

REFERENCE: B-4830

PROJECT: 38600

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

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	B-4830	1	8

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STRUCTURE
SUBSURFACE INVESTIGATION

COUNTY WAKE
 PROJECT DESCRIPTION REPLACE BRIDGE NO. 20 ON -L- (NC 97) OVER MOCCASIN CREEK AT STA. 15+32.5

SITE DESCRIPTION _____

CAUTION NOTICE

THE SUBSURFACE INFORMATION AND THE SUBSURFACE INVESTIGATION ON WHICH IT IS BASED WERE MADE FOR THE PURPOSE OF STUDY, PLANNING AND DESIGN, AND NOT FOR CONSTRUCTION OR PAY PURPOSES. THE VARIOUS FIELD BORING LOGS, ROCK CORES AND SOIL TEST DATA AVAILABLE MAY BE REVIEWED OR INSPECTED IN RALEIGH BY CONTACTING THE N. C. DEPARTMENT OF TRANSPORTATION, GEOTECHNICAL ENGINEERING UNIT AT (919) 707-6850. THE SUBSURFACE PLANS AND REPORTS, FIELD BORING LOGS, ROCK CORES AND SOIL TEST DATA ARE NOT PART OF THE CONTRACT.

GENERAL SOIL AND ROCK STRATA DESCRIPTIONS AND INDICATED BOUNDARIES ARE BASED ON A GEOTECHNICAL INTERPRETATION OF ALL AVAILABLE SUBSURFACE DATA AND MAY NOT NECESSARILY REFLECT THE ACTUAL SUBSURFACE CONDITIONS BETWEEN BORINGS OR BETWEEN SAMPLED STRATA WITHIN THE BOREHOLE. THE LABORATORY SAMPLE DATA AND THE IN SITU (IN-PLACE) TEST DATA CAN BE RELIED ON ONLY TO THE DEGREE OF RELIABILITY INHERENT IN THE STANDARD TEST METHOD. THE OBSERVED WATER LEVELS OR SOIL MOISTURE CONDITIONS INDICATED IN THE SUBSURFACE INVESTIGATIONS ARE AS RECORDED AT THE TIME OF THE INVESTIGATION. THESE WATER LEVELS OR SOIL MOISTURE CONDITIONS MAY VARY CONSIDERABLY WITH TIME ACCORDING TO CLIMATIC CONDITIONS INCLUDING TEMPERATURES, PRECIPITATION AND WIND, AS WELL AS OTHER NON-CLIMATIC FACTORS.

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

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

PERSONNEL
GEOSYNTEC
TRIGON

INVESTIGATED BY NJOROGE WAINAINA
 DRAWN BY CHUCK TURLINGTON
 CHECKED BY WESTON SHIN
 SUBMITTED BY NJOROGE WAINAINA
 DATE OCTOBER 2015



DocuSigned by:
Njoroge Wainaina 11/24/2015
 AEC0C6E0A2E14F2
 SIGNATURE DATE

**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

Table with columns for General Class, Group Class, Symbol, % Passing, Material Passing #40, #200, LL, PI, Group Index, Usual Types of Major Materials, Gen. Rating as Subgrade, and Soil Legend symbols for Granular, Silty, Clayey, and Organic materials.

CONSISTENCY OR DENSENESS

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

TEXTURE OR GRAIN SIZE

Table showing U.S. Std. Sieve Size (mm) and corresponding grain size ranges for Boulder, Cobble, Gravel, Coarse Sand, Fine Sand, Silt, and Clay.

SOIL MOISTURE - CORRELATION OF TERMS

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

PLASTICITY

Table showing Plasticity Index (PI) ranges and corresponding Dry Strength (Very Low, Slight, Medium, High).

COLOR

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

GRADATION

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

ANGULARITY OF GRAINS

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

MINERALOGICAL COMPOSITION

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

COMPRESSIBILITY

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

PERCENTAGE OF MATERIAL

Table showing percentages for Organic Material, Granular Soils, Silty-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

Diagrammatic symbols for Roadway Embankment, Soil Symbol, Artificial Fill, Inferred Soil Boundary, Inferred Rock Line, Alluvial Soil Boundary, Dip and Dip Direction, Test Boring, Auger Boring, Core Boring, Monitoring Well, Piezometer Installation, Slope Indicator, Cone Penetrometer Test, Sounding Rod, Test Boring with Core, SPT N-value.

RECOMMENDATION SYMBOLS

Symbols for Undercut Excavation, 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

- List of 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, FRAGS - 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, UNIT WEIGHT, DRY UNIT WEIGHT, SAMPLE ABBREVIATIONS: S - Bulk, SS - Split Spoon, ST - Shelby Tube, RS - Rock, RT - Re-compacted Triaxial, CBR - California Bearing Ratio.

EQUIPMENT USED ON SUBJECT PROJECT

- Checklist for equipment: Drill Units (CME-45C, CME-55, CME-550, Vane Shear Test, Portable Hoist), Advancing Tools (Clay Bits, 6" Continuous Flight Auger, 8" Hollow Augers, Hard Faced Finger Bits, Tung-Carbide Inserts, Casing w/ Advancer, Tricone *Steel Teeth, Tricone *Tung-Carb., Core Bit, 2 1/4" Hollow Augers), Hammer Type (Automatic, Manual), Core Size (-B, -H, -N), Hand Tools (Post Hole Digger, Hand Auger, Sounding Rod, Vane Shear Test).

ROCK DESCRIPTION

HARD ROCK IS NON-COASTAL PLAIN MATERIAL THAT WOULD YIELD SPT REFUSAL IF TESTED, AN INFERRED ROCK LINE INDICATES THE LEVEL AT WHICH NON-COASTAL PLAIN MATERIAL WOULD YIELD SPT REFUSAL. SPT REFUSAL IS PENETRATION BY A SPLIT SPOON SAMPLER EQUAL TO OR LESS THAN 0.1 FOOT PER 60 BLOWS IN NON-COASTAL PLAIN MATERIAL. THE TRANSITION BETWEEN SOIL AND ROCK IS OFTEN REPRESENTED BY A ZONE OF WEATHERED ROCK. ROCK MATERIALS ARE TYPICALLY DIVIDED AS FOLLOWS:

Table describing rock types: Weathered Rock (WR), Crystalline Rock (CR), Non-Crystalline Rock (NCR), and Coastal Plain Sedimentary Rock (CPS). Includes descriptions of grain size and material composition.

WEATHERING

Table describing weathering conditions: Fresh, Very Slight (IV SLI), Slight (SLI), Moderate (MOD), Moderately Severe (MOD. SEV.), Severe (SEV.), Very Severe (IV SEV.), Complete. Includes descriptions of rock appearance and strength.

ROCK HARDNESS

Table describing rock hardness levels: Very Hard, Hard, Moderately Hard, Medium Hard, Soft, Very Soft. Includes descriptions of how the rock can be scratched or broken.

Tables for Fracture Spacing and Bedding. Fracture Spacing: Term (Very Wide to Very Close) vs Spacing (More than 10 feet to Less than 0.16 feet). Bedding: Term (Very Thickly Bedded to Thinly Laminated) vs Thickness (4 feet to < 0.008 feet).

INDURATION

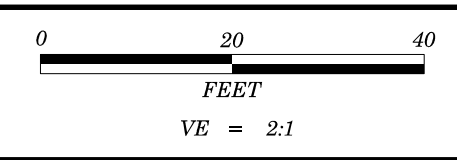
Table describing induration levels: Friable, Moderately Indurated, Indurated, Extremely Indurated. Includes descriptions of how the rock reacts to hammer blows and steel probes.

TERMS AND DEFINITIONS

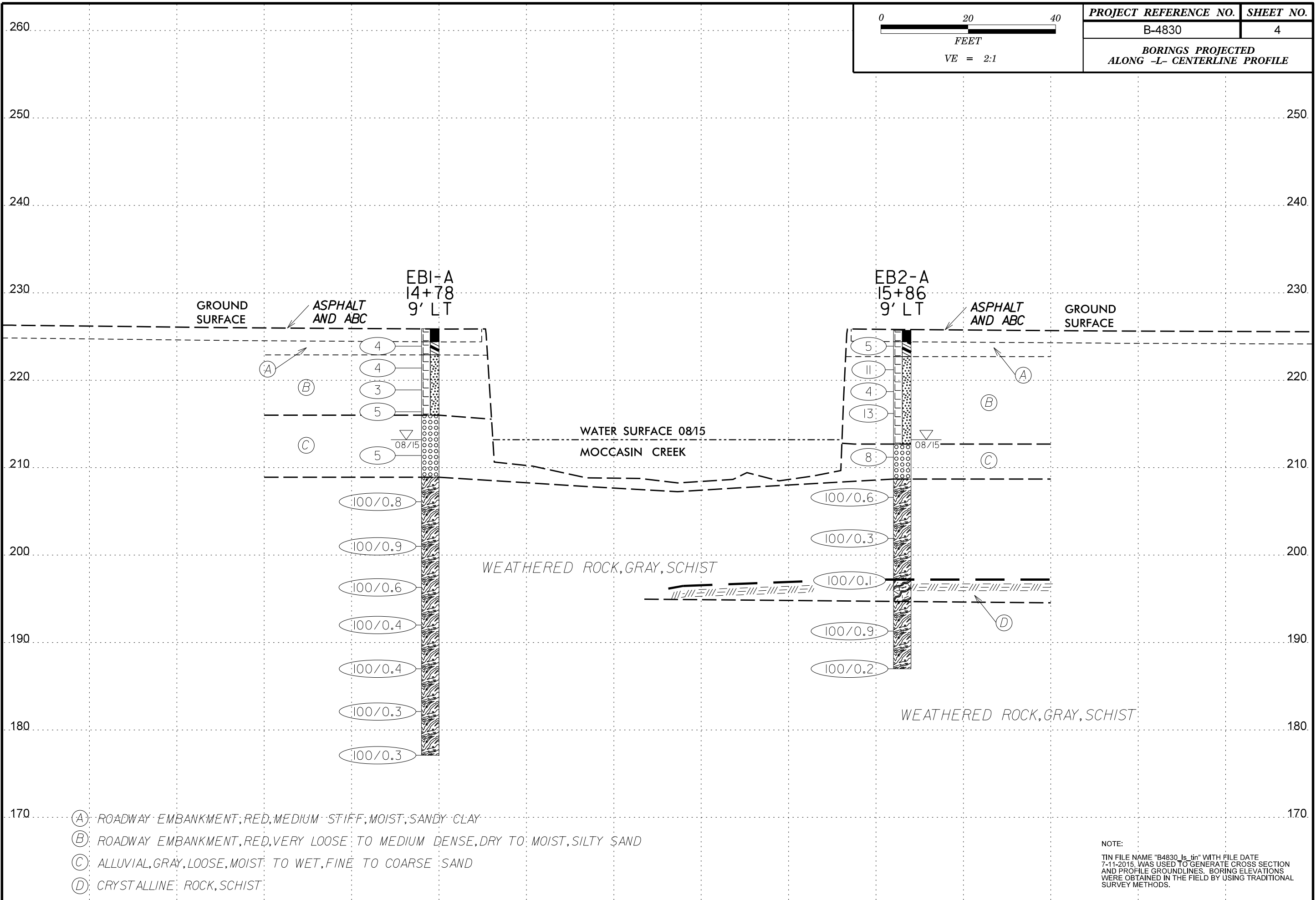
- Definitions for: Alluvium (ALLUV.), Aquifer, Arenaceous, Argillaceous, Artesian, Calcareous (CALC.), Colluvium, Core Recovery (REC.), Dike, Dip, Dip Direction (DIP AZIMUTH), Fault, Fissile, Float, Flood Plain (FP), Formation (FM), Joint, Ledger, Lens, Mottled (MOT.), Perched Water, Residual (RES.) Soil, Rock Quality Designation (ROD), Saprolite (SAP.), Sill, Slickenside, Standard Penetration Test (PENETRATION RESISTANCE) (SPT), Strata Core Recovery (SREC.), Strata Rock Quality Designation (SROD), Topsoil (TS).

BENCH MARK: USGS BENCHMARK; -L- STA: I5+75, OFFSET: I4' RT
NORTHING: 759,553
EASTING: 2,219,114 ELEVATION: 225.4 FEET

NOTES:
TOP OF RAIL @ EB1; STA: I4+89, I0' RT; ELEV.=229.3'
TOP OF RAIL @ EB2; STA: I5+75, I0' RT; ELEV.=229.1'
FIAD - FILLED IN AFTER DRILLING.



PROJECT REFERENCE NO.	SHEET NO.
B-4830	4
BORINGS PROJECTED ALONG -L- CENTERLINE PROFILE	

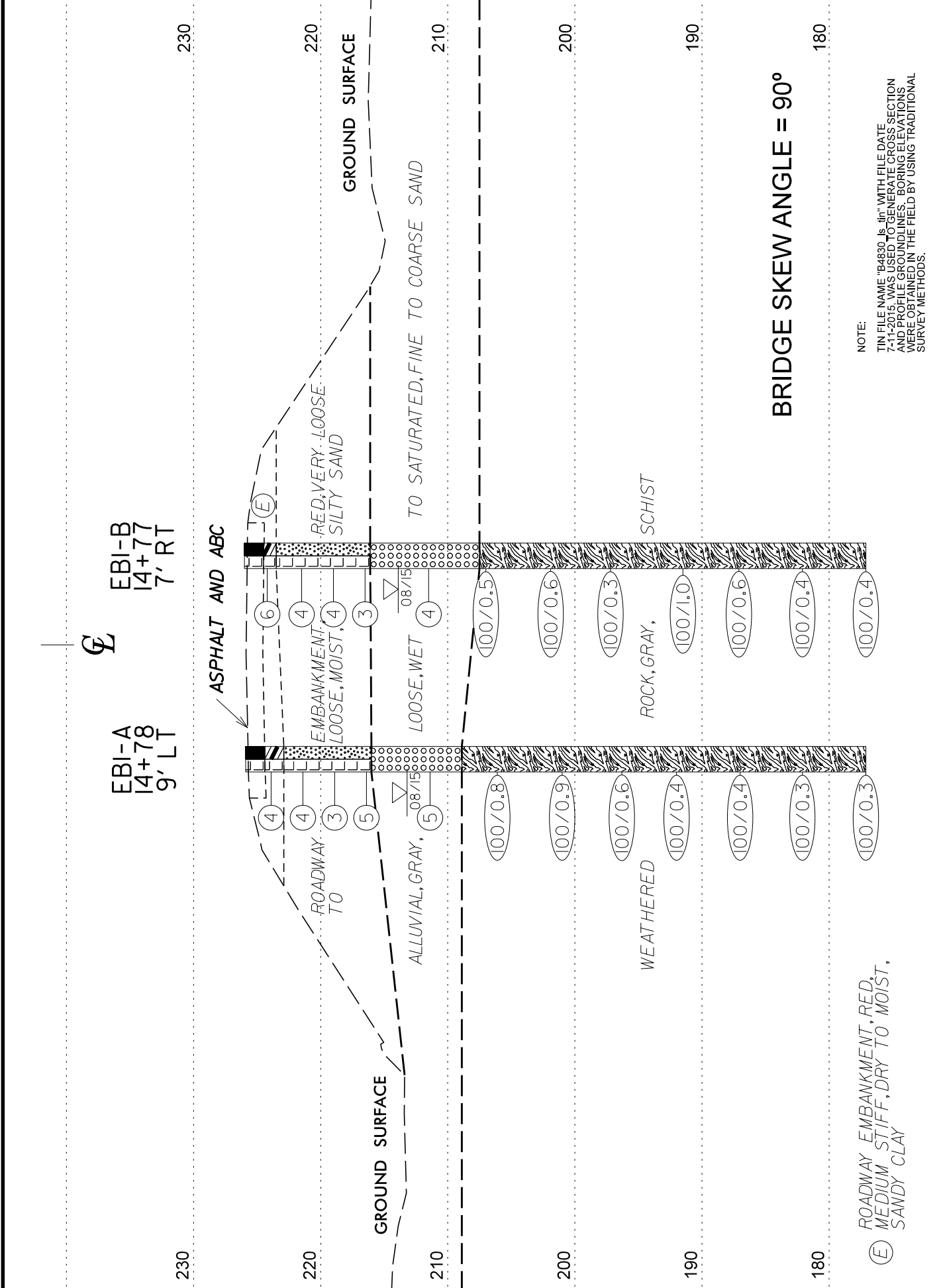


NOTE:
 TIN FILE NAME "B4830_Is.tin" WITH FILE DATE 7-11-2015, WAS USED TO GENERATE CROSS SECTION AND PROFILE GROUNDLINES. BORING ELEVATIONS WERE OBTAINED IN THE FIELD BY USING TRADITIONAL SURVEY METHODS.

14+00

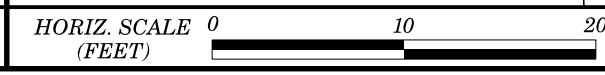
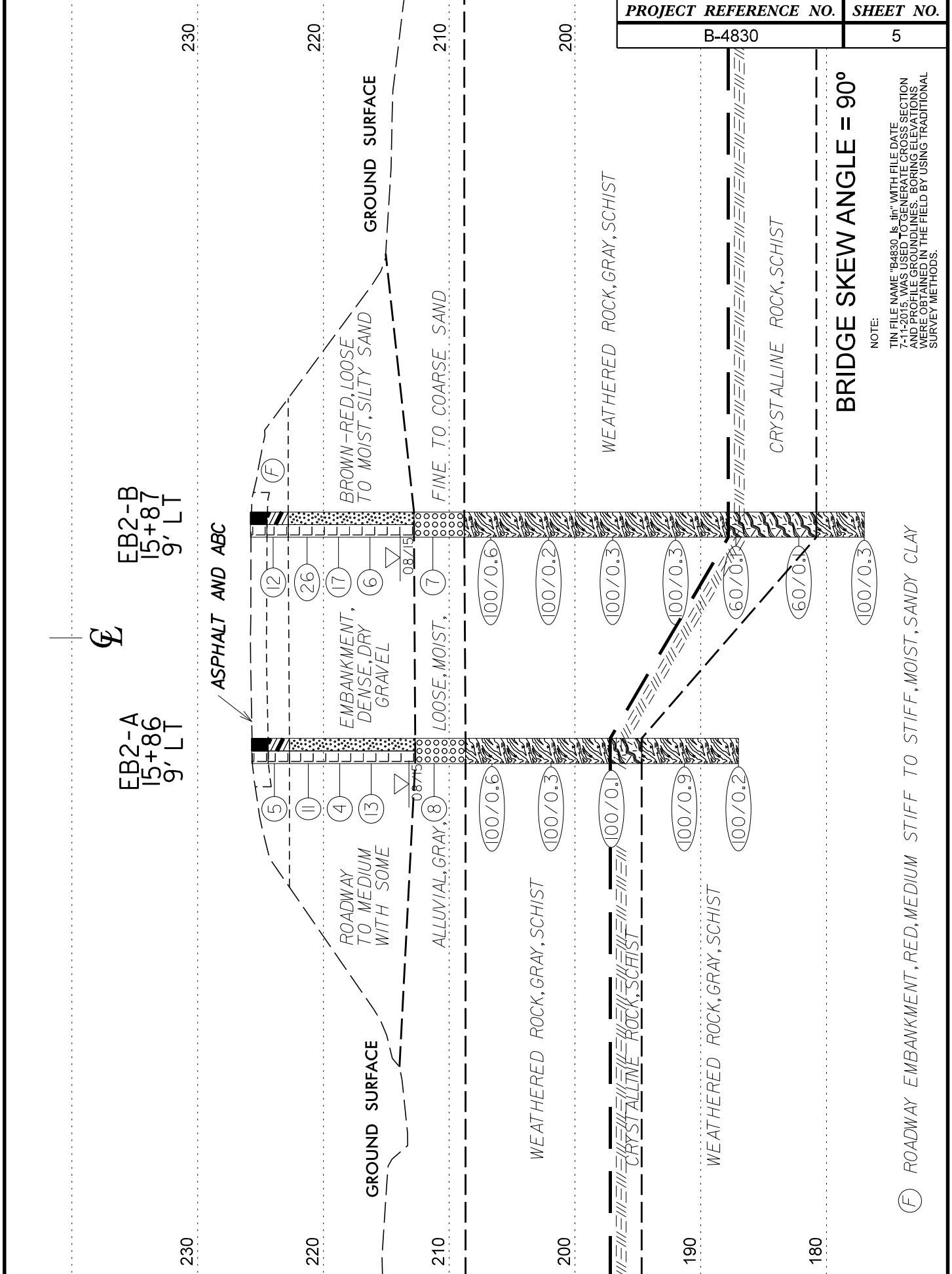
15+00

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VE = 1:1

CROSS SECTION THROUGH END BENT 1



VE = 1:1

CROSS SECTION THROUGH END BENT 2

(E) ROADWAY EMBANKMENT, RED, MEDIUM STIFF TO STIFF, MOIST, SANDY CLAY

(F) ROADWAY EMBANKMENT, RED, MEDIUM STIFF TO STIFF, MOIST, SANDY CLAY

GEOTECHNICAL BORING REPORT BORE LOG

GEOTECHNICAL BORING REPORT BORE LOG

WBS 38600.1.1		TIP B-4830		COUNTY WAKE		GEOLOGIST ROHIT WARRIER										
SITE DESCRIPTION REPLACE BRIDGE NO. 20 ON -L- (NC 97) OVER MOCCASIN CREEK							GROUND WTR (ft)									
BORING NO. EB1-A		STATION 14+78		OFFSET 9 ft LT		ALIGNMENT -L-										
COLLAR ELEV. 225.9 ft		TOTAL DEPTH 48.8 ft		NORTHING 759,558		EASTING 2,219,014										
DRILL RIG/HAMMER EFF./DATE TRI249435 CME-55 84% 02/27/2015			DRILL METHOD H.S. Augers with SPT			HAMMER TYPE Automatic										
DRILLER WENDELL WHICHARD		START DATE 08/10/15		COMP. DATE 08/10/15		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						
230																
225	224.9	1.0	4	2	2								M	225.9 GROUND SURFACE 0.0		
	222.4	3.5	2	2	2								M	224.4 ROADWAY EMBANKMENT 1.5		
	222.4	3.5											M	222.9 RED, SANDY CLAY 3.0		
220	219.9	6.0	4	1	2								M	RED, SILTY SAND		
	217.4	8.5	2	2	3								M			
215	212.4	13.5	6	2	3								M	216.0 ALLUVIAL 9.9		
	212.4	13.5											W	GRAY, FINE TO COARSE SAND		
210	207.4	18.5	35	58	42/0.3								W	208.9 WEATHERED ROCK 17.0		
	207.4	18.5												(SCHIST)		
205	202.4	23.5	28	51	49/0.4										100/0.8	
	197.4	28.5	55	64	36/0.1										100/0.9	
200	192.4	33.5	100/0.4												100/0.6	
	187.4	38.5	100/0.4												100/0.3	
195	182.4	43.5	100/0.3												100/0.4	
	182.4	43.5	100/0.4												100/0.4	
190	177.4	48.5	100/0.3												100/0.3	
	177.4	48.5	100/0.3												100/0.3	
Boring Terminated at Elevation 177.1 ft IN WEATHERED ROCK (SCHIST)																

WBS 38600.1.1		TIP B-4830		COUNTY WAKE		GEOLOGIST ROHIT WARRIER										
SITE DESCRIPTION REPLACE BRIDGE NO. 20 ON -L- (NC 97) OVER MOCCASIN CREEK							GROUND WTR (ft)									
BORING NO. EB1-B		STATION 14+77		OFFSET 7 ft RT		ALIGNMENT -L-										
COLLAR ELEV. 226.0 ft		TOTAL DEPTH 48.9 ft		NORTHING 759,542		EASTING 2,219,016										
DRILL RIG/HAMMER EFF./DATE TRI249435 CME-55 84% 02/27/2015			DRILL METHOD H.S. Augers with SPT			HAMMER TYPE Automatic										
DRILLER WENDELL WHICHARD		START DATE 08/12/15		COMP. DATE 08/12/15		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						
230																
225	225.2	0.8	7	3	3								D	226.0 GROUND SURFACE 0.0		
	222.5	3.5	3	2	2								M	224.5 ROADWAY EMBANKMENT 1.5		
	222.5	3.5											M	223.5 ASPHALT AND ABC 2.5		
220	220.0	6.0	3	2	2								M	RED, SANDY CLAY		
	217.5	8.5	1	1	2								M	RED, SILTY SAND		
215	212.5	13.5	2	2	2								M	216.1 ALLUVIAL 9.9		
	212.5	13.5											Sat.	GRAY, COARSE SAND		
210	207.5	18.5	100/0.5										Sat.	207.5 WEATHERED ROCK 18.5		
	207.5	18.5	100/0.5											(SCHIST)		
205	202.5	23.5	90	10/0.1											100/0.5	
	197.5	28.5	100/0.3												100/0.6	
200	192.5	33.5	35/5	65/0.5											100/0.3	
	187.5	38.5	80	20/0.1											100/0.3	
195	182.5	43.5	100/0.4												100/0.6	
	182.5	43.5	100/0.4												100/0.6	
190	177.5	48.5	100/0.4												100/0.4	
	177.5	48.5	100/0.4												100/0.4	
Boring Terminated at Elevation 177.1 ft IN WEATHERED ROCK (SCHIST)																

NCDOT BORE DOUBLE B4830_GEO_BRDG20_BH.GPJ NC_DOT.GDT 10/5/15

NCDOT BORE DOUBLE B4830_GEO_BRDG20_BH.GPJ NC_DOT.GDT 10/5/15

GEOTECHNICAL BORING REPORT BORE LOG

GEOTECHNICAL BORING REPORT BORE LOG

WBS 38600.1.1		TIP B-4830		COUNTY WAKE		GEOLOGIST ROHIT WARRIER										
SITE DESCRIPTION REPLACE BRIDGE NO. 20 ON -L- (NC 97) OVER MOCCASIN CREEK							GROUND WTR (ft)									
BORING NO. EB2-A		STATION 15+86		OFFSET 9 ft LT		ALIGNMENT -L-										
COLLAR ELEV. 225.7 ft		TOTAL DEPTH 38.7 ft		NORTHING 759,577		EASTING 2,219,120										
DRILL RIG/HAMMER EFF./DATE TRI249435 CME-55 84% 02/27/2015				DRILL METHOD H.S. Augers with SPT		HAMMER TYPE Automatic										
DRILLER WENDELL WHICHARD		START DATE 08/10/15		COMP. DATE 08/10/15		SURFACE WATER DEPTH N/A										
ELEV (ft)	DRIVE ELEV (ft)	DEPTH (ft)	BLOW COUNT			BLOWS PER FOOT					SAMP. NO.	LOG MOI	SOIL AND ROCK DESCRIPTION	DEPTH (ft)		
			0.5ft	0.5ft	0.5ft	0	25	50	75	100						
230																
225	224.9	0.8	2	2	3									225.7	GROUND SURFACE	0.0
														224.4	ROADWAY EMBANKMENT ASPHALT AND ABC	1.3
	222.2	3.5	7	9	2									222.7	RED, SANDY CLAY	3.0
220	219.7	6.0	4	2	2										BROWN-RED, SILTY SAND WITH SOME GRAVEL	
	217.2	8.5	6	7	6											
215																
	212.2	13.5	1	2	6									212.7	ALLUVIAL GRAY, FINE TO COARSE SAND	13.0
210																
	207.2	18.5	80	20/0.1										208.7	WEATHERED ROCK (SCHIST)	17.0
205																
	202.2	23.5	100/0.3													
200																
	197.2	28.5	100/0.1											197.2	CRYSTALLINE ROCK (SCHIST)	28.5
195														194.7	WEATHERED ROCK (SCHIST)	31.0
	192.2	33.5	10	90/0.4												
190																
	187.2	38.5	100/0.2											187.0	Boring Terminated at Elevation 187.0 ft IN WEATHERED ROCK (SCHIST)	38.7

WBS 38600.1.1		TIP B-4830		COUNTY WAKE		GEOLOGIST ROHIT WARRIER										
SITE DESCRIPTION REPLACE BRIDGE NO. 20 ON -L- (NC 97) OVER MOCCASIN CREEK							GROUND WTR (ft)									
BORING NO. EB2-B		STATION 15+87		OFFSET 9 ft RT		ALIGNMENT -L-										
COLLAR ELEV. 225.8 ft		TOTAL DEPTH 48.8 ft		NORTHING 759,560		EASTING 2,219,125										
DRILL RIG/HAMMER EFF./DATE TRI249435 CME-55 84% 02/27/2015				DRILL METHOD H.S. Augers with SPT		HAMMER TYPE Automatic										
DRILLER WENDELL WHICHARD		START DATE 08/12/15		COMP. DATE 08/12/15		SURFACE WATER DEPTH N/A										
ELEV (ft)	DRIVE ELEV (ft)	DEPTH (ft)	BLOW COUNT			BLOWS PER FOOT					SAMP. NO.	LOG MOI	SOIL AND ROCK DESCRIPTION	DEPTH (ft)		
			0.5ft	0.5ft	0.5ft	0	25	50	75	100						
230																
225	225.0	0.8	8	5	7									225.8	GROUND SURFACE	0.0
														224.5	ROADWAY EMBANKMENT ASPHALT AND ABC	1.3
	222.3	3.5	4	19	7									222.8	RED, SANDY CLAY	3.0
220	219.8	6.0	7	6	11										BROWN-RED, SILTY SAND WITH SOME GRAVEL	
	217.3	8.5	3	3	3											
215																
	212.3	13.5	2	3	4									212.8	ALLUVIAL GRAY, FINE TO COARSE SAND WITH TRACE CLAY	13.0
210																
	207.3	18.5	70	30/0.1										208.8	WEATHERED ROCK (SCHIST)	17.0
205																
	202.3	23.5	100/0.2													
200																
	197.3	28.5	100/0.3													
195																
	192.3	33.5	100/0.3													
190																
	187.3	38.5	60/0.1											187.8	CRYSTALLINE ROCK (SCHIST)	38.0
185																
	182.3	43.5	60/0.1											180.8	WEATHERED ROCK (SCHIST)	45.0
180																
	177.3	48.5	100/0.3											177.0	Boring Terminated at Elevation 177.0 ft IN WEATHERED ROCK (SCHIST)	48.8

SITE PHOTOGRAPH

BRIDGE NO. 20 ON -L- (NC 97) OVER
MOCCASIN CREEK

SHEET 8
38600.1.1 (B-4830)



LOOKING NORTH AT BRIDGE NO. 20