

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	38408.1.1 B-4554	1	26

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

**STRUCTURE**  
**SUBSURFACE INVESTIGATION**

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PROJ. REFERENCE NO. 38408.1.1 B-4554 F.A. PROJ. BRZ-1705(1)  
COUNTY JACKSON  
PROJECT DESCRIPTION BRIDGE NO. 145 ON US 23-74 OVER SR 1705,  
SOUTHERN RAILROAD AND SCOTT CREEK

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) 260-4088. NEITHER THE SUBSURFACE PLANS AND REPORTS, NOR THE FIELD BORING LOGS, ROCK CORES, OR SOIL TEST DATA ARE 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 (ON-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 THIS 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.

**PROJECT: 38408.1.1 ID: B-4554**

**PERSONNEL**

P.Q. LOCKAMY

D.O. CHEEK

C.J. COFFEY

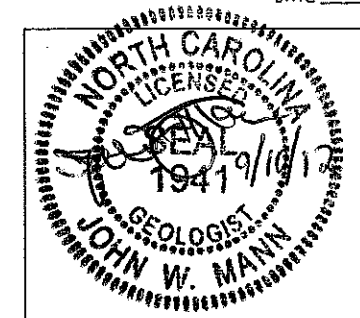
D.M. MULLEN

INVESTIGATED BY J.W. MANN

CHECKED BY W.D. FRYE

SUBMITTED BY W.D. FRYE

DATE 9.10.12



DRAWN BY: J.T. WILLIAMS

NOTE - THE INFORMATION CONTAINED HEREIN IS NOT IMPLIED OR GUARANTEED BY THE N. C. DEPARTMENT OF TRANSPORTATION AS BEING ACCURATE NOR IS IT CONSIDERED TO BE PART OF THE PLANS, SPECIFICATIONS, OR CONTRACT FOR THE PROJECT.

NOTE - 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.

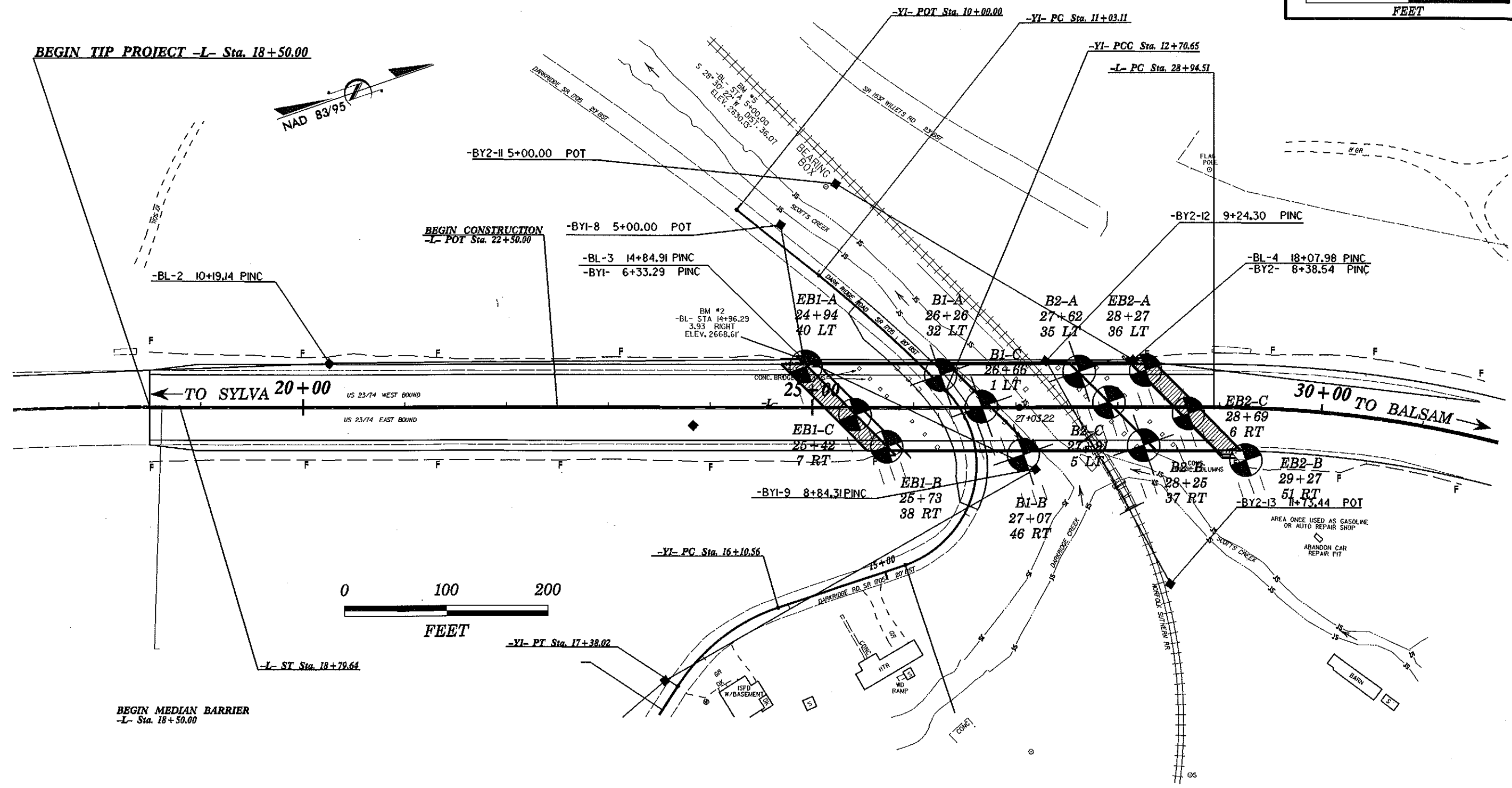
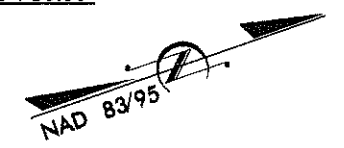
SUBSURFACE INVESTIGATION

SOIL AND ROCK LEGEND, TERMS, SYMBOLS, AND ABBREVIATIONS

Table with multiple sections: SOIL DESCRIPTION, GRADATION, ROCK DESCRIPTION, TERMS AND DEFINITIONS, SOIL LEGEND AND AASHTO CLASSIFICATION, MINERALOGICAL COMPOSITION, COMPRESSIBILITY, PERCENTAGE OF MATERIAL, GROUND WATER, MISCELLANEOUS SYMBOLS, TEXTURE OR GRAIN SIZE, SOIL MOISTURE - CORRELATION OF TERMS, PLASTICITY, COLOR, ABBREVIATIONS, EQUIPMENT USED ON SUBJECT PROJECT, FRACTURE SPACING, BEDDING, INDURATION.

SKEW = 45°

BEGIN TIP PROJECT -L- Sta. 18+50.00



BEGIN CONSTRUCTION -L- POT Sta. 22+50.00

-BL-2 10+19.14 PINC

-BY2-II 5+00.00 POT

-BYI-8 5+00.00 POT

-BL-3 14+84.91 PINC  
-BYI- 6+33.29 PINC

BM #2  
-BL- STA 14+96.29  
3.93 RIGHT  
ELEV. 2668.61'

-YI- PCC Sta. 12+70.65

-L- PC Sta. 28+94.51

-BY2-12 9+24.30 PINC

-BL-4 18+07.98 PINC  
-BY2- 8+38.54 PINC

EB1-A  
24+94  
40 LT

B1-A  
26+26  
32 LT

B2-A  
27+62  
35 LT

EB2-A  
28+27  
36 LT

← TO SYLVA 20+00

US 23/74 WEST BOUND

US 23/74 EAST BOUND

30+00 TO BALSAM →

EB1-C  
25+42  
7 RT

B1-C  
26+66  
1 LT

B2-C  
27+03.22  
5 LT

EB2-C  
28+69  
6 RT

-BYI-9 8+84.31 PINC

EB1-B  
25+73  
38 RT

B1-B  
27+07  
46 RT

B2-B  
28+25  
37 RT

EB2-B  
29+27  
51 RT

-BY2-13 11+75.44 POT

AREA ONCE USED AS GASOLINE OR AUTO REPAIR SHOP  
ABANDON CAR REPAIR PIT

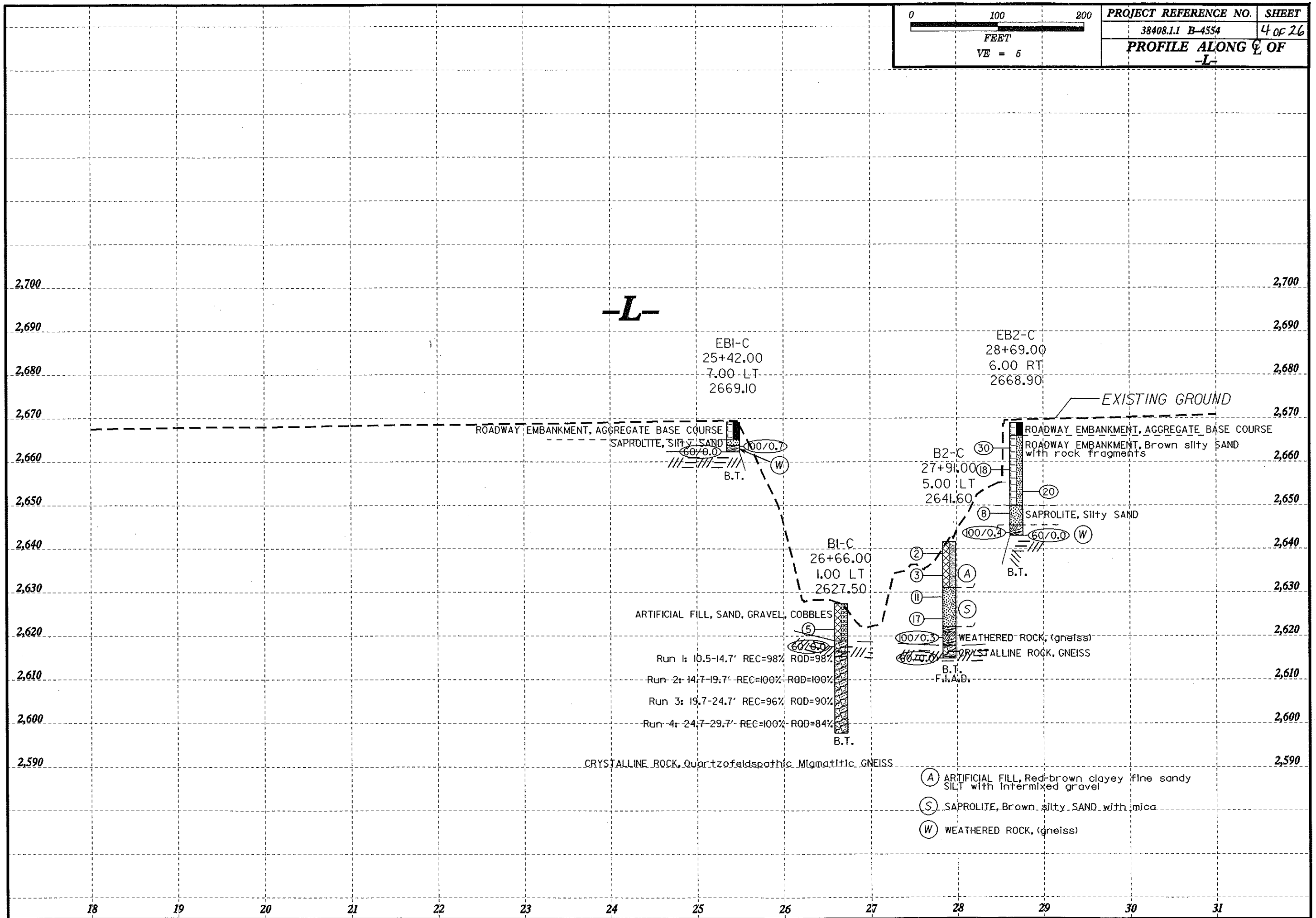
-YI- PC Sta. 16+10.56

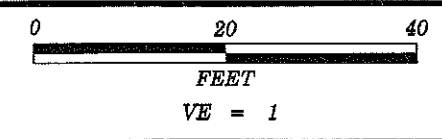


-YI- PT Sta. 17+38.02

-L- ST Sta. 18+79.64

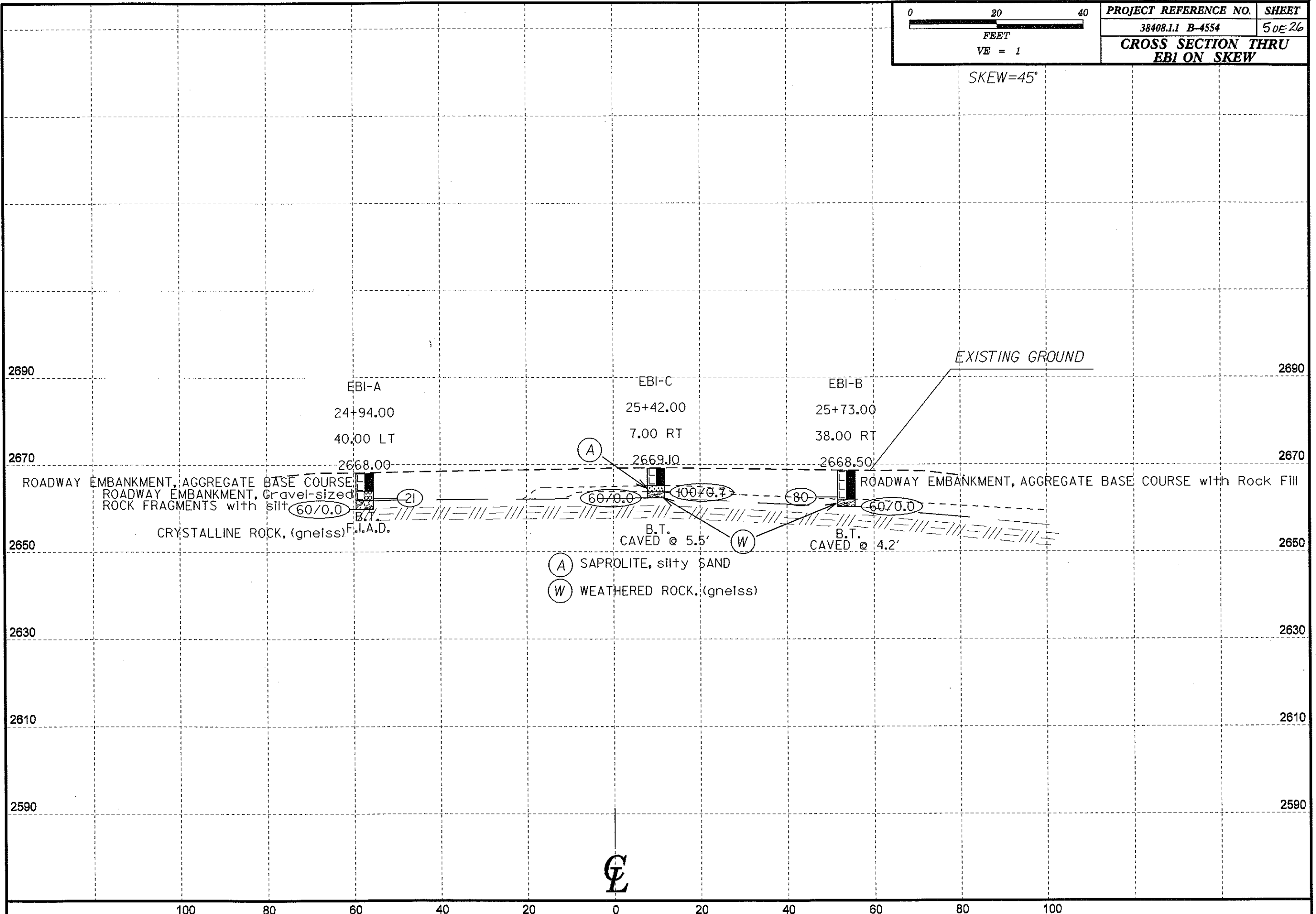
BEGIN MEDIAN BARRIER -L- Sta. 18+50.00





PROJECT REFERENCE NO.	SHEET
38408.1.1 B-4554	5 OF 26
CROSS SECTION THRU EBI ON SKEW	

SKEW=45°



2690  
2670  
2650  
2630  
2610  
2590

2690  
2670  
2650  
2630  
2610  
2590

EBI-A  
24+94.00  
40.00 LT  
2668.00

ROADWAY EMBANKMENT, AGGREGATE BASE COURSE  
ROADWAY EMBANKMENT, Gravel-sized  
ROCK FRAGMENTS with silt (60/0.0)

CRYSTALLINE ROCK, (gneiss) F.I.A.D.

EBI-C  
25+42.00  
7.00 RT  
2669.10

EBI-B  
25+73.00  
38.00 RT  
2668.50

ROADWAY EMBANKMENT, AGGREGATE BASE COURSE with Rock Fill

EXISTING GROUND

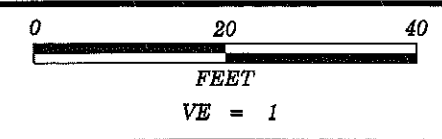
(A) 60/0.0 (21) 100/0.7 (80) 60/0.0

B.T. CAVED @ 5.5' (W) B.T. CAVED @ 4.2'

- (A) SAPROLITE, silty SAND
- (W) WEATHERED ROCK, (gneiss)

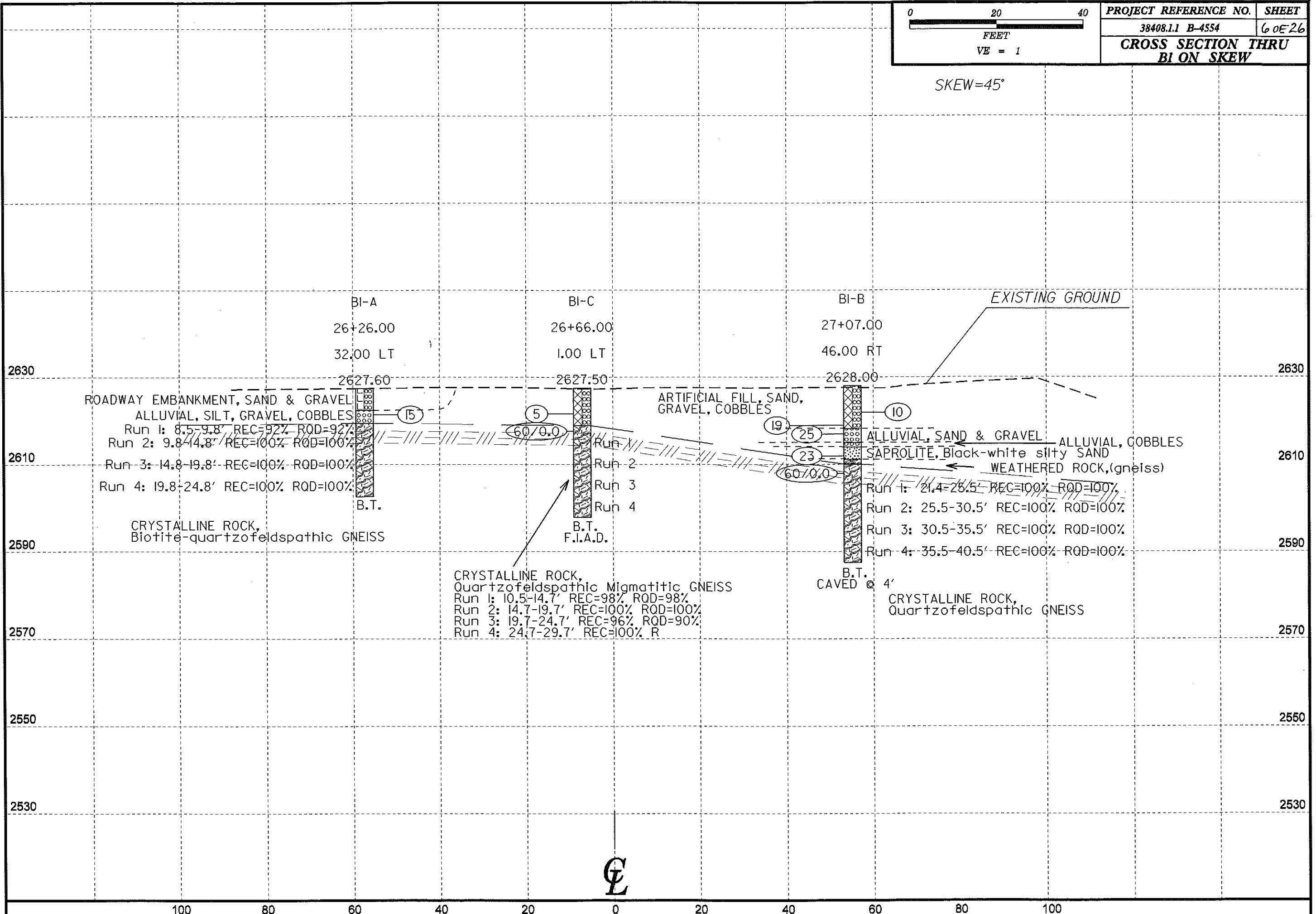


100 80 60 40 20 0 20 40 60 80 100



PROJECT REFERENCE NO.	SHEET
38408.1.1 B-4554	6 OF 26
CROSS SECTION THRU BI ON SKEW	

SKEW=45°



BI-A  
26+26.00  
32.00 LT

BI-C  
26+66.00  
1.00 LT

BI-B  
27+07.00  
46.00 RT

EXISTING GROUND

ROADWAY EMBANKMENT, SAND & GRAVEL  
ALLUVIAL, SILT, GRAVEL, COBBLES  
Run 1: 8.5-9.8' REC=92% RQD=92%  
Run 2: 9.8-14.8' REC=100% RQD=100%  
Run 3: 14.8-19.8' REC=100% RQD=100%  
Run 4: 19.8-24.8' REC=100% RQD=100%

ARTIFICIAL FILL, SAND,  
GRAVEL, COBBLES

ALLUVIAL, SAND & GRAVEL  
ALLUVIAL, COBBLES  
SAPROLITE, Black-white silty SAND  
WEATHERED ROCK, (gneiss)  
Run 1: 21.4-25.5' REC=100% RQD=100%  
Run 2: 25.5-30.5' REC=100% RQD=100%  
Run 3: 30.5-35.5' REC=100% RQD=100%  
Run 4: 35.5-40.5' REC=100% RQD=100%

CRYSTALLINE ROCK,  
Biotite-quartzofeldspathic GNEISS

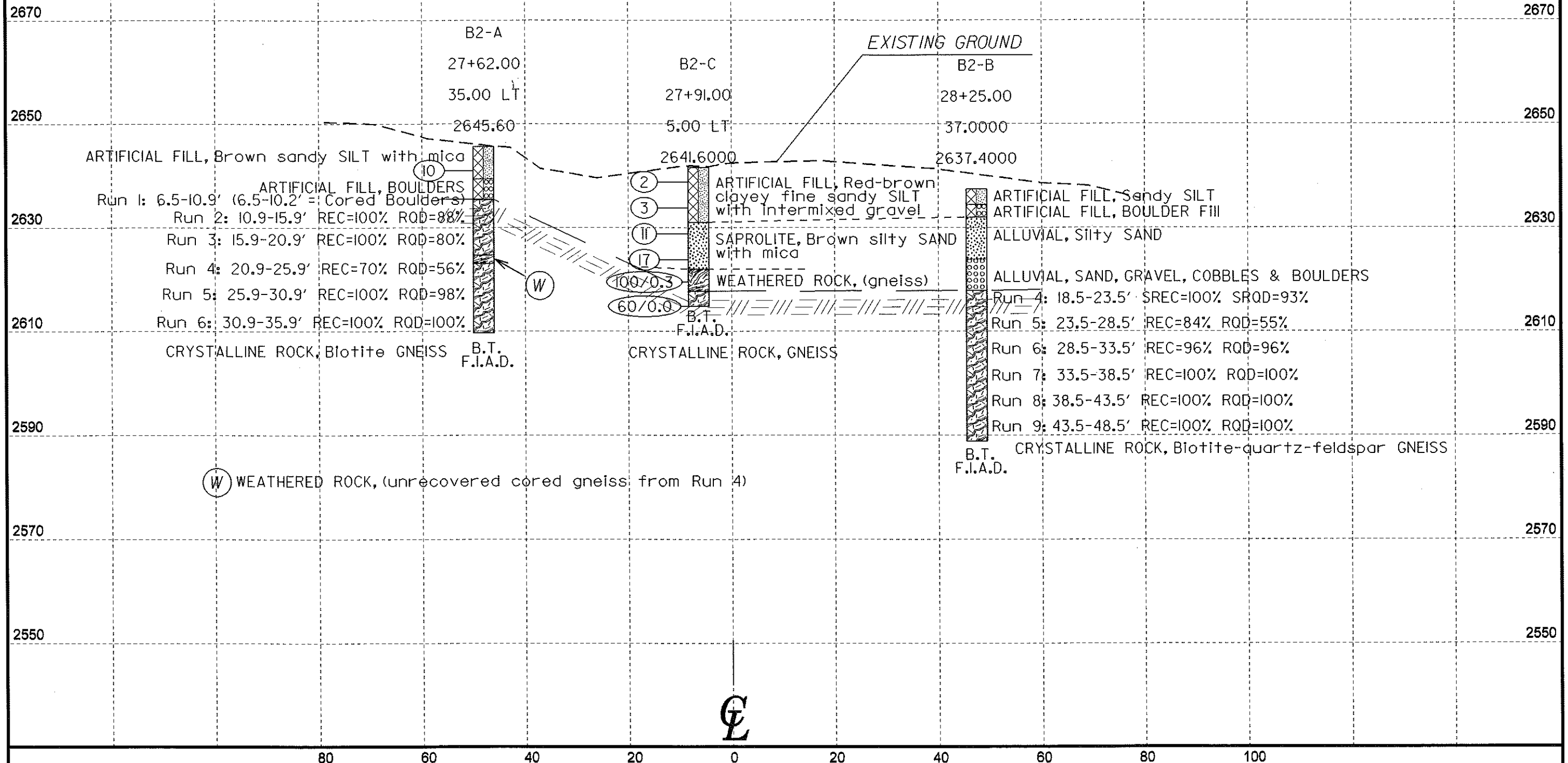
CRYSTALLINE ROCK,  
Quartzofeldspathic Migmatitic GNEISS  
Run 1: 10.5-14.7' REC=98% RQD=98%  
Run 2: 14.7-19.7' REC=100% RQD=100%  
Run 3: 19.7-24.7' REC=96% RQD=90%  
Run 4: 24.7-29.7' REC=100% R

CRYSTALLINE ROCK,  
Quartzofeldspathic GNEISS

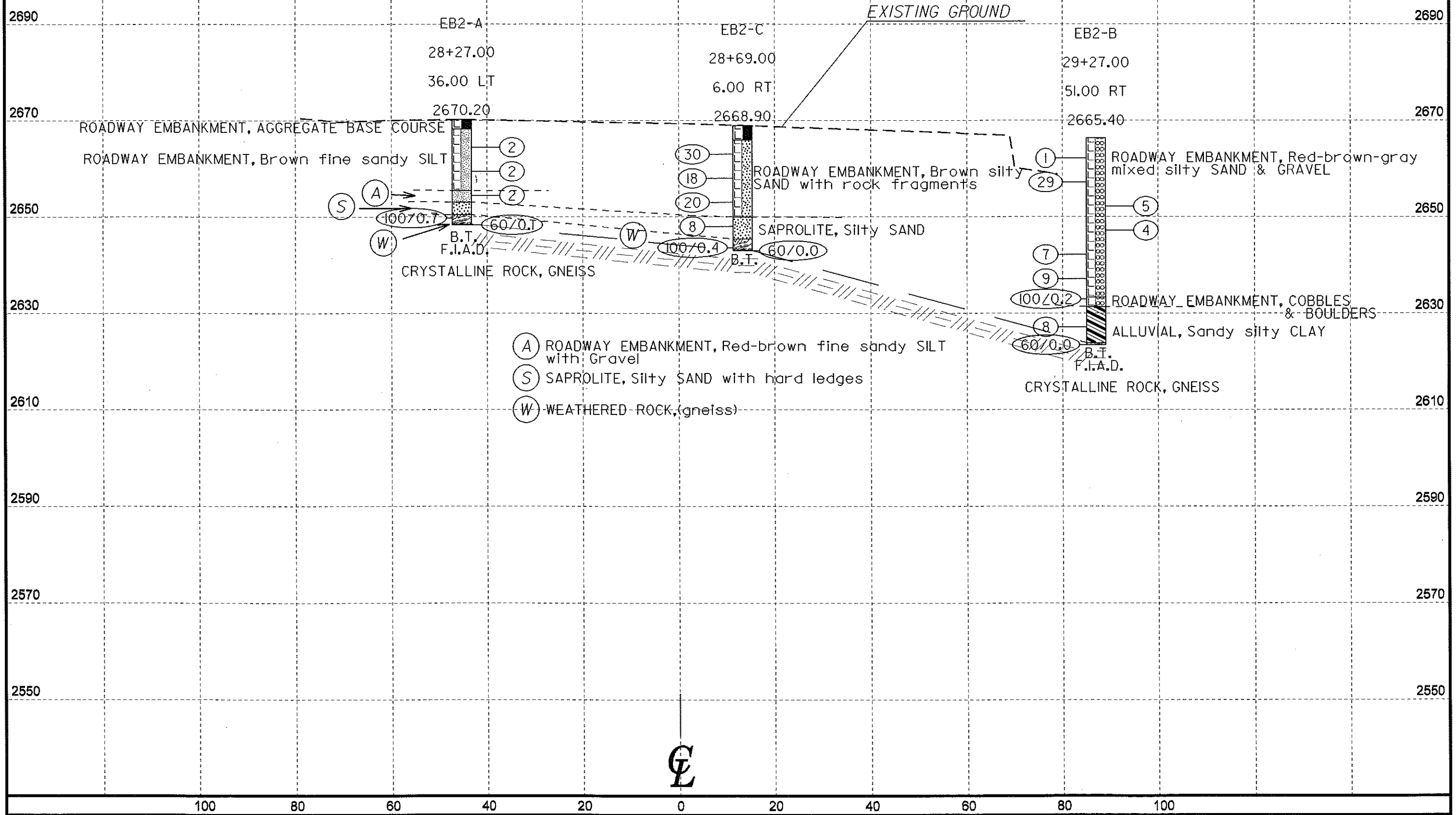


100 80 60 40 20 0 20 40 60 80 100

SKEW=45°



SKEW=45°





WBS 38408.1.1		TIP B-4554		COUNTY JACKSON		GEOLOGIST Lockamy, P. Q.										
SITE DESCRIPTION Bridge No. 145 on US 23-74 over SR 1705, Southern Railroad and Scott Creek							GROUND WTR (ft)									
BORING NO. EB1-A		STATION 24+94		OFFSET 40 ft LT		ALIGNMENT -L-										
COLLAR ELEV. 2,668.0 ft		TOTAL DEPTH 8.2 ft		NORTHING 628,151		EASTING 771,396										
DRILL RIG/HAMMER EFF./DATE AFO0070 CME-550X 81% 09/03/2009		DRILL METHOD NW Casing w/ SPT		HAMMER TYPE Automatic												
DRILLER Cheek, D. O.		START DATE 07/19/12		COMP. DATE 07/19/12		SURFACE WATER DEPTH N/A										
ELEV (ft)	DRIVE ELEV (ft)	DEPTH (ft)	BLOW COUNT			BLOWS PER FOOT					SAMP. NO.	L O G MOI	SOIL AND ROCK DESCRIPTION	DEPTH (ft)		
			0.5ft	0.5ft	0.5ft	0	25	50	75	100						
2670														2,668.0	GROUND SURFACE	0.0
2665														2,663.9	ROADWAY EMBANKMENT AGGREGATE BASE COURSE	4.1
	2,663.3	4.7	15	12	9									2,661.8	ROADWAY EMBANKMENT Gravel-sized ROCK FRAGMENTS with silt	6.2
2660	2,659.8	8.2												2,659.8	CRYSTALLINE ROCK GNEISS	8.2
Boring Terminated with Standard Penetration Test Refusal at Elevation 2,659.8 ft In Crystalline Rock: GNEISS																

NCDOT BORE SINGLE B4554\_GEO\_BH\_BRD00145.GPJ NC\_DOT.GDT 8/28/12

WBS 38408.1.1		TIP B-4554		COUNTY JACKSON		GEOLOGIST Lockamy, P. Q.										
SITE DESCRIPTION Bridge No. 145 on US 23-74 over SR 1705, Southern Railroad and Scott Creek							GROUND WTR (ft)									
BORING NO. EB1-C		STATION 25+42		OFFSET 7 ft RT		ALIGNMENT -L-										
COLLAR ELEV. 2,669.1 ft		TOTAL DEPTH 6.8 ft		NORTHING 628,181		EASTING 771,456										
DRILL RIG/HAMMER EFF./DATE AFO0070 CME-550X 81% 09/03/2009		DRILL METHOD NW Casing w/ SPT		HAMMER TYPE Automatic												
DRILLER Cheek, D. O.		START DATE 07/30/12		COMP. DATE 07/30/12		SURFACE WATER DEPTH N/A										
ELEV (ft)	DRIVE ELEV (ft)	DEPTH (ft)	BLOW COUNT			BLOWS PER FOOT					SAMP. NO.	L O G MOI	SOIL AND ROCK DESCRIPTION	DEPTH (ft)		
			0.5ft	0.5ft	0.5ft	0	25	50	75	100						
2670														2,669.1	GROUND SURFACE	0.0
2665														2,665.1	ROADWAY EMBANKMENT AGGREGATE BASE COURSE	4.0
	2,664.3	4.8	14	86	0.2									2,663.8	SAPROLITE Silty SAND	5.3
	2,662.3	6.8												2,662.3	WEATHERED ROCK (gneiss)	6.8
Boring Terminated with Standard Penetration Test Refusal at Elevation 2,662.3 ft In Crystalline Rock: GNEISS																

NCDOT BORE SINGLE B4554\_GEO\_BH\_BRD00145.GPJ NC\_DOT.GDT 8/28/12



**NCDOT GEOTECHNICAL ENGINEERING UNIT**  
**BORELOG REPORT**

SHEET

SHEET  
10 OF 26

WBS 38408.1.1	TIP B-4554	COUNTY JACKSON	GEOLOGIST Mullen, D. M.
SITE DESCRIPTION Bridge No. 145 on US 23-74 over SR 1705, Southern Railroad and Scott Creek			GROUND WTR (ft)
BORING NO. EB1-B	STATION 25+73	OFFSET 38 ft RT	ALIGNMENT -L-
COLLAR ELEV. 2,668.5 ft	TOTAL DEPTH 8.2 ft	NORTHING 628,201	EASTING 771,495
DRILL RIG/HAMMER EFF./DATE AFO0070 CME-550X 81% 09/03/2009		DRILL METHOD NW Casing w/ SPT	HAMMER TYPE Automatic
DRILLER Cheek, D. O.	START DATE 07/23/12	COMP. DATE 07/23/12	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					
2670															
													GROUND SURFACE	0.0	
													ROADWAY EMBANKMENT AGGREGATE BASE COURSE with Rock Fill		
2665															
	2,663.5	5.0	8	24	56										
	2,660.3	8.2											WEATHERED ROCK (gneiss)	8.2	
			60/0.0										CRYSTALLINE ROCK GNEISS		
													Boring Terminated with Standard Penetration Test Refusal at Elevation 2,660.3 ft On Crystalline Rock: GNEISS		

NCDOT BORE SINGLE B4554 GEO BH BRDG0145.GPJ NC\_DOT\_GDT 8/28/12

WBS 38408.1.1	TIP B-4554	COUNTY JACKSON	GEOLOGIST Lockamy, P. Q.
SITE DESCRIPTION Bridge No. 145 on US 23-74 over SR 1705, Southern Railroad and Scott Creek			GROUND WTR (ft)
BORING NO. B1-A	STATION 26+26	OFFSET 32 ft LT	ALIGNMENT -L-
COLLAR ELEV. 2,627.6 ft	TOTAL DEPTH 24.8 ft	NORTHING 628,274	EASTING 771,446
DRILL RIG/HAMMER EFF./DATE AFO0070 CME-550X 81% 09/03/2009		DRILL METHOD NW Casing W/SPT & Core	HAMMER TYPE Automatic
DRILLER Cheek, D. O.	START DATE 07/11/12	COMP. DATE 07/11/12	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					
2630													GROUND SURFACE	0.0	
2625													ROADWAY EMBANKMENT SAND & GRAVEL		
2620	2,622.6	5.0		7	10	5								ALLUVIAL SILT, GRAVEL, COBBLES	5.0
2615													CRYSTALLINE ROCK Biotite-quartzofeldspathic GNEISS Run 1: 8.5-9.8' REC=92% RQD=92% Run 2: 9.8-14.8' REC=100% RQD=100% Run 3: 14.8-19.8' REC=100% RQD=100% Run 4: 19.8-24.8' REC=100% RQD=100%	8.0	
2610															
2605															

NCDOT BORE SINGLE B4554 GEO\_BH\_BRD00145.GPJ NC\_DOT.GDT 9/7/12

WBS 38408.1.1	TIP B-4554	COUNTY JACKSON	GEOLOGIST Lockamy, P. Q.
SITE DESCRIPTION Bridge No. 145 on US 23-74 over SR 1705, Southern Railroad and Scott Creek			GROUND WTR (ft)
BORING NO. B1-A	STATION 26+26	OFFSET 32 ft LT	ALIGNMENT -L-
COLLAR ELEV. 2,627.6 ft	TOTAL DEPTH 24.8 ft	NORTHING 628,274	EASTING 771,446
DRILL RIG/HAMMER EFF./DATE AFO0070 CME-550X 81% 09/03/2009		DRILL METHOD NW Casing W/SPT & Core	HAMMER TYPE Automatic
DRILLER Cheek, D. O.	START DATE 07/11/12	COMP. DATE 07/11/12	SURFACE WATER DEPTH N/A

ELEV (ft)	RUN ELEV (ft)	DEPTH (ft)	RUN (ft)	DRILL RATE (Min/ft)	TOTAL RUN 16.3 ft		SAMP. NO.	STRATA		LOG	DESCRIPTION AND REMARKS	DEPTH (ft)
					REC (ft) %	RQD (ft) %		REC (ft) %	RQD (ft) %			
2619.06	2,619.1	8.5	1.3		(1.2)	(1.2)					Begin Coring @ 8.5 ft	
2615	2,617.8	9.8	5.0		92%	92%					CRYSTALLINE ROCK White-gray-black moderately foliated Biotite-quartzofeldspathic GNEISS. Rock is fresh, hard to very hard, with wide fracture spacing. Most breaks are mechanical. (continued)	
2610	2,612.8	14.8	5.0		(5.0)	(5.0)	RS-3					
2605	2,607.8	19.8	5.0		100%	100%	RS-4					
	2,602.8	24.8			(5.0)	(5.0)						

NCDOT CORE SINGLE B4554 GEO\_BH\_BRD00145.GPJ NC\_DOT.GDT 8/28/12

Boring Terminated at Elevation 2,602.8 ft In Crystalline Rock: Quartzofeldspathic GNEISS

Boring Terminated at Elevation 2,602.8 ft In Crystalline Rock: Quartzofeldspathic GNEISS

WBS 38408.1.1	TIP B-4554	COUNTY JACKSON	GEOLOGIST Lockamy, P. Q.
SITE DESCRIPTION Bridge No. 145 on US 23-74 over SR 1705, Southern Railroad and Scott Creek			GROUND WTR (ft)
BORING NO. B1-C	STATION 26+66	OFFSET 1 ft LT	ALIGNMENT -L-
COLLAR ELEV. 2,627.5 ft	TOTAL DEPTH 29.7 ft	NORTHING 628,301	EASTING 771,489
DRILL RIG/HAMMER EFF./DATE AFO0070 CME-550X 81% 09/03/2009		DRILL METHOD NW Casing W/SPT & Core	HAMMER TYPE Automatic
DRILLER Cheek, D. O.	START DATE 07/10/12	COMP. DATE 07/10/12	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					
2630													GROUND SURFACE	0.0	
2625													ARTIFICIAL FILL SAND, GRAVEL, COBBLES		
2620	2,622.6	4.9		3	3	2									
2615	2,617.6	9.9												CRYSTALLINE ROCK Quartzofeldspathic Migmatitic GNEISS Run 1: 10.5-14.7' REC=98% RQD=98% Run 2: 14.7-19.7' REC=100% RQD=100% Run 3: 19.7-24.7' REC=96% RQD=90% Run 4: 24.7-29.7' REC=100% RQD=84%	8.6
2610															
2605															
2600															

NCDOT BORE SINGLE B4554\_GEO\_BH\_BRD0145.GPJ NC\_DOT.GDT 8/28/12

WBS 38408.1.1	TIP B-4554	COUNTY JACKSON	GEOLOGIST Lockamy, P. Q.
SITE DESCRIPTION Bridge No. 145 on US 23-74 over SR 1705, Southern Railroad and Scott Creek			GROUND WTR (ft)
BORING NO. B1-C	STATION 26+66	OFFSET 1 ft LT	ALIGNMENT -L-
COLLAR ELEV. 2,627.5 ft	TOTAL DEPTH 29.7 ft	NORTHING 628,301	EASTING 771,489
DRILL RIG/HAMMER EFF./DATE AFO0070 CME-550X 81% 09/03/2009		DRILL METHOD NW Casing W/SPT & Core	HAMMER TYPE Automatic
DRILLER Cheek, D. O.	START DATE 07/10/12	COMP. DATE 07/10/12	SURFACE WATER DEPTH N/A

ELEV (ft)	RUN ELEV (ft)	DEPTH (ft)	RUN (ft)	DRILL RATE (Min/ft)	RUN		SAMP. NO.	STRATA		LOG	DESCRIPTION AND REMARKS	DEPTH (ft)
					REC. (%)	RQD (%)		REC. (%)	RQD (%)			
2617.03											Begin Coring @ 10.5 ft	
2615	2,617.0	10.5	4.2		(4.1)	(4.1)					CRYSTALLINE ROCK	
	2,612.8	14.7			98%	98%					10.5-24.7': White-gray moderately foliated Quartzofeldspathic-biotite GNEISS. Rock is fresh, hard to very hard with wide fracture spacing.	
			5.0		(5.0)	(5.0)	RS-5				24.7-26.0': Closely fractured Amphibolite GNEISS	
2610					100%	100%					26.0-29.7': Migmatitic GNEISS with 1 healed fracture @ 60°. (continued)	
	2,607.8	19.7					RS-6					
2605					(4.8)	(4.5)						
	2,602.8	24.7			96%	90%						
2600					(5.0)	(4.2)						
					100%	84%						
	2,597.8	29.7										

NCDOT CORE SINGLE B4554\_GEO\_BH\_BRD0145.GPJ NC\_DOT.GDT 8/28/12

Boring Terminated at Elevation 2,597.8 ft In Crystalline Rock: Quartzofeldspathic Migmatitic GNEISS

Boring Terminated at Elevation 2,597.8 ft In Crystalline Rock: Quartzofeldspathic Migmatitic GNEISS

WBS 38408.1.1	TIP B-4554	COUNTY JACKSON	GEOLOGIST Lockamy, P. Q.
SITE DESCRIPTION Bridge No. 145 on US 23-74 over SR 1705, Southern Railroad and Scott Creek			GROUND WTR (ft)
BORING NO. B1-B	STATION 27+07	OFFSET 46 ft RT	ALIGNMENT -L-
COLLAR ELEV. 2,628.0 ft	TOTAL DEPTH 40.5 ft	NORTHING 628,325	EASTING 771,546
DRILL RIG/HAMMER EFF./DATE AFO0070 CME-550X 81% 09/03/2009		DRILL METHOD NW Casing W/SPT & Core	HAMMER TYPE Automatic
DRILLER Coffey, Jr., C.	START DATE 07/09/12	COMP. DATE 07/09/12	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				
2630													GROUND SURFACE	0.0
2625	2,622.9	5.1	20	6	4								ARTIFICIAL FILL SAND, GRAVEL & COBBLES	
2620	2,619.9	8.1	18	11	8									
2615	2,617.9	10.1	6	10	15								ALLUVIAL SAND & GRAVEL	9.8
2610	2,612.9	15.1	6	9	14								ALLUVIAL COBBLES	13.0
2605	2,607.9	20.1	60/0.0										SAPROLITE	16.9
2600													Black-white silty SAND	18.0
2595													WEATHERED ROCK (gneiss)	
2590													CRYSTALLINE ROCK Quartzofeldspathic GNEISS	

Boring Terminated at Elevation 2,587.5 ft In Crystalline Rock: Migmatitic GNEISS

NCDOT BORE SINGLE B4554\_GEO\_BH\_BRD0145.GPJ NC\_DOT.GDT 8/28/12

WBS 38408.1.1	TIP B-4554	COUNTY JACKSON	GEOLOGIST Lockamy, P. Q.
SITE DESCRIPTION Bridge No. 145 on US 23-74 over SR 1705, Southern Railroad and Scott Creek			GROUND WTR (ft)
BORING NO. B1-B	STATION 27+07	OFFSET 46 ft RT	ALIGNMENT -L-
COLLAR ELEV. 2,628.0 ft	TOTAL DEPTH 40.5 ft	NORTHING 628,325	EASTING 771,546
DRILL RIG/HAMMER EFF./DATE AFO0070 CME-550X 81% 09/03/2009		DRILL METHOD NW Casing W/SPT & Core	HAMMER TYPE Automatic
DRILLER Coffey, Jr., C.	START DATE 07/09/12	COMP. DATE 07/09/12	SURFACE WATER DEPTH N/A

ELEV (ft)	RUN ELEV (ft)	DEPTH (ft)	RUN (ft)	DRILL RATE (Min/ft)	RUN		SAMP. NO.	STRATA		LOG	DESCRIPTION AND REMARKS	DEPTH (ft)
					REC. (%)	RQD (%)		REC. (%)	RQD (%)			
2606.57	2,606.6	21.4	4.1		(4.1)	(4.1)					Begin Coring @ 21.4 ft	
2605	2,602.5	25.5	5.0		100%	100%					CRYSTALLINE ROCK	
2600	2,597.5	30.5	5.0		100%	100%					White-gray moderately foliated quartzofeldspathic GNEISS. Weathering is fresh, hardness is hard to very hard & fracture spacing is wide to very wide. (continued)	
2595	2,592.5	35.5	5.0		100%	100%						
2590	2,587.5	40.5										

Boring Terminated at Elevation 2,587.5 ft In Crystalline Rock: Migmatitic GNEISS

NCDOT CORE SINGLE B4554\_GEO\_BH\_BRD0145.GPJ NC\_DOT.GDT 8/28/12

WBS 38408.1.1	TIP B-4554	COUNTY JACKSON	GEOLOGIST Lockamy, P. Q.
SITE DESCRIPTION Bridge No. 145 on US 23-74 over SR 1705, Southern Railroad and Scott Creek			GROUND WTR (ft)
BORING NO. B2-A	STATION 27+62	OFFSET 35 ft LT	ALIGNMENT -L-
COLLAR ELEV. 2,645.6 ft	TOTAL DEPTH 35.9 ft	NORTHING 628,403	EASTING 771,488
DRILL RIG/HAMMER EFF./DATE AFO0070 CME-550X 81% 09/03/2009		DRILL METHOD NW Casing W/SPT & Core	HAMMER TYPE Automatic
DRILLER Cheek, D. O.	START DATE 07/19/12	COMP. DATE 07/19/12	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				
2650														
2645	2,642.0	3.6											GROUND SURFACE	0.0
2640			7	5	5								ARTIFICIAL FILL Brown sandy SILT with mica	6.2
2635													ARTIFICIAL FILL BOULDERS	10.2
2630											RS-7		CRYSTALLINE ROCK Biotite GNEISS Run 1: 6.5-10.9' (6.5-10.2' = Cored Boulders) Run 2: 10.9-15.9' REC=100% RQD=88% Run 3: 15.9-20.9' REC=100% RQD=80%	
2625											RS-8		WEATHERED ROCK (unrecovered cored gneiss from Run 4)	20.9
2620													CRYSTALLINE ROCK Run 4: 20.9-25.9' REC=70% RQD=56% Run 5: 25.9-30.9' REC=100% RQD=98% Run 6: 30.9-35.9' REC=100% RQD=100%	22.5
2615														
2610														

NCDOT BORE SINGLE B4554\_GEO\_BH\_BRD0145.GPJ NC\_DOT.GDT 8/28/12

WBS 38408.1.1	TIP B-4554	COUNTY JACKSON	GEOLOGIST Lockamy, P. Q.
SITE DESCRIPTION Bridge No. 145 on US 23-74 over SR 1705, Southern Railroad and Scott Creek			GROUND WTR (ft)
BORING NO. B2-A	STATION 27+62	OFFSET 35 ft LT	ALIGNMENT -L-
COLLAR ELEV. 2,645.6 ft	TOTAL DEPTH 35.9 ft	NORTHING 628,403	EASTING 771,488
DRILL RIG/HAMMER EFF./DATE AFO0070 CME-550X 81% 09/03/2009		DRILL METHOD NW Casing W/SPT & Core	HAMMER TYPE Automatic
DRILLER Cheek, D. O.	START DATE 07/19/12	COMP. DATE 07/19/12	SURFACE WATER DEPTH N/A

ELEV (ft)	RUN ELEV (ft)	DEPTH (ft)	RUN (ft)	DRILL RATE (Min/ft)	TOTAL RUN 29.4 ft		SAMP. NO.	STRATA		LOG	DESCRIPTION AND REMARKS	DEPTH (ft)
					REC. (ft) %	RQD (ft) %		REC. (ft) %	RQD (ft) %			
2639.1	2,839.1	6.5	4.4								Begin Coring @ 6.5 ft	
2635	2,634.7	10.9									ARTIFICIAL FILL 6.5-10.2': Cored Boulder Fill (continued)	10.2
2630	2,629.7	15.9	5.0		(5.0) 100%	(4.4) 88%					CRYSTALLINE ROCK 10.2-20.9': Moderately weathered to fresh, moderately hard to very hard, biotite GNEISS with quartz-feldspar seams. Fracture spacing varies from very close to close. Fractures are along foliation from 25 to 50°.	
2625	2,624.7	20.9	5.0		(5.0) 100%	(4.0) 80%	RS-7					
2620	2,619.7	25.9	5.0		(3.5) 70%	(2.8) 56%	RS-8				WEATHERED ROCK No recovery - muddy water return	20.9
2615	2,614.7	30.9	5.0		(5.0) 100%	(4.9) 98%					CRYSTALLINE ROCK Fresh, hard to very hard, biotite GNEISS with quartz-feldspar. Fracture spacing increases from close to wide with increasing depth. Fractures cut across moderate foliation at 25-50°.	22.5
2610	2,609.7	35.9			(5.0) 100%	(5.0) 100%						

NCDOT BORE SINGLE B4554\_GEO\_BH\_BRD0145.GPJ NC\_DOT.GDT 8/28/12

Boring Terminated at Elevation 2,609.7 ft In Crystalline Rock: Biotite GNEISS

Boring Terminated at Elevation 2,609.7 ft In Crystalline Rock: Biotite GNEISS



# NCDOT GEOTECHNICAL ENGINEERING UNIT BORELOG REPORT

SHEET

SHEET  
15 OF 26

WBS 38408.1.1		TIP B-4554		COUNTY JACKSON		GEOLOGIST Lockamy, P. Q.														
SITE DESCRIPTION Bridge No. 145 on US 23-74 over SR 1705, Southern Railroad and Scott Creek							GROUND WTR (ft)													
BORING NO. B2-C		STATION 27+91		OFFSET 5 ft LT		ALIGNMENT -L-														
COLLAR ELEV. 2,641.6 ft		TOTAL DEPTH 26.8 ft		NORTHING 628,421		EASTING 771,526														
DRILL RIG/HAMMER EFF./DATE AFO0070 CME-550X 81% 09/03/2009				DRILL METHOD NW Casing w/ SPT		HAMMER TYPE Automatic														
DRILLER Cheek, D. O.		START DATE 07/24/12		COMP. DATE 07/24/12		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				ELEV. (ft)	DEPTH (ft)					
2645																				
															2,641.6	0.0	GROUND SURFACE			
2640	2,639.8	1.8	0	0	2												ARTIFICIAL FILL Red-brown clayey fine sandy SILT with intermixed gravel			
2635	2,634.8	6.8	1	1	2															
2630	2,629.8	11.8	7	6	5												2,631.0	10.6	SAPROLITE Brown silty SAND with mica	
2625	2,624.8	16.8	7	8	9															
2620	2,619.8	21.8	100/0.3															2,622.0	19.6	WEATHERED ROCK (gneiss)
2615	2,614.8	26.8	60/0.0															2,617.7	23.9	CRYSTALLINE ROCK GNEISS
																		2,614.8	26.8	Boring Terminated with Standard Penetration Test Refusal at Elevation 2,614.8 ft In Crystalline Rock: GNEISS

NCDOT BORE SINGLE B-4554\_GEO\_BH\_BRDGG0145.GPJ NC\_DOT.GDT 8/28/12

WBS 38408.1.1		TIP B-4554		COUNTY JACKSON		GEOLOGIST Mullen, D. M.					
SITE DESCRIPTION Bridge No. 145 on US 23-74 over SR 1705, Southern Railroad and Scott Creek							GROUND WTR (ft)				
BORING NO. B2-B		STATION 28+25		OFFSET 37 ft RT		ALIGNMENT -L-					
COLLAR ELEV. 2,637.4 ft		TOTAL DEPTH 48.5 ft		NORTHING 628,439		EASTING 771,576					
DRILL RIG/HAMMER EFF./DATE AFO0070 CME-550X 81% 09/03/2009			DRILL METHOD NW Casing W/SPT & Core			HAMMER TYPE Automatic					
DRILLER Cheek, D. O.		START DATE 07/23/12		COMP. DATE 07/23/12		SURFACE WATER DEPTH N/A					
ELEV (ft)	DRIVE ELEV (ft)	DEPTH (ft)	BLOW COUNT				SAMP. NO.	LOG	SOIL AND ROCK DESCRIPTION	DEPTH (ft)	
			0.5ft	0.5ft	0.5ft	0					25
2640									2,637.4	GROUND SURFACE	0.0
2635									2,634.4	ARTIFICIAL FILL Sandy SILT	3.0
2630									2,632.0	ARTIFICIAL FILL BOULDER Fill	5.4
2625									2,623.9	ALLUVIAL Silty SAND	13.5
2620									2,617.9	ALLUVIAL SAND, GRAVEL, COBBLES & BOULDERS	19.5
2615							RS-9			CRYSTALLINE ROCK Biotite-quartz-feldspar GNEISS Run 4: 18.5-23.5' SREC=100% SRQD=93% Run 5: 23.5-28.5' REC=84% RQD=55% Run 6: 28.5-33.5' REC=96% RQD=96% Run 7: 33.5-38.5' REC=100% RQD=100% Run 8: 38.5-43.5' REC=100% RQD=100% Run 9: 43.5-48.5' REC=100% RQD=100%	
2610							RS-10				
2605											
2600											
2595											
2590									2,588.9	Boring Terminated at Elevation 2,588.9 ft In Crystalline Rock: Biotite-quartz-feldspar GNEISS	48.5

NCDOT BORE SINGLE B-4554 GEO\_BH\_BRD00145.GPJ NC\_DOT.GDT 8/28/12

WBS 38408.1.1		TIP B-4554		COUNTY JACKSON		GEOLOGIST Mullen, D. M.						
SITE DESCRIPTION Bridge No. 145 on US 23-74 over SR 1705, Southern Railroad and Scott Creek							GROUND WTR (ft)					
BORING NO. B2-B		STATION 28+25		OFFSET 37 ft RT		ALIGNMENT -L-						
COLLAR ELEV. 2,637.4 ft		TOTAL DEPTH 48.5 ft		NORTHING 628,439		EASTING 771,576						
DRILL RIG/HAMMER EFF./DATE AFO0070 CME-550X 81% 09/03/2009			DRILL METHOD NW Casing W/SPT & Core			HAMMER TYPE Automatic						
DRILLER Cheek, D. O.		START DATE 07/23/12		COMP. DATE 07/23/12		SURFACE WATER DEPTH N/A						
ELEV (ft)	RUN ELEV (ft)	DEPTH (ft)	RUN (ft)	DRILL RATE (Min/ft)	TOTAL RUN 44.3 ft		SAMP. NO.	STRATA		LOG	DESCRIPTION AND REMARKS	DEPTH (ft)
					REC. (ft) %	ROD (ft) %		REC. (ft) %	ROD (ft) %			
2633.22	2,633.2	4.2	4.3		(2.2) 50%	N/A					Begin Coring @ 4.2 ft ARTIFICIAL FILL Cored BOULDER Fill (continued)	5.4
2630	2,628.9	8.5	5.0		(0.0) 0%	N/A					ALLUVIAL Cored Unrecovered SAND	
2625	2,623.9	13.5	5.0		(1.9) 37%	N/A					ALLUVIAL Cored SAND, GRAVEL, COBBLES & BOULDERS	13.5
2620	2,618.9	18.5	5.0		(4.6) 91%	(3.9) 77%					CRYSTALLINE ROCK Biotite-quartz-feldspar GNEISS 19.5-23.5': Slightly weathered to fresh, hard to very hard & closely to moderately closely fractured. Joint @ 10° and 50°. SREC=100% SRQD=93% 23.5-28.5': Recovered rock is very slightly weathered to fresh, hard to very hard, with close to moderately close fractures @ 0-20°. Unrecovered severely weathered zone from 26.3-27.1'. 28.5-48.5': Rock is fresh, hard to very hard with fracture spacing close to wide.	19.5
2615	2,613.9	23.5	5.0		(4.2) 84%	(2.8) 55%	RS-9					
2610	2,608.9	28.5	5.0		(4.8) 96%	(4.8) 96%	RS-10					
2605	2,603.9	33.5	5.0		(5.0) 100%	(5.0) 100%						
2600	2,598.9	38.5	5.0		(5.0) 100%	(5.0) 100%						
2595	2,593.9	43.5	5.0		(5.0) 100%	(5.0) 100%						
2590	2,588.9	48.5									Boring Terminated at Elevation 2,588.9 ft In Crystalline Rock: Biotite-quartz-feldspar GNEISS	48.5

NCDOT CORE SINGLE B-4554 GEO\_BH\_BRD00145.GPJ NC\_DOT.GDT 8/28/12



WBS 38408.1.1	TIP B-4554	COUNTY JACKSON	GEOLOGIST Lockamy, P. Q.
SITE DESCRIPTION Bridge No. 145 on US 23-74 over SR 1705, Southern Railroad and Scott Creek			GROUND WTR (ft)
BORING NO. EB2-A	STATION 28+27	OFFSET 36 ft LT	ALIGNMENT -L-
COLLAR ELEV. 2,670.2 ft	TOTAL DEPTH 21.9 ft	NORTHING 628,465	EASTING 771,508
DRILL RIG/HAMMER EFF./DATE AFO0070 CME-550X 81% 09/03/2009		DRILL METHOD NW Casing w/ SPT	HAMMER TYPE Automatic
DRILLER Cheek, D. O.	START DATE 07/20/12	COMP. DATE 07/20/12	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				
2675														
2670													GROUND SURFACE	0.0
													ROADWAY EMBANKMENT	
													AGGREGATE BASE COURSE	2.0
2665	2,665.4	4.8	1	1	1								ROADWAY EMBANKMENT	
													Brown fine sandy SILT	
2660	2,660.4	9.8	1	1	1									
2655	2,655.4	14.8	1	1	1									
													ROADWAY EMBANKMENT	14.8
													Red-brown fine sandy SILT with Gravel	17.2
													SAPROLITE	
													Silty SAND with hard ledges	19.8
2650	2,650.4	19.8	36	64/0.2									WEATHERED ROCK (gneiss)	21.8
	2,648.4	21.8											CRYSTALLINE ROCK GNEISS	21.9
			60/0.1											

Boring Terminated with Standard Penetration Test Refusal at Elevation 2,648.3 ft In Crystalline Rock: GNEISS

NCDOT BORE SINGLE B4554\_GEO\_BH\_BRD0145.GPJ NC\_DOT\_GDT 8/28/12

WBS 38408.1.1	TIP B-4554	COUNTY JACKSON	GEOLOGIST Lockamy, P. Q.
SITE DESCRIPTION Bridge No. 145 on US 23-74 over SR 1705, Southern Railroad and Scott Creek			GROUND WTR (ft)
BORING NO. EB2-C	STATION 28+69	OFFSET 6 ft RT	ALIGNMENT -L-
COLLAR ELEV. 2,668.9 ft	TOTAL DEPTH 25.9 ft	NORTHING 628,490	EASTING 771,561
DRILL RIG/HAMMER EFF./DATE AFO0070 CME-550X 81% 09/03/2009		DRILL METHOD NW Casing w/ SPT	HAMMER TYPE Automatic
DRILLER Cheek, D. O.	START DATE 07/30/12	COMP. DATE 07/30/12	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				
2670														
													GROUND SURFACE	0.0
													ROADWAY EMBANKMENT	
													AGGREGATE BASE COARSE	3.0
2665	2,664.0	4.9	15	15	15								ROADWAY EMBANKMENT	
													Brown silty SAND with rock fragments	
2660	2,659.0	9.9	9	9	9									
2655	2,654.0	14.9	10	10	10									
2650	2,649.0	19.9	7	5	3								SAPROLITE	19.0
													Silty SAND	
2645	2,644.0	24.9	100/0.4										WEATHERED ROCK (gneiss)	23.5
	2,643.0	25.9	60/0.0										CRYSTALLINE ROCK GNEISS	25.9

Boring Terminated with Standard Penetration Test Refusal at Elevation 2,643.0 ft On Crystalline Rock: GNEISS

NCDOT BORE SINGLE B4554\_GEO\_BH\_BRD0145.GPJ NC\_DOT\_GDT 10/4/12



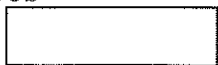
**NCDOT GEOTECHNICAL ENGINEERING UNIT**  
**BORELOG REPORT**

WBS 38408.1.1		TIP B-4554		COUNTY JACKSON		GEOLOGIST Lockamy, P. Q.									
SITE DESCRIPTION Bridge No. 145 on US 23-74 over SR 1705, Southern Railroad and Scott Creek							GROUND WTR (ft)								
BORING NO. EB2-B		STATION 29+27		OFFSET 51 ft RT		ALIGNMENT -L-	0 HR. N/A								
COLLAR ELEV. 2,665.4 ft		TOTAL DEPTH 42.9 ft		NORTHING 628,530		EASTING 771,622	24 HR. Dry								
DRILL RIG/HAMMER EFF./DATE AFO0070 CME-550X 81% 09/03/2009				DRILL METHOD H.S. Augers		HAMMER TYPE Automatic									
DRILLER Cheek, D. O.		START DATE 02/09/09		COMP. DATE 02/09/09		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					
2670															
2665														2,665.4	0.0
			GROUND SURFACE												
			ROADWAY EMBANKMENT												
			Red-brown-gray mixed silty SAND & GRAVEL												
2660	2,662.2	3.2	1	0	1										
2655	2,657.2	8.2	4	6	23										
2650	2,652.2	13.2	2	2	3										
2645	2,647.2	18.2	1	2	2										
2640	2,642.2	23.2	1	2	5										
2635	2,637.2	28.2	8	4	5										
2630	2,632.2	33.2	100/0.2											2,632.4	33.0
			ROADWAY EMBANKMENT												
			COBBLES & BOULDERS												
			ALLUVIAL												
			Sandy silty CLAY												
2625	2,627.2	38.2	2	3	5										
	2,622.5	42.9	60/0.0											2,622.9	42.5
														2,622.5	42.9
			CRYSTALLINE ROCK												
			GNEISS												
			Boring Terminated with Standard Penetration Test Refusal at Elevation 2,622.5 ft In Crystalline Rock: GNEISS												

NCDOT BORE SINGLE B4554 GEO BH BR0G0145.GPJ NC DOT.GDT 8/28/12

38408.1.1 (B-4554)  
JACKSON COUNTY  
BRIDGE # 145 ON US 23-74 OVER SR 1705, SOUTHERN RR & SCOTT CREEK

CORE PHOTOS



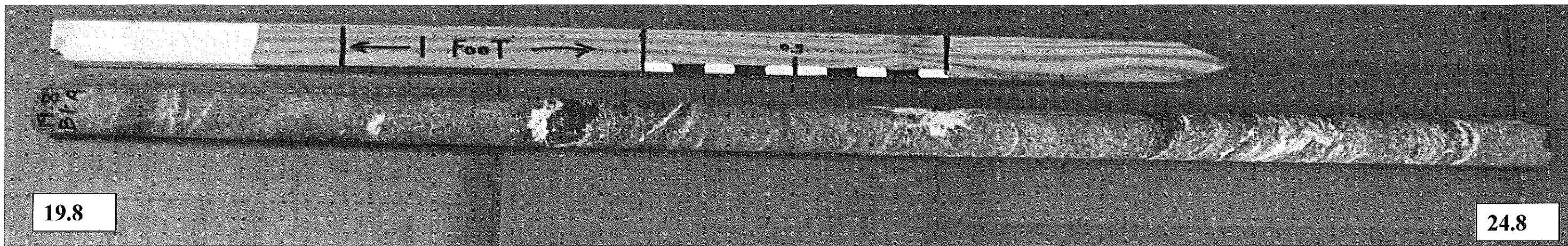
B1-A



38408.1.1 (B-4554)  
JACKSON COUNTY  
BRIDGE # 145 ON US 23-74 OVER SR 1705, SOUTHERN RR & SCOTT CREEK

CORE PHOTOS

B1-A



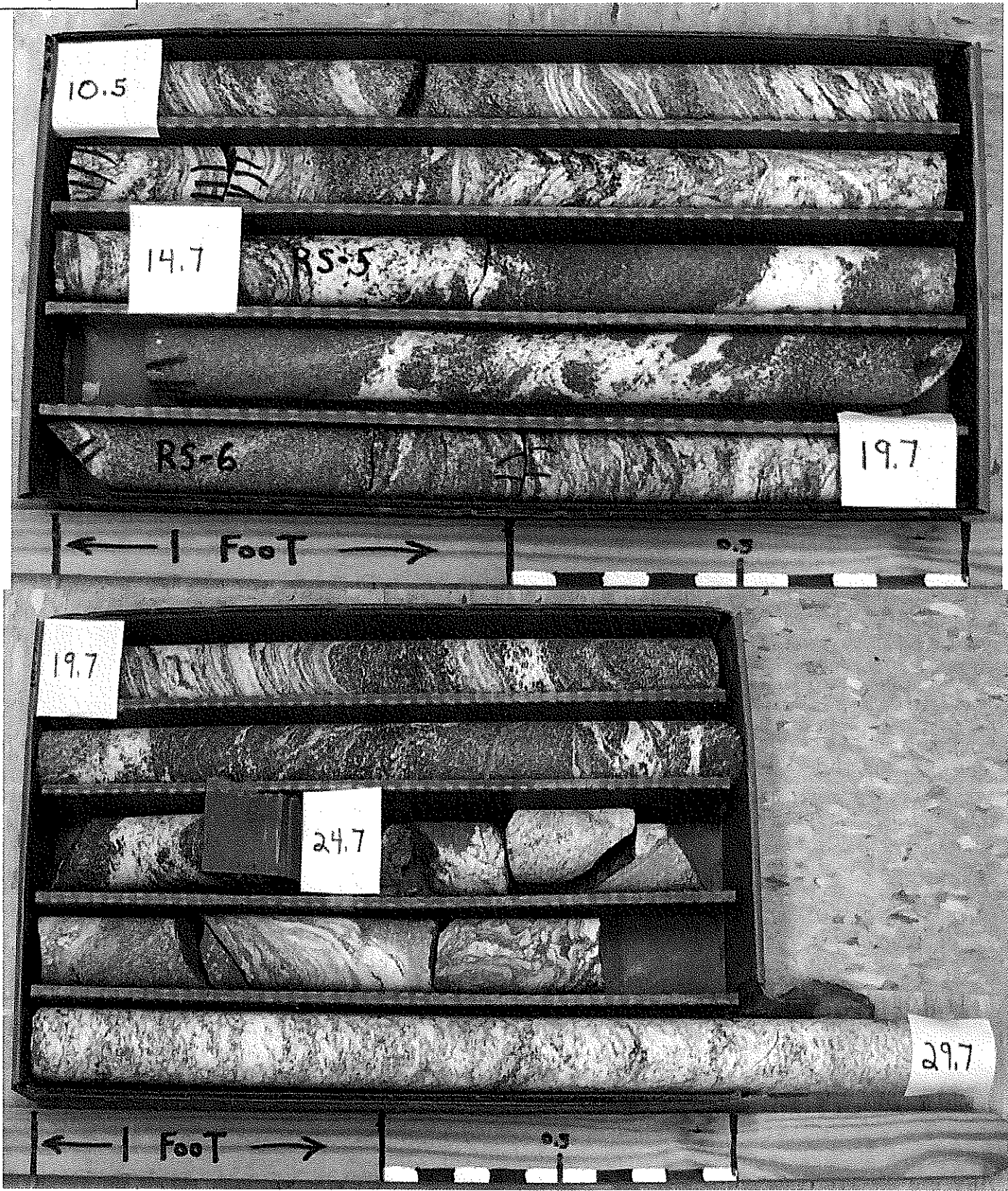
19.8

24.8

38408.1.1 (B-4554)  
JACKSON COUNTY  
BRIDGE # 145 ON US 23-74 OVER SR 1705, SOUTHERN RR & SCOTT CREEK

B1-C

CORE PHOTOS

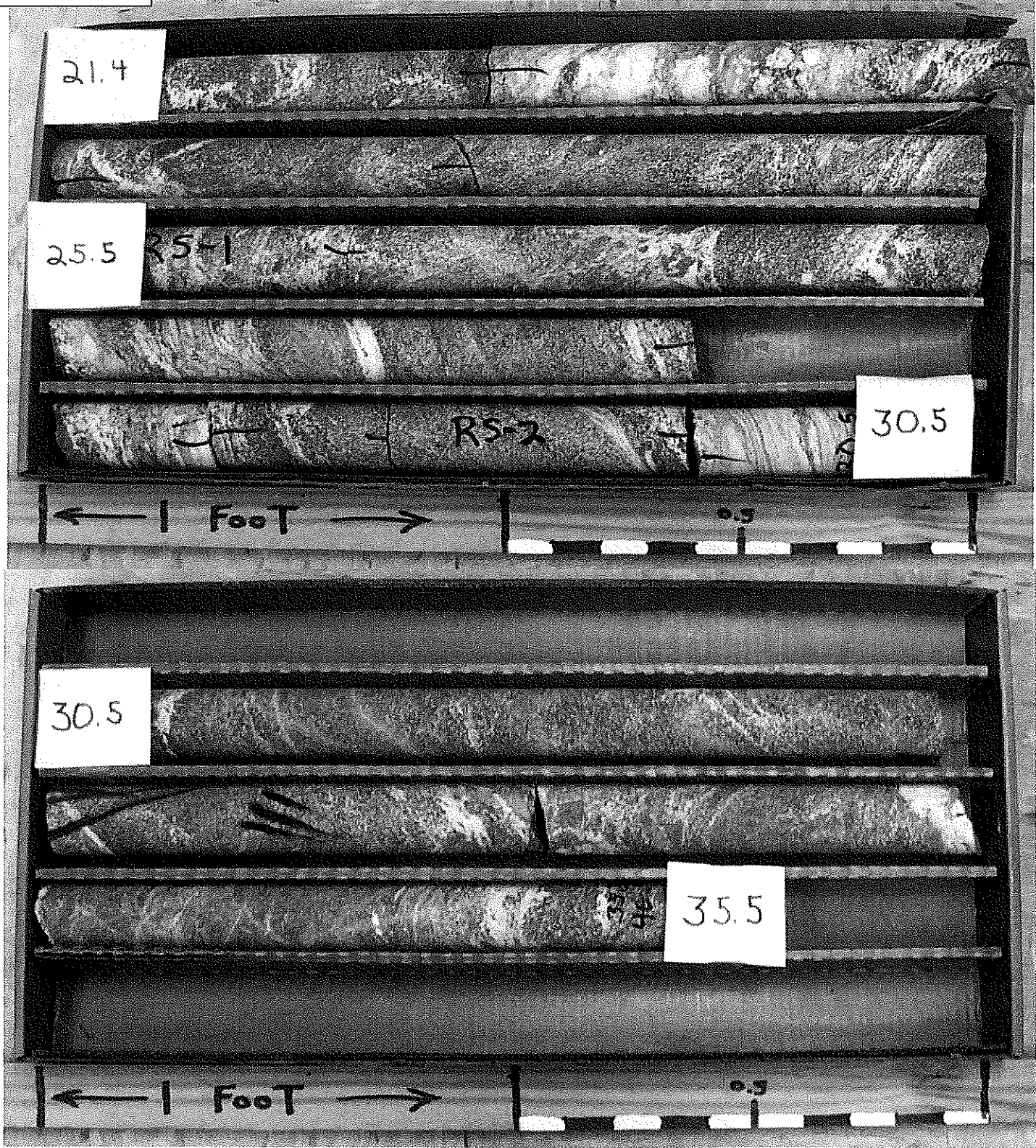


38408.1.1 (B-4554)  
JACKSON COUNTY  
BRIDGE # 145 ON US 23-74 OVER SR 1705, SOUTHERN RR & SCOTT CREEK

CORE PHOTOS



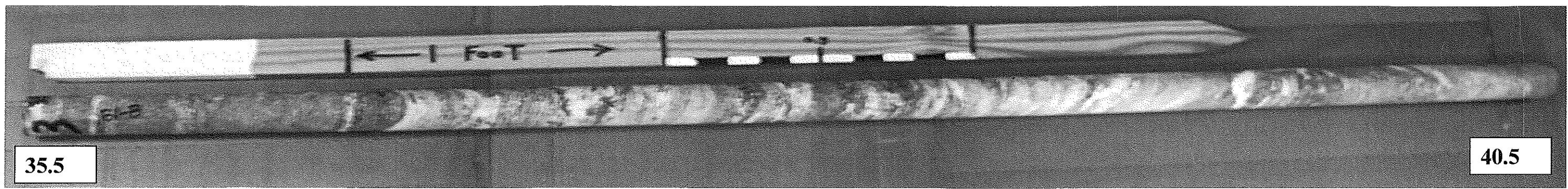
B1-B



38408.1.1 (B-4554)  
JACKSON COUNTY  
BRIDGE # 145 ON US 25-74 OVER SR1705, SOUTHERN RR & SCOTT CREEK

CORE PHOTOS

B1-B

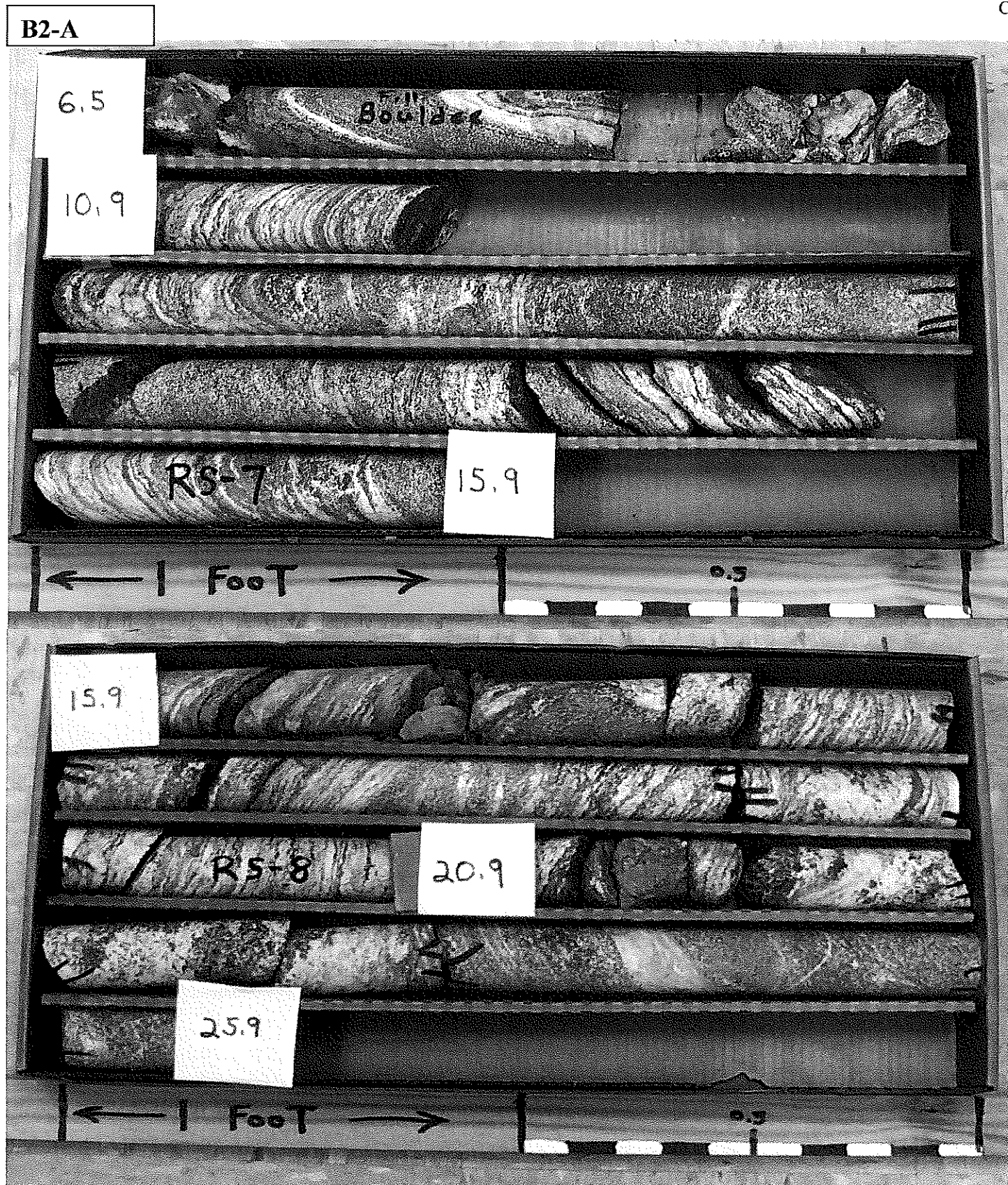


35.5

40.5

38408.1.1 (B-4554)  
JACKSON COUNTY  
BRIDGE # 145 ON US 23-74 OVER SR 1705, SOUTHERN RR & SCOTT CREEK

CORE PHOTOS

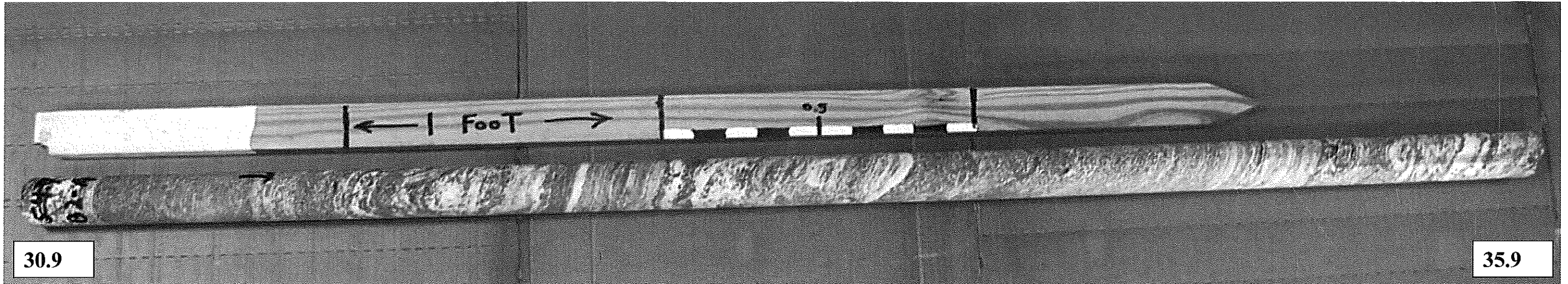




38408.1.1 (B-4554)  
JACKSON COUNTY  
BRIDGE # 145 ON US 23-74 OVER SR 1705, SOUTHERN RR & SCOTT CREEK

CORE PHOTOS

B2-A



30.9

35.9

38408.1.1 (B-4554)  
JACKSON COUNTY  
BRIDGE # 145 ON US 23-74 OVER SR 1705, SOUTHERN RR & SCOTT CREEK

CORE PHOTOS

B2-B



B2-B

