

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



STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	P-5206A	1	20

**STRUCTURE
 INVENTORY REPORT**

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PROJ. REFERENCE NO. P-5206A F.A. PROJ. _____
 COUNTY ROWAN
 PROJECT DESCRIPTION GRADE SEPARATION OVER NCRR/NS

SITE DESCRIPTION PROPOSED BRIDGE ON SR-1560
 OVER US 29 AND NORFOLK SOUTHERN RAILROAD

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 250-4088. NEITHER THE SUBSURFACE PLANS AND REPORTS, NOR THE FIELD BORING LOGS, ROCK CORES, OR SOIL TEST DATA ARE 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 (ON-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 THIS 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.

PERSONNEL

M. GRAGG
 R. DELOST
 F. WOODARD

INVESTIGATED BY R. DELOST

CHECKED BY S. PROVANCE

SUBMITTED BY K. WALKER

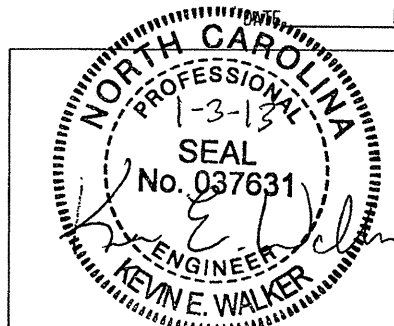
1-3-13

PROJECT: 52000.1.STR3T1B ID: P-5206A

DRAWN BY: W. SHUECRAFT/T. RIDEOUT

NOTE - THE INFORMATION CONTAINED HEREIN IS NOT IMPLIED OR GUARANTEED BY THE N. C. DEPARTMENT OF TRANSPORTATION AS BEING ACCURATE NOR IS IT CONSIDERED TO BE PART OF THE PLANS, SPECIFICATIONS, OR CONTRACT FOR THE PROJECT.

NOTE - 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.



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

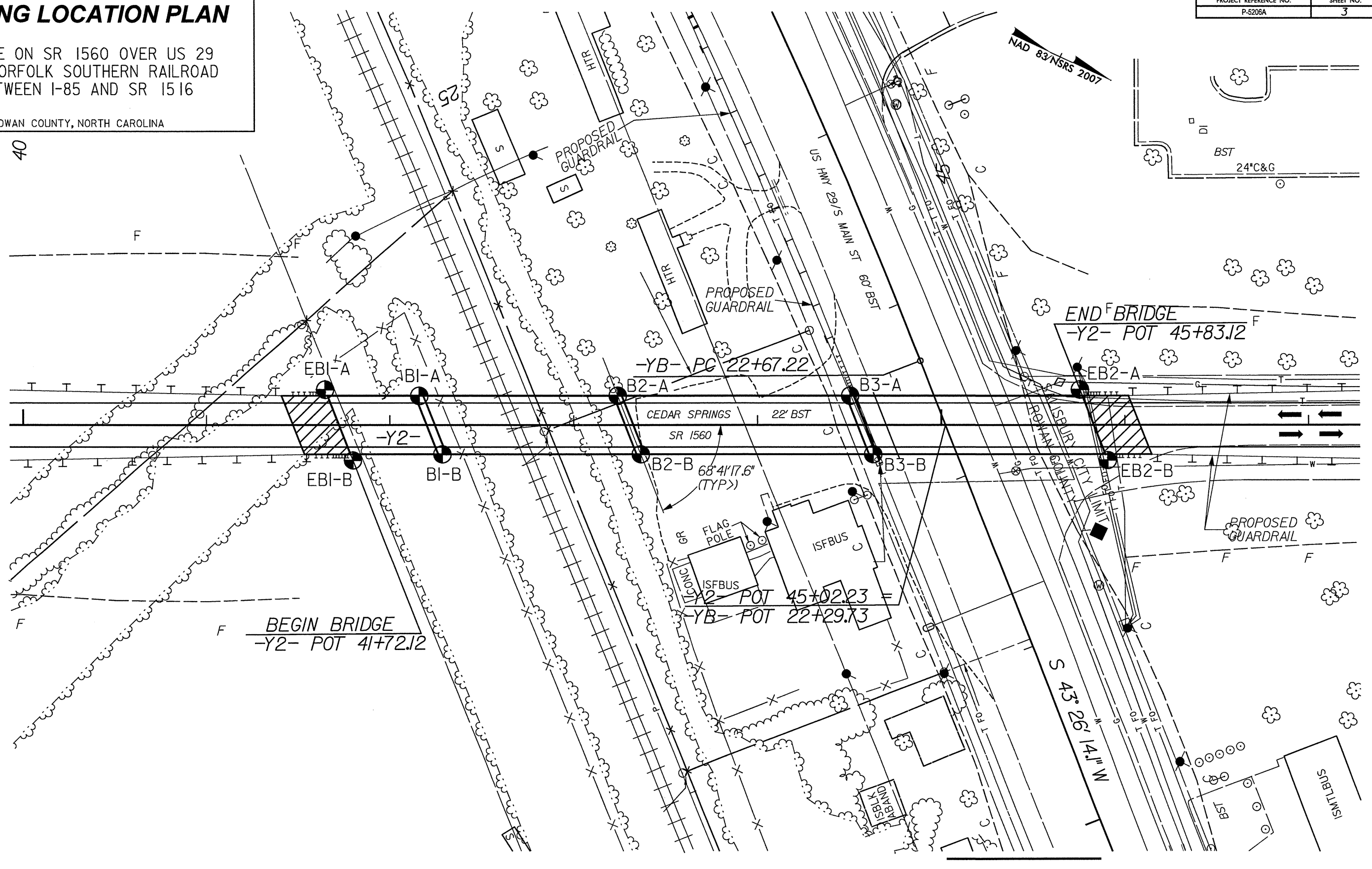
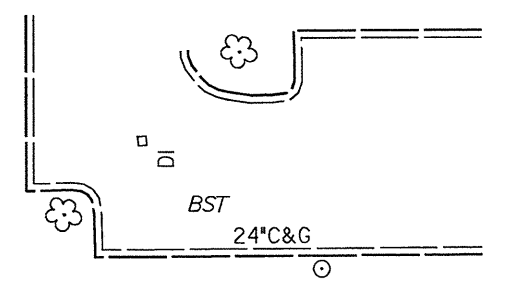
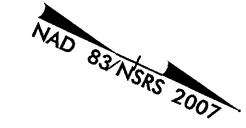
Main content table divided into sections: SOIL DESCRIPTION, GRADATION, ROCK DESCRIPTION, TERMS AND DEFINITIONS, SOIL LEGEND AND AASHTO CLASSIFICATION, MINERALOGICAL COMPOSITION, COMPRESSIBILITY, PERCENTAGE OF MATERIAL, GROUND WATER, MISCELLANEOUS SYMBOLS, ABBREVIATIONS, EQUIPMENT USED ON SUBJECT PROJECT, SOIL MOISTURE - CORRELATION OF TERMS, PLASTICITY, COLOR, TEXTURE OR GRAIN SIZE, CONSISTENCY OR DENSENESS, WEATHERING, ROCK HARDNESS, FRACTURE SPACING, BEDDING, INDURATION.

BORING LOCATION PLAN

BRIDGE ON SR 1560 OVER US 29
AND NORFOLK SOUTHERN RAILROAD
BETWEEN I-85 AND SR 1516

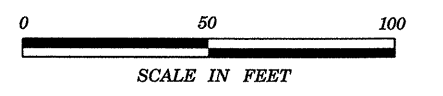
ROWAN COUNTY, NORTH CAROLINA

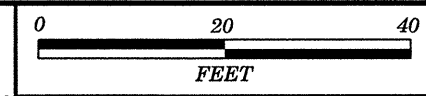
PROJECT REFERENCE NO. P-5206A	SHEET NO. 3
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BEGIN BRIDGE
-Y2- POT 41+72.12

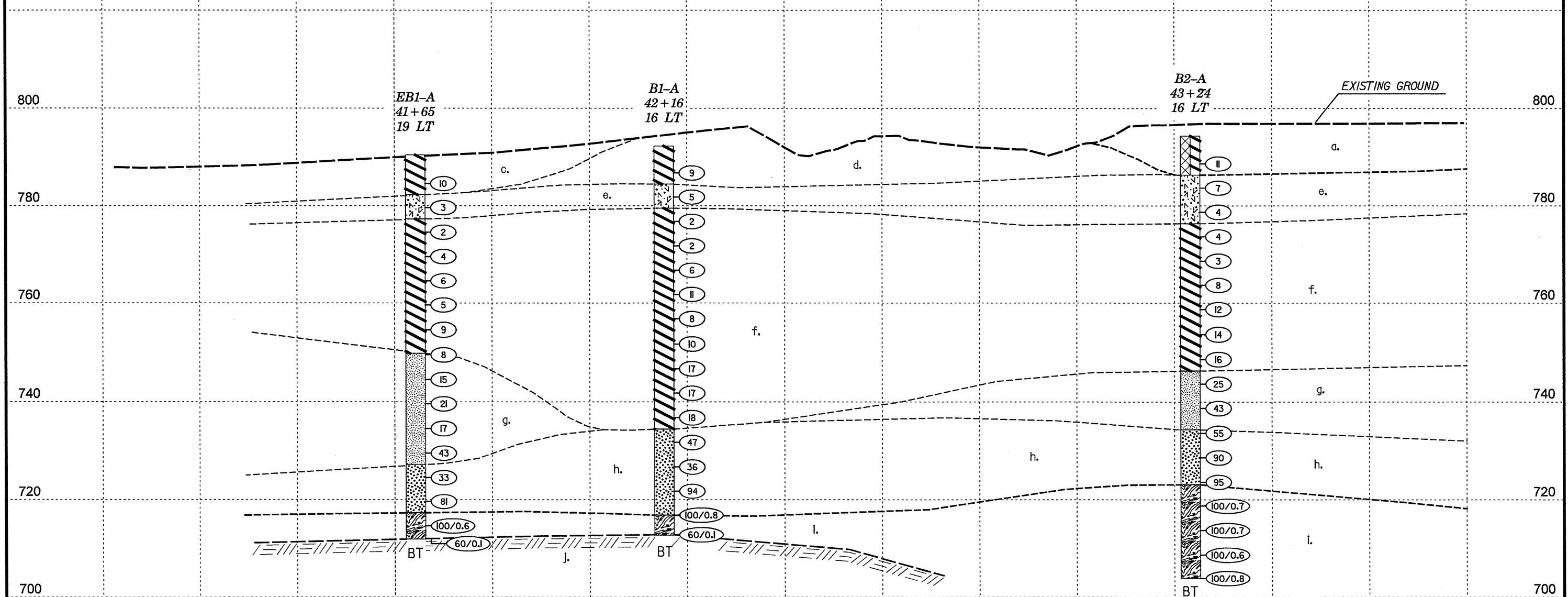
END BRIDGE
-Y2- POT 45+83.12





GENERALIZED SUBSURFACE PROFILE 16' Lt. of -Y2-

GROUNDLINE PROFILE OBTAINED FROM DTM PROVIDED BY NCDOT, RECEIVED 5-20-2011
 INFERRED STRATIGRAPHY IS DRAWN AT THE PROFILE OFFSET WITH THE BORINGS PROJECTED ONTO THE PROFILE



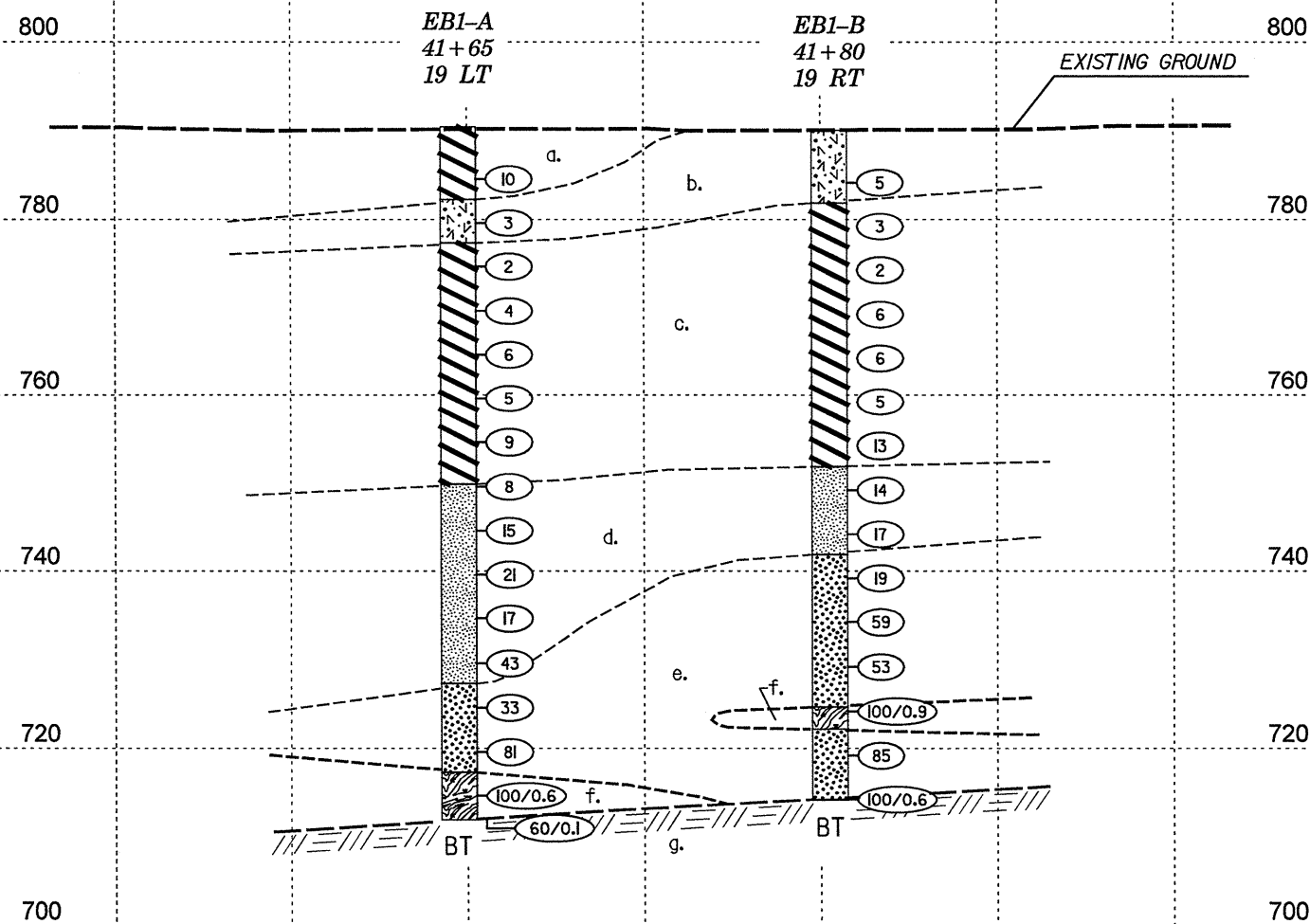
- a. **Artificial Fill** : Orange, red, stiff, dry, silty clay, w/f. to cse. grain sand, trc. rock frags. (A-7-5)
- b. **Artificial Fill** : Red, orange, tan, green, stiff, dry, f. to cse. sandy, micaceous, silty clay w/black cse. rock frags. & gravel. (A-7-6)
- c. **Residual** : Red, tan, white, stiff, dry, f. to cse. sandy, silty clay w/rock frags. in parts. (A-7-6)
- d. **Residual** : Red, tan, soft to stiff, dry to moist, micaceous, silty clay w/f. to cse. grain sand & trc. cse. black rock frags. & black veins. (A-7-5)
- e. **Residual** : Red, tan, orange, white, black, soft to med. stiff, moist, v. sandy, micaceous, silt w/trc. rock frags., root frags. (A-5)
- f. **Residual** : Orange, tan, white, green, pink, black, soft to v. stiff, dry to saturated, micaceous, saprolitic in parts, f. sandy, silty clay w/trcs. cse. grain sand, rock frags., black veining, calcareous in veins. (A-7-5)
- g. **Residual** : Green, red, orange, tan, white, black, clear, pink, v. stiff to hard, dry to moist, micaceous, saprolitic, f. to cse. grain sand & silt w/rock frags, quartz-mica veins & black veins in parts. (A-4)
- h. **Residual** : White, black-green, tan, pink, orange, dense to v. dense, dry to moist, micaceous, saprolitic, f. & cse. grain sand w/silt & black veining in parts. (A-2-4)
- i. **WR** : Gneiss
- j. **CR** : Gneiss.

SYSTEMS
 DESIGN
 &
 CONSTRUCTION
 CONSULTANTS
 INC.
 1000
 W. HARRIS
 BLVD.
 SUITE 100
 RICHMOND,
 VA 23260
 (800) 877-7629
 WWW.SDCI.COM

GENERALIZED SUBSURFACE X-SECTION STA. 41+72.12 -Y2-

GROUNDLINE X-SECTION OBTAINED FROM DTM PROVIDED BY NCDOT, RECEIVED 5-20-2011

INFERRED STRATIGRAPHY IS DRAWN ALONG X-SECTION WITH THE BORINGS PROJECTED ONTO THE X-SECTION

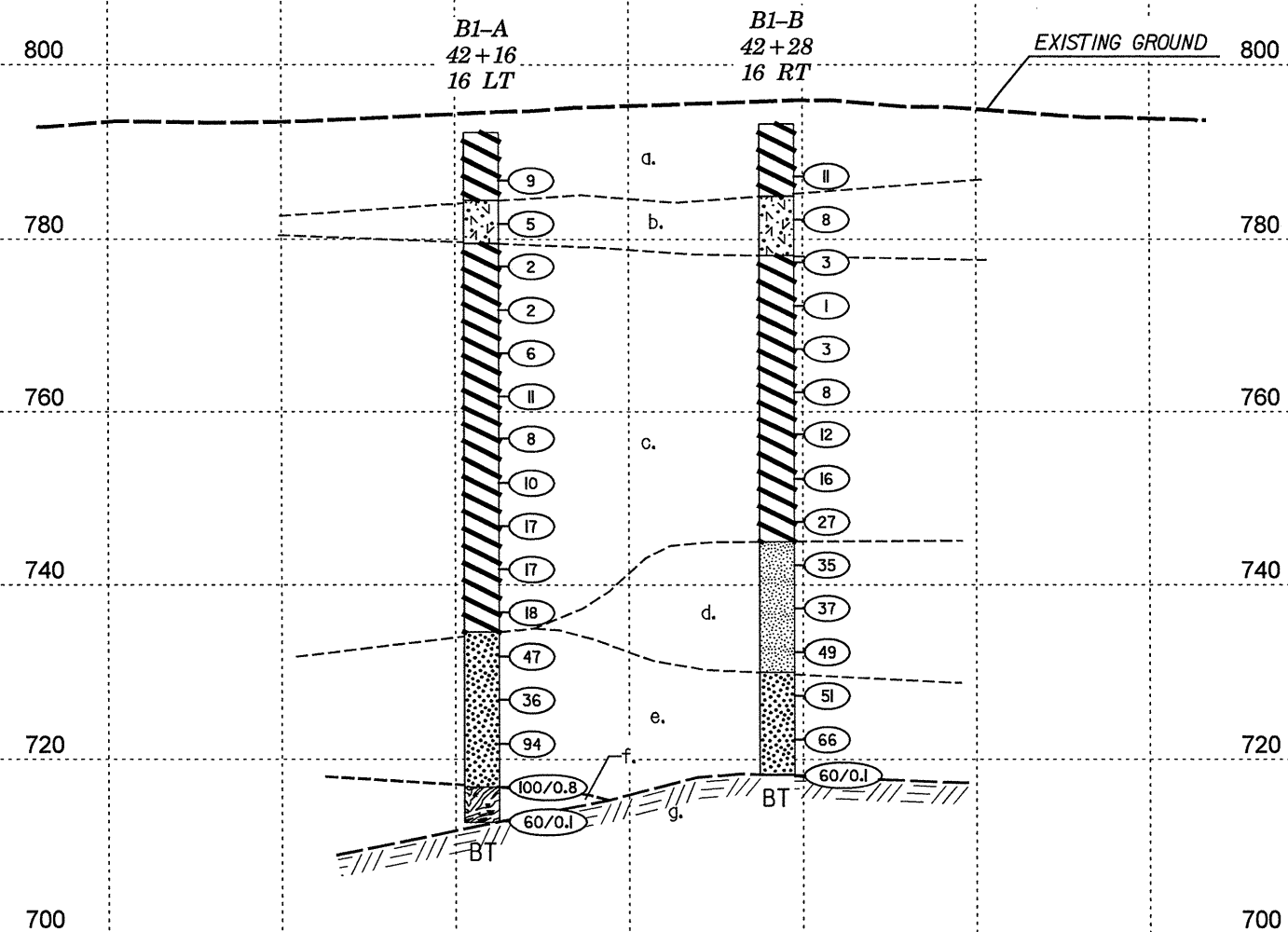


- a. **Residual** : Red, tan, white, stiff, dry, f. to cse. sandy, silty clay w/ rock frags. in parts. (A-7-6).
- b. **Residual** : Red, orange, tan, soft to med. stiff, moist, soft to v. sandy, silt w/ trc. rock frags., micaceous in part. (A-5)
- c. **Residual** : Orange, tan, white, green, soft to stiff, moist to saturated, f. sandy, silty clay w/trcs. cse. grain sand & rock frags (A-7-5).
- d. **Residual** : White, green, tan, black, clear, stiff to hard, dry to wet, f. to cse. grain sand & silt, micaceous, saprolitic & faintly calcareous in part w/trcs. rock frags. (A-4).
- e. **Residual** : White, green, black, tan, med. dense to v. dense, dry to moist, micaceous, saprolitic, f. & cse. grain sand w/silt. (A-2-4)
- f. **WR** : Gneiss.
- g. **CR** : Gneiss.

GENERALIZED SUBSURFACE X-SECTION STA. 42+22.12 -Y2-

GROUNDLINE X-SECTION OBTAINED FROM DTM PROVIDED BY NCDOT, RECEIVED 5-20-2011

INFERRED STRATIGRAPHY IS DRAWN ALONG X-SECTION WITH THE BORINGS PROJECTED ONTO THE X-SECTION



- a. **Residual** : Red, orange, tan, stiff, dry, micaceous, silty clay w/f. to cse. grain sand, black rock frags. & leaf mats. (A-7-5)
- b. **Residual** : Orange, tan, med. stiff to stiff, dry to moist, v. sandy, silt w/rock frags. & black rock veins. (A-5)
- c. **Residual** : Tan, green, white, orange, soft tot v. stiff, dry to saturated, f. sandy, silty clay w/trcs. cse. sand & rock frags., black veining, calcareous in parts. (A-7-5)
- d. **Residual** : White, clear, tan, green, hard, dry to moist, micaceous, saprolitic, calcareous, f. to cse. grain sand & silt w/quartz veins & trcs. rock frags. (A-4)
- e. **Residual** : White, green, tan, pink, dense to v. dense, dry, micaceous, saprolitic, f. & cse. grain sand w/silt & black veining. (A-2-4)
- f. **WR** : Gneiss.
- g. **CR** : Gneiss.

HORIZ. SCALE 0 10 20 (FEET)

VE = 1:1

END BENT 1 CROSS SECTION

HORIZ. SCALE 0 10 20 (FEET)

VE = 1:1

BENT 1 CROSS SECTION

SYSTEMS
 DESIGN
 GROUP
 P.L.L.C.
 10000
 WILSON
 ROAD
 SUITE 100
 WILSON
 N.C. 27157
 919.241.0000
 WWW.SYSDSG.COM

GENERALIZED SUBSURFACE X-SECTION STA. 43 + 30.12 -Y2-

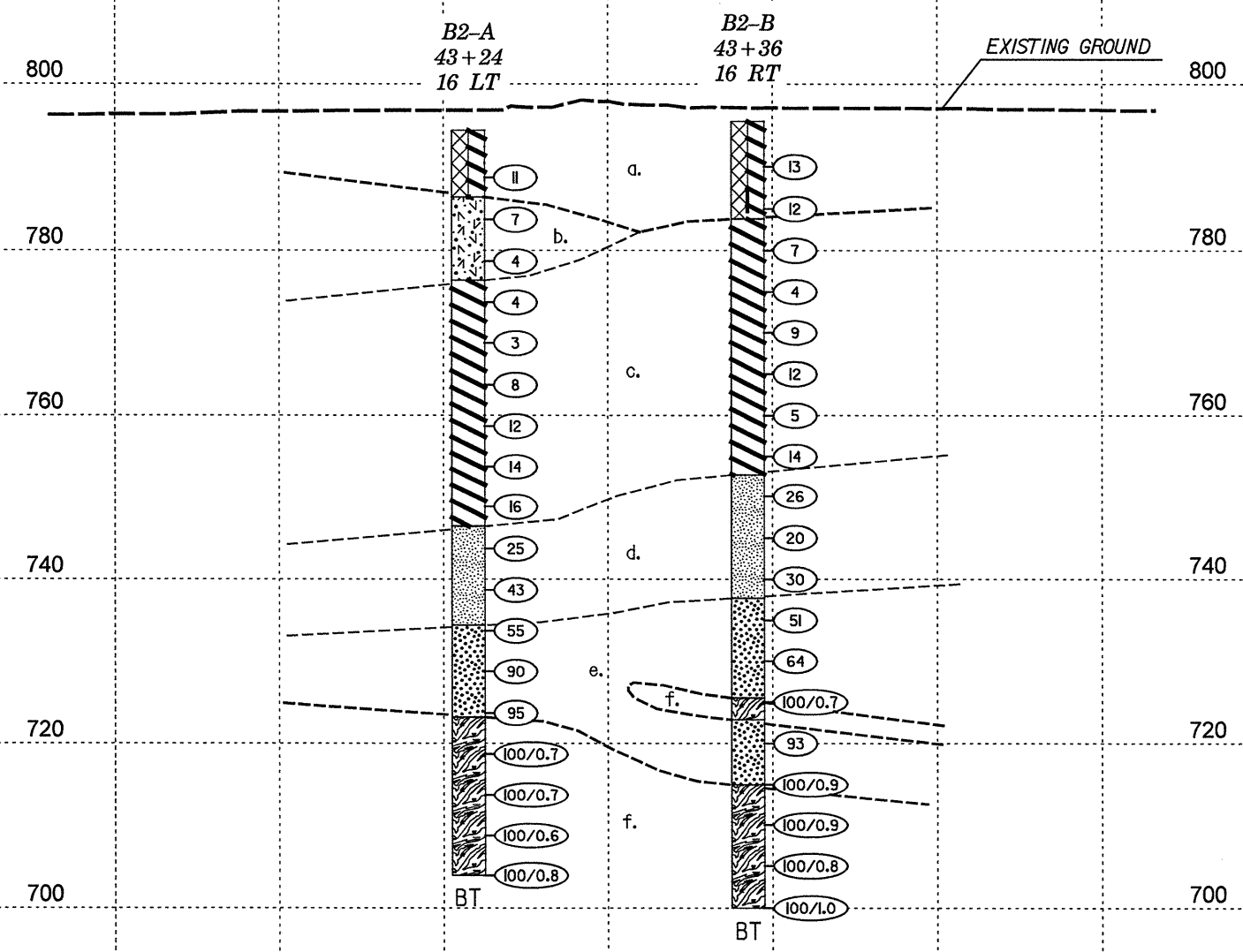
GROUNDLINE X-SECTION OBTAINED FROM DTM PROVIDED BY NCDOT, RECEIVED 5-20-2011

INFERRED STRATIGRAPHY IS DRAWN ALONG X-SECTION WITH THE BORINGS PROJECTED ONTO THE X-SECTION

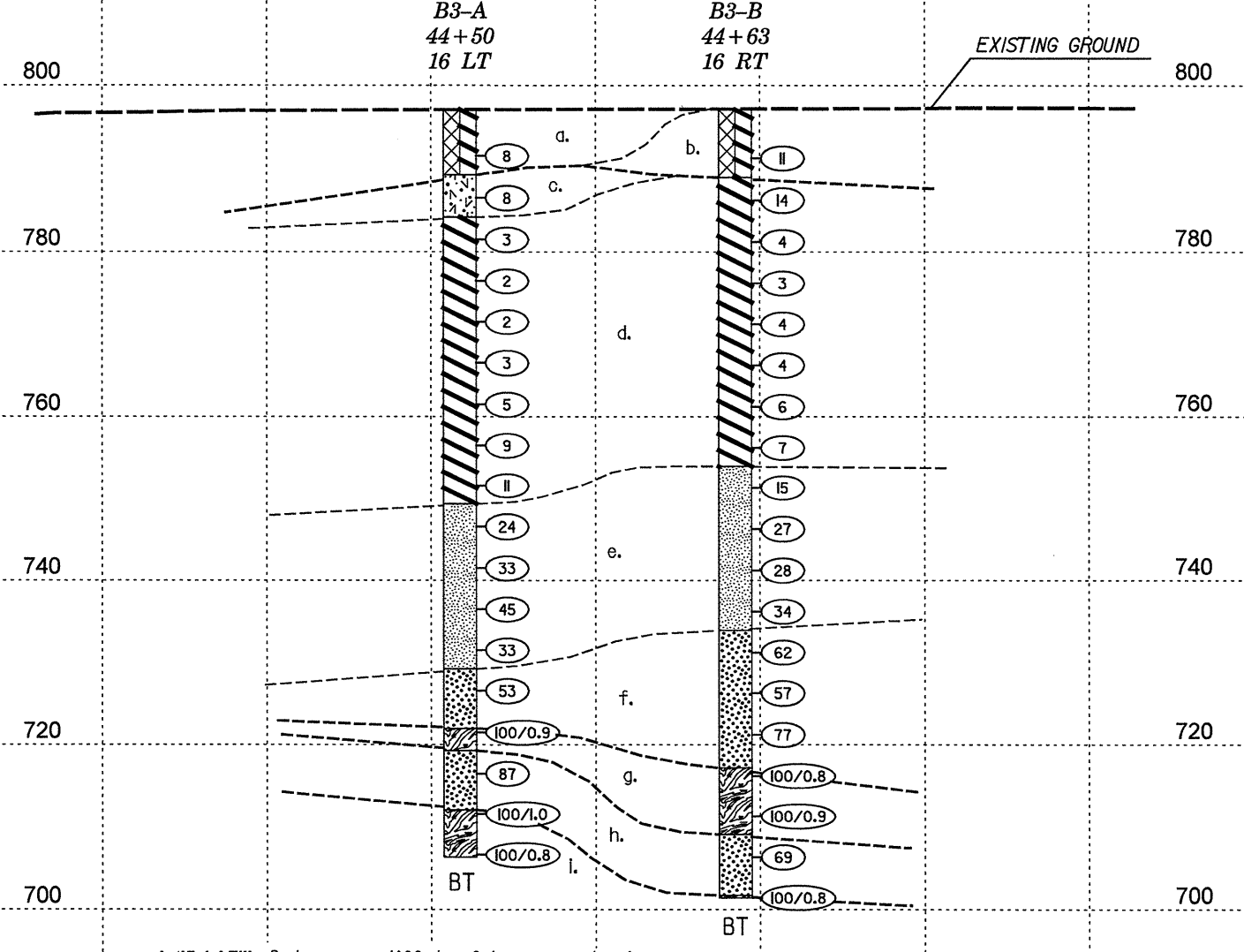
GENERALIZED SUBSURFACE X-SECTION STA. 44 + 56.62 -Y2-

GROUNDLINE X-SECTION OBTAINED FROM DTM PROVIDED BY NCDOT, RECEIVED 5-20-2011

INFERRED STRATIGRAPHY IS DRAWN ALONG X-SECTION WITH THE BORINGS PROJECTED ONTO THE X-SECTION



- a. **Artificial Fill** : Orange, red, tan, stiff, dry to moist, micaceous, silty clay w/f. to cse. grain sand & trcs. rock frags. (A-7-5)
- b. **Residual** : Orange, white, red, med. stiff, moist, v. sandy, silt w/trc. rock frags. & root frags. (A-5)
- c. **Residual** : Green, white, orange, tan, black, soft to v. stiff, dry to wet, saprolitic, f. sandy, silty clay w/trcs. cse. grain sand, rock frags., black veins. (A-7-5)
- d. **Residual** : Green, orange, white, pink, black, v. stiff to hard, dry, saprolitic, f. to cse. grain sand & silt w/trcs. rock frags., quartz-mica veins (A-4)
- e. **Residual** : Green-black, white, orange, v. dense, dry, saprolitic, f. to cse. grain sand w/silt, micaceous in part. (A-2-4)
- f. **WR** : Gneiss.



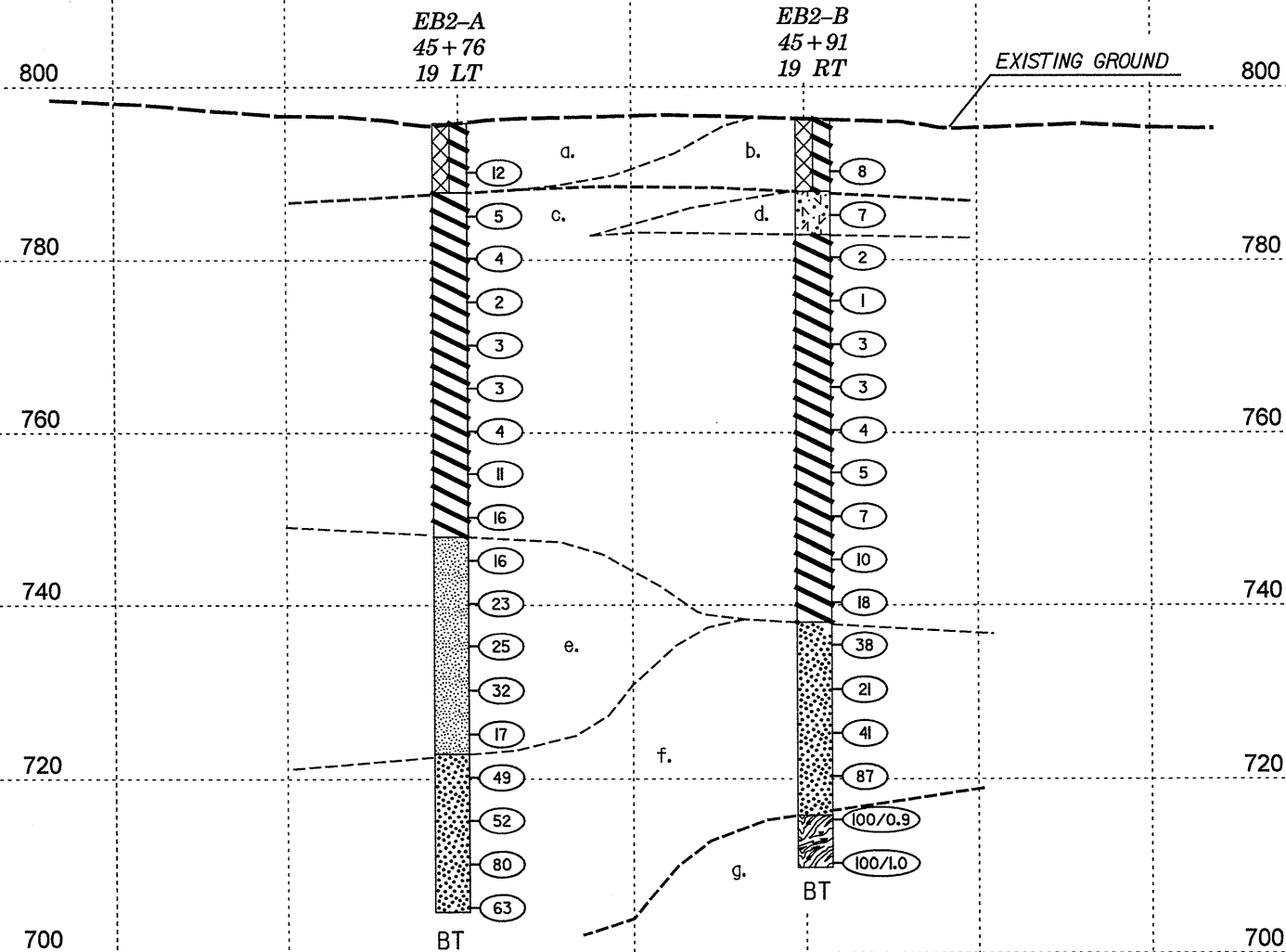
- a. **Artificial Fill** : Red, orange, stiff, dry, f. to cse. sandy, micaceous, silty clay w/black cse. rock frags. & gravel. (A-7-6)
- b. **Artificial Fill** : Red, orange, stiff, dry, micaceous, silty clay w/f. to cse. grain sand & trcs. rock frags. (A-7-5)
- c. **Residual** : Tan, white, black, stiff, moist, v. sandy, micaceous, silt w/rock frags. (A-5)
- d. **Residual** : Tan, white, orange, black, green, red, soft to stiff, dry to saturated, micaceous, saprolitic, f. sandy, silty clay w/trcs. cse. grain sand, rock frags., black rock veins. (A-7-5)
- e. **Residual** : Orange, red, tan, green, black, white, tan, v. stiff to hard, dry to moist, micaceous, saprolitic, f. to cse. grain sand & silt w/trcs. rock frags., black veins. (A-4)
- f. **Residual** : White, black-green, orange, tan, yellow, v. dense, dry, micaceous, saprolitic, f. & cse. grain sand w/silt, black rock veins. (A-2-4)
- g. **WR** : Gneiss.
- h. **Residual** : Green, black, white, v. dense, dry to moist, saprolitic, f. & cse. grain sand w/silt, quartz-feldspar veins, micaceous in parts. (A-2-4)
- i. **WR** : Gneiss.

SYSTEMS
 CONSULTANTS
 INC.
 1100
 W. 15th St.
 Denver, CO 80202
 TEL: 303.733.8800
 FAX: 303.733.8801
 WWW.SCIENCON.COM

GENERALIZED SUBSURFACE X-SECTION STA. 45 + 83.12 -Y2-

GROUNDLINE X-SECTION OBTAINED FROM DTM
PROVIDED BY NCDOT, RECEIVED 5-20-2011

INFERRED STRATIGRAPHY IS DRAWN ALONG X-SECTION
WITH THE BORINGS PROJECTED ONTO THE X-SECTION



- a. **Artificial Fill** : Red, tan, green, stiff, dry, micaceous, f. to cse. sandy, silty clay w/black cse. rock frags. & road aggregate. (A-7-6)
- b. **Artificial Fill** : Tan, orange, green, stiff, dry, micaceous, silty clay w/f. to cse. grain sand, wood & rock frags. (A-7-5)
- c. **Residual** : Red, tan, green, orange, black, white, soft, moist to wet, micaceous, saprolitic, silty clay w/f. to cse. grain sand & trcs. cse. black rock frags. (A-7-5)
- d. **Residual** : Tan, lt. green, orange, med. stiff, moist, v. sandy, silt w/black rock frags. (A-5)
- e. **Residual** : White, green, orange, tan, v. soft to v. stiff, dry to moist, micaceous, saprolitic, f. to cse. grain sand & silt w/black veins, trcs. rock frags (A-4).
- f. **Residual** : Black-green, white, tan, orange, green-lt. green, v. stiff to v. hard, dry to moist, micaceous, saprolitic, f. & cse. grain sand w/silt, black & orange veins (A-2-4).
- g. **WR**: Gneiss.

HORIZ. SCALE 0 10 20
(FEET)

VE = 1:1

END BENT 2 CROSS SECTION

HORIZ. SCALE 0 10 20
(FEET)

VE = NONE

SYSTEMS DESIGN



NCDOT GEOTECHNICAL ENGINEERING UNIT BORELOG REPORT

WBS		TIP		COUNTY		GEOLOGIST				GROUND WTR (ft)						
52000.1.STR3T1B		P-5206A		ROWAN		DeLost, R.				N/A						
SITE DESCRIPTION Bridge on SR 1560 over US 29 and Norfolk Southern Railroad Between I-85 and SR 1516									GROUND WTR (ft)							
BORING NO. EB1-A STATION 41+65 OFFSET 19 ft LT ALIGNMENT -Y2-									0 HR. N/A							
COLLAR ELEV. 790.5 ft TOTAL DEPTH 78.6 ft NORTHING 685,404 EASTING 1,545,975									24 HR. N/A							
DRILL RIG/HAMMER EFF./DATE F&H0404 CME-45C 87.6% 08/15/2011					DRILL METHOD H.S. Augers			HAMMER TYPE Automatic								
DRILLER Woodard, F.		START DATE 05/10/12		COMP. DATE 05/11/12		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		
			0.5ft	0.5ft	0.5ft	0	25	50	75	100				ELEV. (ft)	DEPTH (ft)	
795															GROUND SURFACE	0.0
790															RESIDUAL	
		785.6	4.9	3	4	6						SS-2	D	Red, tan & white, f. to cse. sandy, silty clay with rock frags. in parts (A-7-6).		
785																
780		780.6	9.9	1	1	2						M	M	Red, orange, silty clay w/f. to cse. grain sand & trc. rock frags. (A-5).	8.2	
775		775.6	14.9	WOH	1	1						W	W	Orange, tan, white, green, pink, f. sandy, micaceous, silty clay w/trcs. cse. sand & rock frags., saprolitic in lower part (A-7-5).	13.2	
770		770.6	19.9	1	1	3						Sat.	Sat.			
765		765.6	24.9	WOH	3	3						Sat.	Sat.			
760		760.6	29.9	1	2	3						W	W			
755		755.6	34.9	1	4	5						W	W			
750		750.6	39.9	4	3	5						M	M	Green, white, tan, black, clear, micaceous, saprolitic, f. to cse. grain sand & silt (A-4).	40.6	
745		745.6	44.9	WOH	5	10						M	M			
740		740.6	49.9	5	8	13						M	M			
735		735.6	54.9	5	6	11						M	M			
730		730.6	59.9	9	17	26						D	D			
725		725.6	64.9	4	14	19						D	D	White, black & green, micaceous, saprolitic, f. & cse. grain sand w/silt (A-2-4).	63.2	
720		720.6	69.9	30	38	43						D	D			
715		715.6	74.9											WEATHERED ROCK	73.2	
														Weathered rock (Gneiss).		

NCDOT BORE SINGLE P5206A_GEO_BRDG_BORE.GPJ NC_DOT.GDT 1/3/13



NCDOT GEOTECHNICAL ENGINEERING UNIT BORELOG REPORT

WBS		TIP		COUNTY		GEOLOGIST				GROUND WTR (ft)						
52000.1.STR3T1B		P-5206A		ROWAN		DeLost, R.				N/A						
SITE DESCRIPTION Bridge on SR 1560 over US 29 and Norfolk Southern Railroad Between I-85 and SR 1516									GROUND WTR (ft)							
BORING NO. EB1-A STATION 41+65 OFFSET 19 ft LT ALIGNMENT -Y2-									0 HR. N/A							
COLLAR ELEV. 790.5 ft TOTAL DEPTH 78.6 ft NORTHING 685,404 EASTING 1,545,975									24 HR. N/A							
DRILL RIG/HAMMER EFF./DATE F&H0404 CME-45C 87.6% 08/15/2011					DRILL METHOD H.S. Augers			HAMMER TYPE Automatic								
DRILLER Woodard, F.		START DATE 05/10/12		COMP. DATE 05/11/12		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		
			0.5ft	0.5ft	0.5ft	0	25	50	75	100				ELEV. (ft)	DEPTH (ft)	
715																
		712.0	78.5	60/0.1	Match Line					100/0.6						
															WEATHERED ROCK	
															Weathered rock (Gneiss). <i>(continued)</i>	
															CRYSTALLINE ROCK	
															Crystalline rock (Gneiss)	
															Boring Terminated with Standard Penetration Test Refusal at Elevation 711.9 ft in Crystalline Rock (Gneiss).	

NCDOT BORE SINGLE P5206A_GEO_BRDG_BORE.GPJ NC_DOT.GDT 1/3/13

WBS 52000.1.STR3T1B				TIP P-5206A				COUNTY ROWAN				GEOLOGIST DeLost, R.				
SITE DESCRIPTION Bridge on SR 1560 over US 29 and Norfolk Southern Railroad Between I-85 and SR 1516												GROUND WTR (ft)				
BORING NO. EB1-B			STATION 41+80			OFFSET 19 ft RT			ALIGNMENT -Y2-			0 HR. N/A				
COLLAR ELEV. 790.1 ft			TOTAL DEPTH 76.0 ft			NORTHING 685,434			EASTING 1,546,004			24 HR. N/A				
DRILL RIG/HAMMER EFF./DATE F&H0404 CME-45C 87.6% 08/15/2011						DRILL METHOD H.S. Augers				HAMMER TYPE Automatic						
DRILLER Woodard, F.				START DATE 05/11/12		COMP. DATE 05/11/12		SURFACE WATER DEPTH N/A								
ELEV (ft)	DRIVE ELEV (ft)	DEPTH (ft)	BLOW COUNT			BLOWS PER FOOT					SAMP. NO.	MOI	L O G	SOIL AND ROCK DESCRIPTION	DEPTH (ft)	
			0.5ft	0.5ft	0.5ft	0	25	50	75	100						
795																
790															790.1	0.0
785	785.2	4.9	2	2	3											
780	780.2	9.9	2	1	2										781.9	8.2
775	775.2	14.9		1	1											
770	770.2	19.9	1	2	4											
765	765.2	24.9		2	4											
760	760.2	29.9	1	1	4											
755	755.2	34.9	2	6	7											
750	750.2	39.9	3	5	9										751.9	38.2
745	745.2	44.9	3	7	10											
740	740.2	49.9	5	8	11										741.9	48.2
735	735.2	54.9	13	26	33											
730	730.2	59.9	15	24	32											
725	725.2	64.9	39	61/0.4											724.7	65.4
720	720.2	69.9	24	34	51									722.2	67.9	
715	715.2	74.9														

NCDOT BORE SINGLE P5206A GEO_BRDG_BORE.GPJ NC_DOT.GDT 1/3/13

WBS 52000.1.STR3T1B				TIP P-5206A				COUNTY ROWAN				GEOLOGIST DeLost, R.				
SITE DESCRIPTION Bridge on SR 1560 over US 29 and Norfolk Southern Railroad Between I-85 and SR 1516												GROUND WTR (ft)				
BORING NO. EB1-B			STATION 41+80			OFFSET 19 ft RT			ALIGNMENT -Y2-			0 HR. N/A				
COLLAR ELEV. 790.1 ft			TOTAL DEPTH 76.0 ft			NORTHING 685,434			EASTING 1,546,004			24 HR. N/A				
DRILL RIG/HAMMER EFF./DATE F&H0404 CME-45C 87.6% 08/15/2011						DRILL METHOD H.S. Augers				HAMMER TYPE Automatic						
DRILLER Woodard, F.				START DATE 05/11/12		COMP. DATE 05/11/12		SURFACE WATER DEPTH N/A								
ELEV (ft)	DRIVE ELEV (ft)	DEPTH (ft)	BLOW COUNT			BLOWS PER FOOT					SAMP. NO.	MOI	L O G	SOIL AND ROCK DESCRIPTION	DEPTH (ft)	
			0.5ft	0.5ft	0.5ft	0	25	50	75	100						
715																
															714.2	75.9
															714.1	76.0

NCDOT BORE SINGLE P5206A GEO_BRDG_BORE.GPJ NC_DOT.GDT 1/3/13



NCDOT GEOTECHNICAL ENGINEERING UNIT
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WBS 52000.1.STR3T1B	TIP P-5206A	COUNTY ROWAN	GEOLOGIST DeLost, R.
SITE DESCRIPTION Bridge on SR 1560 over US 29 and Norfolk Southern Railroad Between I-85 and SR 1516			GROUND WTR (ft)
BORING NO. B1-B	STATION 42+28	OFFSET 16 ft RT	ALIGNMENT -Y2-
COLLAR ELEV. 793.3 ft	TOTAL DEPTH 75.1 ft	NORTHING 685,477	EASTING 1,545,980
DRILL RIG/HAMMER EFF./DATE F&H0404 CME-45C 87.6% 08/15/2011		DRILL METHOD H.S. Augers	HAMMER TYPE Automatic
DRILLER Woodard, F.	START DATE 05/12/12	COMP. DATE 05/12/12	SURFACE WATER DEPTH N/A

ELEV (ft)	DRIVE ELEV (ft)	DEPTH (ft)	BLOW COUNT			BLOWS PER FOOT					SAMP. NO.	L O G	SOIL AND ROCK DESCRIPTION	DEPTH (ft)		
			0.5ft	0.5ft	0.5ft	0	25	50	75	100						
795														793.3	GROUND SURFACE	0.0
790	788.3	5.0	4	4	7							D	RESIDUAL Red & orange, micaceous, silty clay w/f. to cse. grain sand, trc. black rock frags. roots & leaf mats (A-7-5).			
785	783.3	10.0	2	4	4							D	Orange & tan, v. sandy, silt w/trc. rock frags. & black rock veins (A-5).	8.3		
780	778.3	15.0	1	2	1							M	Green, white & tan, micaceous, saprolitic, f. sandy, silty clay w/trcs. cse. grain sand & rock frags., calcareous in parts (A-7-5).	15.2		
775	773.3	20.0	WOH	WOH	1							Sat.				
770	768.3	25.0	1	1	2							W				
765	763.3	30.0	2	3	5							W				
760	758.3	35.0	2	5	7							M				
755	753.3	40.0	4	7	9							D				
750	748.3	45.0	8	11	16							D				
745	743.3	50.0	9	16	19							M	White, clear, tan & green, micaceous, saprolitic, calcareous, f. to cse. grain sand & silt w/quartz veins & trc. rock frags. (A-4).	48.3		
740	738.3	55.0	11	17	20							D				
735	733.3	60.0	6	22	27							D				
730	728.3	65.0	15	20	31							D	Black, green, white & tan, micaceous, saprolitic f. & cse. grain sand w/silt (A-2-4).	63.3		
725	723.3	70.0	22	35	31							D				
720	718.3	75.0	60/0.1										CRYSTALLINE ROCK Crystalline rock (Gneiss) Boring Terminated with Standard	75.0		



NCDOT GEOTECHNICAL ENGINEERING UNIT
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WBS 52000.1.STR3T1B	TIP P-5206A	COUNTY ROWAN	GEOLOGIST DeLost, R.
SITE DESCRIPTION Bridge on SR 1560 over US 29 and Norfolk Southern Railroad Between I-85 and SR 1516			GROUND WTR (ft)
BORING NO. B1-B	STATION 42+28	OFFSET 16 ft RT	ALIGNMENT -Y2-
COLLAR ELEV. 793.3 ft	TOTAL DEPTH 75.1 ft	NORTHING 685,477	EASTING 1,545,980
DRILL RIG/HAMMER EFF./DATE F&H0404 CME-45C 87.6% 08/15/2011		DRILL METHOD H.S. Augers	HAMMER TYPE Automatic
DRILLER Woodard, F.	START DATE 05/12/12	COMP. DATE 05/12/12	SURFACE WATER DEPTH N/A

ELEV (ft)	DRIVE ELEV (ft)	DEPTH (ft)	BLOW COUNT			BLOWS PER FOOT					SAMP. NO.	L O G	SOIL AND ROCK DESCRIPTION	DEPTH (ft)
			0.5ft	0.5ft	0.5ft	0	25	50	75	100				
715													Match Line	
													Penetration Test Refusal at Elevation 718.2 ft in Crystalline Rock (Gneiss).	

NCDOT BORE SINGLE P5206A_GEO_BRDG_BORE.GPJ_NC_DOT.GDT 1/3/13

NCDOT BORE SINGLE P5206A_GEO_BRDG_BORE.GPJ_NC_DOT.GDT 1/3/13

WBS 52000.1.STR3T1B	TIP P-5206A	COUNTY ROWAN	GEOLOGIST DeLost, R.
SITE DESCRIPTION Bridge on SR 1560 over US 29 and Norfolk Southern Railroad Between I-85 and SR 1516			GROUND WTR (ft)
BORING NO. B2-A	STATION 43+24	OFFSET 16 ft LT	ALIGNMENT -Y2-
COLLAR ELEV. 794.4 ft	TOTAL DEPTH 90.5 ft	NORTHING 685,550	EASTING 1,545,910
DRILL RIG/HAMMER EFF./DATE F&H0404 CME-45C 87.6% 08/15/2011		DRILL METHOD H.S. Augers	HAMMER TYPE Automatic
DRILLER Gower, S.	START DATE 02/16/12	COMP. DATE 02/17/12	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						
795														794.4	GROUND SURFACE	0.0
790	789.7	4.7	3	5	6								D	ARTIFICIAL FILL Orange-red, silty clay w/f. to cse. grain sand, trc. rock frags. (A-7-5).		
785	784.7	9.7	2	3	4								M	RESIDUAL Orange, white & red, v. sandy, silt w/trc. rock frags. (A-5).	8.0	
780	779.7	14.7	1	2	2								M			
775	774.7	19.7	1	2	2								W	Green, white, orange, saprolitic, f. sandy, silty clay w/black veining & trcs. cse. grain sand, rock frags. (A-7-5).	18.0	
770	769.7	24.7	1	1	2								W			
765	764.7	29.7	1	3	5								W			
760	759.7	34.7	2	5	7								M			
755	754.7	39.7	4	5	9								D			
750	749.7	44.7	4	7	9								M			
745	744.7	49.7	7	9	16								D	Green, orange, white, pink & black, saprolitic f. to cse. grain sand & silt w/rock frags. quartz-mica veins (A-4).	48.0	
740	739.7	54.7	12	17	26								D			
735	734.7	59.7	15	26	29								D	Green-black, white & orange, saprolitic, f. & cse. grain sand w/silt, micaceous in part (A-2-4).	60.0	
730	729.7	64.7	31	40	50								D			
725	724.7	69.7	21	20	75								D			
720	719.7	74.7	43	57/0.2									D	WEATHERED ROCK Weathered rock (Gneiss).	71.2	
715																100/0.7

WBS 52000.1.STR3T1B	TIP P-5206A	COUNTY ROWAN	GEOLOGIST DeLost, R.
SITE DESCRIPTION Bridge on SR 1560 over US 29 and Norfolk Southern Railroad Between I-85 and SR 1516			GROUND WTR (ft)
BORING NO. B2-A	STATION 43+24	OFFSET 16 ft LT	ALIGNMENT -Y2-
COLLAR ELEV. 794.4 ft	TOTAL DEPTH 90.5 ft	NORTHING 685,550	EASTING 1,545,910
DRILL RIG/HAMMER EFF./DATE F&H0404 CME-45C 87.6% 08/15/2011		DRILL METHOD H.S. Augers	HAMMER TYPE Automatic
DRILLER Gower, S.	START DATE 02/16/12	COMP. DATE 02/17/12	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							
715	714.7	79.7	71	29/0.2										Match Line			
710	709.7	84.7	65	35/0.1											WEATHERED ROCK Weathered rock (Gneiss). (continued)		
705	704.7	89.7	40	60/0.3												100/0.8	
																	703.9
																	90.5

NCDOT BORE SINGLE P5206A_GEO_BRDG_BORE.GPJ_NC_DOT.GDT 1/3/13

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WBS 52000.1.STR3T1B		TIP P-5206A		COUNTY ROWAN		GEOLOGIST DeLost, R.											
SITE DESCRIPTION Bridge on SR 1560 over US 29 and Norfolk Southern Railroad Between I-85 and SR 1516							GROUND WTR (ft)										
BORING NO. B2-B		STATION 43+36		OFFSET 16 ft RT		ALIGNMENT -Y2-											
COLLAR ELEV. 795.5 ft		TOTAL DEPTH 95.5 ft		NORTHING 685,574		EASTING 1,545,934											
DRILL RIG/HAMMER EFF./DATE F&H0404 CME-45C 87.6% 08/15/2011				DRILL METHOD H.S. Augers		HAMMER TYPE Automatic											
DRILLER Gower, S.		START DATE 02/17/12		COMP. DATE 02/18/12		SURFACE WATER DEPTH N/A											
ELEV (ft)	DRIVE ELEV (ft)	DEPTH (ft)	BLOW COUNT			BLOWS PER FOOT					SAMP. NO.	L O G	SOIL AND ROCK DESCRIPTION	DEPTH (ft)			
			0.5ft	0.5ft	0.5ft	0	25	50	75	100							
800																	
795															795.5	GROUND SURFACE	0.0
790	791.0	4.5	3	6	7												
785	786.0	9.5	3	5	7												
780	781.0	14.5	2	3	4												
775	776.0	19.5	1	2	2												
770	771.0	24.5	2	3	6												
765	766.0	29.5	3	6	6												
760	761.0	34.5	1	2	3												
755	756.0	39.5	2	6	8												
750	751.0	44.5	7	12	14												
745	746.0	49.5	5	8	12												
740	741.0	54.5	7	12	18												
735	736.0	59.5	16	20	31												
730	731.0	64.5	18	32	32												
725	726.0	69.5	25	61	34/0.2												
720	721.0	74.5	31	43	50												



NCDOT GEOTECHNICAL ENGINEERING UNIT
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WBS 52000.1.STR3T1B		TIP P-5206A		COUNTY ROWAN		GEOLOGIST DeLost, R.										
SITE DESCRIPTION Bridge on SR 1560 over US 29 and Norfolk Southern Railroad Between I-85 and SR 1516							GROUND WTR (ft)									
BORING NO. B2-B		STATION 43+36		OFFSET 16 ft RT		ALIGNMENT -Y2-										
COLLAR ELEV. 795.5 ft		TOTAL DEPTH 95.5 ft		NORTHING 685,574		EASTING 1,545,934										
DRILL RIG/HAMMER EFF./DATE F&H0404 CME-45C 87.6% 08/15/2011				DRILL METHOD H.S. Augers		HAMMER TYPE Automatic										
DRILLER Gower, S.		START DATE 02/17/12		COMP. DATE 02/18/12		SURFACE WATER DEPTH N/A										
ELEV (ft)	DRIVE ELEV (ft)	DEPTH (ft)	BLOW COUNT			BLOWS PER FOOT					SAMP. NO.	L O G	SOIL AND ROCK DESCRIPTION	DEPTH (ft)		
			0.5ft	0.5ft	0.5ft	0	25	50	75	100						
720																
715	716.0	79.5	30	42	58/0.4											
710	711.0	84.5	20	41	59/0.4											
705	706.0	89.5	35	65/0.3												
700	701.0	94.5	22	78/0.5												

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WBS 52000.1.STR3T1B		TIP P-5206A		COUNTY ROWAN		GEOLOGIST DeLost, R.										
SITE DESCRIPTION Bridge on SR 1560 over US 29 and Norfolk Southern Railroad Between I-85 and SR 1516							GROUND WTR (ft)									
BORING NO. B3-B		STATION 44+63		OFFSET 16 ft RT		ALIGNMENT -Y2-	0 HR. N/A									
COLLAR ELEV. 797.1 ft		TOTAL DEPTH 95.7 ft		NORTHING 685,689		EASTING 1,545,880	24 HR. N/A									
DRILL RIG/HAMMER EFF./DATE F&H0404 CME-45C 87.6% 08/15/2011				DRILL METHOD H.S. Augers		HAMMER TYPE Automatic										
DRILLER Gower, S.		START DATE 02/18/12		COMP. DATE 02/21/12		SURFACE WATER DEPTH N/A										
ELEV (ft)	DRIVE ELEV (ft)	DEPTH (ft)	BLOW COUNT			BLOWS PER FOOT					SAMP. NO.	LO G	SOIL AND ROCK DESCRIPTION	DEPTH (ft)		
			0.5ft	0.5ft	0.5ft	0	25	50	75	100						
800																
															797.1	0.0
795																
		792.2	4.9	3	5	6							D	ARTIFICIAL FILL Red & orange, micaceous, silty clay w/f. to cse. grain sand & trcs. rock frags. (A-7-5).		
790																
		787.2	9.9	3	6	8							D	RESIDUAL Tan, orange, white & green, f. sandy, silty clay, micaceous in lower parts w/cse. grain sand, rock frags. black veins (A-7-5).	8.2	
785																
		782.2	14.9	1	1	3							M			
780																
		777.2	19.9	1	1	2							M			
775																
		772.2	24.9	1	2	2							SS-6			
770																
		767.2	29.9	1	1	3							M			
765																
		762.2	34.9	2	2	4							M			
760																
		757.2	39.9	1	2	5							M			
755																
		752.2	44.9	4	6	9							M	Orange, green, tan & white, saprolitic, f. to cse. sand & silt, micaceous in parts w/black veins & trcs. rock frags (A-4).	43.2	
750																
		747.2	49.9	6	11	16							M			
745																
		742.2	54.9	6	11	17							D			
740																
		737.2	59.9	7	12	22							D			
735																
		732.2	64.9	15	29	33							D	White, black-green, orange, tan & yellow, micaceous, saprolitic f. & cse. grain sand w/silt, black rock veins (A-2-4).	63.2	
730																
		727.2	69.9	14	24	33							D			
725																
		722.2	74.9	15	30	47							D			
720																

NCDOT BORE SINGLE P5206A GEO_BRDG_BORE.GPJ_NC_DOT.GDT 1/3/13

WBS 52000.1.STR3T1B		TIP P-5206A		COUNTY ROWAN		GEOLOGIST DeLost, R.										
SITE DESCRIPTION Bridge on SR 1560 over US 29 and Norfolk Southern Railroad Between I-85 and SR 1516							GROUND WTR (ft)									
BORING NO. B3-B		STATION 44+63		OFFSET 16 ft RT		ALIGNMENT -Y2-	0 HR. N/A									
COLLAR ELEV. 797.1 ft		TOTAL DEPTH 95.7 ft		NORTHING 685,689		EASTING 1,545,880	24 HR. N/A									
DRILL RIG/HAMMER EFF./DATE F&H0404 CME-45C 87.6% 08/15/2011				DRILL METHOD H.S. Augers		HAMMER TYPE Automatic										
DRILLER Gower, S.		START DATE 02/18/12		COMP. DATE 02/21/12		SURFACE WATER DEPTH N/A										
ELEV (ft)	DRIVE ELEV (ft)	DEPTH (ft)	BLOW COUNT			BLOWS PER FOOT					SAMP. NO.	LO G	SOIL AND ROCK DESCRIPTION	DEPTH (ft)		
			0.5ft	0.5ft	0.5ft	0	25	50	75	100						
720																
		717.2	79.9	50	50/0.3										717.2	79.9
715																
		712.2	84.9	23	45	55/0.4							D	WEATHERED ROCK Weathered rock (Gneiss)		
710																
		707.2	89.9	38	44	25									709.0	88.1
705																
		702.2	94.9	47	53/0.3								D	RESIDUAL Black & white, micaceous, saprolitic f. & cse. grain sand w/silt, quartz-feldspar veins (A-2-4).		
		701.7	95.4												701.7	95.4
		701.4	95.7													95.7

NCDOT BORE SINGLE P5206A GEO_BRDG_BORE.GPJ_NC_DOT.GDT 1/3/13

Match Line

Boring Terminated at Elevation 701.4 ft in Weathered Rock (Gneiss).



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WBS 52000.1.STR3T1B		TIP P-5206A		COUNTY ROWAN		GEOLOGIST DeLost, R.										
SITE DESCRIPTION Bridge on SR 1560 over US 29 and Norfolk Southern Railroad Between I-85 and SR 1516							GROUND WTR (ft)									
BORING NO. EB2-A		STATION 45+76		OFFSET 19 ft LT		ALIGNMENT -Y2-										
COLLAR ELEV. 795.8 ft		TOTAL DEPTH 91.1 ft		NORTHING 685,776		EASTING 1,545,800										
DRILL RIG/HAMMER EFF./DATE F&H0404 CME-45C 87.6% 08/15/2011				DRILL METHOD H.S. Augers		HAMMER TYPE Automatic										
DRILLER Gower, S.		START DATE 03/06/12		COMP. DATE 03/06/12		SURFACE WATER DEPTH N/A										
ELEV (ft)	DRIVE ELEV (ft)	DEPTH (ft)	BLOW COUNT			BLOWS PER FOOT					SAMP. NO.	L O G	SOIL AND ROCK DESCRIPTION	DEPTH (ft)		
			0.5ft	0.5ft	0.5ft	0	25	50	75	100						
800																
795															795.8	0.0
790	791.2	4.6	4	5	7											
785	786.2	9.6	2	2	3											
780	781.2	14.6	1	2	2											
775	776.2	19.6	1	1	1											
770	771.2	24.6	WOH	1	2											
765	766.2	29.6	1	1	2											
760	761.2	34.6	1	1	3											
755	756.2	39.6	2	3	8											
750	751.2	44.6	3	7	9											
745	746.2	49.6	5	6	10											
740	741.2	54.6	4	9	14											
735	736.2	59.6	6	9	16											
730	731.2	64.6	6	12	20											
725	726.2	69.6	4	7	10											
720	721.2	74.6	14	22	27											



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WBS 52000.1.STR3T1B		TIP P-5206A		COUNTY ROWAN		GEOLOGIST DeLost, R.										
SITE DESCRIPTION Bridge on SR 1560 over US 29 and Norfolk Southern Railroad Between I-85 and SR 1516							GROUND WTR (ft)									
BORING NO. EB2-A		STATION 45+76		OFFSET 19 ft LT		ALIGNMENT -Y2-										
COLLAR ELEV. 795.8 ft		TOTAL DEPTH 91.1 ft		NORTHING 685,776		EASTING 1,545,800										
DRILL RIG/HAMMER EFF./DATE F&H0404 CME-45C 87.6% 08/15/2011				DRILL METHOD H.S. Augers		HAMMER TYPE Automatic										
DRILLER Gower, S.		START DATE 03/06/12		COMP. DATE 03/06/12		SURFACE WATER DEPTH N/A										
ELEV (ft)	DRIVE ELEV (ft)	DEPTH (ft)	BLOW COUNT			BLOWS PER FOOT					SAMP. NO.	L O G	SOIL AND ROCK DESCRIPTION	DEPTH (ft)		
			0.5ft	0.5ft	0.5ft	0	25	50	75	100						
720																
715	716.2	79.6	13	21	31											
710	711.2	84.6	15	39	41											
705	706.2	89.6	17	28	35											
															704.7	91.1

NCDOT BORE SINGLE P5206A_GEO_BRDG_BORE.GPJ NC_DOT.GDT 1/3/13

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WBS 52000.1.STR3T1B			TIP P-5206A			COUNTY ROWAN			GEOLOGIST DeLost, R.						
SITE DESCRIPTION Bridge on SR 1560 over US 29 and Norfolk Southern Railroad Between I-85 and SR 1516								GROUND WTR (ft)							
BORING NO. EB2-B			STATION 45+91			OFFSET 19 ft RT			ALIGNMENT -Y2-			0 HR. N/A			
COLLAR ELEV. 796.3 ft			TOTAL DEPTH 86.5 ft			NORTHING 685,806			EASTING 1,545,828			24 HR. N/A			
DRILL RIG/HAMMER EFF./DATE F&H0404 CME-45C 87.6% 08/15/2011						DRILL METHOD H.S. Augers			HAMMER TYPE Automatic						
DRILLER Gower, S.			START DATE 03/05/12			COMP. DATE 03/05/12			SURFACE WATER DEPTH N/A						
ELEV (ft)	DRIVE ELEV (ft)	DEPTH (ft)	BLOW COUNT			BLOWS PER FOOT					SAMP. NO.	L O G	SOIL AND ROCK DESCRIPTION	DEPTH (ft)	
			0.5ft	0.5ft	0.5ft	0	25	50	75	100					
800															
795															
790	791.3	5.0	2	3	5						8		ARTIFICIAL FILL Tan, orange & lime, micaceous, silty clay w/f. to cse. grain sand, wood & rock frags. (A-7-5).	796.3	
785	786.3	10.0	2	2	5						7		RESIDUAL Tan, lt. green & orange, v. sandy, silt w/black rock frags. (A-5).	788.0	
780	781.3	15.0	1	1	1						2		Tan, green, orange, black & white, micaceous, f. sandy, silty clay w/black rock veins, saprolitic in lower part, trcs. cse. sand & rock frags. (A-7-5).	783.0	
775	776.3	20.0	1	WOH	1						1				
770	771.3	25.0	1	1	2						3				
765	766.3	30.0	1	1	2						3				
760	761.3	35.0	1	1	3						4				
755	756.3	40.0	1	2	3						5				
750	751.3	45.0	1	3	4						7				
745	746.3	50.0	2	4	6						10				
740	741.3	55.0	4	7	11						18				
735	736.3	60.0	6	15	23						38		Black, tan, orange, lt. green-green, micaceous, saprolitic, f. & cse. grain sand w/silt, black & orange veins (A-2-4).	738.0	
730	731.3	65.0	6	9	12						21				
725	726.3	70.0	10	17	24						41				
720	721.3	75.0	19	34	53						87				

NCDOT BORE SINGLE P5206A_GEO_BRDG_BORE.GPJ_NC_DOT.GDT 1/3/13

WBS 52000.1.STR3T1B			TIP P-5206A			COUNTY ROWAN			GEOLOGIST DeLost, R.						
SITE DESCRIPTION Bridge on SR 1560 over US 29 and Norfolk Southern Railroad Between I-85 and SR 1516								GROUND WTR (ft)							
BORING NO. EB2-B			STATION 45+91			OFFSET 19 ft RT			ALIGNMENT -Y2-			0 HR. N/A			
COLLAR ELEV. 796.3 ft			TOTAL DEPTH 86.5 ft			NORTHING 685,806			EASTING 1,545,828			24 HR. N/A			
DRILL RIG/HAMMER EFF./DATE F&H0404 CME-45C 87.6% 08/15/2011						DRILL METHOD H.S. Augers			HAMMER TYPE Automatic						
DRILLER Gower, S.			START DATE 03/05/12			COMP. DATE 03/05/12			SURFACE WATER DEPTH N/A						
ELEV (ft)	DRIVE ELEV (ft)	DEPTH (ft)	BLOW COUNT			BLOWS PER FOOT					SAMP. NO.	L O G	SOIL AND ROCK DESCRIPTION	DEPTH (ft)	
			0.5ft	0.5ft	0.5ft	0	25	50	75	100					
720															
715	716.3	80.0	30	50	50/0.4						100/0.9		Black, tan, orange, lt. green-green, micaceous, saprolitic, f. & cse. grain sand w/silt, black & orange veins (A-2-4). (continued)	81.0	
710	711.3	85.0	36	58	42						100/1.0		WEATHERED ROCK Weathered rock (Gneiss)	709.8	
													Boring Terminated at Elevation 709.8 ft in Weathered Rock (Gneiss).	86.5	

NCDOT BORE SINGLE P5206A_GEO_BRDG_BORE.GPJ_NC_DOT.GDT 1/3/13

STATE PROJECT NO.: 52000.1.STR3T1B
 TIP NO.: P-5206A
 COUNTY: Rowan
 SITE DESC.: Bridge on SR-1560 Over US 29 and Norfolk Southern Railroad

SUMMARY OF SOIL CLASSIFICATIONS AND GRADATIONS															
Boring No.	Sample No.	Depth Interval (ft.)	AASHTO Class.	N	Percent Passing No.10	Percent Passing No.40	Percent Retained No. 60	Percent Passing No.200	SOIL MORTAR			LL	PI	PL	Percent Moisture
									Coarse Sand	Fine Sand	Silt + Clay				
B3-A	SS-1	4.6'-6.1'	A-7-6(6)	8	74.9	64.0	40.1	50.1	20.1	16.9	63.0	45	18	27	45.3
EB1-A	SS-2	4.9'-6.4'	A-7-6(13)	10	98.4	83.1	23.1	64.1	21.9	16.3	61.8	49	21	28	30.6
B2-B	SS-3	4.5'-11.0'	A-7-5(29)	13	95.4	92.5	9.8	79.7	5.5	15.3	79.2	69	31	38	48.1
B2-A	SS-4	9.7'-16.2'	A-5(9)	6	98.3	96.3	6.1	74.6	4.5	27.6	68.0	53	8	45	48.1
B1-B	SS-5	15.0'-16.5'	A-5(2)	3	98.2	78.0	30.9	46.6	29.7	29.1	41.2	44	9	35	36.8
B3-B	SS-6	9.9'-41.4'	A-7-5(11)	6	97.8	94.5	10.4	62.1	8.5	37.6	53.8	51	19	32	47.7
EB2-A	SS-7	49.6'-71.1'	A-4(0)	21	99.7	90	20.6	45.4	20.4	41.7	37.8	36	5	31	27.6
B2-B	SS-8	54.5'-56.0'	A-4(0)	30	100	89.8	22.3	44.9	22.3	40.7	36.9	33	6	27	23.7
EB1-B	SS-9	49.9'-71.4'	A-2-4(0)	64	100	81.4	34	31.7	34	41.2	24.8	25	NP	25	14.6

K. E. Walker
 F&H, CERT. No. 102-0603
Don Schmidt
 Don Schmidt, CERT. No. 102-01-0603
Michael Garrison
 Michael Garrison, CERT. No. 102-02-0603

NOTE: "SS" IS THE ABBREVIATION FOR SOIL SAMPLE. SOME SAMPLES CONSIST OF MULTIPLE SPLIT SPOONS. THE DEPTH INTERVAL CORRESPONDING TO THE SOIL SAMPLE IS REPRESENTATIVE OF THE ENTIRE SAMPLE DEPTH. THE "N" AND "PERCENT MOISTURE" VALUES ARE AVERAGES DETERMINED FROM ALL SPLIT SPOONS TAKEN WITHIN THE "DEPTH INTERVAL" ASSOCIATED WITH THE SAMPLE NUMBER.

SITE PHOTOGRAPHIC RECORD

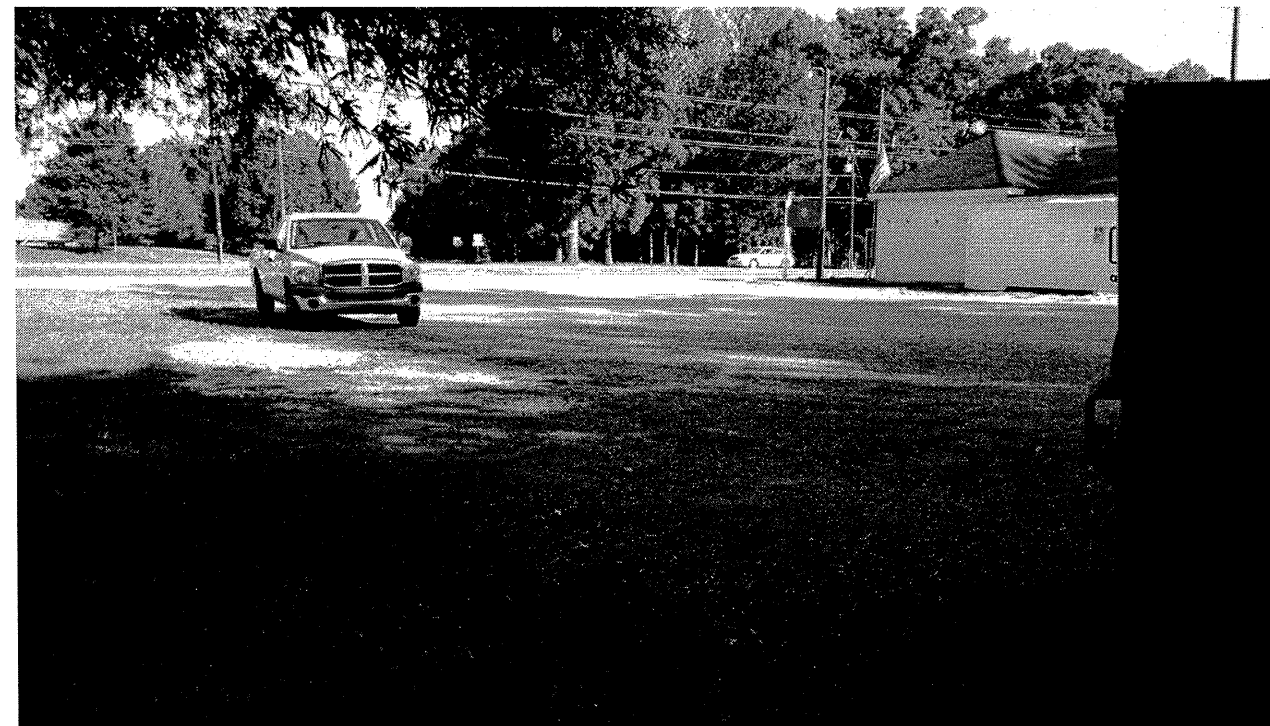
Bridge On SR 1560 Over US 29 & Norfolk Southern Railroad



End Bent 1 Looking Northwest Toward Railroad & Main Street



End Bent 2 Looking Southeast Toward Main Street & Railroad



Bent 2 Looking Northwest Toward Bent 3 & Cedar Springs



Bent 2 Looking Southeast Toward Bent 1 & Railroad