

REFERENCE: BR-0090

PROJECT: 67090

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

STRUCTURE
SUBSURFACE INVESTIGATION

COUNTY NASH
PROJECT DESCRIPTION BRIDGE NO.36 ON NC 56I
OVER FISHING CREEK

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	BR-0090	1	16

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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.

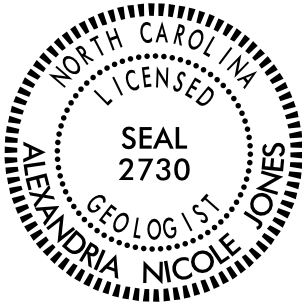
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 - BY HAVING REQUESTED THIS INFORMATION, THE CONTRACTOR SPECIFICALLY WAIVES ANY CLAIMS FOR INCREASED COMPENSATION OR EXTENSION OF TIME BASED ON DIFFERENCES BETWEEN THE CONDITIONS INDICATED HEREIN AND THE ACTUAL CONDITIONS AT THE PROJECT SITE.

PERSONNEL

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

INVESTIGATED BY A. N. JONES
DRAWN BY A. N. JONES
CHECKED BY N. T. ROBERSON
SUBMITTED BY N. T. ROBERSON
DATE AUGUST 2022



DocuSigned by:
Alexandria Jones 01/10/2023
4349EF40DD60478...
SIGNATURE DATE

DOCUMENT NOT CONSIDERED FINAL
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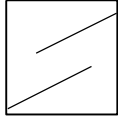
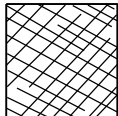
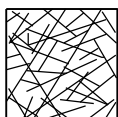
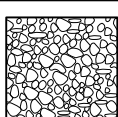
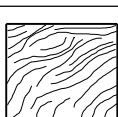
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
GEOTECHNICAL ENGINEERING UNIT

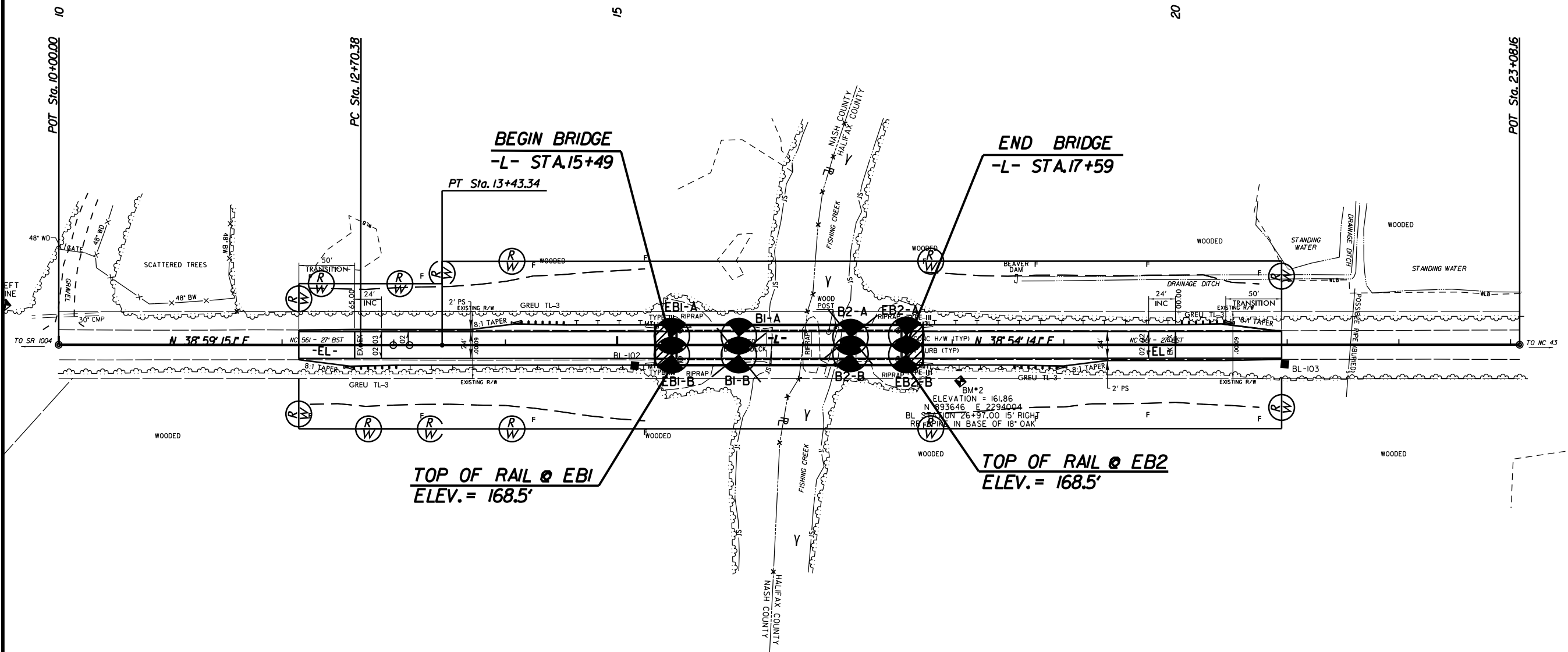
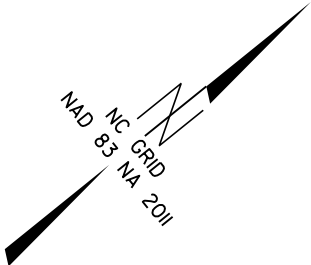
SUBSURFACE INVESTIGATION

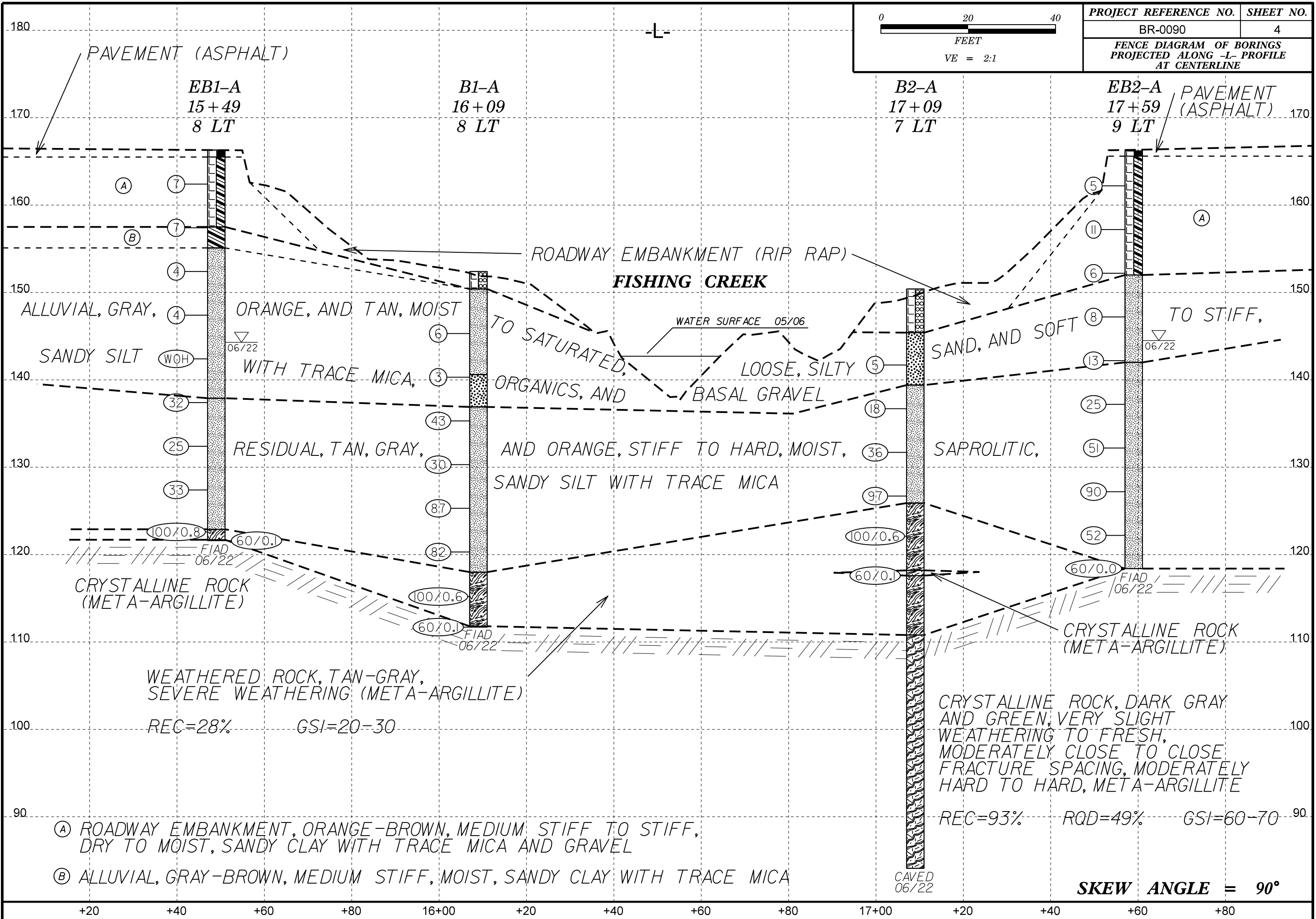
SUPPLEMENTAL LEGEND, GEOLOGICAL STRENGTH INDEX (GSI) TABLES
FROM AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS

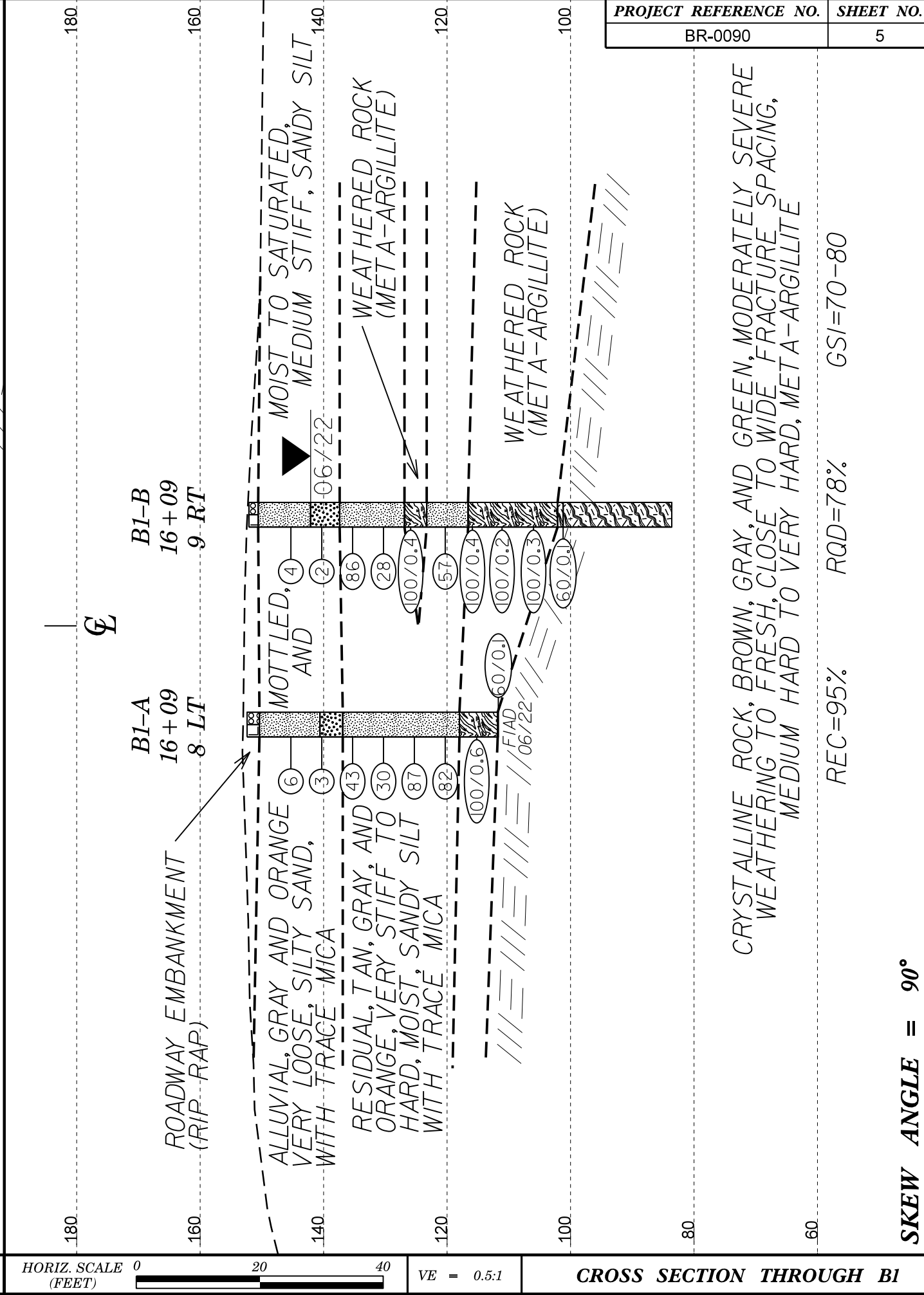
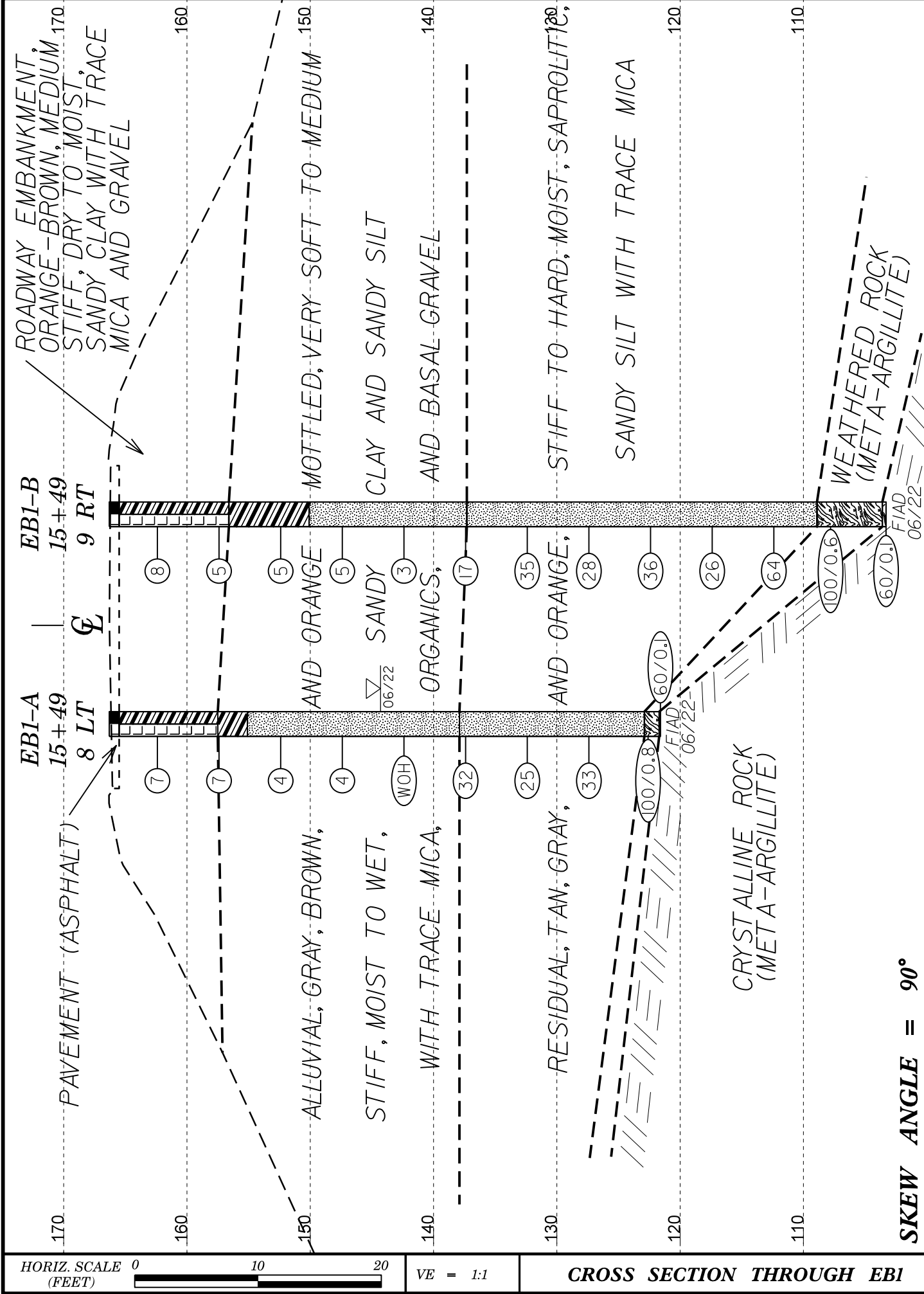
AASHTO LRFD Figure 10.4.6.4-1 — Determination of GSI for Jointed Rock Mass (Marinos and Hoek, 2000)

AASHTO LRFD Figure 10.4.6.4-2 — Determination of GSI for Tectonically Deformed Heterogeneous Rock Masses (Marinos and Hoek, 2000)

GEOLOGICAL STRENGTH INDEX (GSI) FOR JOINTED ROCKS (Hoek and Marinos, 2000) From the lithology, structure and surface conditions of the discontinuities, estimate the average value of GSI. Do not try to be too precise. Quoting a range from 33 to 37 is more realistic than stating that GSI = 35. Note that the table does not apply to structurally controlled failures. Where weak planar structural planes are present in an unfavorable orientation with respect to the excavation face, these will dominate the rock mass behaviour. The shear strength of surfaces in rocks that are prone to deterioration as a result of changes in moisture content will be reduced if water is present. When working with rocks in the fair to very poor categories, a shift to the right may be made for wet conditions. Water pressure is dealt with by effective stress analysis.	SURFACE CONDITIONS VERY GOOD Very rough, fresh unweathered surfaces GOOD Rough, slightly weathered, iron stained surfaces FAIR Smooth, moderately weathered and altered surfaces POOR Slickensided, highly weathered surfaces with compact coatings or fillings or angular fragments VERY POOR Slickensided, highly weathered surfaces with soft clay coatings or fillings	STRUCTURE INTACT OR MASSIVE - intact rock specimens or massive in situ rock with few widely spaced discontinuities BLOCKY - well interlocked undisturbed rock mass consisting of cubical blocks formed by three intersecting discontinuity sets VERY BLOCKY - interlocked, partially disturbed mass with multi-faceted angular blocks formed by 4 or more joint sets BLOCKY/DISTURBED/SEAMY - folded with angular blocks formed by many intersecting discontinuity sets. Persistence of bedding planes or schistosity DISINTEGRATED - poorly interlocked, heavily broken rock mass with mixture of angular and rounded rock pieces LAMINATED/SHEARED - Lack of blockiness due to close spacing of weak schistosity or shear planes	DECREASING SURFACE QUALITY ➡	GSI FOR HETEROGENEOUS ROCK MASSES SUCH AS FLYSCH (Marinos, P and Hoek E., 2000) From a description of the lithology, structure and surface conditions (particularly of the bedding planes), choose a box in the chart. Locate the position in the box that corresponds to the condition of the discontinuities and estimate the average value of GSI from the contours. Do not attempt to be too precise. Quoting a range from 33 to 37 is more realistic than giving GSI = 35. Note that the Hoek-Brown criterion does not apply to structurally controlled failures. Where unfavourably oriented continuous weak planar discontinuities are present, these will dominate the behaviour of the rock mass. The strength of some rock masses is reduced by the presence of groundwater and this can be allowed for by a slight shift to the right in the columns for fair, poor and very poor conditions. Water pressure does not change the value of GSI and it is dealt with by using effective stress analysis.	SURFACE CONDITIONS OF DISCONTINUITIES (Predominantly bedding planes) VERY GOOD - Very Rough, fresh unweathered surfaces GOOD - Rough, slightly weathered surfaces FAIR - Smooth, moderately weathered and altered surfaces POOR - Very smooth, occasionally slickensided surfaces with compact coatings or fillings with angular fragments VERY POOR - Very smooth, slickensided or highly weathered surfaces with soft clay coatings or fillings	COMPOSITION AND STRUCTURE A. Thick bedded, very blocky sandstone The effect of pelitic coatings on the bedding planes is minimized by the confinement of the rock mass. In shallow tunnels or slopes these bedding planes may cause structurally controlled instability. B. Sandstone with thin inter-layers of siltstone C. Sandstone and siltstone in similar amounts D. Siltstone or silty shale with sandstone layers E. Weak siltstone or clayey shale with sandstone layers C, D, E, and G - may be more or less folded than illustrated but this does not change the strength. Tectonic deformation, faulting and loss of continuity moves these categories to F and H. F. Tectonically deformed, intensively folded/faulted, sheared clayey shale or siltstone with broken and deformed sandstone layers forming an almost chaotic structure G. Undisturbed silty or clayey shale with or without a few very thin sandstone layers H. Tectonically deformed silty or clayey shale forming a chaotic structure with pockets of clay. Thin layers of sandstone are transformed into small rock pieces. ➡ Means deformation after tectonic disturbance
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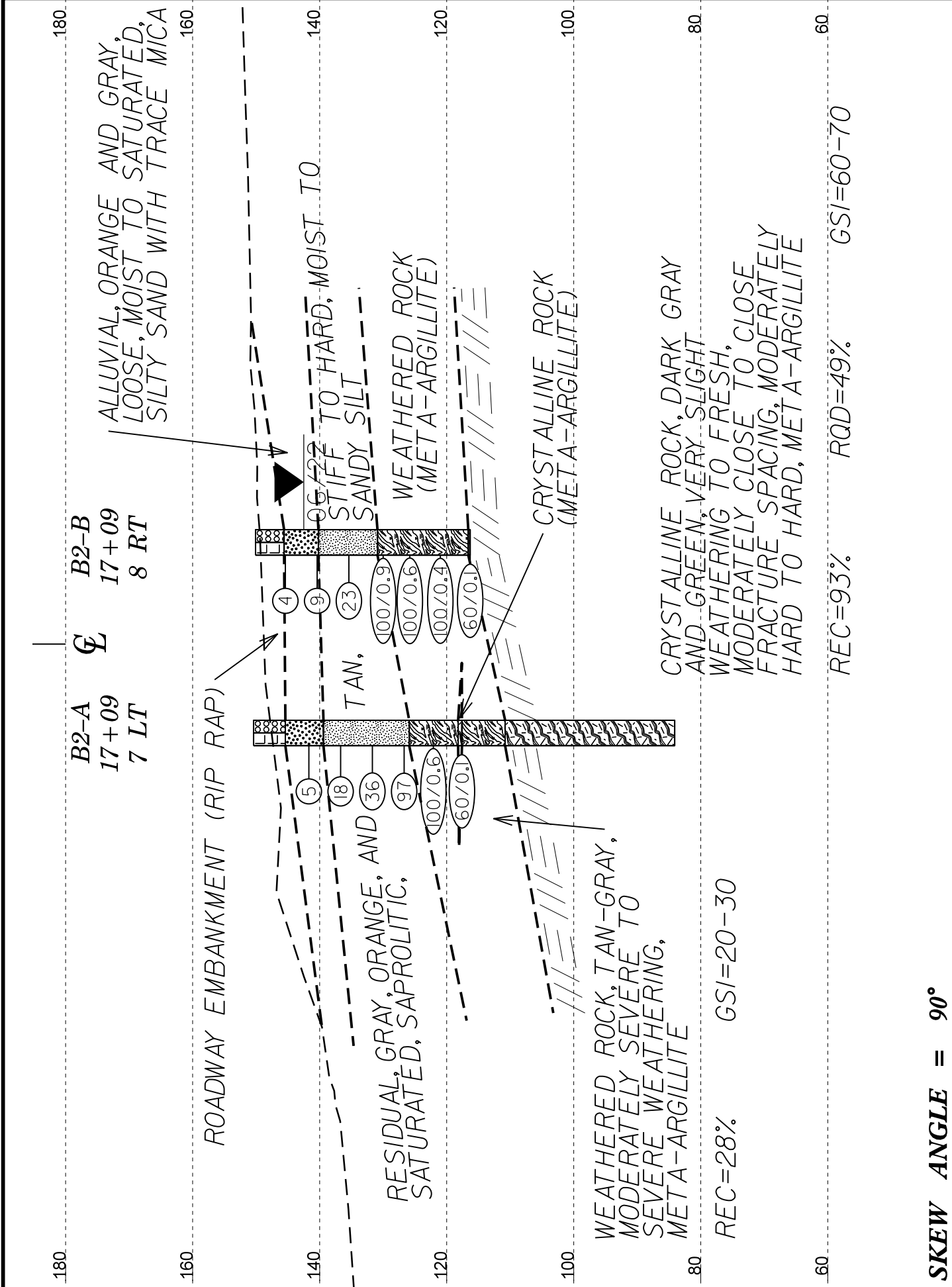






VE = 0.5:1

CROSS SECTION THROUGH B2

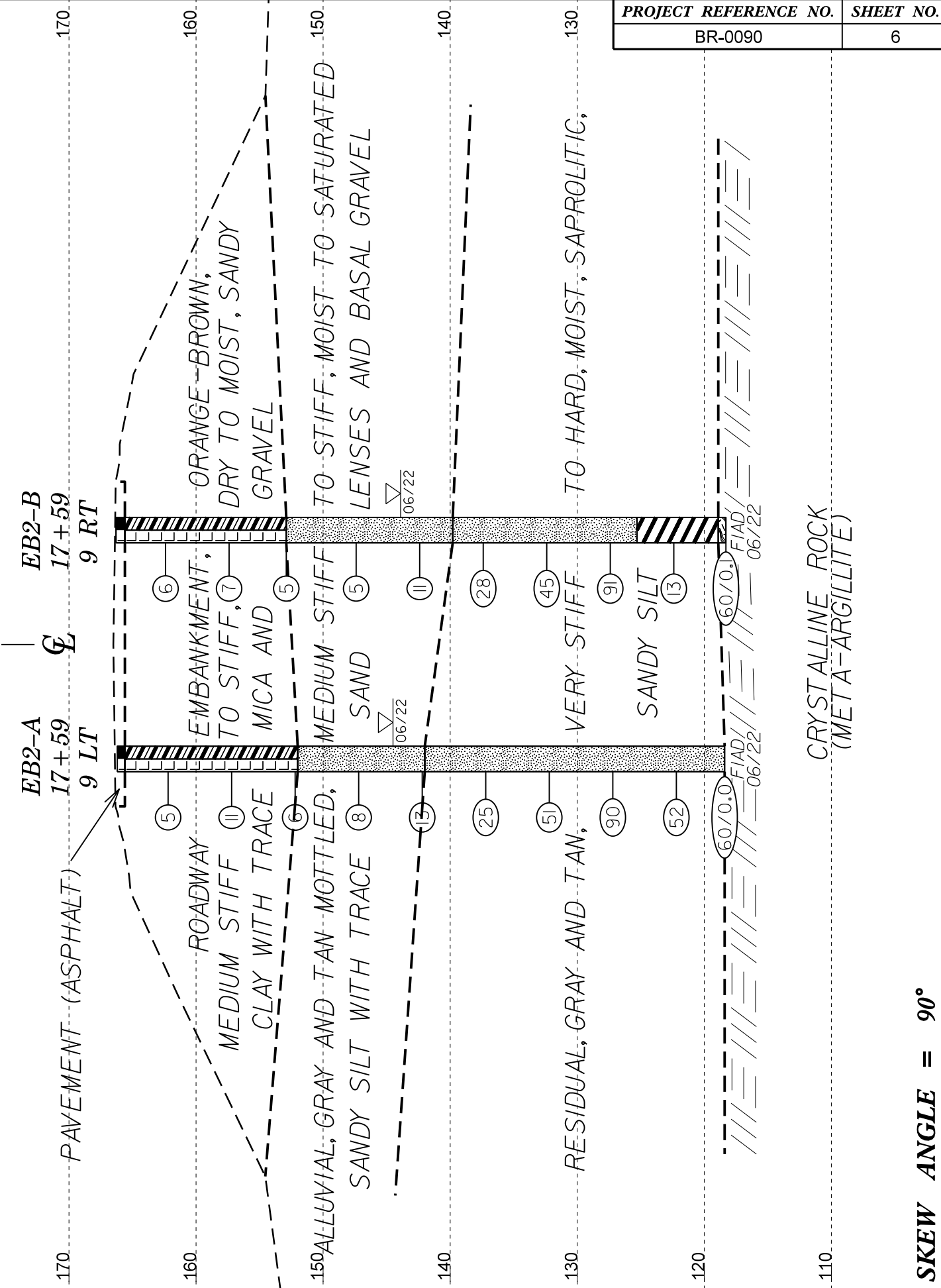


SKW ANGLE = 90°



VE = 1:1

CROSS SECTION THROUGH EB2



SKW ANGLE = 90°

GEOTECHNICAL BORING REPORT
BORE LOG

WBS 67090.1.1				TIP BR-0090				COUNTY NASH				GEOLOGIST Jones, A. N.					
SITE DESCRIPTION BRIDGE NO. 36 ON NC 561 OVER FISHING CREEK												GROUND WTR (ft)					
BORING NO. B1-B				STATION 16+09				OFFSET 9 ft RT				ALIGNMENT -L-				0 HR. N/A	
COLLAR ELEV. 152.1 ft				TOTAL DEPTH 68.5 ft				NORTHING 893,506				EASTING 2,293,861				24 HR. 10.0	
DRILL RIG/HAMMER EFF./DATE HFC0072 CME-550X 87% 02/23/2021								DRILL METHOD NW Casing w/ Core				HAMMER TYPE Automatic					
DRILLER Pinter, D. G.				START DATE 06/28/22				COMP. DATE 06/29/22				SURFACE WATER DEPTH N/A					
ELEV (ft)	DRIVE ELEV (ft)	DEPTH (ft)	BLOW COUNT			BLOWS PER FOOT					SAMP. NO.	MOI	L O G	SOIL AND ROCK DESCRIPTION			
			0.5ft	0.5ft	0.5ft	0	25	50	75	100				ELEV. (ft)	DEPTH (ft)		
155																	
														152.1	0.0		
150														150.6	1.5		
														ROADWAY EMBANKMENT RIP RAP			
	146.3	5.8															
145			2	2	2												
	141.3	10.8												142.1	10.0		
140			1	1	1												
	136.3	15.8												137.4	14.7		
135			16	38	48												
	131.3	20.8															
130			12	17	11												
	126.3	25.8												126.9	25.2		
125			100/0.4														
	121.3	30.8												123.3	28.8		
120			22	28	29												
	116.3	35.8												116.6	35.5		
115			100/0.4														
	111.3	40.8															
110			100/0.2														
	106.3	45.8															
105			100/0.3														
	101.3	50.8												102.1	50.0		
100			60/0.1											100.6	51.5		
														CRYSTALLINE ROCK (META-ARGILLITE)			
														BROWN, GRAY, AND GREEN, SEVERE WEATHERING TO FRESH, CLOSE TO WIDE FRACTURE SPACING, MEDIUM HARD TO VERY HARD, META-ARGILLITE			
95														REC=95% RQD=78% GSI=70-80			
90																	
85																	
														83.6	68.5		
														Boring Terminated at Elevation 83.6 ft IN CRYSTALLINE ROCK (META-ARGILLITE)			

NCDOT BORE DOUBLE BR0090_GEO_BRDG_BH.GPJ NC_DOT.GDT 8/8/22

GEOTECHNICAL BORING REPORT
CORE LOG

SHEET 9

WBS 67090.1.1					TIP BR-0090			COUNTY NASH			GEOLOGIST Jones, A. N.			
SITE DESCRIPTION BRIDGE NO. 36 ON NC 561 OVER FISHING CREEK											GROUND WTR (ft)			
BORING NO. B1-B					STATION 16+09				OFFSET 9 ft RT			ALIGNMENT -L-		0 HR. N/A
COLLAR ELEV. 152.1 ft					TOTAL DEPTH 68.5 ft				NORTHING 893,506			EASTING 2,293,861		24 HR. 10.0
DRILL RIG/HAMMER EFF./DATE HFC0072 CME-550X 87% 02/23/2021								DRILL METHOD NW Casing w/ Core				HAMMER TYPE Automatic		
DRILLER Pinter, D. G.					START DATE 06/28/22				COMP. DATE 06/29/22			SURFACE WATER DEPTH N/A		
CORE SIZE NXWL					TOTAL RUN 17.0 ft									
ELEV (ft)	RUN ELEV (ft)	DEPTH (ft)	RUN (ft)	DRILL RATE (Min/ft)	RUN		SAMP. NO.	STRATA		LOG	DESCRIPTION AND REMARKS			
					REC. (ft) %	ROD (ft) %		REC. (ft) %	ROD (ft) %					
100.6											Begin Coring @ 51.5 ft			
100	100.6	51.5	2.0	1:18/1.0	(1.7)	(1.0)		(16.2)	(13.2)					
	98.6	53.5	5.0	1:09/1.0	85%	50%		95%	78%					
				0:45/1.0	(4.5)	(2.2)								
95				0:47/1.0	90%	44%								
				0:30/1.0										
	93.6	58.5		0:44/1.0									GSI=70-80	
			5.0	0:54/1.0										
90				1:01/1.0	(5.0)	(5.0)								
				0:52/1.0	100%	100%	RS-1							
				0:54/1.0										
	88.6	63.5	5.0	1:05/1.0										
				1:19/1.0										
85				1:12/1.0	(5.0)	(5.0)								
				1:33/1.0	100%	100%								
				2:42/1.0										
	83.6	68.5		1:46/1.0								83.6	Boring Terminated at Elevation 83.6 ft IN CRYSTALLINE ROCK (META-ARGILLITE)	68.5
				2:08/1.0										

NCDOT CORE DOUBLE BR0090_GEO_BRDG_BH.GPJ NC_DOT.GDT 8/8/22

GEOTECHNICAL BORING REPORT
BORE LOG

GEOTECHNICAL BORING REPORT
CORE LOG

WBS 67090.1.1				TIP BR-0090		COUNTY NASH		GEOLOGIST Jones, A. N.							
SITE DESCRIPTION BRIDGE NO. 36 ON NC 561 OVER FISHING CREEK										GROUND WTR (ft)					
BORING NO. B2-A				STATION 17+09		OFFSET 7 ft LT		ALIGNMENT -L-		0 HR.	N/A				
COLLAR ELEV. 150.4 ft				TOTAL DEPTH 66.3 ft		NORTHING 893,594		EASTING 2,293,911		24 HR.	Caved 7.0				
DRILL RIGHAMMER EFF./DATE HFC0072 CME-550X 87% 02/23/2021						DRILL METHOD NW Casing w/ Core			HAMMER TYPE Automatic						
DRILLER Pinter, D. G.				START DATE 06/22/22		COMP. DATE 06/27/22		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					
155															
150													150.4	GROUND SURFACE	0.0
145														ROADWAY EMBANKMENT RIP RAP	
140	142.7	7.7											145.4	ALLUVIAL GRAY, SILTY SAND WITH TRACE ORGANICS	5.0
135	137.7	12.7												RESIDUAL GRAY AND TAN, SAPROLITIC, SANDY SILT	
130	132.7	17.7													
125	127.7	22.7													
120	122.7	27.7													
115	117.7	32.7													
110															
105															
100															
95															
90															
85															

WBS 67090.1.1				TIP BR-0090				COUNTY NASH				GEOLOGIST Jones, A. N.							
SITE DESCRIPTION BRIDGE NO. 36 ON NC 561 OVER FISHING CREEK												GROUND WTR (ft)							
BORING NO. B2-A				STATION 17+09				OFFSET 7 ft LT				ALIGNMENT -L-				0 HR. N/A			
COLLAR ELEV. 150.4 ft				TOTAL DEPTH 66.3 ft				NORTHING 893,594				EASTING 2,293,911				24 HR. Caved 7.0			
DRILL RIGHAMMER EFF./DATE HFC0072 CME-550X 87% 02/23/2021								DRILL METHOD NW Casing w/ Core				HAMMER TYPE Automatic							
DRILLER Pinter, D. G.				START DATE 06/22/22				COMP. DATE 06/27/22				SURFACE WATER DEPTH N/A							
CORE SIZE NXWL				TOTAL RUN 33.5 ft															
ELEV (ft)	RUN ELEV (ft)	DEPTH (ft)	RUN (ft)	DRILL RATE (Min/ft)	RUN		SAMP. NO.	STRATA		LOG	DESCRIPTION AND REMARKS								
					REC. (ft) %	RQD (ft) %		REC. (ft) %	RQD (ft) %										
117.6																			
	117.6	32.8	2.7	0:40/0.7 0:32/1.0 0:22/1.0	(0.8) 30%	(0.0) 0%		(1.9) 28%	(0.0) 0%		Begin Coring @ 32.8 ft								
115	114.9	35.5									WEATHERED ROCK 32.8								
			5.0	0:28/1.0 0:29/1.0 0:26/1.0 1:03/1.0 1:04/1.0	(2.1) 42%	(0.4) 8%					TAN-GRAY, SEVERE WEATHERING, META-ARGILLITE								
											GSI=20-30								
110	109.9	40.5						(24.9) 93%	(13.0) 49%		110.8 39.6								
			4.6	0:45/1.0 0:58/1.0 0:54/1.0 0:56/1.0 0:37/0.6	(4.0) 87%	(3.3) 72%					CRYSTALLINE ROCK								
105	105.3	45.1					RS-2				DARK GRAY AND GREEN, VERY SLIGHT WEATHERING TO FRESH, MODERATELY CLOSE TO CLOSE FRACTURE SPACING, MODERATELY HARD TO HARD, META-ARGILLITE								
			3.9	1:21/1.0 1:56/1.0 1:37/1.0 2:03/0.9	(2.6) 67%	(1.6) 41%					GSI=60-70								
100	101.4	49.0	2.3	0:52/0.3 1:34/1.0 2:04/1.0	(2.3) 100%	(0.9) 39%													
	99.1	51.3	5.0	1:07/1.0 1:11/1.0 1:12/1.0 0:54/1.0 1:02/1.0	(5.0) 100%	(2.3) 46%	RS-3												
95	94.1	56.3																	
			5.0	1:17/1.0 1:01/1.0 1:09/1.0 1:01/1.0 1:05/1.0	(5.0) 100%	(0.5) 10%													
90	89.1	61.3																	
			5.0	1:21/1.0 1:20/1.0 1:32/1.0 1:07/1.0 1:29/1.0	(5.0) 100%	(4.0) 80%													
85	84.1	66.3									84.1 66.3								
											Boring Terminated at Elevation 84.1 ft IN CRYSTALLINE ROCK (META-ARGILLITE)								

NCDOT BORE DOUBLE BR0090_GEO_BRDG_BH.GPJ NC_DOT.GDT 8/8/22

NCDOT BORE DOUBLE BR0090_GEO_BRDG_BH.GPJ NC_DOT.GDT 8/8/22

WBS 67090.1.1			TIP BR-0090			COUNTY NASH			GEOLOGIST Jones, A. N.					
SITE DESCRIPTION BRIDGE NO. 36 ON NC 561 OVER FISHING CREEK									GROUND WTR (ft)					
BORING NO. B2-B			STATION 17+09			OFFSET 8 ft RT			ALIGNMENT -L-			0 HR. N/A		
COLLAR ELEV. 150.1 ft			TOTAL DEPTH 33.8 ft			NORTHING 893,585			EASTING 2,293,923			24 HR. 7.6		
DRILL RIG/HAMMER EFF./DATE HFC0072 CME-550X 87% 02/23/2021						DRILL METHOD NW Casing w/ Advancer			HAMMER TYPE Automatic					
DRILLER Pinter, D. G.			START DATE 06/29/22			COMP. DATE 06/29/22			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
			0.5ft	0.5ft	0.5ft	0	25	50	75	100				
155														
150														150.1 GROUND SURFACE 0.0
145	146.4	3.7	5	2	2									ROADWAY EMBANKMENT RIP RAP 4.5
140	141.4	8.7	6	6	3									ALLUVIAL ORANGE AND GRAY, SILTY SAND 9.9
135	136.4	13.7	8	10	13									RESIDUAL GRAY, ORANGE, AND TAN, SAPROLITIC, SANDY SILT
130	131.4	18.7	13	32	68/0.4									WEATHERED ROCK (META-ARGILLITE) 19.2
125	126.4	23.7	67	33/0.1										
120	121.4	28.7	100/0.4											
	116.4	33.7	60/0.1											CRYSTALLINE ROCK (META-ARGILLITE) 33.5
														33.8
														Boring Terminated WITH STANDARD PENETRATION TEST REFUSAL at Elevation 116.3 ft IN CRYSTALLINE ROCK (META-ARGILLITE)

NCDOT BORE DOUBLE BR0090 GEO BRDG BH.GPJ NC_DOT.GDT 8/8/22

WBS 67090.1.1			TIP BR-0090			COUNTY NASH			GEOLOGIST Jones, A. N.					
SITE DESCRIPTION BRIDGE NO. 36 ON NC 561 OVER FISHING CREEK									GROUND WTR (ft)					
BORING NO. EB2-B			STATION 17+59			OFFSET 9 ft RT			ALIGNMENT -L-					
COLLAR ELEV. 166.3 ft			TOTAL DEPTH 48.0 ft			NORTHING 893,623			EASTING 2,293,955					
DRILL RIG/HAMMER EFF./DATE RFOC074 CME-55 92% 10/12/2020						DRILL METHOD H.S. Augers			HAMMER TYPE Automatic					
DRILLER Pinter, D. G.			START DATE 06/21/22			COMP. DATE 06/21/22			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
			0.5ft	0.5ft	0.5ft	0	25	50	75	100				
170														
165														
	163.4	2.9	2	3	3	6						M		GROUND SURFACE 0.0 ROADWAY EMBANKMENT 0.7 PAVEMENT (ASPHALT) ORANGE-BROWN, SANDY CLAY WITH TRACE MICA AND GRAVEL
160												M		
	158.4	7.9	2	3	4	7								
155														
	153.4	12.9	2	3	2	5					SS-6	M W		13.4 ALLUVIAL GRAY, SANDY SILT WITH TRACE SAND LENSES AND BASAL GRAVEL
150														
	148.4	17.9	2	2	3	5						W		
145														
	143.4	22.9	3	4	7	11						W		
140														
	138.4	27.9	7	10	18	28						M		26.5 RESIDUAL GRAY AND TAN, SAPROLITIC, SANDY SILT
135														
	133.4	32.9	9	18	27	45						M		
130														
	128.4	37.9	23	36	55	91						M		
125														
	123.4	42.9	7	5	8	13					SS-7	M		41.0 DARY GRAY AND BROWN, SAPROLITIC, SILTY CLAY
120														
	118.4	47.9	60/0.1			60/0.1								47.4 CRYSTALLINE ROCK (META-ARGILLITE) Boring Terminated WITH STANDARD PENETRATION TEST REFUSAL at Elevation 118.3 ft IN CRYSTALLINE ROCK (META-ARGILLITE) 48.0

EB1-A

SOIL TEST RESULTS															
SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT				% PASSING (SIEVES)			%	%
							C.SAND	F.SAND	SILT	CLAY	10	40	200		
SS-1	8' LT	15+49	2.9-4.4	A-6(6)	39	15	19.8	32.3	23.8	24.2	100	88	55	-	-
SS-2	8' LT	15+49	8.8-9.4	A-6(4)	31	14	18.3	36.5	19.0	26.2	100	91	52	-	-
SS-3	8' LT	15+49	17.9-19.4	A-4(0)	28	5	5.4	59.2	17.2	18.1	100	99	46	-	-
SS-4	8' LT	15+49	32.9-34.4	A-4(0)	-	NP	19.1	42.1	32.7	6.0	100	93	49	-	-

B1-B

SOIL TEST RESULTS															
SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT				% PASSING (SIEVES)			%	%
							C.SAND	F.SAND	SILT	CLAY	10	40	200		
SS-10	9' RT	16+09	10.8-12.3	A-2-4(0)	-	NP	9.5	67.1	13.4	10.1	100	99	33	-	-
SS-11	9' RT	16+09	15.8-17.3	A-4(0)	-	NP	4.4	25.2	64.4	6.0	100	98	82	-	-

B2-A

SOIL TEST RESULTS															
SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT				% PASSING (SIEVES)			%	%
							C.SAND	F.SAND	SILT	CLAY	10	40	200		
SS-8	7' LT	17+09	7.7-9.2	A-2-4(0)	-	NP	5.2	73.5	13.2	8.1	100	98	35	-	-
SS-9	7' LT	17+09	17.7-19.2	A-4(0)	-	NP	6.8	35.6	49.4	8.1	100	98	68	-	-

EB2-A

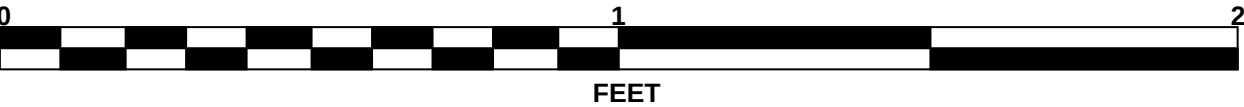
SOIL TEST RESULTS															
SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT				% PASSING (SIEVES)			%	%
							C.SAND	F.SAND	SILT	CLAY	10	40	200		
SS-5	9' LT	17+59	38.0-39.5	A-4(2)	33	3	6.2	31.8	55.9	6.0	90	87	68	-	-

EB2-B

SOIL TEST RESULTS															
SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	% BY WEIGHT			% PASSING (SIEVES)				%	%	
						P.I.	C.SAND	F.SAND	SILT	CLAY	10	40	200	MOISTURE	ORGANIC
SS-6	9' RT	17+59	13.4-14.4	A-4(4)	30	8	6.4	36.7	32.7	24.2	100	97	67	-	-
SS-7	9' RT	17+59	42.9-44.4	A-7-5(7)	47	14	17.1	33.8	34.9	14.1	100	91	57	-	-

CORE PHOTOGRAPHS

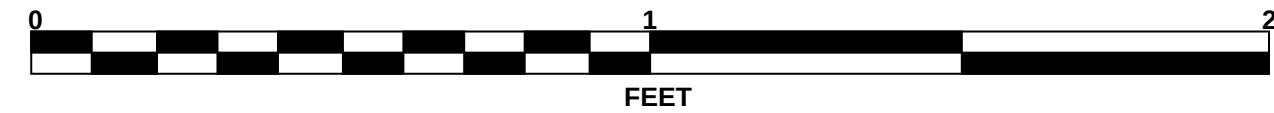
B1-B
BOXES 1 & 2: 51.5 - 68.5 FEET



CORE PHOTOGRAPHS

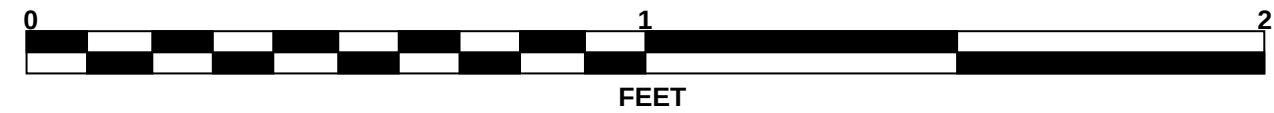
B2-A

BOXES 1 & 2: 32.8 - 54.7 FEET



B2-A

BOXES 3 & 4: 54.7 - 66.3 FEET



SITE PHOTOGRAPH

Bridge No. 36 on -L- (NC 561) over Fishing Creek



Looking Southwest towards End Bent 1