

REFERENCE: B-5758

PROJECT: 45714

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

STRUCTURE
SUBSURFACE INVESTIGATION

COUNTY MOORE
PROJECT DESCRIPTION BRIDGE NO. 013 ON SR 1102
(ADDOR ROAD) OVER ABERDEEN CREEK

CONTENTS

SHEET NO.	DESCRIPTION
1	TITLE SHEET
2	LEGEND (SOIL & ROCK)
3	SITE PLAN
4-5	CROSS SECTIONS
6-7	BORE LOGS
8	SITE PHOTOGRAPH

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	B-5758	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 1991 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:
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

C.R. PASTRANA

SAEDACCO

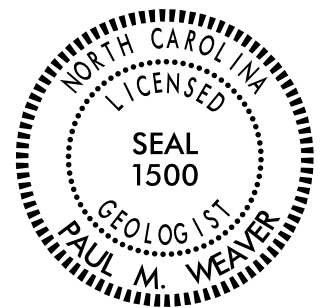
INVESTIGATED BY ESP Associates, P.A.

DRAWN BY T.T. WALKER

CHECKED BY P. WEAVER

SUBMITTED BY ESP Associates, P.A.

DATE September 2016



DocuSigned by:

Paul Weaver

9/14/2016

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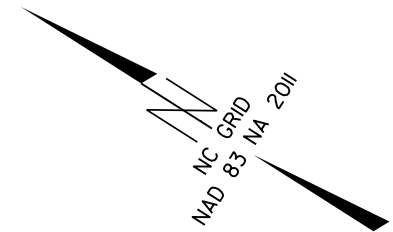
DATE

DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED

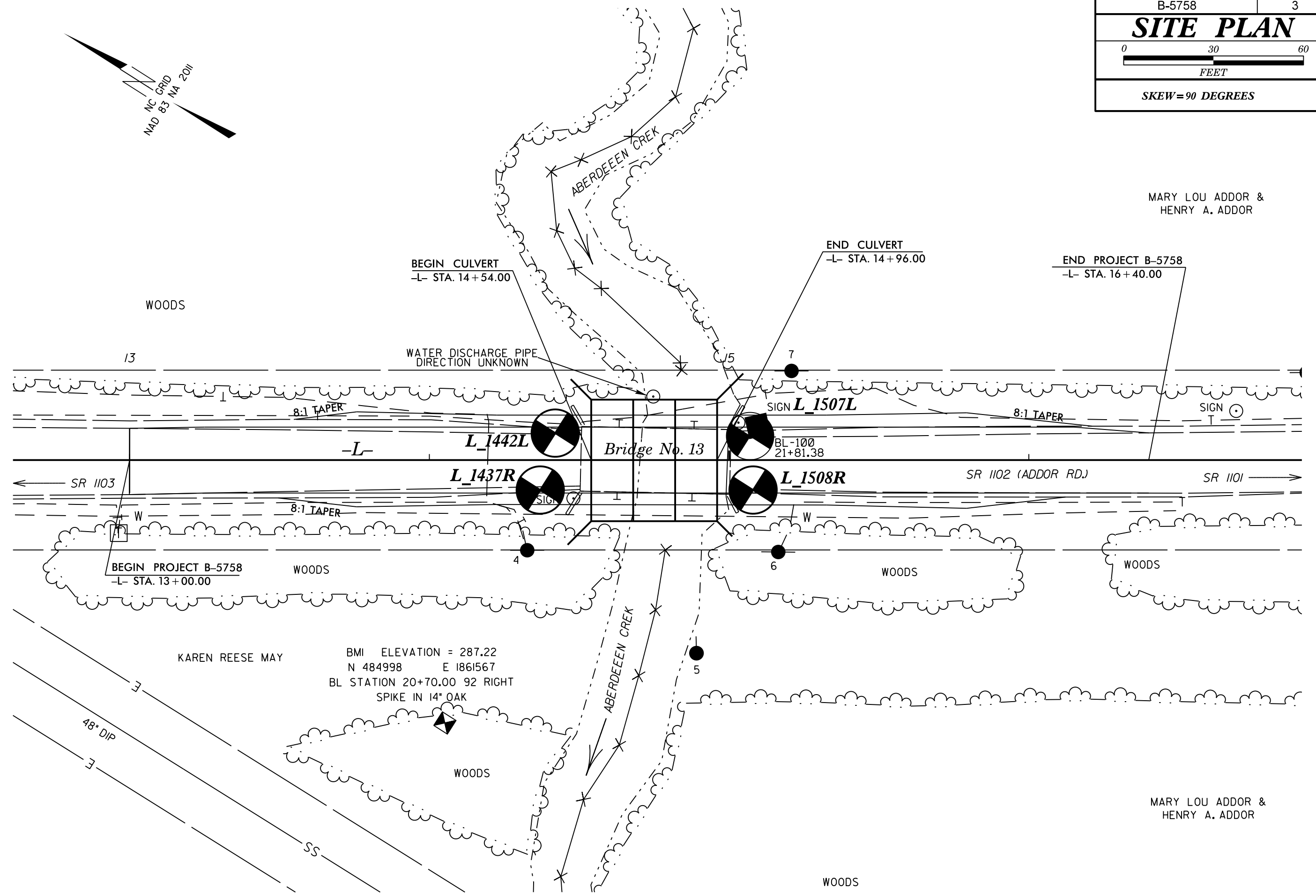
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
GEOTECHNICAL ENGINEERING UNIT
SUBSURFACE INVESTIGATION
SOIL AND ROCK LEGEND, TERMS, SYMBOLS, AND ABBREVIATIONS

Table with 4 main columns: SOIL DESCRIPTION, GRADATION, ROCK DESCRIPTION, and TERMS AND DEFINITIONS. It contains detailed technical specifications, classification charts, and symbols for soil and rock analysis.

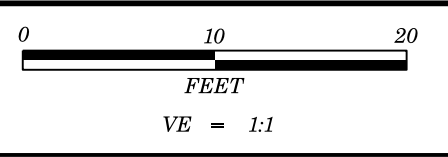
PROJECT REFERENCE NO.	SHEET NO.
B-5758	3
SITE PLAN	
FEET	
SKIEW = 90 DEGREES	



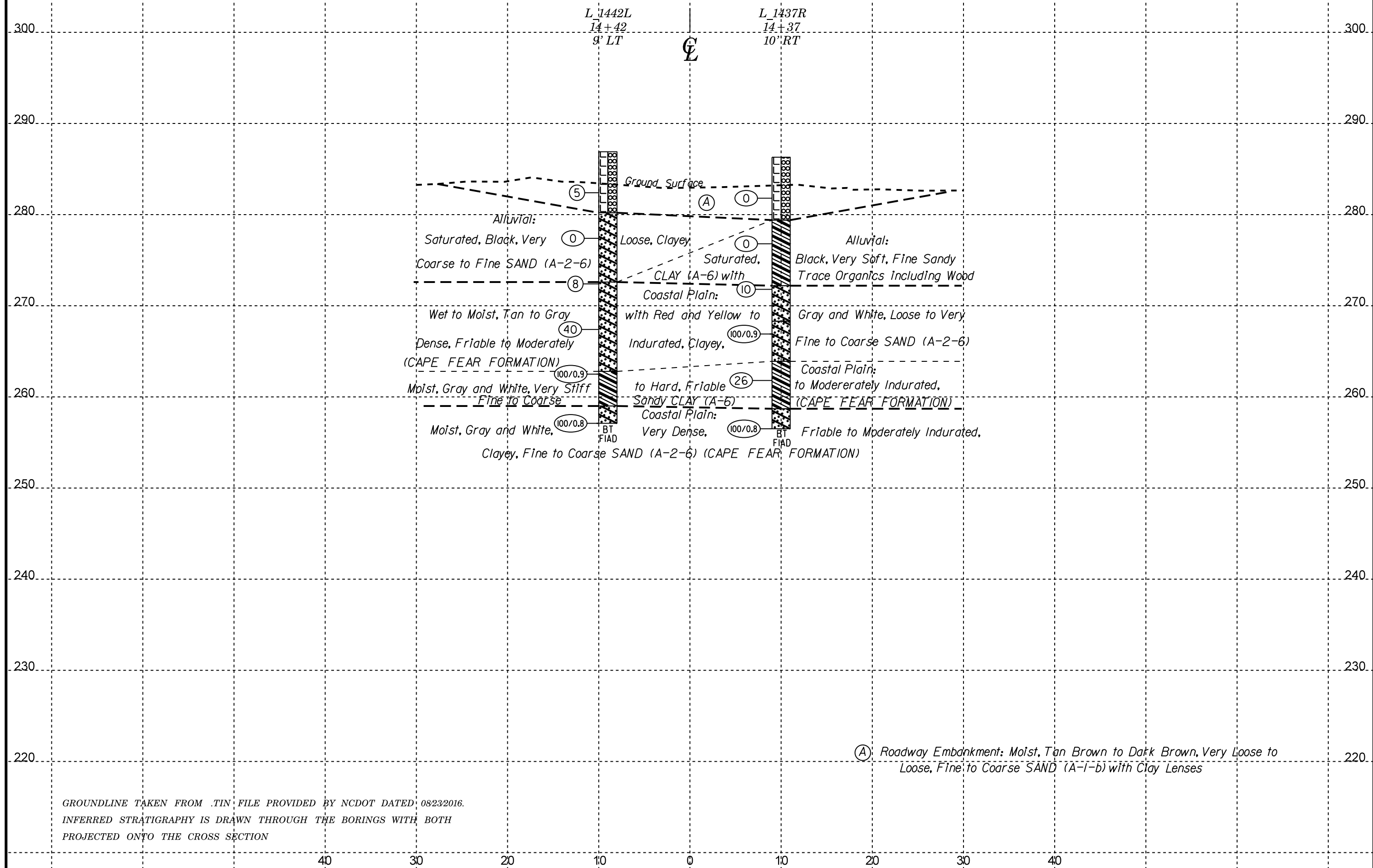
MARY LOU ADDOR &
HENRY A. ADDOR



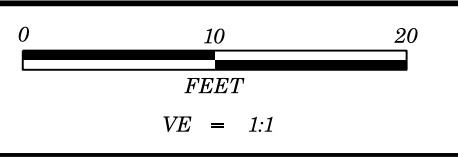
MARY LOU ADDOR &
HENRY A. ADDOR



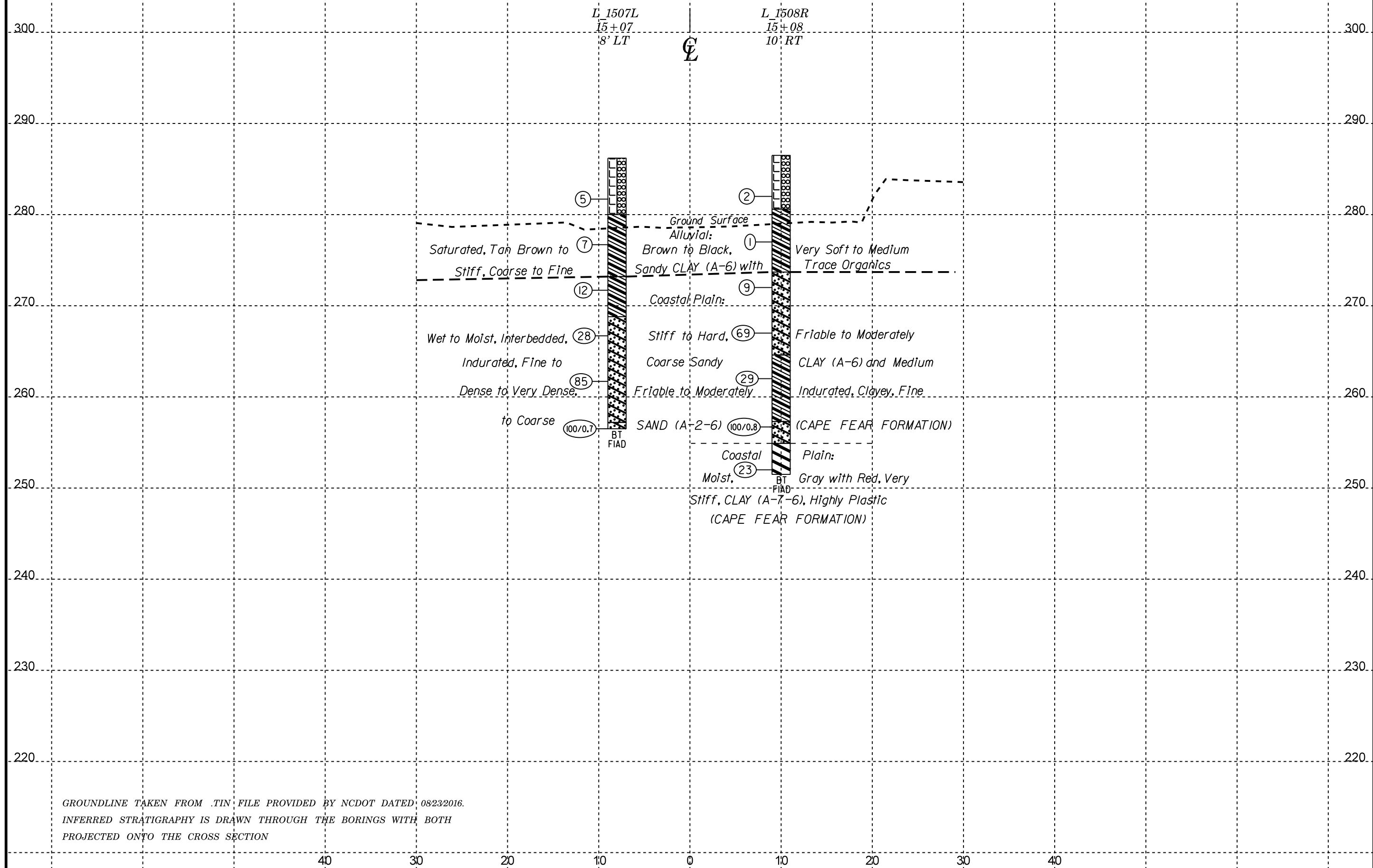
PROJECT REFERENCE NO.	SHEET NO.
B-5758	4
SECTION THROUGH STA. 14+54.00 SKEW=90 DEGREES	



GROUNDLINE TAKEN FROM .TIN FILE PROVIDED BY NCDOT DATED 08232016.
 INFERRED STRATIGRAPHY IS DRAWN THROUGH THE BORINGS WITH BOTH
 PROJECTED ONTO THE CROSS SECTION



PROJECT REFERENCE NO.	SHEET NO.
B-5758	5
SECTION THROUGH STA. 14+96.00 SKEW=90 DEGREES	



GROUNDLINE TAKEN FROM .TIN FILE PROVIDED BY NCDOT DATED 08232016.
 INFERRED STRATIGRAPHY IS DRAWN THROUGH THE BORINGS WITH BOTH
 PROJECTED ONTO THE CROSS SECTION

GEOTECHNICAL BORING REPORT

BORE LOG

WBS 45714		TIP B-5758		COUNTY MOORE		GEOLOGIST Pastrana, C. R.									
SITE DESCRIPTION Bridge No. 013 on SR 1102 (Addor Road) over Aberdeen Creek							GROUND WTR (ft)								
BORING NO. L_1442L		STATION 14+42		OFFSET 9 ft LT		ALIGNMENT -L-									
COLLAR ELEV. 286.9 ft		TOTAL DEPTH 29.8 ft		NORTHING 485,019		EASTING 1,861,669									
DRILL RIG/HAMMER EFF./DATE SAE0177 DIEDRICH D-50 89% 12/29/2015		DRILL METHOD H.S. Augers		HAMMER TYPE Automatic											
DRILLER Smith, S.		START DATE 08/16/16		COMP. DATE 08/16/16		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					
290														286.9	0.0
285	283.4	3.5	1	2	3							M	ROADWAY EMBANKMENT Tan Brown, Loose, Coarse SAND (A-1-b)		
280	278.4	8.5	1	0	0							Sat.	ALLUVIAL Black, Very Loose, Clayey, Coarse to Fine SAND (A-2-6)	6.7	
275	273.4	13.5	3	3	5							W	COASTAL PLAIN Gray and White, Loose, Clayey, Fine to Coarse SAND (A-2-6) (Cape Fear Formation)	14.3	
270	268.4	18.5	7	11	29							M	Note: Harder material encountered from 20.4' to 20.9'		
265	263.4	23.5	18	82/0.4								M	Gray and White, Hard, Fine to Coarse Sandy CLAY (A-6), Friable to Moderately Indurated (Cape Fear Formation)	24.1	
260	258.4	28.5	18	26	74/0.3							M	Note: Harder Drilling at 20.8' Gray and White, Very Dense, Clayey, Coarse to Fine SAND (A-2-6), Friable to Moderately Indurated (Cape Fear Formation)	27.9	
												M	Boring Terminated at Elevation 257.1 ft In Coastal Plain: Gray and White CLAYEY SAND (Cape Fear Formation)	29.8	

WBS 45714		TIP B-5758		COUNTY MOORE		GEOLOGIST Pastrana, C. R.									
SITE DESCRIPTION Bridge No. 013 on SR 1102 (Addor Road) over Aberdeen Creek							GROUND WTR (ft)								
BORING NO. L-1437R		STATION 14+37		OFFSET 10 ft RT		ALIGNMENT -L-									
COLLAR ELEV. 286.3 ft		TOTAL DEPTH 29.8 ft		NORTHING 485,013		EASTING 1,861,650									
DRILL RIG/HAMMER EFF./DATE SAE0177 DIEDRICH D-50 89% 12/29/2015		DRILL METHOD H.S. Augers		HAMMER TYPE Automatic											
DRILLER Smith, S.		START DATE 08/15/16		COMP. DATE 08/15/16		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					
290														286.3	0.0
285	282.8	3.5	1	1	0							M	ROADWAY EMBANKMENT Tan Brown to Dark Brown, Very Loose, Fine to Coarse SAND (A-1-b) with Clay Lenses		
280	277.8	8.5	1	0	0							Sat.	ALLUVIAL Black, Very Soft, Fine Sandy CLAY (A-6) Trace Organics including Wood	6.9	
275	272.8	13.5	3	4	6							W	COASTAL PLAIN Tan to Gray with Red and Yellow, Medium Dense, Clayey, Fine to Coarse SAND (A-2-6) (Cape Fear Formation)	14.1	
270	267.8	18.5	20	80/0.4								M	Gray and White with Yellow, Very Dense, Clayey, Fine to Coarse SAND (A-2-6), Friable to Moderately Indurated (Cape Fear Formation)	18.0	
265	262.8	23.5	8	7	19							M	Gray and White, Very Stiff, Fine to Coarse Sandy CLAY (A-6) (Cape Fear Formation)	22.4	
260	257.8	28.5	24	50	50/0.3							M	Gray and White, Very Dense, Clayey, Fine to Coarse SAND (A-2-6), Friable to Moderately Indurated (Cape Fear Formation)	27.6	
												M	Boring Terminated at Elevation 256.5 ft In Coastal Plain: Gray and White CLAYEY SAND (Cape Fear Formation)	29.8	

NCDOT BORE DOUBLE B5758_GEO_BRDG0013_GINT_LOGS.GPJ NC_DOT.GDT 9/13/16

GEOTECHNICAL BORING REPORT

BORE LOG

WBS 45714		TIP B-5758		COUNTY MOORE		GEOLOGIST Pastrana, C. R.										
SITE DESCRIPTION Bridge No. 013 on SR 1102 (Addor Road) over Aberdeen Creek							GROUND WTR (ft)									
BORING NO. L_1507L		STATION 15+07		OFFSET 8 ft LT		ALIGNMENT -L-										
COLLAR ELEV. 286.2 ft		TOTAL DEPTH 29.7 ft		NORTHING 484,963		EASTING 1,861,703										
DRILL RIG/HAMMER EFF./DATE SAE0177 DIEDRICH D-50 89% 12/29/2015			DRILL METHOD H.S. Augers		HAMMER TYPE Automatic											
DRILLER Smith, S.		START DATE 08/16/16		COMP. DATE 08/16/16		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						
290																
285	282.7	3.5	6	3	2								M	286.2 GROUND SURFACE 0.0		
280	277.7	8.5	5	4	3								M	280.0 ROADWAY EMBANKMENT 6.2		
275	272.7	13.5	7	6	6								Sat.	273.2 ALLUVIAL 13.0		
270	267.7	18.5	24	15	13								W	268.8 COASTAL PLAIN 17.4		
265	262.7	23.5	20	34	51								M	257.2 Yellowish Gray with Red to Gray and White, Medium Dense to Very Dense, Clayey, Fine to Coarse SAND (A-2-6) (Cape Fear Formation) 29.0		
260	257.7	28.5	22	57	43/0.2								M	256.5 Gray and White, Very Dense, Clayey, Fine to Coarse SAND (A-2-6), Friable to Moderately Indurated (Cape Fear Formation) 29.7		

WBS 45714		TIP B-5758		COUNTY MOORE		GEOLOGIST Pastrana, C. R.										
SITE DESCRIPTION Bridge No. 013 on SR 1102 (Addor Road) over Aberdeen Creek							GROUND WTR (ft)									
BORING NO. L_1508R		STATION 15+08		OFFSET 10 ft RT		ALIGNMENT -L-										
COLLAR ELEV. 286.5 ft		TOTAL DEPTH 35.0 ft		NORTHING 484,953		EASTING 1,861,680										
DRILL RIG/HAMMER EFF./DATE SAE0177 DIEDRICH D-50 89% 12/29/2015			DRILL METHOD H.S. Augers		HAMMER TYPE Automatic											
DRILLER Smith, S.		START DATE 08/16/16		COMP. DATE 08/16/16		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						
290																
285	283.0	3.5	1	1	1								M	286.5 GROUND SURFACE 0.0		
280	278.0	8.5	1	0	1								M	280.6 ROADWAY EMBANKMENT 5.9		
275	273.0	13.5	2	4	5								Sat.	273.7 ALLUVIAL 12.8		
270	268.0	18.5	24	36	33								W	264.6 COASTAL PLAIN 21.9		
265	263.0	23.5	8	10	19								M	257.3 Tan to Gray and White with Red, Loose to Very Dense, Clayey, Fine to Coarse SAND (A-2-6), Little Rock Fragments (Cape Fear Formation) 29.2		
260	258.0	28.5	21	48	52/0.3								M	254.9 Gray and White, Very Dense, Clayey, Fine to Coarse SAND (A-2-6), Friable to Moderately Indurated (Cape Fear Formation) 31.6		
255	253.0	33.5	6	9	14								M	251.5 Gray with Red, Very Stiff, CLAY (A-7-6), Highly Plastic (Cape Fear Formation) 35.0		

NCDOT BORE DOUBLE B5758_GEO_BRDG0013_GINT_LOGS.GPJ NC_DOT.GDT 9/13/16

SITE PHOTOGRAPHS
State Project No. 45714 – TIP No. B-5758 – Bridge No. 013 on SR 1102 (Addor Road) over Aberdeen Creek - Moore County, NC

View of Existing Bridge No. 013 Looking Upstation



View of Existing Bridge No. 013 Looking Downstation



View Looking Upstream from Bridge No. 013



View Looking Downstream from Bridge No. 013

