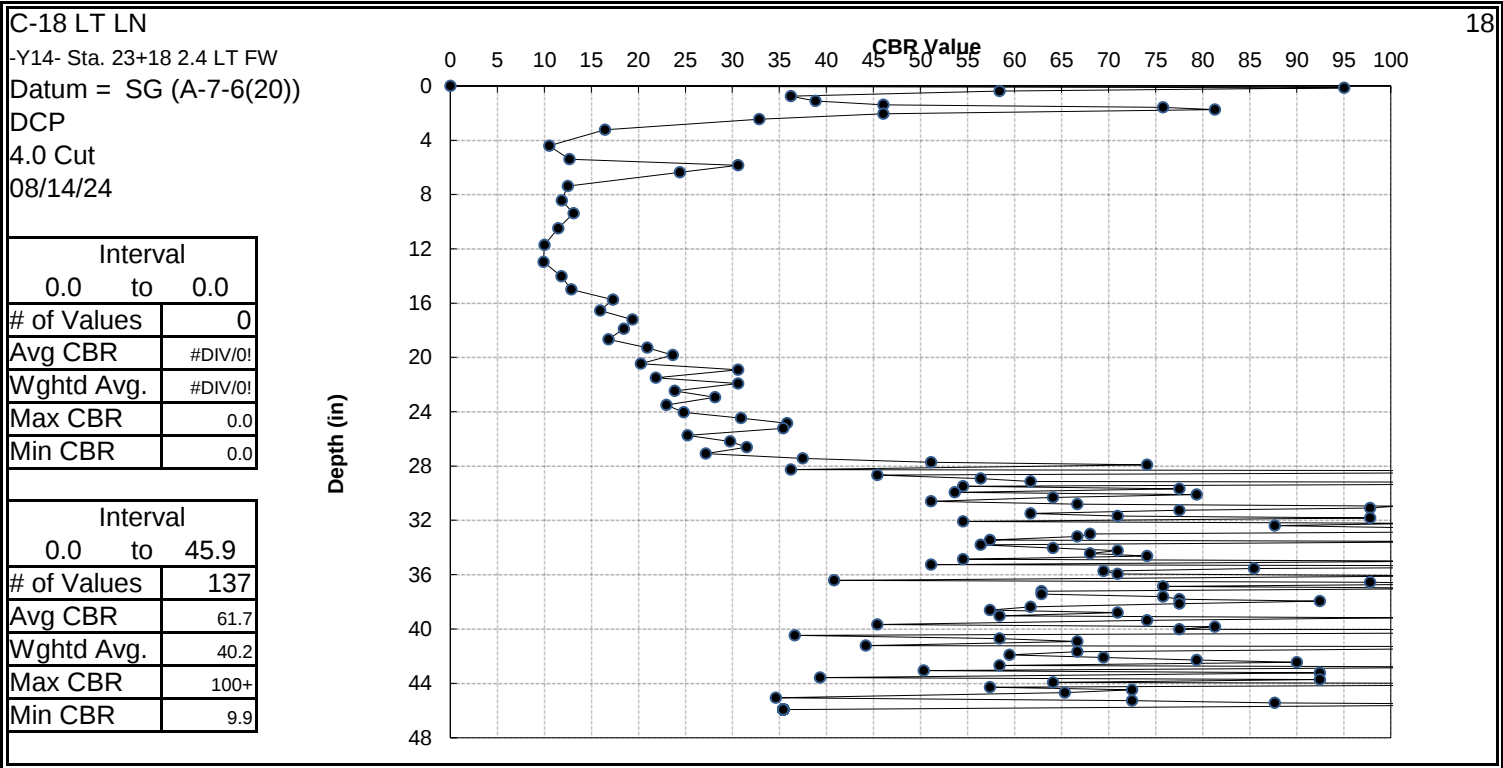
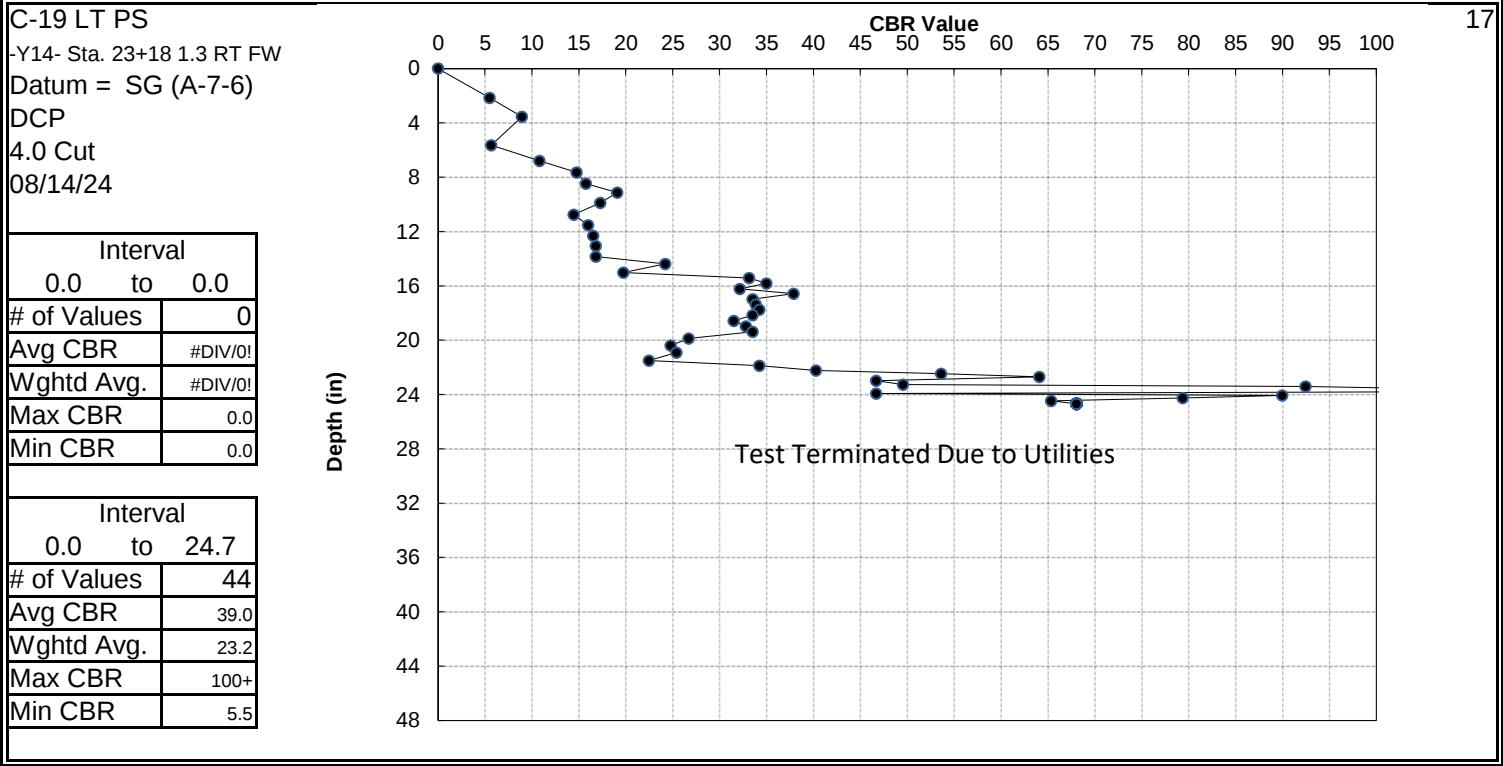


CONE PENETROMETER RESULTS
NCDOT, GEOTECHNICAL ENGINEERING UNIT

PROJECT NO.	48599.1.1
PROJECT ID	R-5963A
ROUTE	New Route from Chatham Parkway, US 15/US 501 South of Pittsboro to US 64 Business, Construct Roadway on New Location
COUNTY	Chatham

GEOLOGIST	T. Wenner
FIELD CREW	CG2 Exploration

FILE	DCP Graphs C-1- to C-16
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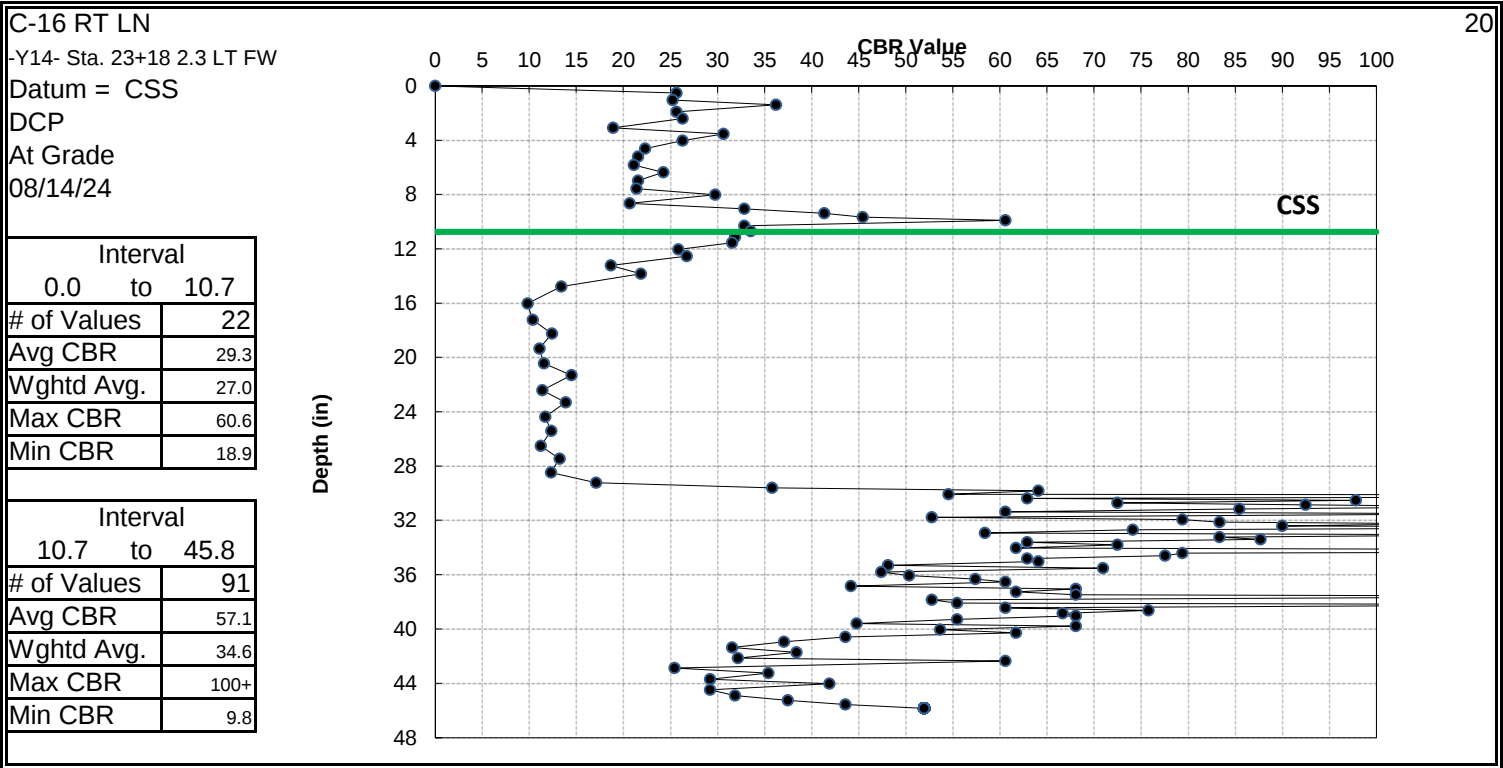
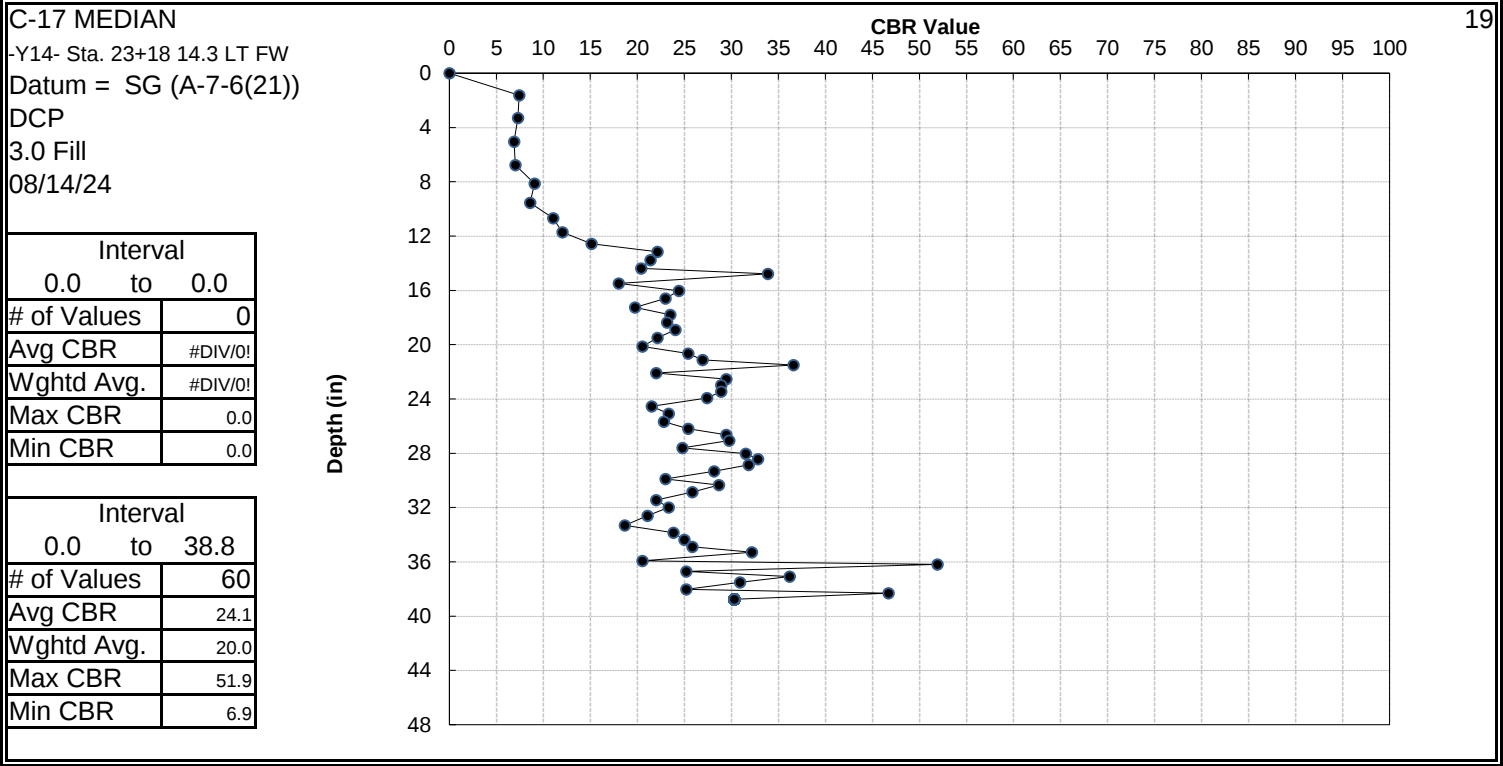
CONE PENETROMETER RESULTS
NCDOT, GEOTECHNICAL ENGINEERING UNIT

Sheet 25

PROJECT NO.	48599.1.1
PROJECT ID	R-5963A
ROUTE	New Route from Chatham Parkway, US 15/US 501 South of Pittsboro to US 64 Business, Construct Roadway on New Location
COUNTY	Chatham

GEOLOGIST	T. Wenner
FIELD CREW	CG2 Exploration

FILE	DCP Graphs C-1- to C-16
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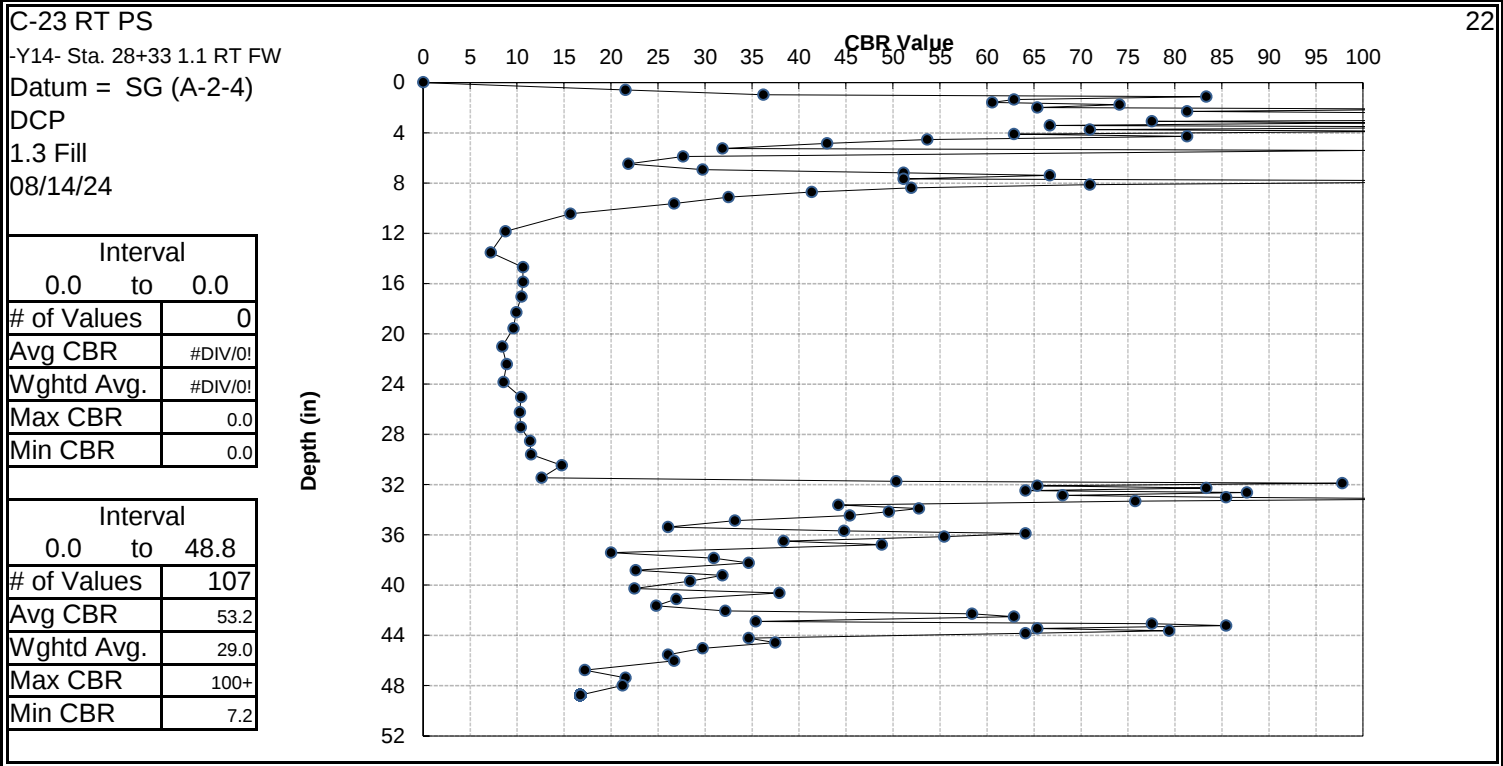
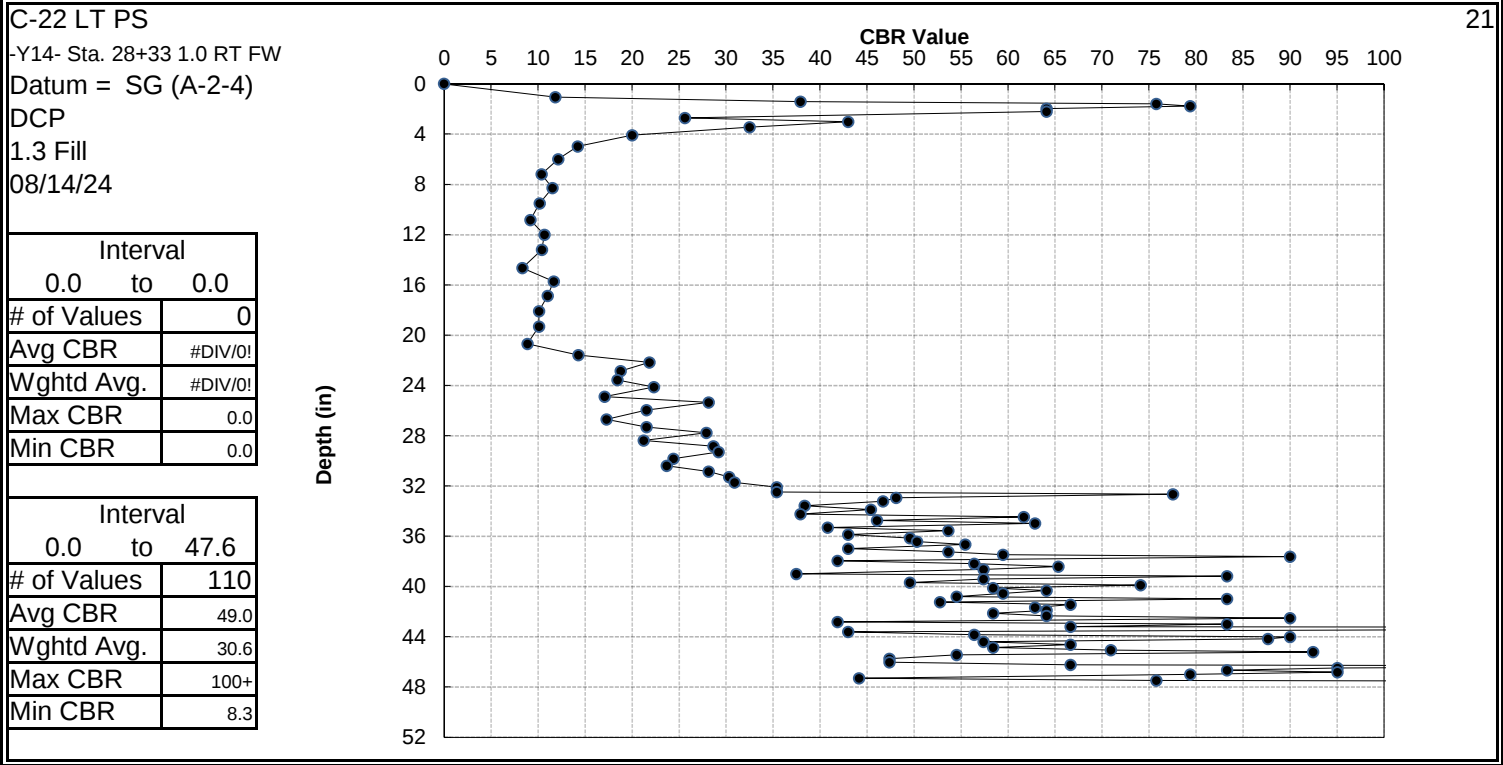


CONE PENETROMETER RESULTS
NCDOT, GEOTECHNICAL ENGINEERING UNIT

PROJECT NO.	48599.1.1
PROJECT ID	R-5963A
ROUTE	New Route from Chatham Parkway, US 15/US 501 South of Pittsboro to US 64 Business, Construct Roadway on New Location
COUNTY	Chatham

GEOLOGIST	T. Wenner
FIELD CREW	CG2 Exploration

FILE	DCP Graphs C-22- to C-15
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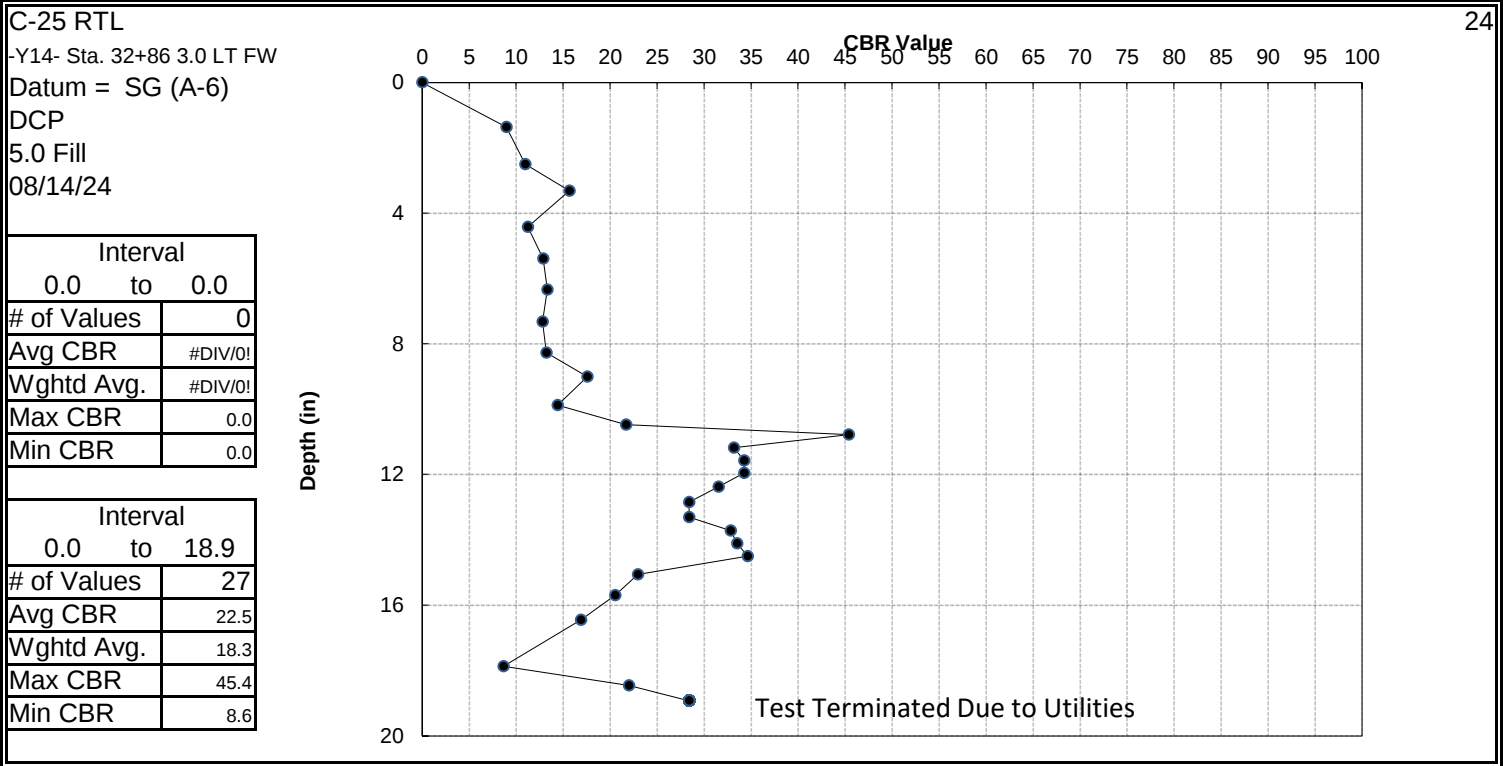
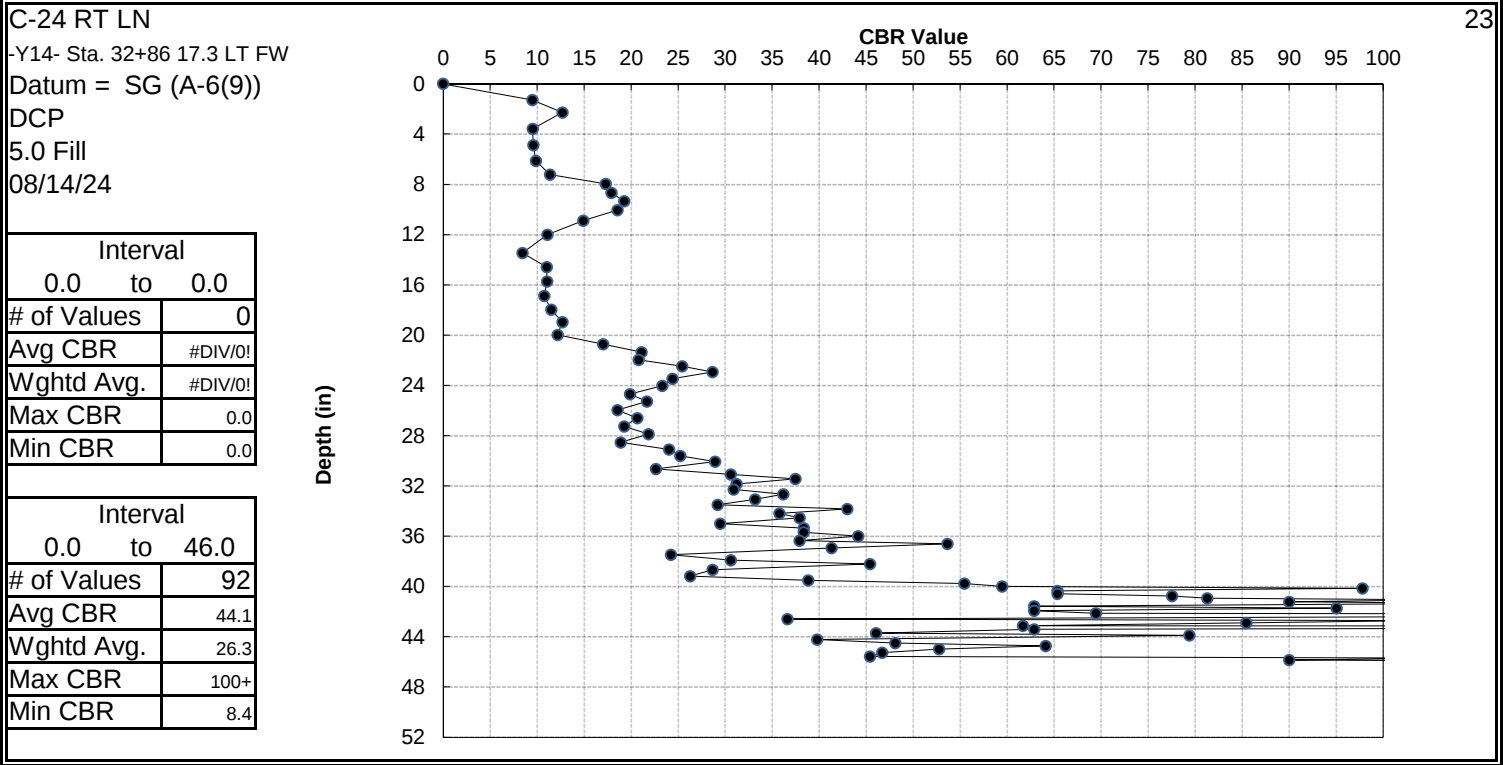


CONE PENETROMETER RESULTS
NCDOT, GEOTECHNICAL ENGINEERING UNIT

PROJECT NO.	48599.1.1
PROJECT ID	R-5963A
ROUTE	New Route from Chatham Parkway, US 15/US 501 South of Pittsboro to US 64 Business, Construct Roadway on New Location
COUNTY	Chatham

GEOLOGIST	T. Wenner
FIELD CREW	CG2 Exploration

FILE	DCP Graphs C-22- to C-15
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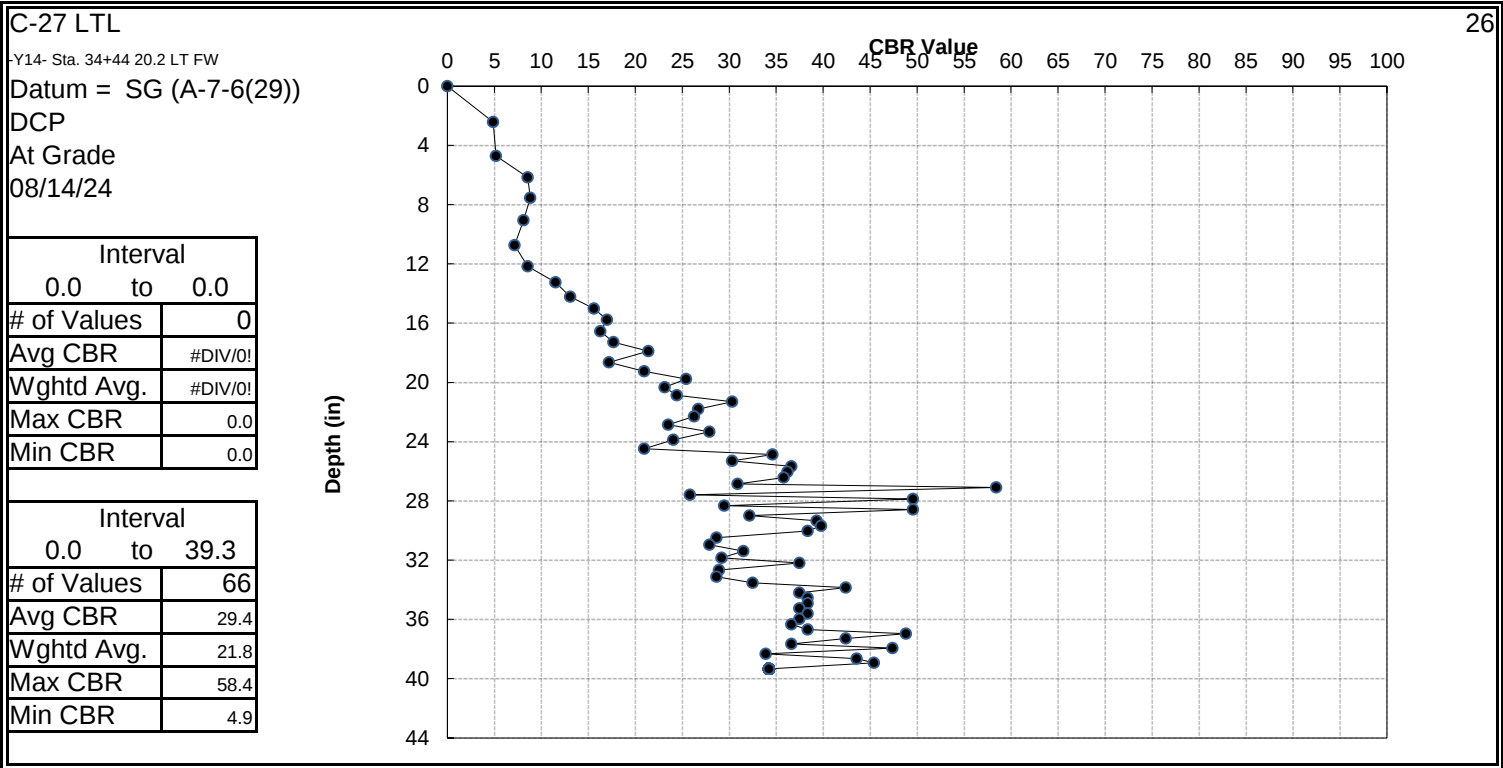
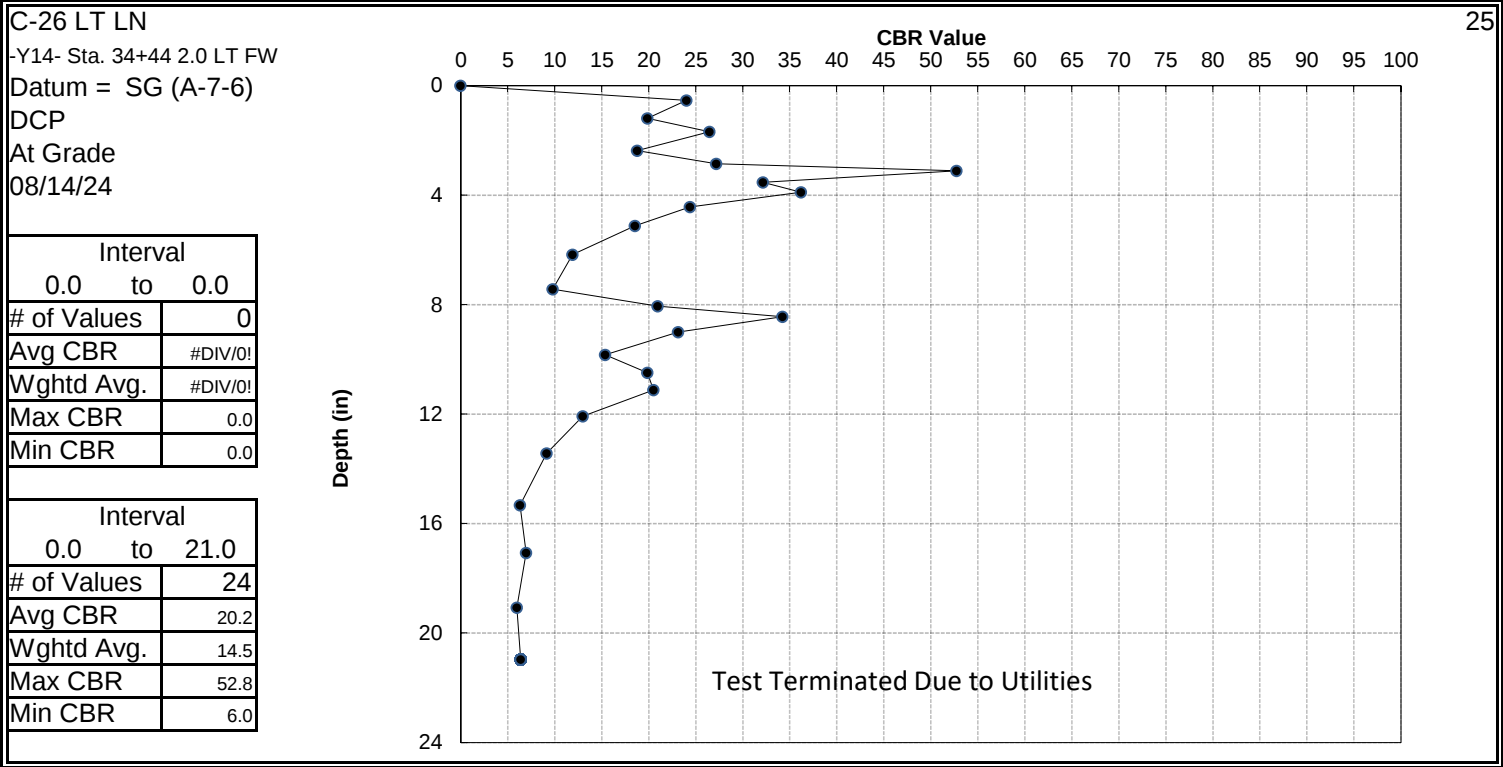


CONE PENETROMETER RESULTS
NCDOT, GEOTECHNICAL ENGINEERING UNIT

PROJECT NO.	48599.1.1
PROJECT ID	R-5963A
ROUTE	New Route from Chatham Parkway, US 15/US 501 South of Pittsboro to US 64 Business, Construct Roadway on New Location
COUNTY	Chatham

GEOLOGIST	T. Wenner
FIELD CREW	CG2 Exploration

FILE	DCP Graphs C-22- to C-15
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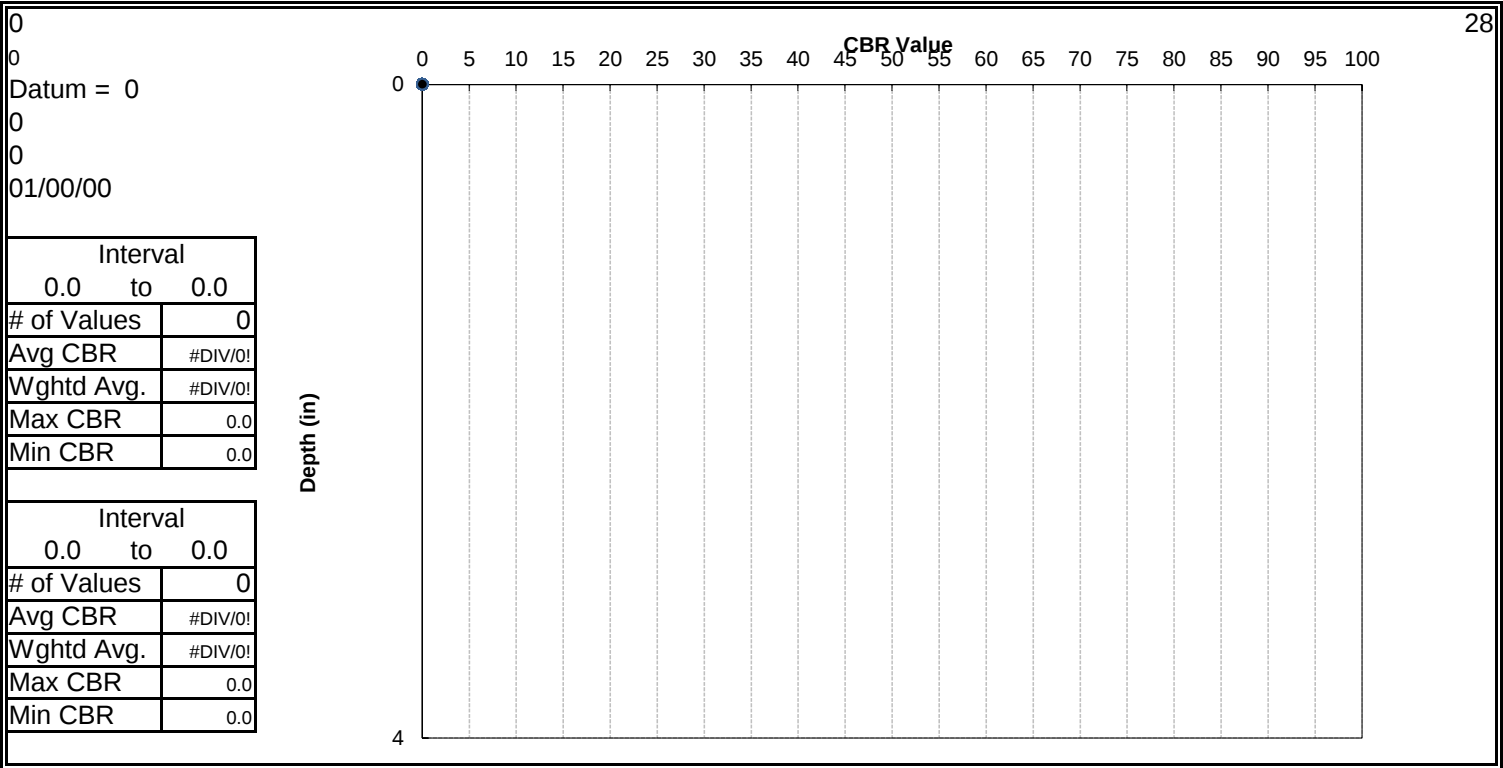
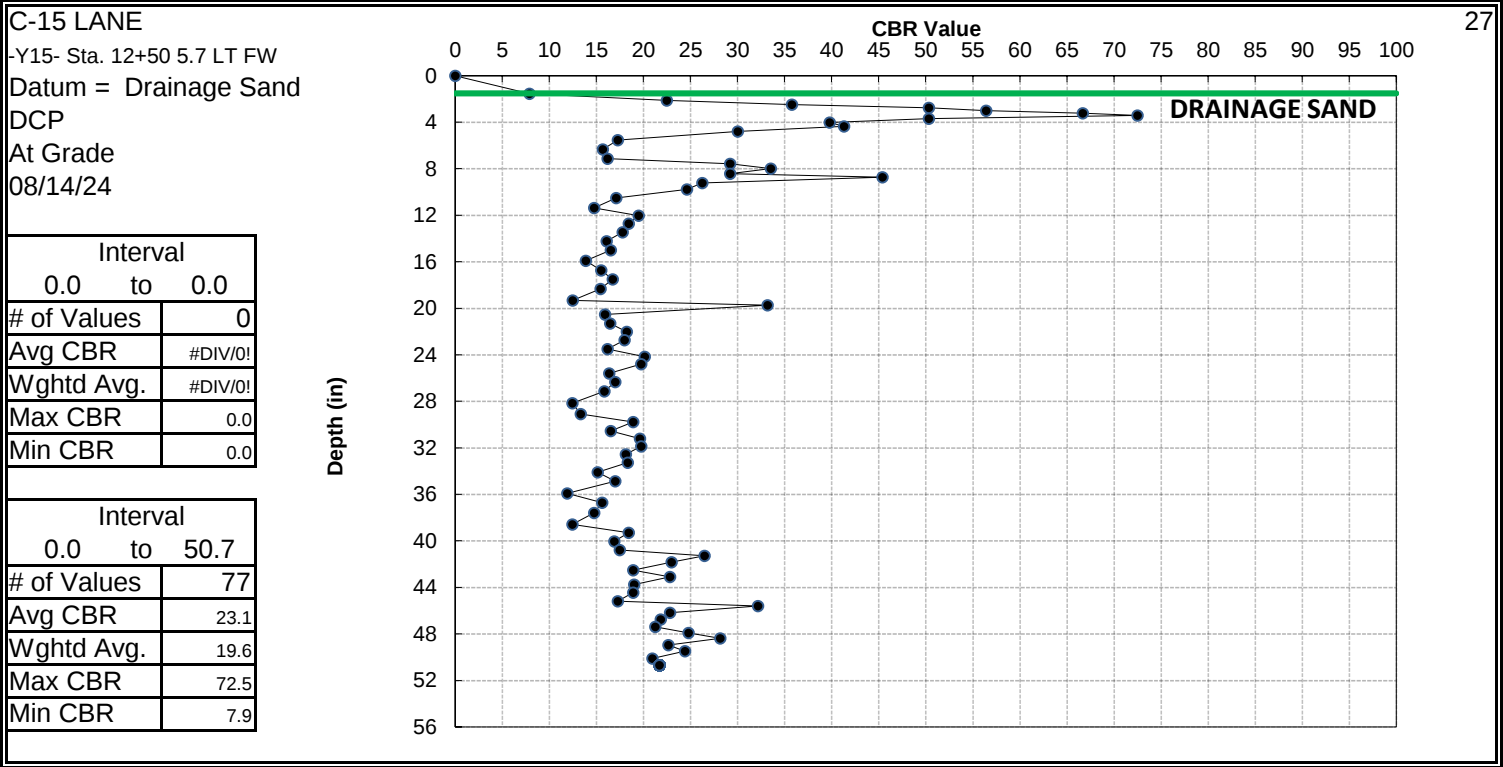
CONE PENETROMETER RESULTS
NCDOT, GEOTECHNICAL ENGINEERING UNIT

Sheet 27

PROJECT NO.	48599.1.1
PROJECT ID	R-5963A
ROUTE	New Route from Chatham Parkway, US 15/US 501 South of Pittsboro to US 64 Business, Construct Roadway on New Location
COUNTY	Chatham

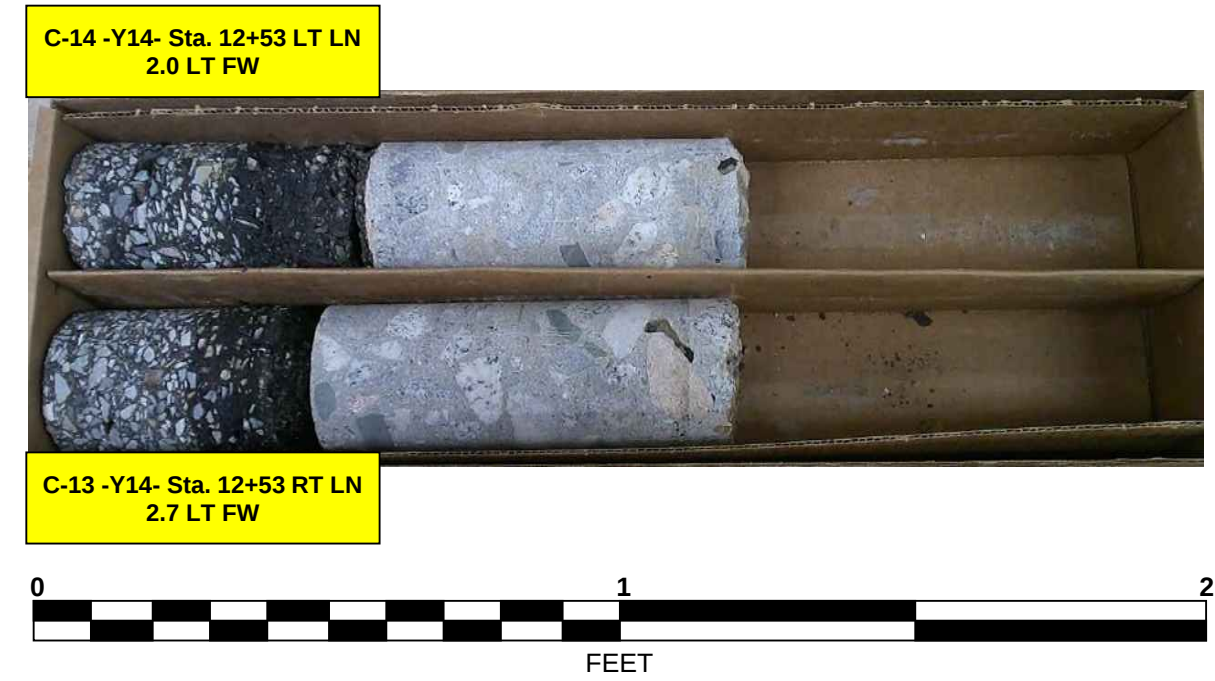
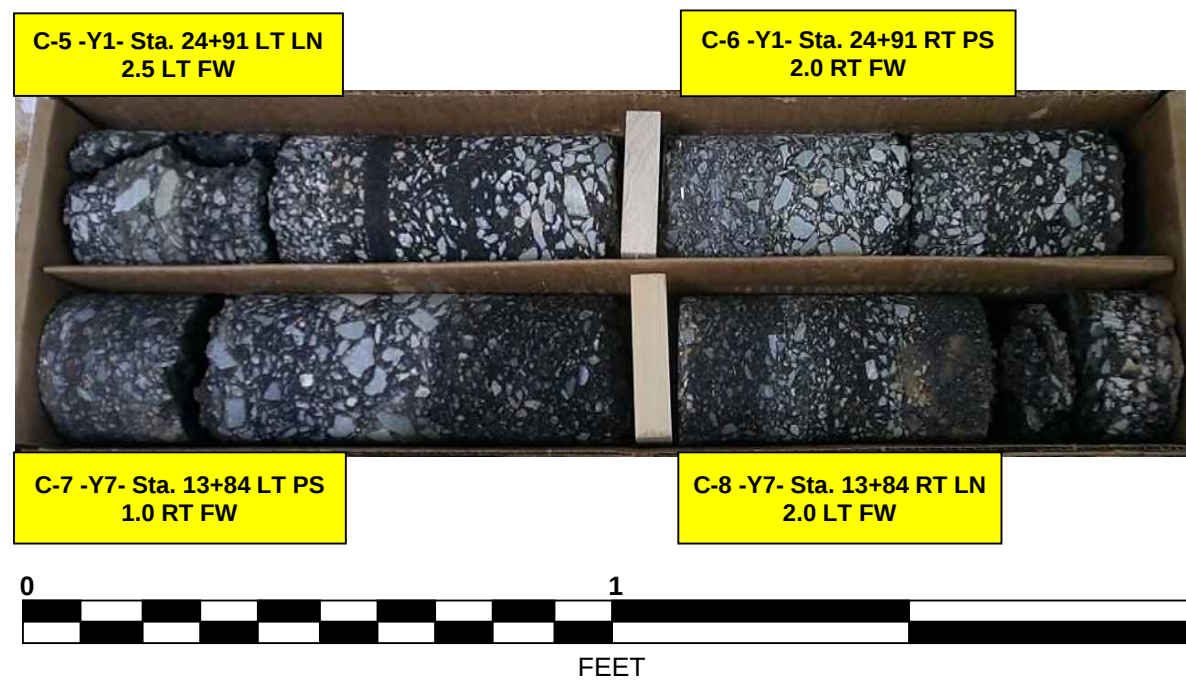
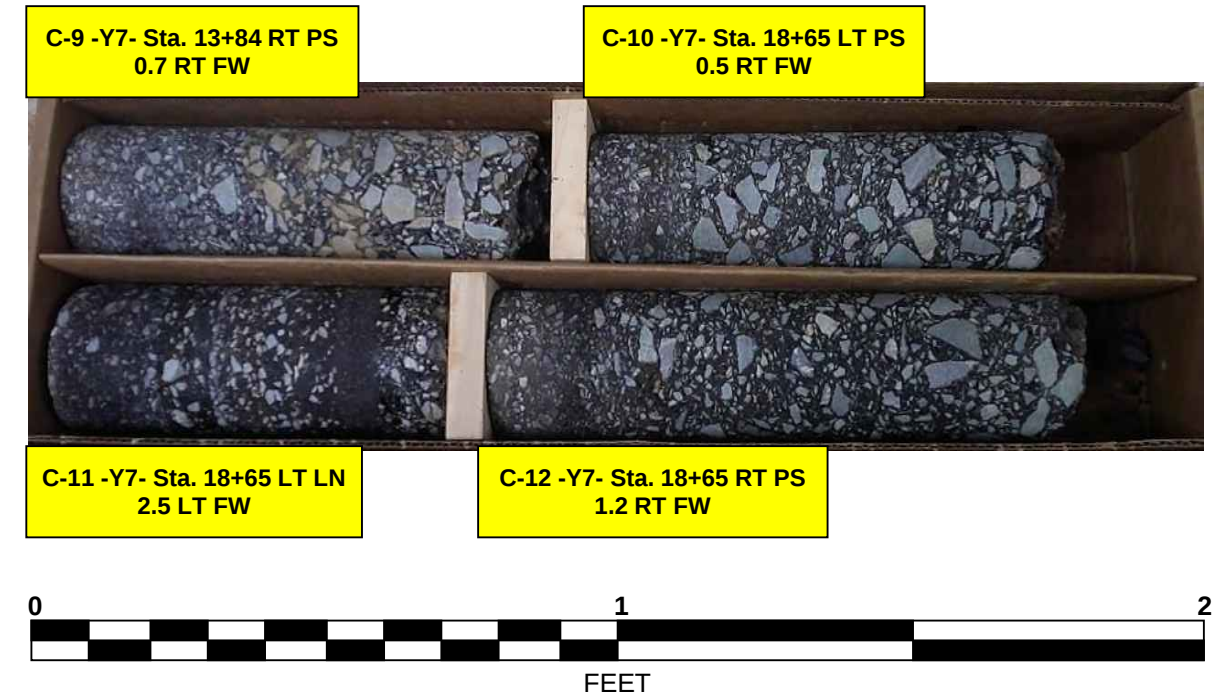
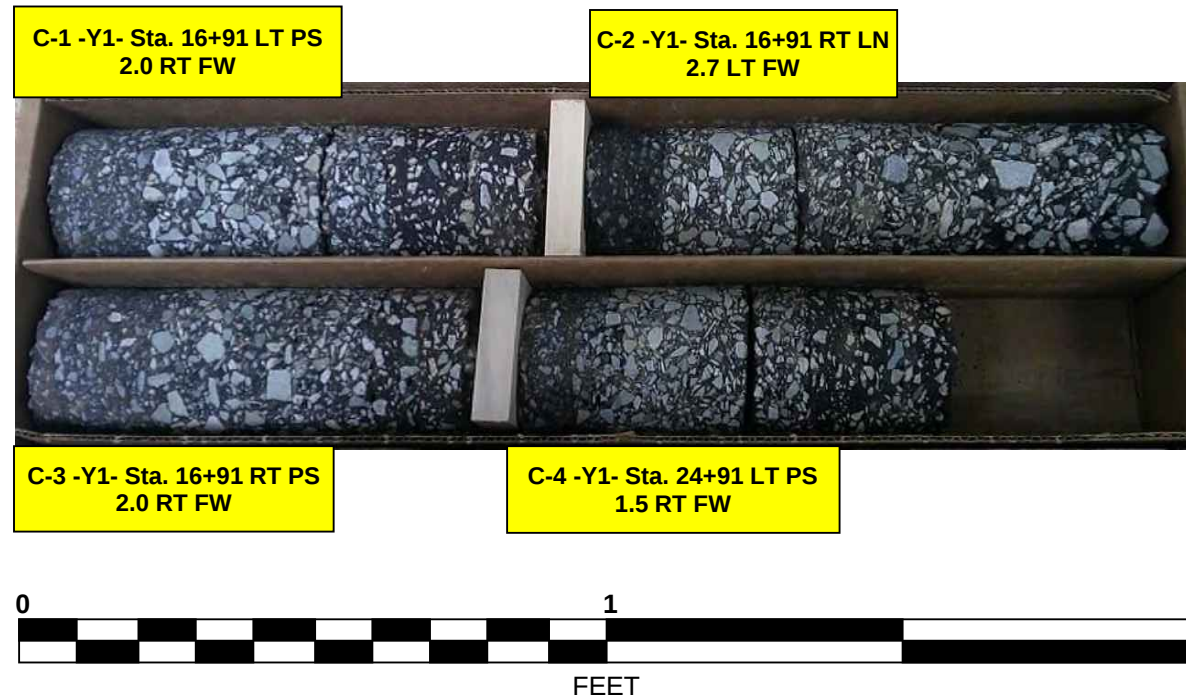
GEOLOGIST	T. Wenner
FIELD CREW	CG2 Exploration

FILE	DCP Graphs C-22- to C-15
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R-5963A: New Route from Chatham Parkway, US 15/US 501 South of Pittsboro to US 64 Business, Construct Roadway on New Location

Pavement Core Photographs



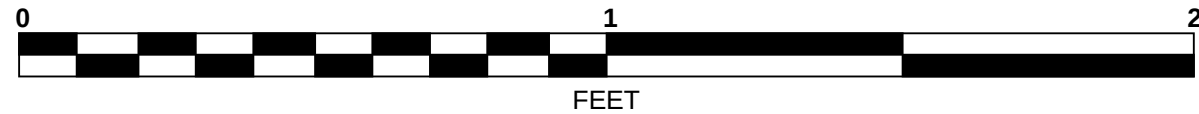
R-5963A: New Route from Chatham Parkway, US 15/US 501 South of Pittsboro to US 64 Business, Construct Roadway on New Location

Pavement Core Photographs

**C-20 -Y14- Sta. 20+ 38 LTL
17.3 LT FW**



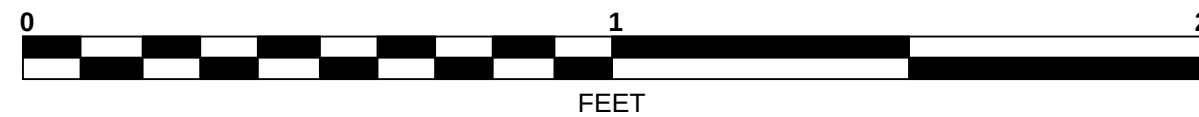
**C-21 -Y14- Sta. 20+38 RT LN
2.8 LT FW**



**C-19 -Y14- Sta. 23+18 LT PS
1.3 RT FW**



**C-18 -Y14- Sta. 23+18 LT LN
2.4 LT FW**

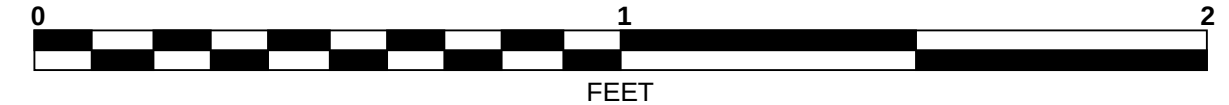


**C-17 -Y14- Sta. 23+18 MEDIAN
14.3 LT FW**



**C-16 -Y14- Sta. 23+18 RT LN
2.3 LT FW**

**C-22 -Y14- Sta. 28+33 LT PS
1.0 RT FW**



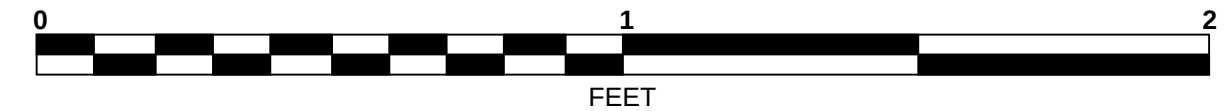
**C-23 -Y14- Sta. 28+33 RT PS
1.1 RT FW**

**C-24 -Y14- Sta. 32+86 RT LN
17.3 LT FW**



**C-25 -Y14- Sta. 32+86 RTL
3.0 LT FW**

**C-26 -Y14- Sta. 34+44 LT LN
2.0 LT FW**



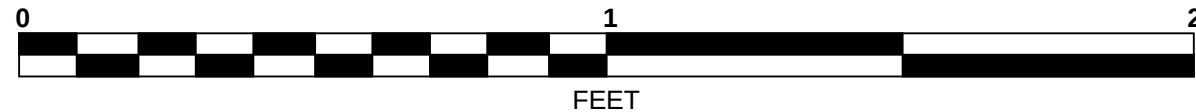
R-5963A: New Route from Chatham Parkway, US 15/US 501 South of Pittsboro to US 64 Business, Construct Roadway on New Location

Pavement Core Photographs

**C-27 -Y14- Sta. 34+44 LTL
20.2 LT FW**



**C-15 -Y15- Sta. 12+50 LANE
5.7 LT FW**



ALIGNMENT	STATION	ABC (in)	LAYER THICKNESS (in)	LAYER	LIFT(S)	REMARKS
-Y1-	C-1 Sta. 16+91 LT PS 2.0 RT FW	10.00	2.00	S	1-2	Low Severity Oxidation, Low Severity Stripping, with few very small voids, FEA
	5.00		I	3	Delamination between lifts 2-3, Low Severity Oxidation, Low Severity Stripping, with few small to medium voids, FEA	
	10.50" Asphalt		3.50	S	2	Low to Moderate Severity Oxidation, Low Severity Stripping, with few very small to small voids, FEA
-Y1-	C-2 Sta. 16+91 RT LN 2.0 RT LN	8.25	1.50	S	1	Low Severity Oxidation, Low Severity Stripping, with few very small voids, FEA
	5.25		I	2	Delamination between lifts 1-2, Low Severity Oxidation, Low Severity Stripping, with few small to medium voids, FEA	
	12.25" Asphalt		5.50	B	1	Low Severity Oxidation, Low to Moderate Severity Stripping, with few small to large voids, FEA
-Y1-	C3 Sta. 16+19 RT PS 2.0 RT FW	11.75	2.75	S	2	Low Severity Oxidation, Low Severity Stripping, with few very small voids, FEA
	4.50		I	2	Low Severity Oxidation, Low to Moderate Severity Stripping, with few small to medium voids, FEA	
	9.25" Asphalt		2.00	S	2	Low to Moderate Severity Oxidation, Low to Moderate Severity Stripping, with few small to medium voids, FEA
-Y1-	C-4 Sta. 24+91 LT PS 1.5 RT FW	10.50	1.75	S	2	Low Severity Oxidation, Low Severity Stripping, with few very small to small voids, FEA
	4.50		I	2	Delamination between lifts 1-2, Low Severity Oxidation, Low to Moderate Severity Stripping, with few very small to small voids, FEA	
	9.00" Asphalt		3.25	S	3	Low to Moderate Severity Oxidation, Low to Moderate Severity Stripping, with few very small to medium voids, FEA
-Y1-	C-5 Sta. 24+91 LT LN 2.5 2.5 LT FW	9.00	1.75	S	1-2	Moderate to High Severity Oxidation, Moderate Severity Stripping, with some very small to small voids, FEA, contains cracks
	4.75		I	2	Delamination between lifts 1-2, Moderate Severity Oxidation, Moderate Severity Stripping, with few small to large voids, FEA	
	0.75		SA	1	Sand Asphalt Layer, Moderate Severity Oxidation, Low Severity Stripping, with few very small voids, FEA	
	12.00" Asphalt		2.50	S	1-2	Low to Moderate Severity Oxidation, Low Severity Stripping, with few very small voids, FEA
	2.25		I	1	Low to Moderate Severity Oxidation, Low Severity Stripping, with few very small voids, FEA	
-Y1-	C-6 Sta. 24+91 RT PS 2.0 RT FW	10.25	2.75	S	2	Low Severity Oxidation, Low Severity Stripping, with few very small voids, FEA
	5.00		I	2	Delamination between lifts 1-2, Low Severity Oxidation, Low to Moderate Severity Stripping, with few very small to medium voids, FEA	
	10.25" Asphalt		2.50	S	3	Low to Moderate Severity Oxidation, Low to Moderate Severity Stripping, with few very small to medium voids, FEA
-Y7-	C-7 Sta. 13+84 LT PS 1.0 RT FW		3.00	S	1-2	Low Severity Oxidation, Low Severity Stripping, with few very small voids, FEA
	5.25		I	2	Mechanical Break between S and I layers, Low Severity Oxidation, Low Severity Stripping, with few very small voids, FEA	
	12.50" Asphalt		4.25	S	3-4	Moderate Severity Oxidation, Low Severity Stripping, with few very small voids, FEA
-Y7-	C-8 Sta. 13+84 RT LN 2.0 LT FW		4.75	S	3-4	Low to Moderate Severity Oxidation, Low Severity Stripping, with few very small, FEA
	6.25		SA	1	Sand Asphalt Layer, Low to Moderate Severity Oxidation, Low Severity Stripping, Missing Asphalt in this layer	
	12.50" Asphalt		1.50	I	1	Mechanical Break between SA and I layers, Moderate to High Severity Oxidation, Moderate to High Severity Stripping, with few small to medium voids
-Y7-	C-9 Sta. 13+84 RT PS 0.7 RT FW		3.50	S	1-2	Low Severity Oxidation, Low Severity Stripping, with few very small voids, FEA
	10.50" Asphalt		7.00	B	1	Low to Moderate Severity Oxidation, Low to Moderate Severity Stripping, with few very small to medium voids, FEA
-Y7-	C-10 Sta. 18+65 LT PS 0.5 RT FW		2.25	S	1	Low Severity Oxidation, Low Severity Stripping, with few very small voids, FEA
	10.25" Asphalt		8.00	B	1	Low to Moderate Severity Oxidation, Low to Moderate Severity Stripping, with few very small to medium voids, FEA
-Y7-	C-11 Sta. 18+65 LT LN 2.5 LT FW		5.75	S	5-6	Low to Moderate Severity Oxidation, Low Severity Stripping, with few very small voids, FEA
	1.00		SA	1	Sand Asphalt Layer, Low to Moderate Severity Oxidation, Low Severity Stripping, with few very small voids	
	8.25" Asphalt		1.50	I	1	Moderate Severity Oxidation, Low Severity Stripping, with few very small voids, FEA, Bleeding
-Y7-	C-12 Sta. 18+65 RT PS 1.2 RT FW		3.00	S	2	Low Severity Oxidation, Low Severity Stripping, with few very small voids, FEA
	6.00		I	1	Low to Moderate Severity Oxidation, Low to Moderate Severity Stripping, with few very small to medium voids, FEA	
	12.5" Asphalt		3.50	B	1	Low to Moderate Severity Oxidation, Low to Moderate Severity Stripping, with few very small to small voids, FEA

S = Surface Course Asphalt
I = Intermediate Course Asphalt
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C = Concrete

ALIGNMENT	STATION	ABC (in)	LAYER THICKNESS (in)	LAYER	LIFT(S)	REMARKS
-Y14-	C-14 Sta. 12+53 LT LN 2.0 LT FW	3.00 Drainage Sand	3.25	S	2	Low Severity Oxidation, Moderate Severity Stripping, with some very small to large voids, FEA, Bleeding
	6.75" Asphalt		3.50	I	1	High Severity Oxidation and Stripping, with numerous very small to small voids
			8.00	C	1	Low Severity Oxidation and Stripping, with few large voids
-Y14-	C-13 Sta. 12+53 RT LN 2.7 LT FW	4.00 Drainage Sand	3.00	S	2	Low Severity Oxidation, Moderate Severity Stripping, with few very small to medium voids, FEA
	5.50" Asphalt		2.50	I	1	High Severity Oxidation and Stripping, with numerous very small to small voids, FEA, Bleeding
			9.00	C	1	Low Severity Oxidation and Stripping, with few large voids
-Y14-	C-20 Sta. 20+38 LTL 17.3 LT FW	4.00 Drainage Sand	2.00	S	2	Low Severity Oxidation and Stripping, with few very small voids
	14.00" Asphalt		3.50	I	2	Low Severity Oxidation, Low to Moderate Severity Stripping, with some very small to small voids, FEA
			8.50	S	7	High Severity Oxidation and Stripping, with numerous very small voids, FEA, Mechanical Break between lifts 6 and 7
			9.50	C	1	Low Severity Oxidation and Stripping, with some very small to medium voids
-Y14-	C-21 Sta. 20+38 RT LN 2.8 LT FW	10.00 CSS	4.50	S	4	Low Severity Oxidation and Stripping, with few very small to small voids, FEA
	14.00" Asphalt		9.50	I	5	Low Severity Oxidation, Low to Moderate Severity Stripping, with some very small to small voids, FEA
-Y14-	C-19 Sta. 23+18 LT PS 1.3 RT FW		4.75	S	4	Low to Moderate Oxidation and Stripping, with few very small voids, FEA, Bleeding
	18.50" Asphalt		10.50	I	5	Mechanical Break between lifts 4-5, Low to Moderate Oxidation and Stripping, with some very small to small voids, FEA
			3.25	B	1	Moderate Severity Oxidation and Stripping, with some small to large voids
-Y14-	C-18 Sta. 23+18 LT LN 2.4 LT FW		4.50	S	4	Low to Moderate Oxidation and Stripping, with some very small to small voids
	11.00" Asphalt		1.50	I	1	Low to Moderate Oxidation and Stripping, with some very small to small voids, FEA
			2.50	S	2	Moderate to High Severity Oxidation and Stripping, with numerous very small voids, FEA, Delamination between I/S
			2.50	I	1	High Severity Oxidation and Stripping, with numerous very small go medium voids, FEA
-Y14-	C-17 Sta. 23+18 MEDIAN 14.3 LT FW		9.75	S	8	Delamination between lifts 3-4 & partial delamination between lifts 4-5, Low to Moderate Oxidation and Stripping, with numerous small voids, FEA
	13.00" Asphalt		3.25	B	1	High Severity Oxidation and Stripping, with numerous small to large voids
			7.00	C	1	Low Severity Oxidation and Stripping, with some very small to small voids
-Y14-	C-16 Sta. 23+18 RT LN 2.3 LT FW	10.75 CSS	4.00	S	4	Low to Moderate Severity Oxidation and Stripping, with some very small to small voids, FEA, Bleeding
	11.25" Asphalt		1.75	I	1	Low Severity Oxidation and Stripping, with few very small voids, FEA
			5.50	S	5	Moderate to High Severity Oxidation and Stripping, with numerous very small to small voids, FEA
-Y14-	C-22 Sta. 28+33 LT PS 1.0 RT FW		5.50	S	3	Delamination between lifts 1-2 & 2-3, Low to Moderate Severity Oxidation and Stripping, with some very small to small voids
	10.50" Asphalt		5.00	B	1	Moderate Severity Oxidation and Stripping, with some very small to small voids
-Y14-	C-23 Sta. 28+33 RT PS 1.1 RT FW		3.75	I	2	Low Severity Oxidation, Moderate Severity Stripping, with few very small to medium voids, FEA
	9.75" Asphalt		6.00	S	5	Low to Moderate Severity Oxidation and Stripping, with some very small to small voids, FEA
-Y14-	C-24 Sta. 32+86 RT LN 17.3 LT FW		3.50	S	4	Mechanical Break in lift 1 & 2, Low to Moderate Severity Oxidation and Stripping, with some very small to small voids, FEA
	13.50" Asphalt		10.00	I	4-5	Low Severity Oxidation and Stripping, with few very small voids, FEA

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ALIGNMENT	STATION	ABC (in)	LAYER THICKNESS (in)	LAYER	LIFT(S)	REMARKS
-Y14-	C-25 Sta. 32+86 RTL 3.0 LT FW		4.00	I	2	Low Severity Oxidation and Stripping, with few small to large voids, FEA
	9.50" Asphalt		1.50	S	1	Low Severity Oxidation and Stripping, with few very small voids, FEA
			4.00	B	1	Low Severity Oxidation and Stripping, with few very small voids, FEA
-Y14-	C-26 Sta. 34+44 LT LN 2.0 LT FW		3.00	S	2	1" Top-down crack in core, Moderate to High Severity Oxidation and Stripping, with numerous very small to small voids
	12.00" Asphalt		9.00	I	Indistinct	High Severity Oxidation and Stripping, with numerous small to large voids
-Y14-	C-27 Sta. 34+44 LTL 20.2 LT FW		6.00	S	Indistinct	High Severity Oxidation and Stripping, with numerous very small to large voids, FEA, Mechanical Breaks between lifts, Top-down crack
	13.00" Asphalt		7.00	C	1	Moderate Severity Oxidation and Stripping, with some small voids
-Y15-	C-15 Sta. 12+50 LANE 5.7 LT FW	1.50 Drainage	3.00	S	1	Top-down crack in core, Low Severity Oxidation, Moderate Severity Stripping, with some very small to small voids, Bleeding
	3.00" Asphalt	Sand	6.00	C	1	Mechanical break in lift, Low to Moderate Severity Oxidation and Stripping, with few small voids

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F&ME CONSULTANTS, INC.
211 BUSINESS PARK BOULEVARD, COLUMBIA SC 29203
(CERT No.: 130-0212)

Project	New Route from Chatham Parkway, US 15/US 501 South of Pittsboro to US 64 Business, Construct Roadway on New Location	T.I.P. No.	R-5963A	County	Chatham	F&ME Job No.	C8806.001 - Task 00030
Date Received	8/16/2024	Date Reported	9/12/2024	Tested By	F&ME	CERT No.:	130-0212

SOIL TEST RESULTS																			
SAMPLE NO.	ALINGMENT	STATION	LANE	OFFSET (ft.)	DEPTH INTERVAL (ft.)	AASHTO CLASS	L.L.	P.I.	% BY WEIGHT				% PASSING (SIEVES)			%			
									C. SAND	F. SAND	SILT	CLAY	10	40	200	MOISTURE	ORGANIC		
S-1	-Y1-	16+91	LT PS	2.0 RT FW	1.7 - 4.0	A-7-6(18)	47	20	8.6%	7.6%	38.5%	45.3%	95.3%	89.3%	81.8%	31.0%	ND		
S-3	-Y1-	16+91	RT PS	2.0 RT FW	1.8 - 5.0	A-6(9)	38	11	7.2%	11.1%	45.2%	36.5%	96.4%	92.2%	81.2%	18.6%	ND		
S-5	-Y1-	24+91	LT LN	2.5 LT FW	1.8 - 3.5	A-6(2)	28	13	24.8%	21.5%	27.0%	26.7%	77.6%	63.9%	44.7%	9.9%	ND		
S-6	-Y1-	24+91	RT PS	2.0 RT FW	1.7 - 2.8	A-4(1)	26	10	27.3%	19.8%	28.4%	24.5%	82.3%	66.5%	46.3%	7.7%	ND		
S-7	-Y7-	13+84	LT PS	1.0 RT FW	1.0 - 5.0	A-7-6(6)	43	23	16.3%	10.7%	30.0%	43.0%	60.7%	53.1%	45.6%	21.7%	ND		
S-8	-Y7-	13+84	RT LN	2.0 LT FW	1.0 - 5.0	A-6(6)	36	18	13.6%	10.1%	39.6%	36.7%	63.1%	56.7%	49.6%	26.4%	ND		
S-11	-Y7-	18+65	LT LN	2.5 LT FW	0.7 - 3.0	A-7-6(16)	46	25	10.8%	6.7%	29.4%	53.1%	82.5%	75.8%	69.3%	21.8%	ND		
S-13	-Y14-	12+53	RT LN	2.7 LT FW	1.5 - 4.0	A-6(9)	32	15	7.5%	6.1%	47.8%	38.6%	81.6%	77.1%	72.0%	26.6%	ND		
S-13A	-Y14-	12+53	RT LN	2.7 LT FW	4.0 - 5.0	A-7-6(22)	43	24	6.4%	4.0%	38.7%	50.9%	96.6%	91.7%	87.5%	25.0%	ND		
S-20	-Y14-	20+38	LTL	17.3LT FW	2.0 - 5.0	A-6(3)	32	13	14.7%	9.6%	39.2%	36.5%	61.8%	54.9%	48.2%	19.3%	ND		
S-21	-Y14-	20+38	RT LN	2.8 LT FW	2.0 - 5.0	A-4(5)	28	10	12.0%	5.9%	47.7%	34.4%	86.4%	77.9%	72.2%	15.8%	ND		
S-17	-Y14-	23+18	MEDIAN	14.3 LT FW	1.7 - 3.0	A-7-6(21)	46	22	4.6%	7.2%	39.1%	49.2%	97.7%	94.9%	88.2%	32.4%	ND		
S-17A	-Y14-	23+18	MEDIAN	14.3 LT FW	3.0 - 5.0	A-7-6(35)	59	33	3.6%	5.8%	38.9%	51.7%	99.8%	97.5%	92.0%	26.9%	ND		
S-18	-Y14-	23+18	LT LN	2.4 LT FW	0.9 - 5.0	A-7-6(20)	46	24	6.0%	8.4%	34.1%	51.5%	93.7%	90.0%	82.2%	31.4%	ND		
S-22	-Y14-	28+33	LT PS	1.0 RT FW	1.3 - 5.0	A-7-6(20)	48	25	9.4%	4.9%	28.5%	57.2%	89.8%	83.5%	77.9%	30.5%	ND		
S-23	-Y14-	28+33	RT PS	1.1 RT FW	1.3 - 5.0	A-6(9)	37	18	16.3%	7.3%	31.7%	44.7%	82.3%	72.2%	64.0%	13.9%	ND		
S-24	-Y14-	32+86	RT LN	17.3 LT FW	1.1 - 3.0	A-6(9)	39	21	16.5%	13.9%	34.7%	34.9%	79.0%	69.8%	57.7%	26.8%	ND		
S-24A	-Y14-	32+86	RT LN	17.3 LT FW	3.0 - 5.0	A-7-6(15)	53	32	5.4%	6.3%	22.4%	65.9%	62.4%	59.8%	56.2%	29.4%	ND		
S-27	-Y14-	34+44	LTL	20.2 LT FW	1.7 - 5.0	A-7-6(29)	55	28	5.7%	3.0%	27.7%	63.6%	98.1%	93.7%	90.4%	35.0%	ND		
S-15	-Y15-	12+50	LANE	5.7 LT FW	0.8 - 5.0	A-7-5(26)	52	22	1.5%	2.4%	47.0%	49.1%	99.7%	98.7%	96.3%	34.0%	ND		
																		130-04-0212	
																		NCDOT Cert. No.	
Date																			

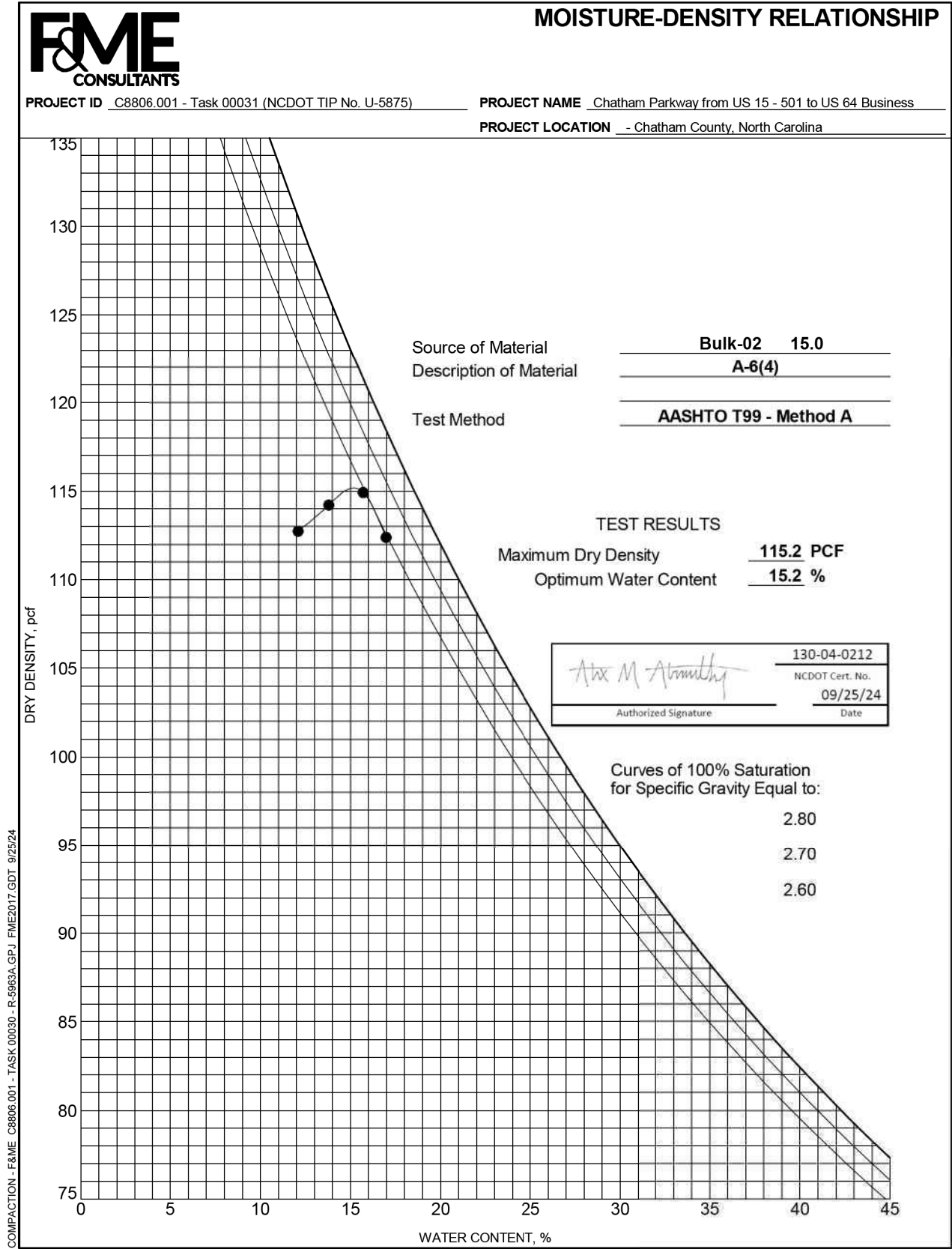
F&ME CONSULTANTS, INC.
211 BUSINESS PARK BOULEVARD, COLUMBIA SC 29203
(CERT No.: 130-0212)

Project	New Route from Chatham Parkway, US 15/US 501 South of Pittsboro to US 64 Business, Construct Roadway on New Location	T.I.P. No.	R-5963A	County	Chatham	F&ME Job No.	C8806.001 - Task 00030
	Date Received	8/23/2024	Date Reported	9/25/2024	Tested By	F&ME	CERT No.:

SOIL TEST RESULTS																
SAMPLE NO.	ALIGNMENT	STATION	OFFSET (ft.)	DEPTH INTERVAL (ft.)	AASHTO CLASS	L.L.	P.I.	% BY WEIGHT				% PASSING (SIEVES)			%	%
								C. SAND	F. SAND	SILT	CLAY	10	40	200		
BULK-01	-L-	13+01	63 RT	10.0 - 20.0	A-7-6(17)	43	17	3.6%	7.3%	35.2%	53.9%	99.8%	97.8%	90.6%	35.4%	ND
BULK-02	-L-	73+01	63 LT	5.0 - 15.0	A-6(4)	32	12	19.1%	12.1%	32.4%	36.4%	78.1%	66.7%	55.6%	12.3%	ND
BULK-03	-L-	155+00	CL	5.0 - 15.0	A-6(13)	35	18	10.5%	13.0%	33.5%	43.0%	100.0%	93.9%	79.3%	8.8%	ND
BULK-04	-Y1-	16+91	21 RT	0.0 - 5.0	A-6(4)	34	12	17.9%	9.3%	40.1%	32.7%	75.5%	65.5%	56.3%	20.8%	ND
BULK-05	-L-	80+19	23 LT	0.0 - 10.0	A-7-6(24)	49	24	3.3%	7.5%	46.6%	42.6%	99.7%	98.0%	91.1%	23.4%	ND
BULK-06	-Y14-	18+02	54 LT	0.0 - 5.0	A-7-6(19)	43	21	5.0%	3.7%	38.4%	52.9%	95.7%	92.1%	88.4%	25.2%	ND

*Bulk 1 and 4 collected for classification purposes, CBR testing not performed due to material properties similar to other bulk samples collected.

	130-04-0212
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REV 03/2024

SPECIFIC GRAVITY OF SOILS

(ASTM D854 / AASHTO T100)

Project Name:

Chatham Pkwy from US-501 to US 64 Business

NCDOT STIP No.:

R-5963A

FME Lab ID

24-2818

Depth (ft.):

5.0 - 15.0

Description of Soil:

A-6(4)

Date Received:

8/23/2024

Method:

A

X

B

Tested By:

Alex Abernethy

Date Tested:

9/12/2024

Boring No.	Bulk-02			
Sample Depth (ft.)	5.0 - 15.0			
Volume of Flask at 20° C	500 mL			
Method of Air Removal	Boiling			
Mass Flask + Water + Soil (Wb)	767.21			
Test Temperature ° C (Tx)	24.0			
Mass Flask + Water (Wa)	704.71			
Container No.	A			
Mass of Container + Oven Dry Soil	306.75			
Mass of Container	206.75			
Mass of Oven Dry Soil (Wo)	100.00			
Specific Gravity @ Test Temperature	2.667			
Specific Gravity (SG)	2.664			
K x Specific Gravity @ Test Temperature				

Remarks:

Alex M. Abernethy

130-04-0212

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REV 01/2023

CALIFORNIA BEARING RATIO (CBR)
AASHTO T193

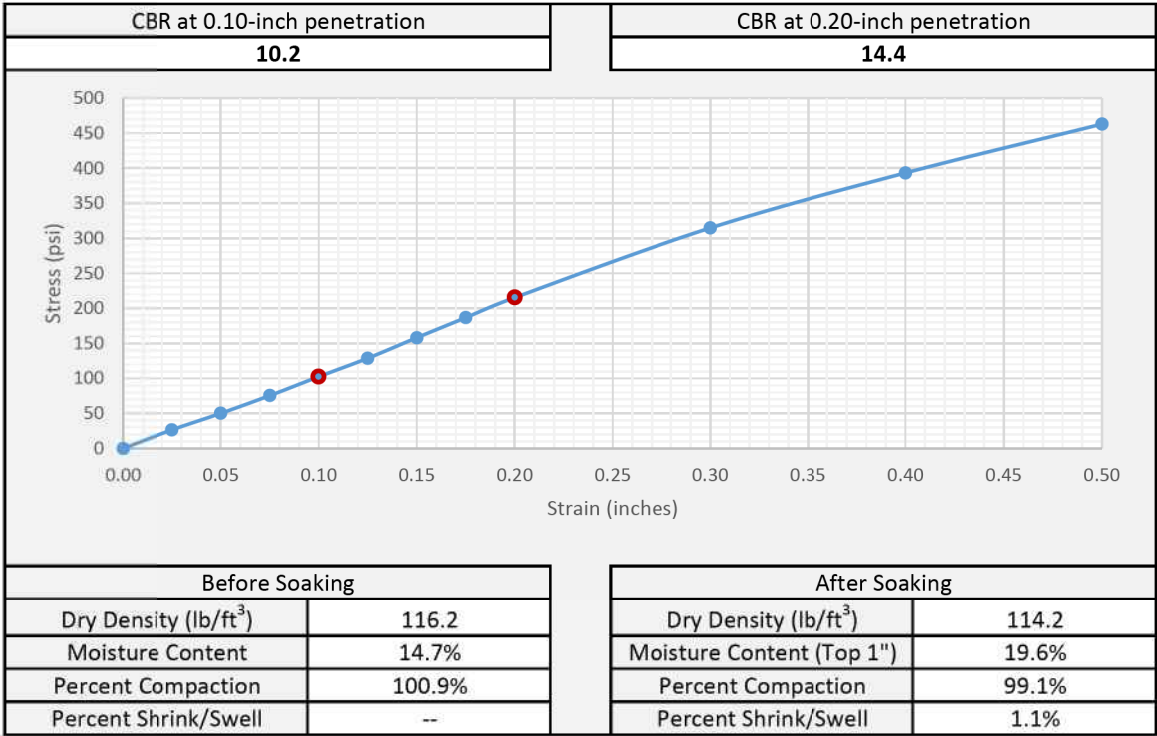
SAMPLE INFORMATION

Project Name	Chatham Parkway from US 15 - 501 to US 64 Business			NCDOT STIP NO.	R-5963A
Sample Location	Bulk-02 (Specimen A)			FME Lab ID	24-2818
Soil Description	A-6(4)			Depth/Elev.	5.0 - 15.0
Date Sampled	--	Sampled By:	CG2	Date Received	8/23/2024
Date Test Began	9/6/2024	Date Completed	9/10/2024	Tested By	AA/DH

MOLDING CHARACTERISTICS

Method	AASHTO T99 - Method A	% Retained on 3/4" Sieve	0%
Max Dry Density (lb/ft ³)	115.2	Optimum Moisture Content (%)	15.2
Soak Time (hr)	96	Surcharge Weight (lb)	10.0

TESTING RESULTS



ADDITIONAL COMMENTS

Target %Compaction = 100%

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CALIFORNIA BEARING RATIO (CBR)
AASHTO T193

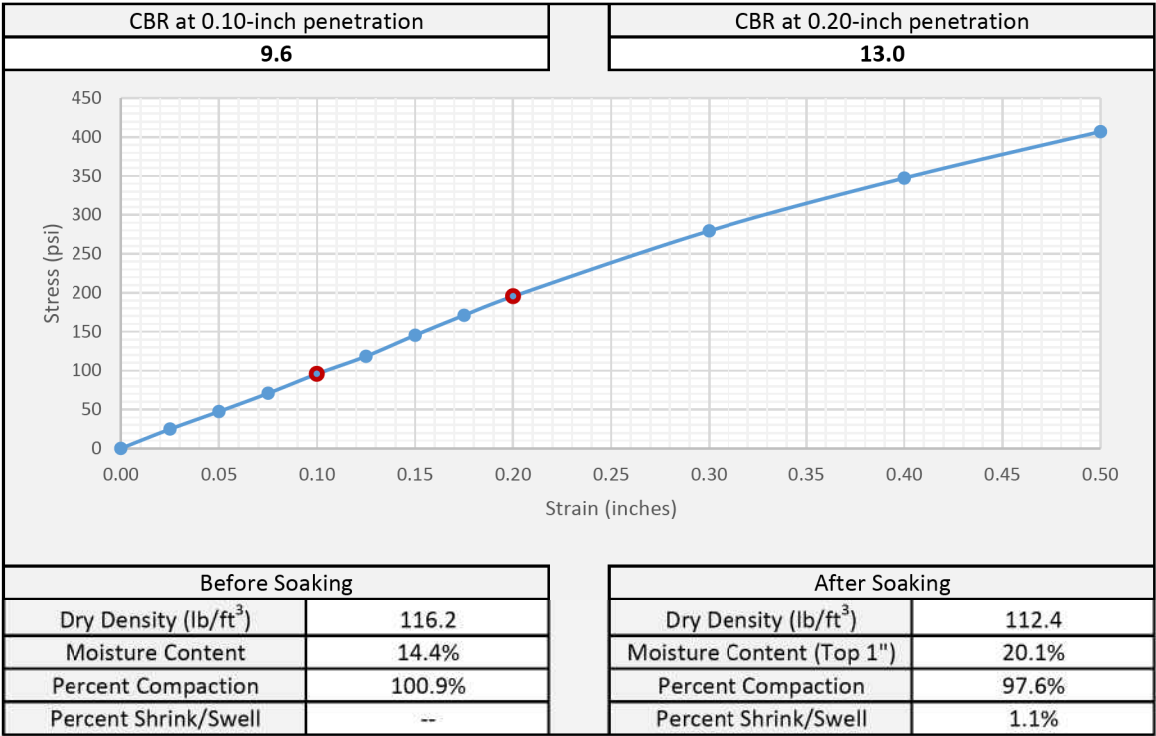
SAMPLE INFORMATION

Project Name	Chatham Parkway from US 15 - 501 to US 64 Business			NCDOT STIP NO.	R-5963A
Sample Location	Bulk-02 (Specimen B)			FME Lab ID	24-2818
Soil Description	A-6(4)			Depth/Elev.	5.0 - 15.0
Date Sampled	--	Sampled By:	CG2	Date Received	8/23/2024
Date Test Began	9/6/2024	Date Completed	9/10/2024	Tested By	AA/DH

MOLDING CHARACTERISTICS

Method	AASHTO T99 - Method A	% Retained on 3/4" Sieve	0%
Max Dry Density (lb/ft ³)	115.2	Optimum Moisture Content (%)	15.2
Soak Time (hr)	96	Surcharge Weight (lb)	10.0

TESTING RESULTS



ADDITIONAL COMMENTS

Target %Compaction = 100%

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COMPRESSIVE STRENGTH OF MOLDED SOIL-CEMENT CYLINDERS ASTM D-1633

Project Name	Chatham Parkway from US 15 - 501 to US 64 Business			NCDOT STIP #	R-5963A
Sample Location	Bulk-02			FME Lab ID	24-2818
Soil Description	A-6(4)			Depth/Elev.	5.0 - 15.0
Station	--			Offset	--
Date Sampled	--	Sampled By:	CG2	Date Received	08/22/24
Date Molded	09/20/24	Date Tested	09/27/24	Tested By	A. Abernethy

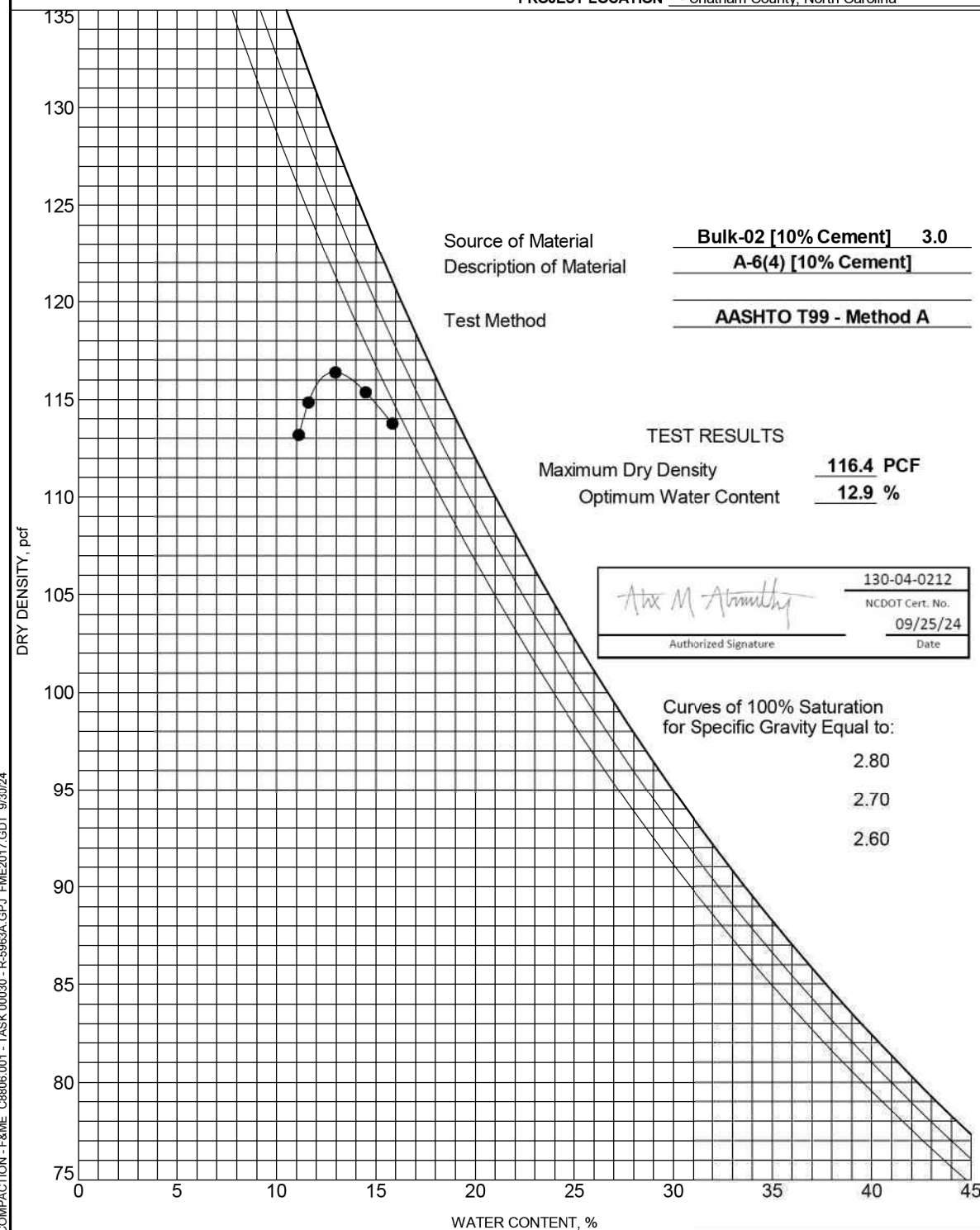
Method	AASHTO T99 - Method A	% Cement Added to Proctor	10%
Max Dry Density (lb/ft ³)	116.4	Optimum Moisture Content (%)	12.9

% Cement	Age (Days)	Moisture Content	Height (in.)	Diameter (in.)	Area (in. ²)	Maximum Load (lbf)	Compressive Strength (psi)	Average Compressive Strength (psi)
8%	7	12.2%	4.69	4.00	12.57	2,611	210	210
8%	7	12.2%	4.70	4.00	12.59	2,626	210	
10%	7	12.2%	5.04	4.00	12.53	3,528	280	290
10%	7	12.2%	4.70	4.00	12.59	3,701	295	

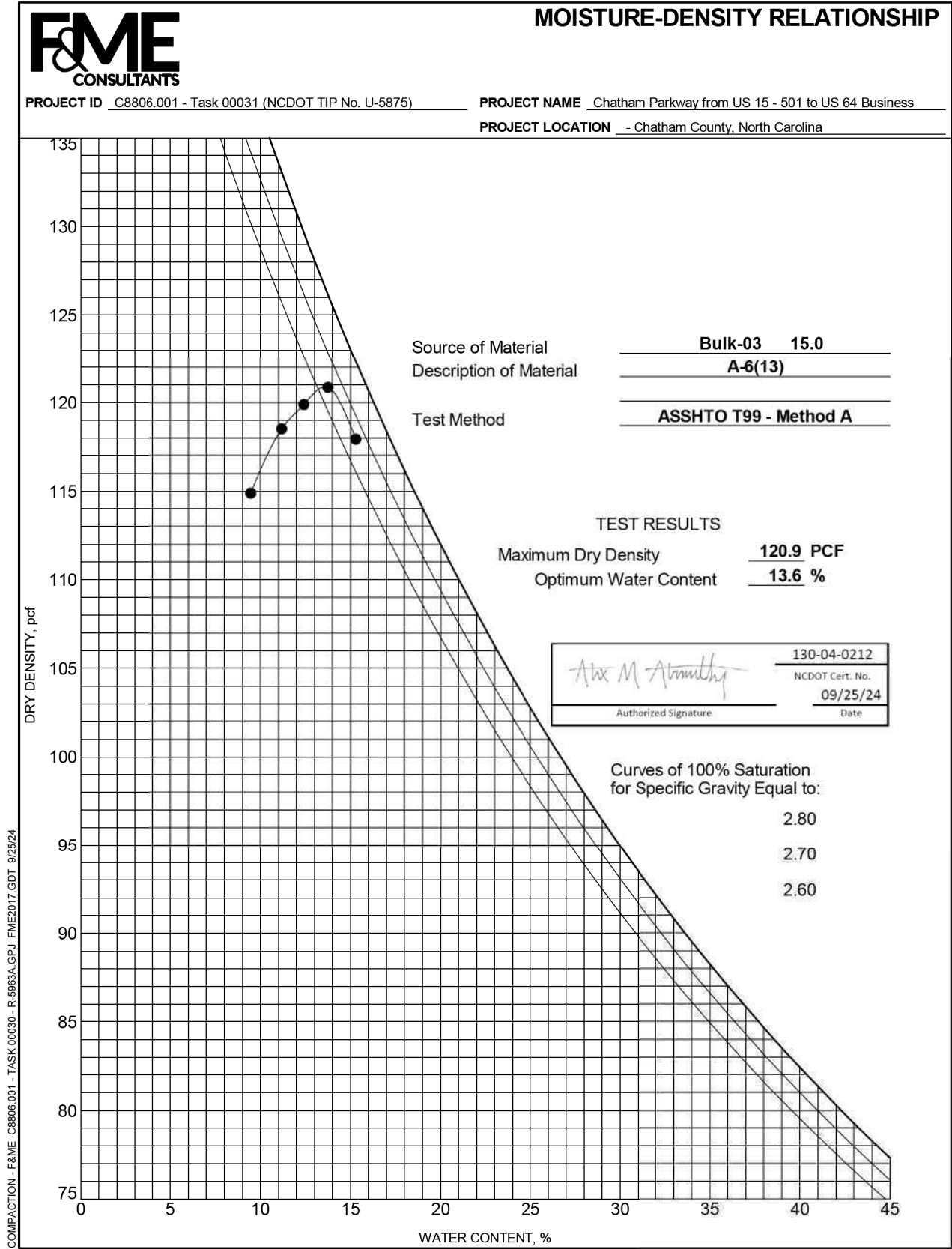
F&ME Consultants, Inc. 211 Business Park Blvd, Columbia, SC 29203			130-04-0212
			NCDOT Certification No. 09/30/24
		Authorized Signature	Date

MOISTURE-DENSITY RELATIONSHIP

PROJECT ID <u>C8806.001 - Task 00031 (NCDOT TIP No. U-5875)</u>	PROJECT NAME <u>Chatham Parkway from US 15 - 501 to US 64 Business</u>
	PROJECT LOCATION <u>- Chatham County, North Carolina</u>



COMPACTION - F&ME C8806.001 - TASK 00030 - R-5963A.GPJ FME2017.GDT 9/30/24



REV 01/2023

CALIFORNIA BEARING RATIO (CBR)
AASHTO T193

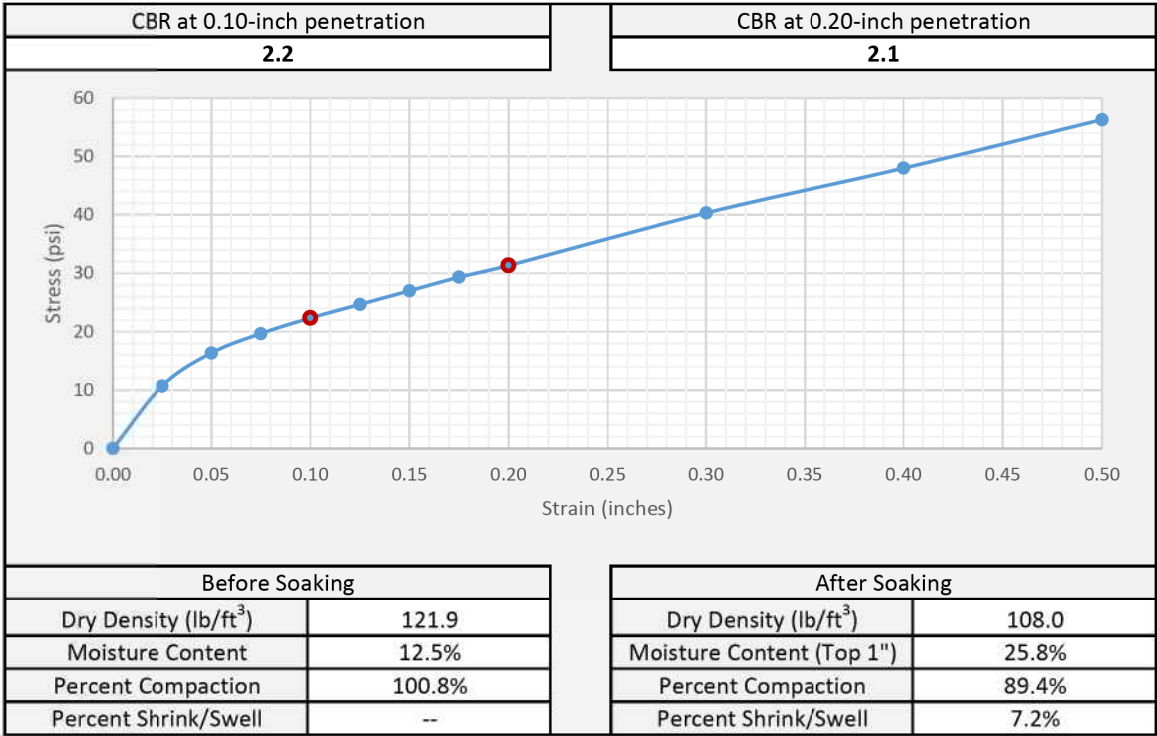
SAMPLE INFORMATION

Project Name	Chatham Parkway from US 15 - 501 to US 64 Business			NCDOT STIP NO.	R-5963A
Sample Location	Bulk-03 (Specimen A)			FME Lab ID	24-2819
Soil Description	A-6(13)			Depth/Elev.	5.0 - 15.0
Date Sampled	--	Sampled By:	CG2	Date Received	8/23/2024
Date Test Began	9/6/2024	Date Completed	9/10/2024	Tested By	AA/DH

MOLDING CHARACTERISTICS

Method	AASHTO T99 - Method A	% Retained on 3/4" Sieve	0%
Max Dry Density (lb/ft ³)	120.9	Optimum Moisture Content (%)	13.6
Soak Time (hr)	96	Surcharge Weight (lb)	10.0

TESTING RESULTS



ADDITIONAL COMMENTS

Target %Compaction = 100%

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AASHTO T193

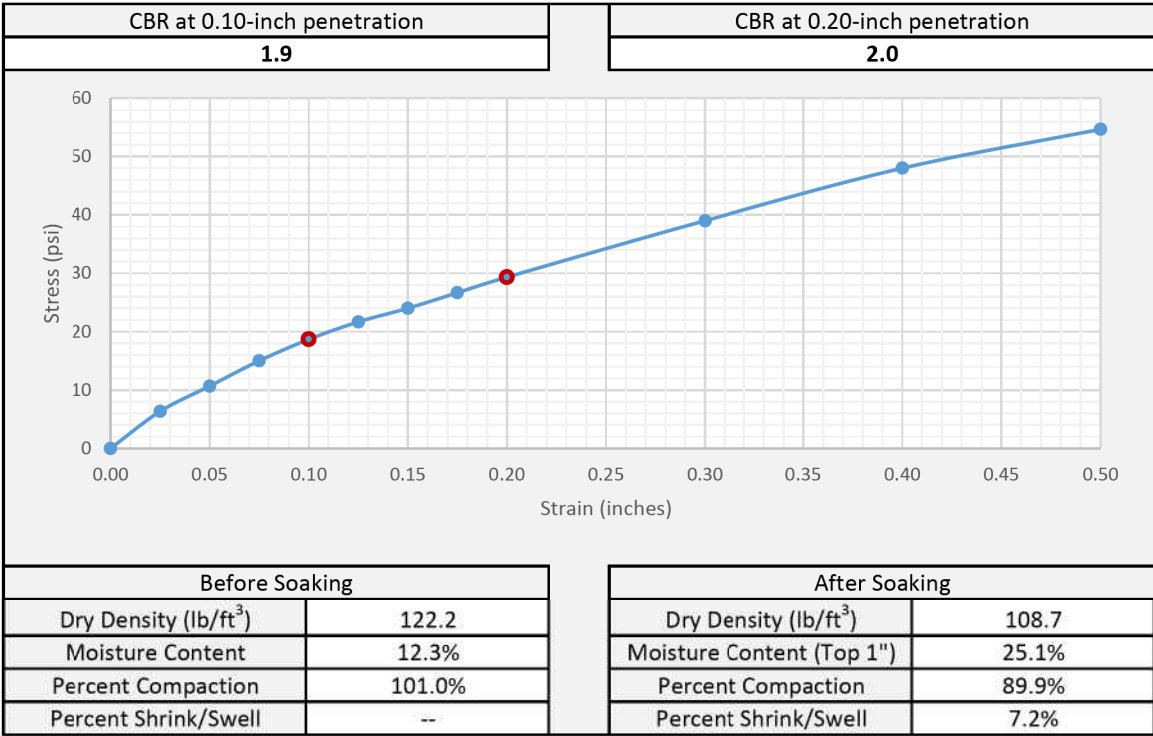
SAMPLE INFORMATION

Project Name	Chatham Parkway from US 15 - 501 to US 64 Business			NCDOT STIP NO.	R-5963A
Sample Location	Bulk-03 (Specimen B)			FME Lab ID	24-2819
Soil Description	A-6(13)			Depth/Elev.	5.0 - 15.0
Date Sampled	--	Sampled By:	CG2	Date Received	8/23/2024
Date Test Began	9/6/2024	Date Completed	9/10/2024	Tested By	AA/DH

MOLDING CHARACTERISTICS

Method	AASHTO T99 - Method A	% Retained on 3/4" Sieve	0%
Max Dry Density (lb/ft ³)	120.9	Optimum Moisture Content (%)	13.6
Soak Time (hr)	96	Surcharge Weight (lb)	10.0

TESTING RESULTS



ADDITIONAL COMMENTS

Target %Compaction = 100%

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COMPRESSIVE STRENGTH OF MOLDED SOIL-LIME CYLINDERS ASTM D-5102

Project Name	Chatham Parkway from US 15 - 501 to US 64 Business			NCDOT STIP #	R-5963A
Sample Location	Bulk-03			FME Lab ID	24-2819
Soil Description	A-6(13)			Depth/Elev.	5.0 - 15.0
Station	--			Offset	--
Date Sampled	--	Sampled By:	CG2	Date Received	08/22/24
Date Molded	09/12/24	Date Tested	09/19/24	Tested By	A. Abernethy

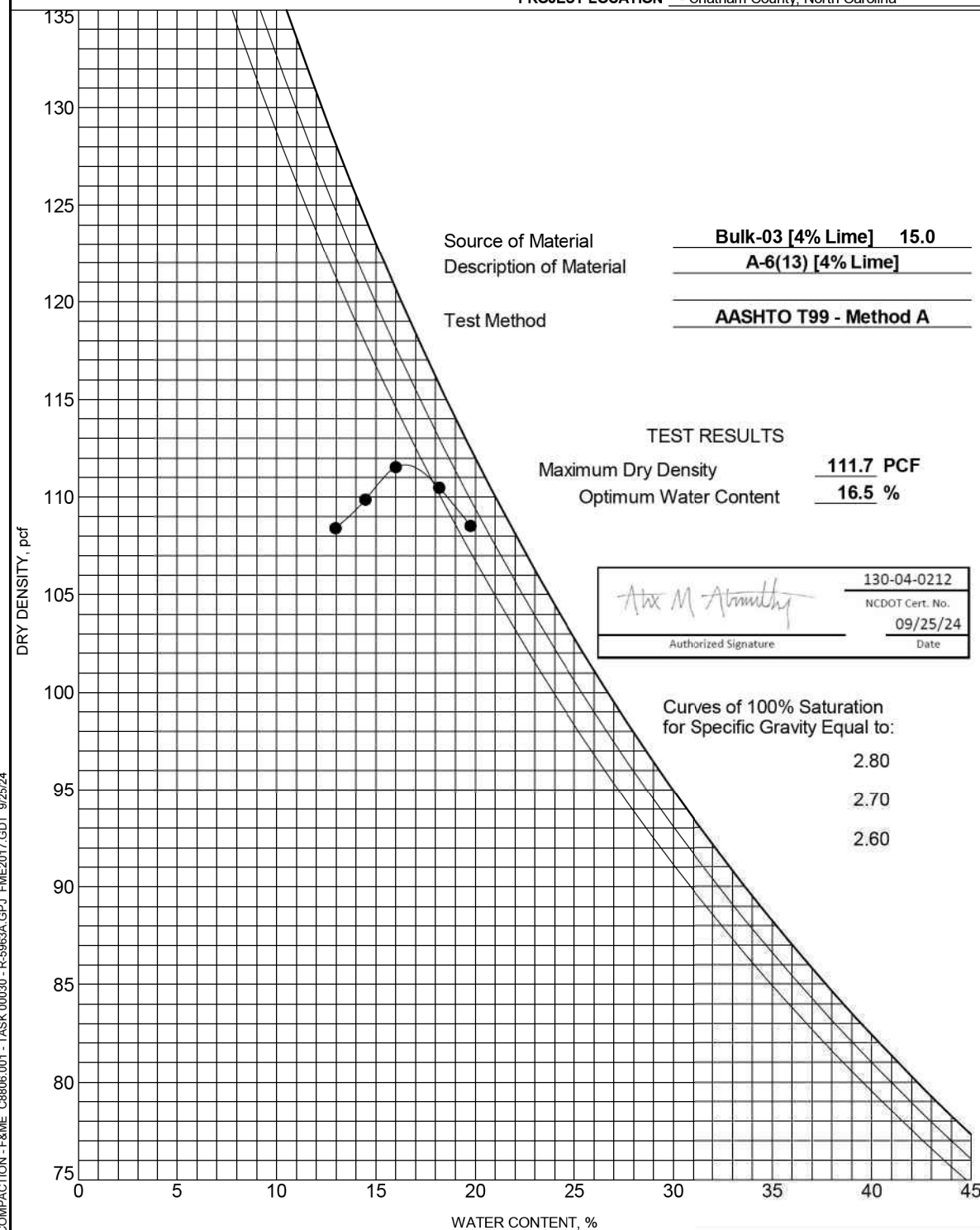
Method	AASHTO T99 - Method A	% Lime Added to Proctor	4%
Max Dry Density (lb/ft ³)	111.7	Optimum Moisture Content (%)	16.5

% Lime	Age (Days)	Moisture Content	Height (in.)	Diameter (in.)	Area (in. ²)	Maximum Load (lbf)	Compressive Strength (psi)	Average Compressive Strength (psi)
3%	7	16.0%	4.83	3.99	12.50	1,011	80	80
3%	7	16.0%	4.76	3.99	12.50	1,025	80	
5%	7	15.7%	4.75	3.99	12.50	1,246	100	105
5%	7	15.7%	4.92	3.98	12.44	1,288	105	

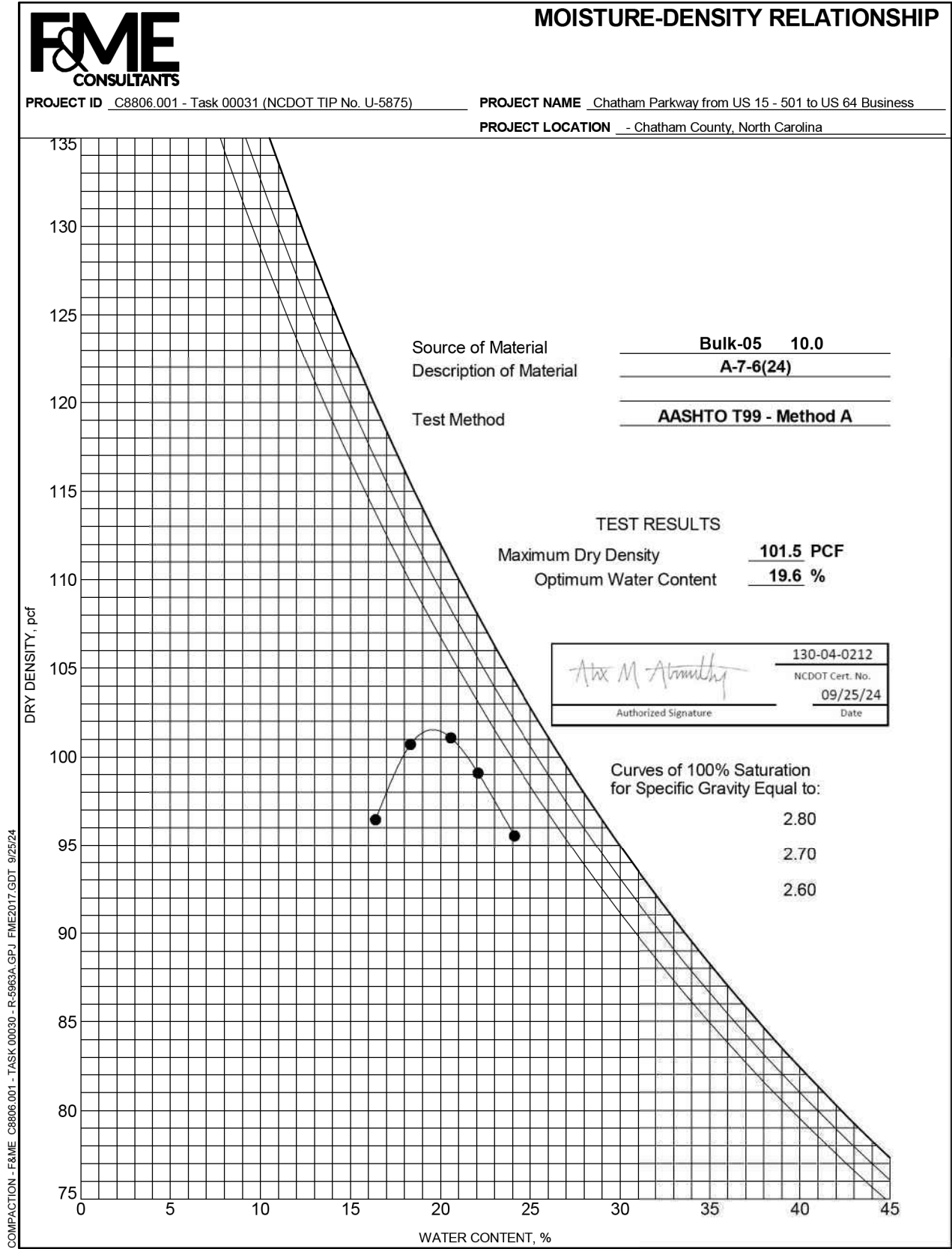
F&ME Consultants, Inc. 211 Business Park Blvd, Columbia, SC 29203		 Authorized Signature	130-04-0212 NCDOT Certification No
			09/23/24 Date

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PROJECT ID C8806.001 - Task 00031 (NCDOT TIP No. U-5875)	PROJECT NAME Chatham Parkway from US 15 - 501 to US 64 Business
	PROJECT LOCATION - Chatham County, North Carolina



COMPACTION - F&ME C8806.001 - TASK 00030 - R-5963A.GPJ FME2017.GDT 9/25/24



REV 03/2024

SPECIFIC GRAVITY OF SOILS
(ASTM D854 / AASHTO T100)

Project Name:	Chatham Pkwy from US-501 to US 64 Business	NCDOT STIP No.:	R-5963A
FME Lab ID	24-2903	Depth (ft.):	0.0 - 10.0
Description of Soil:	A-7-6(24)	Date Received:	8/23/2024
Method:	A X B		
Tested By:	Alex Abernethy	Date Tested:	9/12/2024

Boring No.	Bulk-05			
Sample Depth (ft.)	0.0 - 10.0			
Volume of Flask at 20° C	500 mL			
Method of Air Removal	Boiling			
Mass Flask + Water + Soil (Wb)	759.79			
Test Temperature ° C (Tx)	24.0			
Mass Flask + Water (Wa)	697.26			
Container No.	J			
Mass of Container + Oven Dry Soil	299.28			
Mass of Container	199.28			
Mass of Oven Dry Soil (Wo)	100.00			
Specific Gravity @ Test Temperature Wo/[Wo+(Wa-Wb)]	2.669			
Specific Gravity (SG) K x Specific Gravity @ Test Temperature	2.666			

Remarks:

Alex M. Abernethy

130-04-0212

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9/25/2024

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REV 01/2023

CALIFORNIA BEARING RATIO (CBR)
AASHTO T193

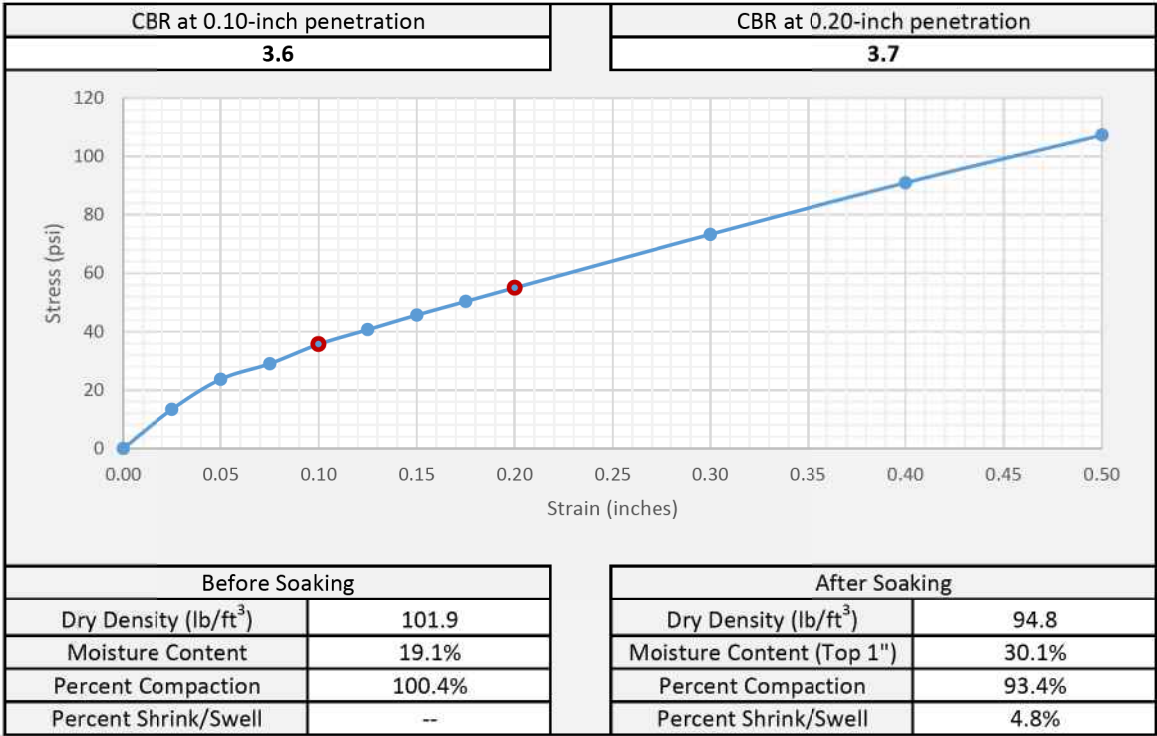
SAMPLE INFORMATION

Project Name	Chatham Parkway from US 15 - 501 to US 64 Business			NCDOT STIP NO.	R-5963A
Sample Location	Bulk-05 (Specimen A)			FME Lab ID	24-2903
Soil Description	A-7-6(24)			Depth/Elev.	0.0 - 10.0
Date Sampled	--	Sampled By:	CG2	Date Received	8/23/2024
Date Test Began	9/6/2024	Date Completed	9/10/2024	Tested By	AA/DH

MOLDING CHARACTERISTICS

Method	AASHTO T99 - Method A	% Retained on 3/4" Sieve	0%
Max Dry Density (lb/ft ³)	101.5	Optimum Moisture Content (%)	19.6
Soak Time (hr)	96	Surcharge Weight (lb)	10.0

TESTING RESULTS



ADDITIONAL COMMENTS

Target %Compaction = 100%

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Alex M. Armulsky

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CALIFORNIA BEARING RATIO (CBR)
AASHTO T193

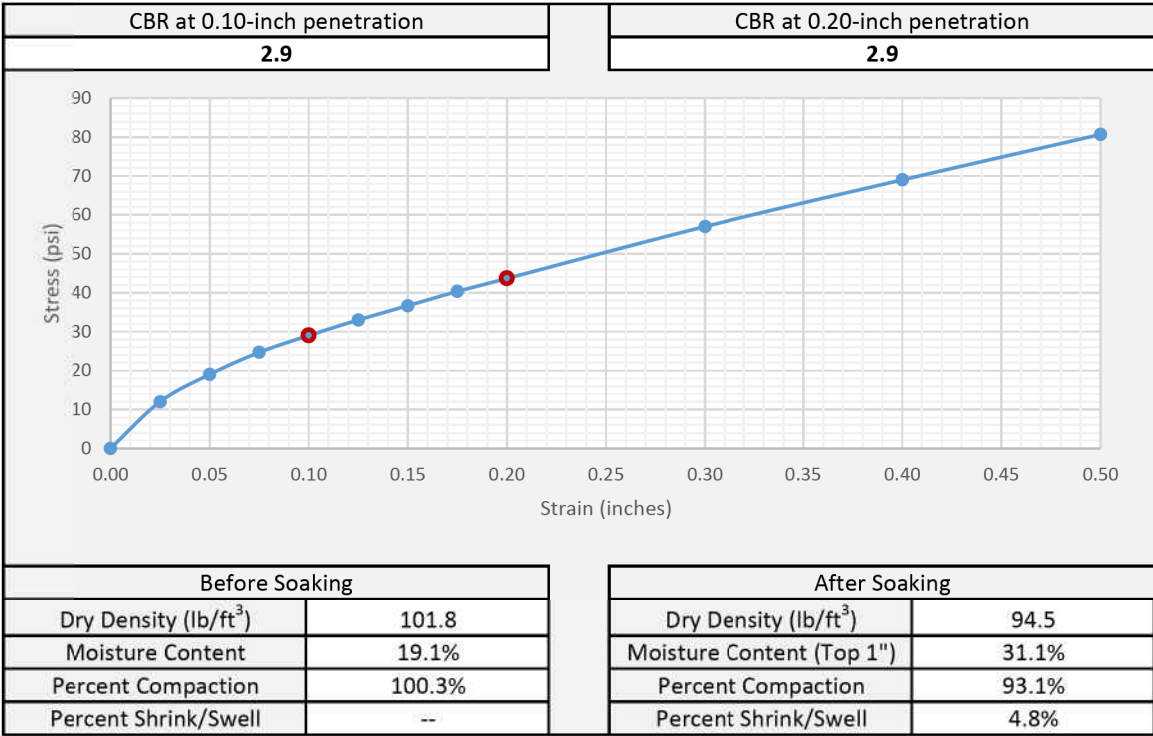
SAMPLE INFORMATION

Project Name	Chatham Parkway from US 15 - 501 to US 64 Business			NCDOT STIP NO.	R-5963A
Sample Location	Bulk-05 (Specimen B)			FME Lab ID	24-2903
Soil Description	A-7-6(24)			Depth/Elev.	0.0 - 10.0
Date Sampled	--	Sampled By:	CG2	Date Received	8/23/2024
Date Test Began	9/6/2024	Date Completed	9/10/2024	Tested By	AA/DH

MOLDING CHARACTERISTICS

Method	AASHTO T99 - Method A	% Retained on 3/4" Sieve	0%
Max Dry Density (lb/ft ³)	101.5	Optimum Moisture Content (%)	19.6
Soak Time (hr)	96	Surcharge Weight (lb)	10.0

TESTING RESULTS



ADDITIONAL COMMENTS

Target %Compaction = 100%

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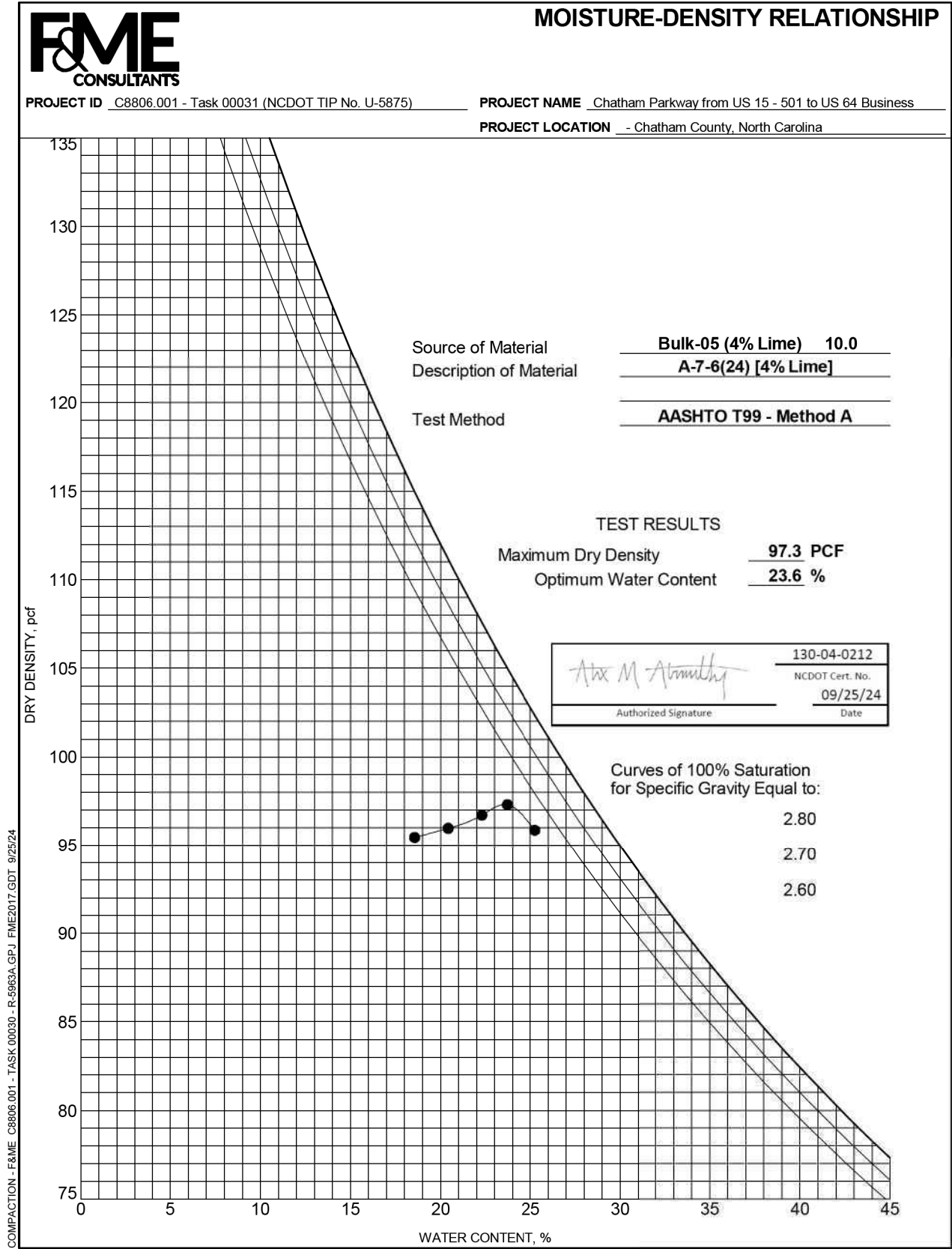
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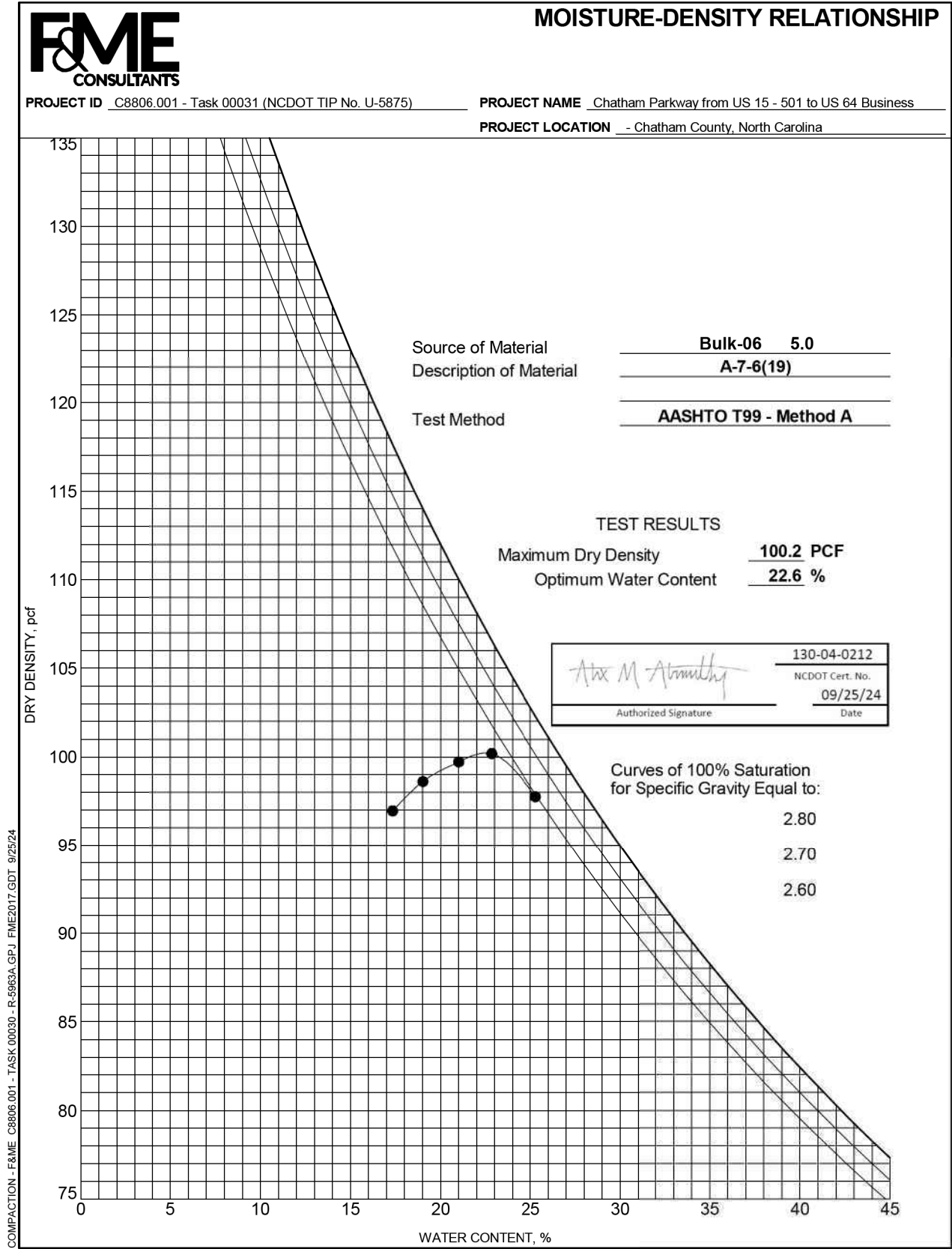
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REV 03/2024

SPECIFIC GRAVITY OF SOILS
(ASTM D854 / AASHTO T100)

Project Name:	Chatham Pkwy from US-501 to US 64 Business	NCDOT STIP No.:	R-5963A
FME Lab ID	24-2820	Depth (ft.):	0.0 - 5.0
Description of Soil:	A-7-6(19)	Date Received:	8/23/2024
Method:	A X B		
Tested By:	Alex Abernethy	Date Tested:	9/12/2024

Boring No.	Bulk-06			
Sample Depth (ft.)	0.0 - 5.0			
Volume of Flask at 20° C	500 mL			
Method of Air Removal	Boiling			
Mass Flask + Water + Soil (Wb)	763.88			
Test Temperature ° C (Tx)	24.0			
Mass Flask + Water (Wa)	701.46			
Container No.	K			
Mass of Container + Oven Dry Soil	303.73			
Mass of Container	203.73			
Mass of Oven Dry Soil (Wo)	100.00			
Specific Gravity @ Test Temperature Wo/[Wo+(Wa-Wb)]	2.661			
Specific Gravity (SG) K x Specific Gravity @ Test Temperature	2.659			

Remarks:

Alex M. Abernethy

130-04-0212

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9/25/2024

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CALIFORNIA BEARING RATIO (CBR)
AASHTO T193

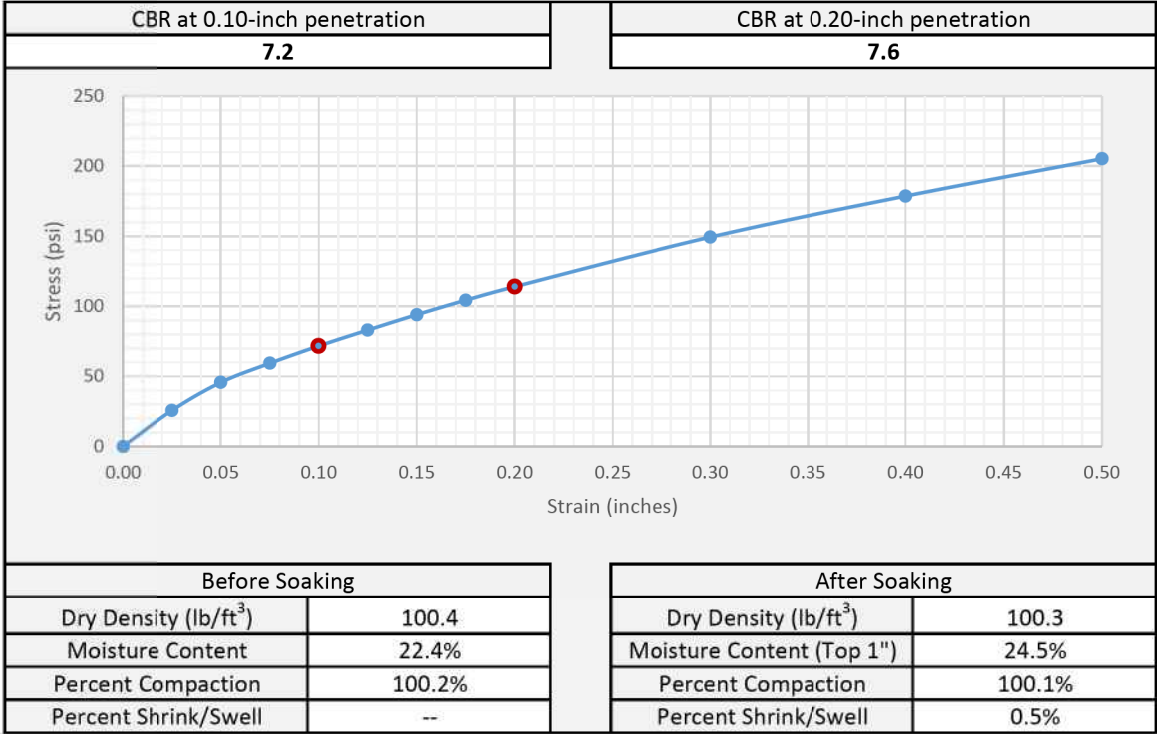
SAMPLE INFORMATION

Project Name	Chatham Parkway from US 15 - 501 to US 64 Business			NCDOT STIP NO.	R-5963A
Sample Location	Bulk-06 (Specimen A)			FME Lab ID	24-2820
Soil Description	A-7-6(19)			Depth/Elev.	0.0 - 5.0
Date Sampled	--	Sampled By:	CG2	Date Received	8/23/2024
Date Test Began	9/6/2024	Date Completed	9/10/2024	Tested By	AA/DH

MOLDING CHARACTERISTICS

Method	AASHTO T99 - Method A	% Retained on 3/4" Sieve	0%
Max Dry Density (lb/ft ³)	100.2	Optimum Moisture Content (%)	22.6
Soak Time (hr)	96	Surcharge Weight (lb)	10.0

TESTING RESULTS



ADDITIONAL COMMENTS

Target %Compaction = 100%

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CALIFORNIA BEARING RATIO (CBR)
AASHTO T193

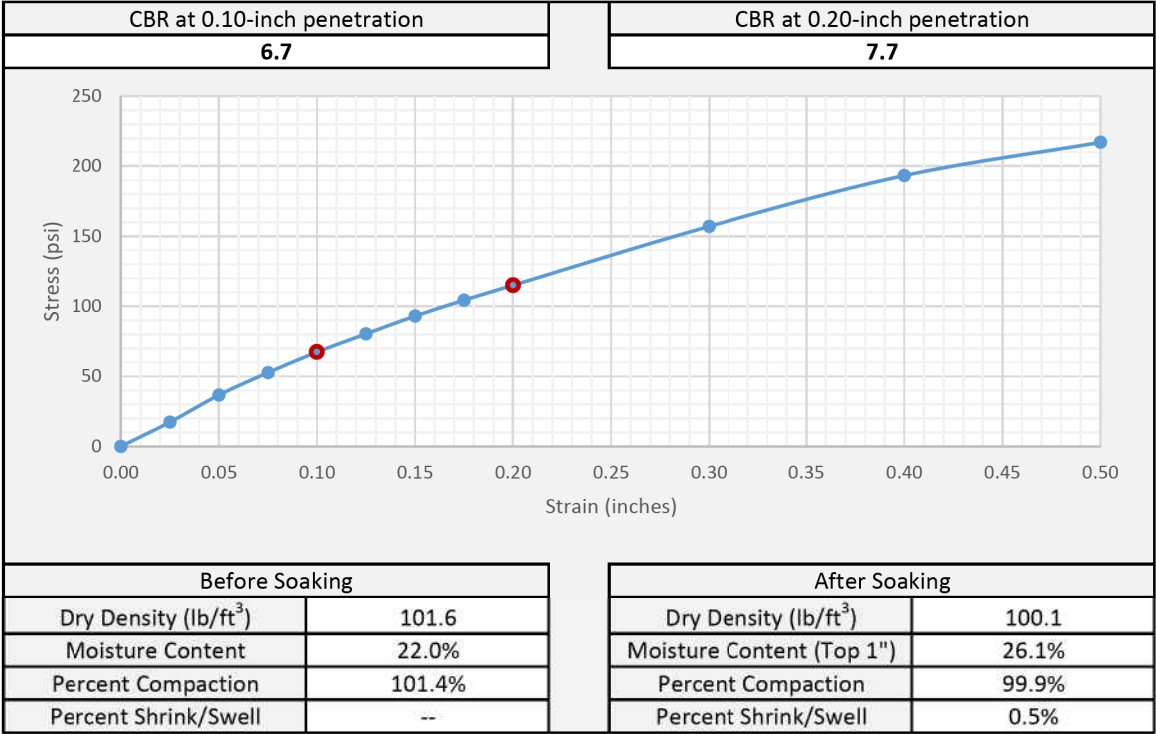
SAMPLE INFORMATION

Project Name	Chatham Parkway from US 15 - 501 to US 64 Business			NCDOT STIP NO.	R-5963A
Sample Location	Bulk-06 (Specimen B)			FME Lab ID	24-2820
Soil Description	A-7-6(19)			Depth/Elev.	0.0 - 5.0
Date Sampled	--	Sampled By:	CG2	Date Received	8/23/2024
Date Test Began	9/6/2024	Date Completed	9/10/2024	Tested By	AA/DH

MOLDING CHARACTERISTICS

Method	AASHTO T99 - Method A	% Retained on 3/4" Sieve	0%
Max Dry Density (lb/ft ³)	100.2	Optimum Moisture Content (%)	22.6
Soak Time (hr)	96	Surcharge Weight (lb)	10.0

TESTING RESULTS



ADDITIONAL COMMENTS

Target %Compaction = 100%

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Alex M. Armulsky

Authorized Signature

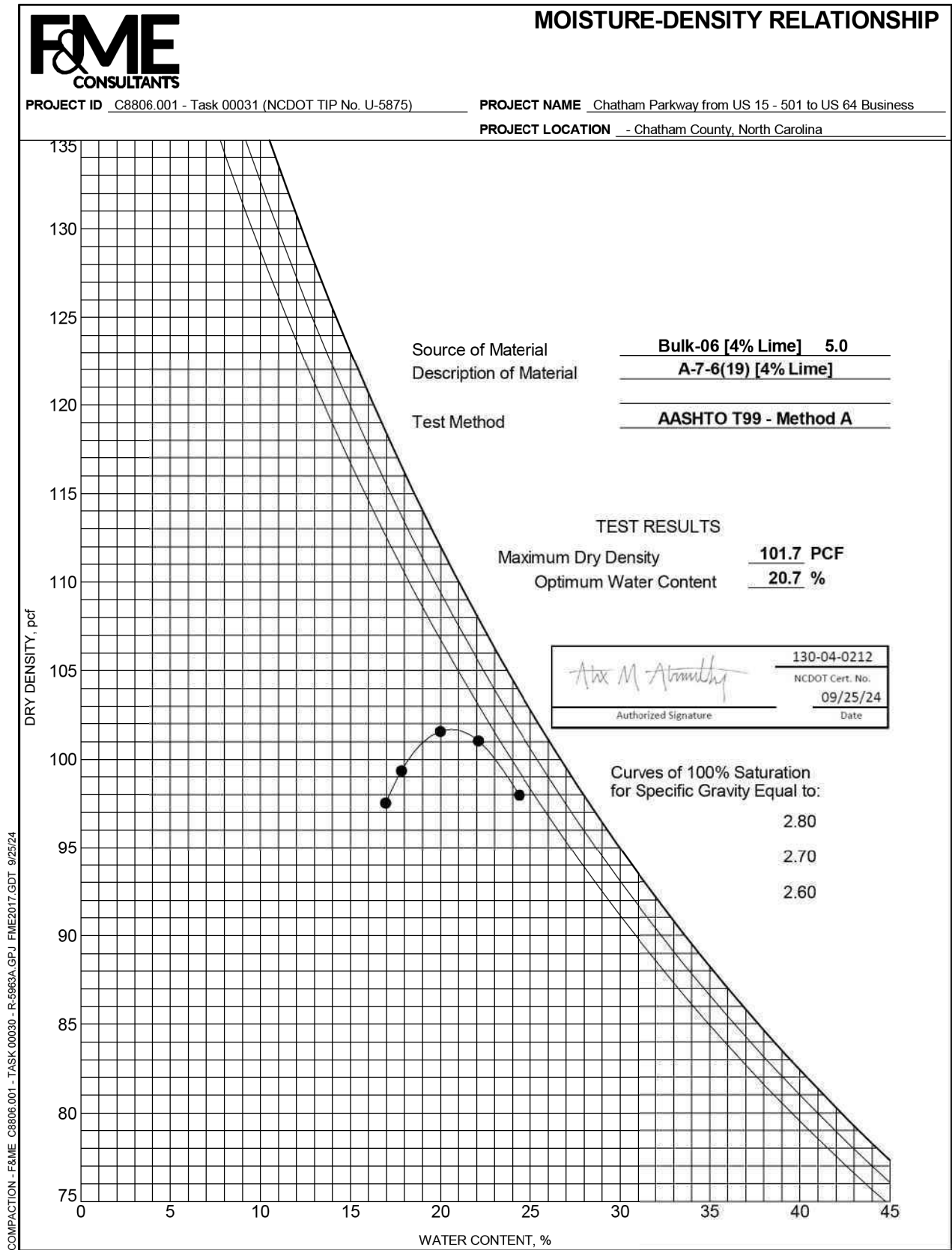
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REV 08/2021

COMPRESSIVE STRENGTH OF MOLDED SOIL-LIME CYLINDERS
ASTM D-5102

SAMPLE INFORMATION

Project Name	Chatham Parkway from US 15 - 501 to US 64 Business	NCDOT STIP #	R-5963A
Sample Location	Bulk-06	FME Lab ID	24-2820
Soil Description	A-7-6(19)	Depth/Elev.	0.0 - 5.0
Station	--	Offset	--
Date Sampled	--	Sampled By: CG2	Date Received 08/22/24
Date Molded	09/12/24	Date Tested 09/19/24	Tested By A. Abernethy

MOLDING CHARACTERISTICS

Method	AASHTO T99 - Method A	% Lime Added to Proctor	4%
Max Dry Density (lb/ft ³)	101.7	Optimum Moisture Content (%)	20.7

TESTING RESULTS

% Lime	Age (Days)	Moisture Content	Height (in.)	Diameter (in.)	Area (in. ²)	Maximum Load (lbf)	Compressive Strength (psi)	Average Compressive Strength (psi)
3%	7	20.7%	4.89	3.99	12.50	811	65	65
3%	7	20.7%	5.00	3.99	12.50	783	65	
5%	7	20.4%	4.92	3.99	12.50	883	70	75
5%	7	20.4%	4.95	4.00	12.57	918	75	

ADDITIONAL COMMENTS

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Authorized Signature: [Signature] 130-04-0212
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