

REFERENCE: R-2561CA

PROJECT: 34466

CONTENTS

<u>SHEET NO.</u>	<u>DESCRIPTION</u>
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STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
GEOTECHNICAL ENGINEERING UNIT

STRUCTURE
SUBSURFACE INVESTIGATION

COUNTY COLUMBUS
 PROJECT DESCRIPTION NEW INTERCHANGE AT THE
INTERSECTION OF NC 87 AND NC 11
 SITE DESCRIPTION BRIDGE NO. 374 ON NC 11 (-Y-)
OVER WEYMAN CREEK

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	R-2561CA	1	6

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 T07-6850. 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

S. PAPKE
MID-ATLANTIC DRILLING

INVESTIGATED BY S. PAPKE
 DRAWN BY C. DRISCOLL
 CHECKED BY T. WELLS
 SUBMITTED BY KLEINFELDER, INC.
 DATE AUGUST 2020

Prepared in the Office of:



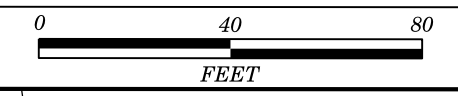
Thomas R. Wells 8/18/20
 SIGNATURE DATE

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

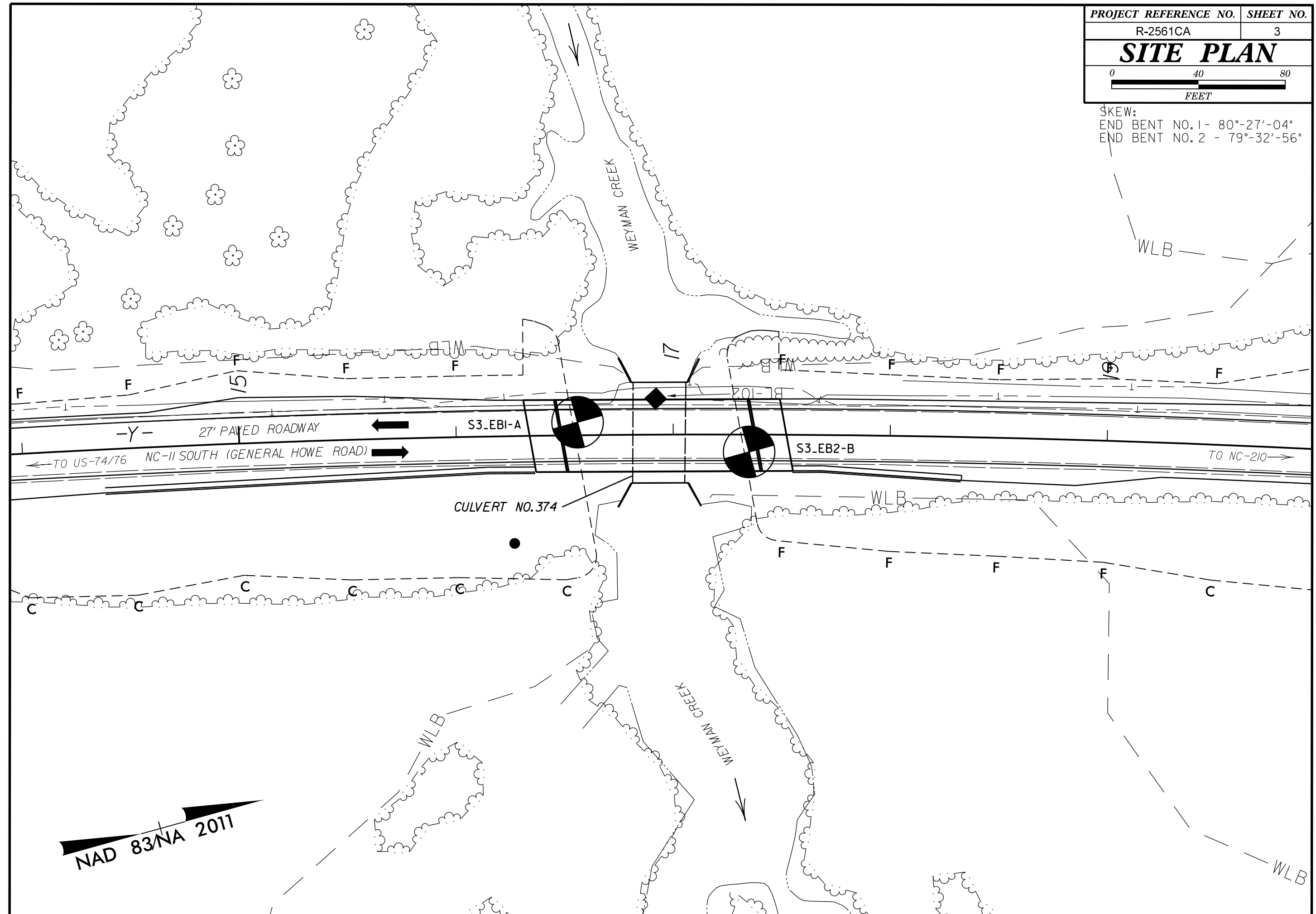
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
GEOTECHNICAL ENGINEERING UNIT
SUBSURFACE INVESTIGATION
SOIL AND ROCK LEGEND, TERMS, SYMBOLS, AND ABBREVIATIONS

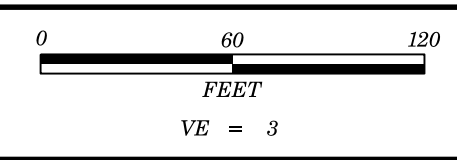
Table with 4 main columns: SOIL DESCRIPTION, GRADATION, ROCK DESCRIPTION, and TERMS AND DEFINITIONS. It contains detailed technical specifications, legends, and definitions for geotechnical engineering.

SITE PLAN

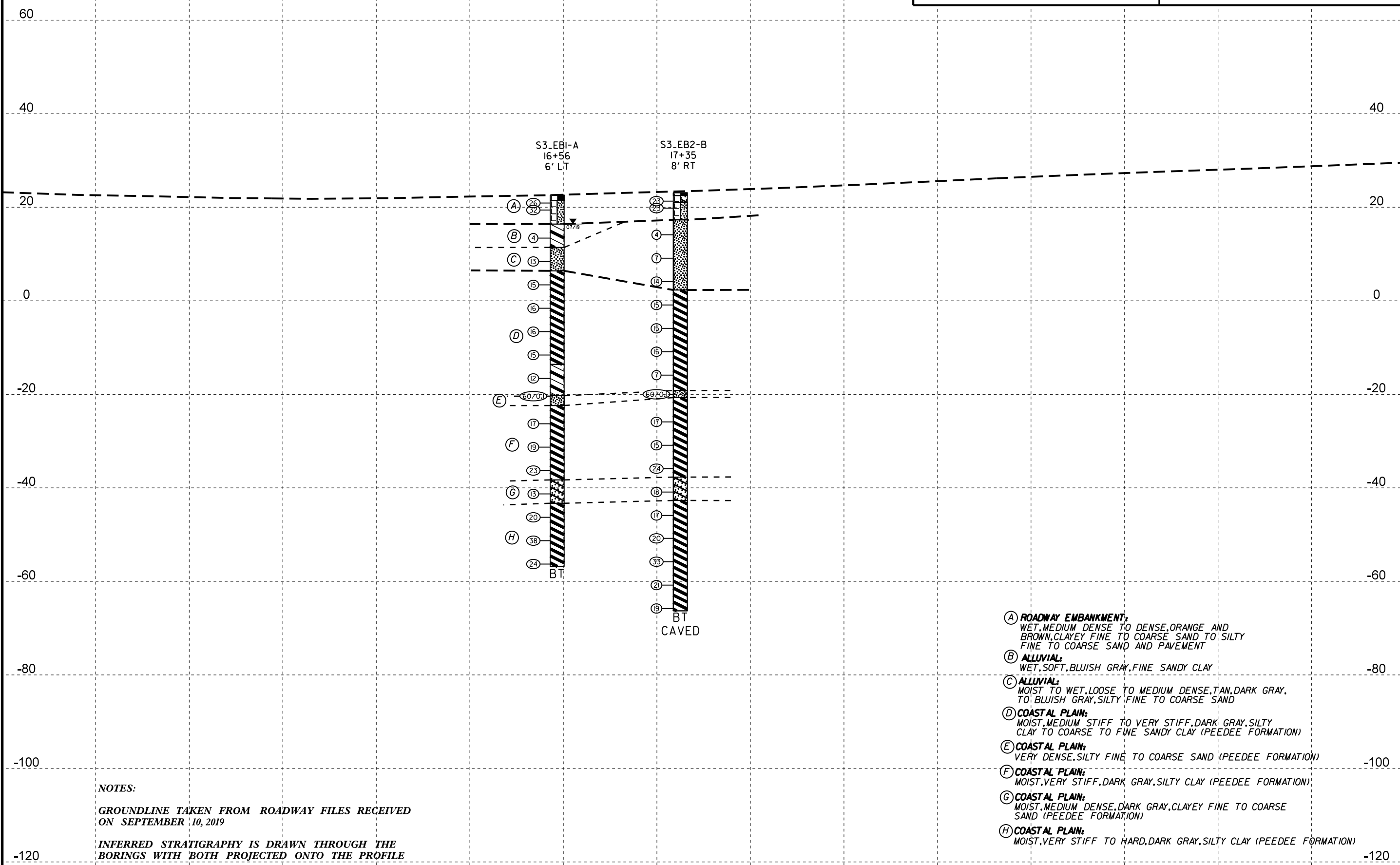


SKEW:
 END BENT NO. 1 - 80°-27'-04"
 END BENT NO. 2 - 79°-32'-56"





PROJECT REFERENCE NO.	SHEET NO.
R-2561CA	4
PROFILE ON BRIDGE NO. 374 ON NC 11 (-Y-) OVER WEYMAN CREEK	



NOTES:
 GROUNDLINE TAKEN FROM ROADWAY FILES RECEIVED
 ON SEPTEMBER 10, 2019
 INFERRED STRATIGRAPHY IS DRAWN THROUGH THE
 BORINGS WITH BOTH PROJECTED ONTO THE PROFILE

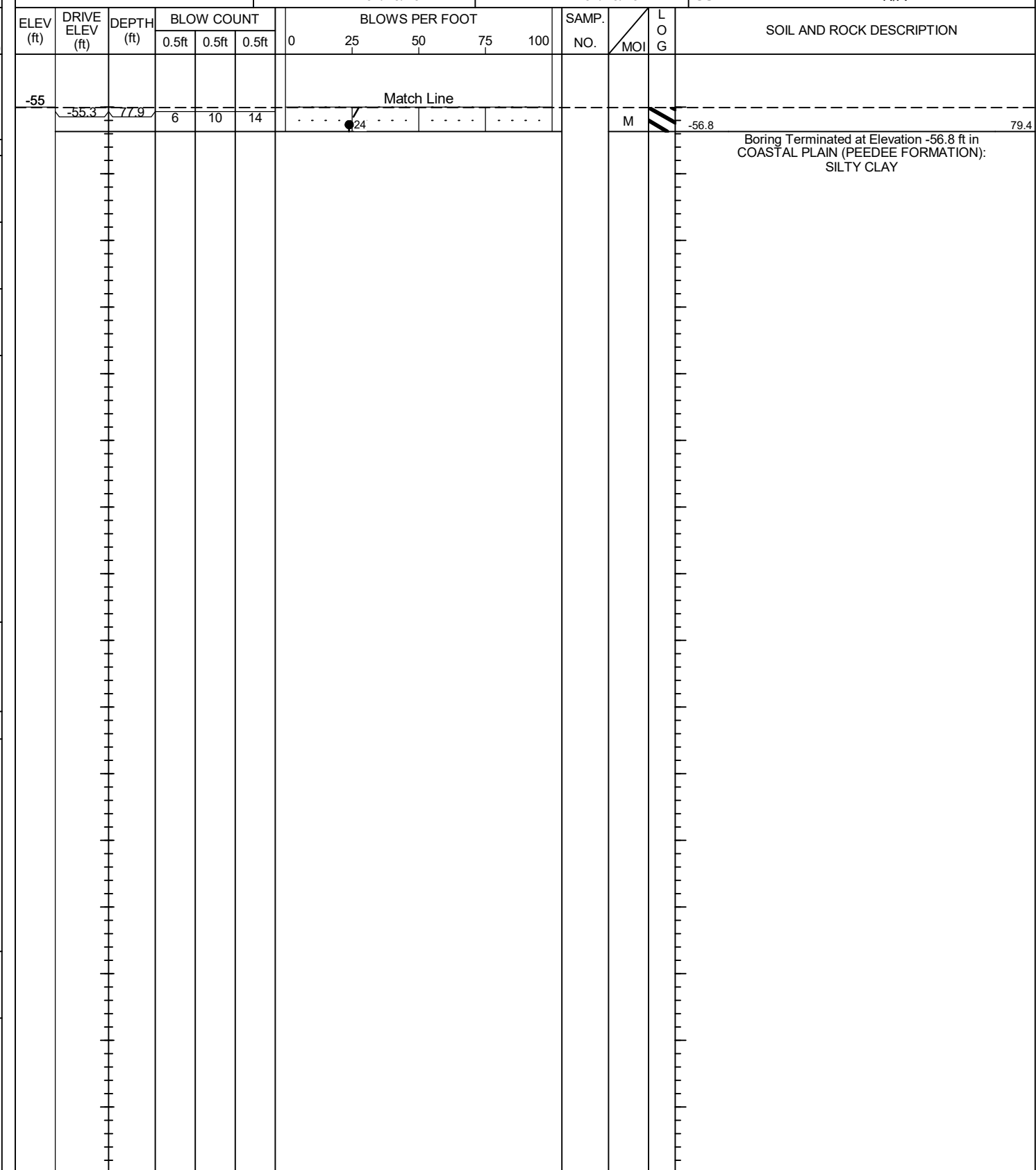
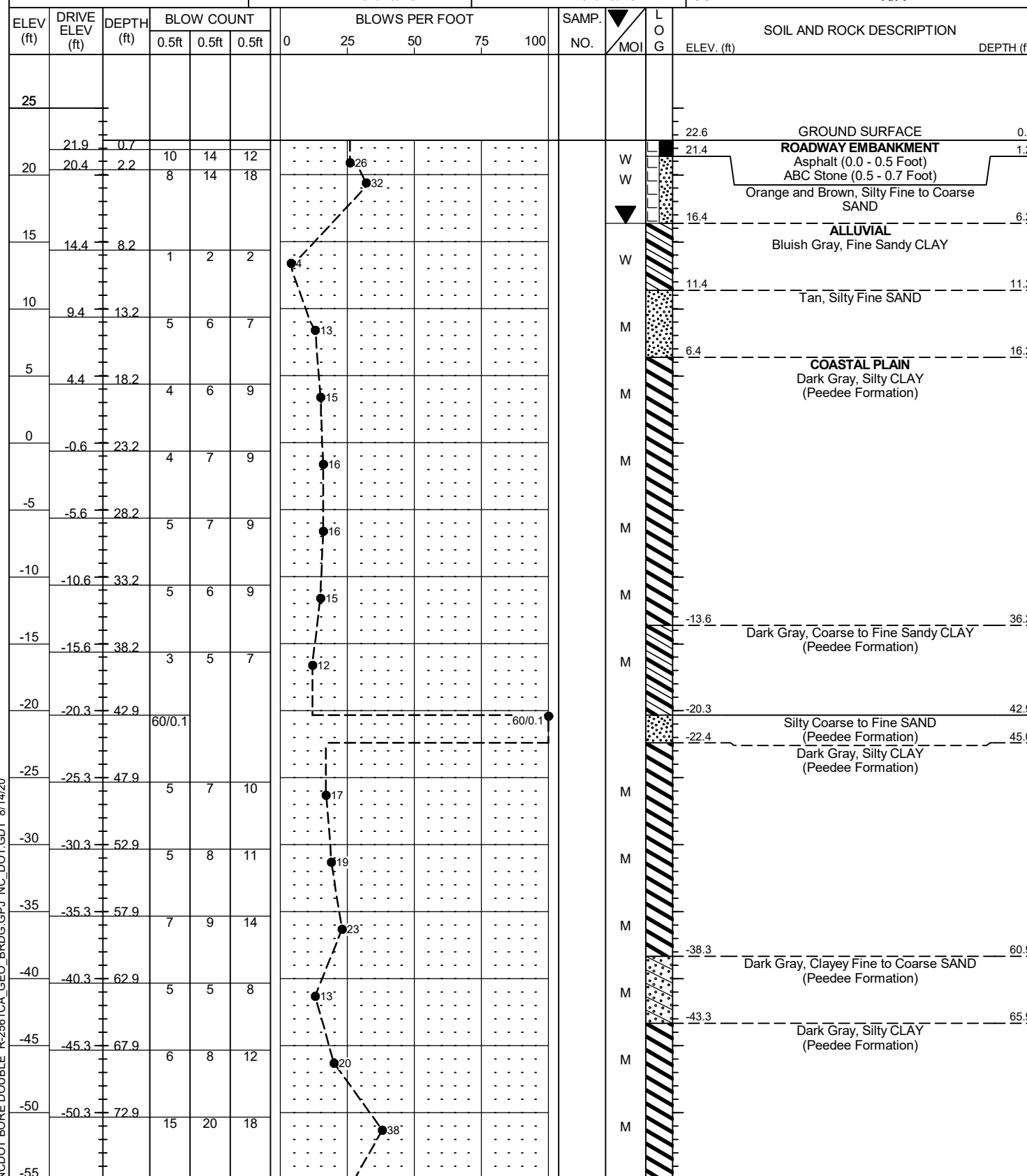
- (A) **ROADWAY EMBANKMENT:**
WET, MEDIUM DENSE TO DENSE, ORANGE AND BROWN, CLAYEY FINE TO COARSE SAND TO SILTY FINE TO COARSE SAND AND PAVEMENT
- (B) **ALLUVIAL:**
WET, SOFT, BLUISH GRAY, FINE SANDY CLAY
- (C) **ALLUVIAL:**
MOIST TO WET, LOOSE TO MEDIUM DENSE, TAN, DARK GRAY, TO BLUISH GRAY, SILTY FINE TO COARSE SAND
- (D) **COASTAL PLAIN:**
MOIST, MEDIUM STIFF TO VERY STIFF, DARK GRAY, SILTY CLAY TO COARSE TO FINE SANDY CLAY (PEEDEE FORMATION)
- (E) **COASTAL PLAIN:**
VERY DENSE, SILTY FINE TO COARSE SAND (PEEDEE FORMATION)
- (F) **COASTAL PLAIN:**
MOIST, VERY STIFF, DARK GRAY, SILTY CLAY (PEEDEE FORMATION)
- (G) **COASTAL PLAIN:**
MOIST, MEDIUM DENSE, DARK GRAY, CLAYEY FINE TO COARSE SAND (PEEDEE FORMATION)
- (H) **COASTAL PLAIN:**
MOIST, VERY STIFF TO HARD, DARK GRAY, SILTY CLAY (PEEDEE FORMATION)

13+60 14+20 14+80 15+40 16+00 16+60 17+20 17+80 18+40 19+00 19+60 20+20 20+80 21+40

GEOTECHNICAL BORING REPORT BORE LOG

WBS 34466.4.1	TIP R-2561CA	COUNTY COLUMBUS	GEOLOGIST S. Papke
SITE DESCRIPTION Bridge No. 374 on NC 87 (-L-) over Weyman Creek			GROUND WTR (ft)
BORING NO. S3_EB1-A	STATION 16+56	OFFSET 6 ft LT	ALIGNMENT -Y-
COLLAR ELEV. 22.6 ft	TOTAL DEPTH 79.4 ft	NORTHING 227,159	EASTING 2,217,393
DRILL RIG/HAMMER EFF./DATE MID5464 CME-45C 90% 02/21/2019		DRILL METHOD Mud Rotary	HAMMER TYPE Automatic
DRILLER B. Fowler	START DATE 07/10/19	COMP. DATE 07/10/19	SURFACE WATER DEPTH N/A

WBS 34466.4.1	TIP R-2561CA	COUNTY COLUMBUS	GEOLOGIST S. Papke
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DRILLER B. Fowler	START DATE 07/10/19	COMP. DATE 07/10/19	SURFACE WATER DEPTH N/A



NCDOT BORE DOUBLE R-2561CA GEO_BRDGG.PJ NC_DOT.GDT 8/14/20

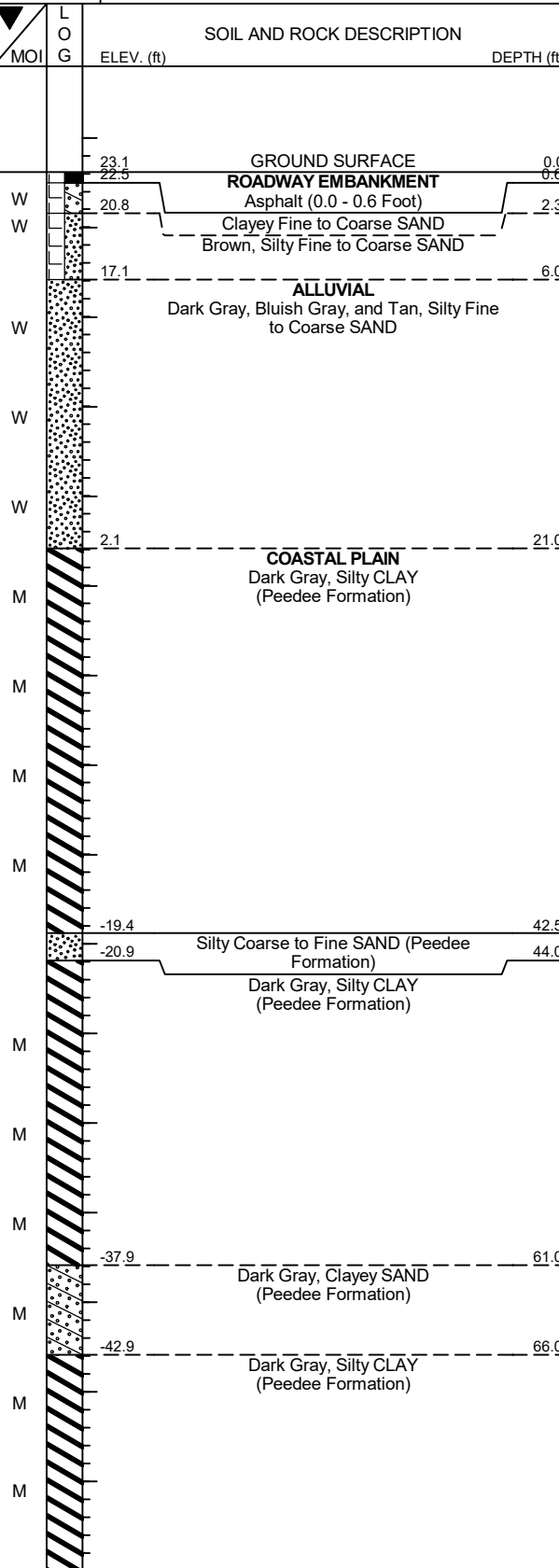
GEOTECHNICAL BORING REPORT

BORE LOG

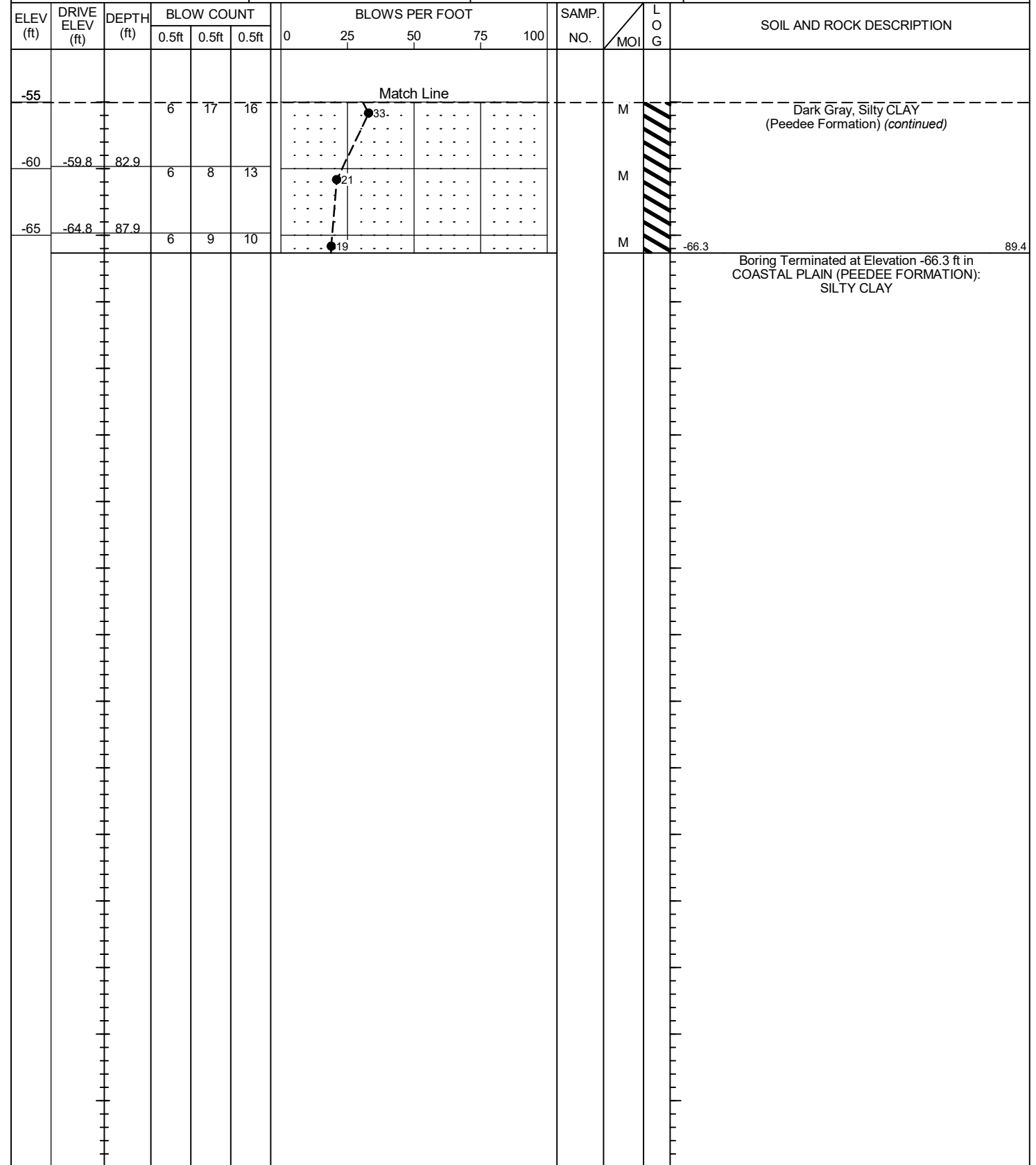
WBS 34466.4.1		TIP R-2561CA		COUNTY COLUMBUS		GEOLOGIST S. Papke	
SITE DESCRIPTION Bridge No. 374 on NC 87 (-L-) over Weyman Creek						GROUND WTR (ft)	
BORING NO. S3_EB2-B		STATION 17+35		OFFSET 8 ft RT		ALIGNMENT -Y-	
COLLAR ELEV. 23.1 ft		TOTAL DEPTH 89.4 ft		NORTHING 227,231		EASTING 2,217,428	
DRILL RIG/HAMMER EFF./DATE MID5464 CME-45C 90% 02/21/2019				DRILL METHOD Mud Rotary		HAMMER TYPE Automatic	
DRILLER B. Fowler		START DATE 07/11/19		COMP. DATE 07/12/19		SURFACE WATER DEPTH N/A	

WBS 34466.4.1		TIP R-2561CA		COUNTY COLUMBUS		GEOLOGIST S. Papke	
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DRILLER B. Fowler		START DATE 07/11/19		COMP. DATE 07/12/19		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 ELEV. (ft) DEPTH (ft)		
			0.5ft	0.5ft	0.5ft	0	25	50	75	100						
25																
22.3	22.3	0.8														
20.8	20.8	2.3	11	12	11											
20			7	10	13											
17.1																
15	15.1	8.0	2	2	2											
10	10.1	13.0	2	3	4											
5	5.1	18.0	6	5	9											
0	0.1	23.0	5	6	9											
-5	-4.9	28.0	5	6	9											
-10	-9.9	33.0	5	6	9											
-15	-14.9	38.0	4	3	4											
-20	-19.9	43.0	60/0.1													
-25	-24.9	48.0	5	7	10											
-30	-29.9	53.0	5	6	9											
-35	-34.9	58.0	6	9	15											
-40	-39.9	63.0	5	7	11											
-45	-44.9	68.0	6	7	10											
-50	-49.8	72.9	8	8	12											
-55	-54.8	77.9														



ELEV (ft)	DRIVE ELEV (ft)	DEPTH (ft)	BLOW COUNT			BLOWS PER FOOT					SAMP. NO.	MOI	LOG	SOIL AND ROCK DESCRIPTION ELEV. (ft) DEPTH (ft)		
			0.5ft	0.5ft	0.5ft	0	25	50	75	100						
-55																
-60	-59.8	82.9	6	8	13											
-65	-64.8	87.9	6	9	10											



NCDOT BORE DOUBLE R-2561CA GEO_BRDG.GPJ NC_DOT.GDT 8/14/20