

**PROP. RETAINING WALL #29A**  
**W/9' WW WILDLIFE FENCE**  
**BEGIN -L- STA. 396+75±**  
**END -L- STA. 398+75±**

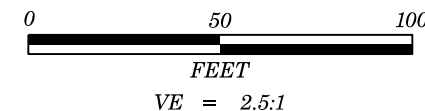


**NOTE:**  
**SOIL, WEATHERED ROCK, AND CRYSTALLINE ROCK LINES**  
**ARE BASED ON AN INTERPRETATION OF BORE HOLE**  
**AND SEISMIC REFRACTION DATA AND SHALL BE**  
**CONSIDERED AS APPROXIMATE.**

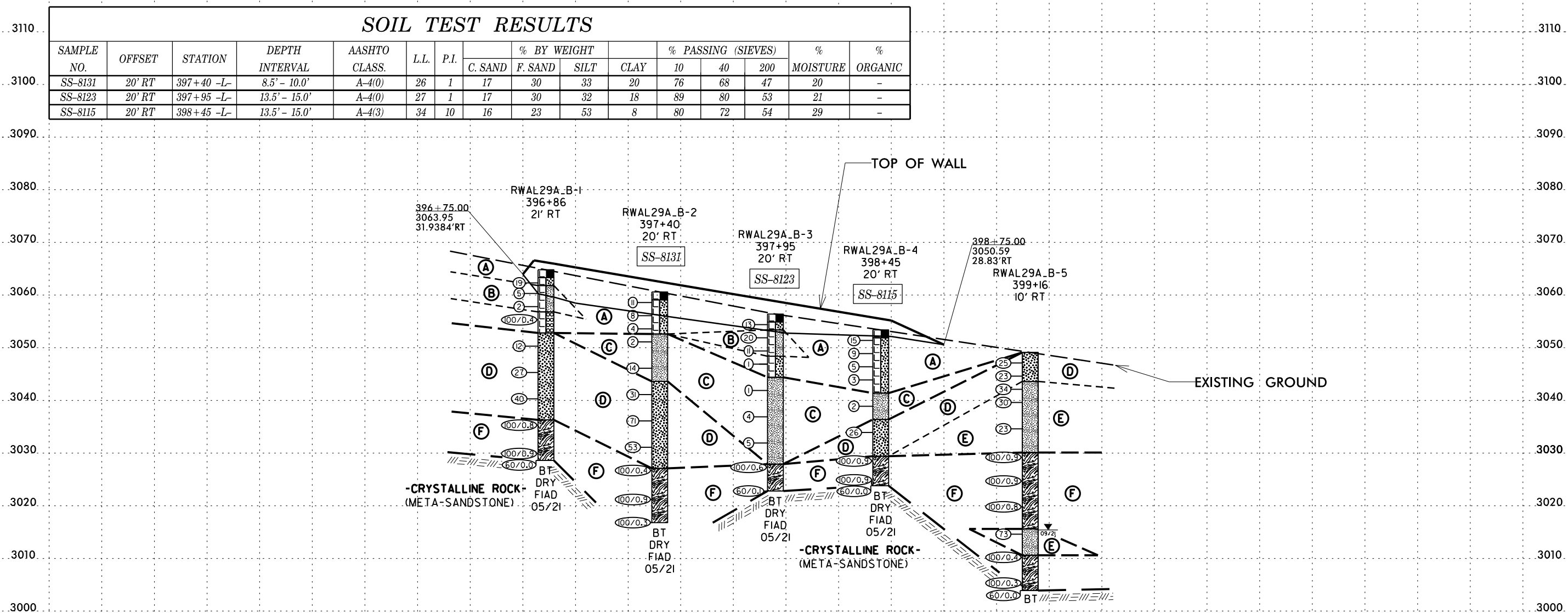
Prepared in the Office of:



CAROLINAS  
 GEOTECHNICAL  
 GROUP



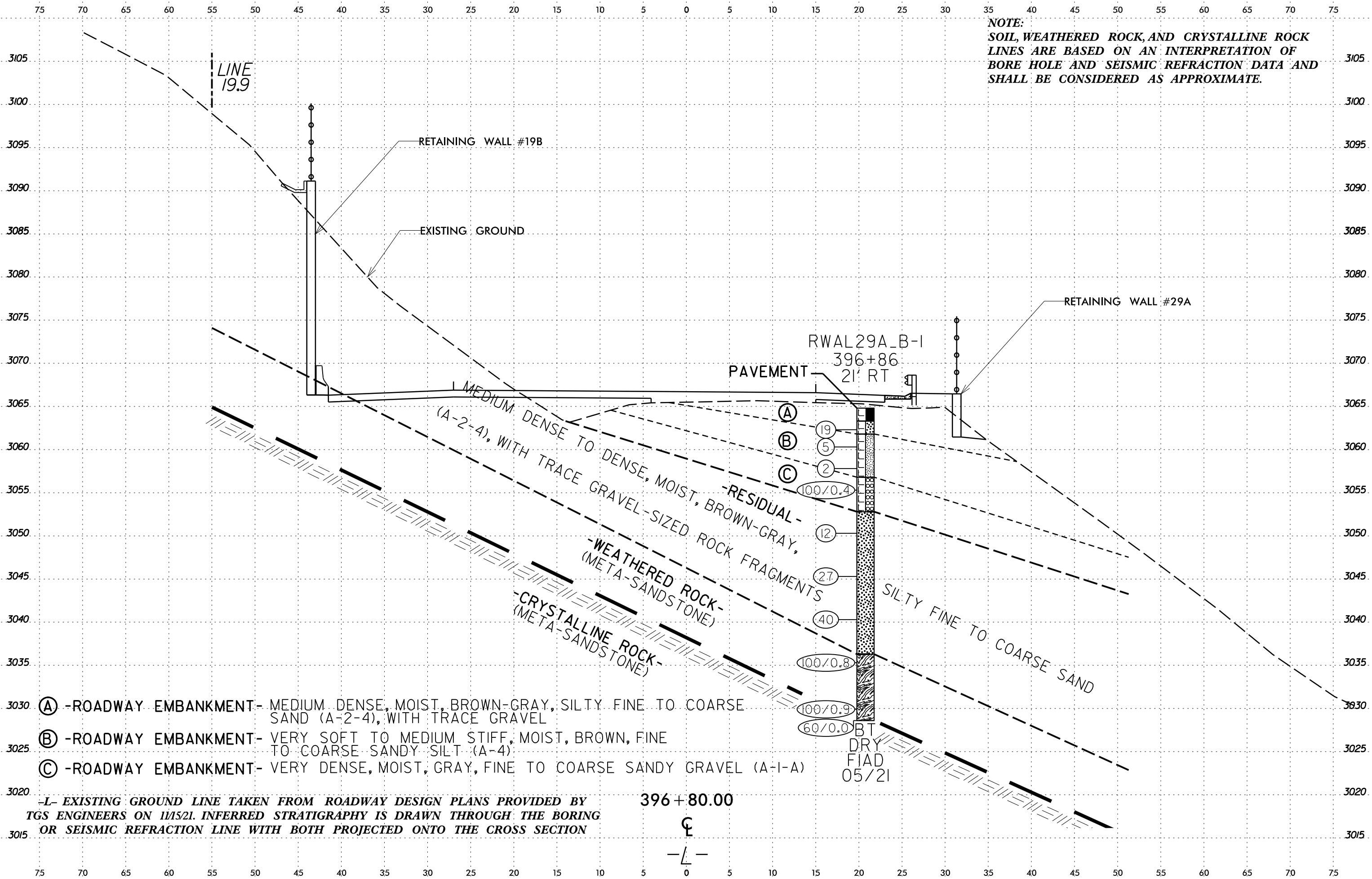
PROJECT REFERENCE NO.	SHEET NO.
A-0009CB	4
RETAINING WALL #29A PROFILE BORINGS PROJECTED ALONG WALL ENVELOPE	



- (A) -ROADWAY EMBANKMENT- VERY LOOSE TO VERY DENSE, MOIST, BROWN-GRAY, SILTY, FINE TO COARSE SANDY GRAVEL (A-1-A) AND SILTY FINE TO COARSE SAND (A-2-4), WITH TRACE GRAVEL
- (B) -ROADWAY EMBANKMENT- VERY SOFT TO VERY STIFF, MOIST, BROWN, FINE TO COARSE SANDY SILT (A-4), WITH TRACE GRAVEL
- (C) -COLLUVIAL- VERY SOFT TO STIFF, MOIST, BROWN-ORANGE, FINE TO COARSE SANDY SILT (A-4), WITH TRACE GRAVEL
- (D) -RESIDUAL- MEDIUM DENSE TO VERY DENSE, DRY TO MOIST, BROWN-GRAY-ORANGE-TAN, SILTY FINE TO COARSE SAND (A-2-4), WITH TRACE GRAVEL-SIZED ROCK FRAGMENTS
- (E) -RESIDUAL- VERY STIFF TO HARD, MOIST, TAN, FINE TO COARSE SANDY SILT (A-4), WITH TRACE MANGANESE OXIDE AND GRAVEL-SIZED ROCK FRAGMENTS
- (F) -WEATHERED ROCK- (META-SANDSTONE)

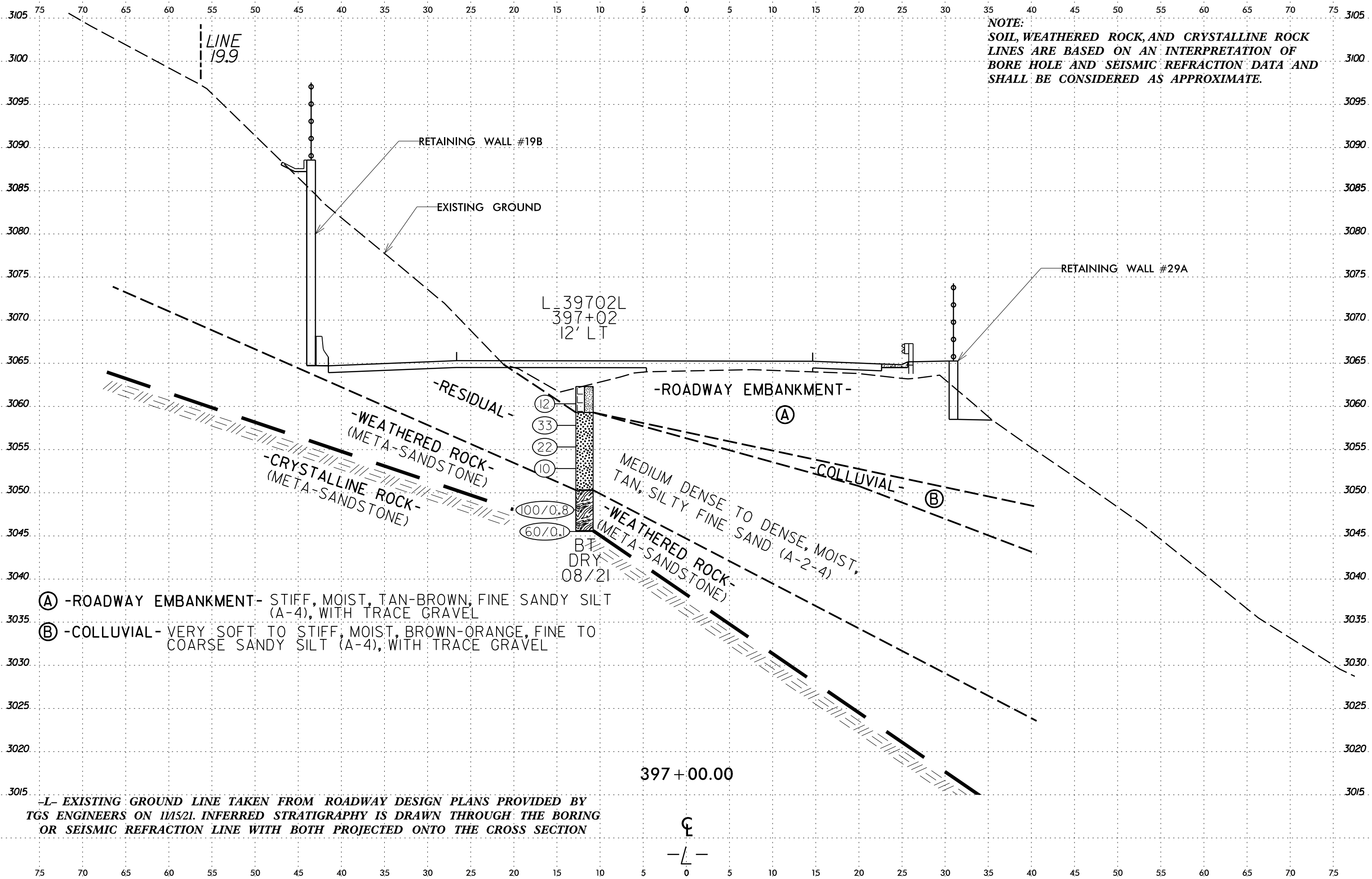
**WALL ENVELOPE TAKEN FROM ROADWAY DESIGN PLANS PROVIDED BY TGS ENGINEERS  
 ON 11/5/21. INFERRED STRATIGRAPHY IS DRAWN THROUGH THE BORING WITH BOTH  
 PROJECTED ONTO THE PROFILE.**

19-MAY-2022 17:45  
 C:\Users\jbriver\OneDrive - Carolines Geotechnical Group, PLLC\Projects\0068 - A-0009CB - Future US 74\_TGS\A-0009CB\CADD\_GEOTECH\Site&Sub\A-0009CB.GEO\_RWAL29A.XSL.dgn  
 \$\$\$SUBSERIALNAME\$\$\$



- (A)** -ROADWAY EMBANKMENT- MEDIUM DENSE, MOIST, BROWN-GRAY, SILTY FINE TO COARSE SAND (A-2-4), WITH TRACE GRAVEL
- (B)** -ROADWAY EMBANKMENT- VERY SOFT TO MEDIUM STIFF, MOIST, BROWN, FINE TO COARSE SANDY SILT (A-4)
- (C)** -ROADWAY EMBANKMENT- VERY DENSE, MOIST, GRAY, FINE TO COARSE SANDY GRAVEL (A-1-A)
- L-** EXISTING GROUND LINE TAKEN FROM ROADWAY DESIGN PLANS PROVIDED BY TGS ENGINEERS ON 11/15/21. INFERRED STRATIGRAPHY IS DRAWN THROUGH THE BORING OR SEISMIC REFRACTION LINE WITH BOTH PROJECTED ONTO THE CROSS SECTION

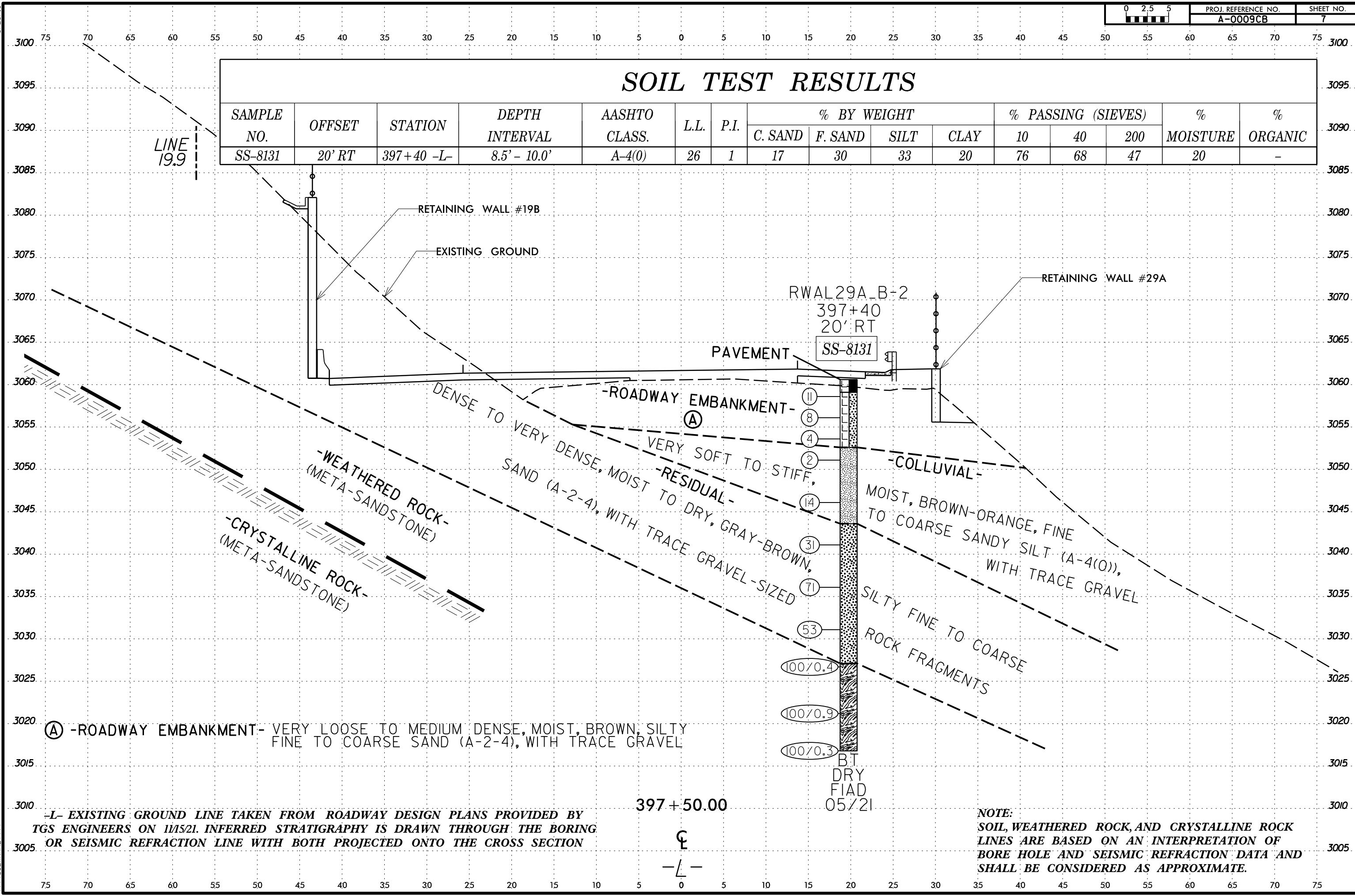
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\$\$\$\$\$SERIAL\$\$\$\$\$



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# SOIL TEST RESULTS

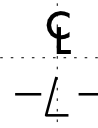
SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT				% PASSING (SIEVES)			% MOISTURE	% ORGANIC
							C. SAND	F. SAND	SILT	CLAY	10	40	200		
SS-8131	20' RT	397+40 -L-	8.5' - 10.0'	A-4(0)	26	1	17	30	33	20	76	68	47	20	-



(A) -ROADWAY EMBANKMENT- VERY LOOSE TO MEDIUM DENSE, MOIST, BROWN, SILTY FINE TO COARSE SAND (A-2-4), WITH TRACE GRAVEL

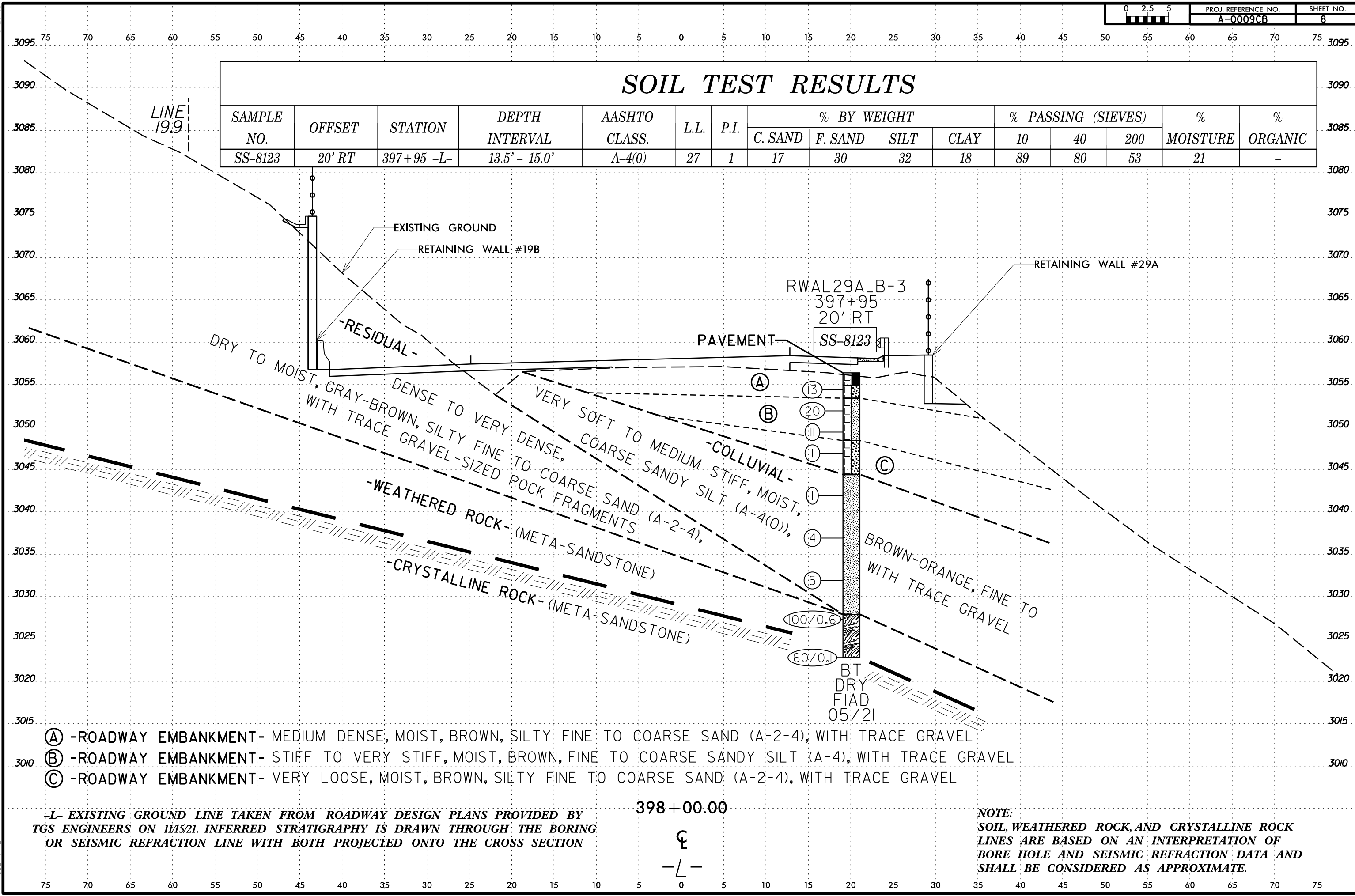
-L- EXISTING GROUND LINE TAKEN FROM ROADWAY DESIGN PLANS PROVIDED BY TGS ENGINEERS ON 11/5/21. INFERRED STRATIGRAPHY IS DRAWN THROUGH THE BORING OR SEISMIC REFRACTION LINE WITH BOTH PROJECTED ONTO THE CROSS SECTION

**NOTE:**  
 SOIL, WEATHERED ROCK, AND CRYSTALLINE ROCK LINES ARE BASED ON AN INTERPRETATION OF BORE HOLE AND SEISMIC REFRACTION DATA AND SHALL BE CONSIDERED AS APPROXIMATE.



# SOIL TEST RESULTS

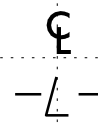
SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT				% PASSING (SIEVES)			% MOISTURE	% ORGANIC
							C. SAND	F. SAND	SILT	CLAY	10	40	200		
SS-8123	20' RT	397+95 -L-	13.5' - 15.0'	A-4(0)	27	1	17	30	32	18	89	80	53	21	-



- (A) -ROADWAY EMBANKMENT- MEDIUM DENSE, MOIST, BROWN, SILTY FINE TO COARSE SAND (A-2-4), WITH TRACE GRAVEL
- (B) -ROADWAY EMBANKMENT- STIFF TO VERY STIFF, MOIST, BROWN, FINE TO COARSE SANDY SILT (A-4), WITH TRACE GRAVEL
- (C) -ROADWAY EMBANKMENT- VERY LOOSE, MOIST, BROWN, SILTY FINE TO COARSE SAND (A-2-4), WITH TRACE GRAVEL

-L- EXISTING GROUND LINE TAKEN FROM ROADWAY DESIGN PLANS PROVIDED BY TGS ENGINEERS ON 11/15/21. INFERRED STRATIGRAPHY IS DRAWN THROUGH THE BORING OR SEISMIC REFRACTION LINE WITH BOTH PROJECTED ONTO THE CROSS SECTION

398 + 00.00



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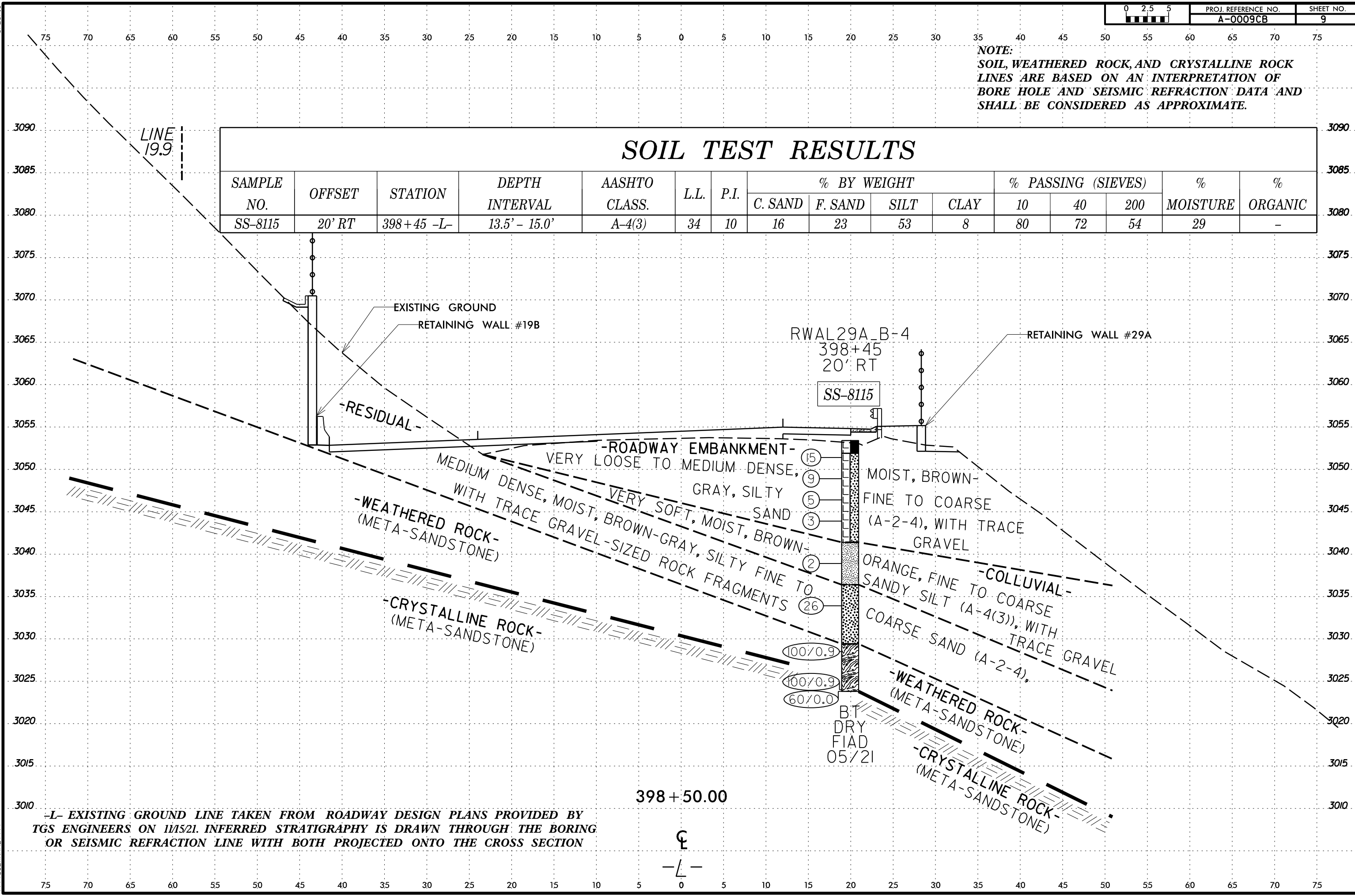
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 \$\$\$SUBSERIAL\$\$\$



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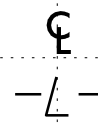
# SOIL TEST RESULTS

SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT				% PASSING (SIEVES)			% MOISTURE	% ORGANIC
							C. SAND	F. SAND	SILT	CLAY	10	40	200		
SS-8115	20' RT	398+45 -L-	13.5' - 15.0'	A-4(3)	34	10	16	23	53	8	80	72	54	29	-



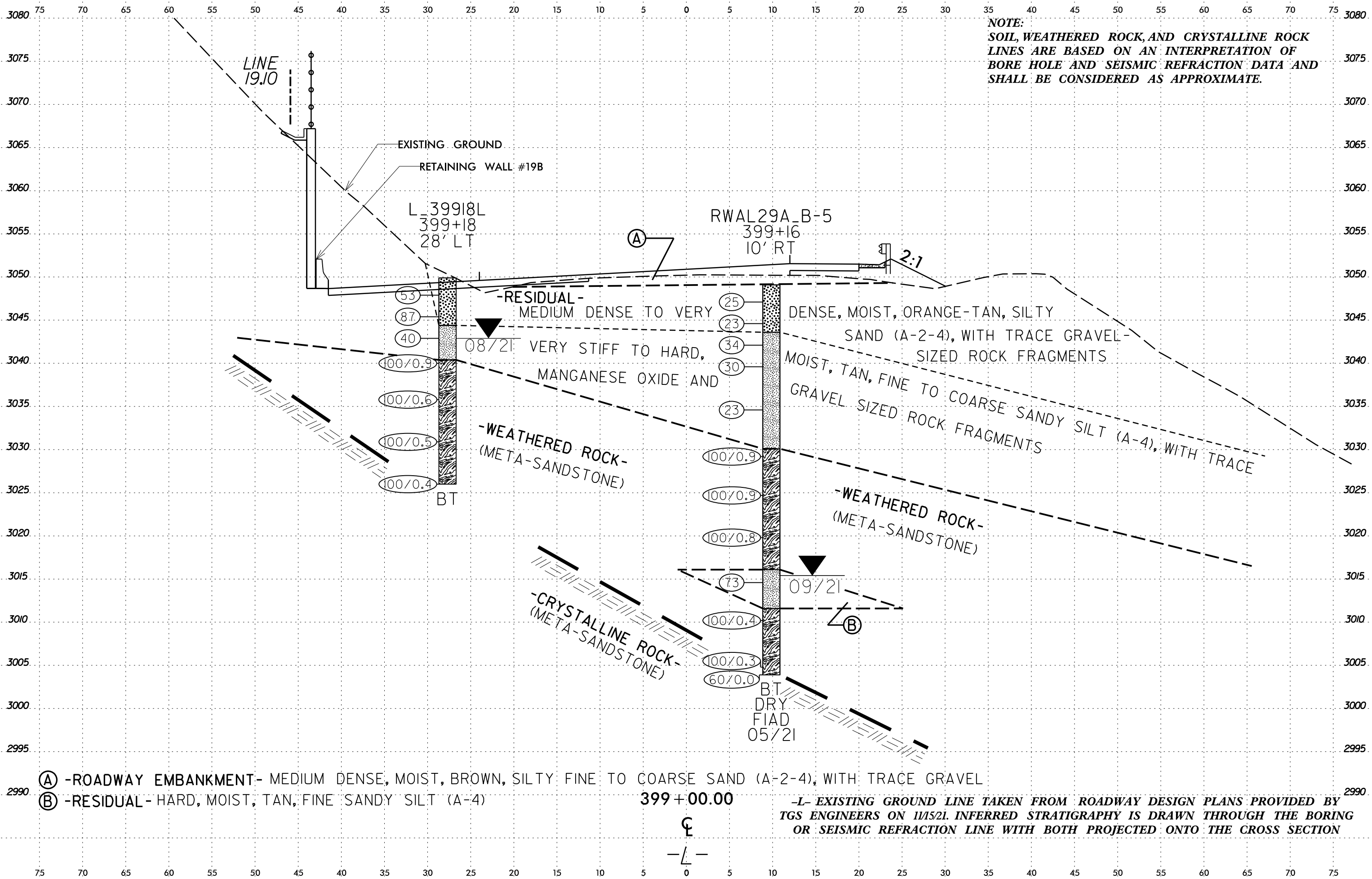
-L- EXISTING GROUND LINE TAKEN FROM ROADWAY DESIGN PLANS PROVIDED BY TGS ENGINEERS ON 11/5/21. INFERRED STRATIGRAPHY IS DRAWN THROUGH THE BORING OR SEISMIC REFRACTION LINE WITH BOTH PROJECTED ONTO THE CROSS SECTION

398 + 50.00



6/23/16  
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 \$\$\$USERNAME\$\$\$



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- (A) -ROADWAY EMBANKMENT- MEDIUM DENSE, MOIST, BROWN, SILTY FINE TO COARSE SAND (A-2-4), WITH TRACE GRAVEL
- (B) -RESIDUAL- HARD, MOIST, TAN, FINE SANDY SILT (A-4)

-L- EXISTING GROUND LINE TAKEN FROM ROADWAY DESIGN PLANS PROVIDED BY  
 TGS ENGINEERS ON 11/15/21. INFERRED STRATIGRAPHY IS DRAWN THROUGH THE BORING  
 OR SEISMIC REFRACTION LINE WITH BOTH PROJECTED ONTO THE CROSS SECTION

399 + 00.00

CL



# GEOTECHNICAL BORING REPORT

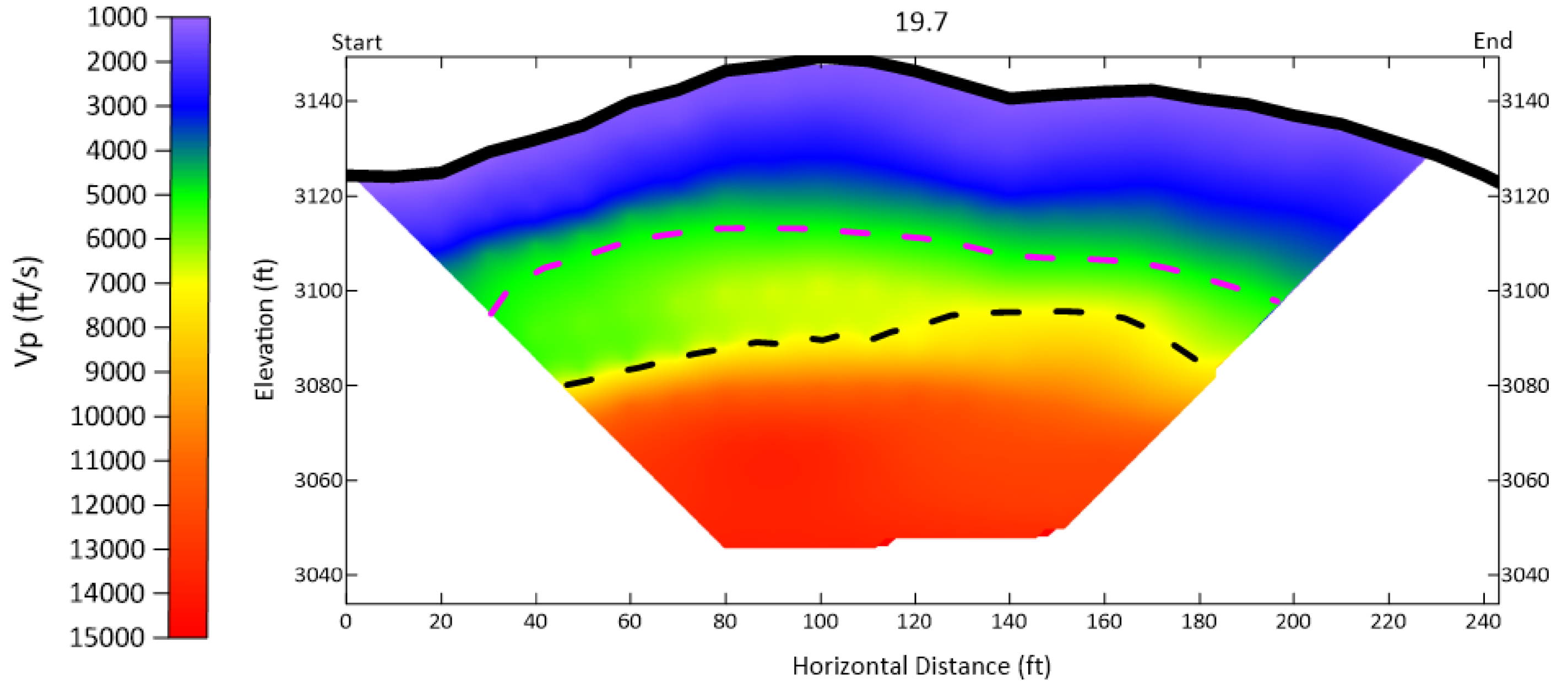
## BORE LOG

WBS 32572.1.FS10		TIP A-0009CB		COUNTY GRAHAM		GEOLOGIST S. Braun										
SITE DESCRIPTION Upgrade NC 143 from SR 1223 (Beech Creek Road) to 0.5 Miles North of Appalachian Trail							GROUND WTR (ft)									
BORING NO. RWAL29_B-2		STATION 395+00		OFFSET 28 ft RT		ALIGNMENT L										
COLLAR ELEV. 3,077.4 ft		TOTAL DEPTH 29.2 ft		NORTHING 619,615		EASTING 594,443										
DRILL RIG/HAMMER EFF./DATE CG20446 Diedrich D50 83%/06/16/2020				DRILL METHOD H.S. Augers		HAMMER TYPE Automatic										
DRILLER J. Estep		START DATE 05/06/21		COMP. DATE 05/06/21		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						
3080																
	3,076.4	1.0	9	8	9										3,077.4	0.0
3075	3,073.9	3.5	10	8	8											
	3,071.4	6.0	9	6	7											
3070	3,068.9	8.5	5	7	5											
	3,063.9	13.5	7	3	4											
3065	3,058.9	18.5	9	5	5											
3060	3,053.9	23.5	1	2	1											
3055	3,049.4	28.0														
3050	3,048.2	29.2	100/0.3													
			60/0.0													

WBS 32572.1.FS10		TIP A-0009CB		COUNTY GRAHAM		GEOLOGIST C. Piercy										
SITE DESCRIPTION Upgrade NC 143 from SR 1223 (Beech Creek Road) to 0.5 Miles North of Appalachian Trail							GROUND WTR (ft)									
BORING NO. RWAL29_B-3		STATION 395+80		OFFSET 28 ft RT		ALIGNMENT L										
COLLAR ELEV. 3,072.1 ft		TOTAL DEPTH 23.0 ft		NORTHING 619,669		EASTING 594,501										
DRILL RIG/HAMMER EFF./DATE BRE9533 OME-550X 78%/03/12/2021				DRILL METHOD H.S. Augers		HAMMER TYPE Automatic										
DRILLER J. Phillips		START DATE 05/06/21		COMP. DATE 05/06/21		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						
3075																
	3,071.1	1.0	6	5	5										3,072.1	0.0
3070	3,068.6	3.5	5	12	11										3,071.3	0.8
	3,066.1	6.0	71	29/0.3												
3065	3,063.6	8.5	4	3	4											
	3,058.6	13.5	9	30	11											
3060	3,053.6	18.5	8	6	4											
3055	3,049.1	23.0														
3050			60/0.0													

NCDOT BORE DOUBLE A-0009CB\_GEO\_RDY\_GTM.GPJ NC\_DOT.GDT 5/17/22

## GEOPHYSICAL TEST RESULTS – SEISMIC REFRACTION LINE 19.7

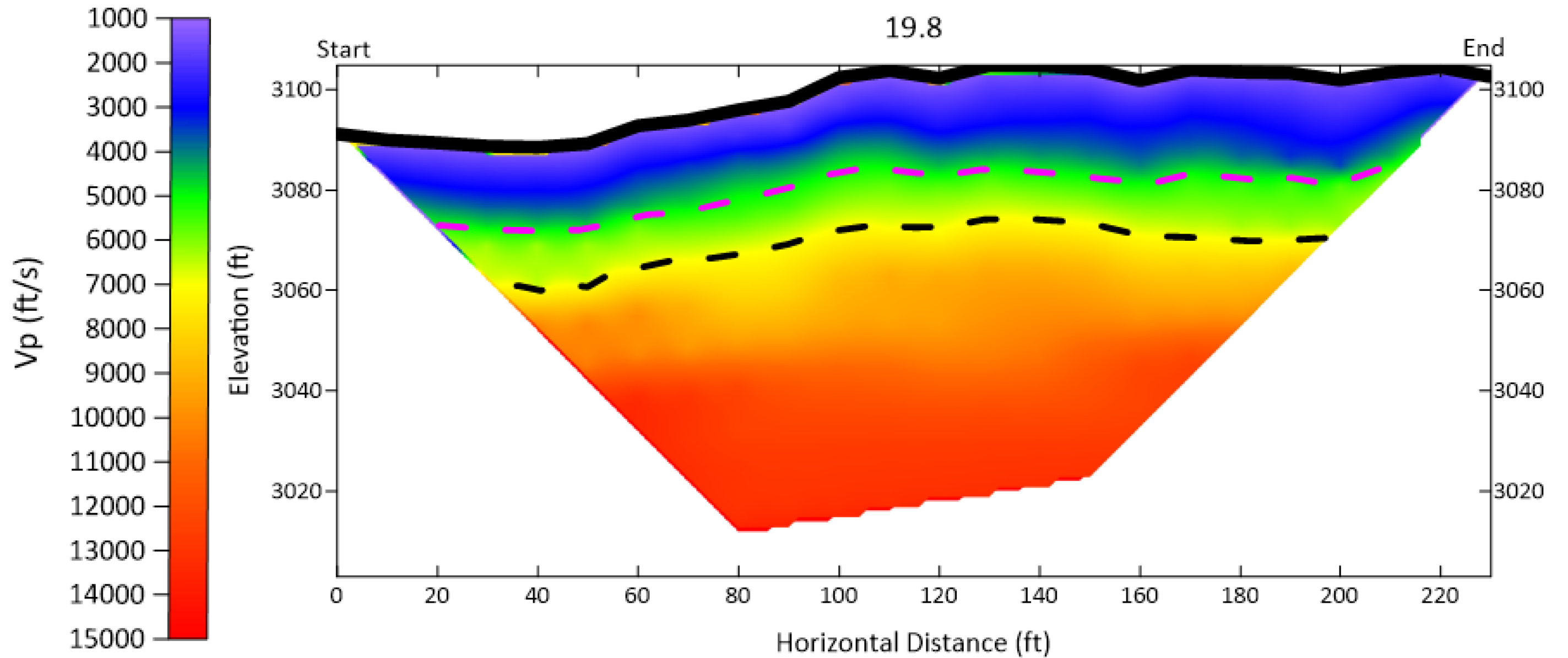


GEOPHYSICAL TESTING PERFORMED BY GEL SOLUTIONS. REFERENCE "SEISMIC REFRACTION SURVEY FOR EVALUATION OF ROCK" DATED 10/1/2021

CG2 ESTIMATED WAVE SPEED FOR WEATHERED ROCK: 4,500 FT/SEC

CG2 ESTIMATED WAVE SPEED FOR CRYSTALLINE ROCK: 7,500 FT/SEC

## GEOPHYSICAL TEST RESULTS – SEISMIC REFRACTION LINE 19.8



GEOPHYSICAL TESTING PERFORMED BY GEL SOLUTIONS. REFERENCE "SEISMIC REFRACTION SURVEY FOR EVALUATION OF ROCK" DATED 10/01/2021

CG2 ESTIMATED WAVE SPEED FOR WEATHERED ROCK: 4,500 FT/SEC

CG2 ESTIMATED WAVE SPEED FOR CRYSTALLINE ROCK: 7,500 FT/SEC