

REFERENCE: I-5880

PROJECT: 53080

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

STRUCTURE  
SUBSURFACE INVESTIGATION

COUNTY FORSYTH

PROJECT DESCRIPTION I-40/US-311 AT NC-109  
(THOMASVILLE ROAD) / CLEMMONSVILLE ROAD  
SPLIT DIAMOND INTERCHANGE

SITE DESCRIPTION BRIDGE NO. 340 ON -L- (I-40/US-311)  
OVER -Y2A- (CLEMMONSVILLE ROAD)

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	I-5880	1	

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 PERFORM INDEPENDENT SUBSURFACE INVESTIGATIONS AND MAKE INTERPRETATIONS AS NECESSARY TO CONFIRM CONDITIONS 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

M. FOSTER

TRIGON EXPLORATION

NCDOT PERSONNEL

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\_\_\_\_\_

\_\_\_\_\_

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INVESTIGATED BY KLEINFELDER, INC

DRAWN BY B. FARMER

CHECKED BY D. KUBINSKI

SUBMITTED BY KLEINFELDER, INC

DATE JUNE 2024

Prepared in the Office of:

**KLEINFELDER**  
Bright People. Right Solutions.

422 GALLIMORE DARY ROAD, SUITE B  
GREENSBORO, NC 27409  
NC ENGINEERING FIRM LICENSE NO. F-1312



DocuSigned by:

Joshua D. Fregosi 06/26/2024

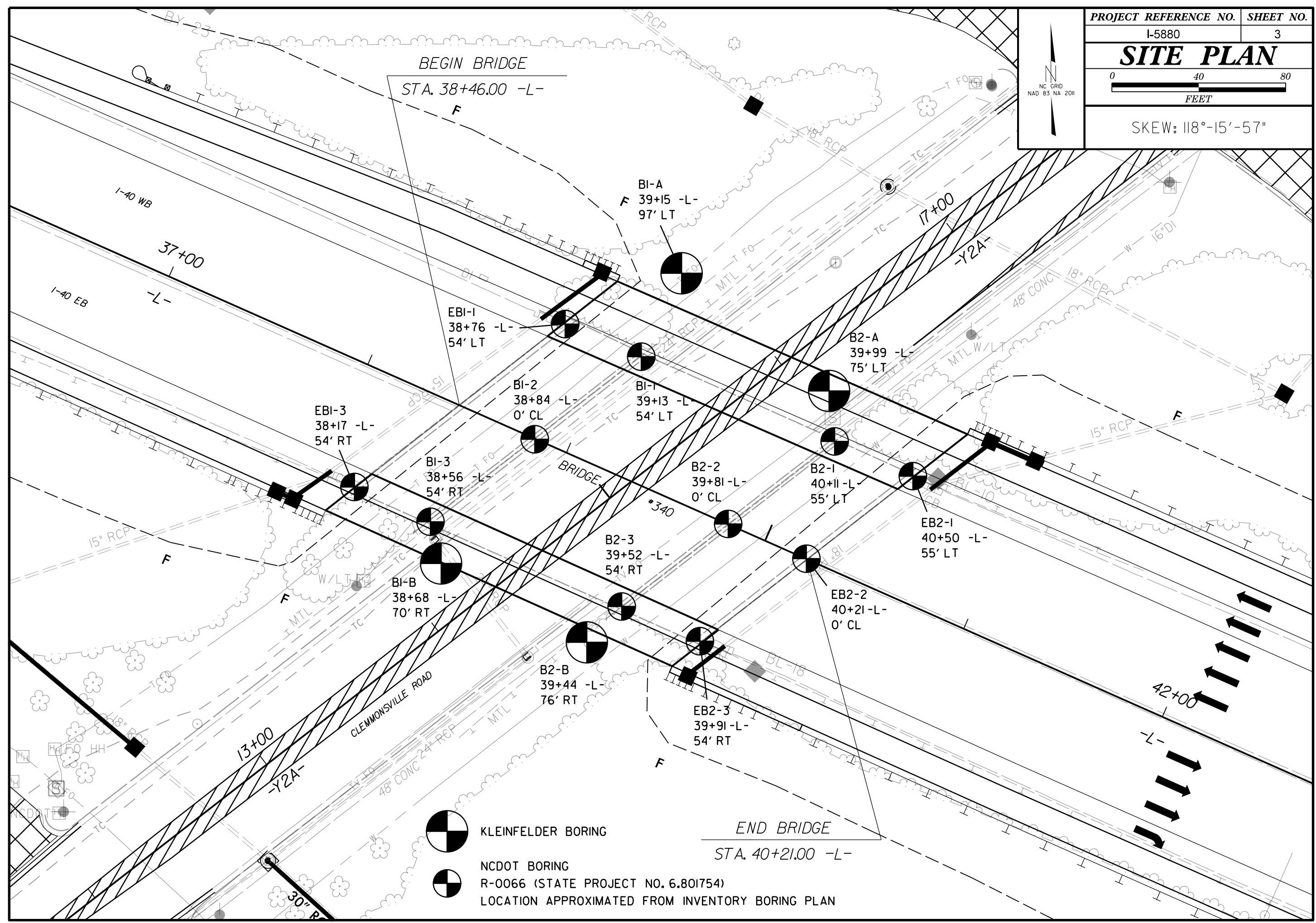
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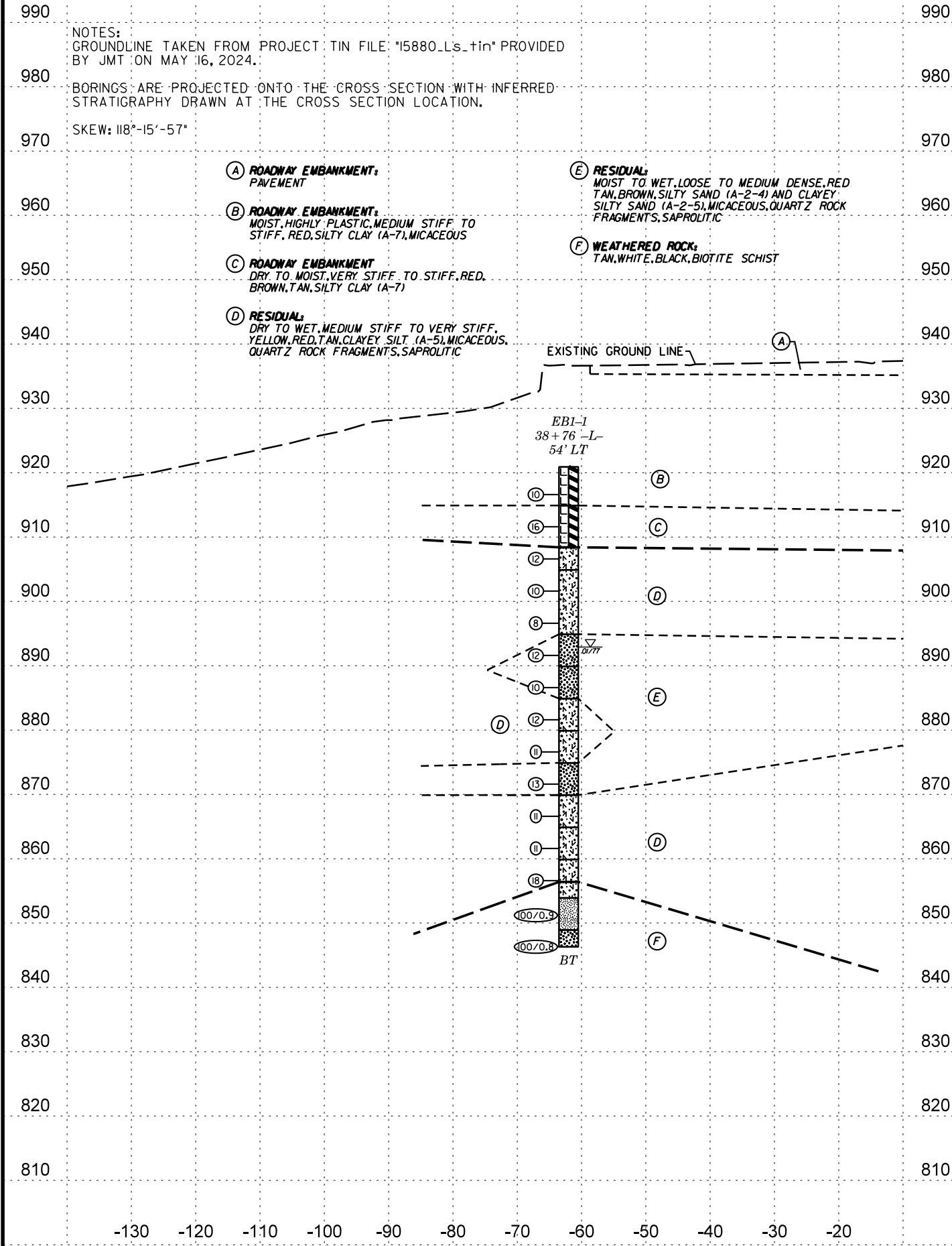
DOCUMENT NOT CONSIDERED FINAL  
UNLESS ALL SIGNATURES COMPLETED

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

[illegible]

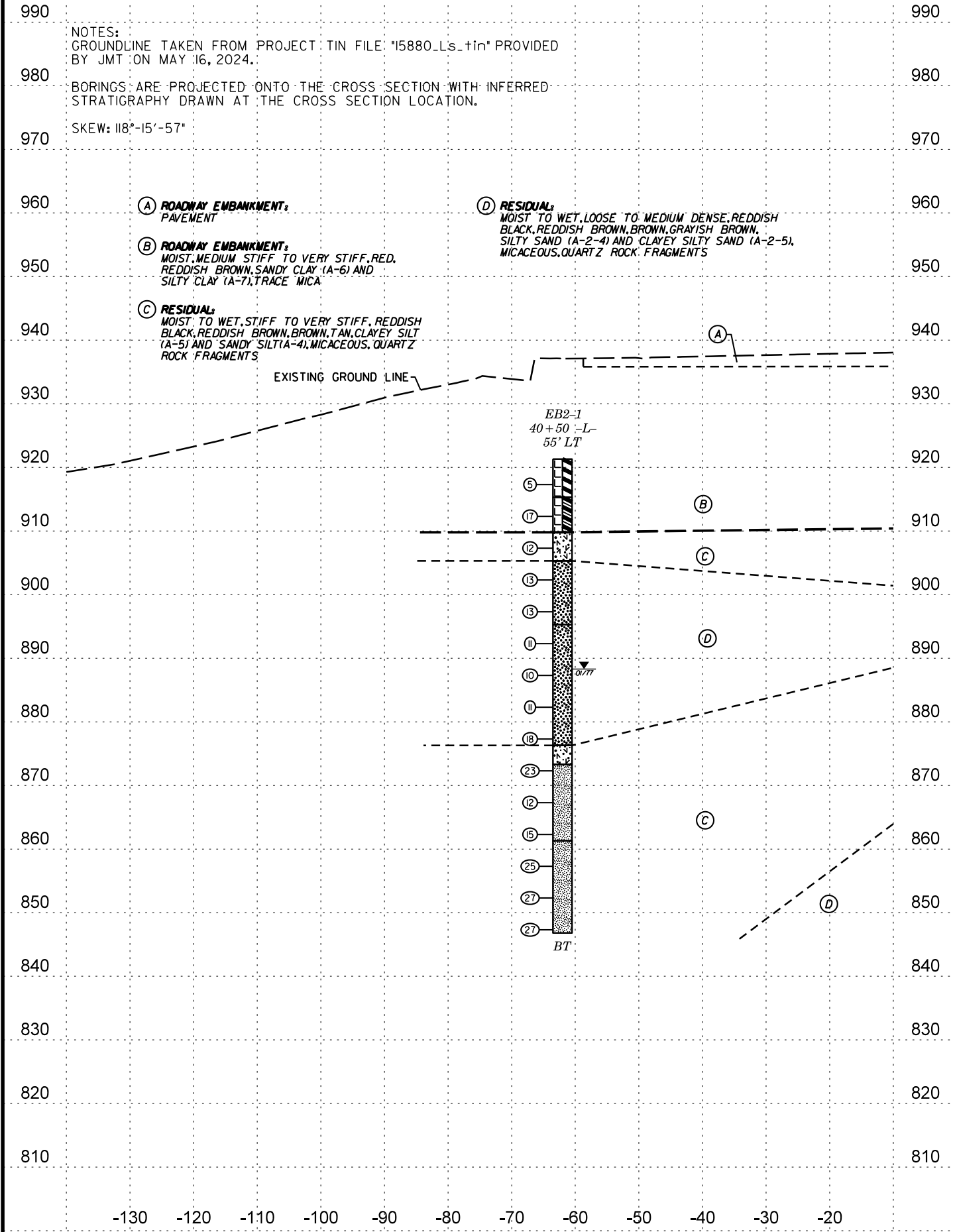
PROJECT REFERENCE NO.	SHEET NO.
I-5880	3
<b>SITE PLAN</b>	
0 40 80 FEET	
SKEW: 118°-15'-57"	



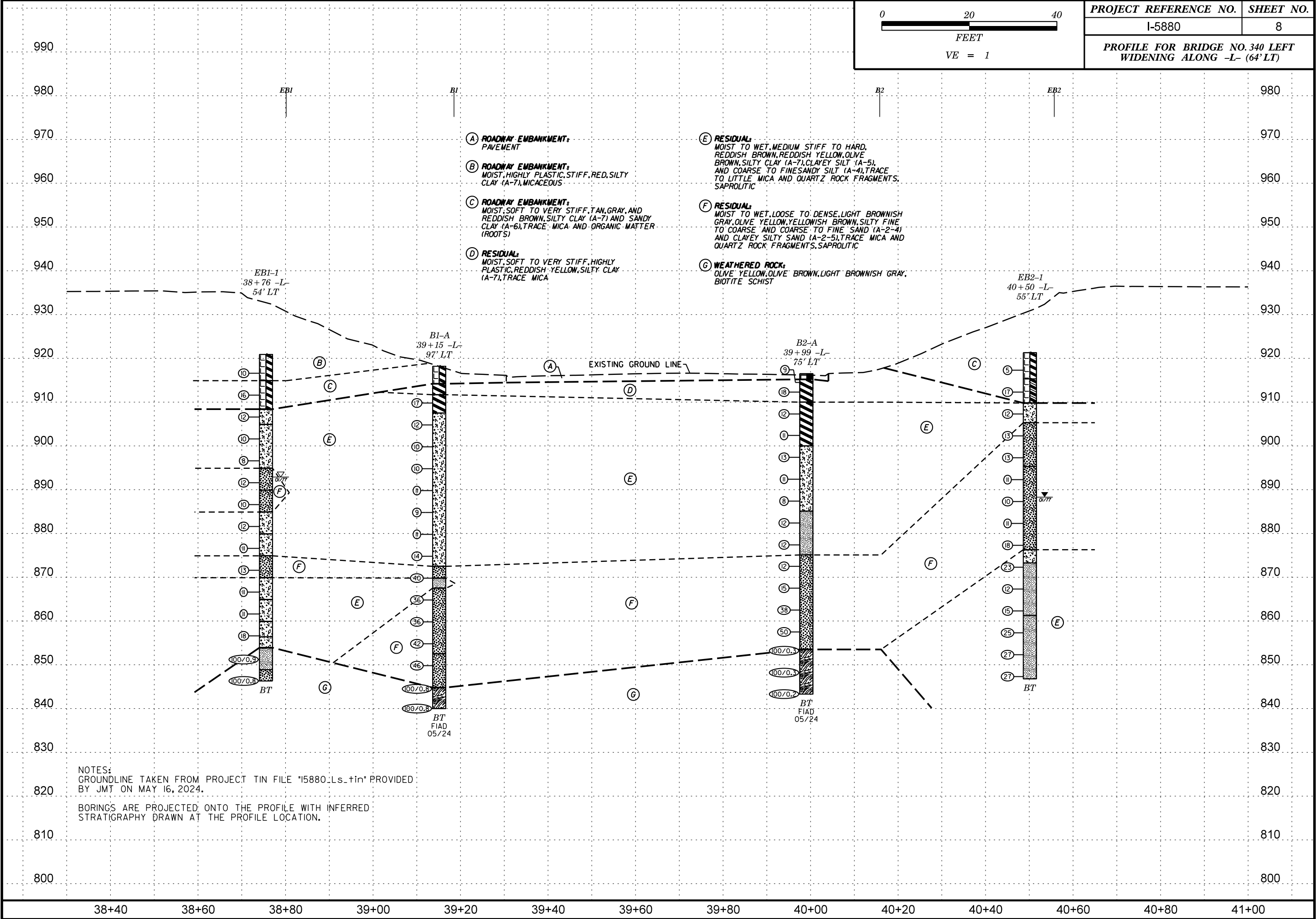




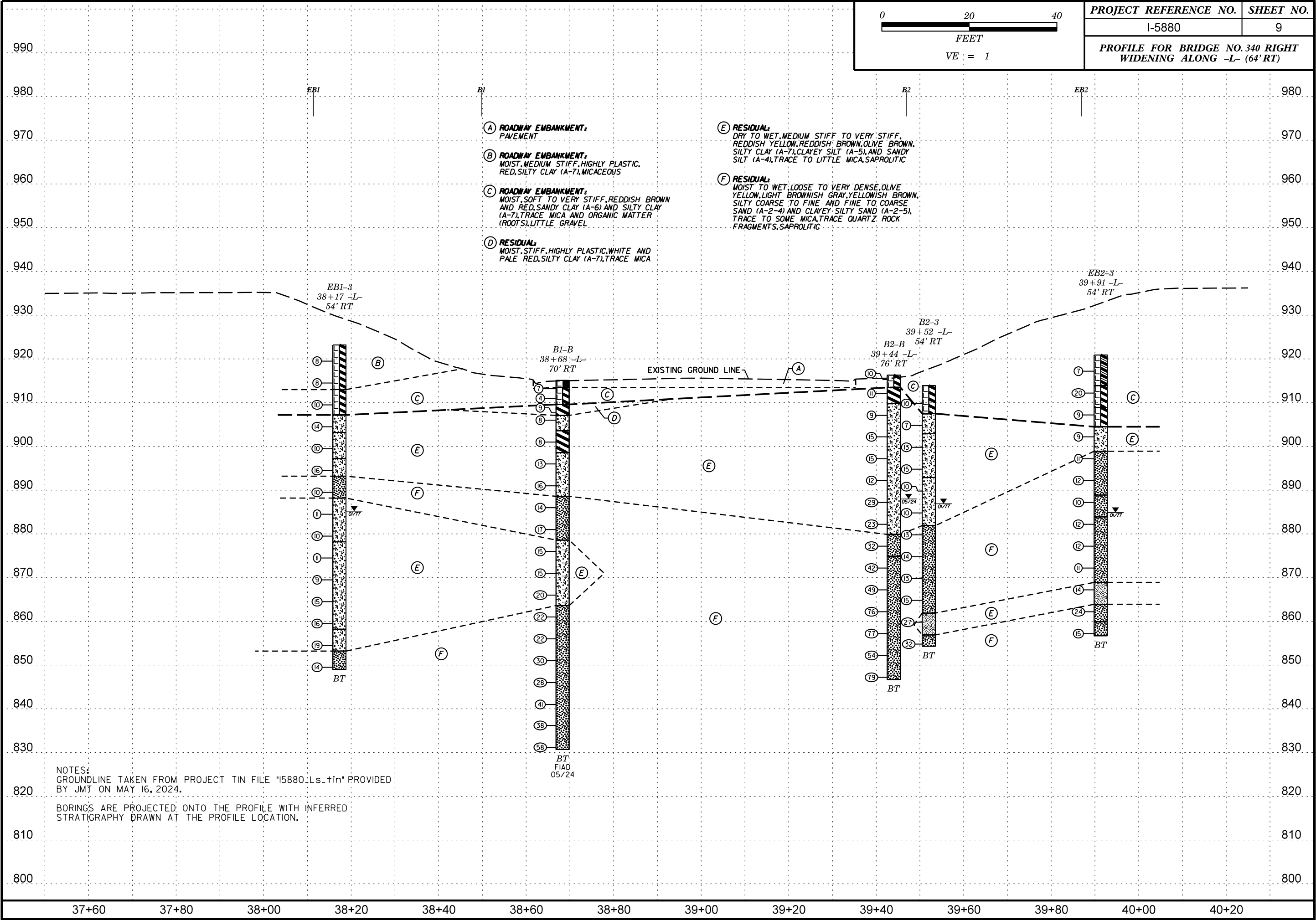












NC DOT BORE DOUBLE I5880 GEO BRDG0340 GINT.GPJ NC DOT.GDT 6/11/24

WBS 53080.1.1						TIP I-5880			COUNTY FORSYTH			GEOLOGIST N/A				
SITE DESCRIPTION Bridge No. 340 on -L- (I-40/US-311) over -Y2A- (Clemmons ville Road)												GROUND WTR (ft)				
BORING NO. EB1-1				STATION 38+76				OFFSET 54 ft LT				ALIGNMENT -L-		0 HR. 28.0		
COLLAR ELEV. 920.9 ft				TOTAL DEPTH 74.6 ft				NORTHING 843,072				EASTING 1,639,486		24 HR. N/A		
DRILL RIG/HAMMER EFF./DATE N/A								DRILL METHOD H.S. Augers				HAMMER TYPE N/A				
DRILLER N/A				START DATE N/A				COMP. DATE 01/26/77				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						
850						Match Line										
	847.6	73.3												848.9		72.0
			23	53	50/0.3								M	846.3	Tan, Micaceous Silty Fine to Medium SAND, Saprolitic	74.6
						100/0.8								Boring Terminated at Elevation 846.3 ft in RESIDUAL (Silty SAND)		
														NOTE: Boring location approximated from NCDOT R-0066 inventory boring plan.  Soil lithology descriptions based on NCDOT R-0066 inventory.		

# **GEOTECHNICAL BORING REPORT**

## **BORE LOG**

[illegible]

WBS 53080.1.1				TIP I-5880				COUNTY FORSYTH				GEOLOGIST N/A					
SITE DESCRIPTION Bridge No. 340 on -L- (I-40/US-311) over -Y2A- (Clemmons ville Road)												GROUND WTR (ft)					
BORING NO. EB1-3				STATION 38+17				OFFSET 54 ft RT				ALIGNMENT -L-				0 HR. N/A	
COLLAR ELEV. 923.2 ft				TOTAL DEPTH 74.2 ft				NORTHING 842,997				EASTING 1,639,389				24 HR. 38.0	
DRILL RIG/HAMMER EFF./DATE N/A								DRILL METHOD H.S. Augers				HAMMER TYPE N/A					
DRILLER N/A				START DATE N/A				COMP. DATE 01/26/77				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							
845						Match Line											
NOTE: Boring location approximated from NCDOT R-0066 inventory boring plan.  Soil lithology descriptions based on NCDOT R-0066 inventory.																	

NCDOT BORE DOUBLE I5880\_GEO\_BRDG0340\_GINT.GPJ NC\_DOT.GDT 6/11/24

GEOTECHNICAL BORING REPORT  
BORE LOG

WBS 53080.1.1				TIP I-5880		COUNTY FORSYTH		GEOLOGIST M. Foster								
SITE DESCRIPTION Bridge No. 340 on -L- (I-40/US-311) over -Y2A- (Clemmonsville Road)										GROUND WTR (ft)						
BORING NO. B1-A		STATION 39+15		OFFSET 97 ft LT		ALIGNMENT -L-		0 HR. N/A								
COLLAR ELEV. 918.2 ft		TOTAL DEPTH 78.2 ft		NORTHING 843,095		EASTING 1,639,540		24 HR. FIAD								
DRILL RIG/HAMMER EFF./DATE TRI0055 CME-55 74% 05/13/2024					DRILL METHOD Mud Rotary			HAMMER TYPE Automatic								
DRILLER R. Toothman			START DATE 05/16/24		COMP. DATE 05/17/24		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)	
925																
920																
915																
910	910.8	7.4		5	7	10									918.2	GROUND SURFACE 0.0
															914.2	ROADWAY EMBANKMENT Soft, Reddish Brown, Silty CLAY (A-7), Trace Mica and Organic Matter (Roots)
															911.7	RESIDUAL Soft, Highly Plastic, Reddish Yellow, Silty CLAY (A-7), Trace Mica

WBS 53080.1.1				TIP I-5880		COUNTY FORSYTH		GEOLOGIST M. Foster						
SITE DESCRIPTION Bridge No. 340 on -L- (I-40/US-311) over -Y2A- (Clemmons <span>ville</span> Road)										GROUND WTR (ft)				
BORING NO. B1-A			STATION 39+15			OFFSET 97 ft LT			ALIGNMENT -L-		0 HR. N/A			
COLLAR ELEV. 918.2 ft			TOTAL DEPTH 78.2 ft			NORTHING 843,095			EASTING 1,639,540		24 HR. FIAD			
DRILL RIG/HAMMER EFF./DATE TRI0055 CME-55 74% 05/13/2024						DRILL METHOD Mud Rotary			HAMMER TYPE Automatic					
DRILLER R. Toothman			START DATE 05/16/24			COMP. DATE 05/17/24			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				
845						Match Line								
840	840.8	77.4	41	59/0.3		<div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></d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NCDOT BORE DOUBLE I5880\_GEO\_BRDG0340\_GINT.GPJ NC\_DOT.GDT 6/11/24

NC DOT BORE DOUBLE I5880 GEO BRDG0340 GINT.GPJ NC DOT.GDT 6/11/24

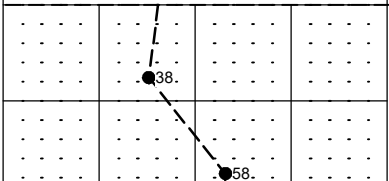
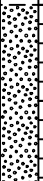
WBS 53080.1.1			TIP I-5880			COUNTY FORSYTH			GEOLOGIST N/A					
SITE DESCRIPTION Bridge No. 340 on -L- (I-40/US-311) over -Y2A- (Clemmons/									GROUND WTR (ft)					
BORING NO. B1-2			STATION 38+84			OFFSET CL			ALIGNMENT -L-			0 HR. N/A		
COLLAR ELEV. 914.5 ft			TOTAL DEPTH 49.5 ft			NORTHING 843,019			EASTING 1,639,472			24 HR. 28.0		
DRILL RIG/HAMMER EFF./DATE N/A						DRILL METHOD H.S. Augers				HAMMER TYPE N/A				
DRILLER N/A			START DATE N/A			COMP. DATE 01/26/77			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				
915														GROUND SURFACE 914.5 0.0
	911.5	3.0												ROADWAY EMBANKMENT
910			9	11	10							M		Red, Fine Sandy Silty CLAY with Quartz Pebbles
	906.5	8.0												
905			6	6	10							M		with Coarse Quartz Grains
	901.5	13.0												RESIDUAL
900			6	7	8							M		Red, Fine Silty CLAY with Fine Mica
	896.5	18.0												
895			3	5	6							M		Red-Brown, Fine to Coarse SAND with Clay Seams, Saprolitic
	891.5	23.0												
890			4	6	9							M		Brown-Red, Fine Silty SAND with Black-Brown Mica
	886.5	28.0												
885			4	6	9							M		Brown, Fine to Coarse SAND with Clay Seams and Mica, Saprolitic
	881.5	33.0												
880			2	4	10							M		Red-Brown, Fine to Coarse SAND, Saprolitic
	876.5	38.0												
875			3	5	6							M		Light Tan, Fine to Medium SAND
	871.5	43.0												
870			2	4	8							W		Red-Brown, Silty SAND
	866.5	48.0												
865			3	7	9							W		Red-Yellow-Tan, Fine to Coarse Sandy Clayey SILT, Saprolitic
														Boring Terminated at Elevation 865.0 ft in RESIDUAL (Sandy Clayey SILT)
														NOTE: Boring location approximated from NCDOT R-0066 inventory boring plan.  Soil lithology descriptions based on NCDOT R-0066 inventory.

GEOTECHNICAL BORING REPORT  
BORE LOG

WBS 53080.1.1		TIP I-5880		COUNTY FORSYTH		GEOLOGIST N/A										
SITE DESCRIPTION Bridge No. 340 on -L- (I-40/US-311) over -Y2A- (Clemmonsville Road)							GROUND WTR (ft)									
BORING NO. B1-3		STATION 38+56		OFFSET 54 ft RT		ALIGNMENT -L-		0 HR. 33.0								
COLLAR ELEV. 913.9 ft		TOTAL DEPTH 69.1 ft		NORTHING 842,981		EASTING 1,639,424		24 HR. 28.0								
DRILL RIG/HAMMER EFF./DATE N/A				DRILL METHOD H.S. Augers			HAMMER TYPE N/A									
DRILLER N/A		START DATE N/A		COMP. DATE 01/26/77		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)	
915																
910	911.1	2.8														913.9 GROUND SURFACE 0.0
905	906.1	7.8														907.9 Red, Silty Micaceous Sandy CLAY 6.0
900	901.1	12.8														903.5 Red-Gray, Silty Very Micaceous Clayey 10.4
895	896.1	17.8														
890	891.1	22.8														903.5 Red-Gray, Silty Very Micaceous Clayey 10.4
885	886.1	27.8														
880	881.1	32.8														903.5 Red-Gray, Silty Very Micaceous Clayey 10.4
875	876.1	37.8														
870	871.1	42.8														
865	866.1	47.8														
860	861.1	52.8														
855	856.1	57.8														
850	851.1	62.8														
845	846.1	67.8														

NCDOT BORE DOUBLE I5880\_GEO\_BRDG0340\_GINT.GPJ NC\_DOT.GDT 6/11/24

NC DOT BORE DOUBLE I5880 GEO BRDG0340 GINT.GPJ NC DOT.GDT 6/11/24

WBS 53080.1.1			TIP I-5880			COUNTY FORSYTH			GEOLOGIST M. Foster				
SITE DESCRIPTION Bridge No. 340 on -L- (I-40/US-311) over -Y2A- (Clemmons ville Road)									GROUND WTR (ft)				
BORING NO. B1-B			STATION 38+68			OFFSET 70 ft RT			ALIGNMENT -L-		0 HR. N/A		
COLLAR ELEV. 915.1 ft			TOTAL DEPTH 84.4 ft			NORTHING 842,962			EASTING 1,639,429		24 HR. FIAD		
DRILL RIG/HAMMER EFF./DATE TRI0055 CME-55 83% 05/09/2022						DRILL METHOD Mud Rotary			HAMMER TYPE Automatic				
DRILLER R. Toothman			START DATE 05/05/24			COMP. DATE 05/08/24			SURFACE WATER DEPTH N/A				
ELEV (ft)	DRIVE ELEV (ft)	DEPTH (ft)	BLOW COUNT			BLOWS PER FOOT					SAMP. NO.	LOG	SOIL AND ROCK DESCRIPTION
			0.5ft	0.5ft	0.5ft	0	25	50	75	100			
840						Match Line							
	837.2	77.9									M		Medium Dense to Very Dense, Olive Yellow, Light Brownish Gray, and Yellowish Brown, Silty Coarse to Fine SAND (A-2-4), Trace Quartz Rock Fragments, Little Mica, Saprolitic (continued)
835			12	17	21								
	832.2	82.9									M		
			14	22	36								
Boring Terminated at Elevation 830.7 ft in RESIDUAL (Silty SAND)													



GEOTECHNICAL BORING REPORT  
BORE LOG

WBS 53080.1.1			TIP I-5880			COUNTY FORSYTH			GEOLOGIST M. Foster						
SITE DESCRIPTION Bridge No. 340 on -L- (I-40/US-311) over -Y2A- (Clemmons ville Road)									GROUND WTR (ft)						
BORING NO. B2-A			STATION 39+99			OFFSET 75 ft LT			ALIGNMENT -L-			0 HR. N/A			
COLLAR ELEV. 916.5 ft			TOTAL DEPTH 73.2 ft			NORTHING 843,041			EASTING 1,639,607			24 HR. FIAD			
DRILL RIG/HAMMER EFF./DATE TRI0055 CME-55 83% 05/09/2022						DRILL METHOD Mud Rotary			HAMMER TYPE Automatic						
DRILLER R. Toothman			START DATE 05/08/24			COMP. DATE 05/10/24			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)
920															
915	915.5	1.0	2	4	5									916.5	0.0
	913.3	3.2	4	8	10									915.2	1.3
910															
	908.3	8.2	3	6	6									910.0	6.5
905															
	903.4	13.1	3	5	6									900.0	16.5
900															
	898.4	18.1	3	6	7										
895															
	893.4	23.1	4	4	7										
890															
	888.4	28.1	2	3	5										
885															
	883.4	33.1	3	4	8									885.1	31.4
880															
	878.4	38.1	5	6	6										
875															
	873.5	43.0	3	5	7									875.1	41.4
870															
	868.5	48.0	5	6	9										
865															
	863.5	53.0	7	16	22										
860															
	858.5	58.0	4	10	40										
855															
	853.5	63.0	100/0.3											853.5	63.0
850															
	848.5	68.0	100/0.3												
845															
	843.5	73.0	100/0.2											843.3	73.2

GROUND SURFACE

ROADWAY EMBANKMENT

Asphalt (0.0 - 1.0 Foot)

ABC Stone (1.0 - 1.3 Feet)

RESIDUAL

Stiff to Very Stiff, Highly Plastic, Reddish Yellow, Silty CLAY (A-7), Trace Mica

Stiff, Reddish Yellow, Silty CLAY (A-7), Trace Mica, Saprolitic

Stiff to Medium Stiff, Yellowish Brown and Light Brownish Gray and Pale Red, Clayey SILT (A-5), Trace Mica, Saprolitic

Stiff, Yellowish Brown, Coarse to Fine Sandy SILT (A-4), Trace Mica, Saprolitic

Medium Dense to Dense, Yellowish Brown and Light Brownish Gray and Olive Brown, Silty Fine to Coarse SAND (A-2-4), Trace Mica, Saprolitic

WEATHERED ROCK

Gray, BIOTITE SCHIST

Boring Terminated at Elevation 843.3 ft in WEATHERED ROCK (BIOTITE SCHIST)

WBS 53080.1.1			TIP I-5880			COUNTY FORSYTH			GEOLOGIST N/A								
SITE DESCRIPTION Bridge No. 340 on -L- (I-40/US-311) over -Y2A- (Clemmons <span>ville</span> Road)									GROUND WTR (ft)								
BORING NO. B2-1			STATION 40+11			OFFSET 55 ft LT			ALIGNMENT -L-								
COLLAR ELEV. 914.8 ft			TOTAL DEPTH 64.5 ft			NORTHING 843,018			EASTING 1,639,610								
DRILL RIG/HAMMER EFF./DATE N/A						DRILL METHOD H.S. Augers			HAMMER TYPE N/A								
DRILLER N/A			START DATE N/A			COMP. DATE 01/26/77			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							
915														914.8	0.0	GROUND SURFACE	
	911.8	3.0	4	8	9											ROADWAY EMBANKMENT	
910																Red, Fine Sandy Micaceous Clayey SILT	
	906.8	8.0	2	4	5										907.8	7.0	RESIDUAL
905																	Pink, Very Micaceous Fine Sandy SILT, Saprolitic
	901.8	13.0	3	3	5										903.8	11.0	Pink-Brown, Micaceous Fine Sandy SILT, Saprolitic
900																	
	896.8	18.0	2	4	4										898.8	16.0	Pink-Brown to Brown, Micaceous, Fine to Coarse Sandy SILT, Saprolitic
895																	
	891.8	23.0	2	4	5										893.8	21.0	
890																	
	886.8	28.0	1	2	5												
885																	
	881.8	33.0	2	3	7												
880																	
	876.8	38.0	1	3	4												
875																	
	871.8	43.0	2	4	7												
870																	
	866.8	48.0	2	4	10										868.8	46.0	Tan-Brown, Micaceous Silty Fine to Coarse SAND to Fine Sandy SILT
865																	
	861.8	53.0	3	6	10												
860																	
	856.8	58.0	4	13	16												
855																	
	851.8	63.0	2	7	12										853.8	61.0	Brown, Micaceous Fine to Coarse Sandy SILT, Saprolitic
															850.3	64.5	Boring Terminated at Elevation 850.3 ft in RESIDUAL (Sandy SILT)
																	NOTE: Boring location approximated from NCDOT R-0066 inventory boring plan.  Soil lithology descriptions based on NCDOT R-0066 inventory.

NCDOT BORE DOUBLE I5880\_GEO\_BRDG0340\_GINT.GPJ NC\_DOT.GDT 6/11/24

GEOTECHNICAL BORING REPORT  
BORE LOG

WBS 53080.1.1			TIP I-5880			COUNTY FORSYTH			GEOLOGIST N/A						
SITE DESCRIPTION Bridge No. 340 on -L- (I-40/US-311) over -Y2A- (Clemmons ville Road)									GROUND WTR (ft)						
BORING NO. B2-2			STATION 39+81			OFFSET CL			ALIGNMENT -L-						
COLLAR ELEV. 914.4 ft			TOTAL DEPTH 64.6 ft			NORTHING 842,980			EASTING 1,639,561						
DRILL RIG/HAMMER EFF./DATE N/A						DRILL METHOD H.S. Augers			HAMMER TYPE N/A						
DRILLER N/A			START DATE N/A			COMP. DATE 01/26/77			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)
915															
														914.4	0.0
														ROADWAY EMBANKMENT	
														Red, Fine to Coarse Sandy Clayey SILT	
910	911.3	3.1		3	4	6							M	908.4	6.0
														Red, Micaceous Fine to Coarse Sandy Clayey SILT	
905	906.3	8.1		3	5	6							M	903.5	10.9
														RESIDUAL	
														Brown-White-Pink to Red-Brown-White, Micaceous Fine to Coarse Sandy SILT with Quartz, Saprolitic	
900	901.3	13.1		3	4	5							M		
895	896.3	18.1		1	4	6							M		
890	891.3	23.1		2	3	6									
885	886.3	28.1		2	3	6							W	888.4	26.0
														Brown, Micaceous Fine to Coarse Sandy Clayey SILT, Saprolitic	
880	881.3	33.1		2	3	6							W		
875	876.3	38.1		1	4	5							W		
870	871.3	43.1		1	4	7							W	873.4	41.0
														Brown, Micaceous Fine to Coarse Sandy SILT, Saprolitic	
865	866.3	48.1		1	2	7							W	868.4	46.0
														White, Micaceous Silty Fine to Coarse SAND, Saprolitic	
860	861.3	53.1		2	5	8							W	863.4	51.0
														Brown, Micaceous, Fine to Coarse Sandy SILT, Saprolitic	
855	856.3	58.1		8	8	13							W	858.4	56.0
														White to White-Brown, Micaceous Silty Fine to Coarse SAND with Pea Gravel, Saprolitic	
850	851.3	63.1		16	18	14							W		
														with Quartz	
														849.8	64.6
														Boring Terminated at Elevation 849.8 ft in RESIDUAL (Silty SAND)	
														NOTE: Boring location approximated from NCDOT R-0066 inventory boring plan.  Soil lithology descriptions based on NCDOT R-0066 inventory.	

WBS 53080.1.1		TIP I-5880		COUNTY FORSYTH		GEOLOGIST N/A										
SITE DESCRIPTION Bridge No. 340 on -L- (I-40/US-311) over -Y2A- (Clemmons Road)							GROUND WTR (ft)									
BORING NO. B2-3		STATION 39+52		OFFSET 54 ft RT		ALIGNMENT -L-		0 HR.	N/A							
COLLAR ELEV. 913.9 ft		TOTAL DEPTH 59.6 ft		NORTHING 842,942		EASTING 1,639,512		24 HR.	27.0							
DRILL RIG/HAMMER EFF./DATE N/A				DRILL METHOD H.S. Augers			HAMMER TYPE N/A									
DRILLER N/A			START DATE N/A		COMP. DATE 01/26/77		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						
915																
910	910.8	3.1		2	4	6								913.9	GROUND SURFACE	0.0
															ROADWAY EMBANKMENT	
															Red, Fine Sandy Clayey SILT	
905	905.8	8.1		2	3	4								907.5		6.4
															RESIDUAL	
															Pink-White, Fine to Coarse Sandy Micaceous SILT to Fine to Coarse SAND with Quartz, Saprolitic	
900	900.8	13.1		3	5	8								902.9		11.0
															Brown, Fine to Coarse Sandy Micaceous SILT, Saprolitic	
895	895.8	18.1		3	6	9										
890	890.8	23.1		1	4	6								892.9		21.0
															Brown to Brown-Green-Black to Brown, Fine to Coarse Sandy Micaceous Clayey SILT	
885	885.8	28.1		2	4	6										
880	880.8	33.1		1	5	8								881.9		32.0
875	875.8	38.1		2	6	8										
															with Quartz Gravel	
870	870.8	43.1		3	5	8										
															Saprolitic	
865	865.8	48.1		3	6	9										
860	860.8	53.1		5	10	17								861.9		52.0
															Brown-Pink-White, Fine to Coarse Sandy Micaceous SILT, Saprolitic	
855	855.8	58.1		6	14	18								856.9		57.0
															Brown, Micaceous Fine to Coarse Sandy SILT, Saprolitic	
														854.3		59.6
															Boring Terminated at Elevation 854.3 ft in RESIDUAL (Sandy SILT)	
															NOTE: Boring location approximated from NCDOT R-0066 inventory boring plan.  Soil lithology descriptions based on NCDOT R-0066 inventory.	

NCDOT BORE DOUBLE I5880\_GEO\_BRDG0340\_GINT.GPJ NC\_DOT.GDT 6/11/24

# GEOTECHNICAL BORING REPORT

## BORE LOG

[illegible]

NC DOT BORE DOUBLE I5880 GEO BRDG0340 GINT.GPJ NC DOT.GDT 6/11/24

NCDOT BORE DOUBLE I5880\_GEO\_BRDG0340\_GINT.GPJ NC\_DOT.GDT 6/11/24

WBS 53080.1.1				TIP I-5880			COUNTY FORSYTH			GEOLOGIST N/A				
SITE DESCRIPTION Bridge No. 340 on -L- (I-40/US-311) over -Y2A- (Clemmons ville Road)										GROUND WTR (ft) 0 HR. N/A 24 HR. 33.0				
BORING NO. EB2-1			STATION 40+50			OFFSET 55 ft LT			ALIGNMENT -L-					
COLLAR ELEV. 921.3 ft			TOTAL DEPTH 74.5 ft			NORTHING 843,002			EASTING 1,639,646					
DRILL RIG/HAMMER EFF./DATE N/A						DRILL METHOD H.S. Augers				HAMMER TYPE N/A				
DRILLER N/A				START DATE N/A			COMP. DATE 01/26/77			SURFACE WATER DEPTH N/A				
ELEV (ft)	DRIVE ELEV (ft)	DEPTH (ft)	BLOW COUNT			BLOWS PER FOOT					SAMP. NO.	<div><div></div><div>MOI</div></div>	<div>L O G</div>	SOIL AND ROCK DESCRIPTION
			0.5ft	0.5ft	0.5ft	0	25	50	75	100				
850						Match Line								
	848.3	73.0				<div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></d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# **GEOTECHNICAL BORING REPORT**

## **BORE LOG**

WBS 53080.1.1						TIP I-5880				COUNTY FORSYTH				GEOLOGIST N/A			
SITE DESCRIPTION Bridge No. 340 on -L- (I-40/US-311) over -Y2A- (Clemmons ville Road)														GROUND WTR (ft)			
BORING NO. EB2-2				STATION 40+21				OFFSET CL				ALIGNMENT -L-				0 HR. N/A	
COLLAR ELEV. 921.7 ft				TOTAL DEPTH 74.4 ft				NORTHING 842,964				EASTING 1,639,597				24 HR. 34.0	
DRILL RIG/HAMMER EFF./DATE N/A										DRILL METHOD H.S. Augurs				HAMMER TYPE N/A			
DRILLER N/A						START DATE N/A				COMP. DATE 01/26/77				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							
925																	
920	918.8	2.9	2	4	10	14						M		921.7	GROUND SURFACE	0.0	
915	913.8	7.9	4	9	11	20						M		916.7	ROADWAY EMBANKMENT Red-Brown, Mottled, Micaceous Clayey SAND with Gravel	5.0	
910	908.8	12.9	4	5	7	12						M		910.5	Red, Silty Very Micaceous Sandy CLAY	11.2	
905	903.8	17.9	3	5	6	11						M		900.7	RESIDUAL Red-Black, Silty Very Micaceous Sandy CLAY	21.0	
900	898.8	22.9	4	6	6	12						M		890.7	Red-Black, Silty Very Micaceous Clayey Very Coarse SAND with Quartz Gravel	31.0	
895	893.8	27.9	2	4	5	9						M		888.8	Red-Brown-Black to Brown, Silty Very Micaceous Coarse Sandy CLAY	31.0	
890	888.8	32.9	3	5	7	12								883.8			
885	883.8	37.9	2	5	6	11						W		878.8			
880	878.8	42.9	2	5	7	12						W		873.8			
875	873.8	47.9	3	4	6	10						W		868.8	with Coarse Quartz Gravel Veins	51.0	
870	868.8	52.9	3	6	8	14						W		860.7	Brown, Silty Very Micaceous Clayey Coarse SAND	61.0	
865	863.8	57.9	3	7	11	18						W		855.7	Gray-Brown, Silty Micaceous Fine to Medium SAND	66.0	
860	858.8	62.9	3	5	10	15						W		850.7	Gray-Brown, Silty Very Micaceous Fine to Coarse SAND	71.0	
855	853.8	67.9	4	10	14	24						W		847.3	Brown-Black, Silty Very Micaceous Clayey Fine to Medium SAND	74.4	
850	848.8	72.9	5	11	15	26						W			Boring Terminated at Elevation 847.3 ft in RESIDUAL (Silty Clayey SAND)		

WBS 53080.1.1			TIP I-5880			COUNTY FORSYTH			GEOLOGIST N/A				
SITE DESCRIPTION Bridge No. 340 on -L- (I-40/US-311) over -Y2A- (Clemmons <span>ville</span> Road)									GROUND WTR (ft)				
BORING NO. EB2-2			STATION 40+21			OFFSET CL			ALIGNMENT -L-			0 HR. N/A	
COLLAR ELEV. 921.7 ft			TOTAL DEPTH 74.4 ft			NORTHING 842,964			EASTING 1,639,597			24 HR. 34.0	
DRILL RIG/HAMMER EFF./DATE N/A						DRILL METHOD H.S. Augers				HAMMER TYPE N/A			
DRILLER N/A			START DATE N/A			COMP. DATE 01/26/77			SURFACE WATER DEPTH N/A				
ELEV (ft)	DRIVE ELEV (ft)	DEPTH (ft)	BLOW COUNT			BLOWS PER FOOT					SAMP. NO.	LOG	SOIL AND ROCK DESCRIPTION
			0.5ft	0.5ft	0.5ft	0	25	50	75	100	MOI		
845						Match Line							
					</								

NCDOT BORE DOUBLE I5880\_GEO\_BRDG0340\_GINT.GPJ NC\_DOT.GDT 6/11/24

GEOTECHNICAL BORING REPORT  
BORE LOG

WBS 53080.1.1			TIP I-5880			COUNTY FORSYTH			GEOLOGIST N/A						
SITE DESCRIPTION Bridge No. 340 on -L- (I-40/US-311) over -Y2A- (Clemmons ville Road)												GROUND WTR (ft)			
BORING NO. EB2-3			STATION 39+91			OFFSET 54 ft RT			ALIGNMENT -L-			0 HR.	N/A		
COLLAR ELEV. 920.9 ft			TOTAL DEPTH 64.2 ft			NORTHING 842,926			EASTING 1,639,548			24 HR.	36.0		
DRILL RIG/HAMMER EFF./DATE N/A						DRILL METHOD H.S. Augers				HAMMER TYPE N/A					
DRILLER N/A			START DATE N/A			COMP. DATE 01/26/77			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	
			0.5ft	0.5ft	0.5ft	0	25	50	75	100				ELEV. (ft)	DEPTH (ft)
925															
920														920.9	0.0
	918.2	2.7	2	4	3	7						M			GROUND SURFACE
915															ROADWAY EMBANKMENT
	913.2	7.7	3	8	12	20						M		913.9	7.0
910															Red, Fine Sandy Micaceous SILT with Quartz Sand
	908.2	12.7	2	4	5	9						M		908.9	12.0
905															Red-Brown, Micaceous, Silty SAND
	903.2	17.7	2	4	5	9						M		904.5	16.4
900															RESIDUAL
	898.2	22.7	3	4	7	11						M		898.9	22.0
895															Red-Brown, Micaceous Silty SAND with Quartz
	893.2	27.7	3	5	7	12						M			Red-Brown, Micaceous Sandy SILT
890															with Quartz Sand
	888.2	32.7	5	5	5	10						M		888.9	32.0
885															Brown-Pink, Micaceous Silty Fine SAND
	883.2	37.7	3	5	7	12						M		883.9	37.0
880															Red-Brown to Brown to Dark Brown, Micaceous Fine Sandy SILT
	878.2	42.7	2	5	7	12						M			
875															
	873.2	47.7	2	4	7	11						W			
870															
	868.2	52.7	2	6	8	14						W		868.9	52.0
865															Tan-Brown, Micaceous Silty SAND
	863.2	57.7	3	9	15	24						W		863.9	57.0
860															Tan-Brown, Micaceous SILT
	858.2	62.7	3	6	9	15						W		859.9	61.0
														856.7	64.2
															Boring Terminated at Elevation 856.7 ft in RESIDUAL (Sandy SILT)
															NOTE: Boring location approximated from NCDOT R-0066 inventory boring plan.  Soil lithology descriptions based on NCDOT R-0066 inventory.

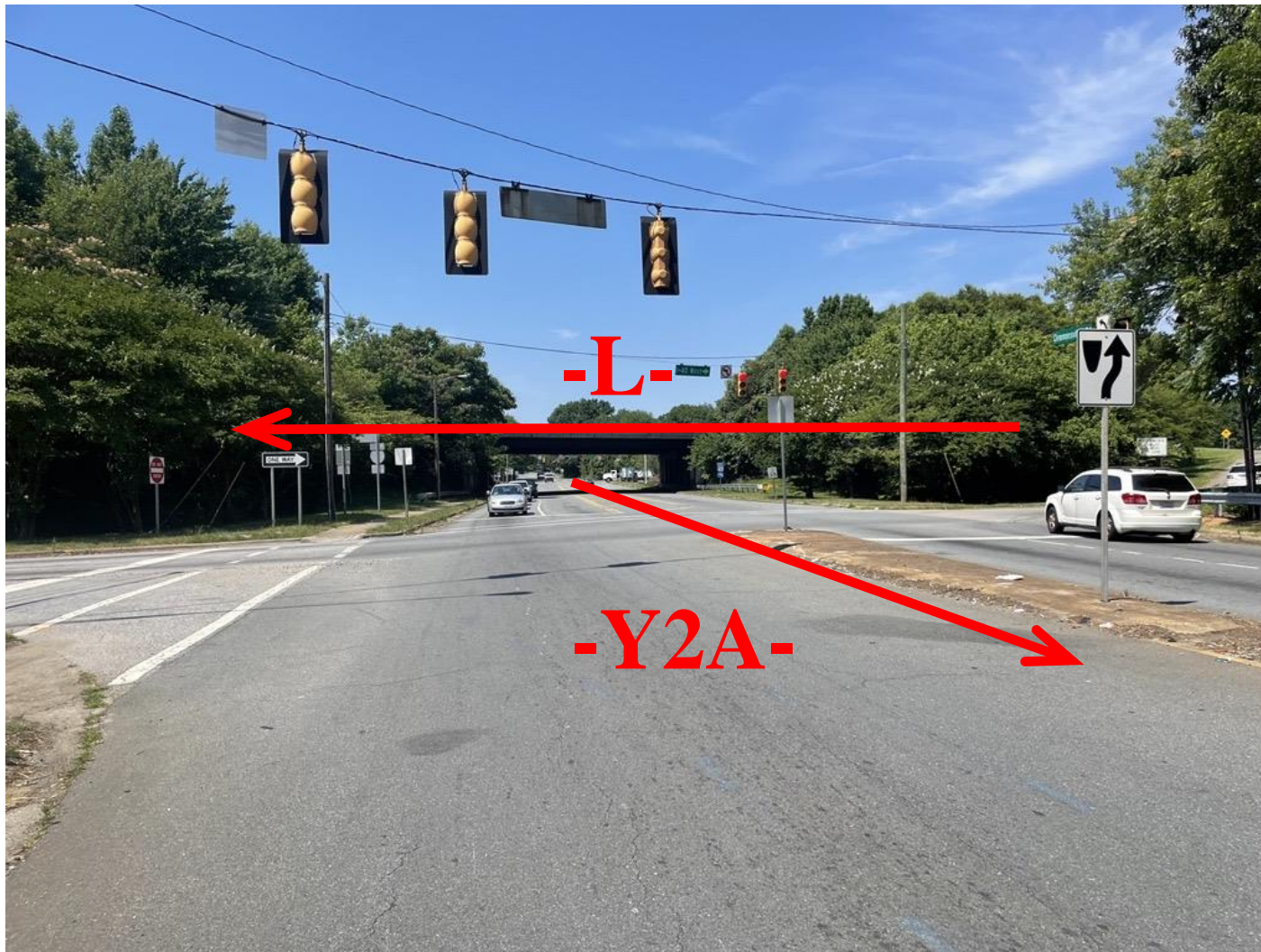
NCDOT BORE DOUBLE I5880 GEO BRDG0340 GINT.GPJ NC\_DOT.GDT 6/11/24



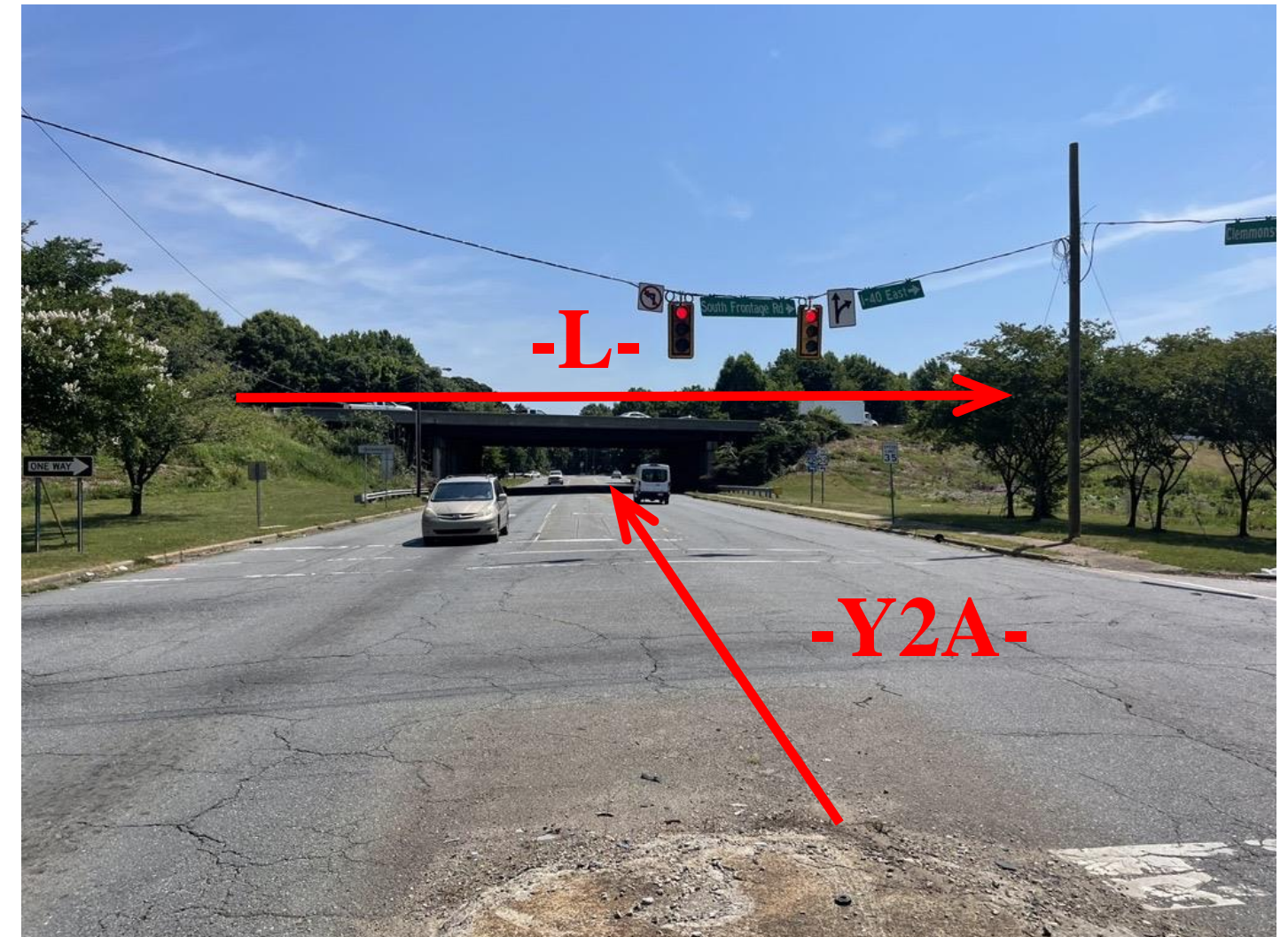
# SITE PHOTOGRAPH

I-5880 (53080.1.1)

Bridge No. 340 on -L- (I-40/US-311) over -Y2A- (Clemmons Road)



Looking Southwest on Clemmons Road (-Y2A-) towards Bridge No. 340 left widening on I-40 (-L-)



Looking Northeast on Clemmons Road (-Y2A-) towards Bridge No. 340 right widening on I-40 (-L-)