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REFERENCE: U-5796

PROJECT: 54039

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

STRUCTURE
SUBSURFACE INVESTIGATION

COUNTY WAYNE
PROJECT DESCRIPTION DIVISION 4 - US 117 AND
SR 1120 (O'BERRY ROAD) INTERCHANGE

SITE DESCRIPTION BRIDGE ON -Y8- (O'BERRY ROAD)
AT STA. 26+20 OVER -L- (US 117) AT STA. 27+42

CONTENTS

SHEET NO.	DESCRIPTION
1	TITLE SHEET
2	LEGEND
3	SITE PLAN
4	PROFILE
5-7	BORE LOGS

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	U-5796	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 (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

E. H. SMITH

M. A. EKLUND

R. T. ASHLEY

INVESTIGATED BY TERRACON CONSULTANTS

DRAWN BY W. D. FIELDS

CHECKED BY M. J. ALEXANDER

SUBMITTED BY TERRACON CONSULTANTS

DATE MARCH 2016



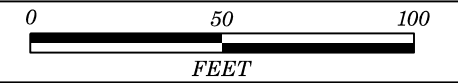
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DATE

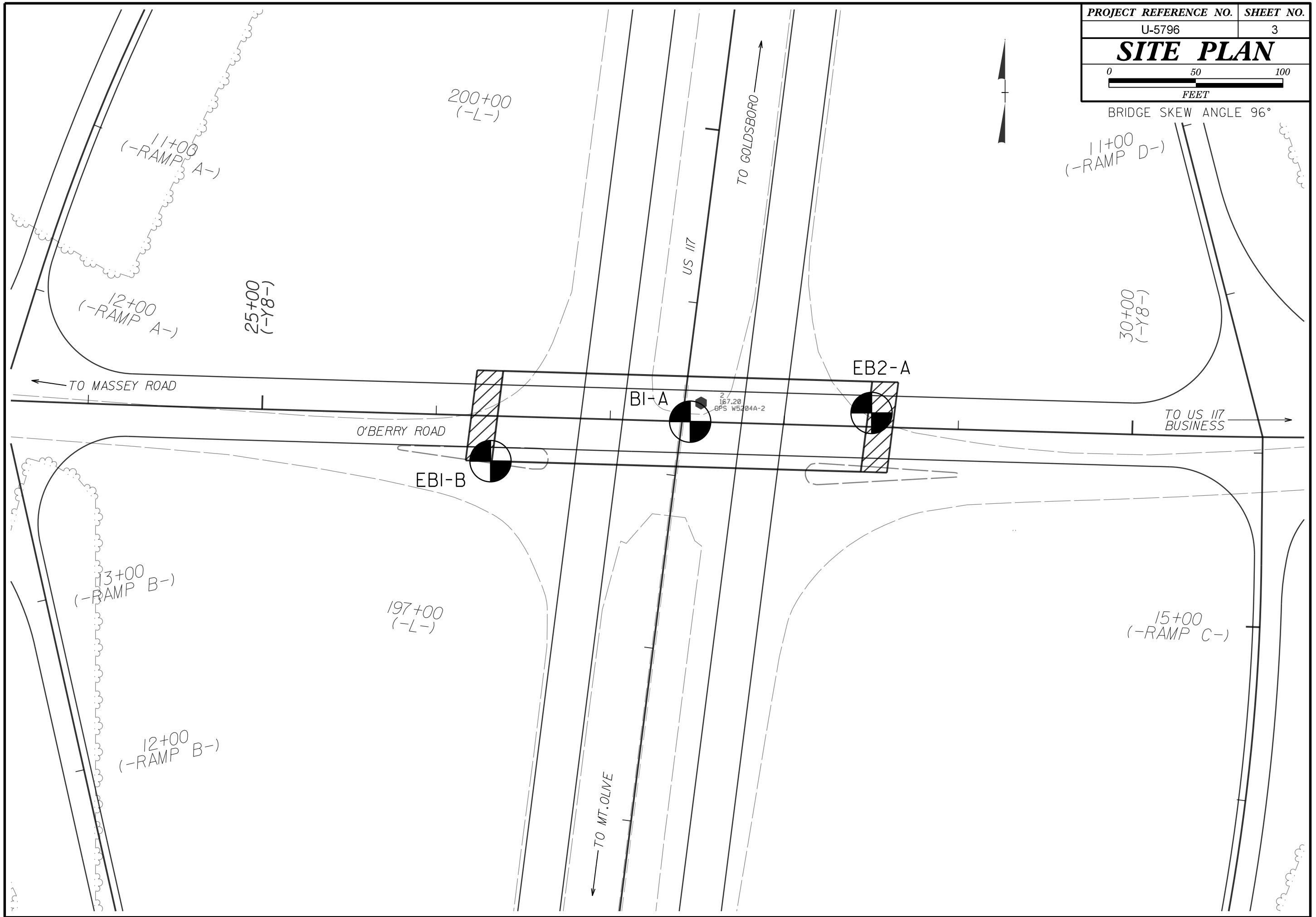
DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED

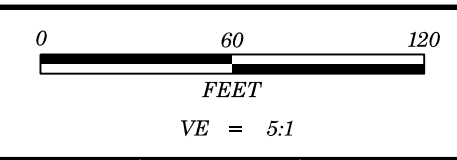
Terracon
Consulting Engineers & Scientists
2401 BRENTWOOD ROAD, SUITE 107
RALEIGH, NORTH CAROLINA 27604
PHONE: (919) 873-2211 FAX: (919) 873-9555
NC REGISTERED FIRM: F-0869

SITE PLAN

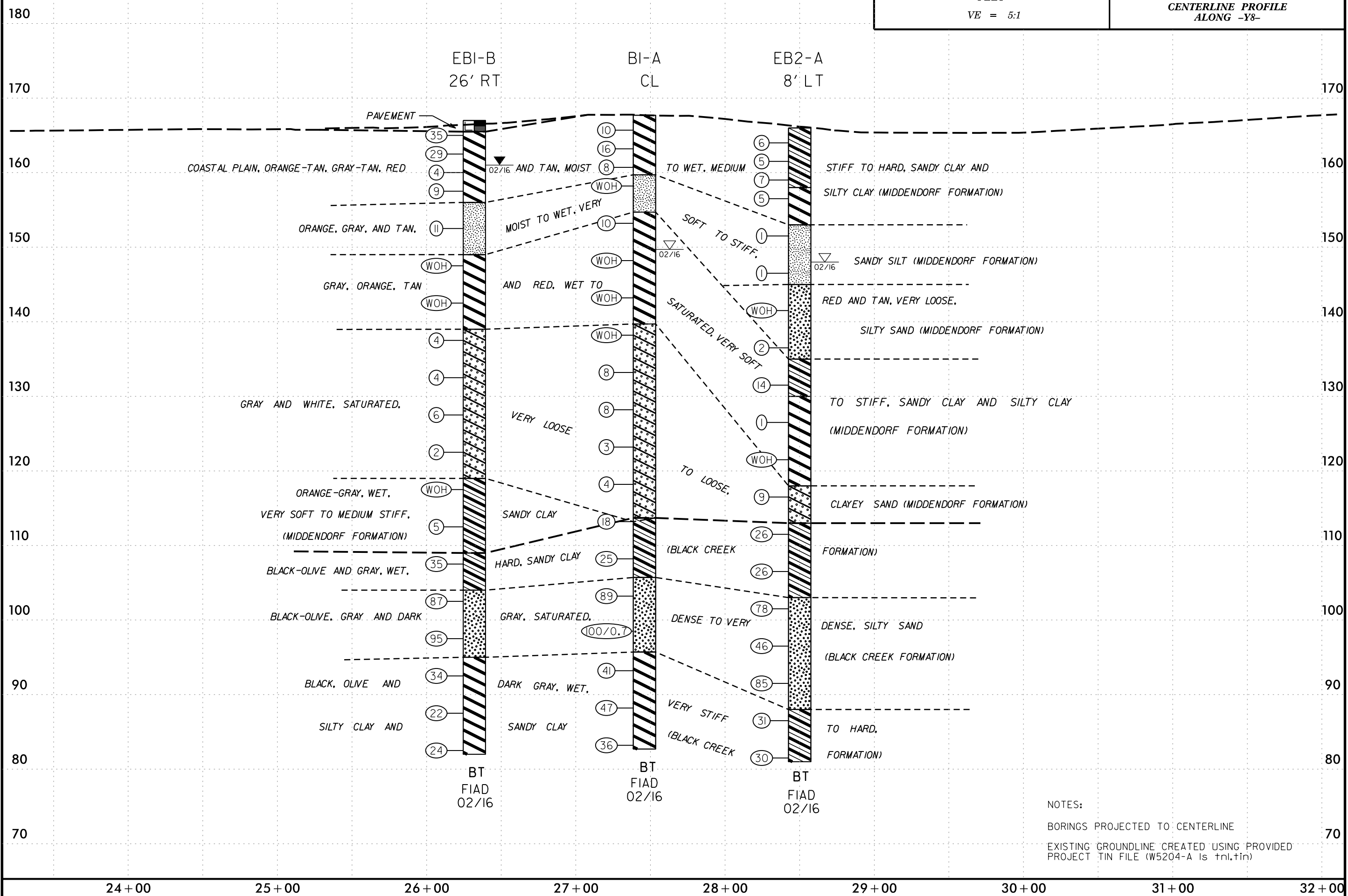


BRIDGE SKEW ANGLE 96°





PROJECT REFERENCE NO.	SHEET NO.
U-5796	4
CENTERLINE PROFILE ALONG -Y8-	

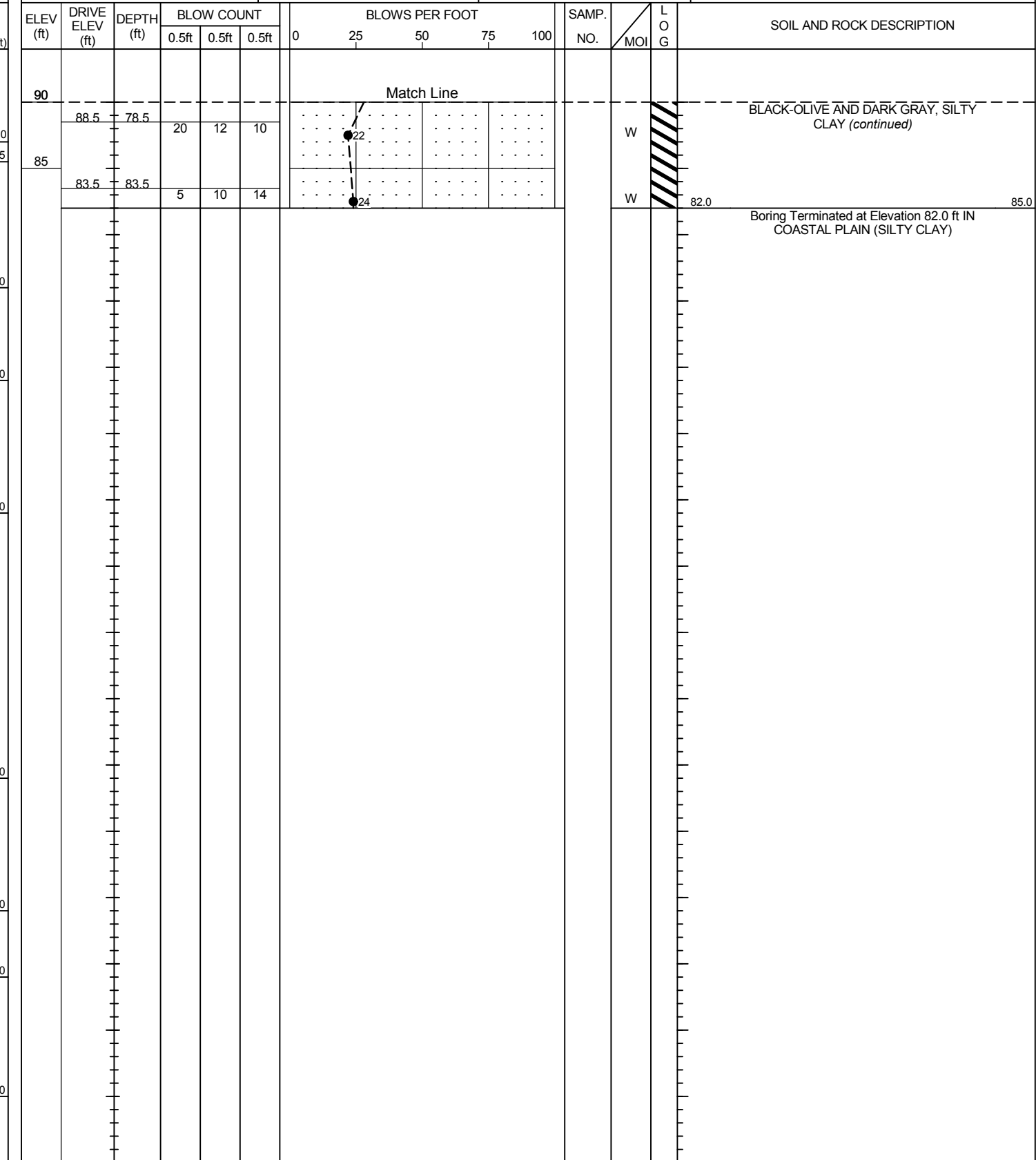
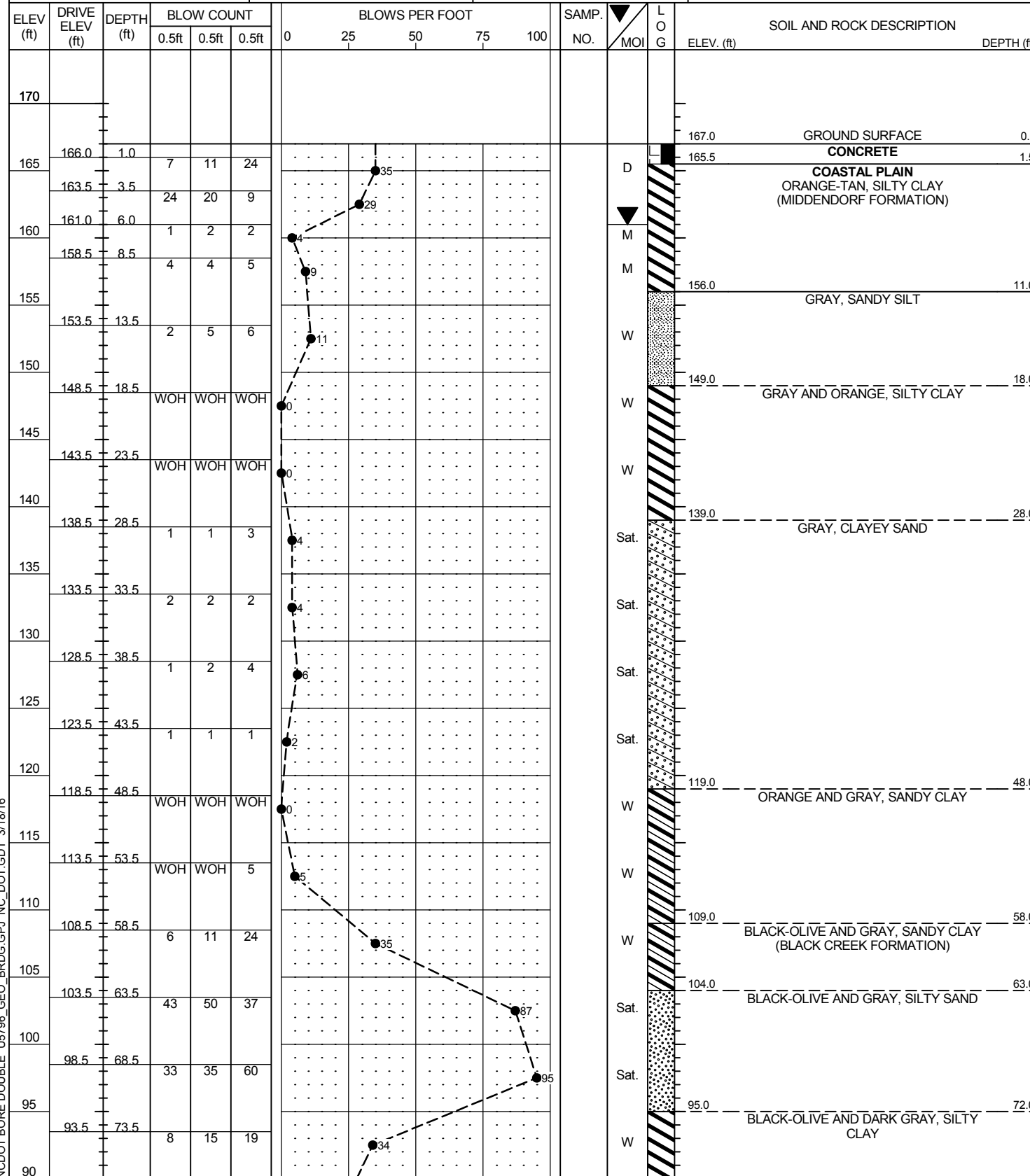


NOTES:
 BORINGS PROJECTED TO CENTERLINE
 EXISTING GROUNDLINE CREATED USING PROVIDED
 PROJECT TIN FILE (W5204-A Is tnl.tin)

GEOTECHNICAL BORING REPORT
BORE LOG

WBS 54039.1.FD1	TIP U-5796	COUNTY WAYNE	GEOLOGIST SMITH, E. H.
SITE DESCRIPTION DIVISION 4 - US 117 & SR 1120 (O'BERRY ROAD) INTERCHANGE			GROUND WTR (ft)
BORING NO. EB1-B	STATION 26+32	OFFSET 26 ft RT	ALIGNMENT -Y8-
COLLAR ELEV. 167.0 ft	TOTAL DEPTH 85.0 ft	NORTHING 553,906	EASTING 2,282,688
DRILL RIG/HAMMER EFF./DATE TER346 DIEDRICH D-50 93% 09/19/2015		DRILL METHOD Mud Rotary	HAMMER TYPE Automatic
DRILLER EKLUND, M. A.	START DATE 02/02/16	COMP. DATE 02/02/16	SURFACE WATER DEPTH N/A

WBS 54039.1.FD1	TIP U-5796	COUNTY WAYNE	GEOLOGIST SMITH, E. H.
SITE DESCRIPTION DIVISION 4 - US 117 & SR 1120 (O'BERRY ROAD) INTERCHANGE			GROUND WTR (ft)
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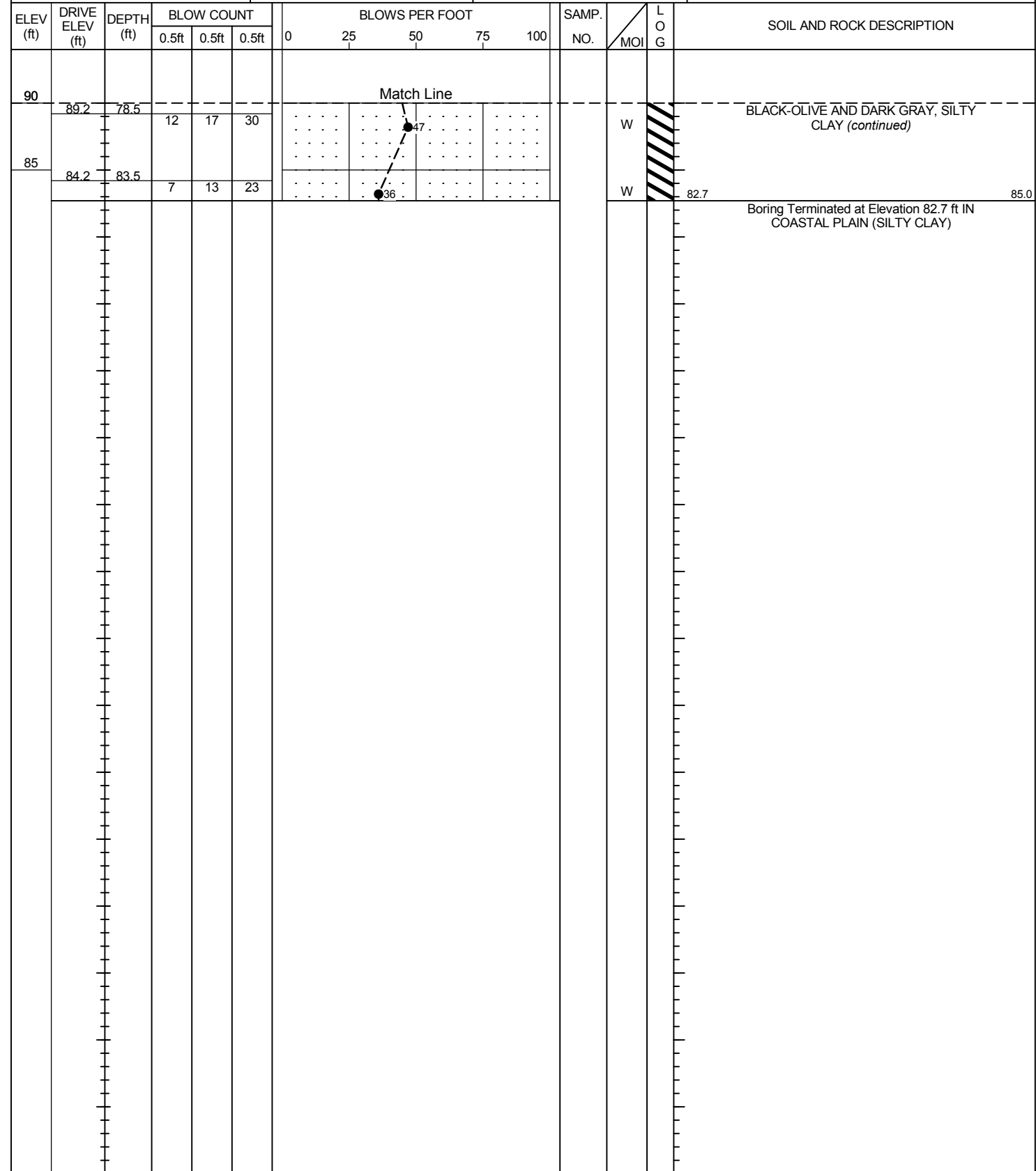
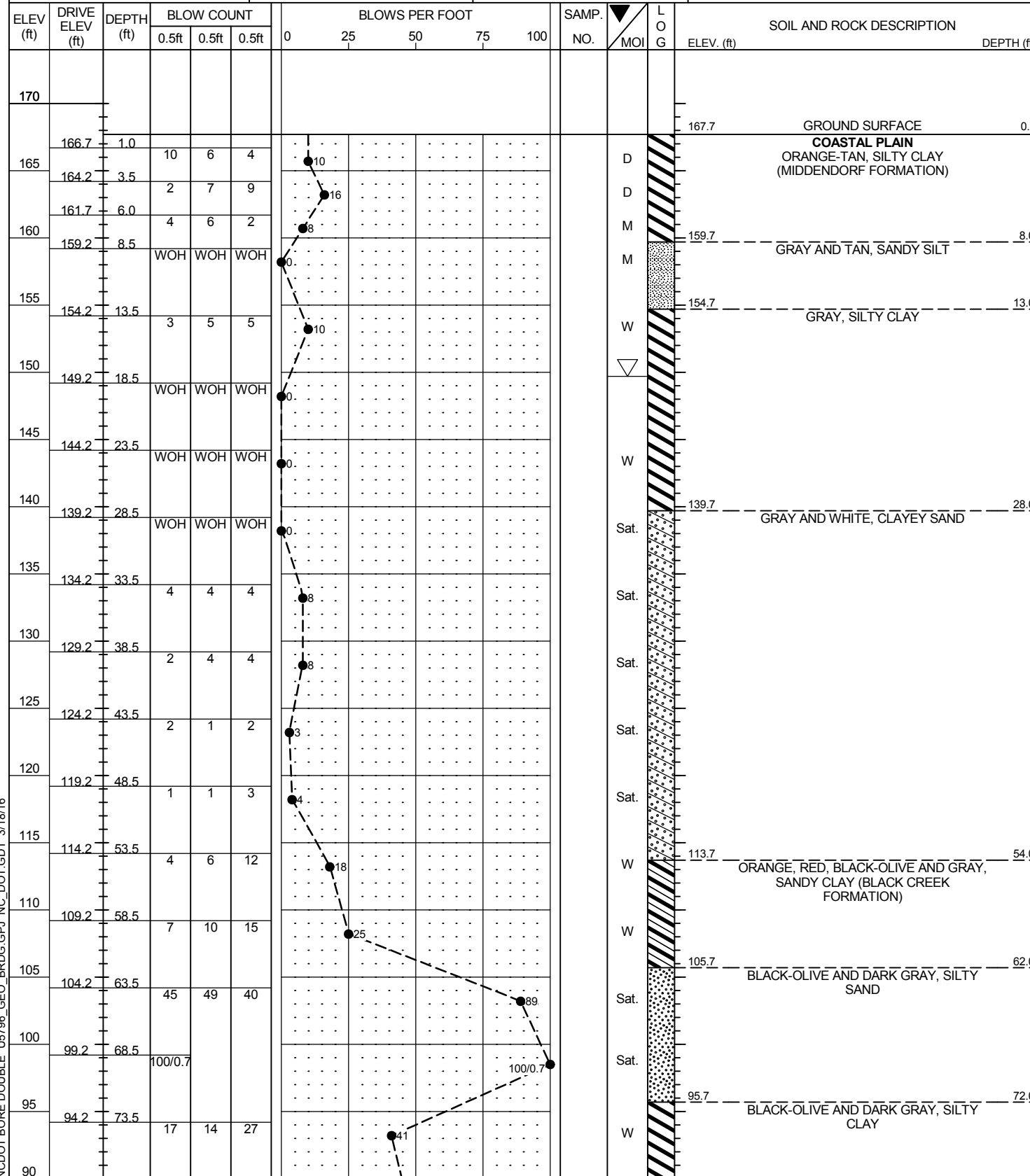


NCDOT BORE DOUBLE U5796_GEO_BRDG.GPJ_NC_DOT.GDT 3/18/16

GEOTECHNICAL BORING REPORT
BORE LOG

WBS 54039.1.FD1	TIP U-5796	COUNTY WAYNE	GEOLOGIST SMITH, E. H.
SITE DESCRIPTION DIVISION 4 - US 117 & SR 1120 (O'BERRY ROAD) INTERCHANGE			GROUND WTR (ft)
BORING NO. B1-A	STATION 27+46	OFFSET CL	ALIGNMENT -Y8-
COLLAR ELEV. 167.7 ft	TOTAL DEPTH 85.0 ft	NORTHING 553,929	EASTING 2,282,802
DRILL RIG/HAMMER EFF./DATE TER346 DIEDRICH D-50 93% 09/19/2015		DRILL METHOD Mud Rotary	HAMMER TYPE Automatic
DRILLER EKLUND, M. A.	START DATE 02/03/16	COMP. DATE 02/03/16	SURFACE WATER DEPTH N/A

WBS 54039.1.FD1	TIP U-5796	COUNTY WAYNE	GEOLOGIST SMITH, E. H.
SITE DESCRIPTION DIVISION 4 - US 117 & SR 1120 (O'BERRY ROAD) INTERCHANGE			GROUND WTR (ft)
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NCDOT BORE DOUBLE U5796_GEO_BRDG.GPJ_NC_DOT.GDT 3/18/16

GEOTECHNICAL BORING REPORT
BORE LOG

WBS 54039.1.FD1		TIP U-5796		COUNTY WAYNE		GEOLOGIST SMITH, E. H.										
SITE DESCRIPTION DIVISION 4 - US 117 & SR 1120 (O'BERRY ROAD) INTERCHANGE							GROUND WTR (ft)									
BORING NO. EB2-A		STATION 28+50		OFFSET 8 ft LT		ALIGNMENT -Y8-										
COLLAR ELEV. 166.0 ft		TOTAL DEPTH 85.0 ft		NORTHING 553,934		EASTING 2,282,907										
DRILL RIG/HAMMER EFF./DATE TER346 DIEDRICH D-50 93% 09/19/2015			DRILL METHOD Mud Rotary		HAMMER TYPE Automatic											
DRILLER EKLUND, M. A.		START DATE 02/01/16		COMP. DATE 02/02/16		SURFACE WATER DEPTH N/A										
ELEV (ft)	DRIVE ELEV (ft)	DEPTH (ft)	BLOW COUNT			BLOWS PER FOOT					SAMP. NO.	LOG MOI	LOG	SOIL AND ROCK DESCRIPTION	DEPTH (ft)	
			0.5ft	0.5ft	0.5ft	0	25	50	75	100						
170																
165	165.0	1.0	4	3	3											
	162.5	3.5	2	2	3											
160	160.0	6.0	3	3	4											
	157.5	8.5	2	2	3											
155	152.5	13.5	WOH	WOH	1											
150	147.5	18.5	1	1	0											
145	142.5	23.5	WOH	WOH	WOH											
140	137.5	28.5	1	1	1											
135	132.5	33.5	3	6	8											
130	127.5	38.5	1	1	0											
125	122.5	43.5	WOH	WOH	WOH											
120	117.5	48.5	2	3	6											
115	112.5	53.5	6	10	16											
110	107.5	58.5	5	9	17											
105	102.5	63.5	15	30	48											
100	97.5	68.5	49	23	23											
95	92.5	73.5	22	43	42											
90																

WBS 54039.1.FD1		TIP U-5796		COUNTY WAYNE		GEOLOGIST SMITH, E. H.										
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DRILLER EKLUND, M. A.		START DATE 02/01/16		COMP. DATE 02/02/16		SURFACE WATER DEPTH N/A										
ELEV (ft)	DRIVE ELEV (ft)	DEPTH (ft)	BLOW COUNT			BLOWS PER FOOT					SAMP. NO.	LOG MOI	LOG	SOIL AND ROCK DESCRIPTION	DEPTH (ft)	
			0.5ft	0.5ft	0.5ft	0	25	50	75	100						
90																
	87.5	78.5	8	11	20											
85	82.5	83.5	9	14	16											

NCDOT BORE DOUBLE U5796_GEO_BRDG.GPJ NC_DOT_GDT 3/18/16

Match Line

88.0 BLACK, OLIVE AND GRAY, SILTY SAND (continued) 78.0

81.0 BLACK, OLIVE AND GRAY, SANDY CLAY 85.0

Boring Terminated at Elevation 81.0 ft IN COASTAL PLAIN (SANDY CLAY)

Other Samples:
ST-2 (10.0 - 12.4)