

CONTRACT: ID: R-2514D

NOTE: SEE SHEET 2A FOR PLAN SHEET LAYOUT AT TIME OF INVESTIGATION

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

**ROADWAY**  
**SUBSURFACE INVESTIGATION**

PROJ. REFERENCE NO. 34442.1.1 (R-2514D) F.A. PROJ. \_\_\_\_\_  
 COUNTY JONES / CRAVEN  
 PROJECT DESCRIPTION US 17 FROM SOUTH OF NC 58 TO THE  
NEW BERN BYPASS

**INVENTORY**

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	R-2514D	1	122
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	
34442.1.1		P.E.	
		RW & UTIL.	

**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 FOLEIGH BY CONTACTING THE N.C. DEPARTMENT OF TRANSPORTATION, GEOTECHNICAL ENGINEERING UNIT AT 1919 TOTT-6850. 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.

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**CROSS SECTIONS**

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-L-	444+00 TO 445+50	79
-L-	446+50 TO 450+00	80-81
-L-	472+50 TO 475+00	82-83
-L-	503+00 TO 506+50	84-85
-L-	530+50 TO 532+00	86-87
-L-	561+50 TO 563+00	88-89
-L-	605+50	90
-Y3-	19+50 TO 23+50	91-92
-Y3-	31+00 TO 35+00	93-94
-Y3A-	14+23 TO 14+60	95
-Y3B-	10+25 TO 16+25	96-99
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**APPENDIX 1**

CPT LOGS

**SHEET**

I-104

DRAWN BY: C.P. TURNER

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.

PERSONNEL

J.R. SWARTLEY

CATLIN PERSONNEL

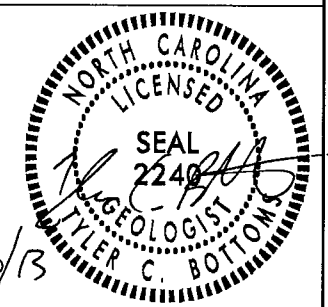
S&ME PERSONNEL

INVESTIGATED BY T.C. BOTTOMS

CHECKED BY D.N. ARGENBRIGHT

SUBMITTED BY D.N. ARGENBRIGHT

DATE JULY 2013



SUBSURFACE INVESTIGATION

SOIL AND ROCK LEGEND, TERMS, SYMBOLS, AND ABBREVIATIONS

SOIL DESCRIPTION		GRADATION		ROCK DESCRIPTION		TERMS AND DEFINITIONS																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																						
<p>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 (AASHTO 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:</p> <p>VERY STIFF, GRAY-SILTY CLAY, MOST WITH INTERBEDDED FINE SAND LAYERS, HEAVY PLASTIC, A-7-6</p>		<p>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)</p> <p>GAP-GRADED - INDICATES A MIXTURE OF UNIFORM PARTICLES OF TWO OR MORE SIZES.</p> <p>ANGULARITY OF GRAINS</p> <p>THE ANGULARITY OR ROUNDNESS OF SOIL GRAINS IS DESIGNATED BY THE TERMS: ANGULAR, SUBANGULAR, SUBROUNDED, OR ROUNDED.</p>		<p>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:</p> <p>WEATHERED ROCK (WR)</p> <p>NON-COASTAL PLAIN MATERIAL THAT WOULD YIELD SPT N VALUES &gt; 100 BLOWS PER FOOT IF TESTED.</p> <p>CRYSTALLINE ROCK (CR)</p> <p>FINE TO COARSE GRAIN IGNEOUS AND METAMORPHIC ROCK THAT WOULD YIELD SPT REFUSAL IF TESTED. ROCK TYPE INCLUDES GRANITE, GNEISS, GABBRO, SCHIST, ETC.</p> <p>NON-CRYSTALLINE ROCK (NCR)</p> <p>FINE TO COARSE GRAIN METAMORPHIC AND NON-COASTAL PLAIN SEDIMENTARY ROCK THAT WOULD YIELD SPT REFUSAL IF TESTED. ROCK TYPE INCLUDES PHYLLITE, SLATE, SANDSTONE, ETC.</p> <p>COASTAL PLAIN SEDIMENTARY ROCK (CP)</p> <p>COASTAL PLAIN SEDIMENTS CEMENTED INTO ROCK, BUT MAY NOT YIELD SPT REFUSAL. ROCK TYPE INCLUDES LIMESTONE, SANDSTONE, CEMENTED SHELL BEDS, ETC.</p>		<p>ALLUVIUM (ALLUV.) - SOILS THAT HAVE BEEN TRANSPORTED BY WATER.</p> <p>AQUIFER - A WATER BEARING FORMATION OR STRATA.</p> <p>ARENACEOUS - APPLIED TO ROCKS THAT HAVE BEEN DERIVED FROM SAND OR THAT CONTAIN SAND.</p> <p>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.</p> <p>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.</p> <p>CALCAREOUS (CALC.) - SOILS THAT CONTAIN APPRECIABLE AMOUNTS OF CALCIUM CARBONATE.</p> <p>COLLUVIUM - ROCK FRAGMENTS MIXED WITH SOIL DEPOSITED BY GRAVITY ON SLOPE OR AT BOTTOM OF SLOPE.</p> <p>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.</p> <p>DIKE - A TABULAR BODY OF IGNEOUS ROCK THAT CUTS ACROSS THE STRUCTURE OF ADJACENT ROCKS OR CUTS MASSIVE ROCK.</p> <p>DIP - THE ANGLE AT WHICH A STRATUM OR ANY PLANAR FEATURE IS INCLINED FROM THE HORIZONTAL.</p> <p>DIP DIRECTION (DIP AZIMUTH) - THE DIRECTION OR BEARING OF THE HORIZONTAL TRACE OF THE LINE OF DIP, MEASURED CLOCKWISE FROM NORTH.</p> <p>FAULT - A FRACTURE OR FRACTURE ZONE ALONG WHICH THERE HAS BEEN DISPLACEMENT OF THE SLICES RELATIVE TO ONE ANOTHER PARALLEL TO THE FRACTURE.</p> <p>FISSILE - A PROPERTY OF SPLITTING ALONG CLOSELY SPACED PARALLEL PLANES.</p> <p>FLOAT - ROCK FRAGMENTS ON SURFACE NEAR THEIR ORIGINAL POSITION AND DISLODGED FROM PARENT MATERIAL.</p> <p>FLOOD PLAIN (FP) - LAND BORDERING A STREAM, BUILT OF SEDIMENTS DEPOSITED BY THE STREAM.</p> <p>FORMATION (FM) - A MAPPABLE GEOLOGIC UNIT THAT CAN BE RECOGNIZED AND TRACED IN THE FIELD.</p> <p>JOINT - FRACTURE IN ROCK ALONG WHICH NO APPRECIABLE MOVEMENT HAS OCCURRED.</p> <p>LEDGE - A SHELF-LIKE RIDGE OR PROJECTION OF ROCK WHOSE THICKNESS IS SMALL COMPARED TO ITS LATERAL EXTENT.</p> <p>LENS - A BODY OF SOIL OR ROCK THAT THINS OUT IN ONE OR MORE DIRECTIONS.</p> <p>MOTTLED (MOT.) - IRREGULARLY MARKED WITH SPOTS OF DIFFERENT COLORS. MOTTLING IN SOILS USUALLY INDICATES POOR AERATION AND LACK OF GOOD DRAINAGE.</p> <p>PERCHED WATER - WATER MAINTAINED ABOVE THE NORMAL GROUND WATER LEVEL BY THE PRESENCE OF AN INTERVENING IMPERVIOUS STRATUM.</p> <p>RESIDUAL (RES.) SOIL - SOIL FORMED IN PLACE BY THE WEATHERING OF ROCK.</p> <p>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.</p> <p>SAPROLITE (SAP) - RESIDUAL SOIL THAT RETAINS THE RELIC STRUCTURE OR FABRIC OF THE PARENT ROCK.</p> <p>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.</p> <p>SLICKENSIDE - POLISHED AND STRIATED SURFACE THAT RESULTS FROM FRICTION ALONG A FAULT OR SLIP PLANE.</p> <p>STANDARD PENETRATION TEST (PENETRATION RESISTANCE) (SPT) - NUMBER OF BLOWS IN 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.</p> <p>STRATA CORE RECOVERY (SREC) - TOTAL LENGTH OF STRATA MATERIAL RECOVERED DIVIDED BY TOTAL LENGTH OF STRATUM AND EXPRESSED AS A PERCENTAGE.</p> <p>STRATA ROCK QUALITY DESIGNATION (SROD) - 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.</p> <p>TOPSOIL (TS) - SURFACE SOILS USUALLY CONTAINING ORGANIC MATTER.</p>																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																						
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A-1-a	A-1-b	A-2-4	A-2-5	A-2-6	A-2-7	A-4	A-5	A-6	A-7	A-1, A-2	A-3	A-4, A-5	A-6, A-7	SYMBOL	[Pattern]	[Pattern]	[Pattern]	[Pattern]	[Pattern]	[Pattern]	[Pattern]	[Pattern]	[Pattern]	[Pattern]	[Pattern]	[Pattern]	[Pattern]	[Pattern]	% PASSING	100	100	100	100	100	100	100	100	100	100	100	100	100	100	LIQUID LIMIT	6	6	10	10	10	10	10	10	10	10	10	10	10	10	PLASTIC INDEX	0	0	0	0	0	0	0	0	0	0	0	0	0	0	GROUP INDEX	0	0	0	0	0	0	0	0	0	0	0	0	0	0	USUAL TYPES OF MAJOR MATERIALS	STONE FRAGS, GRAVEL, AND SAND		FINE SAND		SILTY OR CLAYEY GRAVEL AND SAND		SILTY SOILS		CLAYEY SOILS		GRANULAR SOILS		SILT-CLAY SOILS, MUCK, PEAT		GEN. 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<p><b>PLASTICITY</b></p> <table border="1"> <thead> <tr> <th>NONPLASTIC</th> <th>LOW PLASTICITY</th> <th>MED. PLASTICITY</th> <th>HIGH PLASTICITY</th> </tr> </thead> <tbody> <tr> <td>PLASTICITY INDEX (PI)</td> <td>0-5</td> <td>6-15</td> <td>16-25</td> </tr> <tr> <td>DRY STRENGTH</td> <td>VERY LOW</td> <td>SLIGHT</td> <td>MEDIUM</td> </tr> <tr> <td></td> <td></td> <td></td> <td>HIGH</td> </tr> </tbody> </table>		NONPLASTIC	LOW PLASTICITY	MED. PLASTICITY	HIGH PLASTICITY	PLASTICITY INDEX (PI)	0-5	6-15	16-25	DRY STRENGTH	VERY LOW	SLIGHT	MEDIUM				HIGH	<p><b>COLOR</b></p> <p>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.</p>		<p><b>FRATURE SPACING</b></p> <p>FOR SEDIMENTARY ROCKS, INDURATION IS THE HARDENING OF THE MATERIAL BY CEMENTING, HEAT, PRESSURE, ETC.</p>		<p><b>BENCH MARK:</b></p> <p>ELEVATION: _____ FT.</p>																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																						
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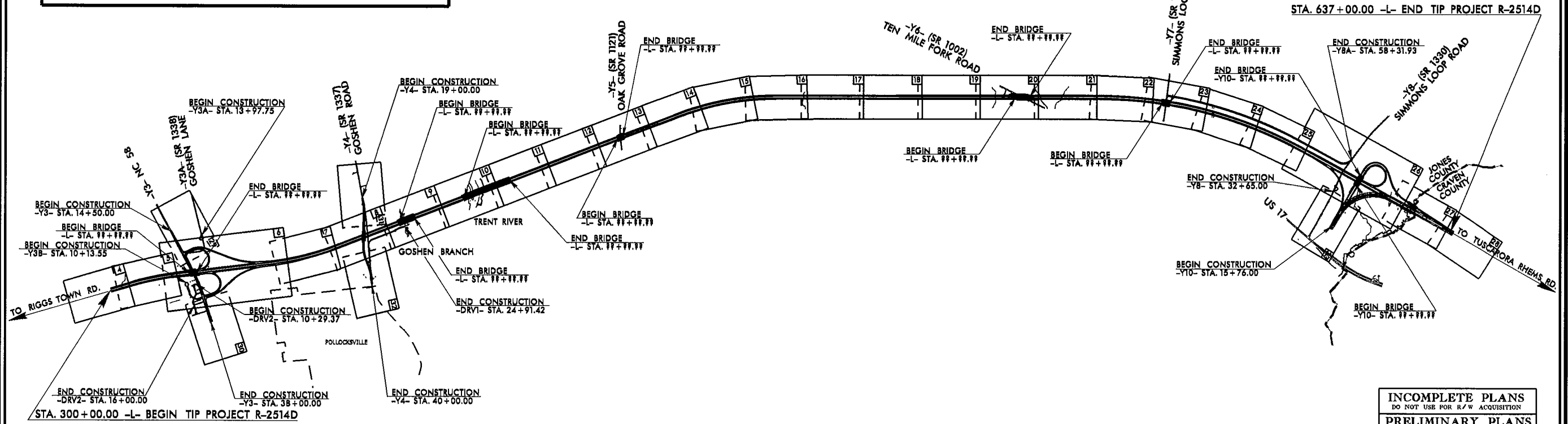
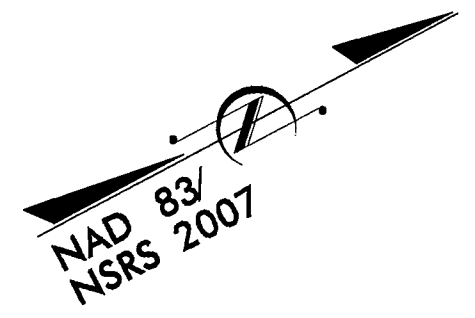
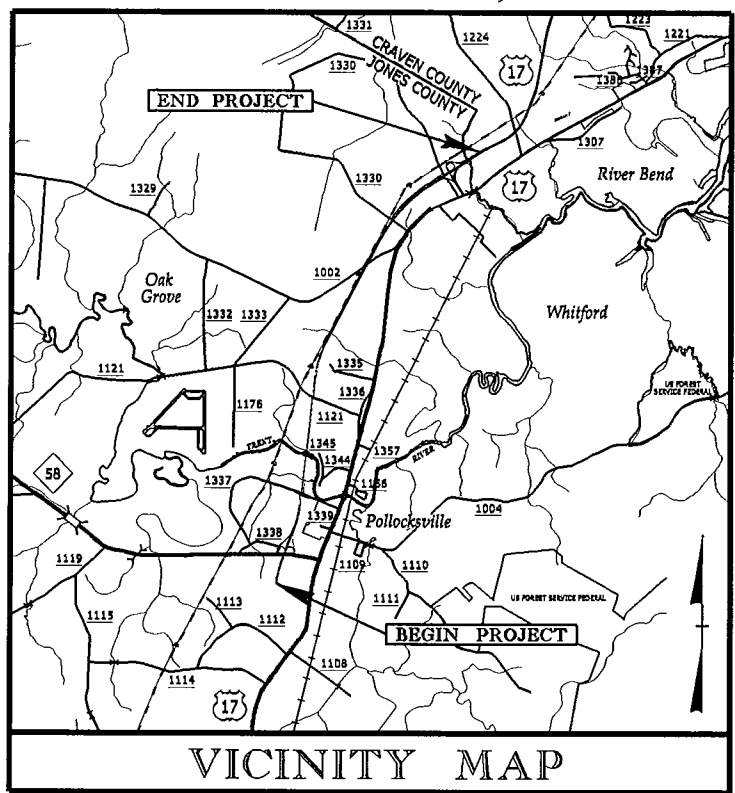
STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	R-2514D	2A	122
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	
34442.1.1		PE	

STATE OF NORTH CAROLINA  
DIVISION OF HIGHWAYS

**JONES & CRAVEN  
COUNTY**

LOCATION: US 17 FROM SOUTH OF NC 58  
TO THE NEW BERN BYPASS

TYPE OF WORK: GRADING, DRAINAGE, PAVING,  
SIGNALS, AND STRUCTURES

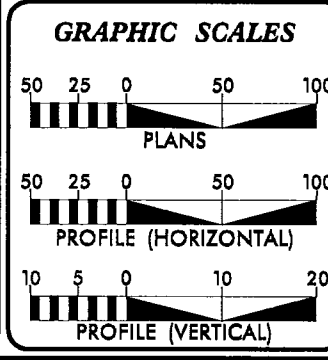


THIS PROJECT IS NOT WITHIN ANY MUNICIPAL BOUNDARIES.  
THIS IS A CONTROLLED-ACCESS PROJECT WITH ACCESS BEING LIMITED TO INTERCHANGES.  
CLEARING ON THIS PROJECT SHALL BE PERFORMED TO LIMITS ESTABLISHED BY METHOD

INCOMPLETE PLANS  
DO NOT USE FOR R/W ACQUISITION  
PRELIMINARY PLANS  
DO NOT USE FOR CONSTRUCTION

TIP PROJECT: R-2514D

CONTRACT:



**DESIGN DATA**

ADT 2015 =	10,600
ADT 2035 =	15,700
DHV =	7 %
D =	65 %
T =	7 % *
V =	70 MPH
* TTST =	4 % DUAL = 3 %
FUNC CLASS =	FREWAY
STATEWIDE TIER	

**PROJECT LENGTH**

LENGTH OF ROADWAY, TIP PROJECT R-2514D	= 0.00 mi.
LENGTH OF STRUCTURES, TIP PROJECT R-2514D	= 0.00 mi.
TOTAL LENGTH OF TIP PROJECT R-2514D	= 6.383 mi.

Prepared in the Office of:  
**DIVISION OF HIGHWAYS**  
1000 Birch Ridge Dr., Raleigh, NC, 27610

2006 STANDARD SPECIFICATIONS

RIGHT OF WAY DATE: MARCH 15, 2013

LETTING DATE: MARCH 17, 2015

**HYDRAULICS ENGINEER**

\_\_\_\_\_  
P.E.

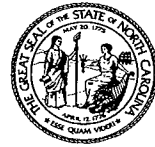
**ROADWAY DESIGN ENGINEER**

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P.E.

**DIVISION OF HIGHWAYS  
STATE OF NORTH CAROLINA**

STATE HIGHWAY DESIGN ENGINEER

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STATE OF NORTH CAROLINA  
DEPARTMENT OF TRANSPORTATION

BEVERLY EAVES PERDUE  
GOVERNOR

EUGENE A. CONTI, JR.  
SECRETARY

June 27, 2012

STATE PROJECT: 34442.1.1 (R-2514D)  
F.A. PROJECT: N/A  
COUNTY: Jones/ Craven  
DESCRIPTION: US 17 from South of NC 58 to the New Bern Bypass  
SUBJECT: Geotechnical Inventory

**Project Description**

This project begins approximately 2000 feet west of NC 58 and extends generally northeast about 6.3 miles to just east of the Trent River. This project terminates at the existing US 17 Bypass (R-2301A). This geotechnical investigation was confined to the areas of proposed construction.

Fieldwork was conducted from November 2011 through June 2012. Standard Penetration Test borings were advanced with a CME 550 drill machine with an automatic hammer. Cone Penetration Test borings were completed with a 10 ton digital subtraction cone mounted on an ATV. Hand auger borings were also completed. Representative soil samples were collected for visual classification in the field and for laboratory analysis by the Materials and Tests Unit.

The following alignments were investigated. Subsurface profiles and selected cross sections of these alignments are included in this report.

<u>Line</u>	<u>Station(±)</u>
-L-	300+00 to 637+00
-Y3-	14+50 to 38+00
-Y3A-	13+72 to 15+10
-Y3B-	10+00 to 16+75
-Y3RPA-	10+00 to 30+99
-Y3LPA-	10+00 to 22+44
-Y3RPD-	10+00 to 27+56
-Y3LPD-	10+00 to 20+92
-Y4-	19+00 to 40+00
-Y5-	11+13 to 12+93

<u>Line</u>	<u>Station(±)</u>
-Y6-	13+90 to 18+28
-Y8-	31+21 to 32+65
-Y8A-	10+00 to 58+31
-Y10-	15+75 to 30+00
-Y10RPA-	10+00 to 38+02
-Y10LPA-	10+00 to 24+13
-Y10RPC-	10+00 to 25+41
-Y10RPD-	10+00 to 24+45
-DRV1-	10+00 to 24+91
-DRV2-	10+00 to 16+00

**Areas of Special Geotechnical Interest**

- 1) The following sections contain cohesive soils which have the potential to cause embankment/subgrade stability and/or long term settlement problems.

<u>Line</u>	<u>Station(±)</u>
-L-	300+00 to 341+00
-L-	364+26 to 369+88
-L-	399+21 to 637+00
-Y3-	14+50 to 38+00
-Y3A-	13+72 to 15+10
-Y3B-	10+00 to 16+75
-Y3RPA-	10+00 to 30+99
-Y3LPA-	10+00 to 22+44
-Y3RPD-	10+00 to 27+56
-Y3LPD-	10+00 to 20+92
-Y4-	31+78 to 40+00
-Y5-	11+13 to 12+93
-Y6-	13+90 to 18+28
-Y8-	31+21 to 32+65
-Y8A-	10+00 to 58+31
-Y10-	15+75 to 30+00
-Y10RPA-	10+00 to 38+02
-Y10LPA-	10+00 to 24+13
-Y10RPC-	10+00 to 25+41
-DRV1-	10+00 to 13+47
-DRV2-	10+00 to 16+00

MAILING ADDRESS:  
NC DEPARTMENT OF TRANSPORTATION  
GEOTECHNICAL ENGINEERING UNIT  
1589 MAIL SERVICE CENTER  
RALEIGH NC 27699-1589

TELEPHONE: 919-250-4088  
FAX: 919-250-4237  
WEBSITE: WWW.NCDOT.ORG/DOH

LOCATION:  
CENTURY CENTER COMPLEX  
ENTRANCE B-2  
1020 BIRCH RIDGE DRIVE  
RALEIGH NC

- 2) The following sections contain organic soils which have the potential to cause embankment/subgrade stability and/or long term settlement problems.

<u>Line</u>	<u>Station(±)</u>
-L-	329+28 to 331+73
-L-	428+52 to 430+27
-L-	432+25 to 432+75
-L-	438+28 to 439+62
-L-	444+25 to 445+25
-L-	472+72 to 474+75
-L-	503+25 to 506+27
-L-	530+75 to 531+80
-L-	561+75 to 563+13
-Y3RPA-	16+55 to 18+63
-Y3RPD-	16+52 to 19+55
-Y8A-	10+82 to 13+75
-Y10-	28+25 to 30+00
-Y10RPA-	29+25 to 30+50
-Y10RPA-	36+38 to 37+60
-Y10LPA-	16+75 to 17+80
-Y10LPA-	22+70 to 23+60

- 3) The entire project was found to exhibit seasonal high ground water.  
 4) The following water wells were encountered within the proposed right of way limits.

<u>Line</u>	<u>Station(±)</u>	<u>Offset</u>
-Y10LPA-	20+72	3' LT
-Y10RPC-	15+33	3' RT

**Physiography and Geology**

This project corridor is located within the Coastal Plain Physiographic Province. Topography along the project is nearly flat to gently sloping. Natural ground elevations range from 15± to 54± feet above sea level.

Surficial soils in this area are generally classified as undivided coastal plain sediments and are underlain by the Belgrade and River Bend formations.

**Ground Water**

Ground water data was collected during times of below normal to normal precipitation. Ground water elevations measured during the months of November and December of 2011 were abnormally low due to the region suffering from drought conditions. Selected borings were re-drilled to collect additional ground water data. Ground water elevations ranged from 0± to 35± feet above sea level.

**Soils**

Soils within this project area have been divided into four categories; roadway embankment, undivided coastal plain, alluvial, and formational.

Soils identified as roadway embankment are comprised of 1± to 19± feet of loose to dense sand (A-2-4, A-3), 1± to 3± feet of medium stiff sandy silt (A-4) and 1± to 2± feet of very stiff sandy clay (A-6). These soils were encountered along the existing US 17 Bypass and associated intersecting roads along the project.

Soils classified as undivided coastal plain are comprised of 1± to 22± feet of very loose to dense sand, clayey sand, sand with trace to little organic material, and muck (A-2-5, A-2-6, A-2-4, A-3, A-1-b), 1± to 7± feet of very soft to very stiff sandy and clayey silt (A-4) and 1± to 19± feet of very soft to very stiff sandy and silty clay (A-6, A-7-6). Organic samples collected within the granular soils contained 2% to 20% organic matter. Moisture samples collected within the cohesive soils ranged from 15% to 110%.

Soils classified as alluvial are comprised of 1± to 11± feet of very soft to very stiff clay with little to moderate organic material and muck. Organic samples collected within this unit contained 3% to 20% organic matter with shear strengths ranging from 167 psf to 2547 psf.

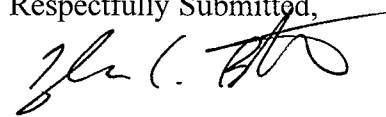
Soils identified as formational belong to the Belgrade and River Bend formations. The Belgrade Formation consists of loose to dense sand and soft silt with shell fragments. The River Bend Formation consists of loose to very dense sand and limestone.

**Undisturbed Samples**

Undisturbed thin wall Shelby tube samples were collected at the following locations and submitted for testing.

<b><u>Sample No.</u></b>	<b><u>Station</u></b>	<b><u>Depth</u></b>	<b><u>Test</u></b>
ST-1	-L- 300+00 CL	10.0'-12.0'	Consolidation
ST-2	-L- 325+00 CL	10.0'-12.0'	Consolidation/ Triaxial
ST-3	-Y3LPA- 15+00 CL	5.0'-7.0'	Consolidation/ Triaxial
ST-4	-L- 525+00 40' RT	5.0'-7.0'	Consolidation/ Triaxial
ST-5	-L- 525+00 40' RT	10.0'-12.0'	Consolidation/ Triaxial
ST-6	-Y3LPD- 12+50 CL	6.0'-8.0'	Consolidation/ Triaxial
ST-7	-L- 440+00 CL	5.0'-7.0'	Consolidation/ Triaxial
ST-8	-L- 440+00 CL	15.0'-17.0'	Consolidation/ Triaxial
ST-9	-L- 429+40 CL	5.0'-7.0'	Consolidation/ Triaxial
ST-10	-Y10- 30+00 CL	5.0'-6.2'	Consolidation/ Triaxial
ST-11	-Y10- 24+00 20' LT	5.0'-7.0'	Consolidation/ Triaxial
ST-12	-Y10RPA- 37+00 CL	5.0'-7.0'	Consolidation/ Triaxial
ST-13	-Y10RPA- 37+00 CL	15.0'-17.0'	Consolidation/ Triaxial
ST-14	-L- 550+00 CL	5.0'-6.0'	Consolidation
ST-15	-L- 565+00 CL	5.0'-6.0'	Consolidation/ Triaxial
ST-16	-Y3RPD- 18+00 50' LT	0.0'-2.0'	Consolidation/ Triaxial

Respectfully Submitted,



Tyler C. Bottoms, L.G.  
Project Engineering Geologist

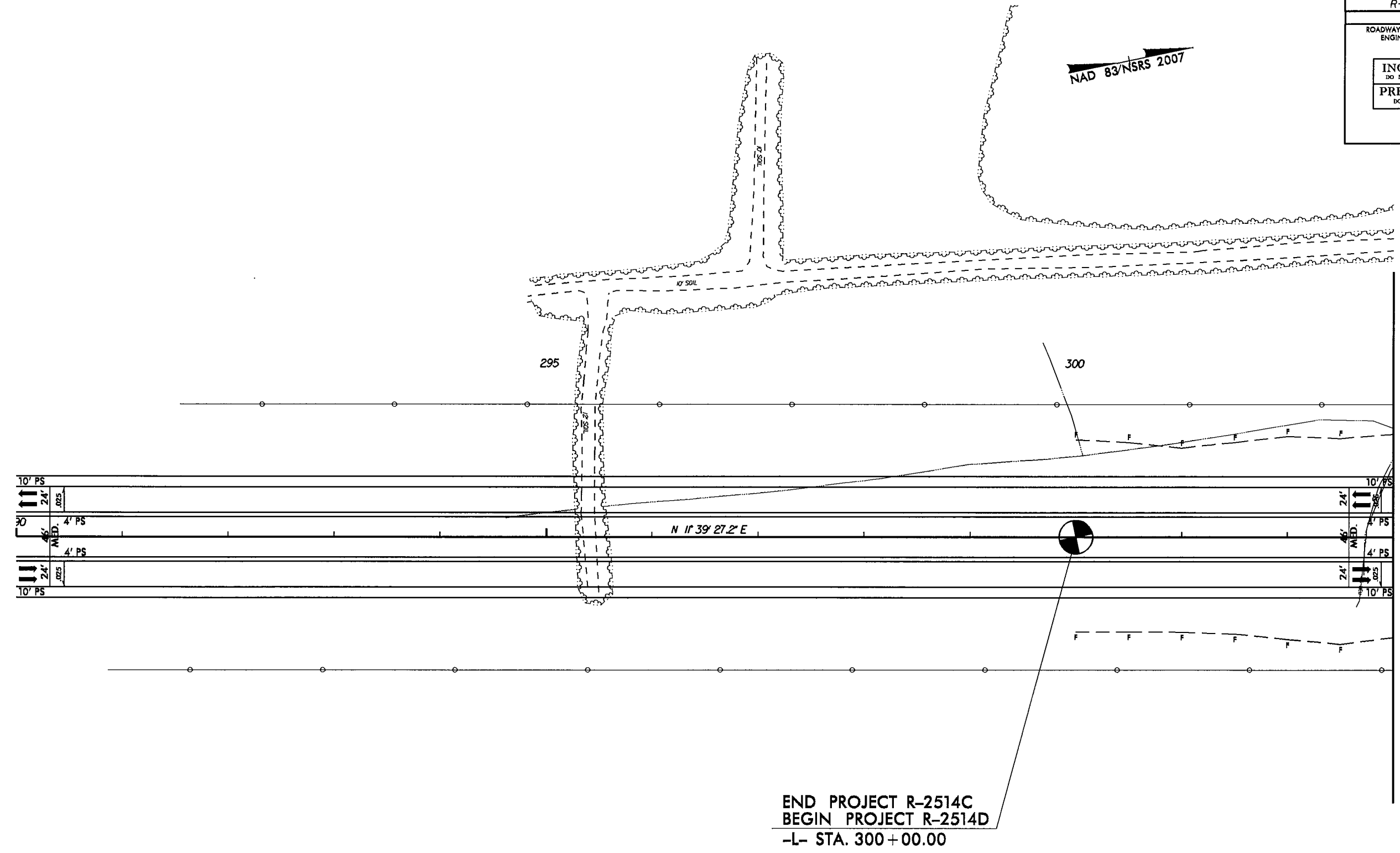
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Author: AT R2514D

REVISIONS

PROJECT REFERENCE NO. <i>R-2514D</i>		SHEET NO. 4	
RW SHEET NO.			
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER	
INCOMPLETE PLANS DO NOT USE FOR ACQUISITION		PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	

NAD 83/NSRS 2007



MATCHLINE -L- STA. 303 + 00.00 SEE SHEET 5

END PROJECT R-2514C  
BEGIN PROJECT R-2514D  
-L- STA. 300 + 00.00

8/17/99

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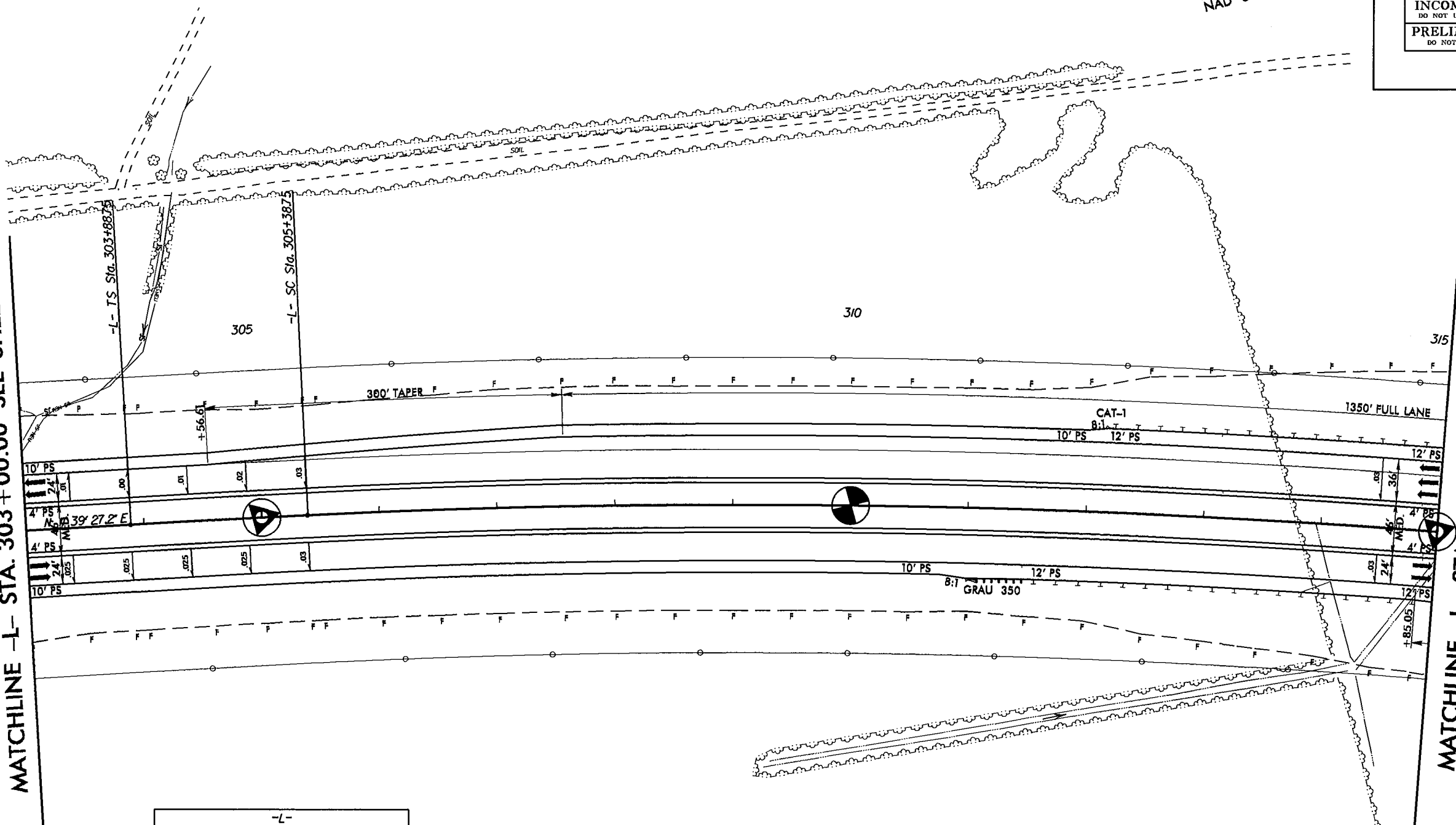
REVISIONS

PROJECT REFERENCE NO.		SHEET NO.	
R-2514D		5	
RW SHEET NO.			
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER	
INCOMPLETE PLANS DO NOT USE FOR A/W ACQUISITION			
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION			

NAD 83/NSRS 2007

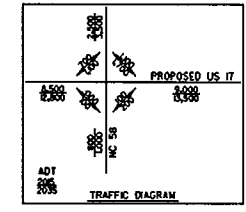
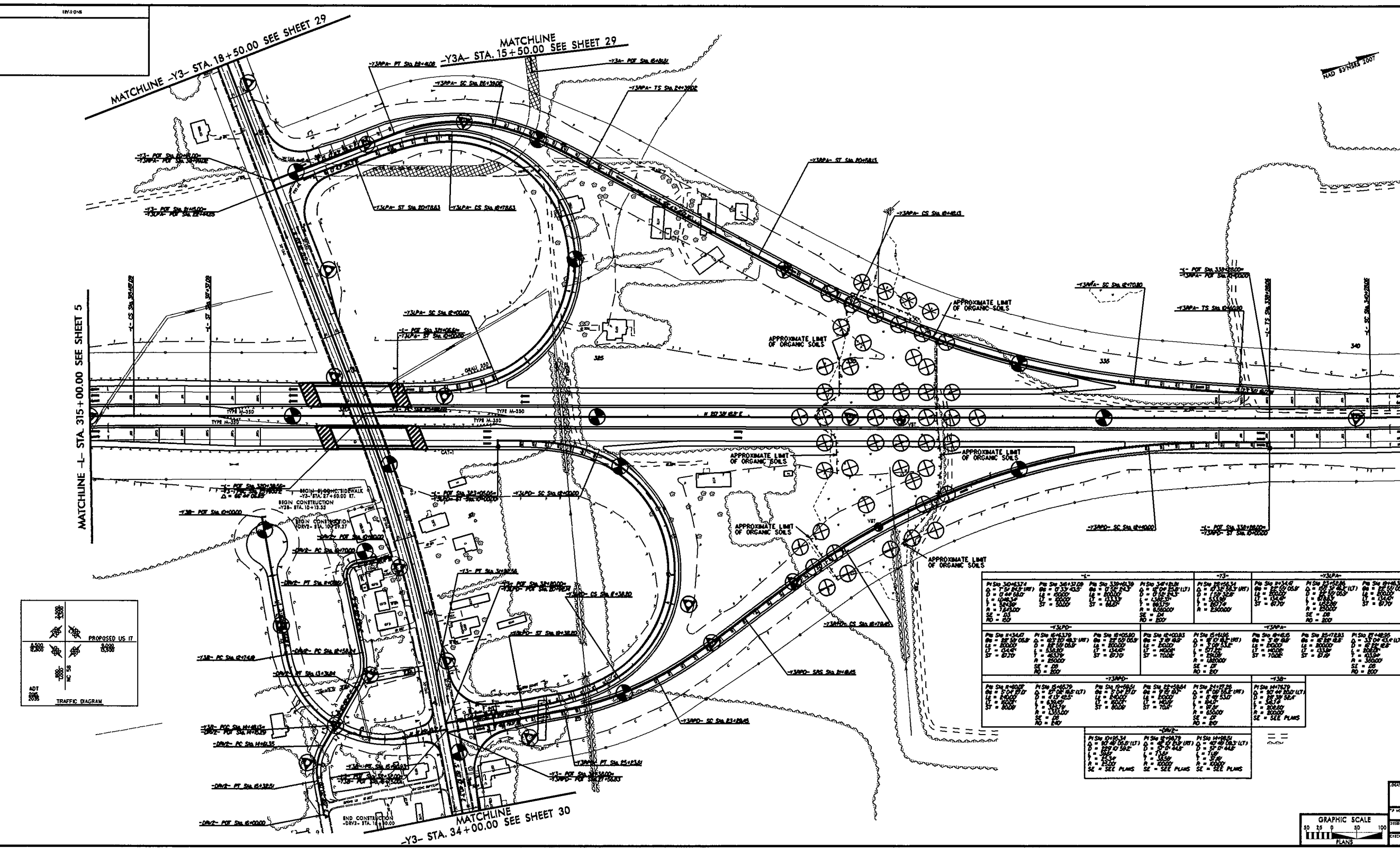
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MATCHLINE -L- STA. 315 + 00.00 SEE SHEET 6

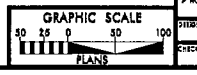


-L-	
PIs Sta 304+88.75	PI Sta 310+63.74
$\theta_s = 0^\circ 33' 43.5''$	$\Delta = 7^\circ 51' 24.5''$ (RT)
$L_s = 150.00'$	$D = 0^\circ 44' 58.0''$
$LT = 100.00'$	$L = 1048.34'$
$ST = 50.00'$	$T = 524.99'$
	$R = 7,645.00'$
	$SE = .03$
	$RO = 150'$





P1 Sta 30+43.74 D = 115' (R) L= 20000 I = 10000 A = 15000 SE = 01 NO = 00	P1 Sta 30+43.74 D = 115' (R) L= 20000 I = 10000 A = 15000 SE = 01 NO = 00	P1 Sta 30+43.74 D = 115' (R) L= 20000 I = 10000 A = 15000 SE = 01 NO = 00	P1 Sta 30+43.74 D = 115' (R) L= 20000 I = 10000 A = 15000 SE = 01 NO = 00	P1 Sta 30+43.74 D = 115' (R) L= 20000 I = 10000 A = 15000 SE = 01 NO = 00	P1 Sta 30+43.74 D = 115' (R) L= 20000 I = 10000 A = 15000 SE = 01 NO = 00	P1 Sta 30+43.74 D = 115' (R) L= 20000 I = 10000 A = 15000 SE = 01 NO = 00
P1 Sta 30+43.74 D = 115' (R) L= 20000 I = 10000 A = 15000 SE = 01 NO = 00	P1 Sta 30+43.74 D = 115' (R) L= 20000 I = 10000 A = 15000 SE = 01 NO = 00	P1 Sta 30+43.74 D = 115' (R) L= 20000 I = 10000 A = 15000 SE = 01 NO = 00	P1 Sta 30+43.74 D = 115' (R) L= 20000 I = 10000 A = 15000 SE = 01 NO = 00	P1 Sta 30+43.74 D = 115' (R) L= 20000 I = 10000 A = 15000 SE = 01 NO = 00	P1 Sta 30+43.74 D = 115' (R) L= 20000 I = 10000 A = 15000 SE = 01 NO = 00	P1 Sta 30+43.74 D = 115' (R) L= 20000 I = 10000 A = 15000 SE = 01 NO = 00
P1 Sta 30+43.74 D = 115' (R) L= 20000 I = 10000 A = 15000 SE = 01 NO = 00	P1 Sta 30+43.74 D = 115' (R) L= 20000 I = 10000 A = 15000 SE = 01 NO = 00	P1 Sta 30+43.74 D = 115' (R) L= 20000 I = 10000 A = 15000 SE = 01 NO = 00	P1 Sta 30+43.74 D = 115' (R) L= 20000 I = 10000 A = 15000 SE = 01 NO = 00	P1 Sta 30+43.74 D = 115' (R) L= 20000 I = 10000 A = 15000 SE = 01 NO = 00	P1 Sta 30+43.74 D = 115' (R) L= 20000 I = 10000 A = 15000 SE = 01 NO = 00	P1 Sta 30+43.74 D = 115' (R) L= 20000 I = 10000 A = 15000 SE = 01 NO = 00



DATE	
7 NO.	
COUNTY	
PREPARED BY	
CHECKED BY	

8/17/99

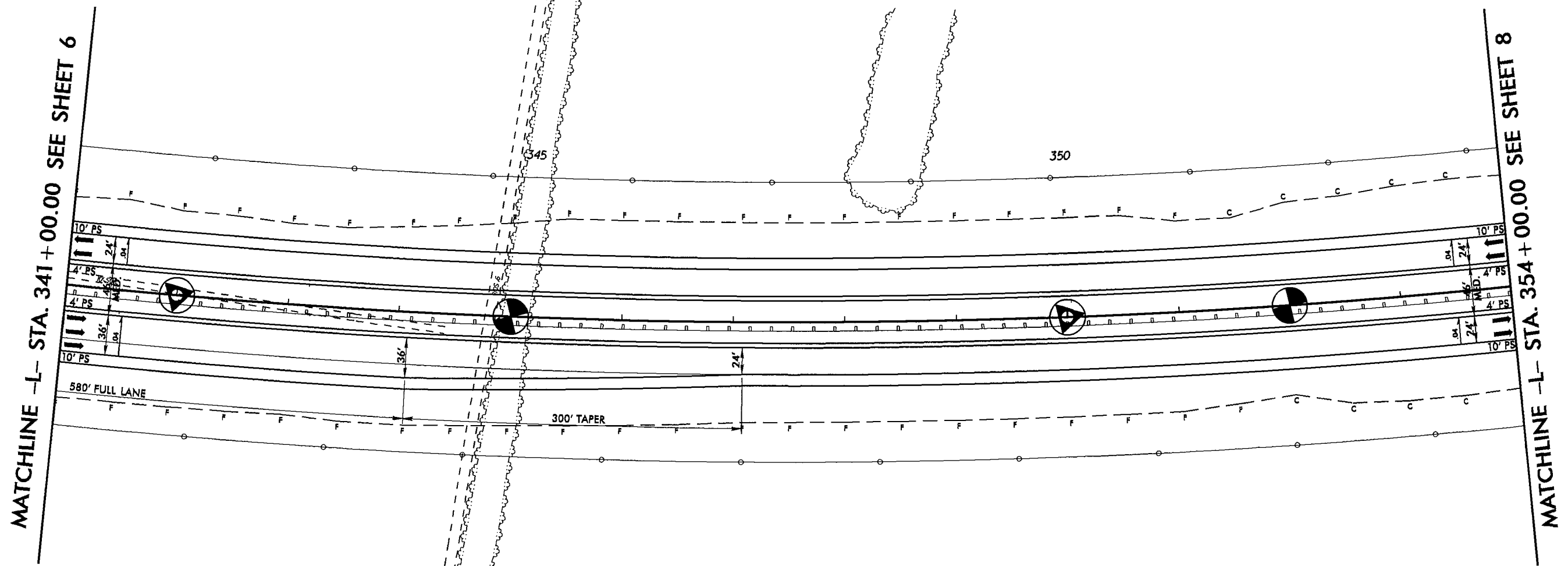
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REVISIONS

PROJECT REFERENCE NO. R-2514D	SHEET NO. 7
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION	
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	

NAD 83/NSRS 2007

-L-  
 P/1 Sta 347+21.81  
 $\Delta = 12^\circ 04' 25.6" (LT)$   
 $D = 0^\circ 52' 24.3"$   
 $L = 1,382.37'$   
 $T = 693.75'$   
 $R = 6,560.00'$   
 $SE = .04$   
 $RO = 200'$



SEE SHEET 36 FOR -L- PROFILE

8/17/99

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Author: A11102461

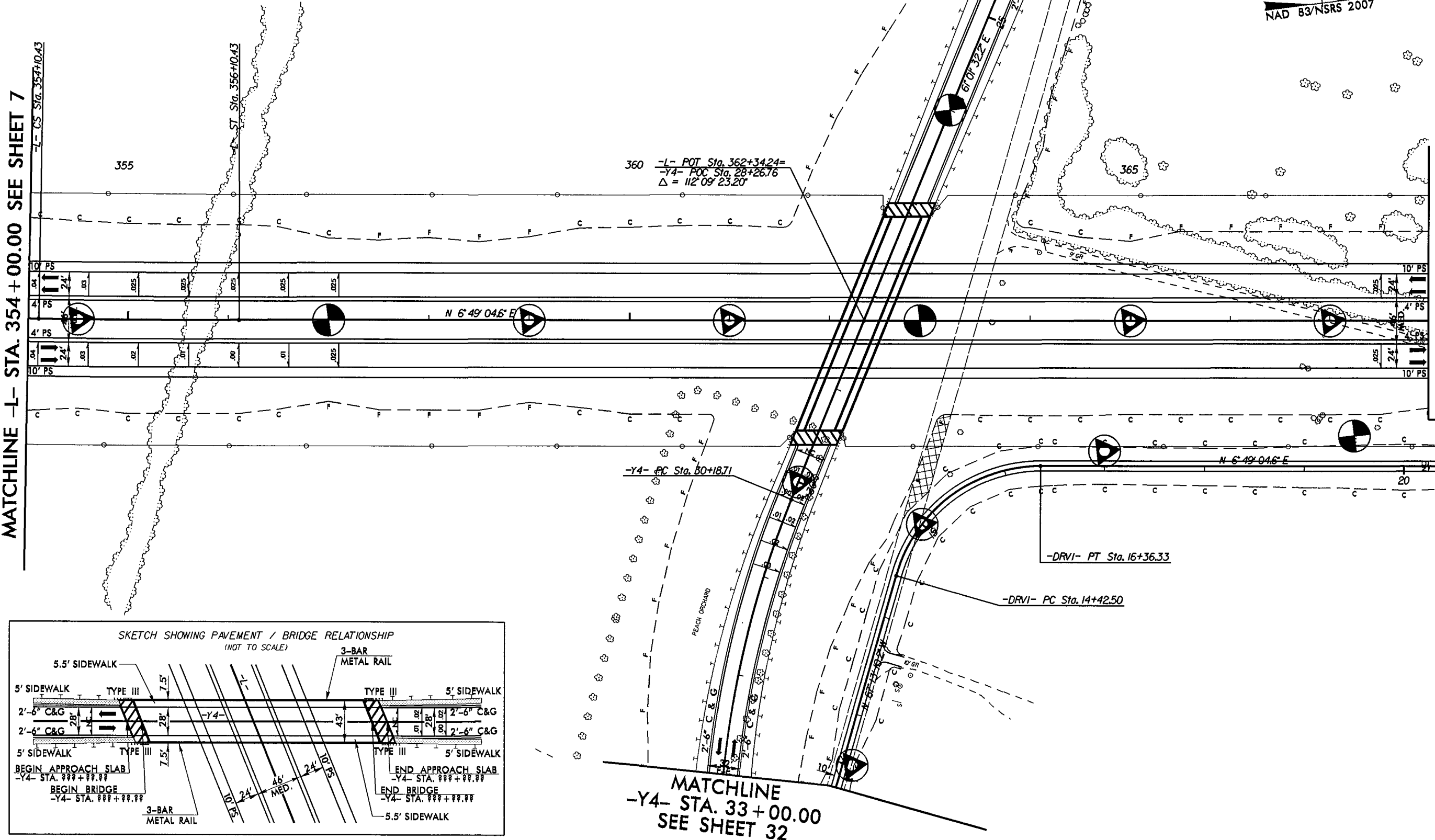
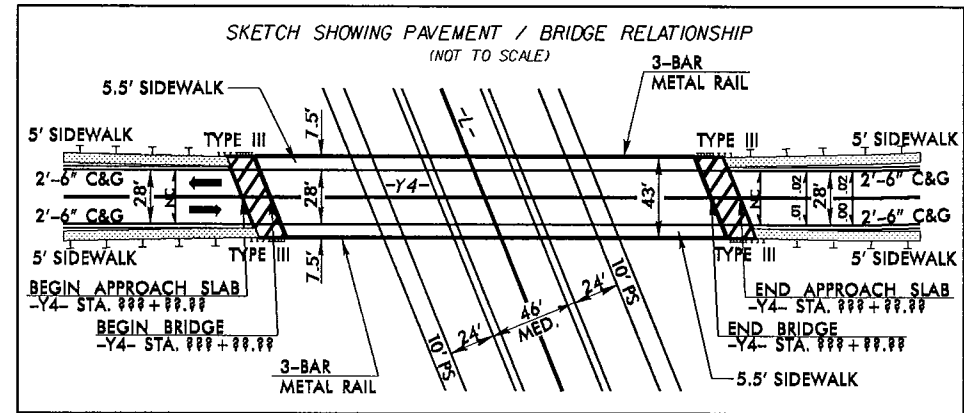
PROJECT REFERENCE NO. R-2514D		SHEET NO. 8	
RW SHEET NO.			
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER	
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION		PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	

-L-		-Y4-	-DRVI-
PI Sta 347+21.81	PIs Sta 354+77.10	PI Sta 32+13.54	PI Sta 15+55.61
$\Delta = 12^{\circ} 04' 25.6" (LT)$	$\Theta_s = 0^{\circ} 52' 24.3"$	$\Delta = 22^{\circ} 22' 41.0" (LT)$	$\Delta = 7^{\circ} 02' 14.8" (RT)$
$D = 0^{\circ} 52' 24.3"$	$L_s = 200.00'$	$D = 5^{\circ} 49' 00.6"$	$D = 38^{\circ} 14' 49.9"$
$L = 1,382.37'$	$LT = 133.33'$	$L = 384.71'$	$L = 193.83'$
$T = 693.75'$	$ST = 66.67'$	$T = 194.84'$	$T = 113.11'$
$R = 6,560.00'$		$R = 985.00'$	$R = 150.00'$
$SE = .04$		$SE = .03$	$SE = NC$
$RO = 200'$		$RO = SEE PLANS$	

NAD 83/NSRS 2007

MATCHLINE -L- STA. 354 + 00.00 SEE SHEET 7

MATCHLINE -L- STA. 368 + 00.00 SEE SHEET 9



REVISIONS

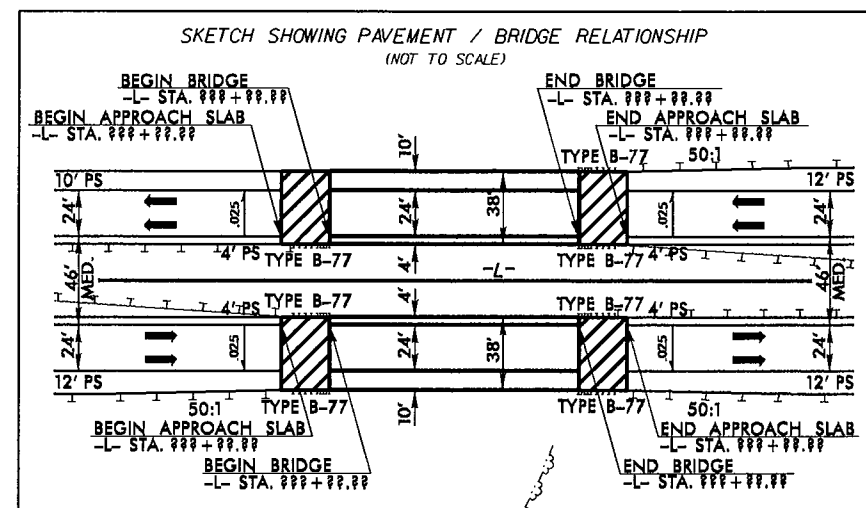
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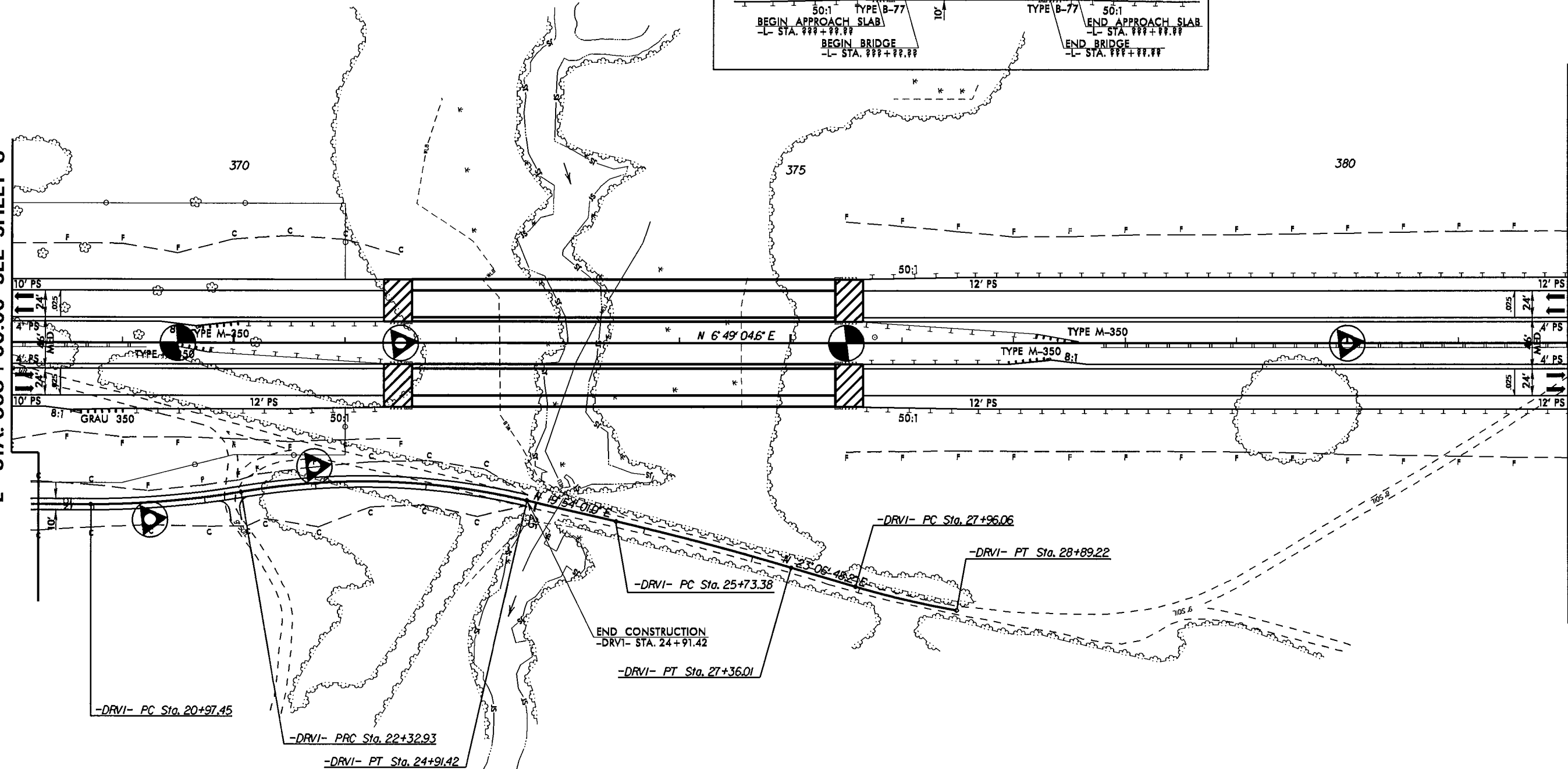
REVISIONS

PROJECT REFERENCE NO. R-2514D	SHEET NO. 9
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION	
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	

NAD 83/NSRS 2007



MATCHLINE -L- STA. 368 + 00.00 SEE SHEET 8



MATCHLINE -L- STA. 382 + 00.00 SEE SHEET 10

-DRVI-			
PI Sta 21+65.35	PI Sta 23+63.90	PI Sta 26+54.72	PI Sta 28+42.69
$\Delta = 9' 42'' 10.6''$ (LT)	$\Delta = 22' 47'' 07.0''$ (RT)	$\Delta = 3' 12'' 47.2''$ (RT)	$\Delta = 6' 16'' 46.6''$ (LT)
D = 7' 09' 43.1'	D = 8' 48' 53.0'	D = 1' 58' 32.6'	D = 6' 44' 26.4'
L = 135.48'	L = 258.49'	L = 162.63'	L = 93.16'
T = 67.90'	T = 130.98'	T = 81.34'	T = 46.63'
R = 800.00'	R = 650.00'	R = 2,900.00'	R = 850.00'
SE = NC	SE = NC		

-DRVI- PC Sta. 20+97.45

-DRVI- PRC Sta. 22+32.93

-DRVI- PT Sta. 24+91.42

-DRVI- PC Sta. 25+73.38

-DRVI- PT Sta. 27+36.01

-DRVI- PC Sta. 27+96.06

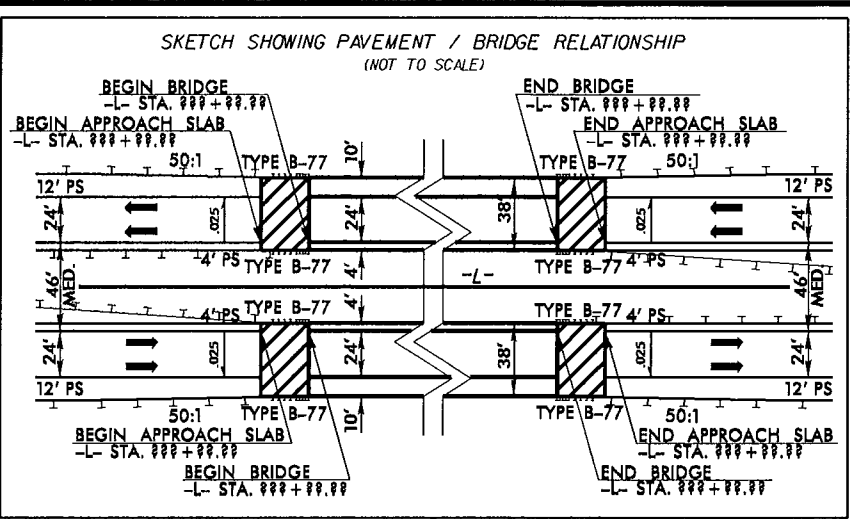
-DRVI- PT Sta. 28+89.22

END CONSTRUCTION  
-DRVI- STA. 24+91.42

REVISIONS

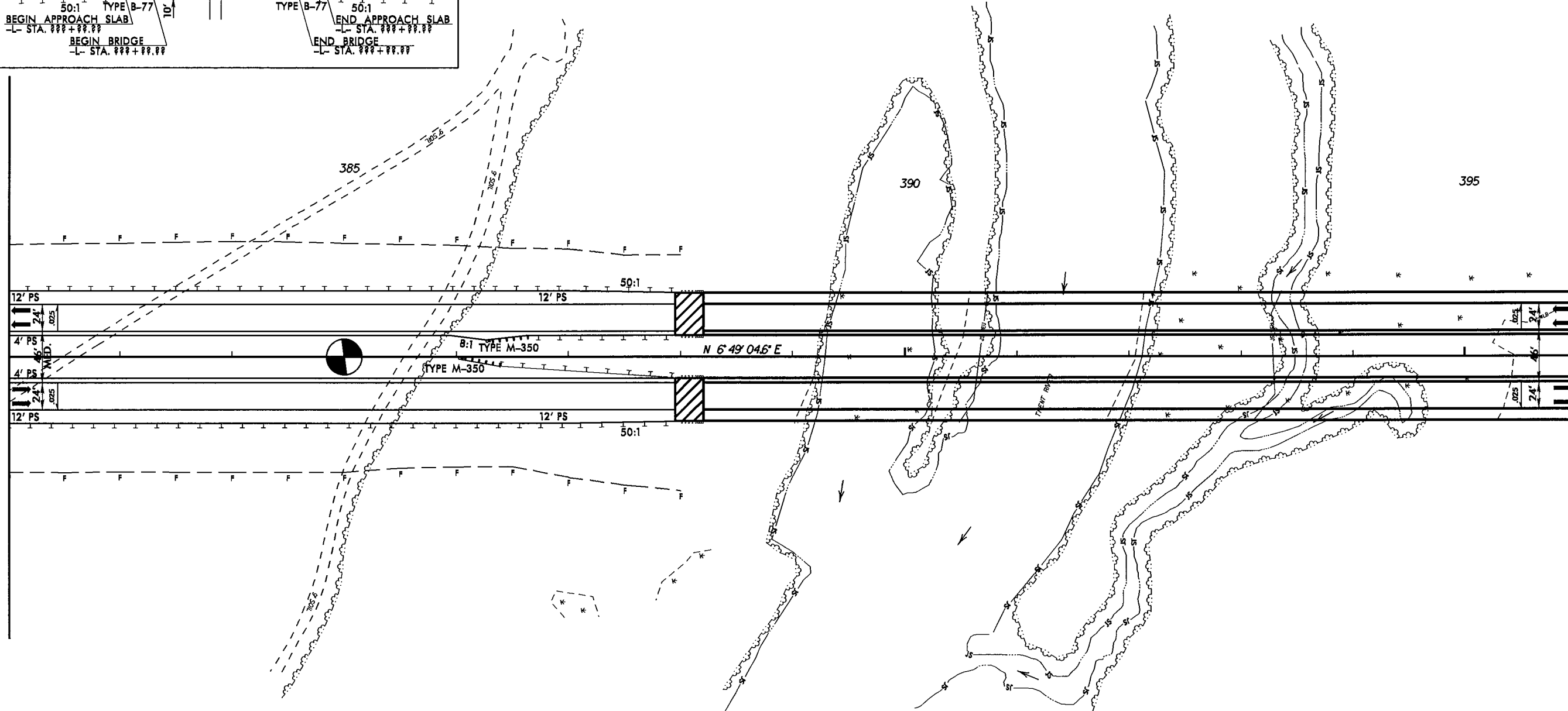
MATCHLINE -L- STA. 382 + 00.00 SEE SHEET 9

MATCHLINE -L- STA. 396 + 00.00 SEE SHEET 11



NAD 83/NSRS 2007

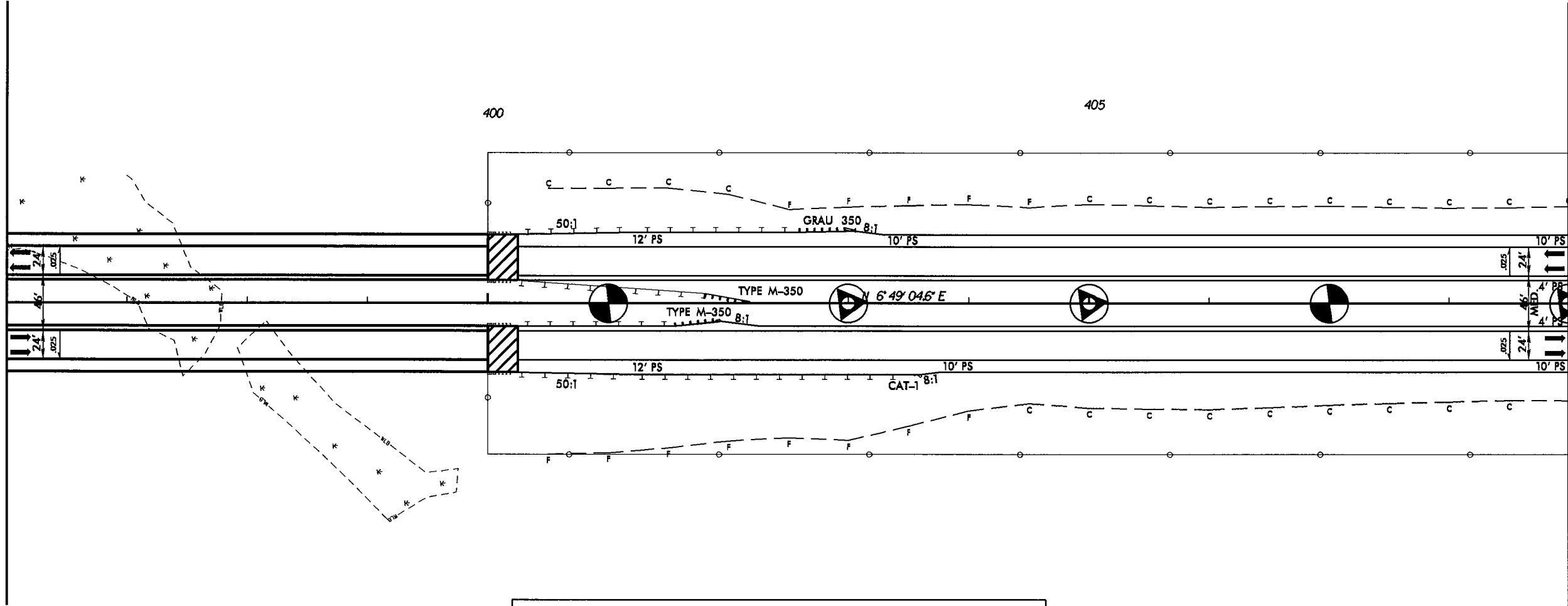
PROJECT REFERENCE NO. R-2514D	SHEET NO. 10
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION	
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	



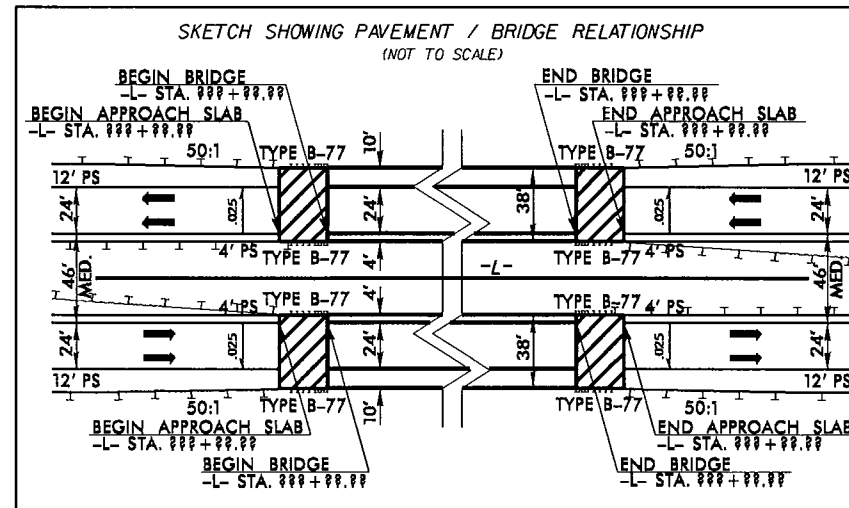
PROJECT REFERENCE NO. R-2514D	SHEET NO. 11
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
<b>INCOMPLETE PLANS</b> DO NOT USE FOR R/W ACQUISITION	
<b>PRELIMINARY PLANS</b> DO NOT USE FOR CONSTRUCTION	

NAD 83/NSRS 2007

MATCHLINE -L- STA. 396 + 00.00 SEE SHEET 10



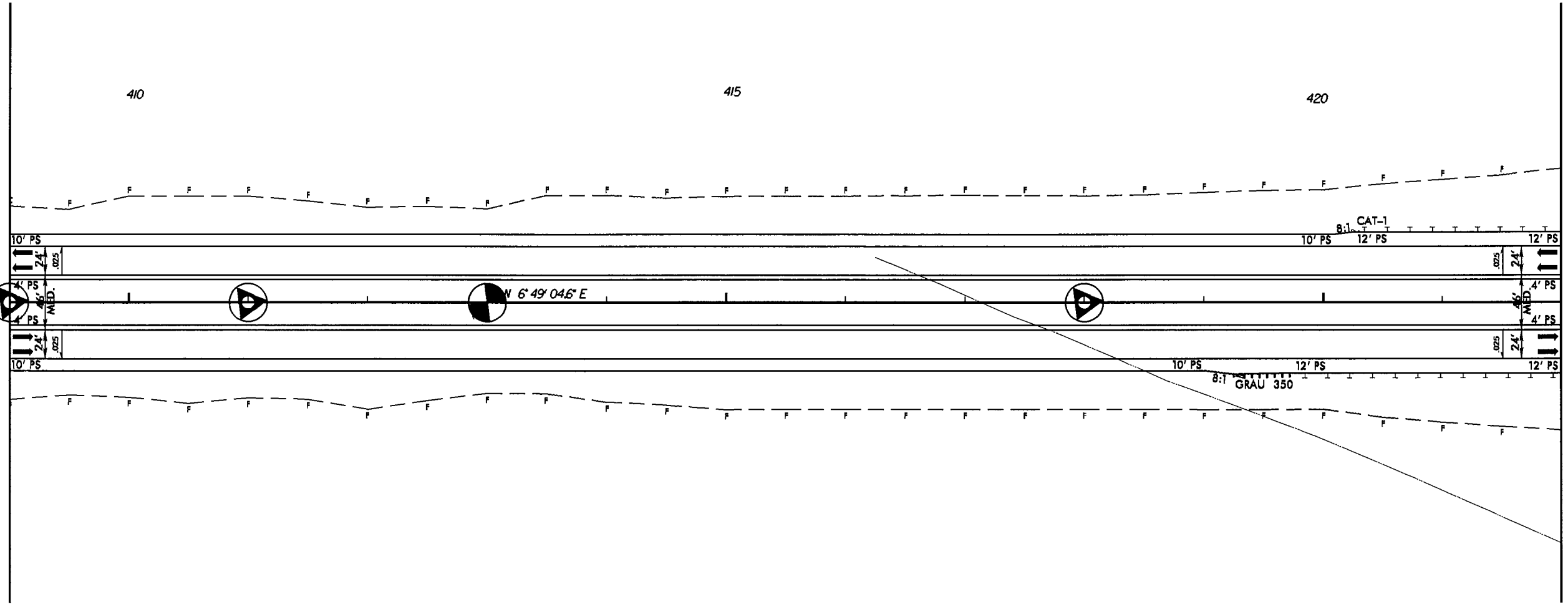
MATCHLINE -L- STA. 409 + 00.00 SEE SHEET 12



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REVISIONS

MATCHLINE -L- STA. 409 + 00.00 SEE SHEET 11



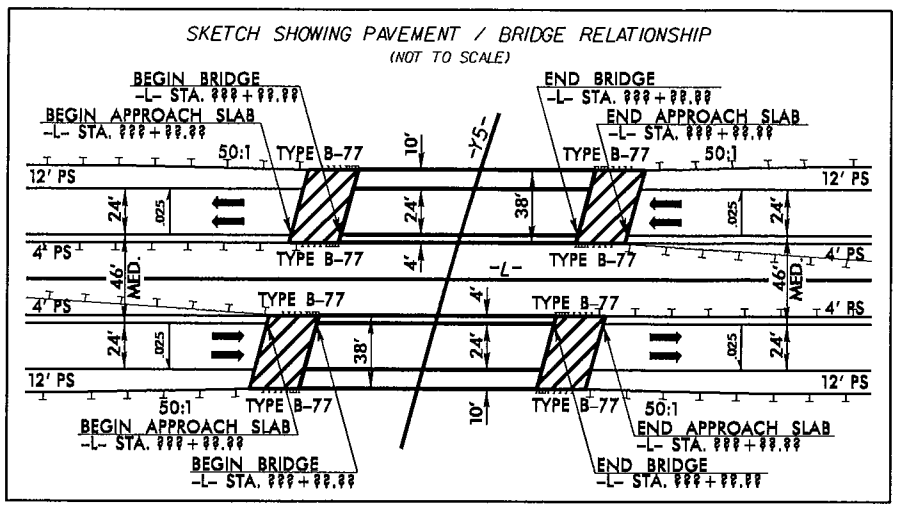
MATCHLINE -L- STA. 422 + 00.00 SEE SHEET 13

NAD 83/NSRS 2007

PROJECT REFERENCE NO. R-2514D		SHEET NO. 12	
RW SHEET NO.			
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER	
INCOMPLETE PLANS DO NOT USE FOR A/W ACQUISITION		PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	

SEE SHEET 38 FOR -L- PROFILE

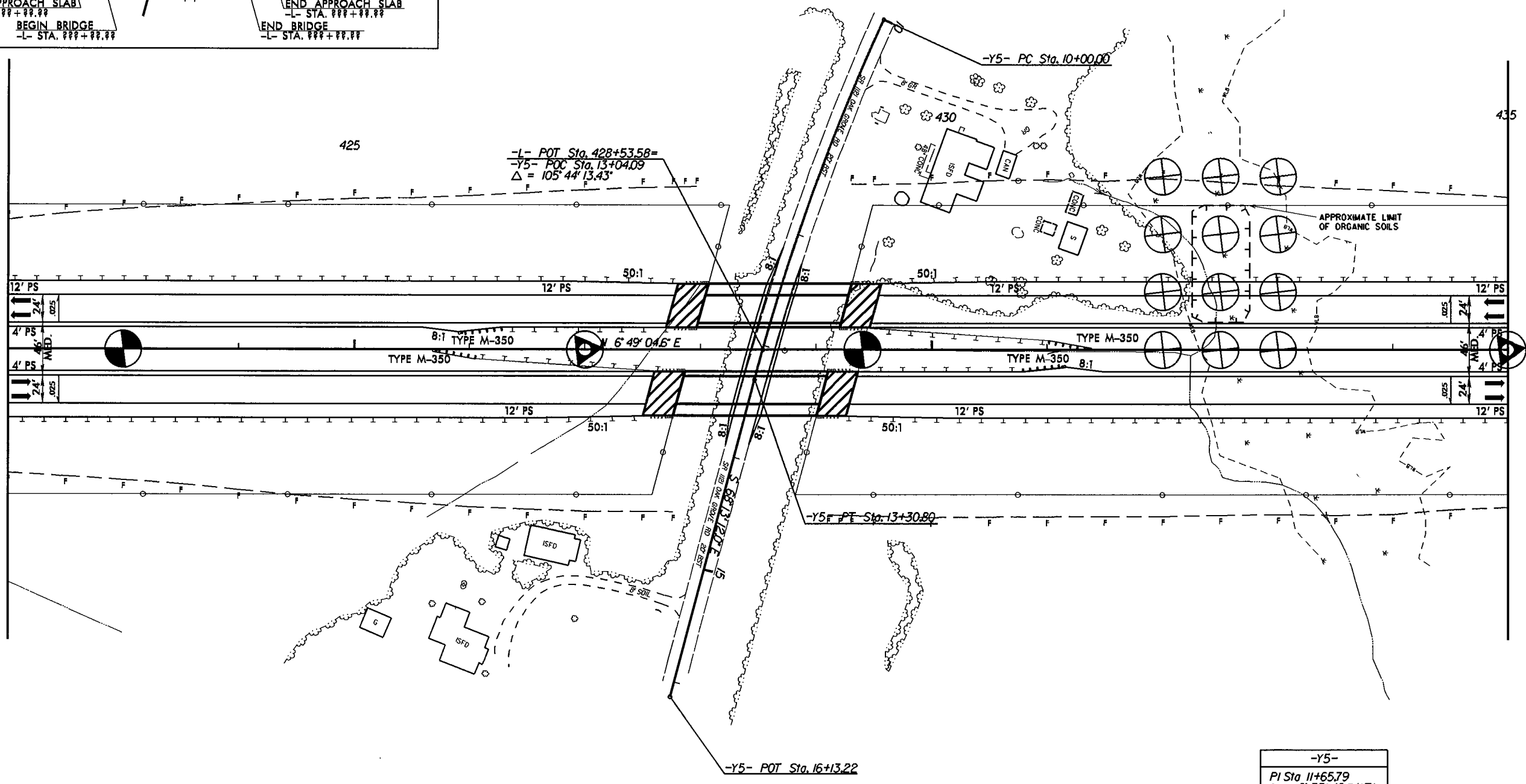
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NAD 83/NSRS 2007

PROJECT REFERENCE NO. R-25140	SHEET NO. 13
RAW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
<b>INCOMPLETE PLANS</b> DO NOT USE FOR S/W ACQUISITION <b>PRELIMINARY PLANS</b> DO NOT USE FOR CONSTRUCTION	

MATCHLINE -L- STA. 422 + 00.00 SEE SHEET 12



MATCHLINE -L- STA. 435 + 00.00 SEE SHEET 14

-Y5-
PI Sta 11+65.79
$\Delta = 9' 35'' 48.1'' (LT)$
$D = 2' 54'' 03.8''$
$L = 330.80'$
$T = 165.79'$
$R = 1975.00'$



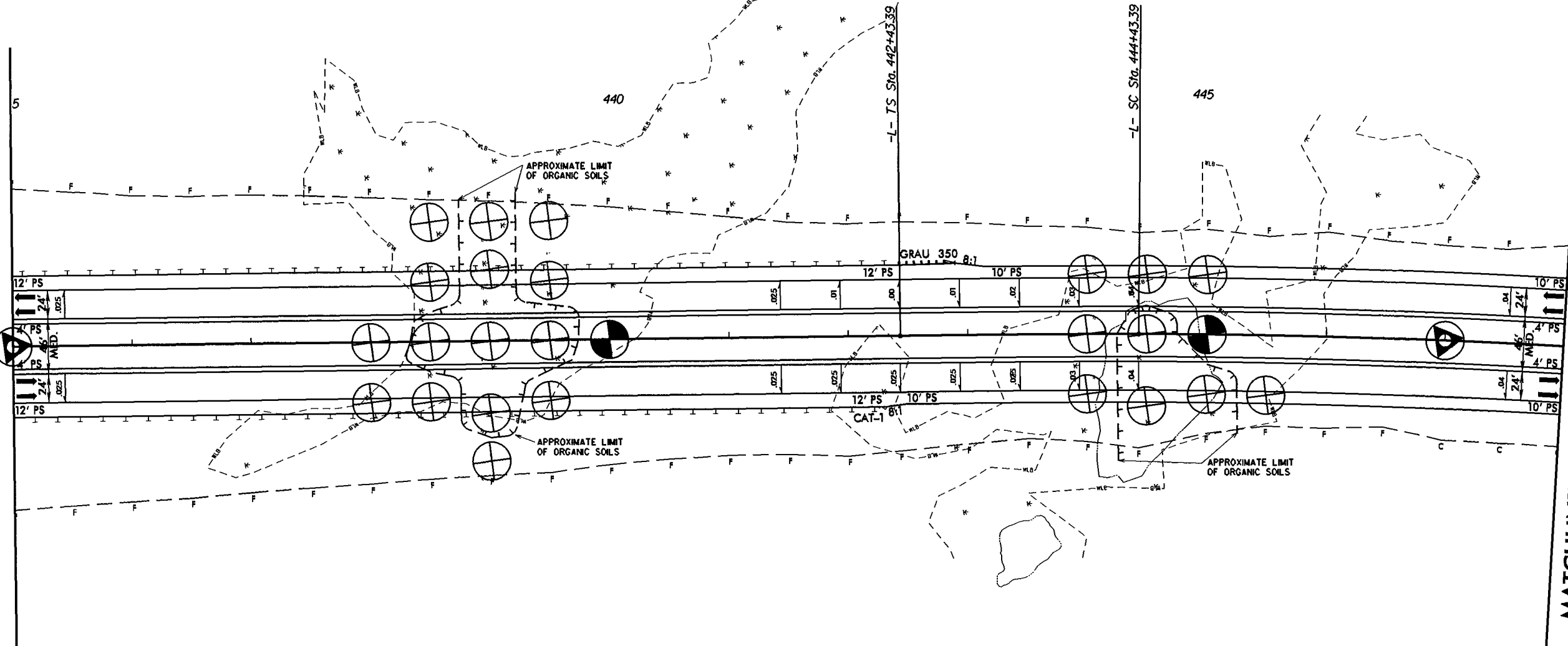
REVISIONS

MATCHLINE -L- STA. 435 + 00.00 SEE SHEET 13

MATCHLINE -L- STA. 448 + 00.00 SEE SHEET 15

-L-	
PIs Sta 443+76.73	PI Sta 455+54.40
$\Theta_s = 0^\circ 52' 24.3''$	$\Delta = 19^\circ 13' 29.4''$ (RT)
$L_s = 200.00'$	$D = 0^\circ 52' 24.3''$
$LT = 133.33'$	$L = 2,201.2'$
$ST = 66.67'$	$T = 1,111.00'$
	$R = 6,560.00'$
	$SE = .04$
	$RO = 200'$

PROJECT REFERENCE NO. R-2514D	SHEET NO. 14
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
<b>INCOMPLETE PLANS</b> DO NOT USE FOR A/W ACQUISITION	
<b>PRELIMINARY PLANS</b> DO NOT USE FOR CONSTRUCTION	





8/17/99

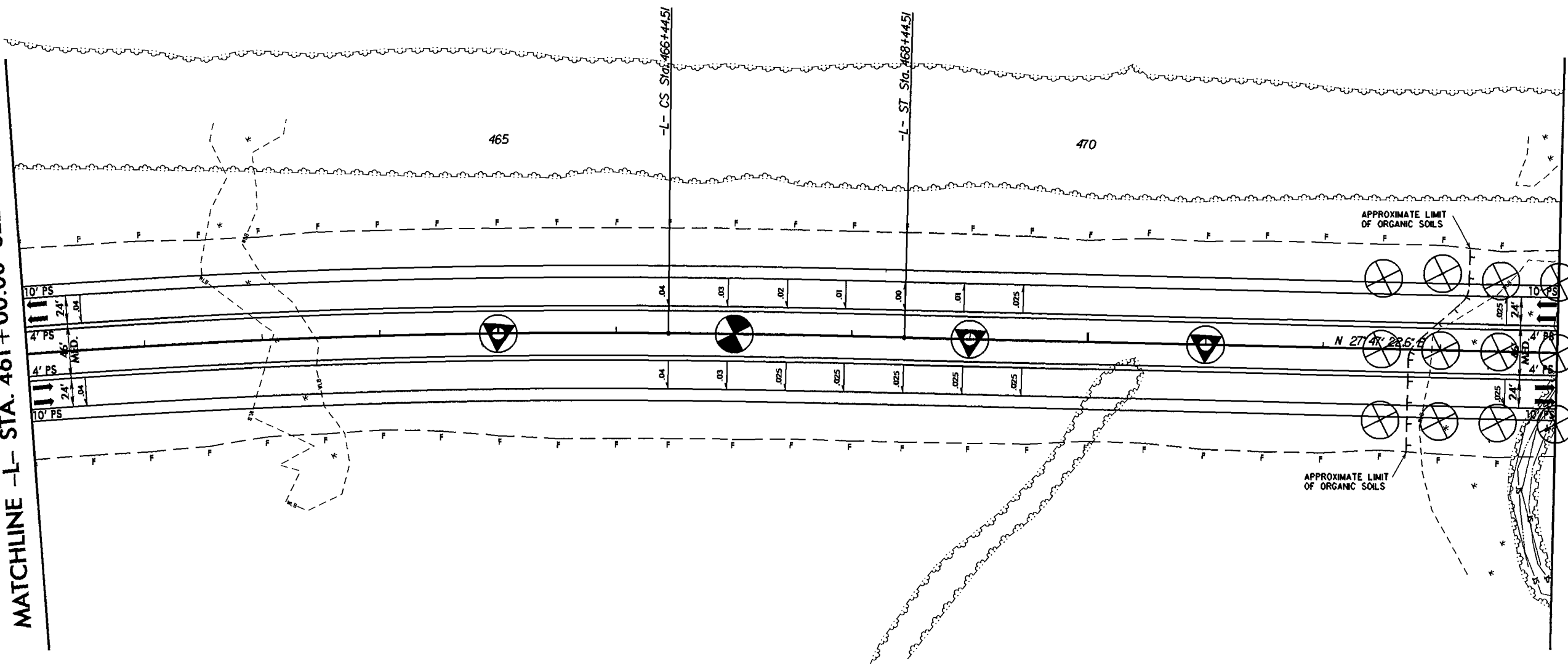
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REVISIONS

PROJECT REFERENCE NO. R-2514D	SHEET NO. 16
RWY SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
INCOMPLETE PLANS DO NOT USE FOR ACQUISITION	
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	



MATCHLINE -L- STA. 461 + 00.00 SEE SHEET 15



MATCHLINE -L- STA. 474 + 00.00 SEE SHEET 17

-L-

PI Sta 455+54.40	Pls Sta 467+11.18
$\Delta = 19^\circ 13' 29.4" (RT)$	$\Theta s = 0^\circ 52' 24.3"$
$D = 0^\circ 52' 24.3"$	$Ls = 200.00'$
$L = 2,201.12'$	$LT = 133.33'$
$T = 1,111.00'$	$ST = 66.67'$
$R = 6,560.00'$	
$SE = 04$	
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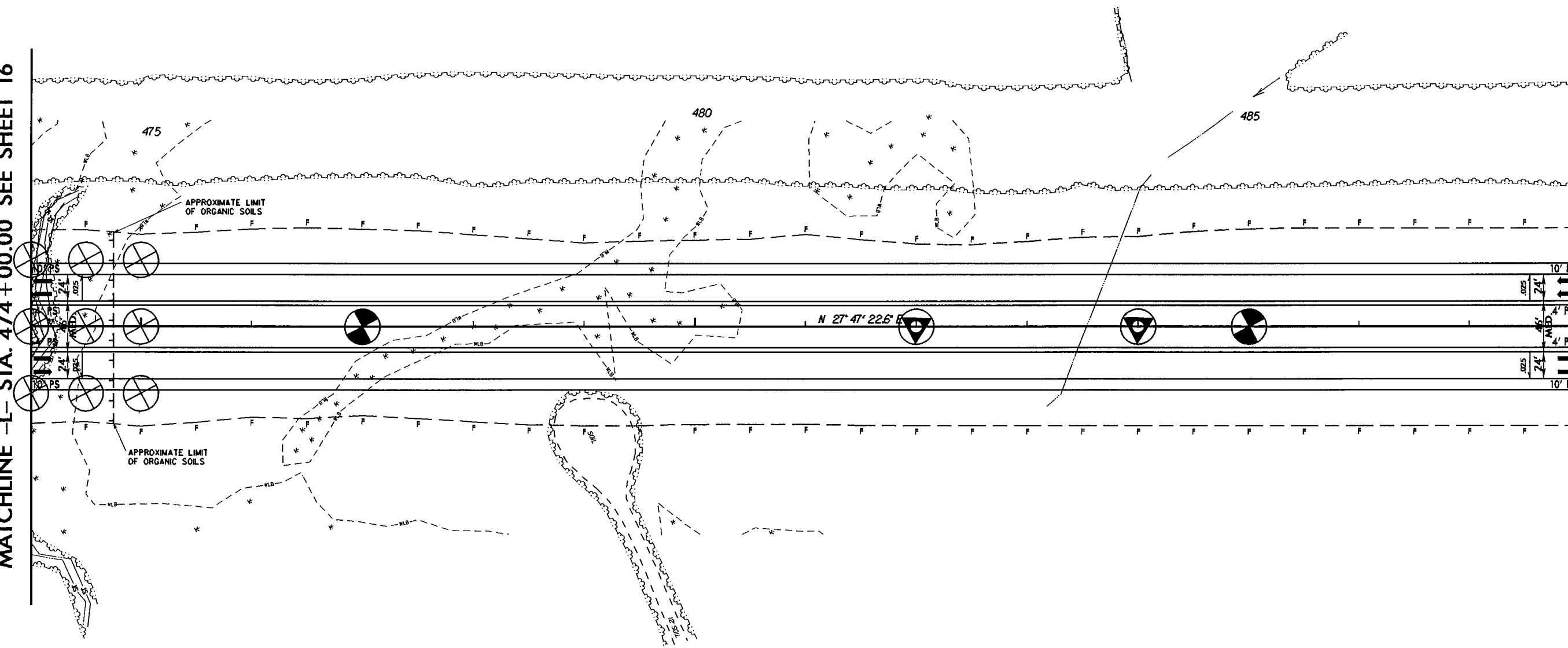
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8/17/09

REVISIONS

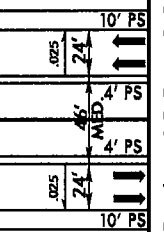
MATCHLINE -L- STA. 474 + 00.00 SEE SHEET 16

MATCHLINE -L- STA. 488 + 00.00 SEE SHEET 18



NAD 83 NSRS 2007

PROJECT REFERENCE NO. R-2514D		SHEET NO. 17	
RWY SHEET NO.			
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER	
INCOMPLETE PLANS DO NOT USE FOR ACQUISITION		PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	

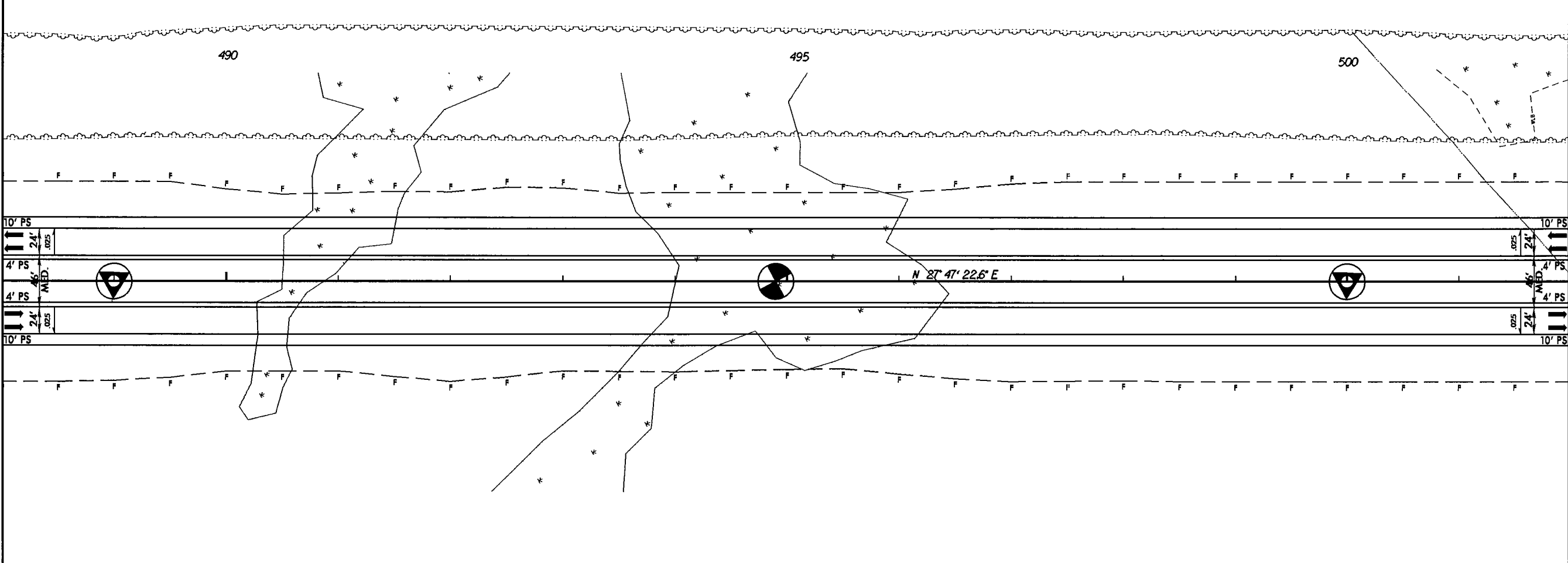


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8/17/09

REVISIONS

MATCHLINE -L- STA. 488 + 00.00 SEE SHEET 17



MATCHLINE -L- STA. 502 + 00.00 SEE SHEET 19

NAD 83/NSRS 2007

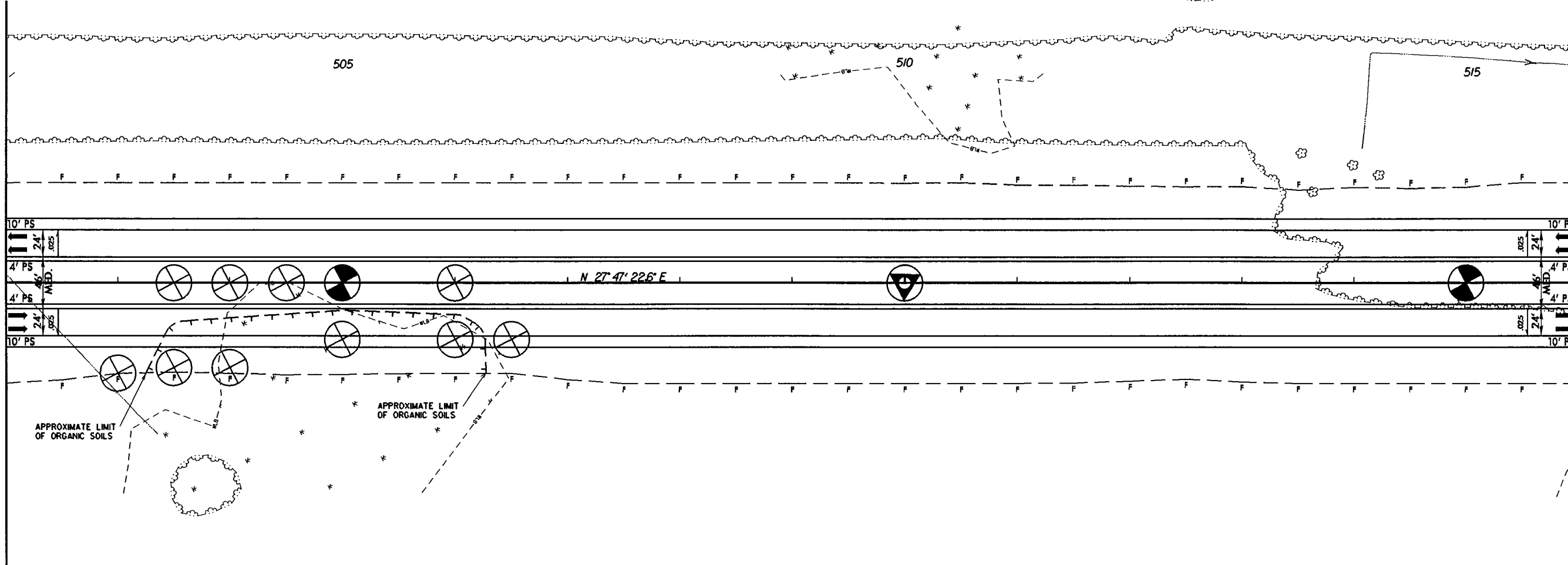
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RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION	
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	

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8/17/99

REVISIONS

MATCHLINE -L- STA. 502 + 00.00 SEE SHEET 18



MATCHLINE -L- STA. 516 + 00.00 SEE SHEET 20

PROJECT REFERENCE NO. R-2514D	SHEET NO. 19
RWY SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION	
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	

NAD 83/MSRS 2007

8/17/99

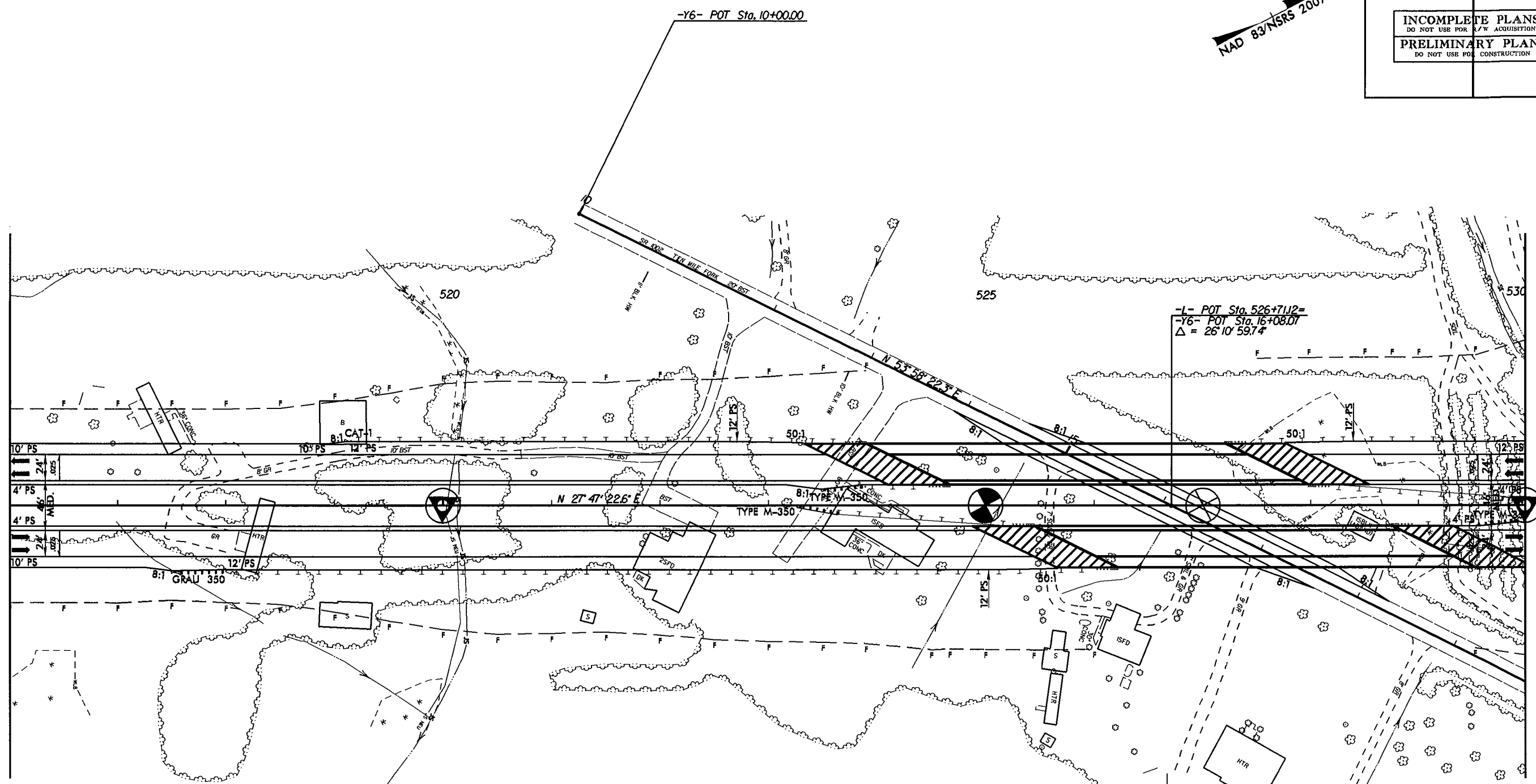
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Author: AT (162546)

PROJECT REFERENCE NO. R-2514D	SHEET NO. 20
RWY SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
<b>INCOMPLETE PLANS</b> DO NOT USE FOR ACQUISITION <b>PRELIMINARY PLANS</b> DO NOT USE FOR CONSTRUCTION	

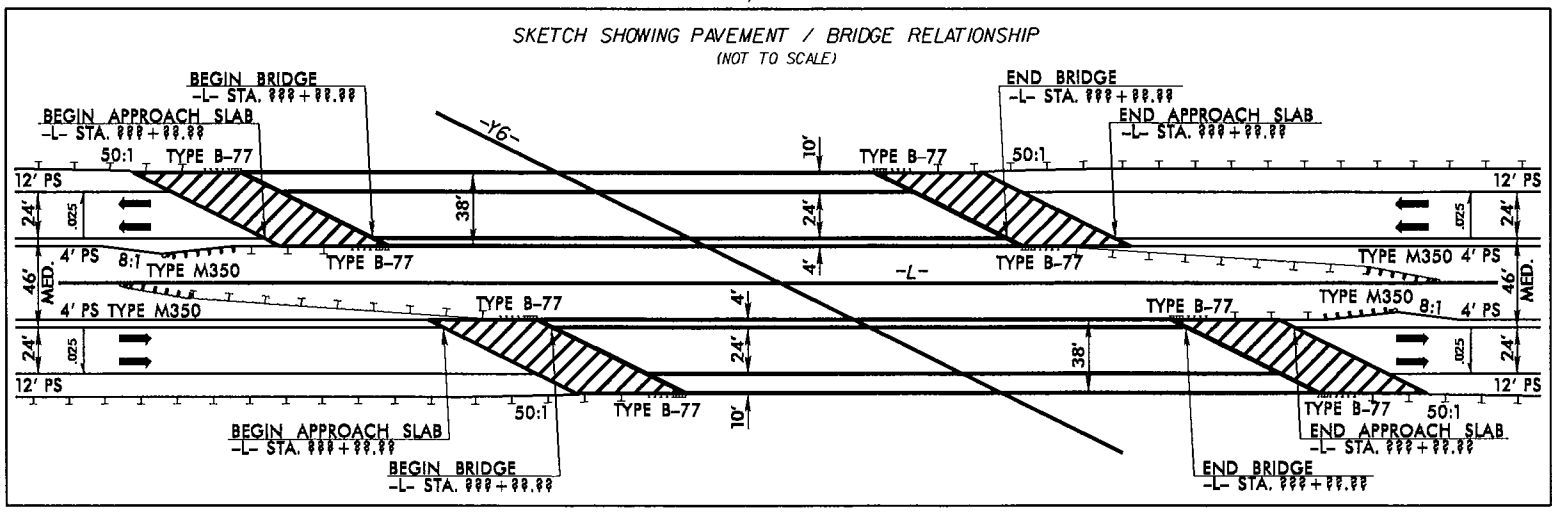


MATCHLINE -L- STA. 516 + 00.00 SEE SHEET 19

MATCHLINE -L- STA. 530 + 00.00 SEE SHEET 21



SKETCH SHOWING PAVEMENT / BRIDGE RELATIONSHIP (NOT TO SCALE)



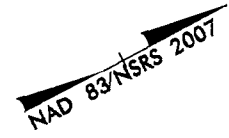
REVISIONS

8/17/99

25-JUN-2012 16:20  
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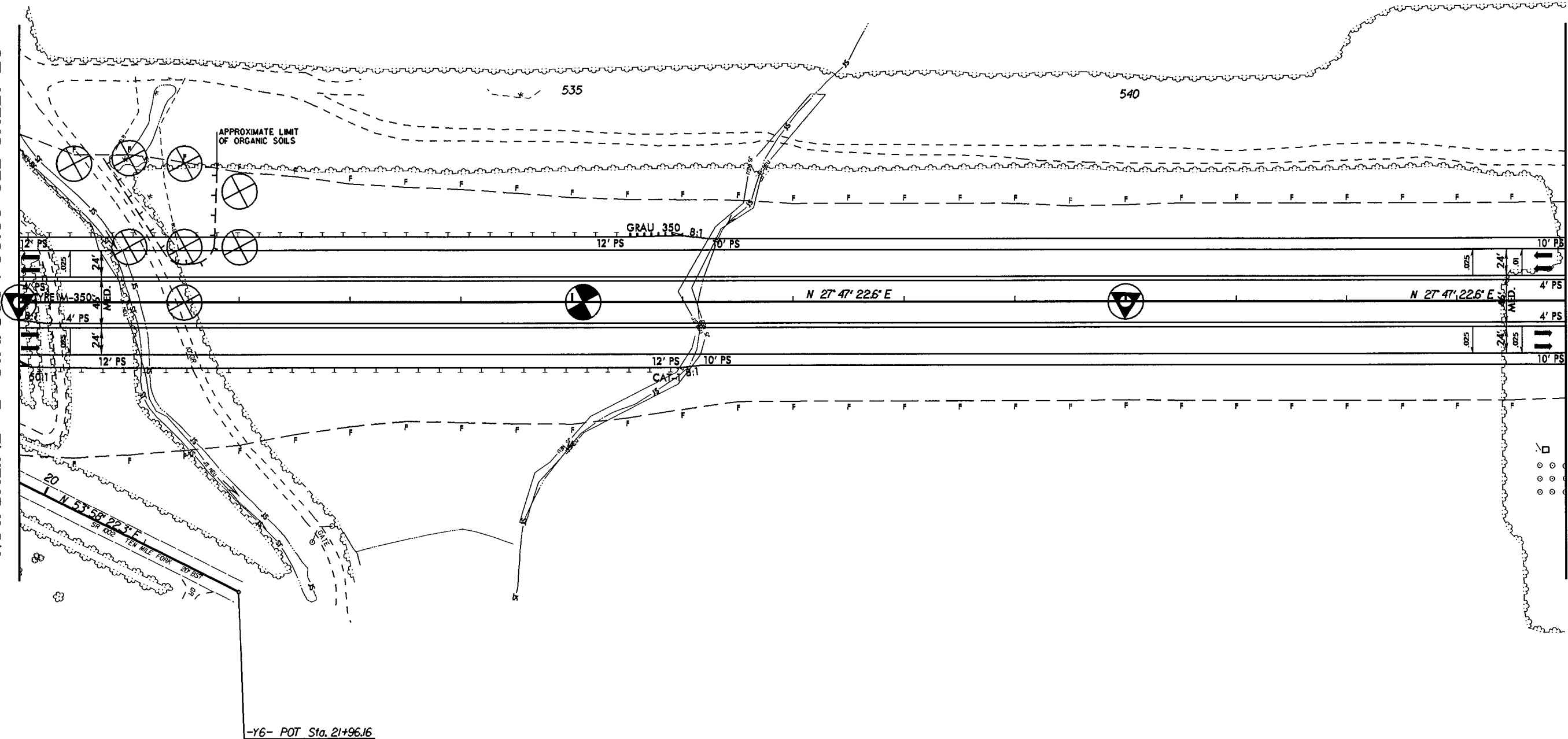
REVISIONS

PROJECT REFERENCE NO. R-2514D	SHEET NO. 21
RW/ SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
<b>INCOMPLETE PLANS</b> DO NOT USE FOR ACQUISITION	
<b>PRELIMINARY PLANS</b> DO NOT USE FOR CONSTRUCTION	



MATCHLINE -L- STA. 530 + 00.00 SEE SHEET 20

MATCHLINE -L- STA. 544 + 00.00 SEE SHEET 22

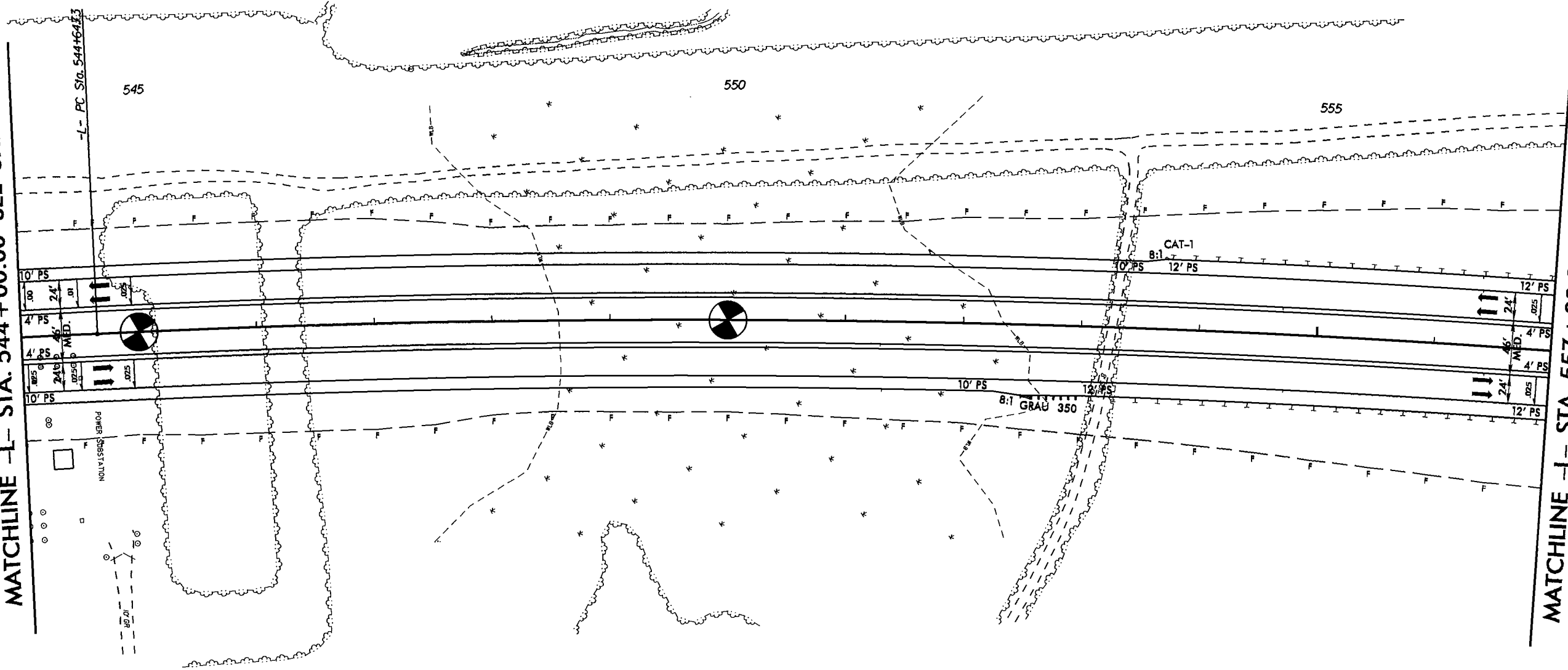


-Y6- POT Sta. 21+96.16

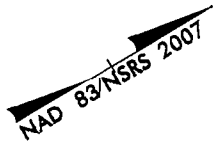


REVISIONS

MATCHLINE -L- STA. 544 + 00.00 SEE SHEET 21



-L-	
PI Sta	571+12.36
$\Delta$	$28^{\circ} 45' 22.4$ (RT)
D	0' 33' 17.7
L	5,183.63'
T	2,647.63'
R	10,328.19'
SE	.025
RO	90'



PROJECT REFERENCE NO. R-2514D	SHEET NO. 22		
RWY SHEET NO.			
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER		
<table border="1"> <tr> <td>INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION</td> </tr> <tr> <td>PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION</td> </tr> </table>		INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION	PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION			
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION			

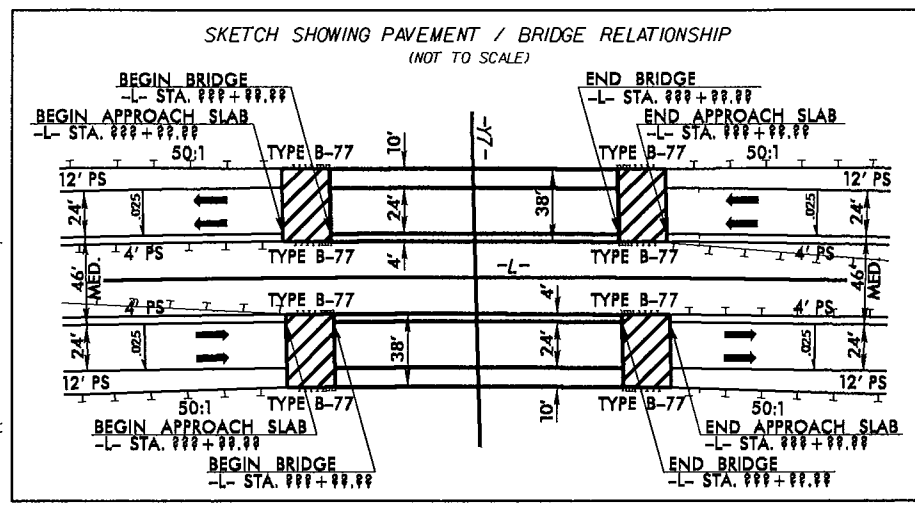
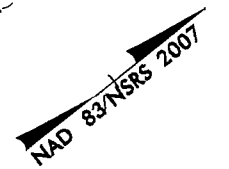
MATCHLINE -L- STA. 557 + 00.00 SEE SHEET 23

REVISIONS

PROJECT REFERENCE NO. <b>R-2514D</b>	SHEET NO. <b>23</b>
RDWY SHEET NO.	HYDRAULICS ENGINEER
ROADWAY DESIGN ENGINEER	

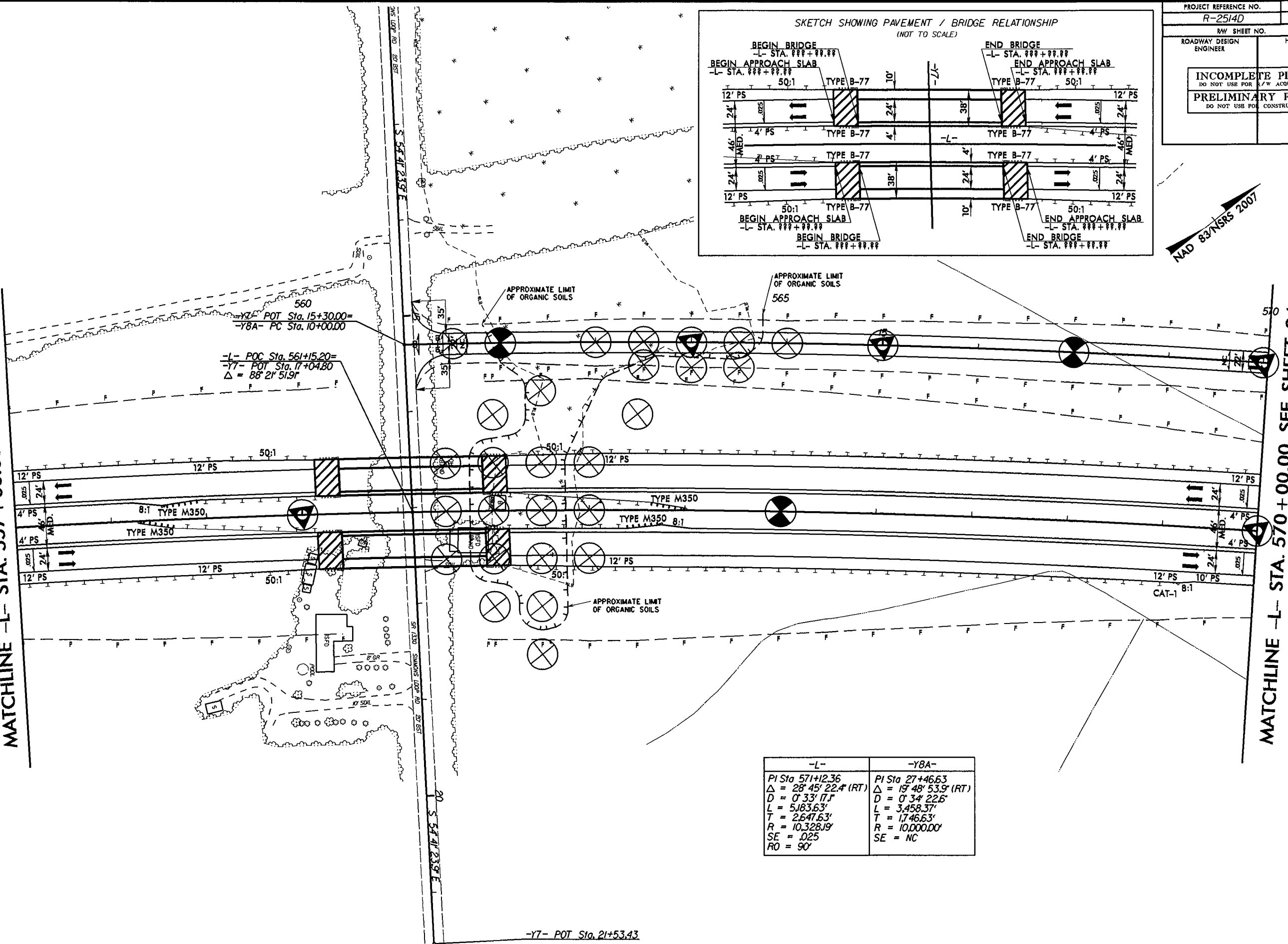
**INCOMPLETE PLANS**  
DO NOT USE FOR ACQUISITION

**PRELIMINARY PLANS**  
DO NOT USE FOR CONSTRUCTION



MATCHLINE -L- STA. 557 + 00.00 SEE SHEET 22

MATCHLINE -L- STA. 570 + 00.00 SEE SHEET 24



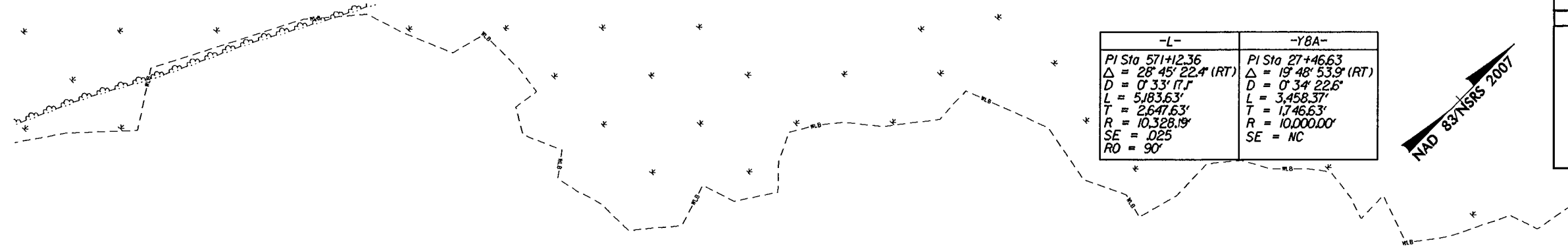
-L-	-Y8A-
PI Sta 571+12.36	PI Sta 27+46.63
$\Delta = 28^\circ 45' 22.4''$ (RT)	$\Delta = 19^\circ 48' 53.9''$ (RT)
$D = 0^\circ 33' 17.1''$	$D = 0^\circ 34' 22.6''$
$L = 5,183.63'$	$L = 3,458.37'$
$T = 2,647.63'$	$T = 1,746.63'$
$R = 10,328.19'$	$R = 10,000.00'$
$SE = .025$	$SE = NC$
$RO = 90^\circ$	

-Y7- POT Sta. 21+53.43

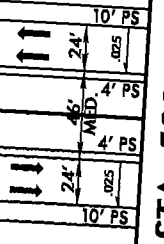
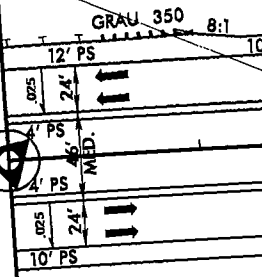
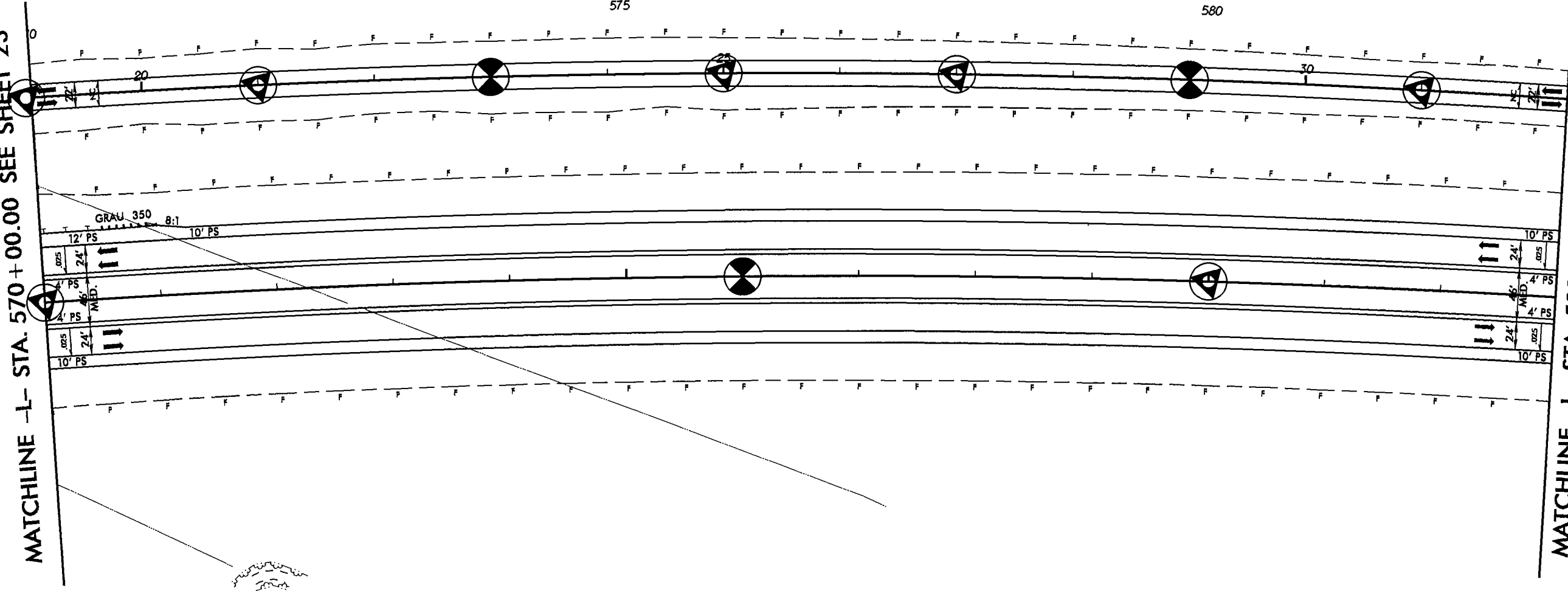
REVISIONS

MATCHLINE -L- STA. 570 + 00.00 SEE SHEET 23

MATCHLINE -L- STA. 583 + 00.00 SEE SHEET 25

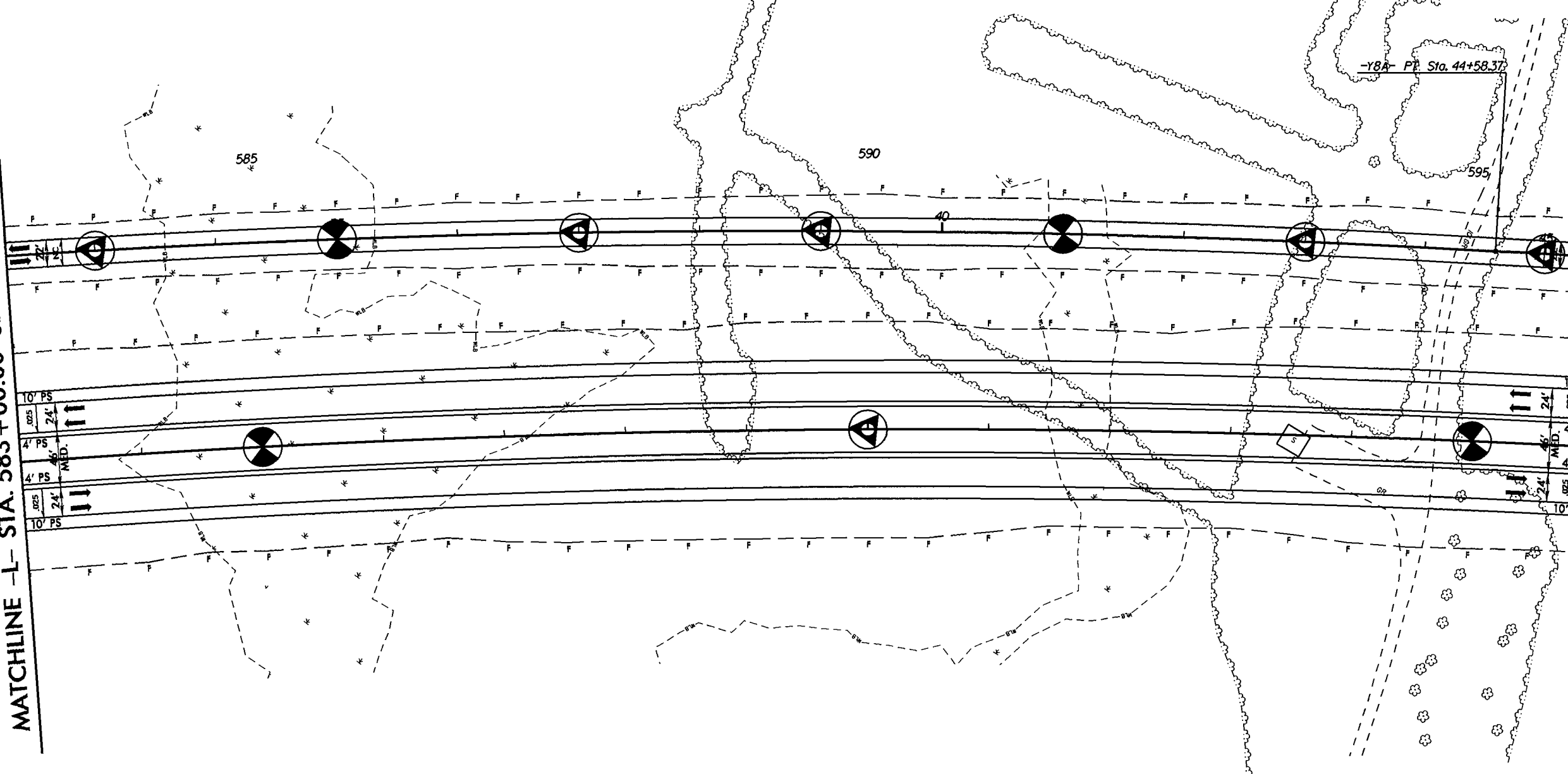


PROJECT REFERENCE NO. R-2514D	SHEET NO. 24
RWY SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
<b>INCOMPLETE PLANS</b> DO NOT USE FOR ACQUISITION	
<b>PRELIMINARY PLANS</b> DO NOT USE FOR CONSTRUCTION	



REVISIONS

MATCHLINE -L- STA. 583 + 00.00 SEE SHEET 24



MATCHLINE -L- STA. 596 + 00.00 SEE SHEET 26

-L-	-YBA-
PI Sta 571+12.36	PI Sta 27+46.63
$\Delta = 28^\circ 45' 22.4" (RT)$	$\Delta = 19^\circ 48' 53.9" (RT)$
$D = 0^\circ 33' 17.7"$	$D = 0^\circ 34' 22.6"$
$L = 5,183.63'$	$L = 3,458.37'$
$T = 2,647.63'$	$T = 1,746.63'$
$R = 10,328.19'$	$R = 10,000.00'$
$SE = .025$	$SE = NC$
$RO = 90'$	

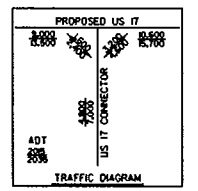
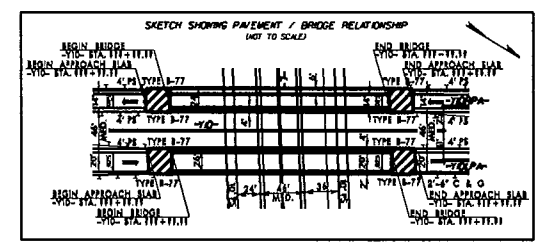
PROJECT REFERENCE NO. R-2514D	SHEET NO. 25
RAW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
<b>INCOMPLETE PLANS</b> DO NOT USE FOR ACQUISITION <b>PRELIMINARY PLANS</b> DO NOT USE FOR CONSTRUCTION	

-YBA- PP Sta. 44+58.37

-7E-		-7B-		-7DPA-		-7DPA-	
PI Stn 51+55.24	PI Stn 51+55.24	PI Stn 51+55.24	PI Stn 51+55.24	PI Stn 51+55.24	PI Stn 51+55.24	PI Stn 51+55.24	PI Stn 51+55.24
Δ = 27° 51' 00" (LT)	Δ = 27° 51' 00" (RT)	Δ = 27° 51' 00" (LT)	Δ = 27° 51' 00" (RT)	Δ = 27° 51' 00" (LT)	Δ = 27° 51' 00" (RT)	Δ = 27° 51' 00" (LT)	Δ = 27° 51' 00" (RT)
D = 80000	D = 80000	D = 80000	D = 80000	D = 80000	D = 80000	D = 80000	D = 80000
L = 10000	L = 10000	L = 10000	L = 10000	L = 10000	L = 10000	L = 10000	L = 10000
f = 6400	f = 6400	f = 6400	f = 6400	f = 6400	f = 6400	f = 6400	f = 6400
A = 80000	A = 80000	A = 80000	A = 80000	A = 80000	A = 80000	A = 80000	A = 80000
SE = 0	SE = 0	SE = 0	SE = 0	SE = 0	SE = 0	SE = 0	SE = 0
NO = 800	NO = 800	NO = 800	NO = 800	NO = 800	NO = 800	NO = 800	NO = 800

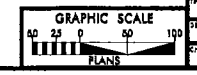
MATCHLINE -L- STA. 596+00.00 SEE SHEET 25

MATCHLINE -L- STA. 622+00.00 SEE SHEET 27



MATCHLINE -Y8- STA. 33+40.00 SEE SHEET 33

MATCHLINE -Y10- STA. 22+50.00 SEE SHEET 33



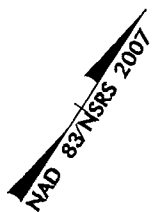
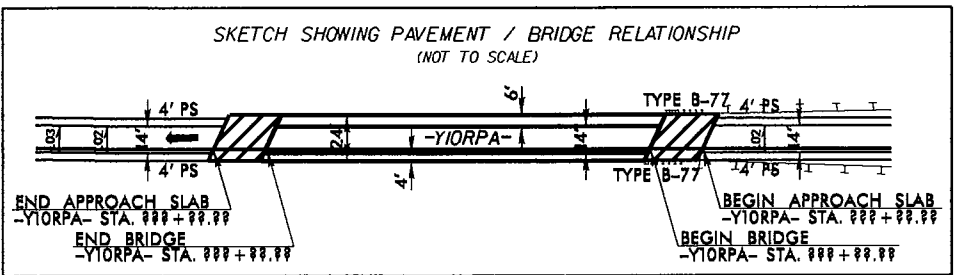
DESIGNED BY	DATE
CHECKED BY	DATE
PROJECT NO.	COUNTY

8-22-00 8:00 AM  
 PROJECT NO. 8-22-00  
 COUNTY: ...  
 SHEET NO. 26  
 TOTAL SHEETS: ...  
 DRAWN BY: ...  
 CHECKED BY: ...  
 DATE: ...

8/17/99

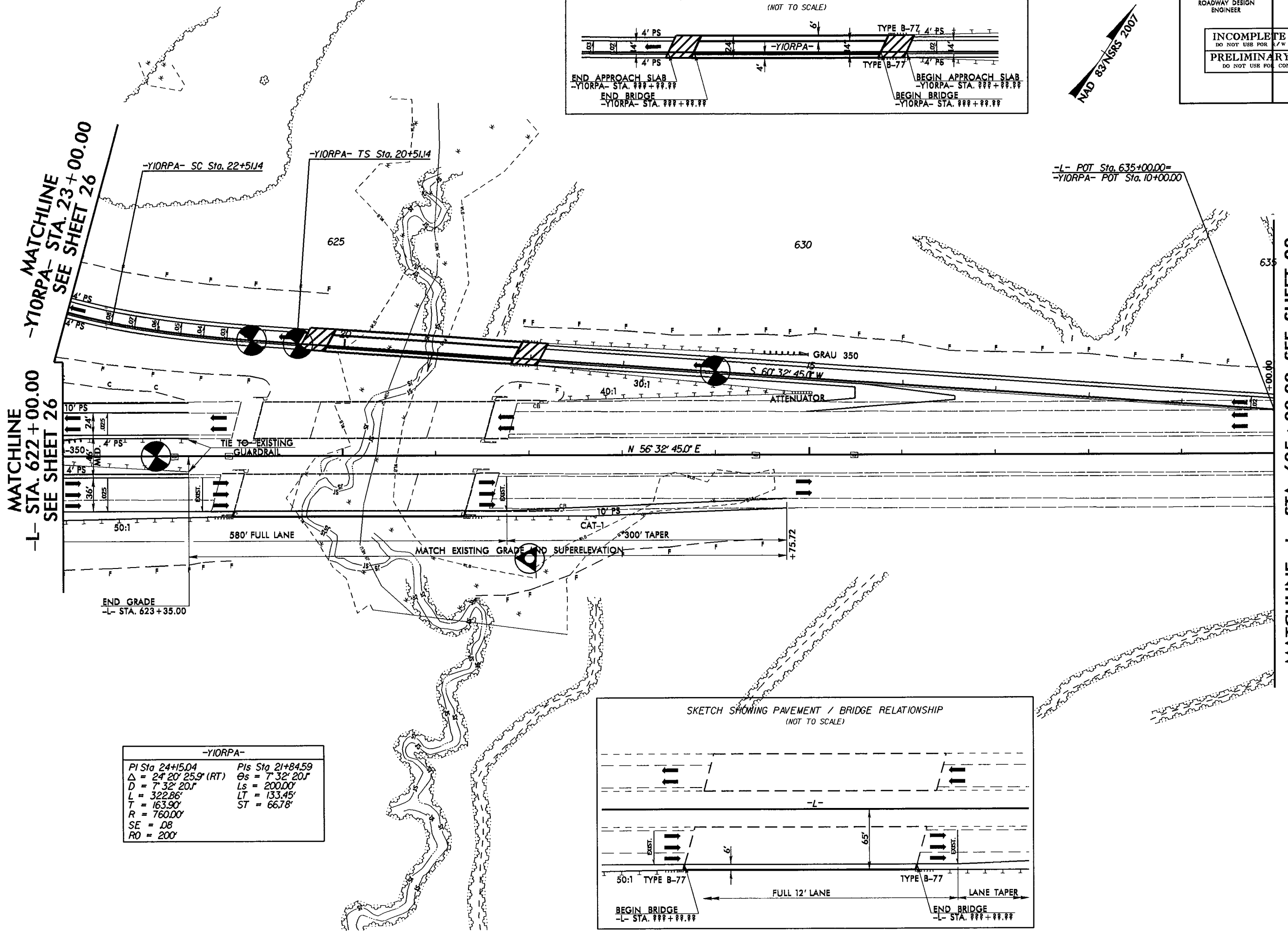
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PROJECT REFERENCE NO. R-2514D	SHEET NO. 27
RWY SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
<b>INCOMPLETE PLANS</b> DO NOT USE FOR A/W ACQUISITION <b>PRELIMINARY PLANS</b> DO NOT USE FOR CONSTRUCTION	



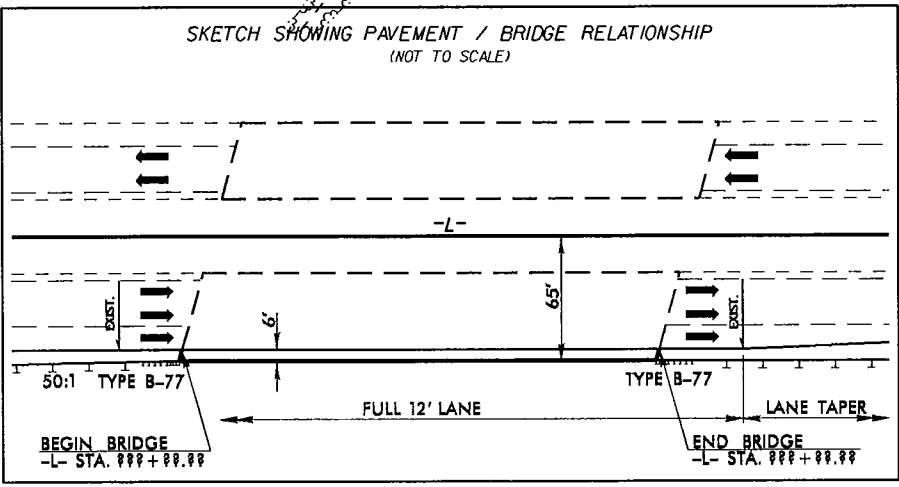
MATCHLINE -YIORPA- STA. 23+00.00 SEE SHEET 26  
 MATCHLINE -L- STA. 622+00.00 SEE SHEET 26

MATCHLINE -L- STA. 635+00.00 SEE SHEET 28



-YIORPA-

PI Sta 24+15.04	Pis Sta 21+84.59
$\Delta = 24^\circ 20' 25.9" (RT)$	$\Theta_s = 7^\circ 32' 20.1"$
$D = 7^\circ 32' 20.1"$	$L_s = 200.00'$
$L = 322.86'$	$LT = 133.45'$
$T = 163.90'$	$ST = 66.78'$
$R = 760.00'$	
$SE = .08$	
$RO = 200'$	



8/17/99

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REVISIONS

PROJECT REFERENCE NO. R-2514D	SHEET NO. 28
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
<b>INCOMPLETE PLANS</b> DO NOT USE FOR ACQUISITION <b>PRELIMINARY PLANS</b> DO NOT USE FOR CONSTRUCTION	

NAD 83 N/S/S 2007

MATCHLINE -L- STA. 635 + 00.00 SEE SHEET 27

-L- POT Sta. 635+00.00=  
-YIORPA- POT Sta. 10+00.00

-L- TS Sta. 635+62.27

195' TAPER  
MATCH EXISTING GRADE AND SUPERELEVATION

-L- SC Sta. 638+247.4

-L- CS Sta. 639+83.96

-L- ST Sta. 642+46.83

640

645

N 63° 54' 36.6" E

N 56° 32' 45.0" E

END PROJECT R-2514D  
-L- STA. 637 + 00.00

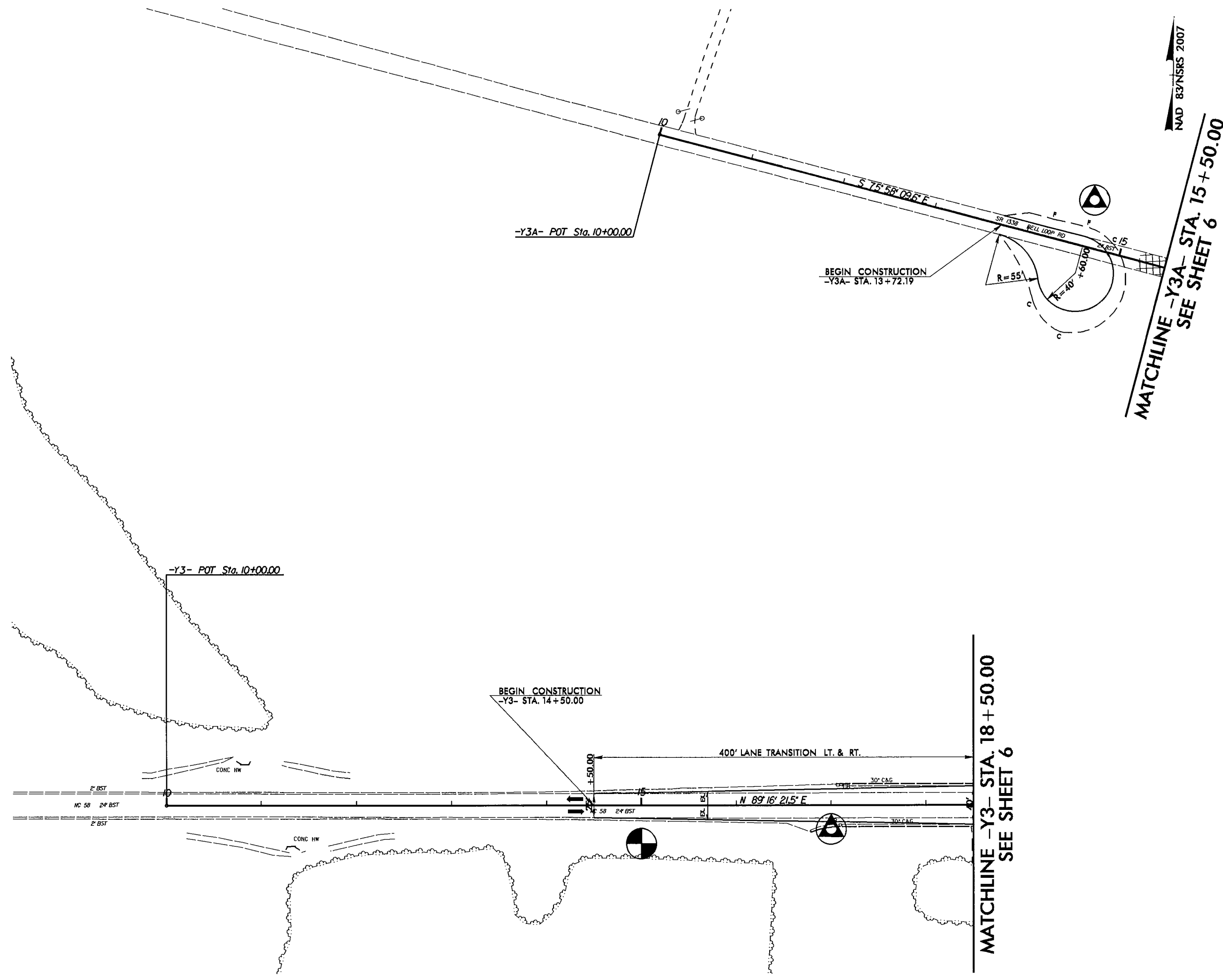
-L-		
PIs Sta 637+37.26	PI Sta 639+04.37	PIs Sta 640+71.46
Os = 2° 17' 30.6"	Δ = 2° 46' 50.4" (RT)	Os = 2° 17' 30.6"
Ls = 262.47'	D = 1° 44' 47.0"	Ls = 262.47'
LT = 174.99'	L = 159.22'	LT = 174.99'
ST = 87.50'	T = 79.63'	ST = 87.50'
	R = 3,280.83'	

8/17/99

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Author: AT

REVISIONS

PROJECT REFERENCE NO. <i>R-2514D</i>	SHEET NO. 29
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
<b>INCOMPLETE PLANS</b> DO NOT USE FOR A/W ACQUISITION <b>PRELIMINARY PLANS</b> DO NOT USE FOR CONSTRUCTION	



**MATCHLINE -Y3- STA. 18 + 50.00  
SEE SHEET 6**

**MATCHLINE -Y3A- STA. 15 + 50.00  
SEE SHEET 6**

NAD 83/NRS 2007

-Y3A- POT Sta. 10+00.00

-Y3- POT Sta. 10+00.00

BEGIN CONSTRUCTION  
-Y3- STA. 14 + 50.00

BEGIN CONSTRUCTION  
-Y3A- STA. 13 + 72.19

400' LANE TRANSITION LT. & RT.

N 69° 16' 21.5" E

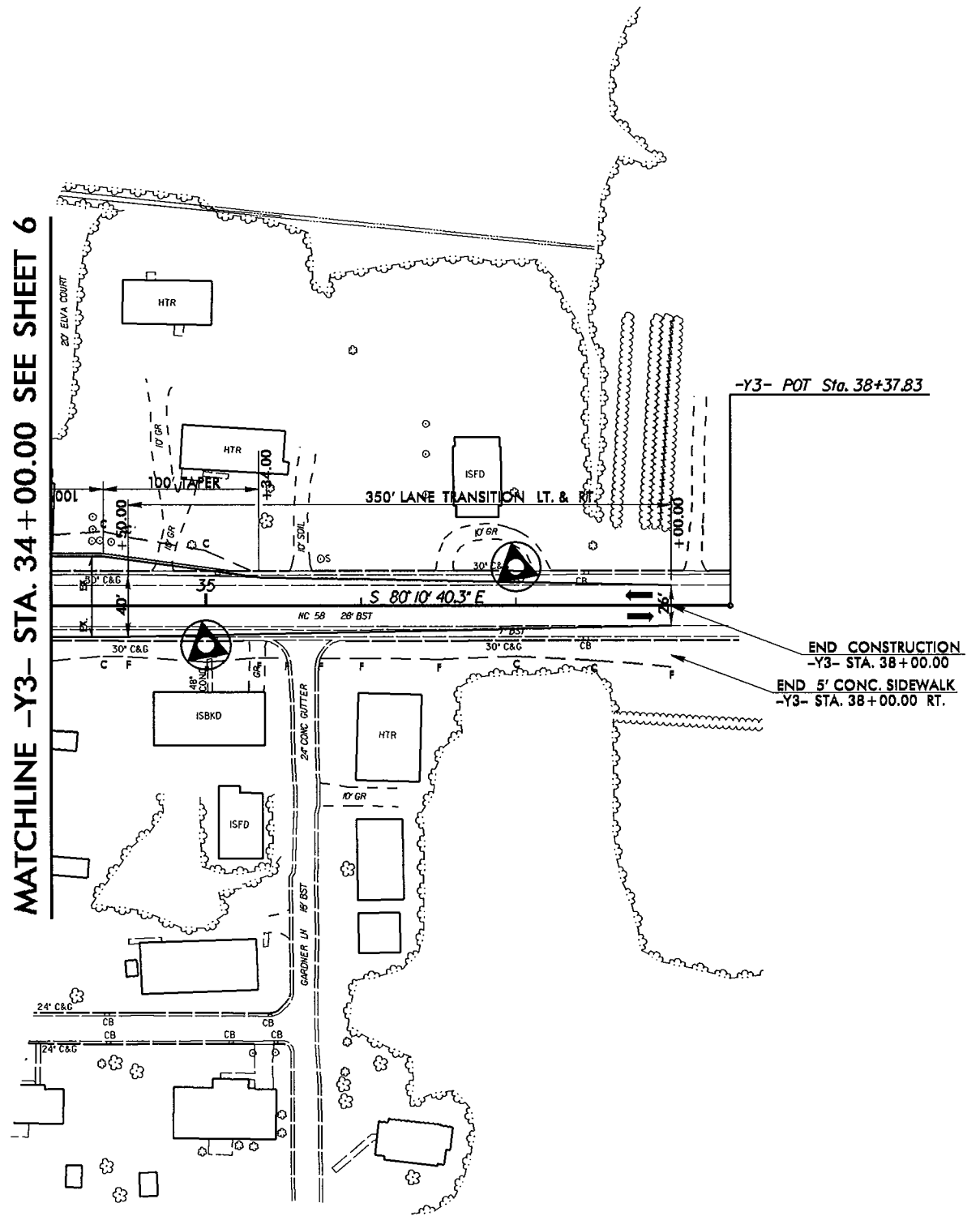


8/17/99

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Author: AT 11/25/04

REVISIONS

MATCHLINE -Y3- STA. 34+00.00 SEE SHEET 6



-Y3- POT Sta. 38+37.83

END CONSTRUCTION  
-Y3- STA. 38+00.00  
END 5' CONC. SIDEWALK  
-Y3- STA. 38+00.00 RT.

NAD 83/NRS 2007

PROJECT REFERENCE NO. R-2514D	SHEET NO. 30
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
<b>INCOMPLETE PLANS</b> DO NOT USE FOR ACQUISITION	
<b>PRELIMINARY PLANS</b> DO NOT USE FOR CONSTRUCTION	

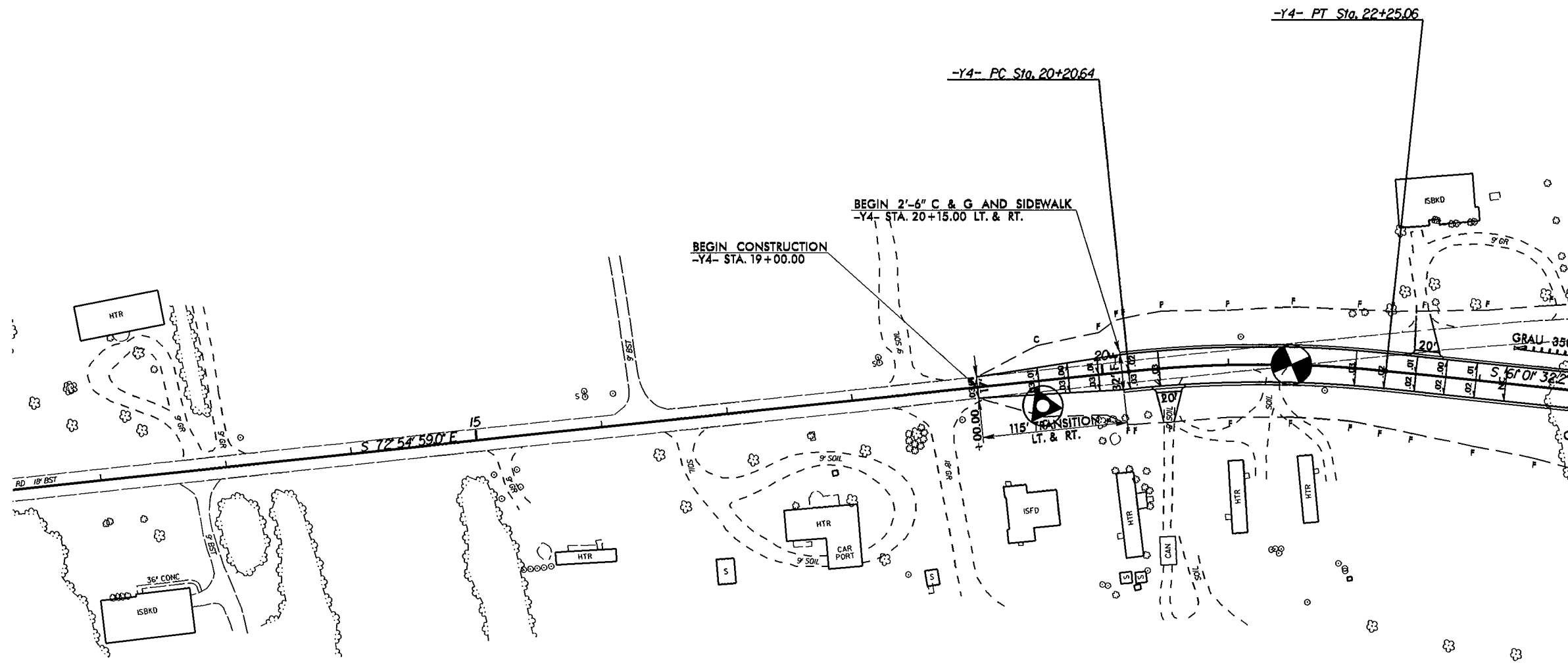
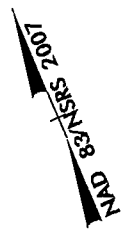
8/17/99

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REVISIONS

PROJECT REFERENCE NO. R-2514D	SHEET NO. 31
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
<b>INCOMPLETE PLANS</b> DO NOT USE FOR ACQUISITION <b>PRELIMINARY PLANS</b> DO NOT USE FOR CONSTRUCTION	

-Y4-  
 PI Sta 21+23.22  
 $\Delta = 115^{\circ} 53' 26.8" (RT)$   
 $D = 5^{\circ} 49' 00.6"$   
 $L = 204.42'$   
 $T = 102.58'$   
 $R = 985.00'$   
 $SE = .03$   
 $RO = 72'$



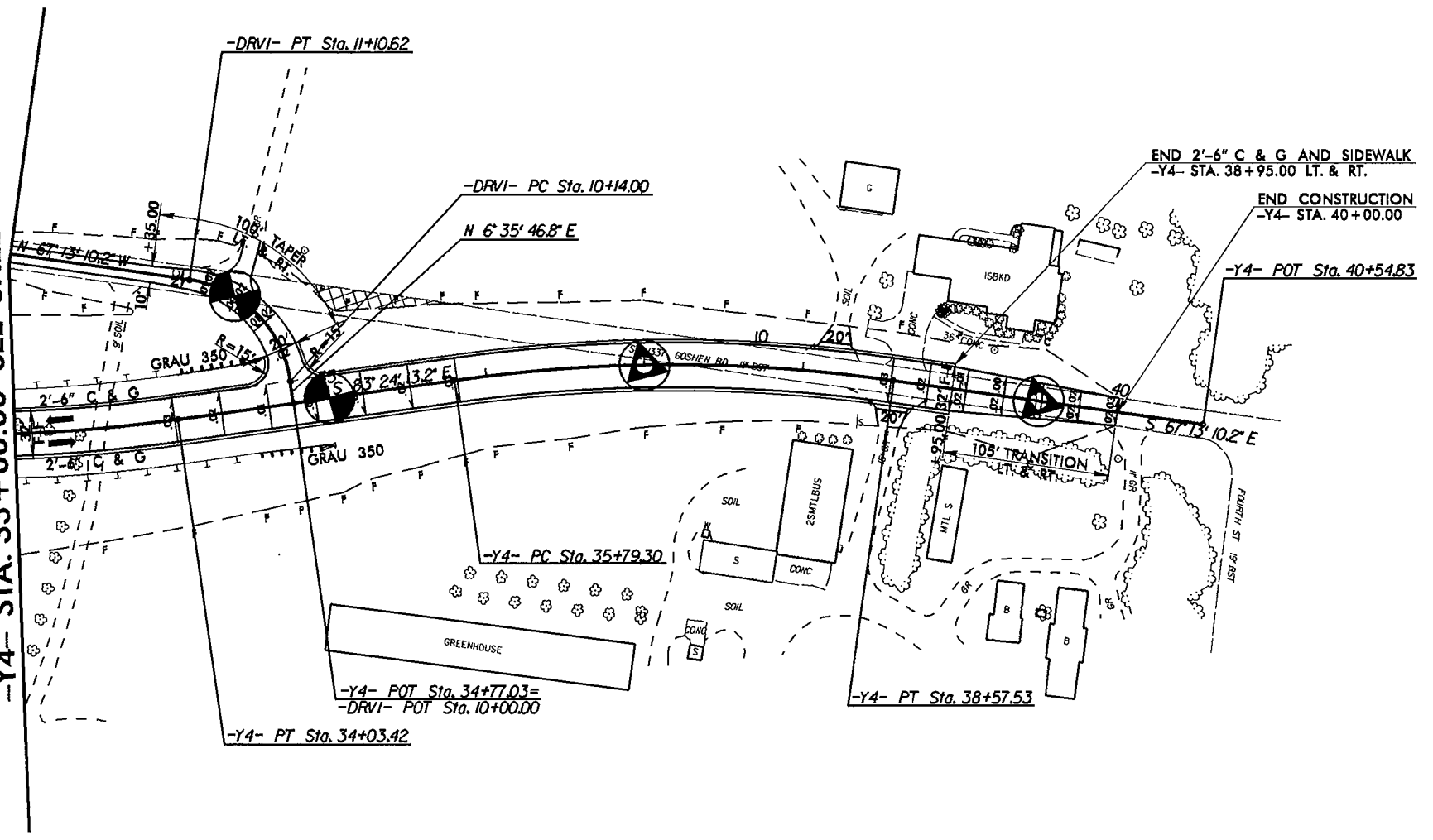
**MATCHLINE -Y4- STA. 24+00.00**  
**SEE SHEET 8**

8/17/99

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REVISIONS

MATCHLINE  
 -Y4- STA. 33+00.00 SEE SHEET 8



-Y4-		-DRVI-
PI Sta 32+13.54	PI Sta 37+19.35	PI Sta 10+70.33
$\Delta = 22^\circ 22' 41.0''$ (LT)	$\Delta = 16^\circ 11' 03.0''$ (RT)	$\Delta = 73^\circ 48' 57.0''$ (LT)
D = 5' 49' 00.6"	D = 5' 49' 00.6"	D = 76' 23' 39.7"
L = 384.71'	L = 278.23'	L = 96.62'
T = 194.84'	T = 140.05'	T = 56.33'
R = 985.00'	R = 985.00'	R = 75.00'
SE = D3	SE = D3	SE = NC
RO = SEE PLANS	RO = SEE PLANS	

NAD 83/RSR 2007

PROJECT REFERENCE NO. R-2514D	SHEET NO. 32
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
<b>INCOMPLETE PLANS</b> DO NOT USE FOR ACQUISITION <b>PRELIMINARY PLANS</b> DO NOT USE FOR CONSTRUCTION	

8/17/99

25-JUN-2012 16:22  
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Continued At The Bottom

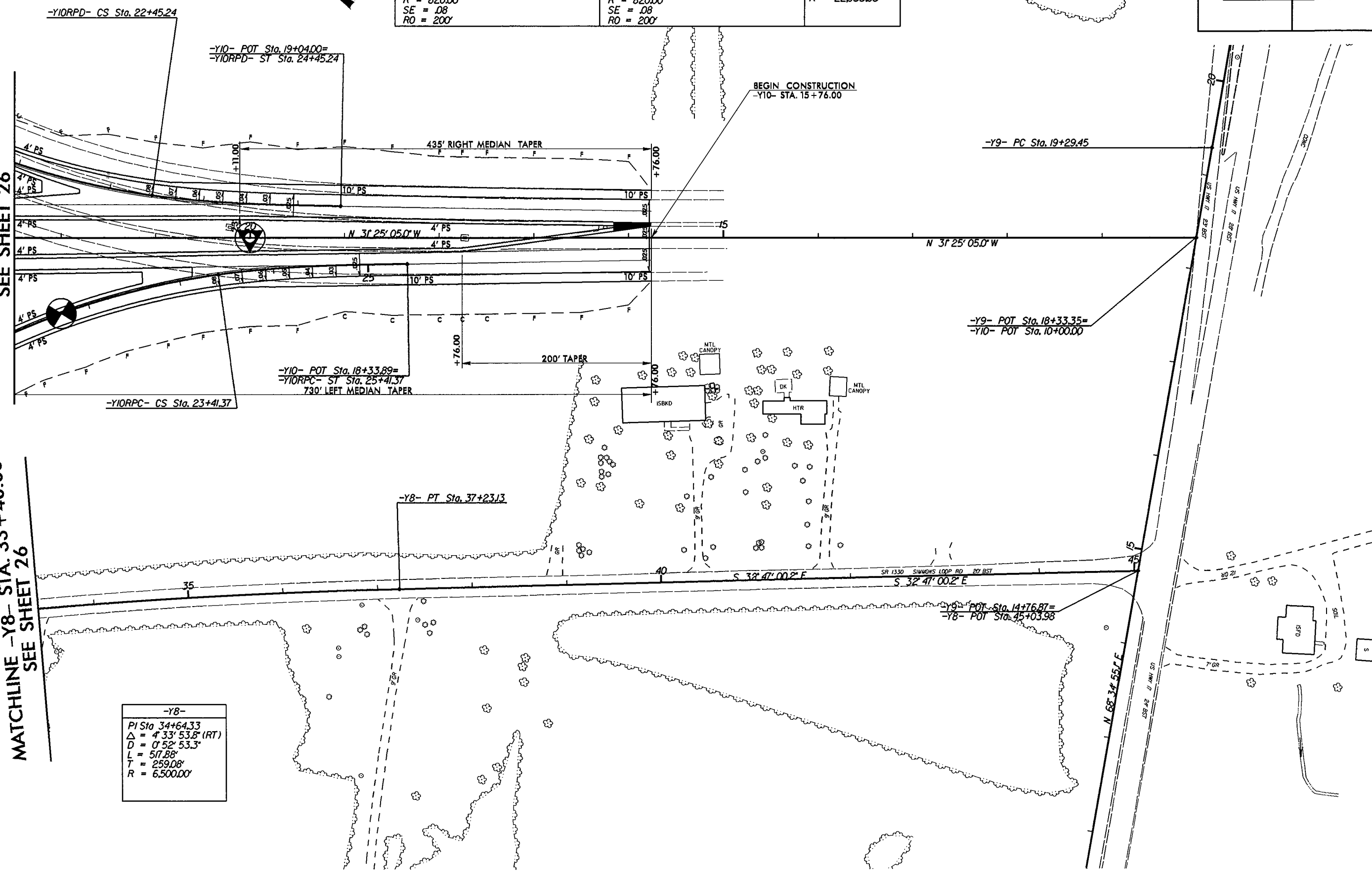
PROJECT REFERENCE NO. R-2514D	SHEET NO. 33
RAW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
<b>INCOMPLETE PLANS</b> DO NOT USE FOR ACQUISITION <b>PRELIMINARY PLANS</b> DO NOT USE FOR CONSTRUCTION	

-YIORPC-		-YIORPD-		-Y9-
PI Sta 18+99.65	PIs Sta 24+08.13	PI Sta 18+07.15	PIs Sta 23+12.00	PI Sta 20+60.71
$\Delta = 74^{\circ} 11' 00.0''$ (RT)	$\Theta_s = 6^{\circ} 59' 14.2''$	$\Delta = 73^{\circ} 02' 03.1''$ (LT)	$\Theta_s = 6^{\circ} 59' 14.2''$	$\Delta = 0^{\circ} 39' 21.1''$ (LT)
D = 6' 59' 14.2"	Ls = 200.00'	D = 6' 59' 14.2"	Ls = 200.00'	D = 0' 14' 59.4"
L = 1,061.69'	LT = 133.44'	L = 1,045.24'	LT = 133.44'	L = 262.51'
T = 619.97'	ST = 66.76'	T = 607.15'	ST = 66.76'	T = 131.26'
R = 820.00'		R = 820.00'		R = 22,933.03'
SE = .08		SE = .08		
RO = 200'		RO = 200'		

NAD BENCHMARKS 2007

MATCHLINE -Y10- STA. 22 + 50.00  
SEE SHEET 26

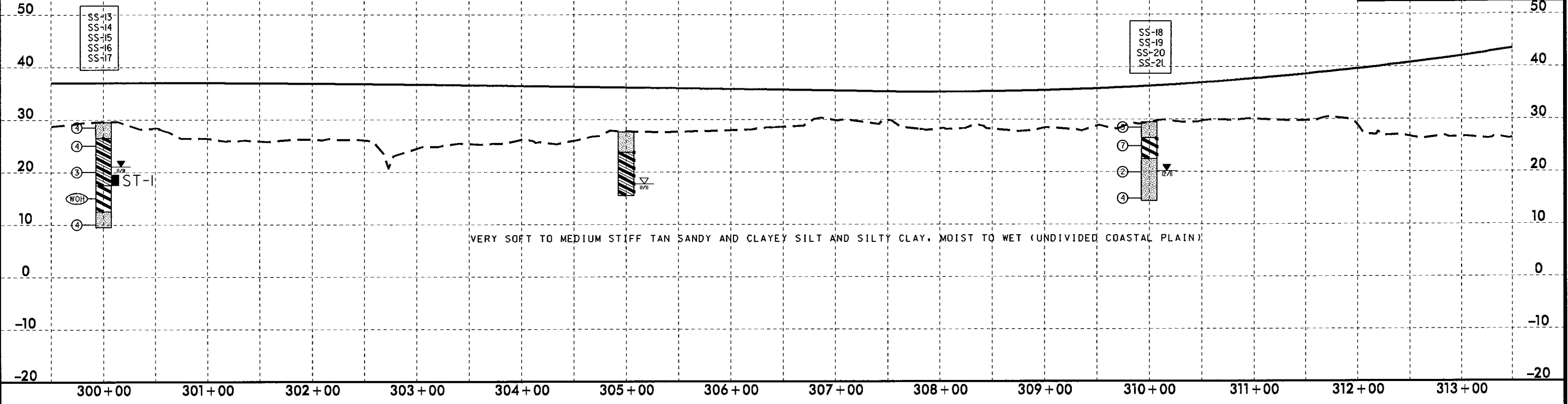
MATCHLINE -Y8- STA. 33 + 40.00  
SEE SHEET 26



-Y8-
PI Sta 34+64.33
$\Delta = 4^{\circ} 33' 53.8''$ (RT)
D = 0' 52' 53.3"
L = 517.88'
T = 259.08'
R = 6,500.00'

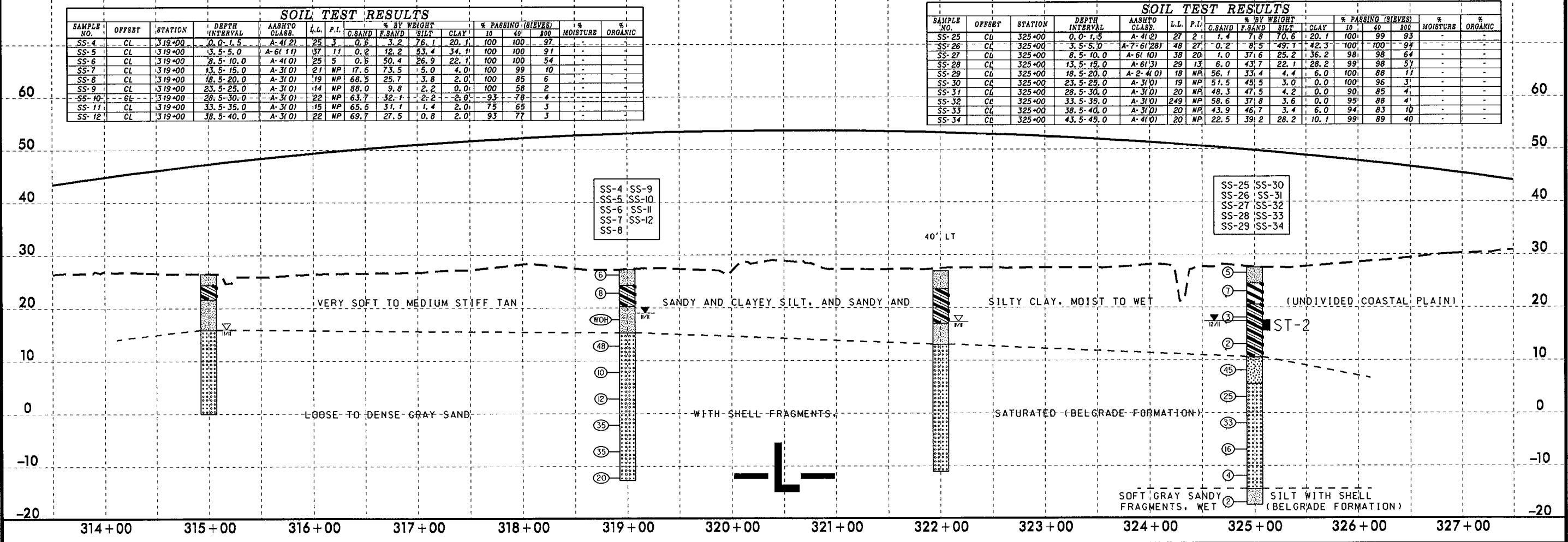
REVISIONS

SOIL TEST RESULTS														
SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT			% PASSING (SIEVES)			% MOISTURE	% ORGANIC
							C.SAND	F.SAND	SILT	10	40	200		
SS-13	CL	300+00	0.0-1.5	A-4(2)	25	3	0.5	3.6	73.7	22.1	100	97	-	-
SS-14	CL	300+00	3.5-5.0	A-6(2)	40	22	0.5	12.2	49.4	38.2	100	92	-	-
SS-15	CL	300+00	8.5-10.0	A-6(2)	35	17	2.0	21.9	42.0	34.1	100	99	-	-
SS-16	CL	300+00	13.5-15.0	A-7-6(24)	50	26	0.6	15.3	25.9	58.2	100	85	-	-
SS-17	CL	300+00	18.5-20.0	A-4(0)	25	7	7.9	47.8	20.3	24.1	100	98	-	-
SS-18	CL	310+00	0.0-1.5	A-4(0)	24	NP	0.6	3.0	78.3	18.1	100	97	-	-
SS-19	CL	310+00	3.5-5.0	A-7-6(20)	41	20	0.2	11.7	51.9	36.2	100	93	-	-
SS-20	CL	310+00	8.5-10.0	A-4(5)	27	9	0.2	28.2	43.5	28.2	100	79	-	-
SS-21	CL	310+00	13.5-15.0	A-4(0)	18	NP	8.5	57.5	23.9	10.1	100	98	-	-



SOIL TEST RESULTS														
SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT			% PASSING (SIEVES)			% MOISTURE	% ORGANIC
							C.SAND	F.SAND	SILT	10	40	200		
SS-4	CL	319+00	0.0-1.5	A-4(2)	25	3	0.5	3.2	76.1	20.1	100	97	-	-
SS-5	CL	319+00	3.5-5.0	A-6(1)	37	11	0.2	12.2	53.4	34.1	100	91	-	-
SS-6	CL	319+00	8.5-10.0	A-4(0)	25	5	0.5	50.4	26.9	22.1	100	54	-	-
SS-7	CL	319+00	13.5-15.0	A-3(0)	21	NP	17.6	73.5	5.0	4.0	100	99	-	-
SS-8	CL	319+00	18.5-20.0	A-3(0)	19	NP	68.5	25.7	3.8	2.0	100	85	-	-
SS-9	CL	319+00	23.5-25.0	A-3(0)	14	NP	88.0	9.8	2.2	0.0	100	58	-	-
SS-10	CL	319+00	28.5-30.0	A-3(0)	22	NP	63.7	32.1	2.2	0.0	93	78	-	-
SS-11	CL	319+00	33.5-35.0	A-3(0)	15	NP	65.6	31.1	1.4	2.0	75	65	-	-
SS-12	CL	319+00	38.5-40.0	A-3(0)	22	NP	69.7	27.5	0.8	2.0	93	77	-	-

SOIL TEST RESULTS															
SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT			% PASSING (SIEVES)			% MOISTURE	% ORGANIC	
							C.SAND	F.SAND	SILT	10	40	200			
SS-25	CL	325+00	0.0-1.5	A-4(2)	27	2	1.4	71.8	70.6	20.1	100	99	93	-	-
SS-26	CL	325+00	3.5-5.0	A-7-6(28)	48	27	0.2	8.5	49.1	42.3	100	100	99	-	-
SS-27	CL	325+00	8.5-10.0	A-6(10)	38	20	1.0	37.6	25.2	36.2	98	98	64	-	-
SS-28	CL	325+00	13.5-15.0	A-6(3)	29	13	6.0	43.7	22.1	28.2	99	98	51	-	-
SS-29	CL	325+00	18.5-20.0	A-2-4(0)	18	NP	56.1	33.4	4.4	6.0	100	88	11	-	-
SS-30	CL	325+00	23.5-25.0	A-3(0)	19	NP	51.5	45.5	3.0	0.0	100	96	3	-	-
SS-31	CL	325+00	28.5-30.0	A-3(0)	20	NP	48.3	47.5	4.2	0.0	90	85	4	-	-
SS-32	CL	325+00	33.5-35.0	A-3(0)	249	NP	58.6	37.8	3.6	0.0	95	88	4	-	-
SS-33	CL	325+00	38.5-40.0	A-3(0)	20	NP	43.9	46.7	3.4	6.0	94	83	10	-	-
SS-34	CL	325+00	43.5-45.0	A-4(0)	20	NP	22.5	391.2	28.2	10.1	99	89	40	-	-



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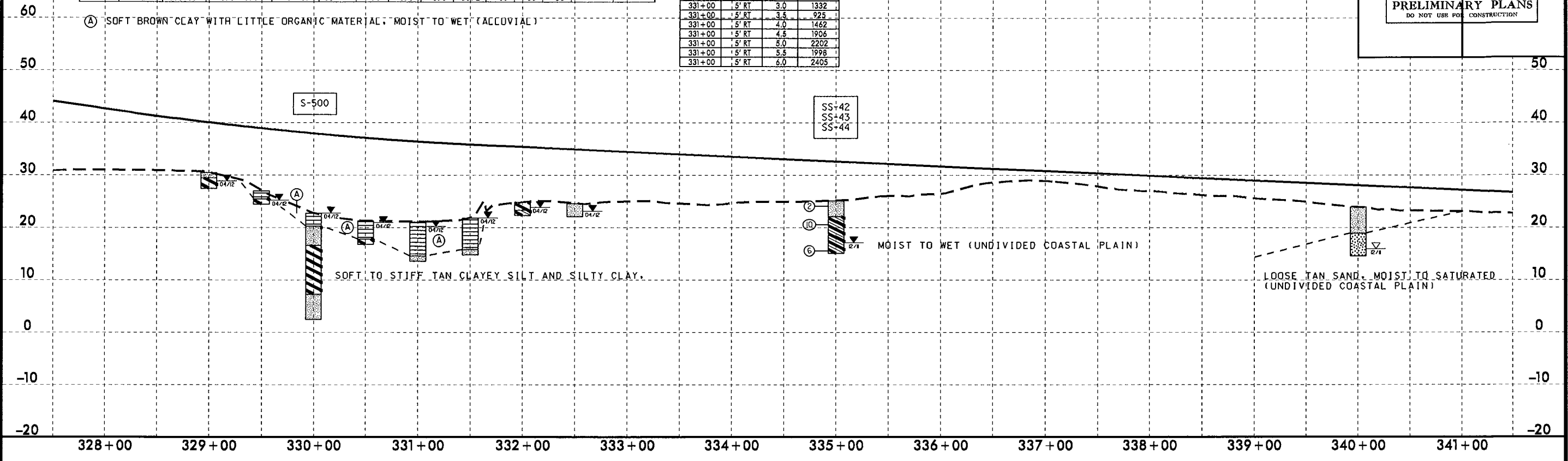
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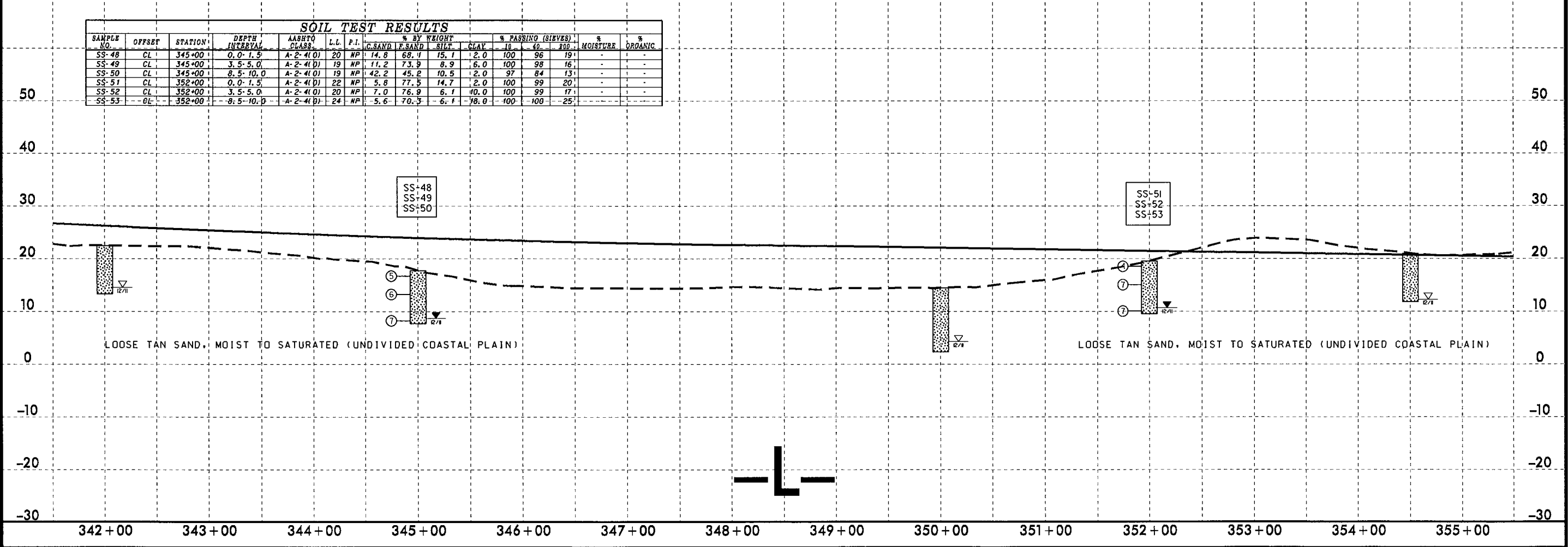
PROJECT REFERENCE NO.		SHEET NO.	
R-2514D		35	
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER	
<b>INCOMPLETE PLANS</b> DO NOT USE FOR R/W ACQUISITION			
<b>PRELIMINARY PLANS</b> DO NOT USE FOR CONSTRUCTION			

SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT				% PASSING (SIEVES)			% MOISTURE	% ORGANIC
							C.SAND	F.SAND	SILT	CLAY	10	40	200		
S-500	CL	330+00	0.0-2.5	A-6(1)	24	3	0.6	7.2	70.0	22.1	100	100	93	-	5.5
SS-42	CL	335+00	0.0-1.5	A-6(1)	32	14	0.4	5.0	60.4	34.2	100	100	95	-	-
SS-43	CL	335+00	3.5-5.0	A-6(1)	35	17	1.0	15.9	46.9	36.2	100	99	90	-	-
SS-44	CL	335+00	8.5-10.0	A-6(1)	35	17	1.0	15.9	46.9	36.2	100	99	90	-	-

STATION	OFFSET	DEPTH	SR (psf)
331+00	5' RT	0.5	1147
331+00	5' RT	1.0	925
331+00	5' RT	1.5	1295
331+00	5' RT	2.0	925
331+00	5' RT	2.5	1166
331+00	5' RT	3.0	1332
331+00	5' RT	3.5	925
331+00	5' RT	4.0	1462
331+00	5' RT	4.5	1906
331+00	5' RT	5.0	2202
331+00	5' RT	5.5	1998
331+00	5' RT	6.0	2405



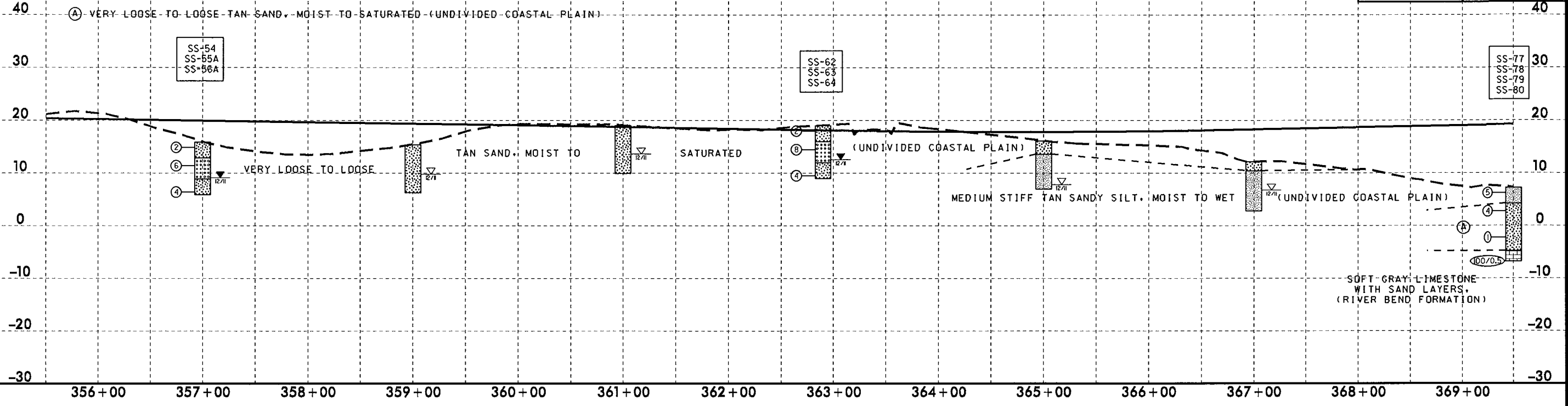
SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT				% PASSING (SIEVES)			% MOISTURE	% ORGANIC
							C.SAND	F.SAND	SILT	CLAY	10	40	200		
SS-48	CL	345+00	0.0-1.5	A-2-4(D)	20	NP	14.8	69.9	15.1	2.0	100	96	19	-	-
SS-49	CL	345+00	3.5-5.0	A-2-4(D)	19	NP	11.2	73.9	8.9	6.0	100	99	16	-	-
SS-50	CL	345+00	8.5-10.0	A-2-4(D)	19	NP	42.2	45.2	10.5	2.0	97	84	13	-	-
SS-51	CL	352+00	0.0-1.5	A-2-4(D)	22	NP	5.8	77.5	14.7	2.0	100	99	20	-	-
SS-52	CL	352+00	3.5-5.0	A-2-4(D)	20	NP	7.0	76.9	6.1	10.0	100	99	17	-	-
SS-53	CL	352+00	8.5-10.0	A-2-4(D)	24	NP	5.6	70.3	6.1	18.0	100	100	25	-	-



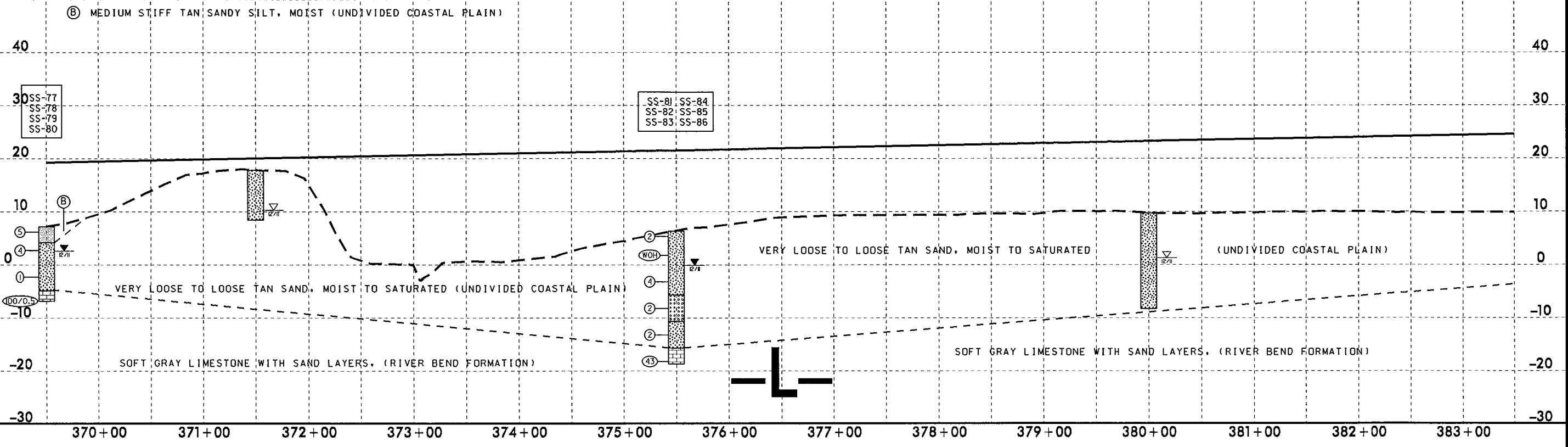
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PROJECT REFERENCE NO. <b>R-2514D</b>	SHEET NO. <b>36</b>
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
<b>INCOMPLETE PLANS</b> DO NOT USE FOR ACQUISITION	
<b>PRELIMINARY PLANS</b> DO NOT USE FOR CONSTRUCTION	

SOIL TEST RESULTS														
SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT			% PASSING (SIEVES)			% MOISTURE	% ORGANIC
							C. SAND	F. SAND	SILT	10	40	200		
SS-54	CL	357+00	0.0-1.5	A-2-4(0)	18	NP	27.8	58.9	5.3	8.0	100	90	15	-
SS-55A	CL	357+00	3.5-5.0	A-3(0)	17	NP	36.6	54.9	2.5	6.0	99	91	9	-
SS-56A	CL	357+00	8.5-10.0	A-2-4(0)	24	NP	17.4	71.3	5.3	6.0	100	97	13	-
SS-62	CL	362+90	0.0-1.5	A-2-4(0)	19	NP	5.0	71.5	11.5	12.0	100	99	26	-
SS-63	CL	362+90	3.5-5.0	A-3(0)	21	NP	5.2	90.3	2.5	2.0	100	100	5	-
SS-64	CL	362+90	8.5-10.0	A-2-4(0)	29	NP	0.6	74.5	16.9	8.0	100	100	35	-
SS-77	CL	369+50	0.0-1.5	A-4(0)	29	NP	5.0	55.3	19.5	20.1	100	98	44	-
SS-78	CL	369+50	3.5-5.0	A-2-4(0)	27	NP	2.8	77.3	9.9	10.1	98	97	23	-
SS-79	CL	369+50	8.5-10.0	A-2-4(0)	23	NP	22.9	62.0	3.0	12.1	98	94	15	-
SS-80	CL	369+50	13.5-15.0	A-1-B(0)	18	NP	28.8	13.9	53.3	4.0	41	32	24	-



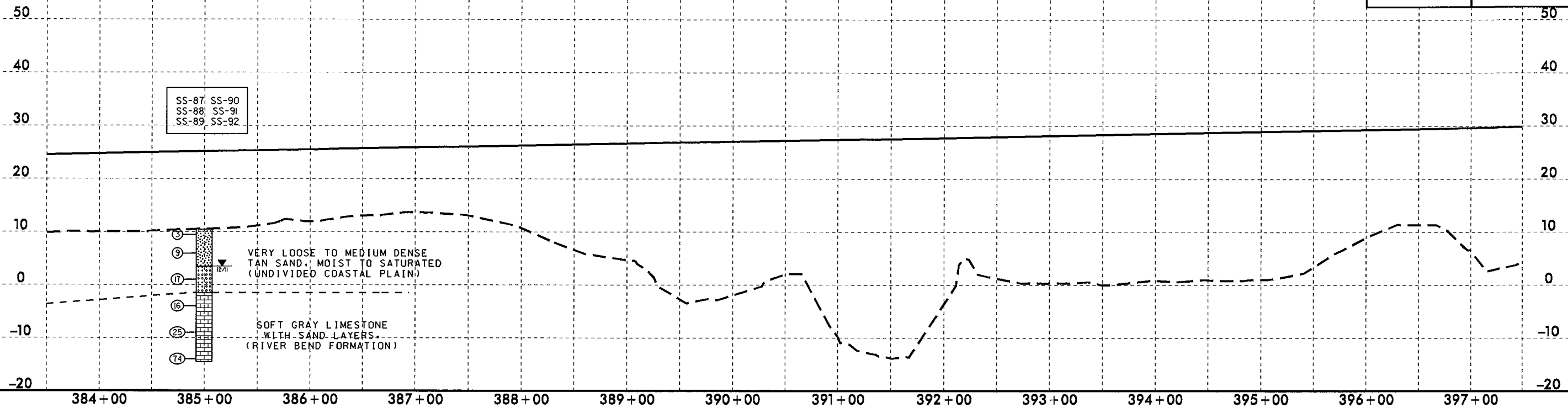
SOIL TEST RESULTS														
SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT			% PASSING (SIEVES)			% MOISTURE	% ORGANIC
							C. SAND	F. SAND	SILT	10	40	200		
SS-81	CL	375+50	0.0-1.5	A-2-4(0)	23	NP	10.9	60.2	18.9	10.1	100	96	37	-
SS-82	CL	375+50	3.5-5.0	A-2-4(0)	21	NP	18.3	59.0	16.7	6.0	100	91	26	-
SS-83	CL	375+50	8.5-10.0	A-2-4(0)	26	NP	4.6	83.3	6.0	6.0	100	99	14	-
SS-84	CL	375+50	13.5-15.0	A-3(0)	25	NP	25.6	66.2	4.2	4.0	100	93	9	-
SS-85	CL	375+50	18.5-20.0	A-2-4(0)	22	NP	15.5	74.4	6.0	4.0	100	97	11	-
SS-86	CL	375+50	23.5-25.0	A-1-B(0)	18	NP	32.8	34.4	22.7	10.1	64	48	22	-



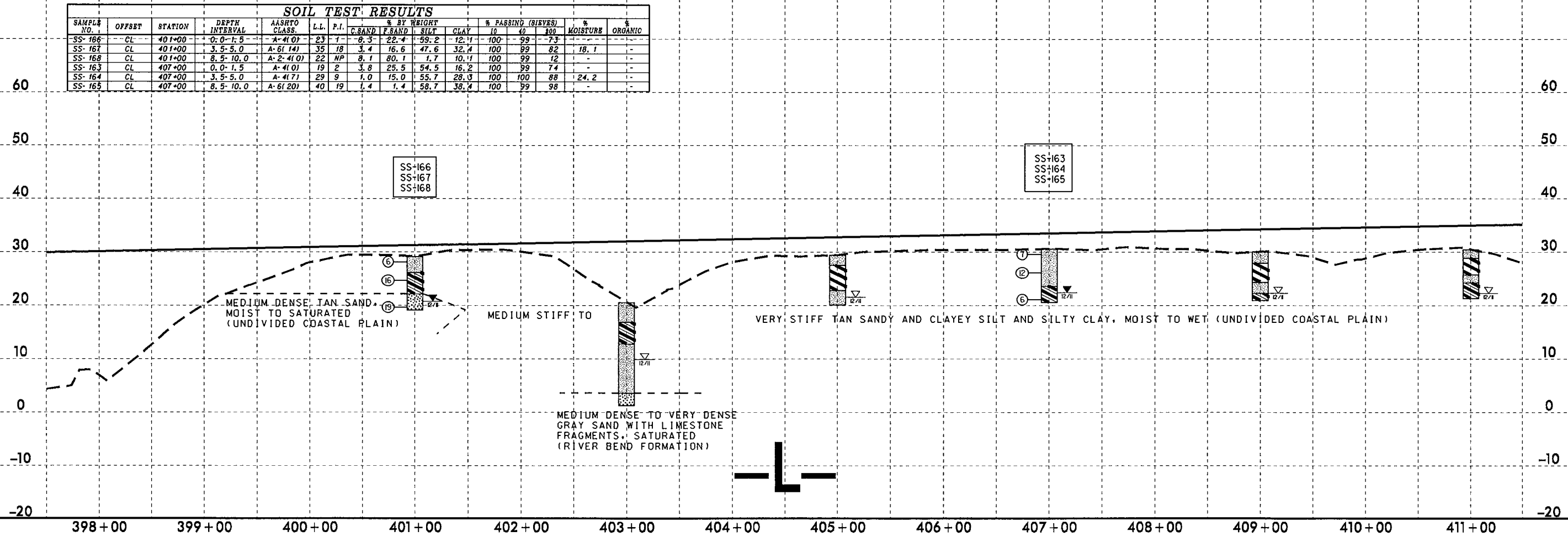
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PROJECT REFERENCE NO.	SHEET NO.
R-2514D	37
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
<b>INCOMPLETE PLANS</b> DO NOT USE FOR ACQUISITION	
<b>PRELIMINARY PLANS</b> DO NOT USE FOR CONSTRUCTION	

SOIL TEST RESULTS															
SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT				% PASSING (SIEVES)			% MOISTURE	% ORGANIC
							C.SAND	F.SAND	SILT	CLAY	10	40	200		
SS-87	CL	385+00	0.0-1.5	A-2-4(0)	23	NP	3.0	76.5	12.5	8.0	100	99	23	-	-
SS-88	CL	385+00	3.5-5.0	A-2-4(0)	24	NP	1.2	86.5	8.2	4.0	100	100	14	-	-
SS-89	CL	385+00	8.5-10.0	A-3(0)	22	NP	48.9	47.9	1.2	2.0	99	87	3	-	-
SS-90	CL	385+00	13.5-15.0	A-1-b(0)	17	NP	57.5	30.3	6.2	6.1	62	42	8	-	-
SS-91	CL	385+00	18.5-20.0	A-1-b(0)	19	NP	43.6	29.5	16.9	10.1	56	37	16	-	-
SS-92	CL	385+00	23.5-25.0	A-1-b(0)	19	NP	44.8	39.8	11.4	4.0	65	50	11	-	-



SOIL TEST RESULTS															
SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT				% PASSING (SIEVES)			% MOISTURE	% ORGANIC
							C.SAND	F.SAND	SILT	CLAY	10	40	200		
SS-166	CL	401+00	0.0-1.5	A-4(0)	23	1	6.3	22.4	59.2	12.1	100	99	7.3	-	-
SS-167	CL	401+00	3.5-5.0	A-6(14)	35	18	3.4	16.6	47.6	32.4	100	89	82	18.1	-
SS-168	CL	401+00	8.5-10.0	A-2-4(0)	22	NP	8.1	80.1	1.7	10.1	100	99	12	-	-
SS-163	CL	407+00	0.0-1.5	A-4(0)	19	2	3.8	25.5	54.5	16.2	100	99	7.4	-	-
SS-164	CL	407+00	3.5-5.0	A-4(7)	29	9	1.0	15.0	55.7	28.3	100	100	88	24.2	-
SS-165	CL	407+00	8.5-10.0	A-6(20)	40	19	1.4	1.4	58.7	38.4	100	99	98	-	-

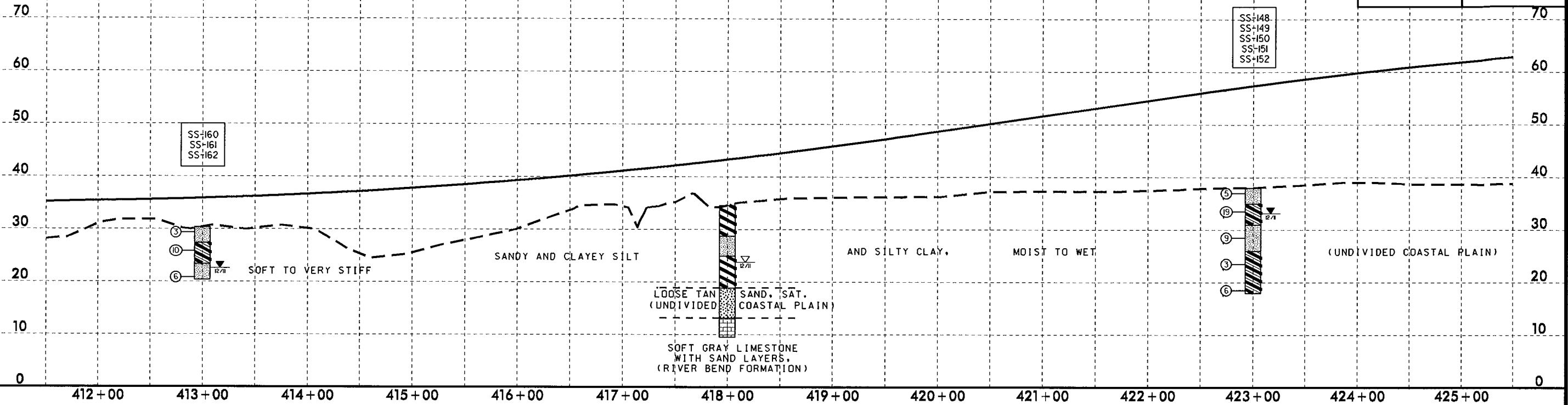




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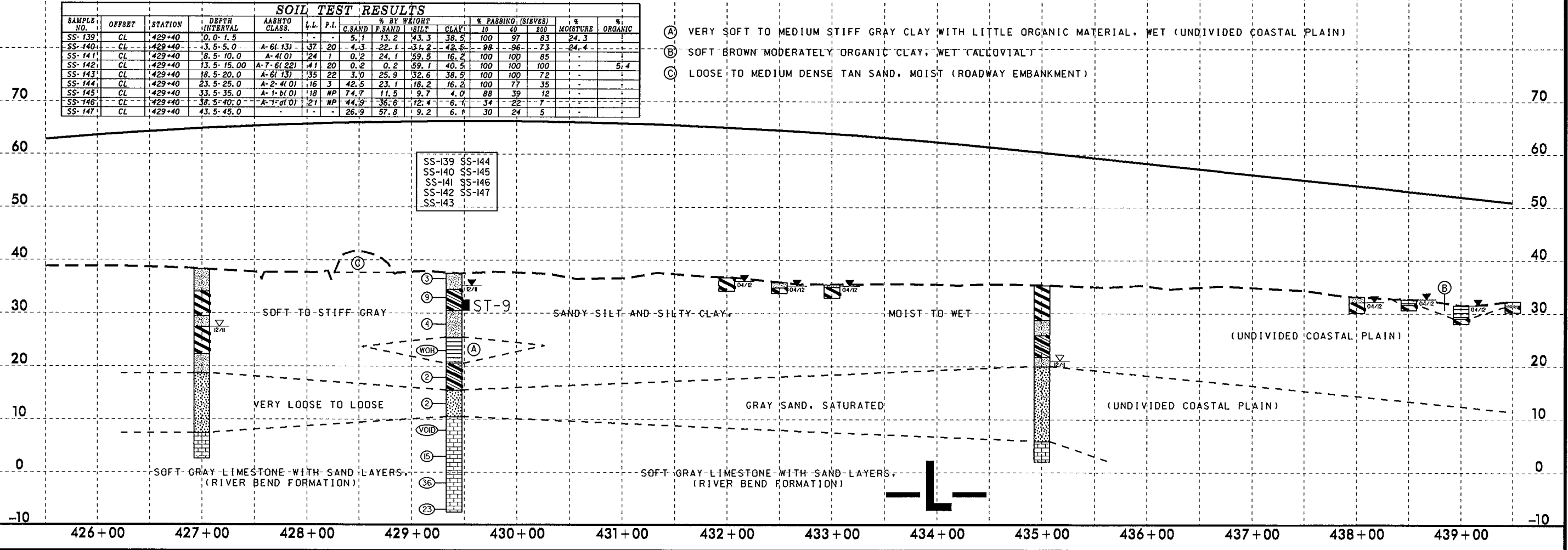
PROJECT REFERENCE NO. <b>R-2514D</b>	SHEET NO. <b>38</b>
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
<b>INCOMPLETE PLANS</b> DO NOT USE FOR ACQUISITION	
<b>PRELIMINARY PLANS</b> DO NOT USE FOR CONSTRUCTION	

SOIL TEST RESULTS														
SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT				% PASSING (SIEVES)		% MOISTURE	% ORGANIC
							C.SAND	F.SAND	SILT	CLAY	10	40		
SS-160	CL	413+00	0.0-1.5	A-4(0)	22	1	71.1	33.0	145.8	14.2	100	98	63	-
SS-161	CL	413+00	3.5-5.0	A-6(9)	31	15	3.2	25.7	38.7	34.5	100	99	74	21.5
SS-162	CL	413+00	8.5-10.0	A-4(8)	31	8	0.4	2.4	172.9	24.1	100	100	98	-
SS-148	CL	423+00	0.0-1.5	A-4(0)	18	2	8.7	42.1	31.0	18.2	100	97	51	18.8
SS-149	CL	423+00	3.5-5.0	A-6(7)	30	14	3.6	28.9	35.1	32.4	100	99	70	18.2
SS-150	CL	423+00	8.5-10.0	A-4(1)	26	4	1.6	34.6	41.6	22.2	100	100	72	-
SS-151	CL	423+00	13.5-15.0	A-6(14)	36	18	21.6	74.0	47.0	36.4	100	99	84	-
SS-152	CL	423+00	18.5-20.0	A-6(11)	32	15	6.5	13.3	47.8	32.3	100	97	81	-



SOIL TEST RESULTS														
SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT				% PASSING (SIEVES)		% MOISTURE	% ORGANIC
							C.SAND	F.SAND	SILT	CLAY	10	40		
SS-139	CL	429+00	10.0-1.5	-	-	-	5.1	13.2	43.3	38.5	100	97	83	24.3
SS-140	CL	429+00	3.5-5.0	A-6(13)	37	20	4.3	22.1	33.2	42.8	100	96	73	24.4
SS-141	CL	429+00	8.5-10.0	A-4(0)	24	1	0.2	24.1	59.5	16.2	100	100	85	-
SS-142	CL	429+00	13.5-15.0	A-7(6/22)	41	20	0.2	0.2	59.1	40.5	100	100	100	5.4
SS-143	CL	429+00	18.5-20.0	A-6(13)	35	22	3.0	25.9	32.6	38.5	100	100	72	-
SS-144	CL	429+00	23.5-25.0	A-2(4/0)	16	3	42.5	23.1	18.2	16.2	100	77	35	-
SS-145	CL	429+00	33.5-35.0	A-1(0/0)	18	NP	74.7	11.5	9.7	4.0	88	39	12	-
SS-146	CL	429+00	38.5-40.0	A-1(0/0)	21	NP	44.9	38.6	12.4	6.1	34	22	7	-
SS-147	CL	429+00	43.5-45.0	-	-	-	26.9	57.8	9.2	6.1	30	24	5	-

- (A) VERY SOFT TO MEDIUM STIFF GRAY CLAY WITH LITTLE ORGANIC MATERIAL, WET (UNDIVIDED COASTAL PLAIN)
- (B) SOFT BROWN MODERATELY ORGANIC CLAY, WET (ALLOUVIAL)
- (C) LOOSE TO MEDIUM DENSE TAN SAND, MOIST (ROADWAY EMBANKMENT)

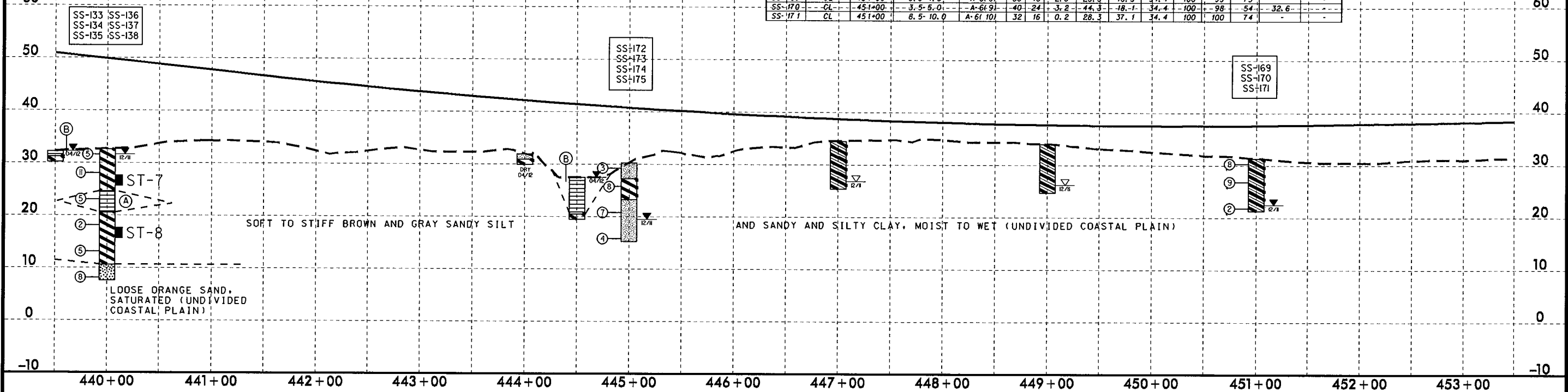


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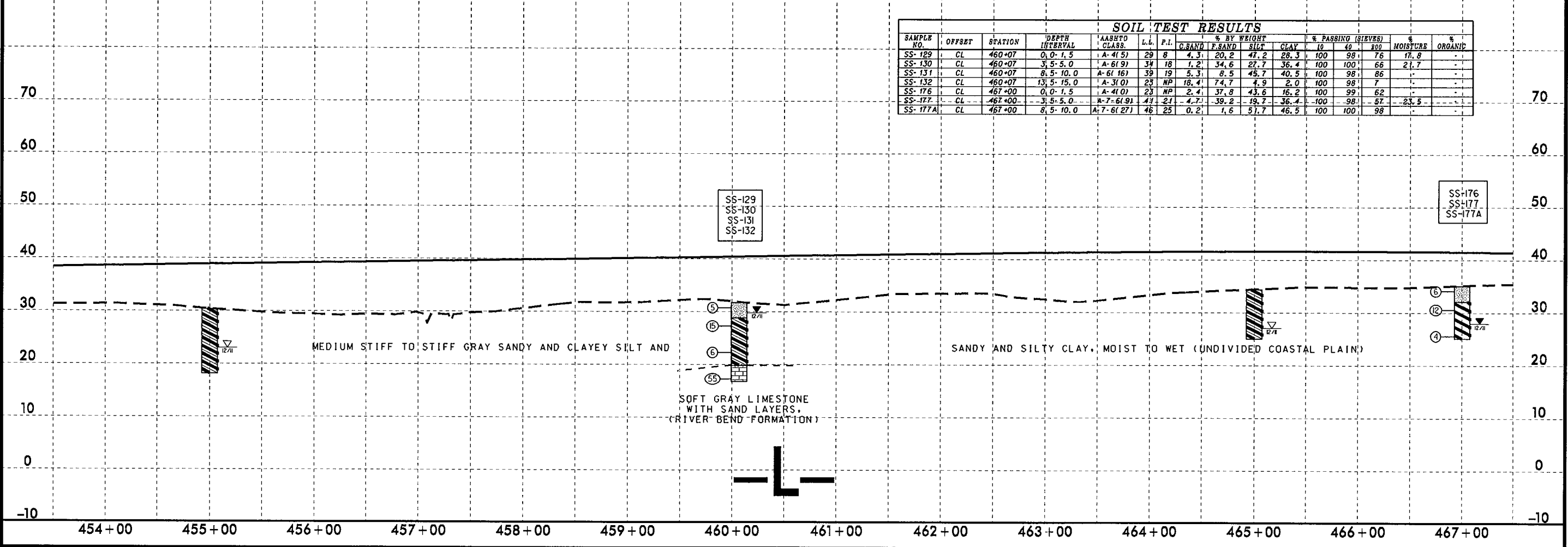
- (A) MEDIUM STIFF GRAY CLAY WITH LITTLE ORGANIC MATERIAL, WET (UNDIVIDED COASTAL PLAIN)
- (B) SOFT BROWN MODERATELY ORGANIC CLAY, WET (ALLUVIAL)

PROJECT REFERENCE NO. <b>R-2514D</b>	SHEET NO. <b>39</b>
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
<p><b>INCOMPLETE PLANS</b> DO NOT USE FOR ACQUISITION</p> <p><b>PRELIMINARY PLANS</b> DO NOT USE FOR CONSTRUCTION</p>	

SOIL TEST RESULTS															
SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT			% PASSING (SIEVES)			% MOISTURE	% ORGANIC	
							C.SAND	F.SAND	SILT	CLAY	10	40			200
SS-133	CL	440+00	0.0-1.5	A-7-5(20)	54	17	5.4	6.7	39.3	50.6	100	98	90	58.7	-
SS-134	CL	440+00	3.5-5.0	A-7-6(30)	51	31	0.6	8.7	30.0	60.7	100	100	91	29.0	-
SS-135	CL	440+00	8.5-10.0	A-7-6(20)	42	23	1.4	11.5	24.3	62.8	100	99	87	-	7.4
SS-136	CL	440+00	13.5-15.0	A-7-6(17)	41	28	7.1	23.5	22.9	46.6	100	97	70	-	-
SS-137	CL	440+00	18.5-20.0	A-7-6(24)	46	31	0.8	19.6	31.0	48.6	100	100	81	-	-
SS-138	CL	440+00	23.5-25.0	A-2-6(0)	30	16	81.2	4.5	6.3	18.1	100	31	15	-	-
SS-172	CL	445+00	0.0-1.5	A-4(3)	27	8	2.8	34.6	38.3	24.3	100	99	63	-	-
SS-173	CL	445+00	3.5-5.0	A-7-6(18)	46	26	2.2	25.5	23.8	48.5	100	99	73	29.4	-
SS-174	CL	445+00	8.5-10.0	A-4(0)	21	4	5.1	58.0	16.7	20.2	100	98	38	-	-
SS-175	CL	445+00	13.5-15.0	A-4(0)	24	6	1.0	53.0	23.8	22.2	100	100	48	-	-
SS-169	CL	451+00	0.0-1.5	A-6(8)	30	13	2.0	23.3	40.3	34.4	100	99	75	-	-
SS-170	CL	451+00	3.5-5.0	A-6(9)	40	24	3.2	44.3	18.1	34.4	100	98	54	32.6	-
SS-171	CL	451+00	8.5-10.0	A-6(10)	32	16	0.2	28.3	37.1	34.4	100	100	74	-	-



SOIL TEST RESULTS															
SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT			% PASSING (SIEVES)			% MOISTURE	% ORGANIC	
							C.SAND	F.SAND	SILT	CLAY	10	40			200
SS-129	CL	460+00	0.0-1.5	A-4(5)	29	8	4.3	20.2	47.2	28.3	100	98	76	17.8	-
SS-130	CL	460+00	3.5-5.0	A-6(9)	34	18	1.2	34.6	27.7	36.4	100	100	66	21.7	-
SS-131	CL	460+00	8.5-10.0	A-6(16)	39	19	5.3	8.5	45.9	40.5	100	98	86	-	-
SS-132	CL	460+00	13.5-15.0	A-3(0)	23	NP	16.4	74.7	4.9	2.0	100	98	7	-	-
SS-176	CL	467+00	0.0-1.5	A-4(0)	23	NP	2.4	37.8	43.6	16.2	100	99	62	-	-
SS-177	CL	467+00	3.5-5.0	A-7-6(9)	41	21	4.7	39.2	19.7	36.4	100	98	57	23.5	-
SS-177A	CL	467+00	8.5-10.0	A-7-6(27)	46	25	0.2	1.6	51.7	46.5	100	100	98	-	-



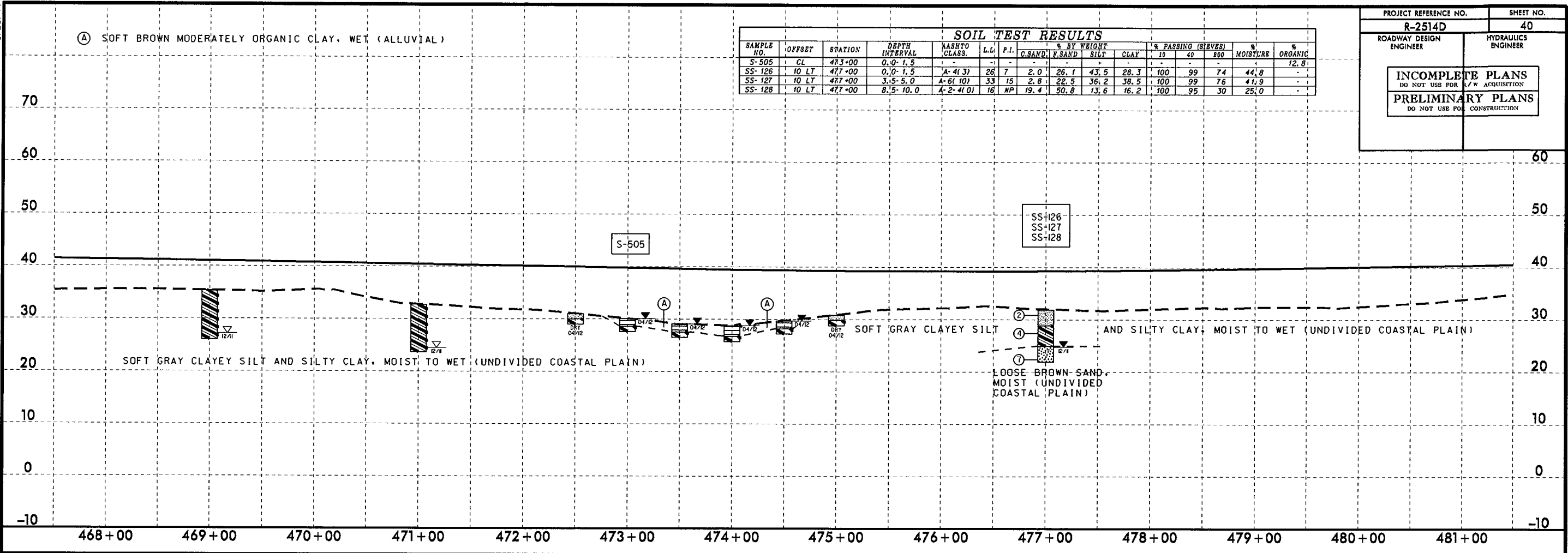
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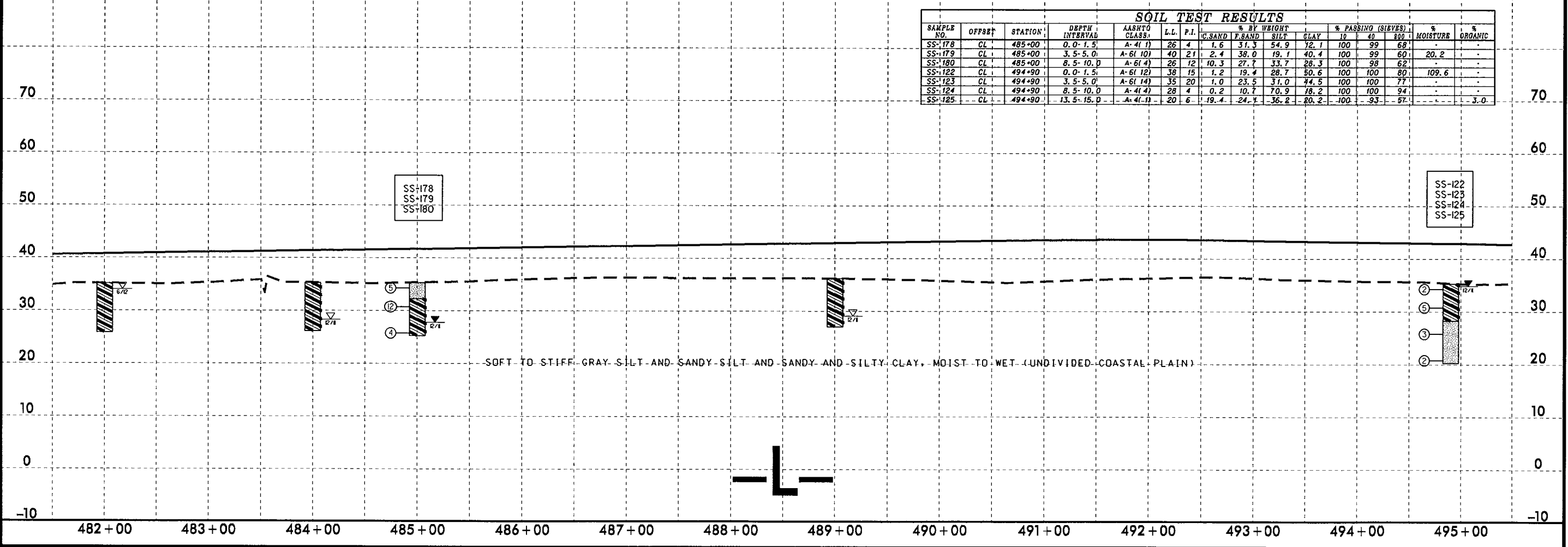
PROJECT REFERENCE NO.	SHEET NO.
R-2514D	40
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
<b>INCOMPLETE PLANS</b> DO NOT USE FOR ACQUISITION	
<b>PRELIMINARY PLANS</b> DO NOT USE FOR CONSTRUCTION	

(A) SOFT BROWN MODERATELY ORGANIC CLAY, WET (ALLUVIAL)

SOIL TEST RESULTS															
SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	ASHFORD CLASS.	L.L.	P.I.	% BY WEIGHT				% PASSING (SIEVES)			% MOISTURE	% ORGANIC
							C.SAND	F.SAND	SILT	CLAY	#10	#40	#200		
S-505	CL	473+00	0.0-1.5	-	-	-	-	-	-	-	-	-	-	-	-
SS-126	10 LT	477+00	0.0-1.5	A-4(3)	26	7	2.0	26.1	43.5	28.3	100	99	74	44.8	-
SS-127	10 LT	477+00	3.5-5.0	A-6(10)	33	15	2.8	22.5	36.2	38.5	100	99	76	41.9	-
SS-128	10 LT	477+00	8.5-10.0	A-2-4(0)	16	NP	19.4	50.8	13.6	16.2	100	95	30	25.0	-



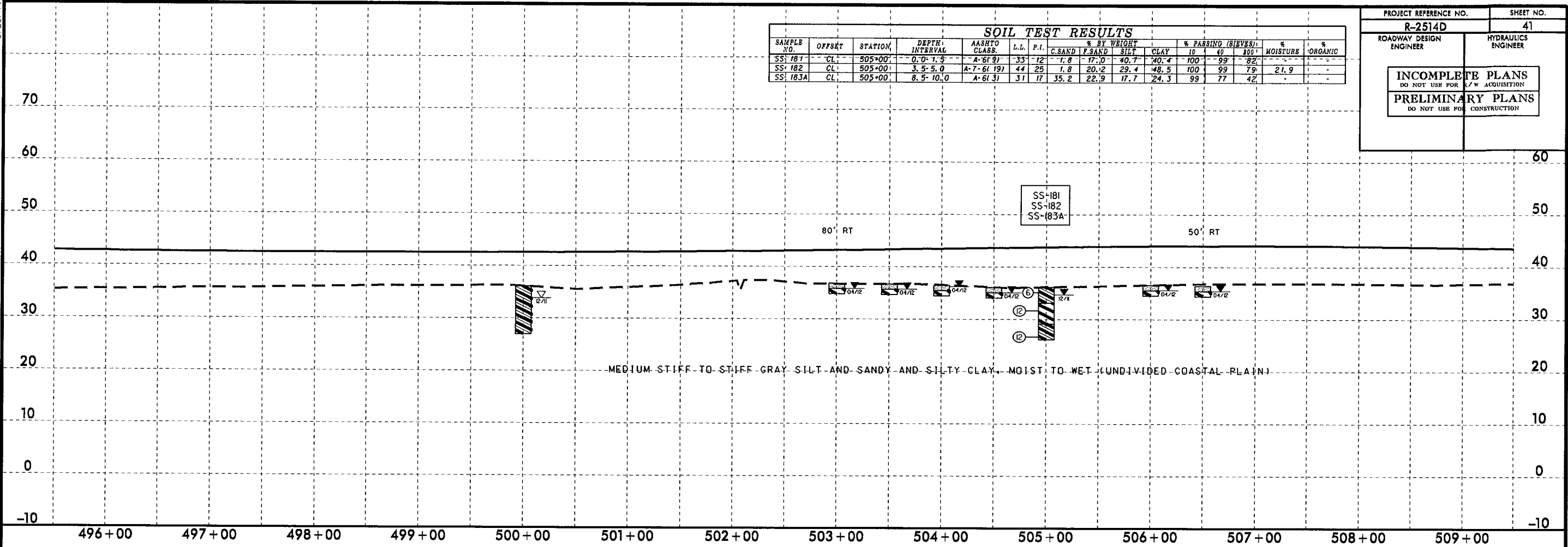
SOIL TEST RESULTS															
SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	ASHFORD CLASS.	L.L.	P.I.	% BY WEIGHT				% PASSING (SIEVES)			% MOISTURE	% ORGANIC
							C.SAND	F.SAND	SILT	CLAY	#10	#40	#200		
SS-178	CL	485+00	0.0-1.5	A-4(1)	26	4	1.6	31.3	54.9	12.1	100	99	68	-	-
SS-179	CL	485+00	3.5-5.0	A-6(10)	40	21	2.4	38.0	19.1	40.4	100	99	60	20.2	-
SS-180	CL	485+00	8.5-10.0	A-6(4)	26	12	10.3	27.7	33.7	28.3	100	98	62	-	-
SS-122	CL	494+90	0.0-1.5	A-6(12)	38	15	1.2	19.4	28.7	50.6	100	100	80	109.6	-
SS-123	CL	494+90	3.5-5.0	A-6(14)	35	20	1.0	23.5	31.0	44.5	100	100	77	-	-
SS-124	CL	494+90	8.5-10.0	A-4(4)	28	4	0.2	10.7	70.9	18.2	100	100	94	-	-
SS-125	CL	494+90	13.5-15.0	A-4(1)	20	6	19.4	24.4	36.2	20.2	100	93	67	-	3.0



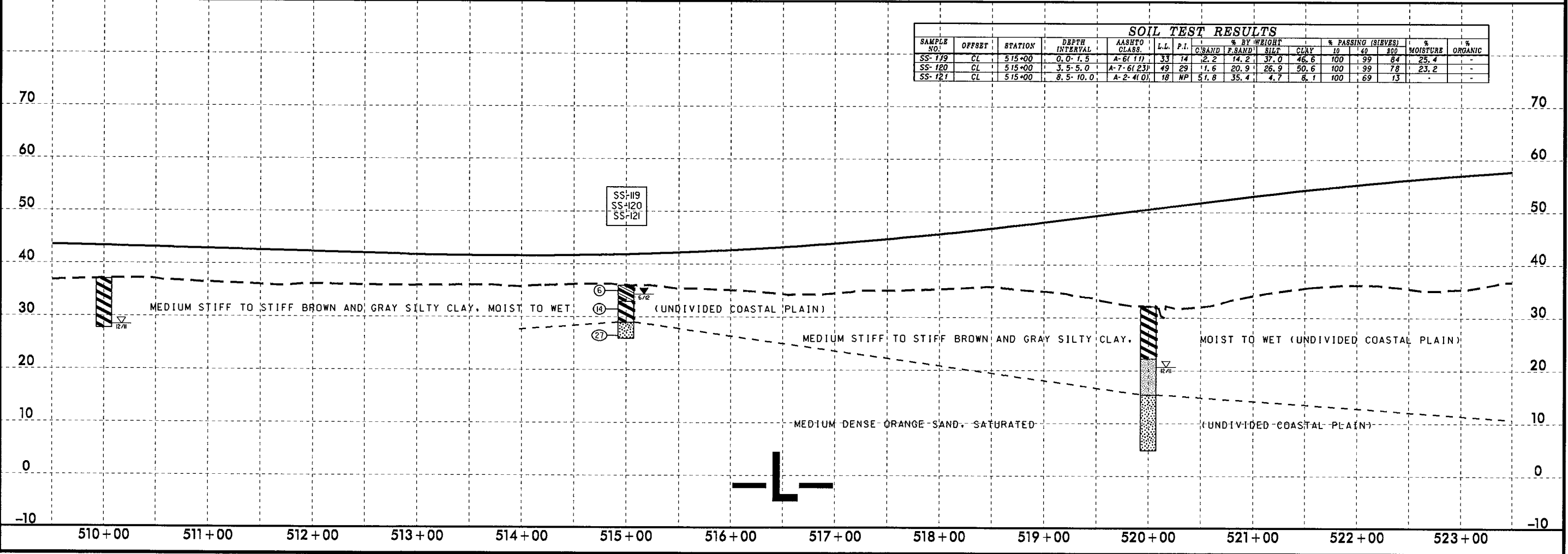
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PROJECT REFERENCE NO.	SHEET NO.
R-2514D	41
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
<b>INCOMPLETE PLANS</b> DO NOT USE FOR ACQUISITION	
<b>PRELIMINARY PLANS</b> DO NOT USE FOR CONSTRUCTION	

SOIL TEST RESULTS															
SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT			% PASSING (SIEVES)			% MOISTURE	% ORGANIC	
							C.SAND	F.SAND	SILT	CLAY	10	40	200		
SS-181	CL	505+00	0.0-1.5	A-6(9)	33	12	1.8	17.0	40.7	40.4	100	99	82	-	-
SS-182	CL	505+00	3.5-5.0	A-7-6(19)	44	25	1.8	20.2	29.4	48.5	100	99	79	21.9	-
SS-183A	CL	505+00	8.5-10.0	A-6(3)	31	17	35.2	22.9	17.7	24.3	99	77	42	-	-



SOIL TEST RESULTS															
SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT			% PASSING (SIEVES)			% MOISTURE	% ORGANIC	
							C.SAND	F.SAND	SILT	CLAY	10	40	200		
SS-119	CL	515+00	0.0-1.5	A-6(11)	33	14	2.2	14.2	37.0	46.6	100	99	84	25.4	-
SS-120	CL	515+00	3.5-5.0	A-7-6(23)	49	29	1.6	20.9	26.9	50.6	100	99	78	23.2	-
SS-121	CL	515+00	8.5-10.0	A-2-4(0)	18	NP	51.8	35.4	4.7	8.1	100	69	13	-	-



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SOIL TEST RESULTS															
SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT			% PASSING (SIEVES)			% MOISTURE	% ORGANIC	
							C.SAND	F.SAND	SILT	10	40	200			
SS-110	40 RT	525+00	0.0-1.5	A-6(14)	34	16	1.0	9.3	41.1	48.4	100	100	90	25.6	-
SS-111	40 RT	525+00	3.5-5.0	A-6(10)	35	17	0.8	29.5	29.4	40.4	100	100	70	25.1	-
SS-112	40 RT	525+00	8.5-10.0	A-6(12)	32	12	1.2	1.8	64.6	32.4	100	99	97	-	-
SS-113	40 RT	525+00	13.5-15.0	A-6(14)	33	14	0.2	1.0	66.4	32.4	100	100	99	-	-
SS-114	40 RT	525+00	18.5-20.0	A-4(3)	26	5	8.7	4.0	89.0	18.2	100	96	87	-	-
SS-115	40 RT	525+00	23.5-25.0	-	-	-	-	-	-	-	-	-	-	31.5	-
SS-116	40 RT	525+00	28.5-30.0	A-3(O)	23	NP	50.6	42.5	2.8	4.0	100	81	7	-	-
SS-117	40 RT	525+00	33.5-35.0	-	-	-	-	-	-	-	-	-	-	2.9	-
SS-118	40 RT	525+00	38.5-40.0	A-3(O)	20	NP	62.1	33.2	2.6	2.1	100	81	5	-	-

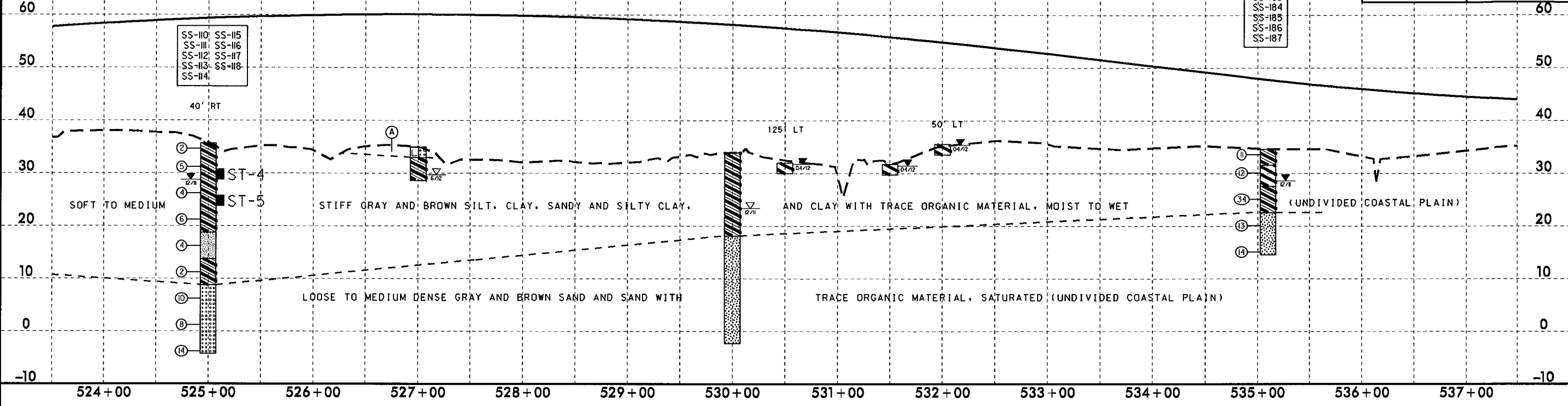
SOIL TEST RESULTS															
SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT			% PASSING (SIEVES)			% MOISTURE	% ORGANIC	
							C.SAND	F.SAND	SILT	10	40	200			
SS-183	CL	535+10	0.0-1.5	A-6(13)	38	15	0.8	12.7	44.0	42.5	100	100	87	-	-
SS-184	CL	535+10	3.5-5.0	A-7-6(16)	45	24	3.8	26.5	29.2	40.4	100	99	70	-	-
SS-185	CL	535+10	8.5-10.0	A-6(7)	28	14	11.5	22.2	29.8	36.4	100	96	67	-	-
SS-186	CL	535+10	13.5-15.0	A-2-4(O)	22	4	12.0	61.2	8.6	18.2	80	76	22	-	-
SS-187	CL	535+10	18.5-20.0	A-2-4(O)	20	NP	48.3	19.4	23.2	9.1	88	59	29	-	-

PROJECT REFERENCE NO. **R-2514D** SHEET NO. **42**

ROADWAY DESIGN ENGINEER \_\_\_\_\_ HYDRAULICS ENGINEER \_\_\_\_\_

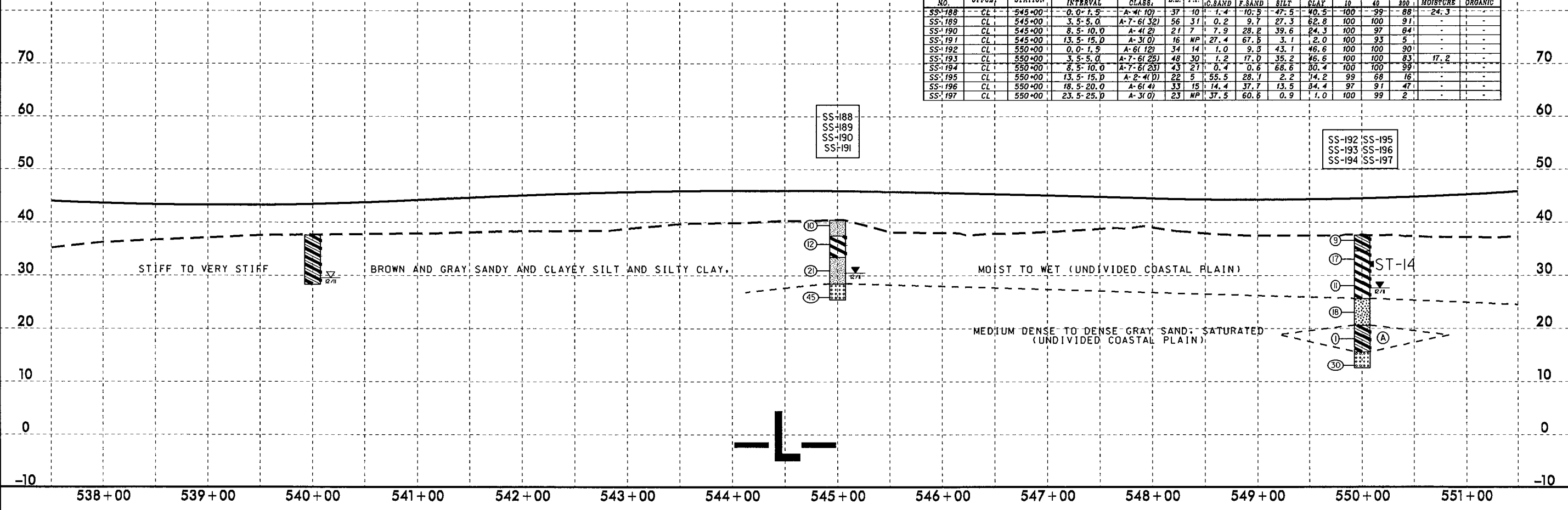
**INCOMPLETE PLANS**  
DO NOT USE FOR A/W ACQUISITION

**PRELIMINARY PLANS**  
DO NOT USE FOR CONSTRUCTION



(A) VERY SOFT GRAY SANDY SILT, WET (UNDIVIDED COASTAL PLAIN)

SOIL TEST RESULTS															
SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT			% PASSING (SIEVES)			% MOISTURE	% ORGANIC	
							C.SAND	F.SAND	SILT	10	40	200			
SS-188	CL	545+00	0.0-1.5	A-4(10)	37	10	1.4	10.5	47.5	40.5	100	99	88	24.3	-
SS-189	CL	545+00	3.5-5.0	A-7-6(32)	56	31	0.2	9.7	27.3	62.8	100	100	91	-	-
SS-190	CL	545+00	8.5-10.0	A-4(2)	21	7	7.9	28.2	39.6	24.3	100	97	64	-	-
SS-191	CL	545+00	13.5-15.0	A-3(O)	16	NP	27.4	67.5	3.1	2.0	100	93	5	-	-
SS-192	CL	550+00	0.0-1.5	A-6(12)	34	14	1.0	9.3	43.1	46.6	100	100	90	-	-
SS-193	CL	550+00	3.5-5.0	A-7-6(25)	48	30	1.2	17.0	35.2	46.6	100	100	83	17.2	-
SS-194	CL	550+00	8.5-10.0	A-7-6(23)	43	21	0.4	0.6	68.6	30.4	100	100	99	-	-
SS-195	CL	550+00	13.5-15.0	A-2-4(O)	22	5	55.5	28.1	2.2	14.2	99	68	16	-	-
SS-196	CL	550+00	18.5-20.0	A-6(4)	33	15	14.4	37.7	13.5	34.4	97	91	47	-	-
SS-197	CL	550+00	23.5-25.0	A-3(O)	23	NP	37.5	60.6	0.9	1.0	100	99	2	-	-



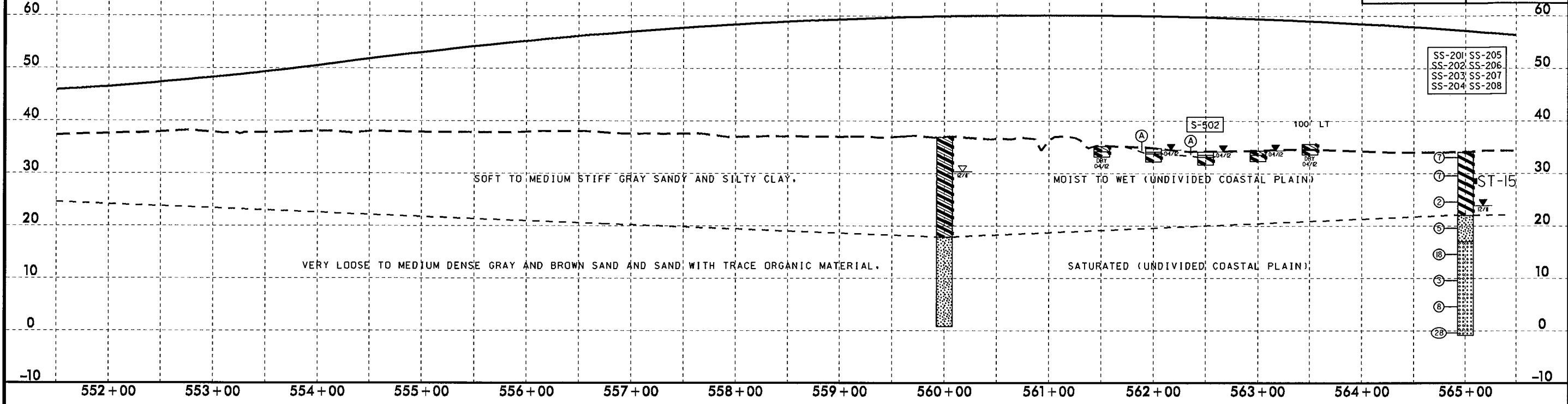
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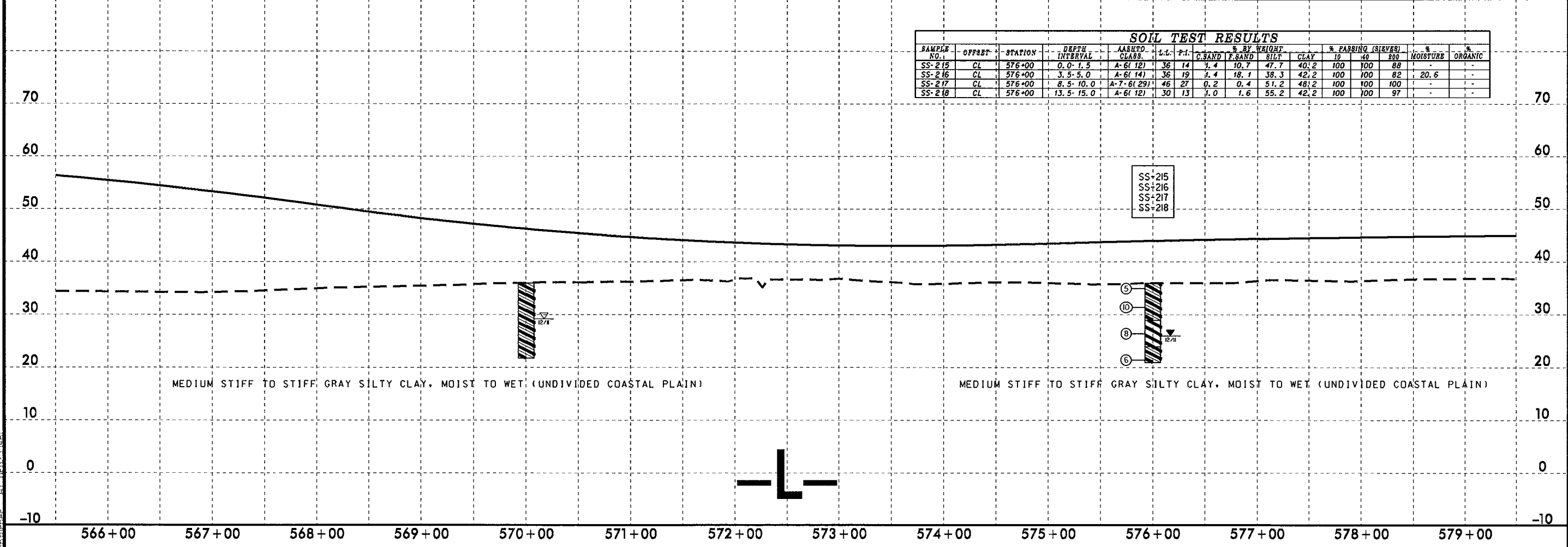
(A) SOFT BROWN CLAY WITH LITTLE ORGANIC MATERIAL, MOIST TO WET (ALLUVIAL)

SOIL TEST RESULTS															
SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	ASHUTO CLASS.	L.L.	P.I.	% BY WEIGHT				% PASSING (SIEVES)			% MOISTURE	% ORGANIC
							C.SAND	F.SAND	SILT	CLAY	#10	#40	#200		
S-502	CL	562+50	0.0-1.0	-	-	-	4.3	4.9	38.2	52.7	98	96	89	-	10.9
SS-201	CL	565+00	0.0-1.5	A-7-5(23)	56	20	0.4	1.0	31.7	66.9	98	97	96	34.7	-
SS-202	CL	565+00	3.5-5.0	A-7-6(31)	54	28	0.4	1.0	31.7	66.9	98	97	96	34.7	-
SS-203	CL	565+00	8.5-10.0	A-7-6(11)	42	21	16.8	22.3	21.4	40.5	99	91	62	-	-
SS-204	CL	565+00	13.5-15.0	A-2-4(0)	19	NP	33.6	41.8	11.3	13.2	100	87	25	-	2.5
SS-205	CL	565+00	18.5-20.0	A-3(0)	21	NP	72.7	24.3	0.9	2.0	97	59	3	-	-
SS-206	CL	565+00	23.5-25.0	A-3(0)	19	NP	84.2	11.1	0.6	4.1	100	69	5	-	-
SS-207	CL	565+00	28.5-30.0	A-3(0)	17	NP	53.8	37.9	1.2	7.1	92	76	8	-	-
SS-208	CL	565+00	33.5-35.0	A-3(0)	23	NP	41.4	55.2	1.3	21.0	100	98	3	-	-

PROJECT REFERENCE NO. <b>R-2514D</b>	SHEET NO. <b>43</b>
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
<b>INCOMPLETE PLANS</b> DO NOT USE FOR ACQUISITION	
<b>PRELIMINARY PLANS</b> DO NOT USE FOR CONSTRUCTION	



SOIL TEST RESULTS															
SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	ASHUTO CLASS.	L.L.	P.I.	% BY WEIGHT				% PASSING (SIEVES)			% MOISTURE	% ORGANIC
							C.SAND	F.SAND	SILT	CLAY	#10	#40	#200		
SS-215	CL	576+00	0.0-1.5	A-6(12)	36	14	1.4	10.7	47.7	40.2	100	100	88	-	-
SS-216	CL	576+00	3.5-5.0	A-6(14)	36	19	1.4	18.1	38.3	42.2	100	100	82	20.6	-
SS-217	CL	576+00	8.5-10.0	A-7-6(29)	46	27	0.2	0.4	51.2	48.2	100	100	100	-	-
SS-218	CL	576+00	13.5-15.0	A-6(12)	30	13	1.0	1.6	55.2	42.2	100	100	97	-	-



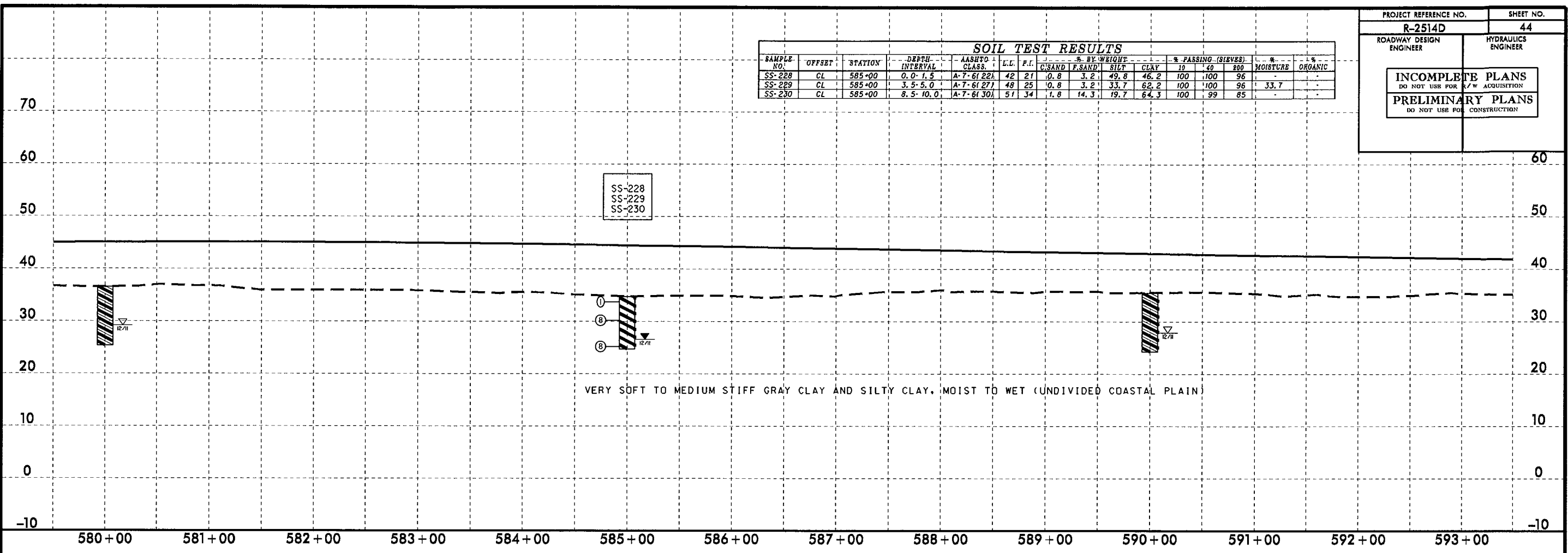
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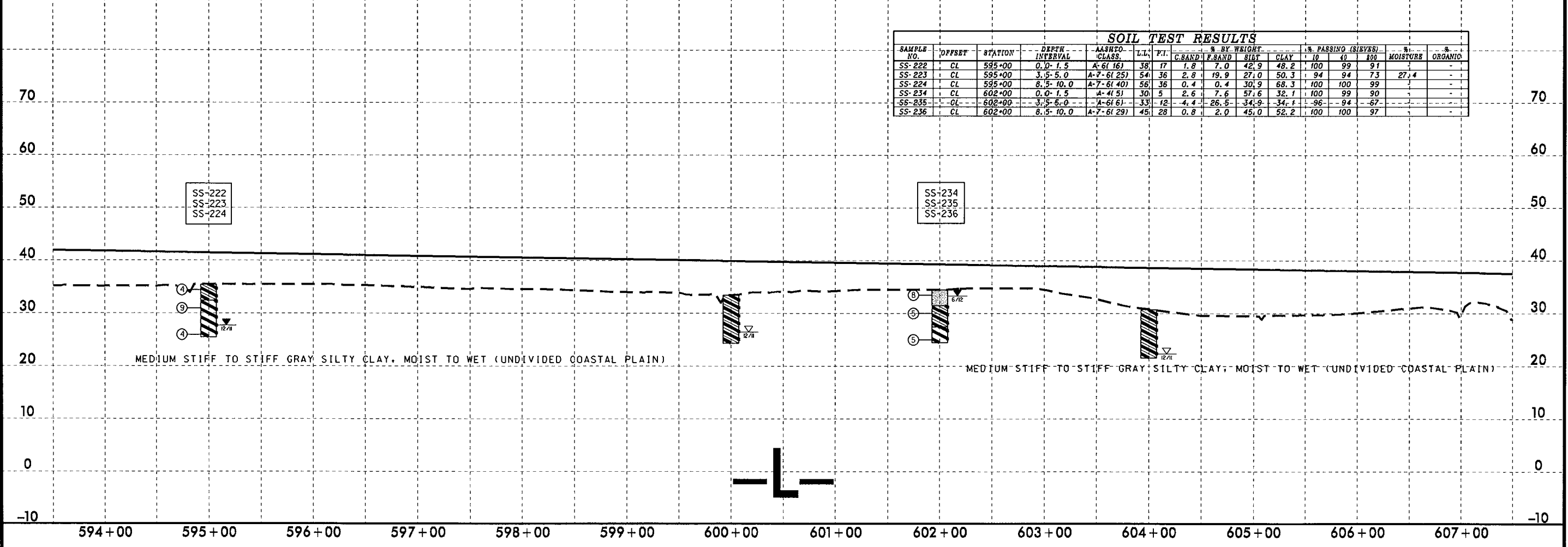
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PROJECT REFERENCE NO.	SHEET NO.
R-2514D	44
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
<b>INCOMPLETE PLANS</b> DO NOT USE FOR ACQUISITION	
<b>PRELIMINARY PLANS</b> DO NOT USE FOR CONSTRUCTION	

SOIL TEST RESULTS														
SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT			% PASSING (SIEVES)			MOISTURE	ORGANIC
							C.SAND	F.SAND	SILT	CLAY	10	40		
SS-228	CL	585+00	0.0-1.5	A-7-6(22)	42	21	0.8	3.2	49.8	46.2	100	100	96	-
SS-229	CL	585+00	3.5-5.0	A-7-6(27)	48	25	0.8	3.2	33.7	62.2	100	100	96	33.7
SS-230	CL	585+00	8.5-10.0	A-7-6(30)	51	34	1.8	14.3	19.7	64.3	100	99	85	-



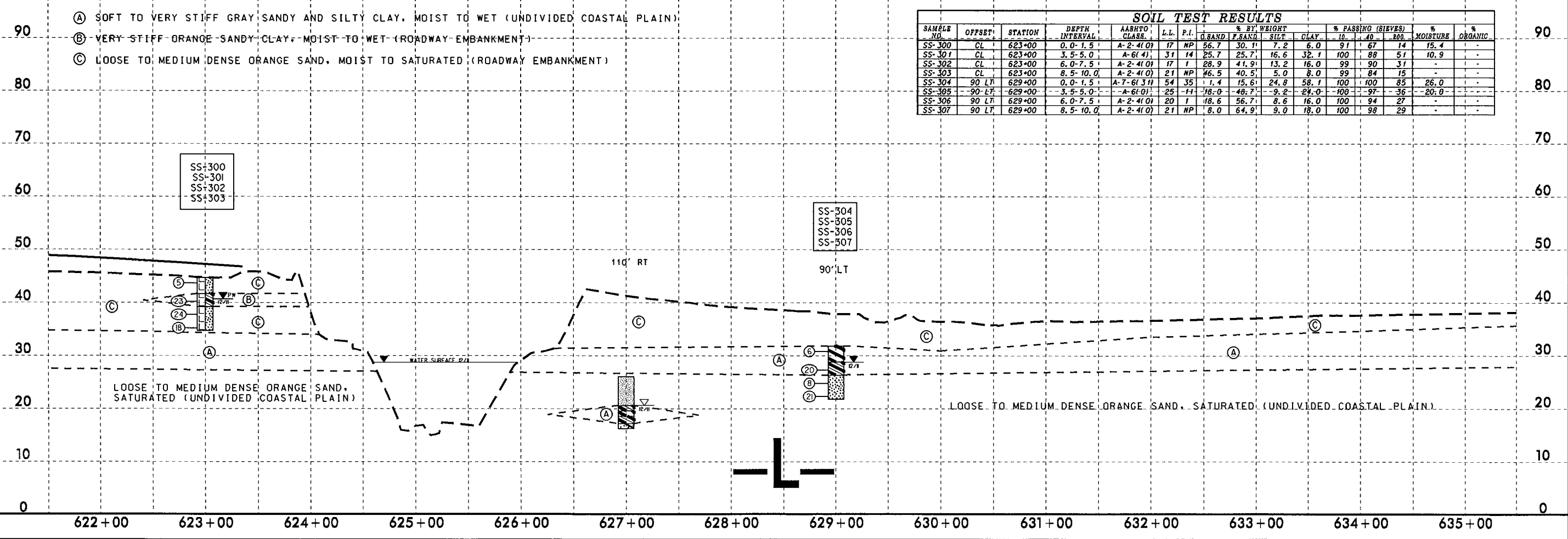
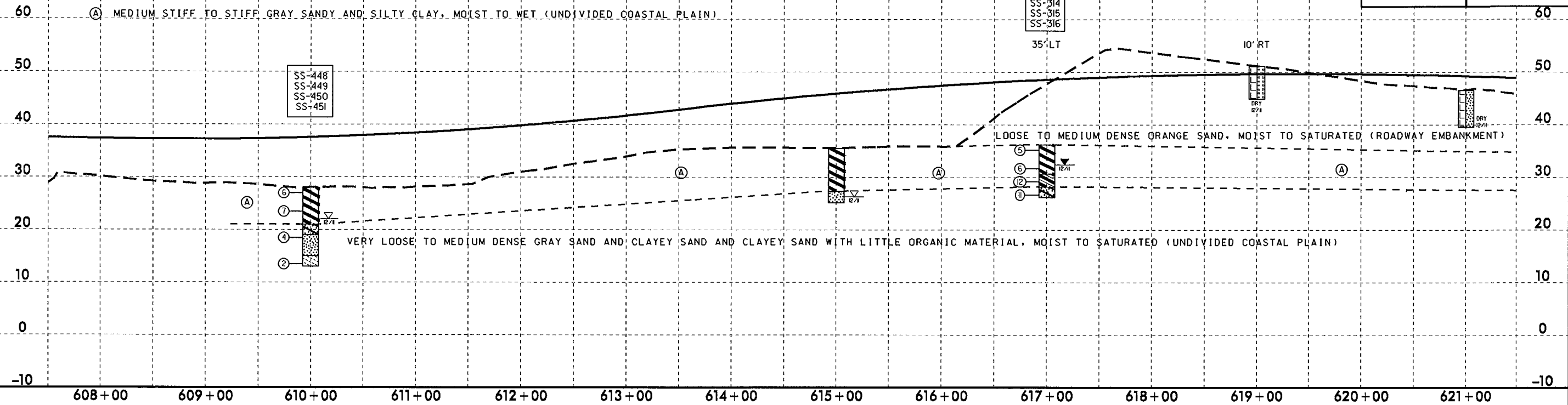
SOIL TEST RESULTS														
SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT			% PASSING (SIEVES)			MOISTURE	ORGANIC
							C.SAND	F.SAND	SILT	CLAY	10	40		
SS-222	CL	595+00	0.0-1.5	A-6(16)	38	17	1.8	7.0	42.9	48.2	100	99	91	-
SS-223	CL	595+00	3.5-5.0	A-7-6(25)	54	36	2.8	19.9	27.0	50.3	94	94	73	27.4
SS-224	CL	595+00	8.5-10.0	A-7-6(40)	56	36	0.4	0.4	30.9	68.3	100	100	99	-
SS-234	CL	602+00	0.0-1.5	A-4(5)	30	5	2.6	7.6	57.6	32.1	100	99	90	-
SS-235	CL	602+00	3.5-5.0	A-6(6)	33	12	4.4	26.5	34.9	34.1	96	94	67	-
SS-236	CL	602+00	8.5-10.0	A-7-6(29)	45	28	0.8	2.0	45.0	52.2	100	100	97	-



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PROJECT REFERENCE NO. <b>R-2514D</b>	SHEET NO. <b>45</b>
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
<b>INCOMPLETE PLANS</b> DO NOT USE FOR A/W ACQUISITION	
<b>PRELIMINARY PLANS</b> DO NOT USE FOR CONSTRUCTION	

SOIL TEST RESULTS															
SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT			% PASSING (SIEVES)			% MOISTURE	% ORGANIC	
							G.SAND	F.SAND	SILT	CLAY	10	40			200
SS-448	CL	610+00	0.0-1.5	A-7-6(32)	57	28	1.8	2.4	31.4	64.4	100	99	96	-	-
SS-449	CL	610+00	3.5-5.0	A-7-6(36)	57	32	0.8	2.0	32.8	64.4	100	100	98	-	-
SS-450	CL	610+00	8.5-10.0	A-2-6(1)	29	15	51.5	18.9	9.5	20.1	100	80	30	-	-
SS-451	CL	610+00	13.5-15.0	A-2-6(1)	29	13	31.1	35.5	5.2	28.2	100	93	34	-	-
SS-313	35'LT	617+00	0.0-1.5	A-7-6(32)	53	34	3.6	11.6	28.7	56.1	100	98	89	24.7	-
SS-314	35'LT	617+00	3.5-5.0	A-7-6(19)	42	24	6.6	14.0	31.3	48.1	100	98	82	-	-
SS-315	35'LT	617+00	6.0-7.5	A-6(12)	38	21	10.8	22.0	21.0	46.1	100	96	69	-	-
SS-316	35'LT	617+00	8.5-10.0	A-2-6(0)	27	11	23.8	44.1	8.0	24.0	100	91	34	-	-



SOIL TEST RESULTS															
SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT			% PASSING (SIEVES)			% MOISTURE	% ORGANIC	
							G.SAND	F.SAND	SILT	CLAY	10	40			200
SS-300	CL	623+00	0.0-1.5	A-2-4(0)	17	NP	56.7	30.7	7.2	6.0	91	67	14	15.4	-
SS-301	CL	623+00	3.5-5.0	A-6(4)	31	14	25.7	25.7	16.6	32.1	100	88	51	10.9	-
SS-302	CL	623+00	6.0-7.5	A-2-4(0)	17	1	28.9	41.9	13.2	16.0	99	90	31	-	-
SS-303	CL	623+00	8.5-10.0	A-2-4(0)	21	NP	46.5	40.5	5.0	8.0	99	84	15	-	-
SS-304	90'LT	629+00	0.0-1.5	A-7-6(31)	54	35	1.4	15.6	24.8	58.1	100	100	85	26.0	-
SS-305	90'LT	629+00	3.5-5.0	A-6(0)	25	11	18.0	48.7	9.2	24.0	100	97	36	20.0	-
SS-306	90'LT	629+00	6.0-7.5	A-2-4(0)	20	1	18.6	56.7	8.6	16.0	100	94	27	-	-
SS-307	90'LT	629+00	8.5-10.0	A-2-4(0)	21	NP	8.0	64.9	9.0	18.0	100	98	29	-	-



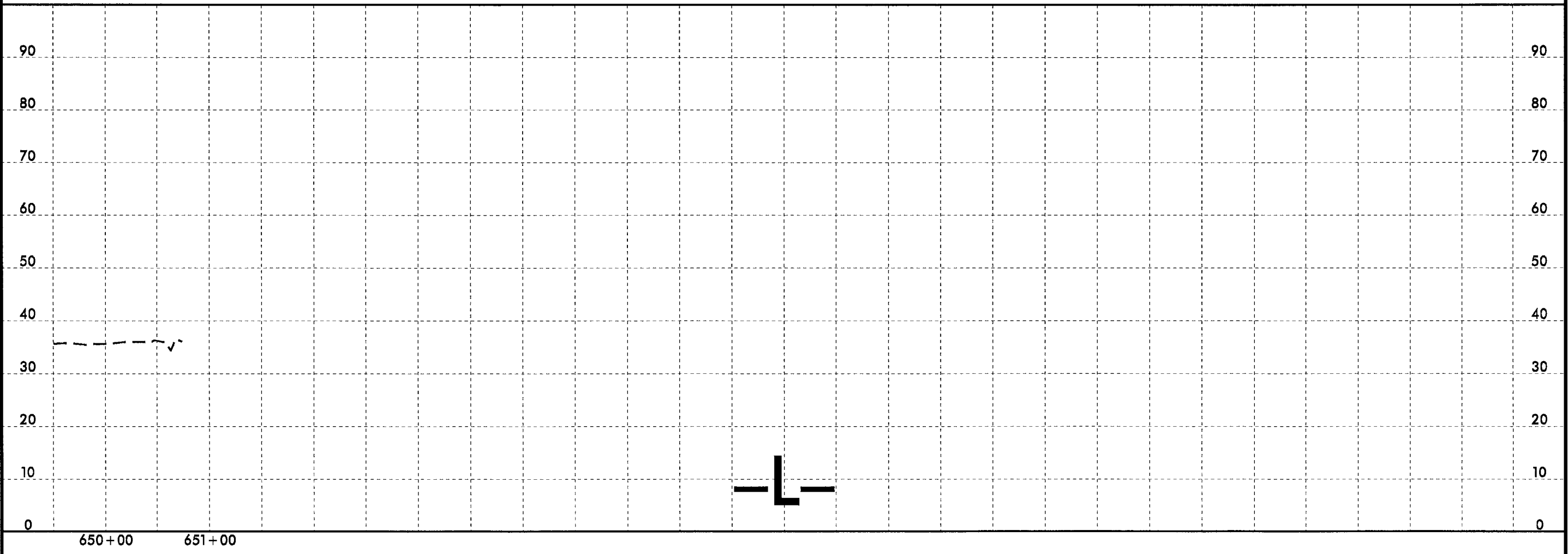
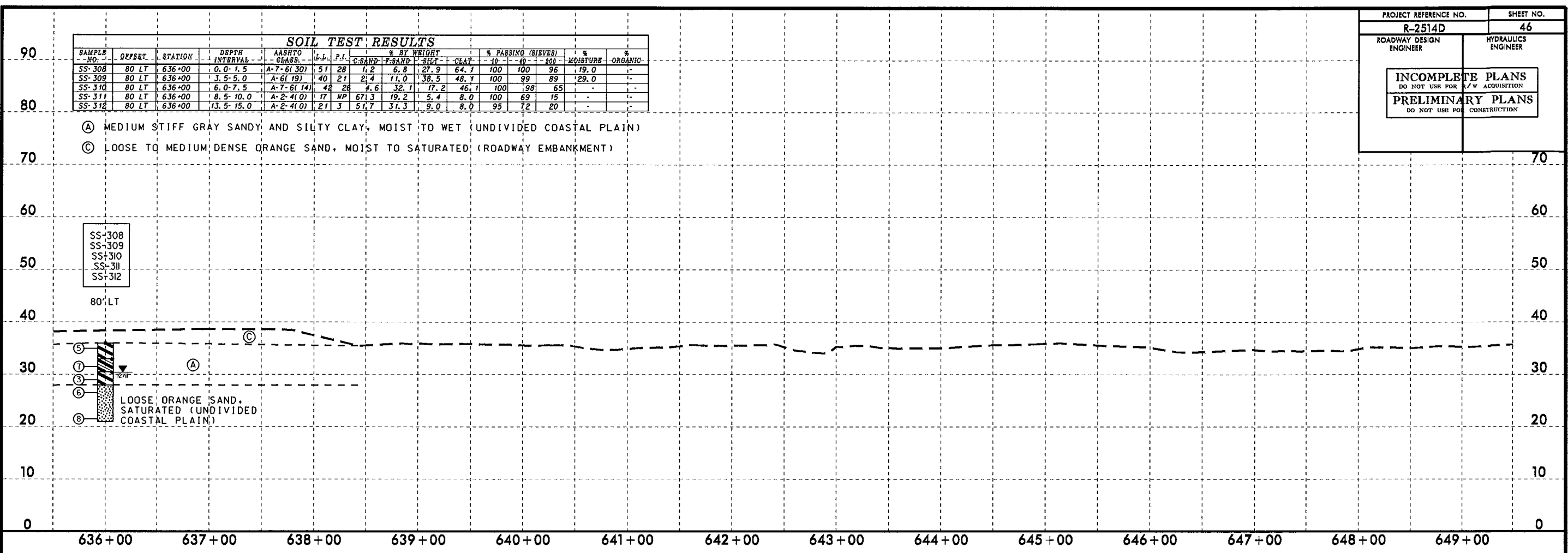
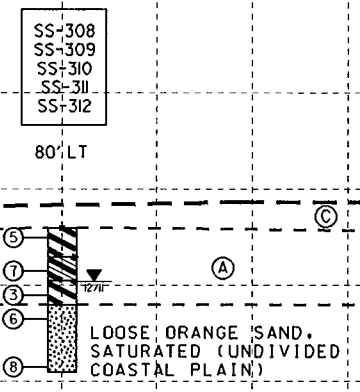
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PROJECT REFERENCE NO.	SHEET NO.
R-2514D	46
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
<b>INCOMPLETE PLANS</b> DO NOT USE FOR ACQUISITION	
<b>PRELIMINARY PLANS</b> DO NOT USE FOR CONSTRUCTION	

SOIL TEST RESULTS														
SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT			% PASSING (SIEVES)			% MOISTURE	% ORGANIC
							C SAND	F SAND	SILT + CLAY	-10	-40	-80		
SS-308	80 LT	636+00	0.0-1.5	A-7-6(30)	51	28	1.2	6.8	27.9	64.1	100	96	19.0	-
SS-309	80 LT	636+00	3.5-5.0	A-6(19)	40	21	2.4	11.0	38.5	48.1	100	89	29.0	-
SS-310	80 LT	636+00	6.0-7.5	A-7-6(14)	42	26	4.6	32.1	17.2	46.1	100	98	65	-
SS-311	80 LT	636+00	8.5-10.0	A-2-4(0)	17	NP	61.3	19.2	5.4	8.0	100	69	15	-
SS-312	80 LT	636+00	13.5-15.0	A-2-4(0)	21	3	51.7	31.3	9.0	8.0	95	72	20	-

- (A) MEDIUM STIFF GRAY SANDY AND SILTY CLAY, MOIST TO WET (UNDIVIDED COASTAL PLAIN)
- (C) LOOSE TO MEDIUM DENSE ORANGE SAND, MOIST TO SATURATED (ROADWAY EMBANKMENT)

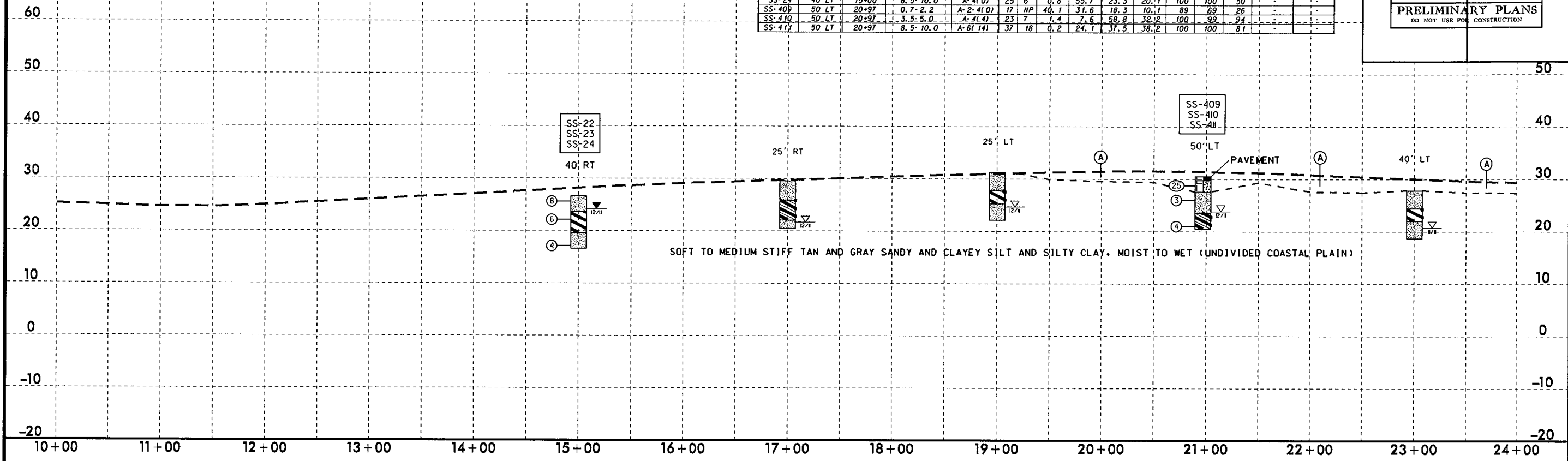


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 computer: AT-116-RS-001

Ⓐ MEDIUM DENSE TAN SAND, MOIST (ROADWAY EMBANKMENT)

SOIL TEST RESULTS														
SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT			% PASSING (SIEVES)			% MOISTURE	% ORGANIC
							C.SAND	F.SAND	SILT	10	40	100		
SS-22	40 LT	15+00	0.0-1.5	A-4(1)	22	3	0.8	4.8	78.3	16.1	100	100	96	-
SS-23	40 LT	15+00	3.5-5.0	A-7(6.32)	52	30	0.2	6.2	49.3	44.3	100	100	96	-
SS-24	40 LT	15+00	8.5-10.0	A-4(0)	25	6	0.8	59.7	23.3	20.1	100	100	50	-
SS-409	50 LT	20+97	0.7-2.2	A-2(4.0)	17	HP	40.1	31.6	18.3	10.1	89	69	26	-
SS-410	50 LT	20+97	3.5-5.0	A-4(4)	23	7	1.4	7.6	58.8	32.2	100	99	94	-
SS-411	50 LT	20+97	8.5-10.0	A-6(14)	37	18	0.2	24.1	37.5	38.2	100	100	81	-

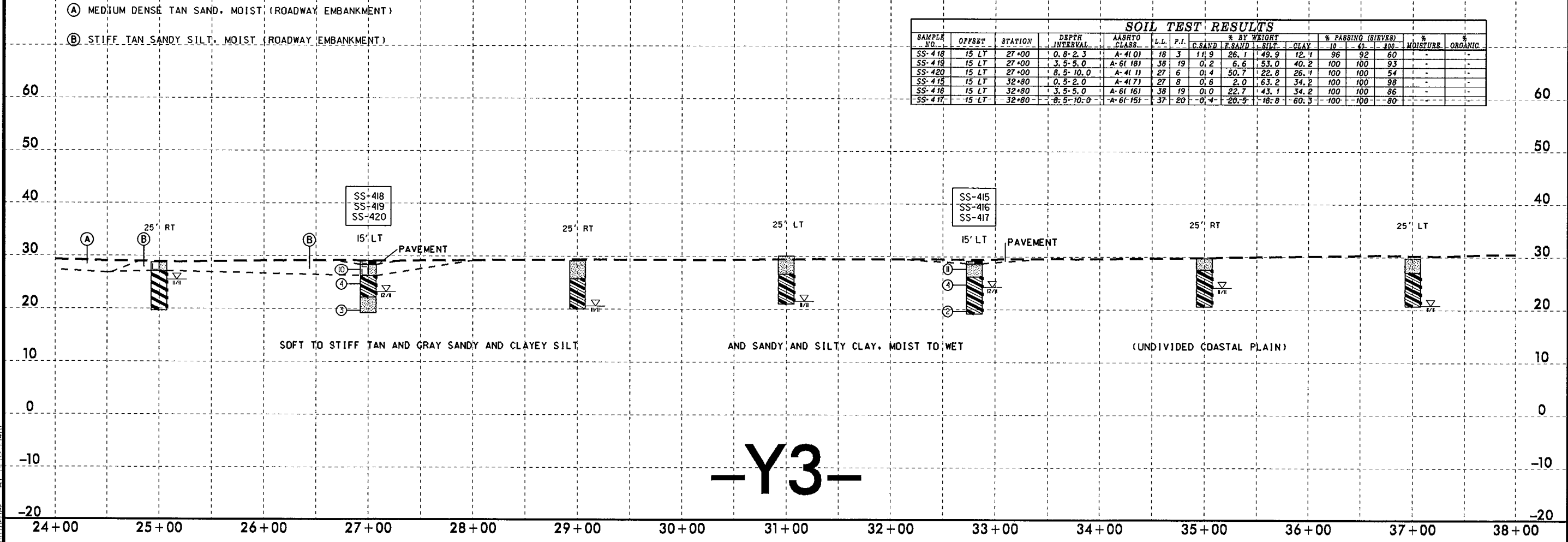
PROJECT REFERENCE NO. <b>R-2514D</b>	SHEET NO. <b>47</b>
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
<b>INCOMPLETE PLANS</b> DO NOT USE FOR A/W ACQUISITION	
<b>PRELIMINARY PLANS</b> DO NOT USE FOR CONSTRUCTION	



Ⓐ MEDIUM DENSE TAN SAND, MOIST (ROADWAY EMBANKMENT)

Ⓑ STIFF TAN SANDY SILT, MOIST (ROADWAY EMBANKMENT)

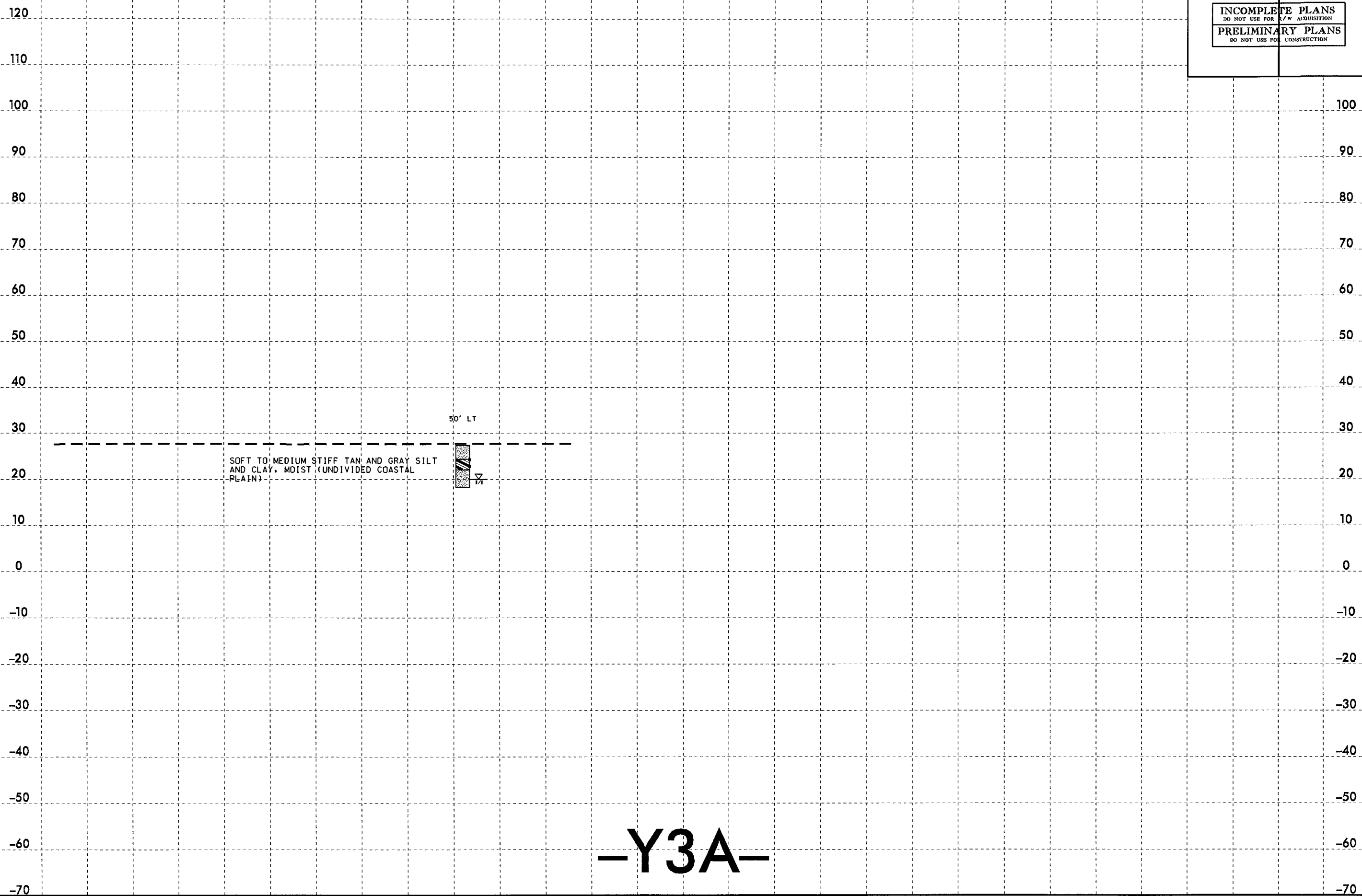
SOIL TEST RESULTS														
SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT			% PASSING (SIEVES)			% MOISTURE	% ORGANIC
							C.SAND	F.SAND	SILT	10	40	100		
SS-418	15 LT	27+00	0.8-2.3	A-4(0)	18	3	11.9	26.1	49.9	12.1	96	92	60	-
SS-419	15 LT	27+00	3.5-5.0	A-6(18)	38	19	0.2	6.6	53.0	40.2	100	100	93	-
SS-420	15 LT	27+00	8.5-10.0	A-4(1)	27	6	0.4	50.7	22.8	26.4	100	100	54	-
SS-415	15 LT	32+80	0.5-2.0	A-4(7)	27	8	0.6	2.0	63.2	34.2	100	100	98	-
SS-416	15 LT	32+80	3.5-5.0	A-6(16)	38	19	0.0	22.7	43.1	34.2	100	100	86	-
SS-417	15 LT	32+80	8.5-10.0	A-6(15)	37	20	0.4	20.5	18.8	60.3	100	100	80	-



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BY: [signature]

PROJECT REFERENCE NO.	SHEET NO.
R-2514D	48
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
<b>INCOMPLETE PLANS</b> DO NOT USE FOR ACQUISITION	
<b>PRELIMINARY PLANS</b> DO NOT USE FOR CONSTRUCTION	

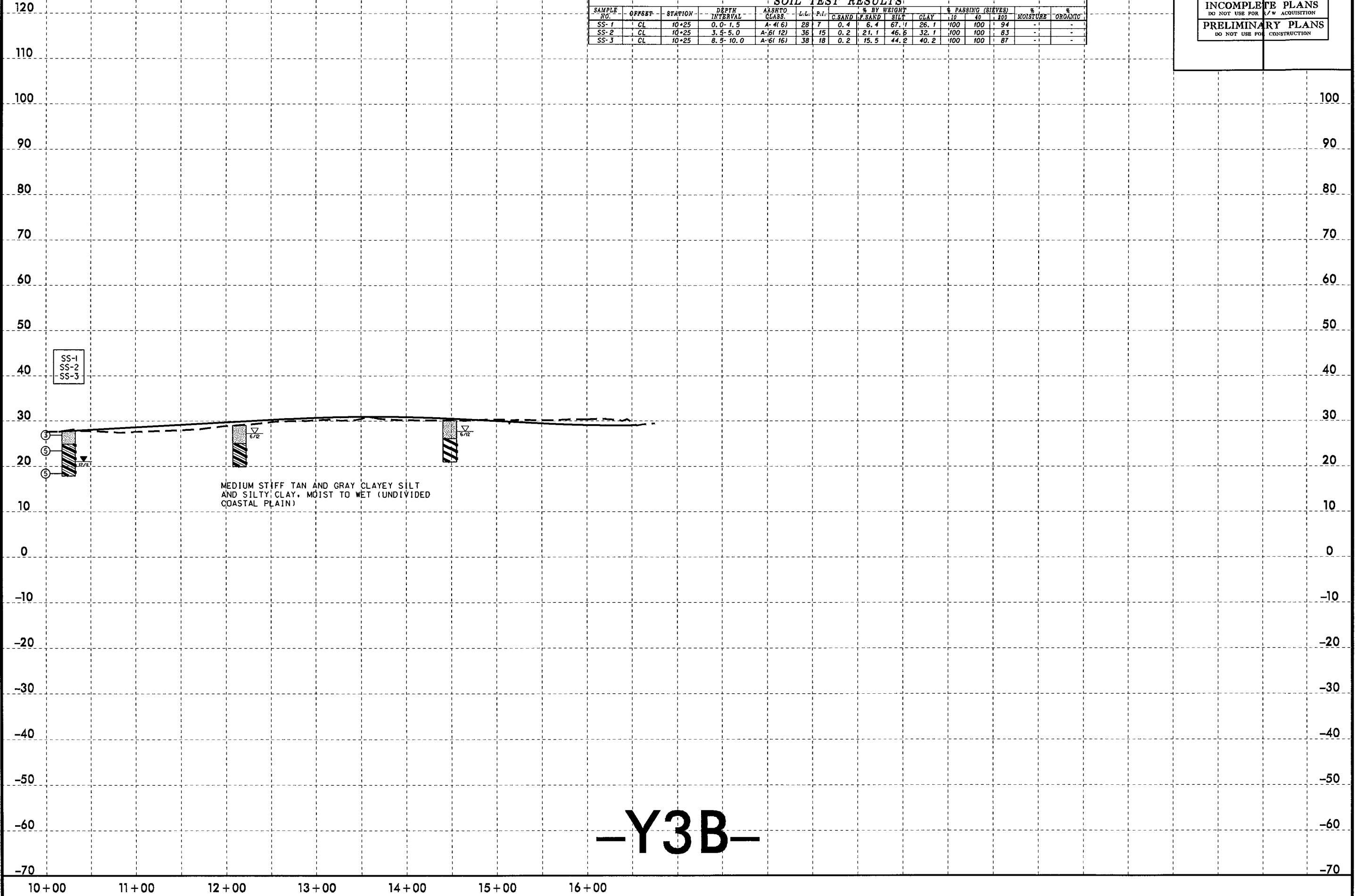


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PROJECT REFERENCE NO.		SHEET NO.	
R-2514D		49	
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER	
INCOMPLETE PLANS DO NOT USE FOR ACQUISITION		PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	

SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	ASTM CLASS.	L.L.	P.I.	% BY WEIGHT			% PASSING (SIEVES)			% MOISTURE	% ORGANIC
							C.SAND	F.SAND	SILT	#10	#40	#200		
SS-1	CL	10+25	0.0-1.5	A-4(6)	28	7	0.4	6.4	67.1	26.1	100	100	94	-
SS-2	CL	10+25	3.5-5.0	A-6(12)	36	15	0.2	21.1	46.6	32.1	100	100	83	-
SS-3	CL	10+25	8.5-10.0	A-6(16)	38	18	0.2	15.5	44.2	40.2	100	100	87	-



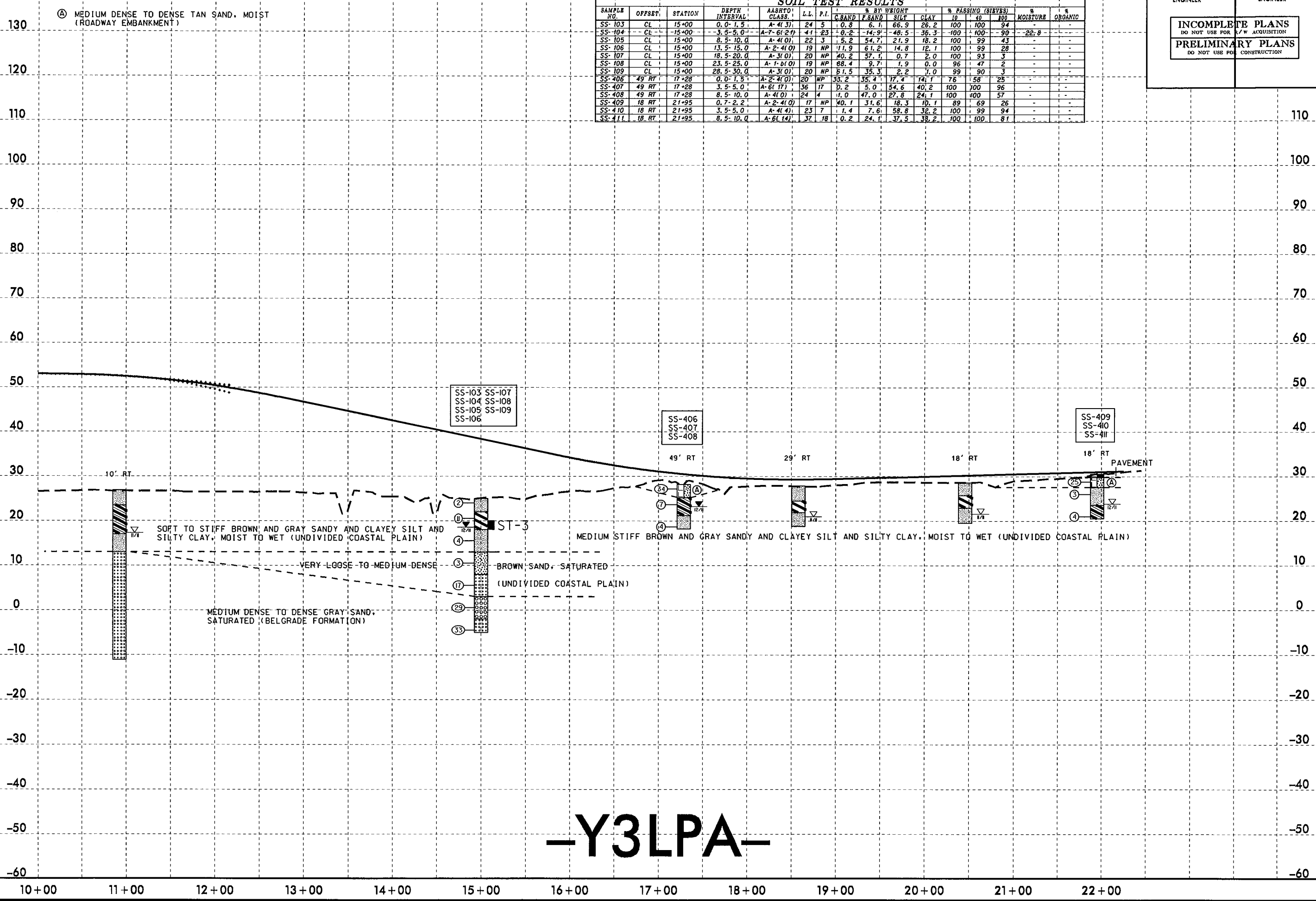
SS-1  
SS-2  
SS-3

MEDIUM STIFF TAN AND GRAY CLAYEY SILT  
AND SILTY CLAY, MOIST TO WET (UNDIVIDED  
COASTAL PLAIN)

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PROJECT REFERENCE NO. <b>R-2514D</b>	SHEET NO. <b>50</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	

SOIL TEST RESULTS															
SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT				% PASSING (SIEVES)			% MOISTURE	% ORGANIC
							G. SAND	F. SAND	SILT	CLAY	10	40	100		
SS-103	CL	15+00	0.0-1.5	A-4(3)	24	5	0.8	6.1	66.9	26.2	100	100	94	-	-
SS-104	CL	15+00	3.5-5.0	A-7-6(2-7)	41	23	0.2	14.9	48.5	36.3	100	100	90	22.8	-
SS-105	CL	15+00	8.5-10.0	A-4(0)	22	3	5.2	54.7	21.9	18.2	100	99	43	-	-
SS-106	CL	15+00	13.5-15.0	A-2-4(0)	19	NP	11.9	61.2	14.8	12.1	100	99	28	-	-
SS-107	CL	15+00	18.5-20.0	A-3(0)	20	NP	40.2	57.1	0.7	2.0	100	93	3	-	-
SS-108	CL	15+00	23.5-25.0	A-1-6(0)	19	NP	88.4	9.7	1.9	0.0	96	47	2	-	-
SS-109	CL	15+00	28.5-30.0	A-3(0)	20	NP	61.5	35.3	2.2	1.0	99	90	3	-	-
SS-406	49' RT	17+28	0.0-1.5	A-2-4(0)	20	NP	33.2	35.4	17.4	14.1	76	58	25	-	-
SS-407	49' RT	17+28	3.5-5.0	A-6(17)	36	17	0.2	5.0	54.6	40.2	100	100	96	-	-
SS-408	49' RT	17+28	8.5-10.0	A-4(0)	24	4	11.0	47.0	27.8	24.1	100	100	57	-	-
SS-409	18' RT	21+95	0.7-2.2	A-2-4(0)	17	NP	40.1	31.6	18.3	10.1	89	69	26	-	-
SS-410	18' RT	21+95	3.5-5.0	A-4(4)	23	7	1.4	7.6	58.8	32.2	100	99	94	-	-
SS-411	18' RT	21+95	8.5-10.0	A-6(14)	37	18	0.2	24.1	37.5	38.2	100	100	81	-	-

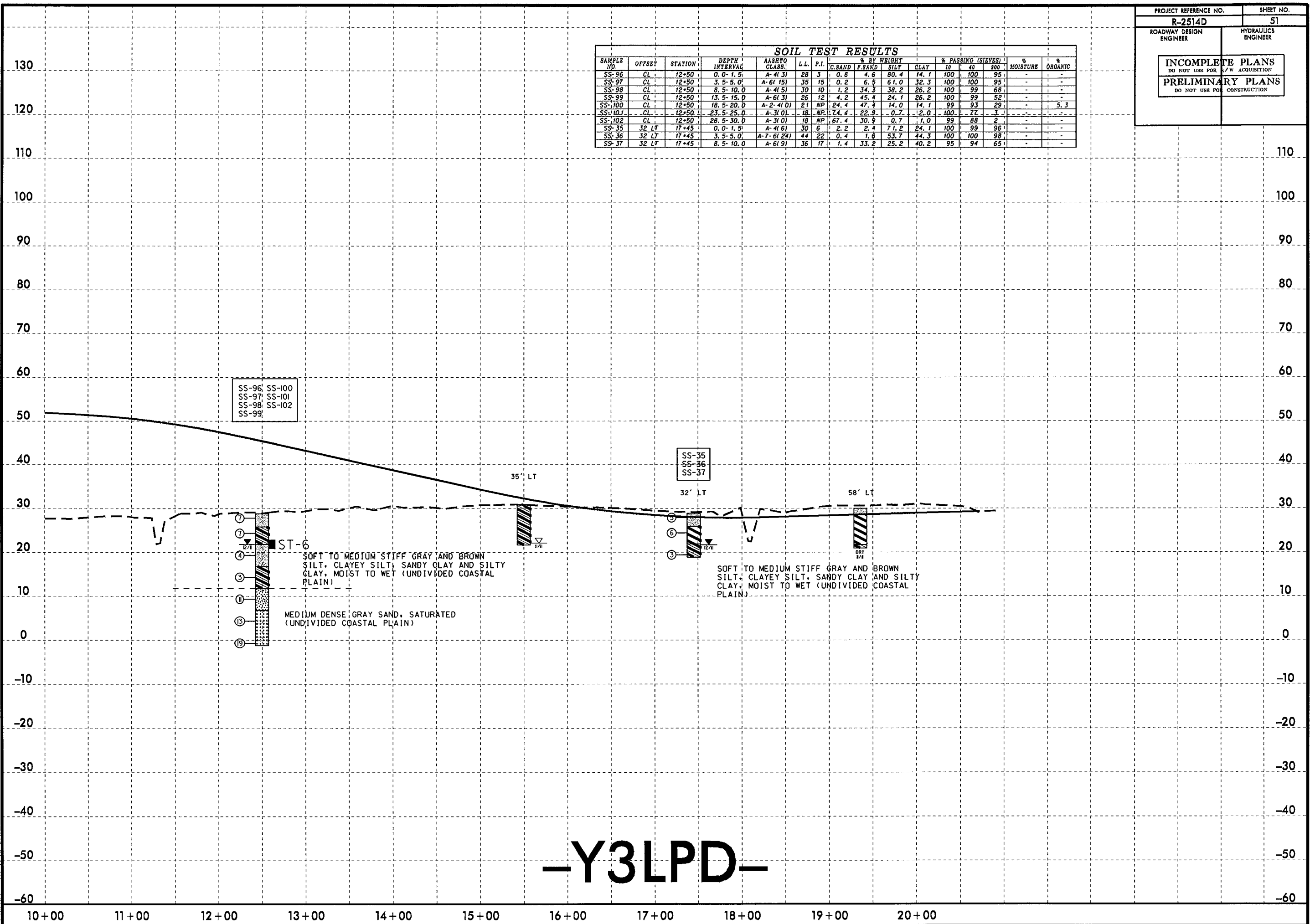


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PROJECT REFERENCE NO.		SHEET NO.	
R-2514D		51	
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER	
INCOMPLETE PLANS DO NOT USE FOR ACQUISITION		PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	

SOIL TEST RESULTS															
SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT				% PASSING (SIEVES)			% MOISTURE	% ORGANIC
							C.SAND	F.SAND	SILT	CLAY	10	40	800		
SS-96	CL	12+50	0.0-1.5	A-4(3)	28	3	0.8	4.6	80.4	14.1	100	100	95	-	-
SS-97	CL	12+50	3.5-5.0	A-6(15)	35	15	0.2	6.5	61.0	32.3	100	100	95	-	-
SS-98	CL	12+50	8.5-10.0	A-4(5)	30	10	1.2	34.3	38.2	26.2	100	99	68	-	-
SS-99	CL	12+50	13.5-15.0	A-6(3)	26	12	4.2	45.4	24.1	26.2	100	99	52	-	-
SS-100	CL	12+50	18.5-20.0	A-2(10)	21	NP	24.4	47.4	14.0	14.1	99	93	29	-	5.3
SS-101	CL	12+50	23.5-25.0	A-3(0)	18	NP	74.4	22.9	0.7	2.0	100	77	3	-	-
SS-102	CL	12+50	28.5-30.0	A-3(0)	18	NP	67.4	30.9	0.7	1.0	99	88	2	-	-
SS-35	32 LT	17+45	0.0-1.5	A-4(6)	30	6	2.2	2.4	71.2	24.1	100	99	96	-	-
SS-36	32 LT	17+45	3.5-5.0	A-7(6(24))	44	22	0.4	1.6	53.7	44.3	100	100	98	-	-
SS-37	32 LT	17+45	8.5-10.0	A-6(9)	36	17	1.4	33.2	25.2	40.2	95	94	65	-	-



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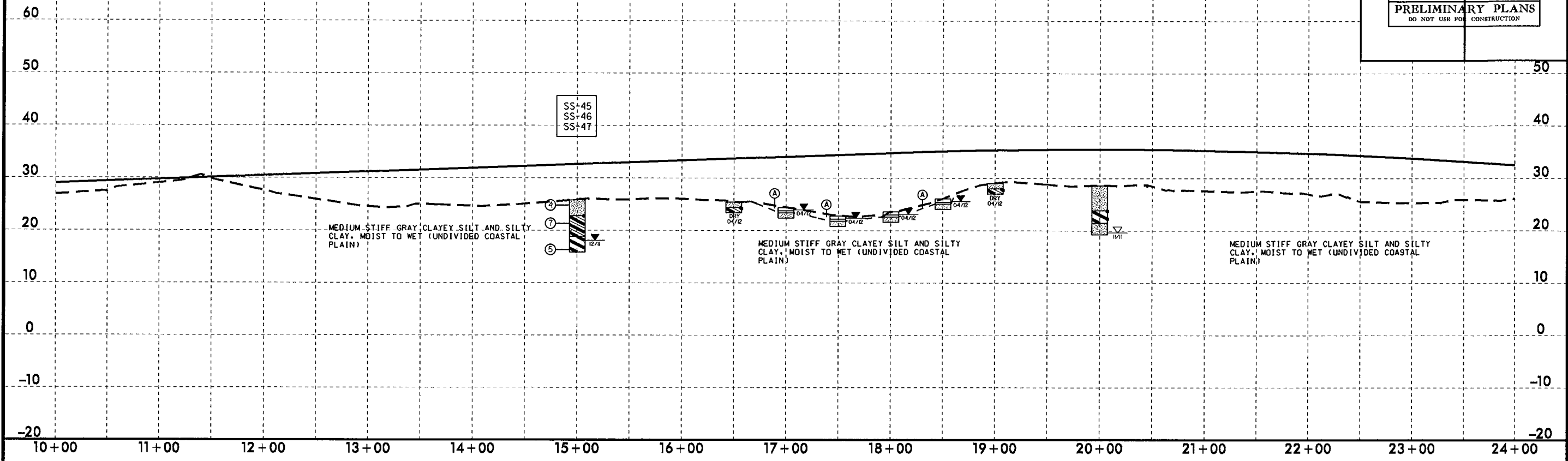
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Ⓐ SOFT BROWN CLAY WITH LITTLE ORGANIC MATERIAL, MOIST TO WET (ALLUVIAL)

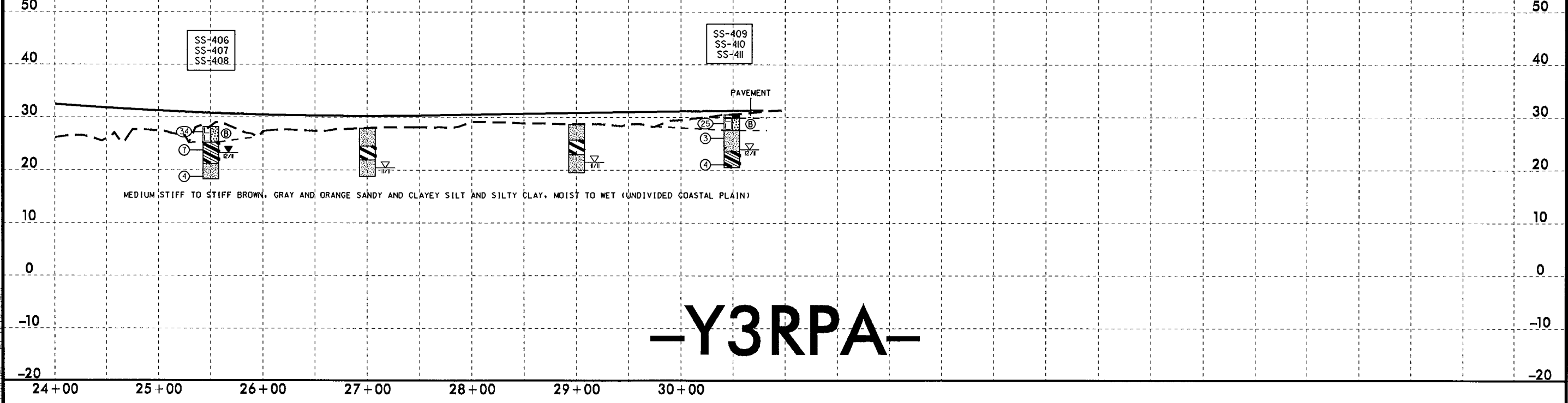
SOIL TEST RESULTS															
SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT				% PASSING (SIEVES)			% MOISTURE	% ORGANIC
							C.SAND	F.SAND	SILT	CLAY	#10	#40	#200		
SS-45	CL	15+00	0.0-1.5	A-4(7)	26	9	0.8	9.3	61.8	28.2	100	100	92	-	-
SS-46	CL	15+00	3.5-5.0	A-6(11)	32	13	0.2	17.1	54.5	28.2	100	100	88	-	-
SS-47	CL	15+00	8.5-10.0	A-7-6(22)	41	23	1.2	9.5	43.1	46.3	100	99	92	-	-

PROJECT REFERENCE NO. <b>R-2514D</b>	SHEET NO. <b>52</b>
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
<b>INCOMPLETE PLANS</b> DO NOT USE FOR ACQUISITION <b>PRELIMINARY PLANS</b> DO NOT USE FOR CONSTRUCTION	



SOIL TEST RESULTS															
SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT				% PASSING (SIEVES)			% MOISTURE	% ORGANIC
							C.SAND	F.SAND	SILT	CLAY	#10	#40	#200		
SS-406	CL	25+50	0.0-1.5	A-2-4(0)	20	NP	33.2	35.4	17.4	14.1	76	58	25	-	-
SS-407	CL	25+50	3.5-5.0	A-6(17)	36	17	0.2	5.0	54.6	40.2	100	100	96	-	-
SS-408	CL	25+50	8.5-10.0	A-4(0)	24	4	1.0	47.0	27.8	24.1	100	100	57	-	-
SS-409	CL	30+49	0.7-2.2	A-2-4(0)	17	NP	40.1	31.6	18.3	10.1	89	69	26	-	-
SS-410	CL	30+49	3.5-5.0	A-4(4)	23	7	1.4	7.6	58.8	32.2	100	99	94	-	-
SS-411	CL	30+49	8.5-10.0	A-6(14)	37	18	0.2	24.1	37.5	38.2	100	100	81	-	-

Ⓑ MEDIUM DENSE TO DENSE TAN SAND, MOIST (ROADWAY EMBANKMENT)



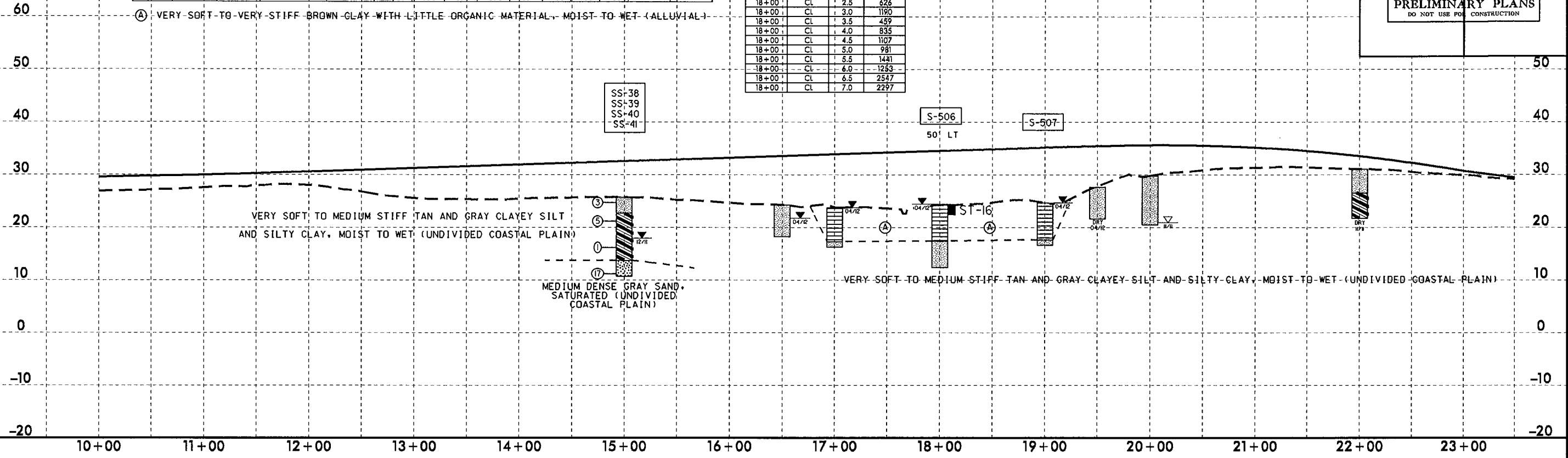
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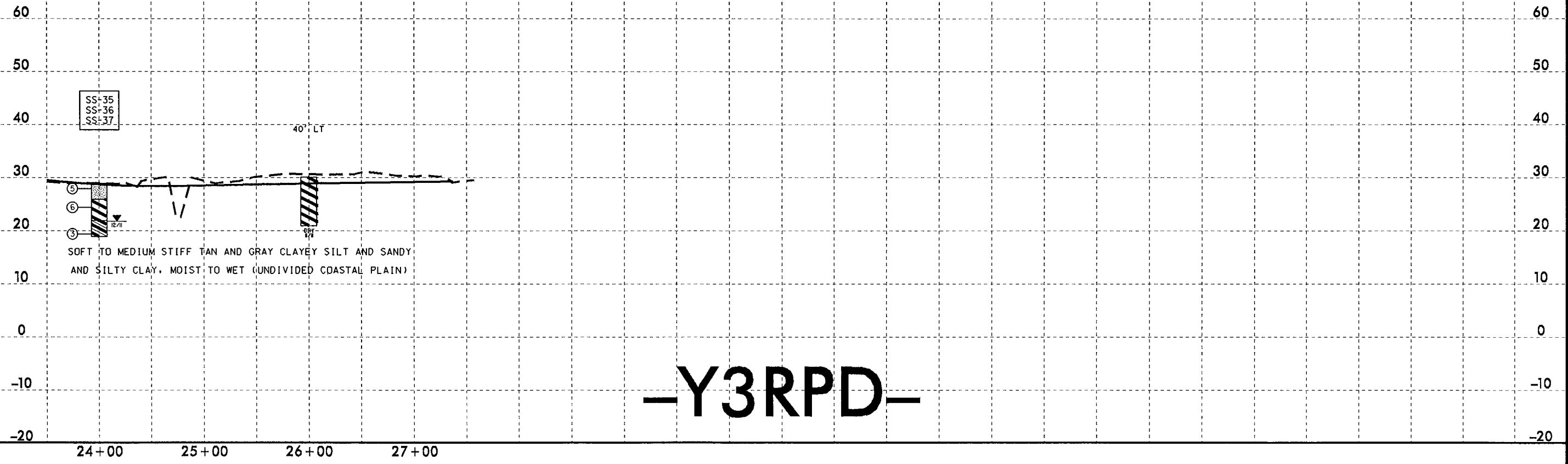
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ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
<b>INCOMPLETE PLANS</b> DO NOT USE FOR ACQUISITION <b>PRELIMINARY PLANS</b> DO NOT USE FOR CONSTRUCTION	

SOIL TEST RESULTS															
SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT				% PASSING (SIEVES)			% MOISTURE	% ORGANIC
							C. SAND	F. SAND	SILT	CLAY	10	40	200		
SS-38	CL	15+00	0.0-1.5'	A-4(4)	25	5	0.6	5.6	71.6	22.1	100	100	95	-	-
SS-39	CL	15+00	3.5-5.0'	A-6(16)	38	19	0.0	24.7	41.0	34.2	100	100	85	-	-
SS-40	CL	15+00	8.5-10.0'	A-6(15)	40	20	8.0	12.5	31.4	48.3	97	97	78	-	-
SS-41	CL	15+00	18.5-20.0'	A-2(40)	22	NP	0.6	73.8	15.5	70.1	100	100	30	-	-

VANE SHEAR TESTS			
STATION	OFFSET	DEPTH	SR (psf)
18+00	CL	0.5	167
18+00	CL	1.0	251
18+00	CL	1.5	376
18+00	CL	2.0	501
18+00	CL	2.5	626
18+00	CL	3.0	1190
18+00	CL	3.5	459
18+00	CL	4.0	835
18+00	CL	4.5	1107
18+00	CL	5.0	981
18+00	CL	5.5	1441
18+00	CL	6.0	1252
18+00	CL	6.5	2547
18+00	CL	7.0	2297



SOIL TEST RESULTS															
SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT				% PASSING (SIEVES)			% MOISTURE	% ORGANIC
							C. SAND	F. SAND	SILT	CLAY	10	40	200		
SS-35	CL	24+00	0.0-1.5'	A-4(6)	30	6	2.2	2.4	71.2	24.1	100	99	96	-	-
SS-36	CL	24+00	3.5-5.0'	A-7(24)	44	22	0.4	1.6	53.7	44.3	100	100	98	-	-
SS-37	CL	24+00	8.5-10.0'	A-6(9)	36	17	1.4	33.2	25.2	40.2	95	94	65	-	-



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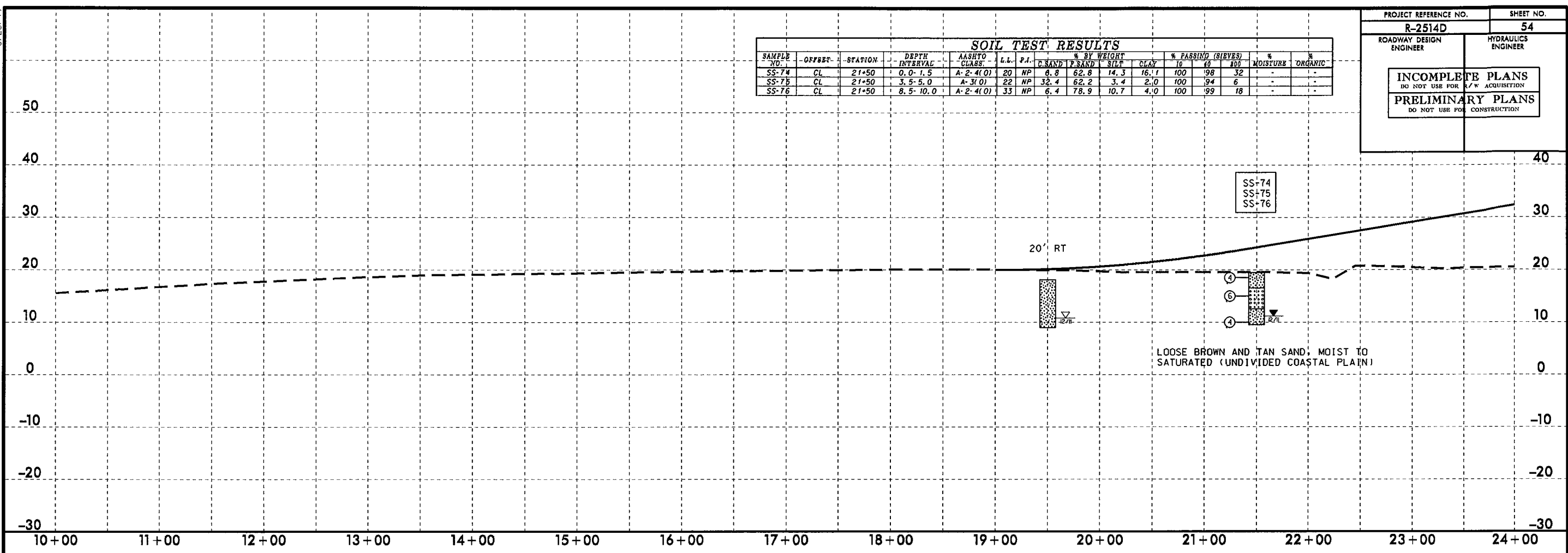


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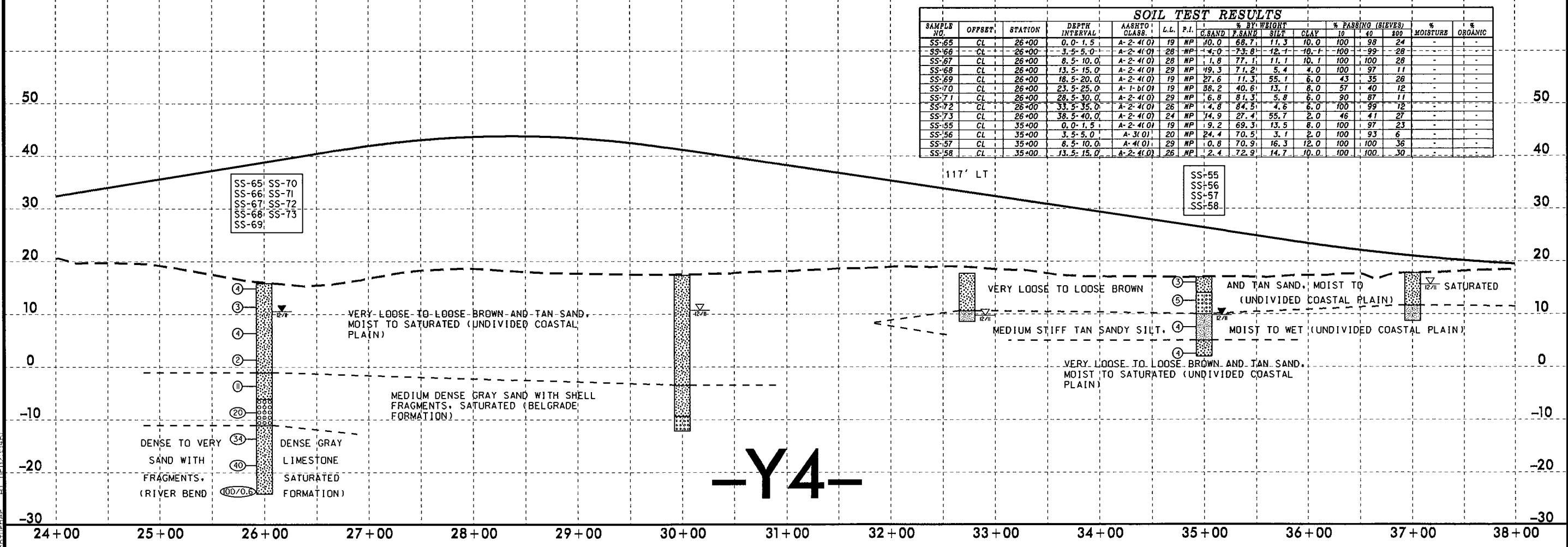
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PROJECT REFERENCE NO. <b>R-2514D</b>	SHEET NO. <b>54</b>
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
<b>INCOMPLETE PLANS</b> DO NOT USE FOR R/W ACQUISITION <b>PRELIMINARY PLANS</b> DO NOT USE FOR CONSTRUCTION	

SOIL TEST RESULTS															
SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT				% PASSING (SIEVES)			% MOISTURE	% ORGANIC
							C.SAND	F.SAND	SILT	CLAY	10	40	200		
SS-74	CL	21+50	0.0-1.5	A-2-4(0)	20	NP	6.8	62.8	14.3	16.1	100	98	32	-	-
SS-75	CL	21+50	3.5-5.0	A-3(0)	22	NP	32.4	62.2	3.4	2.0	100	94	6	-	-
SS-76	CL	21+50	8.5-10.0	A-2-4(0)	33	NP	6.4	78.9	10.7	4.0	100	99	18	-	-



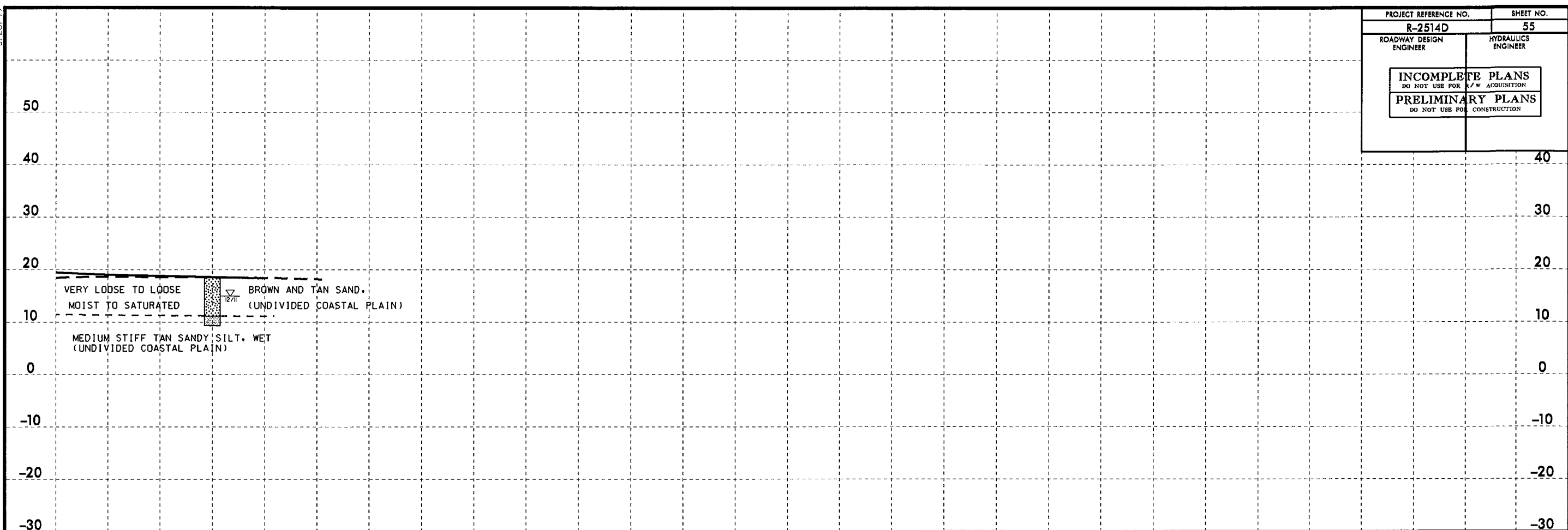
SOIL TEST RESULTS															
SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT				% PASSING (SIEVES)			% MOISTURE	% ORGANIC
							C.SAND	F.SAND	SILT	CLAY	10	40	200		
SS-65	CL	26+00	0.0-1.5	A-2-4(0)	19	NP	10.0	68.7	11.3	10.0	100	98	24	-	-
SS-66	CL	26+00	3.5-5.0	A-2-4(0)	28	NP	4.0	73.8	12.1	10.1	100	99	28	-	-
SS-67	CL	26+00	8.5-10.0	A-2-4(0)	28	NP	1.8	77.1	11.1	10.1	100	100	28	-	-
SS-68	CL	26+00	13.5-15.0	A-2-4(0)	29	NP	19.3	71.2	5.4	4.0	100	97	11	-	-
SS-69	CL	26+00	18.5-20.0	A-2-4(0)	19	NP	27.6	11.3	55.1	6.0	43	35	28	-	-
SS-70	CL	26+00	23.5-25.0	A-1-6(0)	19	NP	38.2	40.6	13.1	6.0	57	40	12	-	-
SS-71	CL	26+00	28.5-30.0	A-2-4(0)	29	NP	6.8	81.3	5.8	6.0	90	87	11	-	-
SS-72	CL	26+00	33.5-35.0	A-2-4(0)	26	NP	4.8	84.5	4.6	6.0	100	99	12	-	-
SS-73	CL	26+00	38.5-40.0	A-2-4(0)	24	NP	14.9	27.4	55.7	2.0	46	41	27	-	-
SS-55	CL	35+00	0.0-1.5	A-2-4(0)	19	NP	9.2	69.3	13.5	8.0	100	97	23	-	-
SS-56	CL	35+00	3.5-5.0	A-3(0)	20	NP	24.4	70.5	3.1	2.0	100	93	6	-	-
SS-57	CL	35+00	8.5-10.0	A-4(0)	29	NP	0.8	70.9	16.3	12.0	100	100	36	-	-
SS-58	CL	35+00	13.5-15.0	A-2-4(0)	26	NP	2.4	72.9	14.7	10.0	100	100	30	-	-



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PROJECT REFERENCE NO.	SHEET NO.
R-2514D	55
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
<b>INCOMPLETE PLANS</b> DO NOT USE FOR ACQUISITION	
<b>PRELIMINARY PLANS</b> DO NOT USE FOR CONSTRUCTION	



38+00      39+00      40+00

**-Y4-**

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Author: AT (R2514D)

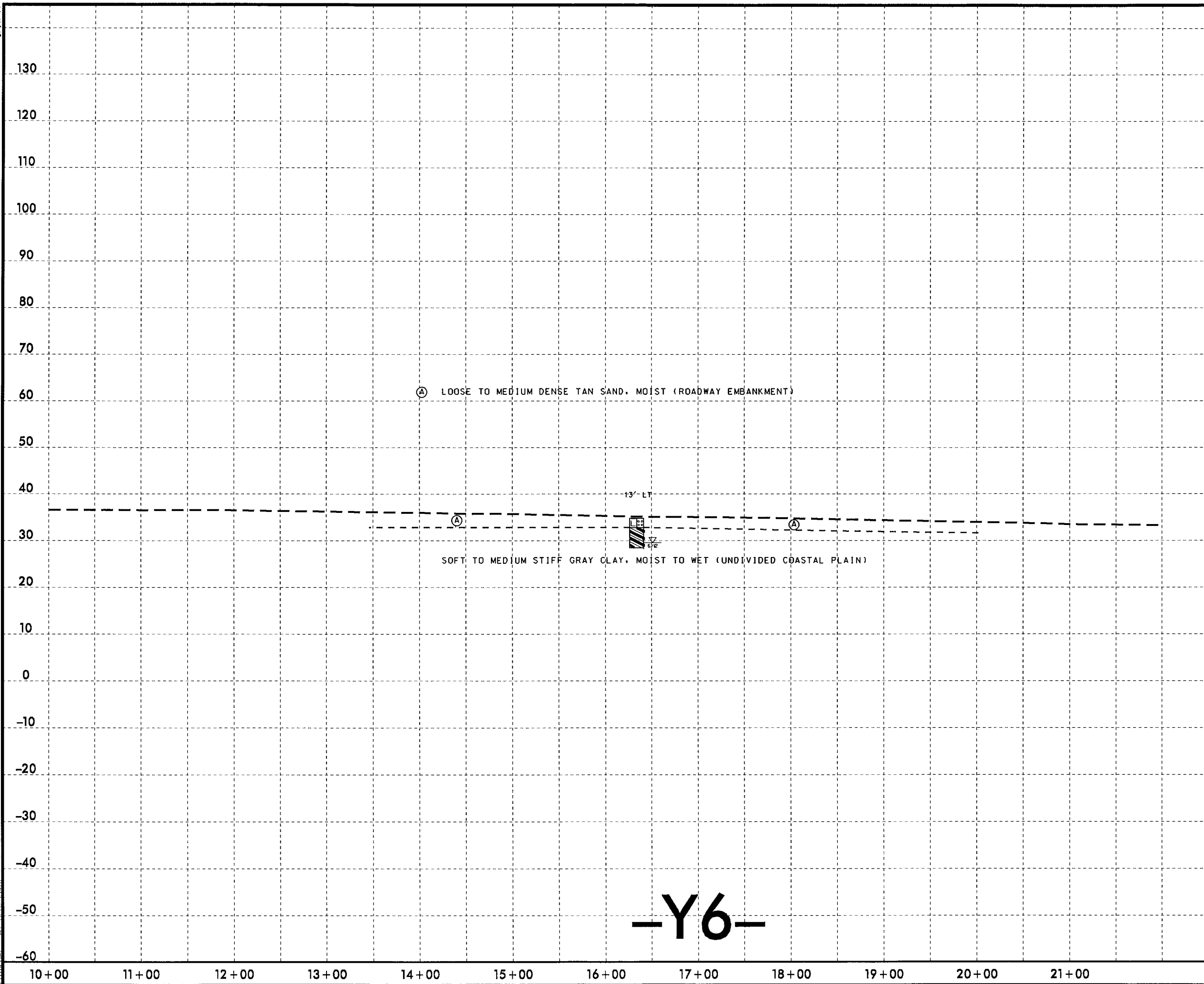
PROJECT REFERENCE NO. R-2514D	SHEET NO. 56
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
<b>INCOMPLETE PLANS</b> DO NOT USE FOR ACQUISITION	
<b>PRELIMINARY PLANS</b> DO NOT USE FOR CONSTRUCTION	



**-Y5-**

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Author: AT (R25140)

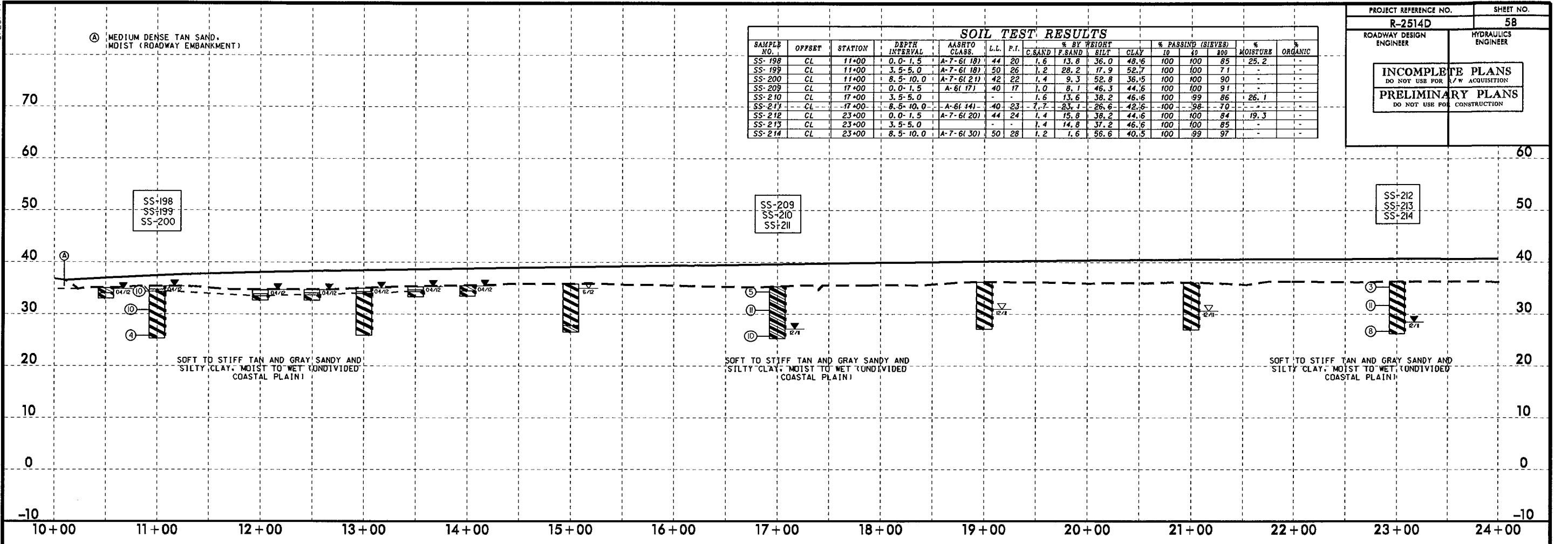
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ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
<b>INCOMPLETE PLANS</b> DO NOT USE FOR A/W ACQUISITION	
<b>PRELIMINARY PLANS</b> DO NOT USE FOR CONSTRUCTION	



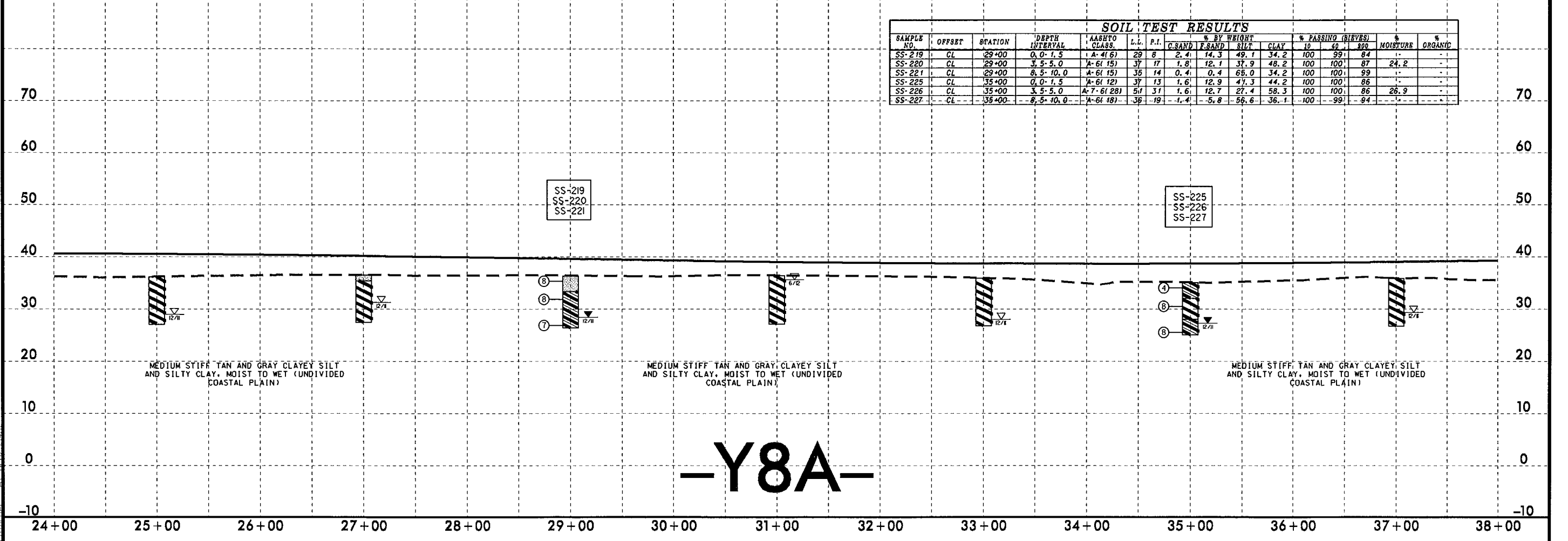
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10+00 11+00 12+00 13+00 14+00 15+00 16+00 17+00 18+00 19+00 20+00 21+00

SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT			% PASSING (SIEVES)			% MOISTURE	% ORGANIC	
							C.SAND	F.SAND	SILT	10	40	80			
SS-198	CL	11+00	0.0-1.5	A-7-61 (18)	44	20	1.6	13.8	36.0	44.6	100	100	85	25.2	-
SS-199	CL	11+00	3.5-5.0	A-7-61 (18)	50	26	1.2	28.2	17.9	52.7	100	100	71	-	-
SS-200	CL	11+00	8.5-10.0	A-7-61 (21)	42	22	1.4	9.3	52.8	36.5	100	100	90	-	-
SS-209	CL	17+00	0.0-1.5	A-61 (17)	40	17	1.0	8.1	46.3	44.6	100	100	91	-	-
SS-210	CL	17+00	3.5-5.0	-	-	-	1.6	13.6	38.2	46.6	100	99	86	26.1	-
SS-211	CL	17+00	8.5-10.0	A-61 (14)	40	23	7.7	23.4	26.6	42.6	100	98	70	-	-
SS-212	CL	23+00	0.0-1.5	A-7-61 (20)	44	24	1.4	15.8	38.2	44.6	100	100	84	19.3	-
SS-213	CL	23+00	3.5-5.0	-	-	-	1.4	14.8	37.2	46.6	100	100	85	-	-
SS-214	CL	23+00	8.5-10.0	A-7-61 (30)	50	28	1.2	1.6	56.6	40.5	100	99	97	-	-



SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT			% PASSING (SIEVES)			% MOISTURE	% ORGANIC	
							C.SAND	F.SAND	SILT	10	40	80			
SS-219	CL	29+00	0.0-1.5	A-41 (6)	29	8	2.4	14.3	49.1	34.2	100	99	84	-	-
SS-220	CL	29+00	3.5-5.0	A-61 (5)	37	17	1.8	12.1	37.9	48.2	100	100	87	24.2	-
SS-221	CL	29+00	8.5-10.0	A-61 (5)	35	14	0.4	0.4	68.0	34.2	100	100	99	-	-
SS-225	CL	35+00	0.0-1.5	A-61 (2)	37	13	1.6	12.9	41.3	44.2	100	100	86	-	-
SS-226	CL	35+00	3.5-5.0	A-7-61 (28)	51	31	1.6	12.7	27.4	58.3	100	100	86	26.9	-
SS-227	CL	35+00	8.5-10.0	A-61 (8)	36	19	1.4	5.8	56.6	36.1	100	99	94	-	-



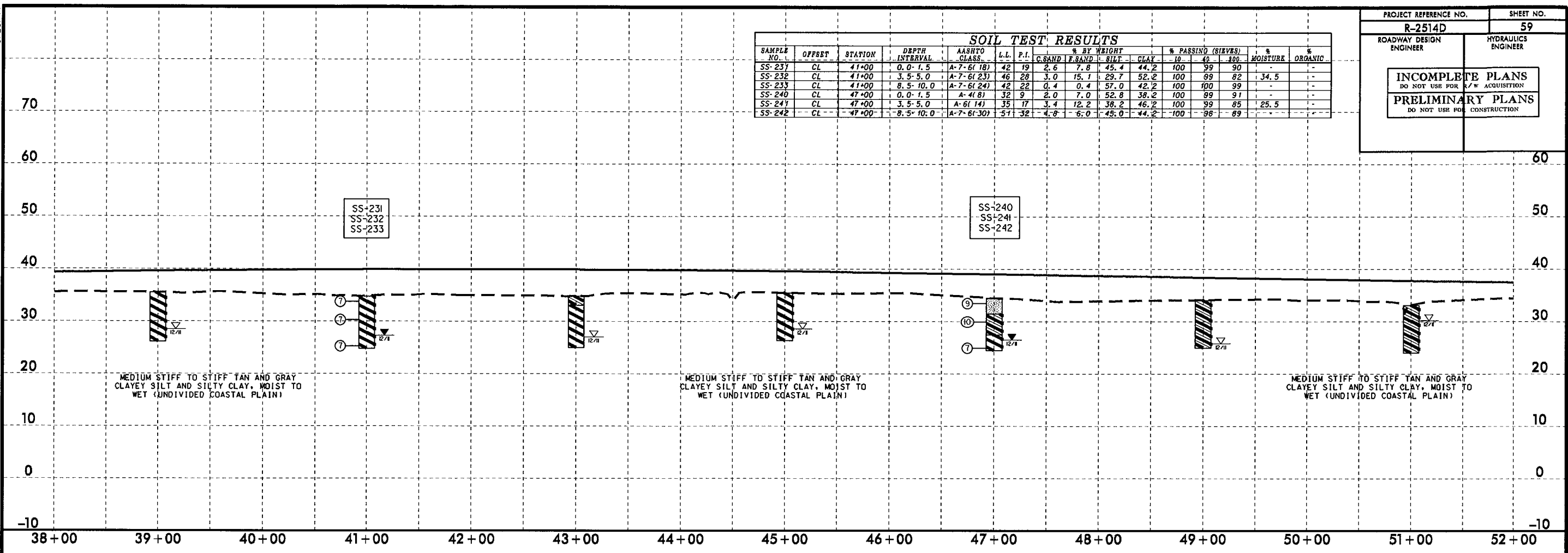
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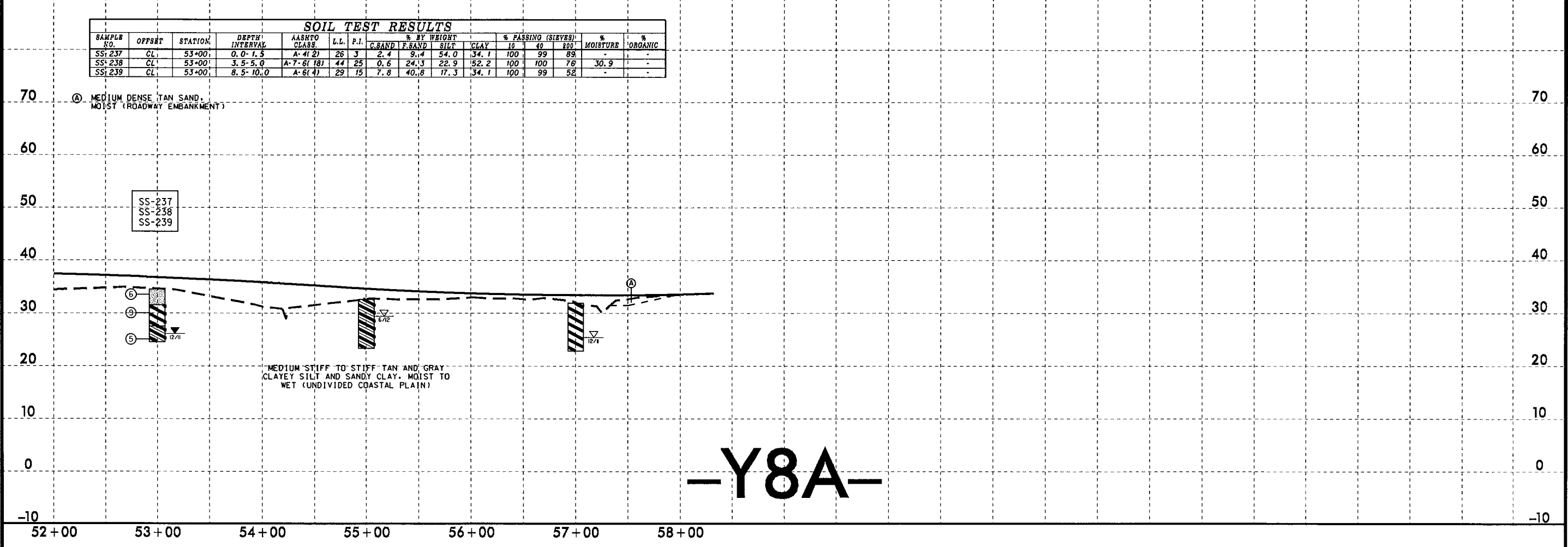
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PROJECT REFERENCE NO.	SHEET NO.
R-2514D	59
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
<b>INCOMPLETE PLANS</b> DO NOT USE FOR R/W ACQUISITION	
<b>PRELIMINARY PLANS</b> DO NOT USE FOR CONSTRUCTION	

SOIL TEST RESULTS															
SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS	L.L.	P.I.	% BY WEIGHT				% PASSING (SIEVES)			% MOISTURE	% ORGANIC
							C.SAND	F.SAND	SILT	CLAY	10	40	200		
SS-237	CL	41+00	0.0-1.5	A-7-6(18)	42	19	2.6	7.8	45.4	44.2	100	99	90	-	-
SS-232	CL	41+00	3.5-5.0	A-7-6(23)	46	28	3.0	15.7	29.7	52.2	100	99	82	34.5	-
SS-233	CL	41+00	8.5-10.0	A-7-6(24)	42	22	0.4	0.4	57.0	42.2	100	100	99	-	-
SS-240	CL	47+00	0.0-1.5	A-4(8)	32	9	2.0	7.0	52.8	38.2	100	99	91	-	-
SS-241	CL	47+00	3.5-5.0	A-6(14)	35	17	3.4	12.2	38.2	46.2	100	99	85	25.5	-
SS-242	CL	47+00	8.5-10.0	A-7-6(30)	51	32	4.8	6.0	45.0	44.2	100	98	89	-	-



SOIL TEST RESULTS															
SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS	L.L.	P.I.	% BY WEIGHT				% PASSING (SIEVES)			% MOISTURE	% ORGANIC
							C.SAND	F.SAND	SILT	CLAY	10	40	200		
SS-237	CL	53+00	0.0-1.5	A-4(2)	26	3	2.4	9.4	54.0	34.1	100	99	89	-	-
SS-238	CL	53+00	3.5-5.0	A-7-6(18)	44	25	0.6	24.3	22.9	52.2	100	100	76	30.9	-
SS-239	CL	53+00	8.5-10.0	A-6(4)	29	15	7.8	40.8	17.3	34.1	100	99	52	-	-

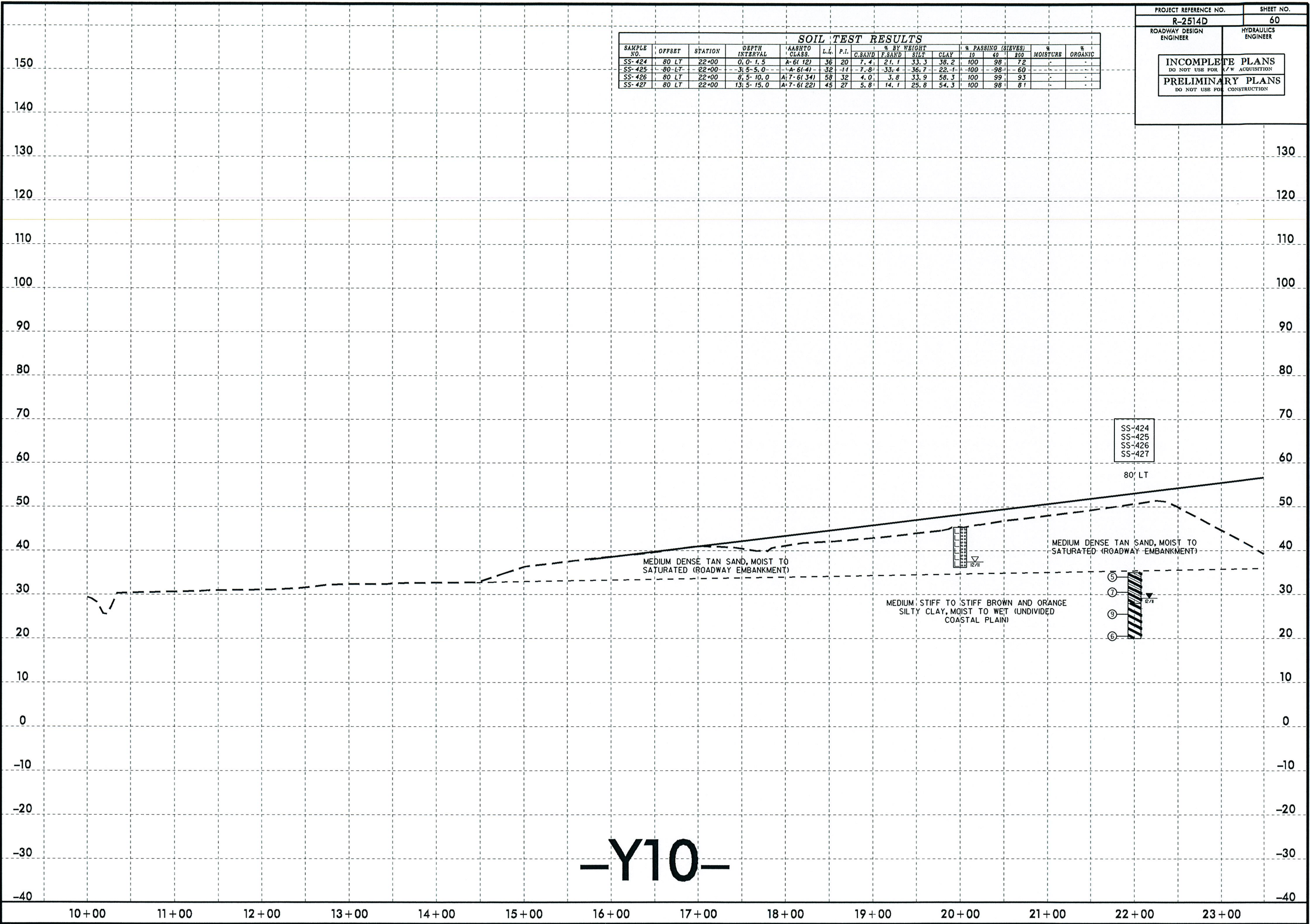


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PROJECT REFERENCE NO.	SHEET NO.
R-2514D	60
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
<b>INCOMPLETE PLANS</b> DO NOT USE FOR ACQUISITION	
<b>PRELIMINARY PLANS</b> DO NOT USE FOR CONSTRUCTION	

SOIL TEST RESULTS															
SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS	L.L.	P.I.	% BY WEIGHT				% PASSING (SIEVES)			% MOISTURE	% ORGANIC
							C.SAND	F.SAND	SILT	CLAY	#10	#40	#200		
SS-424	80 LT	22+00	0.0-1.5	A-6(12)	36	20	7.4	21.1	33.3	38.2	100	98	72	-	-
SS-425	80 LT	22+00	3.5-5.0	A-6(4)	32	14	7.8	33.4	36.7	22.1	100	98	60	-	-
SS-426	80 LT	22+00	8.5-10.0	A-7(6(34))	59	32	4.0	3.8	33.9	58.3	100	99	93	-	-
SS-427	80 LT	22+00	13.5-15.0	A-7(6(22))	45	27	5.8	14.1	25.8	54.3	100	98	81	-	-

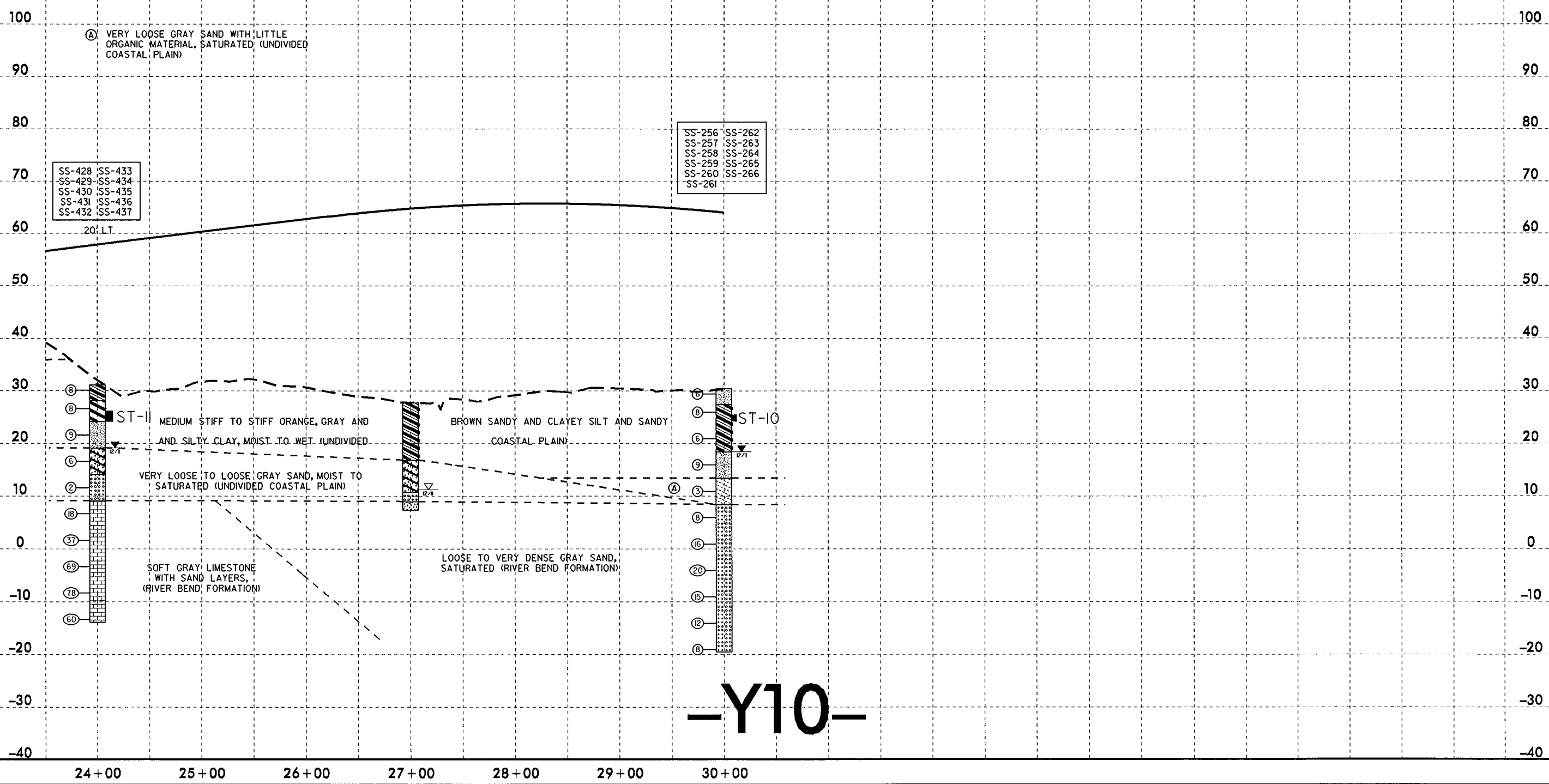


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PROJECT REFERENCE NO.		SHEET NO.	
R-2514D		61	
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER	
<b>INCOMPLETE PLANS</b> DO NOT USE FOR ACQUISITION		<b>PRELIMINARY PLANS</b> DO NOT USE FOR CONSTRUCTION	

SOIL TEST RESULTS															
SAMPLER NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT			% PASSING (SIEVES)			% MOISTURE	% ORGANIC	
							C. SAND	F. SAND	SILT	10	40	60			
SS-428	20 LT	24+00	0.0-1.5	A-6(1)	31	12	2.4	5.2	56.2	36.2	100	99	93	20.1	-
SS-429	20 LT	24+00	3.5-5.0	A-7-6(25)	50	29	3.6	12.7	29.4	54.3	100	99	84	31.7	-
SS-430	20 LT	24+00	8.5-10.0	A-4(0)	24	8	10.1	53.3	12.6	24.1	100	99	37	-	-
SS-431	20 LT	24+00	13.5-15.0	A-2-6(0)	25	12	46.4	23.5	8.9	20.7	95	74	29	-	-
SS-432	20 LT	24+00	18.5-20.0	A-3(0)	23	NP	37.6	56.3	1.1	5.0	100	98	6	-	-
SS-433	20 LT	24+00	23.5-25.0	A-2-4(0)	17	NP	34.6	34.0	23.4	8.0	76	64	24	-	-
SS-434	20 LT	24+00	28.5-30.0	A-2-4(0)	19	NP	8.0	66.9	17.0	8.0	88	85	22	-	-
SS-435	20 LT	24+00	33.5-35.0	A-2-4(0)	21	NP	1.3	82.4	12.3	4.0	100	100	17	-	-
SS-436	20 LT	24+00	38.5-40.0	A-2-4(0)	23	NP	0.6	83.2	11.2	5.0	100	100	17	-	-
SS-437	20 LT	24+00	43.5-45.0	A-2-4(0)	24	NP	0.7	82.6	11.7	5.0	100	100	18	-	-
SS-256	CL	30+00	0.0-1.5	A-4(5)	29	5	1.8	7.4	60.7	30.1	100	99	93	-	-
SS-257	CL	30+00	3.5-5.0	A-6(19)	40	22	3.6	12.2	34.1	50.1	100	99	86	-	-
SS-258	CL	30+00	8.5-10.0	A-6(10)	35	21	14.0	24.2	21.6	40.1	100	94	64	-	-
SS-259	CL	30+00	13.5-15.0	A-4(0)	21	10	36.5	28.5	11.0	24.0	100	84	37	-	2.2
SS-260	CL	30+00	18.5-20.0	A-2-4(0)	25	NP	52.5	29.5	-6.0	12.0	97	74	19	-	3.3
SS-261	CL	30+00	23.5-25.0	A-3(0)	24	NP	33.3	62.7	4.0	0.0	100	97	6	-	-
SS-262	CL	30+00	28.5-30.0	A-3(0)	28	NP	3.4	89.2	5.4	2.0	100	99	10	-	-
SS-263	CL	30+00	33.5-35.0	A-3(0)	27	NP	3.2	90.4	4.4	2.0	100	99	9	-	-
SS-264	CL	30+00	38.5-40.0	A-3(0)	26	NP	3.4	90.6	6.0	0.0	100	99	8	-	-
SS-265	CL	30+00	43.5-45.0	A-3(0)	27	NP	1.4	93.4	5.2	0.0	100	100	7	-	-
SS-266	CL	30+00	48.5-50.0	A-3(0)	26	NP	4.4	89.8	5.8	0.0	100	98	8	-	-



-Y10-



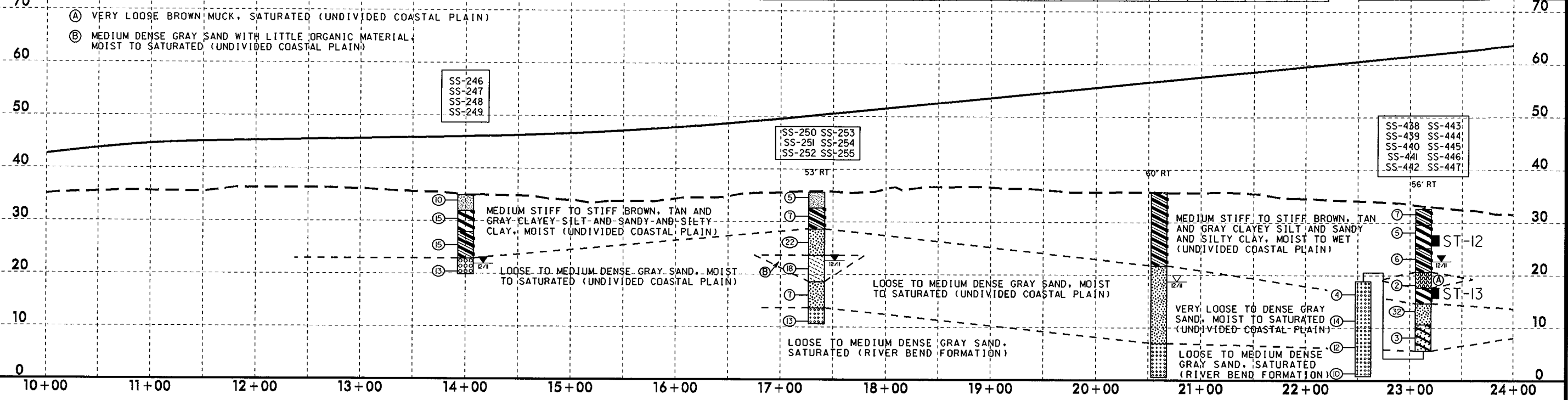
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SOIL TEST RESULTS															
SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS	L.L.	P.I.	% BY WEIGHT				% PASSING (SIEVES)			% MOISTURE	% ORGANIC
							C.SAND	F.SAND	SILT	CLAY	10	40	200		
SS-246	CL	14+00	0.0-1.5	A-4(2)	24	4	0.8	8.0	52.0	38.2	100	99	91	-	-
SS-247	CL	14+00	3.5-5.0	A-7-6(32)	52	31	0.8	4.0	30.9	64.9	100	100	95	28.4	-
SS-248	CL	14+00	8.5-10.0	A-6(3)	27	12	18.3	31.1	16.5	34.1	100	95	51	-	-
SS-249	CL	14+00	13.5-15.0	A-1-b(0)	17	NP	99.3	3.5	1.2	0.0	100	25	1	-	-
SS-250	53 RT	17+34	0.0-1.5	A-4(3)	24	6	31.0	12.4	52.4	32.1	100	99	85	27.5	-
SS-251	53 RT	17+34	3.5-6.0	A-6(15)	39	22	31.8	18.1	31.9	44.2	100	99	76	-	-
SS-252	53 RT	17+34	8.5-10.0	A-2-4(0)	18	NP	38.5	39.1	10.4	12.0	100	87	24	-	-
SS-253	53 RT	17+34	13.5-15.0	A-2-4(0)	23	NP	42.1	40.3	9.6	8.0	100	87	20	-	4.6
SS-254	53 RT	17+34	18.5-20.0	A-2-5(0)	41	NP	36.5	36.1	13.4	12.0	100	93	28	-	-
SS-255	53 RT	17+34	23.5-25.0	A-3(0)	24	NP	24.4	72.7	2.8	0.0	100	99	5	-	-

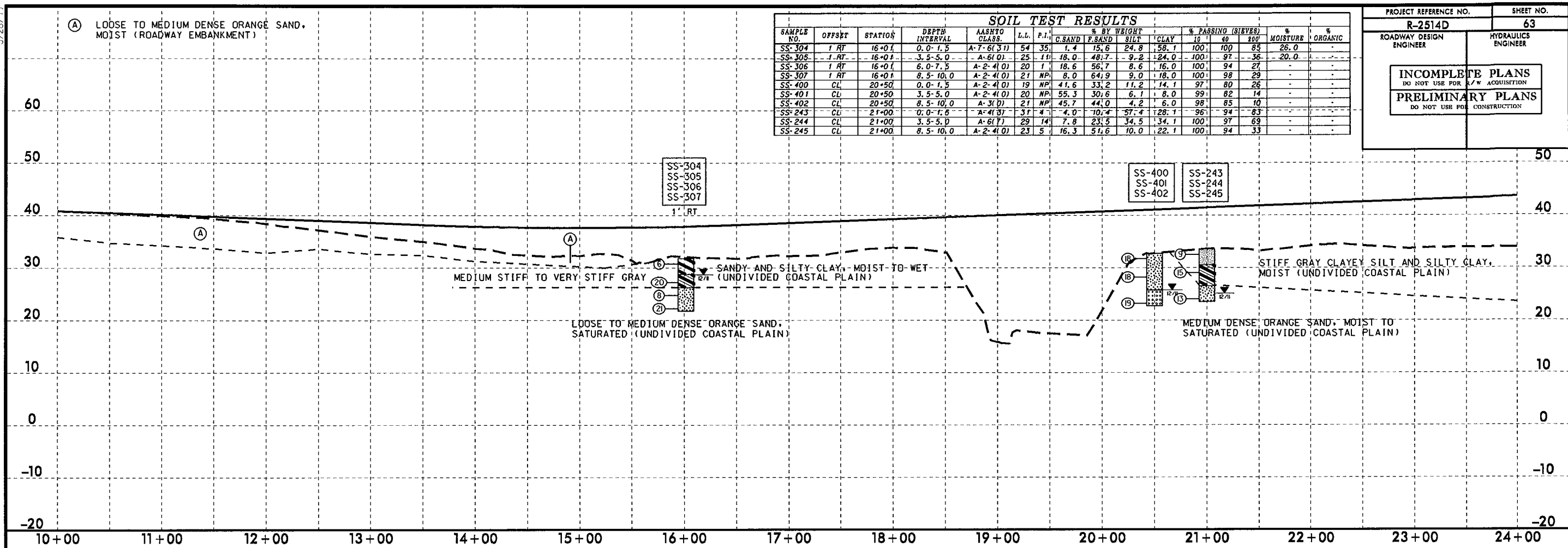
SOIL TEST RESULTS															
SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS	L.L.	P.I.	% BY WEIGHT				% PASSING (SIEVES)			% MOISTURE	% ORGANIC
							C.SAND	F.SAND	SILT	CLAY	10	40	200		
SS-438	CL	37+00	0.0-1.5	A-6(14)	35	15	1.4	6.4	45.9	46.2	100	100	92	25.2	-
SS-439	CL	37+00	3.5-5.0	A-7-6(19)	42	20	1.6	7.4	44.7	46.2	100	99	91	-	-
SS-440	CL	37+00	8.5-10.0	A-6(18)	40	21	2.8	10.9	40.1	46.2	100	99	87	-	-
SS-441	CL	37+00	13.5-15.0	A-2-5(0)	41	NP	31.2	34.4	20.4	14.1	100	88	35	-	19.7
SS-442	CL	37+00	18.5-20.0	A-2-4(0)	16	NP	43.4	39.4	8.1	9.0	100	84	18	-	-
SS-443	CL	37+00	23.5-25.0	A-2-6(0)	28	12	39.8	34.1	2.0	24.1	100	97	26	-	-
SS-444	CL	37+00	28.5-30.0	A-3(0)	21	NP	39.2	57.5	2.2	1.0	100	95	3	-	-
SS-445	CL	37+00	33.5-35.0	A-3(0)	26	NP	0.6	90.9	6.4	2.0	100	100	9	-	-
SS-446	CL	37+00	38.5-40.0	A-3(0)	26	NP	3.3	90.6	5.0	1.0	100	100	6	-	-
SS-447	CL	37+00	43.5-45.0	A-3(0)	27	NP	4.7	88.4	5.8	1.0	100	99	7	-	-

PROJECT REFERENCE NO. <b>R-2514D</b>	SHEET NO. <b>62</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	

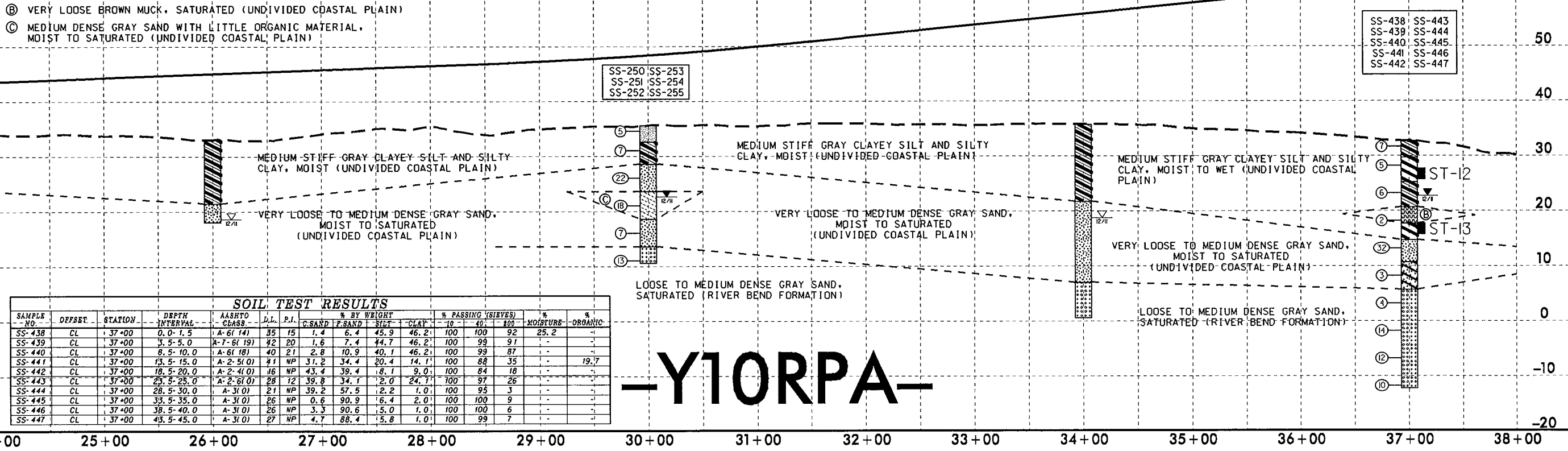


**-Y10LPA-**

SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT				% PASSING (SIEVES)			% MOISTURE	% ORGANIC
							C.SAND	F.SAND	SILT	CLAY	10	40	200		
SS-304	1 RT	16+0.1	0.0-1.5	A-7-6(31)	54	35	1.4	15.6	24.8	58.1	100	100	85	26.0	-
SS-305	1 RT	16+0.1	3.5-5.0	A-6(1)	25	11	18.0	48.7	9.2	124.0	100	97	36	20.0	-
SS-306	1 RT	16+0.1	6.0-7.5	A-2-4(0)	20	1	18.6	56.7	8.6	16.0	100	94	27	-	-
SS-307	1 RT	16+0.1	8.5-10.0	A-2-4(0)	21	NP	8.0	64.9	9.0	18.0	100	98	29	-	-
SS-400	CL	20+50	0.0-1.5	A-2-4(0)	19	NP	41.6	33.2	11.2	14.1	97	80	26	-	-
SS-401	CL	20+50	3.5-5.0	A-2-4(0)	20	NP	55.3	30.6	6.1	8.0	99	82	14	-	-
SS-402	CL	20+50	8.5-10.0	A-3(0)	21	NP	45.7	44.0	4.2	6.0	98	85	10	-	-
SS-243	CL	21+00	0.0-1.6	A-6(1)	31	4	4.0	10.4	37.4	128.1	96	94	83	-	-
SS-244	CL	21+00	3.5-5.0	A-6(1)	29	14	7.8	23.5	34.5	34.1	100	97	69	-	-
SS-245	CL	21+00	8.5-10.0	A-2-4(0)	23	5	16.3	51.6	10.0	22.1	100	94	33	-	-



SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT				% PASSING (SIEVES)			% MOISTURE	% ORGANIC
							C.SAND	F.SAND	SILT	CLAY	10	40	200		
SS-250	CL	30+00	0.0-1.5	A-4(3)	24	6	3.0	12.4	52.4	32.1	100	99	85	27.5	-
SS-251	CL	30+00	3.5-5.0	A-6(15)	39	22	5.8	18.1	31.9	44.2	100	99	76	-	-
SS-252	CL	30+00	8.5-10.0	A-2-4(0)	18	NP	38.5	39.1	10.4	12.0	100	87	24	-	-
SS-253	CL	30+00	13.5-15.0	A-2-4(0)	23	NP	42.1	40.3	9.6	8.0	100	87	20	-	4.6
SS-254	CL	30+00	18.5-20.0	A-2-5(0)	41	NP	36.5	38.1	13.4	12.0	100	93	28	-	-
SS-255	CL	30+00	23.5-25.0	A-3(0)	24	NP	24.4	72.7	2.8	0.0	100	99	5	-	-



SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT				% PASSING (SIEVES)			% MOISTURE	% ORGANIC
							C.SAND	F.SAND	SILT	CLAY	10	40	200		
SS-438	CL	37+00	0.0-1.5	A-6(14)	35	15	1.4	6.4	45.9	46.2	100	100	92	25.2	-
SS-439	CL	37+00	3.5-5.0	A-7-6(19)	42	20	1.6	7.4	44.7	46.2	100	99	91	-	-
SS-440	CL	37+00	8.5-10.0	A-6(18)	40	21	2.8	10.9	40.1	46.2	100	99	87	-	-
SS-441	CL	37+00	13.5-15.0	A-2-5(0)	41	NP	31.2	34.4	20.4	14.1	100	88	35	-	19.7
SS-442	CL	37+00	18.5-20.0	A-2-4(0)	16	NP	43.4	39.4	18.1	9.0	100	84	18	-	-
SS-443	CL	37+00	23.5-25.0	A-2-6(0)	28	12	39.8	34.1	2.0	24.1	100	97	26	-	-
SS-444	CL	37+00	28.5-30.0	A-3(0)	21	NP	39.2	57.5	2.2	1.0	100	95	3	-	-
SS-445	CL	37+00	33.5-35.0	A-3(0)	26	NP	0.6	90.9	6.4	2.0	100	100	9	-	-
SS-446	CL	37+00	38.5-40.0	A-3(0)	26	NP	3.3	90.6	5.0	1.0	100	100	6	-	-
SS-447	CL	37+00	43.5-45.0	A-3(0)	27	NP	4.7	88.4	5.8	1.0	100	99	7	-	-

-Y10RPA-

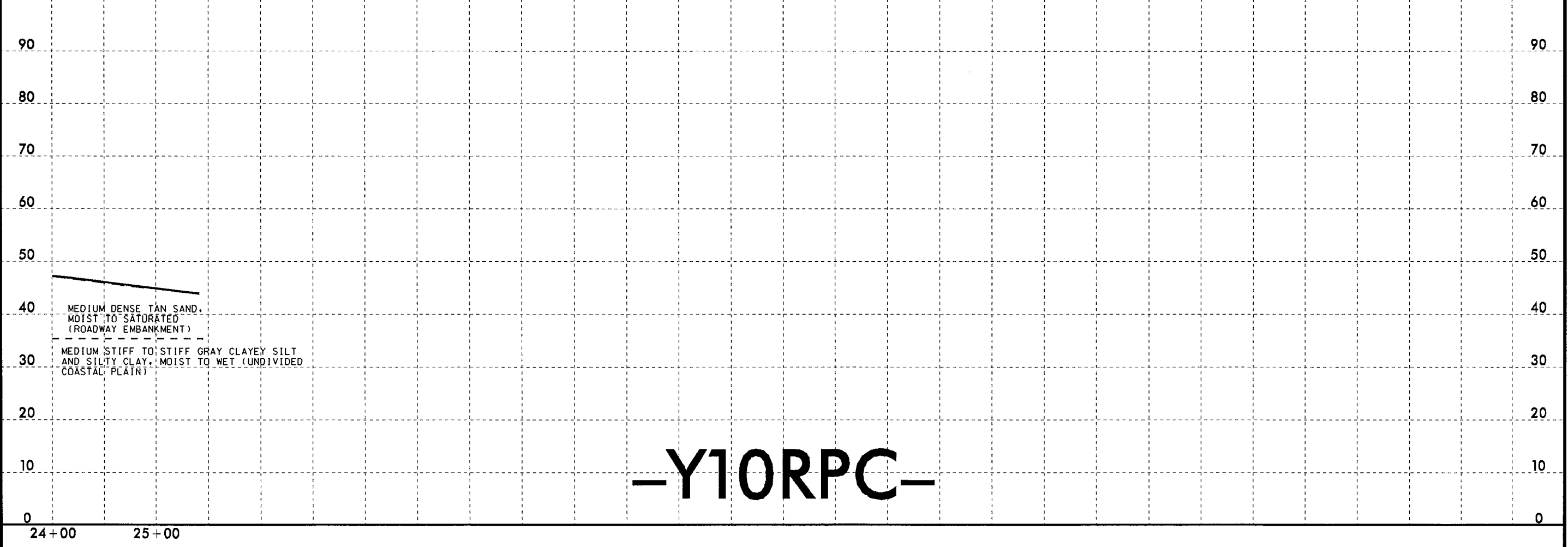
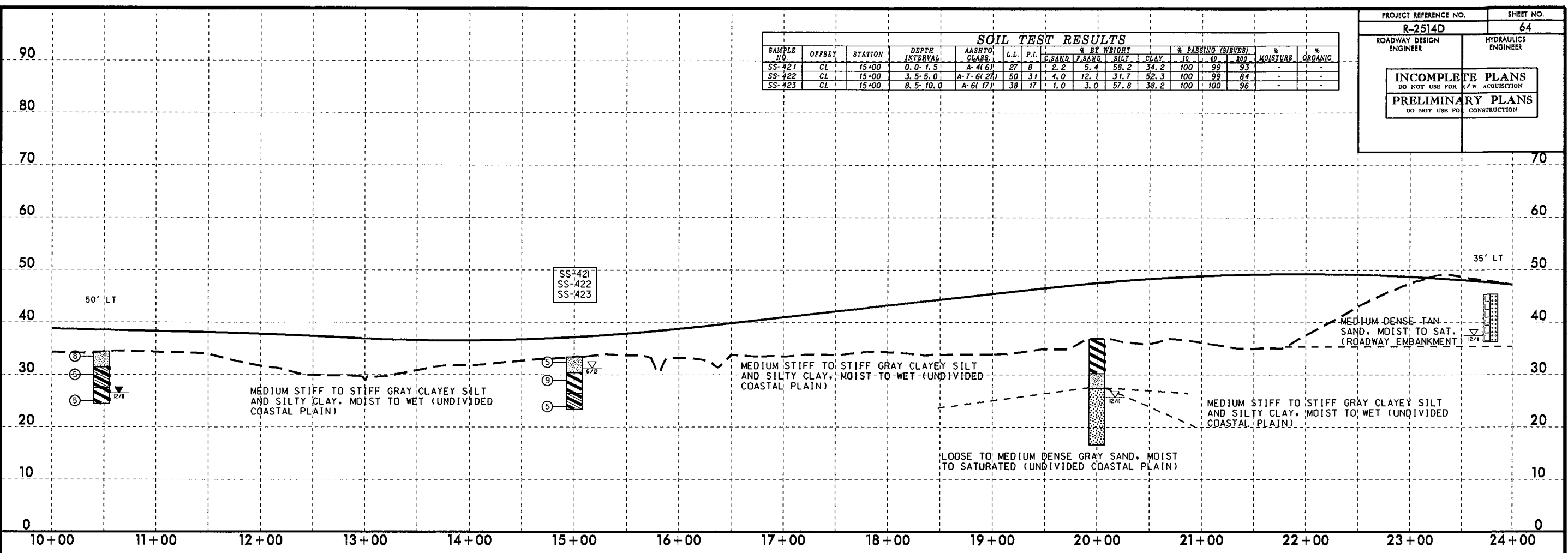
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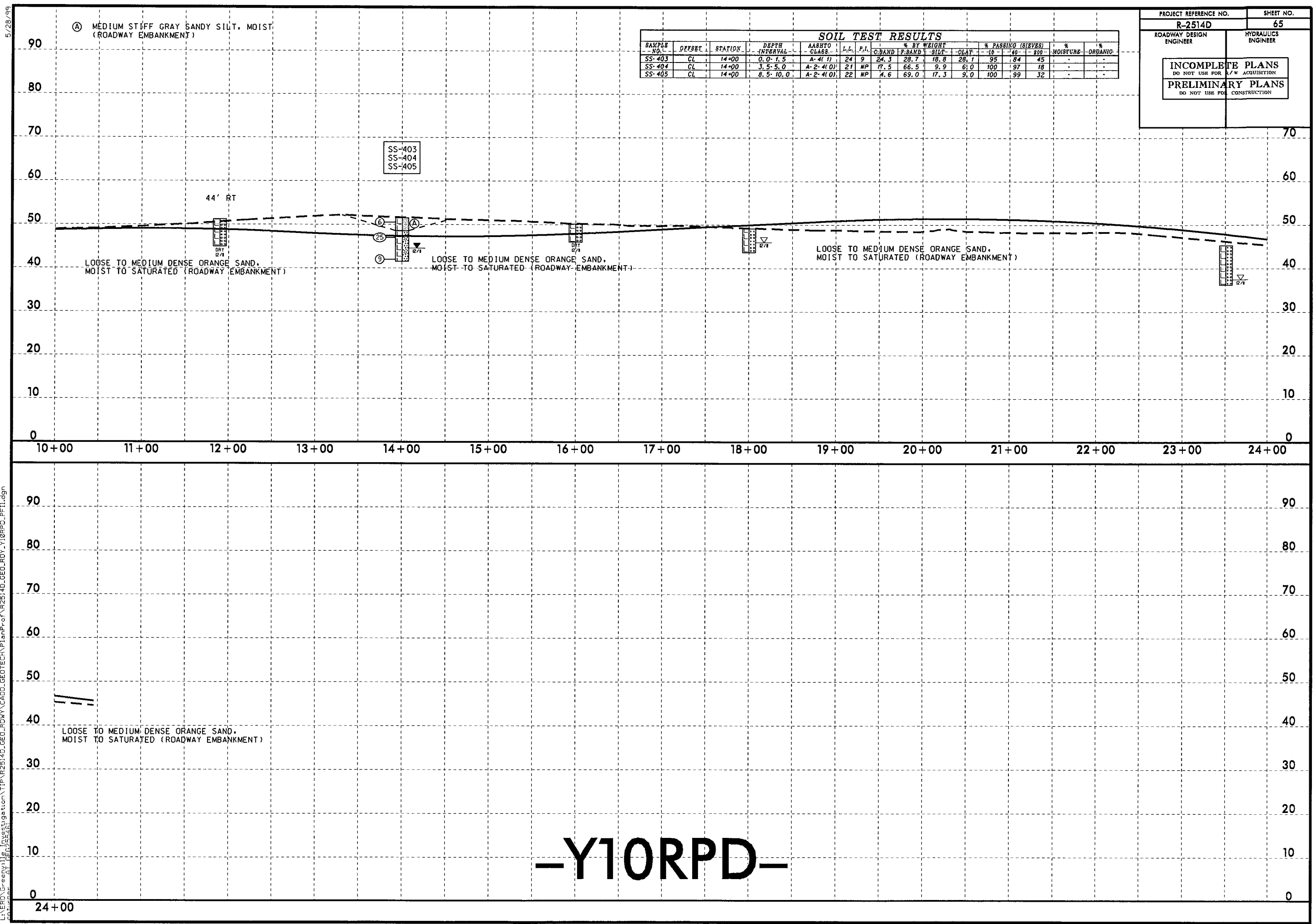
SOIL TEST RESULTS															
SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT				% PASSING (SIEVES)			% MOISTURE	% ORGANIC
							C.SAND	F.SAND	SILT	CLAY	#10	#40	#200		
SS-421	CL	15+00	0.0-1.5	A-4(6)	27	8	2.2	5.4	58.2	34.2	100	99	93	-	-
SS-422	CL	15+00	3.5-5.0	A-7-6(2)	50	31	4.0	12.1	31.7	52.3	100	99	84	-	-
SS-423	CL	15+00	8.5-10.0	A-6(17)	38	17	1.0	3.0	57.8	38.2	100	100	96	-	-

PROJECT REFERENCE NO. <b>R-2514D</b>	SHEET NO. <b>64</b>
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
<b>INCOMPLETE PLANS</b> DO NOT USE FOR ACQUISITION	
<b>PRELIMINARY PLANS</b> DO NOT USE FOR CONSTRUCTION	



**-Y10RPC-**

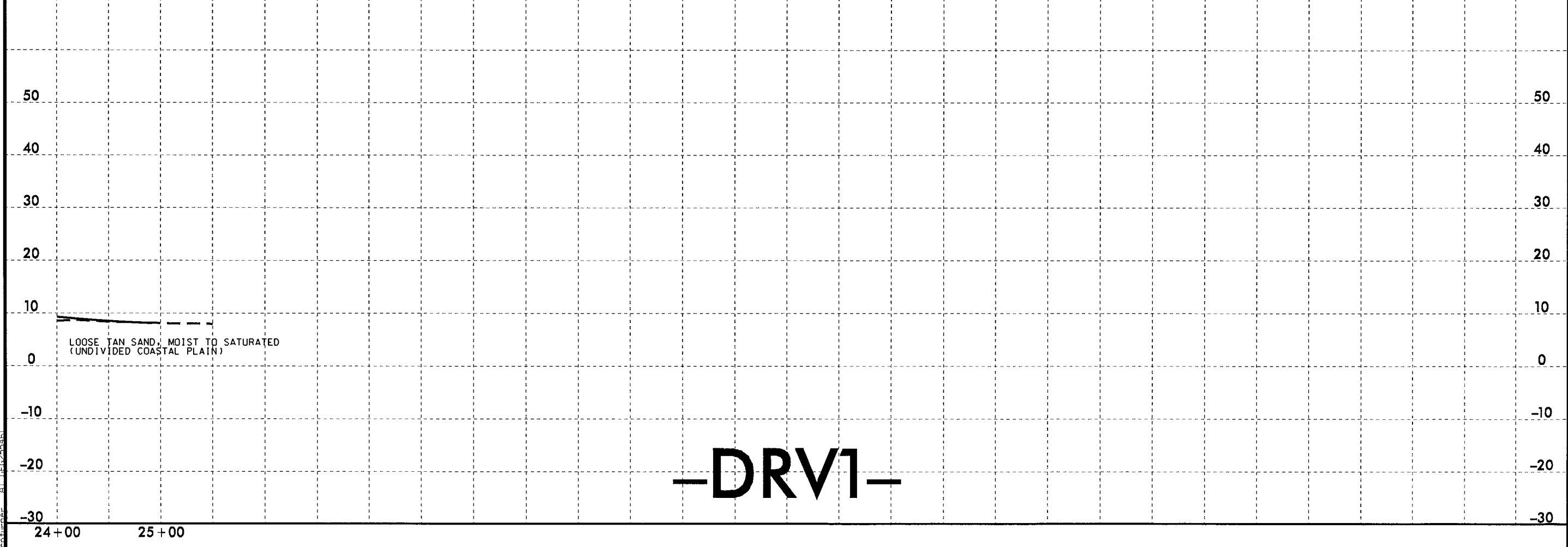
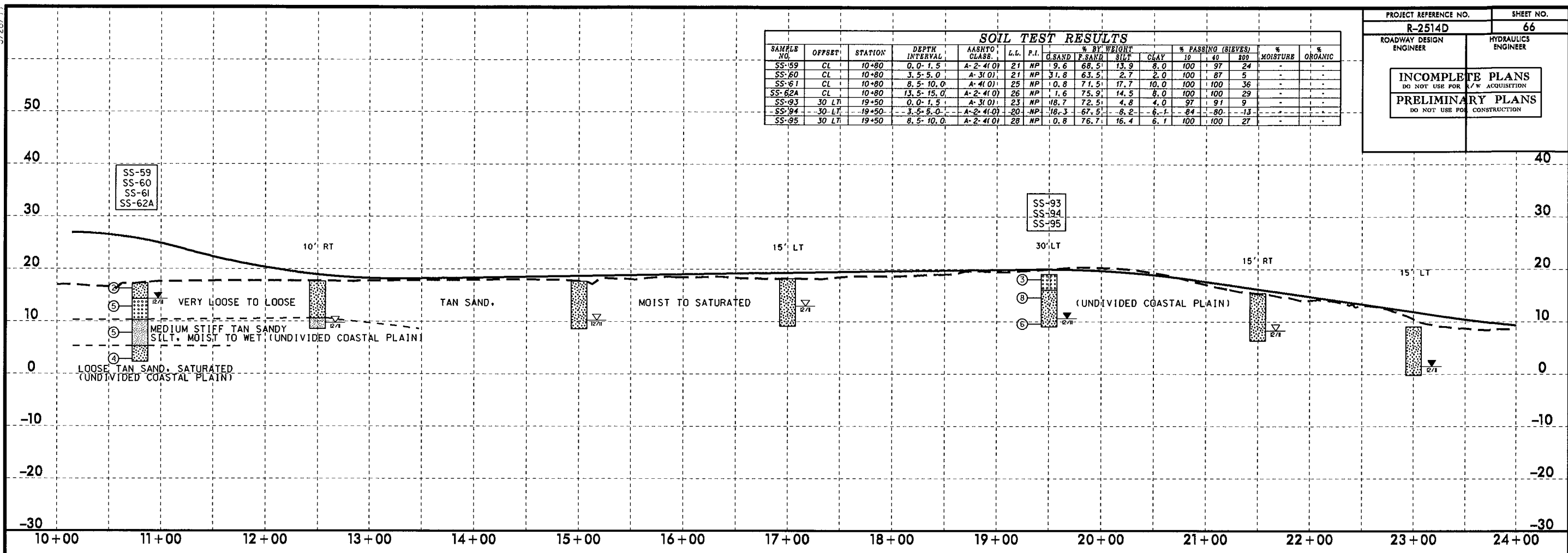
SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.L.	% BY WEIGHT				% PASSING (SIEVES)			% MOISTURE	% ORGANIC
							C. SAND	F. SAND	SILT	CLAY	-10	-40	-200		
SS-403	CL	14+00	0.0-1.5	A-4(1)	24	9	24.3	28.7	18.8	28.1	95	84	45	-	-
SS-404	CL	14+00	3.5-5.0	A-2-4(O)	21	NP	17.5	66.5	9.9	6.0	100	97	18	-	-
SS-405	CL	14+00	8.5-10.0	A-2-4(O)	22	NP	4.6	69.0	17.3	9.0	100	99	32	-	-



-Y10RPD-

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SOIL TEST RESULTS															
SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS	L.L.	P.I.	% BY WEIGHT				% PASSING (SIEVES)			% MOISTURE	% ORGANIC
							SAND	F.SAND	SILT	CLAY	10	40	200		
SS-59	CL	10+80	0.0-1.5	A-2-4(0)	21	NP	9.6	68.2	13.9	8.0	100	97	24	-	-
SS-60	CL	10+80	3.5-5.0	A-3(0)	21	NP	31.8	63.2	2.7	2.0	100	87	5	-	-
SS-61	CL	10+80	8.5-10.0	A-4(0)	25	NP	0.8	71.2	17.7	10.0	100	100	36	-	-
SS-62A	CL	10+80	13.5-15.0	A-2-4(0)	26	NP	1.6	75.2	14.5	8.0	100	100	29	-	-
SS-93	30 LT	19+50	0.0-1.5	A-3(0)	23	NP	18.7	72.2	4.8	4.0	97	91	9	-	-
SS-94	30 LT	19+50	3.5-5.0	A-2-4(0)	20	NP	18.3	67.2	6.2	6.1	84	80	13	-	-
SS-95	30 LT	19+50	8.5-10.0	A-2-4(0)	28	NP	0.8	76.7	16.4	6.1	100	100	27	-	-

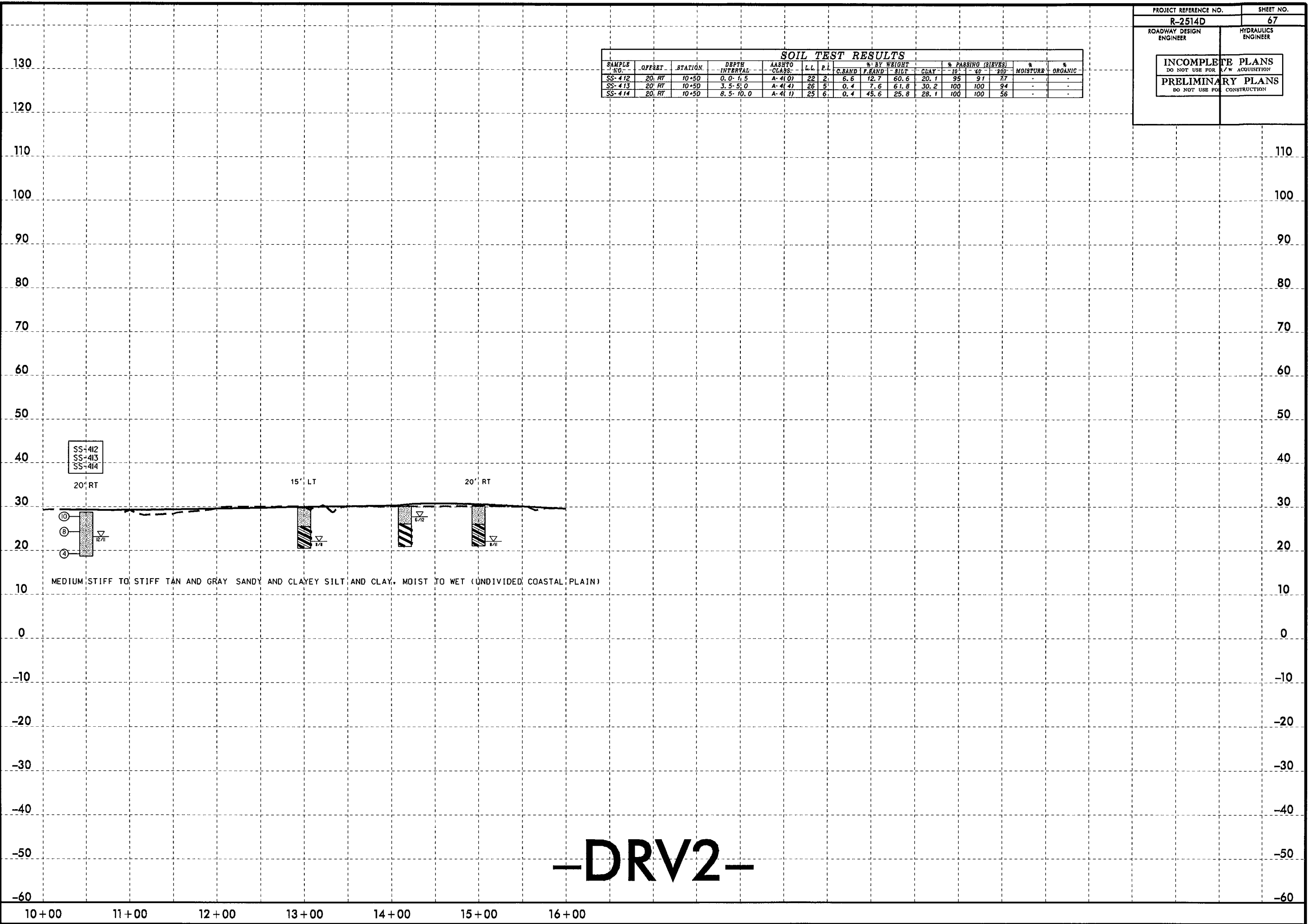


-DRV1-

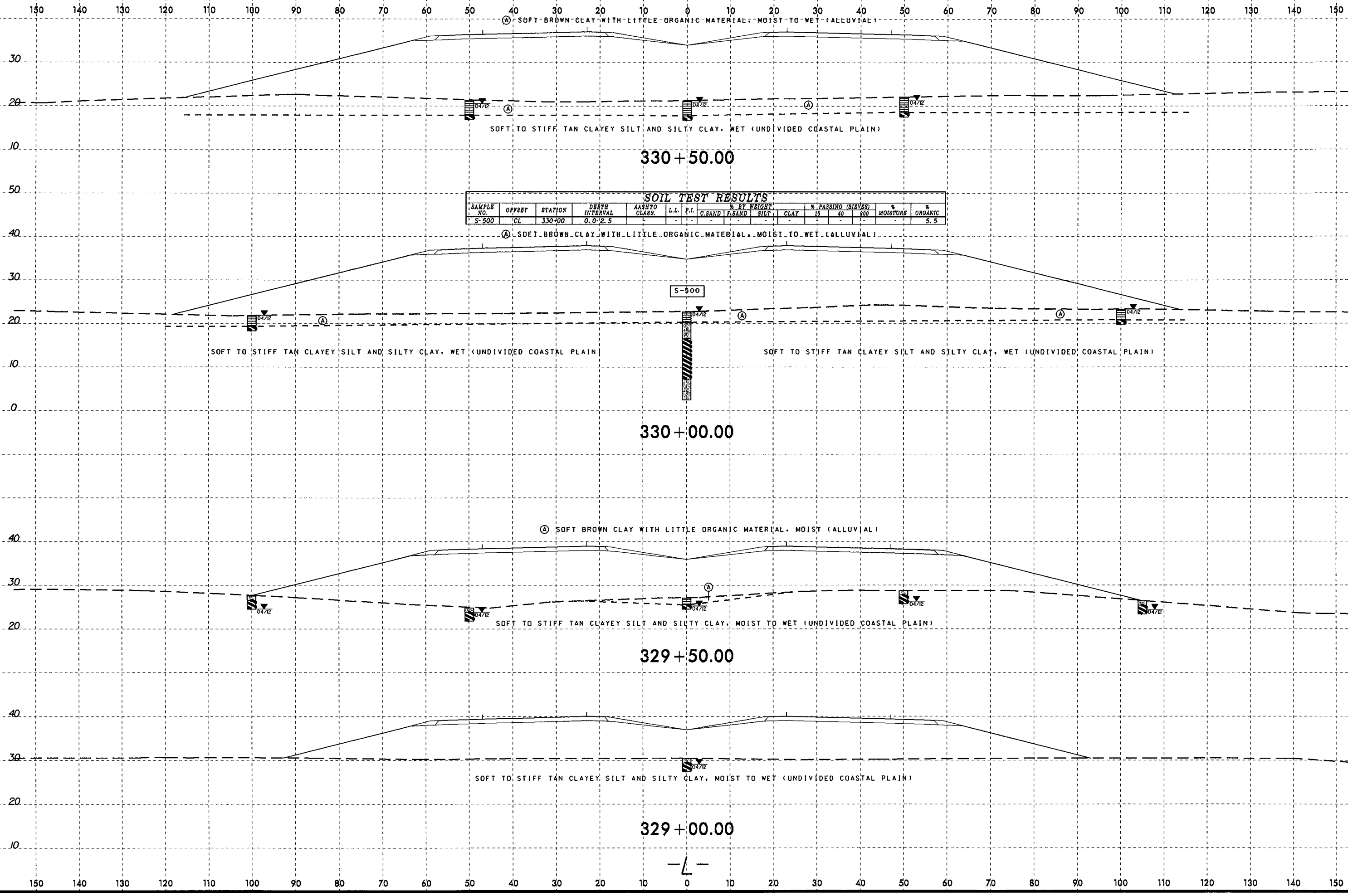
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SOIL TEST RESULTS															
SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS	L.L.	P.L.	% BY WEIGHT			% PASSING (SIEVES)			% MOISTURE	% ORGANIC	
							C.SAND	F.SAND	SILT	CLAY	#10	#40			#100
SS-412	20' RT	10+50	0.0-1.5	A-1(0)	22	21	6.6	12.7	60.6	20.1	95	91	77	-	-
SS-413	20' RT	10+50	3.5-5.0	A-1(4)	26	51	0.4	7.6	61.8	30.2	100	100	94	-	-
SS-414	20' RT	10+50	8.5-10.0	A-1(1)	25	61	0.4	45.6	25.8	28.1	100	100	56	-	-

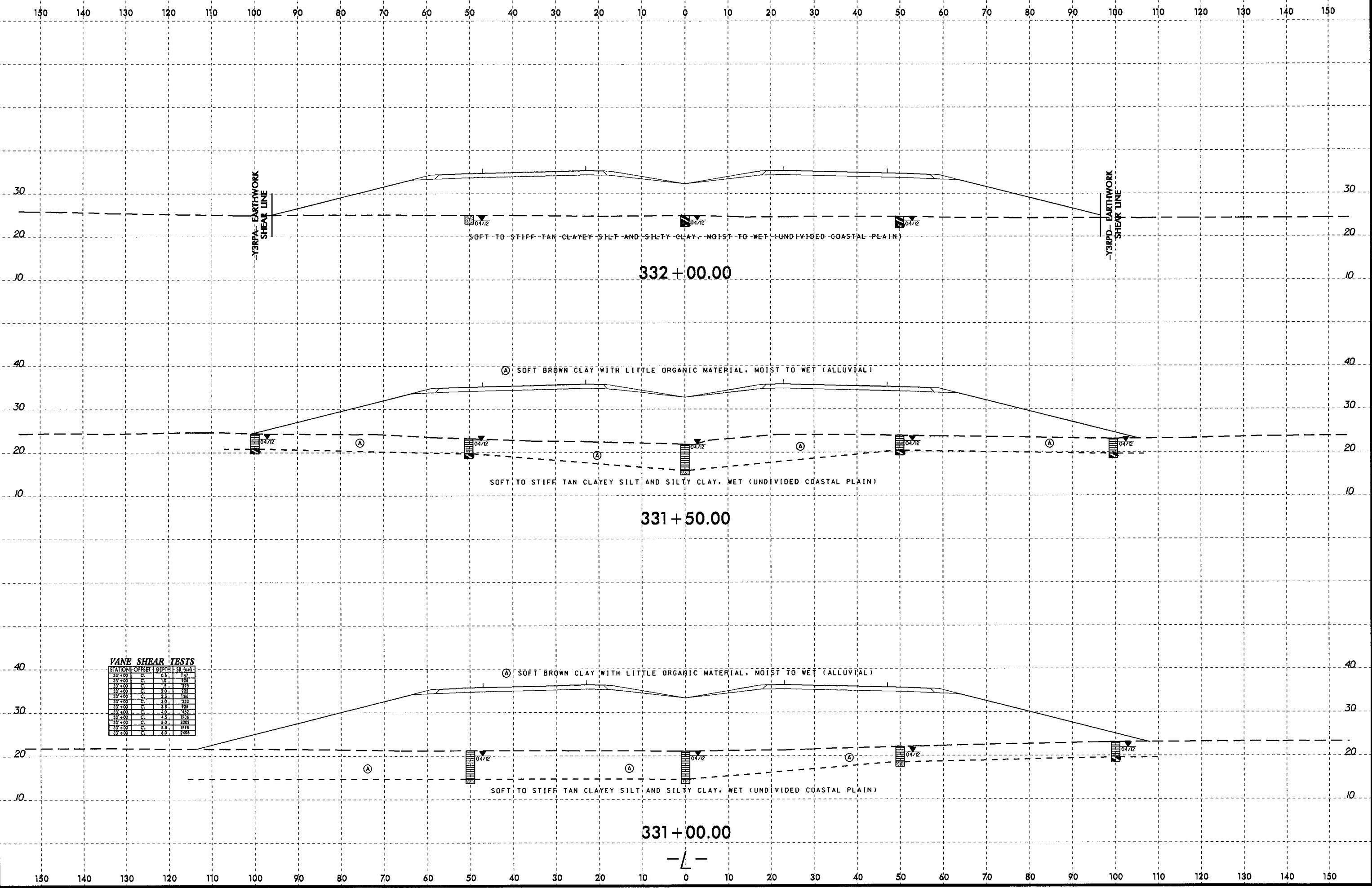
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-DRV2-



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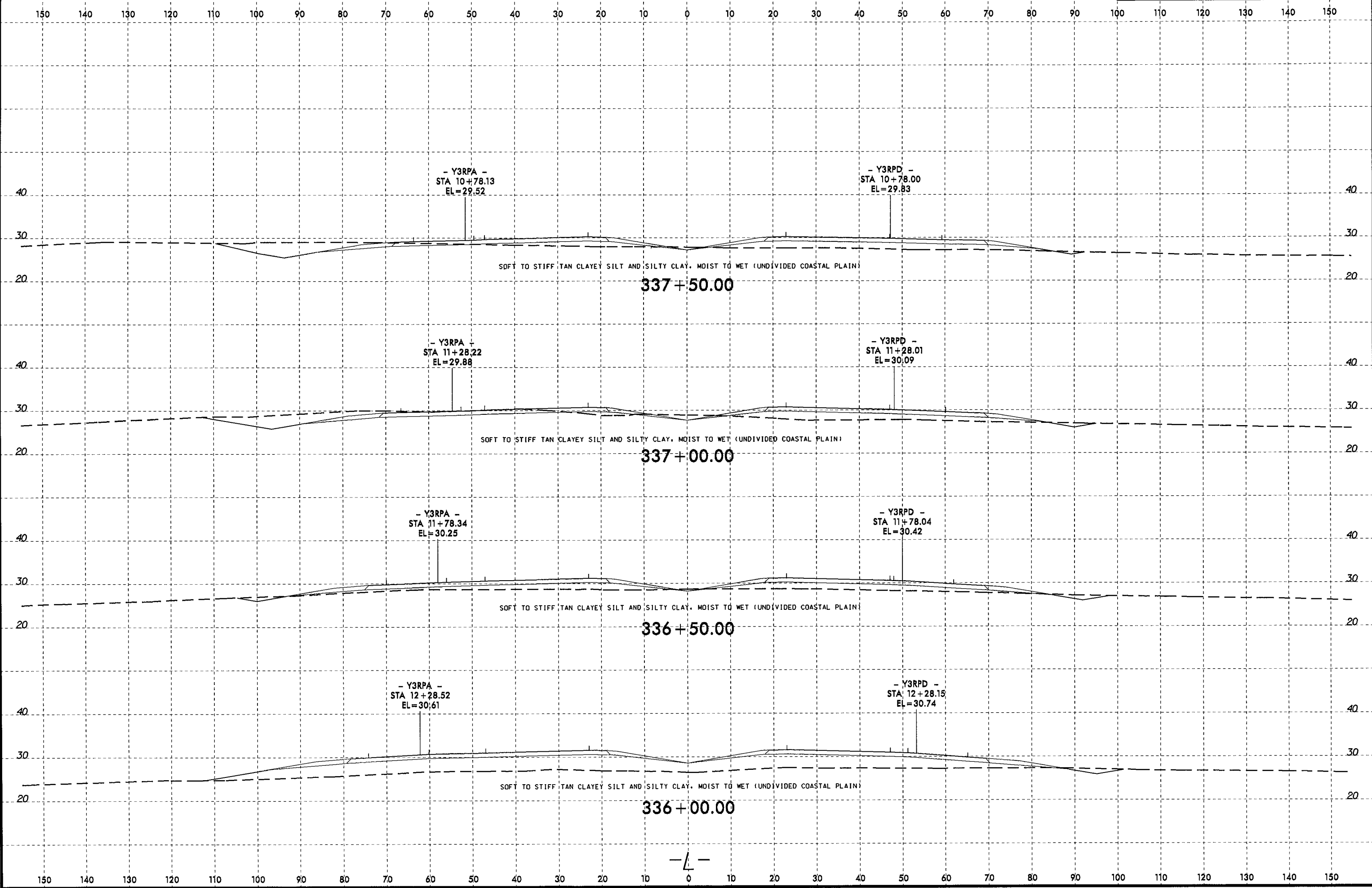
**VANE SHEAR TESTS**

STATION	OFFSET	DEPTH	SR (pcf)
33+00	0.5	1.47	
33+00	1.0	131	
33+00	1.5	293	
33+00	2.0	123	
33+00	2.5	116	
33+00	3.0	133	
33+00	3.5	123	
33+00	4.0	162	
33+00	4.5	150	
33+00	5.0	2303	
33+00	5.5	1978	
33+00	6.0	2205	

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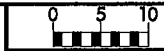


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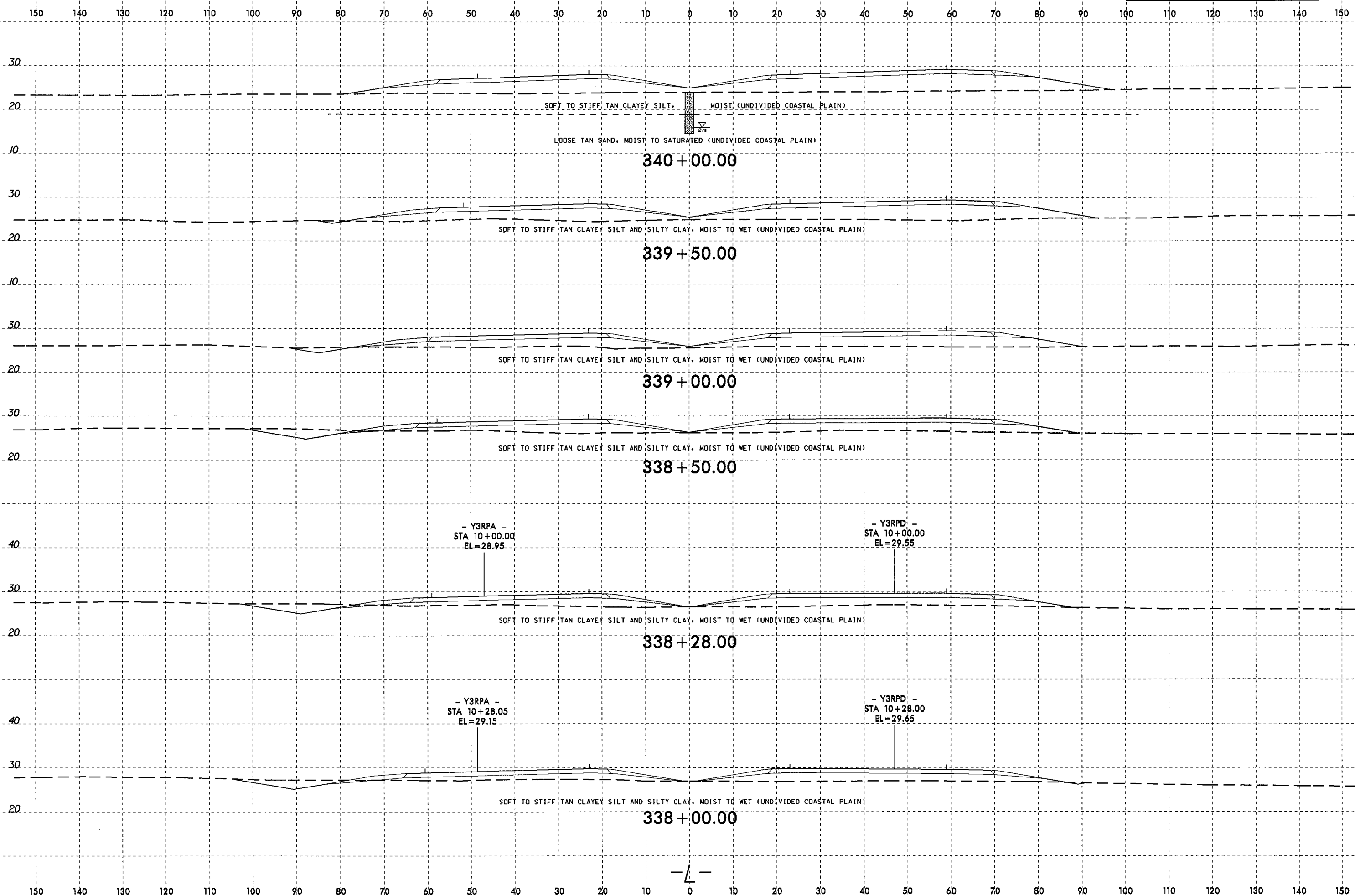


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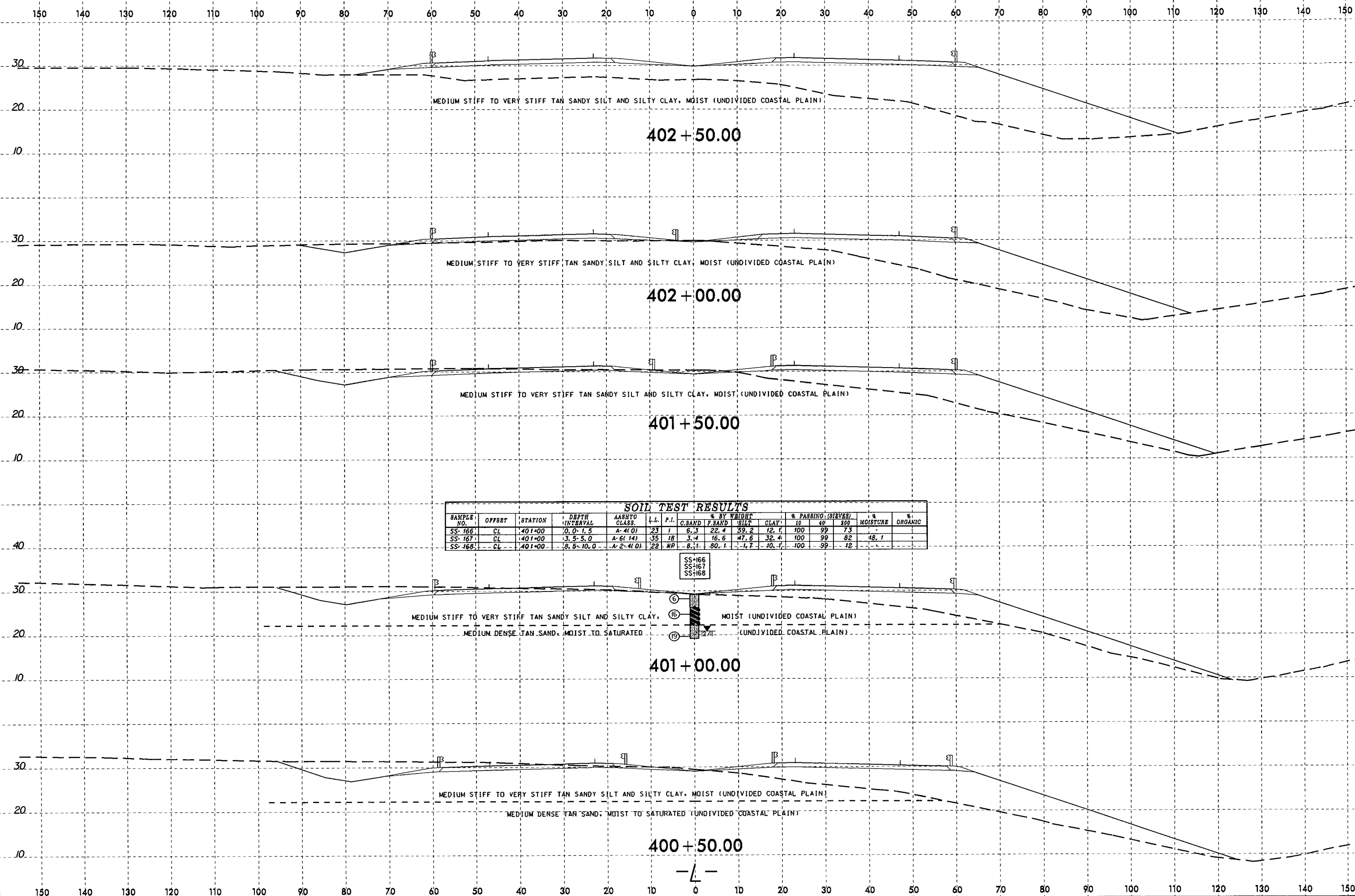
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PROJ. REFERENCE NO.	SHEET NO.
R-2514D	71



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SOIL TEST RESULTS														
SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT				% PASSING (SIEVES)		% MOISTURE	% ORGANIC
							C.SAND	F.SAND	SILT	CLAY	10	40		
SS-166	CL	401+00	0.0-1.5	A-4(0)	23	1	6.5	22.4	59.2	12.1	100	99	73	
SS-167	CL	401+00	3.5-5.0	A-6(14)	35	18	3.4	16.6	47.6	32.4	100	99	82	48.1
SS-168	CL	401+00	8.5-10.0	A-2(40)	22	NR	8.1	80.1	1.7	10.1	100	99	12	

SOIL TEST RESULTS															
SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT				% PASSING (SIEVES)			% MOISTURE	% ORGANIC
							G.BAND	F.SAND	SILT	CLAY	10	40	200		
SS-163	CL	407+00	0.0-1.5	A-4(0)	19	2	3.8	25.5	54.5	161.2	100	99	74	-	-
SS-164	CL	407+00	3.5-5.0	A-4(7)	29	9	1.0	15.0	55.7	28.3	100	100	88	24.2	-
SS-165	CL	407+00	8.5-10.0	A-6(20)	40	19	1.4	1.4	58.7	38.4	100	99	98	-	-

SS-163  
SS-164  
SS-165

MEDIUM STIFF TO STIFF TAN SANDY AND CLAYEY SILT AND SILTY CLAY, MOIST TO WET (UNDIVIDED COASTAL PLAIN)

407+00.00

MEDIUM STIFF TO STIFF TAN SANDY AND CLAYEY SILT AND SILTY CLAY, MOIST TO WET (UNDIVIDED COASTAL PLAIN)

406+50.00

MEDIUM STIFF TO STIFF TAN SANDY AND CLAYEY SILT AND SILTY CLAY, MOIST TO WET (UNDIVIDED COASTAL PLAIN)

406+00.00

MEDIUM STIFF TO STIFF TAN SANDY AND CLAYEY SILT AND SILTY CLAY, MOIST TO WET (UNDIVIDED COASTAL PLAIN)

405+50.00

MEDIUM STIFF TO STIFF TAN SANDY AND CLAYEY SILT AND SILTY CLAY, MOIST (UNDIVIDED COASTAL PLAIN)

405+00.00

MEDIUM STIFF TO STIFF TAN SANDY AND CLAYEY SILT AND SILTY CLAY, MOIST TO WET (UNDIVIDED COASTAL PLAIN)

404+50.00

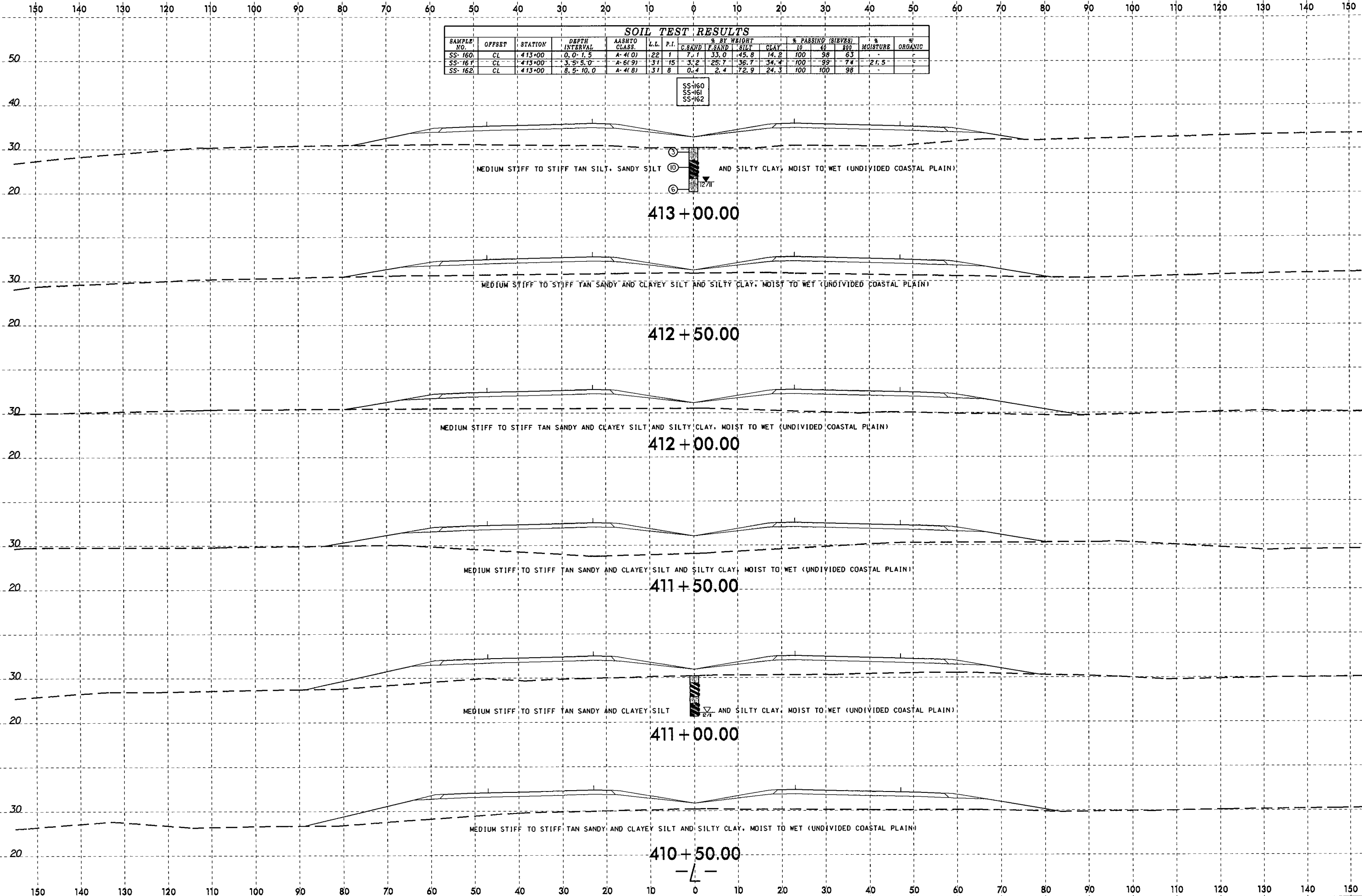
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SOIL TEST RESULTS															
SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT			% PASSING (SIEVES)			% MOISTURE	% ORGANIC	
							C. SAND	F. SAND	SILT	CLAY	10	40			200
SS-160	CL	413+00	0.0-1.5	A-4(0)	22	1	7.1	33.0	45.8	14.2	100	98	63	-	-
SS-161	CL	413+00	3.5-5.0	A-6(9)	37	15	3.2	26.7	36.7	34.4	100	99	74	21.5	-
SS-162	CL	413+00	8.5-10.0	A-4(8)	37	8	0.4	2.4	72.9	24.3	100	100	98	-	-

SS-160  
SS-161  
SS-162



MEDIUM STIFF TO STIFF TAN SILT, SANDY SILT AND SILTY CLAY, MOIST TO WET (UNDIVIDED COASTAL PLAIN)

413 + 00.00

MEDIUM STIFF TO STIFF TAN SANDY AND CLAYEY SILT AND SILTY CLAY, MOIST TO WET (UNDIVIDED COASTAL PLAIN)

412 + 50.00

MEDIUM STIFF TO STIFF TAN SANDY AND CLAYEY SILT AND SILTY CLAY, MOIST TO WET (UNDIVIDED COASTAL PLAIN)

412 + 00.00

MEDIUM STIFF TO STIFF TAN SANDY AND CLAYEY SILT AND SILTY CLAY, MOIST TO WET (UNDIVIDED COASTAL PLAIN)

411 + 50.00

MEDIUM STIFF TO STIFF TAN SANDY AND CLAYEY SILT AND SILTY CLAY, MOIST TO WET (UNDIVIDED COASTAL PLAIN)

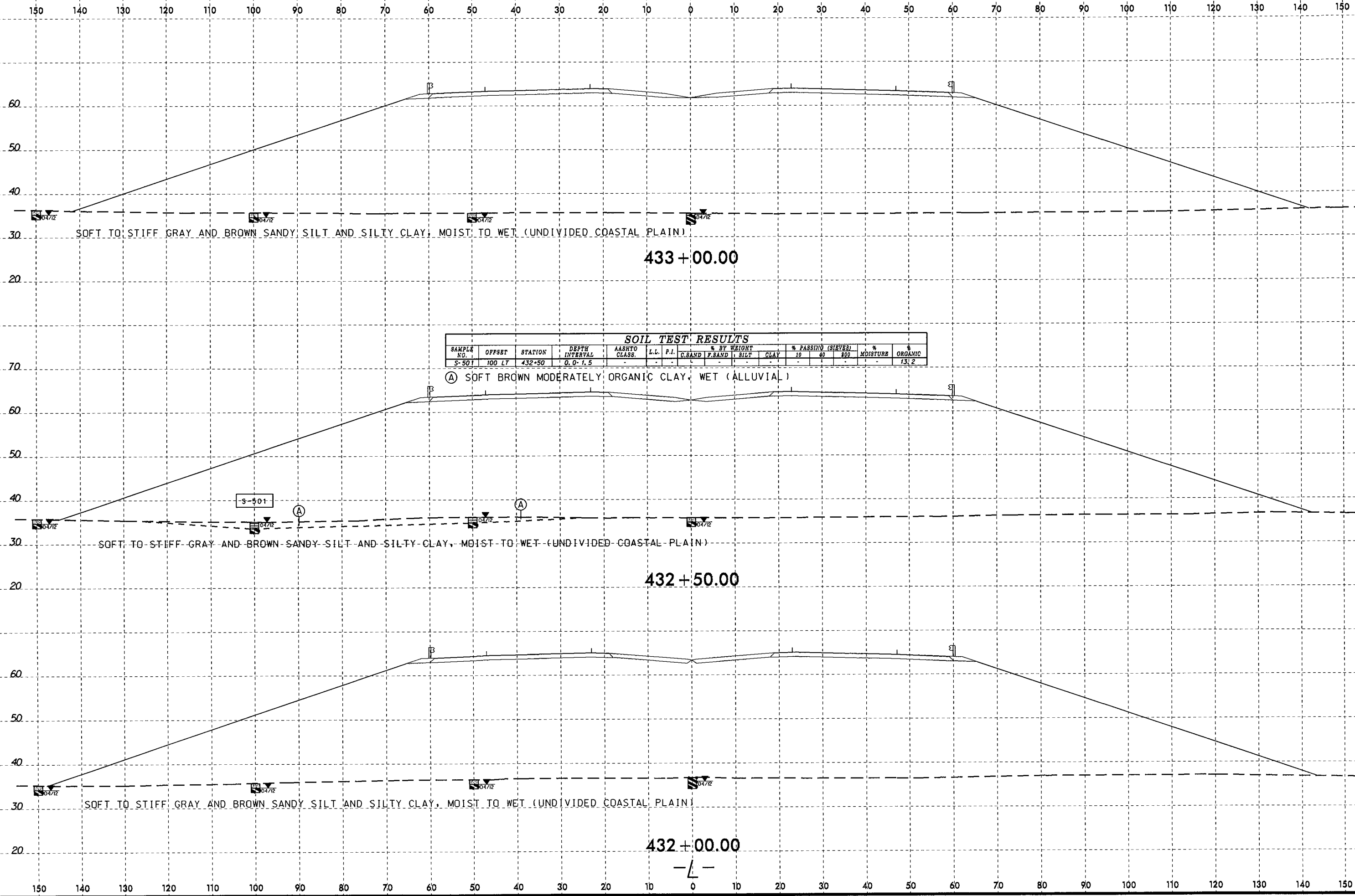
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MEDIUM STIFF TO STIFF TAN SANDY AND CLAYEY SILT AND SILTY CLAY, MOIST TO WET (UNDIVIDED COASTAL PLAIN)

410 + 50.00

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8/23/99  
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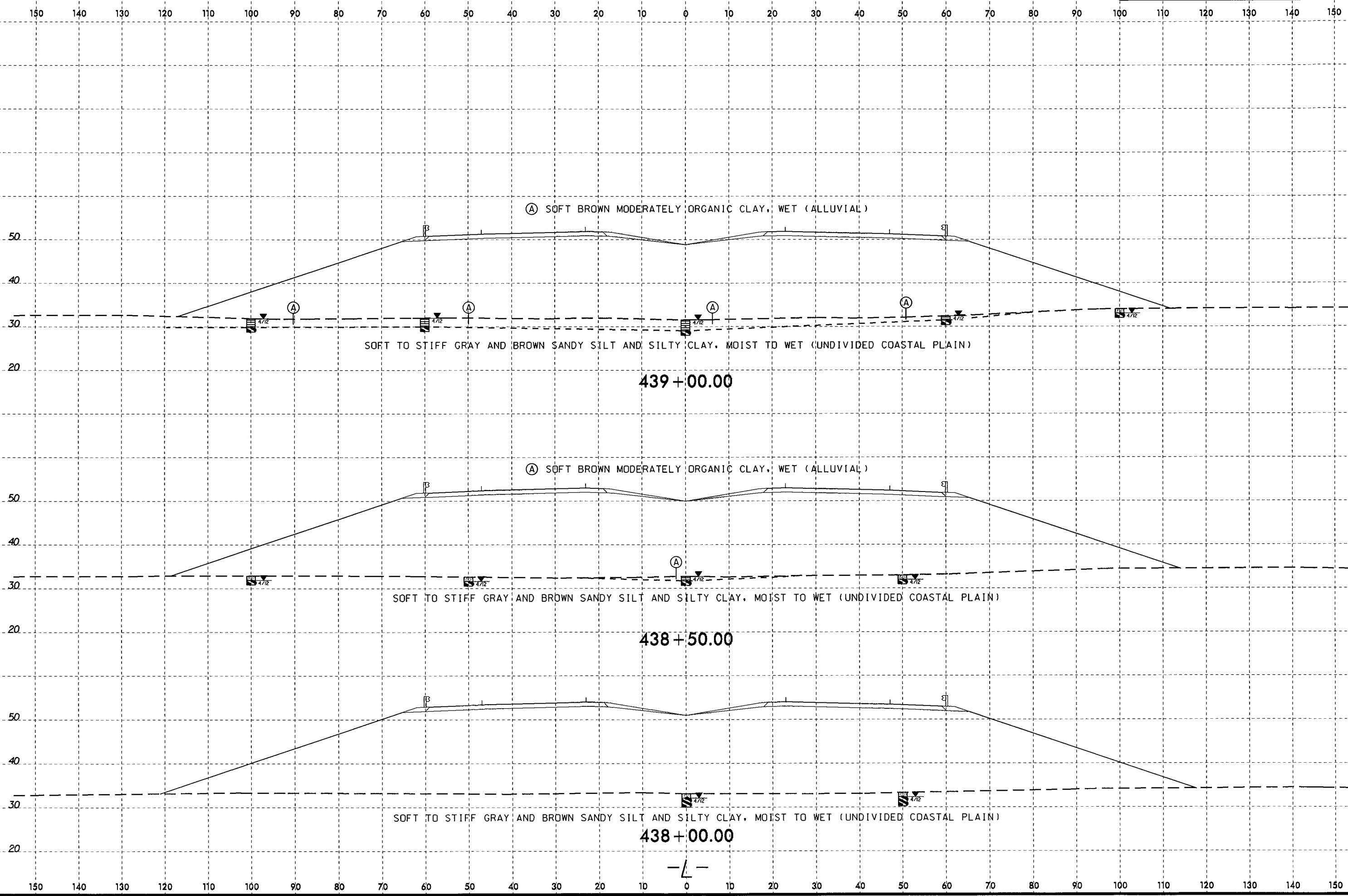


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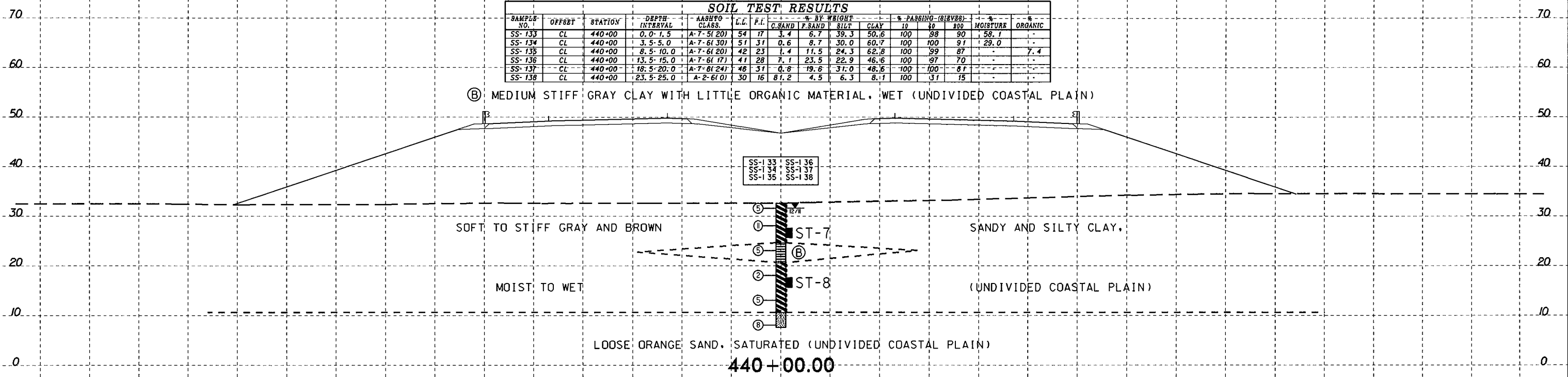
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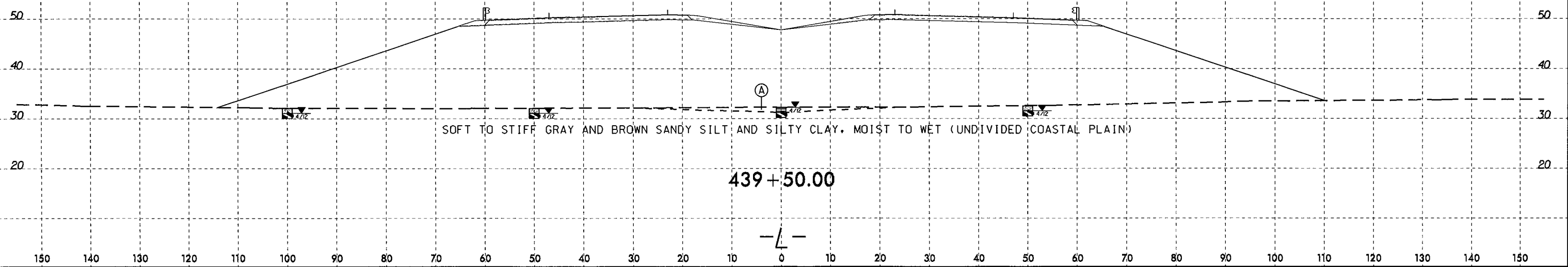


SOIL TEST RESULTS															
SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT			% PASSING (SIEVES)			MOISTURE	% ORGANIC	
							C. SAND	F. SAND	SIET	CLAY	10	20			60
SS-133	CL	440+00	0.0-1.5	A-7-5(20)	54	17	3.4	6.7	39.3	50.6	100	98	90	58.1	-
SS-134	CL	440+00	3.5-5.0	A-7-6(30)	51	31	0.6	8.7	30.0	60.7	100	100	91	29.0	-
SS-135	CL	440+00	8.5-10.0	A-7-6(20)	42	23	1.4	11.5	24.3	62.8	100	99	87	-	7.4
SS-136	CL	440+00	13.5-15.0	A-7-6(17)	41	28	7.1	23.5	22.9	46.6	100	97	70	-	-
SS-137	CL	440+00	18.5-20.0	A-7-6(24)	46	31	0.8	19.6	31.0	48.6	100	100	81	-	-
SS-138	CL	440+00	23.5-25.0	A-2-6(0)	30	16	81.2	4.5	6.3	8.1	100	31	15	-	-

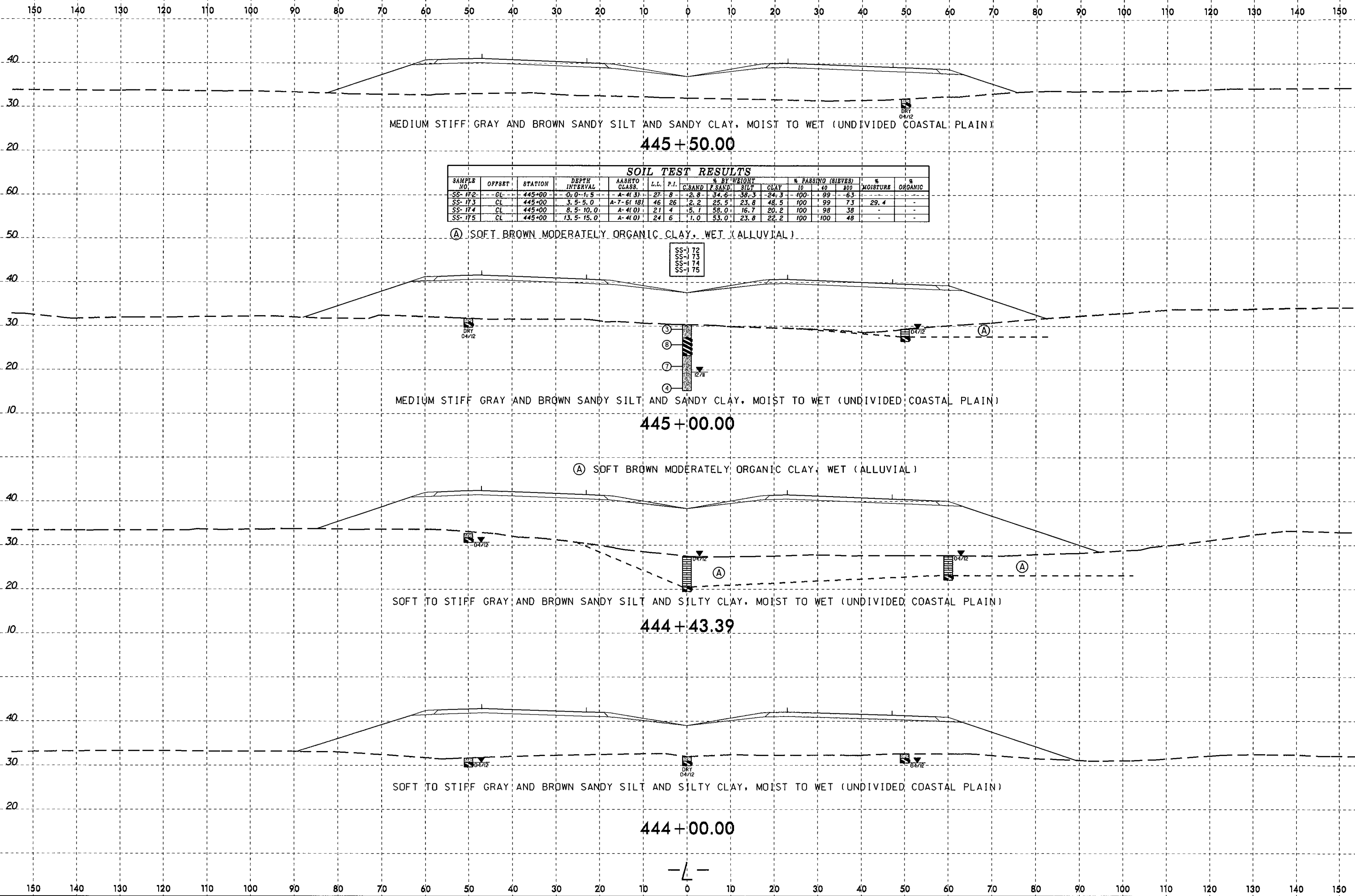
ⓑ MEDIUM STIFF GRAY CLAY WITH LITTLE ORGANIC MATERIAL, WET (UNDIVIDED COASTAL PLAIN)



Ⓐ SOFT BROWN MODERATELY ORGANIC CLAY, WET (ALLUVIAL)



8/23/99



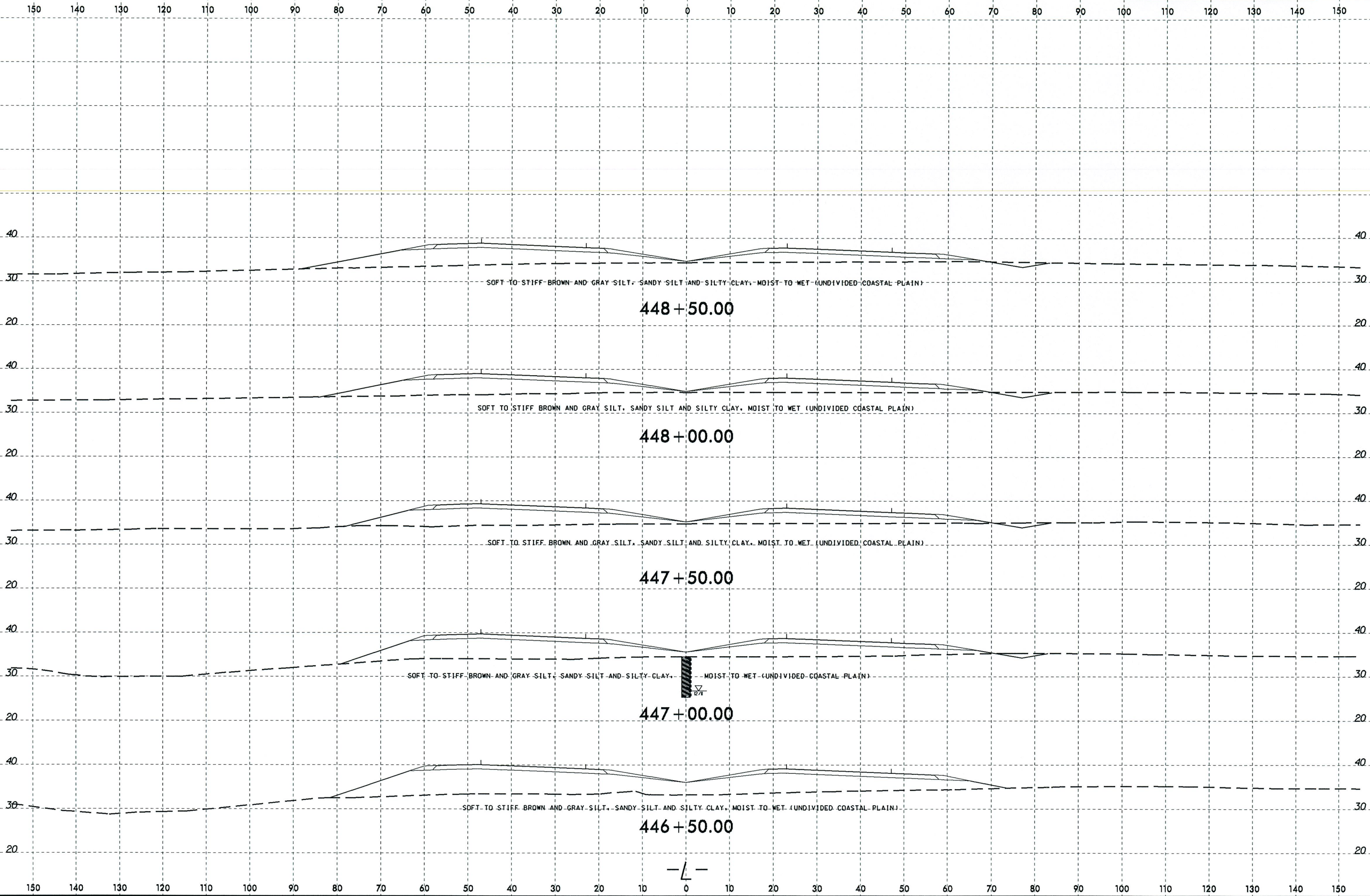
**SOIL TEST RESULTS**

SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT				% PASSING (SIEVES)			% MOISTURE	% ORGANIC
							CSAND	F.SAND	SILT	CLAY	10	40	100		
SS-172	CL	445+00	0.0-1.5	A-4(3)	27	8	12.8	34.6	36.3	24.3	100	99	63	-	-
SS-173	CL	445+00	3.5-5.0	A-7(61)	46	26	12.2	25.5	23.8	48.5	100	99	73	29.4	-
SS-174	CL	445+00	8.5-10.0	A-4(0)	21	4	5.1	58.0	16.7	20.2	100	98	38	-	-
SS-175	CL	445+00	13.5-15.0	A-4(0)	24	6	1.0	53.0	23.8	22.2	100	100	48	-	-

SS-172	72
SS-173	75
SS-174	74
SS-175	75

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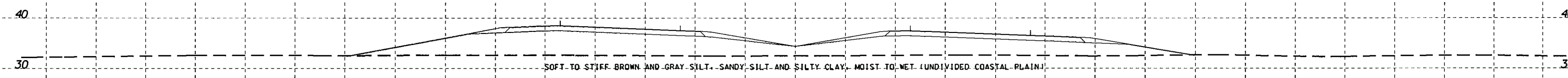


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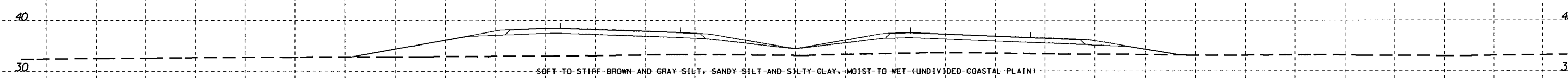


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R-2514D	81

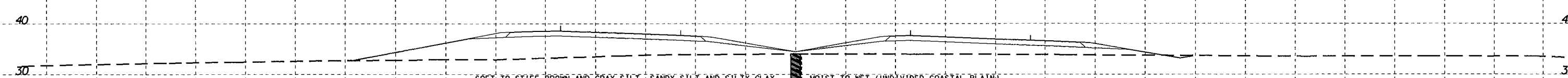
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450+00.00



449+50.00



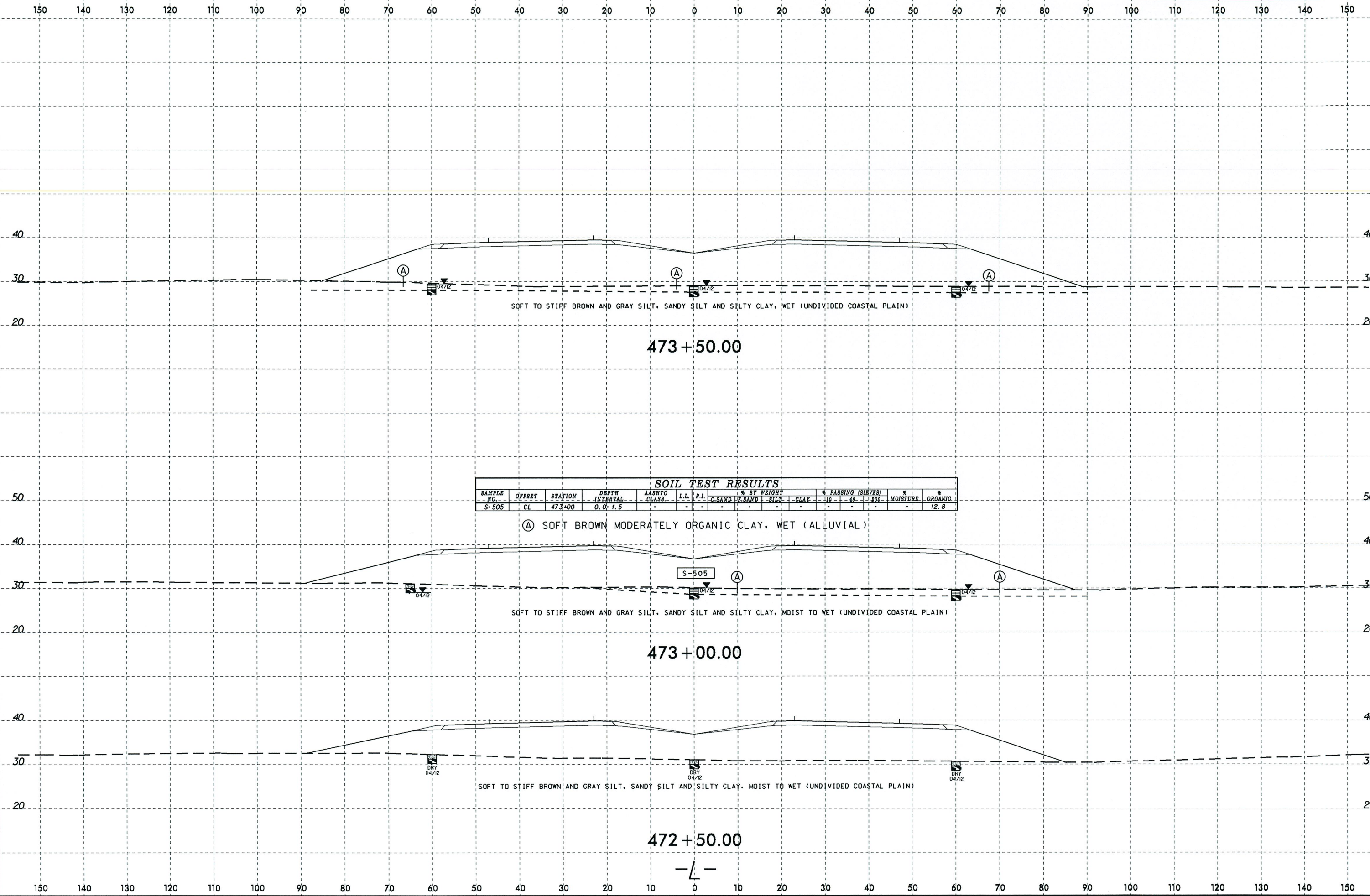
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SOIL TEST RESULTS													
SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	C.SAND	F.SAND	SILT	CLAY	% PASSING (SIEVES)	% MOISTURE	% ORGANIC
											10	42	200
S-505	CL	473+00	0.0 - 1.5										12.6

Ⓐ SOFT BROWN MODERATELY ORGANIC CLAY, WET (ALLUVIAL)

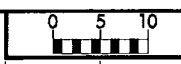
473+50.00

473+00.00

472+50.00

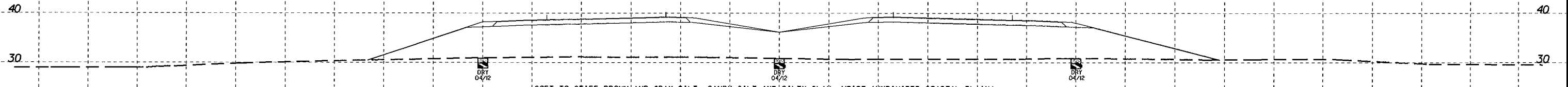
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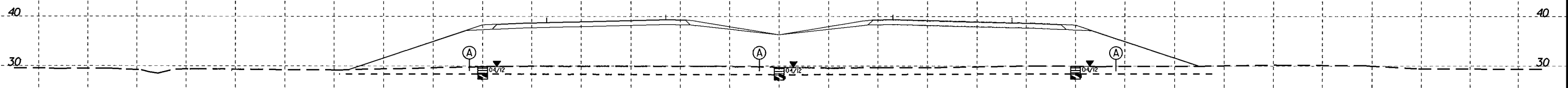
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R-2514D	83

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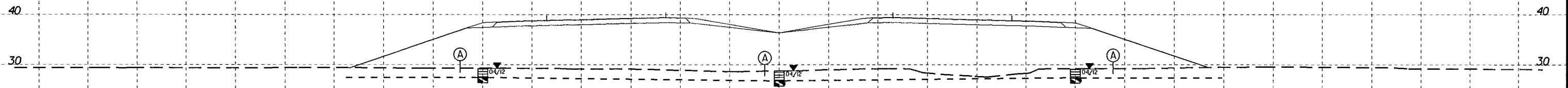
SOFT TO STIFF BROWN AND GRAY SILT, SANDY SILT AND SILTY CLAY, MOIST (UNDIVIDED COASTAL PLAIN)

475+00.00



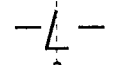
SOFT TO STIFF BROWN AND GRAY SILT, SANDY SILT AND SILTY CLAY, WET (UNDIVIDED COASTAL PLAIN)

474+50.00



SOFT TO STIFF BROWN AND GRAY SILT, SANDY SILT AND SILTY CLAY, WET (UNDIVIDED COASTAL PLAIN)

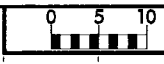
474+00.00



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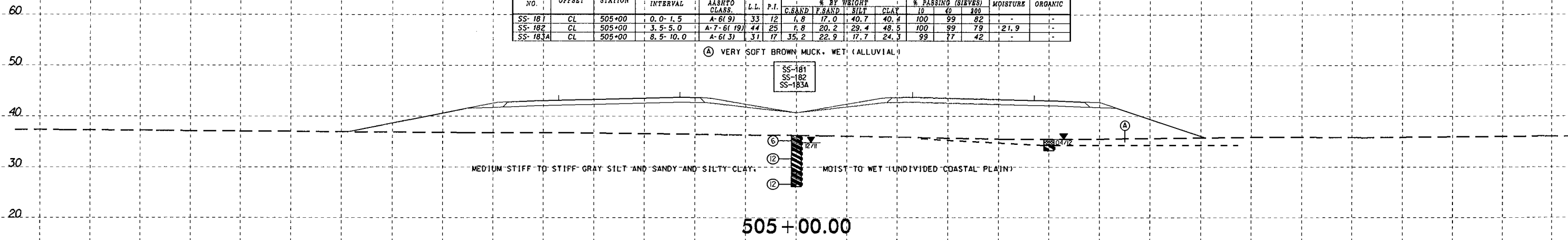


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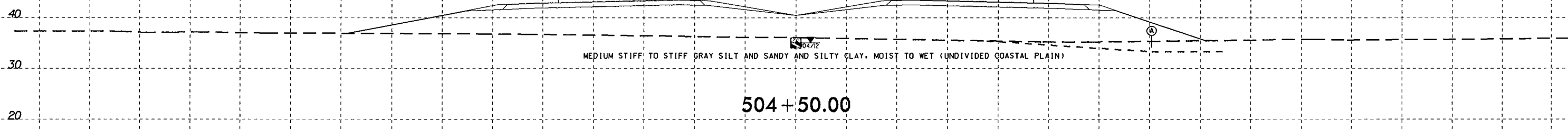
SOIL TEST RESULTS															
SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT			% PASSING (SIEVES)			% MOISTURE	% ORGANIC	
							C. SAND	F. SAND	SILT	CLAY	10	40			100
SS-181	CL	505+00	0.0-1.5	A-6(9)	33	12	1.8	17.0	40.7	40.4	100	99	82	-	-
SS-182	CL	505+00	3.5-5.0	A-7(61.9)	44	25	1.8	20.2	29.4	48.5	100	99	79	21.9	-
SS-183A	CL	505+00	8.5-10.0	A-6(3)	37	17	35.2	22.9	17.7	24.3	99	17	42	-	-

(A) VERY SOFT BROWN MUCK, WET (ALLUVIAL)

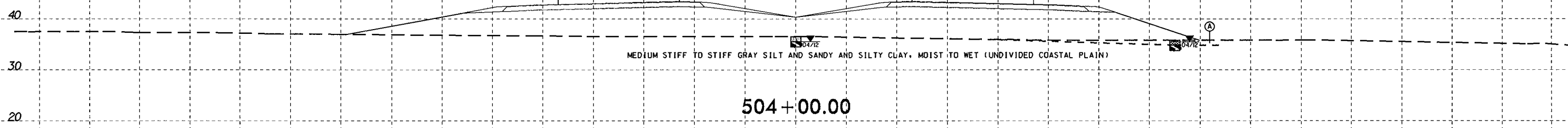
SS-181  
SS-182  
SS-183A



(A) VERY SOFT BROWN MUCK, WET (ALLUVIAL)



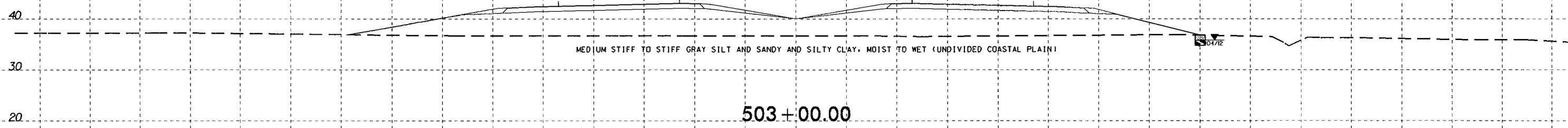
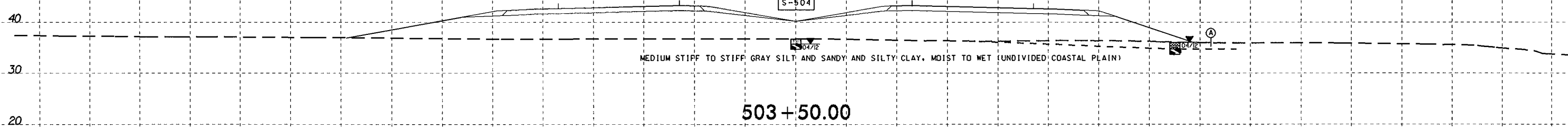
(A) VERY SOFT BROWN MUCK, MOIST TO WET (ALLUVIAL)



SOIL TEST RESULTS														
SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT			% PASSING (SIEVES)			% MOISTURE	% ORGANIC
							C. SAND	F. SAND	SILT	CLAY	10	40		
S-504	75 RT	503+50	0.0-1.2	-	-	-	-	-	-	-	-	-	21.3	-

(A) VERY SOFT BROWN MUCK, WET (ALLUVIAL)

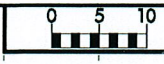
S-504



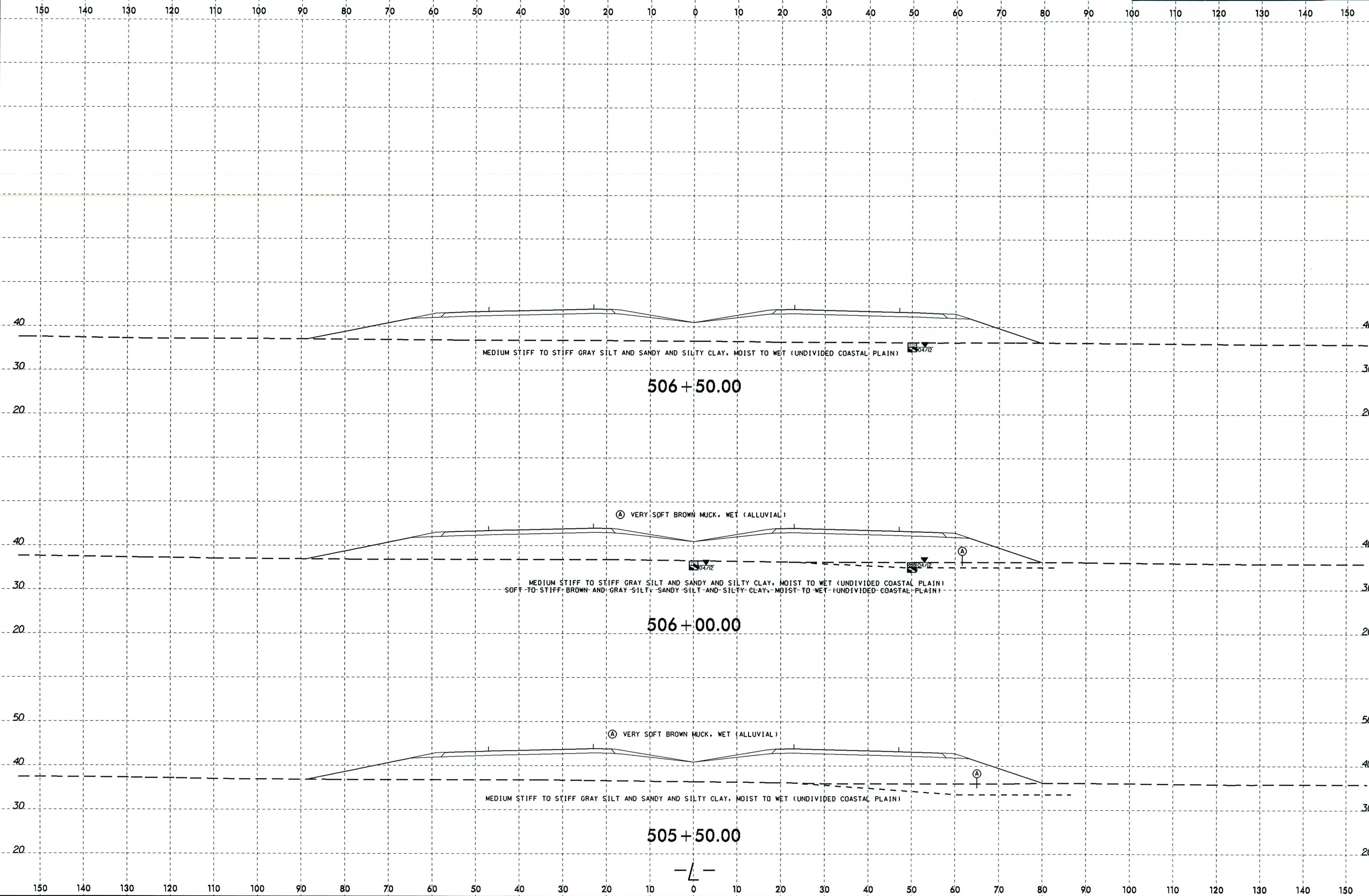
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PROJ. REFERENCE NO.	SHEET NO.
R-2514D	85



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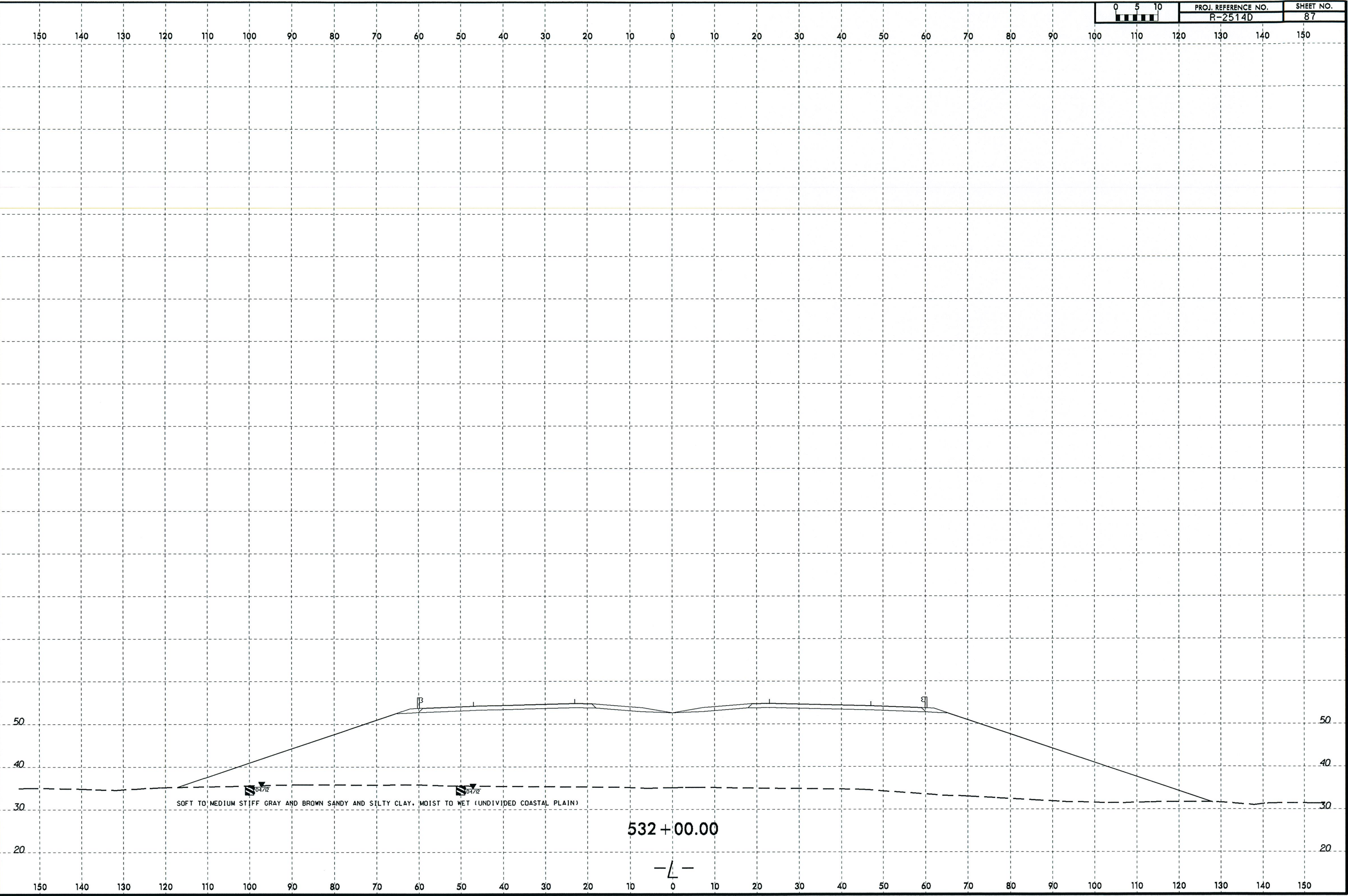




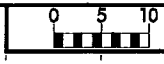
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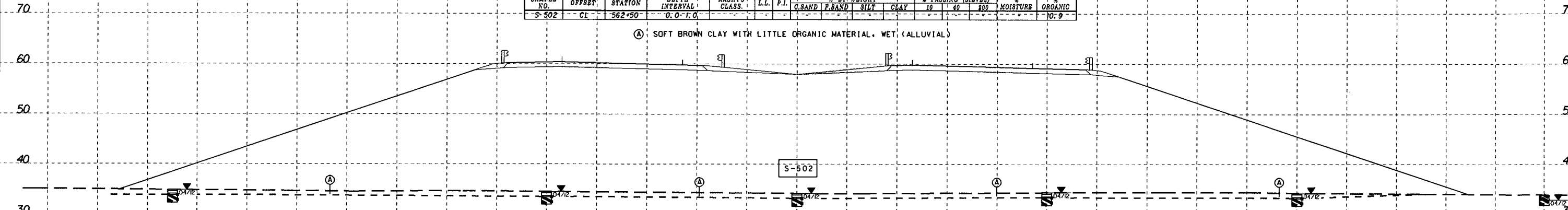
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R-2514D	88

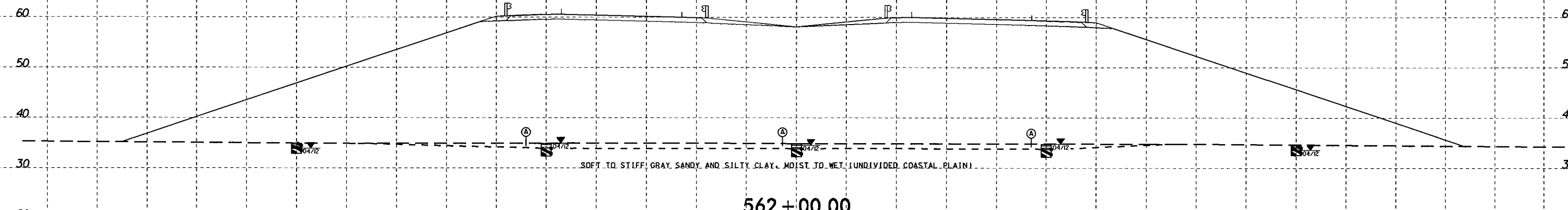
SOIL TEST RESULTS														
SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS	L.L.	P.I.	% BY WEIGHT				% PASSING (SIEVES)		% MOISTURE	% ORGANIC
							C.SAND	F.SAND	SILT	CLAY	10	40	200	
S-502	CL	562+50	0.0-1.0											

(A) SOFT BROWN CLAY WITH LITTLE ORGANIC MATERIAL, WET (ALLUVIAL)



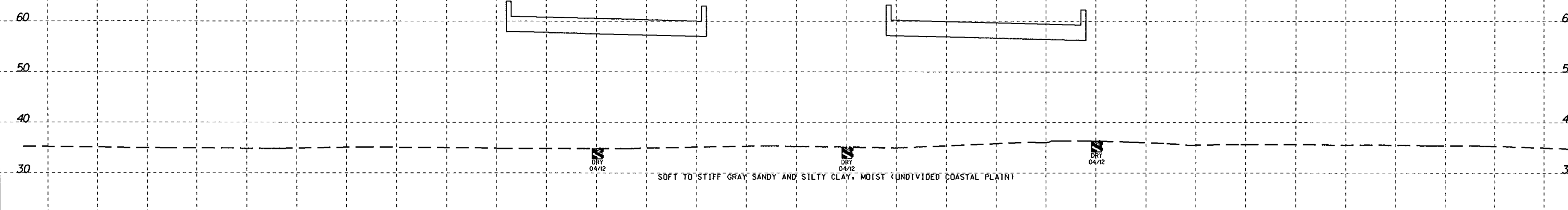
562 + 50.00

(A) SOFT BROWN CLAY WITH LITTLE ORGANIC MATERIAL, WET (ALLUVIAL)



562 + 00.00

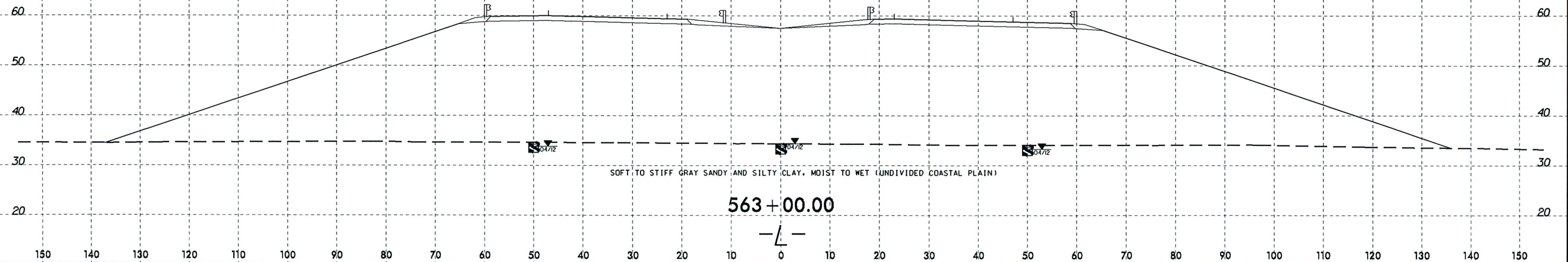
(A) SOFT TO STIFF GRAY SANDY AND SILTY CLAY, MOIST TO WET (UNDIVIDED COASTAL PLAIN)



561 + 50.00

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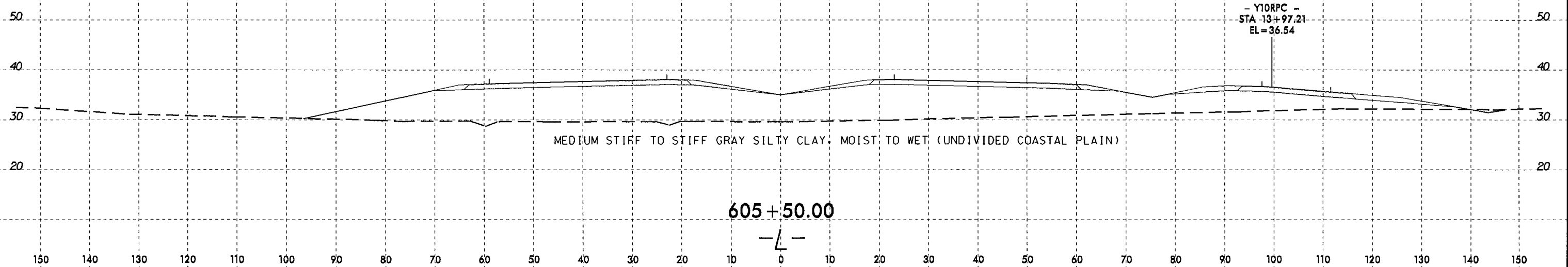
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PROJ. REFERENCE NO.	SHEET NO.
R-2514D	90

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150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150

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SOIL TEST RESULTS															
SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT			% PASSING (SIEVES)			% MOISTURE	% ORGANIC	
							C.SAND	F.SAND	SILT	CLAY	#10	#40			#200
SS-409	50 LT	20+97	0.7-2.2	A-2-4(0)	17	NP	40.1	31.6	18.3	10.1	89	69	26	-	-
SS-410	50 LT	20+97	3.5-5.0	A-4(4)	23	7	1.4	7.6	58.8	32.2	100	99	94	-	-
SS-411	50 LT	20+97	8.5-10.0	A-6(14)	37	18	0.2	24.1	37.5	38.2	100	100	81	-	-

SS-409  
SS-410  
SS-411  
20+97

(A) MEDIUM DENSE TAN SAND, MOIST (ROADWAY EMBANKMENT)

-Y3RPA- INTERSECTION SHEAR LINE

PAVEMENT

SOFT TO MEDIUM STIFF TAN AND GRAY SANDY AND CLAYEY SILT AND SILTY CLAY, MOIST TO WET (UNDIVIDED COASTAL PLAIN)

21 + 00.00

-Y3RPA- INTERSECTION SHEAR LINE

(A) MEDIUM DENSE TAN SAND, MOIST (ROADWAY EMBANKMENT)

SOFT TO MEDIUM STIFF TAN AND GRAY SANDY AND CLAYEY SILT AND SILTY CLAY, MOIST TO WET (UNDIVIDED COASTAL PLAIN)

20 + 50.00

(A) MEDIUM DENSE TAN SAND, MOIST (ROADWAY EMBANKMENT)

SOFT TO MEDIUM STIFF TAN AND GRAY SANDY AND CLAYEY SILT AND SILTY CLAY, MOIST TO WET (UNDIVIDED COASTAL PLAIN)

19 + 94.00

(A) MEDIUM DENSE TAN SAND, MOIST (ROADWAY EMBANKMENT)

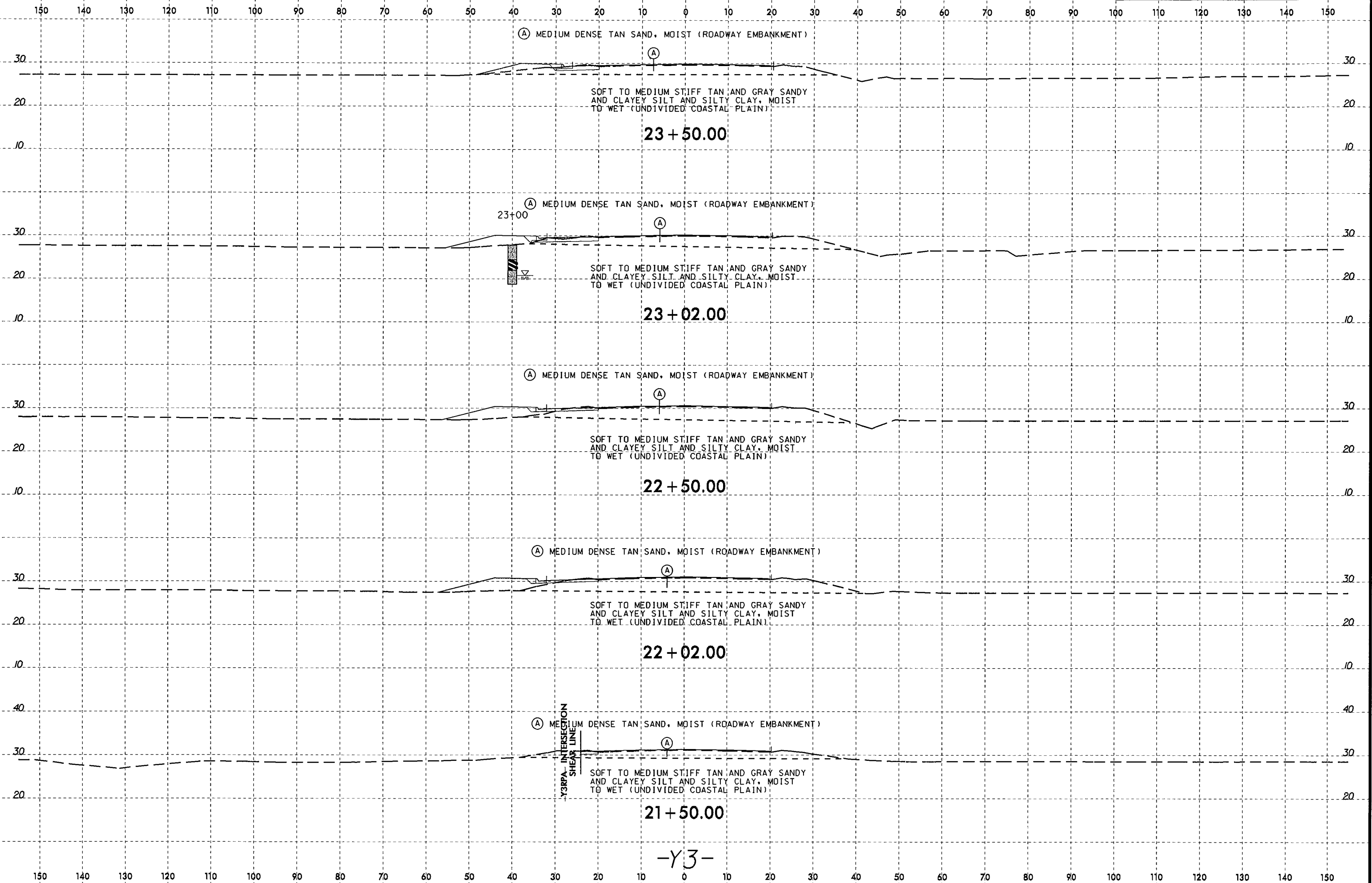
SOFT TO MEDIUM STIFF TAN AND GRAY SANDY AND CLAYEY SILT AND SILTY CLAY, MOIST TO WET (UNDIVIDED COASTAL PLAIN)

19 + 50.00

-Y3-

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21+50.00

22+02.00

22+50.00

23+02.00

23+50.00

-Y3-

Y3RPA INTERSECTION SHEAR LINE

(A) MEDIUM DENSE TAN SAND, MOIST (ROADWAY EMBANKMENT)

SOFT TO MEDIUM STIFF TAN AND GRAY SANDY AND CLAYEY SILT AND SILTY CLAY, MOIST TO WET (UNDIVIDED COASTAL PLAIN)

(A) MEDIUM DENSE TAN SAND, MOIST (ROADWAY EMBANKMENT)

SOFT TO MEDIUM STIFF TAN AND GRAY SANDY AND CLAYEY SILT AND SILTY CLAY, MOIST TO WET (UNDIVIDED COASTAL PLAIN)

(A) MEDIUM DENSE TAN SAND, MOIST (ROADWAY EMBANKMENT)

SOFT TO MEDIUM STIFF TAN AND GRAY SANDY AND CLAYEY SILT AND SILTY CLAY, MOIST TO WET (UNDIVIDED COASTAL PLAIN)

(A) MEDIUM DENSE TAN SAND, MOIST (ROADWAY EMBANKMENT)

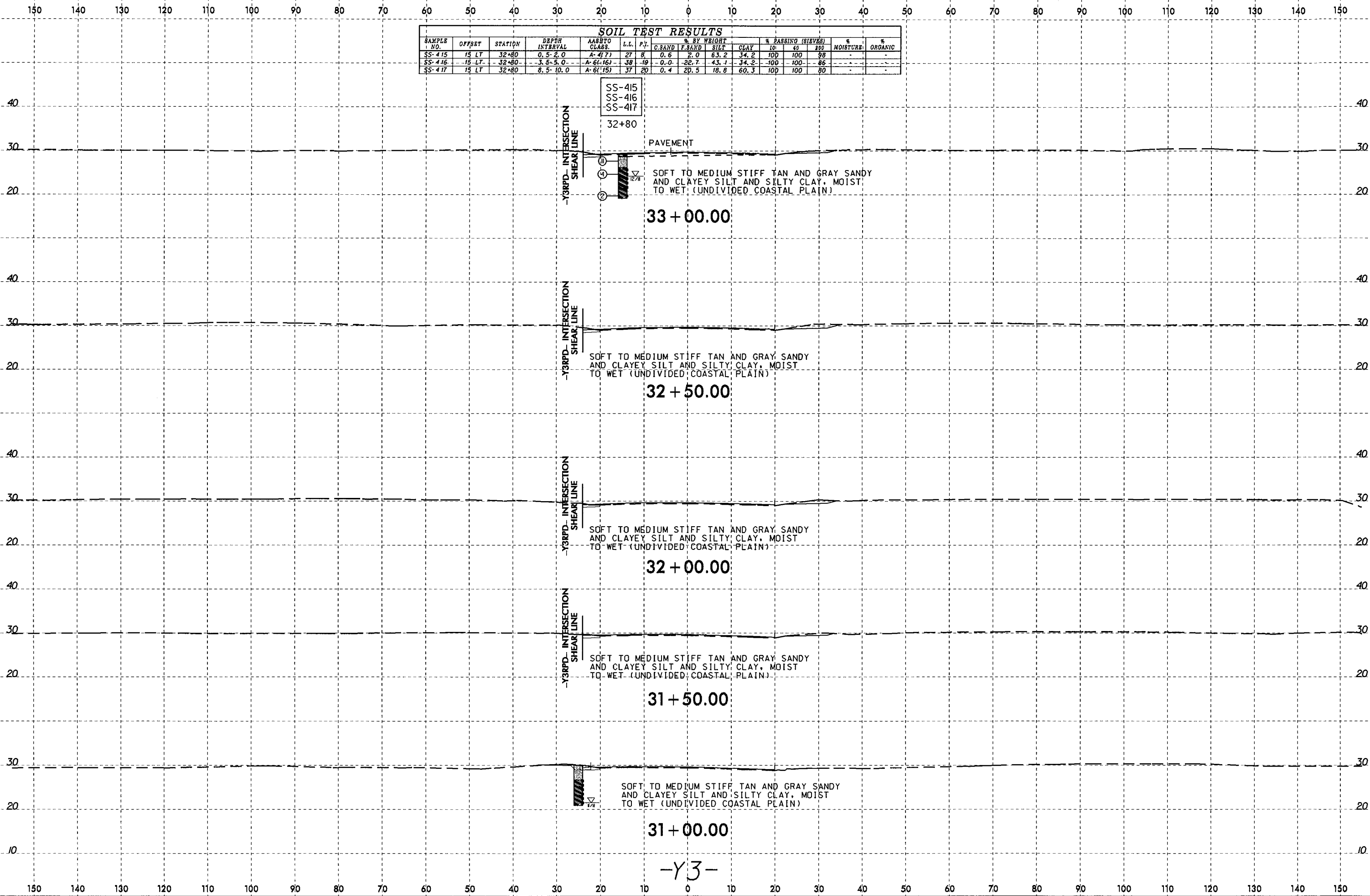
SOFT TO MEDIUM STIFF TAN AND GRAY SANDY AND CLAYEY SILT AND SILTY CLAY, MOIST TO WET (UNDIVIDED COASTAL PLAIN)

(A) MEDIUM DENSE TAN SAND, MOIST (ROADWAY EMBANKMENT)

SOFT TO MEDIUM STIFF TAN AND GRAY SANDY AND CLAYEY SILT AND SILTY CLAY, MOIST TO WET (UNDIVIDED COASTAL PLAIN)

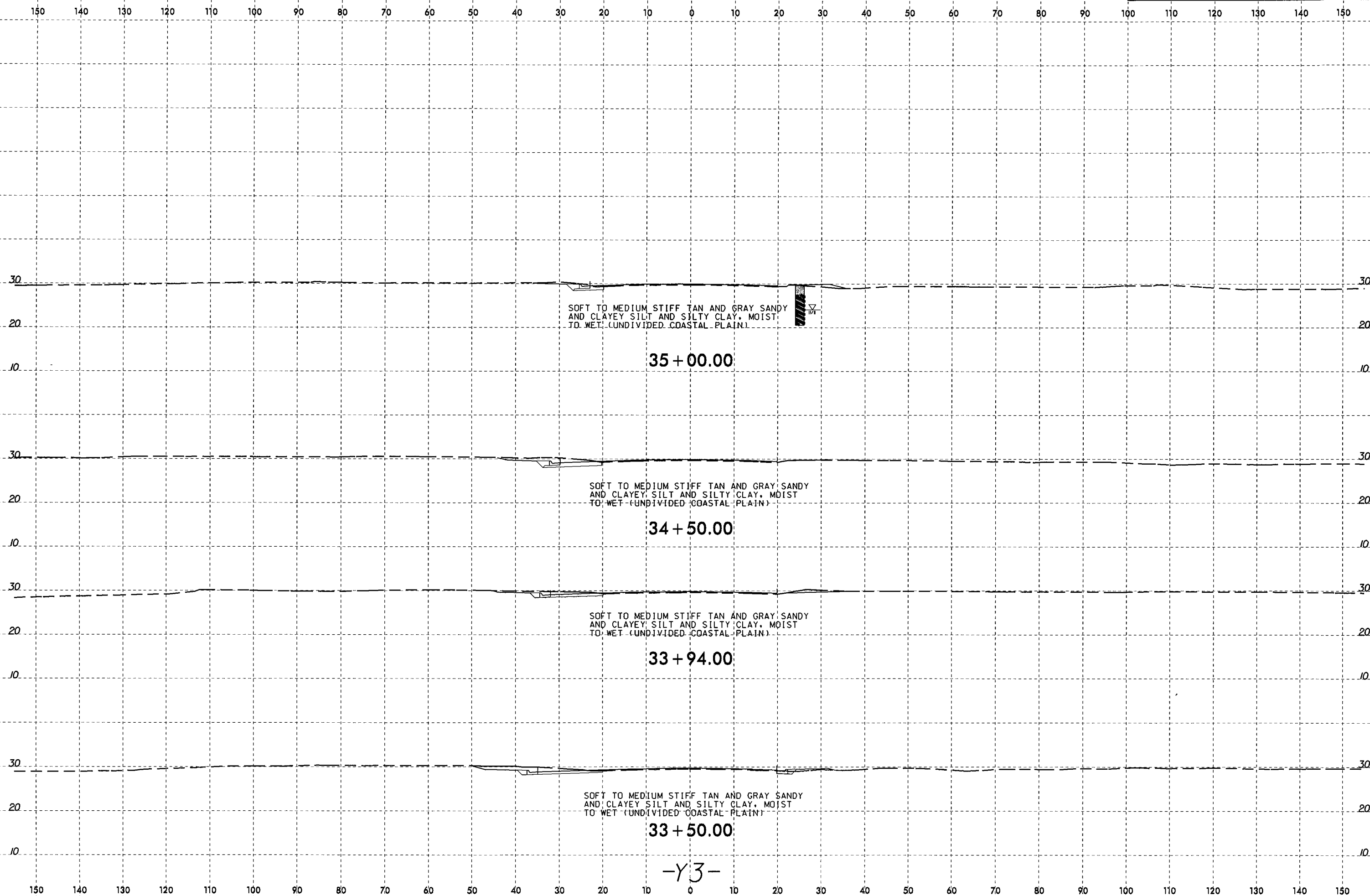
8/23/99

SOIL TEST RESULTS														
SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.P.	% BY WEIGHT			% PASSING (SIEVES)			% MOISTURE	% ORGANIC
							C. SAND	F. SAND	SILT CLAY	10	40	200		
SS-415	15 LT	32+80	0.5-2.0	A-4(7)	27	8	0.6	2.0	63.2	34.2	100	100	98	-
SS-416	15 LT	32+80	3.5-5.0	A-6(16)	39	19	0.0	22.7	43.1	34.2	100	100	86	-
SS-417	15 LT	32+80	8.5-10.0	A-6(15)	37	20	0.4	20.5	18.8	60.3	100	100	80	-



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SOFT TO MEDIUM STIFF TAN AND GRAY SANDY  
AND CLAYEY SILT AND SILTY CLAY, MOIST  
TO WET (UNDIVIDED COASTAL PLAIN)

35 + 00.00

SOFT TO MEDIUM STIFF TAN AND GRAY SANDY  
AND CLAYEY SILT AND SILTY CLAY, MOIST  
TO WET (UNDIVIDED COASTAL PLAIN)

34 + 50.00

SOFT TO MEDIUM STIFF TAN AND GRAY SANDY  
AND CLAYEY SILT AND SILTY CLAY, MOIST  
TO WET (UNDIVIDED COASTAL PLAIN)

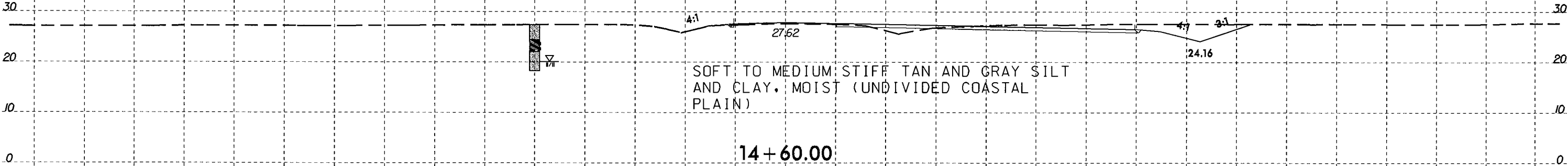
33 + 94.00

SOFT TO MEDIUM STIFF TAN AND GRAY SANDY  
AND CLAYEY SILT AND SILTY CLAY, MOIST  
TO WET (UNDIVIDED COASTAL PLAIN)

33 + 50.00

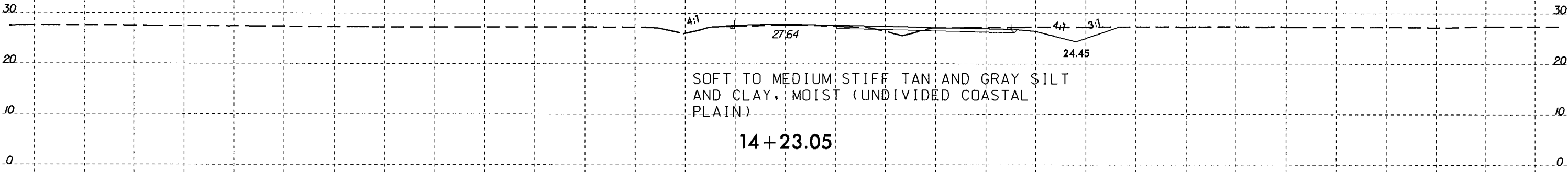
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SOFT TO MEDIUM STIFF TAN AND GRAY SILT AND CLAY, MOIST (UNDIVIDED COASTAL PLAIN)

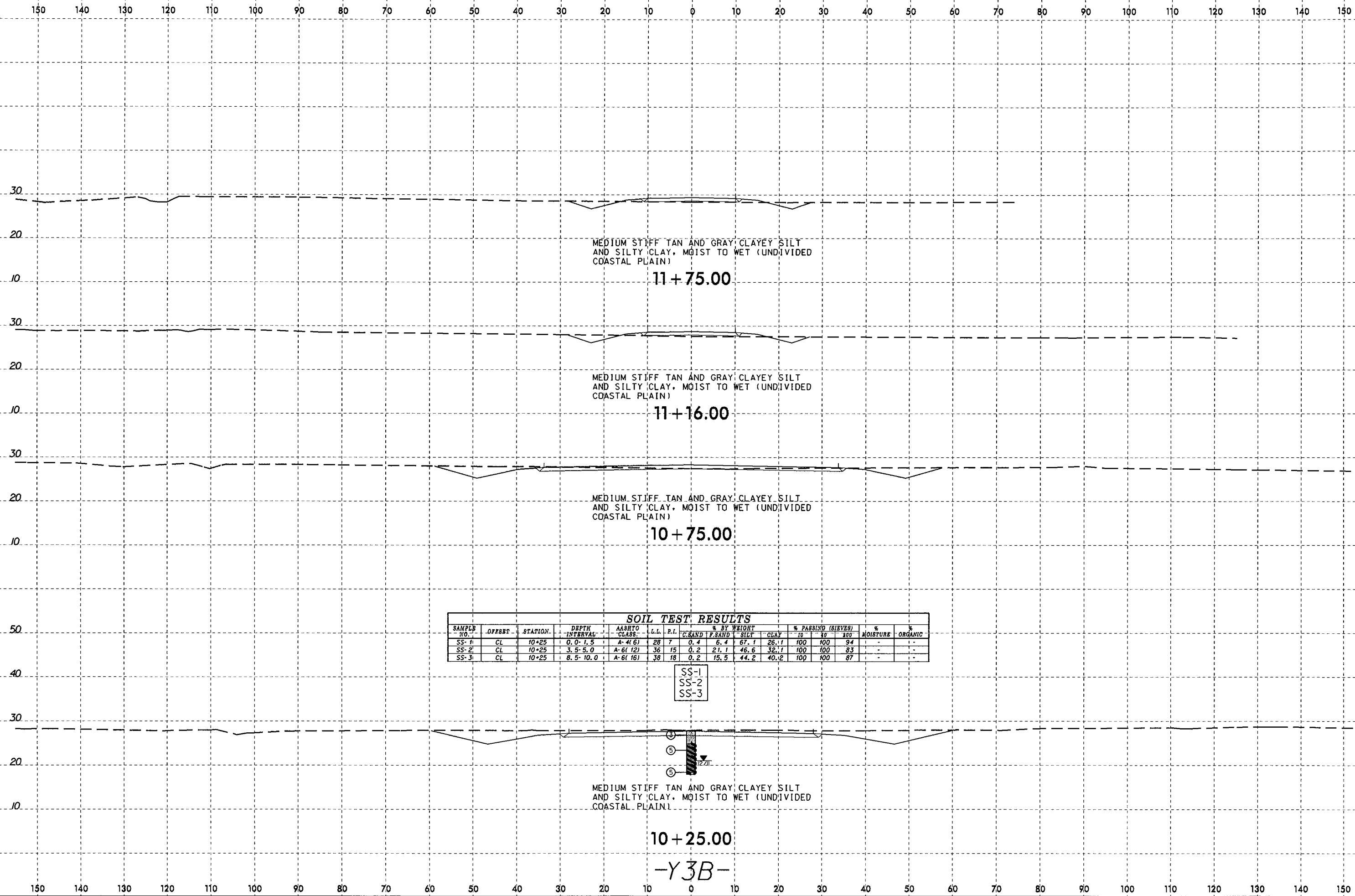
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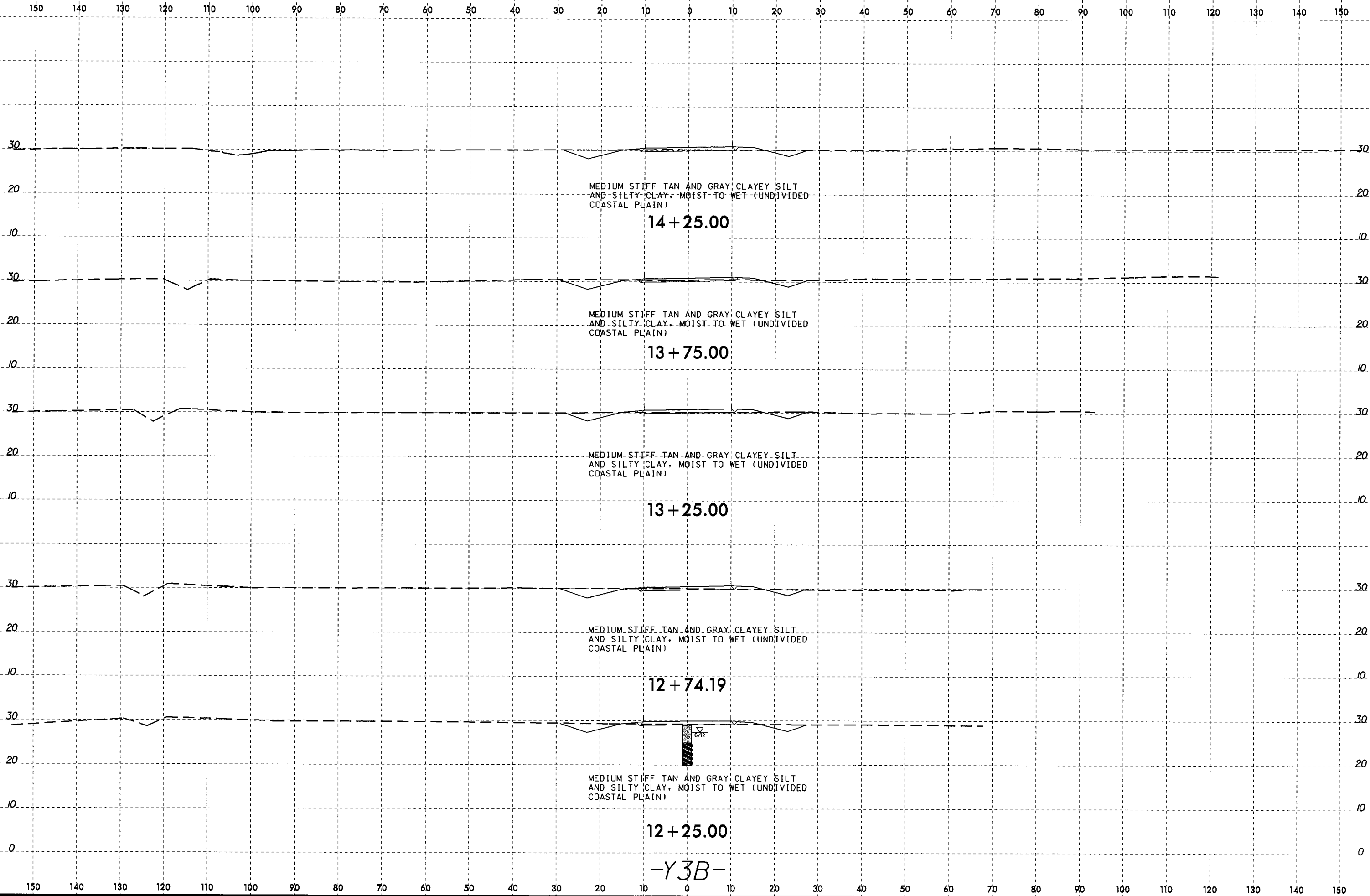
SOFT TO MEDIUM STIFF TAN AND GRAY SILT AND CLAY, MOIST (UNDIVIDED COASTAL PLAIN)

14 + 23.05

-Y3A-

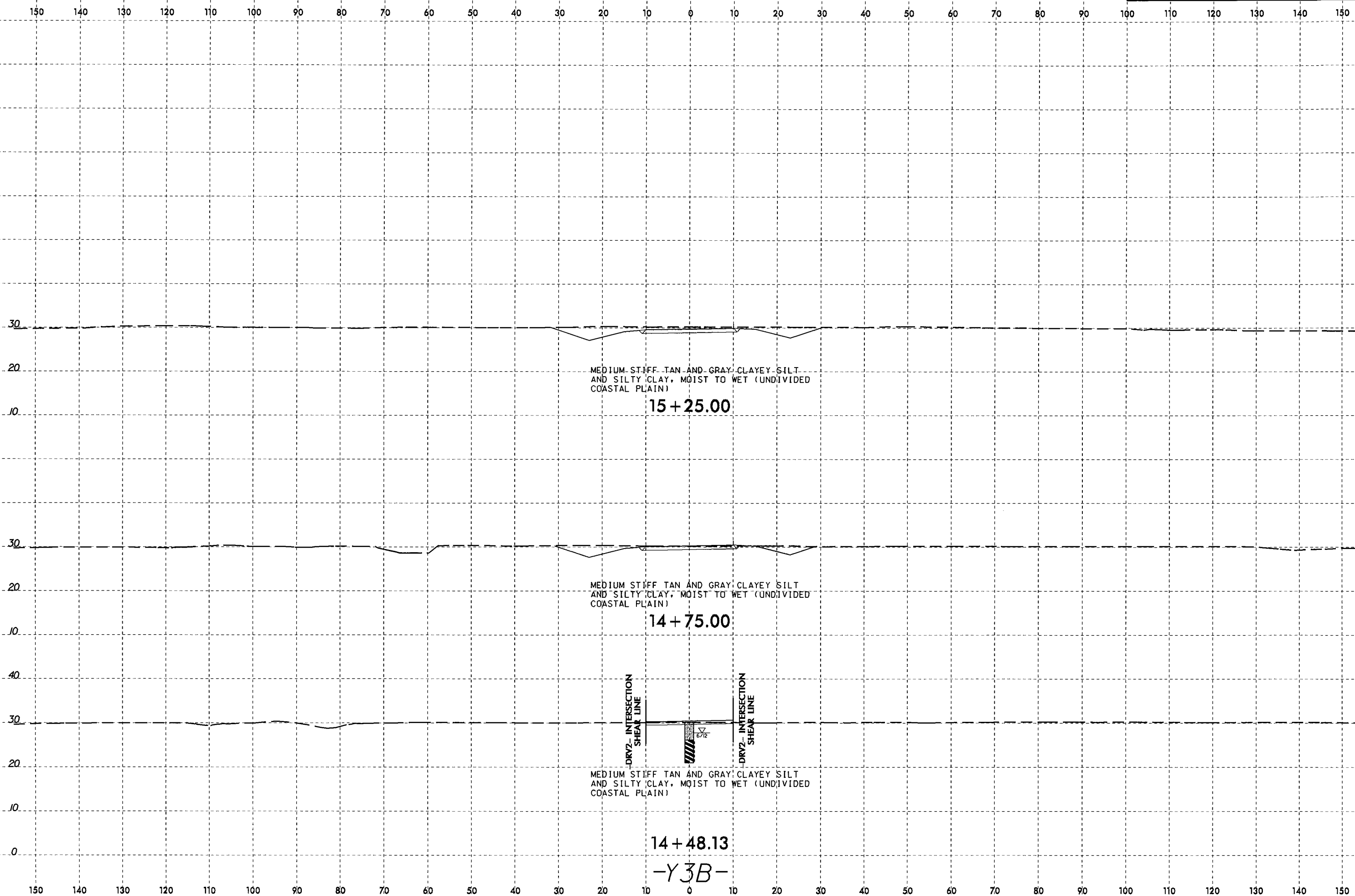


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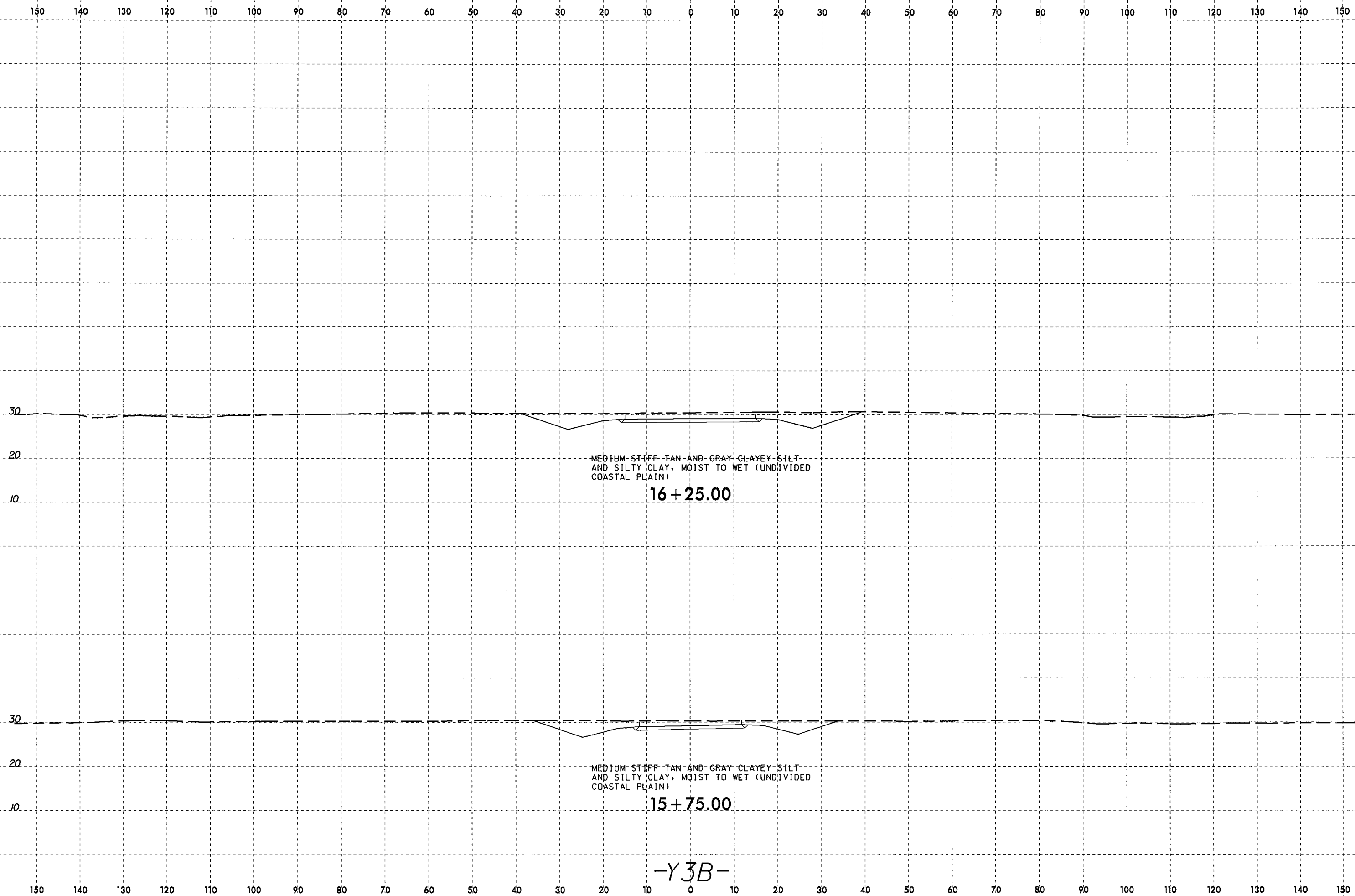
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8/23/99

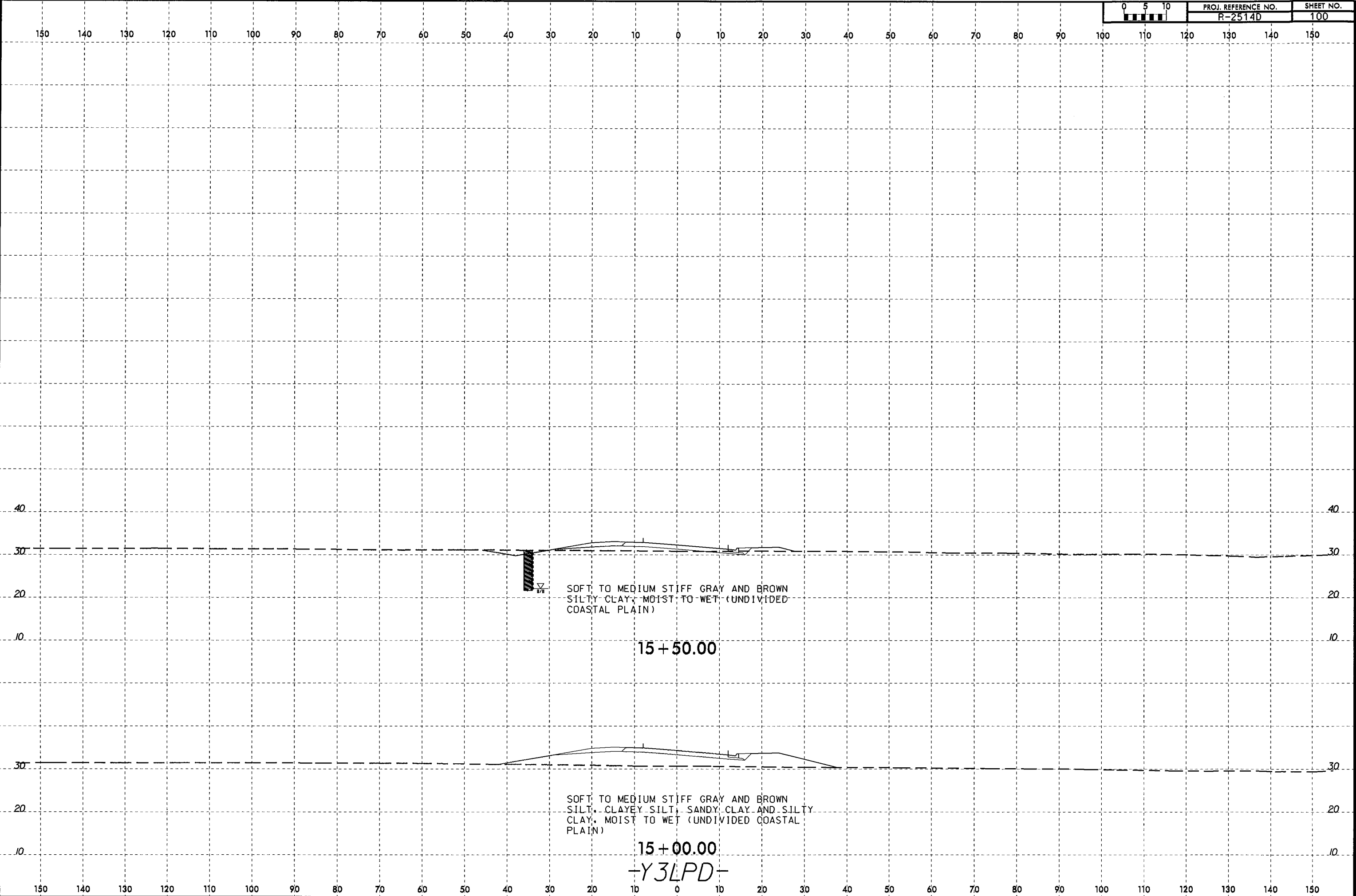


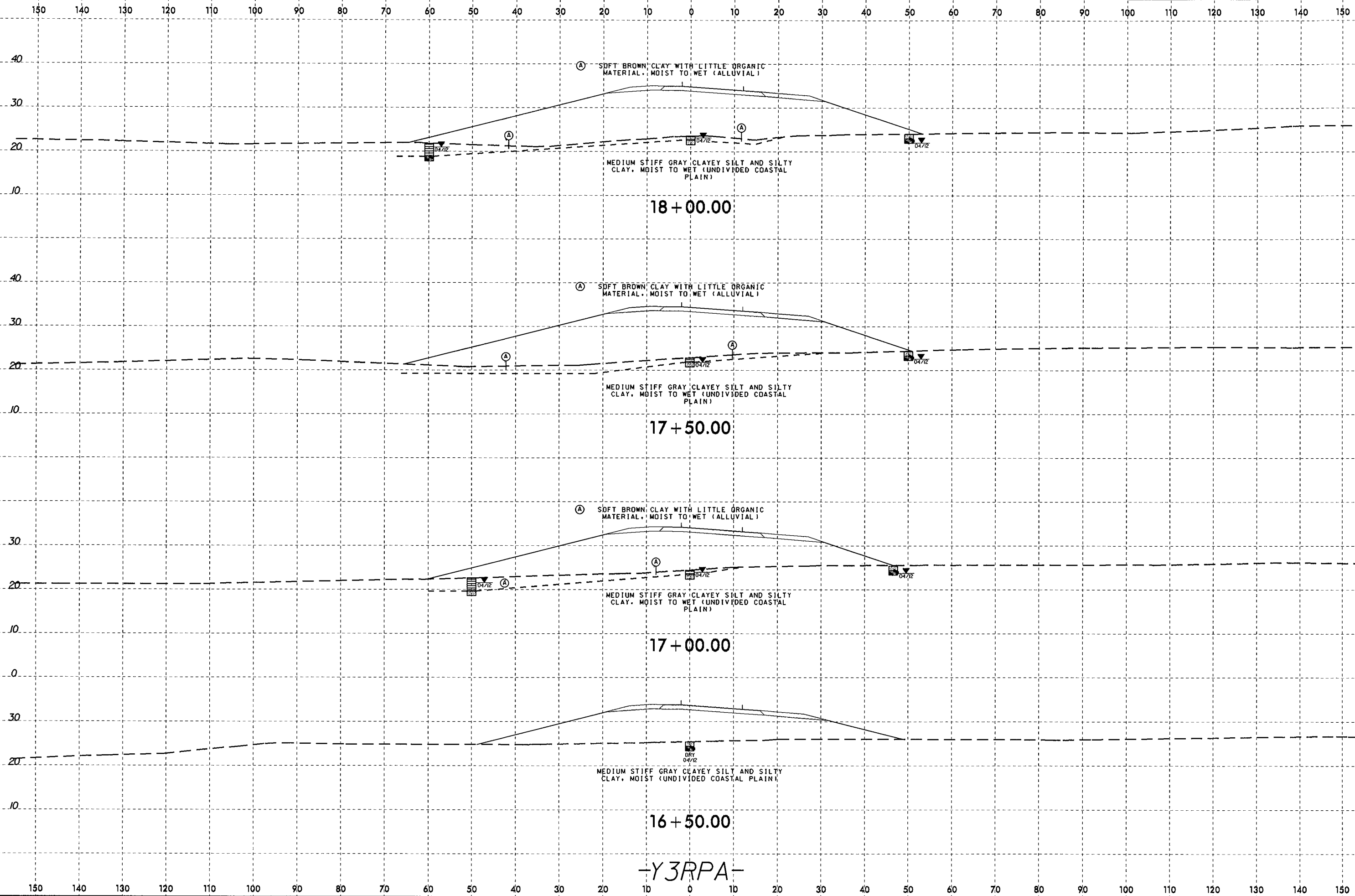
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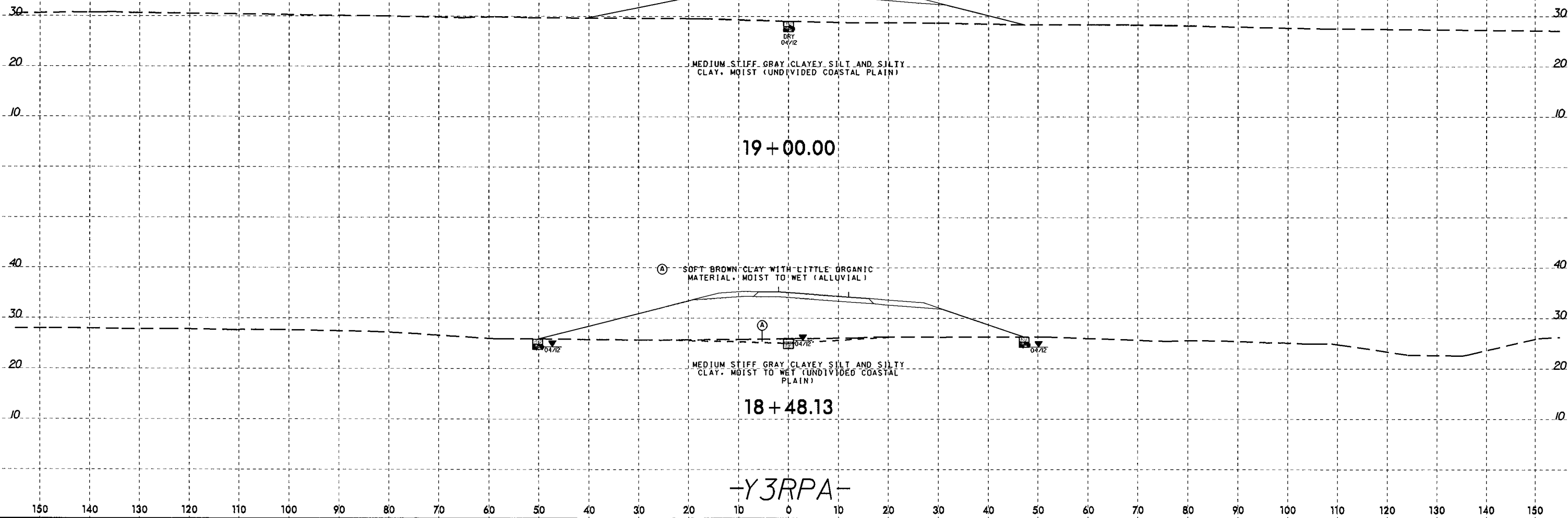


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8/23/99

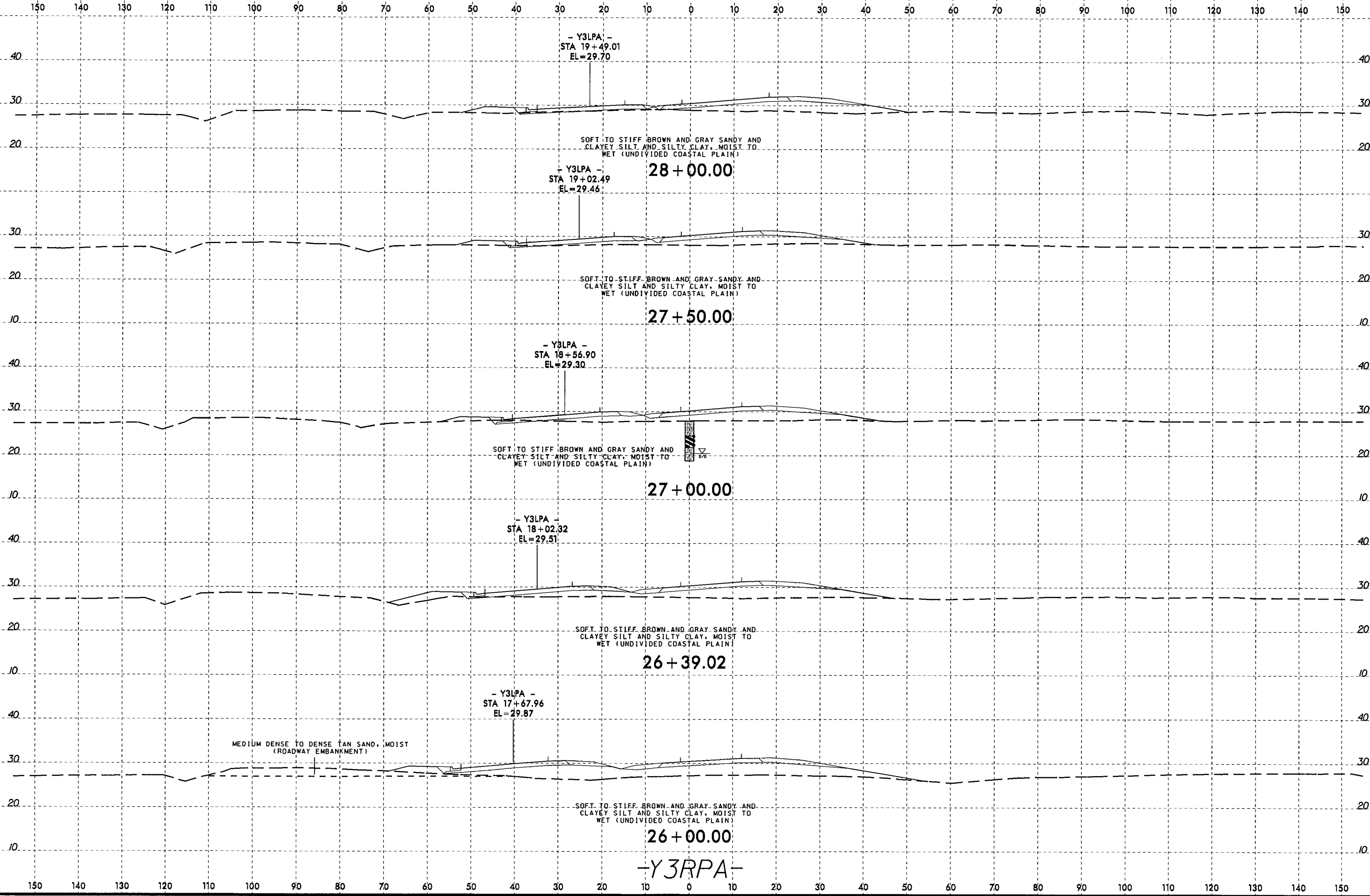
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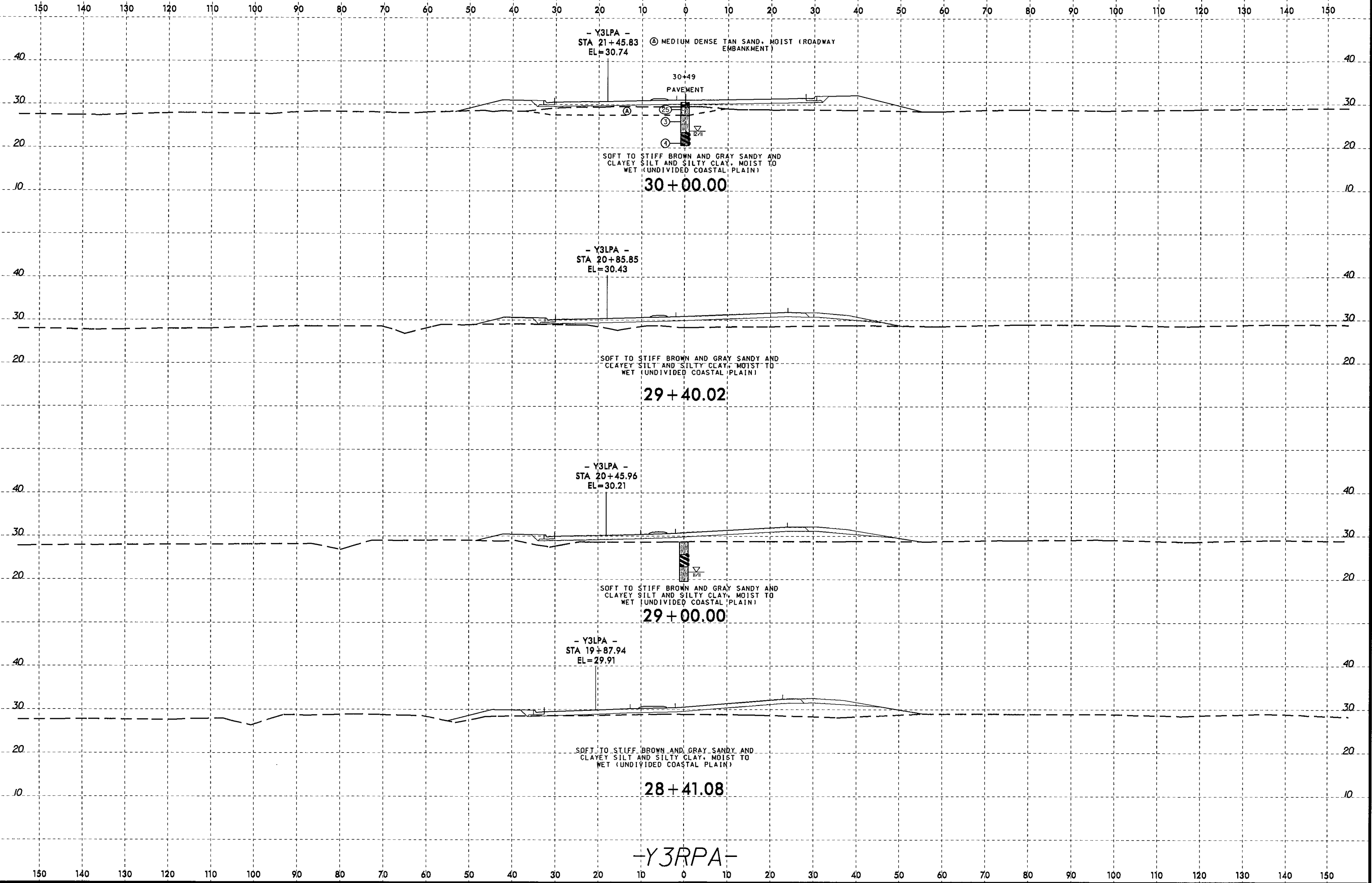
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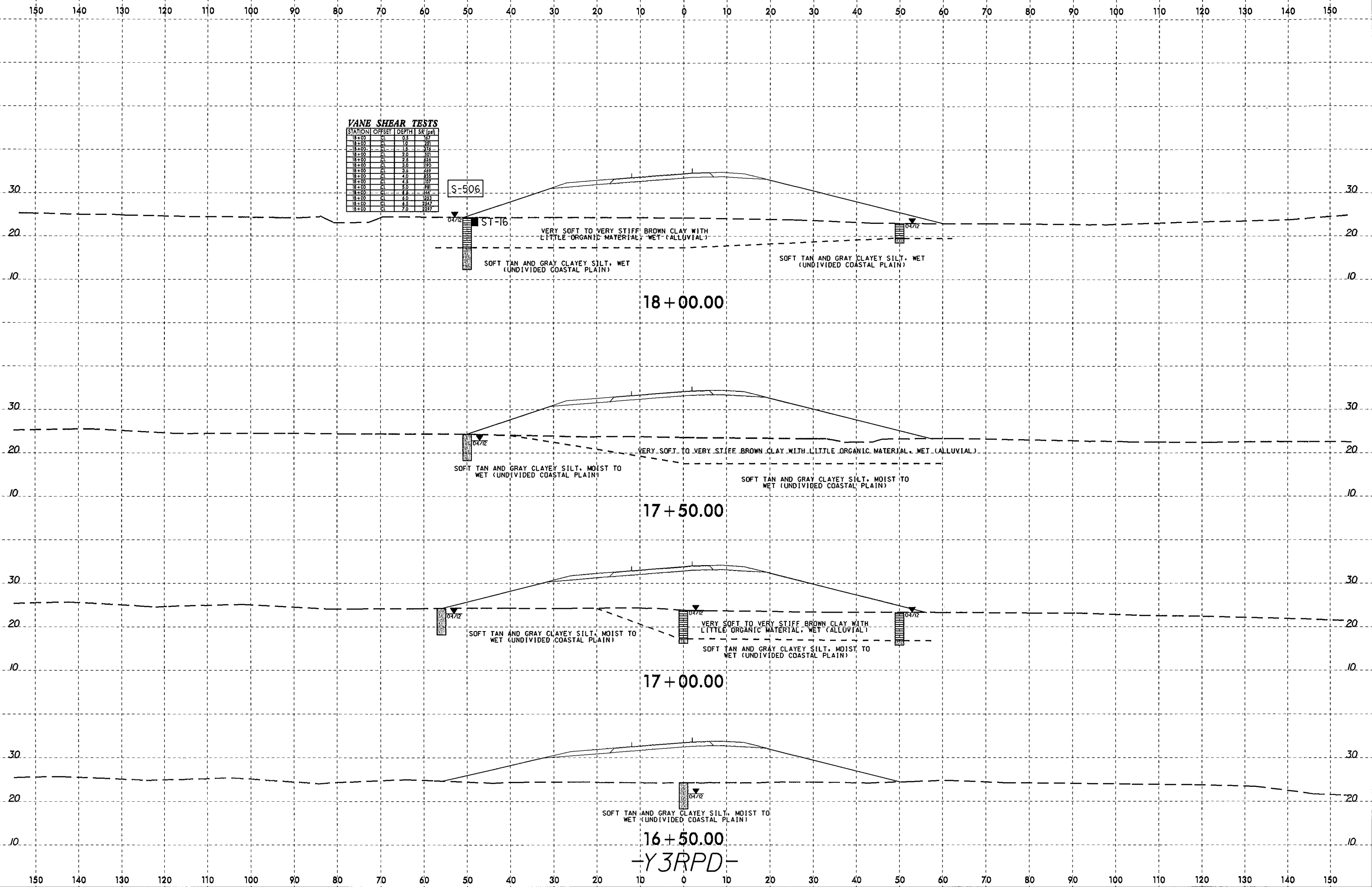


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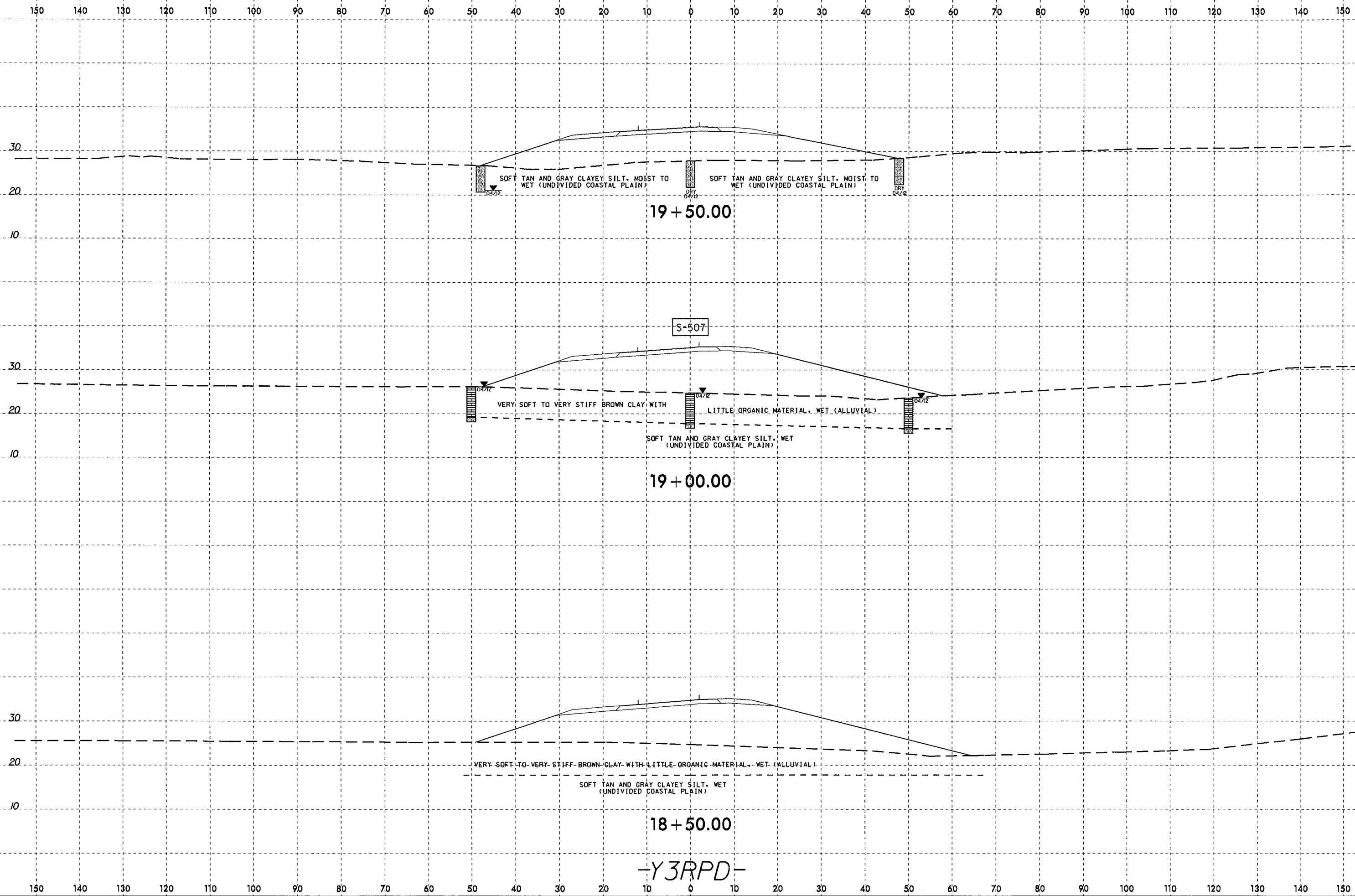


**VANE SHEAR TESTS**

STATION	OFFSET	DEPTH	SV (psf)
18+00	CL	0.5	157
18+00	CL	1.0	251
18+00	CL	1.5	372
18+00	CL	2.0	450
18+00	CL	2.5	526
18+00	CL	3.0	1190
18+00	CL	3.5	437
18+00	CL	4.0	335
18+00	CL	4.5	157
18+00	CL	5.0	781
18+00	CL	6.5	1447
18+00	CL	6.0	1553
18+00	CL	6.5	2547
18+00	CL	7.0	2297

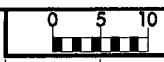
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8/23/99

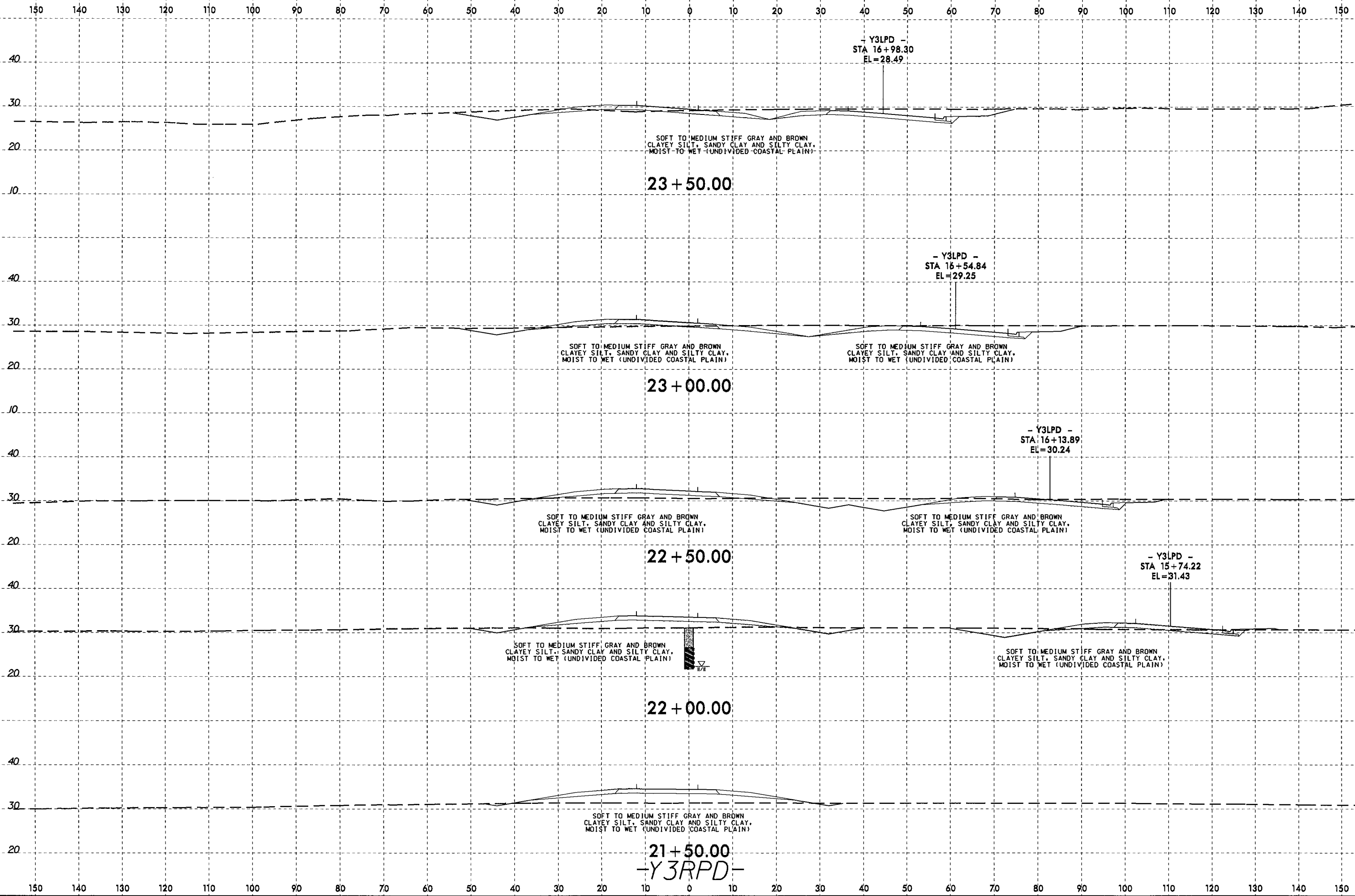


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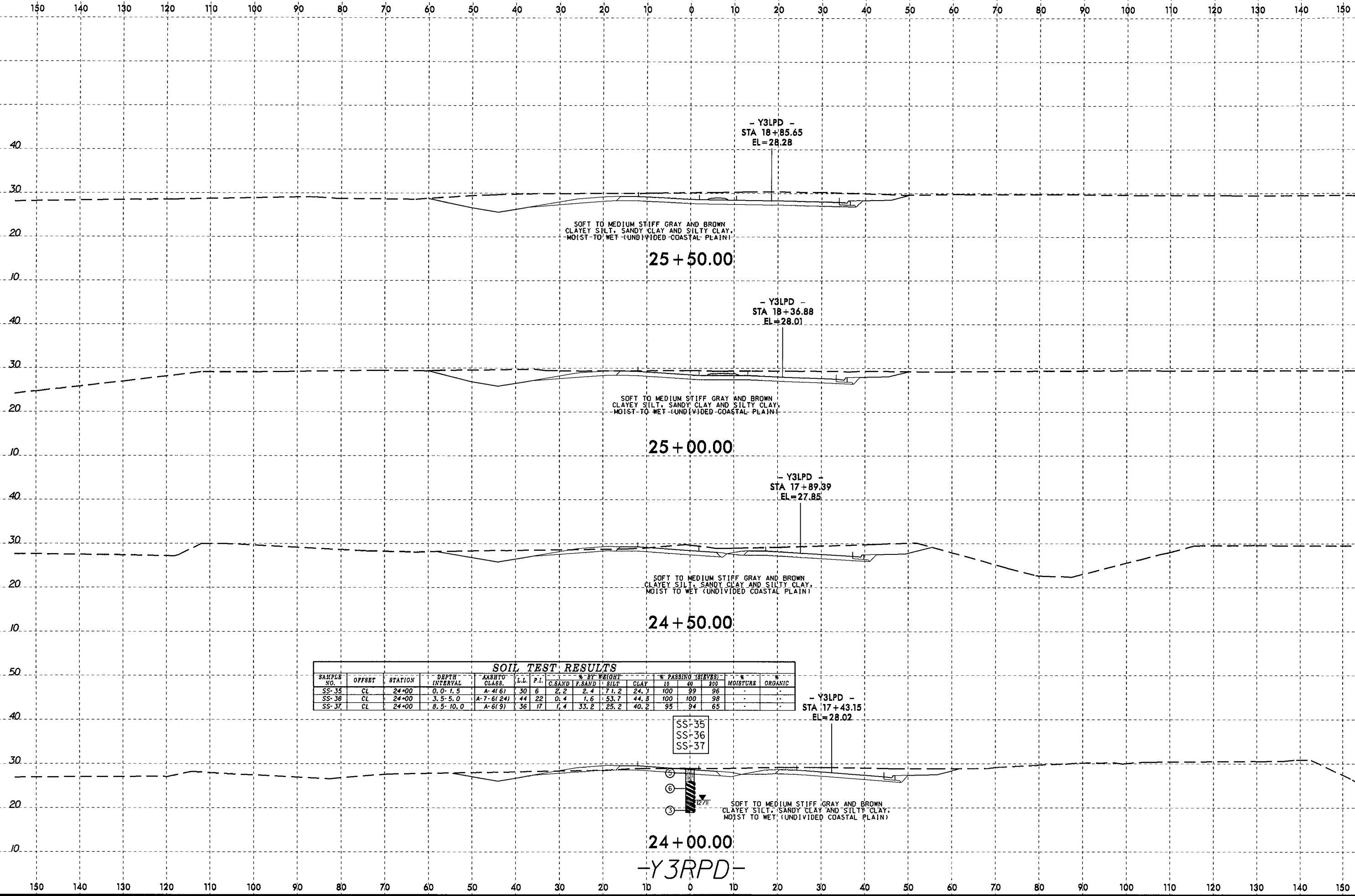
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PROJ. REFERENCE NO.	SHEET NO.
R-2514D	107



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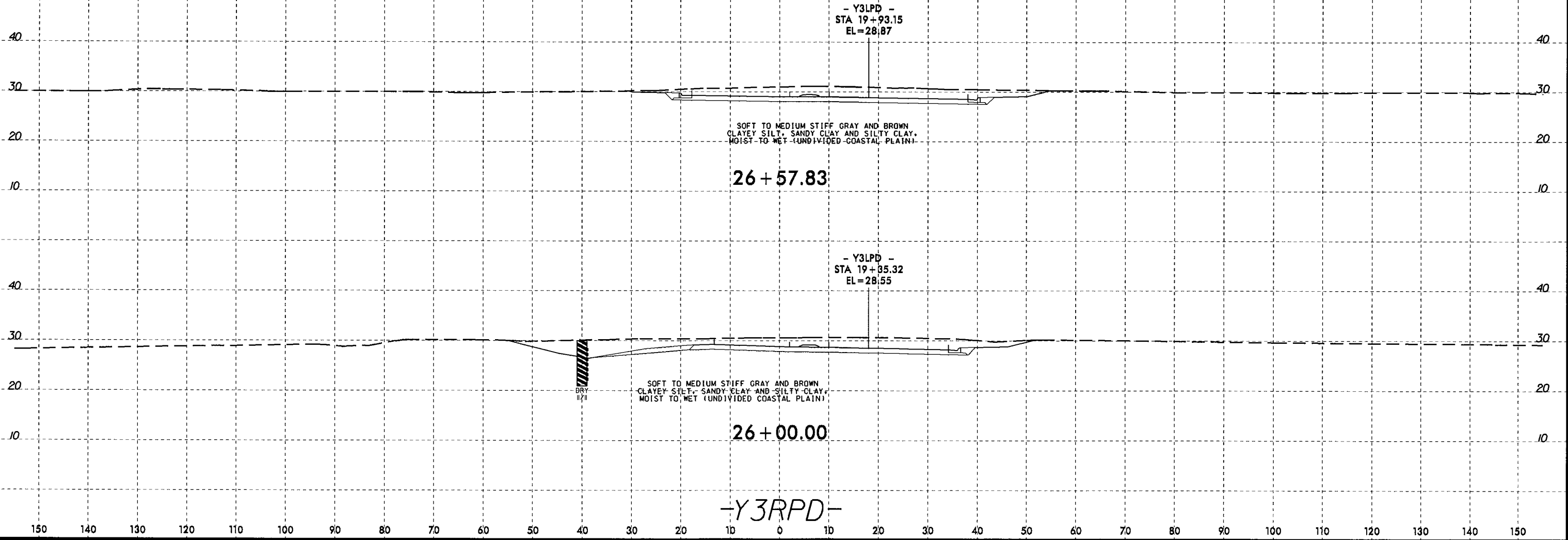
**SOIL TEST RESULTS**

SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT				% PASSING (SIEVES)			% MOISTURE ORGANIC	
							C.SAND	F.SAND	SILT	CLAY	#10	#40	#200		
SS-35	CL	24+00	0.0-1.5	A-4(6)	30	6	2.2	2.4	17.1	24.7	100	99	96	-	-
SS-36	CL	24+00	3.5-5.0	A-7-6(24)	44	22	0.4	1.6	53.7	44.8	100	100	98	-	-
SS-37	CL	24+00	8.5-10.0	A-6(9)	36	17	1.4	33.2	25.2	40.2	95	94	65	-	-

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8/23/99

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- Y3LPD -  
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EL=28.87

26 + 57.83

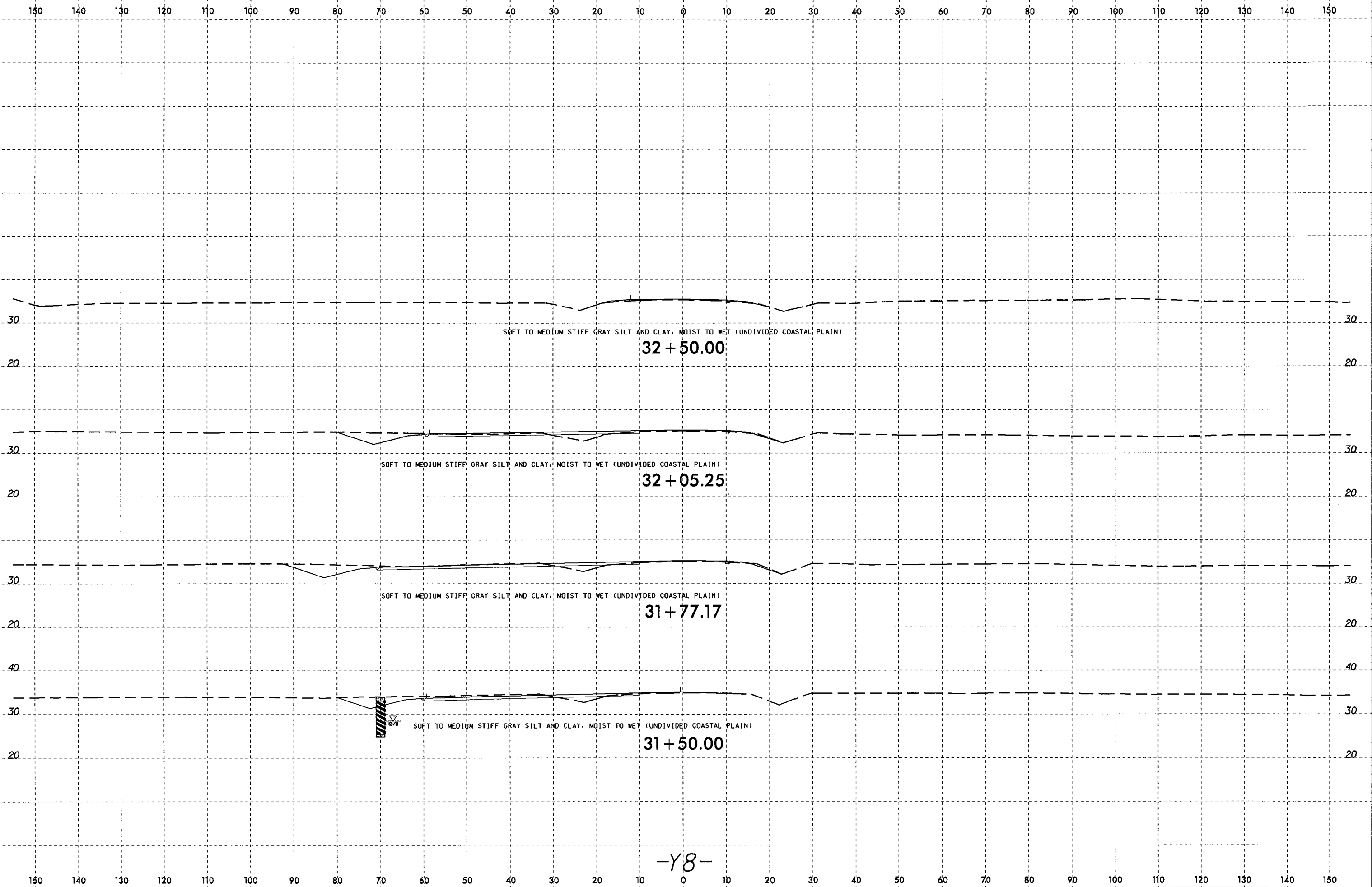
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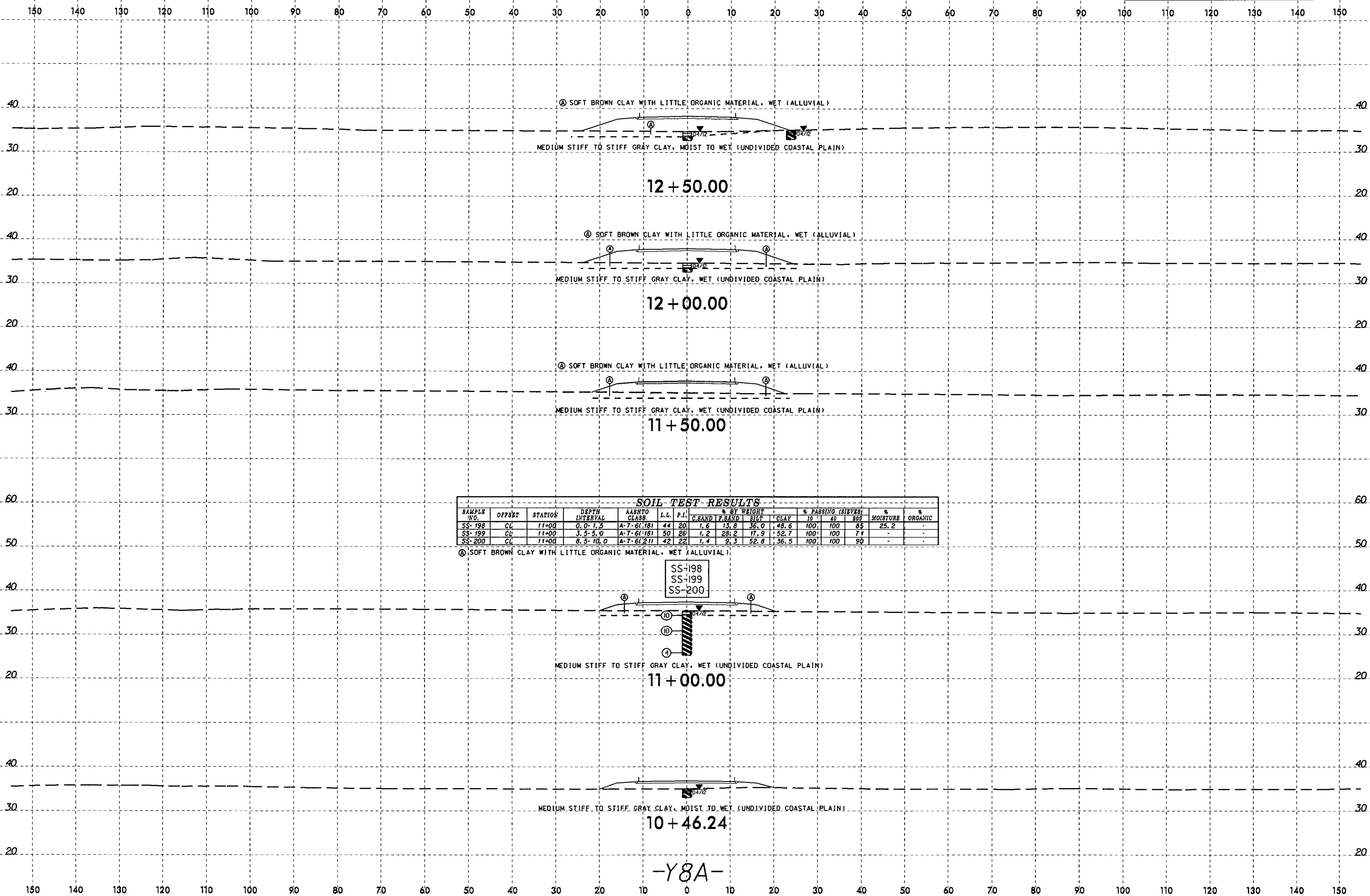
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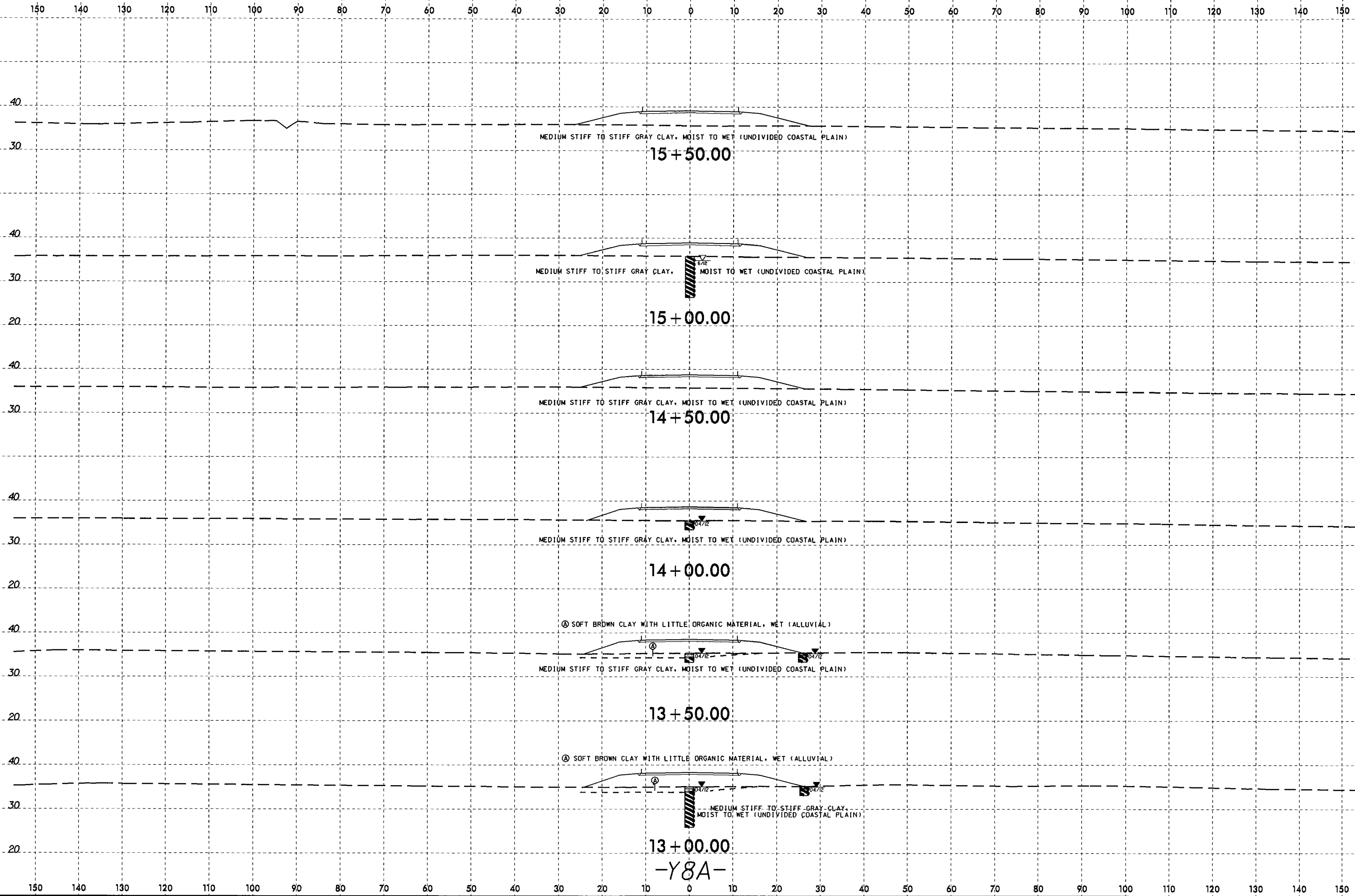
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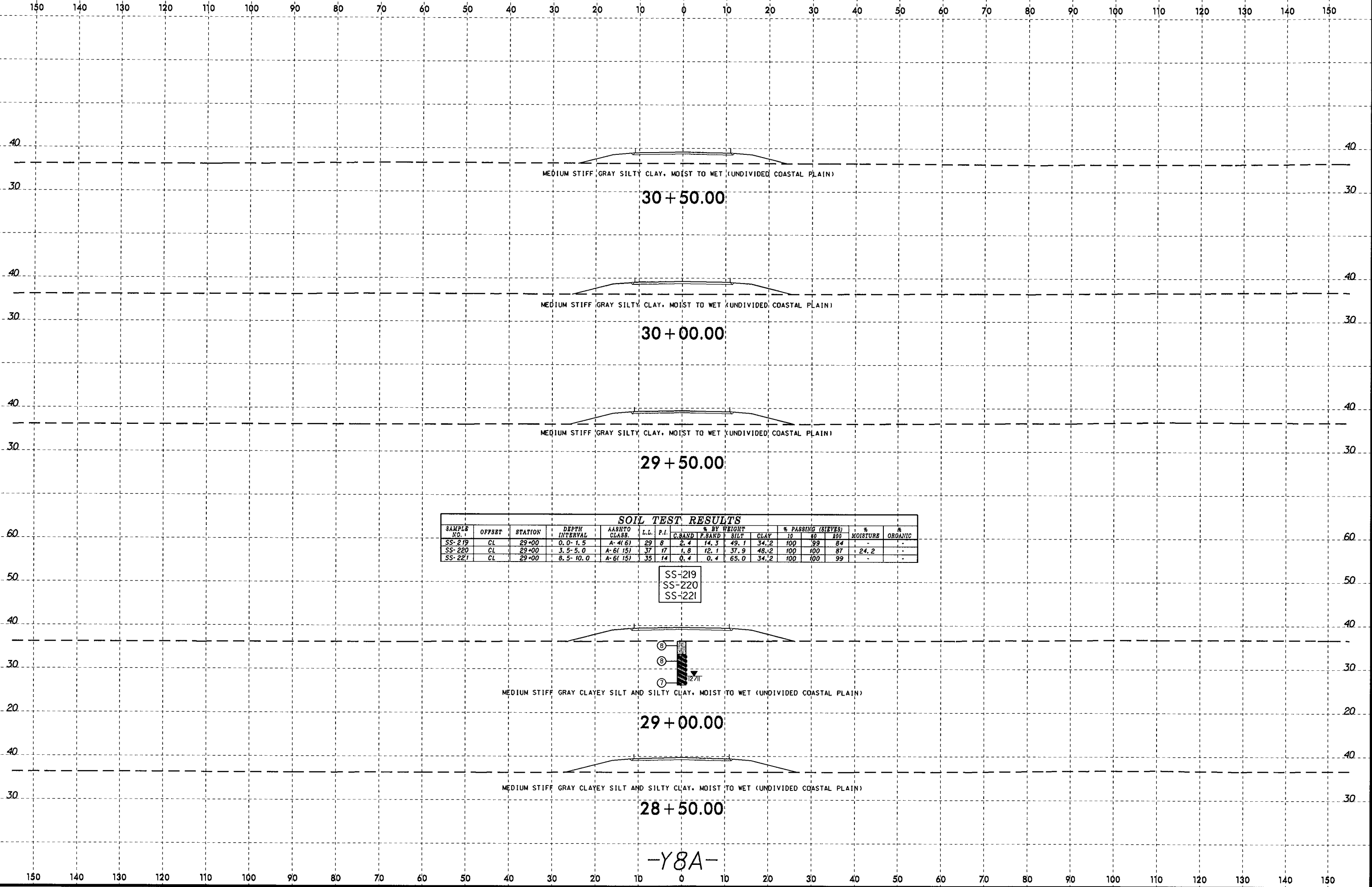
**SOIL TEST RESULTS**

SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS	L.L.	P.I.	% BY WEIGHT				% PASSING (SIEVES)			% MOISTURE	% ORGANIC
							C. SAND	F. SAND	SILT	CLAY	10	40	200		
SS-198	CL	11+00	0.0-1.5	A-7-6(18)	44	20	1.6	13.8	36.0	48.6	100	100	85	25.2	-
SS-199	CL	11+00	3.5-5.0	A-7-6(18)	50	26	1.2	28.2	17.9	52.7	100	100	71	-	-
SS-200	CL	11+00	8.5-10.0	A-7-6(21)	42	22	1.4	9.3	52.8	36.5	100	100	90	-	-

SS-198  
SS-199  
SS-200

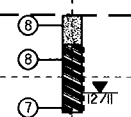


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SOIL TEST RESULTS															
SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT				% PASSING (SIEVES)			% MOISTURE	% ORGANIC
							C.BAND	F.BAND	SILT	CLAY	10	40	200		
SS-219	CL	29+00	0.0-1.5	A-4(6)	29	8	2.4	14.3	49.1	34.2	100	99	84	-	-
SS-220	CL	29+00	3.5-5.0	A-6(15)	37	17	1.8	12.1	37.9	48.2	100	100	87	24.2	-
SS-221	CL	29+00	8.5-10.0	A-6(15)	35	14	0.4	0.4	65.0	34.2	100	100	99	-	-

SS-219  
 SS-220  
 SS-221



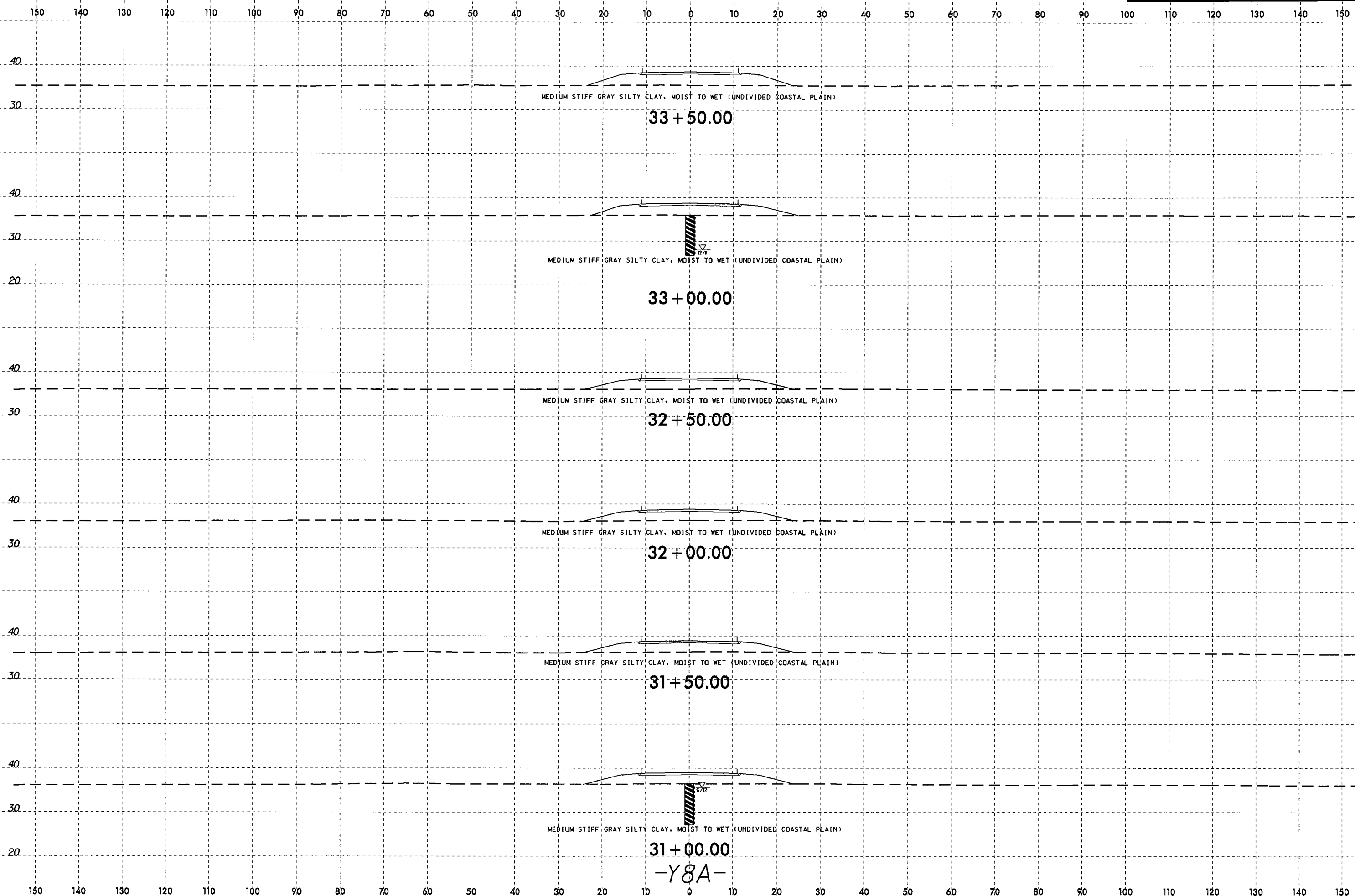
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8/23/99



PROJ. REFERENCE NO.  
R-2514D

SHEET NO.  
114

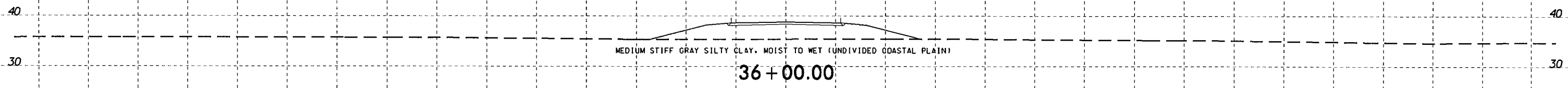
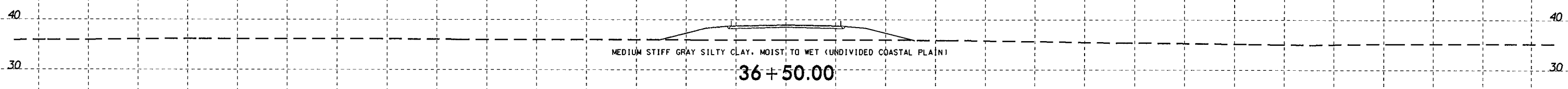
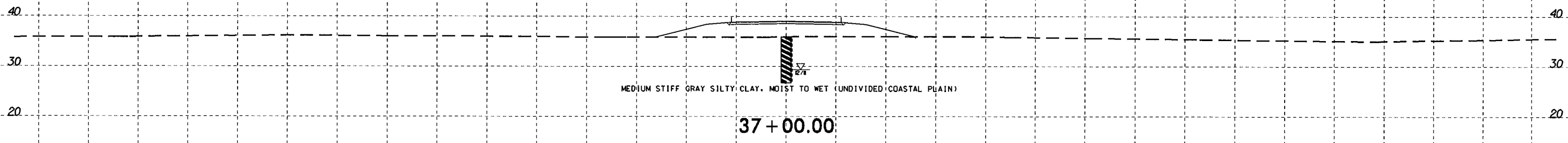
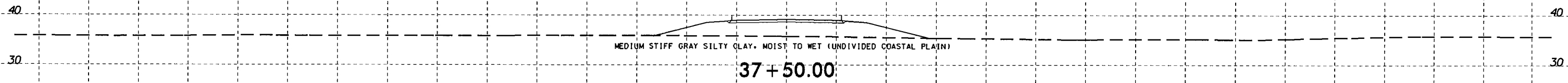


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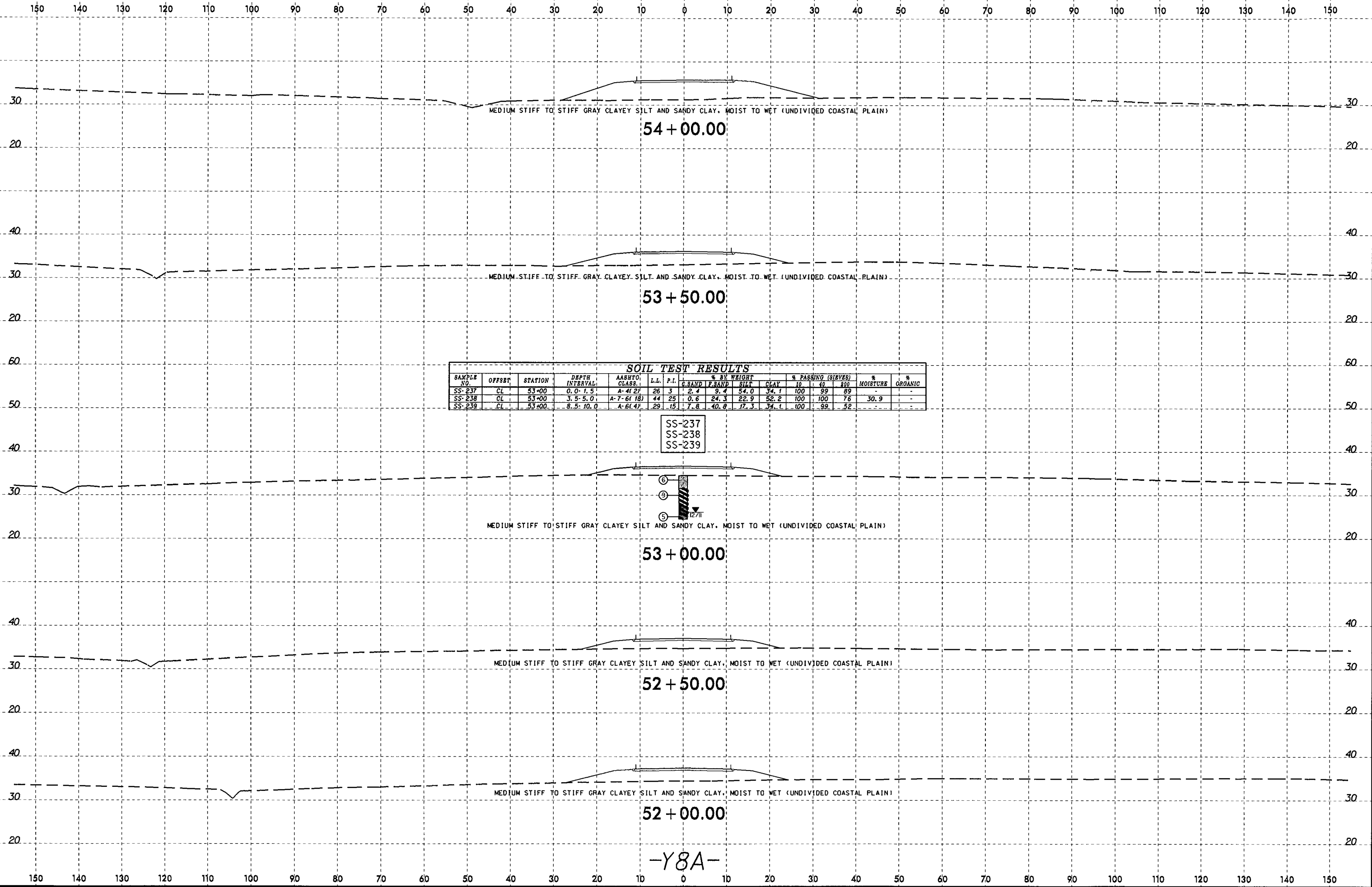
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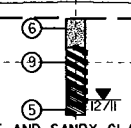
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SOIL TEST RESULTS															
SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT				% PASSING (SIEVES)			% MOISTURE	% ORGANIC
							C. SAND	F. SAND	SILT	CLAY	10	40	200		
SS-237	CL	53+00	0.0-1.5	A-4(2)	26	3	2.4	9.4	54.0	34.1	100	99	89	-	-
SS-238	CL	53+00	3.5-5.0	A-7(18)	44	25	0.6	24.3	22.9	52.2	100	100	76	30.9	-
SS-239	CL	53+00	8.5-10.0	A-6(4)	29	15	7.8	40.8	17.3	34.1	100	99	52	-	-

SS-237  
SS-238  
SS-239

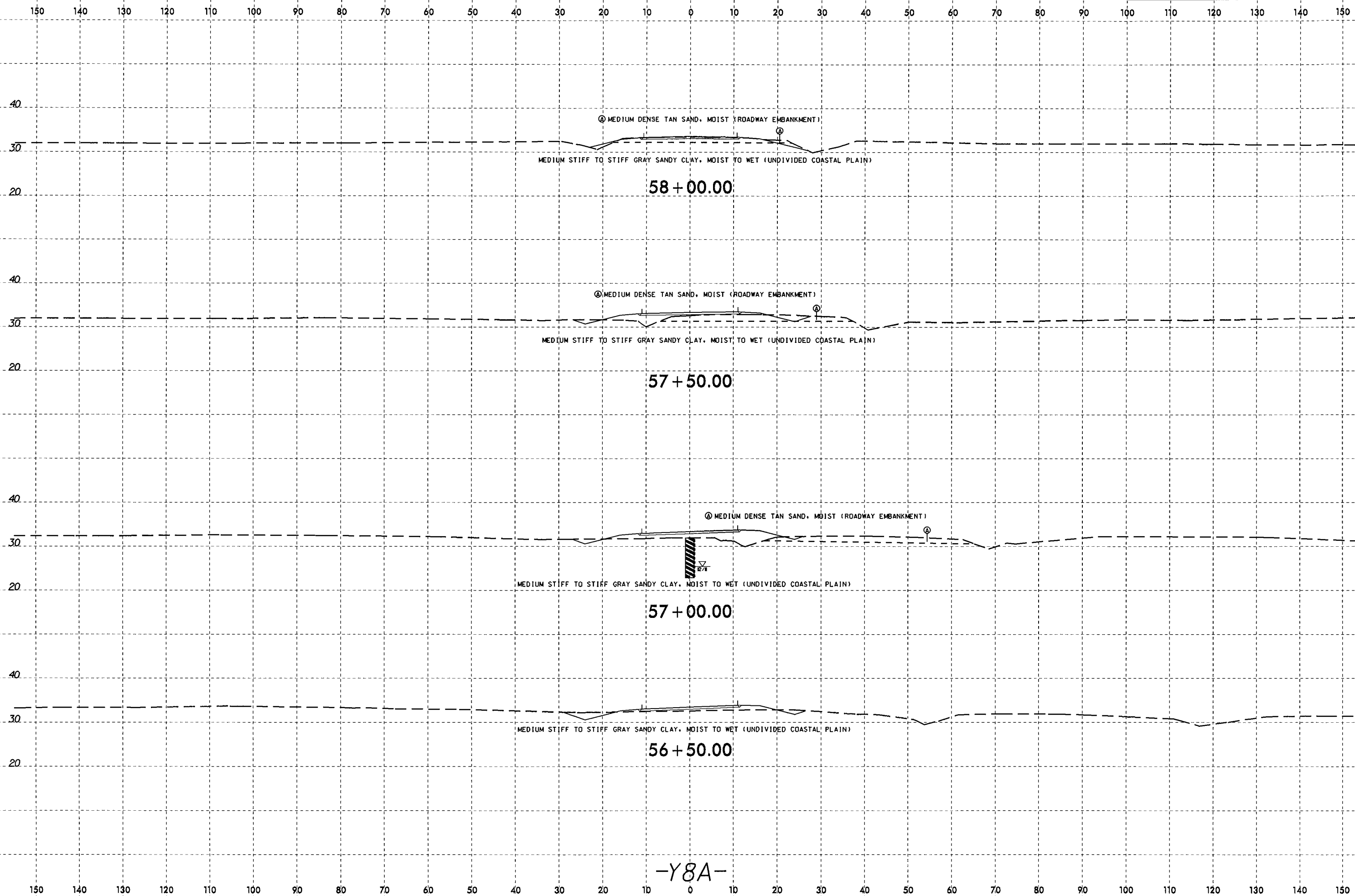


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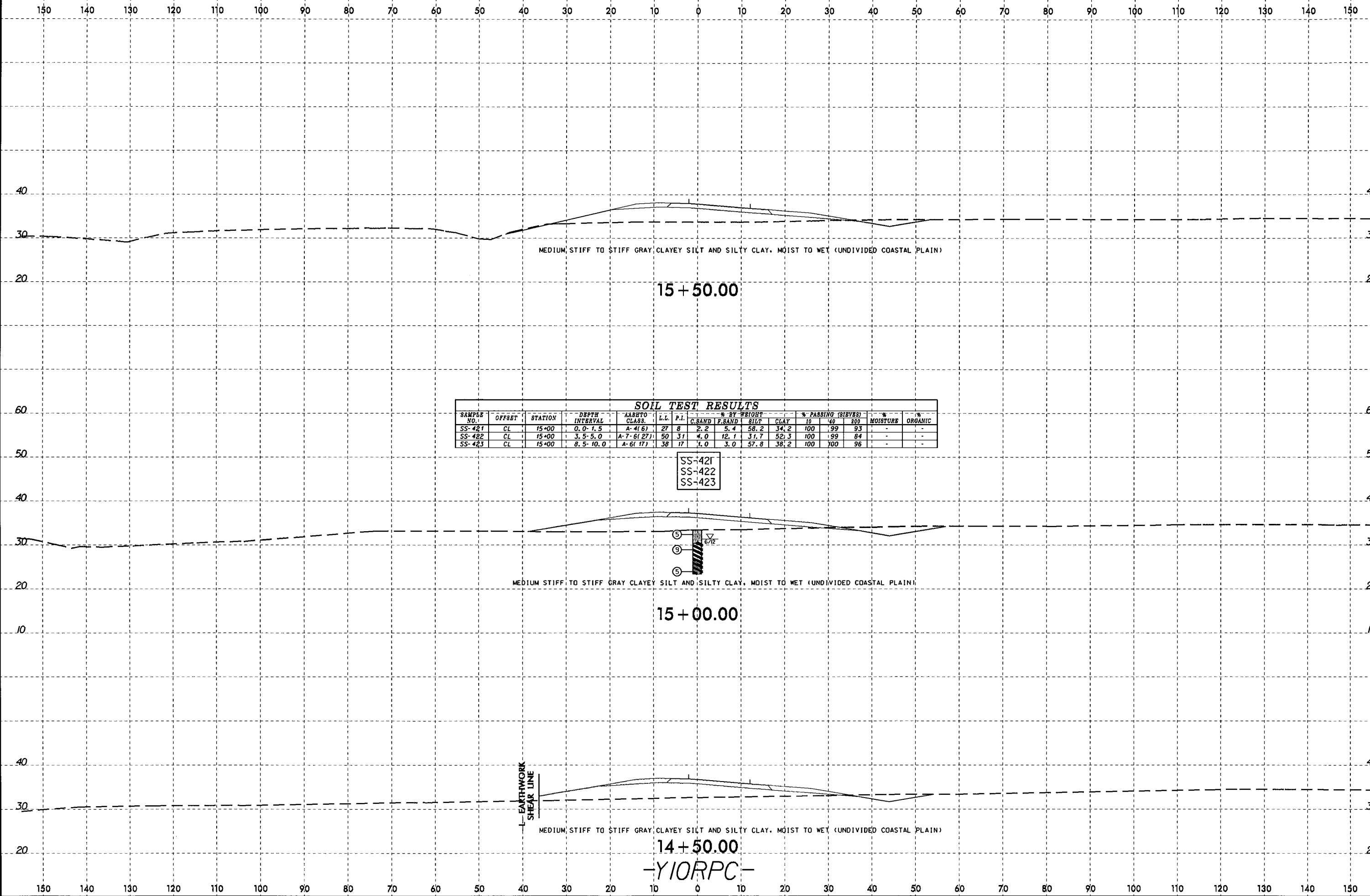


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**SOIL TEST RESULTS**

SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	ASTM CLASS.	L.L.	P.I.	% BY WEIGHT				% PASSING (SIEVES)			% MOISTURE	% ORGANIC
							G. SAND	F. SAND	SILT	CLAY	10	40	200		
SS-421	CL	15+00	0.0-1.5	A-4(6)	27	8	2.2	5.4	58.2	34.2	100	99	93	-	-
SS-422	CL	15+00	3.5-5.0	A-7-6(27)	50	31	4.0	12.1	31.7	52.3	100	99	84	-	-
SS-423	CL	15+00	8.5-10.0	A-6(17)	38	17	1.0	3.0	57.8	38.2	100	100	96	-	-

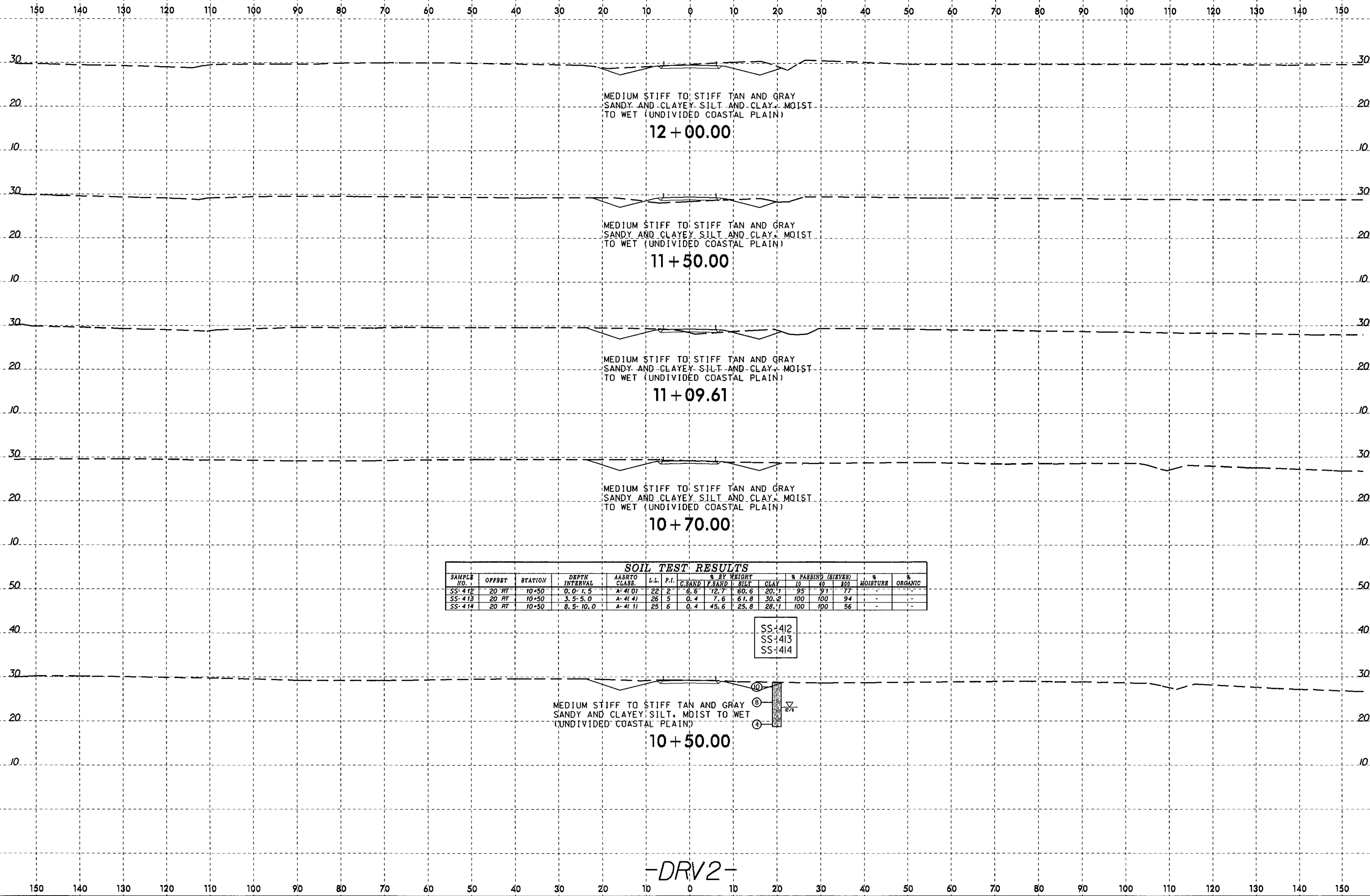
SS-421  
 SS-422  
 SS-423

15 + 00.00

14 + 50.00

-Y10RPC-

8/23/99



MEDIUM STIFF TO STIFF TAN AND GRAY  
SANDY AND CLAYEY SILT AND CLAY, MOIST  
TO WET (UNDIVIDED COASTAL PLAIN)  
**12 + 00.00**

MEDIUM STIFF TO STIFF TAN AND GRAY  
SANDY AND CLAYEY SILT AND CLAY, MOIST  
TO WET (UNDIVIDED COASTAL PLAIN)  
**11 + 50.00**

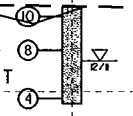
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SANDY AND CLAYEY SILT AND CLAY, MOIST  
TO WET (UNDIVIDED COASTAL PLAIN)  
**11 + 09.61**

MEDIUM STIFF TO STIFF TAN AND GRAY  
SANDY AND CLAYEY SILT AND CLAY, MOIST  
TO WET (UNDIVIDED COASTAL PLAIN)  
**10 + 70.00**

MEDIUM STIFF TO STIFF TAN AND GRAY  
SANDY AND CLAYEY SILT, MOIST TO WET  
(UNDIVIDED COASTAL PLAIN)  
**10 + 50.00**

SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	ASTM CLASS.	L.L.	P.I.	% BY WEIGHT			% PASSING (SIEVES)			% MOISTURE	% ORGANIC	
							C. SAND	F. SAND	CLAY	10	40	100			
SS-412	20 RT	10+50	0.0-1.5	A-41(1)	22	2	8.6	12.7	60.6	20.1	95	91	77	-	-
SS-413	20 RT	10+50	3.5-5.0	A-41(4)	26	5	0.4	7.6	61.8	30.2	100	100	94	-	-
SS-414	20 RT	10+50	8.5-10.0	A-41(1)	25	6	0.4	45.6	25.8	28.1	100	100	56	-	-

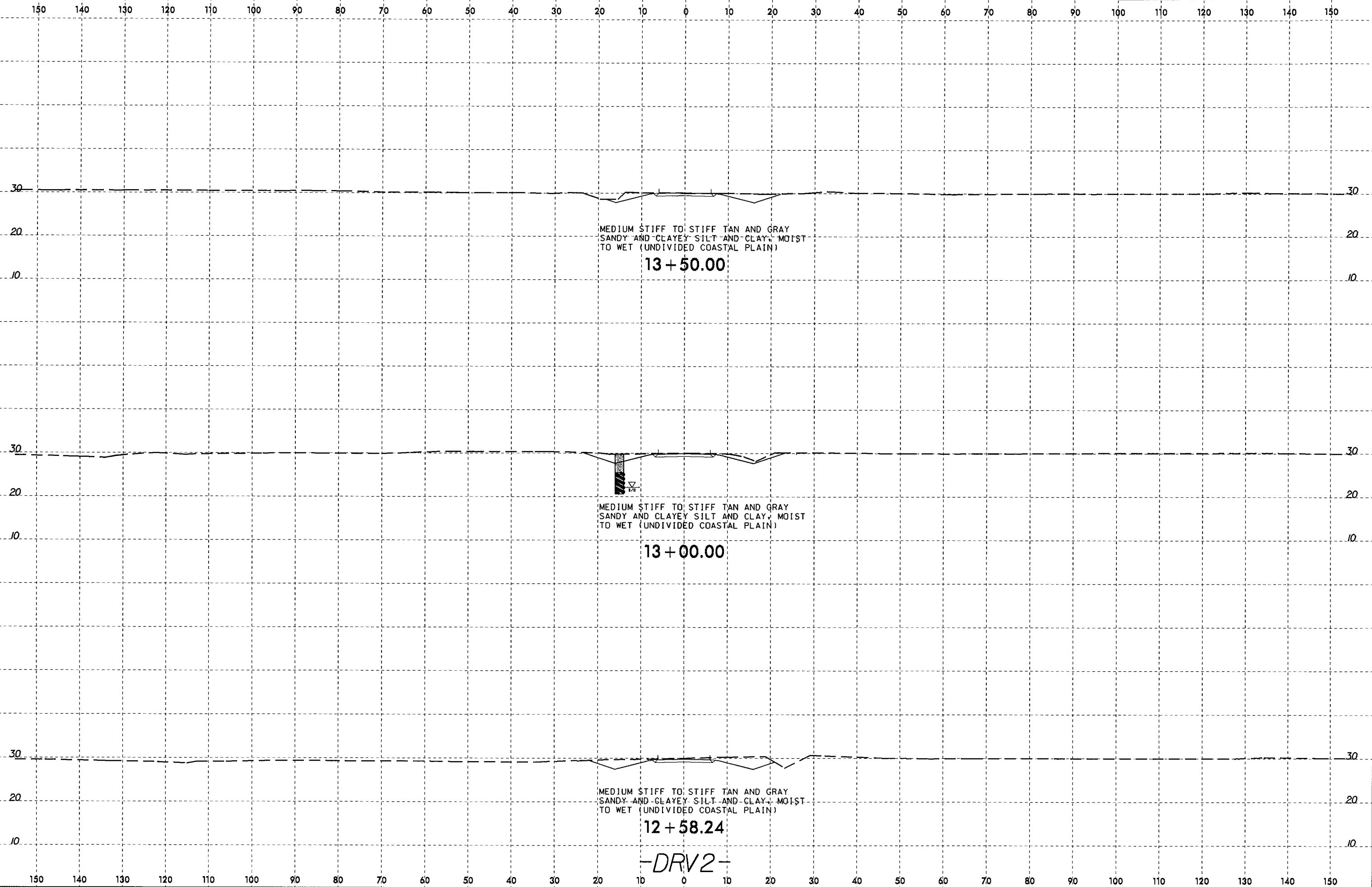
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SS-413  
SS-414



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8/23/99



MEDIUM STIFF TO STIFF TAN AND GRAY  
SANDY AND CLAYEY SILT AND CLAY, MOIST  
TO WET (UNDIVIDED COASTAL PLAIN)  
**13 + 50.00**

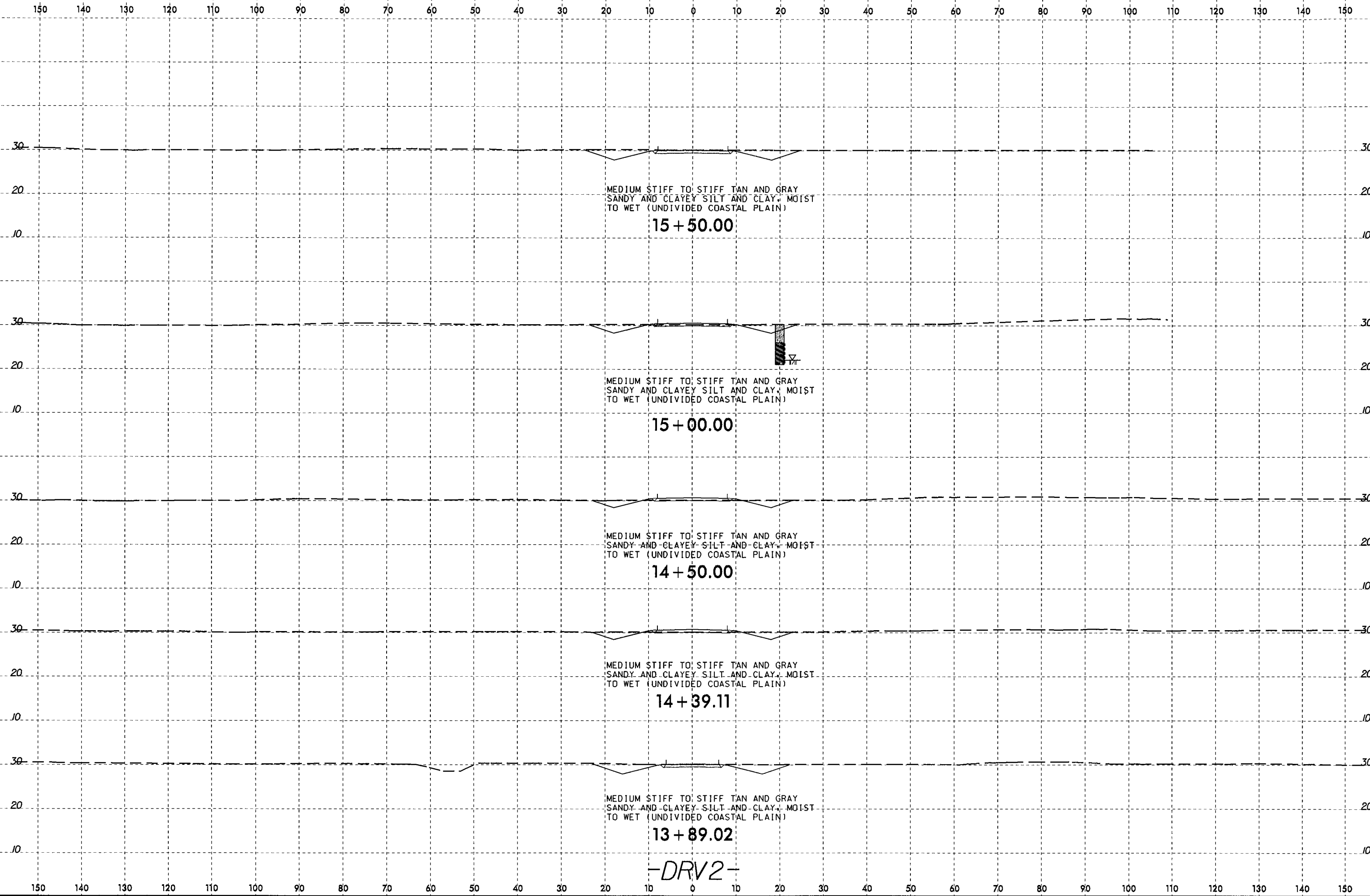
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SANDY AND CLAYEY SILT AND CLAY, MOIST  
TO WET (UNDIVIDED COASTAL PLAIN)  
**13 + 00.00**

MEDIUM STIFF TO STIFF TAN AND GRAY  
SANDY AND CLAYEY SILT AND CLAY, MOIST  
TO WET (UNDIVIDED COASTAL PLAIN)  
**12 + 58.24**

-DRV2-

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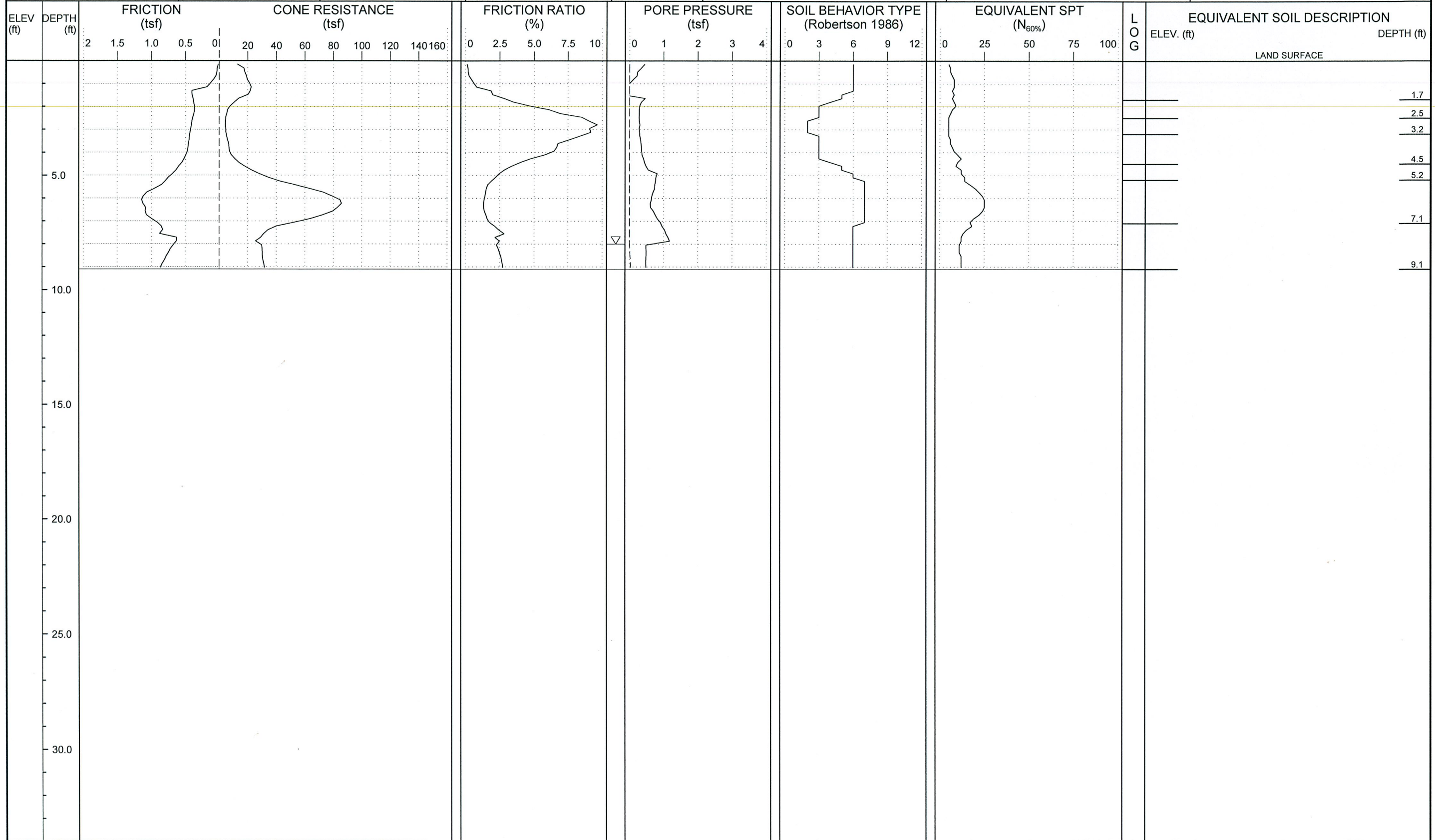
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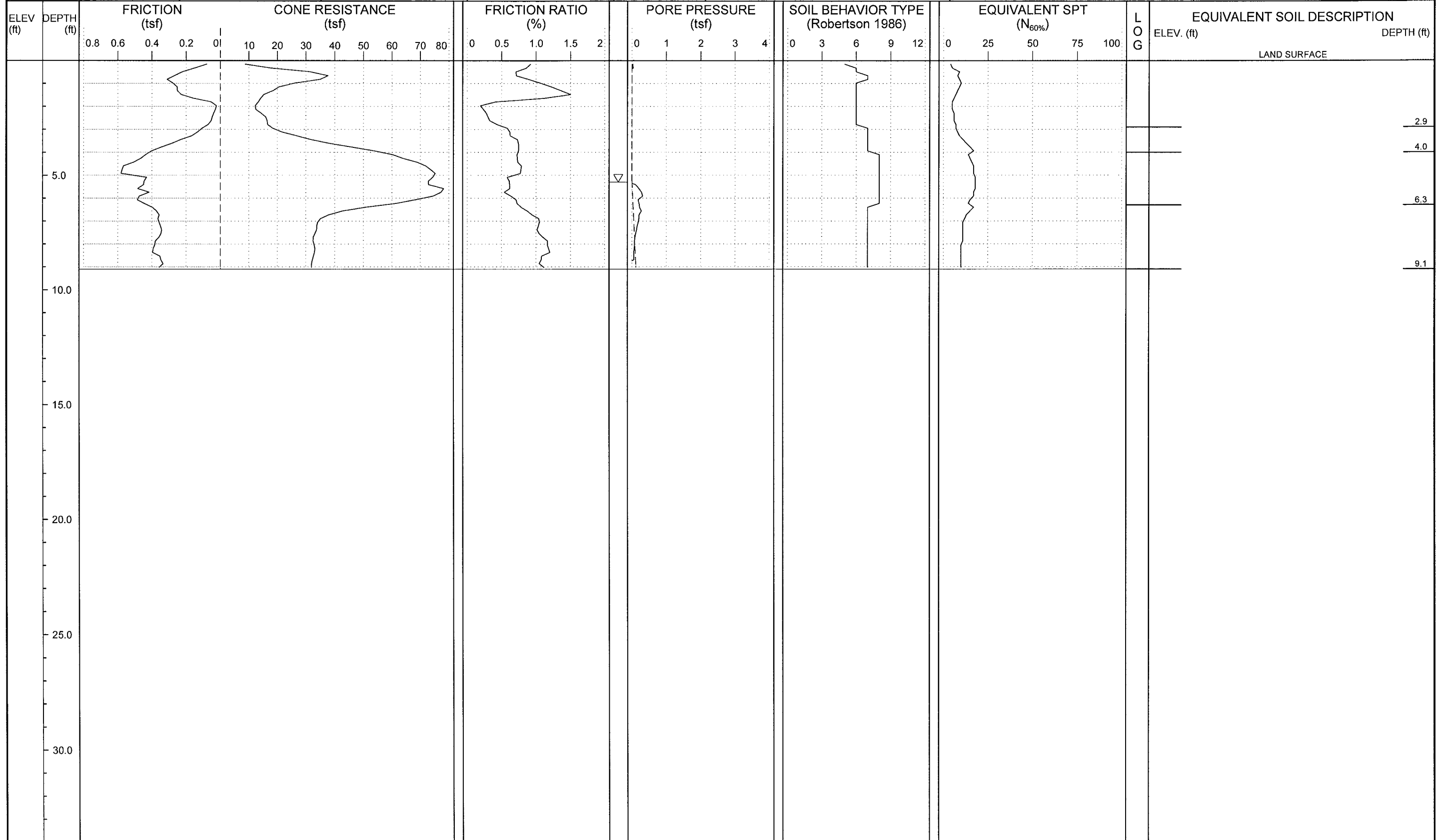
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SITE DESCRIPTION: US 17 from South of NC 58 to the New Bern Bypass				GROUND WTR (ft): 0 HR. 8.0	DRILL METHOD: Direct Push	CONE TYPE: Piezo	DRILLER: Cory Robinson
BORING NO.: DRV1-1250	STATION: 12+50	OFFSET: 0ft CL	ALIGNMENT: -DRV1-	24 HR. FIAD	ROD TYPE: Pre-Strung	CONE ID: DSA1123	TECHNICIAN: M.A.D.
COLLAR ELEV.: N/A	TOTAL DEPTH: 9.1 ft	NORTHING: 463,318	EASTING: 2,530,744	START DATE: 12/02/11	COMP. DATE: 12/02/11	SURFACE WATER DEPTH: N/A	







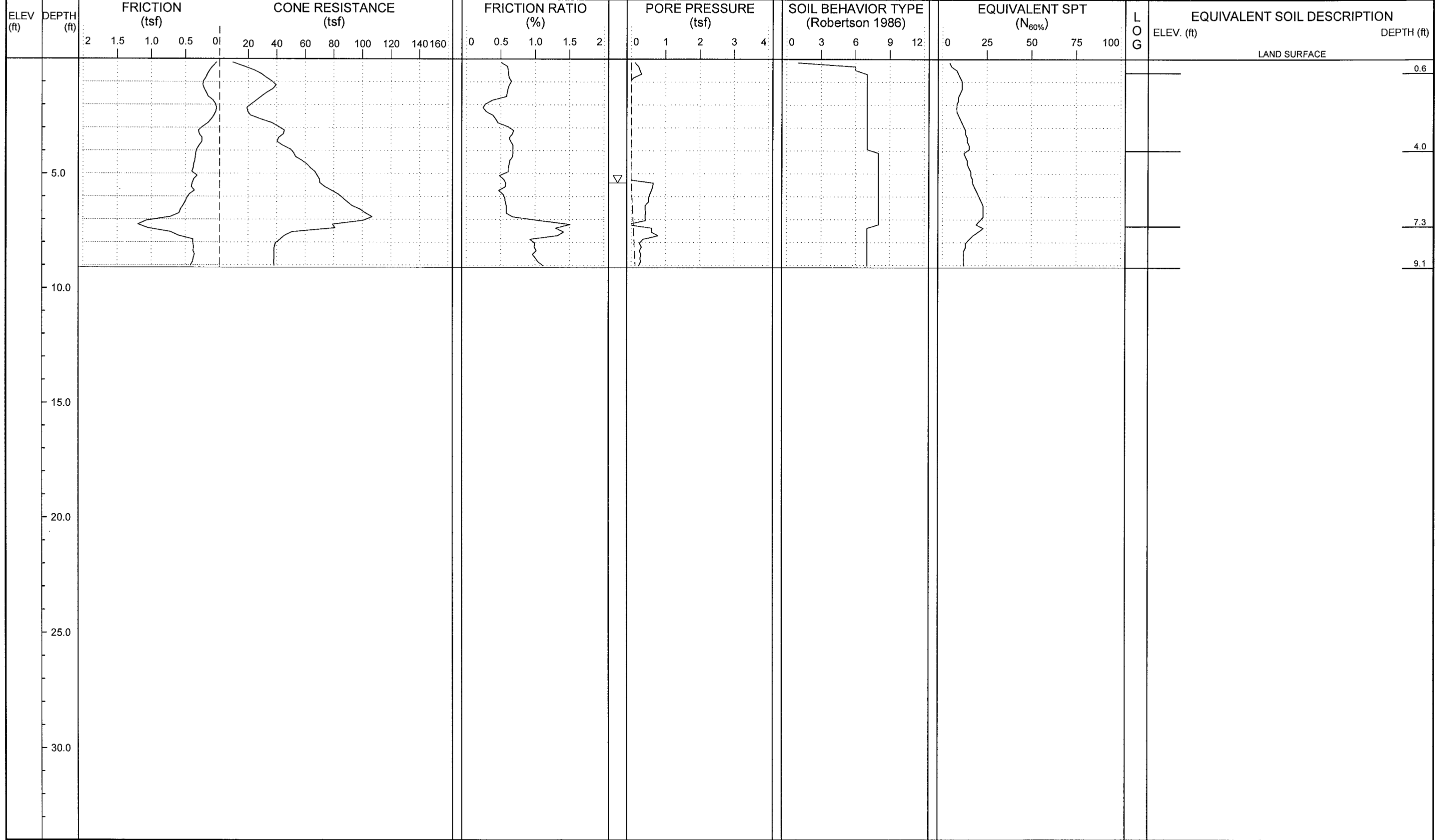
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SITE DESCRIPTION: US 17 from South of NC 58 to the New Bern Bypass				GROUND WTR (ft): 0 HR. 5.3	DRILL METHOD: Direct Push
BORING NO.: DRV1-1700	STATION: 17+00	OFFSET: 15ft LT	ALIGNMENT: -DRV1-	ROD TYPE: Pre-Strung	CONE TYPE: Piezo
COLLAR ELEV.: N/A	TOTAL DEPTH: 9.1 ft	NORTHING: 463,614	EASTING: 2,530,468	24 HR. FIAD	DRILLER: Cory Robinson
				START DATE: 12/02/11	CONE ID: DSA1123
				COMP. DATE: 12/02/11	TECHNICIAN: M.A.D.
				SURFACE WATER DEPTH: N/A	





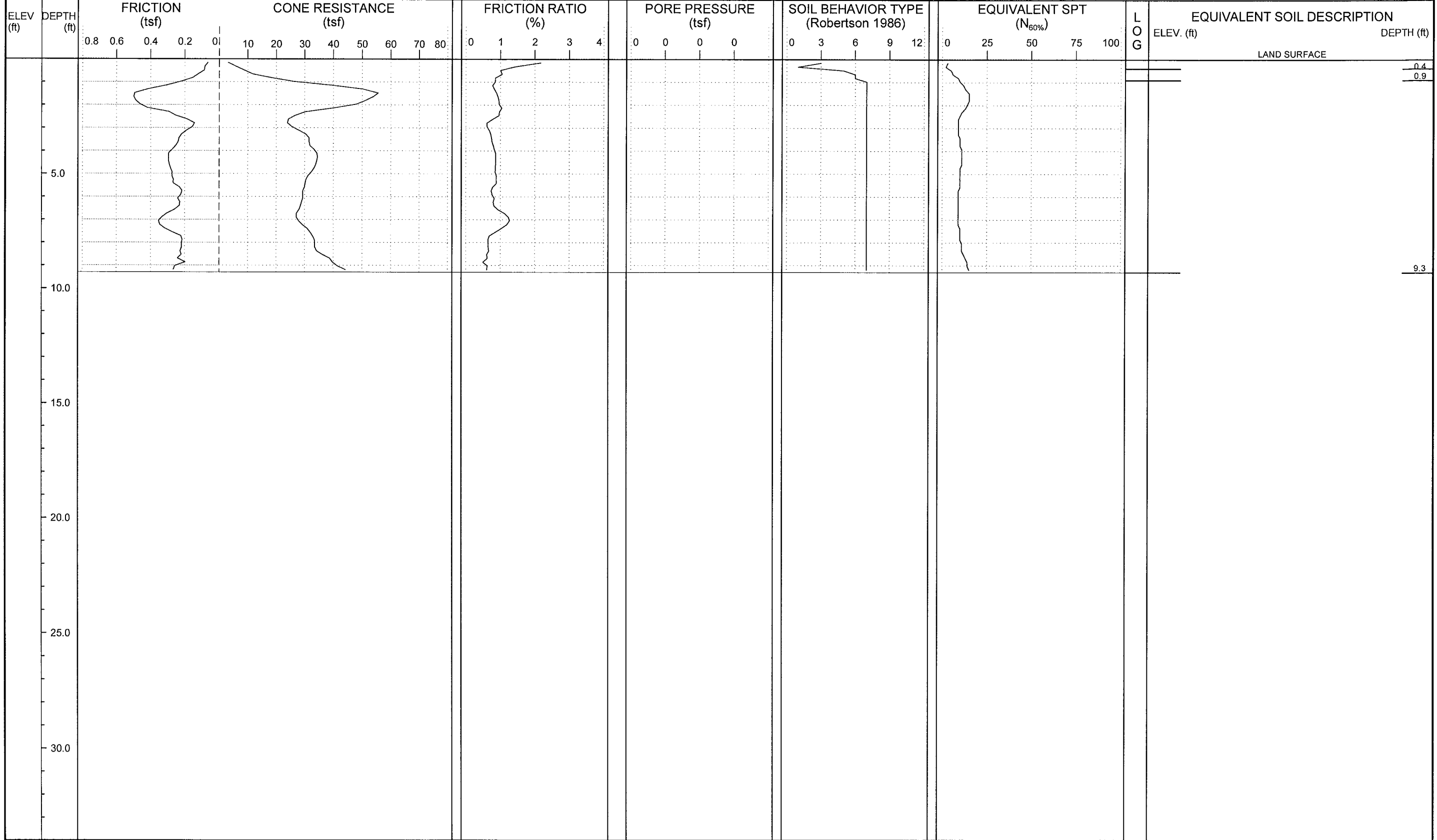


PROJECT NO.: 34441.1.1	ID.: R-2514D	COUNTY: Jones/Craven	GEOLOGIST: Steven Hudson	DRILL MACHINE: Hogentogler Track	MAX. DOWN PRESSURE: 10,000
SITE DESCRIPTION: US 17 from South of NC 58 to the New Bern Bypass				GROUND WTR (ft): 0 HR. 5.4	DRILL METHOD: Direct Push
BORING NO.: DRV1-2150	STATION: 21+50	OFFSET: 15ft RT	ALIGNMENT: -DRV1-	ROD TYPE: Pre-Strung	CONE TYPE: Piezo
COLLAR ELEV.: N/A	TOTAL DEPTH: 9.1 ft	NORTHING: 464,058	EASTING: 2,530,550	24 HR. FIAD	CONE ID: DSA1123
				START DATE: 12/02/11	DRILLER: Cory Robinson
				COMP. DATE: 12/02/11	TECHNICIAN: M.A.D.
				SURFACE WATER DEPTH: N/A	



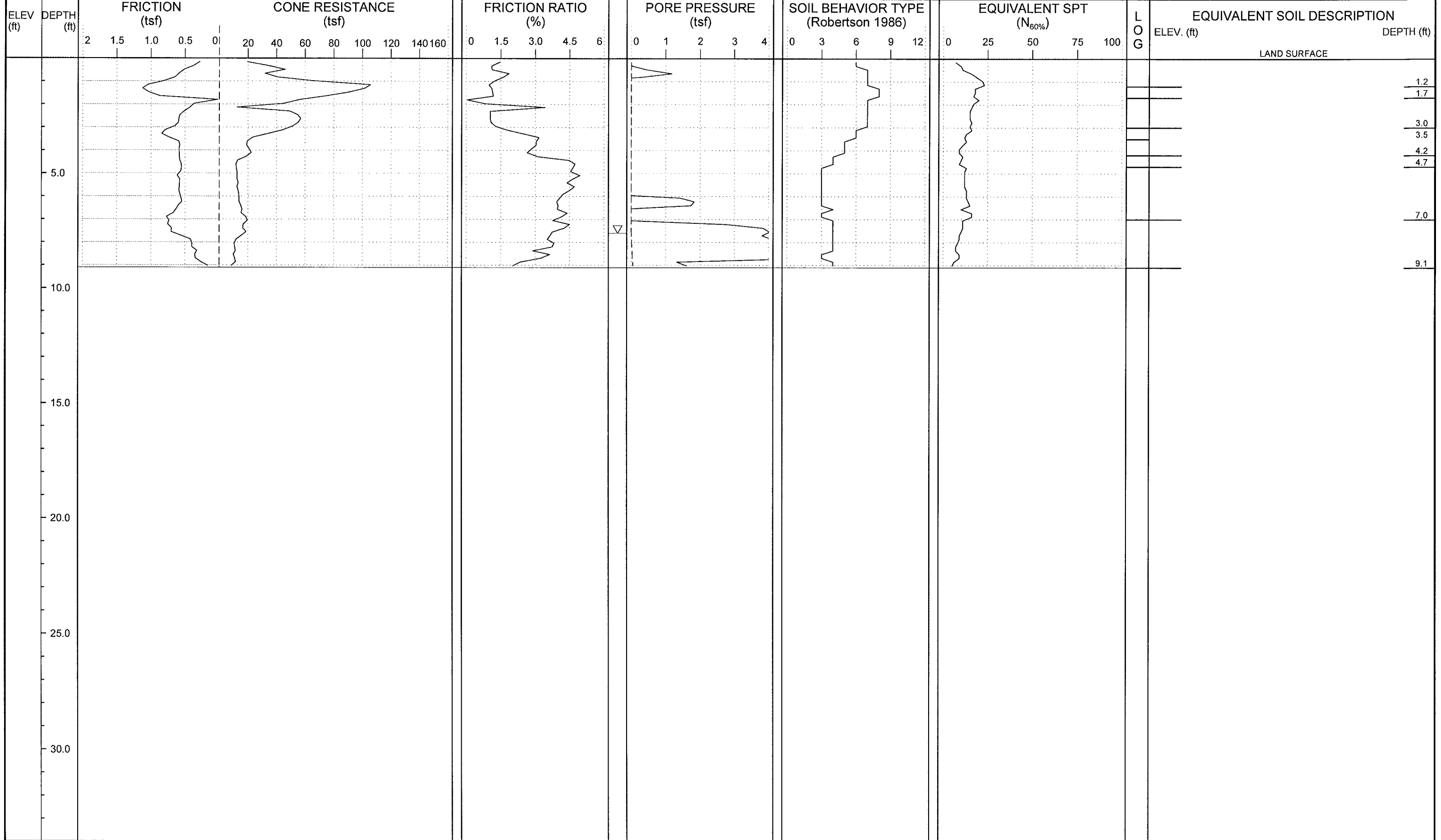


PROJECT NO.: 34441.1.1	ID.: R-2514D	COUNTY: Jones/Craven	GEOLOGIST: Steven Hudson	DRILL MACHINE: Hogentogler Track	MAX. DOWN PRESSURE: 10,000		
SITE DESCRIPTION: US 17 from South of NC 58 to the New Bern Bypass				GROUND WTR (ft)	DRILL METHOD: Direct Push	CONE TYPE: Piezo	DRILLER: Cory Robinson
BORING NO.: DRV1-2300	STATION: 23+00	OFFSET: 15ft LT	ALIGNMENT: -DRV1-	0 HR. N/A	ROD TYPE: Pre-Strung	CONE ID: DSA1123	TECHNICIAN: M.A.D.
COLLAR ELEV.: N/A	TOTAL DEPTH: 9.3 ft	NORTHING: 464,208	EASTING: 2,530,550	24 HR. FIAD	START DATE: 12/02/11	COMP. DATE: 12/02/11	SURFACE WATER DEPTH: N/A



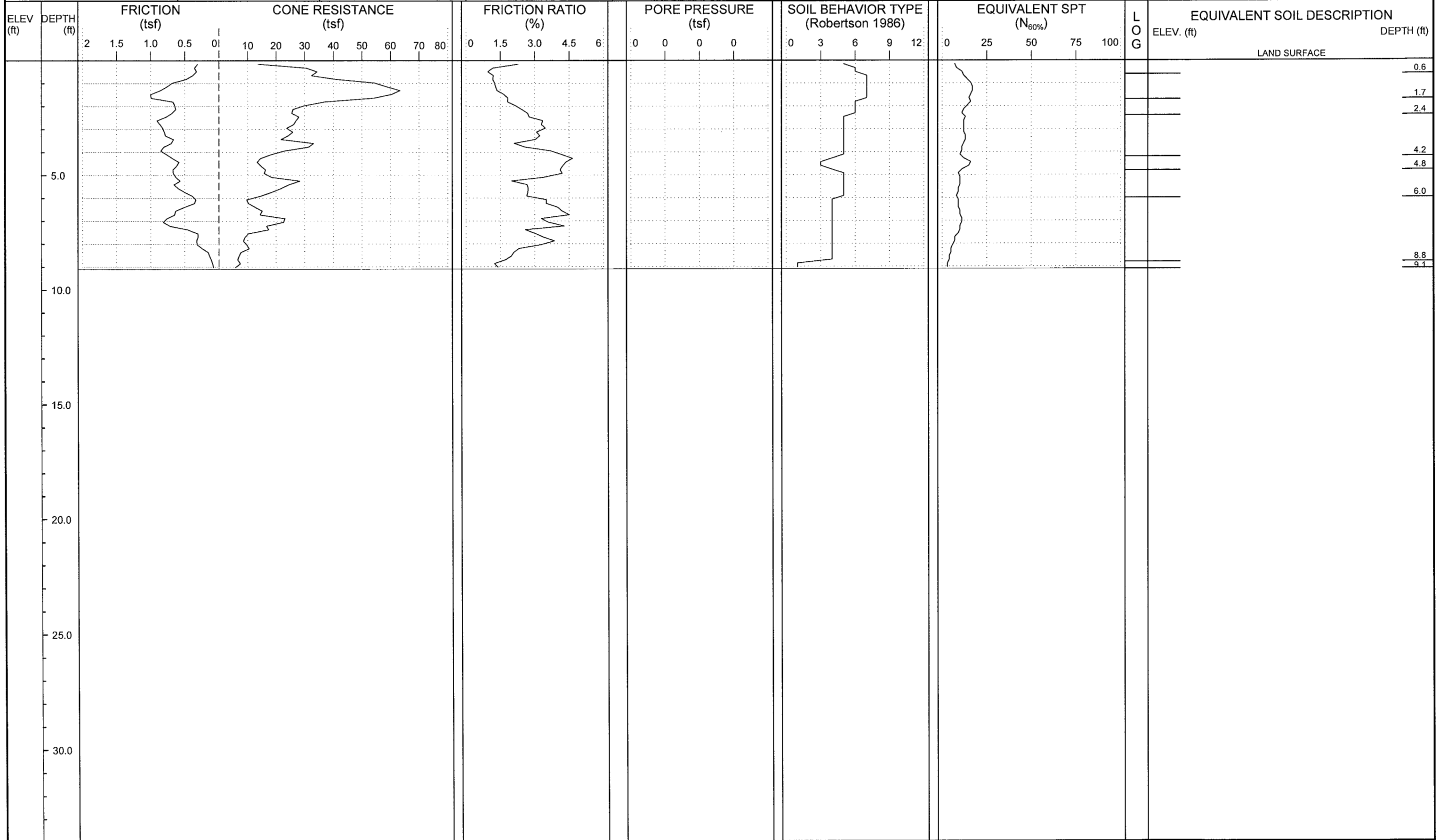


PROJECT NO.: 34441.1.1	ID.: R-2514D	COUNTY: Jones/Craven	GEOLOGIST: Steven Hudson	DRILL MACHINE: Hogentogler Track	MAX. DOWN PRESSURE: 10,000
SITE DESCRIPTION: US 17 from South of NC 58 to the New Bern Bypass			GROUND WTR (ft): 0 HR. 7.6	DRILL METHOD: Direct Push	CONE TYPE: Piezo
BORING NO.: DRV2-1300	STATION: 13+00	OFFSET: 15ft LT	ALIGNMENT: -DRV2-	ROD TYPE: Pre-Strung	DRILLER: Cory Robinson
COLLAR ELEV.: N/A	TOTAL DEPTH: 9.1 ft	NORTHING: 459,205	EASTING: 2,529,666	START DATE: 11/30/11	TECHNICIAN: M.A.D.
			24 HR. FIAD	COMP. DATE: 11/30/11	SURFACE WATER DEPTH: N/A

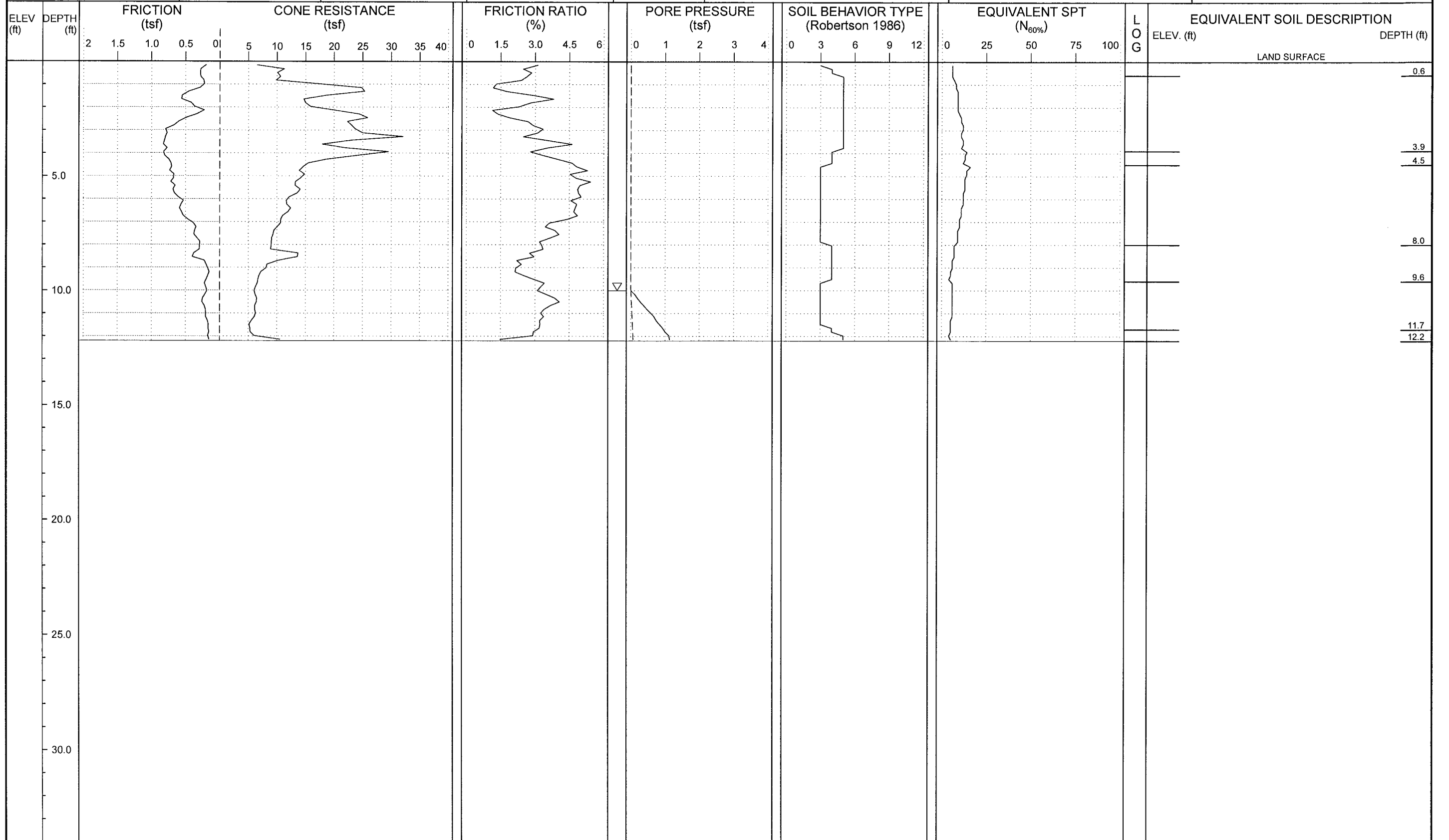




PROJECT NO.: 34441.1.1	ID.: R-2514D	COUNTY: Jones/Craven	GEOLOGIST: Steven Hudson	DRILL MACHINE: Hogentogler Track	MAX. DOWN PRESSURE: 10,000
SITE DESCRIPTION: US 17 from South of NC 58 to the New Bern Bypass				GROUND WTR (ft): 0 HR. N/A	DRILL METHOD: Direct Push
BORING NO.: DRV2-1500	STATION: 13+00	OFFSET: 20ft RT	ALIGNMENT: -DRV2-	ROD TYPE: Pre-Strung	CONE TYPE: Piezo
COLLAR ELEV.: N/A	TOTAL DEPTH: 9.1 ft	NORTHING: 459,029	EASTING: 2,529,783	24 HR. FIAD	DRILLER: Cory Robinson
				START DATE: 11/30/11	CONE ID: DSA1123
				COMP. DATE: 11/30/11	
				TECHNICIAN: M.A.D.	
				SURFACE WATER DEPTH: N/A	

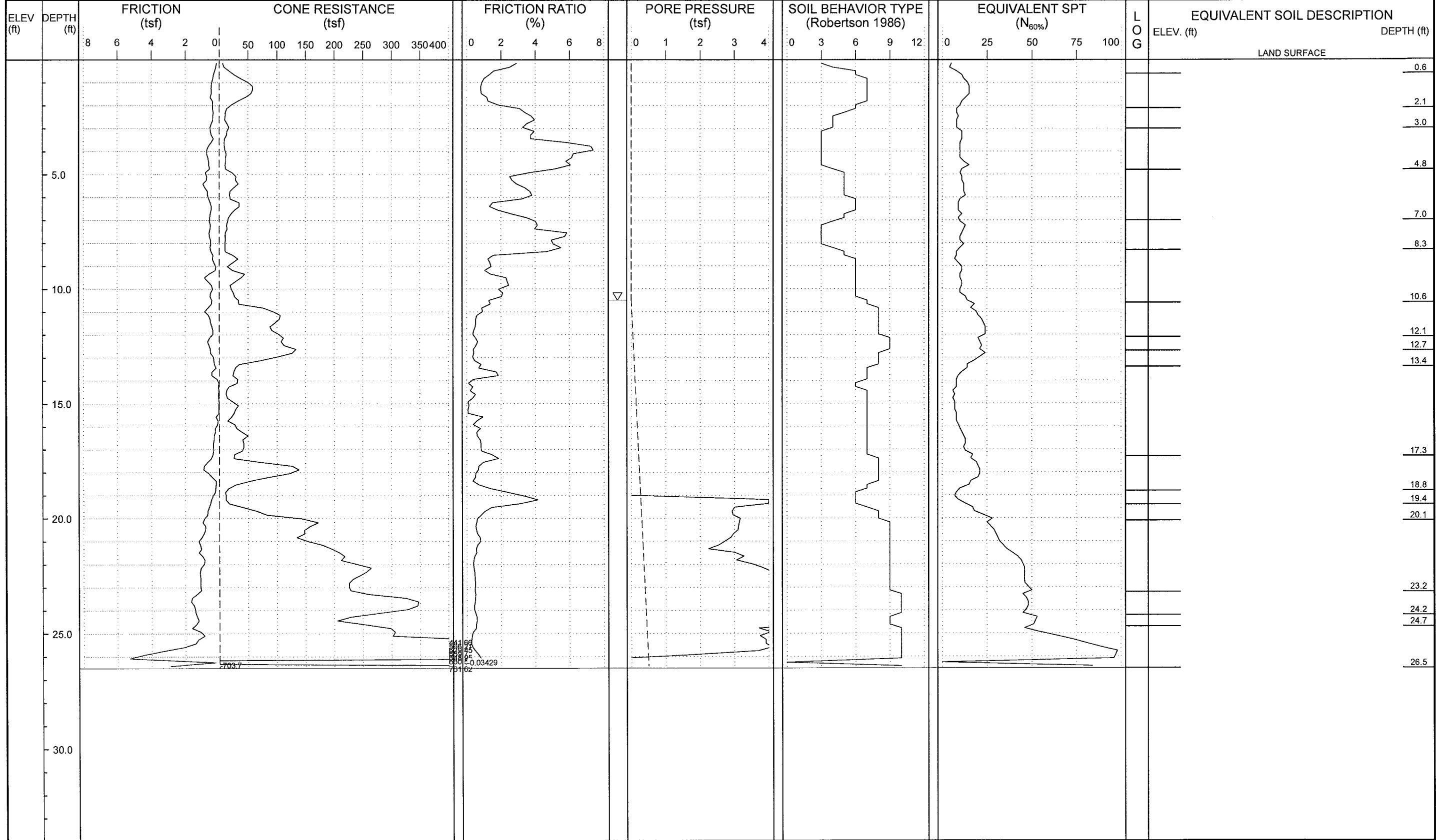


PROJECT NO.: 34441.1.1	ID.: R-2514D	COUNTY: Jones/Craven	GEOLOGIST: Steven Hudson	DRILL MACHINE: Hogentogler Track	MAX. DOWN PRESSURE: 10,000		
SITE DESCRIPTION: US 17 from South of NC 58 to the New Bern Bypass				GROUND WTR (ft): 0 HR. 10.0, 24 HR. FIAD	DRILL METHOD: Direct Push	CONE TYPE: Piezo	DRILLER: Cory Robinson
BORING NO.: L-30500	STATION: 305+00	OFFSET: 0ft CL	ALIGNMENT: -L-	START DATE: 11/29/11	ROD TYPE: Pre-Strung	CONE ID: DSA1123	TECHNICIAN: M.A.D.
COLLAR ELEV.: N/A	TOTAL DEPTH: 12.2 ft	NORTHING: 457,903	EASTING: 2,528,726	COMP. DATE: 11/29/11	SURFACE WATER DEPTH: N/A		





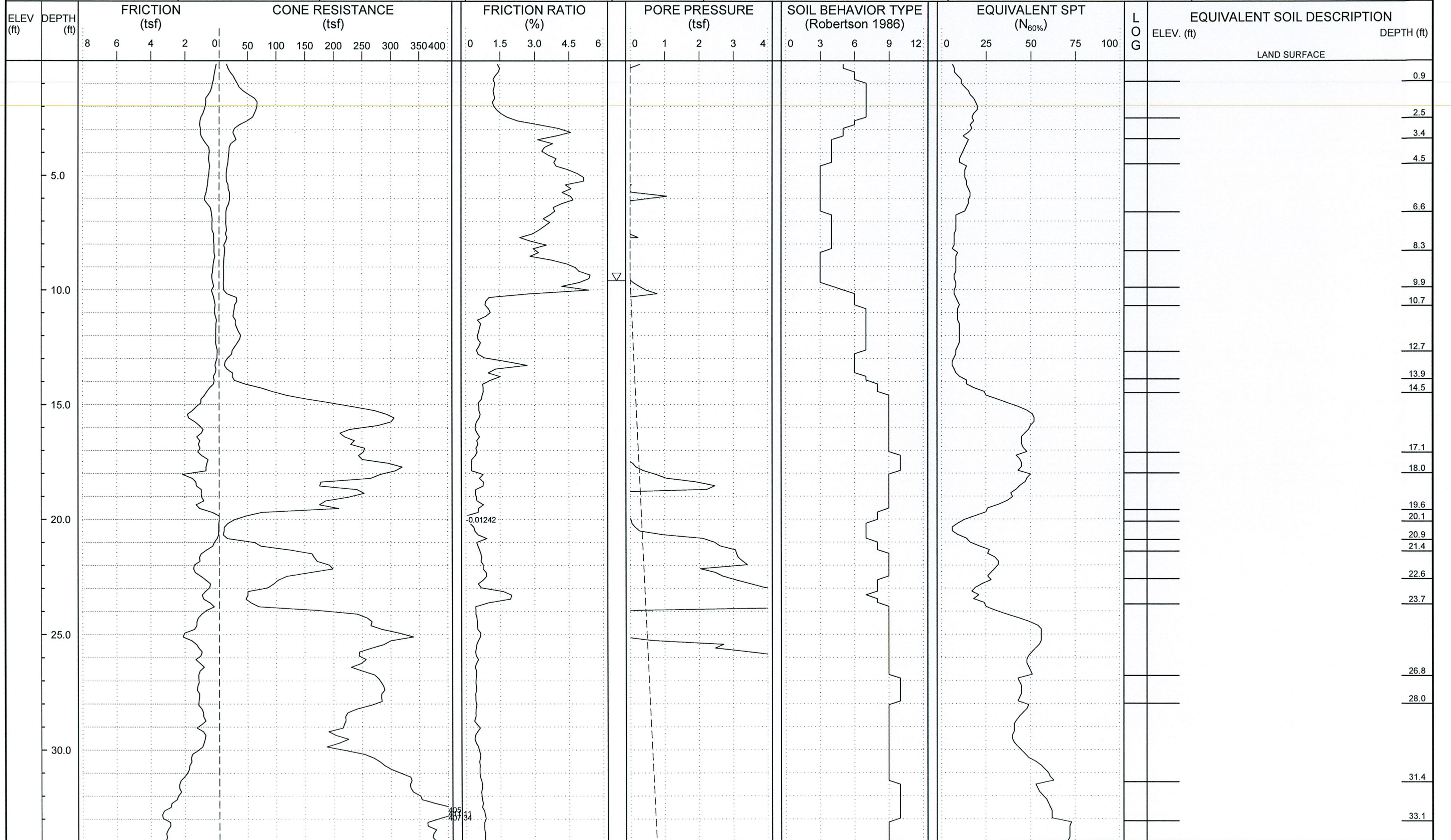
PROJECT NO.: 34441.1.1	ID: R-2514D	COUNTY: Jones/Craven	GEOLOGIST: Steven Hudson	DRILL MACHINE: Hogentogler Track	MAX. DOWN PRESSURE: 10,000
SITE DESCRIPTION: US 17 from South of NC 58 to the New Bern Bypass			GROUND WTR (ft): 0 HR. 10.5	DRILL METHOD: Direct Push	CONE TYPE: Piezo
BORING NO.: L-31500	STATION: 315+00	OFFSET: 0ft CL	ALIGNMENT: -L-	ROD TYPE: Pre-Strung	CONE ID: DSA1123
COLLAR ELEV.: N/A	TOTAL DEPTH: 26.5 ft	NORTHING: 458,865	EASTING: 2,528,996	24 HR. FIAD	START DATE: 11/29/11
				COMP. DATE: 11/29/11	DRILLER: Cory Robinson
				TECHNICIAN: M.A.D.	
				SURFACE WATER DEPTH: N/A	



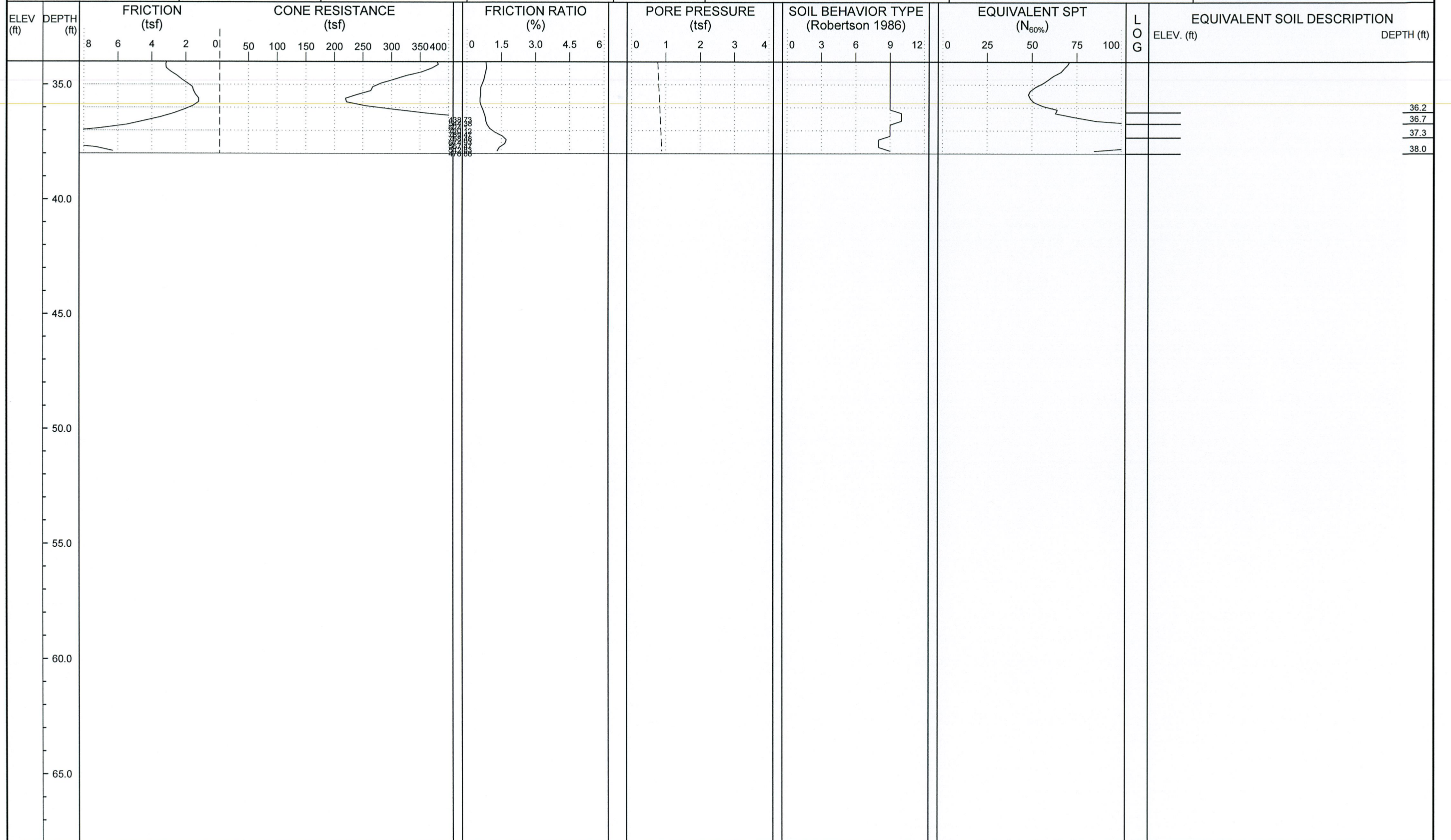
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 75162



PROJECT NO.: 34441.1.1	ID.: R-2514D	COUNTY: Jones/Craven	GEOLOGIST: Steven Hudson	DRILL MACHINE: Hogentogler Track	MAX. DOWN PRESSURE: 10,000
SITE DESCRIPTION: US 17 from South of NC 58 to the New Bern Bypass			GROUND WTR (ft): 0 HR. 9.6	DRILL METHOD: Direct Push	CONE TYPE: Piezo
BORING NO.: L-32200	STATION: 322+00	OFFSET: 40ft LT	ALIGNMENT: -L-	ROD TYPE: Pre-Strung	CONE ID: DSA1123
COLLAR ELEV.: N/A	TOTAL DEPTH: 38.0 ft	NORTHING: 459,535	EASTING: 2,529,204	24 HR. FIAD	START DATE: 11/30/11
				COMP. DATE: 11/30/11	DRILLER: Cory Robinson
				TECHNICIAN: M.A.D.	
				SURFACE WATER DEPTH: N/A	



PROJECT NO.: 34441.1.1	ID.: R-2514D	COUNTY: Jones/Craven	GEOLOGIST: Steven Hudson	DRILL MACHINE: Hogentogler Track	MAX. DOWN PRESSURE: 10,000
SITE DESCRIPTION: US 17 from South of NC 58 to the New Bern Bypass			GROUND WTR (ft)	DRILL METHOD: Direct Push	CONE TYPE: Piezo
BORING NO.: L-32200	STATION: 322+00	OFFSET: 40ft LT	ALIGNMENT: -L-	0 HR. 9.6	ROD TYPE: Pre-Strung
COLLAR ELEV.: N/A	TOTAL DEPTH: 38.0 ft	NORTHING: 459,535	EASTING: 2,529,204	24 HR. FIAD	START DATE: 11/30/11
				DRILLER: Cory Robinson	TECHNICIAN: M.A.D.
				COMP. DATE: 11/30/11	SURFACE WATER DEPTH: N/A

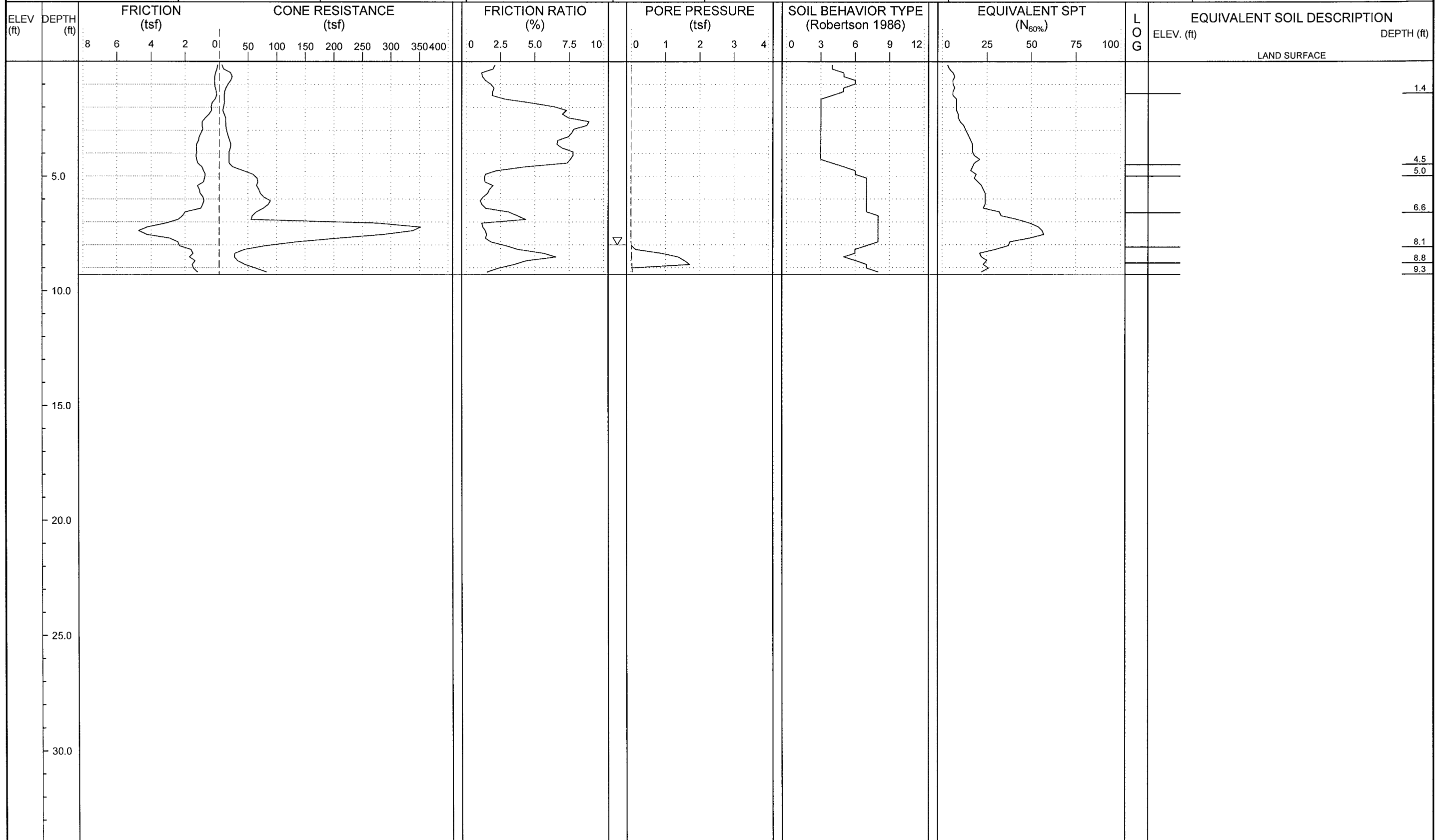








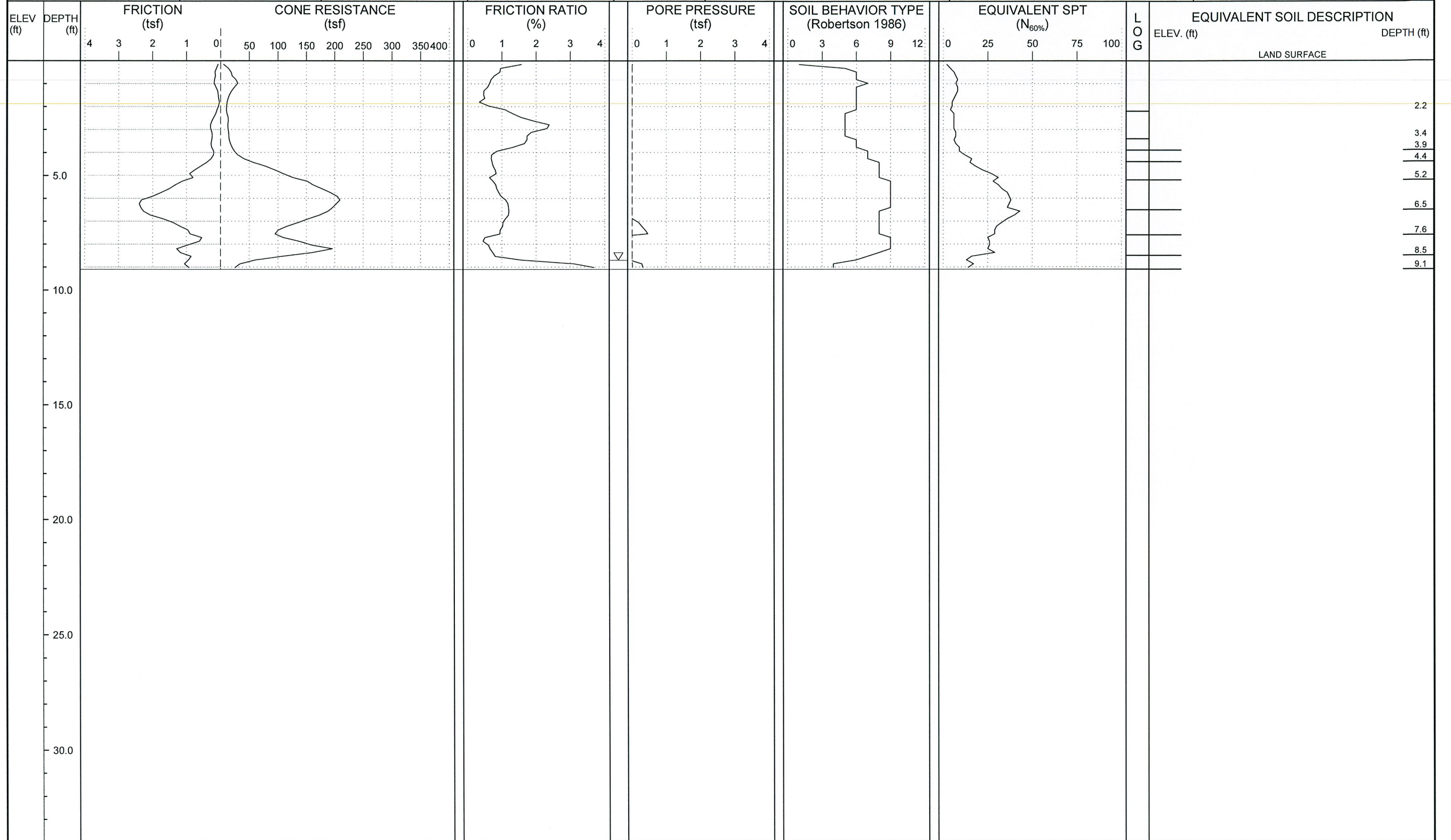
PROJECT NO.: 34441.1.1	ID.: R-2514D	COUNTY: Jones/Craven	GEOLOGIST: Steven Hudson	DRILL MACHINE: Hogentogler Track	MAX. DOWN PRESSURE: 10,000		
SITE DESCRIPTION: US 17 from South of NC 58 to the New Bern Bypass				GROUND WTR (ft): 0 HR. 8.0	DRILL METHOD: Direct Push	CONE TYPE: Piezo	DRILLER: Cory Robinson
BORING NO.: L-34000	STATION: 340+00	OFFSET: 0ft CL	ALIGNMENT: -L-	24 HR. FIAD	ROD TYPE: Pre-Strung	CONE ID: DSA1123	TECHNICIAN: M.A.D.
COLLAR ELEV.: N/A	TOTAL DEPTH: 9.3 ft	NORTHING: 461,206	EASTING: 2,529,875	START DATE: 12/01/11	COMP. DATE: 12/01/11	SURFACE WATER DEPTH: N/A	







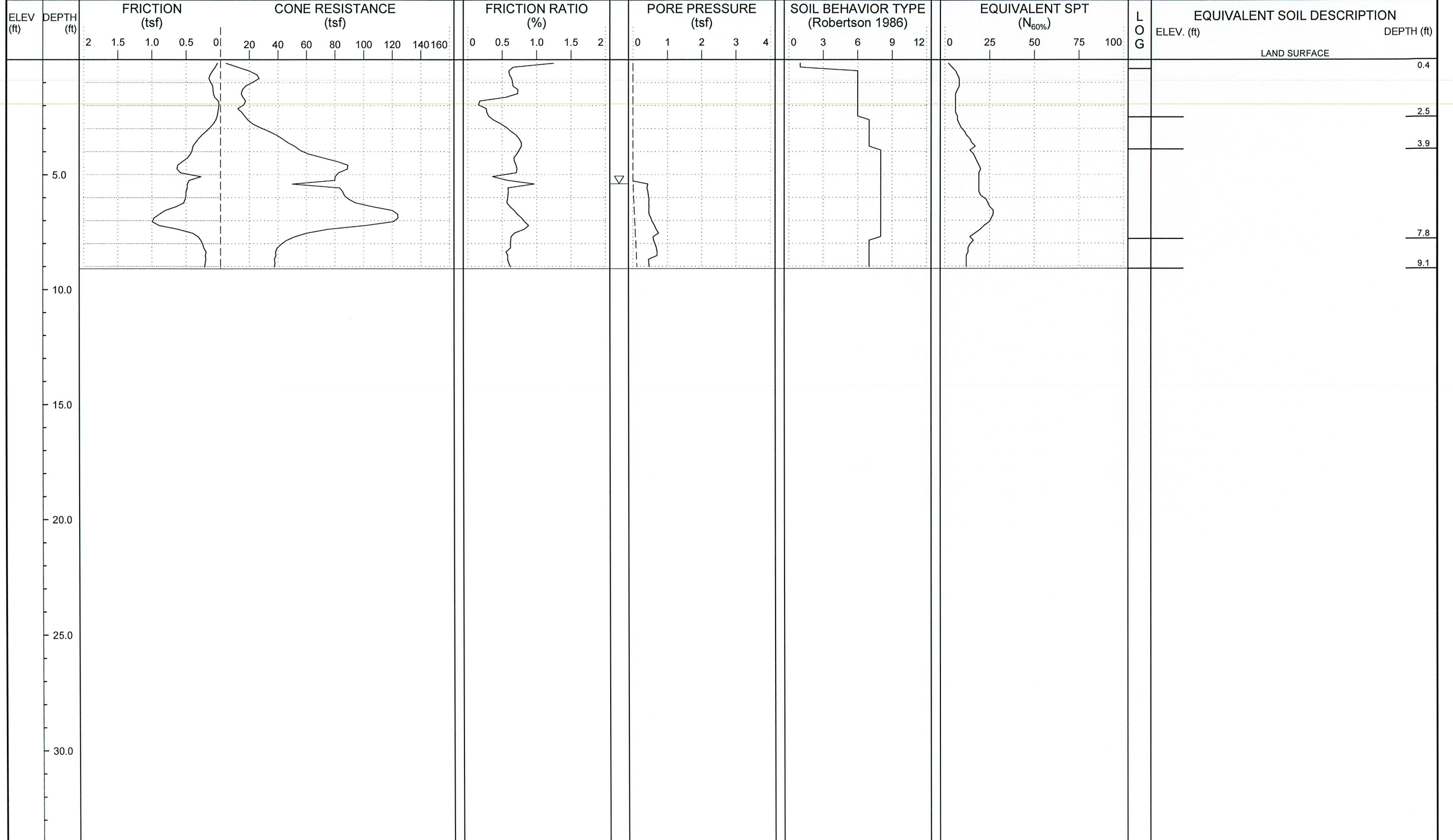
PROJECT NO.: 34441.1.1	ID.: R-2514D	COUNTY: Jones/Craven	GEOLOGIST: Steven Hudson	DRILL MACHINE: Hogentogler Track	MAX. DOWN PRESSURE: 10,000		
SITE DESCRIPTION: US 17 from South of NC 58 to the New Bern Bypass				GROUND WTR (ft)	DRILL METHOD: Direct Push	CONE TYPE: Piezo	DRILLER: Cory Robinson
BORING NO.: L-35450	STATION: 354+50	OFFSET: 0ft CL	ALIGNMENT: -L-	0 HR. 8.7	ROD TYPE: Pre-Strung	CONE ID: DSA1123	TECHNICIAN: M.A.D.
COLLAR ELEV.: N/A	TOTAL DEPTH: 9.1 ft	NORTHING: 462,612	EASTING: 2,530,218	24 HR. FIAD	START DATE: 12/01/11	COMP. DATE: 12/01/11	SURFACE WATER DEPTH: N/A







PROJECT NO.: 34441.1.1	ID.: R-2514D	COUNTY: Jones/Craven	GEOLOGIST: Steven Hudson	DRILL MACHINE: Hogentogler Track	MAX. DOWN PRESSURE: 10,000
SITE DESCRIPTION: US 17 from South of NC 58 to the New Bern Bypass				GROUND WTR (ft): 0 HR. 5.4	DRILL METHOD: Direct Push
BORING NO.: L-36100	STATION: 361+00	OFFSET: 0ft CL	ALIGNMENT: -L-	ROD TYPE: Pre-Strung	CONE TYPE: Piezo
COLLAR ELEV.: N/A	TOTAL DEPTH: 9.1 ft	NORTHING: 463,257	EASTING: 2,530,295	24 HR. FIAD	CONE ID: DSA1123
				START DATE: 12/01/11	DRILLER: Cory Robinson
				COMP. DATE: 12/01/11	TECHNICIAN: M.A.D.
				SURFACE WATER DEPTH: N/A	

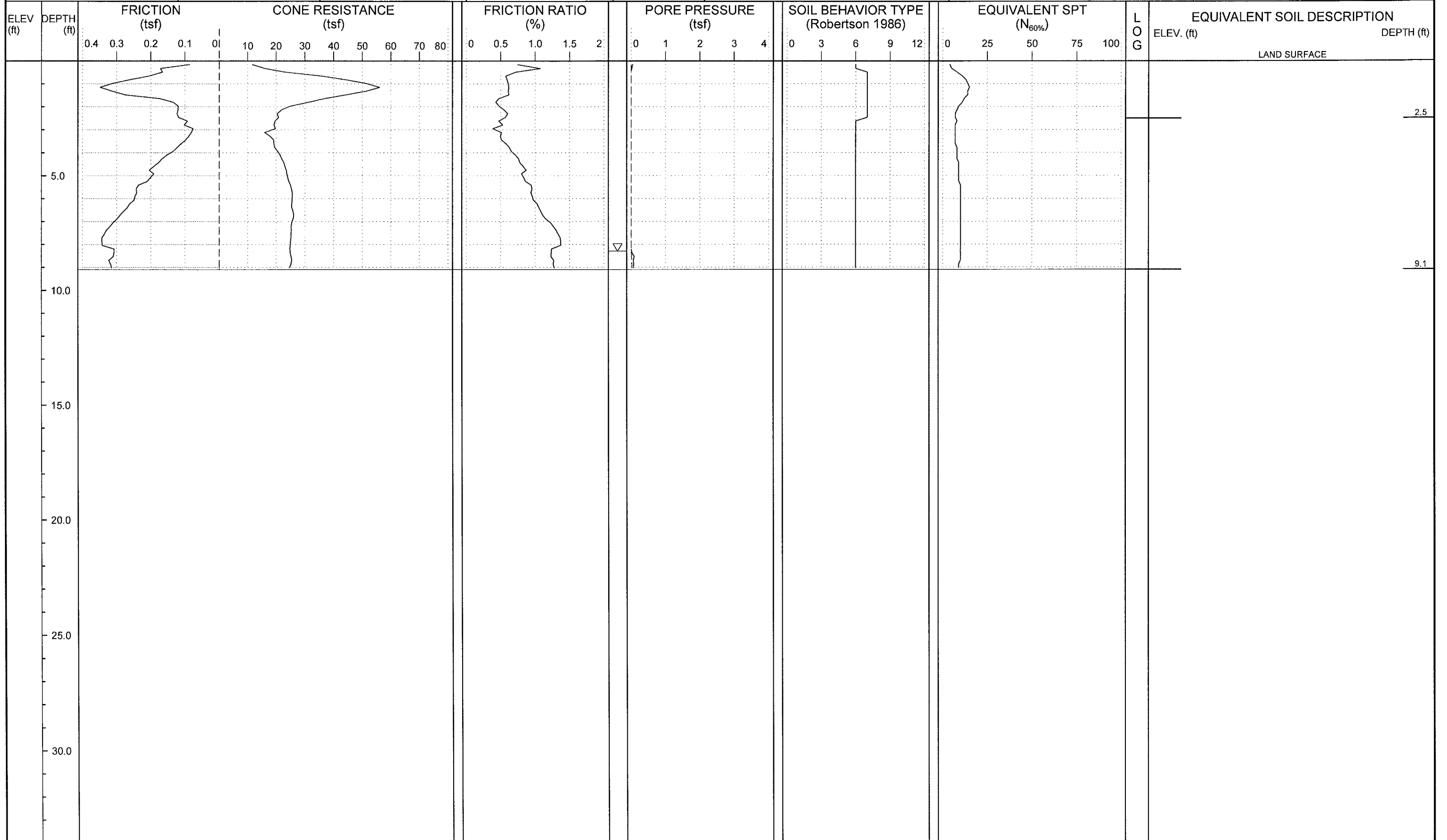




NCDOT GEOTECHNICAL ENGINEERING UNIT

SHEET NO.:	19
PROJ. NO.:	34441.1.1
TIP NO.:	R-2514D
COUNTY:	Jones/Craven

PROJECT NO.: 34441.1.1	ID: R-2514D	COUNTY: Jones/Craven	GEOLOGIST: Steven Hudson	DRILL MACHINE: Hogentogler Track	MAX. DOWN PRESSURE: 10,000
SITE DESCRIPTION: US 17 from South of NC 58 to the New Bern Bypass			GROUND WTR (ft): 0 HR. 8.3	DRILL METHOD: Direct Push	CONE TYPE: Piezo
BORING NO.: L-36500	STATION: 365+00	OFFSET: 0ft CL	ALIGNMENT: -L-	ROD TYPE: Pre-Strung	CONE ID: DSA1123
COLLAR ELEV.: N/A	TOTAL DEPTH: 9.1 ft	NORTHING: 463,654	EASTING: 2,530,343	START DATE: 12/02/11	COMP. DATE: 12/02/11
					DRILLER: Cory Robinson
					TECHNICIAN: M.A.D.
					SURFACE WATER DEPTH: N/A





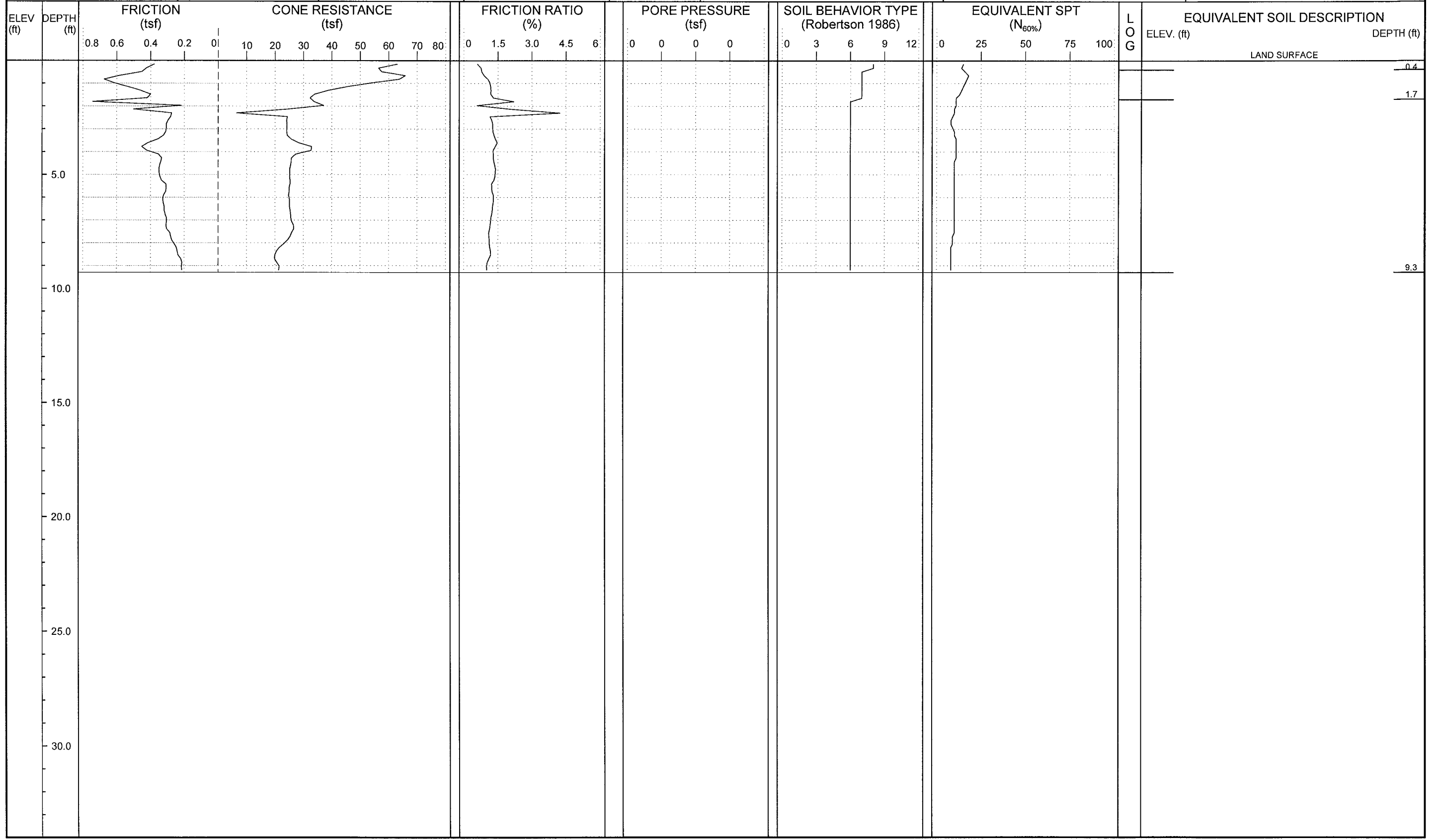


# NCDOT GEOTECHNICAL ENGINEERING UNIT



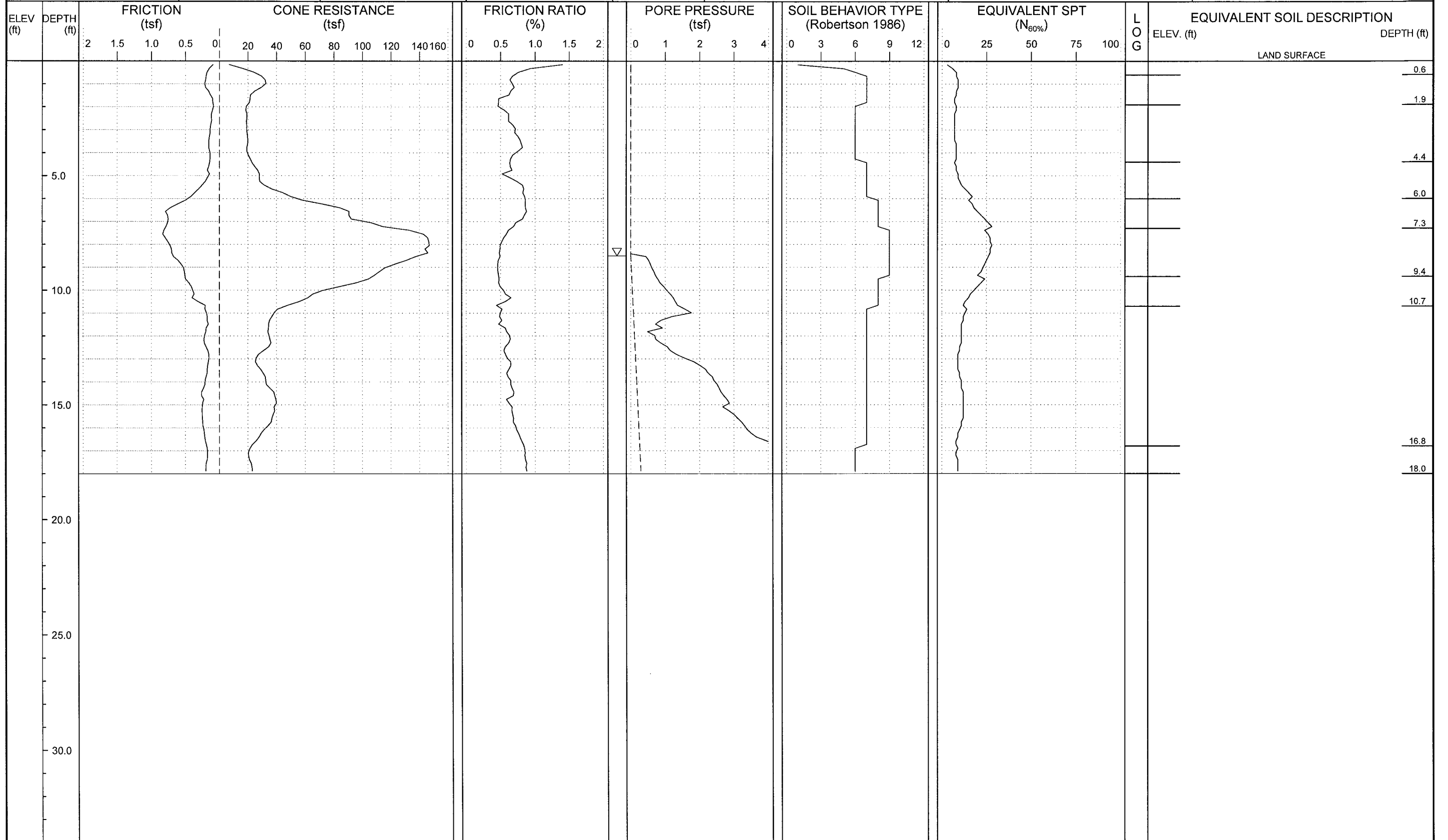
SHEET NO.:	20
PROJ. NO.:	34441.1.1
TIP NO.:	R-2514D
COUNTY:	Jones/Craven

PROJECT NO.: 34441.1.1	ID.: R-2514D	COUNTY: Jones/Craven	GEOLOGIST: Steven Hudson	DRILL MACHINE: Hogentogler Track	MAX. DOWN PRESSURE: 10,000
SITE DESCRIPTION: US 17 from South of NC 58 to the New Bern Bypass				GROUND WTR (ft): 0 HR. N/A	DRILL METHOD: Direct Push
BORING NO.: L-36700	STATION: 367+00	OFFSET: 0ft CL	ALIGNMENT: -L-	ROD TYPE: Pre-Strung	CONE TYPE: Piezo
COLLAR ELEV.: N/A	TOTAL DEPTH: 9.3 ft	NORTHING: 463,853	EASTING: 2,530,366	START DATE: 12/02/11	CONE ID: DSA1123
				24 HR. FIAD	DRILLER: Cory Robinson
					TECHNICIAN: M.A.D.
					COMP. DATE: 12/02/11
					SURFACE WATER DEPTH: N/A



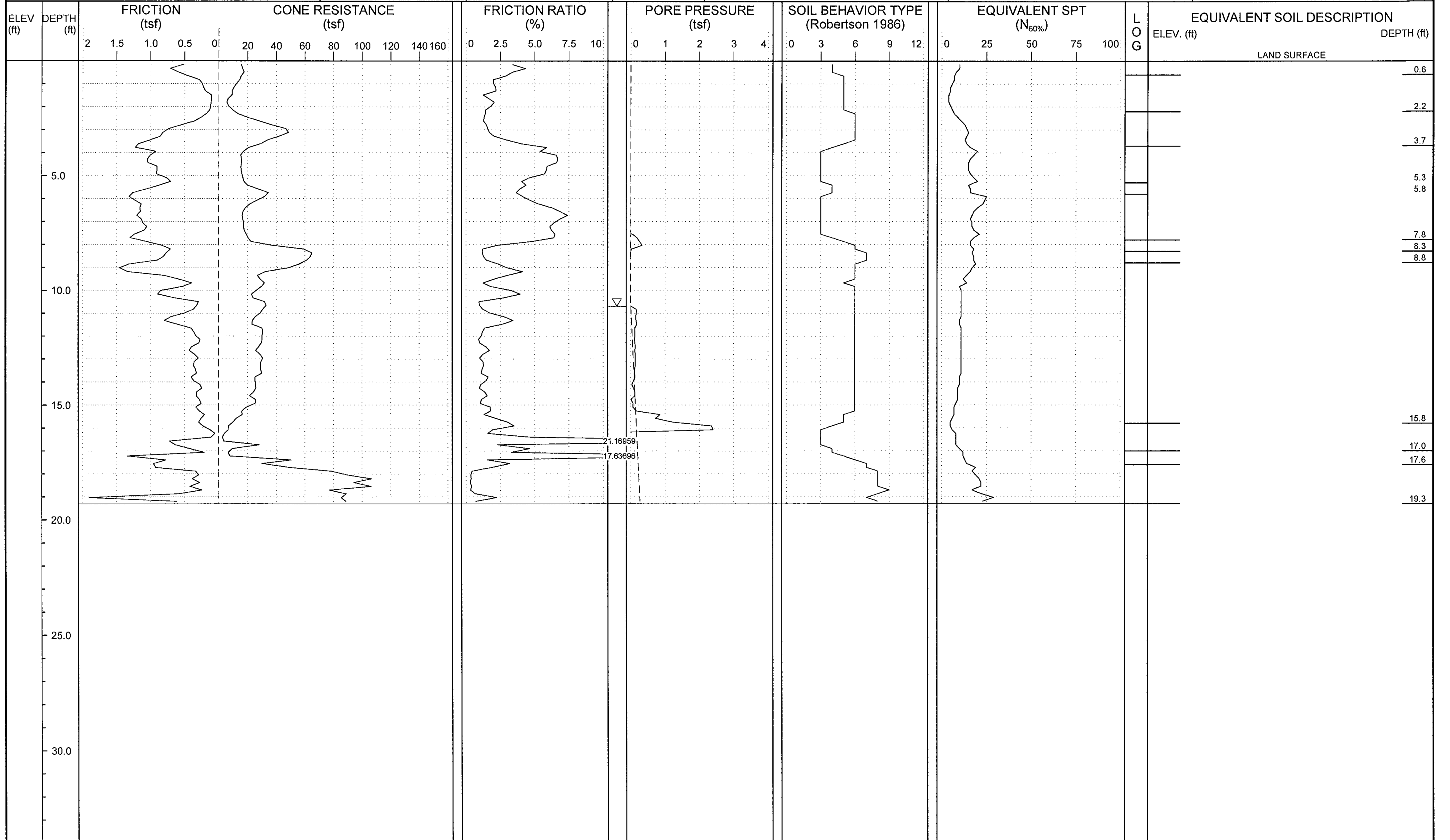


PROJECT NO.: 34441.1.1	ID.: R-2514D	COUNTY: Jones/Craven	GEOLOGIST: Steven Hudson	DRILL MACHINE: Hogentogler Track	MAX. DOWN PRESSURE: 10,000
SITE DESCRIPTION: US 17 from South of NC 58 to the New Bern Bypass				GROUND WTR (ft): 0 HR. 8.5	DRILL METHOD: Direct Push
BORING NO.: L-38000	STATION: 380+00	OFFSET: 0ft CL	ALIGNMENT: -L-	ROD TYPE: Pre-Strung	CONE TYPE: Piezo
COLLAR ELEV.: N/A	TOTAL DEPTH: 18.0 ft	NORTHING: 465,144	EASTING: 2,530,521	24 HR. FIAD	DRILLER: Cory Robinson
				START DATE: 12/02/11	CONE ID: DSA1123
				COMP. DATE: 12/02/11	TECHNICIAN: M.A.D.
				SURFACE WATER DEPTH: N/A	



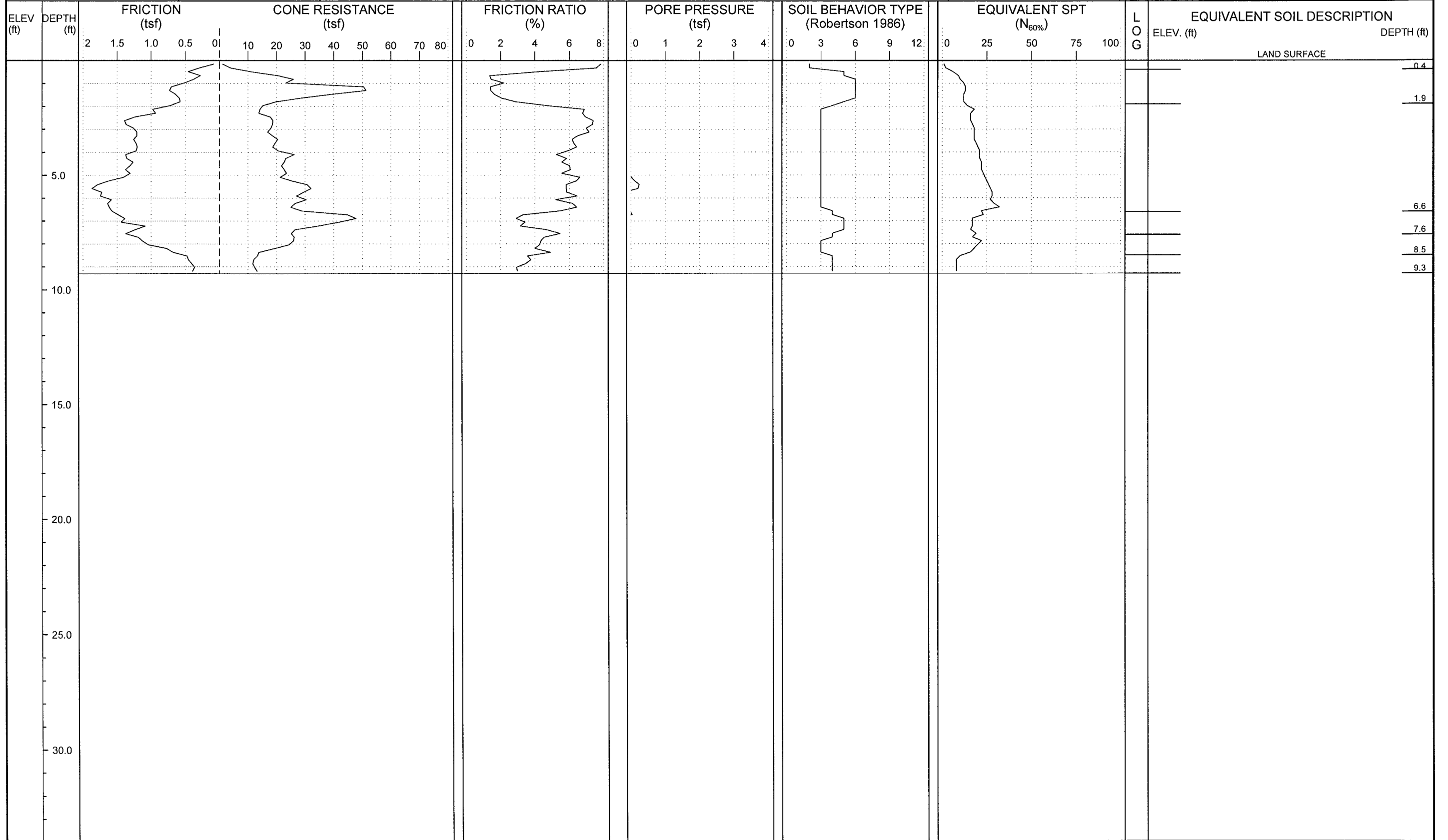


PROJECT NO.: 34441.1.1	ID.: R-2514D	COUNTY: Jones/Craven	GEOLOGIST: Steven Hudson	DRILL MACHINE: Hogentogler Track	MAX. DOWN PRESSURE: 10,000
SITE DESCRIPTION: US 17 from South of NC 58 to the New Bern Bypass			GROUND WTR (ft)	DRILL METHOD: Direct Push	CONE TYPE: Piezo
BORING NO.: L-40300	STATION: 403+00	OFFSET: 0ft CL	ALIGNMENT: -L-	0 HR. 10.7	ROD TYPE: Pre-Strung
COLLAR ELEV.: N/A	TOTAL DEPTH: 19.3 ft	NORTHING: 467,427	EASTING: 2,530,794	24 HR. FIAD	START DATE: 12/14/11
				CONC. DATE: 12/14/11	DRILLER: Cory Robinson
					TECHNICIAN: M.A.D.
					SURFACE WATER DEPTH: N/A



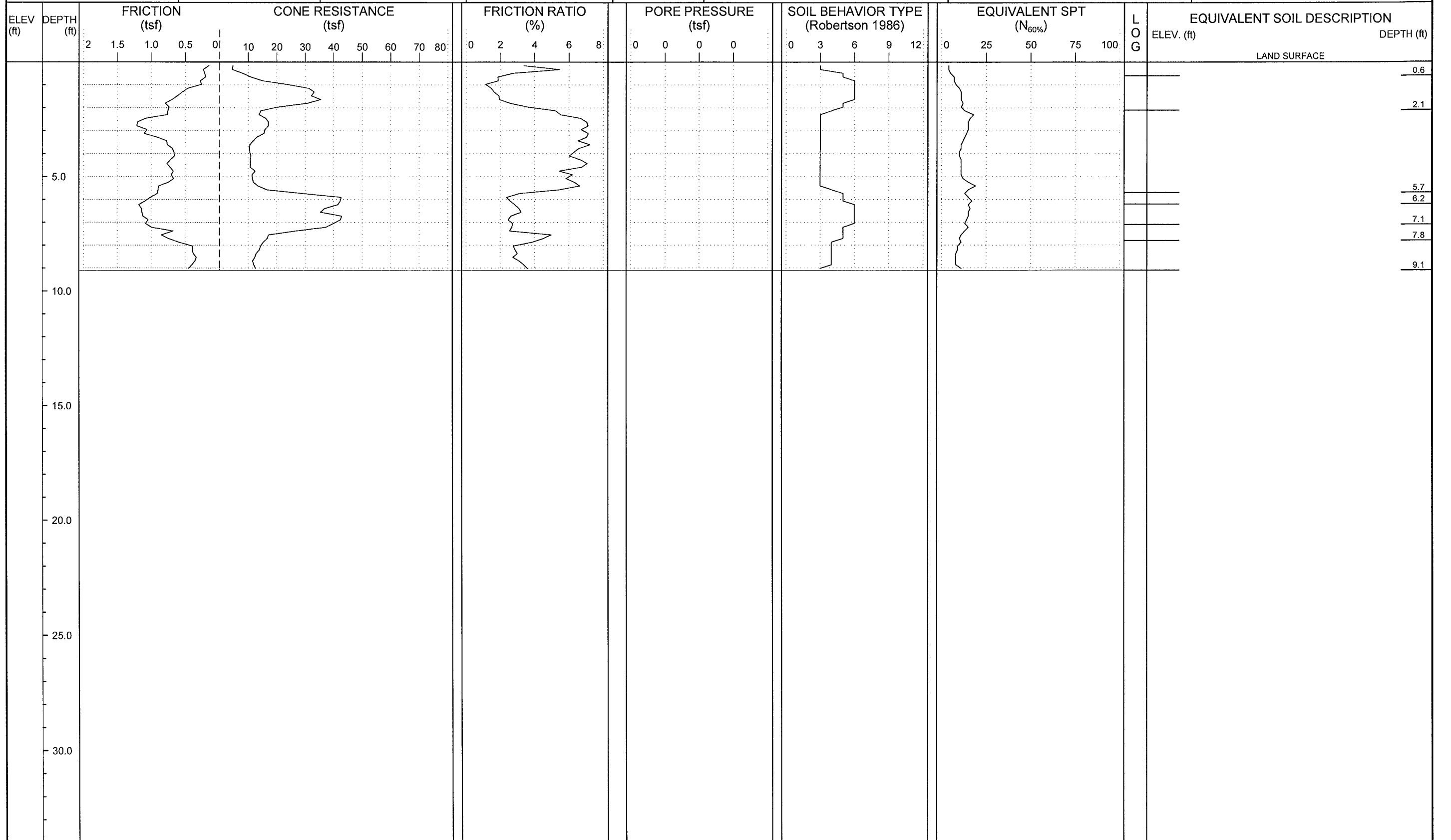


PROJECT NO.: 34441.1.1	ID.: R-2514D	COUNTY: Jones/Craven	GEOLOGIST: Steven Hudson	DRILL MACHINE: Hogentogler Track	MAX. DOWN PRESSURE: 10,000
SITE DESCRIPTION: US 17 from South of NC 58 to the New Bern Bypass				GROUND WTR (ft): 0 HR. N/A	DRILL METHOD: Direct Push
BORING NO.: L-40500	STATION: 405+00	OFFSET: 0ft CL	ALIGNMENT: -L-	ROD TYPE: Pre-Strung	CONE TYPE: Piezo
COLLAR ELEV.: N/A	TOTAL DEPTH: 9.3 ft	NORTHING: 467,626	EASTING: 2,530,818	24 HR. FIAD	CONE ID: DSA1123
				START DATE: 12/14/11	DRILLER: Cory Robinson
				COMP. DATE: 12/14/11	TECHNICIAN: M.A.D.
				SURFACE WATER DEPTH: N/A	



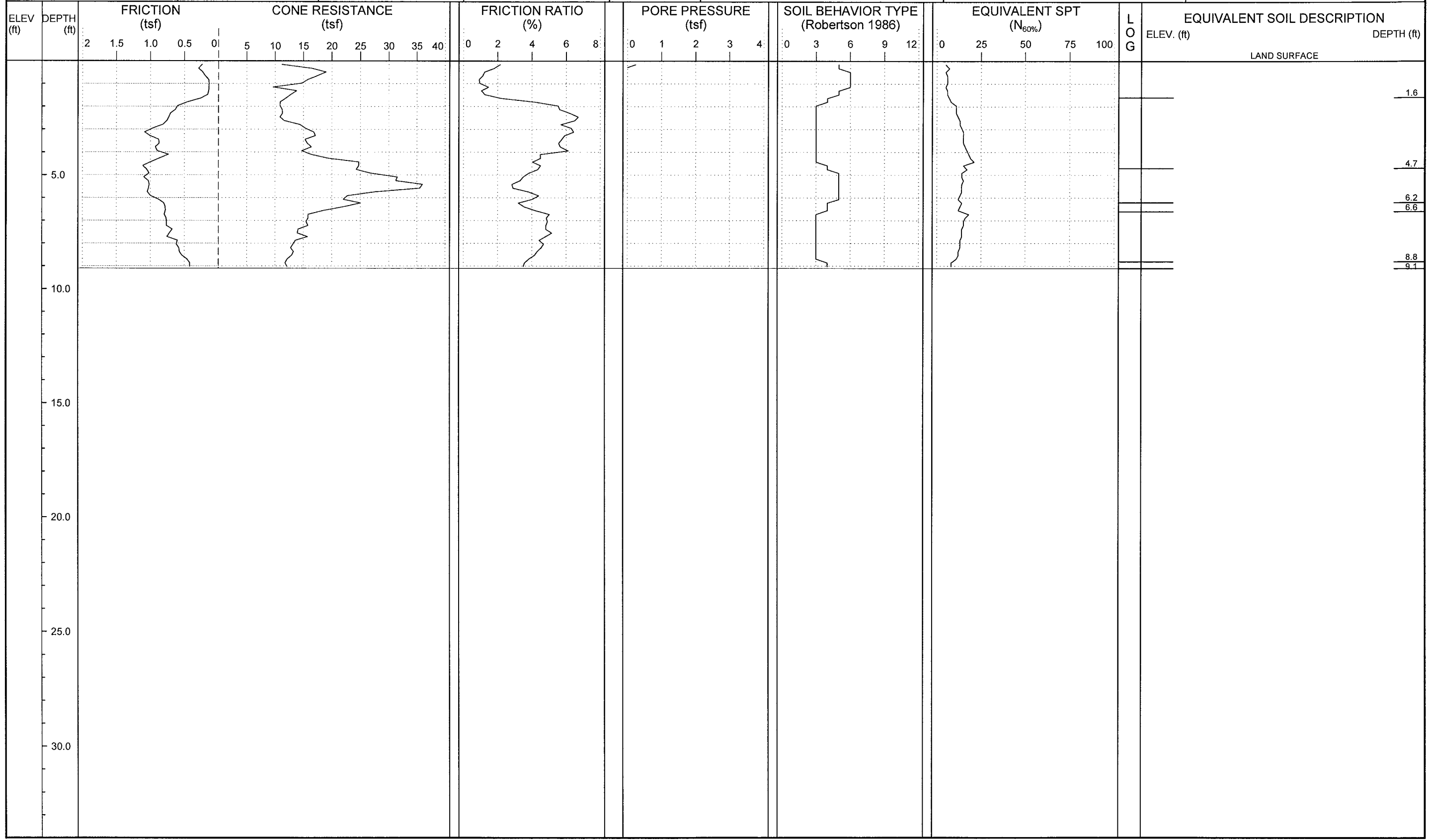


PROJECT NO.: 34441.1.1	ID.: R-2514D	COUNTY: Jones/Craven	GEOLOGIST: Steven Hudson	DRILL MACHINE: Hogentogler Track	MAX. DOWN PRESSURE: 10,000
SITE DESCRIPTION: US 17 from South of NC 58 to the New Bern Bypass			GROUND WTR (ft): 0 HR. N/A	DRILL METHOD: Direct Push	CONE TYPE: Piezo
BORING NO.: L-40900	STATION: 409+00	OFFSET: 0ft CL	ALIGNMENT: -L-	ROD TYPE: Pre-Strung	CONE ID: DSA1123
COLLAR ELEV.: N/A	TOTAL DEPTH: 9.1 ft	NORTHING: 468,023	EASTING: 2,530,865	START DATE: 12/14/11	COMP. DATE: 12/14/11
					DRILLER: Cory Robinson
					TECHNICIAN: M.A.D.
					SURFACE WATER DEPTH: N/A

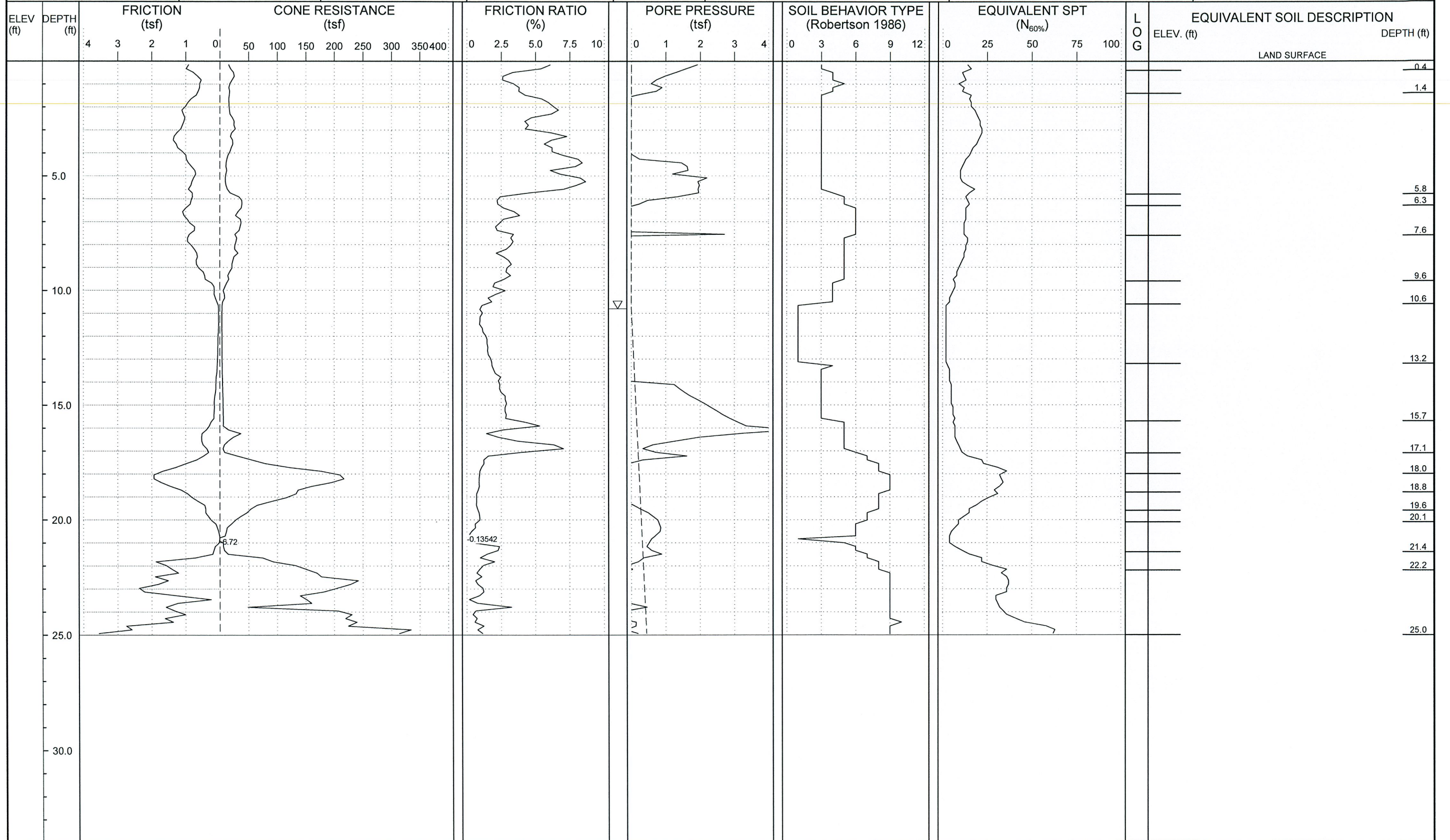




PROJECT NO.: <b>34441.1.1</b>	ID.: <b>R-2514D</b>	COUNTY: <b>Jones/Craven</b>	GEOLOGIST: <b>Steven Hudson</b>	DRILL MACHINE: <b>Hogentogler Track</b>	MAX. DOWN PRESSURE: <b>10,000</b>		
SITE DESCRIPTION: <b>US 17 from South of NC 58 to the New Bern Bypass</b>			GROUND WTR (ft)	DRILL METHOD: <b>Direct Push</b>	CONE TYPE: <b>Piezo</b>	DRILLER: <b>Cory Robinson</b>	
BORING NO.: <b>L-41100</b>	STATION: <b>411+00</b>	OFFSET: <b>0ft CL</b>	ALIGNMENT: <b>-L-</b>	0 HR. <b>N/A</b>	ROD TYPE: <b>Pre-Strung</b>	CONE ID: <b>DSA1123</b>	TECHNICIAN: <b>M.A.D.</b>
COLLAR ELEV.: <b>N/A</b>	TOTAL DEPTH: <b>9.1 ft</b>	NORTHING: <b>468,222</b>	EASTING: <b>2,530,889</b>	24 HR. <b>FIAD</b>	START DATE: <b>12/14/11</b>	COMP. DATE: <b>12/14/11</b>	SURFACE WATER DEPTH: <b>N/A</b>



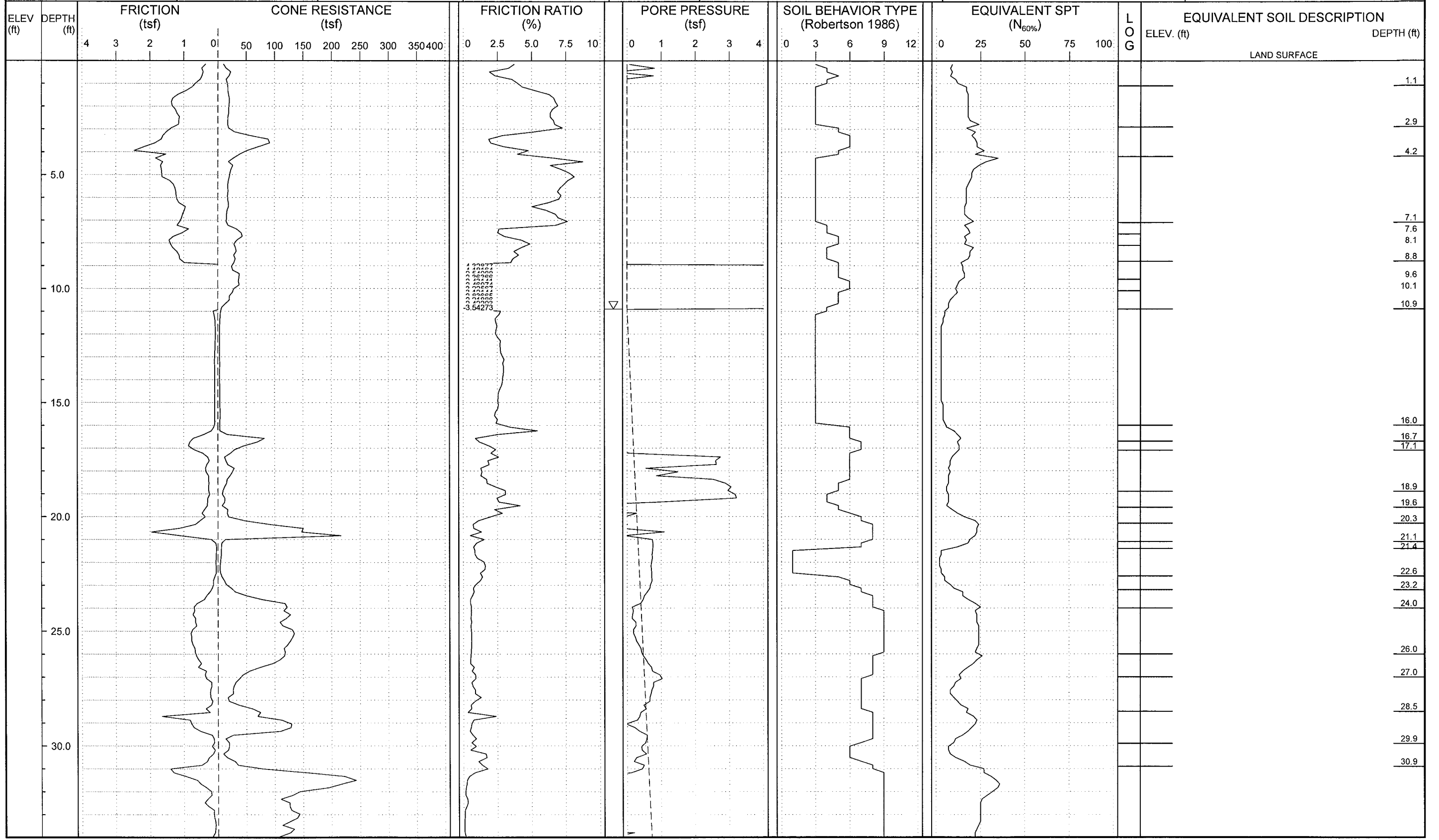
PROJECT NO.: 34441.1.1	ID.: R-2514D	COUNTY: Jones/Craven	GEOLOGIST: Steven Hudson	DRILL MACHINE: Hogentogler Track	MAX. DOWN PRESSURE: 10,000
SITE DESCRIPTION: US 17 from South of NC 58 to the New Bern Bypass				GROUND WTR (ft): 0 HR. 10.8	DRILL METHOD: Direct Push
BORING NO.: L-41800	STATION: 418+00	OFFSET: 0ft CL	ALIGNMENT: -L-	ROD TYPE: Pre-Strung	CONE TYPE: Piezo
COLLAR ELEV.: N/A	TOTAL DEPTH: 25.0 ft	NORTHING: 468,917	EASTING: 2,530,972	START DATE: 12/14/11	CONE ID: DSA1123
				24 HR. FIAD	DRILLER: Cory Robinson
					TECHNICIAN: M.A.D.
					COMP. DATE: 12/14/11
					SURFACE WATER DEPTH: N/A







PROJECT NO.: 34441.1.1	ID.: R-2514D	COUNTY: Jones/Craven	GEOLOGIST: Steven Hudson	DRILL MACHINE: Hogentogler Track	MAX. DOWN PRESSURE: 10,000
SITE DESCRIPTION: US 17 from South of NC 58 to the New Bern Bypass			GROUND WTR (ft): 0 HR. 10.9	DRILL METHOD: Direct Push	CONE TYPE: Piezo
BORING NO.: L-42750	STATION: 427+00	OFFSET: 0ft CL	ALIGNMENT: -L-	ROD TYPE: Pre-Strung	DRILLER: Cory Robinson
COLLAR ELEV.: N/A	TOTAL DEPTH: 35.7 ft	NORTHING: 469,860	EASTING: 2,531,085	START DATE: 12/14/11	TECHNICIAN: M.A.D.
			24 HR. FIAD	START DATE: 12/14/11	COMP. DATE: 12/14/11
					SURFACE WATER DEPTH: N/A



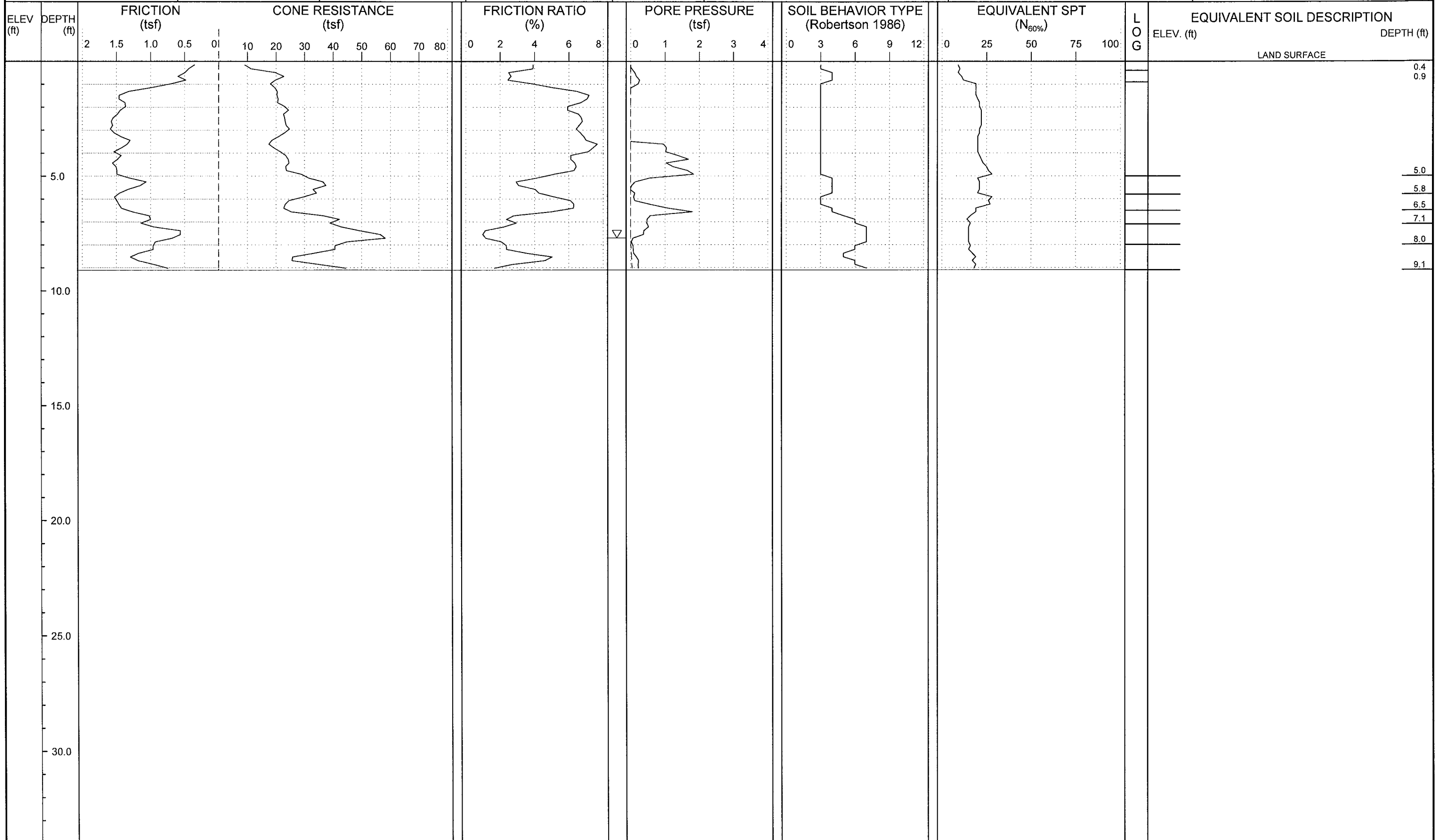




**NCDOT GEOTECHNICAL ENGINEERING UNIT**

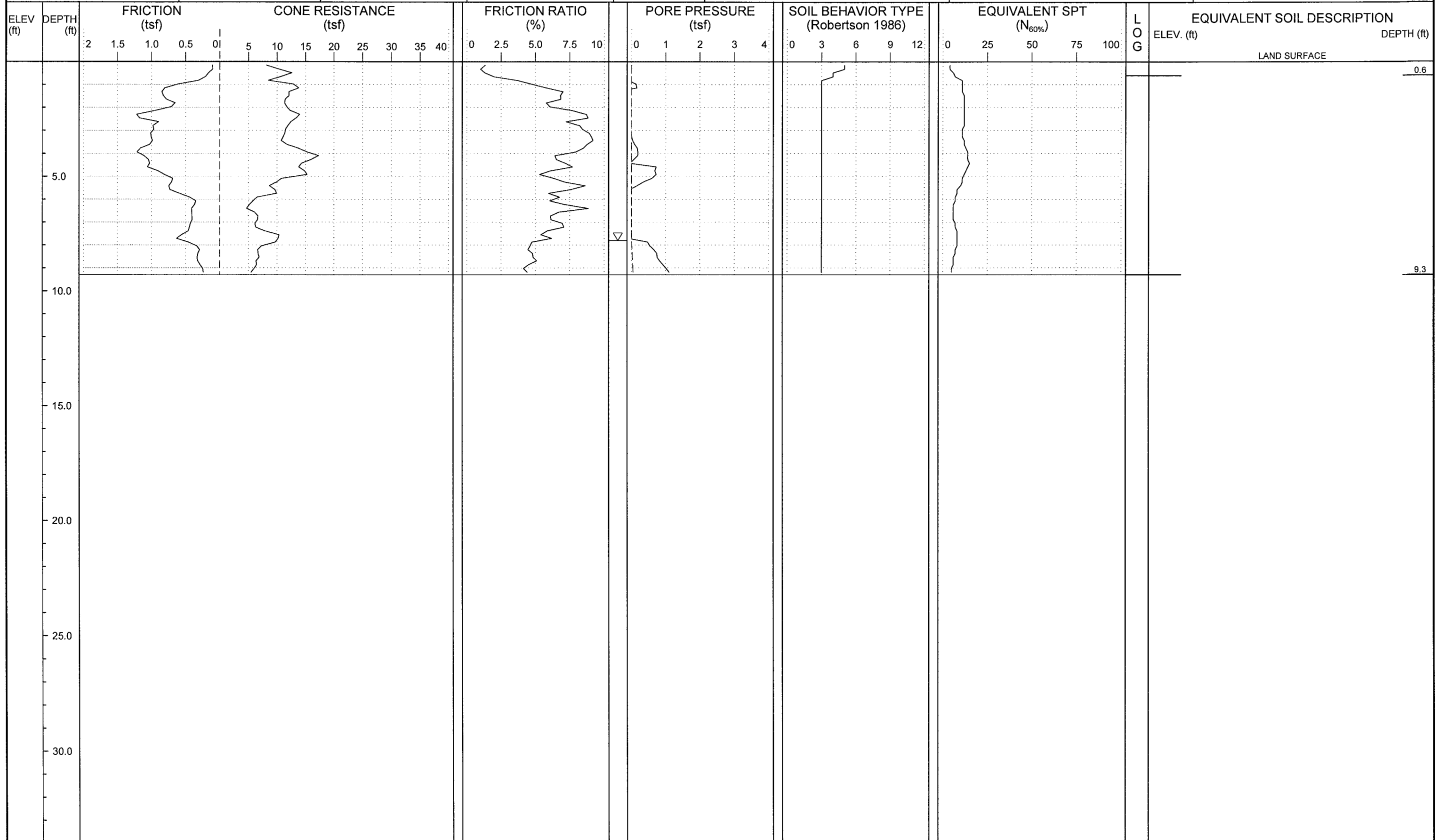
<b>ENGLISH</b>	SHEET NO.: 31
	PROJ. NO.: 34441.1.1
	TIP NO.: R-2514D
	COUNTY: Jones/Craven

PROJECT NO.: 34441.1.1	ID: R-2514D	COUNTY: Jones/Craven	GEOLOGIST: Steven Hudson	DRILL MACHINE: Hogentogler Track	MAX. DOWN PRESSURE: 10,000
SITE DESCRIPTION: US 17 from South of NC 58 to the New Bern Bypass			GROUND WTR (ft): 0 HR. 7.7	DRILL METHOD: Direct Push	CONE TYPE: Piezo
BORING NO.: L-44700	STATION: 447+00	OFFSET: 0ft CL	ALIGNMENT: -L-	ROD TYPE: Pre-Strung	CONE ID: DSA1123
COLLAR ELEV.: N/A	TOTAL DEPTH: 9.1 ft	NORTHING: 471,795	EASTING: 2,531,326	START DATE: 12/14/11	COMP. DATE: 12/14/11
					DRILLER: Cory Robinson
					TECHNICIAN: M.A.D.
					SURFACE WATER DEPTH: N/A





PROJECT NO.: 34441.1.1	ID.: R-2514D	COUNTY: Jones/Craven	GEOLOGIST: Steven Hudson	DRILL MACHINE: Hogentogler Track	MAX. DOWN PRESSURE: 10,000		
SITE DESCRIPTION: US 17 from South of NC 58 to the New Bern Bypass				GROUND WTR (ft): 0 HR. 7.8	DRILL METHOD: Direct Push	CONE TYPE: Piezo	DRILLER: Cory Robinson
BORING NO.: L-44900	STATION: 449+00	OFFSET: 0ft CL	ALIGNMENT: -L-	24 HR. FIAD	ROD TYPE: Pre-Strung	CONE ID: DSA1123	TECHNICIAN: M.A.D.
COLLAR ELEV.: N/A	TOTAL DEPTH: 9.3 ft	NORTHING: 471,991	EASTING: 2,531,363		START DATE: 12/12/11	COMP. DATE: 12/12/11	SURFACE WATER DEPTH: N/A







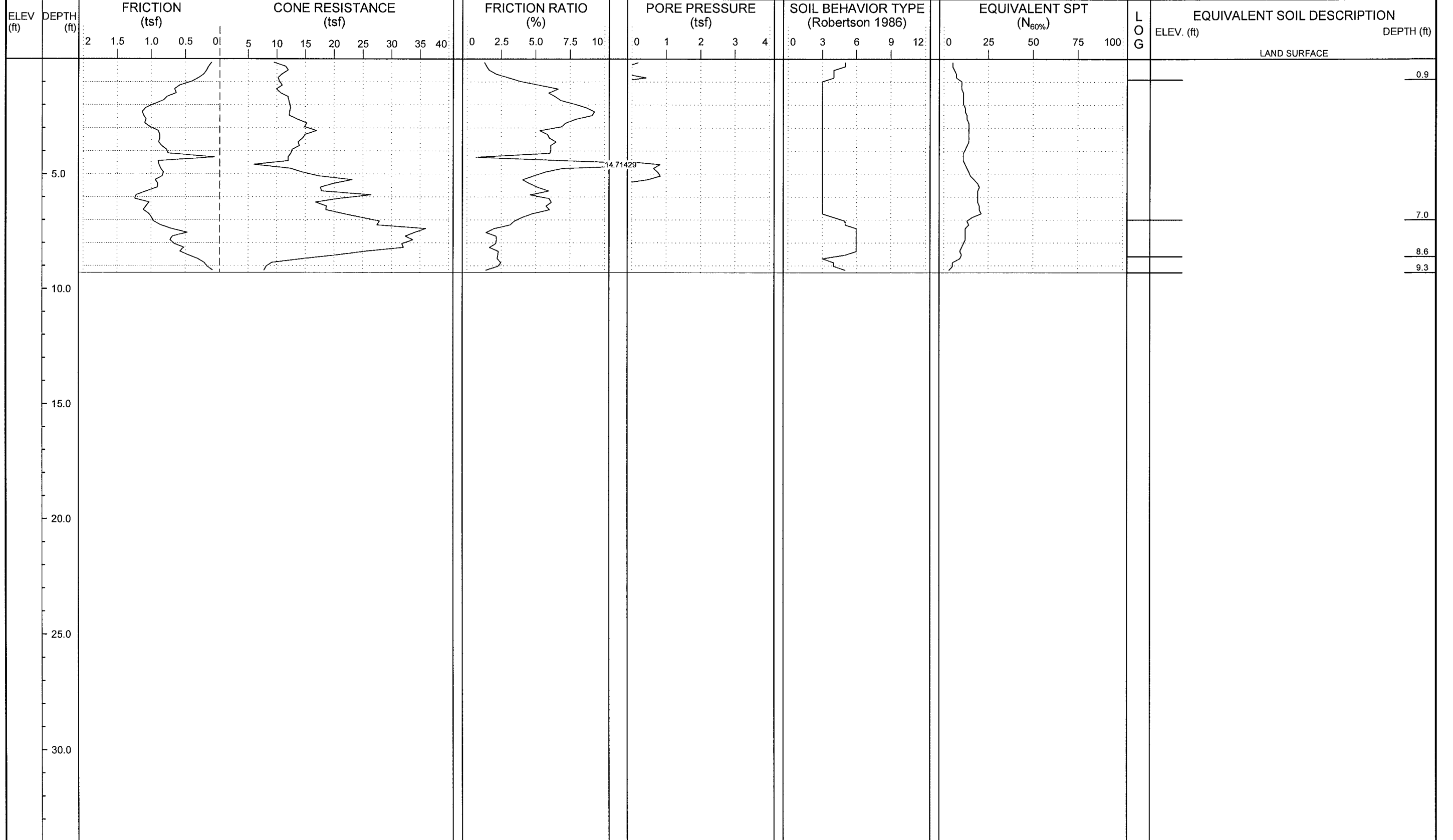








PROJECT NO.: 34441.1.1	ID.: R-2514D	COUNTY: Jones/Craven	GEOLOGIST: Steven Hudson	DRILL MACHINE: Hogentogler Track	MAX. DOWN PRESSURE: 10,000
SITE DESCRIPTION: US 17 from South of NC 58 to the New Bern Bypass				GROUND WTR (ft): 0 HR. N/A	DRILL METHOD: Direct Push
BORING NO.: L-48200	STATION: 482+00	OFFSET: 0ft CL	ALIGNMENT: -L-	ROD TYPE: Pre-Strung	CONE TYPE: Piezo
COLLAR ELEV.: N/A	TOTAL DEPTH: 9.3 ft	NORTHING: 475,010	EASTING: 2,532,663	24 HR. FIAD	DRILLER: Cory Robinson
				START DATE: 12/12/11	CONE ID: DSA1123
				COMP. DATE: 12/12/11	TECHNICIAN: M.A.D.
				SURFACE WATER DEPTH: N/A	



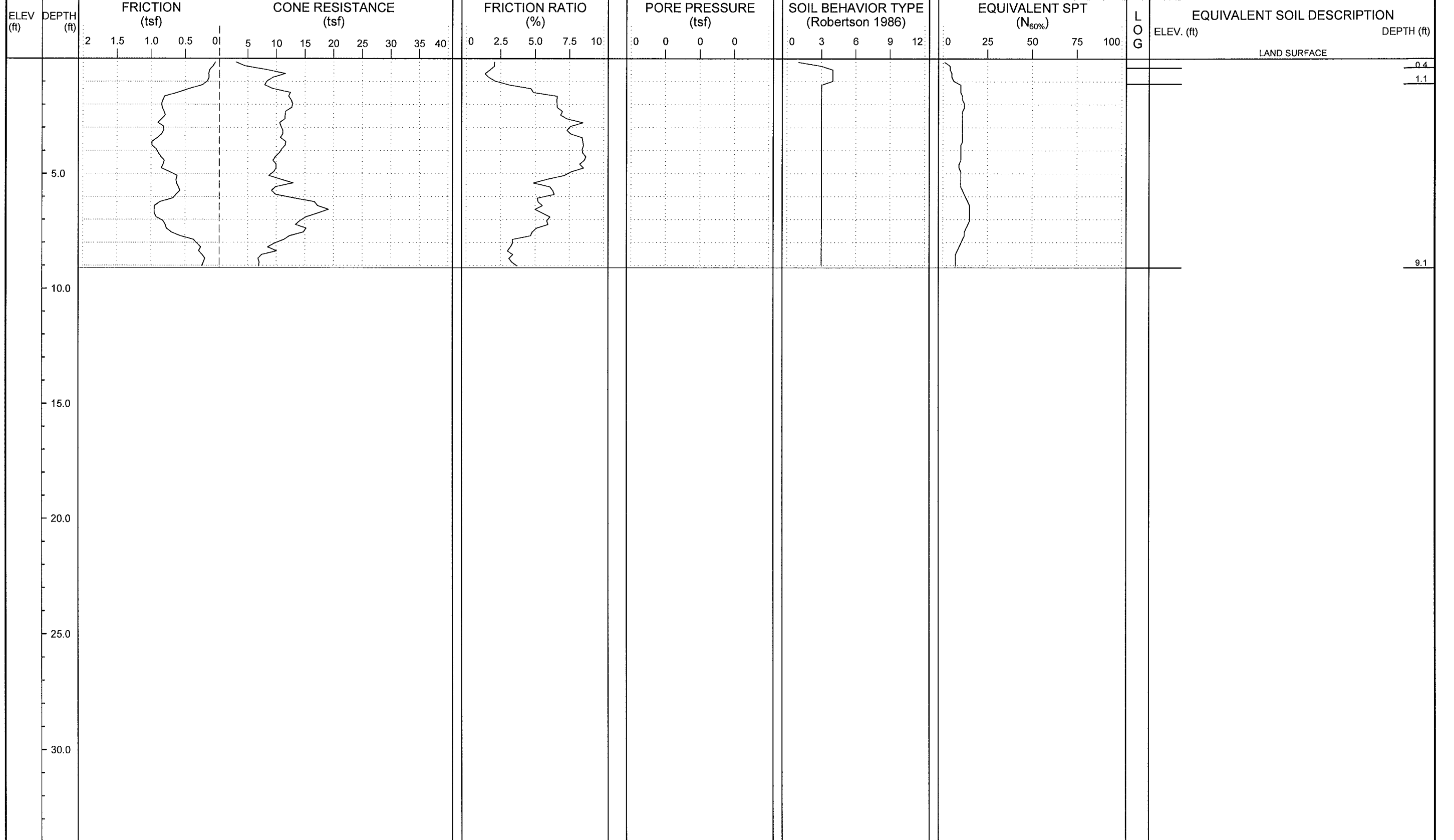


# NCDOT GEOTECHNICAL ENGINEERING UNIT



SHEET NO.:	38
PROJ. NO.:	34441.1.1
TIP NO.:	R-2514D
COUNTY:	Jones/Craven

PROJECT NO.: 34441.1.1	ID.: R-2514D	COUNTY: Jones/Craven	GEOLOGIST: Steven Hudson	DRILL MACHINE: Hogentogler Track	MAX. DOWN PRESSURE: 10,000		
SITE DESCRIPTION: US 17 from South of NC 58 to the New Bern Bypass				GROUND WTR (ft): 0 HR. N/A	DRILL METHOD: Direct Push	CONE TYPE: Piezo	DRILLER: Cory Robinson
BORING NO.: L-48400	STATION: 484+00	OFFSET: 0ft CL	ALIGNMENT: -L-	24 HR. FIAD	ROD TYPE: Pre-Strung	CONE ID: DSA1123	TECHNICIAN: M.A.D.
COLLAR ELEV.: N/A	TOTAL DEPTH: 9.1 ft	NORTHING: 475,187	EASTING: 2,532,756		START DATE: 12/09/11	COMP. DATE: 12/09/11	SURFACE WATER DEPTH: N/A

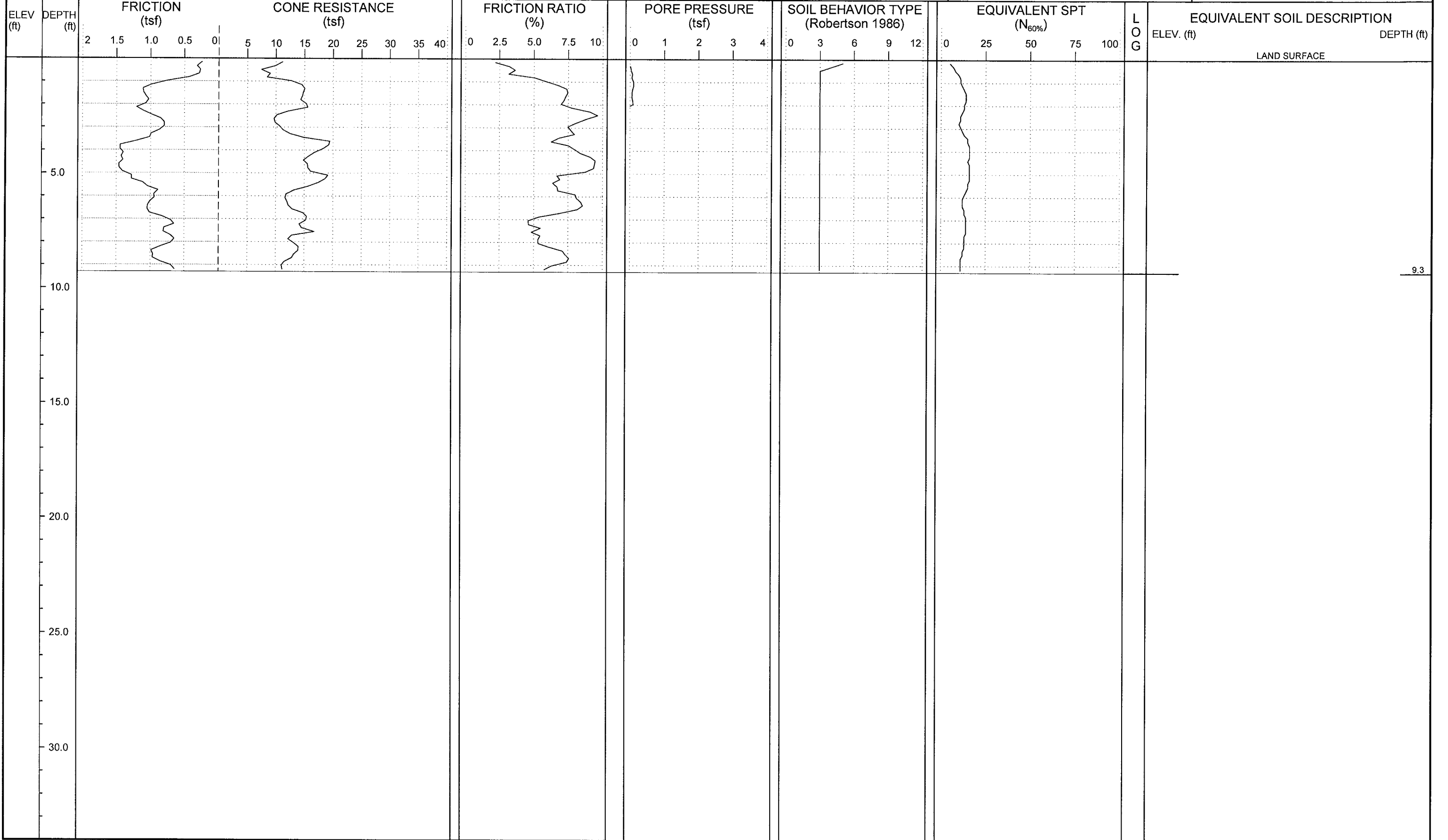








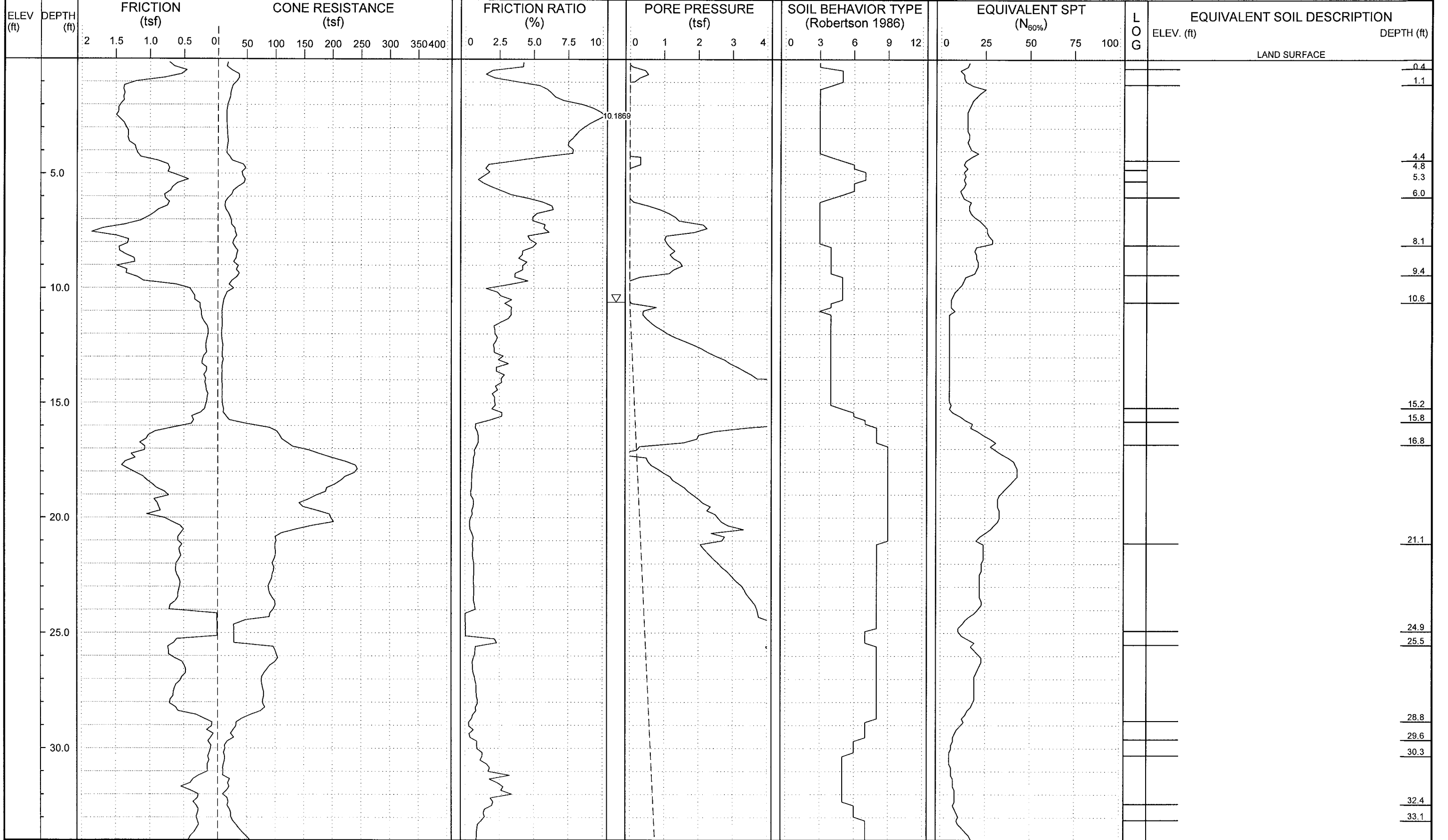
PROJECT NO.: 34441.1.1	ID.: R-2514D	COUNTY: Jones/Craven	GEOLOGIST: Steven Hudson	DRILL MACHINE: Hogentogler Track	MAX. DOWN PRESSURE: 10,000		
SITE DESCRIPTION: US 17 from South of NC 58 to the New Bern Bypass				GROUND WTR (ft)	DRILL METHOD: Direct Push	CONE TYPE: Piezo	DRILLER: Cory Robinson
BORING NO.: L-51000	STATION: 510+00	OFFSET: 0ft CL	ALIGNMENT: -L-	0 HR. N/A	ROD TYPE: Pre-Strung	CONE ID: DSA1123	TECHNICIAN: M.A.D.
COLLAR ELEV.: N/A	TOTAL DEPTH: 9.3 ft	NORTHING: 477,487	EASTING: 2,533,968	24 HR. FIAD	START DATE: 12/09/11	COMP. DATE: 12/09/11	SURFACE WATER DEPTH: N/A







PROJECT NO.: 34441.1.1	ID.: R-2514D	COUNTY: Jones/Craven	GEOLOGIST: Steven Hudson	DRILL MACHINE: Hogentogler Track	MAX. DOWN PRESSURE: 10,000
SITE DESCRIPTION: US 17 from South of NC 58 to the New Bern Bypass				GROUND WTR (ft): 0 HR. 10.6	DRILL METHOD: Direct Push
BORING NO.: L-53000	STATION: 530+00	OFFSET: 0ft CL	ALIGNMENT: -L-	ROD TYPE: Pre-Strung	CONE TYPE: Piezo
COLLAR ELEV.: N/A	TOTAL DEPTH: 36.2 ft	NORTHING: 479,256	EASTING: 2,534,901	24 HR. FIAD	DRILLER: Cory Robinson
				START DATE: 12/12/11	CONE ID: DSA1123
				COMP. DATE: 12/12/11	
				TECHNICIAN: M.A.D.	
				SURFACE WATER DEPTH: N/A	



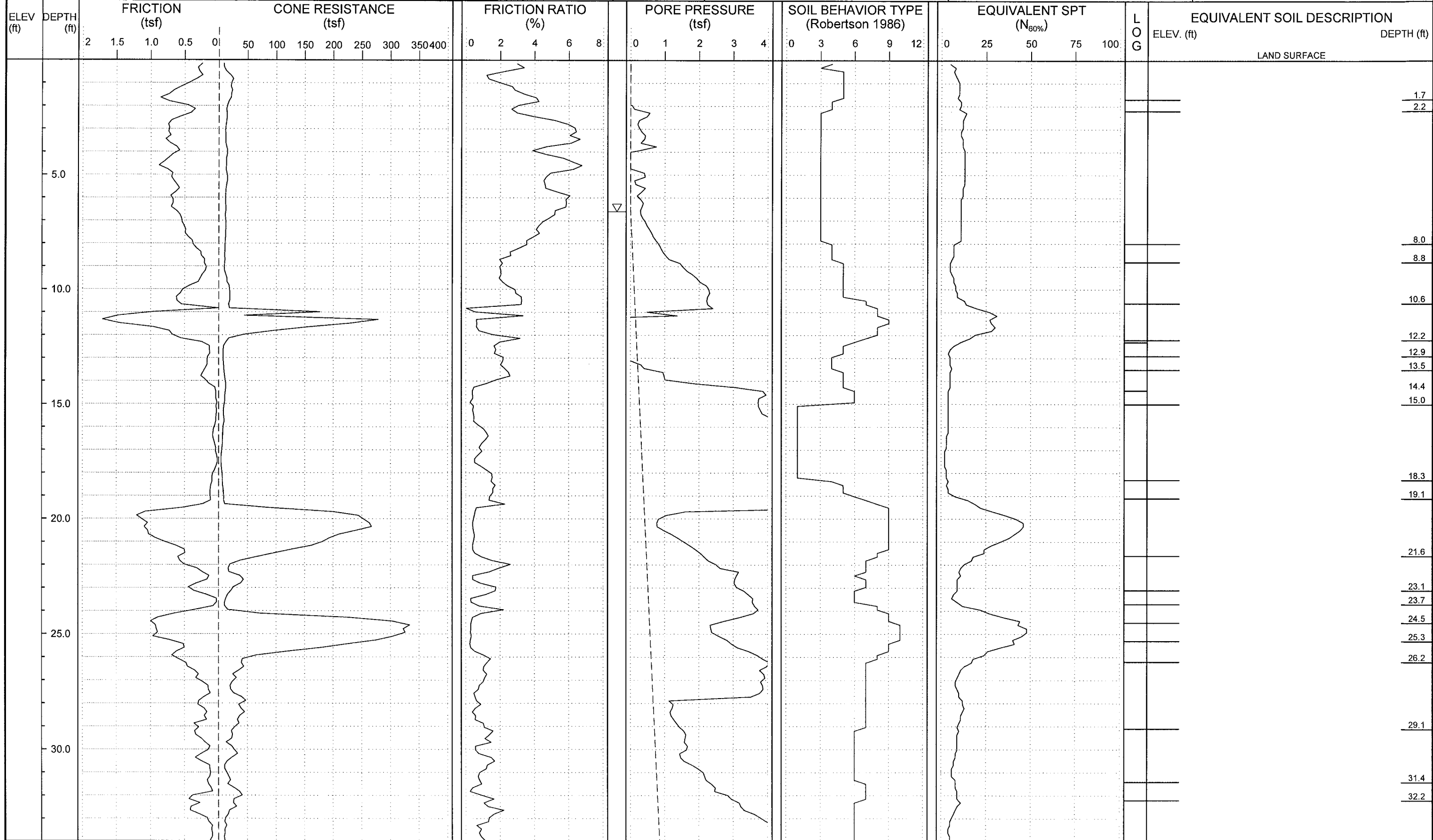








PROJECT NO.: 34441.1.1	ID.: R-2514D	COUNTY: Jones/Craven	GEOLOGIST: Steven Hudson	DRILL MACHINE: Hogentogler Track	MAX. DOWN PRESSURE: 10,000		
SITE DESCRIPTION: US 17 from South of NC 58 to the New Bern Bypass				GROUND WTR (ft): 0 HR. 6.6	DRILL METHOD: Direct Push	CONE TYPE: Piezo	DRILLER: Cory Robinson
BORING NO.: L-56000	STATION: 560+00	OFFSET: 0ft CL	ALIGNMENT: -L-	24 HR. FIAD	ROD TYPE: Pre-Strung	CONE ID: DSA1123	TECHNICIAN: M.A.D.
COLLAR ELEV.: N/A	TOTAL DEPTH: 36.2 ft	NORTHING: 481,852	EASTING: 2,536,397	START DATE: 12/08/11	COMP. DATE: 12/08/11	SURFACE WATER DEPTH: N/A	



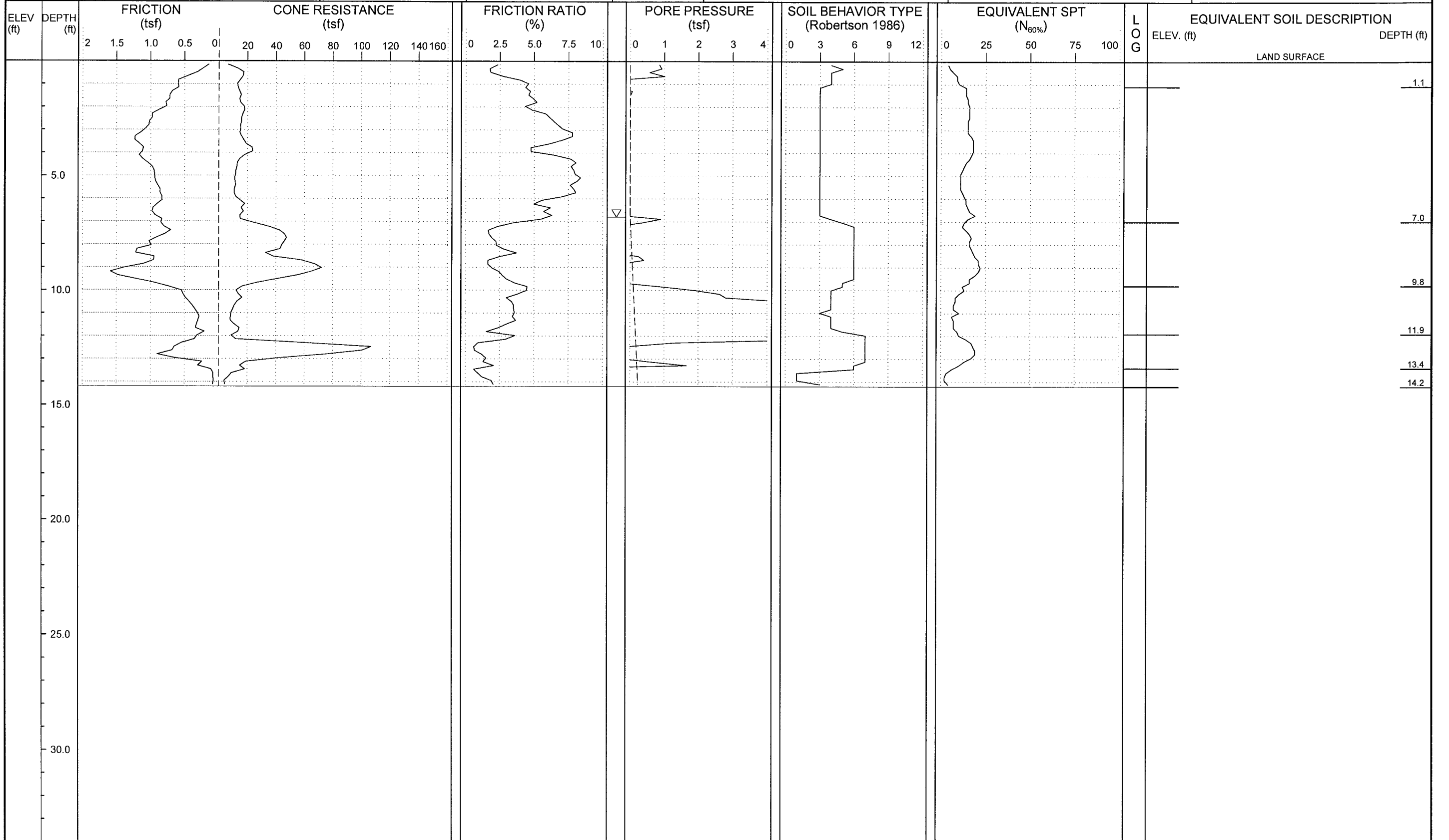


PROJECT NO.: 34441.1.1	ID.: R-2514D	COUNTY: Jones/Craven	GEOLOGIST: Steven Hudson	DRILL MACHINE: Hogentogler Track	MAX. DOWN PRESSURE: 10,000
SITE DESCRIPTION: US 17 from South of NC 58 to the New Bern Bypass			GROUND WTR (ft): 0 HR. 6.6	DRILL METHOD: Direct Push	CONE TYPE: Piezo
BORING NO.: L-56000	STATION: 560+00	OFFSET: 0ft CL	ALIGNMENT: -L-	ROD TYPE: Pre-Strung	CONE ID: DSA1123
COLLAR ELEV.: N/A	TOTAL DEPTH: 36.2 ft	NORTHING: 481,852	EASTING: 2,536,397	START DATE: 12/08/11	COMP. DATE: 12/08/11
					DRILLER: Cory Robinson
					TECHNICIAN: M.A.D.
					SURFACE WATER DEPTH: N/A

ELEV (ft)	DEPTH (ft)	FRICTION (tsf)					CONE RESISTANCE (tsf)					FRICTION RATIO (%)					PORE PRESSURE (tsf)					SOIL BEHAVIOR TYPE (Robertson 1986)					EQUIVALENT SPT (N <sub>60%</sub> )					LOG	EQUIVALENT SOIL DESCRIPTION		
		2	1.5	1.0	0.5	0	50	100	150	200	250	300	350	400	0	2	4	6	8	0	1	2	3	4	0	3	6	9	12	0	25		50	75	100
	35.0																																		34.9
																																			35.4
																																			36.2

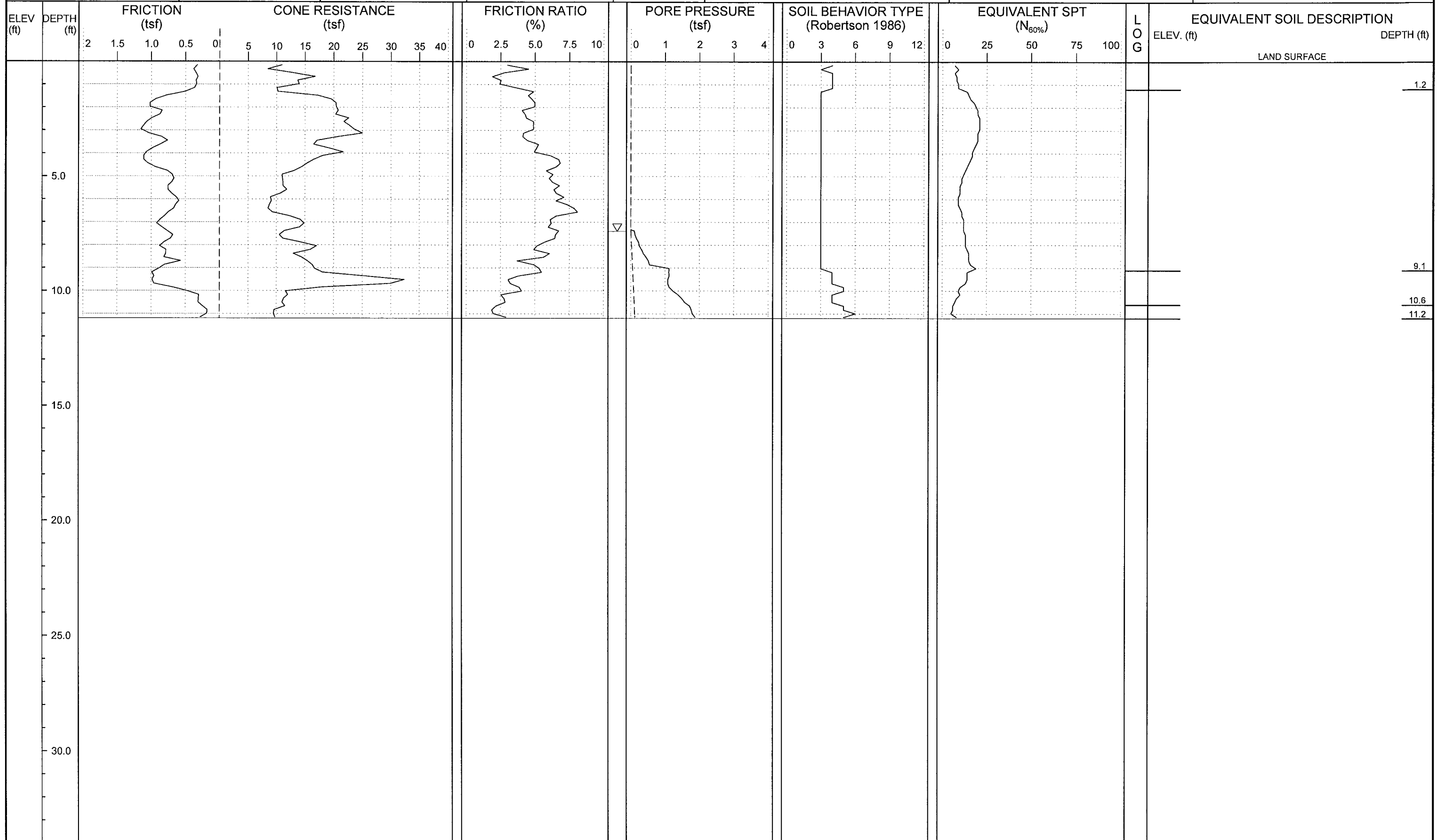


PROJECT NO.: 34441.1.1	ID.: R-2514D	COUNTY: Jones/Craven	GEOLOGIST: Steven Hudson	DRILL MACHINE: Hogentogler Track	MAX. DOWN PRESSURE: 10,000
SITE DESCRIPTION: US 17 from South of NC 58 to the New Bern Bypass				GROUND WTR (ft): 0 HR. 6.8	DRILL METHOD: Direct Push
BORING NO.: L-57000	STATION: 570+00	OFFSET: 0ft CL	ALIGNMENT: -L-	ROD TYPE: Pre-Strung	CONE TYPE: Piezo
COLLAR ELEV.: N/A	TOTAL DEPTH: 14.2 ft	NORTHING: 482,628	EASTING: 2,537,027	START DATE: 12/08/11	CONE ID: DSA1123
				DRILLER: Cory Robinson	TECHNICIAN: M.A.D.
				COMP. DATE: 12/08/11	SURFACE WATER DEPTH: N/A



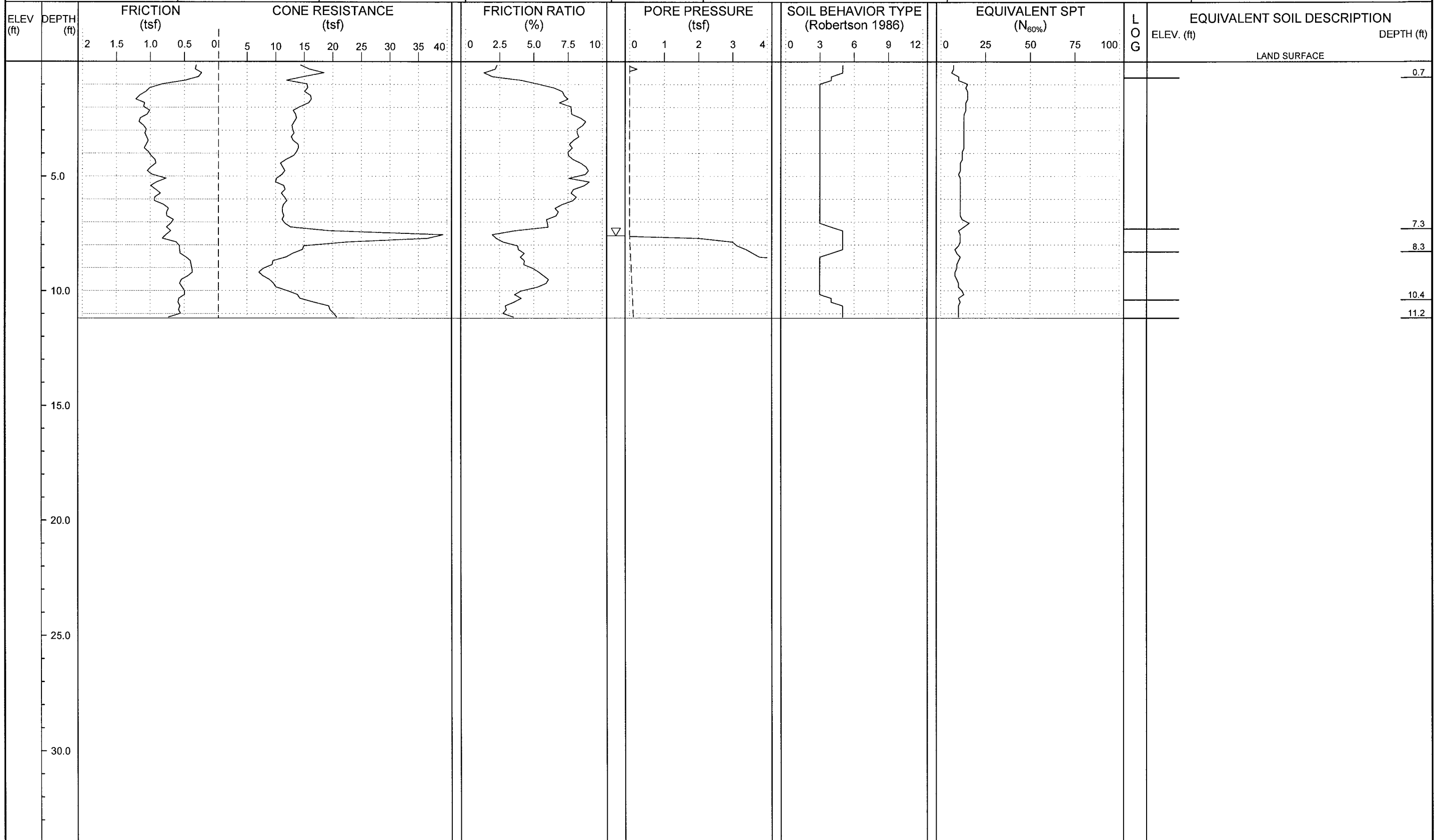


PROJECT NO.: 34441.1.1	ID.: R-2514D	COUNTY: Jones/Craven	GEOLOGIST: Steven Hudson	DRILL MACHINE: Hogentogler Track	MAX. DOWN PRESSURE: 10,000
SITE DESCRIPTION: US 17 from South of NC 58 to the New Bern Bypass				GROUND WTR (ft): 0 HR. 7.4	DRILL METHOD: Direct Push
BORING NO.: L-58000	STATION: 580+00	OFFSET: 0ft CL	ALIGNMENT: -L-	ROD TYPE: Pre-Strung	CONE TYPE: Piezo
COLLAR ELEV.: N/A	TOTAL DEPTH: 11.2 ft	NORTHING: 483,339	EASTING: 2,537,730	START DATE: 12/07/11	CONE ID: DSA1123
				24 HR. FIAD	DRILLER: Cory Robinson
					TECHNICIAN: M.A.D.
					COMP. DATE: 12/07/11
					SURFACE WATER DEPTH: N/A





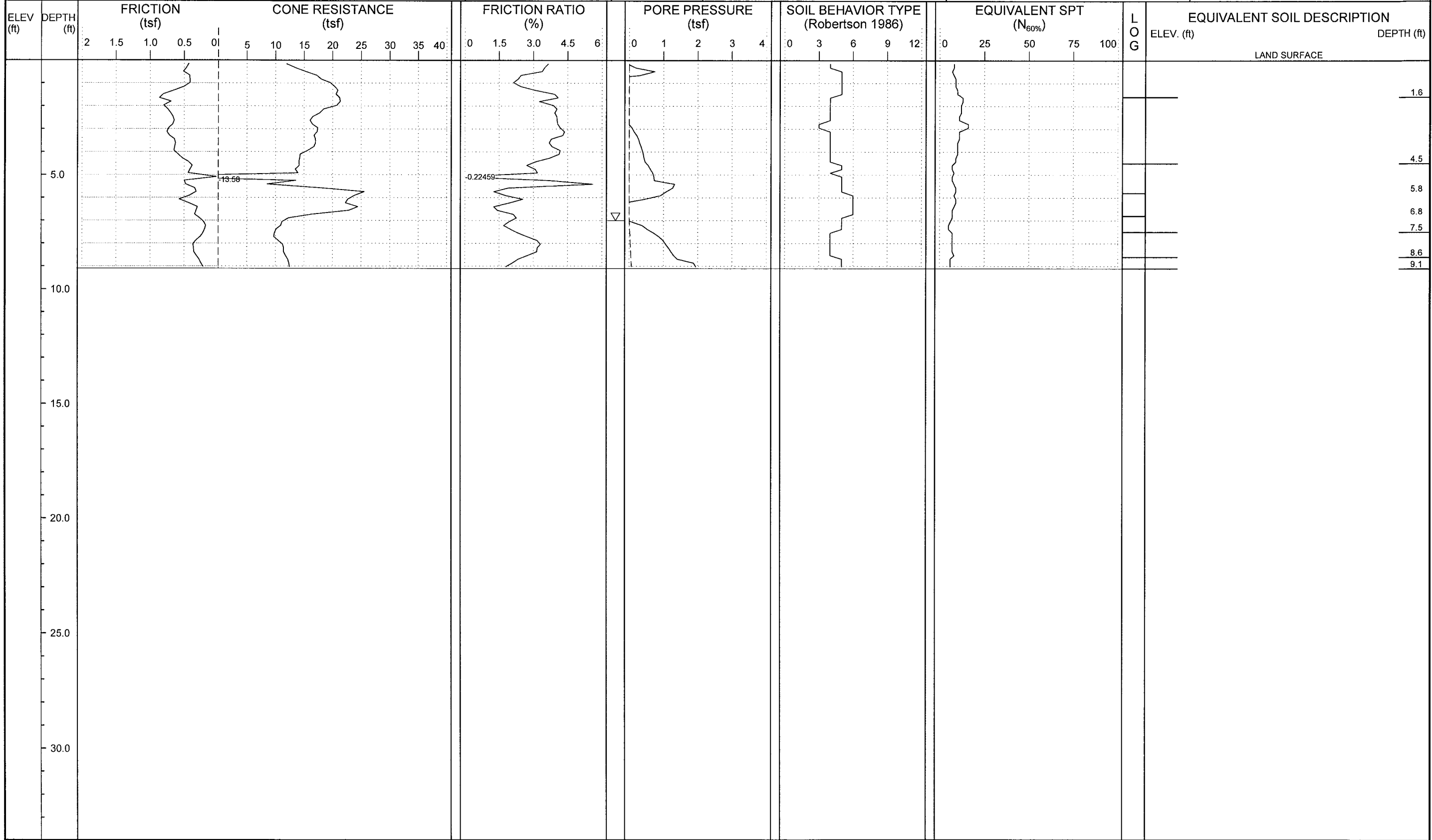
PROJECT NO.: 34441.1.1	ID.: R-2514D	COUNTY: Jones/Craven	GEOLOGIST: Steven Hudson	DRILL MACHINE: Hogentogler Track	MAX. DOWN PRESSURE: 10,000		
SITE DESCRIPTION: US 17 from South of NC 58 to the New Bern Bypass				GROUND WTR (ft): 0 HR. 7.6	DRILL METHOD: Direct Push	CONE TYPE: Piezo	DRILLER: Cory Robinson
BORING NO.: L-59000	STATION: 590+00	OFFSET: 0ft CL	ALIGNMENT: -L-	24 HR. FIAD	ROD TYPE: Pre-Strung	CONE ID: DSA1123	TECHNICIAN: M.A.D.
COLLAR ELEV.: N/A	TOTAL DEPTH: 11.2 ft	NORTHING: 483,979	EASTING: 2,538,497	START DATE: 12/07/11	COMP. DATE: 12/07/11	SURFACE WATER DEPTH: N/A	







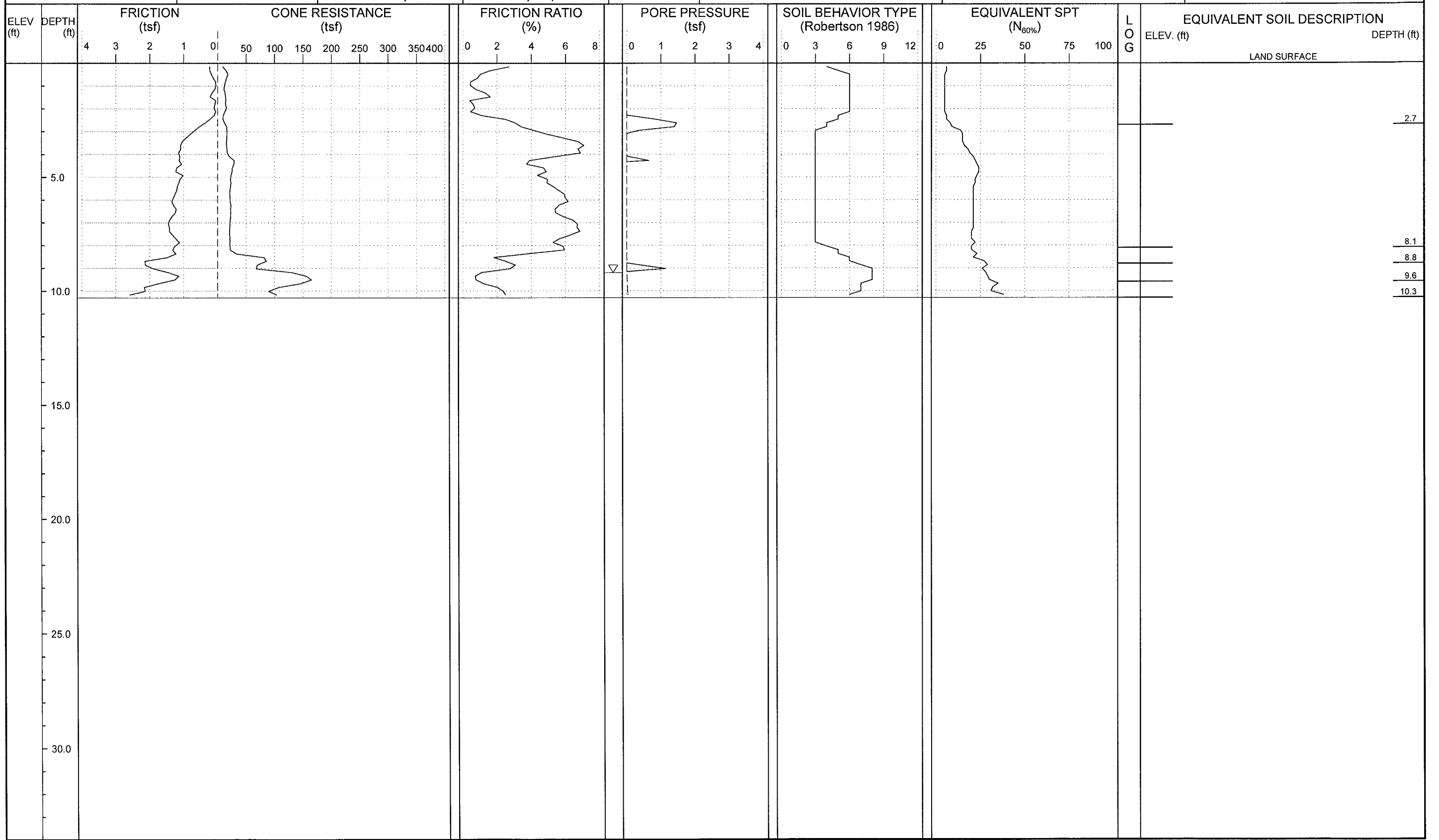
PROJECT NO.: 34441.1.1	ID.: R-2514D	COUNTY: Jones/Craven	GEOLOGIST: Steven Hudson	DRILL MACHINE: Hogentogler Track	MAX. DOWN PRESSURE: 10,000
SITE DESCRIPTION: US 17 from South of NC 58 to the New Bern Bypass			GROUND WTR (ft)	DRILL METHOD: Direct Push	CONE TYPE: Piezo
BORING NO.: L-60000	STATION: 600+00	OFFSET: 0ft CL	ALIGNMENT: -L-	0 HR. 7.0	ROD TYPE: Pre-Strung
COLLAR ELEV.: N/A	TOTAL DEPTH: 9.1 ft	NORTHING: 484,548	EASTING: 2,539,320	24 HR. FIAD	START DATE: 12/07/11
					COMP. DATE: 12/07/11
					DRILLER: Cory Robinson
					TECHNICIAN: M.A.D.
					SURFACE WATER DEPTH: N/A







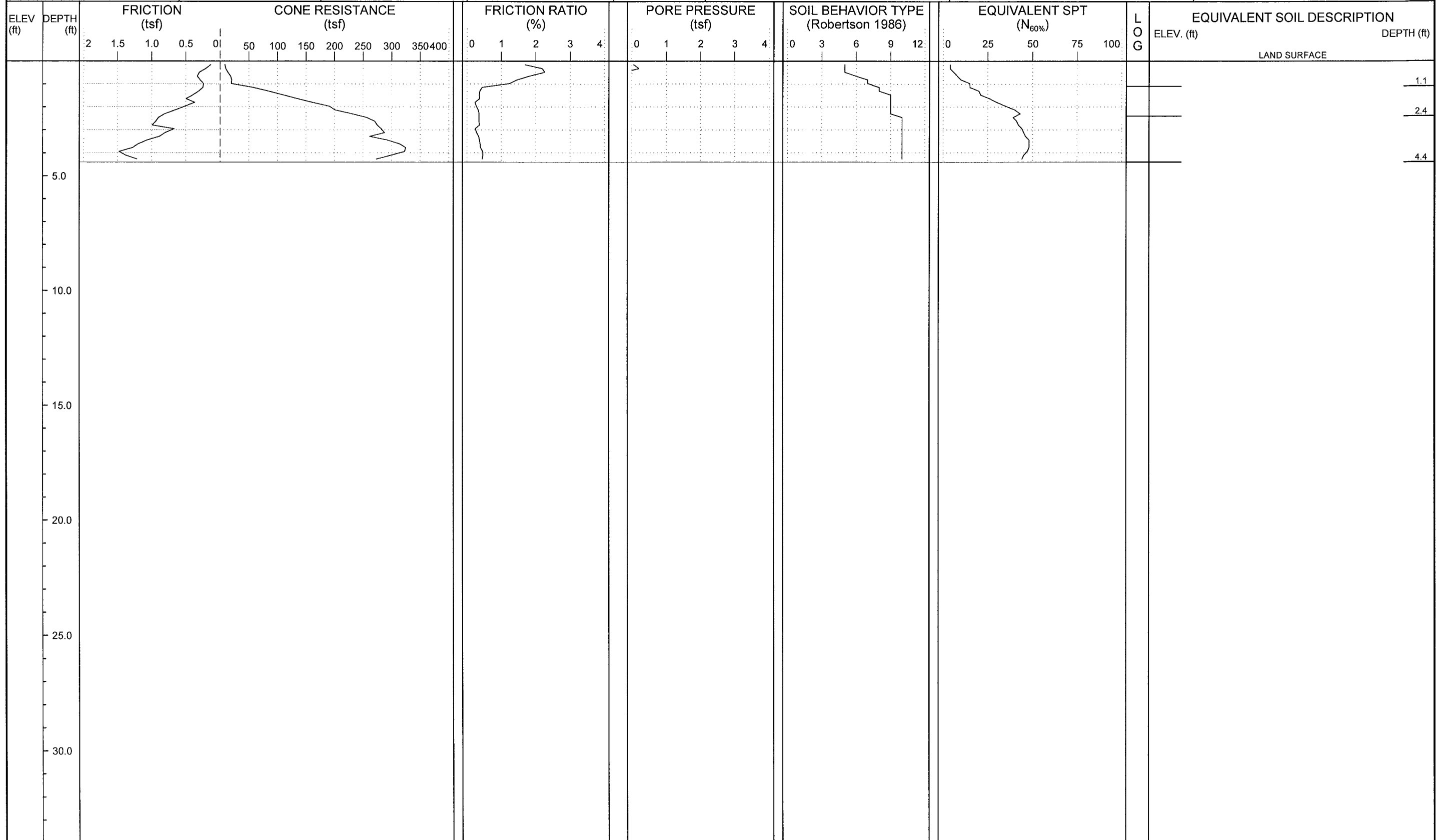
PROJECT NO.: 34441.1.1	ID: R-2514D	COUNTY: Jones/Craven	GEOLOGIST: Steven Hudson	DRILL MACHINE: Hogentogler Track	MAX. DOWN PRESSURE: 10,000
SITE DESCRIPTION: US 17 from South of NC 58 to the New Bern Bypass			GROUND WTR (ft): 0 HR. 9.2	DRILL METHOD: Direct Push	CONE TYPE: Piezo
BORING NO.: L-61500	STATION: 615+00	OFFSET: 0ft CL	ALIGNMENT: -L-	ROD TYPE: Pre-Strung	CONE ID: DSA1123
COLLAR ELEV.: N/A	TOTAL DEPTH: 10.3 ft	NORTHING: 485,374	EASTING: 2,540,572	START DATE: 12/06/11	COMP. DATE: 12/06/11
					DRILLER: Cory Robinson
					TECHNICIAN: M.A.D.
					SURFACE WATER DEPTH: N/A





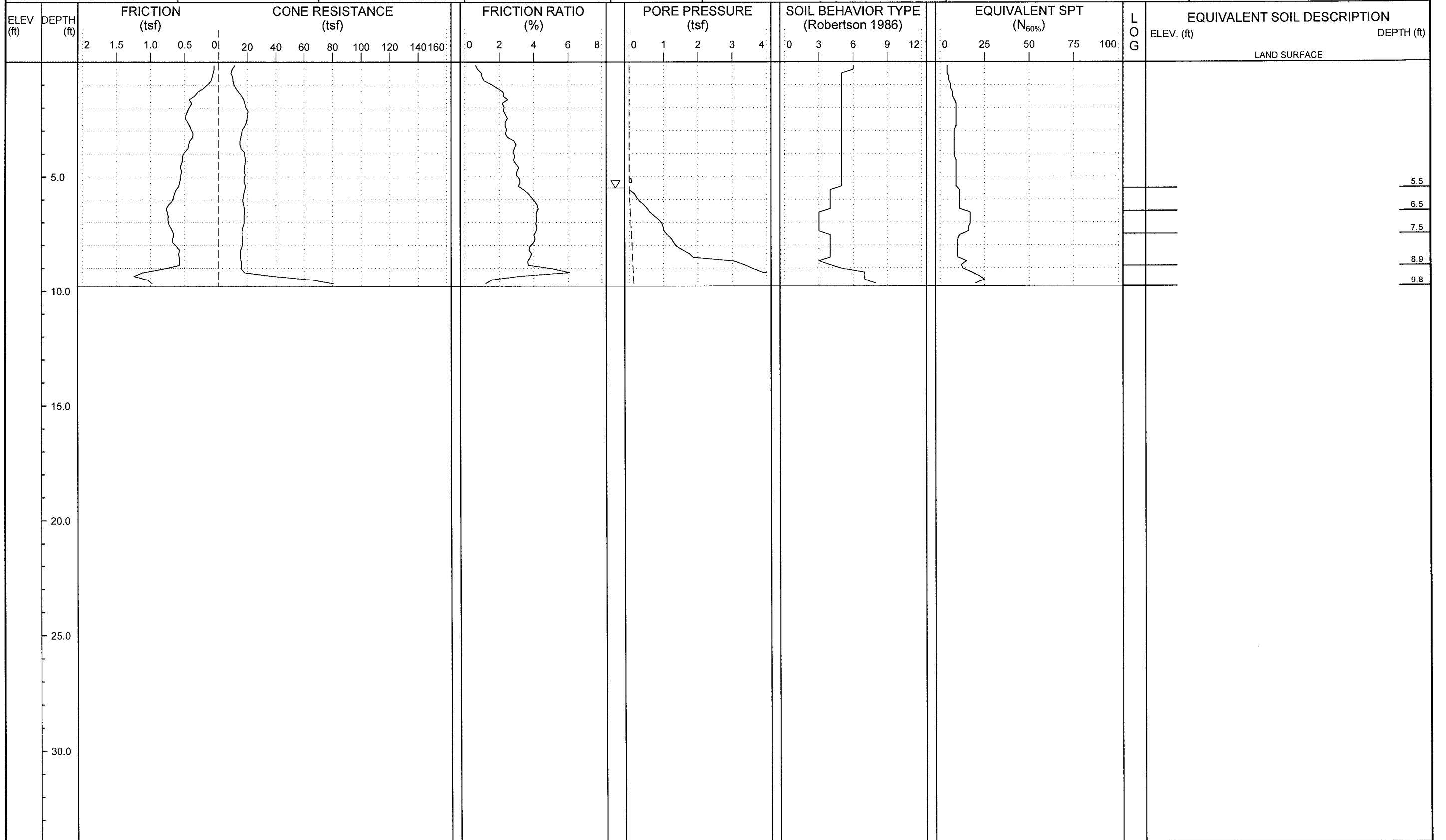


PROJECT NO.: 34441.1.1	ID.: R-2514D	COUNTY: Jones/Craven	GEOLOGIST: Steven Hudson	DRILL MACHINE: Hogentogler Track	MAX. DOWN PRESSURE: 10,000
SITE DESCRIPTION: US 17 from South of NC 58 to the New Bern Bypass			GROUND WTR (ft)	DRILL METHOD: Direct Push	CONE TYPE: Piezo
BORING NO.: L-62100	STATION: 621+00	OFFSET: 0ft CL	ALIGNMENT: -L-	0 HR. N/A	ROD TYPE: Pre-Strung
COLLAR ELEV.: N/A	TOTAL DEPTH: 4.4 ft	NORTHING: 485,705	EASTING: 2,541,072	24 HR. FIAD	START DATE: 12/05/11
				CONC. DATE: 12/05/11	DRILLER: Cory Robinson
					TECHNICIAN: M.A.D.
					SURFACE WATER DEPTH: N/A

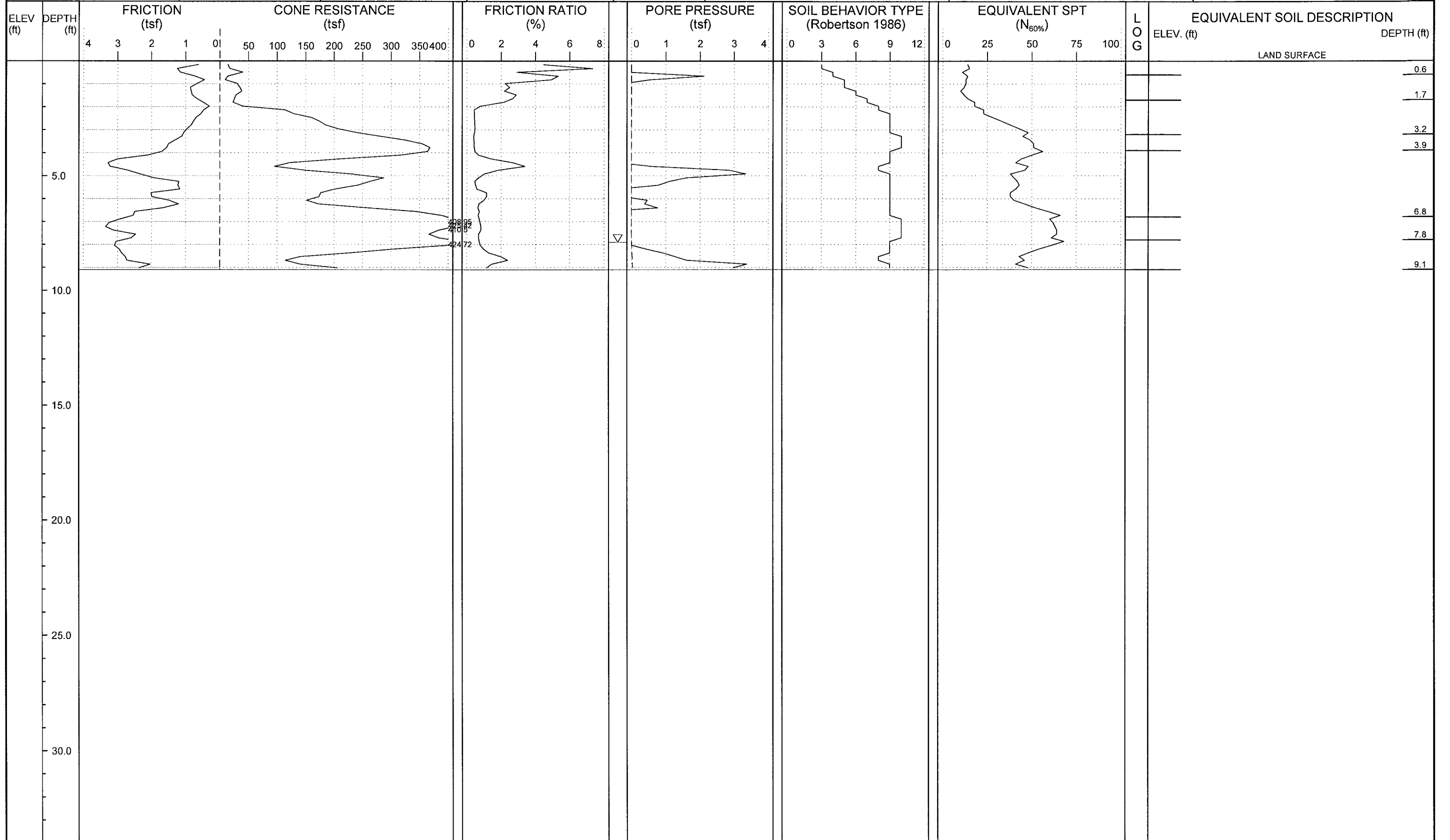




PROJECT NO.: 34441.1.1	ID.: R-2514D	COUNTY: Jones/Craven	GEOLOGIST: Steven Hudson	DRILL MACHINE: Hogentogler Track	MAX. DOWN PRESSURE: 10,000
SITE DESCRIPTION: US 17 from South of NC 58 to the New Bern Bypass				GROUND WTR (ft): 0 HR. 5.5	DRILL METHOD: Direct Push
BORING NO.: L-62700	STATION: 627+00	OFFSET: 110ft RT	ALIGNMENT: -L-	ROD TYPE: Pre-Strung	CONE TYPE: Piezo
COLLAR ELEV.: N/A	TOTAL DEPTH: 9.8 ft	NORTHING: 485,944	EASTING: 2,541,633	24 HR. FIAD	DRILLER: Cory Robinson
				START DATE: 12/05/11	CONE ID: DSA1123
					TECHNICIAN: M.A.D.
					COMP. DATE: 12/05/11
					SURFACE WATER DEPTH: N/A

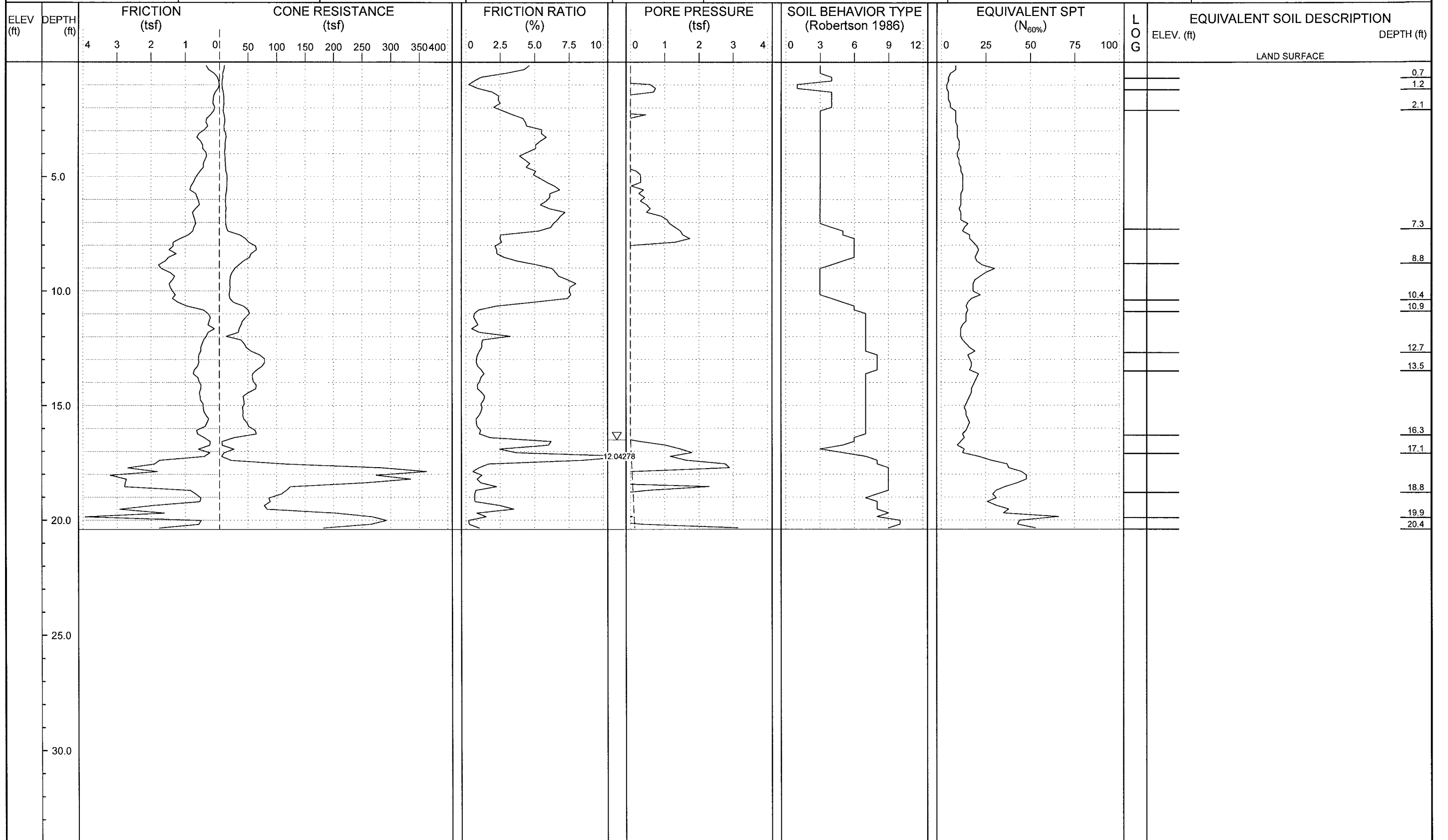


PROJECT NO.: 34441.1.1	ID.: R-2514D	COUNTY: Jones/Craven	GEOLOGIST: Steven Hudson	DRILL MACHINE: Hogentogler Track	MAX. DOWN PRESSURE: 10,000
SITE DESCRIPTION: US 17 from South of NC 58 to the New Bern Bypass			GROUND WTR (ft)	DRILL METHOD: Direct Push	CONE TYPE: Piezo
BORING NO.: Y10-2000	STATION: 20+00	OFFSET: 0ft CL	ALIGNMENT: -Y10-	0 HR. 7.9	DRILLER: Cory Robinson
COLLAR ELEV.: N/A	TOTAL DEPTH: 9.1 ft	NORTHING: 484,484	EASTING: 2,540,728	24 HR. FIAD	ROD TYPE: Pre-Strung
				START DATE: 12/05/11	CONE ID: DSA1123
					TECHNICIAN: M.A.D.
					COMP. DATE: 12/05/11
					SURFACE WATER DEPTH: N/A





PROJECT NO.: 34441.1.1	ID.: R-2514D	COUNTY: Jones/Craven	GEOLOGIST: Steven Hudson	DRILL MACHINE: Hogentogler Track	MAX. DOWN PRESSURE: 10,000
SITE DESCRIPTION: US 17 from South of NC 58 to the New Bern Bypass				GROUND WTR (ft): 0 HR. 16.5	DRILL METHOD: Direct Push
BORING NO.: Y10-2700	STATION: 27+00	OFFSET: 0ft CL	ALIGNMENT: -Y10-	ROD TYPE: Pre-Strung	CONE TYPE: Piezo
COLLAR ELEV.: N/A	TOTAL DEPTH: 20.4 ft	NORTHING: 485,082	EASTING: 2,540,363	START DATE: 12/05/11	CONE ID: DSA1123
				DRILLER: Cory Robinson	TECHNICIAN: M.A.D.
				COMP. DATE: 12/05/11	SURFACE WATER DEPTH: N/A





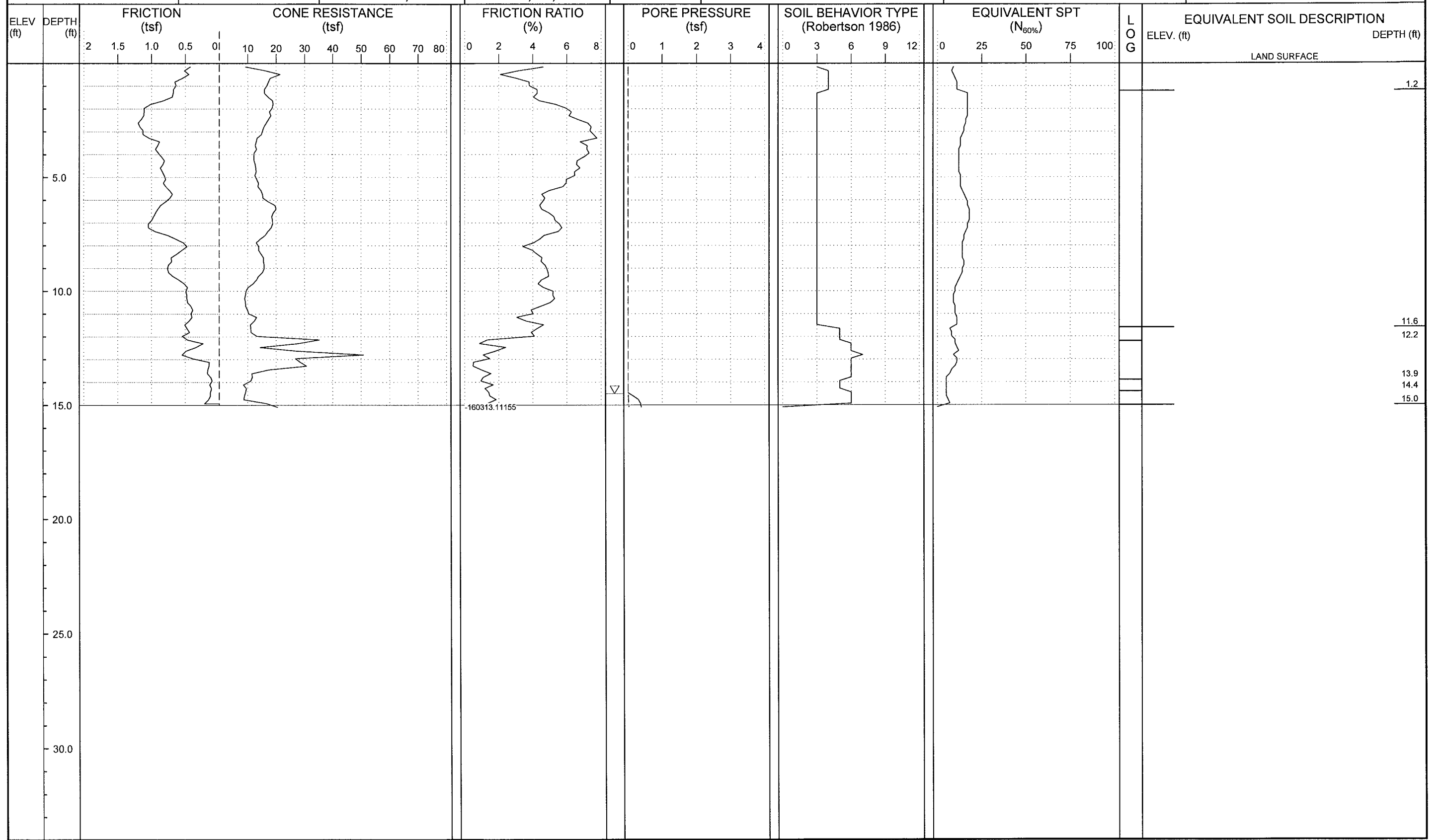


# NCDOT GEOTECHNICAL ENGINEERING UNIT



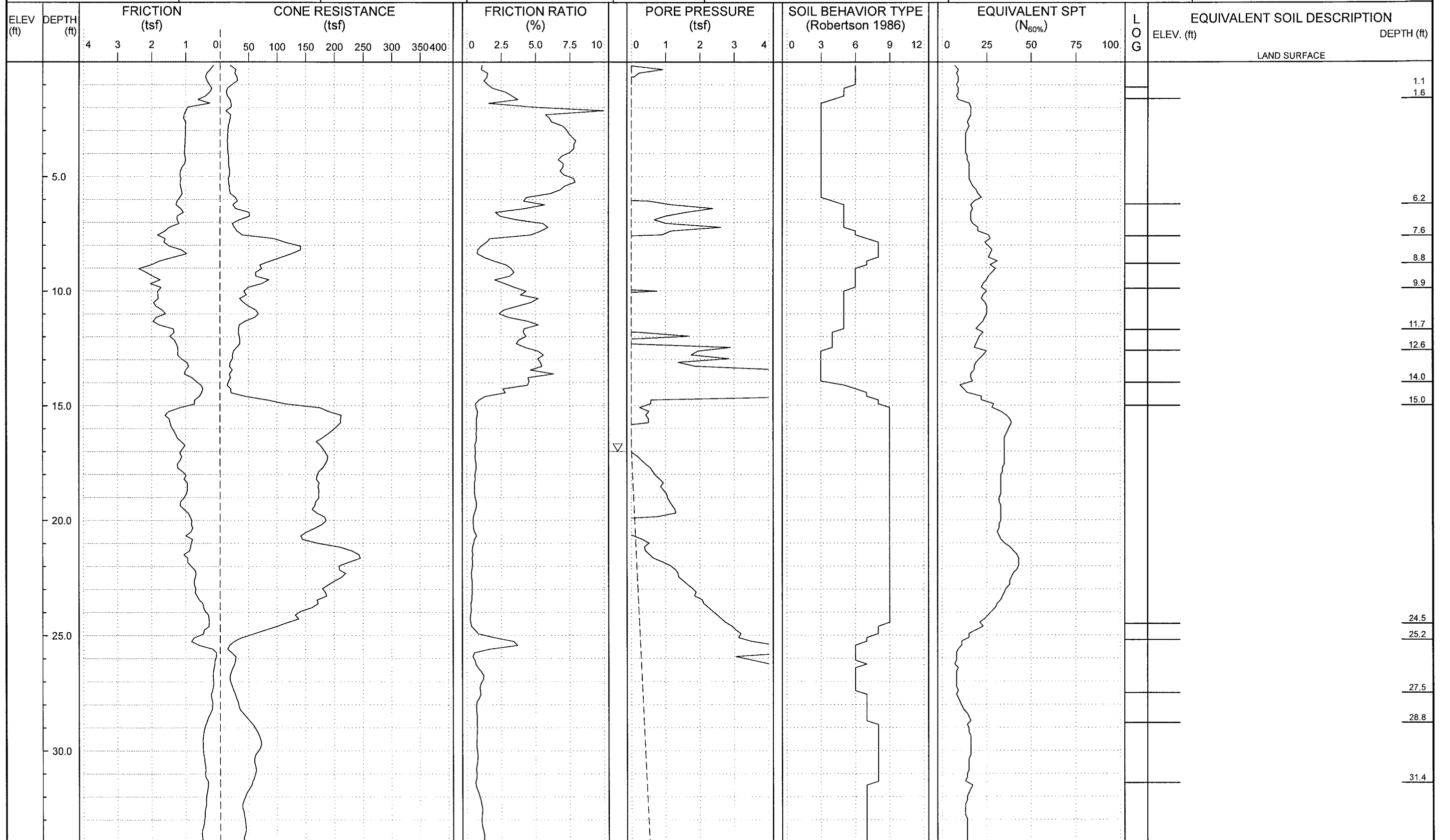
SHEET NO.: 60  
 PROJ. NO.: 34441.1.1  
 TIP NO.: R-2514D  
 COUNTY: Jones/Craven

PROJECT NO.: 34441.1.1	ID.: R-2514D	COUNTY: Jones/Craven	GEOLOGIST: Steven Hudson	DRILL MACHINE: Hogentogler Track	MAX. DOWN PRESSURE: 10,000
SITE DESCRIPTION: US 17 from South of NC 58 to the New Bern Bypass			GROUND WTR (ft): 0 HR. 14.5	DRILL METHOD: Direct Push	CONE TYPE: Piezo
BORING NO.: Y10RPA-2600	STATION: 26+00	OFFSET: 0ft CL	ALIGNMENT: -Y10RPA-	ROD TYPE: Pre-Strung	CONE ID: DSA1123
COLLAR ELEV.: N/A	TOTAL DEPTH: 15.0 ft	NORTHING: 485,856	EASTING: 2,540,779	START DATE: 12/06/11	COMP. DATE: 12/06/11
					DRILLER: Cory Robinson
					TECHNICIAN: M.A.D.
					SURFACE WATER DEPTH: N/A





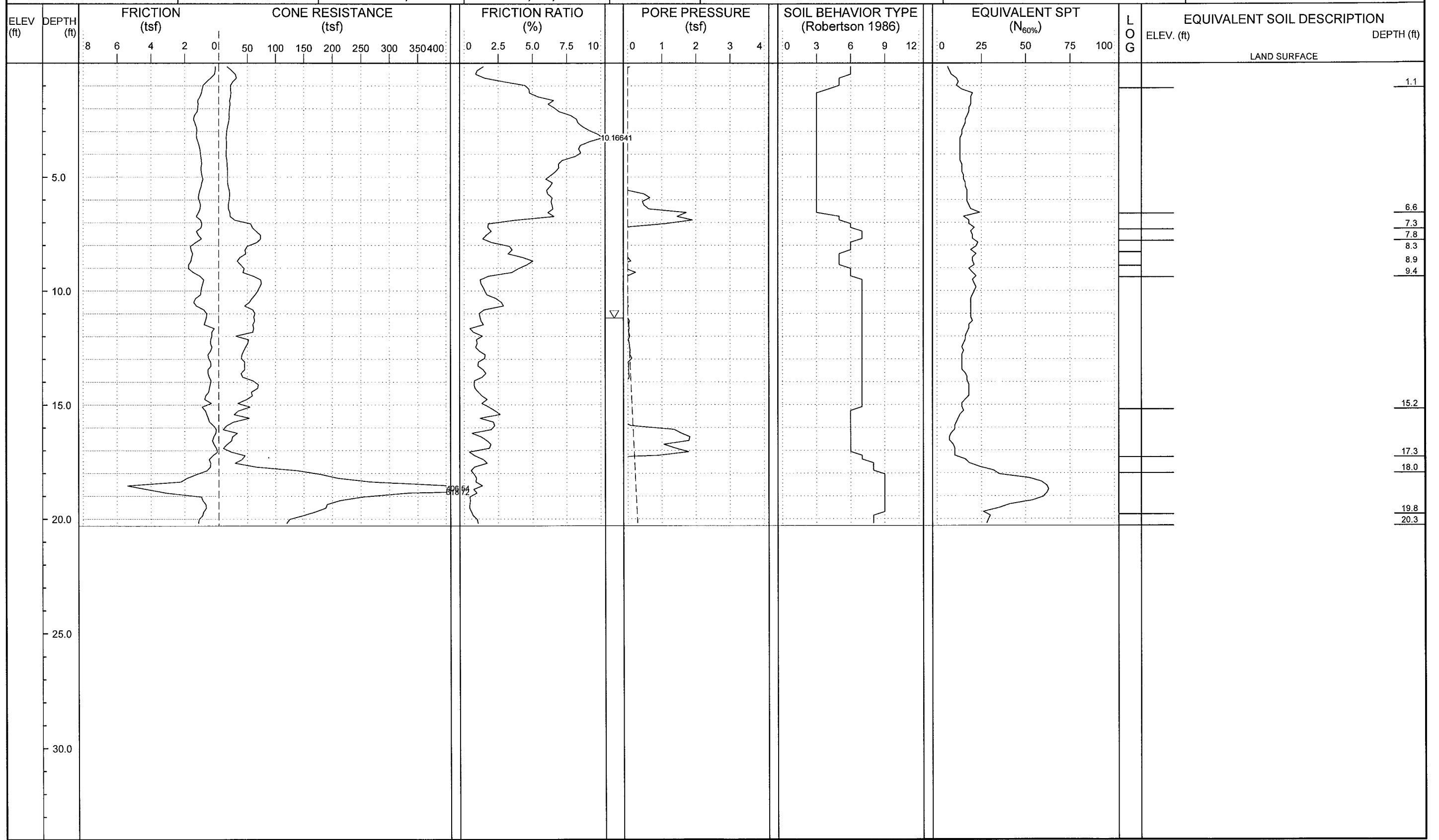
PROJECT NO.: 34441.1.1	ID: R-2514D	COUNTY: Jones/Craven	GEOLOGIST: Steven Hudson	DRILL MACHINE: Hogentogler Track	MAX. DOWN PRESSURE: 10,000
SITE DESCRIPTION: US 17 from South of NC 58 to the New Bern Bypass				GROUND WTR (ft): 0 HR. 17.0, 24 HR. FIAD	DRILL METHOD: Direct Push
BORING NO.: Y10RPA-3400	STATION: 34+00	OFFSET: 0ft CL	ALIGNMENT: -Y10RPA-	DRILLER: Cory Robinson	DRILLER: Cory Robinson
COLLAR ELEV.: N/A	TOTAL DEPTH: 35.2 ft	NORTHING: 485,698	EASTING: 2,540,080	ROD TYPE: Pre-Strung	TECHNICIAN: M.A.D.
				START DATE: 12/06/11	SURFACE WATER DEPTH: N/A
				CONC. DATE: 12/06/11	





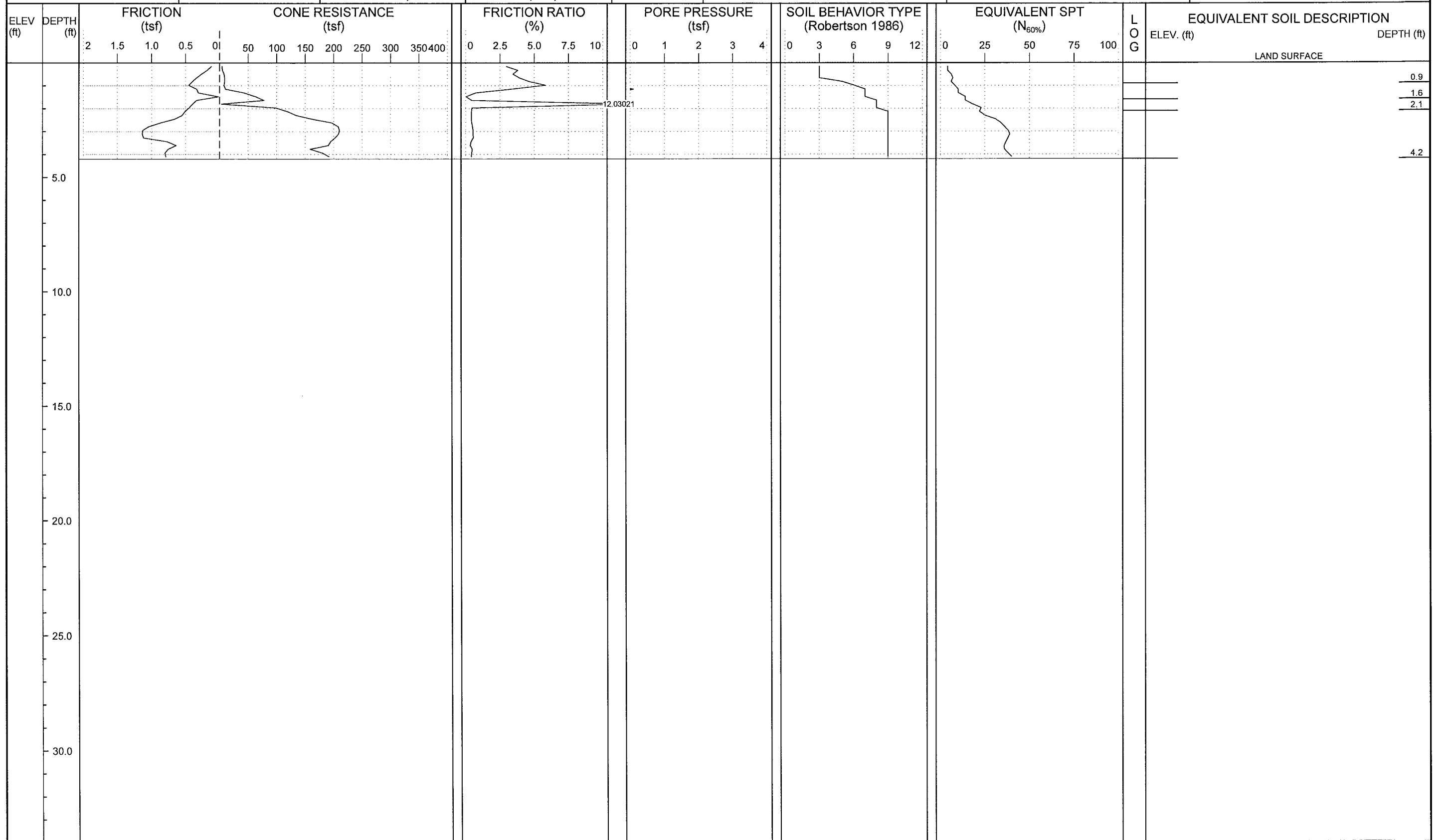


PROJECT NO.: 34441.1.1	ID: R-2514D	COUNTY: Jones/Craven	GEOLOGIST: Steven Hudson	DRILL MACHINE: Hogentogler Track	MAX. DOWN PRESSURE: 10,000
SITE DESCRIPTION: US 17 from South of NC 58 to the New Bern Bypass			GROUND WTR (ft): 0 HR. 11.2	DRILL METHOD: Direct Push	CONE TYPE: Piezo
BORING NO.: Y10RPC-2000	STATION: 20+00	OFFSET: 0ft CL	ALIGNMENT: -Y10RPC-	ROD TYPE: Pre-Strung	CONE ID: DSA1123
COLLAR ELEV.: N/A	TOTAL DEPTH: 20.3 ft	NORTHING: 484,705	EASTING: 2,540,413	START DATE: 12/05/11	COMP. DATE: 12/05/11
					DRILLER: Cory Robinson
					TECHNICIAN: M.A.D.
					SURFACE WATER DEPTH: N/A



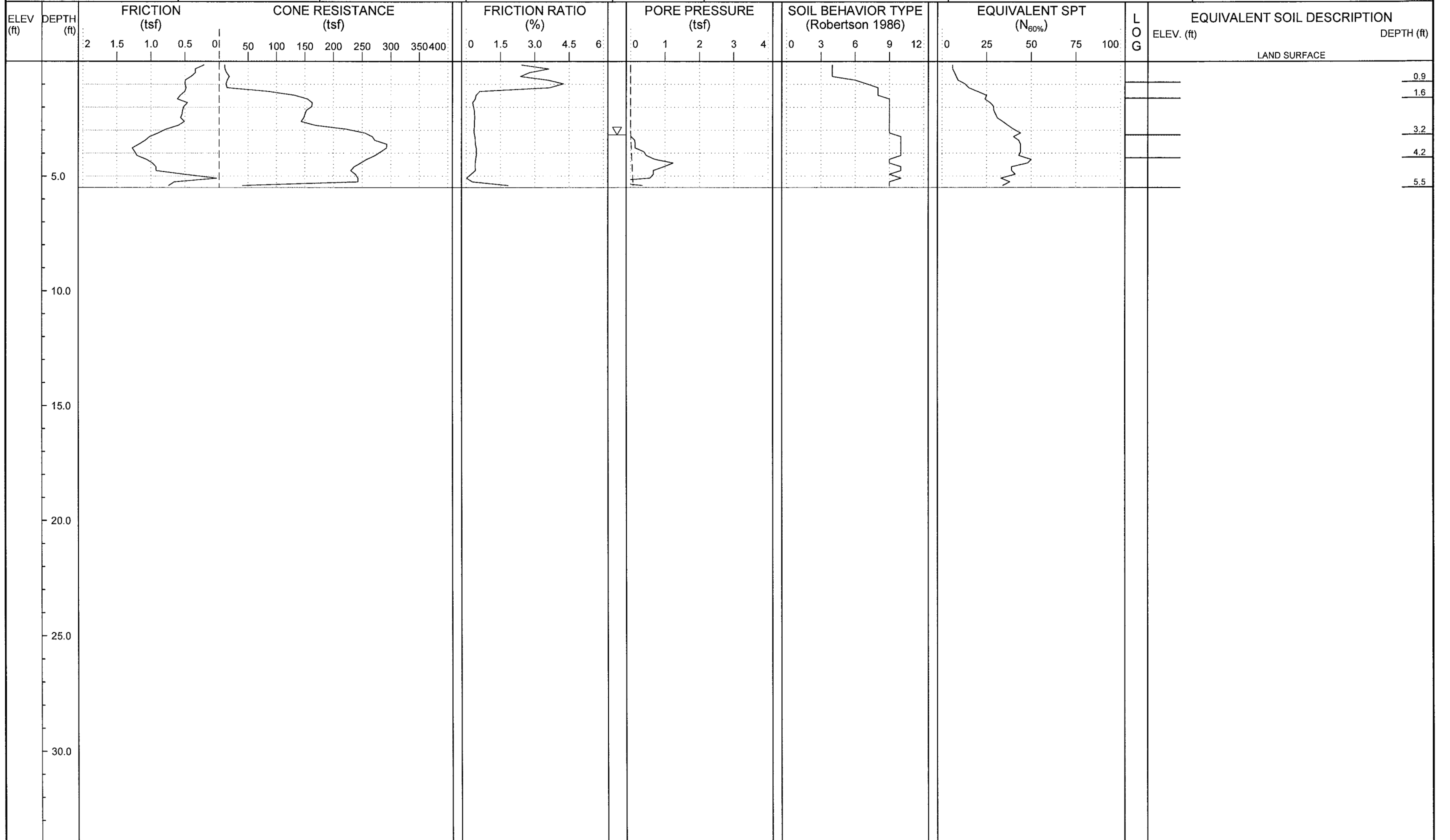


PROJECT NO.: 34441.1.1	ID.: R-2514D	COUNTY: Jones/Craven	GEOLOGIST: Steven Hudson	DRILL MACHINE: Hogentogler Track	MAX. DOWN PRESSURE: 10,000
SITE DESCRIPTION: US 17 from South of NC 58 to the New Bern Bypass			GROUND WTR (ft)	DRILL METHOD: Direct Push	CONE TYPE: Piezo
BORING NO.: Y10RPD-1600	STATION: 16+00	OFFSET: 0ft CL	ALIGNMENT: -Y10RPD-	0 HR. N/A	ROD TYPE: Pre-Strung
COLLAR ELEV.: N/A	TOTAL DEPTH: 4.2 ft	NORTHING: 485,225	EASTING: 2,540,702	24 HR. FIAD	START DATE: 12/05/11
				CONC. DATE: 12/05/11	DRILLER: Cory Robinson
					TECHNICIAN: M.A.D.
					SURFACE WATER DEPTH: N/A





PROJECT NO.: 34441.1.1	ID.: R-2514D	COUNTY: Jones/Craven	GEOLOGIST: Steven Hudson	DRILL MACHINE: Hogentogler Track	MAX. DOWN PRESSURE: 10,000
SITE DESCRIPTION: US 17 from South of NC 58 to the New Bern Bypass			GROUND WTR (ft): 0 HR. 3.2	DRILL METHOD: Direct Push	CONE TYPE: Piezo
BORING NO.: Y10RPD-1800	STATION: 18+00	OFFSET: 0ft CL	ALIGNMENT: -Y10RPD-	ROD TYPE: Pre-Strung	DRILLER: Cory Robinson
COLLAR ELEV.: N/A	TOTAL DEPTH: 5.5 ft	NORTHING: 485,032	EASTING: 2,540,652	START DATE: 12/05/11	TECHNICIAN: M.A.D.
			24 HR. FIAD	COMP. DATE: 12/05/11	SURFACE WATER DEPTH: N/A



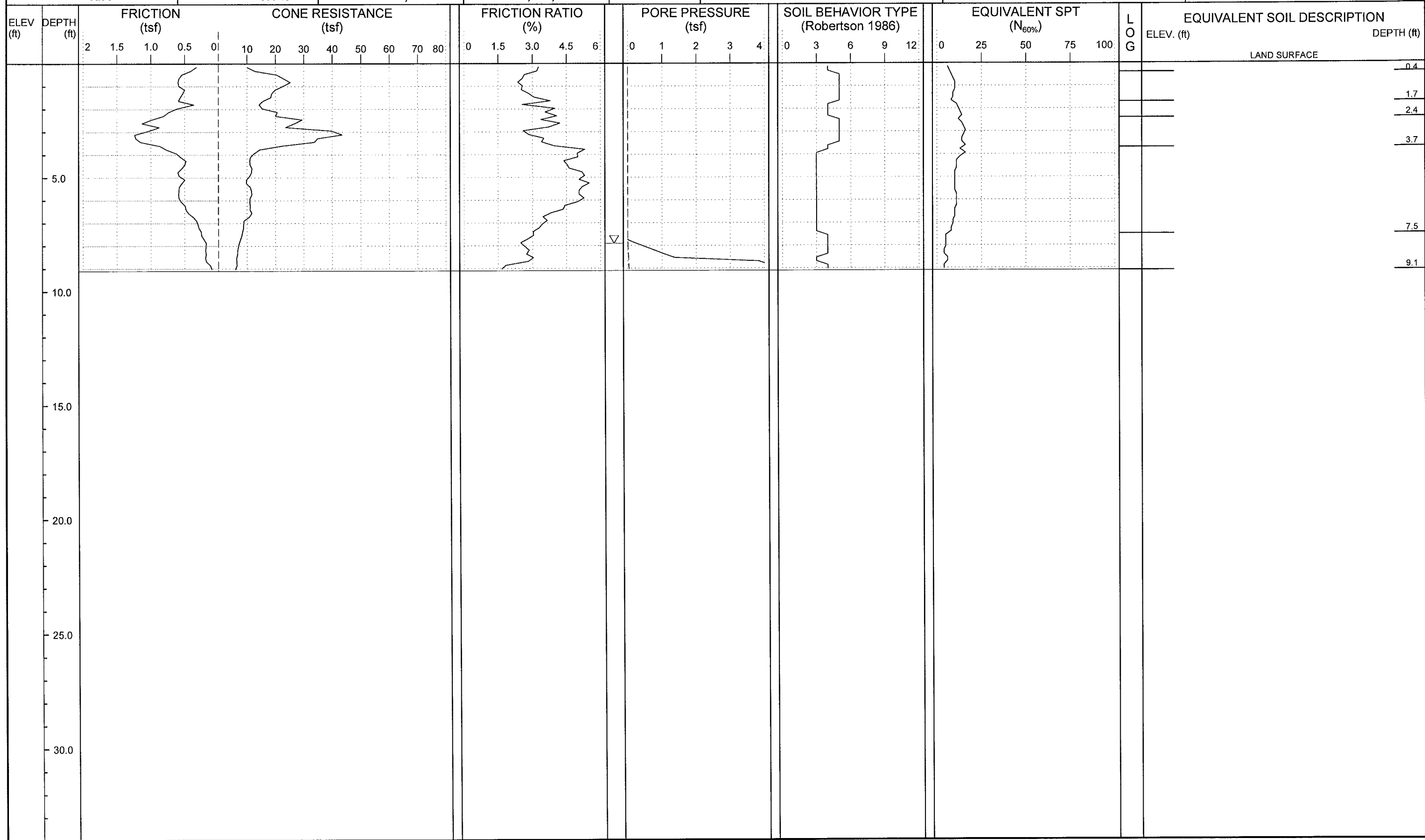


# NCDOT GEOTECHNICAL ENGINEERING UNIT



SHEET NO.: 66  
 PROJ. NO.: 34441.1.1  
 TIP NO.: R-2514D  
 COUNTY: Jones/Craven

PROJECT NO.: 34441.1.1	ID.: R-2514D	COUNTY: Jones/Craven	GEOLOGIST: Steven Hudson	DRILL MACHINE: Hogentogler Track	MAX. DOWN PRESSURE: 10,000
SITE DESCRIPTION: US 17 from South of NC 58 to the New Bern Bypass			GROUND WTR (ft): 0 HR. 7.9	DRILL METHOD: Direct Push	CONE TYPE: Piezo
BORING NO.: Y3-1700	STATION: 17+00	OFFSET: 25ft RT	ALIGNMENT: -Y3-	ROD TYPE: Pre-Strung	CONE ID: DSA1123
COLLAR ELEV.: N/A	TOTAL DEPTH: 9.1 ft	NORTHING: 459,335	EASTING: 2,528,292	START DATE: 12/01/11	COMP. DATE: 12/01/11
					DRILLER: Cory Robinson
					TECHNICIAN: M.A.D.
					SURFACE WATER DEPTH: N/A



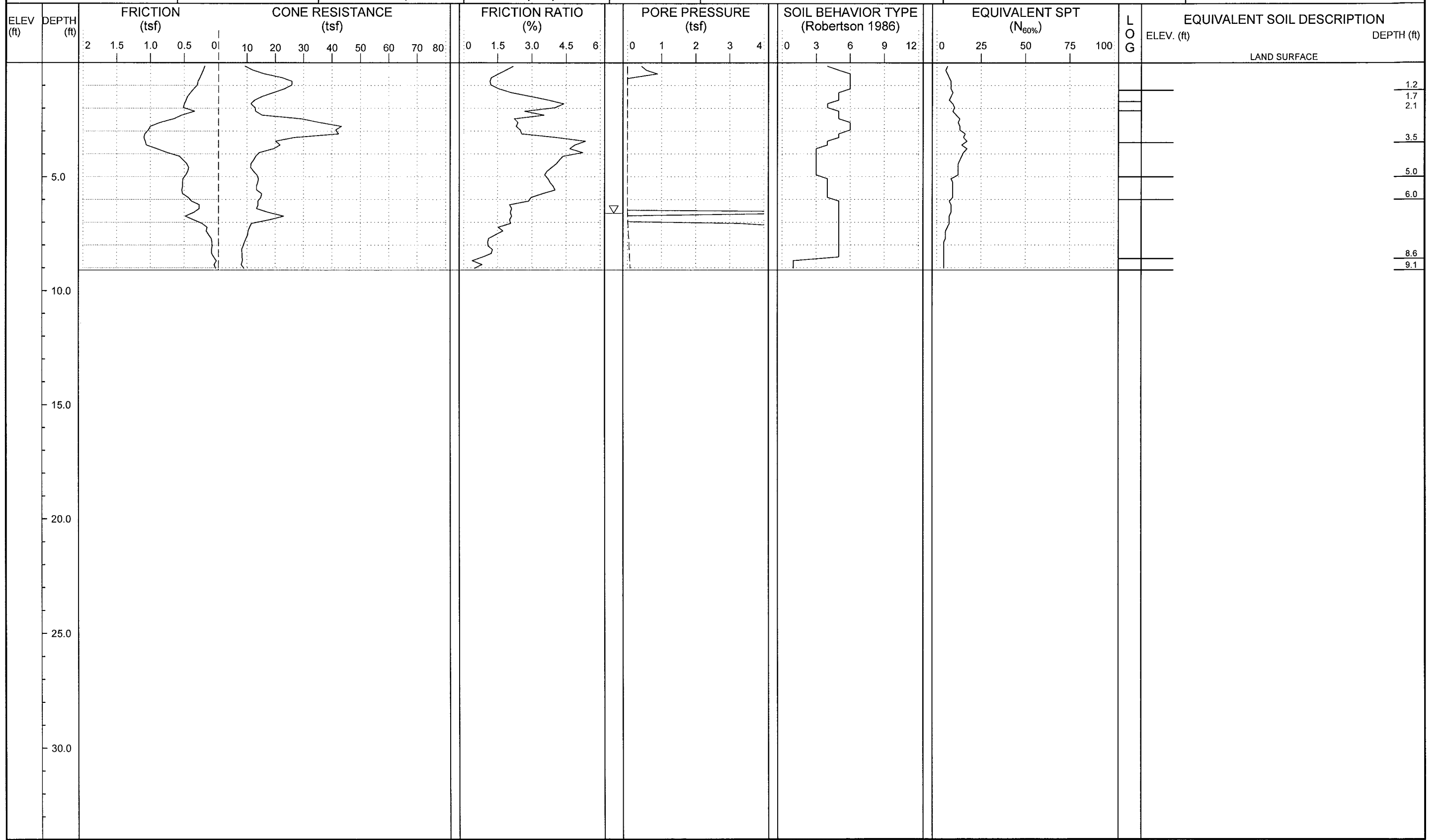


**NCDOT GEOTECHNICAL ENGINEERING UNIT**



SHEET NO.:	67
PROJ. NO.:	34441.1.1
TIP NO.:	R-2514D
COUNTY:	Jones/Craven

PROJECT NO.: 34441.1.1	ID.: R-2514D	COUNTY: Jones/Craven	GEOLOGIST: Steven Hudson	DRILL MACHINE: Hogentogler Track	MAX. DOWN PRESSURE: 10,000
SITE DESCRIPTION: US 17 from South of NC 58 to the New Bern Bypass			GROUND WTR (ft): 0 HR. 6.6, 24 HR. FIAD	DRILL METHOD: Direct Push	CONE TYPE: Piezo
BORING NO.: Y3-1900	STATION: 19+00	OFFSET: 25ft LT	ALIGNMENT: -Y3-	ROD TYPE: Pre-Strung	DRILLER: Cory Robinson
COLLAR ELEV.: N/A	TOTAL DEPTH: 9.1 ft	NORTHING: 459,387	EASTING: 2,528,491	START DATE: 12/01/11	TECHNICIAN: M.A.D.
					COMP. DATE: 12/01/11
					SURFACE WATER DEPTH: N/A





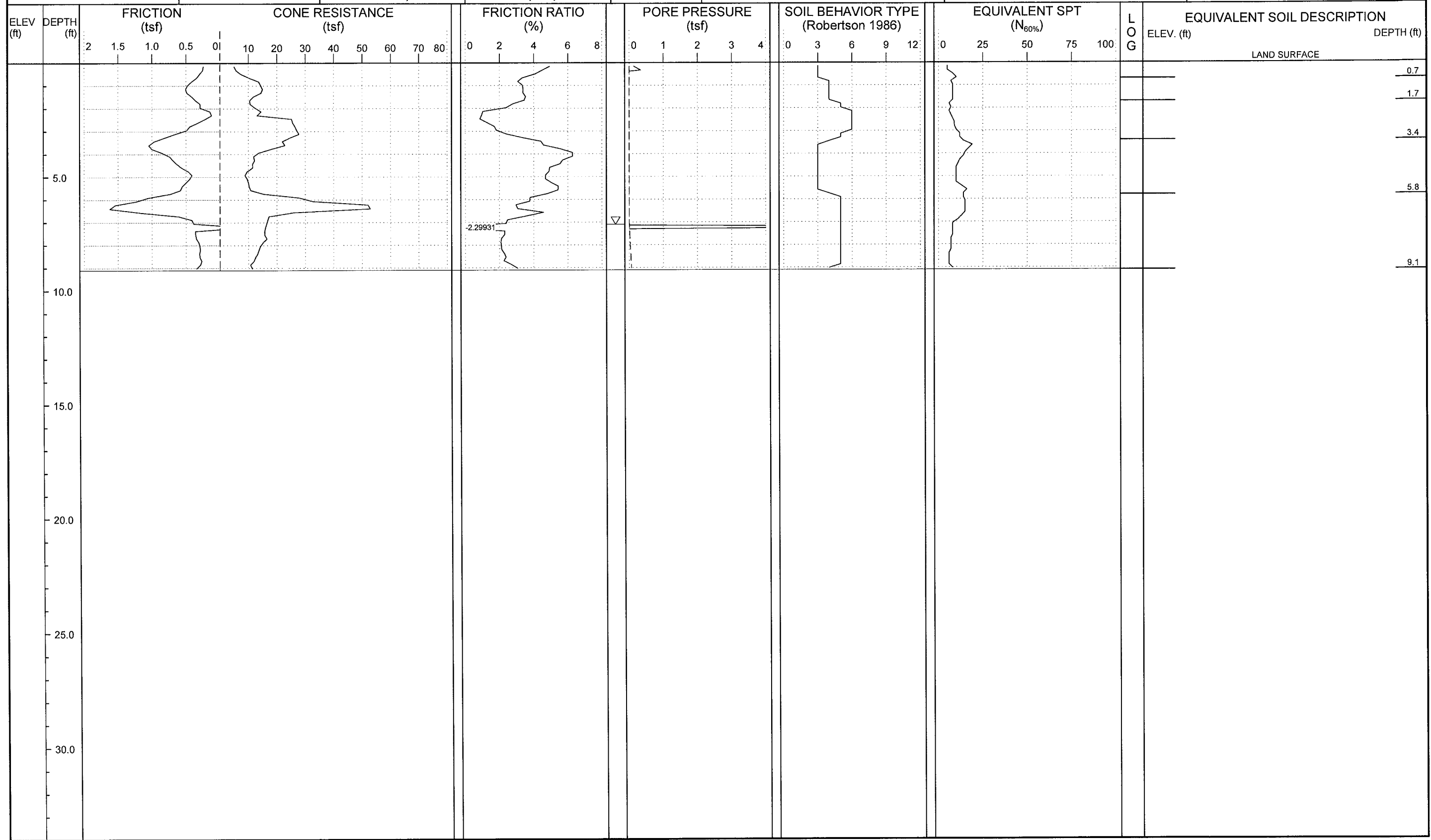


**NCDOT GEOTECHNICAL ENGINEERING UNIT**

ENGLISH

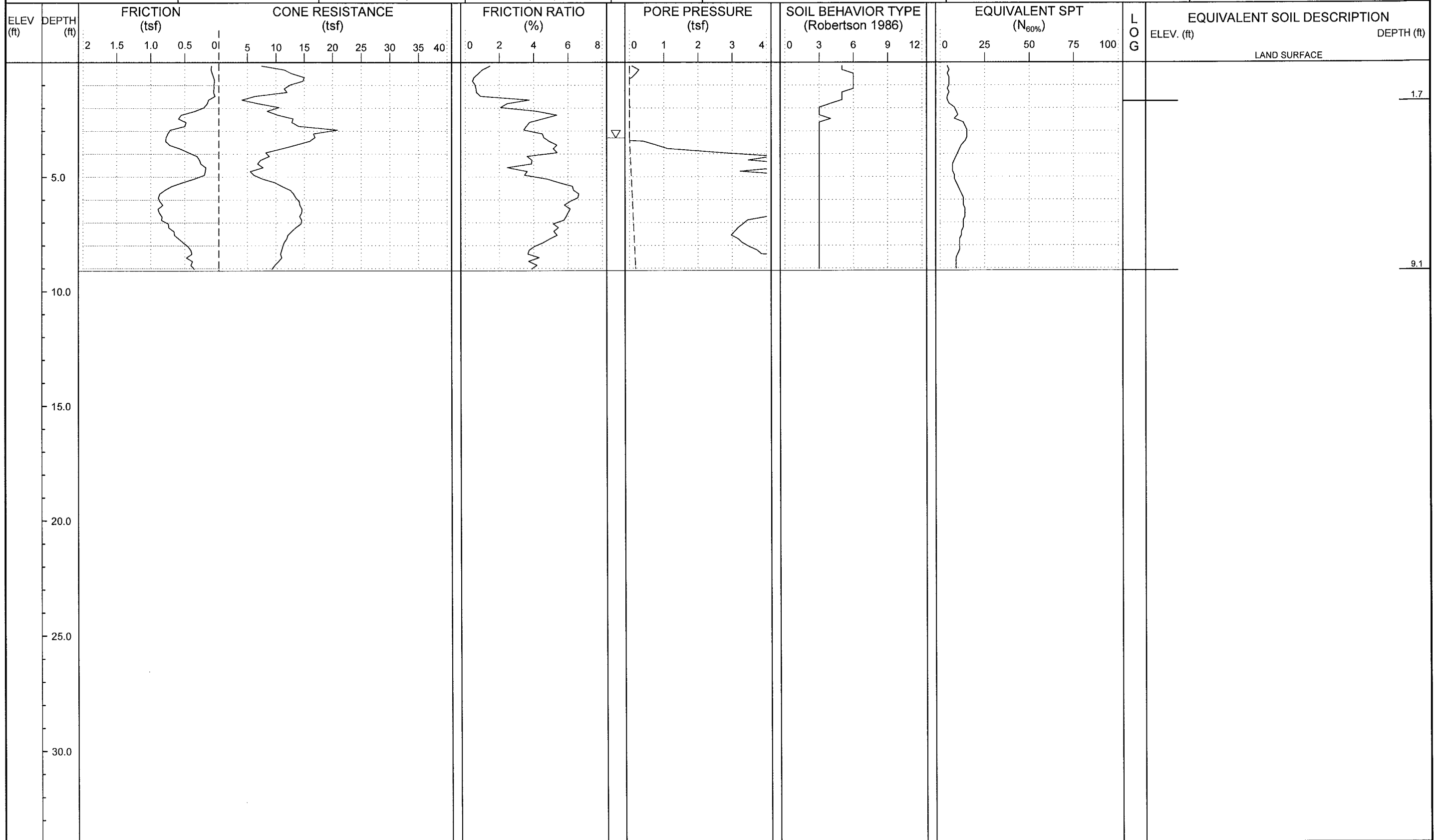
SHEET NO.:	68
PROJ. NO.:	34441.1.1
TIP NO.:	R-2514D
COUNTY:	Jones/Craven

PROJECT NO.: 34441.1.1	ID.: R-2514D	COUNTY: Jones/Craven	GEOLOGIST: Steven Hudson	DRILL MACHINE: Hogentogler Track	MAX. DOWN PRESSURE: 10,000
SITE DESCRIPTION: US 17 from South of NC 58 to the New Bern Bypass			GROUND WTR (ft): 0 HR. 7.1, 24 HR. FIAD	DRILL METHOD: Direct Push	CONE TYPE: Piezo
BORING NO.: Y3-2300	STATION: 23+00	OFFSET: 40ft LT	ALIGNMENT: -Y3-	ROD TYPE: Pre-Strung	DRILLER: Cory Robinson
COLLAR ELEV.: N/A	TOTAL DEPTH: 9.1 ft	NORTHING: 459,407	EASTING: 2,528,891	START DATE: 11/30/11	TECHNICIAN: M.A.D.
				COMP. DATE: 11/30/11	SURFACE WATER DEPTH: N/A



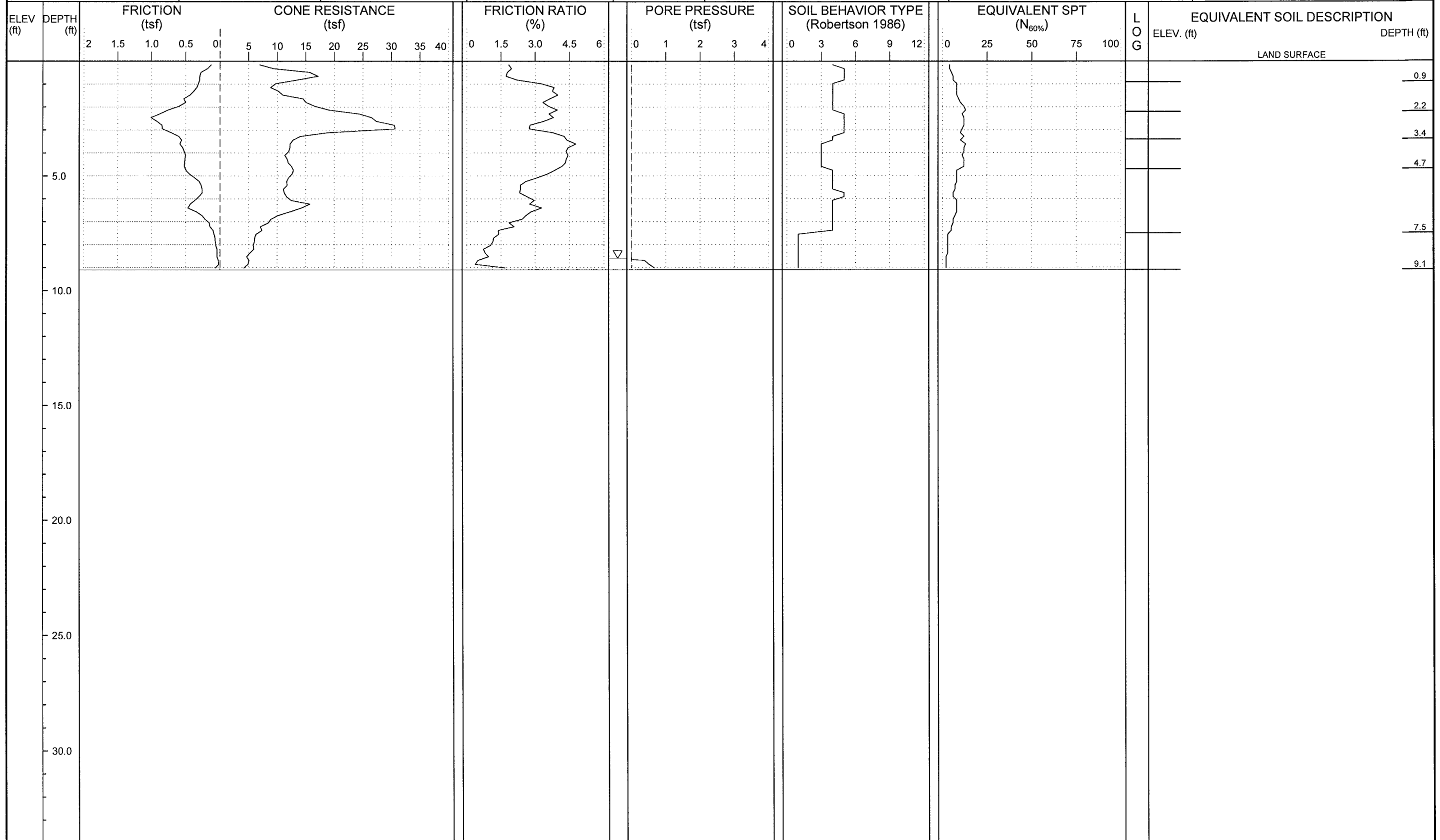


PROJECT NO.: 34441.1.1	ID: R-2514D	COUNTY: Jones/Craven	GEOLOGIST: Steven Hudson	DRILL MACHINE: Hogentogler Track	MAX. DOWN PRESSURE: 10,000
SITE DESCRIPTION: US 17 from South of NC 58 to the New Bern Bypass			GROUND WTR (ft): 0 HR. 3.3	DRILL METHOD: Direct Push	CONE TYPE: Piezo
BORING NO.: Y3-2500	STATION: 25+00	OFFSET: 25ft RT	ALIGNMENT: -Y3-	ROD TYPE: Pre-Strung	CONE ID: DSA1123
COLLAR ELEV.: N/A	TOTAL DEPTH: 9.1 ft	NORTHING: 459,345	EASTING: 2,529,092	START DATE: 11/30/11	COMP. DATE: 11/30/11
					DRILLER: Cory Robinson
					TECHNICIAN: M.A.D.
					SURFACE WATER DEPTH: N/A



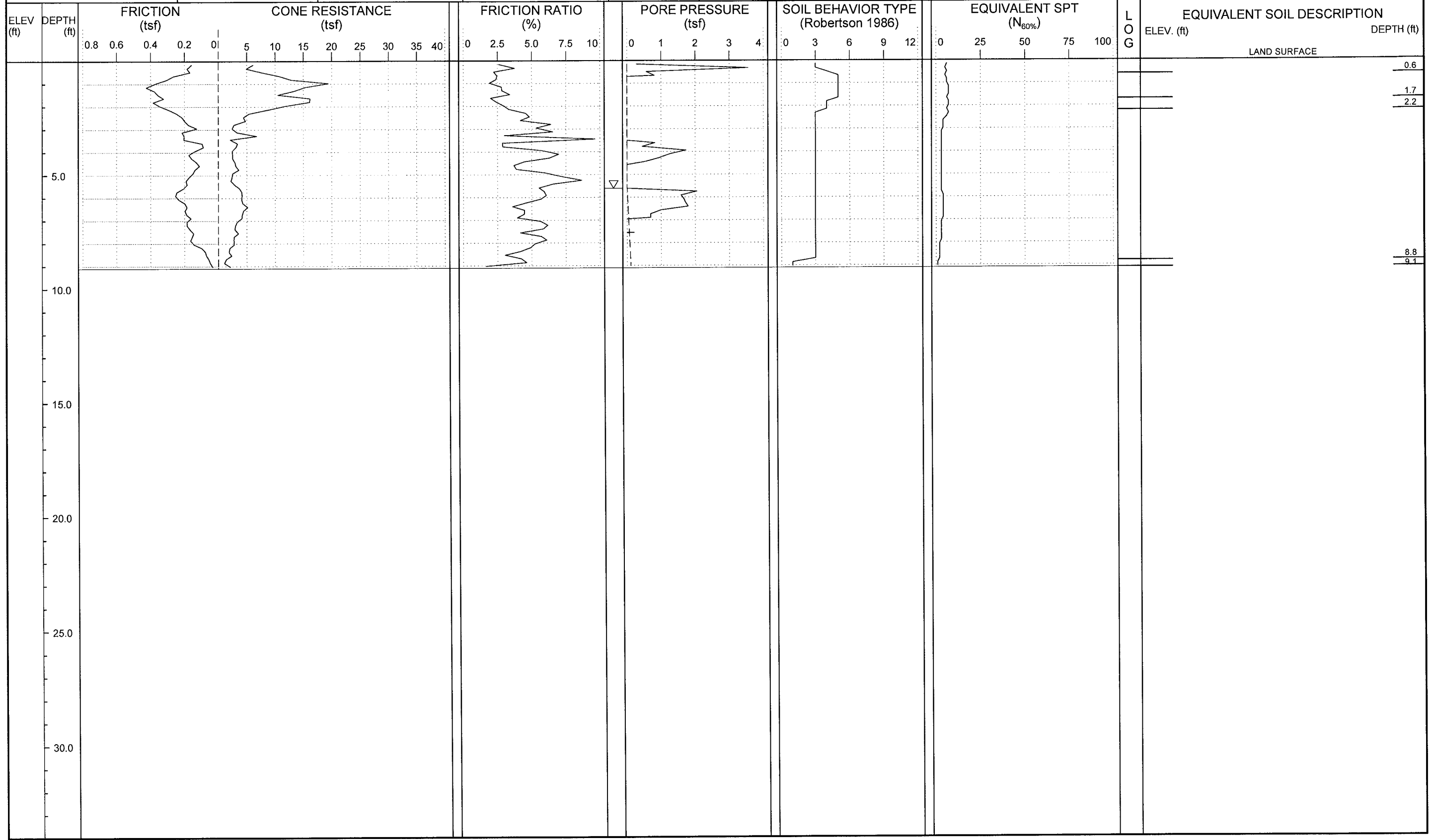


PROJECT NO.: 34441.1.1	ID.: R-2514D	COUNTY: Jones/Craven	GEOLOGIST: Steven Hudson	DRILL MACHINE: Hogentogler Track	MAX. DOWN PRESSURE: 10,000
SITE DESCRIPTION: US 17 from South of NC 58 to the New Bern Bypass			GROUND WTR (ft): 0 HR. 8.6	DRILL METHOD: Direct Push	CONE TYPE: Piezo
BORING NO.: Y3-3100	STATION: 31+00	OFFSET: 25ft LT	ALIGNMENT: -Y3-	ROD TYPE: Pre-Strung	CONE ID: DSA1123
COLLAR ELEV.: N/A	TOTAL DEPTH: 9.1 ft	NORTHING: 459,357	EASTING: 2,529,693	START DATE: 11/30/11	COMP. DATE: 11/30/11
					DRILLER: Cory Robinson
					TECHNICIAN: M.A.D.
					SURFACE WATER DEPTH: N/A



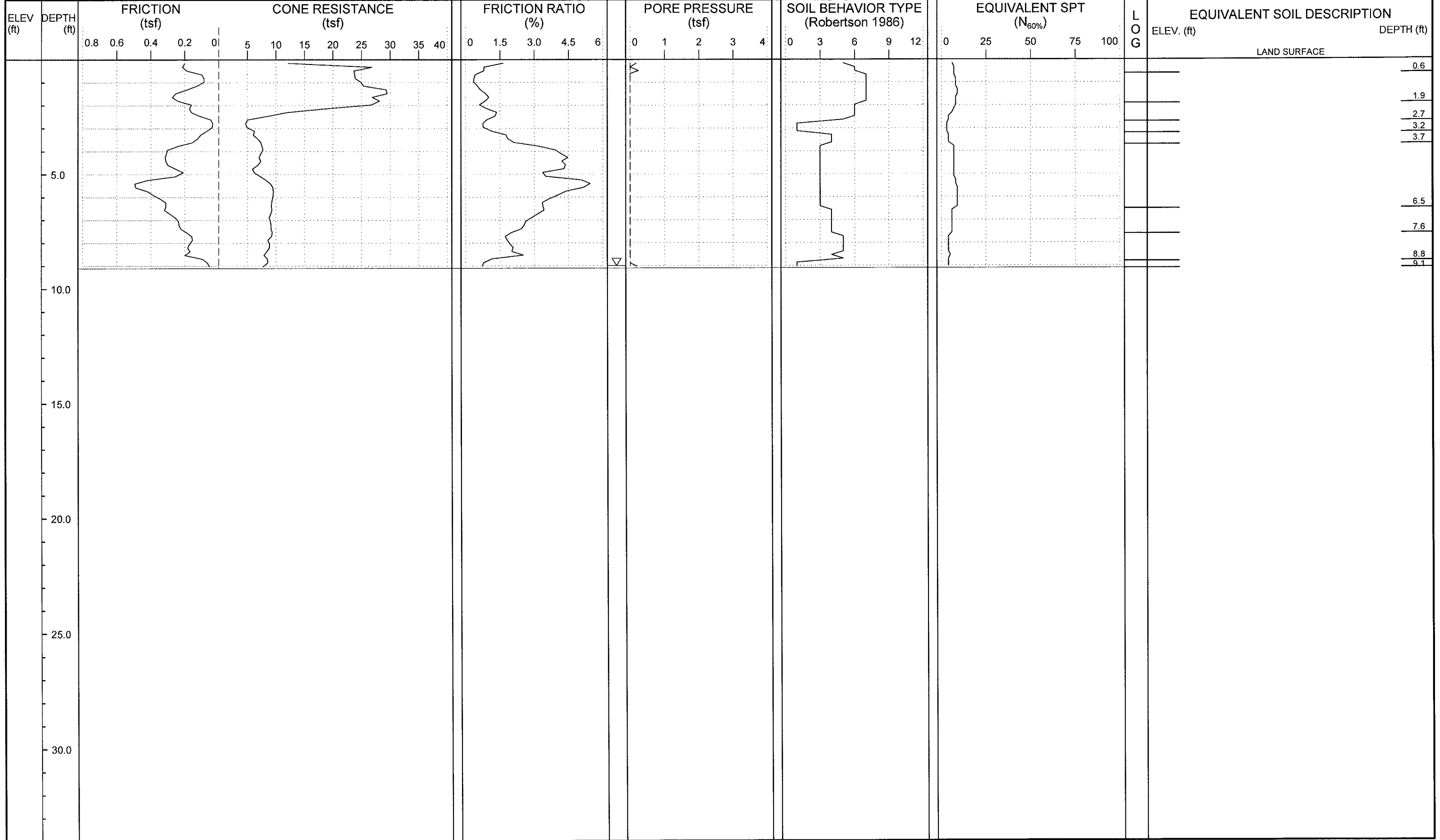


PROJECT NO.: 34441.1.1	ID.: R-2514D	COUNTY: Jones/Craven	GEOLOGIST: Steven Hudson	DRILL MACHINE: Hogentogler Track	MAX. DOWN PRESSURE: 10,000
SITE DESCRIPTION: US 17 from South of NC 58 to the New Bern Bypass			GROUND WTR (ft): 0 HR. 5.6	DRILL METHOD: Direct Push	CONE TYPE: Piezo
BORING NO.: Y3-3500	STATION: 35+00	OFFSET: 25ft RT	ALIGNMENT: -Y3-	ROD TYPE: Pre-Strung	CONE ID: DSA1123
COLLAR ELEV.: N/A	TOTAL DEPTH: 9.1 ft	NORTHING: 459,240	EASTING: 2,530,079	START DATE: 11/30/11	COMP. DATE: 11/30/11
					DRILLER: Cory Robinson
					TECHNICIAN: M.A.D.
					SURFACE WATER DEPTH: N/A





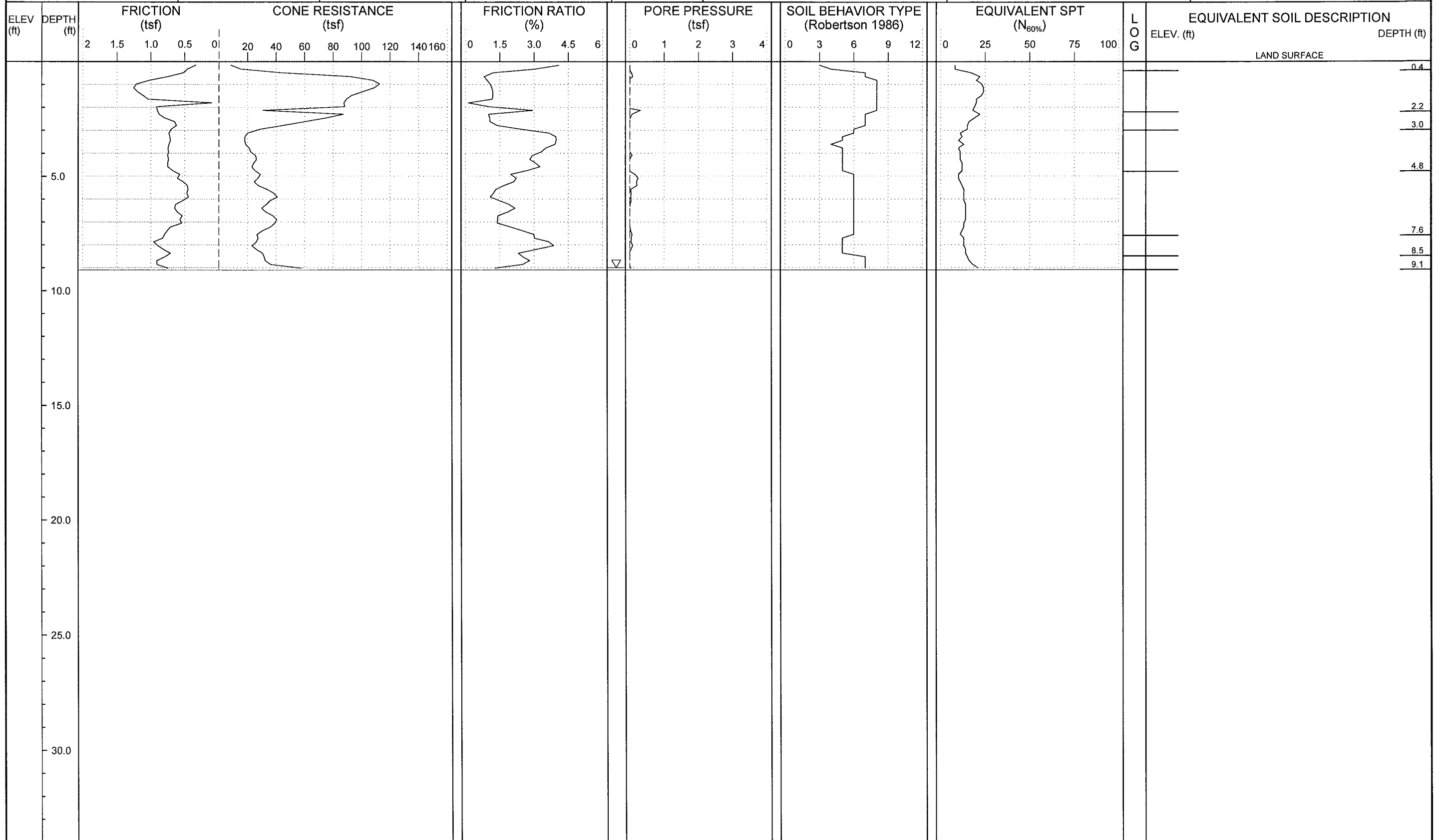
PROJECT NO.: 34441.1.1	ID.: R-2514D	COUNTY: Jones/Craven	GEOLOGIST: Steven Hudson	DRILL MACHINE: Hogentogler Track	MAX. DOWN PRESSURE: 10,000
SITE DESCRIPTION: US 17 from South of NC 58 to the New Bern Bypass			GROUND WTR (ft): 0 HR. 9.0	DRILL METHOD: Direct Push	CONE TYPE: Piezo
BORING NO.: Y3-3700	STATION: 37+00	OFFSET: 25ft LT	ALIGNMENT: -Y3-	ROD TYPE: Pre-Strung	DRILLER: Cory Robinson
COLLAR ELEV.: N/A	TOTAL DEPTH: 9.1 ft	NORTHING: 459,255	EASTING: 2,530,285	START DATE: 11/30/11	TECHNICIAN: M.A.D.
			24 HR. FIAD	COMP. DATE: 11/30/11	SURFACE WATER DEPTH: N/A







PROJECT NO.: 34441.1.1	ID: R-2514D	COUNTY: Jones/Craven	GEOLOGIST: Steven Hudson	DRILL MACHINE: Hogentogler Track	MAX. DOWN PRESSURE: 10,000
SITE DESCRIPTION: US 17 from South of NC 58 to the New Bern Bypass				GROUND WTR (ft): 0 HR. 9.0	DRILL METHOD: Direct Push
BORING NO.: Y3B-1225	STATION: 12+15	OFFSET: 0ft CL	ALIGNMENT: -Y3B-	24 HR. FIAD	CONE TYPE: Piezo
COLLAR ELEV.: N/A	TOTAL DEPTH: 9.1 ft	NORTHING: 459,074	EASTING: 2,529,523	START DATE: 11/29/11	DRILLER: Cory Robinson
					ROD TYPE: Pre-Strung
					CONE ID: DSA1123
					TECHNICIAN: M.A.D.
					COMP. DATE: 11/29/11
					SURFACE WATER DEPTH: N/A

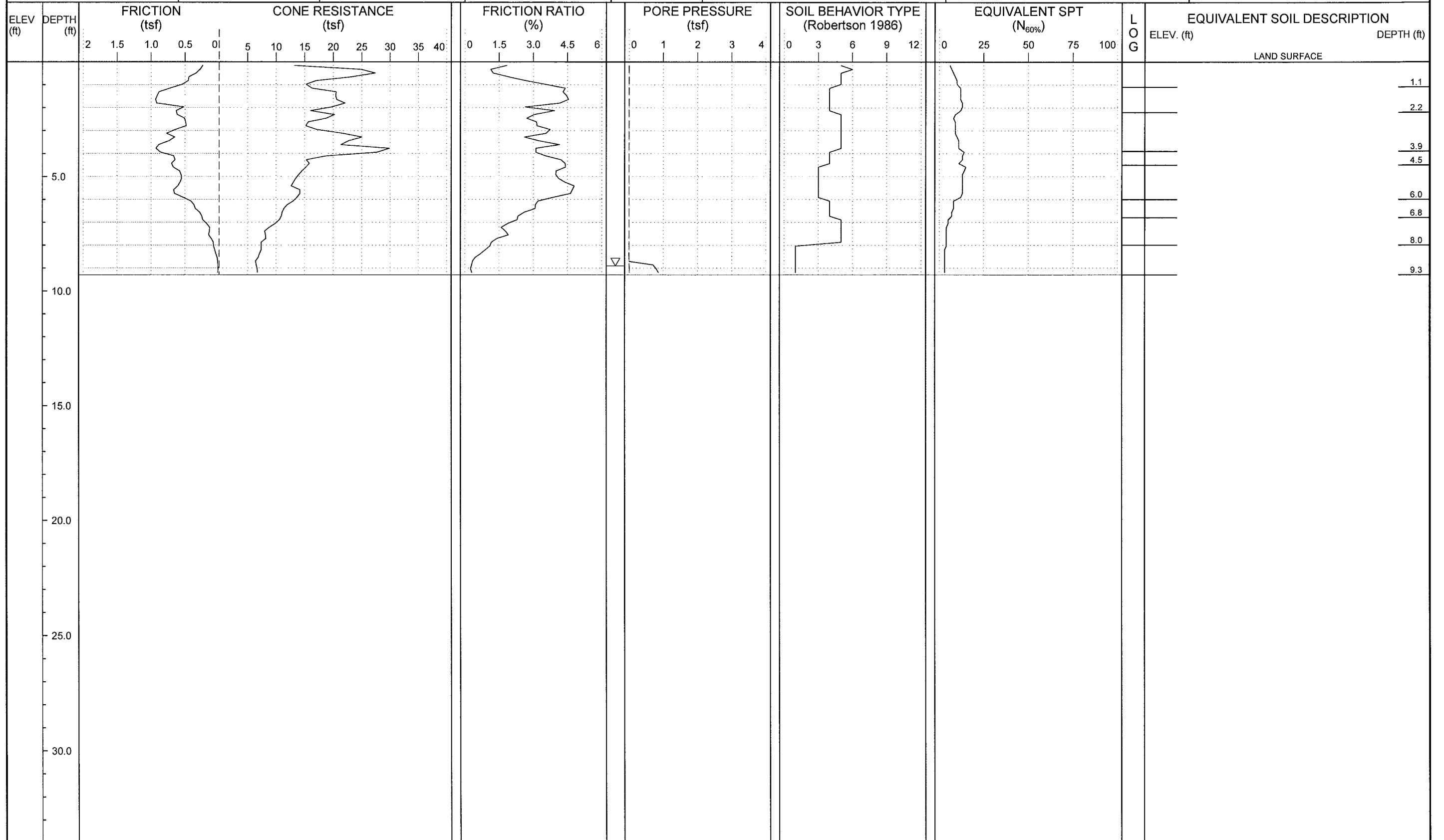








PROJECT NO.: 34441.1.1	ID.: R-2514D	COUNTY: Jones/Craven	GEOLOGIST: Steven Hudson	DRILL MACHINE: Hogentogler Track	MAX. DOWN PRESSURE: 10,000
SITE DESCRIPTION: US 17 from South of NC 58 to the New Bern Bypass				GROUND WTR (ft): 0 HR. 8.9	DRILL METHOD: Direct Push
BORING NO.: Y3LPD-1550	STATION: 15+50	OFFSET: 35ft LT	ALIGNMENT: -Y3LPD-	ROD TYPE: Pre-Strung	CONE TYPE: Piezo
COLLAR ELEV.: N/A	TOTAL DEPTH: 9.3 ft	NORTHING: 459,842	EASTING: 2,529,757	24 HR. FIAD	START DATE: 11/28/11
				CONC. DATE: 11/28/11	DRILLER: Cory Robinson
				TECHNICIAN: M.A.D.	SURFACE WATER DEPTH: N/A



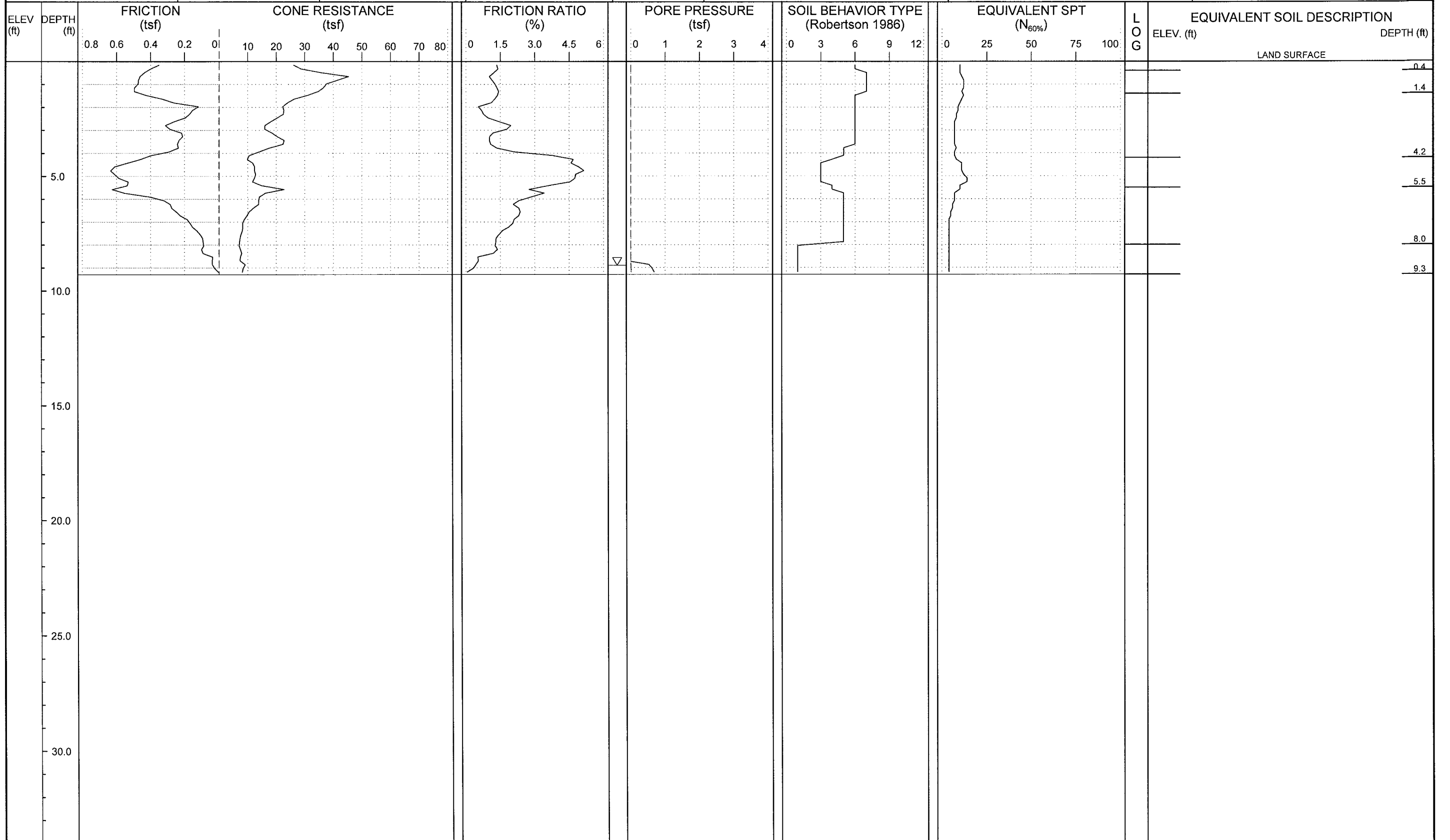






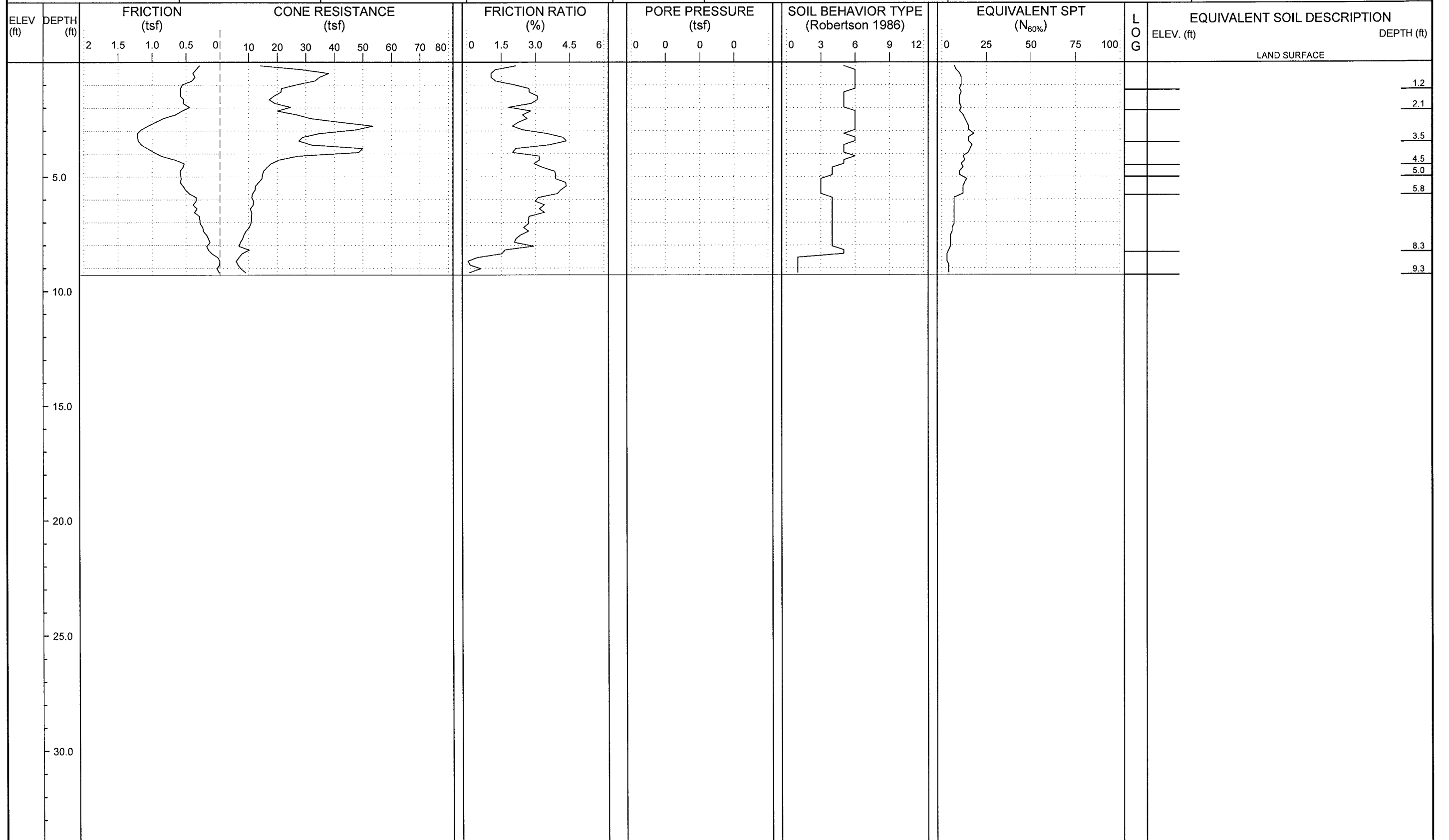


PROJECT NO.: 34441.1.1	ID.: R-2514D	COUNTY: Jones/Craven	GEOLOGIST: Steven Hudson	DRILL MACHINE: Hogentogler Track	MAX. DOWN PRESSURE: 10,000
SITE DESCRIPTION: US 17 from South of NC 58 to the New Bern Bypass				GROUND WTR (ft): 0 HR. 8.9	DRILL METHOD: Direct Push
BORING NO.: Y3RPD-2000	STATION: 20+00	OFFSET: 0ft CL	ALIGNMENT: -Y3RPD-	ROD TYPE: Pre-Strung	CONE TYPE: Piezo
COLLAR ELEV.: N/A	TOTAL DEPTH: 9.3 ft	NORTHING: 460,051	EASTING: 2,529,787	24 HR. FIAD	DRILLER: Cory Robinson
				START DATE: 11/28/11	CONE ID: DSG0867
					TECHNICIAN: M.A.D.
					COMP. DATE: 11/28/11
					SURFACE WATER DEPTH: N/A

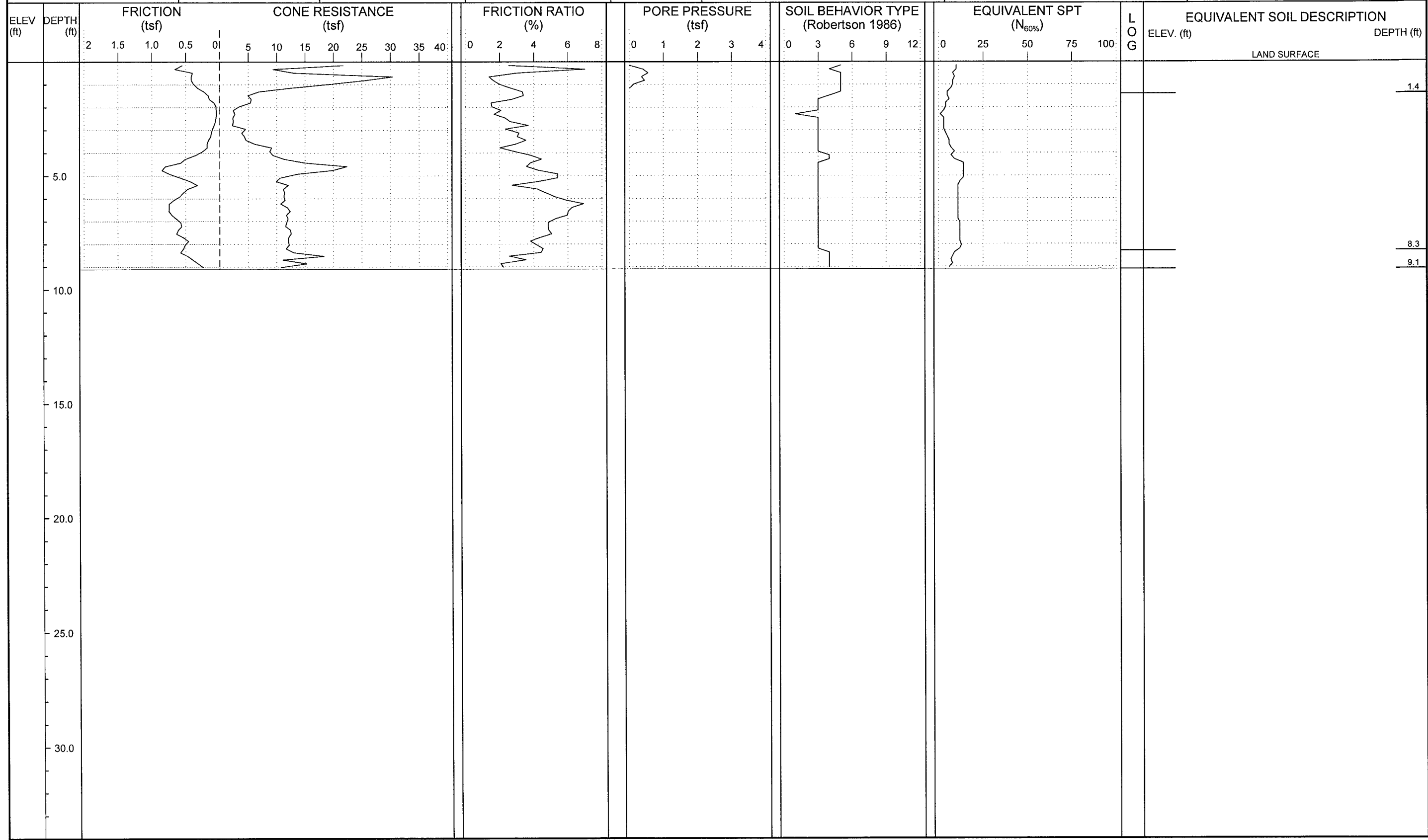




PROJECT NO.: 34441.1.1	ID.: R-2514D	COUNTY: Jones/Craven	GEOLOGIST: Steven Hudson	DRILL MACHINE: Hogentogler Track	MAX. DOWN PRESSURE: 10,000
SITE DESCRIPTION: US 17 from South of NC 58 to the New Bern Bypass				GROUND WTR (ft): 0 HR. N/A	DRILL METHOD: Direct Push
BORING NO.: Y3RPD-2200	STATION: 22+00	OFFSET: 0ft CL	ALIGNMENT: -Y3RPD-	ROD TYPE: Pre-Strung	CONE TYPE: Piezo
COLLAR ELEV.: N/A	TOTAL DEPTH: 9.3 ft	NORTHING: 459,859	EASTING: 2,529,843	24 HR. FIAD	DRILLER: Cory Robinson
				START DATE: 11/28/11	CONE ID: DSG0867
					TECHNICIAN: M.A.D.
					COMP. DATE: 11/28/11
					SURFACE WATER DEPTH: N/A



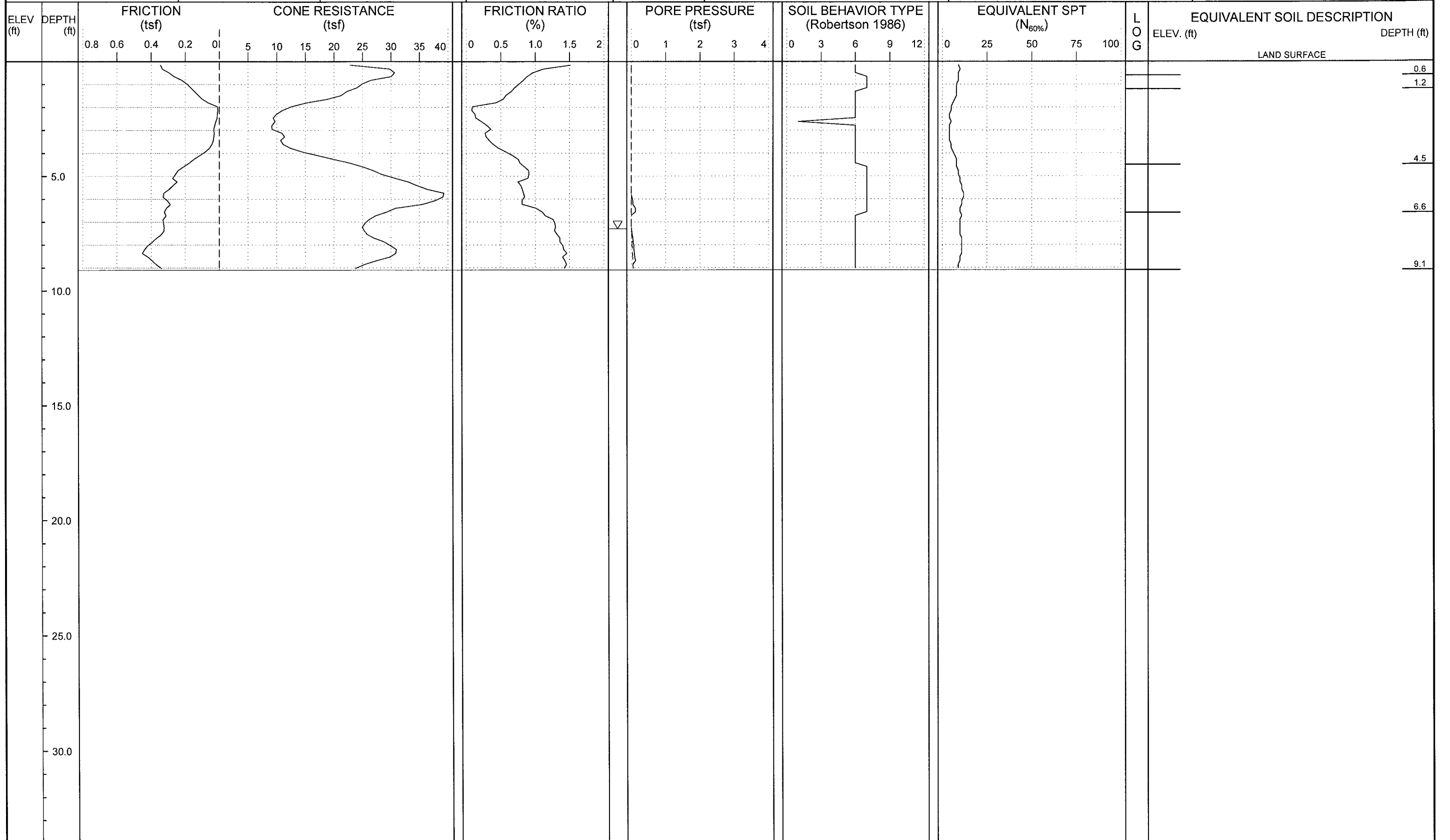
PROJECT NO.: 34441.1.1	ID.: R-2514D	COUNTY: Jones/Craven	GEOLOGIST: Steven Hudson	DRILL MACHINE: Hogentogler Track	MAX. DOWN PRESSURE: 10,000
SITE DESCRIPTION: US 17 from South of NC 58 to the New Bern Bypass				GROUND WTR (ft): 0 HR. N/A	DRILL METHOD: Direct Push
BORING NO.: Y3RPD-2600	STATION: 26+00	OFFSET: 40ft LT	ALIGNMENT: -Y3RPD-	ROD TYPE: Pre-Strung	CONE TYPE: Piezo
COLLAR ELEV.: N/A	TOTAL DEPTH: 9.1 ft	NORTHING: 459,457	EASTING: 2,529,891	START DATE: 11/30/11	CONE ID: DSA1123
				24 HR. FIAD	COMP. DATE: 11/30/11
				DRILLER: Cory Robinson	
				TECHNICIAN: M.A.D.	
				SURFACE WATER DEPTH: N/A	





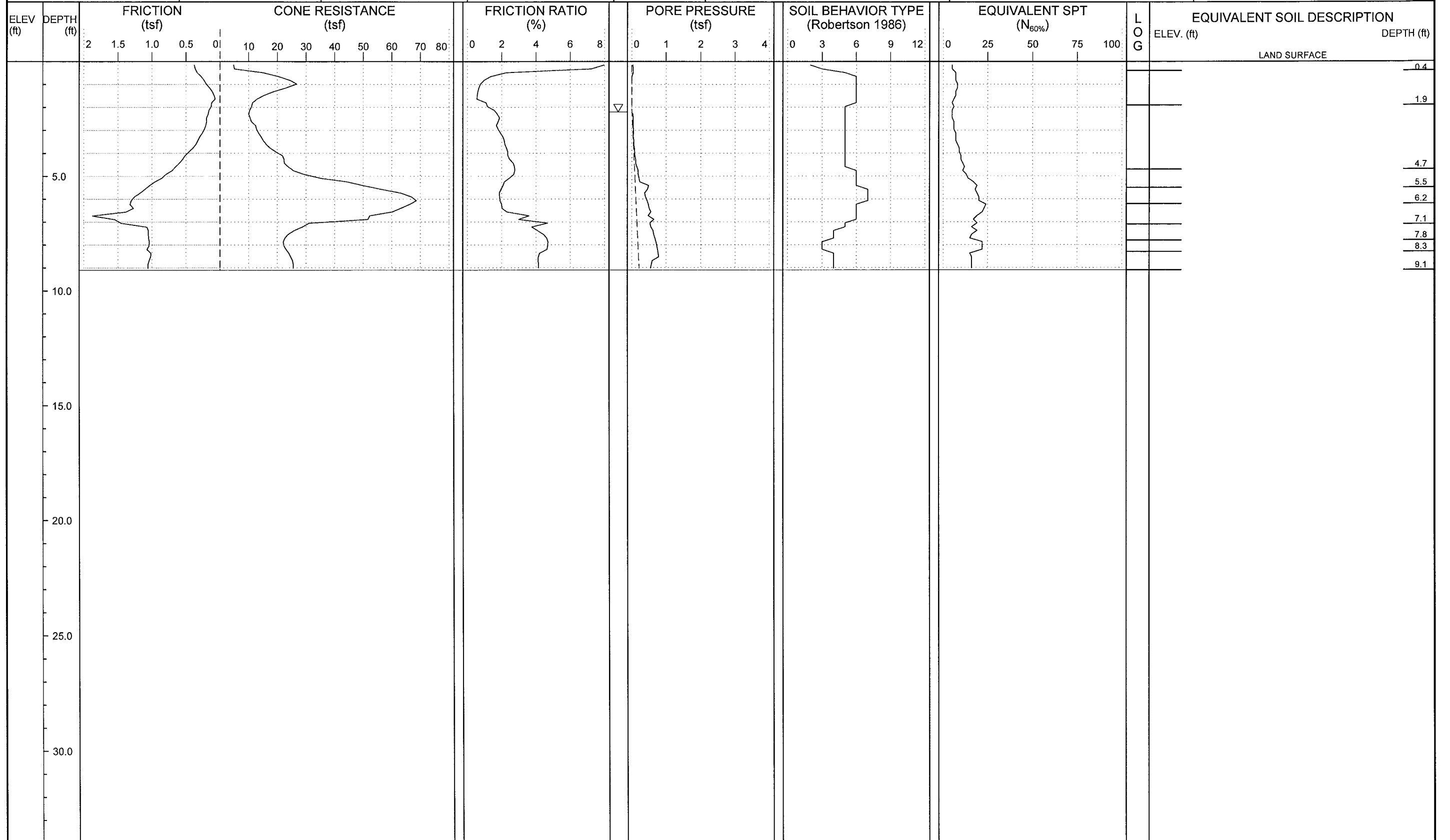


PROJECT NO.: 34441.1.1	ID.: R-2514D	COUNTY: Jones/Craven	GEOLOGIST: Steven Hudson	DRILL MACHINE: Hogentogler Track	MAX. DOWN PRESSURE: 10,000		
SITE DESCRIPTION: US 17 from South of NC 58 to the New Bern Bypass				GROUND WTR (ft): 0 HR. 7.3	DRILL METHOD: Direct Push	CONE TYPE: Piezo	DRILLER: Cory Robinson
BORING NO.: Y4-1950	STATION: 19+50	OFFSET: 20ft RT	ALIGNMENT: -Y4-	24 HR. FIAD	ROD TYPE: Pre-Strung	CONE ID: DSA1123	TECHNICIAN: M.A.D.
COLLAR ELEV.: N/A	TOTAL DEPTH: 9.1 ft	NORTHING: 463,763	EASTING: 2,529,524	START DATE: 12/02/11	COMP. DATE: 12/02/11	SURFACE WATER DEPTH: N/A	



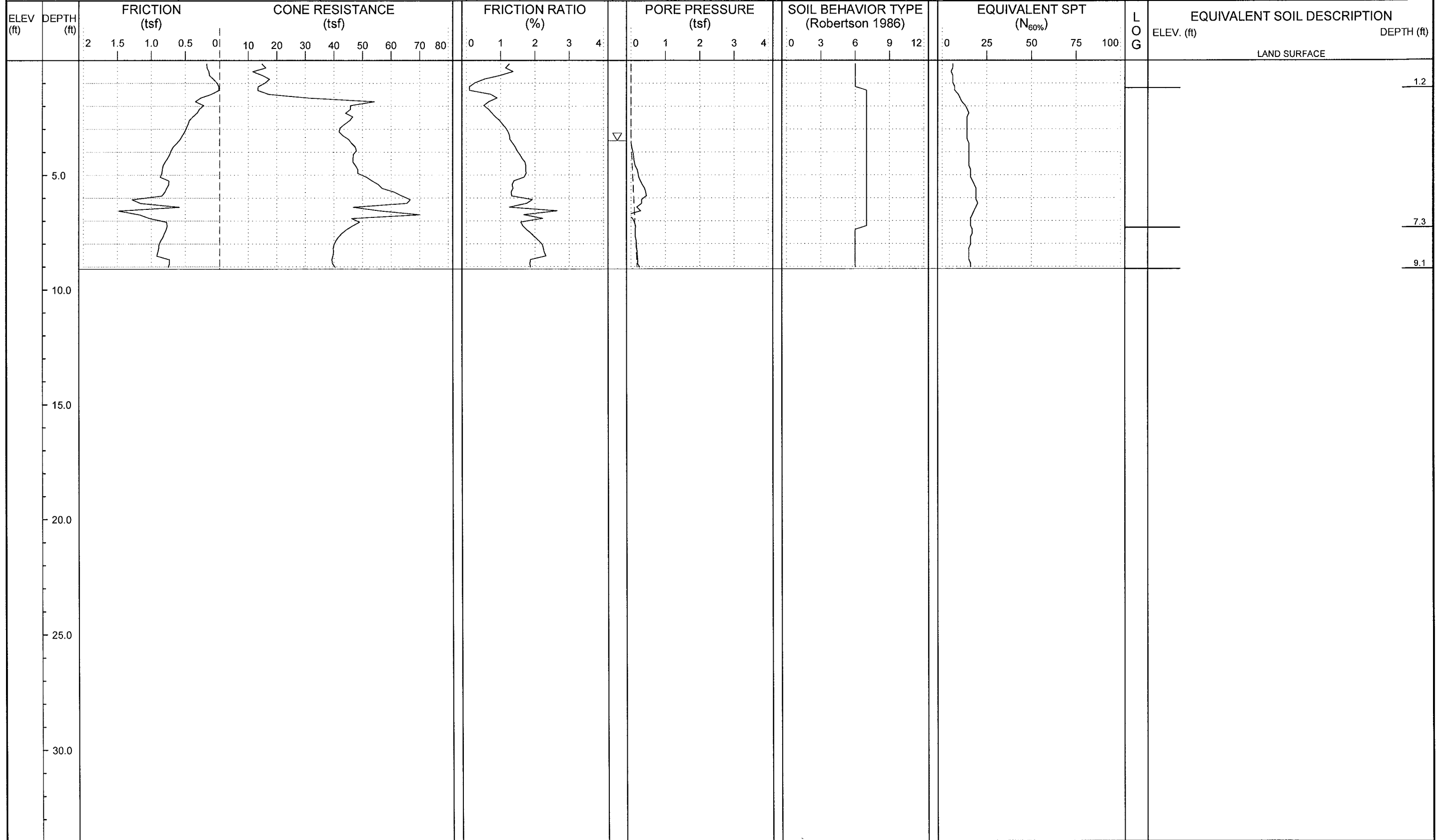


PROJECT NO.: 34441.1.1	ID.: R-2514D	COUNTY: Jones/Craven	GEOLOGIST: Steven Hudson	DRILL MACHINE: Hogentogler Track	MAX. DOWN PRESSURE: 10,000
SITE DESCRIPTION: US 17 from South of NC 58 to the New Bern Bypass			GROUND WTR (ft): 0 HR. 2.2	DRILL METHOD: Direct Push	CONE TYPE: Piezo
BORING NO.: Y4-3700	STATION: 37+00	OFFSET: 0ft CL	ALIGNMENT: -Y4-	ROD TYPE: Pre-Strung	DRILLER: Cory Robinson
COLLAR ELEV.: N/A	TOTAL DEPTH: 9.1 ft	NORTHING: 463,139	EASTING: 2,531,137	START DATE: 12/02/11	TECHNICIAN: M.A.D.
			24 HR. FIAD	COMP. DATE: 12/02/11	SURFACE WATER DEPTH: N/A





PROJECT NO.: 34441.1.1	ID.: R-2514D	COUNTY: Jones/Craven	GEOLOGIST: Steven Hudson	DRILL MACHINE: Hogentogler Track	MAX. DOWN PRESSURE: 10,000
SITE DESCRIPTION: US 17 from South of NC 58 to the New Bern Bypass				GROUND WTR (ft): 0 HR. 3.5	DRILL METHOD: Direct Push
BORING NO.: Y4-3950	STATION: 39+50	OFFSET: 0ft CL	ALIGNMENT: -Y4-	ROD TYPE: Pre-Strung	CONE TYPE: Piezo
COLLAR ELEV.: N/A	TOTAL DEPTH: 9.1 ft	NORTHING: 463,054	EASTING: 2,531,371	24 HR. FIAD	START DATE: 12/02/11
				DRILLER: Cory Robinson	TECHNICIAN: M.A.D.
				COMP. DATE: 12/02/11	SURFACE WATER DEPTH: N/A

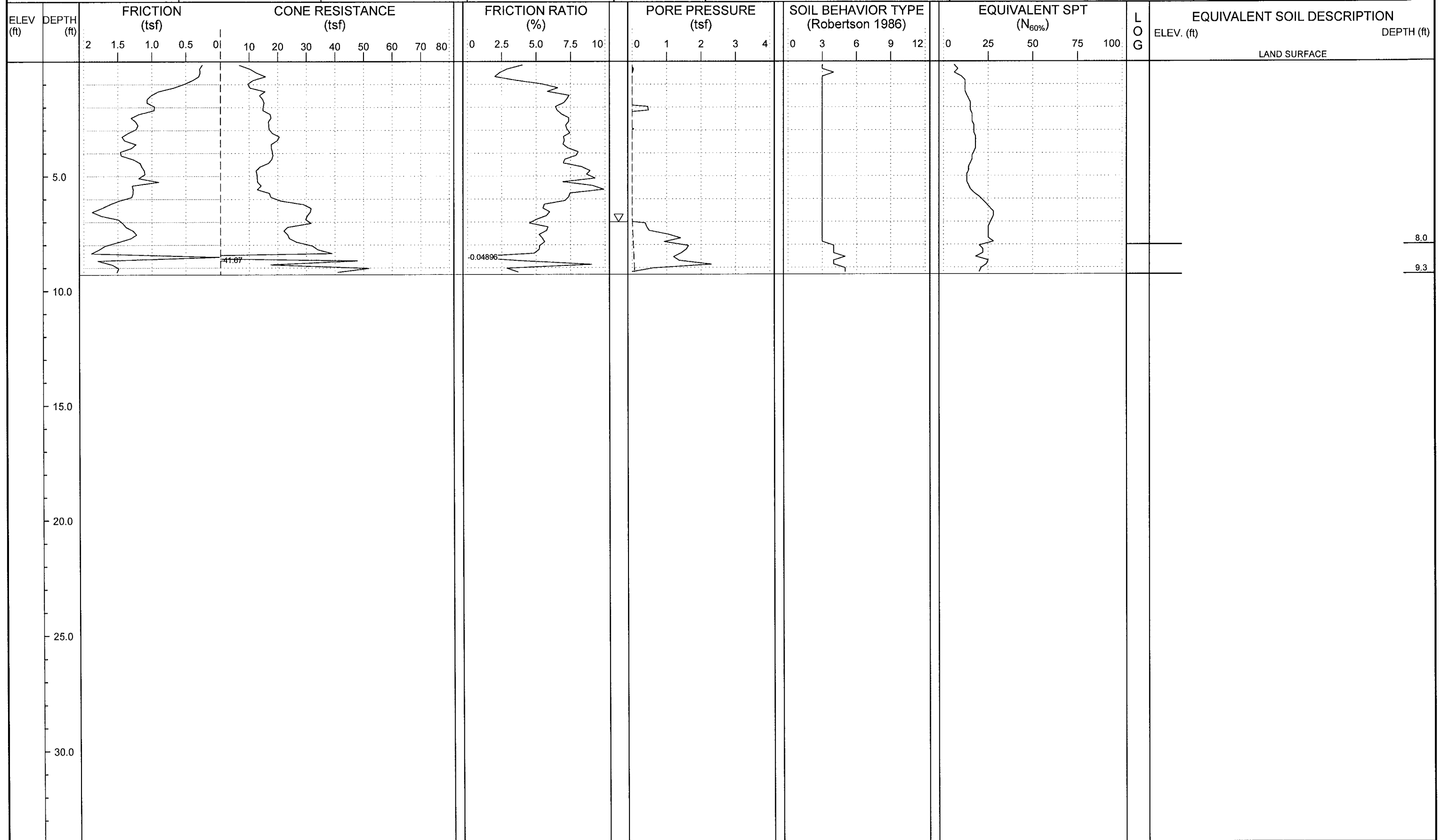






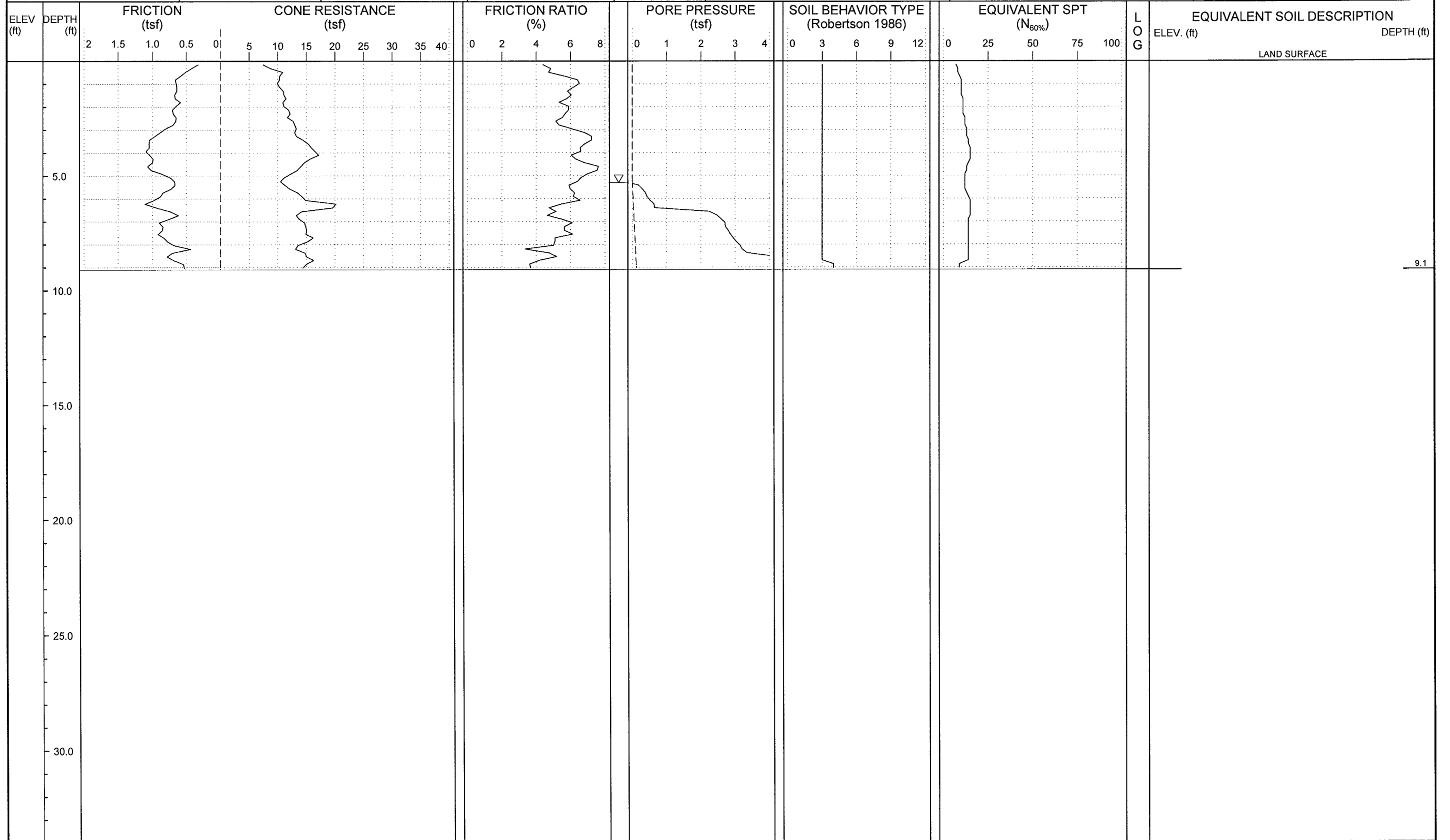


PROJECT NO.: 34441.1.1	ID.: R-2514D	COUNTY: Jones/Craven	GEOLOGIST: Steven Hudson	DRILL MACHINE: Hogentogler Track	MAX. DOWN PRESSURE: 10,000
SITE DESCRIPTION: US 17 from South of NC 58 to the New Bern Bypass				GROUND WTR (ft): 0 HR. 7.0	DRILL METHOD: Direct Push
BORING NO.: Y8A-1500	STATION: 15+00	OFFSET: 0ft CL	ALIGNMENT: -Y8A-	ROD TYPE: Pre-Strung	CONE TYPE: Piezo
COLLAR ELEV.: N/A	TOTAL DEPTH: 9.3 ft	NORTHING: 482,439	EASTING: 2,536,632	START DATE: 12/08/11	CONE ID: DSA1123
				24 HR. FIAD	DRILLER: Cory Robinson
					TECHNICIAN: M.A.D.
					SURFACE WATER DEPTH: N/A
					COMP. DATE: 12/08/11





PROJECT NO.: 34441.1.1	ID.: R-2514D	COUNTY: Jones/Craven	GEOLOGIST: Steven Hudson	DRILL MACHINE: Hogentogler Track	MAX. DOWN PRESSURE: 10,000
SITE DESCRIPTION: US 17 from South of NC 58 to the New Bern Bypass				GROUND WTR (ft): 0 HR. 5.3	DRILL METHOD: Direct Push
BORING NO.: Y8A-1900	STATION: 19+00	OFFSET: 0ft CL	ALIGNMENT: -Y8A-	ROD TYPE: Pre-Strung	CONE TYPE: Piezo
COLLAR ELEV.: N/A	TOTAL DEPTH: 9.1 ft	NORTHING: 482,742	EASTING: 2,536,893	24 HR. FIAD	DRILLER: Cory Robinson
				START DATE: 12/08/11	CONE ID: DSA1123
					TECHNICIAN: M.A.D.
					COMP. DATE: 12/08/11
					SURFACE WATER DEPTH: N/A



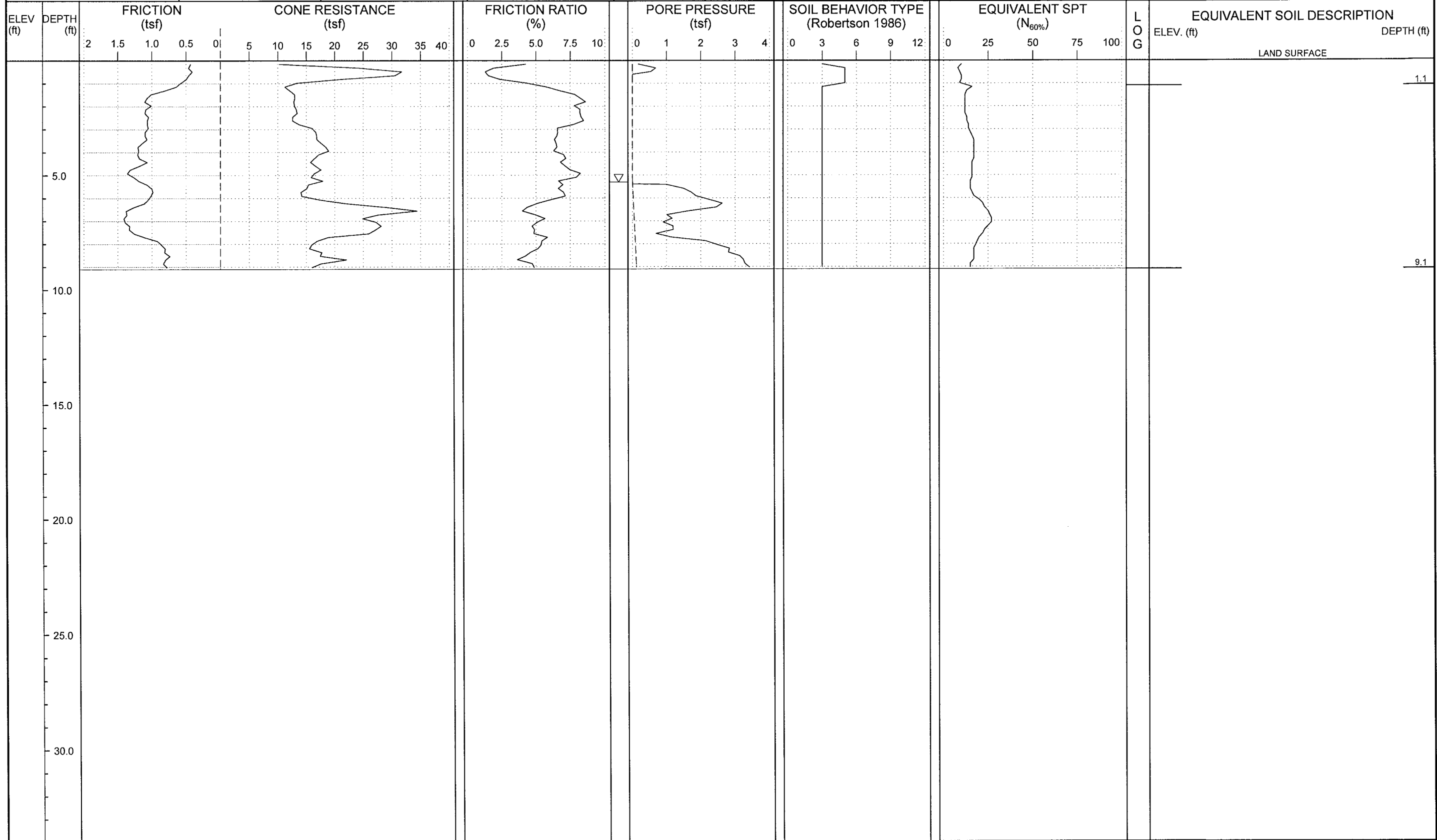






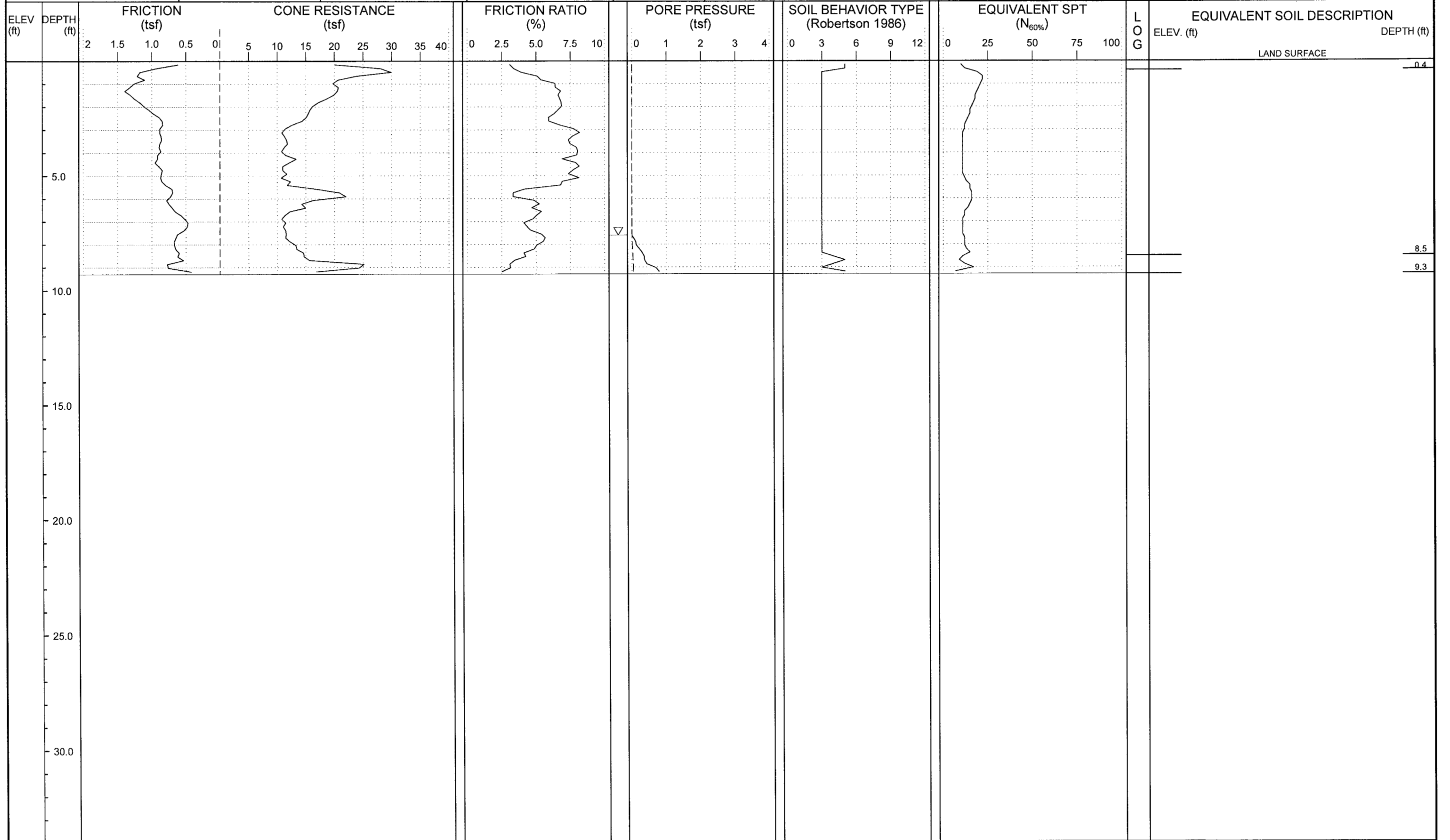


PROJECT NO.: 34441.1.1	ID.: R-2514D	COUNTY: Jones/Craven	GEOLOGIST: Steven Hudson	DRILL MACHINE: Hogentogler Track	MAX. DOWN PRESSURE: 10,000
SITE DESCRIPTION: US 17 from South of NC 58 to the New Bern Bypass			GROUND WTR (ft)	DRILL METHOD: Direct Push	CONE TYPE: Piezo
BORING NO.: Y8A-2700	STATION: 27+00	OFFSET: 0ft CL	ALIGNMENT: -Y8A-	0 HR. 5.3	ROD TYPE: Pre-Strung
COLLAR ELEV.: N/A	TOTAL DEPTH: 9.1 ft	NORTHING: 483,315	EASTING: 2,537,451	24 HR. FIAD	START DATE: 12/08/11
				CONE ID: DSA1123	DRILLER: Cory Robinson
				COMP. DATE: 12/08/11	TECHNICIAN: M.A.D.
				SURFACE WATER DEPTH: N/A	





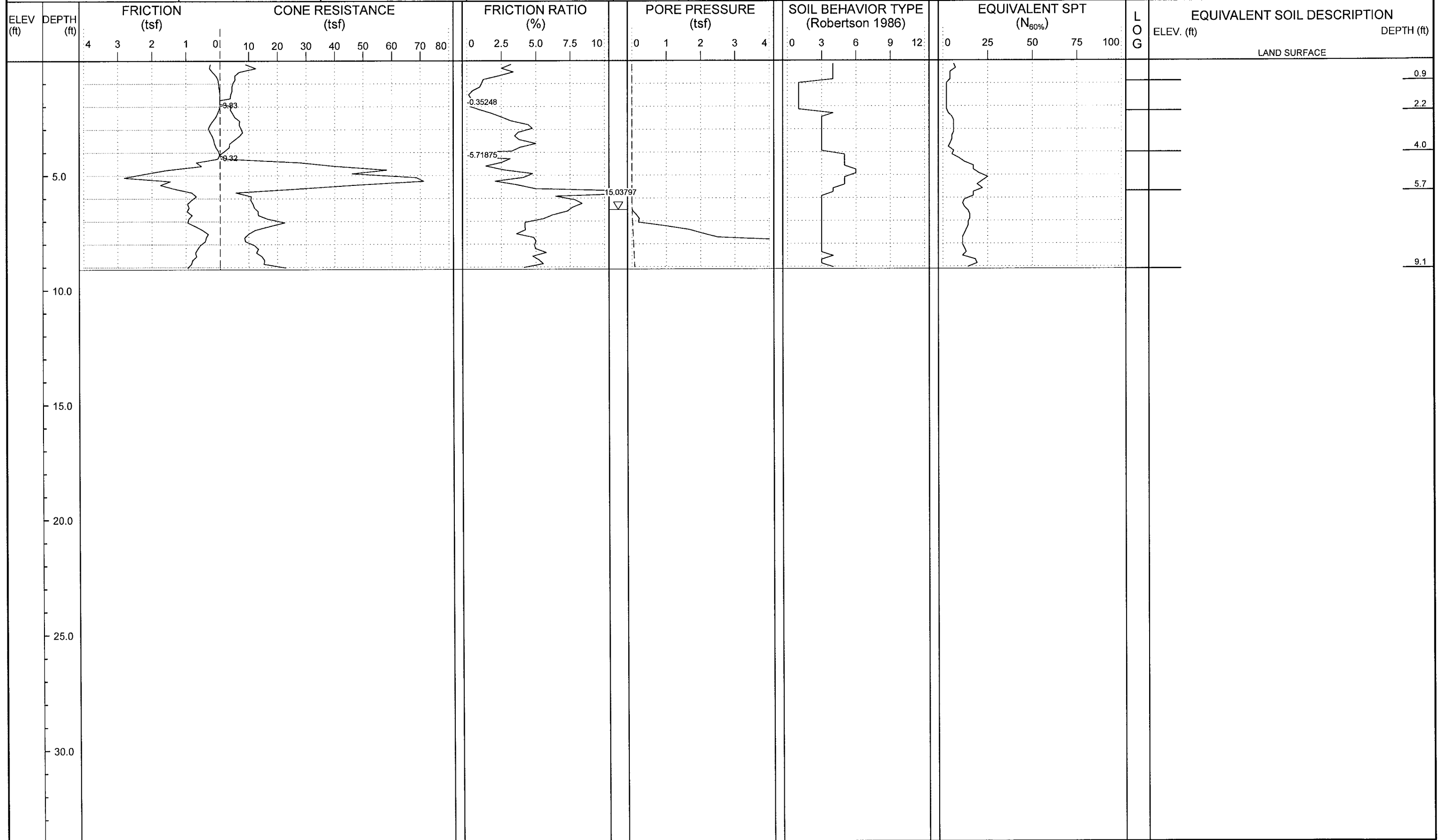
PROJECT NO.: 34441.1.1	ID.: R-2514D	COUNTY: Jones/Craven	GEOLOGIST: Steven Hudson	DRILL MACHINE: Hogentogler Track	MAX. DOWN PRESSURE: 10,000		
SITE DESCRIPTION: US 17 from South of NC 58 to the New Bern Bypass				GROUND WTR (ft)	DRILL METHOD: Direct Push	CONE TYPE: Piezo	DRILLER: Cory Robinson
BORING NO.: Y8A-3100	STATION: 31+00	OFFSET: 0ft CL	ALIGNMENT: -Y8A-	0 HR. 7.6	ROD TYPE: Pre-Strung	CONE ID: DSA1123	TECHNICIAN: M.A.D.
COLLAR ELEV.: N/A	TOTAL DEPTH: 9.3 ft	NORTHING: 483,585	EASTING: 2,537,746	24 HR. FIAD	START DATE: 12/07/11	COMP. DATE: 12/07/11	SURFACE WATER DEPTH: N/A







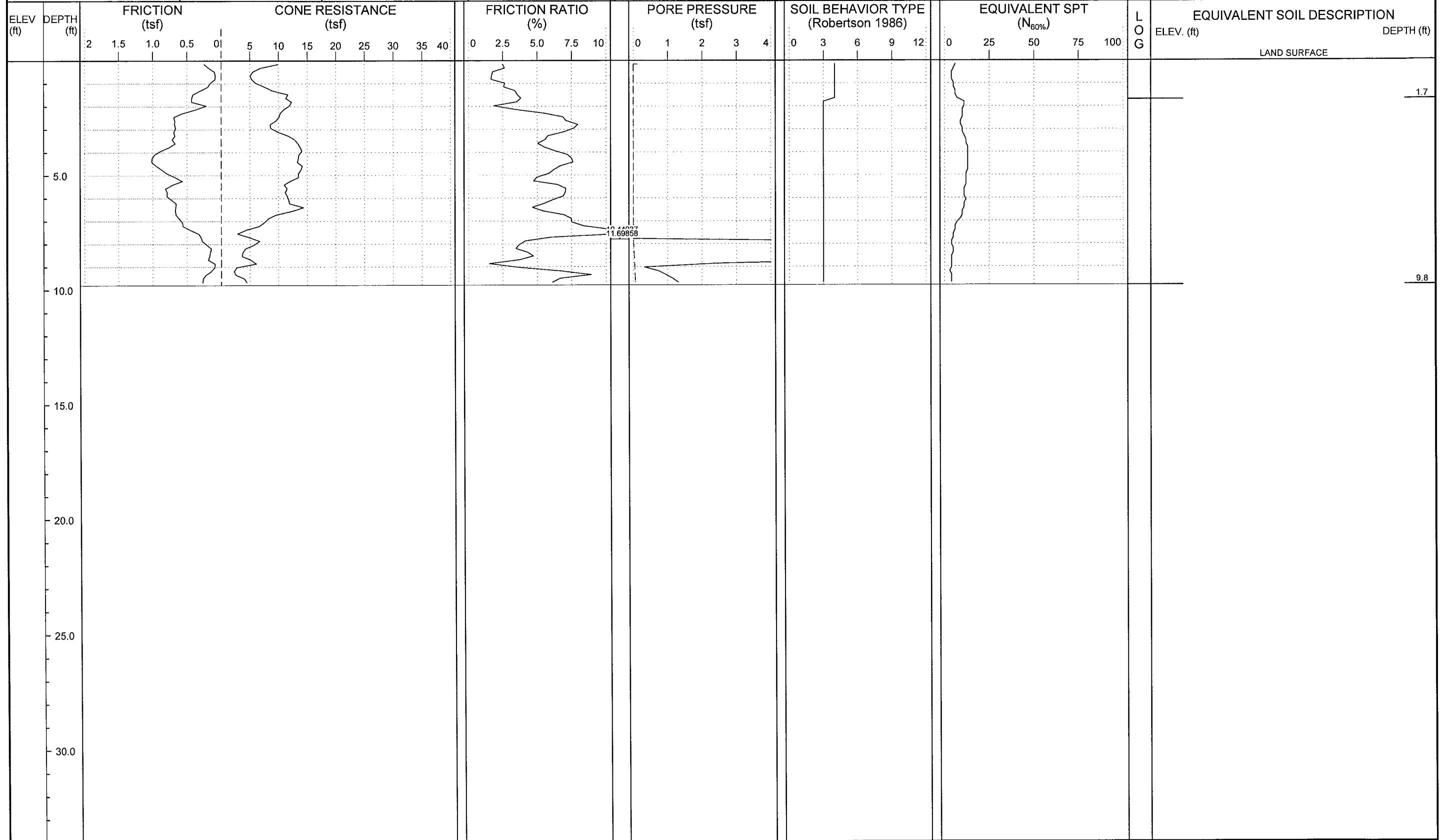
PROJECT NO.: 34441.1.1	ID.: R-2514D	COUNTY: Jones/Craven	GEOLOGIST: Steven Hudson	DRILL MACHINE: Hogentogler Track	MAX. DOWN PRESSURE: 10,000
SITE DESCRIPTION: US 17 from South of NC 58 to the New Bern Bypass			GROUND WTR (ft)	DRILL METHOD: Direct Push	CONE TYPE: Piezo
BORING NO.: Y8A-3700	STATION: 37+00	OFFSET: 0ft CL	ALIGNMENT: -Y8A-	0 HR. 6.5	ROD TYPE: Pre-Strung
COLLAR ELEV.: N/A	TOTAL DEPTH: 9.1 ft	NORTHING: 483,966	EASTING: 2,538,209	24 HR. FIAD	START DATE: 12/07/11
				CONC. DATE: 12/07/11	DRILLER: Cory Robinson
				TECHNICIAN: M.A.D.	
				SURFACE WATER DEPTH: N/A	







PROJECT NO.: 34441.1.1	ID.: R-2514D	COUNTY: Jones/Craven	GEOLOGIST: Steven Hudson	DRILL MACHINE: Hogentogler Track	MAX. DOWN PRESSURE: 10,000
SITE DESCRIPTION: US 17 from South of NC 58 to the New Bern Bypass				GROUND WTR (ft): 0 HR. 7.8	DRILL METHOD: Direct Push
BORING NO.: Y8A-4300	STATION: 43+00	OFFSET: 0ft CL	ALIGNMENT: -Y8A-	ROD TYPE: Pre-Strung	CONE TYPE: Piezo
COLLAR ELEV.: N/A	TOTAL DEPTH: 9.8 ft	NORTHING: 484,320	EASTING: 2,538,694	24 HR. FIAD	START DATE: 12/07/11
				CONC. DATE: 12/07/11	DRILLER: Cory Robinson
				TECHNICIAN: M.A.D.	
				SURFACE WATER DEPTH: N/A	





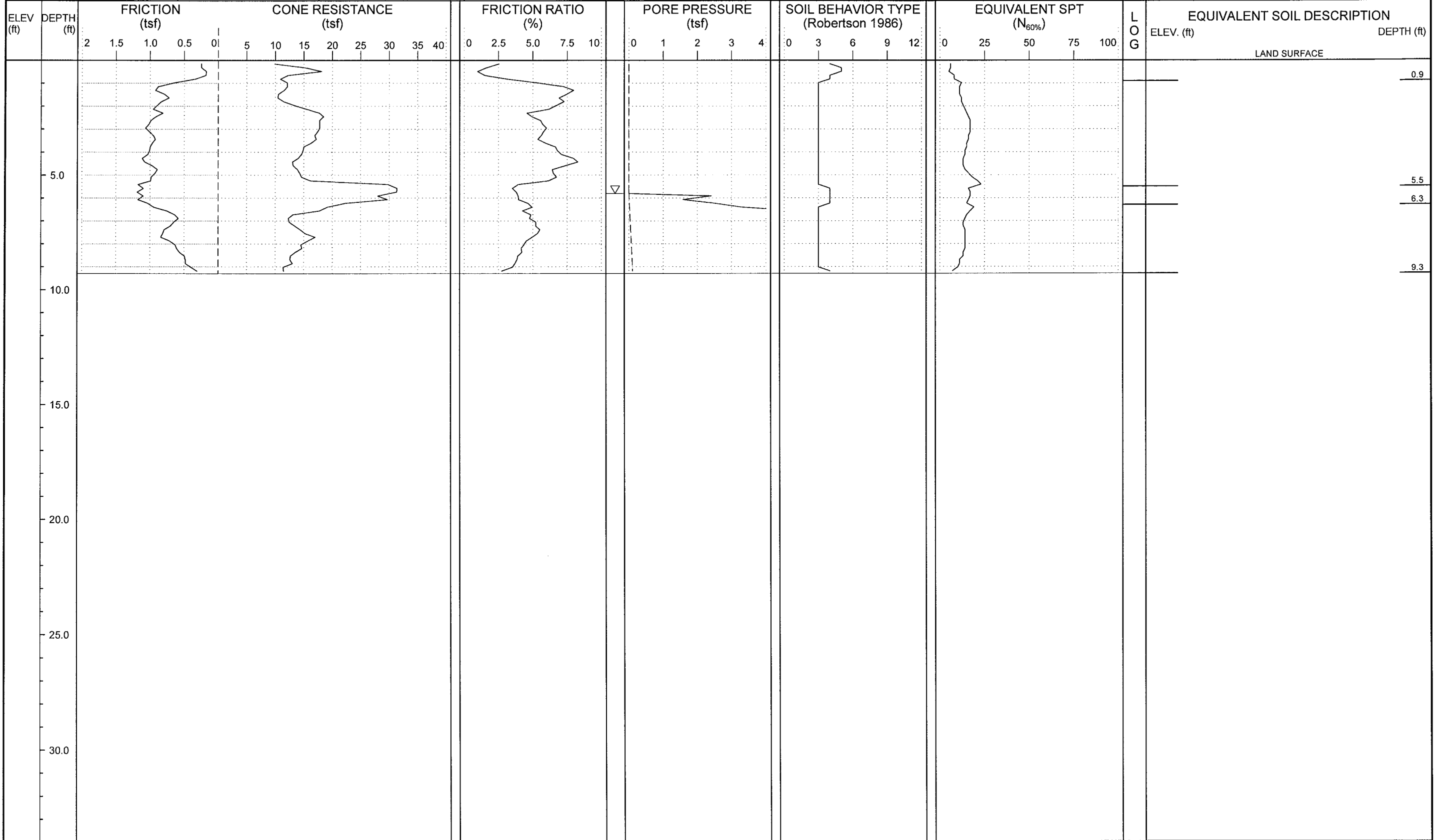








PROJECT NO.: 34441.1.1	ID.: R-2514D	COUNTY: Jones/Craven	GEOLOGIST: Steven Hudson	DRILL MACHINE: Hogentogler Track	MAX. DOWN PRESSURE: 10,000
SITE DESCRIPTION: US 17 from South of NC 58 to the New Bern Bypass			GROUND WTR (ft)	DRILL METHOD: Direct Push	CONE TYPE: Piezo
BORING NO.: Y8A-5500	STATION: 55+00	OFFSET: 0ft CL	ALIGNMENT: -Y8A-	0 HR. 5.8	ROD TYPE: Pre-Strung
COLLAR ELEV.: N/A	TOTAL DEPTH: 9.3 ft	NORTHING: 484,983	EASTING: 2,539,694	24 HR. FIAD	START DATE: 12/06/11
				CONC. DATE: 12/06/11	DRILLER: Cory Robinson
					TECHNICIAN: M.A.D.
					SURFACE WATER DEPTH: N/A





PROJECT NO.: 34441.1.1	ID.: R-2514D	COUNTY: Jones/Craven	GEOLOGIST: Steven Hudson	DRILL MACHINE: Hogentogler Track	MAX. DOWN PRESSURE: 10,000
SITE DESCRIPTION: US 17 from South of NC 58 to the New Bern Bypass				GROUND WTR (ft): 0 HR. N/A	DRILL METHOD: Direct Push
BORING NO.: Y8A-5700	STATION: 57+00	OFFSET: 0ft CL	ALIGNMENT: -Y8A-	ROD TYPE: Pre-Strung	CONE TYPE: Piezo
COLLAR ELEV.: N/A	TOTAL DEPTH: 9.1 ft	NORTHING: 485,155	EASTING: 2,539,785	24 HR. FIAD	DRILLER: Cory Robinson
				START DATE: 12/06/11	CONE ID: DSA1123
				COMP. DATE: 12/06/11	
				TECHNICIAN: M.A.D.	
				SURFACE WATER DEPTH: N/A	

