

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	U-5312	1	14

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

**STRUCTURE**  
**SUBSURFACE INVESTIGATION**

COUNTY WILKES  
 PROJECT DESCRIPTION US 421 FROM NC 16 TO US 421  
BUSINESS IN WILKESBORO  
 \_\_\_\_\_  
 SITE DESCRIPTION RW1 -L- STA. 91+50, 82' LT TO  
-L- STA. 95+00, 82' LT  
RW2 -L- STA. 95+50, 66.8' RT TO -L- STA. 97+70, 90.9' RT  
-L- STA. 97+70, 90.9' RT  
RW3 -L- STA. 100+00, 51.417' LT TO -L- STA.  
107+50, 51.417' LT

**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 1919 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 PERFORM INDEPENDENT SUBSURFACE INVESTIGATIONS AND MAKE INTERPRETATIONS AS NECESSARY TO CONFIRM CONDITIONS ENCOUNTERED ON THE PROJECT. THE CONTRACTOR SHALL HAVE NO CLAIM FOR ADDITIONAL COMPENSATION OR FOR AN EXTENSION OF TIME FOR ANY REASON RESULTING FROM THE ACTUAL CONDITIONS ENCOUNTERED AT THE SITE DIFFERING FROM THOSE INDICATED IN THE SUBSURFACE INFORMATION.

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

PERSONNEL  
TRIGON EXPLORATION  
LANE, R.W.

INVESTIGATED BY FALCON ENG.  
 DRAWN BY HILL, M.J.  
 CHECKED BY HUNSBERGER, W.S.  
 SUBMITTED BY FALCON ENG.  
 DATE JULY 2023



DocuSigned by:  
W. Scott Hunsberger 7/7/2023  
 5A469AC89FCB49E  
 SIGNATURE DATE

**DOCUMENT NOT CONSIDERED FINAL  
 UNLESS ALL SIGNATURES COMPLETED**

**REFERENCE: U-5312**

**PROJECT: 45446**

**CONTENTS**

<u>SHEET NO.</u>	<u>DESCRIPTION</u>
1	TITLE SHEET
2	LEGEND (SOIL & ROCK)
3-4	SITE PLAN
5	PROFILES
6-14	BORE LOGS

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 208, 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

Table with columns for General Class, Group Class, Symbol, % Passing, Material Passing #40, #100, #200, and Group Index. Includes soil texture patterns and AASHTO group designations.

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

CONSISTENCY OR DENSENESS

Table mapping Primary Soil Type (e.g., Generally Granular, Generally Silty-Clay) to Consistency (e.g., Very Loose, Very Dense) and Range of Standard Penetration Resistance (N-value).

TEXTURE OR GRAIN SIZE

Table showing U.S. Std. Sieve Size (mm and in.) and corresponding percentages for various soil fractions: Boulder, Cobble, Gravel, Coarse Sand, Fine Sand, Silt, and Clay.

SOIL MOISTURE - CORRELATION OF TERMS

Table correlating Soil Moisture Scale (Atterberg Limits) with Field Moisture Description (e.g., Saturated, Wet, Moist, Dry) and Guide for Field Moisture Description.

PLASTICITY

Table showing Plasticity Index (PI) ranges (0-5 to 26 or more) and corresponding Dry Strength (Very Low to High).

COLOR

DESCRIPTIONS MAY INCLUDE COLOR OR COLOR COMBINATIONS (TAN, RED, YELLOW-BROWN, BLUE-BROWN). MODIFIERS SUCH AS LIGHT, DARK, STREAKED, ETC. ARE USED TO DESCRIBE APPEARANCE.

GRADATION

WELL GRADED - INDICATES A GOOD REPRESENTATION OF PARTICLE SIZES FROM FINE TO COARSE. UNIFORMLY GRADED - INDICATES THAT SOIL PARTICLES ARE ALL APPROXIMATELY THE SAME SIZE. GAP-GRADED - INDICATES A MIXTURE OF UNIFORM PARTICLE SIZES OF TWO OR MORE SIZES.

ANGULARITY OF GRAINS

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

MINERALOGICAL COMPOSITION

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

COMPRESSIBILITY

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

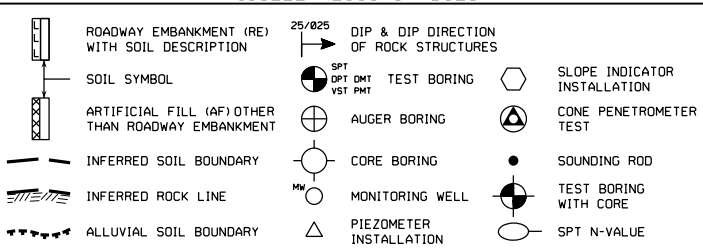
PERCENTAGE OF MATERIAL

Table showing percentages for Organic Material, Granular Soils, Silt-Clay Soils, and Other Material.

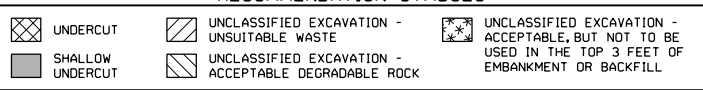
GROUND WATER

Water level symbols: 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



RECOMMENDATION SYMBOLS



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, FRAGMENTS, HI. - HIGHLY, MED. - MEDIUM, MICA - MICACEOUS, MOD. - MODERATELY, NP - NON PLASTIC, ORG. - ORGANIC, PMT - PRESSUREMETER TEST, SAP. - SAPROLITIC, SD. - SAND, SANDY, SL. - SILTY, SILTY, SLI. - SLIGHTLY, TCR - TRICONE REFUSAL, w - MOISTURE CONTENT, V - VERY, VST - VANE SHEAR TEST, WEA. - WEATHERED, U - UNIT WEIGHT, G - 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-550, VANE SHEAR TEST, PORTABLE HOIST, MOBILE B-57. ADVANCING TOOLS: CLAY BITS, 6" CONTINUOUS FLIGHT AUGER, 8" HOLLOW AUGERS, HARD FACED FINGER BITS, TUNG-CARBIDE INSERTS, CASING w/ ADVANCER, TRICONE STEEL TEETH, TRICONE TUNG-CARB., CORE BIT. HAMMER TYPE: AUTOMATIC, MANUAL. CORE SIZE: B, H, N. HAND TOOLS: POST HOLE DIGGER, HAND AUGER, SOUNDING ROD, VANE SHEAR TEST.

ROCK DESCRIPTION

HARD ROCK IS NON-COASTAL PLAIN MATERIAL THAT WOULD YIELD SPT REFUSAL IF TESTED, AN INFERRED ROCK LINE INDICATES THE LEVEL AT WHICH NON-COASTAL PLAIN MATERIAL WOULD YIELD SPT REFUSAL 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:

Table defining rock types: WEATHERED ROCK (WR), CRYSTALLINE ROCK (CR), NON-CRYSTALLINE ROCK (NCR), COASTAL PLAIN SEDIMENTARY ROCK (CP).

WEATHERING

Table describing weathering levels: FRESH, VERY SLIGHT (IV SLI), SLIGHT (SLI), MODERATE (MOD), MODERATELY SEVERE (MOD. SEV.), SEVERE (SEV), VERY SEVERE (IV SEV), COMPLETE.

ROCK HARDNESS

Table describing rock hardness levels: VERY HARD, HARD, MODERATELY HARD, MEDIUM HARD, SOFT, VERY SOFT.

FRACTURE SPACING

Table mapping fracture spacing terms (Very Wide to Very Close) to spacing measurements (More than 10 feet to Less than 0.16 feet).

BEDDING

Table mapping bedding terms (Very Thickly Bedded to Thinly Laminated) to thickness measurements (4 feet to < 0.008 feet).

TERMS AND DEFINITIONS

- ALLUVIUM (ALLUV.) - SOILS THAT HAVE BEEN TRANSPORTED BY WATER. AQUIFER - A WATER BEARING FORMATION OR STRATA. ARENACEOUS - APPLIED TO ROCKS THAT HAVE BEEN DERIVED FROM SAND OR THAT CONTAIN SAND. ARGILLACEOUS - APPLIED TO ALL ROCKS OR SUBSTANCES COMPOSED OF CLAY MINERALS, OR HAVING A NOTABLE PROPORTION OF CLAY IN THEIR COMPOSITION, SUCH AS SHALE, SLATE, ETC. ARTESIAN - GROUND WATER THAT IS UNDER SUFFICIENT PRESSURE TO RISE ABOVE THE LEVEL AT WHICH IT IS ENCOUNTERED, BUT WHICH DOES NOT NECESSARILY RISE TO OR ABOVE THE GROUND SURFACE. CALCAREOUS (CALC.) - SOILS THAT CONTAIN APPRECIABLE AMOUNTS OF CALCIUM CARBONATE. COLLUVIUM - ROCK FRAGMENTS MIXED WITH SOIL DEPOSITED BY GRAVITY ON SLOPE OR AT BOTTOM OF SLOPE. CORE RECOVERY (REC.) - TOTAL LENGTH OF ALL MATERIAL RECOVERED IN THE CORE BARREL DIVIDED BY TOTAL LENGTH OF CORE RUN AND EXPRESSED AS A PERCENTAGE. DIKE - A TABULAR BODY OF IGNEOUS ROCK THAT CUTS ACROSS THE STRUCTURE OF ADJACENT ROCKS OR CUTS MASSIVE ROCK. DIP - THE ANGLE AT WHICH A STRATUM OR ANY PLANAR FEATURE IS INCLINED FROM THE HORIZONTAL. DIP DIRECTION (DIP AZIMUTH) - THE DIRECTION OR BEARING OF THE HORIZONTAL TRACE OF THE LINE OF DIP, MEASURED CLOCKWISE FROM NORTH. FAULT - A FRACTURE OR FRACTURE ZONE ALONG WHICH THERE HAS BEEN DISPLACEMENT OF THE SIDES RELATIVE TO ONE ANOTHER PARALLEL TO THE FRACTURE. FISSILE - A PROPERTY OF SPLITTING ALONG CLOSELY SPACED PARALLEL PLANES. FLOAT - ROCK FRAGMENTS ON SURFACE NEAR THEIR ORIGINAL POSITION AND DISLODGED FROM PARENT MATERIAL. FLOOD PLAIN (FP) - LAND BORDERING A STREAM, BUILT OF SEDIMENTS DEPOSITED BY THE STREAM. FORMATION (FM) - A MAPPABLE GEOLOGIC UNIT THAT CAN BE RECOGNIZED AND TRACED IN THE FIELD. JOINT - FRACTURE IN ROCK ALONG WHICH NO APPRECIABLE MOVEMENT HAS OCCURRED. LEDGE - A SHELF-LIKE RIDGE OR PROJECTION OF ROCK WHOSE THICKNESS IS SMALL COMPARED TO ITS LATERAL EXTENT. LENS - A BODY OF SOIL OR ROCK THAT THINS OUT IN ONE OR MORE DIRECTIONS. MOTTLED (MOT.) - IRREGULARLY MARKED WITH SPOTS OF DIFFERENT COLORS. MOTTLING IN SOILS USUALLY INDICATES POOR AERATION AND LACK OF GOOD DRAINAGE. PERCHED WATER - WATER MAINTAINED ABOVE THE NORMAL GROUND WATER LEVEL BY THE PRESENCE OF AN INTERVENING IMPERVIOUS STRATUM. RESIDUAL (RES.) SOIL - SOIL FORMED IN PLACE BY THE WEATHERING OF ROCK. ROCK QUALITY DESIGNATION (ROD) - A MEASURE OF ROCK QUALITY DESCRIBED BY TOTAL LENGTH OF ROCK SEGMENTS EQUAL TO OR GREATER THAN 4 INCHES DIVIDED BY THE TOTAL LENGTH OF CORE RUN AND EXPRESSED AS A PERCENTAGE. SAPROLITE (SAP.) - RESIDUAL SOIL THAT RETAINS THE RELIC STRUCTURE OR FABRIC OF THE PARENT ROCK. SILL - AN INTRUSIVE BODY OF IGNEOUS ROCK OF APPROXIMATELY UNIFORM THICKNESS AND RELATIVELY THIN COMPARED WITH ITS LATERAL EXTENT, THAT HAS BEEN EMPLACED PARALLEL TO THE BEDDING OR SCHISTOSITY OF THE INTRUDED ROCKS. SLICKENSIDE - POLISHED AND STRIATED SURFACE THAT RESULTS FROM FRICTION ALONG A FAULT OR SLIP PLANE. STANDARD PENETRATION TEST (PENETRATION RESISTANCE) (SPT) - NUMBER OF BLOWS (N OR BPF) OF A 140 LB. HAMMER FALLING 30 INCHES REQUIRED TO PRODUCE A PENETRATION OF 1 FOOT INTO SOIL WITH A 2 INCH OUTSIDE DIAMETER SPLIT SPOON SAMPLER. SPT REFUSAL IS PENETRATION EQUAL TO OR LESS THAN 0.1 FOOT PER 60 BLOWS. STRATA CORE RECOVERY (SREC.) - TOTAL LENGTH OF STRATA MATERIAL RECOVERED DIVIDED BY TOTAL LENGTH OF STRATUM AND EXPRESSED AS A PERCENTAGE. STRATA ROCK QUALITY DESIGNATION (SROD) - A MEASURE OF ROCK QUALITY DESCRIBED BY TOTAL LENGTH OF ROCK SEGMENTS WITHIN A STRATUM EQUAL TO OR GREATER THAN 4 INCHES DIVIDED BY THE TOTAL LENGTH OF STRATA AND EXPRESSED AS A PERCENTAGE. TOPSOIL (TS.) - SURFACE SOILS USUALLY CONTAINING ORGANIC MATTER.

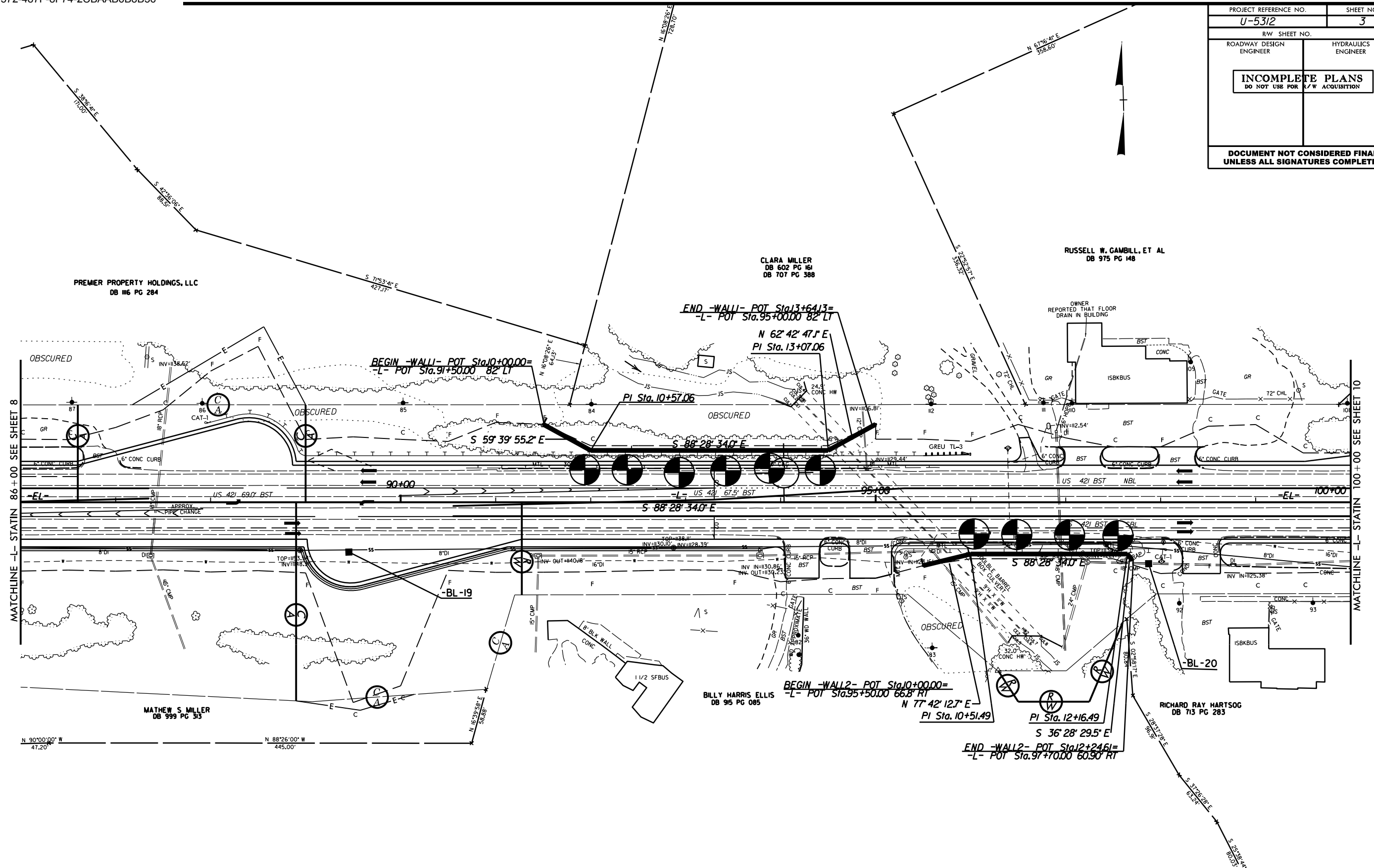
BENCH MARK:

BORING ELEVATIONS TAKEN FROM MULTIPLE .TIN FILES DATED 09/15-09/22 2018 ELEVATION: FEET

NOTES:

FIAD - FILLED IMMEDIATELY AFTER DRILLING

PROJECT REFERENCE NO.	SHEET NO.
U-5312	3
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
<b>INCOMPLETE PLANS</b> DO NOT USE FOR A/W ACQUISITION	
<b>DOCUMENT NOT CONSIDERED FINAL</b> UNLESS ALL SIGNATURES COMPLETED	



ALL DRIVEWAY TURNOUTS ARE 20' WIDE WITH 10' RADII UNLESS OTHERWISE NOTED.

REVISIONS  
 29-JUN-2023 15:07  
 11-Projects\17-617038.00 VHB U-5312 (US-42) Superstreet in Wilkes County\U5312.GEO\_CADD\GEO\TECH\Plan\Prof\U5312\_geo\_psh03-WALL1AND2.dgn  
 11-Projects\17-617038.00 VHB U-5312 (US-42) Superstreet in Wilkes County\U5312.GEO\_CADD\GEO\TECH\Plan\Prof\U5312\_geo\_psh03-WALL1AND2.dgn

MATCHLINE -L- STATIN 86+00 SEE SHEET 8

MATCHLINE -L- STATIN 100+00 SEE SHEET 10

PREMIER PROPERTY HOLDINGS, LLC  
DB 116 PG 284

CLARA MILLER  
DB 602 PG 161  
DB 707 PG 388

RUSSELL W. GAMBILL, ET AL  
DB 975 PG 148

MATHEW S. MILLER  
DB 999 PG 313

BILLY HARRIS ELLIS  
DB 915 PG 085

RICHARD RAY HARTSOG  
DB 713 PG 283

BEGIN -WALL1- POT Sta10+00.00=  
-L- POT Sta.91+50.00 82' LI

END -WALL1- POT Sta13+64.13=  
-L- POT Sta.95+00.00 82' LI

BEGIN -WALL2- POT Sta10+00.00=  
-L- POT Sta.95+50.00 66.8' RT

END -WALL2- POT Sta12+24.61=  
-L- POT Sta.97+70.00 60.90' RT

N 90°00'00" W  
47.20'

N 88°26'00" W  
445.00'

N 16°39'38" E  
38.88'

N 77°42'12.7" E

N 77°42'12.7" E  
PI Sta. 10+51.49

PI Sta. 12+16.49  
S 36°28'29.5" E

S 28°17'28" E  
36.91'

S 26°38'44" E  
80.10'

S 59°39'55.2" E

S 88°28'34.0" E

S 88°28'34.0" E

S 36°28'29.5" E

US 421 -69.0' BST

90+00

US 421 -67.5' BST

95+00

US 421 BST

100+00

OBSCURED

OBSCURED

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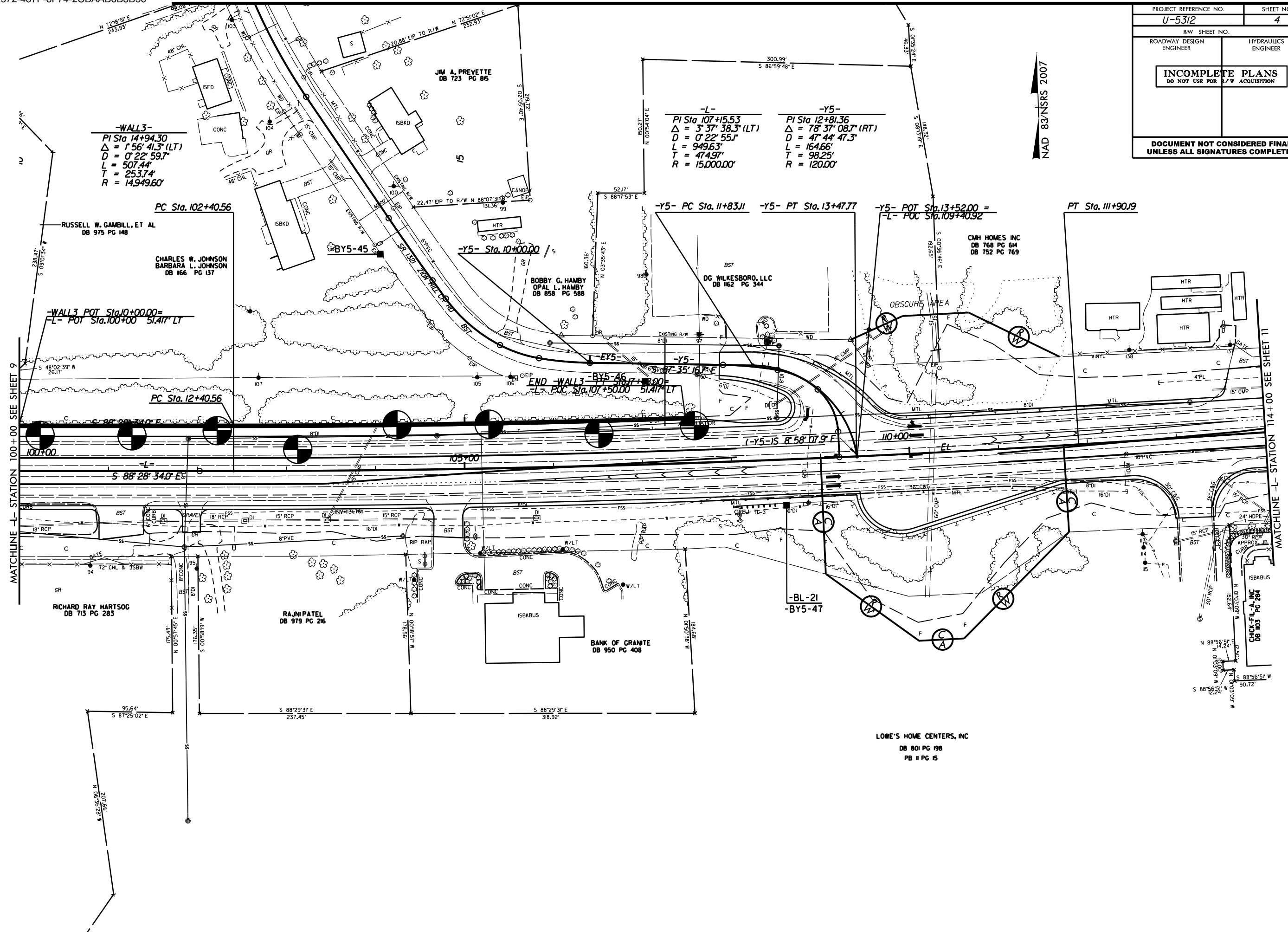
OBSCURED

MATCHLINE -L- STATIN 86+00 SEE SHEET 8

MATCHLINE -L- STATIN 100+00 SEE SHEET 10

PROJECT REFERENCE NO. <b>U-5312</b>	SHEET NO. <b>4</b>
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
<b>INCOMPLETE PLANS</b> DO NOT USE FOR A/W ACQUISITION	
<b>DOCUMENT NOT CONSIDERED FINAL</b> UNLESS ALL SIGNATURES COMPLETED	

NAD 83/NSRS 2007



REVISIONS  
 MATCHLINE -L- STATION 100+00 SEE SHEET 9  
 MATCHLINE -L- STATION 114+00 SEE SHEET 11  
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 cadmachine

LOWE'S HOME CENTERS, INC  
 DB 801 PG 198  
 PB # PG 15

5/28/09  
28 JUN 2003 09:55  
C:\Users\jacob\Documents\Projects\2017\G17038.00 VHB U-5312 (US-421) Superstreet in Wilkes County\U5312\_GEO.RDW\CA00\_GEOTECH\Plan\erPr\U5312\_GEO.plt\_psh.dgn

THE WALL ENVELOPE DOES NOT ACCURATELY DEPICT THE ACTUAL FACE OF THE WALL

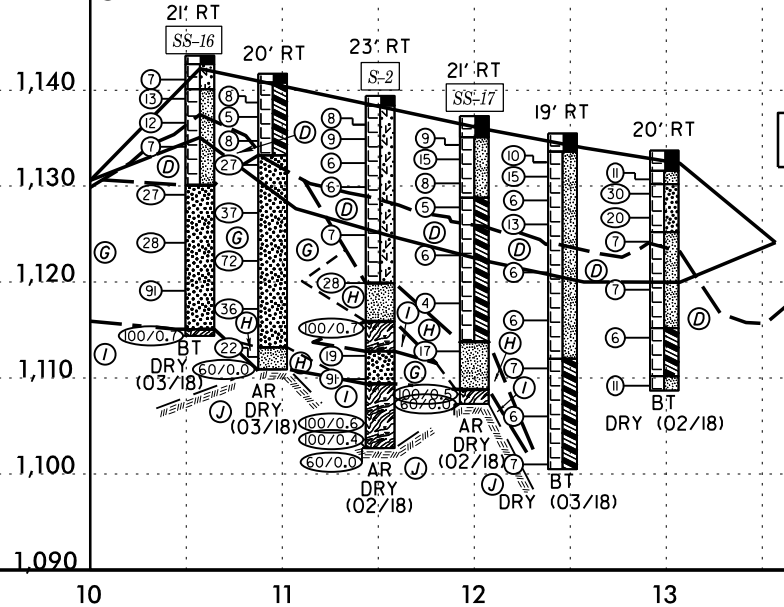
PROJECT REFERENCE NO. <b>U-5312</b>	SHEET NO. <b>5</b>
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
<b>INCOMPLETE PLANS</b> DO NOT USE FOR R/W ACQUISITION	
<b>DOCUMENT NOT CONSIDERED FINAL</b> UNLESS ALL SIGNATURES COMPLETED	

**SOIL TEST RESULTS**

SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	LL.	P.I.	% BY WEIGHT				% PASSING (SIEVES)			% MOISTURE	% ORGANIC
							C. SAND	F. SAND	SILT	CLAY	10	40	200		
SS-16	21 FT RT	10+57	1.0'-3.0'	A-5	43	6	-	-	-	98	93	72	26.0	-	
S-2	23 FT RT	11+51	13.5'-18.5'	A-5	47	9	-	-	-	81	75	58	20.9	-	
SS-17	21 FT RT	12+00	2.0'-3.5'	A-4	38	3	-	-	-	97	86	46	23.3	-	

APPROXIMATE WALL FACE AREA = 1,040 SQ. FT.

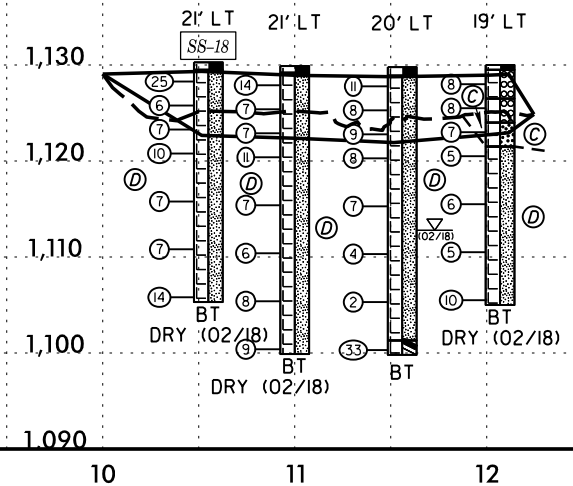
- (C) ROADWAY EMBANKMENT: BROWN AND ORANGE, DRY, MED. DENSE, SILTY SAND
- (D) ROADWAY EMBANKMENT: ORANGE, GRAY BROWN AND WHITE, DRY TO MOIST, MED. STIFF TO STIFF, SANDY SILT AND SANDY CLAY WITH MICA AND TRACE GRAVEL
- (G) RESIDUAL: TAN GRAY AND WHITE, DRY, MED. DENSE TO V. DENSE, SILTY SAND WITH LITTLE ROCK FRAGMENTS
- (H) RESIDUAL: TAN-ORANGE TAN AND WHITE, DRY TO MOIST, V. STIFF, SILT AND SANDY SILT WITH SOME ROCK FRAGMENTS
- (I) WEATHERED ROCK: GRAY TAN AND WHITE, GRANITE
- (J) CRYSTALLINE ROCK: GRAY TAN AND WHITE, GRANITE



**SOIL TEST RESULTS**

SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	LL.	P.I.	% BY WEIGHT				% PASSING (SIEVES)			% MOISTURE	% ORGANIC
							C. SAND	F. SAND	SILT	CLAY	10	40	200		
SS-18	21 FT LT	10+55	3.5'-5.0'	A-4	38	NP	-	-	-	97	86	52	23.2	-	

- (C) ROADWAY EMBANKMENT: GRAY TAN AND BROWN, DRY, LOOSE, SAND AND SILTY SAND WITH SOME GRAVEL
- (D) ROADWAY EMBANKMENT: ORANGE TAN TAN-ORANGE AND BROWN, DRY TO MOIST, SOFT TO HARD, SILT AND SANDY SILT WITH TRACE GRAVEL

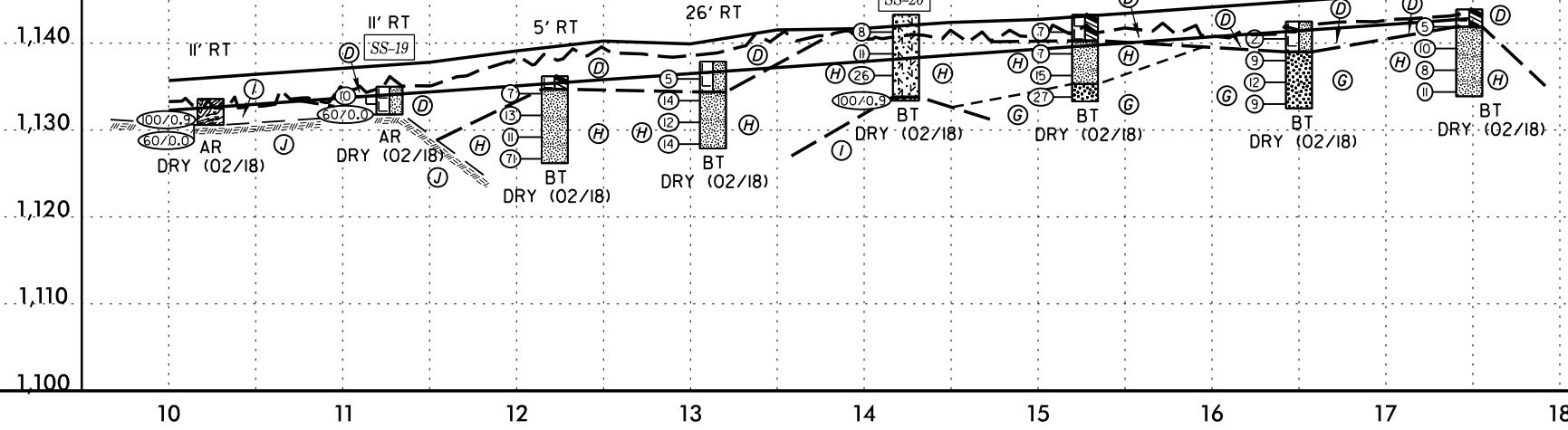


APPROXIMATE WALL FACE AREA = 2,746 SQ. FT.

**SOIL TEST RESULTS**

SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	LL.	P.I.	% BY WEIGHT				% PASSING (SIEVES)			% MOISTURE	% ORGANIC
							C. SAND	F. SAND	SILT	CLAY	10	40	200		
SS-19	11 FT RT	11+27	1.0'-2.5'	A-4	35	1	-	-	-	75	62	38	16.7	-	
SS-20	1 FT LT	14+24	1.0'-2.5'	A-5	42	NP	-	-	-	88	67	38	21.8	-	

- (D) ROADWAY EMBANKMENT: ORANGE BROWN RED AND TAN, MOIST, MED. STIFF TO STIFF, SANDY SILT AND SANDY CLAY WITH TRACE ASPHALT FRAGMENTS
- (G) RESIDUAL: GRAY TAN AND WHITE, DRY, DENSE, SILTY SAND
- (H) RESIDUAL: ORANGE TAN BROWN GRAY WHITE AND BLACK, DRY TO MOIST, MED. STIFF TO HARD, SANDY SILT
- (I) WEATHERED ROCK: TAN AND WHITE, GRANITE
- (J) CRYSTALLINE ROCK: TAN, GRANITE



# GEOTECHNICAL BORING REPORT

## BORE LOG

WBS 45446.1.1		TIP U-5312		COUNTY WILKES		GEOLOGIST Lane, R.W.	
SITE DESCRIPTION US 421 FROM NC 16 TO US 421 BUSINESS IN WILKESBORO							GROUND WTR (ft)
BORING NO. RW1-1		STATION 10+57		OFFSET 21 ft RT		ALIGNMENT -WALL1-	
COLLAR ELEV. 1,143.6 ft		TOTAL DEPTH 29.2 ft		NORTHING 880,721		EASTING 1,346,492	
DRILL RIG/HAMMER EFF./DATE TRI8016 MOBILE B-57 95% 03/19/2018		DRILL METHOD H.S. Augers		HAMMER TYPE Automatic			
DRILLER Estep, J. E.		START DATE 03/02/18		COMP. DATE 03/02/18		SURFACE WATER DEPTH N/A	

ELEV (ft)	DRIVE ELEV (ft)	DEPTH (ft)	BLOW COUNT			BLOWS PER FOOT					SAMP. NO.	LOG	SOIL AND ROCK DESCRIPTION	DEPTH (ft)	
			0.5ft	0.5ft	0.5ft	0	25	50	75	100					
1145															
	1,142.1	1.5	6	4	3									0.9	0.0
1140	1,140.1	3.5	2	7	6									3.5	0.0
	1,137.6	6.0	11	6	6										
1135	1,135.1	8.5	4	3	4										
	1,130.1	13.5	14	14	13										
1125	1,125.1	18.5	9	13	15										
1120	1,120.1	23.5	9	21	70										
1115	1,115.1	28.5	63	37	0.2									28.5	29.2

WBS 45446.1.1		TIP U-5312		COUNTY WILKES		GEOLOGIST Lane, R.W.	
SITE DESCRIPTION US 421 FROM NC 16 TO US 421 BUSINESS IN WILKESBORO							GROUND WTR (ft)
BORING NO. RW1-2		STATION 10+95		OFFSET 20 ft RT		ALIGNMENT -WALL1-	
COLLAR ELEV. 1,141.7 ft		TOTAL DEPTH 30.8 ft		NORTHING 880,720		EASTING 1,346,536	
DRILL RIG/HAMMER EFF./DATE TRI8016 MOBILE B-57 95% 03/19/2018		DRILL METHOD H.S. Augers		HAMMER TYPE Automatic			
DRILLER Estep, J. E.		START DATE 03/02/18		COMP. DATE 03/02/18		SURFACE WATER DEPTH N/A	

ELEV (ft)	DRIVE ELEV (ft)	DEPTH (ft)	BLOW COUNT			BLOWS PER FOOT					SAMP. NO.	LOG	SOIL AND ROCK DESCRIPTION	DEPTH (ft)	
			0.5ft	0.5ft	0.5ft	0	25	50	75	100					
1145															
	1,141.7	0.0												0.0	0.0
	1,140.8	0.9												0.9	0.0
1140	1,139.7	2.0	4	4	4										
	1,138.2	3.5	3	2	3										
1135	1,135.7	6.0	2	3	5										
	1,133.2	8.5	13	13	14										
1130	1,128.2	13.5	7	11	26										
1125	1,123.2	18.5	34	49	23										
1120	1,118.2	23.5	13	17	19										
1115	1,113.2	28.5	3	7	15									28.5	30.8
	1,110.9	30.8	60	0	0									60	0.0

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# GEOTECHNICAL BORING REPORT

## BORE LOG

WBS 45446.1.1		TIP U-5312		COUNTY WILKES		GEOLOGIST Lane, R.W.										
SITE DESCRIPTION US 421 FROM NC 16 TO US 421 BUSINESS IN WILKESBORO							GROUND WTR (ft)									
BORING NO. RW1-3		STATION 11+51		OFFSET 23 ft RT		ALIGNMENT -WALL1-										
COLLAR ELEV. 1,139.4 ft		TOTAL DEPTH 36.7 ft		NORTHING 880,715		EASTING 1,346,591										
DRILL RIG/HAMMER EFF./DATE TRI8016 MOBILE B-57 95% 03/19/2018			DRILL METHOD H.S. Augers		HAMMER TYPE Automatic											
DRILLER Estep, J. E.		START DATE 02/27/18		COMP. DATE 02/27/18		SURFACE WATER DEPTH N/A										
ELEV (ft)	DRIVE ELEV (ft)	DEPTH (ft)	BLOW COUNT			BLOWS PER FOOT					SAMP. NO.	L O G	SOIL AND ROCK DESCRIPTION	DEPTH (ft)		
			0.5ft	0.5ft	0.5ft	0	25	50	75	100						
1140															1,139.4	0.0
	1,137.4	2.0													1,138.4	1.0
1135	1,135.9	3.5	5	4	4											
	1,133.4	6.0	4	5	4											
1130	1,130.9	8.5	3	2	4											
	1,125.9	13.5	2	3	3											
1125	1,125.9	13.5	3	3	4											
1120	1,120.9	18.5	9	9	19											
	1,115.9	23.5	55	45/0.2												
1115	1,113.3	26.1	85	14	5											
	1,110.9	28.5	15	29	62											
1110	1,105.9	33.5	63	37/0.1												
	1,104.0	35.4	100/0.4													
	1,102.7	36.7	60/0.0													

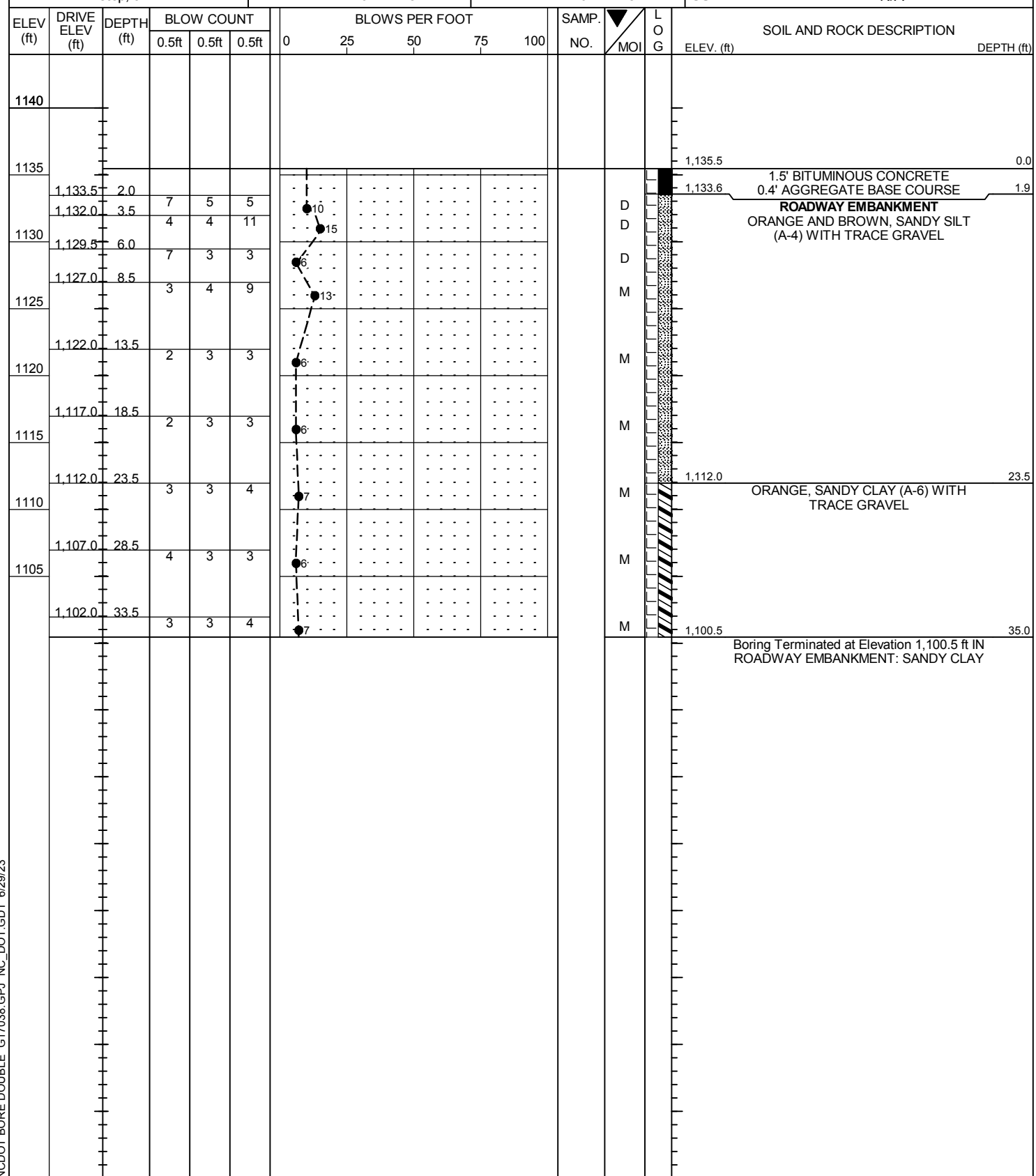
WBS 45446.1.1		TIP U-5312		COUNTY WILKES		GEOLOGIST Lane, R.W.										
SITE DESCRIPTION US 421 FROM NC 16 TO US 421 BUSINESS IN WILKESBORO							GROUND WTR (ft)									
BORING NO. RW1-4		STATION 12+00		OFFSET 21 ft RT		ALIGNMENT -WALL1-										
COLLAR ELEV. 1,137.3 ft		TOTAL DEPTH 30.0 ft		NORTHING 880,716		EASTING 1,346,640										
DRILL RIG/HAMMER EFF./DATE TRI8016 MOBILE B-57 95% 03/19/2018			DRILL METHOD H.S. Augers		HAMMER TYPE Automatic											
DRILLER Estep, J. E.		START DATE 02/27/18		COMP. DATE 02/27/18		SURFACE WATER DEPTH N/A										
ELEV (ft)	DRIVE ELEV (ft)	DEPTH (ft)	BLOW COUNT			BLOWS PER FOOT					SAMP. NO.	L O G	SOIL AND ROCK DESCRIPTION	DEPTH (ft)		
			0.5ft	0.5ft	0.5ft	0	25	50	75	100						
1140															1,137.3	0.0
	1,135.3	2.0													1,135.1	2.2
1135	1,133.8	3.5	8	5	4											
	1,131.3	6.0	7	8	7											
1130	1,128.8	8.5	3	4	4											
	1,123.8	13.5	3	3	2											
1125	1,123.8	13.5	3	3	3											
1120	1,118.8	18.5	3	2	2											
1115	1,113.8	23.5	4	6	11											
	1,108.8	28.5	100/0.5													
1110	1,107.3	30.0	60/0.0													

NCDOT BORE DOUBLE G17038.GPJ NC\_DOT.GDT 6/29/23

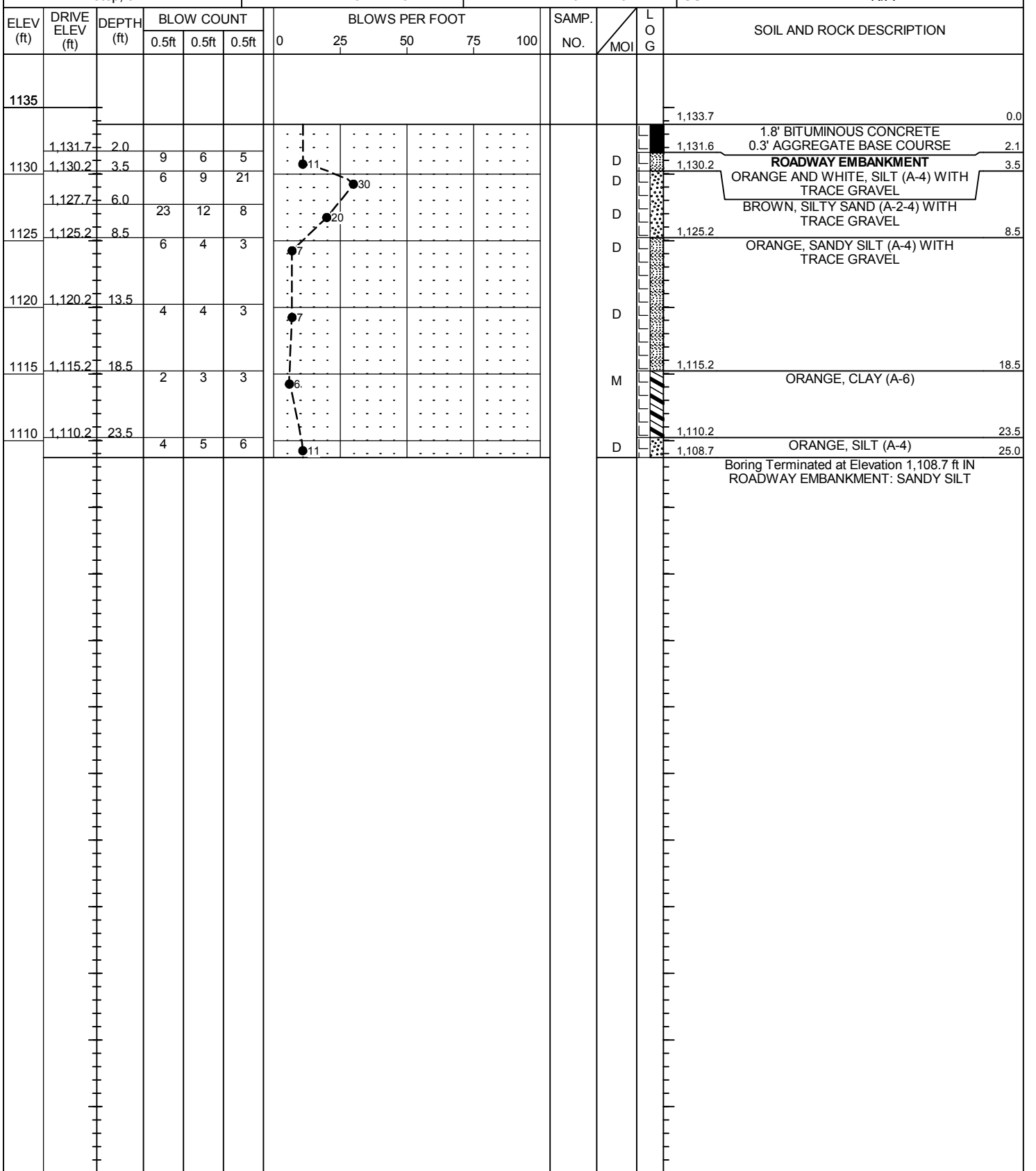
# GEOTECHNICAL BORING REPORT

## BORE LOG

WBS 45446.1.1	TIP U-5312	COUNTY WILKES	GEOLOGIST Lane, R.W.
SITE DESCRIPTION US 421 FROM NC 16 TO US 421 BUSINESS IN WILKESBORO			GROUND WTR (ft)
BORING NO. RW1-5	STATION 12+46	OFFSET 19 ft RT	ALIGNMENT -WALL1-
COLLAR ELEV. 1,135.5 ft	TOTAL DEPTH 35.0 ft	NORTHING 880,717	EASTING 1,346,686
DRILL RIG/HAMMER EFF./DATE TRI8016 MOBILE B-57 95% 03/19/2018		DRILL METHOD H.S. Augers	
DRILLER Estep, J. E.		HAMMER TYPE Automatic	
START DATE 02/27/18	COMP. DATE 02/27/18	SURFACE WATER DEPTH N/A	



WBS 45446.1.1	TIP U-5312	COUNTY WILKES	GEOLOGIST Lane, R.W.
SITE DESCRIPTION US 421 FROM NC 16 TO US 421 BUSINESS IN WILKESBORO			GROUND WTR (ft)
BORING NO. RW1-6	STATION 12+99	OFFSET 20 ft RT	ALIGNMENT -WALL1-
COLLAR ELEV. 1,133.7 ft	TOTAL DEPTH 25.0 ft	NORTHING 880,714	EASTING 1,346,739
DRILL RIG/HAMMER EFF./DATE TRI8016 MOBILE B-57 95% 03/19/2018		DRILL METHOD H.S. Augers	
DRILLER Estep, J. E.		HAMMER TYPE Automatic	
START DATE 02/27/18	COMP. DATE 02/27/18	SURFACE WATER DEPTH N/A	





# GEOTECHNICAL BORING REPORT

## BORE LOG

WBS 45446.1.1		TIP U-5312		COUNTY WILKES		GEOLOGIST Lane, R.W.										
SITE DESCRIPTION US 421 FROM NC 16 TO US 421 BUSINESS IN WILKESBORO							GROUND WTR (ft)									
BORING NO. RW2-1		STATION 10+55		OFFSET 21 ft LT		ALIGNMENT -WALL2-										
COLLAR ELEV. 1,130.3 ft		TOTAL DEPTH 25.0 ft		NORTHING 880,642		EASTING 1,346,899										
DRILL RIG/HAMMER EFF./DATE TRI8016 MOBILE B-57 95% 03/19/2018			DRILL METHOD H.S. Augers		HAMMER TYPE Automatic											
DRILLER Estep, J. E.		START DATE 02/23/18		COMP. DATE 02/23/18		SURFACE WATER DEPTH N/A										
ELEV (ft)	DRIVE ELEV (ft)	DEPTH (ft)	BLOW COUNT			BLOWS PER FOOT					SAMP. NO.	LOG	SOIL AND ROCK DESCRIPTION			
			0.5ft	0.5ft	0.5ft	0	25	50	75	100						
1135																
1130	1,129.3	1.0	16	17	8								D	0.8' BITUMINOUS CONCRETE	0.8	
	1,126.8	3.5	3	3	3								D	ROADWAY EMBANKMENT ORANGE AND TAN, SILT (A-4) WITH TRACE GRAVEL		
1125	1,124.3	6.0	3	3	4								D			
	1,121.8	8.5	4	5	5								D			
1120	1,116.8	13.5	2	3	4								D			
1115	1,111.8	18.5	3	3	4								D			
1110	1,106.8	23.5	11	9	5								D			
															Boring Terminated at Elevation 1,105.3 ft IN ROADWAY EMBANKMENT: SANDY SILT	25.0

WBS 45446.1.1		TIP U-5312		COUNTY WILKES		GEOLOGIST Lane, R.W.										
SITE DESCRIPTION US 421 FROM NC 16 TO US 421 BUSINESS IN WILKESBORO							GROUND WTR (ft)									
BORING NO. RW2-2		STATION 11+00		OFFSET 21 ft LT		ALIGNMENT -WALL2-										
COLLAR ELEV. 1,129.9 ft		TOTAL DEPTH 30.0 ft		NORTHING 880,641		EASTING 1,346,944										
DRILL RIG/HAMMER EFF./DATE TRI8016 MOBILE B-57 95% 03/19/2018			DRILL METHOD H.S. Augers		HAMMER TYPE Automatic											
DRILLER Estep, J. E.		START DATE 02/23/18		COMP. DATE 02/23/18		SURFACE WATER DEPTH N/A										
ELEV (ft)	DRIVE ELEV (ft)	DEPTH (ft)	BLOW COUNT			BLOWS PER FOOT					SAMP. NO.	LOG	SOIL AND ROCK DESCRIPTION			
			0.5ft	0.5ft	0.5ft	0	25	50	75	100						
1130																
	1,128.9	1.0	14	9	5								D	0.7' BITUMINOUS CONCRETE	0.0	
	1,126.4	3.5	3	3	4								D	ROADWAY EMBANKMENT TAN AND ORANGE, SILT (A-4) WITH TRACE GRAVEL		
1125	1,123.9	6.0	2	3	4								D			
	1,121.4	8.5	3	4	7								D			
1120	1,116.4	13.5	2	3	4								D			
1115	1,111.4	18.5	3	2	4								D			
1110	1,106.4	23.5	3	3	5								M			
	1,101.4	28.5	5	4	5								M			
1100															Boring Terminated at Elevation 1,099.9 ft IN ROADWAY EMBANKMENT: SANDY SILT	30.0

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# GEOTECHNICAL BORING REPORT

## BORE LOG

WBS 45446.1.1		TIP U-5312		COUNTY WILKES		GEOLOGIST Lane, R.W.									
SITE DESCRIPTION US 421 FROM NC 16 TO US 421 BUSINESS IN WILKESBORO							GROUND WTR (ft)								
BORING NO. RW2-3		STATION 11+56		OFFSET 20 ft LT		ALIGNMENT -WALL2-									
COLLAR ELEV. 1,129.8 ft		TOTAL DEPTH 30.0 ft		NORTHING 880,638		EASTING 1,347,000									
DRILL RIG/HAMMER EFF./DATE TRI8016 MOBILE B-57 95% 03/19/2018		DRILL METHOD H.S. Augers		HAMMER TYPE Automatic											
DRILLER Estep, J. E.		START DATE 02/23/18		COMP. DATE 02/23/18		SURFACE WATER DEPTH N/A									
ELEV (ft)	DRIVE ELEV (ft)	DEPTH (ft)	BLOW COUNT			BLOWS PER FOOT					SAMP. NO.	LOG	SOIL AND ROCK DESCRIPTION	DEPTH (ft)	
			0.5ft	0.5ft	0.5ft	0	25	50	75	100					
1130	1,128.8	1.0	10	7	4									0.9'	0.0
	1,128.3	3.5	3	4	4										
1125	1,123.8	6.0	3	4	5										
	1,121.3	8.5	3	4	4										
1120	1,116.3	13.5	5	3	4										
	1,111.3	18.5	2	2	2										
1110	1,106.3	23.5	2	1	1										
	1,101.3	28.5	4	25	8										
1100															

WBS 45446.1.1		TIP U-5312		COUNTY WILKES		GEOLOGIST Lane, R.W.									
SITE DESCRIPTION US 421 FROM NC 16 TO US 421 BUSINESS IN WILKESBORO							GROUND WTR (ft)								
BORING NO. RW2-4		STATION 12+07		OFFSET 19 ft LT		ALIGNMENT -WALL2-									
COLLAR ELEV. 1,130.0 ft		TOTAL DEPTH 25.0 ft		NORTHING 880,636		EASTING 1,347,051									
DRILL RIG/HAMMER EFF./DATE TRI8016 MOBILE B-57 95% 03/19/2018		DRILL METHOD H.S. Augers		HAMMER TYPE Automatic											
DRILLER Estep, J. E.		START DATE 02/22/18		COMP. DATE 02/22/18		SURFACE WATER DEPTH N/A									
ELEV (ft)	DRIVE ELEV (ft)	DEPTH (ft)	BLOW COUNT			BLOWS PER FOOT					SAMP. NO.	LOG	SOIL AND ROCK DESCRIPTION	DEPTH (ft)	
			0.5ft	0.5ft	0.5ft	0	25	50	75	100					
1130	1,129.0	1.0	2	3	5									0.5'	0.0
	1,126.5	3.5	8	4	4										
1125	1,124.0	6.0	2	4	3										
	1,121.5	8.5	2	2	3										
1120	1,116.5	13.5	3	2	4										
	1,111.5	18.5	3	2	3										
1110	1,106.5	23.5	5	5	5										
1105															

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# GEOTECHNICAL BORING REPORT BORE LOG

WBS 45446.1.1		TIP U-5312		COUNTY WILKES		GEOLOGIST Lane, R.W.										
SITE DESCRIPTION US 421 FROM NC 16 TO US 421 BUSINESS IN WILKESBORO							GROUND WTR (ft)									
BORING NO. RW3-1	STATION 10+24		OFFSET 11 ft RT		ALIGNMENT -WALL3-		0 HR. Dry									
COLLAR ELEV. 1,133.6 ft	TOTAL DEPTH 3.0 ft		NORTHING 880,704		EASTING 1,347,321		24 HR. Dry									
DRILL RIG/HAMMER EFF./DATE TRI8016 MOBILE B-57 95% 03/19/2018				DRILL METHOD H.S. Augers		HAMMER TYPE Automatic										
DRILLER Estep, J. E.		START DATE 02/15/18	COMP. DATE 02/15/18		SURFACE WATER DEPTH N/A											
ELEV (ft)	DRIVE ELEV (ft)	DEPTH (ft)	BLOW COUNT			BLOWS PER FOOT					SAMP. NO.	L O G	SOIL AND ROCK DESCRIPTION	DEPTH (ft)		
			0.5ft	0.5ft	0.5ft	0	25	50	75	100						
1135																
	1,132.6	1.0												1,133.6	0.2' TOPSOIL	0.0
			4	7	93/0.4										WEATHERED ROCK TAN, METAMORPHOSED GRANITIC	
	1,130.6	3.0												1,130.6	Boring Terminated at Elevation 1,130.6 ft ON CR: METAMORPHOSED GRANITIC ROCK	3.0
		60/0.0														

WBS 45446.1.1		TIP U-5312		COUNTY WILKES		GEOLOGIST Lane, R.W.										
SITE DESCRIPTION US 421 FROM NC 16 TO US 421 BUSINESS IN WILKESBORO							GROUND WTR (ft)									
BORING NO. RW3-2	STATION 11+27		OFFSET 11 ft RT		ALIGNMENT -WALL3-		0 HR. Dry									
COLLAR ELEV. 1,135.0 ft	TOTAL DEPTH 3.2 ft		NORTHING 880,701		EASTING 1,347,424		24 HR. Dry									
DRILL RIG/HAMMER EFF./DATE TRI8016 MOBILE B-57 95% 03/19/2018				DRILL METHOD H.S. Augers		HAMMER TYPE Automatic										
DRILLER Estep, J. E.		START DATE 02/15/18	COMP. DATE 02/15/18		SURFACE WATER DEPTH N/A											
ELEV (ft)	DRIVE ELEV (ft)	DEPTH (ft)	BLOW COUNT			BLOWS PER FOOT					SAMP. NO.	L O G	SOIL AND ROCK DESCRIPTION	DEPTH (ft)		
			0.5ft	0.5ft	0.5ft	0	25	50	75	100						
1140																
														1,135.0	ROADWAY EMBANKMENT ORANGE, SANDY SILT (A-4)	0.0
1135																
	1,134.0	1.0	2	3	7											
	1,131.8	3.2												1,131.8	Boring Terminated at Elevation 1,131.8 ft ON CR: METAMORPHOSED GRANITIC ROCK	3.2
		60/0.0														

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# GEOTECHNICAL BORING REPORT

## BORE LOG

WBS 45446.1.1		TIP U-5312		COUNTY WILKES		GEOLOGIST Lane, R.W.										
SITE DESCRIPTION US 421 FROM NC 16 TO US 421 BUSINESS IN WILKESBORO							GROUND WTR (ft)									
BORING NO. RW3-3		STATION 12+22		OFFSET 5 ft RT		ALIGNMENT -WALL3-										
COLLAR ELEV. 1,136.2 ft		TOTAL DEPTH 10.0 ft		NORTHING 880,705		EASTING 1,347,520										
DRILL RIG/HAMMER EFF./DATE TRI8016 MOBILE B-57 95% 03/19/2018			DRILL METHOD H.S. Augers		HAMMER TYPE Automatic											
DRILLER Estep, J. E.		START DATE 02/15/18		COMP. DATE 02/15/18		SURFACE WATER DEPTH N/A										
ELEV (ft)	DRIVE ELEV (ft)	DEPTH (ft)	BLOW COUNT			BLOWS PER FOOT					SAMP. NO.	LOG	SOIL AND ROCK DESCRIPTION	DEPTH (ft)		
			0.5ft	0.5ft	0.5ft	0	25	50	75	100						
1140																
1135	1,135.2	1.0	2	3	4								M	ROADWAY EMBANKMENT BROWN, CLAY (A-6)	1.5	
	1,132.7	3.5	8	9	4								M	RESIDUAL BROWN AND WHITE, SILT (A-4) SAPROLITIC		
1130	1,130.2	6.0	4	4	7								D			
	1,127.7	8.5	12	27	44								D			
															Boring Terminated at Elevation 1,126.2 ft IN RESIDUAL: SANDY SILT	10.0

WBS 45446.1.1		TIP U-5312		COUNTY WILKES		GEOLOGIST Lane, R.W.										
SITE DESCRIPTION US 421 FROM NC 16 TO US 421 BUSINESS IN WILKESBORO							GROUND WTR (ft)									
BORING NO. RW3-4		STATION 13+13		OFFSET 26 ft RT		ALIGNMENT -WALL3-										
COLLAR ELEV. 1,137.9 ft		TOTAL DEPTH 10.0 ft		NORTHING 880,681		EASTING 1,347,610										
DRILL RIG/HAMMER EFF./DATE TRI8016 MOBILE B-57 95% 03/19/2018			DRILL METHOD H.S. Augers		HAMMER TYPE Automatic											
DRILLER Estep, J. E.		START DATE 02/15/18		COMP. DATE 02/15/18		SURFACE WATER DEPTH N/A										
ELEV (ft)	DRIVE ELEV (ft)	DEPTH (ft)	BLOW COUNT			BLOWS PER FOOT					SAMP. NO.	LOG	SOIL AND ROCK DESCRIPTION	DEPTH (ft)		
			0.5ft	0.5ft	0.5ft	0	25	50	75	100						
1140																
	1,136.9	1.0	3	2	3								M	ROADWAY EMBANKMENT BROWN AND RED, SILT (A-4)	0.0	
1135	1,134.4	3.5	7	6	8								M	RESIDUAL BROWN AND WHITE, SILT (A-4) SAPROLITIC	3.5	
	1,131.9	6.0	4	5	7								M			
1130	1,129.4	8.5	4	6	8								M			
															Boring Terminated at Elevation 1,127.9 ft IN RESIDUAL: SANDY SILT	10.0

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# GEOTECHNICAL BORING REPORT

## BORE LOG

WBS 45446.1.1		TIP U-5312		COUNTY WILKES		GEOLOGIST Lane, R.W.										
SITE DESCRIPTION US 421 FROM NC 16 TO US 421 BUSINESS IN WILKESBORO							GROUND WTR (ft)									
BORING NO. RW3-5		STATION 14+24		OFFSET 1 ft LT		ALIGNMENT -WALL3-										
COLLAR ELEV. 1,143.3 ft		TOTAL DEPTH 9.9 ft		NORTHING 880,706		EASTING 1,347,722										
DRILL RIG/HAMMER EFF./DATE TRI8016 MOBILE B-57 95% 03/19/2018			DRILL METHOD H.S. Augers			HAMMER TYPE Automatic										
DRILLER Estep, J. E.		START DATE 02/15/18		COMP. DATE 02/15/18		SURFACE WATER DEPTH N/A										
ELEV (ft)	DRIVE ELEV (ft)	DEPTH (ft)	BLOW COUNT			BLOWS PER FOOT					SAMP. NO.	MOI	LOG	SOIL AND ROCK DESCRIPTION	DEPTH (ft)	
			0.5ft	0.5ft	0.5ft	0	25	50	75	100						
1145																
	1,142.3	1.0	2	3	5										1,143.3	0.2' TOPSOIL
1140	1,139.8	3.5	5	5	6						SS-20	22%				RESIDUAL TAN WHITE BLACK AND BROWN, CLAYEY SILT (A-5) SAPROLITIC
	1,137.3	6.0	5	8	18							M				
1135	1,134.8	8.5	8	15	85/0.4							M				
															1,133.8	WEATHERED ROCK TAN AND WHITE, METAMORPHOSED GRANITIC
															1,133.4	Boring Terminated at Elevation 1,133.4 ft IN CR: METAMORPHOSED GRANITIC ROCK

WBS 45446.1.1		TIP U-5312		COUNTY WILKES		GEOLOGIST Lane, R.W.										
SITE DESCRIPTION US 421 FROM NC 16 TO US 421 BUSINESS IN WILKESBORO							GROUND WTR (ft)									
BORING NO. RW3-6		STATION 15+27		OFFSET CL		ALIGNMENT -WALL3-										
COLLAR ELEV. 1,143.3 ft		TOTAL DEPTH 10.0 ft		NORTHING 880,704		EASTING 1,347,825										
DRILL RIG/HAMMER EFF./DATE TRI8016 MOBILE B-57 95% 03/19/2018			DRILL METHOD H.S. Augers			HAMMER TYPE Automatic										
DRILLER Estep, J. E.		START DATE 02/15/18		COMP. DATE 02/15/18		SURFACE WATER DEPTH N/A										
ELEV (ft)	DRIVE ELEV (ft)	DEPTH (ft)	BLOW COUNT			BLOWS PER FOOT					SAMP. NO.	MOI	LOG	SOIL AND ROCK DESCRIPTION	DEPTH (ft)	
			0.5ft	0.5ft	0.5ft	0	25	50	75	100						
1145																
	1,142.3	1.0	1	3	4										1,143.3	0.2' TOPSOIL
1140	1,139.8	3.5	3	3	4								M		1,140.3	ROADWAY EMBANKMENT ORANGE RED AND TAN, SANDY CLAY (A-6) TRACE ASPHALT FRAGMENTS
	1,137.3	6.0	5	7	8								M			RESIDUAL ORANGE BLACK GRAY AND TAN, SILT (A-4) SAPROLITIC
1135	1,134.8	8.5	11	12	15								M		1,135.3	GRAY TAN AND WHITE, SILTY SAND (A-2-4) SAPROLITIC
													D		1,133.3	Boring Terminated at Elevation 1,133.3 ft IN RESIDUAL: SILTY SAND

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# GEOTECHNICAL BORING REPORT

## BORE LOG

WBS 45446.1.1		TIP U-5312		COUNTY WILKES		GEOLOGIST Lane, R.W.										
SITE DESCRIPTION US 421 FROM NC 16 TO US 421 BUSINESS IN WILKESBORO							GROUND WTR (ft)									
BORING NO. RW3-7		STATION 16+50		OFFSET 14 ft RT		ALIGNMENT -WALL3-										
COLLAR ELEV. 1,142.5 ft		TOTAL DEPTH 10.0 ft		NORTHING 880,690		EASTING 1,347,948										
DRILL RIG/HAMMER EFF./DATE TRI8016 MOBILE B-57 95% 03/19/2018		DRILL METHOD H.S. Augers		HAMMER TYPE Automatic												
DRILLER Estep, J. E.		START DATE 02/15/18		COMP. DATE 02/15/18		SURFACE WATER DEPTH N/A										
ELEV (ft)	DRIVE ELEV (ft)	DEPTH (ft)	BLOW COUNT			BLOWS PER FOOT					SAMP. NO.	LOG	SOIL AND ROCK DESCRIPTION	DEPTH (ft)		
			0.5ft	0.5ft	0.5ft	0	25	50	75	100						
1145																
1140	1,141.5	1.0	1	1	1							M	ROADWAY EMBANKMENT ORANGE, SANDY SILT (A-4)	1,142.5	0.0	
	1,139.0	3.5	2	4	5							D	RESIDUAL GRAY TAN AND ORANGE, SILTY SAND (A-2-4) SAPROLITIC	1,139.0	3.5	
	1,136.5	6.0	5	6	6							D				
1135	1,134.0	8.5	4	5	4							D		1,132.5	10.0	
Boring Terminated at Elevation 1,132.5 ft IN RESIDUAL: SILTY SAND																

WBS 45446.1.1		TIP U-5312		COUNTY WILKES		GEOLOGIST Lane, R.W.										
SITE DESCRIPTION US 421 FROM NC 16 TO US 421 BUSINESS IN WILKESBORO							GROUND WTR (ft)									
BORING NO. RW3-8		STATION 17+48		OFFSET 8 ft RT		ALIGNMENT N/A										
COLLAR ELEV. 1,143.9 ft		TOTAL DEPTH 10.0 ft		NORTHING 880,696		EASTING 1,348,056										
DRILL RIG/HAMMER EFF./DATE TRI8016 MOBILE B-57 95% 03/19/2018		DRILL METHOD H.S. Augers		HAMMER TYPE Automatic												
DRILLER Estep, J. E.		START DATE 02/15/18		COMP. DATE 02/15/18		SURFACE WATER DEPTH N/A										
ELEV (ft)	DRIVE ELEV (ft)	DEPTH (ft)	BLOW COUNT			BLOWS PER FOOT					SAMP. NO.	LOG	SOIL AND ROCK DESCRIPTION	DEPTH (ft)		
			0.5ft	0.5ft	0.5ft	0	25	50	75	100						
1145																
	1,142.9	1.0	4	2	3									1,143.9	0.0	0.2' TOPSOIL
1140	1,140.4	3.5	4	5	5									1,141.9	2.0	ROADWAY EMBANKMENT ORANGE, CLAY (A-6) WITH TRACE ASPAHLT PIECES
	1,137.9	6.0	2	4	4											RESIDUAL ORANGE AND BLACK, SILT (A-4) SAPROLITIC
1135	1,135.4	8.5	3	5	6									1,133.9	10.0	
Boring Terminated at Elevation 1,133.9 ft IN RESIDUAL: SANDY SILT																

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