

REFERENCE: U-5839

PROJECT: 50230

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

STRUCTURE
SUBSURFACE INVESTIGATION

COUNTY HAYWOOD
 PROJECT DESCRIPTION RUSS AVE - US 276 FROM
US 23/74 (GREAT SMOKY MOUNTAINS EXPWY)
TO US 23 BUS (N MAIN ST)
 SITE DESCRIPTION RETAINING WALLS 1, 2, 3, 4, 5, 6,
AND 7

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	U-5839	1	22

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

P. PATTON

A. VERDICCHIO

S. GOWAN

T. MILLER

A. MORGAN

L. GREENE

INVESTIGATED BY S&ME, INC.

DRAWN BY M. HARTMAN

CHECKED BY J. DAILY

SUBMITTED BY S. LANEY

DATE SEPTEMBER 2019

Prepared in the Office of:



3201 SPRING FOREST ROAD
 RALEIGH, NC 27616
 (919) 872-2660



DocuSigned by:

Stewart Laney

75BB4AB1AB3B4CB

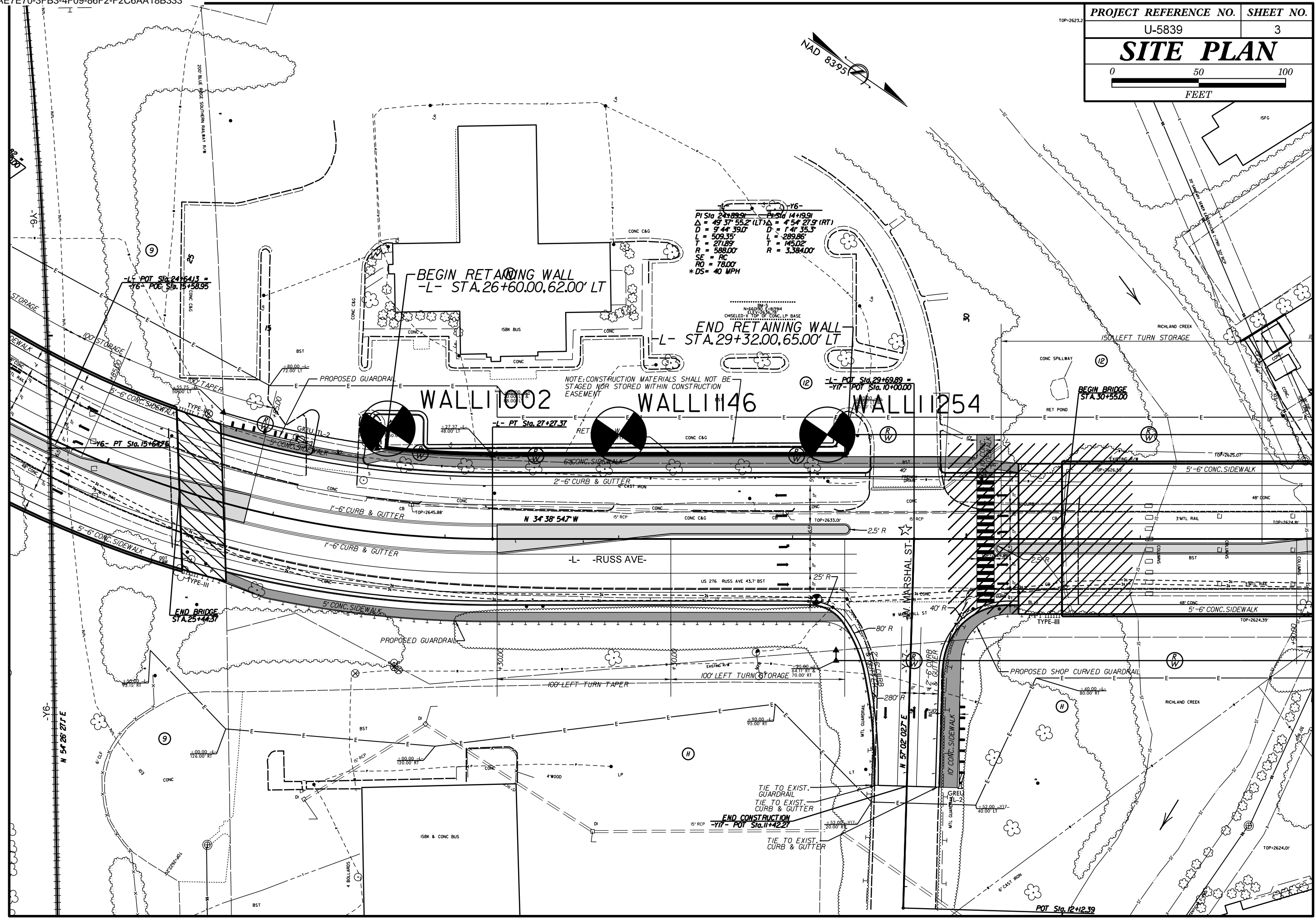
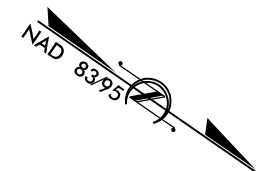
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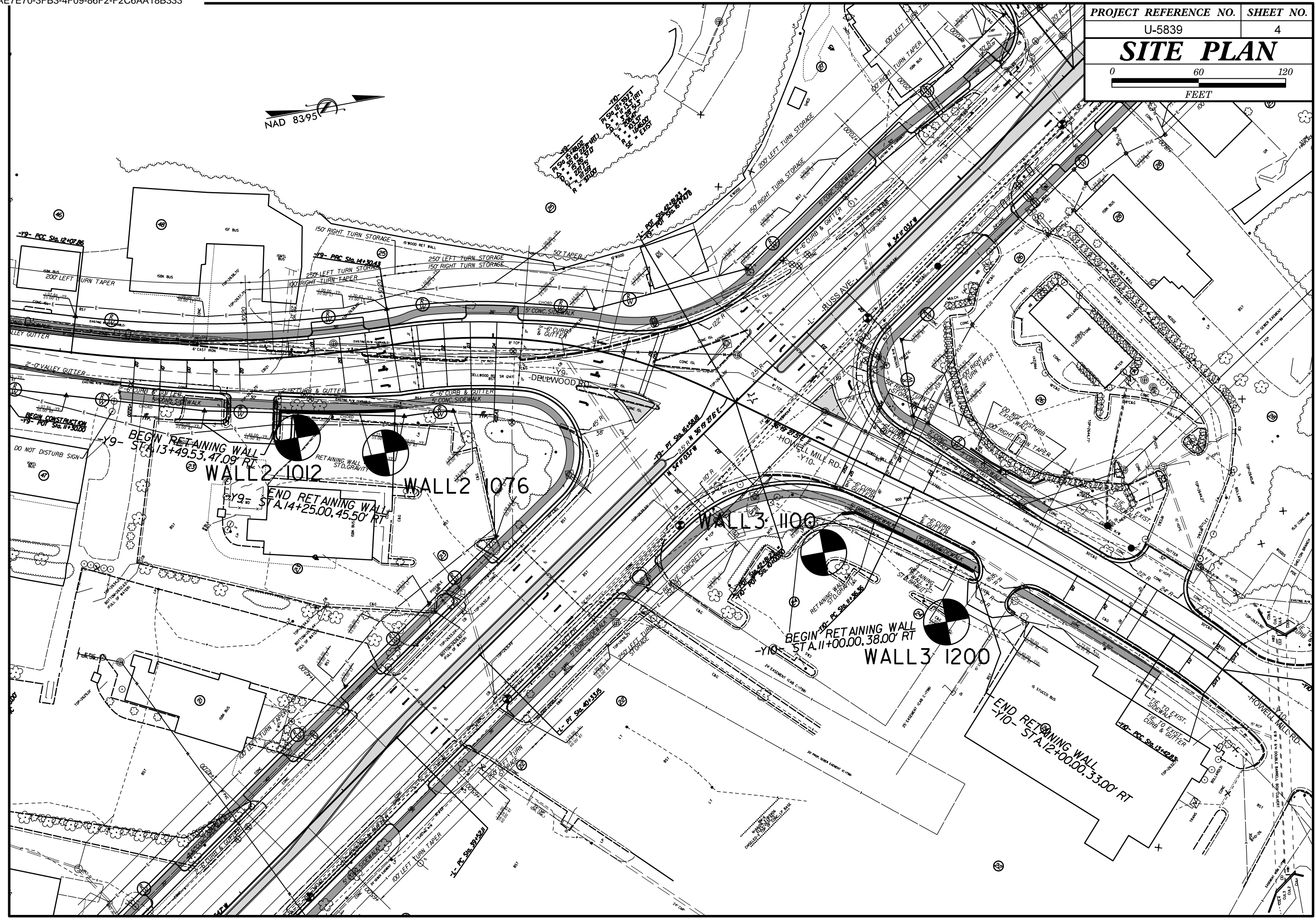
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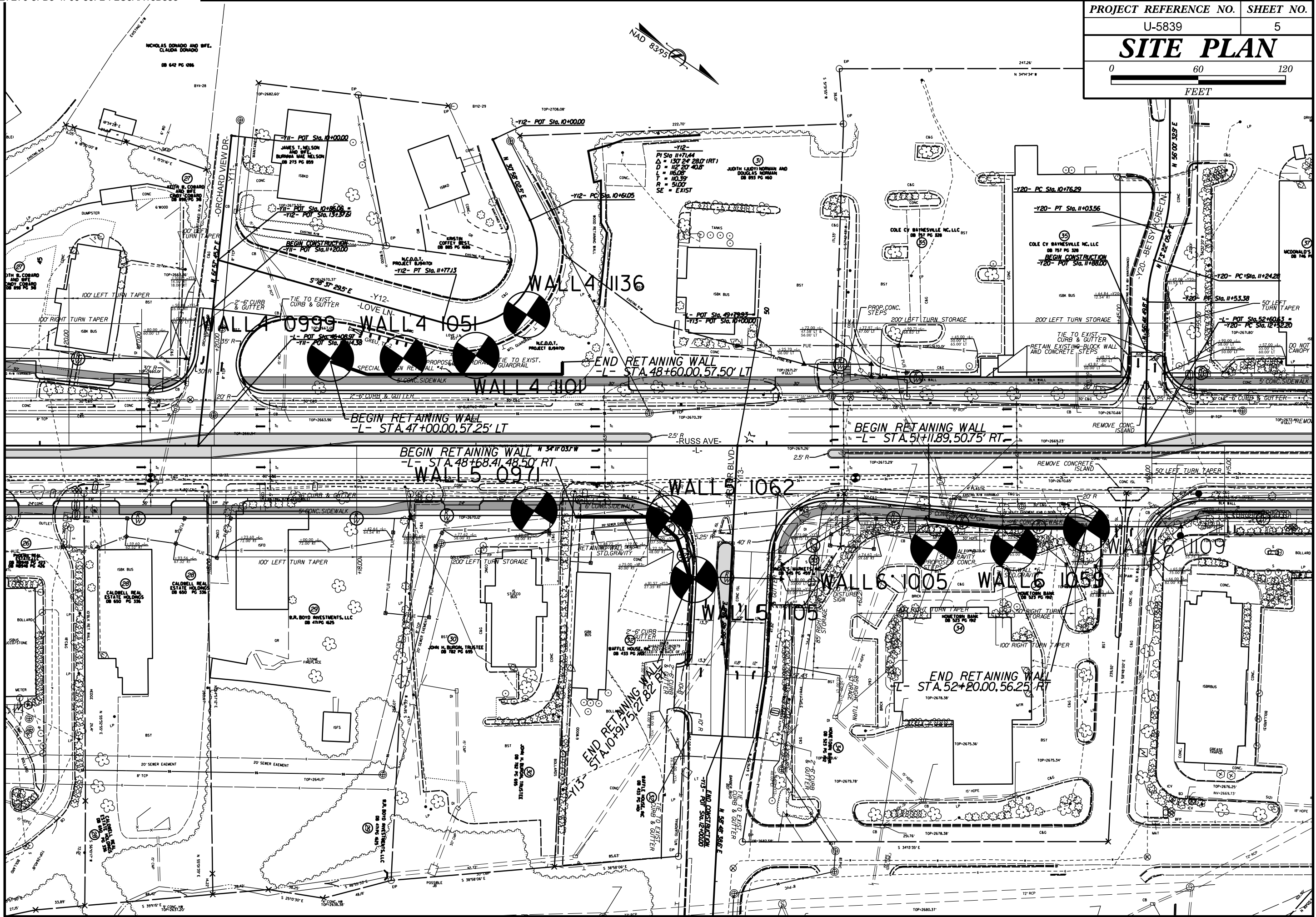
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NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
GEOTECHNICAL ENGINEERING UNIT
SUBSURFACE INVESTIGATION
SOIL AND ROCK LEGEND, TERMS, SYMBOLS, AND ABBREVIATIONS

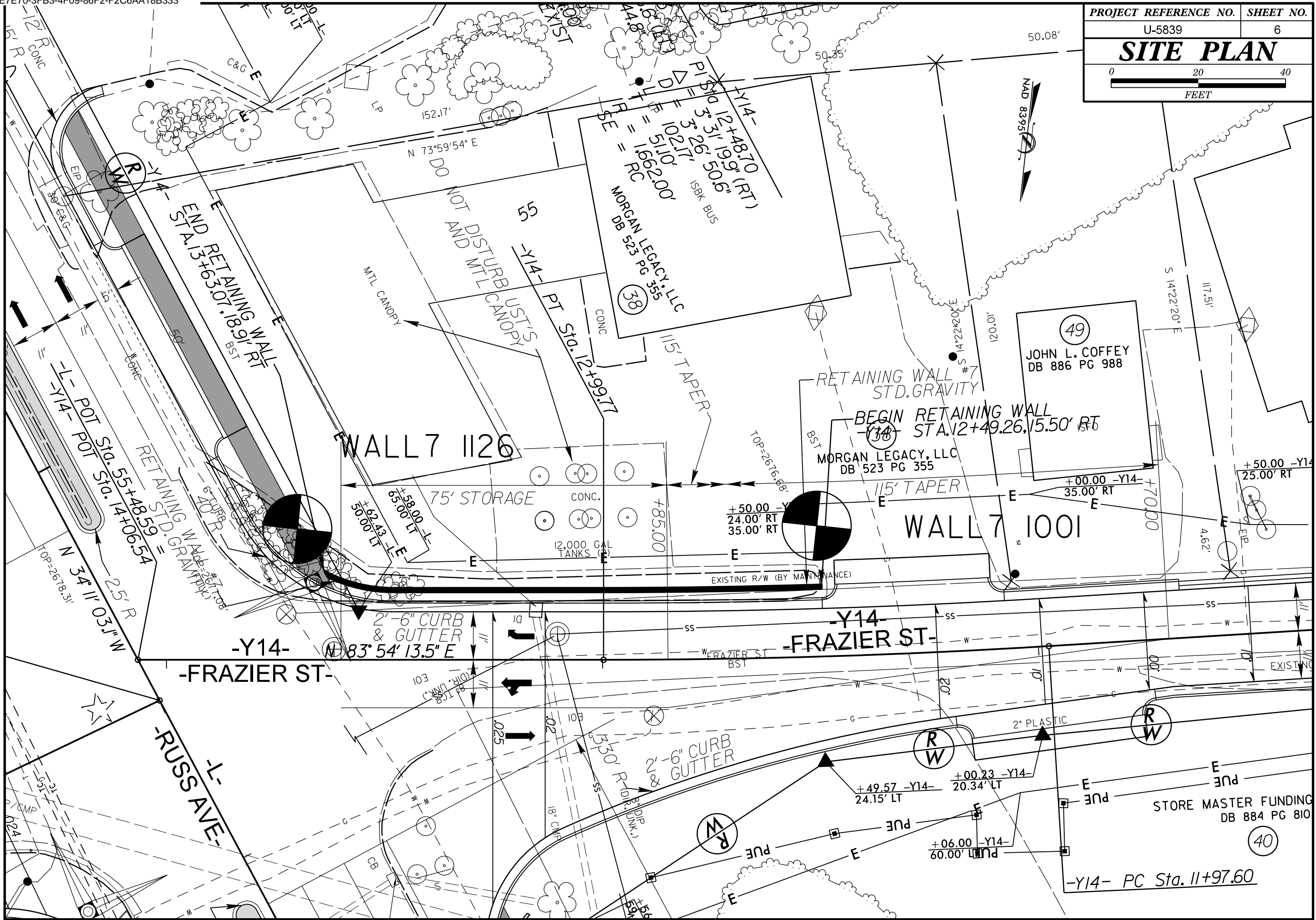
Table containing: SOIL DESCRIPTION, SOIL LEGEND AND AASHTO CLASSIFICATION, GRADATION, MINERALOGICAL COMPOSITION, ROCK DESCRIPTION, TERMS AND DEFINITIONS, CONSISTENCY OR DENSENESS, TEXTURE OR GRAIN SIZE, SOIL MOISTURE - CORRELATION OF TERMS, PLASTICITY, COLOR, MISCELLANEOUS SYMBOLS, RECOMMENDATION SYMBOLS, ABBREVIATIONS, EQUIPMENT USED ON SUBJECT PROJECT, FRACTURE SPACING, BEDDING, INDURATION.

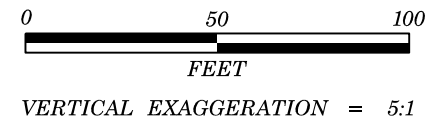






PROJECT REFERENCE NO.	SHEET NO.
U-5839	6
SITE PLAN	
FEET	





PROJECT REFERENCE NO.	SHEET NO.
U-5839	7
PROFILE ALONG -WALL1- FOR PLAN VIEW, SEE SHEET 3	

2690
2680
2670
2660
2650
2640
2630
2620
2610
2600

2680
2670
2660
2650
2640
2630
2620
2610
2600

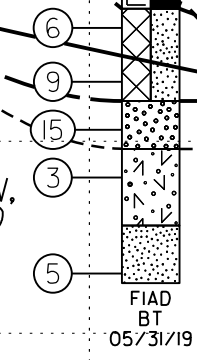
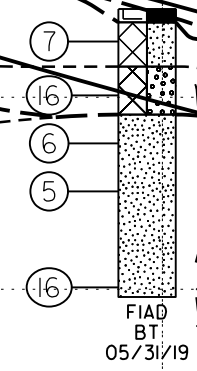
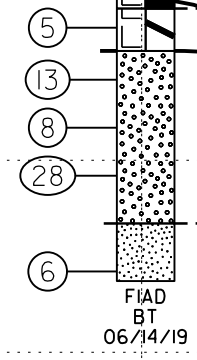
BEGIN -WALL1- STA.10+00.00 =
-L- STA.26+60.00 ,62' LT
EL = 2648.62'

END -WALL1- STA.12+96.44 =
-L- STA.29+32.00 ,65.00' LT
EL = 2637.08'

TOP OF WALL
SS-1214
WALL1_1002
CL

SS-1155
WALL1_1146
11' LT

BOTTOM OF WALL
WALL1_1254
11' LT



RESIDUAL
LOOSE TO
MEDIUM DENSE,
TAN AND BROWN,
SILTY SAND, MOIST

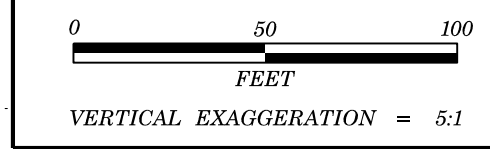
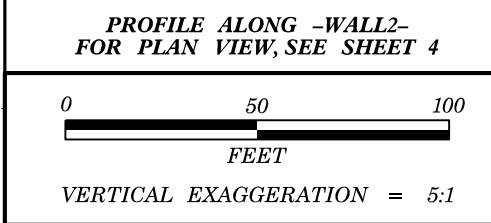
RESIDUAL
SOFT TO
VERY STIFF,
TAN AND BROWN,
SANDY SILT AND
CLAYEY SILT,
MOIST

RESIDUAL
LOOSE TO
MEDIUM DENSE,
TAN AND BROWN,
SILTY SAND, MOIST

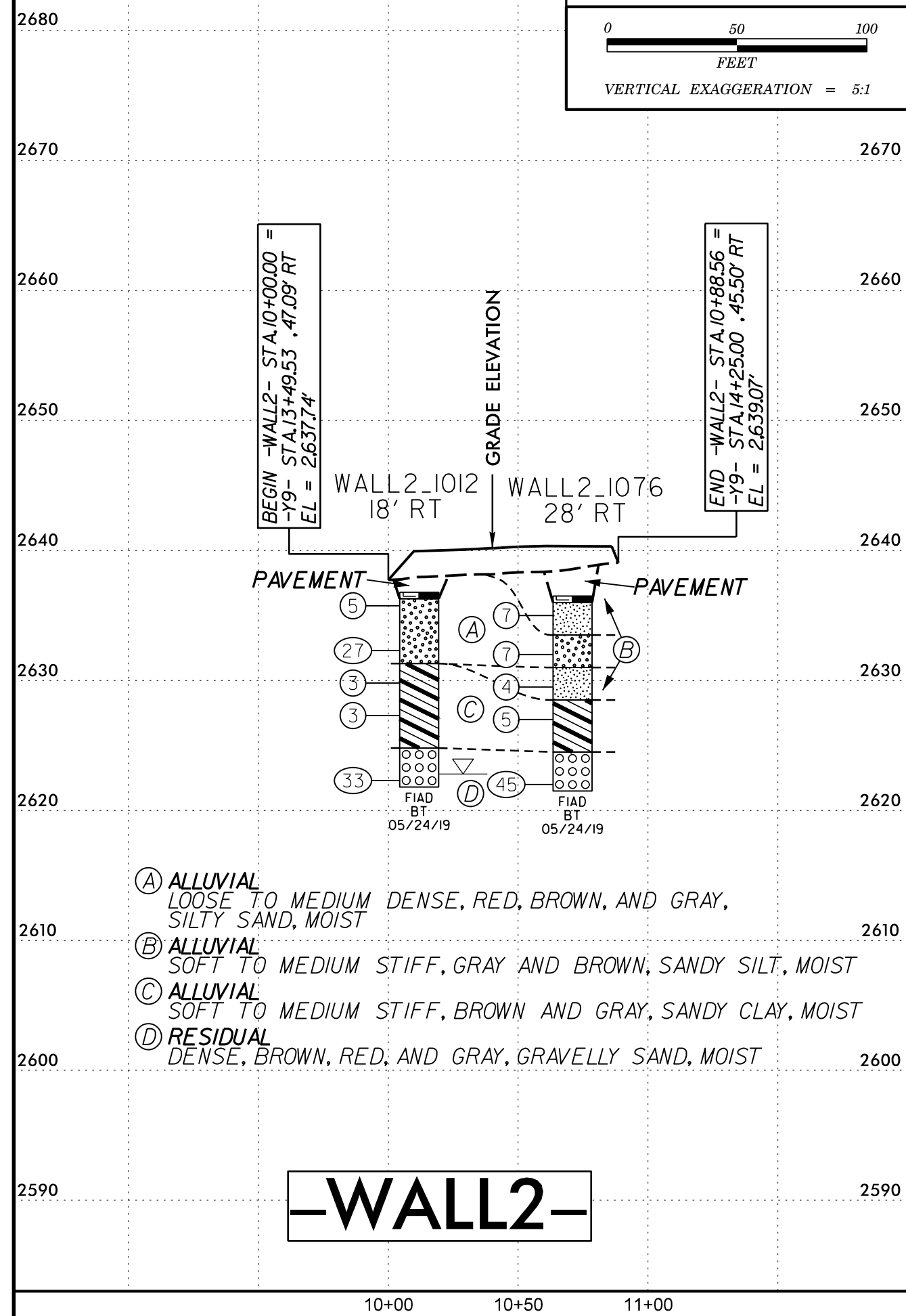
- (A) ROADWAY EMBANKMENT
MEDIUM STIFF, RED AND BROWN, MODERATELY PLASTIC,
SILTY CLAY, MOIST
- (B) ARTIFICIAL FILL
MEDIUM STIFF TO STIFF, BROWN, SANDY SILT, MOIST
- (C) ARTIFICIAL FILL
MEDIUM DENSE, TAN AND BROWN, SILTY SAND, MOIST

-WALL1-

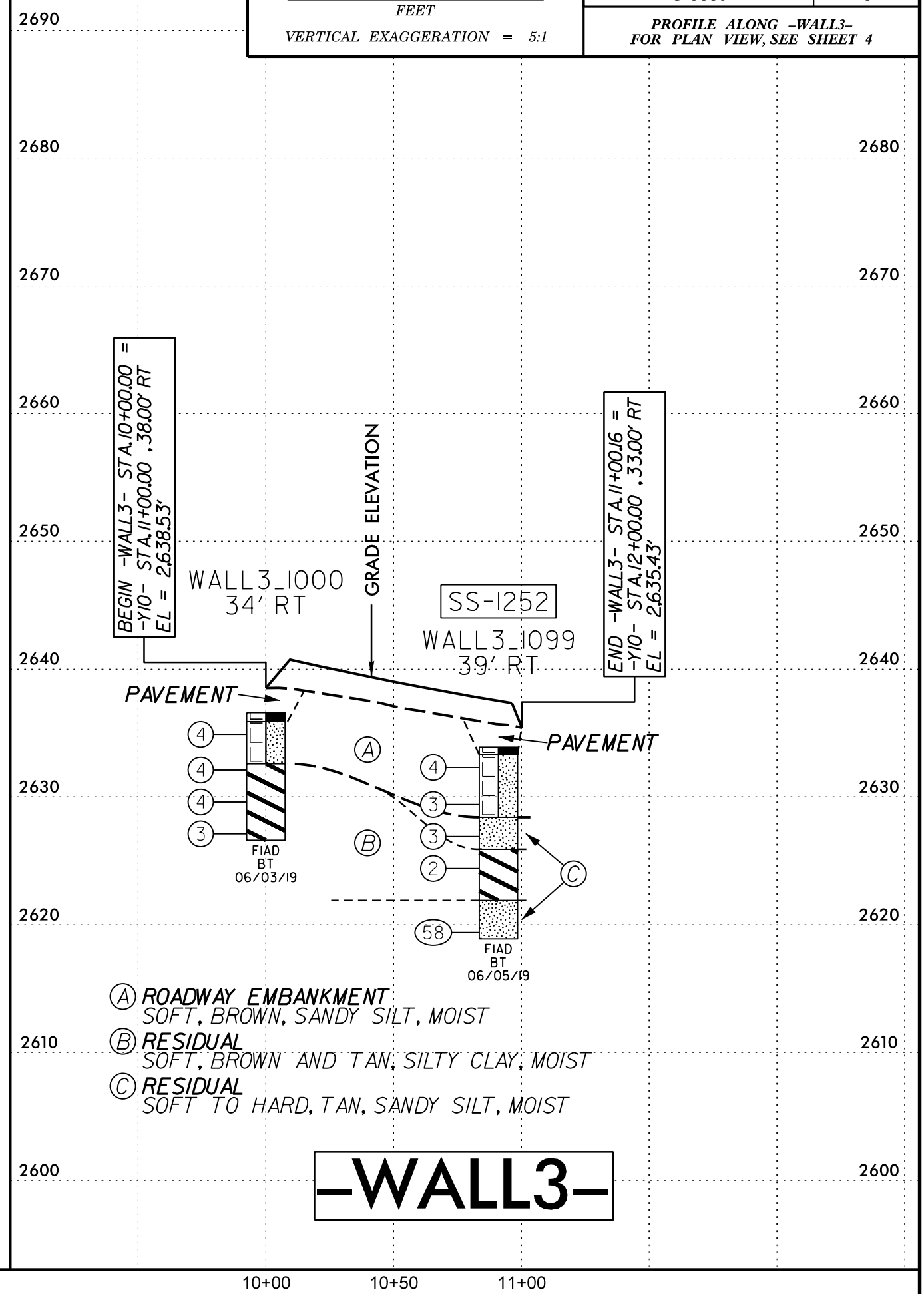
10+00 10+50 11+00 11+50 12+00 12+50 13+00



PROJECT REFERENCE NO.	SHEET NO.
U-5839	8
PROFILE ALONG -WALL3- FOR PLAN VIEW, SEE SHEET 4	

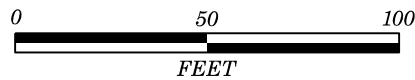


- (A) ALLUVIAL
LOOSE TO MEDIUM DENSE, RED, BROWN, AND GRAY,
SILTY SAND, MOIST
- (B) ALLUVIAL
SOFT TO MEDIUM STIFF, GRAY AND BROWN, SANDY SILT, MOIST
- (C) ALLUVIAL
SOFT TO MEDIUM STIFF, BROWN AND GRAY, SANDY CLAY, MOIST
- (D) RESIDUAL
DENSE, BROWN, RED, AND GRAY, GRAVELLY SAND, MOIST

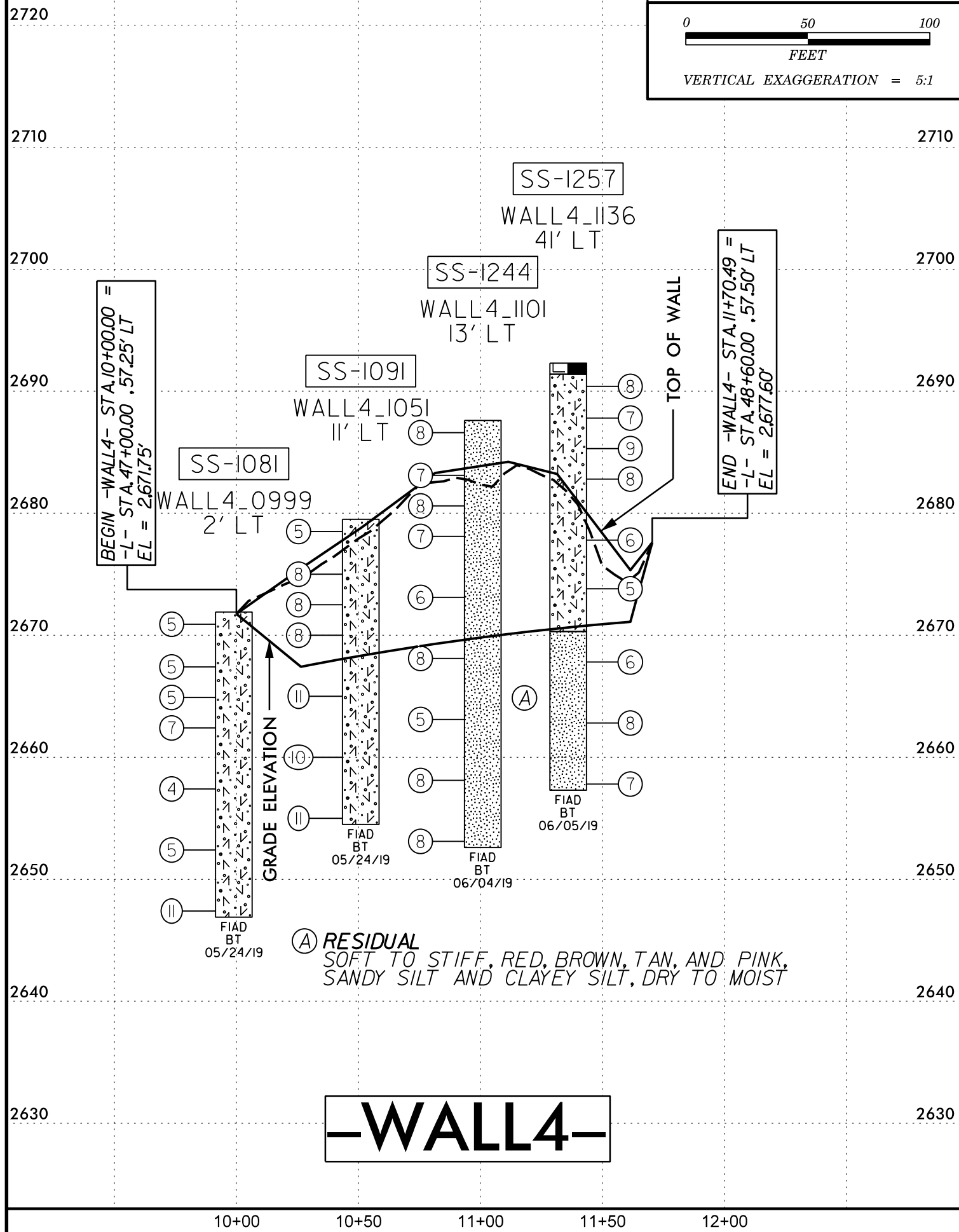


- (A) ROADWAY EMBANKMENT
SOFT, BROWN, SANDY SILT, MOIST
- (B) RESIDUAL
SOFT, BROWN AND TAN, SILTY CLAY, MOIST
- (C) RESIDUAL
SOFT TO HARD, TAN, SANDY SILT, MOIST

PROFILE ALONG -WALL4-
FOR PLAN VIEW, SEE SHEET 5

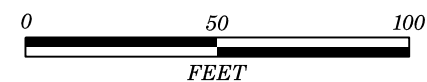


VERTICAL EXAGGERATION = 5:1

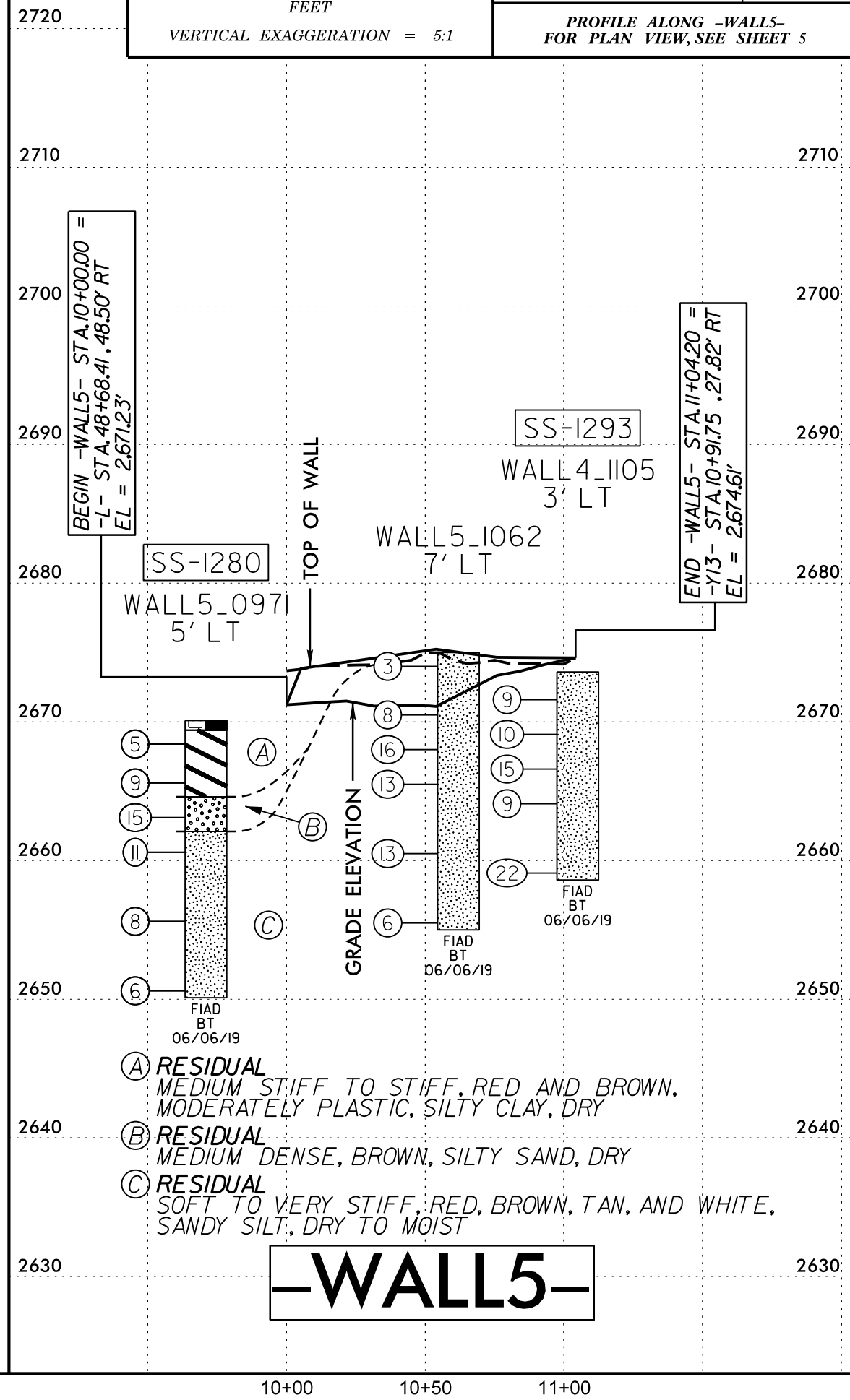


U-5839 9

PROFILE ALONG -WALL5-
FOR PLAN VIEW, SEE SHEET 5



VERTICAL EXAGGERATION = 5:1



PROFILE ALONG -WALL6-
FOR PLAN VIEW, SEE SHEET 5

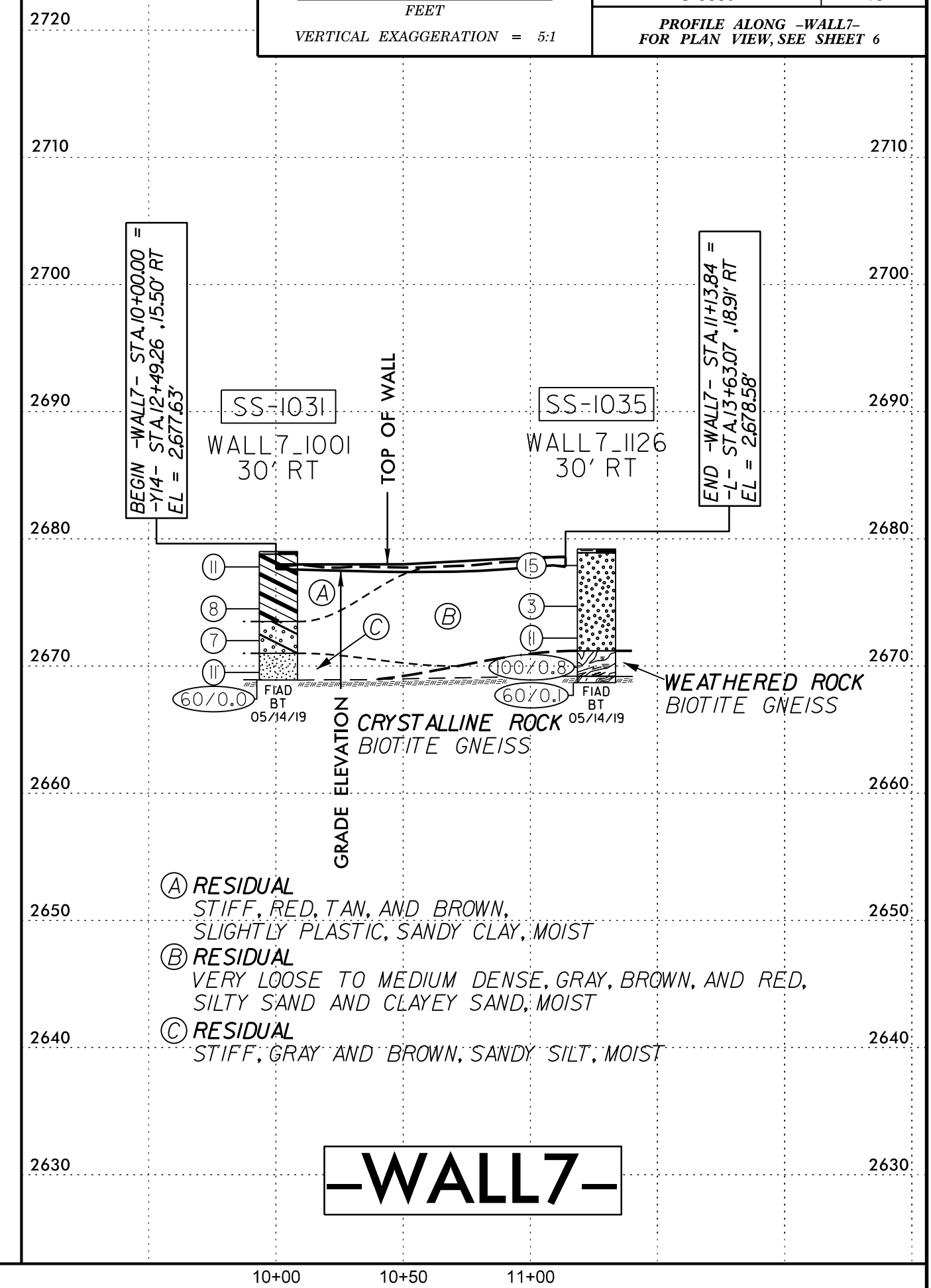
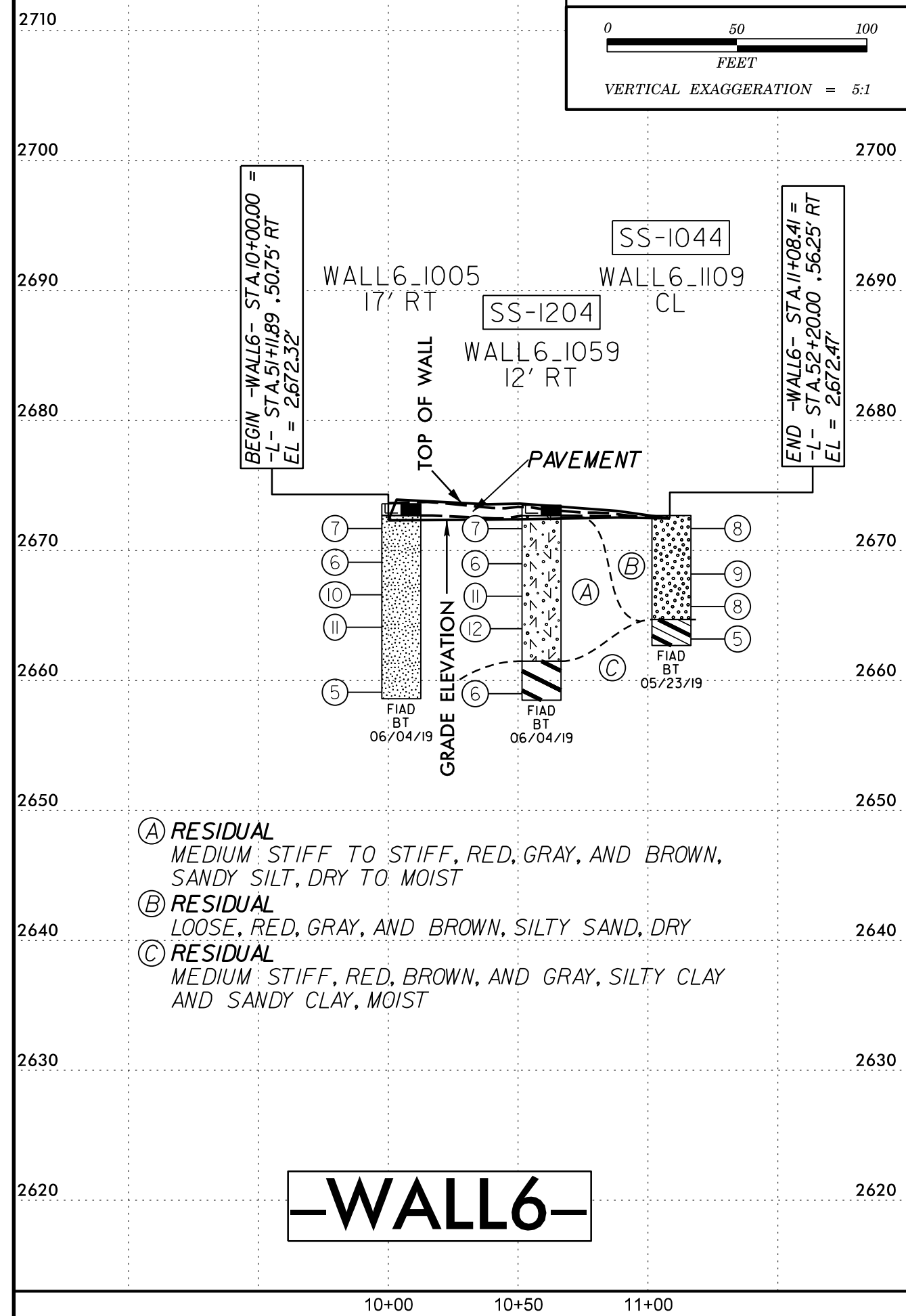
0 50 100
FEET

VERTICAL EXAGGERATION = 5:1

0 50 100
FEET

VERTICAL EXAGGERATION = 5:1

PROJECT REFERENCE NO.	SHEET NO.
U-5839	10
PROFILE ALONG -WALL7- FOR PLAN VIEW, SEE SHEET 6	



GEOTECHNICAL BORING REPORT BORE LOG

WBS 50230.1.1		TIP U-5839		COUNTY HAYWOOD		GEOLOGIST Verdicchio, T.										
SITE DESCRIPTION RUSS AVE - US 276 FROM US 23/74 (GREAT SMOKY MOUNTAINS EXPWY) TO US 23 BUS (N MAIN ST)						GROUND WTR (ft)										
BORING NO. WALL1_1002		STATION 10+02		OFFSET CL		ALIGNMENT -WALL1-										
COLLAR ELEV. 2,648.7 ft		TOTAL DEPTH 15.0 ft		NORTHING 659,965		EASTING 814,064										
DRILL RIG/HAMMER EFF./DATE SME2938 CME-750 84% 4/25/2019		DRILL METHOD H.S. Augers		HAMMER TYPE Automatic												
DRILLER Gowan, S. L.		START DATE 06/04/19		COMP. DATE 06/04/19		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)	
2650																2,648.7 GROUND SURFACE 0.0
	2,647.9	0.8														2,647.9 ROADWAY EMBANKMENT (PAVEMENT) 0.8
2645	2,645.2	3.5	1	2	3											2,645.7 RED AND BROWN, MODERATELY PLASTIC SILTY CLAY (71.2% PASSING #200) 3.0
	2,642.7	6.0	5	7	6											RESIDUAL TAN AND BROWN, SILTY SAND
2640	2,640.2	8.5	3	3	5											2,636.7 TAN AND BROWN SANDY SILT 12.0
			7	14	14											
2635	2,635.2	13.5	3	3	3											2,633.7 Boring Terminated at Elevation 2,633.7 ft IN LOOSE SILTY SAND 15.0

NCDOT BORE SINGLE U5839_GEO_WALLS.GPJ NC_DOT.GDT 8/30/19

GEOTECHNICAL BORING REPORT BORE LOG

WBS 50230.1.1		TIP U-5839		COUNTY HAYWOOD		GEOLOGIST Verdicchio, T.										
SITE DESCRIPTION RUSS AVE - US 276 FROM US 23/74 (GREAT SMOKY MOUNTAINS EXPWY) TO US 23 BUS (N MAIN ST)						GROUND WTR (ft)										
BORING NO. WALL1_1146		STATION 11+46		OFFSET 11 ft LT		ALIGNMENT -WALL1-										
COLLAR ELEV. 2,644.6 ft		TOTAL DEPTH 15.0 ft		NORTHING 660,076		EASTING 813,991										
DRILL RIG/HAMMER EFF./DATE SME8245 CME-55 90% 09/06/2018		DRILL METHOD H.S. Augers		HAMMER TYPE Automatic												
DRILLER Miller, R. T.		START DATE 05/31/19		COMP. DATE 05/31/19		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)	
2645	2,643.9	0.7														2,644.6 GROUND SURFACE 0.0
			3	3	4											2,643.9 ROADWAY EMBANKMENT (PAVEMENT) 0.7
2640	2,641.1	3.5	7	6	10											2,641.6 ARTIFICIAL FILL BROWN, SANDY SILT 3.0
	2,638.6	6.0	5	3	3											2,639.1 TAN AND BROWN, SILTY SAND 5.5
2635	2,636.1	8.5	2	2	3											BROWN, SANDY SILT
2630	2,631.1	13.5	5	7	9											2,629.6 Boring Terminated at Elevation 2,629.6 ft IN VERY STIFF SANDY SILT 15.0

NCDOT BORE SINGLE U5839_GEO_WALLS.GPJ NC_DOT.GDT 8/30/19

GEOTECHNICAL BORING REPORT BORE LOG

WBS 50230.1.1	TIP U-5839	COUNTY HAYWOOD	GEOLOGIST Verdicchio, T.	
SITE DESCRIPTION RUSS AVE - US 276 FROM US 23/74 (GREAT SMOKY MOUNTAINS EXPWY) TO US 23 BUS (N MAIN ST)				GROUND WTR (ft)
BORING NO. WALL1_1254	STATION 12+54	OFFSET 11 ft LT	ALIGNMENT -WALL1-	0 HR. Dry
COLLAR ELEV. 2,637.6 ft	TOTAL DEPTH 15.0 ft	NORTHING 660,175	EASTING 813,923	24 HR. FIAD
DRILL RIG/HAMMER EFF./DATE SME8245 CME-55 90% 09/06/2018			DRILL METHOD H.S. Augers	HAMMER TYPE Automatic
DRILLER Miller, R. T.	START DATE 05/31/19	COMP. DATE 05/31/19	SURFACE WATER DEPTH N/A	

ELEV (ft)	DRIVE ELEV (ft)	DEPTH (ft)	BLOW COUNT			BLOWS PER FOOT					SAMP. NO.	LOG MOI	SOIL AND ROCK DESCRIPTION	DEPTH (ft)				
			0.5ft	0.5ft	0.5ft	0	25	50	75	100					ELEV. (ft)			
2640																		
	2,636.9	0.7														2,637.6	GROUND SURFACE	0.0
2635			3	3	3								D			2,636.9	ROADWAY EMBANKMENT (PAVEMENT)	0.7
	2,634.1	3.5											D					
	2,631.6	6.0	3	4	5								D			2,632.1	ARTIFICIAL FILL BROWN, SANDY SILT	5.5
2630			8	8	7								D			2,629.6	RESIDUAL BROWN AND TAN, SILTY SAND	8.0
	2,629.1	8.5											M				BROWN, CLAYEY SILT	
2625			1	2	1								M			2,625.6	BROWN, SANDY SILT	12.0
	2,624.1	13.5											M					
			1	1	4								M			2,622.6	Boring Terminated at Elevation 2,622.6 ft IN MED. STIFF SANDY SILT	15.0

NCDOT BORE SINGLE U5839_GEO_WALLS.GPJ NC_DOT.GDT 8/30/19

GEOTECHNICAL BORING REPORT BORE LOG

WBS 50230.1.1		TIP U-5839		COUNTY HAYWOOD		GEOLOGIST Patton, P.										
SITE DESCRIPTION RUSS AVE - US 276 FROM US 23/74 (GREAT SMOKY MOUNTAINS EXPWY) TO US 23 BUS (N MAIN ST)						GROUND WTR (ft)										
BORING NO. WALL2_1012		STATION 10+12		OFFSET 18 ft RT		ALIGNMENT -WALL2-										
COLLAR ELEV. 2,636.8 ft		TOTAL DEPTH 15.0 ft		NORTHING 661,028		EASTING 813,170										
DRILL RIG/HAMMER EFF./DATE SME8245 CME-55 90% 09/06/2018		DRILL METHOD H.S. Augers		HAMMER TYPE Automatic												
DRILLER Miller, R. T.		START DATE 05/24/19		COMP. DATE 05/24/19		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)	
2640																
2635	2,636.8	0.1	2	3	2										2,636.8	0.0
															2,636.3	0.5
	2,633.3	3.5	4	9	18											
2630	2,630.8	6.0	1	2	1										2,631.3	5.5
	2,628.3	8.5	1	1	2											
2625	2,623.3	13.5	8	10	23										2,624.8	12.0
															2,621.8	15.0
Boring Terminated at Elevation 2,621.8 ft IN DENSE SAND WITH GRAVEL																

NCDOT BORE SINGLE U5839_GEO_WALLS.GPJ NC_DOT.GDT 8/30/19

GEOTECHNICAL BORING REPORT BORE LOG

WBS 50230.1.1		TIP U-5839		COUNTY HAYWOOD		GEOLOGIST Patton, P.										
SITE DESCRIPTION RUSS AVE - US 276 FROM US 23/74 (GREAT SMOKY MOUNTAINS EXPWY) TO US 23 BUS (N MAIN ST)						GROUND WTR (ft)										
BORING NO. WALL2_1076		STATION 10+76		OFFSET 28 ft RT		ALIGNMENT -WALL2-										
COLLAR ELEV. 2,636.5 ft		TOTAL DEPTH 15.0 ft		NORTHING 661,086		EASTING 813,191										
DRILL RIG/HAMMER EFF./DATE SME8245 CME-55 90% 09/06/2018		DRILL METHOD H.S. Augers		HAMMER TYPE Automatic												
DRILLER Miller, R. T.		START DATE 05/24/19		COMP. DATE 05/24/19		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)	
2640																
2635	2,636.0	0.5	3	4	3										2,636.5	0.0
															2,633.5	3.0
	2,633.0	3.5	1	3	4										2,631.0	5.5
2630	2,630.5	6.0	1	2	2										2,628.5	8.0
	2,628.0	8.5	1	2	3										2,624.5	12.0
2625	2,623.0	13.5	3	28	17										2,621.5	15.0
Boring Terminated at Elevation 2,621.5 ft IN DENSE SAND WITH GRAVEL																

NCDOT BORE SINGLE U5839_GEO_WALLS.GPJ NC_DOT.GDT 8/30/19

GEOTECHNICAL BORING REPORT BORE LOG

WBS 50230.1.1		TIP U-5839		COUNTY HAYWOOD		GEOLOGIST Verdicchio, T.										
SITE DESCRIPTION RUSS AVE - US 276 FROM US 23/74 (GREAT SMOKY MOUNTAINS EXPWY) TO US 23 BUS (N MAIN ST)						GROUND WTR (ft)										
BORING NO. WALL3_1000		STATION 10+00		OFFSET 34 ft RT		ALIGNMENT -WALL3-										
COLLAR ELEV. 2,636.6 ft		TOTAL DEPTH 10.0 ft		NORTHING 661,371		EASTING 813,314										
DRILL RIG/HAMMER EFF./DATE SME2938 CME-750 84% 4/25/2019				DRILL METHOD H.S. Augers		HAMMER TYPE Automatic										
DRILLER Gowan, S. L.		START DATE 06/03/19		COMP. DATE 06/03/19		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)	
2640																
2635	2,635.9	0.7	2	2	2											GROUND SURFACE 0.0 ROADWAY EMBANKMENT (PAVEMENT) 0.7
	2,633.1	3.5	3	2	2											BROWN, SANDY SILT
2630	2,630.6	6.0	2	2	2											RESIDUAL BROWN, SILTY CLAY
	2,628.1	8.5	WOH	1	2											
																Boring Terminated at Elevation 2,626.6 ft IN SOFT SILTY CLAY

NCDOT BORE SINGLE U5839_GEO_WALLS.GPJ NC_DOT.GDT 8/30/19

GEOTECHNICAL BORING REPORT BORE LOG

WBS 50230.1.1		TIP U-5839		COUNTY HAYWOOD		GEOLOGIST Verdicchio, T.										
SITE DESCRIPTION RUSS AVE - US 276 FROM US 23/74 (GREAT SMOKY MOUNTAINS EXPWY) TO US 23 BUS (N MAIN ST)						GROUND WTR (ft)										
BORING NO. WALL3_1099		STATION 10+99		OFFSET 39 ft RT		ALIGNMENT -WALL3-										
COLLAR ELEV. 2,633.9 ft		TOTAL DEPTH 15.0 ft		NORTHING 661,445		EASTING 813,376										
DRILL RIG/HAMMER EFF./DATE SME2938 CME-750 84% 4/25/2019				DRILL METHOD H.S. Augers		HAMMER TYPE Automatic										
DRILLER Gowan, S. L.		START DATE 06/05/19		COMP. DATE 06/05/19		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)	
2635																
	2,633.3	0.6	2	2	2											GROUND SURFACE 0.0 ROADWAY EMBANKMENT (PAVEMENT) 0.6
2630	2,630.4	3.5	1	1	2											BROWN, SANDY SILT
	2,627.9	6.0	1	2	1											RESIDUAL BROWN, SANDY SILT
2625	2,625.4	8.5	WOH	1	1											TAN, SILTY CLAY
2620	2,620.4	13.5	8	33	25											TAN, SANDY SILT
																Boring Terminated at Elevation 2,618.9 ft IN HARD SANDY SILT

NCDOT BORE SINGLE U5839_GEO_WALLS.GPJ NC_DOT.GDT 8/30/19

GEOTECHNICAL BORING REPORT BORE LOG

WBS 50230.1.1		TIP U-5839		COUNTY HAYWOOD		GEOLOGIST Verdicchio, T.										
SITE DESCRIPTION RUSS AVE - US 276 FROM US 23/74 (GREAT SMOKY MOUNTAINS EXPWY) TO US 23 BUS (N MAIN ST)						GROUND WTR (ft)										
BORING NO. WALL4_0999		STATION 9+99		OFFSET 2 ft LT		ALIGNMENT -WALL4-										
COLLAR ELEV. 2,671.9 ft		TOTAL DEPTH 25.0 ft		NORTHING 661,643		EASTING 812,916										
DRILL RIG/HAMMER EFF./DATE SME2938 CME-750 84% 4/25/2019		DRILL METHOD H.S. Augers		HAMMER TYPE Automatic												
DRILLER Gowan, S. L.		START DATE 05/24/19		COMP. DATE 05/24/19		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)	
2675																
	2,671.9	0.0													2,671.9	0.0
2670	2,668.4	3.5	2	2	3	5							D			
	2,665.9	6.0	2	3	2								SS-1081	D		
2665	2,663.4	8.5	2	2	3									D		
	2,663.4	8.5	2	3	4									D		
2660	2,658.4	13.5	2	1	3									D		
	2,653.4	18.5	3	2	3									M		
2650	2,648.4	23.5	3	5	6									M		
															2,646.9	25.0
Boring Terminated at Elevation 2,646.9 ft IN STIFF CLAYEY SILT																

NCDOT BORE SINGLE U5839_GEO_WALLS.GPJ NC_DOT.GDT 8/30/19

GEOTECHNICAL BORING REPORT BORE LOG

WBS 50230.1.1		TIP U-5839		COUNTY HAYWOOD		GEOLOGIST Verdicchio, T.										
SITE DESCRIPTION RUSS AVE - US 276 FROM US 23/74 (GREAT SMOKY MOUNTAINS EXPWY) TO US 23 BUS (N MAIN ST)						GROUND WTR (ft)										
BORING NO. WALL4_1051		STATION 10+51		OFFSET 11 ft LT		ALIGNMENT -WALL4-										
COLLAR ELEV. 2,679.5 ft		TOTAL DEPTH 25.0 ft		NORTHING 661,684		EASTING 812,888										
DRILL RIG/HAMMER EFF./DATE SME2938 CME-750 84% 4/25/2019		DRILL METHOD H.S. Augers		HAMMER TYPE Automatic												
DRILLER Gowan, S. L.		START DATE 05/24/19		COMP. DATE 05/24/19		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)	
2680	2,679.5	0.0	10	3	2										2,679.5	0.0
	2,676.0	3.5	3	3	5									D		
2675	2,673.5	6.0	3	4	4									SS-1091	D	
	2,671.0	8.5	2	4	4										M	
2670	2,666.0	13.5	4	5	6										D	
	2,661.0	18.5	6	4	6										M	
2665	2,656.0	23.5	3	5	6										M	
															2,654.5	25.0
Boring Terminated at Elevation 2,654.5 ft IN STIFF CLAYEY SILT																

NCDOT BORE SINGLE U5839_GEO_WALLS.GPJ NC_DOT.GDT 8/30/19

GEOTECHNICAL BORING REPORT BORE LOG

WBS 50230.1.1		TIP U-5839		COUNTY HAYWOOD		GEOLOGIST Verdicchio, T.										
SITE DESCRIPTION RUSS AVE - US 276 FROM US 23/74 (GREAT SMOKY MOUNTAINS EXPWY) TO US 23 BUS (N MAIN ST)						GROUND WTR (ft)										
BORING NO. WALL4_1101		STATION 11+01		OFFSET 13 ft LT		ALIGNMENT -WALL4-										
COLLAR ELEV. 2,687.6 ft		TOTAL DEPTH 35.0 ft		NORTHING 661,724		EASTING 812,858										
DRILL RIG/HAMMER EFF./DATE SME2938 CME-750 84% 4/25/2019		DRILL METHOD H.S. Augers		HAMMER TYPE Automatic												
DRILLER Gowan, S. L.		START DATE 06/04/19		COMP. DATE 06/04/19		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)	
2690																
	2,687.6	0.0	1	3	5	8							D		2,687.6	GROUND SURFACE
2685													D			RESIDUAL TAN AND BROWN, SANDY SILT
	2,684.1	3.5	3	3	4	7							D	SS-1244		
	2,681.6	6.0	4	4	4	8							D			
2680													D			
	2,679.1	8.5	2	3	4	7							D			
2675													D			
	2,674.1	13.5	2	2	4	6							M			
2670													M			
	2,669.1	18.5	2	4	4	8							M			
2665													M			
	2,664.1	23.5	1	2	3	5							M			
2660													M			
	2,659.1	28.5	1	4	4	8							M			
2655													M			
	2,654.1	33.5	1	3	5	8							M		2,652.6	35.0
Boring Terminated at Elevation 2,652.6 ft IN MED. STIFF SANDY SILT																

NCDOT BORE SINGLE U5839_GEO_WALLS.GPJ NC_DOT.GDT 8/30/19

GEOTECHNICAL BORING REPORT BORE LOG

WBS 50230.1.1		TIP U-5839		COUNTY HAYWOOD		GEOLOGIST Verdicchio, T.										
SITE DESCRIPTION RUSS AVE - US 276 FROM US 23/74 (GREAT SMOKY MOUNTAINS EXPWY) TO US 23 BUS (N MAIN ST)						GROUND WTR (ft)										
BORING NO. WALL4_1136		STATION 11+36		OFFSET 41 ft LT		ALIGNMENT -WALL4-										
COLLAR ELEV. 2,692.3 ft		TOTAL DEPTH 35.0 ft		NORTHING 661,737		EASTING 812,815										
DRILL RIG/HAMMER EFF./DATE SME2938 CME-750 84% 4/25/2019		DRILL METHOD H.S. Augers		HAMMER TYPE Automatic												
DRILLER Gowan, S. L.		START DATE 06/05/19		COMP. DATE 06/05/19		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)	
2695																
	2,691.4	0.9	3	3	5	8							D		2,692.3	0.0
2690													D		2,691.4	0.9
	2,688.8	3.5	2	3	4	7							D			
2685													D			
	2,686.3	6.0	4	4	5	9							D			
	2,683.8	8.5	3	4	4	8							D			
2680													D			
	2,678.8	13.5	2	2	4	6							D			
2675													M			
	2,674.8	17.5	2	2	3	5							M			
2670													M		2,670.3	22.0
	2,668.8	23.5	3	3	3	6							M			
2665													M			
	2,663.8	28.5	3	3	5	8							M			
2660													M			
	2,658.8	33.5	2	3	4	7							M		2,657.3	35.0
Boring Terminated at Elevation 2,657.3 ft IN MED. STIFF SANDY SILT																

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GEOTECHNICAL BORING REPORT BORE LOG

WBS 50230.1.1		TIP U-5839		COUNTY HAYWOOD		GEOLOGIST Verdicchio, T.										
SITE DESCRIPTION RUSS AVE - US 276 FROM US 23/74 (GREAT SMOKY MOUNTAINS EXPWY) TO US 23 BUS (N MAIN ST)						GROUND WTR (ft)										
BORING NO. WALL5_0971		STATION 9+71		OFFSET 5 ft LT		ALIGNMENT -WALL5-										
COLLAR ELEV. 2,670.1 ft		TOTAL DEPTH 20.0 ft		NORTHING 661,817		EASTING 812,924										
DRILL RIG/HAMMER EFF./DATE SME2938 CME-750 84% 4/25/2019		DRILL METHOD H.S. Augers		HAMMER TYPE Automatic												
DRILLER Gowan, S. L.		START DATE 06/06/19		COMP. DATE 06/06/19		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						
2675																
2670	2,669.4	0.7													2,670.1	0.0
															2,669.4	0.7
2665	2,666.6	3.5	2	2	3											
	2,664.1	6.0	2	4	5											
2660	2,664.1	6.0	5	6	9											
	2,661.6	8.5	3	5	6											
2655	2,656.6	13.5	3	4	4											
	2,651.6	18.5	2	2	4											
															2,650.1	20.0
Boring Terminated at Elevation 2,650.1 ft IN MED. STIFF SANDY SILT																

NCDOT BORE SINGLE U5839_GEO_WALLS.GPJ NC_DOT.GDT 8/30/19

GEOTECHNICAL BORING REPORT BORE LOG

WBS 50230.1.1		TIP U-5839		COUNTY HAYWOOD		GEOLOGIST Verdicchio, T.										
SITE DESCRIPTION RUSS AVE - US 276 FROM US 23/74 (GREAT SMOKY MOUNTAINS EXPWY) TO US 23 BUS (N MAIN ST)						GROUND WTR (ft)										
BORING NO. WALL5_1062		STATION 10+62		OFFSET 7 ft LT		ALIGNMENT -WALL5-										
COLLAR ELEV. 2,675.0 ft		TOTAL DEPTH 20.0 ft		NORTHING 661,897		EASTING 812,876										
DRILL RIG/HAMMER EFF./DATE SME2938 CME-750 84% 4/25/2019		DRILL METHOD H.S. Augers		HAMMER TYPE Automatic												
DRILLER Gowan, S. L.		START DATE 06/06/19		COMP. DATE 06/06/19		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						
2675	2,675.0	0.0	1	1	2										2,675.0	0.0
	2,671.5	3.5	3	4	4											
2670	2,669.0	6.0	5	9	7											
	2,666.5	8.5	4	6	7											
2665	2,661.5	13.5	3	6	7											
2660	2,656.5	18.5	2	2	4											
2655															2,655.0	20.0
Boring Terminated at Elevation 2,655.0 ft IN MED. STIFF SANDY SILT																

NCDOT BORE SINGLE U5839_GEO_WALLS.GPJ NC_DOT.GDT 8/30/19

GEOTECHNICAL BORING REPORT BORE LOG

WBS 50230.1.1	TIP U-5839	COUNTY HAYWOOD	GEOLOGIST Verdicchio, T.
SITE DESCRIPTION RUSS AVE - US 276 FROM US 23/74 (GREAT SMOKY MOUNTAINS EXPWY) TO US 23 BUS (N MAIN ST)			GROUND WTR (ft)
BORING NO. WALL5_1105	STATION 11+05	OFFSET 3 ft LT	ALIGNMENT -WALL5- 0 HR. Dry
COLLAR ELEV. 2,673.6 ft	TOTAL DEPTH 15.0 ft	NORTHING 661,935	EASTING 812,901 24 HR. FIAD
DRILL RIG/HAMMER EFF./DATE SME2938 CME-750 84% 4/25/2019		DRILL METHOD H.S. Augers	HAMMER TYPE Automatic
DRILLER Gowan, S. L.	START DATE 06/06/19	COMP. DATE 06/06/19	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						
2675															2,673.6	0.0
	2,672.6	1.0														
2670	2,670.1	3.5	2	5	4								D			
	2,667.6	6.0	4	4	6								D			
	2,667.6	6.0	5	7	8								D			
2665	2,665.1	8.5	3	3	6								D			
2660	2,660.1	13.5	5	10	12								D		2,658.6	15.0
															Boring Terminated at Elevation 2,658.6 ft IN STIFF SANDY SILT	

NCDOT BORE SINGLE U5839_GEO_WALL5.GPJ NC_DOT.GDT 8/30/19

GEOTECHNICAL BORING REPORT BORE LOG

WBS 50230.1.1		TIP U-5839		COUNTY HAYWOOD		GEOLOGIST Verdicchio, T.										
SITE DESCRIPTION RUSS AVE - US 276 FROM US 23/74 (GREAT SMOKY MOUNTAINS EXPWY) TO US 23 BUS (N MAIN ST)						GROUND WTR (ft)										
BORING NO. WALL6_1005		STATION 10+05		OFFSET 17 ft RT		ALIGNMENT -WALL6-										
COLLAR ELEV. 2,673.6 ft		TOTAL DEPTH 15.0 ft		NORTHING 662,059		EASTING 812,790										
DRILL RIG/HAMMER EFF./DATE SME2938 CME-750 84% 4/25/2019		DRILL METHOD H.S. Augers		HAMMER TYPE Automatic												
DRILLER Gowan, S. L.		START DATE 06/04/19		COMP. DATE 06/04/19		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)	
2675																
	2,672.7	0.9														2,673.6 GROUND SURFACE 0.0 2,672.7 ROADWAY EMBANKMENT (PAVEMENT) 0.9
2670	2,670.1	3.5	2	4	3								D			RESIDUAL RED AND BROWN, SANDY SILT
	2,667.6	6.0	4	4	6								M			
2665	2,665.1	8.5	5	5	6								D			
2660	2,660.1	13.5	3	2	3								M			Boring Terminated at Elevation 2,658.6 ft IN MED. STIFF SANDY SILT

NCDOT BORE SINGLE U5839_GEO_WALLS.GPJ NC_DOT.GDT 8/30/19

GEOTECHNICAL BORING REPORT BORE LOG

WBS 50230.1.1		TIP U-5839		COUNTY HAYWOOD		GEOLOGIST Verdicchio, T.										
SITE DESCRIPTION RUSS AVE - US 276 FROM US 23/74 (GREAT SMOKY MOUNTAINS EXPWY) TO US 23 BUS (N MAIN ST)						GROUND WTR (ft)										
BORING NO. WALL6_1059		STATION 10+59		OFFSET 12 ft RT		ALIGNMENT -WALL6-										
COLLAR ELEV. 2,673.5 ft		TOTAL DEPTH 15.0 ft		NORTHING 662,104		EASTING 812,759										
DRILL RIG/HAMMER EFF./DATE SME2938 CME-750 84% 4/25/2019		DRILL METHOD H.S. Augers		HAMMER TYPE Automatic												
DRILLER Gowan, S. L.		START DATE 06/04/19		COMP. DATE 06/04/19		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)	
2675																
	2,672.7	0.8														2,673.5 GROUND SURFACE 0.0 2,672.7 ROADWAY EMBANKMENT (PAVEMENT) 0.8
2670	2,670.0	3.5	2	3	4								D			RESIDUAL RED AND BROWN, CLAYEY SILT
	2,667.5	6.0	4	5	6								D			
2665	2,665.0	8.5	4	5	7								D			
2660	2,660.0	13.5	2	3	3								M			Boring Terminated at Elevation 2,658.5 ft IN MED. STIFF SILTY CLAY

NCDOT BORE SINGLE U5839_GEO_WALLS.GPJ NC_DOT.GDT 8/30/19

GEOTECHNICAL BORING REPORT BORE LOG

WBS 50230.1.1		TIP U-5839		COUNTY HAYWOOD		GEOLOGIST Verdicchio, T.										
SITE DESCRIPTION RUSS AVE - US 276 FROM US 23/74 (GREAT SMOKY MOUNTAINS EXPWY) TO US 23 BUS (N MAIN ST)							GROUND WTR (ft)									
BORING NO. WALL6_1109		STATION 11+09		OFFSET CL		ALIGNMENT -WALL6-										
COLLAR ELEV. 2,672.7 ft		TOTAL DEPTH 10.0 ft		NORTHING 662,138		EASTING 812,720										
DRILL RIG/HAMMER EFF./DATE SME2938 CME-750 84% 4/25/2019				DRILL METHOD H.S. Augers		HAMMER TYPE Automatic										
DRILLER Gowan, S. L.		START DATE 05/23/19		COMP. DATE 05/23/19		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)	
2675																
	2,672.7	0.0													2,672.7	0.0
2670																
	2,669.2	3.5	2	3	5	8						SS-1044	D			
	2,666.7	6.0	2	4	5	9							D			
2665																
	2,664.2	8.5	4	4	4	8							D		2,664.7	8.0
	2,662.7	10.0	2	2	3	5							M		2,662.7	10.0
															Boring Terminated at Elevation 2,662.7 ft IN MED. STIFF SANDY CLAY	

NCDOT BORE SINGLE U5839_GEO_WALLS.GPJ NC_DOT.GDT 8/30/19

GEOTECHNICAL BORING REPORT BORE LOG

WBS 50230.1.1		TIP U-5839		COUNTY HAYWOOD		GEOLOGIST Verdicchio, T.											
SITE DESCRIPTION RUSS AVE - US 276 FROM US 23/74 (GREAT SMOKY MOUNTAINS EXPWY) TO US 23 BUS (N MAIN ST)						GROUND WTR (ft)											
BORING NO. WALL7_1001		STATION 10+01		OFFSET 13 ft RT		ALIGNMENT -WALL7-											
COLLAR ELEV. 2,679.0 ft		TOTAL DEPTH 10.1 ft		NORTHING 662,331		EASTING 812,337											
DRILL RIG/HAMMER EFF./DATE SME2938 CME-750 84% 4/25/2019		DRILL METHOD H.S. Augers		HAMMER TYPE Automatic													
DRILLER Gowan, S. L.		START DATE 05/22/19		COMP. DATE 05/22/19		SURFACE WATER DEPTH N/A											
ELEV (ft)	DRIVE ELEV (ft)	DEPTH (ft)	BLOW COUNT			BLOWS PER FOOT					SAMP. NO.	LOG MOI	LOG G	SOIL AND ROCK DESCRIPTION	DEPTH (ft)		
			0.5ft	0.5ft	0.5ft	0	25	50	75	100							
2680	2,678.8	0.2													2,678.8	GROUND SURFACE	0.2
			12	6	5											ROADWAY EMBANKMENT (PAVEMENT)	
2675	2,675.5	3.5	6	5	3										2,673.5	RESIDUAL RED, TAN, AND BROWN, SLIGHTLY PLASTIC SANDY CLAY, TRACE GRAVEL GRAY, CLAYEY SAND	5.5
	2,673.0	6.0	6	4	3										2,671.0	GRAY AND BROWN, SANDY SILT	8.0
2670	2,670.5	8.5	9	5	6										2,668.9	Boring Terminated with Standard Penetration Test Refusal at Elevation 2,668.9 ft ON CRYSTALLINE ROCK	10.1
	2,668.9	10.1	60/0.0			60/0.0											

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GEOTECHNICAL BORING REPORT BORE LOG

WBS 50230.1.1		TIP U-5839		COUNTY HAYWOOD		GEOLOGIST Verdicchio, T.											
SITE DESCRIPTION RUSS AVE - US 276 FROM US 23/74 (GREAT SMOKY MOUNTAINS EXPWY) TO US 23 BUS (N MAIN ST)						GROUND WTR (ft)											
BORING NO. WALL7_1126		STATION 11+26		OFFSET 4 ft RT		ALIGNMENT -WALL7-											
COLLAR ELEV. 2,679.2 ft		TOTAL DEPTH 10.5 ft		NORTHING 662,345		EASTING 812,455											
DRILL RIG/HAMMER EFF./DATE SME8245 CME-55 90% 09/06/2018		DRILL METHOD H.S. Augers		HAMMER TYPE Automatic													
DRILLER Gowan, S. L.		START DATE 05/22/19		COMP. DATE 05/22/19		SURFACE WATER DEPTH N/A											
ELEV (ft)	DRIVE ELEV (ft)	DEPTH (ft)	BLOW COUNT			BLOWS PER FOOT					SAMP. NO.	LOG MOI	LOG G	SOIL AND ROCK DESCRIPTION	DEPTH (ft)		
			0.5ft	0.5ft	0.5ft	0	25	50	75	100							
2680	2,678.9	0.3													2,678.3	GROUND SURFACE	0.3
			7	6	9											ROADWAY EMBANKMENT (PAVEMENT)	
2675	2,675.7	3.5	1	1	2										2,671.2	RESIDUAL BROWN AND RED, SILTY SAND	8.0
	2,673.2	6.0	7	5	6										2,669.2	WEATHERED ROCK (BIOTITE GNEISS)	10.0
2670	2,670.7	8.5	24	76/0.3											2,668.7	CRYSTALLINE ROCK (BIOTITE GNEISS)	10.5
	2,668.8	10.4	60/0.1			60/0.1										Boring Terminated with Standard Penetration Test Refusal at Elevation 2,668.7 ft IN CRYSTALLINE ROCK	

NCDOT BORE SINGLE U5839_GEO_WALLS.GPJ NC_DOT.GDT 8/30/19



SUMMARY OF LABORATORY TEST DATA
Soil Classification and Gradation

S&ME, Inc. Raleigh, 3201 Spring Forest Road, Raleigh, North Carolina 27616			
S&ME Project #:	1305-16-028	Date Report:	8/6/2019
State Project No.:	50230.1.1	County:	Haywood
Federal ID No.:		TIP No.:	U-5839
Project Name: Russ Avenue US 276 from US 23/74 to US 23 Business			
Client Name: CALYX		Client Address: Cary, NC	

Sample No.	Station	Offset	Alignment	Sample Depth (ft)	AASHTO Classification	Total % Passing Sieve #				Total Mortar Fraction (%)				LL	PL	PI	Moist. %
						10	40	60	200	Coarse Sand	Fine Sand	Silt	Clay				
SS-1031	12+50	30 RT	Y14	0.2-1.7	A-6 (3)	76	64	59	45.8	23	22	25	31	36	22	14	16.8
SS-1035	13+70	30 RT	Y14	0.3-1.8	A-2-4 (0)	67	51	44	28.5	35	28	20	17	30	24	6	10.7
SS-1044	52+20	57 RT	-L-	0-1.5	A-2-4 (0)	69	56	49	30.2	29	33	23	14	32	28	4	34.7
SS-1081	47+00	60 LT	-L-	3.5-5.0	A-5 (3)	100	94	86	57.0	14	39	32	15	46	40	6	32.7
SS-1091	47+50	60 LT	-L-	3.5-5.0	A-5 (9)	100	97	92	74.0	8	27	46	19	52	43	9	39.6
SS-1155	28+00	60 LT	-L-	0.7-2.2	A-4 (0)	89	72	55	43.9	28	28	27	16	30	24	6	13.9
SS-1204	51+70	70 RT	-L-	0.8-2.3	A-5 (5)	97	90	84	61.8	14	30	36	20	41	33	8	24.0
SS-1214	26+60	60 LT	-L-	0.8-2.3	A-7-6 (14)	100	89	84	71.2	14	17	17	53	42	21	21	24.5
SS-1244	48+00	73 LT	-L-	3.5-5.0	A-4 (1)	100	88	79	51.5	21	37	34	8	39	35	4	21.8
SS-1252	12+00	72 RT	Y10	0.6-2.1	A-4 (0)	95	76	65	41.3	31	31	24	13	29	27	2	21.9
SS-1280	48+40	45 RT	-L-	0.7-2.2	A-7-5 (10)	100	90	82	60.5	18	26	19	37	52	35	17	25.9
SS-1293	49+50	92 RT	-L-	3.5-5.0	A-4 (0)	95	82	73	47.0	23	34	29	14	34	30	4	19.6

References / Comments / Deviations: ND=Not Determined. NP=Non-Plastic.

AASHTO T88: Particle Size Analysis of Soils as Modified by the NCDOT

AASHTO T89: Determining the Liquid Limit of Soils

AASHTO T90: Determining the Plastic Limit & Plasticity Index of Soils

AASHTO T265: Laboratory Determination of Moisture Content of Soils

AASHTO M145: The Classification of Soils and Soil Aggregate Mixtures for Highway Construction Purposes

Karen Warner

Technician Name:

NCDOT 118-06-030!

Signature

Certification #

Joey Daily, P.E.

Technical Responsibility:

Project Manager

Position

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