

REFERENCE: R-5516

PROJECT: 45492

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

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	R-5516	1	17

CONTENTS

SHEET NO.	DESCRIPTION
1	TITLE SHEET
2	LEGEND
3	SITE PLAN
4	PROFILE ALONG -YEB01-
5 - 8	CROSS SECTION(S)
9 - 16	BORE LOGS
17	SOIL TEST RESULTS

STRUCTURE  
SUBSURFACE INVESTIGATION

COUNTY CRAVEN  
PROJECT DESCRIPTION INTERCHANGE FROM US 70  
TO SLOCUM RD AT CHERRY POINT MILITARY  
BASE  
SITE DESCRIPTION BRIDGE NO. 270 ON -YEB01-  
OVER -L- (US 70)

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) 707-6850. 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

S. CROCKETT

G. LANG

M. COOGAN

M. WITMORE

INVESTIGATED BY M. WITMORE

DRAWN BY S. CROCKETT

CHECKED BY G. LANG

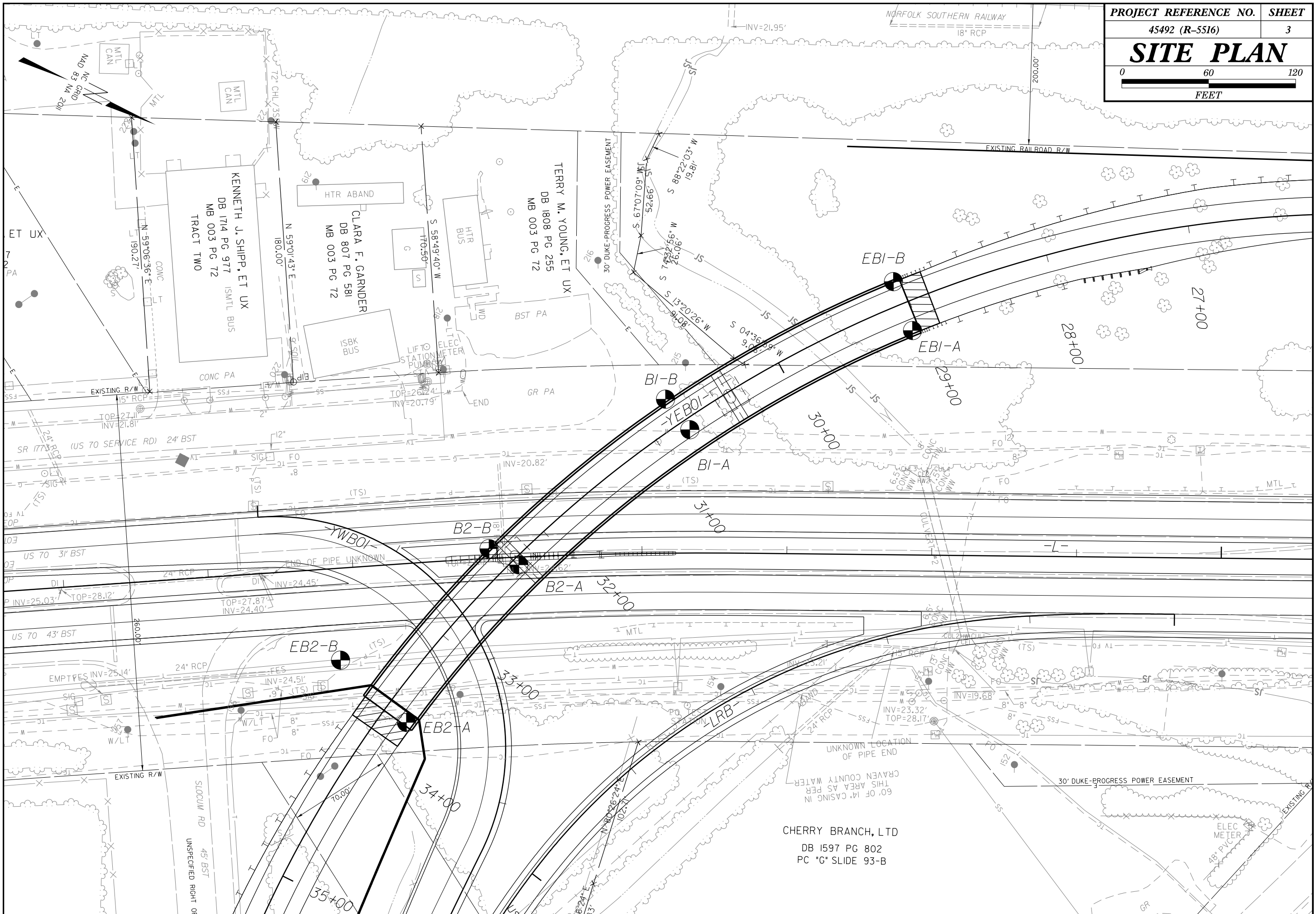
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DATE SEPTEMBER, 2015

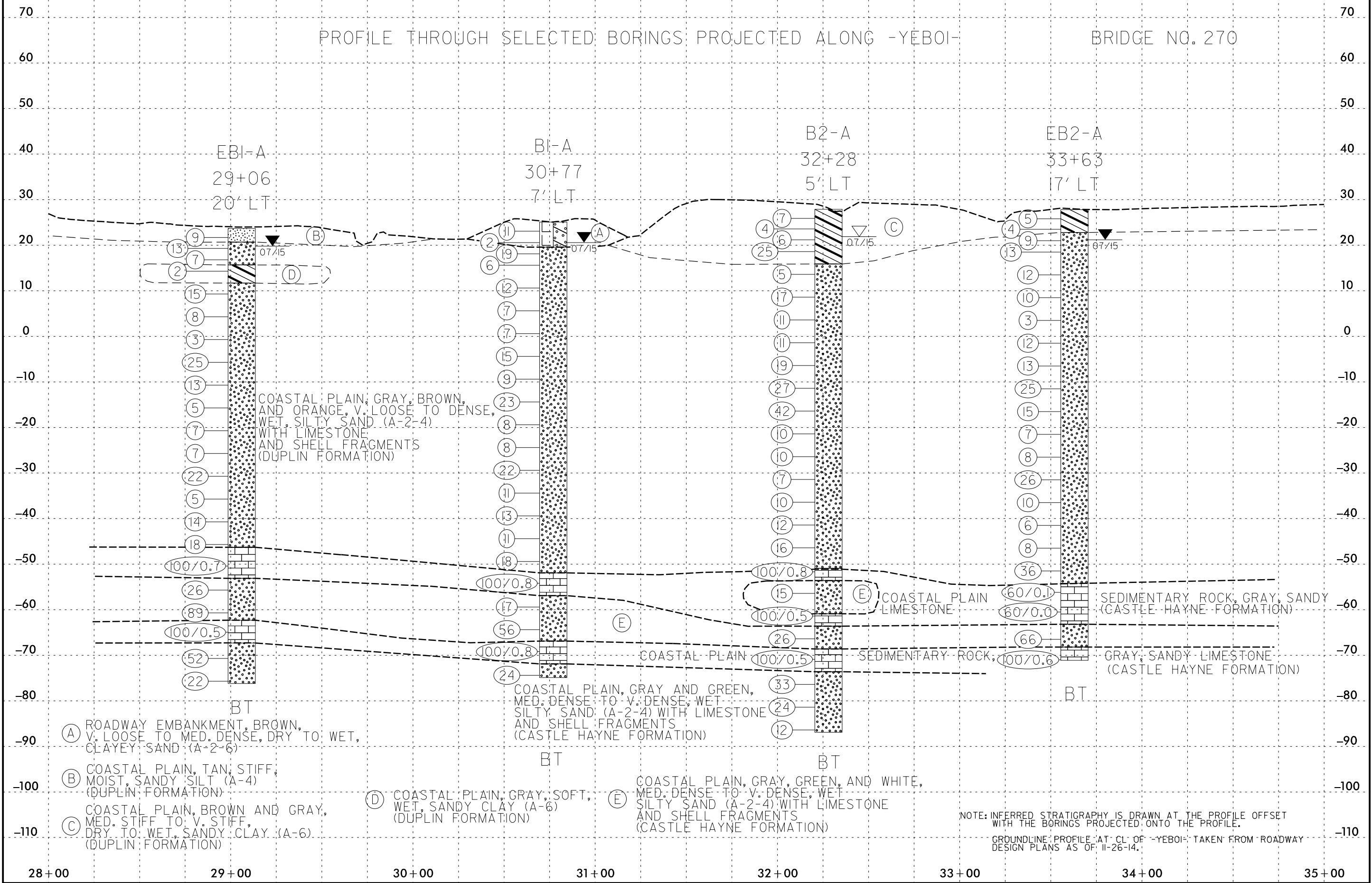


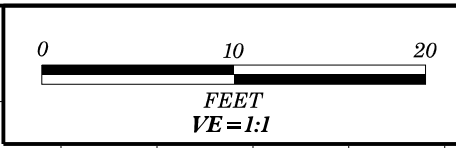
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Gabriel Lang 1/11/2016  
1E651F26B73E4AF SIGNATURE DATE





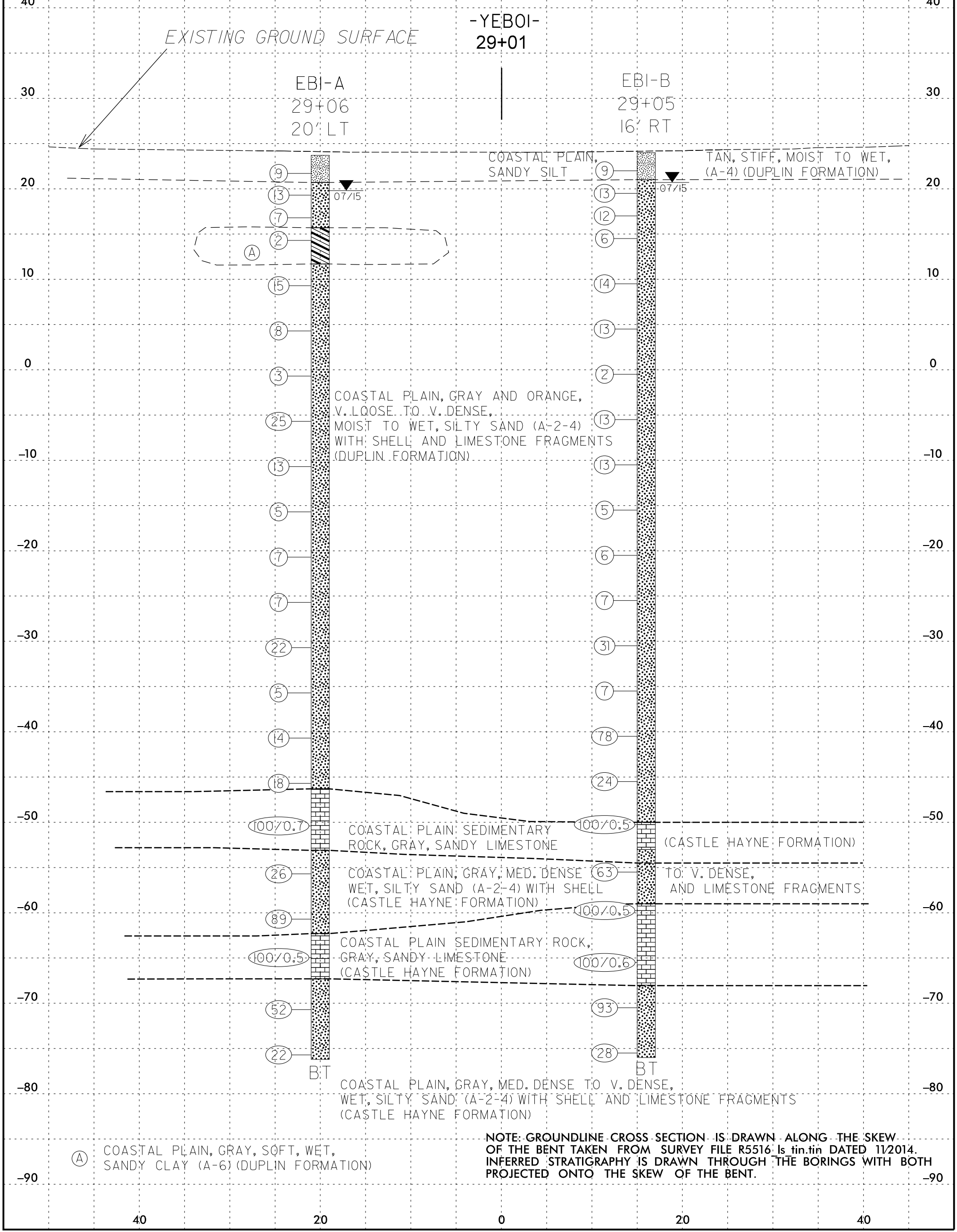
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 DB I597 PG 802  
 PC "G" SLIDE 93-B

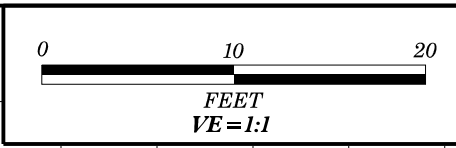




PROJECT REFERENCE NO.	SHEET
R-5516	5
END BENT 1 CROSS SECTION	

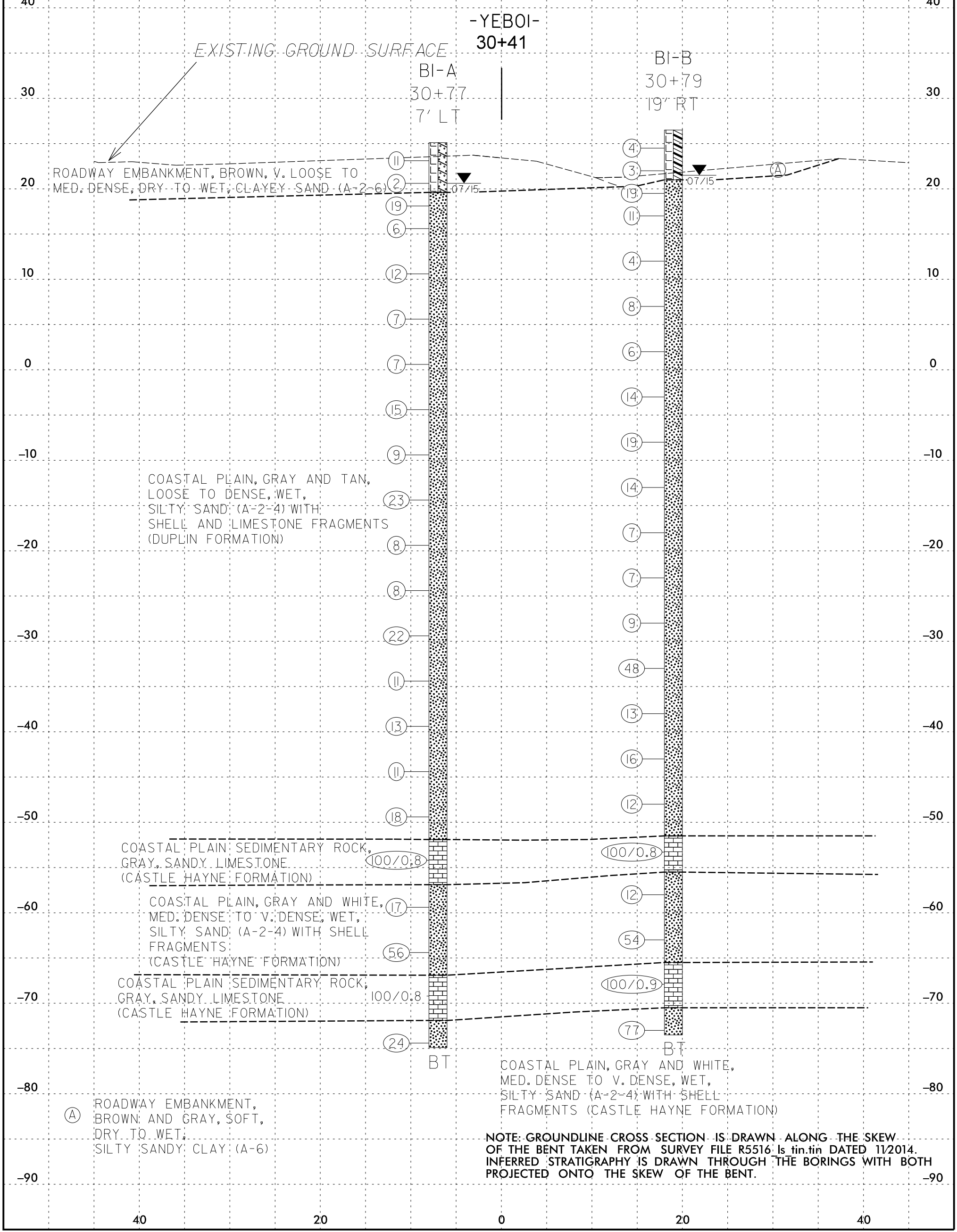
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SKEW: 90°

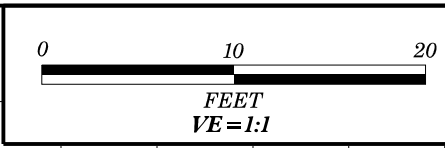




PROJECT REFERENCE NO.	SHEET
R-5516	6
<b>BENT 1 CROSS SECTION</b>	

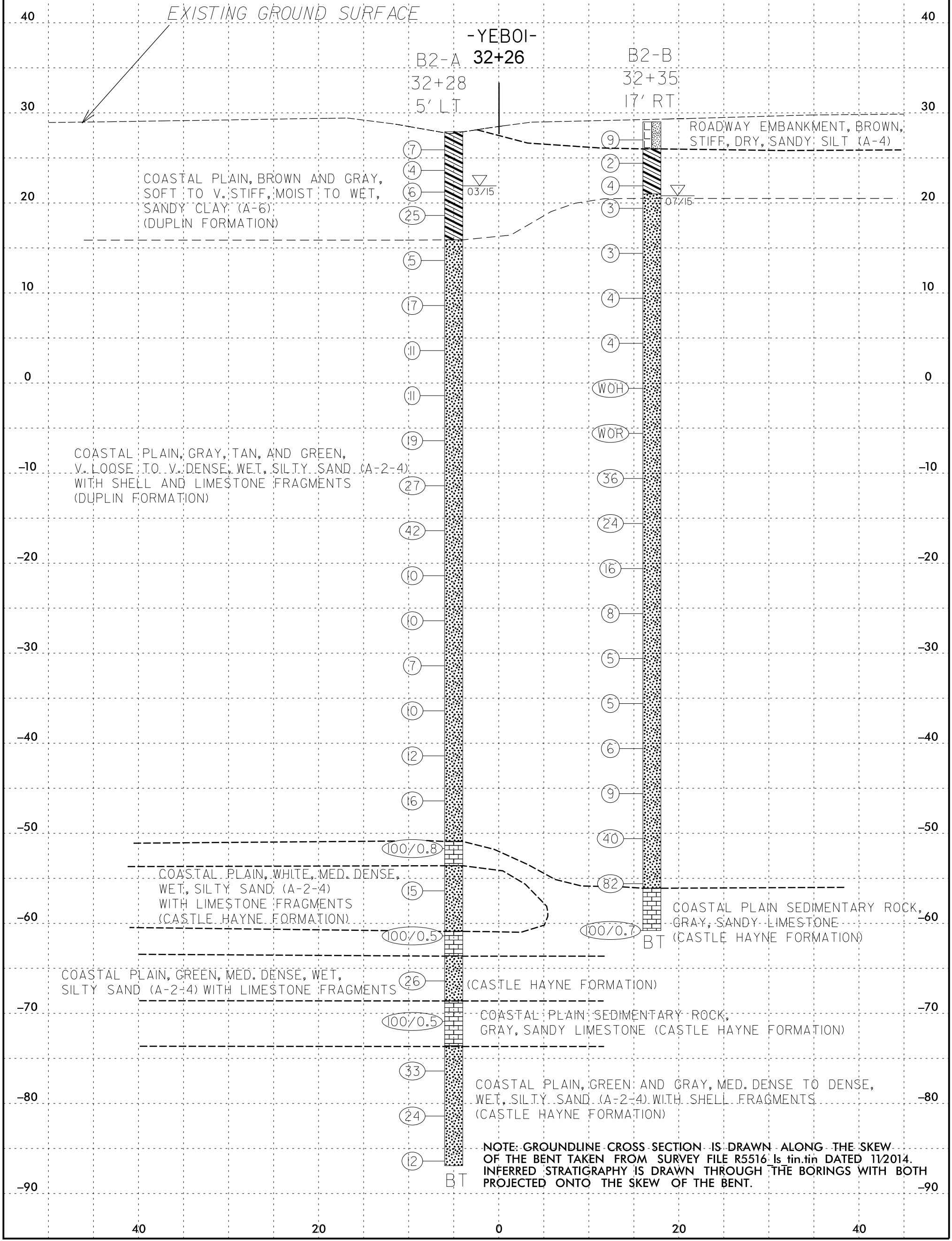
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**SKEW: 90°**

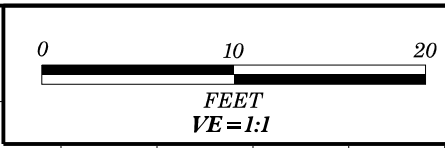




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R-5516	7
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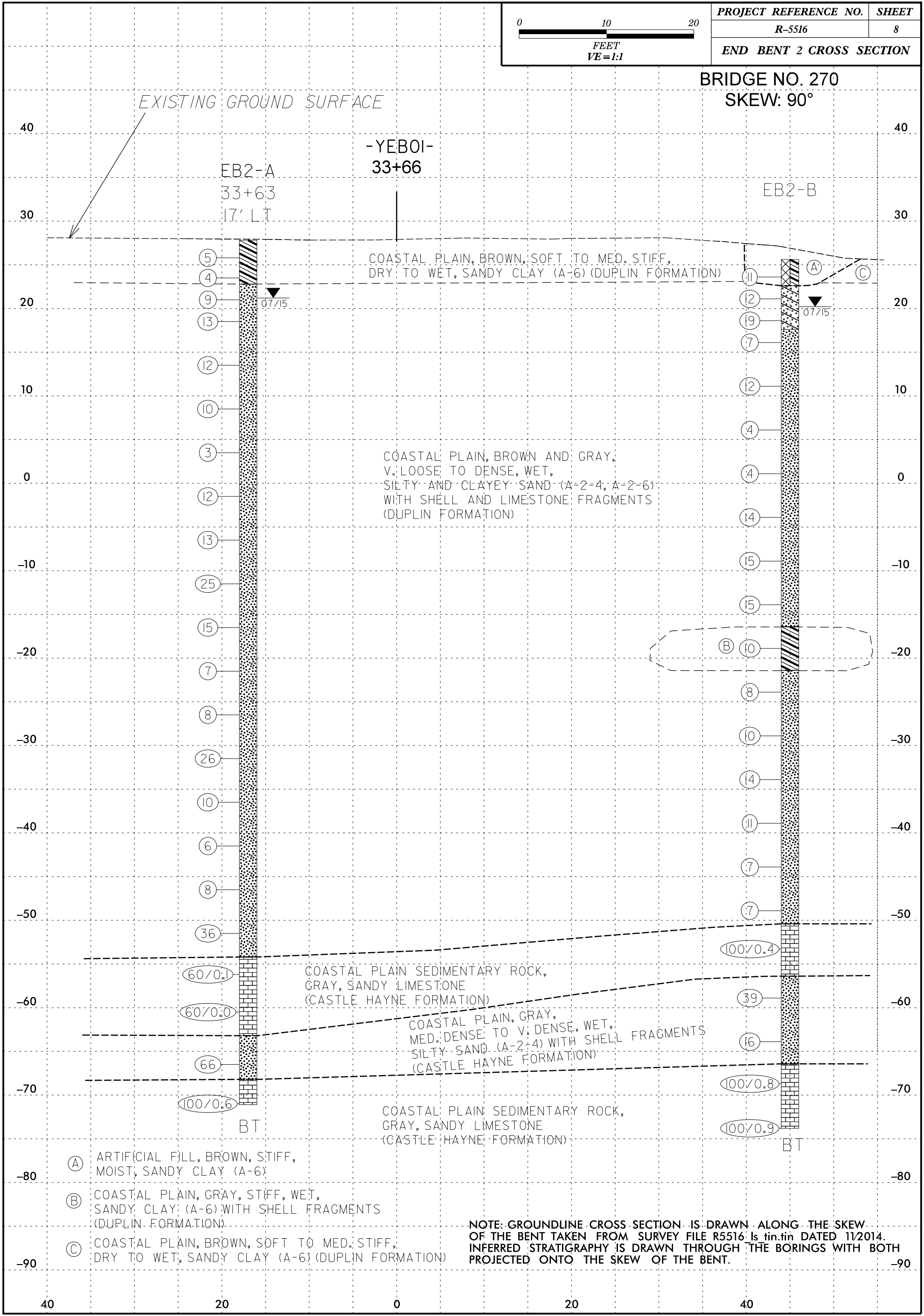
**BRIDGE NO. 270**  
**SKREW: 90°**





PROJECT REFERENCE NO.	SHEET
R-5516	8
END BENT 2 CROSS SECTION	

BRIDGE NO. 270  
SKEW: 90°



EXISTING GROUND SURFACE

EB2-A  
33+63  
17' LT

-YEB01-  
33+66

EB2-B

COASTAL PLAIN, BROWN, SOFT TO MED. STIFF,  
DRY TO WET, SANDY CLAY (A-6) (DUPLIN FORMATION)

COASTAL PLAIN, BROWN AND GRAY,  
V. LOOSE TO DENSE, WET,  
SILTY AND CLAYEY SAND (A-2-4, A-2-6)  
WITH SHELL AND LIMESTONE FRAGMENTS  
(DUPLIN FORMATION)

COASTAL PLAIN SEDIMENTARY ROCK,  
GRAY, SANDY LIMESTONE  
(CASTLE HAYNE FORMATION)

COASTAL PLAIN, GRAY,  
MED. DENSE TO V. DENSE, WET,  
SILTY SAND (A-2-4) WITH SHELL FRAGMENTS  
(CASTLE HAYNE FORMATION)

COASTAL PLAIN SEDIMENTARY ROCK,  
GRAY, SANDY LIMESTONE  
(CASTLE HAYNE FORMATION)

- (A) ARTIFICIAL FILL, BROWN, STIFF, MOIST, SANDY CLAY (A-6)
- (B) COASTAL PLAIN, GRAY, STIFF, WET, SANDY CLAY (A-6) WITH SHELL FRAGMENTS (DUPLIN FORMATION)
- (C) COASTAL PLAIN, BROWN, SOFT TO MED. STIFF, DRY TO WET, SANDY CLAY (A-6) (DUPLIN FORMATION)

NOTE: GROUNDLINE CROSS SECTION IS DRAWN ALONG THE SKEW OF THE BENT TAKEN FROM SURVEY FILE R5516 IS TITIN DATED 11/2014. INFERRED STRATIGRAPHY IS DRAWN THROUGH THE BORINGS WITH BOTH PROJECTED ONTO THE SKEW OF THE BENT.





# NCDOT GEOTECHNICAL ENGINEERING UNIT

## BORELOG REPORT

WBS 45492.1.1		TIP R-5516		COUNTY CRAVEN		GEOLOGIST M. WITMORE										
SITE DESCRIPTION BRIDGE NO. 270 ON -YEB01- OVER -L- (US 70)							GROUND WTR (ft)									
BORING NO. EB1-A		STATION 29+06		OFFSET 20 ft LT		ALIGNMENT -YEB01-										
COLLAR ELEV. 23.7 ft		TOTAL DEPTH 99.9 ft		NORTHING 431,562		EASTING 2,616,529										
DRILL RIG/HAMMER EFF./DATE MID3964 CME-45C 83% 08/07/2014			DRILL METHOD Mud Rotary		HAMMER TYPE Automatic											
DRILLER M. COOGAN		START DATE 07/09/15		COMP. DATE 07/09/15		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	DEPTH (ft)	
			0.5ft	0.5ft	0.5ft	0	25	50	75	100						
25																23.7
	22.7	1.0	3	4	5											20.7
20	20.3	3.4	8	7	6											15.7
	17.8	5.9	4	4	3											11.7
15	15.3	8.4	1	1	1											
	10.3	13.4	3	6	9											
10	5.3	18.4	4	4	4											
5	0.3	23.4	2	2	1											
0	-4.7	28.4	9	13	12											
-5	-9.7	33.4	6	6	7											
-10	-14.7	38.4	3	2	3											
-15	-19.7	43.4	2	3	4											
-20	-24.7	48.4	2	3	4											
-25	-29.7	53.4	9	11	11											
-30	-34.7	58.4	2	2	3											
-35	-39.7	63.4	4	7	7											
-40	-44.7	68.4	8	11	7											
-45	-49.7	73.4	19	81/0.2												
-50	-54.7	78.4														
-55																

WBS 45492.1.1		TIP R-5516		COUNTY CRAVEN		GEOLOGIST M. WITMORE										
SITE DESCRIPTION BRIDGE NO. 270 ON -YEB01- OVER -L- (US 70)							GROUND WTR (ft)									
BORING NO. EB1-A		STATION 29+06		OFFSET 20 ft LT		ALIGNMENT -YEB01-										
COLLAR ELEV. 23.7 ft		TOTAL DEPTH 99.9 ft		NORTHING 431,562		EASTING 2,616,529										
DRILL RIG/HAMMER EFF./DATE MID3964 CME-45C 83% 08/07/2014			DRILL METHOD Mud Rotary		HAMMER TYPE Automatic											
DRILLER M. COOGAN		START DATE 07/09/15		COMP. DATE 07/09/15		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	DEPTH (ft)	
			0.5ft	0.5ft	0.5ft	0	25	50	75	100						
-55			8	10	16											
-60	-59.7	83.4	55	55	34											
-65	-64.7	88.4	100/0.5													
-70	-69.7	93.4	24	27	25											
-75	-74.7	98.4	14	13	9											

NCDOT BORE DOUBLE R5516\_GEO\_BRDG.GPJ NC\_DOT.GDT 9/17/15



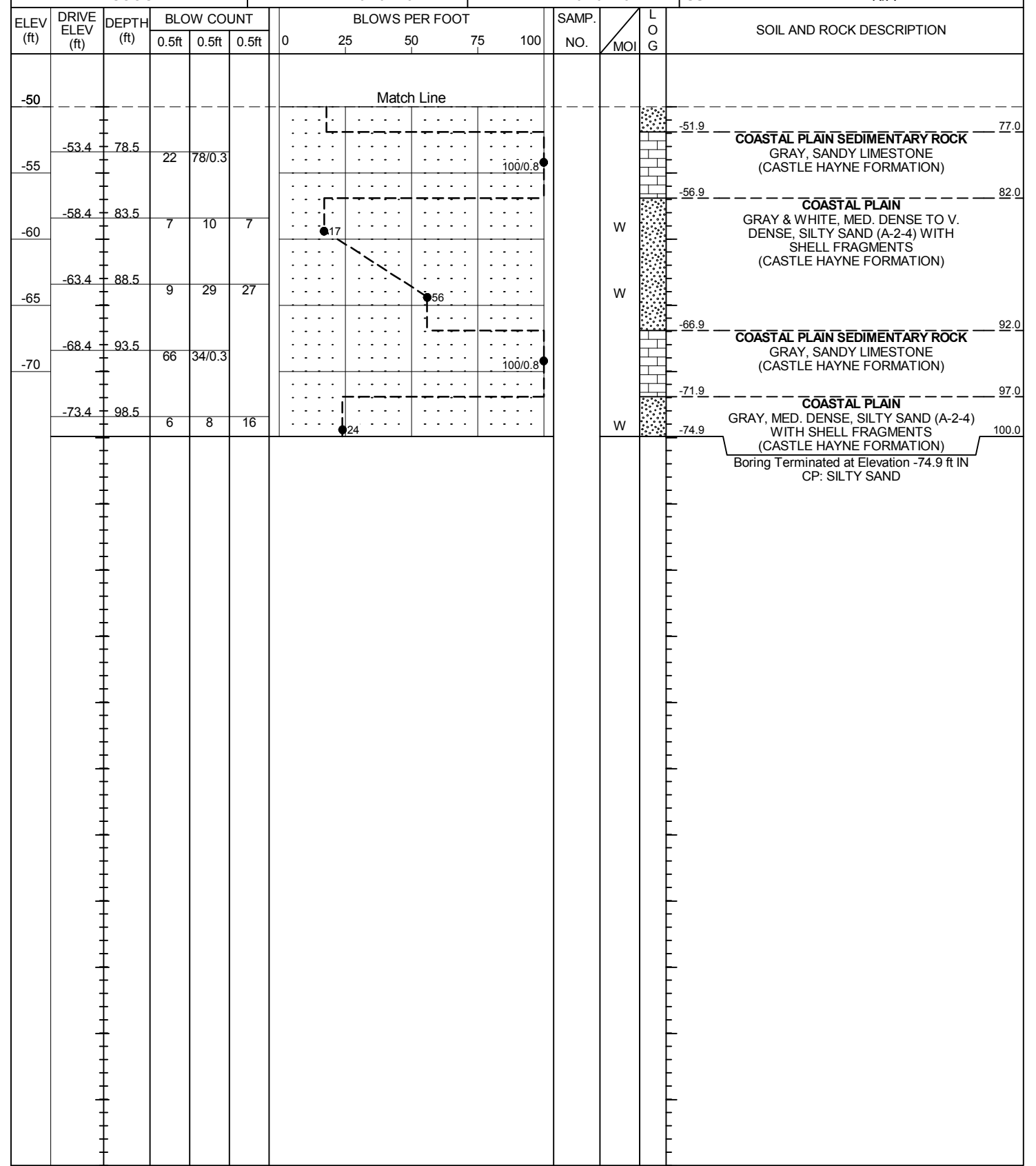
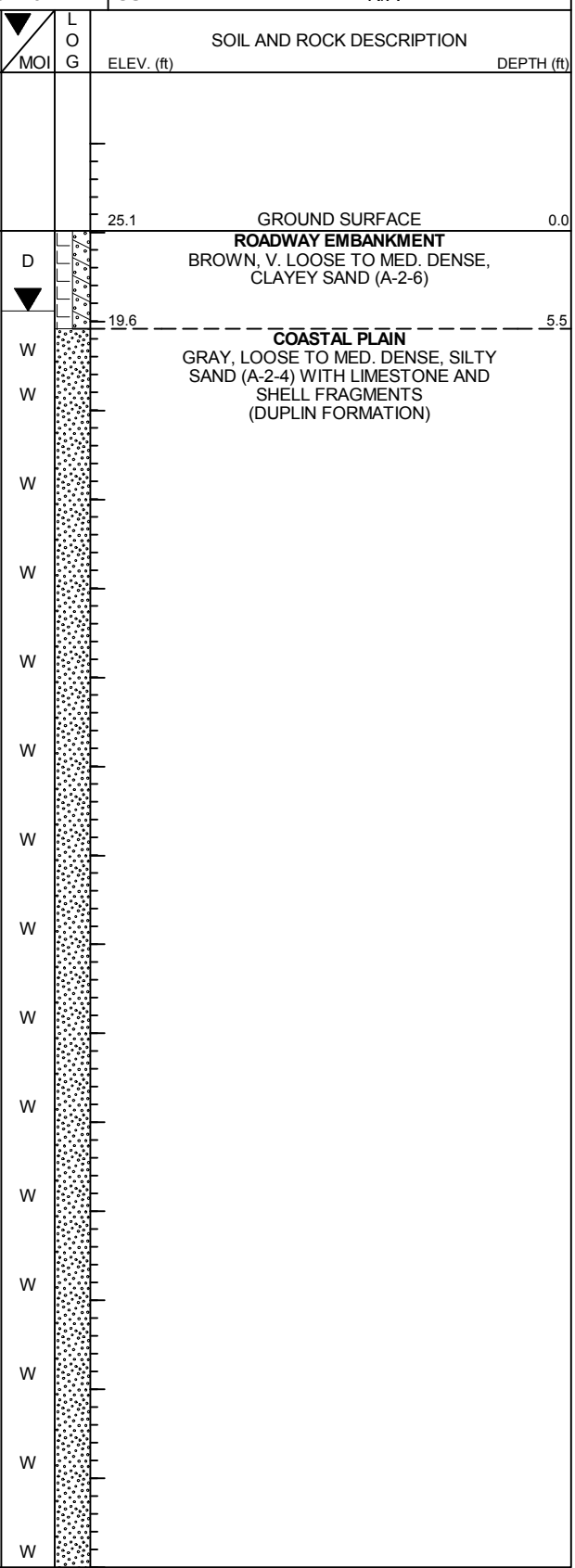


# NCDOT GEOTECHNICAL ENGINEERING UNIT BORELOG REPORT

WBS 45492.1.1		TIP R-5516		COUNTY CRAVEN		GEOLOGIST M. WITMORE									
SITE DESCRIPTION BRIDGE NO. 270 ON -YEB01- OVER -L- (US 70)							GROUND WTR (ft)								
BORING NO. B1-A		STATION 30+77		OFFSET 7 ft LT		ALIGNMENT -YEB01-									
COLLAR ELEV. 25.1 ft		TOTAL DEPTH 100.0 ft		NORTHING 431,456		EASTING 2,616,660									
DRILL RIG/HAMMER EFF./DATE MID3964 CME-45C 83% 08/07/2014			DRILL METHOD Mud Rotary		HAMMER TYPE Automatic										
DRILLER M. COOGAN		START DATE 07/07/15		COMP. DATE 07/07/15		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					
30															
25	24.1	1.0	3	3	8										25.1
	21.6	3.5	WOH	1	1										
20	19.1	6.0	9	9	10										19.6
	16.6	8.5	2	3	3										
15															
	11.6	13.5	4	5	7										
10															
	6.6	18.5	4	4	3										
5															
	1.6	23.5	5	4	3										
0															
	-3.4	28.5	8	8	7										
-5															
	-8.4	33.5	5	4	5										
-10															
	-13.4	38.5	10	11	12										
-15															
	-18.4	43.5	3	4	4										
-20															
	-23.4	48.5	3	4	4										
-25															
	-28.4	53.5	10	13	9										
-30															
	-33.4	58.5	4	6	5										
-35															
	-38.4	63.5	12	6	7										
-40															
	-43.4	68.5	4	6	5										
-45															
	-48.4	73.5	21	12	6										
-50															

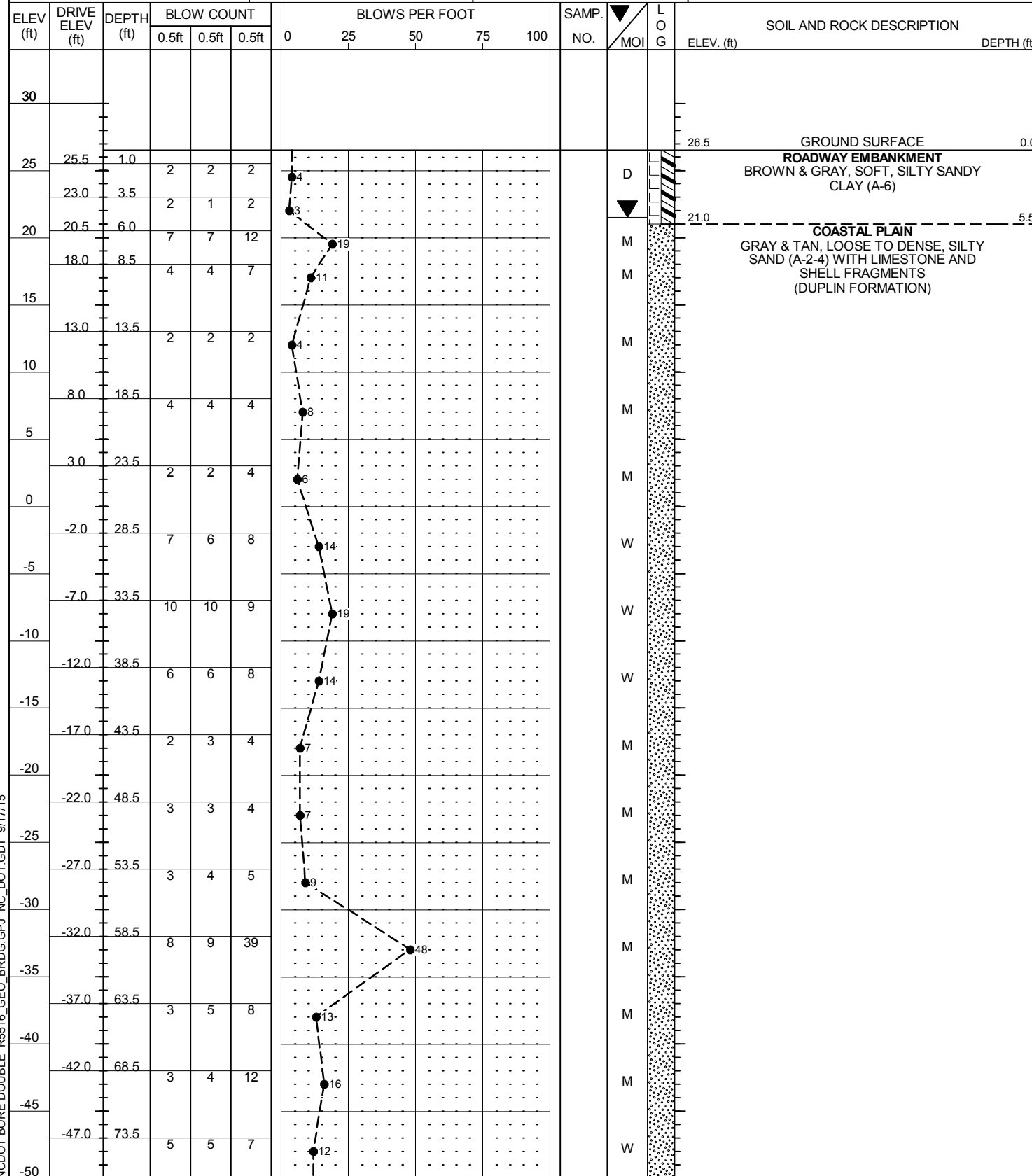
WBS 45492.1.1		TIP R-5516		COUNTY CRAVEN		GEOLOGIST M. WITMORE									
SITE DESCRIPTION BRIDGE NO. 270 ON -YEB01- OVER -L- (US 70)							GROUND WTR (ft)								
BORING NO. B1-A		STATION 30+77		OFFSET 7 ft LT		ALIGNMENT -YEB01-									
COLLAR ELEV. 25.1 ft		TOTAL DEPTH 100.0 ft		NORTHING 431,456		EASTING 2,616,660									
DRILL RIG/HAMMER EFF./DATE MID3964 CME-45C 83% 08/07/2014			DRILL METHOD Mud Rotary		HAMMER TYPE Automatic										
DRILLER M. COOGAN		START DATE 07/07/15		COMP. DATE 07/07/15		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					
-50															
	-53.4	78.5	22	78/0.3											
-55															
	-58.4	83.5	7	10	7										
-60															
	-63.4	88.5	9	29	27										
-65															
	-68.4	93.5	66	34/0.3											
-70															
	-73.4	98.5	6	8	16										

NCDOT BORE DOUBLE R5516\_GEO\_BRDG.GPJ NC\_DOT.GDT 9/17/15

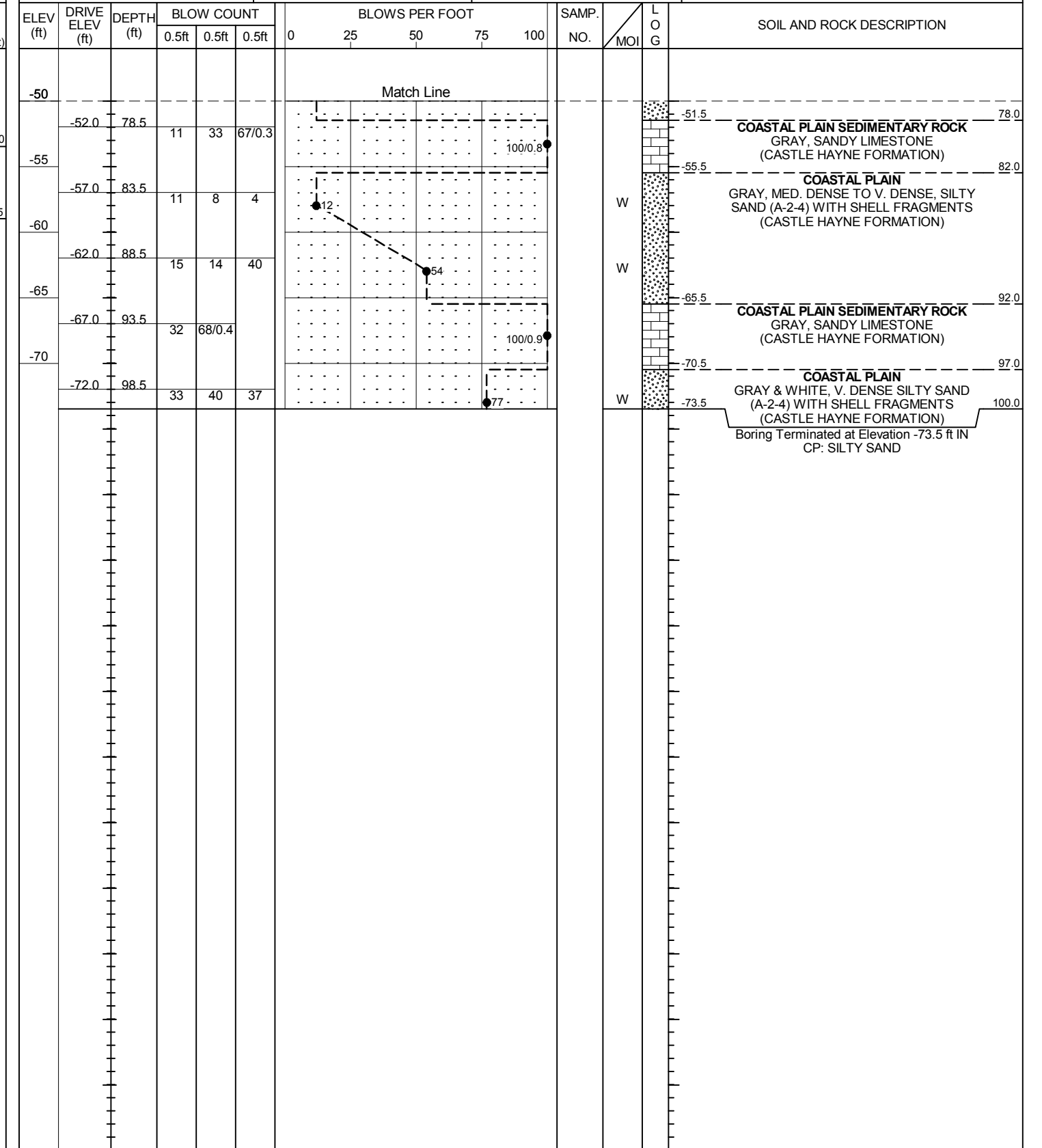


**NCDOT GEOTECHNICAL ENGINEERING UNIT**  
**BORELOG REPORT**

WBS 45492.1.1	TIP R-5516	COUNTY CRAVEN	GEOLOGIST M. WITMORE
SITE DESCRIPTION BRIDGE NO. 270 ON -YEB01- OVER -L- (US 70)			GROUND WTR (ft)
BORING NO. B1-B	STATION 30+79	OFFSET 19 ft RT	ALIGNMENT -YEB01-
COLLAR ELEV. 26.5 ft	TOTAL DEPTH 100.0 ft	NORTHING 431,432	EASTING 2,616,649
DRILL RIG/HAMMER EFF./DATE MID3964 CME-45C 83% 08/07/2014		DRILL METHOD Mud Rotary	HAMMER TYPE Automatic
DRILLER M. COOGAN	START DATE 07/06/15	COMP. DATE 07/06/15	SURFACE WATER DEPTH N/A



WBS 45492.1.1	TIP R-5516	COUNTY CRAVEN	GEOLOGIST M. WITMORE
SITE DESCRIPTION BRIDGE NO. 270 ON -YEB01- OVER -L- (US 70)			GROUND WTR (ft)
BORING NO. B1-B	STATION 30+79	OFFSET 19 ft RT	ALIGNMENT -YEB01-
COLLAR ELEV. 26.5 ft	TOTAL DEPTH 100.0 ft	NORTHING 431,432	EASTING 2,616,649
DRILL RIG/HAMMER EFF./DATE MID3964 CME-45C 83% 08/07/2014		DRILL METHOD Mud Rotary	HAMMER TYPE Automatic
DRILLER M. COOGAN	START DATE 07/06/15	COMP. DATE 07/06/15	SURFACE WATER DEPTH N/A



NCDOT BORE DOUBLE R5516\_GEO\_BRDG.GPJ NC\_DOT.GDT 9/17/15

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

WBS 45492.1.1	TIP R-5516	COUNTY CRAVEN	GEOLOGIST M. WITMORE
SITE DESCRIPTION BRIDGE NO. 270 ON -YEB01- OVER -L- (US 70)			GROUND WTR (ft)
BORING NO. B2-A	STATION 32+28	OFFSET 5 ft LT	ALIGNMENT -YEB01-
COLLAR ELEV. 27.9 ft	TOTAL DEPTH 114.8 ft	NORTHING 431,394	EASTING 2,616,797
DRILL RIG/HAMMER EFF./DATE MID5152 D-25 86% 05/19/2014		DRILL METHOD Mud Rotary	HAMMER TYPE Automatic
DRILLER B. FOWLER	START DATE 03/17/15	COMP. DATE 03/17/15	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	DEPTH (ft)	
			0.5ft	0.5ft	0.5ft	0	25	50	75	100						
30																
	26.9	1.0	3	4	3										27.9	GROUND SURFACE
	24.6	3.3	1	2	2											
	22.2	5.7	WOH	2	4											
	19.6	8.3	6	12	13											
	14.6	13.3	2	1	4										15.9	COASTAL PLAIN
	9.6	18.3	4	7	10											
	4.6	23.3	6	6	5											
	-0.4	28.3	3	4	7											
	-5.4	33.3	9	9	10											
	-10.4	38.3	10	12	15											
	-15.4	43.3	16	24	18											
	-20.4	48.3	4	4	6											
	-25.4	53.3	3	4	6											
	-30.4	58.3	4	3	4											
	-35.4	63.3	4	4	6											
	-40.4	68.3	3	4	8											
	-45.4	73.3	4	6	10											

WBS 45492.1.1	TIP R-5516	COUNTY CRAVEN	GEOLOGIST M. WITMORE
SITE DESCRIPTION BRIDGE NO. 270 ON -YEB01- OVER -L- (US 70)			GROUND WTR (ft)
BORING NO. B2-A	STATION 32+28	OFFSET 5 ft LT	ALIGNMENT -YEB01-
COLLAR ELEV. 27.9 ft	TOTAL DEPTH 114.8 ft	NORTHING 431,394	EASTING 2,616,797
DRILL RIG/HAMMER EFF./DATE MID5152 D-25 86% 05/19/2014		DRILL METHOD Mud Rotary	HAMMER TYPE Automatic
DRILLER B. FOWLER	START DATE 03/17/15	COMP. DATE 03/17/15	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	DEPTH (ft)	
			0.5ft	0.5ft	0.5ft	0	25	50	75	100						
-50	-50.4	78.3	16	73	27/0.3											
	-55.4	83.3	8	6	9											
	-60.4	88.3	14	71	29/0.0											
	-65.4	93.3	6	10	16											
	-70.4	98.3	95	5/0.0												
	-75.4	103.3	9	10	23											
	-80.4	108.3	6	12	12											
	-85.4	113.3	7	5	7											

NCDOT BORE DOUBLE R5516\_GEO\_BRDG.GPJ NC\_DOT.GDT 9/17/15

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

WBS 45492.1.1		TIP R-5516		COUNTY CRAVEN		GEOLOGIST M. WITMORE										
SITE DESCRIPTION BRIDGE NO. 270 ON -YEB01- OVER -L- (US 70)							GROUND WTR (ft)									
BORING NO. B2-B		STATION 32+35		OFFSET 17 ft RT		ALIGNMENT -YEB01-										
COLLAR ELEV. 29.0 ft		TOTAL DEPTH 89.8 ft		NORTHING 431,370		EASTING 2,616,796										
DRILL RIG/HAMMER EFF./DATE MID3964 CME-45C 83% 08/07/2014			DRILL METHOD Mud Rotary		HAMMER TYPE Automatic											
DRILLER M. COOGAN		START DATE 07/10/15		COMP. DATE 07/10/15		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						
30																
	28.0	1.0	5	4	5											
25	25.4	3.6	1	1	1											
	22.9	6.1	WOH	2	2											
20	20.4	8.6	2	1	2											
	15.4	13.6	2	1	2											
15	10.4	18.6	2	2	2											
	5.4	23.6	1	2	2											
5	0.4	28.6	1	WOH	WOH											
0	-4.6	33.6	WOR	WOR	WOR											
-5	-9.6	38.6	13	15	21											
-10	-14.6	43.6	18	14	10											
-15	-19.6	48.6	4	6	10											
-20	-24.6	53.6	3	4	4											
-25	-29.6	58.6	4	2	3											
-30	-34.6	63.6	3	2	3											
-35	-39.6	68.6	3	2	4											
-40	-44.6	73.6	2	4	5											
-45	-49.6	78.6														

WBS 45492.1.1		TIP R-5516		COUNTY CRAVEN		GEOLOGIST M. WITMORE										
SITE DESCRIPTION BRIDGE NO. 270 ON -YEB01- OVER -L- (US 70)							GROUND WTR (ft)									
BORING NO. B2-B		STATION 32+35		OFFSET 17 ft RT		ALIGNMENT -YEB01-										
COLLAR ELEV. 29.0 ft		TOTAL DEPTH 89.8 ft		NORTHING 431,370		EASTING 2,616,796										
DRILL RIG/HAMMER EFF./DATE MID3964 CME-45C 83% 08/07/2014			DRILL METHOD Mud Rotary		HAMMER TYPE Automatic											
DRILLER M. COOGAN		START DATE 07/10/15		COMP. DATE 07/10/15		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						
-50			60	14	26											
	-54.6	83.6	49	14	68											
-55	-59.6	88.6	13	26	74/0.2											
-60																

NCDOT BORE DOUBLE R5516\_GEO\_BRDG.GPJ NC\_DOT.GDT 9/17/15

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

WBS 45492.1.1	TIP R-5516	COUNTY CRAVEN	GEOLOGIST M. WITMORE	
SITE DESCRIPTION BRIDGE NO. 270 ON -YEB01- OVER -L- (US 70)				GROUND WTR (ft)
BORING NO. EB2-A	STATION 33+63	OFFSET 17 ft LT	ALIGNMENT -YEB01-	0 HR. 8.2
COLLAR ELEV. 27.8 ft	TOTAL DEPTH 98.9 ft	NORTHING 431,374	EASTING 2,616,929	24 HR. 6.6
DRILL RIG/HAMMER EFF./DATE MID3964 CME-45C 83% 08/07/2014		DRILL METHOD Mud Rotary	HAMMER TYPE Automatic	
DRILLER M. COOGAN	START DATE 07/08/15	COMP. DATE 07/08/15	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						
30														27.8	GROUND SURFACE	0.0
	26.8	1.0	2	3	2							D	COASTAL PLAIN			
	24.5	3.3	3	2	2							W	BROWN, SOFT TO MED. STIFF, SANDY CLAY (A-6) (DUPLIN FORMATION)			
	22.0	5.8	3	4	5							W	COASTAL PLAIN			
	19.5	8.3	2	6	7							W	BROWN & GRAY, V. LOOSE TO DENSE, SILTY SAND (A-2-4) WITH SHELL AND LIMESTONE FRAGMENTS (DUPLIN FORMATION)			
	14.5	13.3	2	5	7							W				
	9.5	18.3	4	4	6							W				
	4.5	23.3	1	1	2							W				
	-0.5	28.3	8	6	6							W				
	-5.5	33.3	8	7	6							W				
	-10.5	38.3	14	13	12							W				
	-15.5	43.3	7	7	8							W				
	-20.5	48.3	3	3	4							W				
	-25.5	53.3	3	4	4							W				
	-30.5	58.3	15	16	10							W				
	-35.5	63.3	3	3	7							W				
	-40.5	68.3	3	3	3							W				
	-45.5	73.3	3	2	6							W				

WBS 45492.1.1	TIP R-5516	COUNTY CRAVEN	GEOLOGIST M. WITMORE	
SITE DESCRIPTION BRIDGE NO. 270 ON -YEB01- OVER -L- (US 70)				GROUND WTR (ft)
BORING NO. EB2-A	STATION 33+63	OFFSET 17 ft LT	ALIGNMENT -YEB01-	0 HR. 8.2
COLLAR ELEV. 27.8 ft	TOTAL DEPTH 98.9 ft	NORTHING 431,374	EASTING 2,616,929	24 HR. 6.6
DRILL RIG/HAMMER EFF./DATE MID3964 CME-45C 83% 08/07/2014		DRILL METHOD Mud Rotary	HAMMER TYPE Automatic	
DRILLER M. COOGAN	START DATE 07/08/15	COMP. DATE 07/08/15	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				
-50	-50.5	78.3	5	29	7									
												W		
	-56.1	83.9	60/0.1									W	COASTAL PLAIN SEDIMENTARY ROCK	
	-60.5	88.3	60/0.0									W	GRAY, SANDY LIMESTONE (CASTLE HAYNE FORMATION)	
	-65.5	93.3	28	28	38							W	COASTAL PLAIN	
	-70.5	98.3	74	26/0.1	100/0.6							W	GRAY, V. DENSE, SILTY SAND (A-2-4) (CASTLE HAYNE FORMATION)	
													COASTAL PLAIN SEDIMENTARY ROCK	
													GRAY, SANDY LIMESTONE (CASTLE HAYNE FORMATION)	
													Boring Terminated at Elevation -71.1 ft IN CP: SANDY LIMESTONE	

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### SOIL TEST RESULTS

SAMPLE NO.	OFFSET	STATION	ALIGNMENT	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT				% PASSING (SIEVES)			% MOISTURE	% ORGANIC
								C.SAND	F.SAND	SILT	CLAY	10	40	200		
SS-457	5' LT	32+28	-YEBO1-	3.3-4.8	A-6	39	23	9.7	40.5	10.9	38.9	96.2	96.9	51.2	24.9	-
SS-461	5' LT	32+28	-YEBO1-	18.3-19.8	A-2-4	-	-	62.8	32.8	1.4	3.0	99.7	79.6	5.2	19.3	-
SS-468	5' LT	32+28	-YEBO1-	53.3-54.8	A-2-4	30	7	21.2	63.3	6.0	9.5	99.0	90.8	21.0	32.8	-

TESTED BY: Michael P. Sinner

NCDOT NO.: 129-03-0411