

REFERENCE: U-2525C

PROJECT: 34821

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

STRUCTURE
SUBSURFACE INVESTIGATION

COUNTY GUILFORD
 PROJECT DESCRIPTION GREENSBORO EASTERN LOOP
FROM US 29 NORTH OF GREENSBORO TO SR 2303
(LAWNDALE DRIVE)
 SITE DESCRIPTION CULVERT AT -L- 364+68 AT
UNNAMED TRIBUTARY TO REEDY FORK/TOWNSEND
LAKE

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	U-2525C	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 (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:
- 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

L. BUTLER

T. WILLIAMS

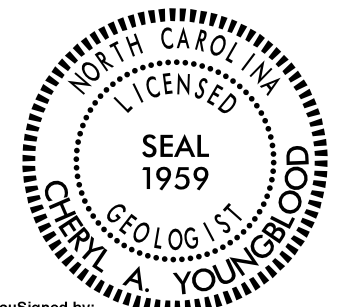
INVESTIGATED BY S&ME, Inc.

DRAWN BY T.T. WALKER, F&R, Inc.

CHECKED BY C.A. YOUNGBLOOD

SUBMITTED BY C.A. YOUNGBLOOD

DATE DECEMBER 2017



DocuSigned by:
Cheryl A. Youngblood

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12/18/2017

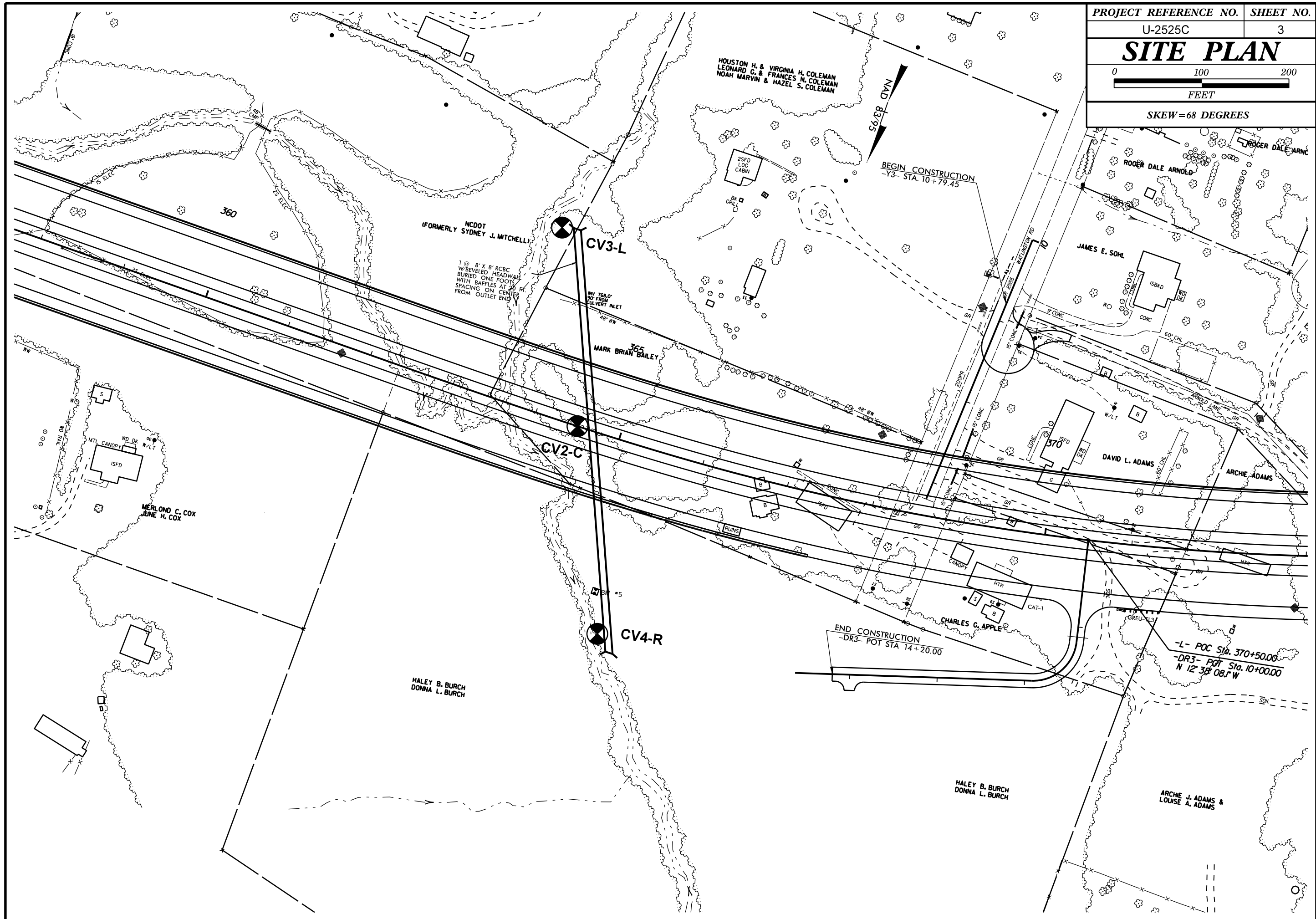
SIGNATURE

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 multiple columns and rows detailing soil and rock classification, gradation, rock description, terms and definitions, consistency or denseness, texture or grain size, soil moisture, plasticity, color, and equipment used on subject project.



NCDOT
(FORMERLY SYDNEY J. MITCHELL)

1 @ 8' X 8' RCBC
W/BEVELED HEADWALL
BURIED ONE FOOT
WITH BAFFLES AT 20 FT
SPACING ON CENTER
FROM OUTLET END

CV3-L

CV2-C

CV4-R

HOUSTON H. & VIRGINIA H. COLEMAN
LEONARD G. & FRANCES M. COLEMAN
NOAH MARVIN & HAZEL S. COLEMAN

BEGIN CONSTRUCTION
-Y3- STA. 10+79.45

END CONSTRUCTION
-DR3- POT STA 14+20.00

-L- POC Sta. 370+50.00
-DR3- POT Sta. 10+00.00
N 12° 38' 08" W

MERLOND C. COX
JUNE H. COX

HALEY B. BURCH
DONNA L. BURCH

HALEY B. BURCH
DONNA L. BURCH

ARCHE J. ADAMS &
LOUISE A. ADAMS

ROGER DALE ARNOLD

JAMES E. SOHL

DAVID L. ADAMS

ARCHE ADAMS

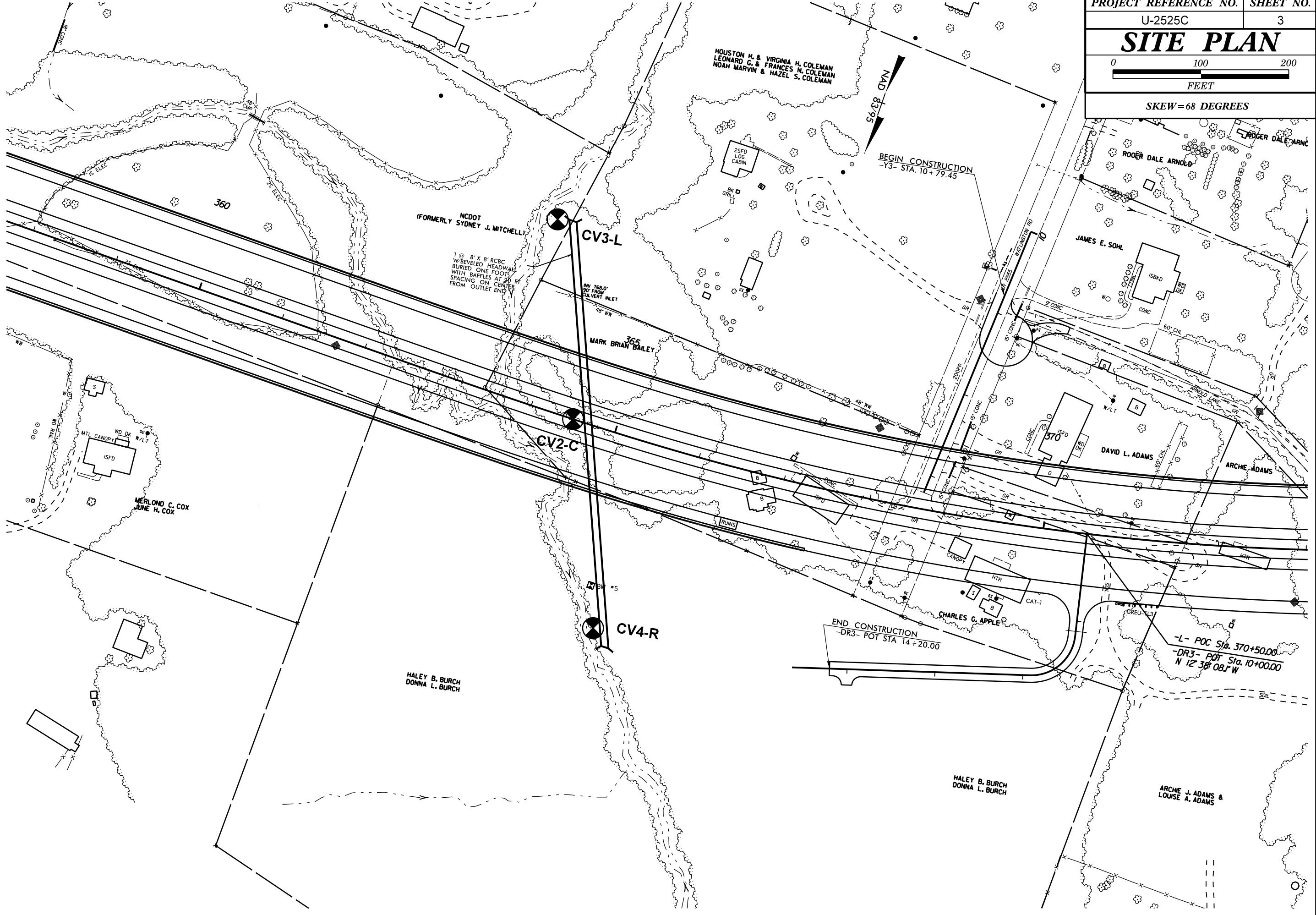
CHARLES C. APPLE

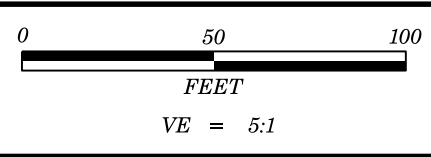
360

365
MARK BRIAN BAILEY

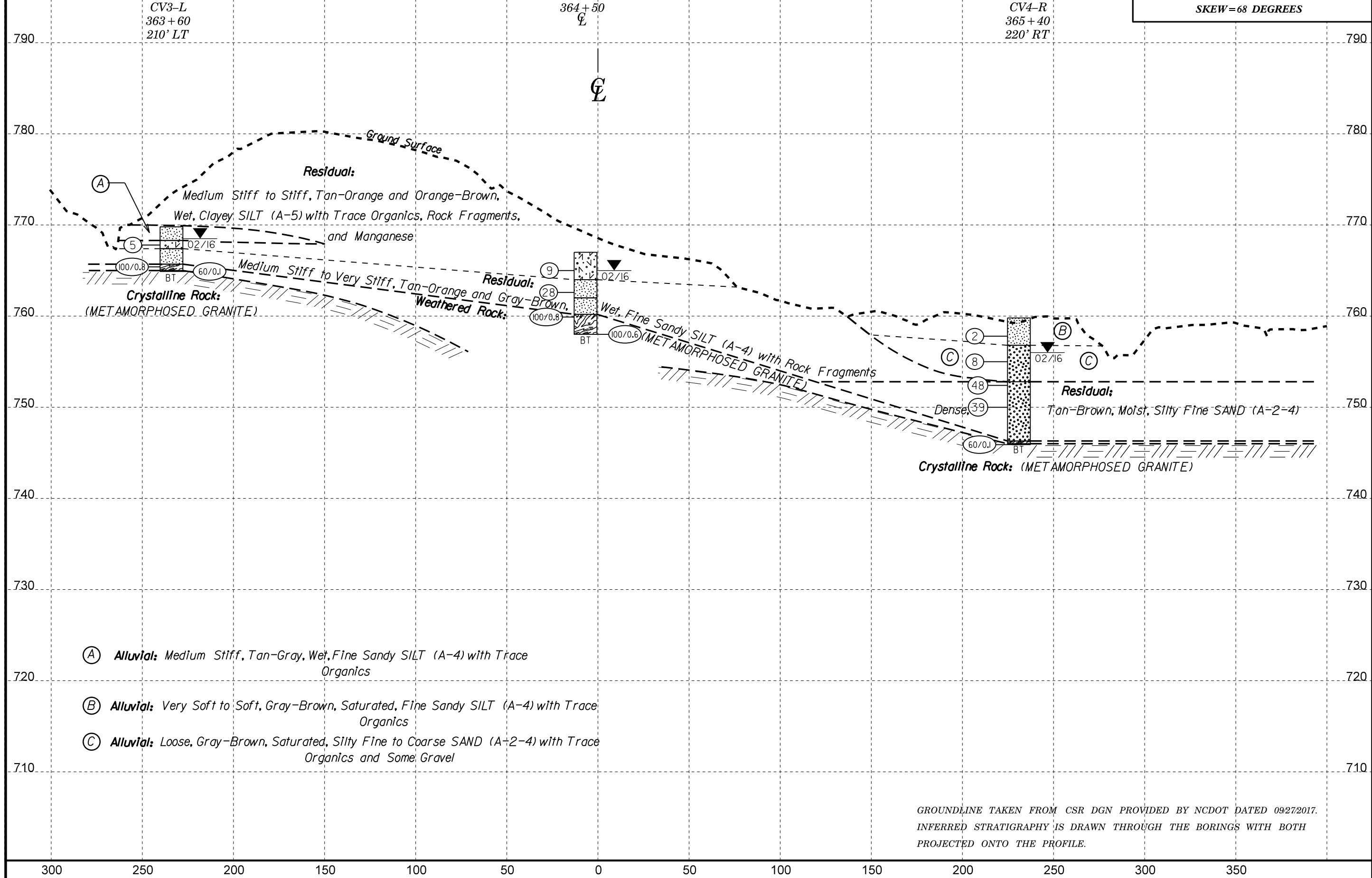
370

MAD 83.95





PROJECT REFERENCE NO.	SHEET NO.
U-2525C	4
CULVERT PROFILE ALONG -L- CROSS SECTION AT 364+68.00	
SKEW=68 DEGREES	



- Ⓐ **Alluvial:** Medium Stiff, Tan-Gray, Wet, Fine Sandy SILT (A-4) with Trace Organics
- Ⓑ **Alluvial:** Very Soft to Soft, Gray-Brown, Saturated, Fine Sandy SILT (A-4) with Trace Organics
- Ⓒ **Alluvial:** Loose, Gray-Brown, Saturated, Silty Fine to Coarse SAND (A-2-4) with Trace Organics and Some Gravel

GROUNDLINE TAKEN FROM CSR DGN PROVIDED BY NCDOT DATED 09/27/2017.
 INFERRED STRATIGRAPHY IS DRAWN THROUGH THE BORINGS WITH BOTH
 PROJECTED ONTO THE PROFILE.

GEOTECHNICAL BORING REPORT

BORE LOG

WBS 34821.1.5		TIP U-2525C		COUNTY GUILFORD		GEOLOGIST Butler, L.										
SITE DESCRIPTION Greensboro Eastern Loop From US 29 North of Greensboro to East of SR 2303 (Lawndale Drive)							GROUND WTR (ft)									
BORING NO. CV3-L		STATION 363+60		OFFSET 210 ft LT		ALIGNMENT -L-										
COLLAR ELEV. 769.8 ft		TOTAL DEPTH 4.9 ft		NORTHING 874,477		EASTING 1,774,148										
DRILL RIG/HAMMER EFF./DATE SME275 DIEDRICH D-50 89% 1/15/2016				DRILL METHOD Wash Boring		HAMMER TYPE Automatic										
DRILLER T. Williams		START DATE 02/09/16		COMP. DATE 02/09/16		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						
770	768.8	1.0	2	2	3									769.8	GROUND SURFACE	0.0
	768.3													768.3	ALLUVIAL	1.5
	767.4													767.4	Tan-Gray Fine Sandy SILT with Trace of Organics	2.4
	765.7													765.7	RESIDUAL	4.1
	765.0													765.0	Tan-Orange Clayey SILT with Trace of Organics	4.8
	764.9													764.9	Brown-Orange Fine Sandy SILT with Little Rock Fragments	4.9
															WEATHERED ROCK (Metamorphosed Granite)	
															CRYSTALLINE ROCK (Metamorphosed Granite)	
															Boring Terminated with Standard Penetration Test Refusal at Elevation 764.9 ft in Crystalline Rock (Metamorphosed Granite)	

WBS 34821.1.5		TIP U-2525C		COUNTY GUILFORD		GEOLOGIST Butler, L.											
SITE DESCRIPTION Greensboro Eastern Loop From US 29 North of Greensboro to East of SR 2303 (Lawndale Drive)							GROUND WTR (ft)										
BORING NO. CV2-C		STATION 364+50		OFFSET CL		ALIGNMENT -L-											
COLLAR ELEV. 767.0 ft		TOTAL DEPTH 9.0 ft		NORTHING 874,686		EASTING 1,774,056											
DRILL RIG/HAMMER EFF./DATE SME275 DIEDRICH D-50 89% 1/15/2016				DRILL METHOD Wash Boring		HAMMER TYPE Automatic											
DRILLER T. Williams		START DATE 02/09/16		COMP. DATE 02/09/16		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							
770																	
															767.0	GROUND SURFACE	0.0
																RESIDUAL	
															764.0	Orange-Brown Clayey SILT, with Rock Fragments and Manganese	3.0
															762.0	Gray-Green SILT	5.0
															760.2	Gray-Brown Fine Sandy SILT	6.8
																WEATHERED ROCK (Metamorphosed Granite)	
															758.0	Boring Terminated at Elevation 758.0 ft in Weathered Rock (Metamorphosed Granite)	

NCDOT BORE DOUBLE U2525C_GEO_CULV1_L_36468_5162016.GPJ NC_DOT.GDT 11/16/17

GEOTECHNICAL BORING REPORT BORE LOG

WBS 34821.1.5		TIP U-2525C		COUNTY GUILFORD		GEOLOGIST Butler, L.	
SITE DESCRIPTION Greensboro Eastern Loop From US 29 North of Greensboro to East of SR 2303 (Lawndale Drive)							GROUND WTR (ft)
BORING NO. CV4-R		STATION 365+40		OFFSET 220 ft RT		ALIGNMENT -L-	
COLLAR ELEV. 759.8 ft		TOTAL DEPTH 13.9 ft		NORTHING 874,902		EASTING 1,773,956	
DRILL RIG/HAMMER EFF/DATE SVE275 DIEDRICH D-50 89% 1/15/2016				DRILL METHOD Wash Boring		HAMMER TYPE Automatic	
DRILLER T. Williams		START DATE 02/09/16		COMP. DATE 02/09/16		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					ELEV. (ft)
760														759.8	0.0
	758.8	1.0	1	1	1	2							Sat.	756.8	3.0
755	756.0	3.8	3	3	5	8							Sat.	752.8	7.0
	753.4	6.4	10	18	30	48							M		
750	751.0	8.8	19	12	27	39							M		
	746.0	13.8	60/0.1			60/0.1								746.3	13.5
														746.0	13.2
														745.9	13.9

NCDOT BORE DOUBLE U2525C_GEO_CULV1_L_36468_5162016.GPJ NC_DOT.GDT 11/16/17

WEATHERED ROCK
(Metamorphosed Granite)
CRYSTALLINE ROCK
(Metamorphosed Granite)
Boring Terminated with Standard Penetration Test Refusal at Elevation 745.9 ft in Crystalline Rock (Metamorphosed Granite)