

PROJECT: BP4.R.002.1 REFERENCE: SF-500215

CONTENTS

<u>SHEET NO.</u>	<u>DESCRIPTION</u>
1	TITLE SHEET
2	LEGEND (SOIL & ROCK)
3	SITE PLAN
4	PROFILE(S)
5	CROSS SECTION(S)
6-7	BORE LOG(S)
8	SITE PHOTOGRAPH(S)

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

STRUCTURE
SUBSURFACE INVESTIGATION

COUNTY JOHNSTON
 PROJECT DESCRIPTION BRIDGE NO. 215 ON SR 2159
(BAY VALLEY RD.) OVER UT TO LITTLE
BUFFALO CREEK

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	BP4.R.002.1	1	8

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 TOT-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

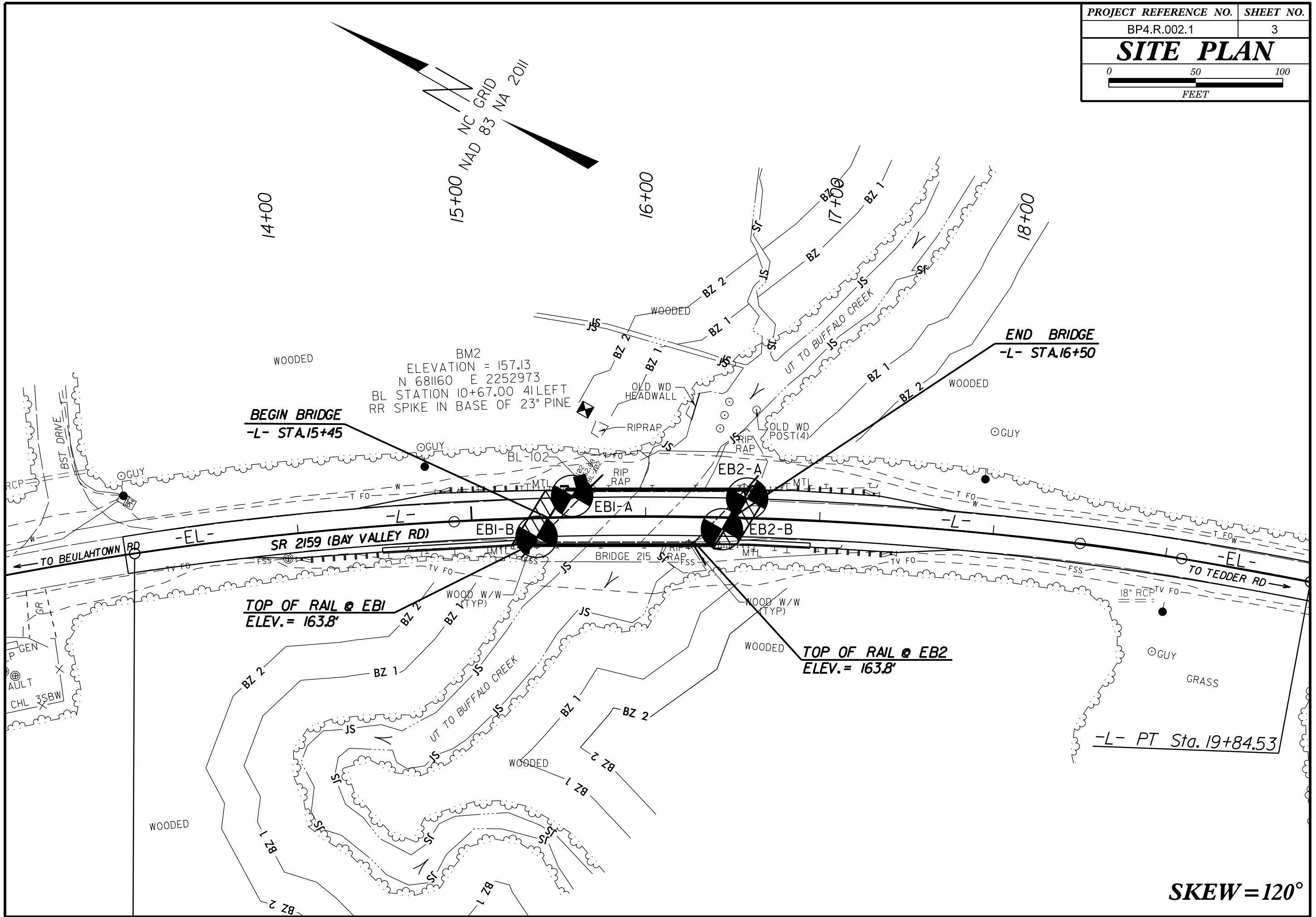
A. N. JONES
D. G. PINTER
C. M. WALKER

INVESTIGATED BY J. L. LOVE
 DRAWN BY A. N. JONES
 CHECKED BY N. T. ROBERSON
 SUBMITTED BY N. T. ROBERSON
 DATE JANUARY 2021

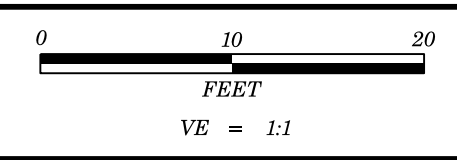


DocuSigned by:
Jaime L. Love 2/3/2021
 B03574039B884B5
 SIGNATURE DATE

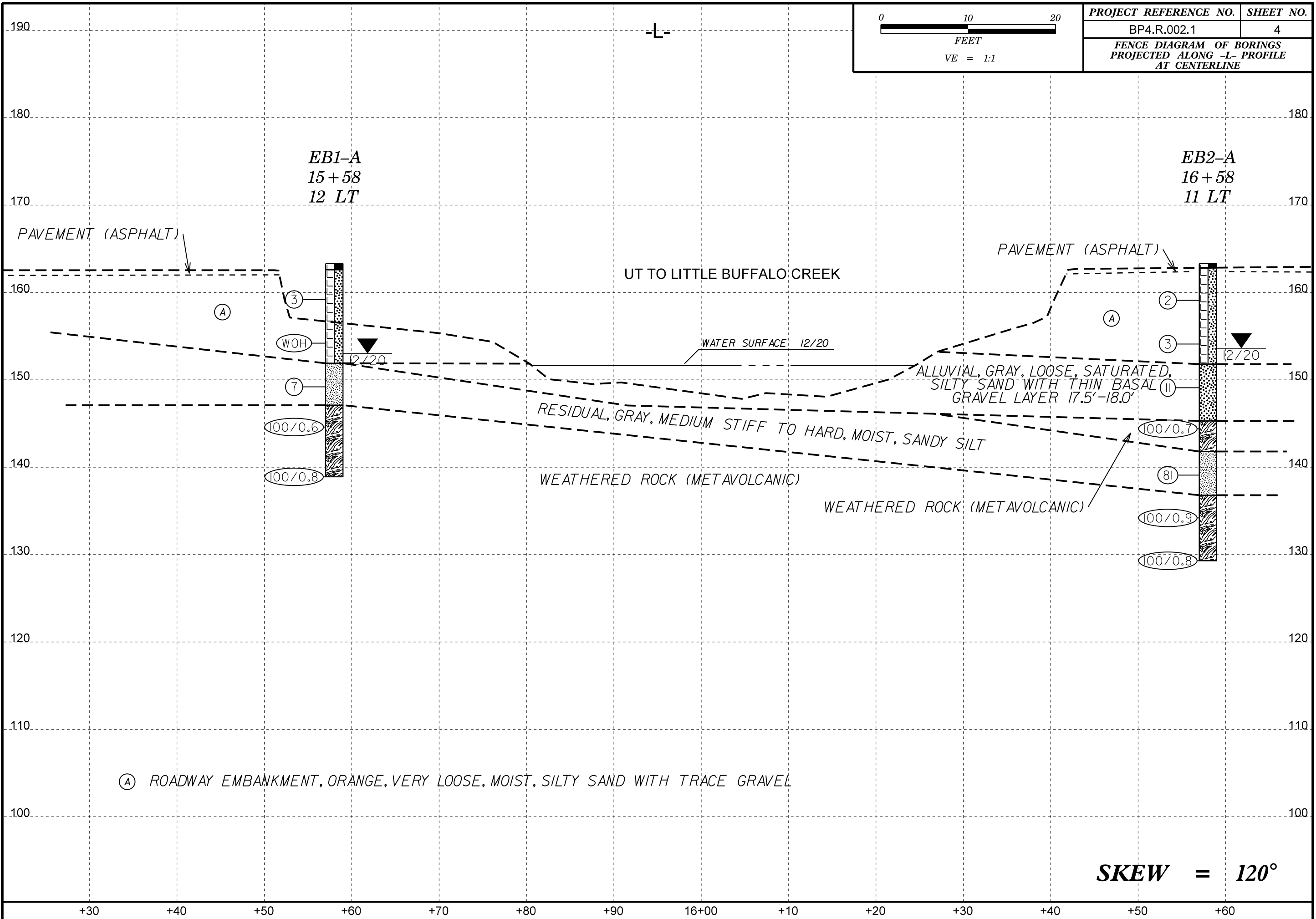
**DOCUMENT NOT CONSIDERED FINAL
 UNLESS ALL SIGNATURES COMPLETED**



SKEW = 120°



PROJECT REFERENCE NO.	SHEET NO.
BP4.R.002.1	4
FENCE DIAGRAM OF BORINGS PROJECTED ALONG -L- PROFILE AT CENTERLINE	



EB1-A
15+58
12 LT

EB2-A
16+58
11 LT

(A)

(A)

(3)

(2)

(WOH)

(3)

(7)

(11)

(100/0.6)

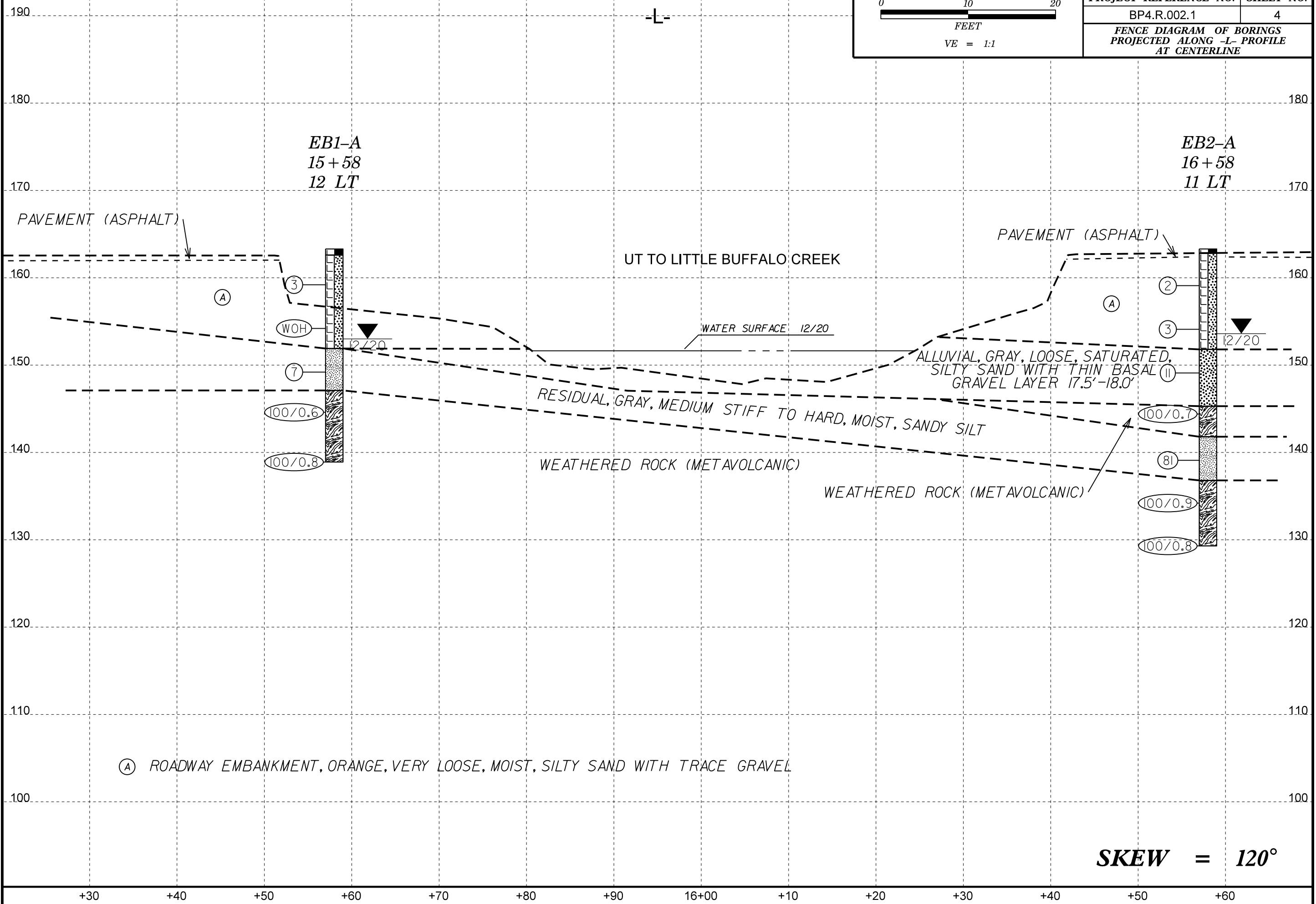
(100/0.7)

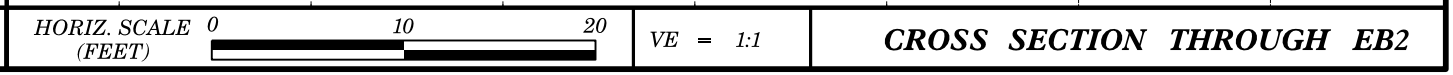
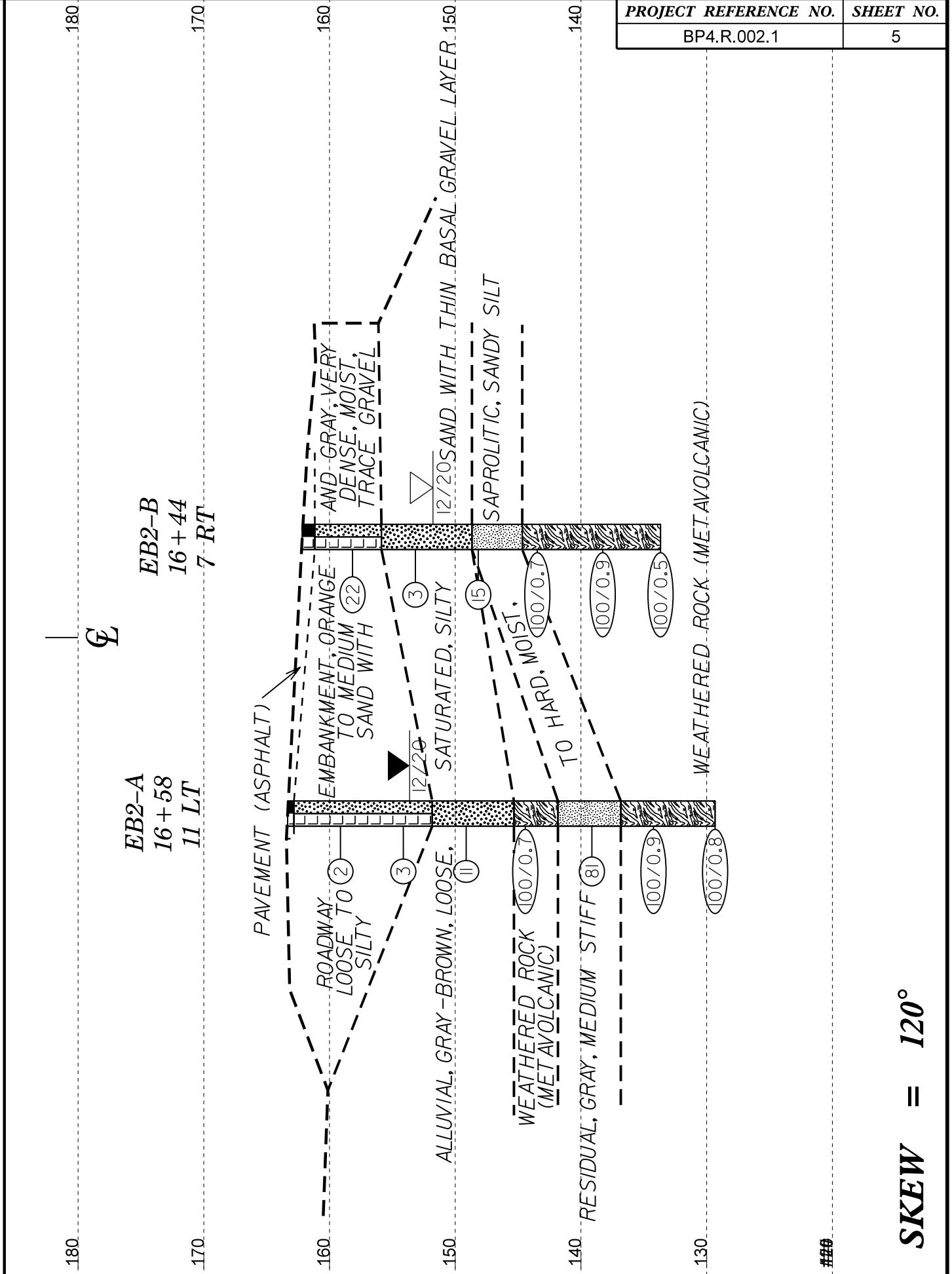
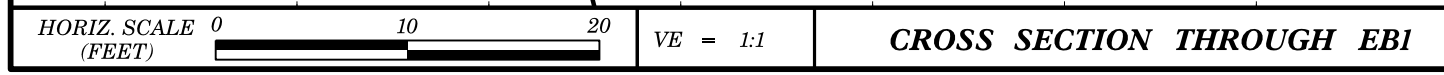
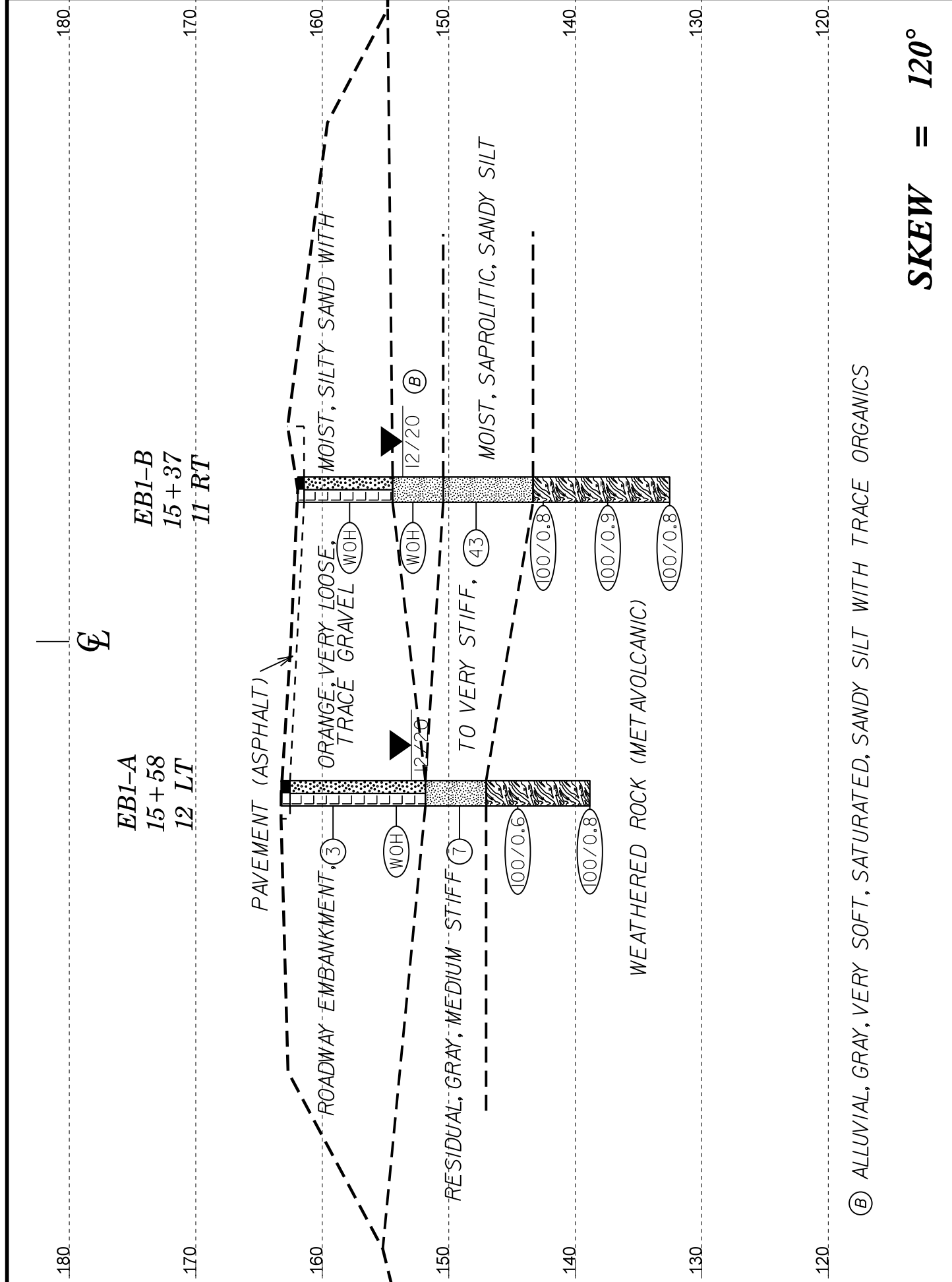
(100/0.8)

(81)

(100/0.9)

(100/0.8)





###

GEOTECHNICAL BORING REPORT

BORE LOG

WBS BP4.R002.1		TIP SF-500215		COUNTY JOHNSTON		GEOLOGIST Jones, A. N.									
SITE DESCRIPTION BRIDGE NO. 215 ON SR 2159 (BAY VALLEY RD.) OVER UT TO LITTLE BUFFALO CREEK							GROUND WTR (ft)								
BORING NO. EB1-A		STATION 15+58		OFFSET 12 ft LT		ALIGNMENT -L-									
COLLAR ELEV. 163.3 ft		TOTAL DEPTH 24.4 ft		NORTHING 681,142		EASTING 2,252,927									
DRILL RIG/HAMMER EFF./DATE RFO0074 CME-55 80% 03/08/2019				DRILL METHOD H.S. Augers		HAMMER TYPE Automatic									
DRILLER Walker, C. M.		START DATE 12/08/20		COMP. DATE 12/08/20		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					
165														GROUND SURFACE	0.0
														ROADWAY EMBANKMENT (ASPHALT)	0.7
160	160.2	3.1	WOH	2	1									ORANGE, SILTY SAND WITH TRACE GRAVEL	
155	155.2	8.1	WOH	WOH	WOH										
150	150.2	13.1	2	2	5									RESIDUAL GRAY, SANDY SILT	11.4
145	145.2	18.1	81	19/0.1										WEATHERED ROCK (METAVOLCANIC)	16.2
140	140.2	23.1	30	55	45/0.3										100/0.6
															100/0.8
															138.9
Boring Terminated at Elevation 138.9 ft IN WEATHERED ROCK (METAVOLCANIC)															

WBS BP4.R002.1		TIP SF-500215		COUNTY JOHNSTON		GEOLOGIST Jones, A. N.									
SITE DESCRIPTION BRIDGE NO. 215 ON SR 2159 (BAY VALLEY RD.) OVER UT TO LITTLE BUFFALO CREEK							GROUND WTR (ft)								
BORING NO. EB1-B		STATION 15+37		OFFSET 11 ft RT		ALIGNMENT -L-									
COLLAR ELEV. 161.9 ft		TOTAL DEPTH 29.4 ft		NORTHING 681,148		EASTING 2,252,895									
DRILL RIG/HAMMER EFF./DATE RFO0074 CME-55 80% 03/08/2019				DRILL METHOD H.S. Augers		HAMMER TYPE Automatic									
DRILLER Walker, C. M.		START DATE 12/08/20		COMP. DATE 12/08/20		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					
165														GROUND SURFACE	0.0
														ROADWAY EMBANKMENT (ASPHALT)	0.7
160	158.8	3.1	WOH	WOH	WOH									ORANGE, SILTY SAND WITH TRACE GRAVEL	
155	153.8	8.1	WOH	WOH	WOH										
150	148.8	13.1	4	15	28									RESIDUAL GRAY, SAPRILITIC, SANDY SILT	11.5
145	143.8	18.1	34	45	55/0.3									ALLUVIAL GRAY, SANDY SILT WITH TRACE ORGANICS	7.5
140	138.8	23.1	24	44	56/0.4									WEATHERED ROCK (METAVOLCANIC)	18.6
135	133.8	28.1	14	27	73/0.3									WEATHERED ROCK (METAVOLCANIC)	100/0.8
															100/0.9
															100/0.8
															132.5
Boring Terminated at Elevation 132.5 ft IN WEATHERED ROCK (METAVOLCANIC)															

NCDOT BORE DOUBLE 50_GEO_BRD0215_BH.GPJ NC_DOT.GDT 2/3/21

GEOTECHNICAL BORING REPORT

BORE LOG

WBS BP4.R002.1		TIP SF-500215		COUNTY JOHNSTON		GEOLOGIST Jones, A. N.										
SITE DESCRIPTION BRIDGE NO. 215 ON SR 2159 (BAY VALLEY RD.) OVER UT TO LITTLE BUFFALO CREEK							GROUND WTR (ft)									
BORING NO. EB2-A		STATION 16+58		OFFSET 11 ft LT		ALIGNMENT -L-										
COLLAR ELEV. 163.3 ft		TOTAL DEPTH 34.0 ft		NORTHING 681,054		EASTING 2,252,975										
DRILL RIG/HAMMER EFF./DATE RFC0074 CME-55 80% 03/08/2019				DRILL METHOD H.S. Augers		HAMMER TYPE Automatic										
DRILLER Walker, C. M.		START DATE 12/08/20		COMP. DATE 12/08/20		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						
165																
160	160.1	3.2	2	1	1								M	GROUND SURFACE ROADWAY EMBANKMENT (ASPHALT) ORANGE, SILTY SAND WITH TRACE GRAVEL	0.0	
155	155.1	8.2	2	2	1								M			
150	150.1	13.2	4	5	6								Sat.	ALLUVIAL GRAY, SILTY SAND WITH THIN BASAL GRAVEL LAYER 17.5'-18.0'	11.5	
145	145.1	18.2	58	42/0.2									Sat.	WEATHERED ROCK (METAVOLCANIC)	18.0	
140	140.1	23.2	35	24	57								M	RESIDUAL GRAY, SANDY SILT	21.5	
135	135.1	28.2	40	60/0.4										WEATHERED ROCK (METAVOLCANIC)	26.5	
130	130.1	33.2	29	70/0.3										WEATHERED ROCK (METAVOLCANIC)	34.0	
														Boring Terminated at Elevation 129.3 ft IN WEATHERED ROCK (METAVOLCANIC)		

WBS BP4.R002.1		TIP SF-500215		COUNTY JOHNSTON		GEOLOGIST Jones, A. N.										
SITE DESCRIPTION BRIDGE NO. 215 ON SR 2159 (BAY VALLEY RD.) OVER UT TO LITTLE BUFFALO CREEK							GROUND WTR (ft)									
BORING NO. EB2-B		STATION 16+44		OFFSET 7 ft RT		ALIGNMENT -L-										
COLLAR ELEV. 162.2 ft		TOTAL DEPTH 28.5 ft		NORTHING 681,058		EASTING 2,252,953										
DRILL RIG/HAMMER EFF./DATE RFC0074 CME-55 80% 03/08/2019				DRILL METHOD H.S. Augers		HAMMER TYPE Automatic										
DRILLER Walker, C. M.		START DATE 12/10/20		COMP. DATE 12/10/20		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						
165																
160	159.2	3.0	10	12	10								M	GROUND SURFACE ROADWAY EMBANKMENT (ASPHALT) ORANGE AND GRAY, SILTY SAND WITH TRACE GRAVEL	0.0	
155	154.2	8.0	1	1	2								Sat.	ALLUVIAL GRAY-BROWN, SILTY SAND WITH TRACE GRAVEL	6.3	
150	149.2	13.0	2	5	10								Sat. M	RESIDUAL GRAY, SAPROLITIC, SANDY SILT	13.5	
145	144.2	18.0	53	47/0.2										WEATHERED ROCK (METAVOLCANIC)	17.5	
140	139.2	23.0	28	72/0.4										WEATHERED ROCK (METAVOLCANIC)	26.5	
135	134.2	28.0	100/0.5											WEATHERED ROCK (METAVOLCANIC)	28.5	
														Boring Terminated at Elevation 133.7 ft IN WEATHERED ROCK (METAVOLCANIC)		

NCDOT BORE DOUBLE 50_GEO_BRD0215_BH.GPJ NC_DOT.GDT 2/3/21

SITE PHOTOGRAPH

Bridge No. 215 on -L- (SR 2159) over UT to Little Buffalo Creek



Looking South towards End Bent 2