

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	38395.1.1 (B-4506)	1	14

**STATE OF NORTH CAROLINA**

DEPARTMENT OF TRANSPORTATION

DIVISION OF HIGHWAYS

GEOTECHNICAL ENGINEERING UNIT

**STRUCTURE  
SUBSURFACE INVESTIGATION**

PROJ. REFERENCE NO. 38395.1.1 (B-4506) F.A. PROJ. BRNHS-52(24)

COUNTY FORSYTH

PROJECT DESCRIPTION BRIDGES 319 AND 335 OVER SR 1620  
ON US 52

**CONTENTS**

<u>SHEET</u>	<u>DESCRIPTION</u>
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**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 (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 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.

**PROJECT: 38395.1.1 ID: B-4506**

PERSONNEL

C. L. SMITH

J. K. STICKNEY

M. L. SMITH

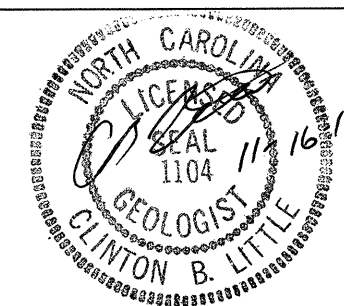
A. C. SMITH

INVESTIGATED BY J. E. BEVERLY

CHECKED BY C. B. LITTLE

SUBMITTED BY C. B. LITTLE

DATE OCTOBER 2010



DRAWN BY: C. E. BURRIS

NOTE - THE INFORMATION CONTAINED HEREIN IS NOT IMPLIED OR GUARANTEED BY THE N. C. DEPARTMENT OF TRANSPORTATION AS BEING ACCURATE NOR IT IS 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**

PROJECT REFERENCE NO. 38395.11 (B-4506)	SHEET NO. 2
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## SUBSURFACE INVESTIGATION

### SOIL AND ROCK LEGEND, TERMS, SYMBOLS, AND ABBREVIATIONS

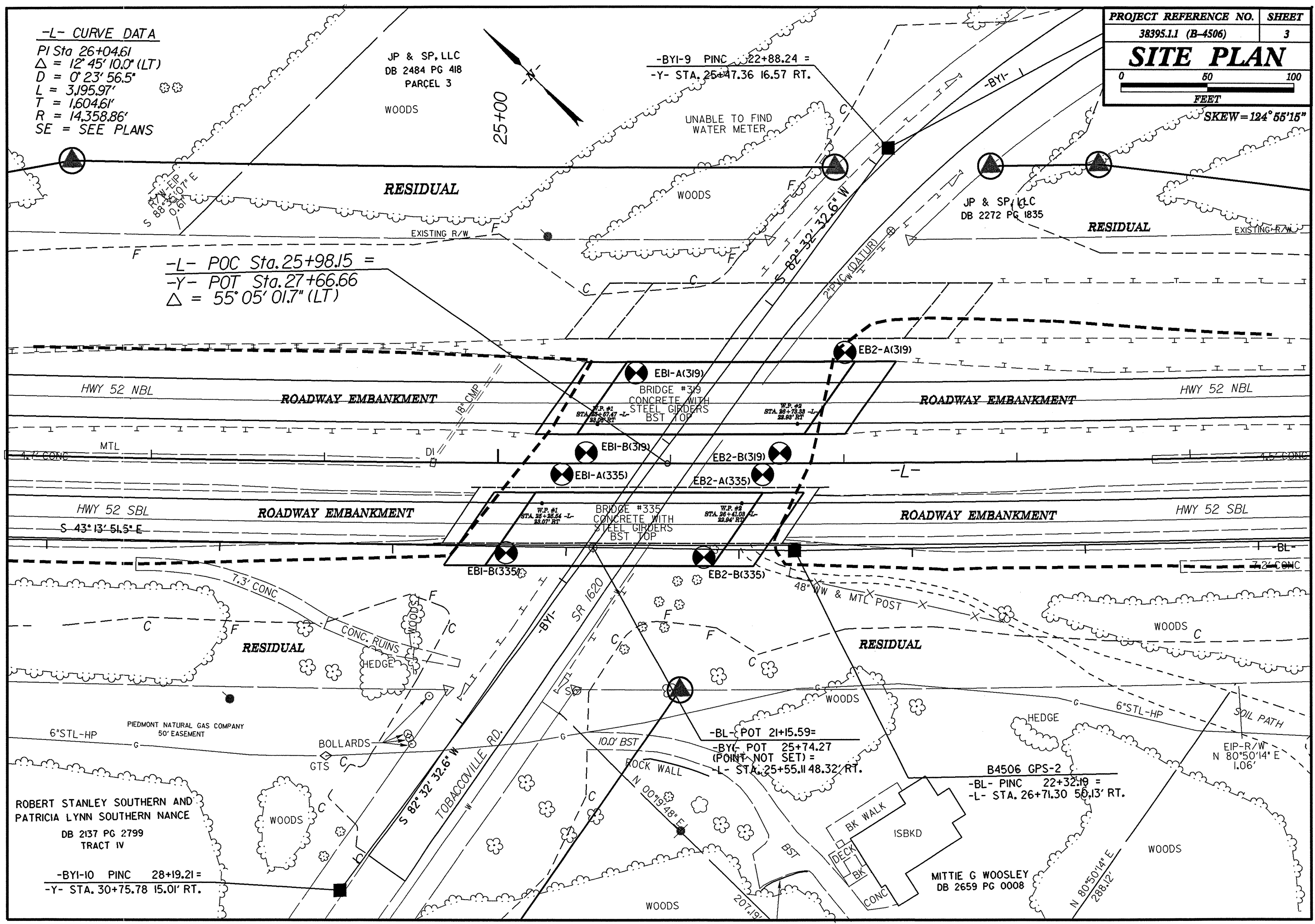
SOIL DESCRIPTION		GRADATION		ROCK DESCRIPTION		TERMS AND DEFINITIONS	
SOIL IS CONSIDERED TO BE THE UNCONSOLIDATED, SEMI-CONSOLIDATED, OR WEATHERED EARTH MATERIALS THAT CAN BE PENETRATED WITH A CONTINUOUS FLIGHT POWER AUGER, AND YIELD LESS THAN 100 BLOWS PER FOOT ACCORDING TO STANDARD PENETRATION TEST (ASHTO T206, ASTM D-1586). SOIL CLASSIFICATION IS BASED ON THE AASHTO SYSTEM. BASIC DESCRIPTIONS GENERALLY SHALL INCLUDE: CONSISTENCY, COLOR, TEXTURE, MOISTURE, AASHTO CLASSIFICATION, AND OTHER PERTINENT FACTORS SUCH AS MINERALOGICAL COMPOSITION, ANGULARITY, STRUCTURE, PLASTICITY, ETC. EXAMPLE:  <i>VERY STIFF, GRAY, SILTY CLAY, MOST WITH INTERBEDDED FINE SAND LAYERS, MEDIUM PLASTIC, A-7-6</i>		WELL GRADED - INDICATES A GOOD REPRESENTATION OF PARTICLE SIZES FROM FINE TO COARSE. UNIFORM - INDICATES THAT SOIL PARTICLES ARE ALL APPROXIMATELY THE SAME SIZE. (ALSO POORLY GRADED) GAP-GRADED - INDICATES A MIXTURE OF UNIFORM PARTICLES OF TWO OR MORE SIZES.  ANGULARITY OF GRAINS THE ANGULARITY OR ROUNDNESS OF SOIL GRAINS IS DESIGNATED BY THE TERMS: ANGULAR, SUBANGULAR, SUBROUNDED, OR ROUNDED.		HARD ROCK IS NON-COASTAL PLAIN MATERIAL THAT IF TESTED, WOULD YIELD SPT REFUSAL. AN INFERRED ROCK LINE INDICATES THE LEVEL AT WHICH NON-COASTAL PLAIN MATERIAL WOULD YIELD SPT REFUSAL. SPT REFUSAL IS PENETRATION BY A SPLIT SPOON SAMPLER EQUAL TO OR LESS THAN 0.1 FOOT PER 60 BLOWS. IN NON-COASTAL PLAIN MATERIAL, THE TRANSITION BETWEEN SOIL AND ROCK IS OFTEN REPRESENTED BY A ZONE OF WEATHERED ROCK. ROCK MATERIALS ARE TYPICALLY DIVIDED AS FOLLOWS:  WEATHERED ROCK (WR) CRYSTALLINE ROCK (CR) NON-CRYSTALLINE ROCK (NCR) COASTAL PLAIN SEDIMENTARY ROCK (CP)		ALLUVIUM (ALLUV.) - SOILS THAT HAVE BEEN TRANSPORTED BY WATER. AQUIFER - A WATER BEARING FORMATION OR STRATA. ARENACEOUS - APPLIED TO ROCKS THAT HAVE BEEN DERIVED FROM SAND OR THAT CONTAIN SAND. ARGILLACEOUS - APPLIED TO ALL ROCKS OR SUBSTANCES COMPOSED OF CLAY MINERALS, OR HAVING A NOTABLE PROPORTION OF CLAY IN THEIR COMPOSITION, AS SHALE, SLATE, ETC. ARTESIAN - GROUND WATER THAT IS UNDER SUFFICIENT PRESSURE TO RISE ABOVE THE LEVEL AT WHICH IT IS ENCOUNTERED, BUT WHICH DOES NOT NECESSARILY RISE TO OR ABOVE THE GROUND SURFACE. CALCAREOUS (CALC.) - SOILS THAT CONTAIN APPRECIABLE AMOUNTS OF CALCIUM CARBONATE. COLLUVIUM - ROCK FRAGMENTS MIXED WITH SOIL DEPOSITED BY GRAVITY ON SLOPE OR AT BOTTOM OF SLOPE. CORE RECOVERY (REC.) - TOTAL LENGTH OF ALL MATERIAL RECOVERED IN THE CORE BARREL DIVIDED BY TOTAL LENGTH OF CORE RUN AND EXPRESSED AS A PERCENTAGE. DIKE - A TABULAR BODY OF IGNEOUS ROCK THAT CUTS ACROSS THE STRUCTURE OF ADJACENT ROCKS OR CUTS MASSIVE ROCK. DIP - THE ANGLE AT WHICH A STRATUM OR ANY PLANAR FEATURE IS INCLINED FROM THE HORIZONTAL. DIP DIRECTION (DIP AZIMUTH) - THE DIRECTION OR BEARING OF THE HORIZONTAL TRACE OF THE LINE OF DIP, MEASURED CLOCKWISE FROM NORTH. FAULT - A FRACTURE OR FRACTURE ZONE ALONG WHICH THERE HAS BEEN DISPLACEMENT OF THE SIDES RELATIVE TO ONE ANOTHER PARALLEL TO THE FRACTURE. FISSILE - A PROPERTY OF SPLITTING ALONG CLOSELY SPACED PARALLEL PLANES. FLOAT - ROCK FRAGMENTS ON SURFACE NEAR THEIR ORIGINAL POSITION AND DISLODGED FROM PARENT MATERIAL. FLOOD PLAIN (FP) - LAND BORDERING A STREAM, BUILT OF SEDIMENTS DEPOSITED BY THE STREAM. FORMATION (FM) - A MAPPABLE GEOLOGIC UNIT THAT CAN BE RECOGNIZED AND TRACED IN THE FIELD. JOINT - FRACTURE IN ROCK ALONG WHICH NO APPRECIABLE MOVEMENT HAS OCCURRED. LEDGE - A SHELF-LIKE RIDGE OR PROJECTION OF ROCK WHOSE THICKNESS IS SMALL COMPARED TO ITS LATERAL EXTENT. LENS - A BODY OF SOIL OR ROCK THAT THINS OUT IN ONE OR MORE DIRECTIONS. MOTTLED (MOT.) - IRREGULARLY MARKED WITH SPOTS OF DIFFERENT COLORS, MOTTLING IN SOILS USUALLY INDICATES POOR AERATION AND LACK OF GOOD DRAINAGE. PERCHED WATER - WATER MAINTAINED ABOVE THE NORMAL GROUND WATER LEVEL BY THE PRESENCE OF AN INTERVENING IMPERVIOUS STRATUM. RESIDUAL (RES.) SOIL - SOIL FORMED IN PLACE BY THE WEATHERING OF ROCK. ROCK QUALITY DESIGNATION (RQD) - A MEASURE OF ROCK QUALITY DESCRIBED BY TOTAL LENGTH OF ROCK SEGMENTS EQUAL TO OR GREATER THAN 4 INCHES DIVIDED BY THE TOTAL LENGTH OF CORE RUN AND EXPRESSED AS A PERCENTAGE. SAPROLITE (SAP) - RESIDUAL SOIL THAT RETAINS THE RELIC STRUCTURE OR FABRIC OF THE PARENT ROCK. SILL - AN INTRUSIVE BODY OF IGNEOUS ROCK OF APPROXIMATELY UNIFORM THICKNESS AND RELATIVELY THIN COMPARED WITH ITS LATERAL EXTENT, THAT HAS BEEN EMPLACED PARALLEL TO THE BEDDING OR SCHISTOSITY OF THE INTRUDED ROCKS. SLICKENSIDE - POLISHED AND STRIATED SURFACE THAT RESULTS FROM FRICTION ALONG A FAULT OR SLIP PLANE. STANDARD PENETRATION TEST (PENETRATION RESISTANCE) (SPT) - NUMBER OF BLOWS (N OR BPF) OF A 140 LB. HAMMER FALLING 30 INCHES REQUIRED TO PRODUCE A PENETRATION OF 1 FOOT INTO SOIL WITH A 2 INCH OUTSIDE DIAMETER SPLIT SPOON SAMPLER. SPT REFUSAL IS PENETRATION EQUAL TO OR LESS THAN 0.1 FOOT PER 60 BLOWS. STRATA CORE RECOVERY (SCRC) - TOTAL LENGTH OF STRATA MATERIAL RECOVERED DIVIDED BY TOTAL LENGTH OF STRATUM AND EXPRESSED AS A PERCENTAGE. STRATA ROCK QUALITY DESIGNATION (SRQD) - A MEASURE OF ROCK QUALITY DESCRIBED BY TOTAL LENGTH OF ROCK SEGMENTS WITHIN A STRATUM EQUAL TO OR GREATER THAN 4 INCHES DIVIDED BY THE TOTAL LENGTH OF STRATA AND EXPRESSED AS A PERCENTAGE. TOPSOIL (TS) - SURFACE SOILS USUALLY CONTAINING ORGANIC MATTER.	
SOIL LEGEND AND AASHTO CLASSIFICATION		MINERALOGICAL COMPOSITION		WEATHERING		ROCK HARDNESS	
GENERAL CLASS.	GRANULAR MATERIALS (< 35% PASSING #200)	SILT-CLAY MATERIALS (> 35% PASSING #200)	ORGANIC MATERIALS	MINERAL NAMES SUCH AS QUARTZ, FELDSPAR, MICA, TALC, KAOLIN, ETC. ARE USED IN DESCRIPTIONS WHENEVER THEY ARE CONSIDERED OF SIGNIFICANCE.		FRESH VERY SLIGHT (V SLI.) SLIGHT (SLI.) MODERATE (MOD.) MODERATELY SEVERE (MOD. SEV.) SEVERE (SEV.) VERY SEVERE (V SEV.) COMPLETE	
GROUP CLASS.	A-1, A-3, A-2, A-4, A-5, A-6, A-7, A-7.5, A-7.6			LIQUID LIMIT LESS THAN 31 LIQUID LIMIT EQUAL TO 31-50 LIQUID LIMIT GREATER THAN 50		VERY HARD HARD MODERATELY HARD MEDIUM HARD SOFT VERY SOFT	
SYMBOL	[SOIL SYMBOL PATTERNS]			COMPRESSIBILITY		ROCK HARDNESS	
% PASSING	[PASSING PERCENTAGES]			PERCENTAGE OF MATERIAL		ROCK HARDNESS	
LIQUID LIMIT	[LIQUID LIMIT VALUES]			ORGANIC MATERIAL		ROCK HARDNESS	
PLASTIC INDEX	[PLASTIC INDEX VALUES]			TRACE OF ORGANIC MATTER LITTLE ORGANIC MATTER MODERATELY ORGANIC HIGHLY ORGANIC		ROCK HARDNESS	
USUAL TYPES OF MAJOR MATERIALS	[USUAL TYPES]			GROUND WATER		ROCK HARDNESS	
GEN. RATING AS A SUBGRADE	[RATING]			WATER LEVEL IN BORE HOLE IMMEDIATELY AFTER DRILLING STATIC WATER LEVEL AFTER 24 HOURS PERCHED WATER, SATURATED ZONE, OR WATER BEARING STRATA SPRING OR SEEP		ROCK HARDNESS	
CONSISTENCY OR DENSENESS		RANGE OF UNCONFINED COMPRESSIVE STRENGTH (TONS/F <sup>2</sup> )		MISCELLANEOUS SYMBOLS			
PRIMARY SOIL TYPE	COMPACTNESS OR CONSISTENCY	RANGE OF STANDARD PENETRATION RESISTANCE (N-VALUE)	RANGE OF UNCONFINED COMPRESSIVE STRENGTH (TONS/F <sup>2</sup> )	ROADWAY EMBANKMENT (RED) WITH SOIL DESCRIPTION SOIL SYMBOL ARTIFICIAL FILL (AF) OTHER THAN ROADWAY EMBANKMENT INFERRED SOIL BOUNDARY INFERRED ROCK LINE ALLUVIAL SOIL BOUNDARY DIP & DIP DIRECTION OF ROCK STRUCTURES			
GENERALLY GRANULAR MATERIAL (NON-COHESIVE)	VERY LOOSE LOOSE MEDIUM DENSE DENSE VERY DENSE	<4 4 TO 10 10 TO 30 30 TO 50 >50	N/A	SPT TEST BORING TEST BORING W/ CORE AUGER BORING CORE BORING MONITORING WELL PIEZOMETER INSTALLATION SLOPE INDICATOR INSTALLATION CONE PENETROMETER TEST SOUNDING ROD			
GENERALLY SILT-CLAY MATERIAL (COHESIVE)	VERY SOFT SOFT MEDIUM STIFF STIFF VERY STIFF HARD	<2 2 TO 4 4 TO 8 8 TO 15 15 TO 30 >30	<0.25 0.25 TO 0.50 0.5 TO 1.0 1 TO 2 2 TO 4 >4	AR - AUGER REFUSAL BT - BORING TERMINATED CL - CLAY CPT - CONE PENETRATION TEST CSE - COARSE DMT - DILATOMETER TEST DPT - DYNAMIC PENETRATION TEST e - VOID RATIO f - FINE FOSS - FOSSILIFEROUS FRAC. - FRACTURED, FRACTURES FRAGS. - FRAGMENTS HI. - HIGHLY MED. - MEDIUM MICA - MICA MOD. - MODERATELY NP - NON PLASTIC ORG. - ORGANIC PMT - PRESSUREMETER TEST SAP. - SAPROLITIC SD. - SAND, SANDY SL. - SILT, SILTY SLI. - SLIGHTLY TCR - TRICONE REFUSAL w - MOISTURE CONTENT v - VERY			
TEXTURE OR GRAIN SIZE				ABBREVIATIONS			
U.S. STD. SIEVE SIZE OPENING (MM)	4 4.76	10 2.00	40 0.42	60 0.25	200 0.075	270 0.053	VST - VANE SHEAR TEST WEA. - WEATHERED γ - UNIT WEIGHT γ <sub>d</sub> - DRY UNIT WEIGHT  S - BULK SS - SPLIT SPOON ST - SHIELTUBE RS - ROCK RT - RECOMPACTED TRIAXIAL CBR - CALIFORNIA BEARING RATIO
BOULDER (BLDR.)	COBBLE (COB.)	GRAVEL (GR.)	COARSE SAND (CSE. SD.)	FINE SAND (F SD.)	SILT (SL.)	CLAY (CL.)	
GRAIN SIZE	MM 305 IN. 12	75 3	2.0	0.25	0.05	0.005	
SOIL MOISTURE - CORRELATION OF TERMS				EQUIPMENT USED ON SUBJECT PROJECT			
SOIL MOISTURE SCALE (ATTERBERG LIMITS)	FIELD MOISTURE DESCRIPTION	GUIDE FOR FIELD MOISTURE DESCRIPTION		DRILL UNITS: ADVANCING TOOLS: HAMMER TYPE: CORE SIZE: HAND TOOLS:			
LL - LIQUID LIMIT PL - PLASTIC LIMIT OM - OPTIMUM MOISTURE SL - SHRINKAGE LIMIT	- SATURATED - (SAT) - WET - (W) - MOIST - (M) - DRY - (D)	USUALLY LIQUID; VERY WET, USUALLY FROM BELOW THE GROUND WATER TABLE SEMISOLID; REQUIRES DRYING TO ATTAIN OPTIMUM MOISTURE SOLID; AT OR NEAR OPTIMUM MOISTURE REQUIRES ADDITIONAL WATER TO ATTAIN OPTIMUM MOISTURE		<input type="checkbox"/> MOBILE B-____ <input type="checkbox"/> BK-51 <input type="checkbox"/> CME-45C <input checked="" type="checkbox"/> CME-550 <input type="checkbox"/> PORTABLE HOIST  <input type="checkbox"/> CLAY BITS <input type="checkbox"/> 6" CONTINUOUS FLIGHT AUGER <input checked="" type="checkbox"/> 8" HOLLOW AUGERS <input type="checkbox"/> HARD FACED FINGER BITS <input checked="" type="checkbox"/> TUNG-CARBIDE INSERTS <input type="checkbox"/> CASING <input type="checkbox"/> W/ ADVANCER <input type="checkbox"/> TRICONE _____ * STEEL TEETH <input type="checkbox"/> TRICONE _____ * TUNG-CARB. <input type="checkbox"/> CORE BIT  <input checked="" type="checkbox"/> AUTOMATIC <input type="checkbox"/> MANUAL  <input type="checkbox"/> B-____ <input type="checkbox"/> N-____ <input type="checkbox"/> H-____  <input type="checkbox"/> POST HOLE DIGGER <input type="checkbox"/> HAND AUGER <input type="checkbox"/> SOUNDING ROD <input type="checkbox"/> VANE SHEAR TEST			
PLASTICITY				FRACTURE SPACING			
PLASTICITY INDEX (PI)		DRY STRENGTH		TERM SPACING THICKNESS			
NONPLASTIC	0-5	VERY LOW		VERY WIDE	MORE THAN 10 FEET	VERY THICKLY BEDDED	> 4 FEET
LOW PLASTICITY	6-15	SLIGHT		WIDE	3 TO 10 FEET	THICKLY BEDDED	1.5 - 4 FEET
MED. PLASTICITY	16-25	MEDIUM		MODERATELY CLOSE	1 TO 3 FEET	THINLY BEDDED	0.16 - 1.5 FEET
HIGH PLASTICITY	26 OR MORE	HIGH		CLOSE	0.16 TO 1 FEET	VERY THINLY BEDDED	0.03 - 0.16 FEET
COLOR				INDURATION			
DESCRIPTIONS MAY INCLUDE COLOR OR COLOR COMBINATIONS (TAN, RED, YELLOW-BROWN, BLUE-GRAY). MODIFIERS SUCH AS LIGHT, DARK, STREAKED, ETC. ARE USED TO DESCRIBE APPEARANCE.				FOR SEDIMENTARY ROCKS, INDURATION IS THE HARDENING OF THE MATERIAL BY CEMENTING, HEAT, PRESSURE, ETC.			
				BENCH MARK: GPS B4506-2 STA. 22+32.19 -BL- -L- STA. 26+71.3 50.13' RT ELEVATION: 937.93 FT.			
				NOTES:			

**-L- CURVE DATA**  
 PI Sta 26+04.61  
 $\Delta = 12^\circ 45' 10.0''$  (LT)  
 $D = 0^\circ 23' 56.5''$   
 $L = 3,195.97'$   
 $T = 1,604.61'$   
 $R = 14,358.86'$   
 SE = SEE PLANS

JP & SP, LLC  
 DB 2484 PG 418  
 PARCEL 3

-BYI-9 PINC 22+88.24 =  
 -Y- STA. 25+47.36 16.57 RT.

-L- POC Sta. 25+98.15 =  
 -Y- POT Sta. 27+66.66  
 $\Delta = 55^\circ 05' 01.7''$  (LT)



ROBERT STANLEY SOUTHERN AND  
 PATRICIA LYNN SOUTHERN NANCE  
 DB 2137 PG 2799  
 TRACT IV

-BYI-10 PINC 28+19.21 =  
 -Y- STA. 30+75.78 15.01' RT.

B4506 GPS-2  
 -BL- PINC 22+32.19 =  
 -L- STA. 26+71.30 56.13' RT.

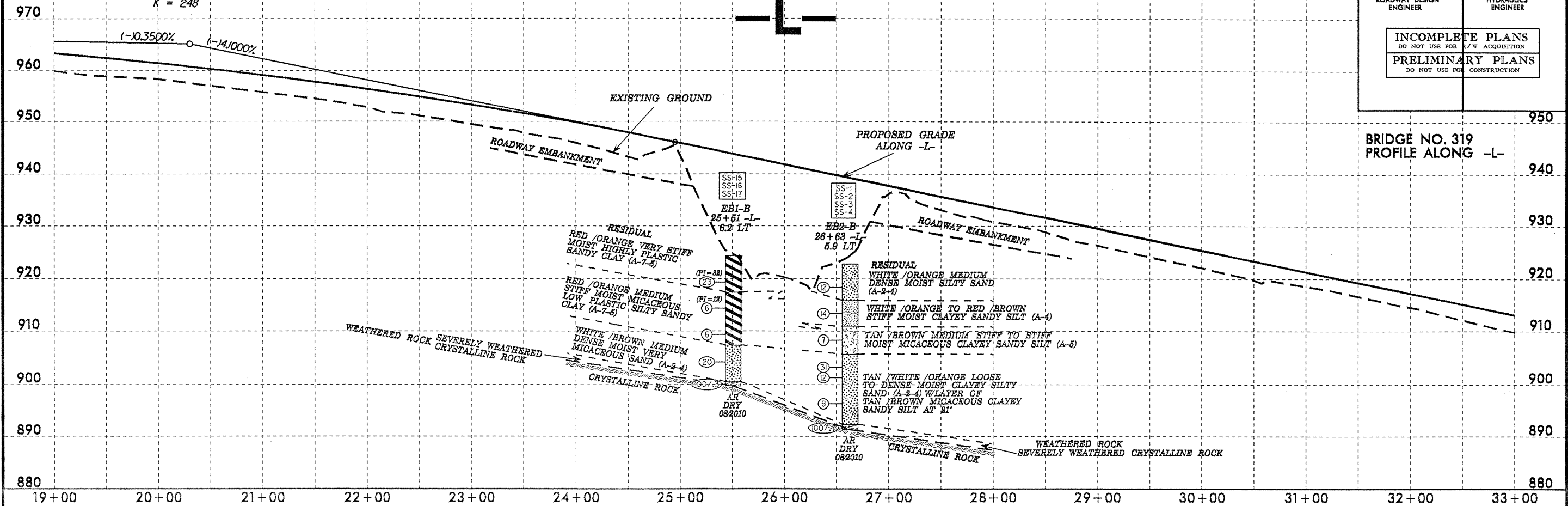
-BL- POT 21+15.59 =  
 -BYI- POT 25+74.27  
 (POINT NOT SET) =  
 -L- STA. 25+55.11 48.32' RT.

5/28/99

PI = 20+30.00  
EL = 965.15'  
VC = 930'  
K = 248

PROJECT REFERENCE NO. <b>38395.1.1 (B-4506)</b>	SHEET NO. <b>4</b>
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
INCOMPLETE PLANS DO NOT USE FOR ACQUISITION	
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	

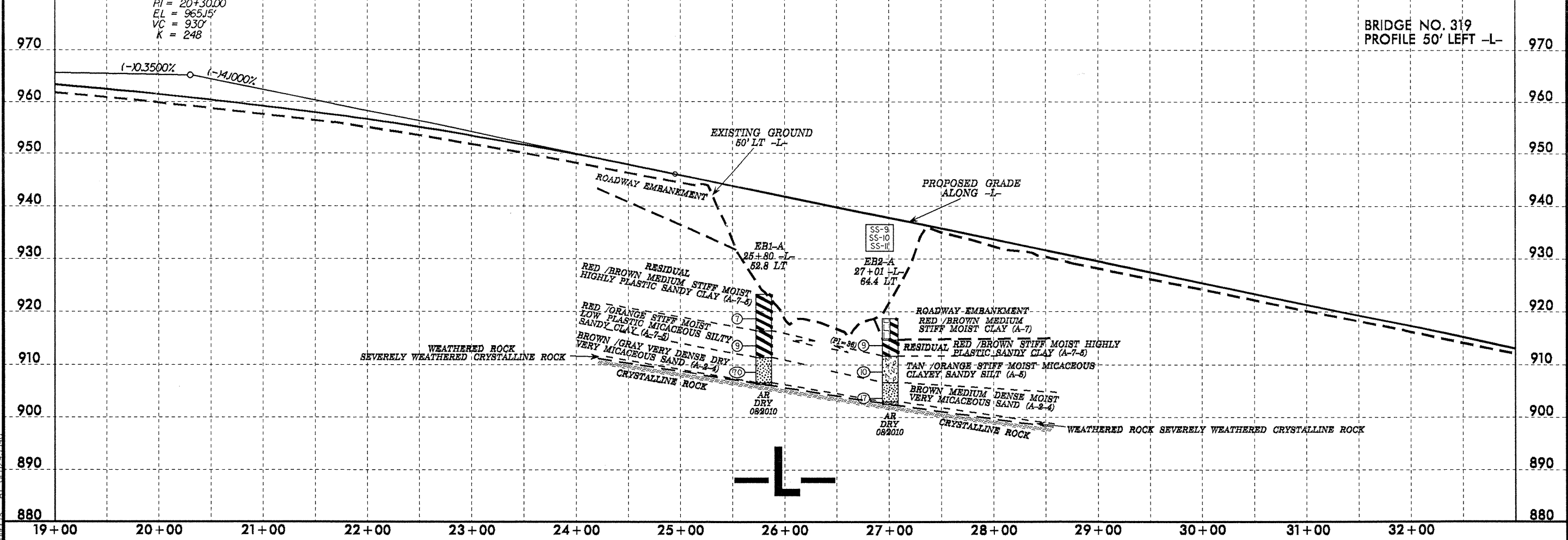
BRIDGE NO. 319  
PROFILE ALONG -L-



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PI = 20+30.00  
EL = 965.15'  
VC = 930'  
K = 248

BRIDGE NO. 319  
PROFILE 50' LEFT -L-



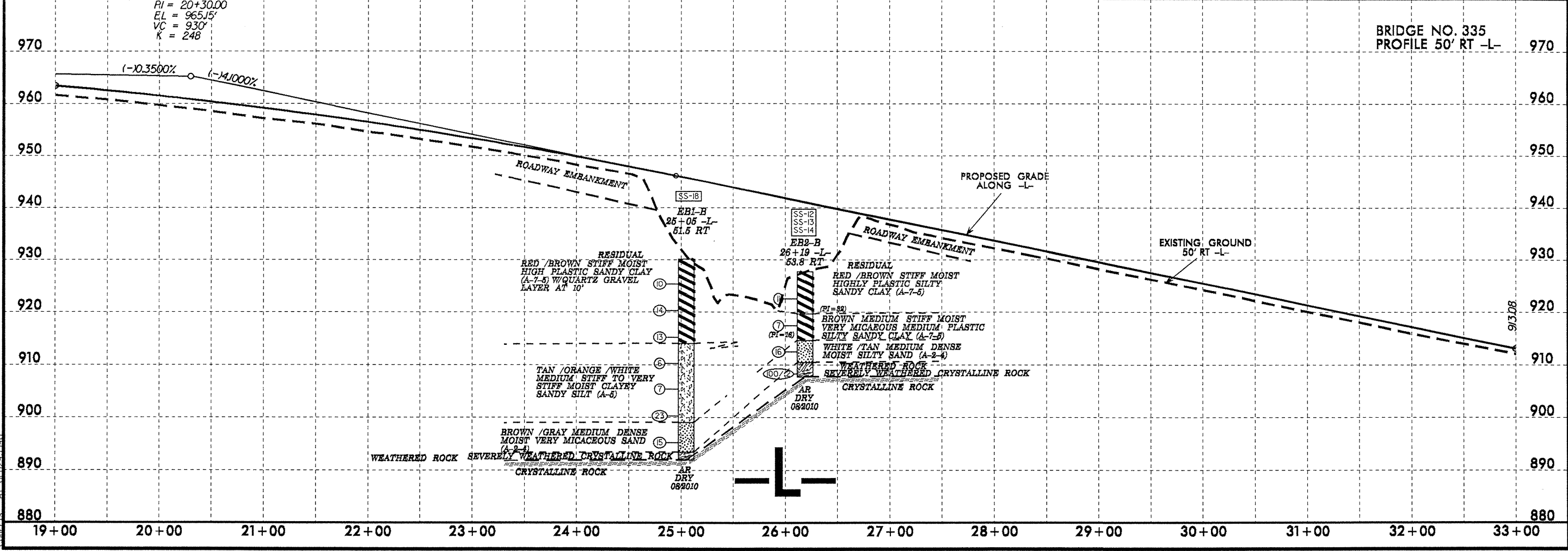
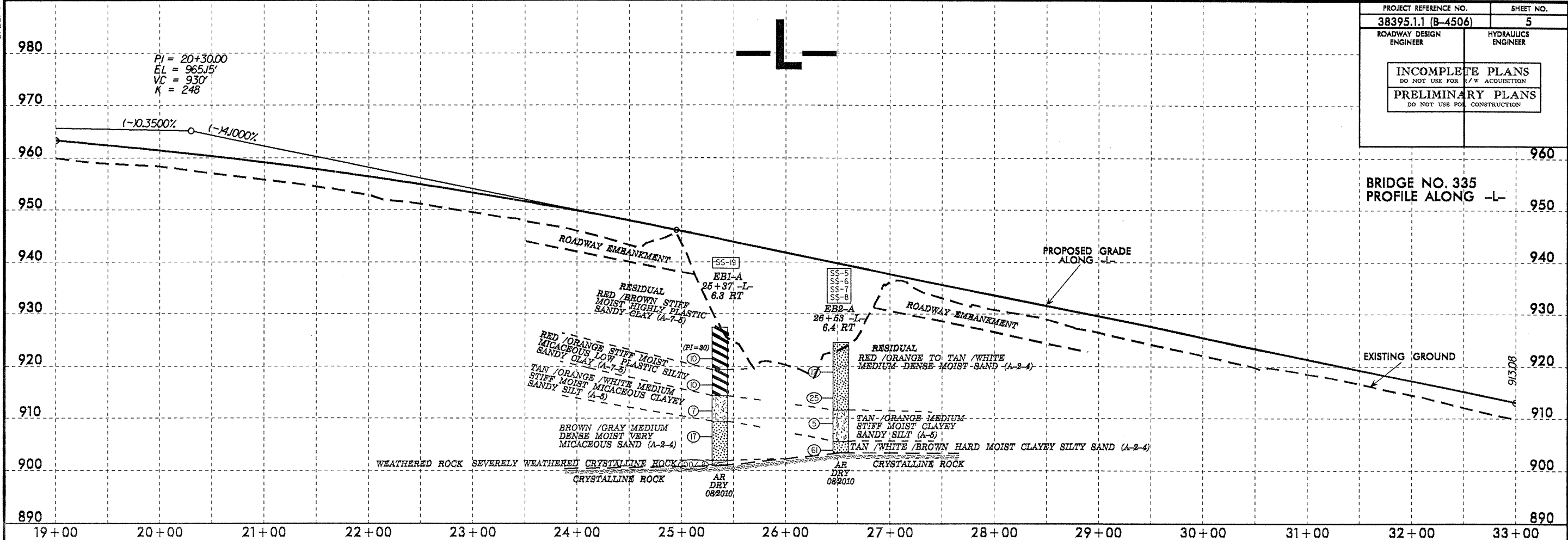
PROJECT REFERENCE NO. <b>38395.1.1 (B-4506)</b>	SHEET NO. <b>5</b>
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
<b>INCOMPLETE PLANS</b> DO NOT USE FOR R/W ACQUISITION	
<b>PRELIMINARY PLANS</b> DO NOT USE FOR CONSTRUCTION	

**BRIDGE NO. 335  
PROFILE ALONG -L-**

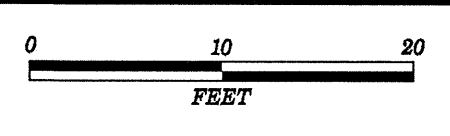
EXISTING GROUND 913.08

**BRIDGE NO. 335  
PROFILE 50' RT -L-**

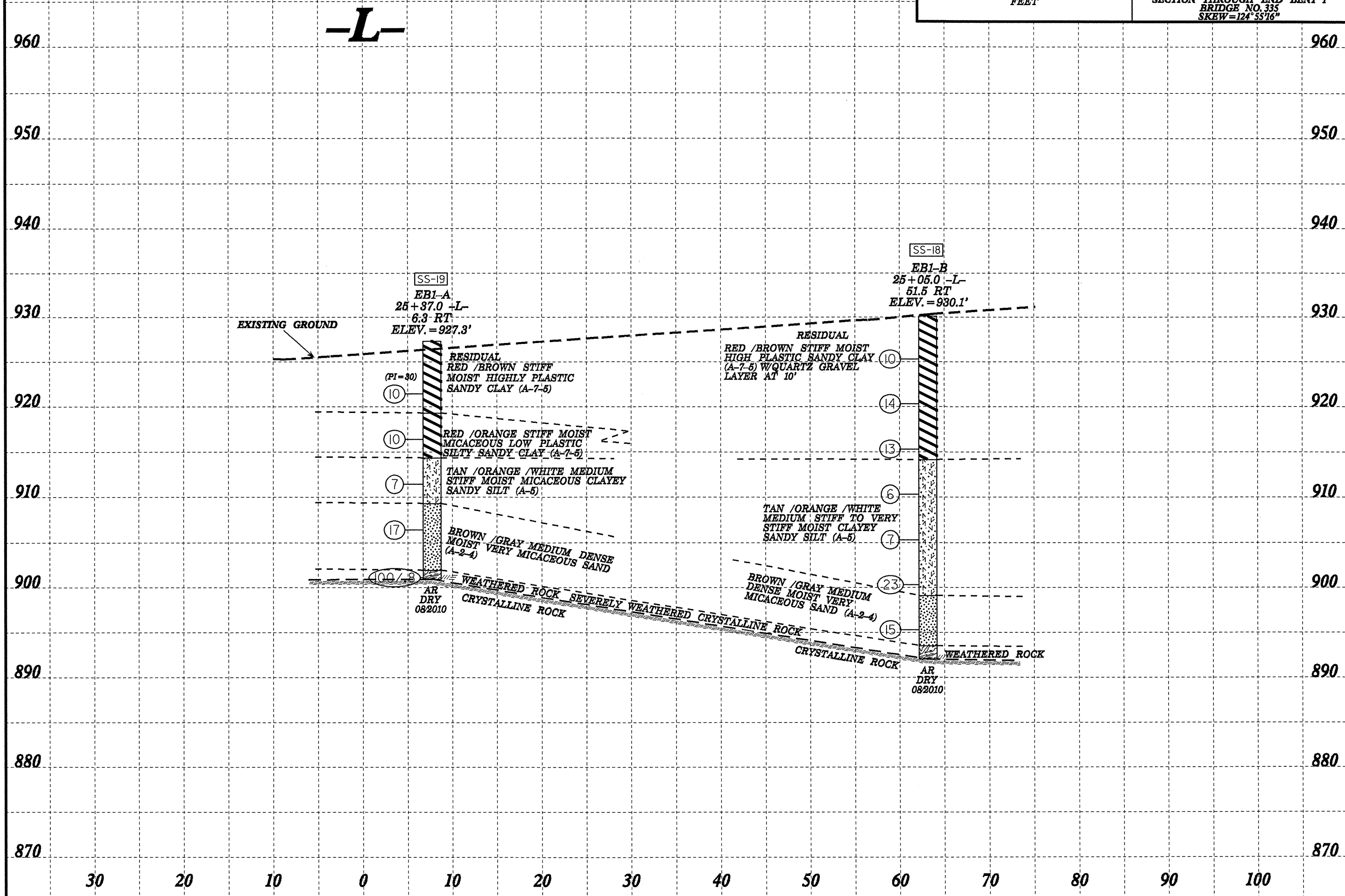
EXISTING GROUND 50' RT -L- 913.08



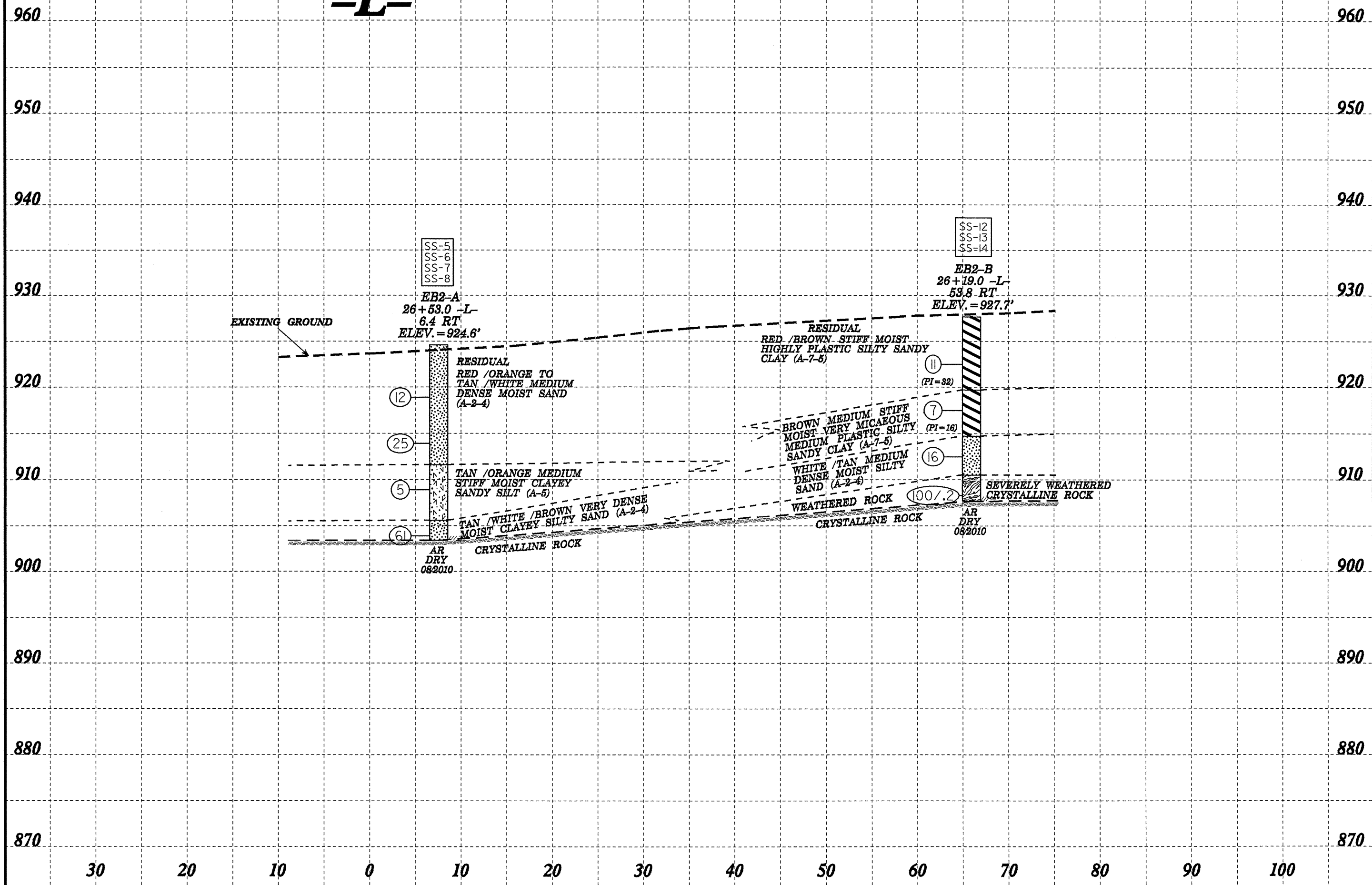
5/28/94  
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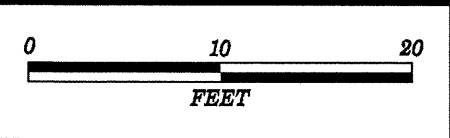


PROJECT REFERENCE NO.	SHEET
38395.1.1 (B-4506)	6
SECTION THROUGH END BENT 1	
BRIDGE NO. 335	
SKEW = 124° 55' 16"	

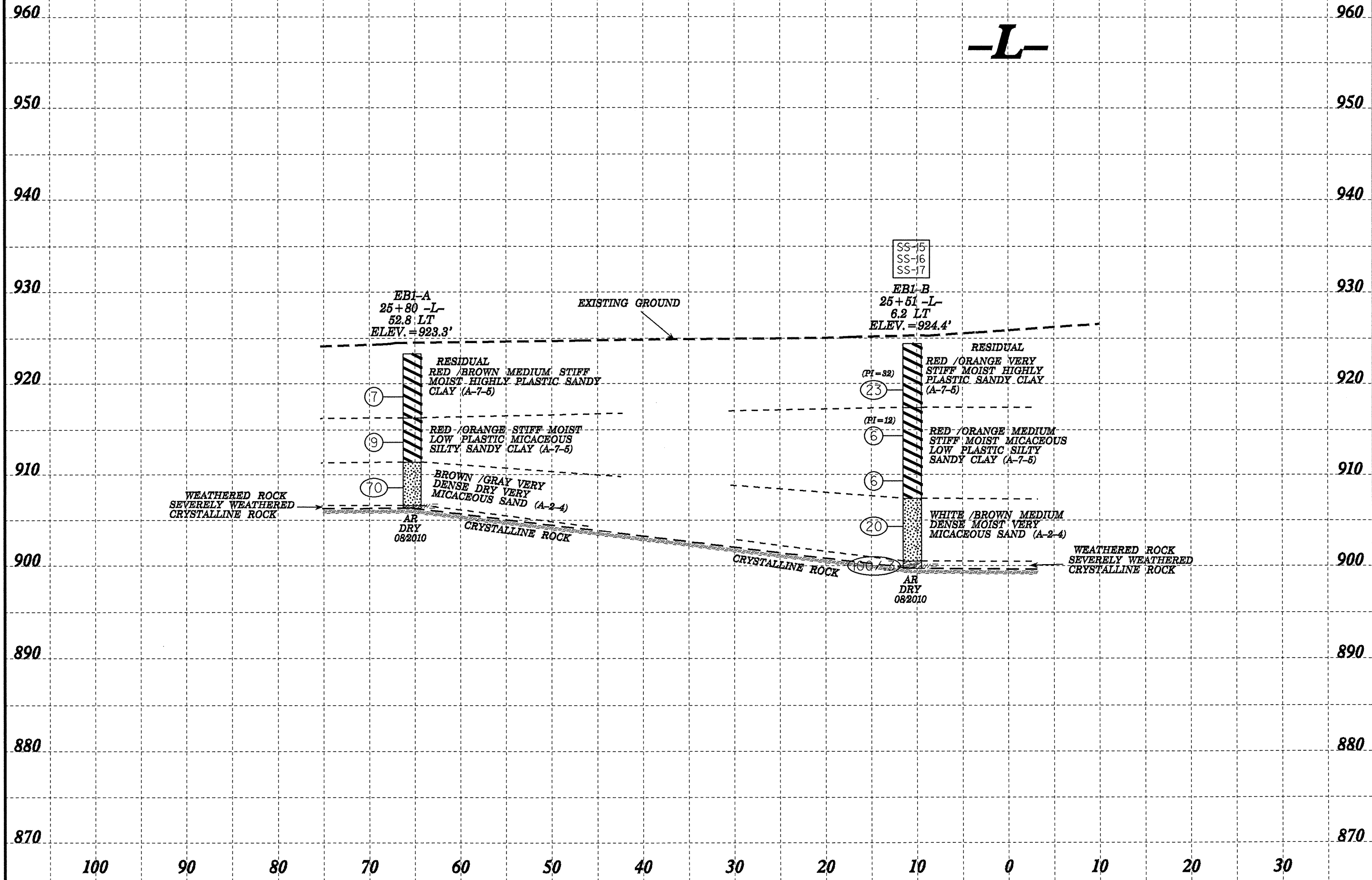


**-L-**

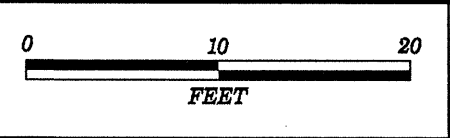




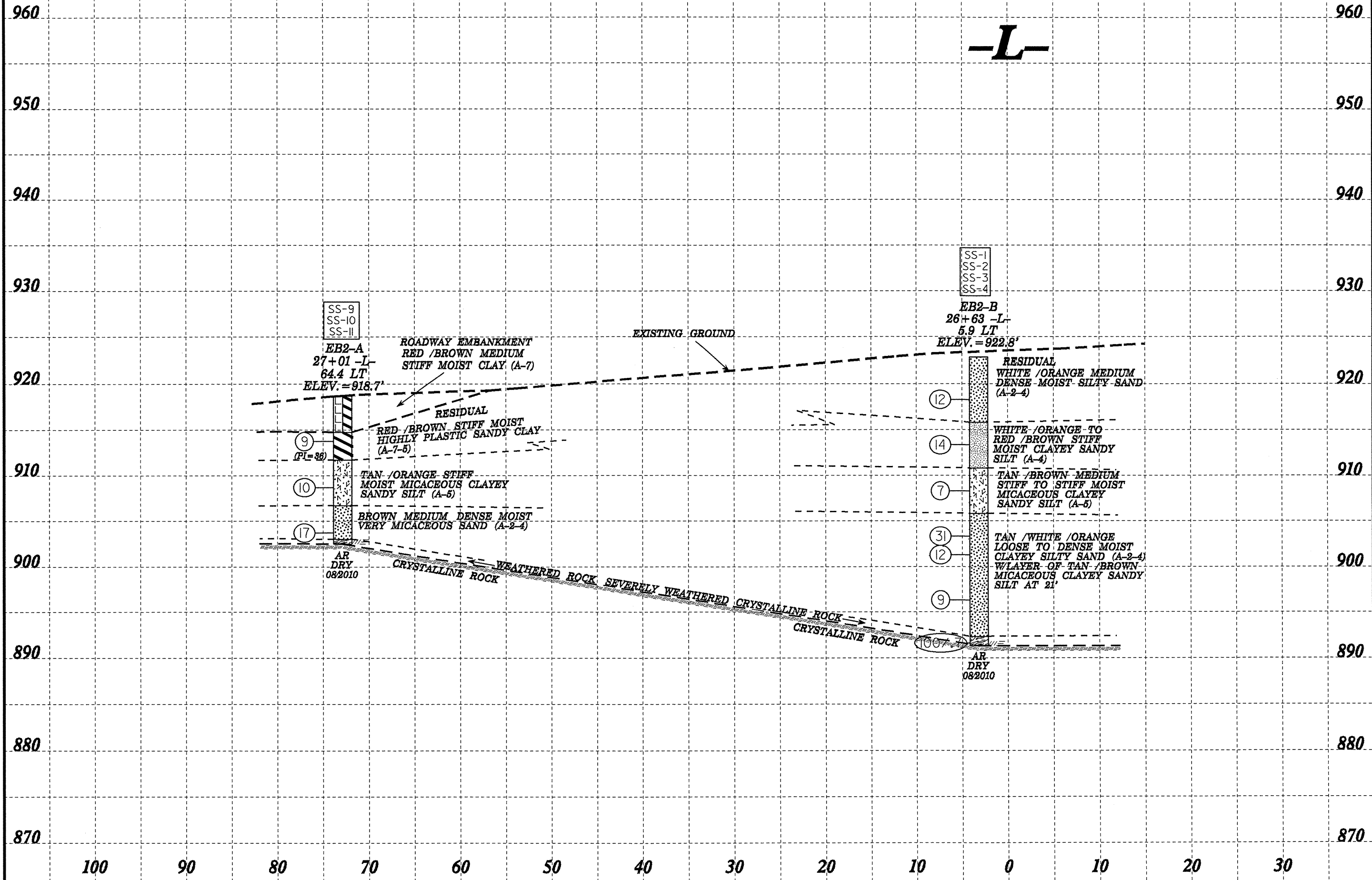
PROJECT REFERENCE NO.	SHEET
38395.1.1 (B-4506)	8
SECTION THROUGH END BENT 1	
BRIDGE NO. 319	
SKEW = 124° 55' 16"	







PROJECT REFERENCE NO.	SHEET
38395.1.1 (B-4506)	9
SECTION THROUGH END BENT 2	
BRIDGE NO. 319	
SKEW = 124° 55' 16"	



SS-9  
SS-10  
SS-11

EB2-A  
27+01 -L  
64.4 LT  
ELEV. = 918.7'

ROADWAY EMBANKMENT  
RED / BROWN MEDIUM  
STIFF MOIST CLAY (A-7)

EXISTING GROUND

SS-1  
SS-2  
SS-3  
SS-4

EB2-B  
26+63 -L  
5.9 LT  
ELEV. = 922.8'

RESIDUAL  
WHITE / ORANGE MEDIUM  
DENSE MOIST SILTY SAND  
(A-2-4)

9  
(PI = 38)

RESIDUAL  
RED / BROWN STIFF MOIST  
HIGHLY PLASTIC SANDY CLAY  
(A-7-5)

12

WHITE / ORANGE TO  
RED / BROWN STIFF  
MOIST CLAYEY SANDY  
SILT (A-4)

10

TAN / ORANGE STIFF  
MOIST MICACEOUS CLAYEY  
SANDY SILT (A-5)

14

TAN / BROWN MEDIUM  
STIFF TO STIFF MOIST  
MICACEOUS CLAYEY  
SANDY SILT (A-5)

17

BROWN MEDIUM DENSE MOIST  
VERY MICACEOUS SAND (A-2-4)

7

TAN / WHITE / ORANGE  
LOOSE TO DENSE MOIST  
CLAYEY SILTY SAND (A-2-4)  
W/LAYER OF TAN / BROWN  
MICACEOUS CLAYEY SANDY  
SILT AT 21'

AR  
DRY  
082010

WEATHERED ROCK SEVERELY WEATHERED CRYSTALLINE ROCK

31  
12

9

16

AR  
DRY  
082010

100 90 80 70 60 50 40 30 20 10 0 10 20 30

PROJECT NO. 38395.1.1		ID. B-4506		COUNTY FORSYTH		GEOLOGIST Stickney, J. K.									
SITE DESCRIPTION DUAL BRIDGES ON US 52 OVER SR 1620															
BORING NO. EB1-A(319)		STATION 25+80		OFFSET 53 ft LT		ALIGNMENT -L-									
COLLAR ELEV. 923.3 ft		TOTAL DEPTH 17.0 ft		NORTHING 909,266		EASTING 1,603,354									
DRILL MACHINE CME-550X		DRILL METHOD H.S. Augers		HAMMER TYPE Automatic											
DRILLER Smith, C. L.		START DATE 08/30/10		COMP. DATE 08/30/10		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					
925														923.3	0.0
920	919.6	3.7	2	3	4								M	RESIDUAL RED / BROWN MEDIUM STIFF MOIST HIGHLY PLASTIC SANDY CLAY (A-7-5)	
915	914.6	8.7	4	4	5								M	RESIDUAL RED / ORANGE STIFF MOIST LOW PLASTIC MICACEOUS SILTY SANDY CLAY (A-7-5)	7.0
910	909.6	13.7	14	21	49								D	RESIDUAL BROWN / GRAY VERY DENSE DRY VERY MICACEOUS SAND (A-2-4)	11.9
905														906.6 906.3	16.7 17.0
WEATHERED ROCK SEVERELY WEATHERED CRYSTALLINE ROCK Boring Terminated by Auger Refusal at Elevation 906.3 ft on crystalline rock															

PROJECT NO. 38395.1.1		ID. B-4506		COUNTY FORSYTH		GEOLOGIST Stickney, J. K.										
SITE DESCRIPTION DUAL BRIDGES ON US 52 OVER SR 1620																
BORING NO. EB1-B(319)		STATION 25+51		OFFSET 6 ft LT		ALIGNMENT -L-										
COLLAR ELEV. 924.4 ft		TOTAL DEPTH 24.7 ft		NORTHING 909,254		EASTING 1,603,300										
DRILL MACHINE CME-550X		DRILL METHOD H.S. Augers		HAMMER TYPE Automatic												
DRILLER Smith, C. L.		START DATE 08/27/10		COMP. DATE 08/27/10		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						
925														924.4	0.0	
920	920.3	4.1	2	12	11								SS-15	M	RESIDUAL RED / ORANGE VERY STIFF MOIST HIGHLY PLASTIC (PI=32) SANDY CLAY (A-7-5)	
915	915.3	9.1	4	2	4								SS-16	M	RESIDUAL RED / ORANGE MEDIUM STIFF MOIST MICACEOUS LOW PLASTIC (PI=12) SILTY SANDY CLAY (A-7-5)	7.0
910	910.3	14.1	3	3	3									M		
905	905.3	19.1	2	6	14								SS-17	M	RESIDUAL WHITE / BROWN MEDIUM DENSE MOIST VERY MICACEOUS SAND (A-2-4)	17.0
900	900.3	24.1												D	900.5 899.7	23.9 24.7
WEATHERED ROCK SEVERELY WEATHERED CRYSTALLINE ROCK Boring Terminated by Auger Refusal at Elevation 899.7 ft on crystalline rock																

NCDOT BORE SINGLE B4506\_GEO\_BH\_BRD0035&0319\_FORSYTH.GPJ NC\_DOT.GDT 09/23/10

NCDOT BORE SINGLE B4506\_GEO\_BH\_BRD0035&0319\_FORSYTH.GPJ NC\_DOT.GDT 09/23/10

PROJECT NO. 38395.1.1		ID. B-4506		COUNTY FORSYTH		GEOLOGIST Stickney, J. K.										
SITE DESCRIPTION DUAL BRIDGES ON US 52 OVER SR 1620							GROUND WTR (ft)									
BORING NO. EB2-A(319)	STATION 27+01	OFFSET 64 ft LT	ALIGNMENT -L-	0 HR. Dry												
COLLAR ELEV. 918.7 ft	TOTAL DEPTH 16.2 ft	NORTHING 909,188	EASTING 1,603,446	24 HR. Dry												
DRILL MACHINE CME-550X		DRILL METHOD H.S. Augers		HAMMER TYPE Automatic												
DRILLER Smith, C. L.		START DATE 08/26/10	COMP. DATE 08/26/10	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						
920														918.7	GROUND SURFACE	0.0
														914.7	ROADWAY EMBANKMENT RED / BROWN MEDIUM STIFF MOIST CLAY (A-7)	4.0
915	914.7	4.0	3	4	5							SS-9	M	911.7	RESIDUAL RED / BROWN STIFF MOIST HIGHLY PLASTIC (PI=36) SANDY CLAY (A-7-5)	7.0
910	909.7	9.0	4	4	6							SS-10	M	906.7	RESIDUAL TAN / ORANGE STIFF MOIST MICACEOUS CLAYEY SANDY SILT (A-5)	12.0
905	904.7	14.0	4	8	9							SS-11	M	903.0	RESIDUAL BROWN MEDIUM DENSE MOIST VERY MICACEOUS SAND (A-2-4)	15.7
900														902.5	WEATHERED ROCK SEVERELY WEATHERED CRYSTALLINE ROCK	16.2
Boring Terminated by Auger Refusal at Elevation 902.5 ft on crystalline rock																

PROJECT NO. 38395.1.1		ID. B-4506		COUNTY FORSYTH		GEOLOGIST Stickney, J. K.										
SITE DESCRIPTION DUAL BRIDGES ON US 52 OVER SR 1620							GROUND WTR (ft)									
BORING NO. EB2-B(319)	STATION 26+63	OFFSET 6 ft LT	ALIGNMENT -L-	0 HR. Dry												
COLLAR ELEV. 922.8 ft	TOTAL DEPTH 31.5 ft	NORTHING 909,174	EASTING 1,603,378	24 HR. Dry												
DRILL MACHINE CME-550X		DRILL METHOD H.S. Augers		HAMMER TYPE Automatic												
DRILLER Smith, C. L.		START DATE 08/23/10	COMP. DATE 08/23/10	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						
925														922.8	GROUND SURFACE	0.0
920	919.3	3.5												915.8	RESIDUAL WHITE / ORANGE MEDIUM DENSE MOIST SILTY SAND (A-2-4)	7.0
915	914.3	8.5	1	4	8							SS-1	M	910.8	RESIDUAL WHITE / ORANGE TO RED / BROWN STIFF MOIST CLAYEY SANDY SILT (A-4)	12.0
910	909.3	13.5	3	4	10							SS-2	M	905.8	RESIDUAL TAN / BROWN MEDIUM STIFF TO STIFF MOIST MICACEOUS CLAYEY SANDY SILT (A-5)	17.0
905	904.3	18.5	2	3	4							SS-3	M		RESIDUAL TAN / WHITE / ORANGE LOOSE TO DENSE MOIST CLAYEY SILTY SAND (A-2-4) W/ LAYER OF TAN / BROWN MICACEOUS CLAYEY SANDY SILT AT 21'	
900	902.3	20.5	3	15	16							SS-4	M			
895	897.3	25.5	3	6	6								M			
890	892.3	30.5	3	4	5								M			
														891.3	WEATHERED ROCK SEVERELY WEATHERED CRYSTALLINE ROCK	30.5
Boring Terminated by Auger Refusal at Elevation 891.3 ft on crystalline rock																

NCDOT BORE SINGLE B4506 GEO\_BH\_BRDG0335&0319\_FORSYTH.GPJ NC\_DOT.GDT 09/23/10

NCDOT BORE SINGLE B4506 GEO\_BH\_BRDG0335&0319\_FORSYTH.GPJ NC\_DOT.GDT 09/23/10

PROJECT NO. 38395.1.1	ID. B-4506	COUNTY FORSYTH	GEOLOGIST Stickney, J. K.
SITE DESCRIPTION DUAL BRIDGES ON US 52 OVER SR 1620			GROUND WTR (ft)
BORING NO. EB1-A(335)	STATION 25+37	OFFSET 6 ft RT	ALIGNMENT -L-
COLLAR ELEV. 927.3 ft	TOTAL DEPTH 26.4 ft	NORTHING 909,256	EASTING 1,603,281
DRILL MACHINE CME-550X	DRILL METHOD H.S. Augers	HAMMER TYPE Automatic	
DRILLER Smith, C. L.	START DATE 08/30/10	COMP. DATE 08/30/10	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				
930													927.3 GROUND SURFACE 0.0	
925													RESIDUAL RED / BROWN STIFF MOIST HIGHLY PLASTIC (PI=30) SANDY CLAY (A-7-5)	
920	922.4	4.9	2	4	6						SS-19	M	919.3 8.0	
915	917.4	9.9	4	5	5							M	914.3 13.0	
910	912.4	14.9	2	3	4							M	909.3 18.0	
905	907.4	19.9	2	5	12							M	901.9 25.4	
900	902.4	24.9	2	20	80/3							D	900.9 26.4	
895													WEATHERED ROCK SEVERELY WEATHERED CRYSTALLINE ROCK	
890													Boring Terminated by Auger Refusal at Elevation 900.9 ft on crystalline rock	

PROJECT NO. 38395.1.1	ID. B-4506	COUNTY FORSYTH	GEOLOGIST Stickney, J. K.
SITE DESCRIPTION DUAL BRIDGES ON US 52 OVER SR 1620			GROUND WTR (ft)
BORING NO. EB1-B(335)	STATION 25+05	OFFSET 52 ft RT	ALIGNMENT -L-
COLLAR ELEV. 930.1 ft	TOTAL DEPTH 38.1 ft	NORTHING 909,248	EASTING 1,603,226
DRILL MACHINE CME-550X	DRILL METHOD H.S. Augers	HAMMER TYPE Automatic	
DRILLER Smith, C. L.	START DATE 08/27/10	COMP. DATE 08/27/10	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				
935													930.1 GROUND SURFACE 0.0	
930													RESIDUAL RED / BROWN STIFF MOIST HIGH PLASTIC SANDY CLAY (A-7-5) W/ QUARTZ GRAVEL LAYER AT 10'	
925	926.3	3.8	2	5	5							M	919.3 8.0	
920	921.3	8.8	4	5	9							M	914.3 13.0	
915	916.3	13.8	5	6	7							M	909.3 18.0	
910	911.3	18.8	2	2	4						SS-18	M	901.9 25.4	
905	906.3	23.8	3	3	4							M	900.9 26.4	
900	901.3	28.8	19	18	5								WEATHERED ROCK SEVERELY WEATHERED CRYSTALLINE ROCK	
895	896.3	33.8	7	8	7							M	Boring Terminated by Auger Refusal at Elevation 900.9 ft on crystalline rock	
890													RESIDUAL BROWN / GRAY MEDIUM DENSE MOIST VERY MICACEOUS SAND (A-2-4)	
885													914.1 16.0	
880													TAN / ORANGE / WHITE MEDIUM STIFF TO VERY STIFF MOIST CLAYEY SANDY SILT (A-5)	
875													914.1 16.0	
870													RESIDUAL TAN / ORANGE / WHITE MEDIUM STIFF TO VERY STIFF MOIST CLAYEY SANDY SILT (A-5)	
865													914.1 16.0	
860													RESIDUAL BROWN / GRAY MEDIUM DENSE MOIST VERY MICACEOUS SAND (A-2-4)	
855													914.1 16.0	
850													WEATHERED ROCK SEVERELY WEATHERED CRYSTALLINE ROCK	
													Boring Terminated by Auger Refusal at Elevation 892.0 ft on crystalline rock	

NCDOT BORE SINGLE B4506\_GEO\_BH\_BRD0335&0319\_FORSYTH.GPJ NC\_DOT\_GDT 09/23/10

NCDOT BORE SINGLE B4506\_GEO\_BH\_BRD0335&0319\_FORSYTH.GPJ NC\_DOT\_GDT 09/23/10

PROJECT NO. 38395.1.1	ID. B-4506	COUNTY FORSYTH	GEOLOGIST Smith, M. L.
SITE DESCRIPTION DUAL BRIDGES ON US 52 OVER SR 1620			GROUND WTR (ft)
BORING NO. EB2-A(335)	STATION 26+53	OFFSET 6 ft RT	ALIGNMENT -L-
COLLAR ELEV. 924.6 ft	TOTAL DEPTH 21.2 ft	NORTHING 909,172	EASTING 1,603,362
DRILL MACHINE CME-550X		DRILL METHOD H.S. Augers	HAMMER TYPE Automatic
DRILLER Smith, C. L.		START DATE 08/25/10	COMP. DATE 08/25/10
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														GROUND SURFACE	0.0
920	919.9	4.7	4	5	7	12					SS-5	M		RESIDUAL RED / ORANGE TO TAN / WHITE MEDIUM DENSE MOIST SAND (A-2-4)	
915	914.9	9.7	5	12	13						SS-6	M			
910	909.9	14.7	1	2	3	5					SS-7	M		RESIDUAL TAN / ORANGE MEDIUM STIFF MOIST CLAYEY SANDY SILT (A-5)	13.0
905	904.9	19.7	4	9	52						SS-8	M		RESIDUAL TAN / WHITE / BROWN VERY DENSE MOIST CLAYEY SILTY SAND (A-2-4)	19.0
900														Boring Terminated by Auger Refusal at Elevation 903.4 ft on crystalline rock	21.2

PROJECT NO. 38395.1.1	ID. B-4506	COUNTY FORSYTH	GEOLOGIST Stickney, J. K.
SITE DESCRIPTION DUAL BRIDGES ON US 52 OVER SR 1620			GROUND WTR (ft)
BORING NO. EB2-B(335)	STATION 26+19	OFFSET 54 ft RT	ALIGNMENT -L-
COLLAR ELEV. 927.7 ft	TOTAL DEPTH 20.0 ft	NORTHING 909,164	EASTING 1,603,304
DRILL MACHINE CME-550X		DRILL METHOD H.S. Augers	HAMMER TYPE Automatic
DRILLER Smith, C. L.		START DATE 08/26/10	COMP. DATE 08/26/10
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					
930														GROUND SURFACE	0.0
925	923.5	4.2	1	5	6	11					SS-12	M		RESIDUAL RED / BROWN STIFF MOIST HIGHLY PLASTIC (PI=32) SILTY SANDY CLAY (A-7-5)	
920	918.5	9.2	3	3	4						SS-13	M		RESIDUAL BROWN MEDIUM STIFF MOIST VERY MICAEOUS MEDIUM PLASTIC (PI=16) SILTY SANDY CLAY (A-7-5)	8.0
915	913.5	14.2	5	5	11						SS-14	M		RESIDUAL WHITE / TAN MEDIUM DENSE MOIST SILTY SAND (A-2-4)	13.0
910	908.5	19.2												WEATHERED ROCK SEVERELY WEATHERED CRYSTALLINE ROCK	17.2
905														Boring Terminated by Auger Refusal at Elevation 907.7 ft on crystalline rock	20.0

NCDOT BORE SINGLE B4506\_GEO\_BH\_BRD0335&0319\_FORSYTH.GPJ NC\_DOT\_GDT\_09/23/10

NCDOT BORE SINGLE B4506\_GEO\_BH\_BRD0335&0319\_FORSYTH.GPJ NC\_DOT\_GDT\_09/23/10

TEST RESULTS

PROJECT: 38395.1.1 (B-4506)  
 COUNTY: FORSYTH  
 SITE DESCRIPTION: DUAL BRIDGES ON US 52 OVER SR 1620

SOIL SAMPLE RESULTS														ROCK SAMPLE RESULTS												
SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS	N	L.L.	P.I.	% BY WEIGHT				% PASSING SIEVES			% MOISTURE	% ORGANIC	UNIT WT. (d)	VOID RATIO	SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	RQD	UNIT WT	Q(MPa) (ksf)	E(MPa) (MPsi)
								C. SAND	F. SAND	SILT	CLAY	10	40	200												
				<b>EB1-A (335)</b>																						
SS-19	6.3 RT	25+37 -L-	5.40-6.40	A-7-5(13)	10	60	30	26.2	23.0	7.8	43.0	97	81	52												
				<b>EB1-B (335)</b>																						
SS-18	51.5 RT	25+05 -L-	19.30-20.30	A-5(1)	6	48	8	29.7	36.3	23.8	10.2	100	88	40												
				<b>EB2-A (335)</b>																						
SS-5	6.4 RT	26+53 -L-	5.20-6.20	A-2-4(0)	12	31	2	47.7	31.6	8.4	12.3	82	55	21												
SS-6	6.4 RT	26+53 -L-	10.20-11.20	A-2-4(0)	25	29	NP	44.8	33.3	12.7	9.2	91	63	26												
SS-7	6.4 RT	26+53 -L-	15.20-16.20	A-5(2)	5	56	8	20.9	42.2	24.6	12.3	100	91	44												
SS-8	6.4 RT	26+53 -L-	20.20-21.20	A-2-4(0)	61	30	5	41.8	33.9	14.0	10.2	93	71	27												
				<b>EB2-B (335)</b>																						
SS-12	53.8 RT	26+19 -L-	4.70-5.70	A-7-5(31)	11	76	32	6.6	18.2	11.7	63.5	100	97	79												
SS-13	53.8 RT	26+19 -L-	9.70-10.70	A-7-5(5)	7	48	16	12.9	47.1	13.3	26.6	100	99	46												
SS-14	53.8 RT	26+19 -L-	14.70-15.70	A-2-4(0)	16	36	NP	35.0	42.4	14.3	8.2	94	76	28												
				<b>EB1-B (319)</b>																						
SS-15	6.2 LT	25+51 -L-	4.60-5.60	A-7-5(12)	23	62	32	28.9	21.1	4.9	45.1	93	75	49												
SS-16	6.2 LT	25+51 -L-	9.60-10.60	A-7-5(6)	6	50	12	16.4	39.1	26.0	18.4	100	91	56												
SS-17	6.2 LT	25+51 -L-	19.60-20.60	A-2-4(0)	20	40	NP	27.0	59.2	9.6	4.1	100	92	21												
				<b>EB2-A (319)</b>																						
SS-9	64.4 LT	27+01 -L-	4.50-5.50	A-7-5(24)	9	70	36	15.8	21.9	9.0	53.3	99	90	65												
SS-10	64.4 LT	27+01 -L-	9.50-10.50	A-5(0)	10	49	2	18.9	51.4	17.4	12.3	100	95	37												
SS-11	64.4 LT	27+01 -L-	14.50-15.50	A-2-4(0)	17	33	NP	55.3	33.2	7.4	4.1	100	69	15												
				<b>EB2-B (319)</b>																						
SS-1	5.9 LT	26+63 -L-	4.00-5.00	A-2-4(0)	12	25	NP	46.3	33.8	13.7	6.1	78	54	20												
SS-2	5.9 LT	26+63 -L-	9.00-10.00	A-4(0)	14	39	10	32.6	33.2	17.8	16.4	93	74	37												
SS-3	5.9 LT	26+63 -L-	14.00-15.00	A-5(2)	7	64	7	20.1	42.8	22.7	14.3	100	91	44												
SS-4	5.9 LT	26+63 -L-	19.00-20.00	A-2-4(0)	31	31	3	38.1	36.5	13.1	12.3	91	70	29												