

PROJECT: 17BP.9.R.79 REFERENCE: SF-280230

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

STRUCTURE
SUBSURFACE INVESTIGATION

COUNTY DAVIDSON
PROJECT DESCRIPTION BRIDGE NO. 230 ON
SR 2250 (BECK'S CHURCH ROAD)
OVER POUNDER FORK CREEK
SITE DESCRIPTION BRIDGE NO. 230 AT
STATION 14+16 -L-

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	SF-280230	1	7

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.

PERSONNEL
STICKNEY, J. K.
SMITH, C. L.
FOSTER, B. E.
INVESTIGATED BY STICKNEY, J. K.
DRAWN BY FIELDS, W. D.
CHECKED BY LAVENDER III, C. R.
SUBMITTED BY MILLER, K. B.
DATE NOVEMBER 2019



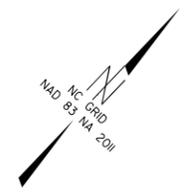
DocuSigned by:

8EEA8D18A25188
11/25/2019
SIGNATURE DATE

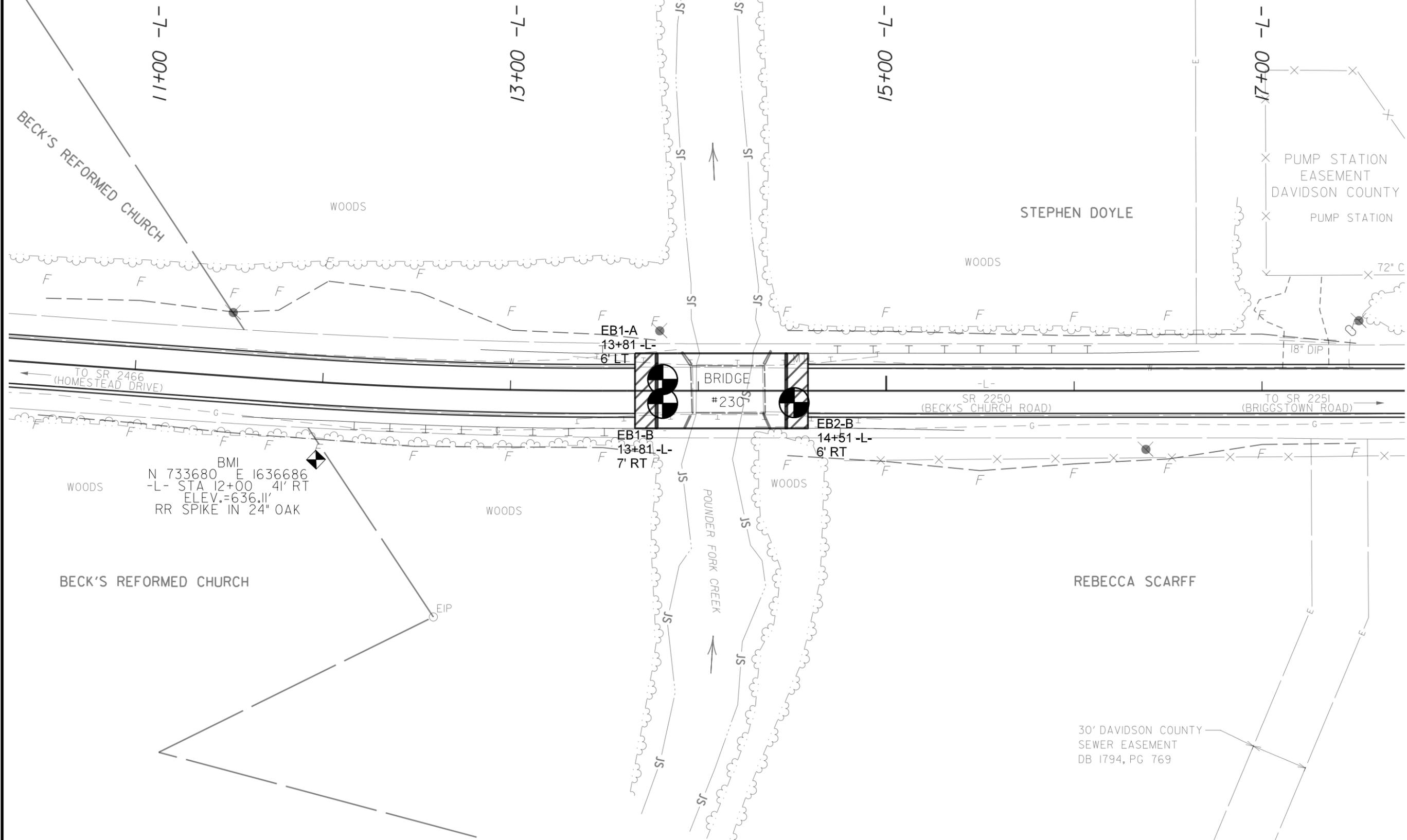
**DOCUMENT NOT CONSIDERED FINAL
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NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
GEOTECHNICAL ENGINEERING UNIT
SUBSURFACE INVESTIGATION
SOIL AND ROCK LEGEND, TERMS, SYMBOLS, AND ABBREVIATIONS

Table with 4 main columns: SOIL DESCRIPTION, GRADATION, ROCK DESCRIPTION, and TERMS AND DEFINITIONS. Includes sub-sections like SOIL LEGEND AND AASHTO CLASSIFICATION, CONSISTENCY OR DENSENESS, TEXTURE OR GRAIN SIZE, SOIL MOISTURE - CORRELATION OF TERMS, PLASTICITY, COLOR, MISCELLANEOUS SYMBOLS, RECOMMENDATION SYMBOLS, ABBREVIATIONS, EQUIPMENT USED ON SUBJECT PROJECT, FRACTURE SPACING, BEDDING, and INDURATION.



SKEW ANGLE = 90°



BECK'S REFORMED CHURCH

WOODS

STEPHEN DOYLE

WOODS

PUMP STATION
EASEMENT
DAVIDSON COUNTY
PUMP STATION

TO SR 2466
(HOMESTEAD DRIVE)

BRIDGE
#230

SR 2250
(BECK'S CHURCH ROAD)

TO SR 2251
(BRIGGSTOWN ROAD)

BMI
N 733680 E 1636686
-L- STA 12+00 41' RT
ELEV.=636.11'
RR SPIKE IN 24" OAK

BECK'S REFORMED CHURCH

WOODS

WOODS

REBECCA SCARFF

30' DAVIDSON COUNTY
SEWER EASEMENT
DB 1794, PG 769

EB1-A
13+81 -L-
6' LT

EB1-B
13+81 -L-
7' RT

EB2-B
14+51 -L-
6' RT

POUNDER FORK CREEK

18" DIP

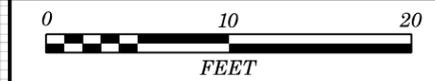
72° C

11+00 -L-

13+00 -L-

15+00 -L-

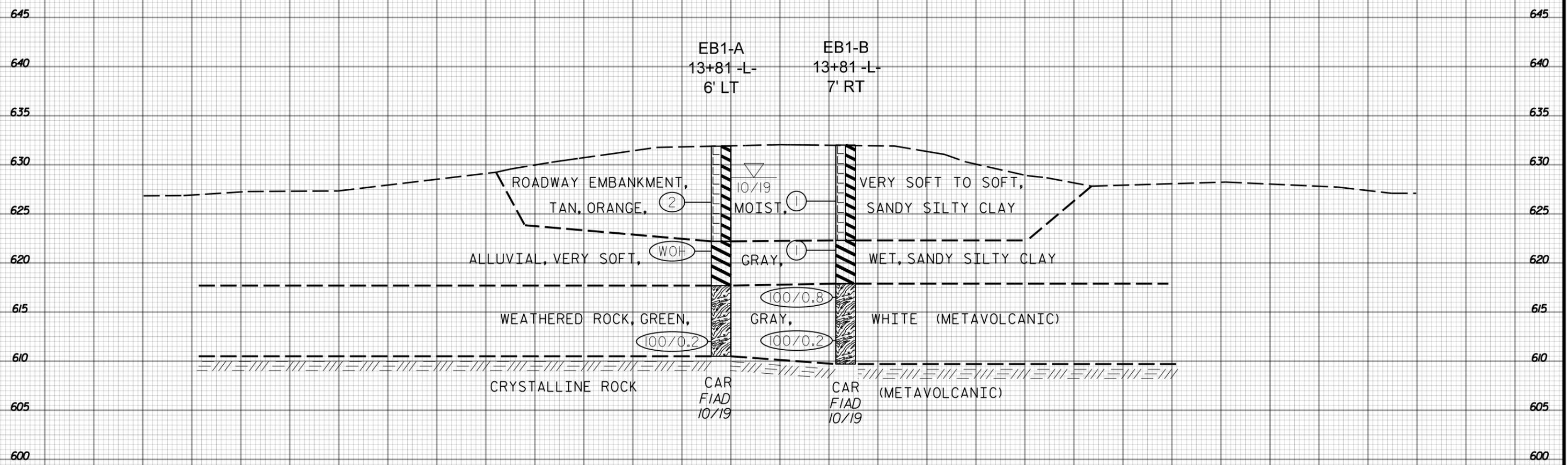
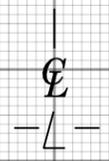
17+00 -L-



CROSS SECTION ALONG END BENT 1 AT STA. 13+77

NOTE: INFERRED STRATIGRAPHY IS DRAWN THROUGH THE BORINGS AND PROJECTED ON TO THE CROSS SECTION. GROUND LINE TAKEN FROM PROVIDED TIN FILE: 280230_ls_tnl.tin (DATED: 01/11/2018)

SKEW ANGLE - 90°



GEOTECHNICAL BORING REPORT

BORE LOG

WBS 17BP.9.R.79		TIP SF-280230		COUNTY DAVIDSON		GEOLOGIST Stickney, J. K.									
SITE DESCRIPTION BRIDGE NO. 230 ON SR 2250 (BECKS CHURCH ROAD) OVER POUNDER FORK CREEK							GROUND WTR (ft)								
BORING NO. EB1-A		STATION 13+81		OFFSET 6 ft LT		ALIGNMENT -L-									
COLLAR ELEV. 631.9 ft		TOTAL DEPTH 21.4 ft		NORTHING 733,838		EASTING 1,636,790									
DRILL RIG/HAMMER EFF./DATE HFO0070 CME-550X 81% 06/04/2018		DRILL METHOD NW Casing w/ Advancer		HAMMER TYPE Automatic											
DRILLER Smith, C. L.		START DATE 10/28/19		COMP. DATE 10/28/19		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					
635															
														631.9	0.0
630															
	627.2	4.7	1	1	1										
625															
	622.2	9.7	WOH	WOH	WOH									622.2	9.7
620															
615														617.7	14.2
	612.2	19.7	100/0.2											610.5	21.4

WBS 17BP.9.R.79		TIP SF-280230		COUNTY DAVIDSON		GEOLOGIST Stickney, J. K.									
SITE DESCRIPTION BRIDGE NO. 230 ON SR 2250 (BECKS CHURCH ROAD) OVER POUNDER FORK CREEK							GROUND WTR (ft)								
BORING NO. EB1-B		STATION 13+81		OFFSET 7 ft RT		ALIGNMENT -L-									
COLLAR ELEV. 632.0 ft		TOTAL DEPTH 22.3 ft		NORTHING 733,829		EASTING 1,636,799									
DRILL RIG/HAMMER EFF./DATE HFO0070 CME-550X 81% 06/04/2018		DRILL METHOD NW Casing w/ Advancer		HAMMER TYPE Automatic											
DRILLER Smith, C. L.		START DATE 10/28/19		COMP. DATE 10/28/19		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					
635															
														632.0	0.0
630															
	627.3	4.7	1	0	1										
625															
	622.3	9.7	1	0	1									622.3	9.7
620															
615														617.9	14.1
	612.3	19.7	100/0.2											609.7	22.3
610															

NCDOT BORE DOUBLE SF280230_GEO_BRDG0230_BL.GPJ NC_DOT.GDT 11/14/19

WBS 17BP.9.R.79		TIP SF-280230		COUNTY DAVIDSON		GEOLOGIST Stickney, J. K.									
SITE DESCRIPTION BRIDGE NO. 230 ON SR 2250 (BECKS CHURCH ROAD) OVER POUNDER FORK CREEK							GROUND WTR (ft)								
BORING NO. EB2-B		STATION 14+51		OFFSET 6 ft RT		ALIGNMENT -L-	0 HR. 5.0								
COLLAR ELEV. 632.0 ft		TOTAL DEPTH 27.6 ft		NORTHING 733,878		EASTING 1,636,849	24 HR. FIAD								
DRILL RIG/HAMMER EFF./DATE HFO0070 CME-550X 81% 06/04/2018				DRILL METHOD NW Casing w/ Advancer		HAMMER TYPE Automatic									
DRILLER Smith, C. L.		START DATE 10/28/19		COMP. DATE 10/28/19		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					
635															
														632.0	GROUND SURFACE 0.0
630															ROADWAY EMBANKMENT RED, ORANGE, TAN, BROWN, SANDY SILTY CLAY
	627.3	4.7													
625															
	622.3	9.7												622.3	ALLUVIAL 9.7
620			WOH	WOH	WOH										GRAY, SANDY SILTY CLAY
	617.3	14.7												617.8	RESIDUAL 14.2
615			8	14	27										BROWN, GRAY, SILTY SANDY CLAY
	612.3	19.7												611.3	WEATHERED ROCK 20.7
610			38	57	43/0.4										GREEN, GRAY, WHITE (METAVOLCANIC)
	607.3	24.7													
605			100/0.4											604.4	Boring Terminated with Casing Advancer Refusal at Elevation 604.4 ft on Crystalline Rock (Metavolcanic) 27.6

SITE PHOTOGRAPHS

BRIDGE NO. 230 ON SR 2250 (BECK'S CHURCH ROAD) OVER POUNDER FORK CREEK



LOOKING FROM END BENT 1 UPSTATION TOWARD END BENT 2



FROM END BENT 1 LEFT LOOKING UPSTREAM