

REFERENCE: R-2582A

PROJECT: 34472

SEE SHEET 3 FOR PLAN SHEET LAYOUT
AT TIME OF INVESTIGATION

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

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	R-2582A	1	260

ROADWAY SUBSURFACE INVESTIGATION

COUNTY NORTHAMPTON
PROJECT DESCRIPTION US 158 FROM I-95/NC 46 IN
ROANOKE RAPIDS TO SR 1312 (ST. JOHN CHURCH
RD)

INVENTORY

CAUTION NOTICE

THE SUBSURFACE INFORMATION AND THE SUBSURFACE INVESTIGATION ON WHICH IT IS BASED WERE MADE FOR THE PURPOSE OF STUDY, PLANNING AND DESIGN, AND NOT FOR CONSTRUCTION OR PAY PURPOSES. THE VARIOUS FIELD BORING LOGS, ROCK CORES AND SOIL TEST DATA AVAILABLE MAY BE REVIEWED OR INSPECTED IN RALEIGH BY CONTACTING THE N. C. DEPARTMENT OF TRANSPORTATION, GEOTECHNICAL ENGINEERING UNIT AT (919) 707-6850. THE SUBSURFACE PLANS AND REPORTS, FIELD BORING LOGS, ROCK CORES AND SOIL TEST DATA ARE NOT PART OF THE CONTRACT.

GENERAL SOIL AND ROCK STRATA DESCRIPTIONS AND INDICATED BOUNDARIES ARE BASED ON A GEOTECHNICAL INTERPRETATION OF ALL AVAILABLE SUBSURFACE DATA AND MAY NOT NECESSARILY REFLECT THE ACTUAL SUBSURFACE CONDITIONS BETWEEN BORINGS OR BETWEEN SAMPLED STRATA WITHIN THE BOREHOLE. THE LABORATORY SAMPLE DATA AND THE IN SITU (IN-PLACE) TEST DATA CAN BE RELIED ON ONLY TO THE DEGREE OF RELIABILITY INHERENT IN THE STANDARD TEST METHOD. THE OBSERVED WATER LEVELS OR SOIL MOISTURE CONDITIONS INDICATED IN THE SUBSURFACE INVESTIGATIONS ARE AS RECORDED AT THE TIME OF THE INVESTIGATION. THESE WATER LEVELS OR SOIL MOISTURE CONDITIONS MAY VARY CONSIDERABLY WITH TIME ACCORDING TO CLIMATIC CONDITIONS INCLUDING TEMPERATURES, PRECIPITATION AND WIND, AS WELL AS OTHER NON-CLIMATIC FACTORS.

THE BIDDER OR CONTRACTOR IS CAUTIONED THAT DETAILS SHOWN ON THE SUBSURFACE PLANS ARE PRELIMINARY ONLY AND IN MANY CASES THE FINAL DESIGN DETAILS ARE DIFFERENT. FOR BIDDING AND CONSTRUCTION PURPOSES, REFER TO THE CONSTRUCTION PLANS AND DOCUMENTS FOR FINAL DESIGN INFORMATION ON THIS PROJECT. THE DEPARTMENT DOES NOT WARRANT OR GUARANTEE THE SUFFICIENCY OR ACCURACY OF THE INVESTIGATION MADE, NOR THE INTERPRETATIONS MADE, OR OPINION OF THE DEPARTMENT AS TO THE TYPE OF MATERIALS AND CONDITIONS TO BE ENCOUNTERED. THE BIDDER OR CONTRACTOR IS CAUTIONED TO MAKE SUCH INDEPENDENT SUBSURFACE INVESTIGATIONS AS HE DEEMS NECESSARY TO SATISFY HIMSELF AS TO CONDITIONS TO BE ENCOUNTERED ON THE PROJECT. THE CONTRACTOR SHALL HAVE NO CLAIM FOR ADDITIONAL COMPENSATION OR FOR AN EXTENSION OF TIME FOR ANY REASON RESULTING FROM THE ACTUAL CONDITIONS ENCOUNTERED AT THE SITE DIFFERING FROM THOSE INDICATED IN THE SUBSURFACE INFORMATION.

- NOTES:
1. THE INFORMATION CONTAINED HEREIN IS NOT IMPLIED OR GUARANTEED BY THE N. C. DEPARTMENT OF TRANSPORTATION AS ACCURATE NOR IS IT CONSIDERED PART OF THE PLANS, SPECIFICATIONS OR CONTRACT FOR THE PROJECT.
 2. 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.

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PERSONNEL

C.M. WRIKE

R.E. SMITH

S&ME PERSONNEL

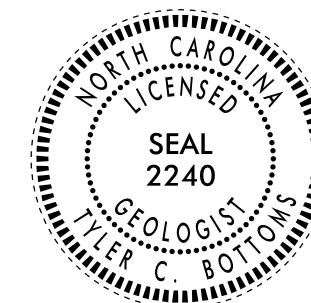
INVESTIGATED BY T.C. BOTTOMS

DRAWN BY C.P. TURNER

CHECKED BY D.N. ARGENBRIGHT

SUBMITTED BY D.N. ARGENBRIGHT

DATE OCTOBER 2014



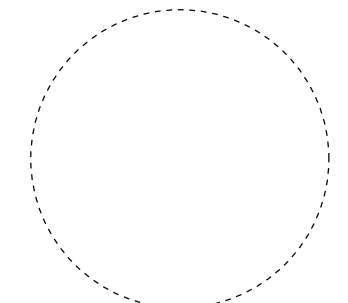
DocuSigned by:

Tyler C. Bottoms

3/11/2015

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DATE



SIGNATURE

DATE

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

SOIL DESCRIPTION

SOIL IS CONSIDERED 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 THE STANDARD PENETRATION TEST (AASHTO T 206, ASTM D1586). SOIL CLASSIFICATION IS BASED ON THE AASHTO SYSTEM. BASIC DESCRIPTIONS GENERALLY INCLUDE THE FOLLOWING: CONSISTENCY, COLOR, TEXTURE, MOISTURE, AASHTO CLASSIFICATION, AND OTHER PERTINENT FACTORS SUCH AS MINERALOGICAL COMPOSITION, ANGULARITY, STRUCTURE, PLASTICITY, ETC. FOR EXAMPLE, *VERY STIFF, GRAY, SILTY CLAY, MOIST WITH INTERBEDDED FINE SAND LAYERS, HIGHLY PLASTIC, A-7-6*

SOIL LEGEND AND AASHTO CLASSIFICATION

GENERAL CLASS.	GRANULAR MATERIALS (≤ 35% PASSING #200)						SILT-CLAY MATERIALS (> 35% PASSING #200)						ORGANIC MATERIALS					
GROUP CLASS.	A-1		A-3		A-2		A-4		A-5		A-6		A-7		A-1, A-2, A-3, A-4, A-5, A-6, A-7			
SYMBOL	A-1-a		A-1-b		A-2-4		A-2-5		A-2-6		A-2-7		A-7-5, A-7-6					
% PASSING #10 #40 #200	50 MX 30 MX 15 MX	50 MX 25 MX	51 MN	35 MX	35 MX	35 MX	35 MX	35 MX	36 MN	36 MN	36 MN	36 MN	36 MN	36 MN	GRANULAR SOILS	SILT-CLAY SOILS	MUCK, PEAT	
MATERIAL PASSING #40 LL PI	-		6 MX	NP	40 MX	41 MN	40 MX	41 MN	40 MX	41 MN	40 MX	41 MN	40 MX	41 MN	SOILS WITH LITTLE OR MODERATE AMOUNTS OF ORGANIC MATTER			
GROUP INDEX	0		0	0	4 MX		8 MX	12 MX	16 MX	NO MX			HIGHLY ORGANIC SOILS					
USUAL TYPES OF MAJOR MATERIALS	STONE FRAGS. GRAVEL, AND SAND		FINE SAND	SILTY OR CLAYEY GRAVEL AND SAND		SILTY SOILS		CLAYEY SOILS										
GEN. RATING AS SUBGRADE	EXCELLENT TO GOOD						FAIR TO POOR						FAIR TO POOR	POOR	UNSUITABLE			

PI OF A-7-5 SUBGROUP IS ≤ LL - 30 ; PI OF A-7-6 SUBGROUP IS > LL - 30

CONSISTENCY OR DENSENESS

PRIMARY SOIL TYPE	COMPACTNESS OR CONSISTENCY	RANGE OF STANDARD PENETRATION RESISTANCE (N-VALUE)	RANGE OF UNCONFINED COMPRESSIVE STRENGTH (TONS/FT ²)
GENERALLY GRANULAR MATERIAL (NON-COHESIVE)	VERY LOOSE LOOSE MEDIUM DENSE DENSE VERY DENSE	< 4 4 TO 10 10 TO 30 30 TO 50 > 50	N/A
GENERALLY SILT-CLAY MATERIAL (COHESIVE)	VERY SOFT SOFT MEDIUM STIFF STIFF VERY STIFF HARD	< 2 2 TO 4 4 TO 8 8 TO 15 15 TO 30 > 30	< 0.25 0.25 TO 0.5 0.5 TO 1.0 1 TO 2 2 TO 4 > 4

TEXTURE OR GRAIN SIZE

U.S. STD. SIEVE SIZE OPENING (MM)	4	10	40	60	200	270
	4.76	2.00	0.42	0.25	0.075	0.053
BOULDER (BLDR.)						
COBBLE (COB.)						
GRAVEL (GR.)						
COARSE SAND (CS, SD.)						
FINE SAND (F SD.)						
SILT (SL.)						
CLAY (CL.)						

GRAIN SIZE MM 305 75 2.0 0.25 0.05 0.005
IN. 12 3

SOIL MOISTURE - CORRELATION OF TERMS

SOIL MOISTURE SCALE (ATTERBERG LIMITS)	FIELD MOISTURE DESCRIPTION	GUIDE FOR FIELD MOISTURE DESCRIPTION
LL - LIQUID LIMIT	- SATURATED - (SAT.)	USUALLY LIQUID; VERY WET, USUALLY FROM BELOW THE GROUND WATER TABLE
PLASTIC RANGE (PI)	- WET - (W)	SEMISOLID; REQUIRES DRYING TO ATTAIN OPTIMUM MOISTURE
OM - OPTIMUM MOISTURE SHRINKAGE LIMIT	- MOIST - (M)	SOLID; AT OR NEAR OPTIMUM MOISTURE
SL - SHRINKAGE LIMIT	- DRY - (D)	REQUIRES ADDITIONAL WATER TO ATTAIN OPTIMUM MOISTURE

PLASTICITY

	PLASTICITY INDEX (PI)	DRY STRENGTH
NON PLASTIC	0-5	VERY LOW
SLIGHTLY PLASTIC	6-15	SLIGHT
MODERATELY PLASTIC	16-25	MEDIUM
HIGHLY PLASTIC	26 OR MORE	HIGH

COLOR

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.

GRADATION

WELL GRADED - INDICATES A GOOD REPRESENTATION OF PARTICLE SIZES FROM FINE TO COARSE.
 UNIFORMLY GRADED - INDICATES THAT SOIL PARTICLES ARE ALL APPROXIMATELY THE SAME SIZE.
 GAP-GRADED - INDICATES A MIXTURE OF UNIFORM PARTICLE SIZES OF TWO OR MORE SIZES.

ANGULARITY OF GRAINS

THE ANGULARITY OR ROUNDNESS OF SOIL GRAINS IS DESIGNATED BY THE TERMS: ANGULAR, SUBANGULAR, SUBROUNDED, OR ROUNDED.

MINERALOGICAL COMPOSITION

MINERAL NAMES SUCH AS QUARTZ, FELDSPAR, MICA, TALC, KAOLIN, ETC. ARE USED IN DESCRIPTIONS WHEN THEY ARE CONSIDERED OF SIGNIFICANCE.

COMPRESSIBILITY

SLIGHTLY COMPRESSIBLE	LL < 31
MODERATELY COMPRESSIBLE	LL = 31 - 50
HIGHLY COMPRESSIBLE	LL > 50

PERCENTAGE OF MATERIAL

	GRANULAR SOILS	SILT - CLAY SOILS	OTHER MATERIAL
TRACE OF ORGANIC MATTER	2 - 3%	3 - 5%	TRACE 1 - 10%
LITTLE ORGANIC MATTER	3 - 5%	5 - 12%	LITTLE 10 - 20%
MODERATELY ORGANIC	5 - 10%	12 - 20%	SOME 20 - 35%
HIGHLY ORGANIC	> 10%	> 20%	HIGHLY 35% AND ABOVE

GROUND WATER

▽ WATER LEVEL IN BORE HOLE IMMEDIATELY AFTER DRILLING
 ▽ STATIC WATER LEVEL AFTER 24 HOURS
 ▽PW PERCHED WATER, SATURATED ZONE, OR WATER BEARING STRATA
 ○ SPRING OR SEEP

MISCELLANEOUS SYMBOLS

	ROADWAY EMBANKMENT (RE) WITH SOIL DESCRIPTION		DIP & DIP DIRECTION OF ROCK STRUCTURES
	SOIL SYMBOL		TEST BORING
	ARTIFICIAL FILL (AF) OTHER THAN ROADWAY EMBANKMENT		AUGER BORING
	INFERRED SOIL BOUNDARY		CORE BORING
	INFERRED ROCK LINE		MONITORING WELL
	ALLUVIAL SOIL BOUNDARY		PIEZOMETER INSTALLATION
			SLOPE INDICATOR INSTALLATION
			CONE PENETROMETER TEST
			SOUNDING ROD
			TEST BORING WITH CORE
			SPT N-VALUE

RECOMMENDATION SYMBOLS

	UNDERCUT EXCAVATION		UNCLASSIFIED EXCAVATION - UNSUITABLE WASTE		UNCLASSIFIED EXCAVATION - ACCEPTABLE ROCK
	SHALLOW UNDERCUT				

ABBREVIATIONS

AR - AUGER REFUSAL	MED. - MEDIUM	VST - VANE SHEAR TEST
BT - BORING TERMINATED	MICA - MICACEOUS	WEA. - WEATHERED
CL - CLAY	MOD. - MODERATELY	W - UNIT WEIGHT
CPT - CONE PENETRATION TEST	NP - NON PLASTIC	W _d - DRY UNIT WEIGHT
CSE - COARSE	ORG. - ORGANIC	
DMT - DILATOMETER TEST	PMT - PRESSUREMETER TEST	SAMPLE ABBREVIATIONS
DPT - DYNAMIC PENETRATION TEST	SAP. - SAPROLITIC	S - BULK
e - VOID RATIO	SD. - SAND, SANDY	SS - SPLIT SPOON
F - FINE	SL. - SILTY, SILTY	ST - SHELBY TUBE
FOSS. - FOSSILIFEROUS	SLI. - SLIGHTLY	RS - ROCK
FRAC. - FRACTURED, FRACTURES	TCR - TRICONE REFUSAL	RT - RECOMPACTED TRIAXIAL
FRAGS. - FRAGMENTS	w - MOISTURE CONTENT	CBR - CALIFORNIA BEARING RATIO
HI. - HIGHLY	V - VERY	

EQUIPMENT USED ON SUBJECT PROJECT

DRILL UNITS:	ADVANCING TOOLS:	HAMMER TYPE:
<input type="checkbox"/> CME-45C	<input type="checkbox"/> CLAY BITS	<input checked="" type="checkbox"/> AUTOMATIC <input type="checkbox"/> MANUAL
<input checked="" type="checkbox"/> CME-55	<input type="checkbox"/> 6" CONTINUOUS FLIGHT AUGER	CORE SIZE:
<input type="checkbox"/> CME-550	<input type="checkbox"/> 8" HOLLOW AUGERS	<input type="checkbox"/> -B <input type="checkbox"/> -H
<input type="checkbox"/> VANE SHEAR TEST	<input type="checkbox"/> HARD FACED FINGER BITS	<input type="checkbox"/> -N
<input type="checkbox"/> PORTABLE HOIST	<input type="checkbox"/> TUNG-CARBIDE INSERTS	HAND TOOLS:
<input checked="" type="checkbox"/> CPT-ATV	<input checked="" type="checkbox"/> CASING <input type="checkbox"/> w/ ADVANCER	<input type="checkbox"/> POST HOLE DIGGER
	<input checked="" type="checkbox"/> TRICONE 2 15/16" STEEL TEETH	<input checked="" type="checkbox"/> HAND AUGER
	<input type="checkbox"/> TRICONE " TUNG-CARB.	<input type="checkbox"/> SOUNDING ROD
	<input type="checkbox"/> CORE BIT	<input type="checkbox"/> VANE SHEAR TEST

ROCK DESCRIPTION

HARD ROCK IS NON-COASTAL PLAIN MATERIAL THAT WOULD YIELD SPT REFUSAL IF TESTED, AN INFERRED ROCK LINE INDICATES THE LEVEL AT WHICH NON-COASTAL PLAIN MATERIAL WOULD YIELD SPT REFUSAL. SPT REFUSAL IS PENETRATION BY A SPLIT SPOON SAMPLER EQUAL TO OR LESS THAN 0.1 FOOT PER 60 BLOWS IN NON-COASTAL PLAIN MATERIAL. THE TRANSITION BETWEEN SOIL AND ROCK IS OFTEN REPRESENTED BY A ZONE OF WEATHERED ROCK. ROCK MATERIALS ARE TYPICALLY DIVIDED AS FOLLOWS:

	WEATHERED ROCK (WR)	NON-COASTAL PLAIN MATERIAL THAT WOULD YIELD SPT N VALUES > 100 BLOWS PER FOOT IF TESTED.
	CRYSTALLINE ROCK (CR)	FINE TO COARSE GRAIN IGNEOUS AND METAMORPHIC ROCK THAT WOULD YIELD SPT REFUSAL IF TESTED. ROCK TYPE INCLUDES GRANITE, GNEISS, GABBRO, SCHIST, ETC.
	NON-CRYSTALLINE ROCK (NCR)	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.
	COASTAL PLAIN SEDIMENTARY ROCK (CP)	COASTAL PLAIN SEDIMENTS CEMENTED INTO ROCK, BUT MAY NOT YIELD SPT REFUSAL. ROCK TYPE INCLUDES LIMESTONE, SANDSTONE, CEMENTED SHELL BEDS, ETC.

WEATHERING

FRESH ROCK FRESH, CRYSTALS BRIGHT, FEW JOINTS MAY SHOW SLIGHT STAINING. ROCK RINGS UNDER HAMMER IF CRYSTALLINE.

VERY SLIGHT (V SLI.) ROCK GENERALLY FRESH, JOINTS STAINED, SOME JOINTS MAY SHOW THIN CLAY COATINGS IF OPEN. CRYSTALS ON A BROKEN SPECIMEN FACE SHINE BRIGHTLY. ROCK RINGS UNDER HAMMER BLOWS IF OF A CRYSTALLINE NATURE.

SLIGHT (SLI.) ROCK GENERALLY FRESH, JOINTS STAINED AND DISCOLORATION EXTENDS INTO ROCK UP TO 1 INCH. OPEN JOINTS MAY CONTAIN CLAY. IN GRANITOID ROCKS SOME OCCASIONAL FELDSPAR CRYSTALS ARE DULL AND DISCOLORED. CRYSTALLINE ROCKS RING UNDER HAMMER BLOWS.

MODERATE (MOD.) SIGNIFICANT PORTIONS OF ROCK SHOW DISCOLORATION AND WEATHERING EFFECTS. IN GRANITOID ROCKS, MOST FELDSPARS ARE DULL AND DISCOLORED, SOME SHOW CLAY. ROCK HAS DULL SOUND UNDER HAMMER BLOWS AND SHOWS SIGNIFICANT LOSS OF STRENGTH AS COMPARED WITH FRESH ROCK.

MODERATELY SEVERE (MOD. SEV.) ALL ROCK EXCEPT QUARTZ DISCOLORED OR STAINED. IN GRANITOID ROCKS, ALL FELDSPARS DULL AND DISCOLORED AND A MAJORITY SHOW KAOLINIZATION. ROCK SHOWS SEVERE LOSS OF STRENGTH AND CAN BE EXCAVATED WITH A GEOLOGIST'S PICK. ROCK GIVES "CLUNK" SOUND WHEN STRUCK. *IF TESTED, WOULD YIELD SPT REFUSAL*

SEVERE (SEV.) ALL ROCK EXCEPT QUARTZ DISCOLORED OR STAINED. ROCK FABRIC CLEAR AND EVIDENT BUT REDUCED IN STRENGTH TO STRONG SOIL. IN GRANITOID ROCKS ALL FELDSPARS ARE KAOLINIZED TO SOME EXTENT. SOME FRAGMENTS OF STRONG ROCK USUALLY REMAIN. *IF TESTED, WOULD YIELD SPT N VALUES > 100 BPF*

VERY SEVERE (V SEV.) ALL ROCK EXCEPT QUARTZ DISCOLORED OR STAINED. ROCK FABRIC ELEMENTS ARE DISCERNIBLE BUT MASS IS EFFECTIVELY REDUCED TO SOIL STATUS, WITH ONLY FRAGMENTS OF STRONG ROCK REMAINING. SAPROLITE IS AN EXAMPLE OF ROCK WEATHERED TO A DEGREE THAT ONLY MINOR VESTIGES OF ORIGINAL ROCK FABRIC REMAIN. *IF TESTED, WOULD YIELD SPT N VALUES < 100 BPF*

COMPLETE ROCK REDUCED TO SOIL. ROCK FABRIC NOT DISCERNIBLE, OR DISCERNIBLE ONLY IN SMALL AND SCATTERED CONCENTRATIONS. QUARTZ MAY BE PRESENT AS DIKES OR STRINGERS. SAPROLITE IS ALSO AN EXAMPLE.

ROCK HARDNESS

VERY HARD CANNOT BE SCRATCHED BY KNIFE OR SHARP PICK. BREAKING OF HAND SPECIMENS REQUIRES SEVERAL HARD BLOWS OF THE GEOLOGIST'S PICK.

HARD CAN BE SCRATCHED BY KNIFE OR PICK ONLY WITH DIFFICULTY. HARD HAMMER BLOWS REQUIRED TO DETACH HAND SPECIMEN.

MODERATELY HARD CAN BE SCRATCHED BY KNIFE OR PICK. GOUGES OR GROOVES TO 0.25 INCHES DEEP CAN BE EXCAVATED BY HARD BLOW OF A GEOLOGIST'S PICK. HAND SPECIMENS CAN BE DETACHED BY MODERATE BLOWS.

MEDIUM HARD CAN BE GROUDED OR GOUGED 0.05 INCHES DEEP BY FIRM PRESSURE OF KNIFE OR PICK POINT. CAN BE EXCAVATED IN SMALL CHIPS TO PIECES 1 INCH MAXIMUM SIZE BY HARD BLOWS OF THE POINT OF A GEOLOGIST'S PICK.

SOFT CAN BE GROUDED OR GOUGED READILY BY KNIFE OR PICK. CAN BE EXCAVATED IN FRAGMENTS FROM CHIPS TO SEVERAL INCHES IN SIZE BY MODERATE BLOWS OF A PICK POINT. SMALL, THIN PIECES CAN BE BROKEN BY FINGER PRESSURE.

VERY SOFT CAN BE CARVED WITH KNIFE. CAN BE EXCAVATED READILY WITH POINT OF PICK. PIECES 1 INCH OR MORE IN THICKNESS CAN BE BROKEN BY FINGER PRESSURE. CAN BE SCRATCHED READILY BY FINGERNAIL.

FRACTURE SPACING		BEDDING	
TERM	SPACING	TERM	THICKNESS
VERY WIDE	MORE THAN 10 FEET	VERY THICKLY BEDDED	4 FEET
WIDE	3 TO 10 FEET	THICKLY BEDDED	1.5 - 4 FEET
MODERATELY CLOSE	1 TO 3 FEET	THINLY BEDDED	0.16 - 1.5 FEET
CLOSE	0.16 TO 1 FOOT	VERY THINLY BEDDED	0.03 - 0.16 FEET
VERY CLOSE	LESS THAN 0.16 FEET	THICKLY LAMINATED	0.008 - 0.03 FEET
		THINLY LAMINATED	< 0.008 FEET

INDURATION

FOR SEDIMENTARY ROCKS, INDURATION IS THE HARDENING OF MATERIAL BY CEMENTING, HEAT, PRESSURE, ETC.

FRIABLE RUBBING WITH FINGER FREES NUMEROUS GRAINS; GENTLE BLOW BY HAMMER DISINTEGRATES SAMPLE.

MODERATELY INDURATED GRAINS CAN BE SEPARATED FROM SAMPLE WITH STEEL PROBE; BREAKS EASILY WHEN HIT WITH HAMMER.

INDURATED GRAINS ARE DIFFICULT TO SEPARATE WITH STEEL PROBE; DIFFICULT TO BREAK WITH HAMMER.

EXTREMELY INDURATED SHARP HAMMER BLOWS REQUIRED TO BREAK SAMPLE; SAMPLE BREAKS ACROSS GRAINS.

TERMS AND DEFINITIONS

ALLUVIUM (ALLUV.) - SOILS THAT HAVE BEEN TRANSPORTED BY WATER.

AQUIFER - A WATER BEARING FORMATION OR STRATA.

ARENACEOUS - APPLIED TO ROCKS THAT HAVE BEEN DERIVED FROM SAND OR THAT CONTAIN SAND.

ARGILLACEOUS - APPLIED TO ALL ROCKS OR SUBSTANCES COMPOSED OF CLAY MINERALS, OR HAVING A NOTABLE PROPORTION OF CLAY IN THEIR COMPOSITION, SUCH AS SHALE, SLATE, ETC.

ARTESIAN - GROUND WATER THAT IS UNDER SUFFICIENT PRESSURE TO RISE ABOVE THE LEVEL AT WHICH IT IS ENCOUNTERED, BUT WHICH DOES NOT NECESSARILY RISE TO OR ABOVE THE GROUND SURFACE.

CALCAREOUS (CALC.) - SOILS THAT CONTAIN APPRECIABLE AMOUNTS OF CALCIUM CARBONATE.

COLLUVIUM - ROCK FRAGMENTS MIXED WITH SOIL DEPOSITED BY GRAVITY ON SLOPE OR AT BOTTOM OF SLOPE.

CORE RECOVERY (REC.) - TOTAL LENGTH OF ALL MATERIAL RECOVERED IN THE CORE BARREL DIVIDED BY TOTAL LENGTH OF CORE RUN AND EXPRESSED AS A PERCENTAGE.

DIKE - A TABULAR BODY OF IGNEOUS ROCK THAT CUTS ACROSS THE STRUCTURE OF ADJACENT ROCKS OR CUTS MASSIVE ROCK.

DIP - THE ANGLE AT WHICH A STRATUM OR ANY PLANAR FEATURE IS INCLINED FROM THE HORIZONTAL.

DIP DIRECTION (DIP AZIMUTH) - THE DIRECTION OR BEARING OF THE HORIZONTAL TRACE OF THE LINE OF DIP, MEASURED CLOCKWISE FROM NORTH.

FAULT - A FRACTURE OR FRACTURE ZONE ALONG WHICH THERE HAS BEEN DISPLACEMENT OF THE SIDES RELATIVE TO ONE ANOTHER PARALLEL TO THE FRACTURE.

FISSILE - A PROPERTY OF SPLITTING ALONG CLOSELY SPACED PARALLEL PLANES.

FLOAT - ROCK FRAGMENTS ON SURFACE NEAR THEIR ORIGINAL POSITION AND DISLOGGED FROM PARENT MATERIAL.

FLOOD PLAIN (FP) - LAND BORDERING A STREAM, BUILT OF SEDIMENTS DEPOSITED BY THE STREAM.

FORMATION (FM) - A MAPPABLE GEOLOGIC UNIT THAT CAN BE RECOGNIZED AND TRACED IN THE FIELD.

JOINT - FRACTURE IN ROCK ALONG WHICH NO APPRECIABLE MOVEMENT HAS OCCURRED.

LEDGE - A SHELF-LIKE RIDGE OR PROJECTION OF ROCK WHOSE THICKNESS IS SMALL COMPARED TO ITS LATERAL EXTENT.

LENS - A BODY OF SOIL OR ROCK THAT THINS OUT IN ONE OR MORE DIRECTIONS.

MOTTLED (MOT.) - IRREGULARLY MARKED WITH SPOTS OF DIFFERENT COLORS. MOTTLING IN SOILS USUALLY INDICATES POOR AERATION AND LACK OF GOOD DRAINAGE.

PERCHED WATER - WATER MAINTAINED ABOVE THE NORMAL GROUND WATER LEVEL BY THE PRESENCE OF AN INTERVENING IMPERVIOUS STRATUM.

RESIDUAL (RES.) SOIL - SOIL FORMED IN PLACE BY THE WEATHERING OF ROCK.

ROCK QUALITY DESIGNATION (ROD) - A MEASURE OF ROCK QUALITY DESCRIBED BY TOTAL LENGTH OF ROCK SEGMENTS EQUAL TO OR GREATER THAN 4 INCHES DIVIDED BY THE TOTAL LENGTH OF CORE RUN AND EXPRESSED AS A PERCENTAGE.

SAPROLITE (SAP.) - RESIDUAL SOIL THAT RETAINS THE RELIC STRUCTURE OR FABRIC OF THE PARENT ROCK.

SILL - AN INTRUSIVE BODY OF IGNEOUS ROCK OF APPROXIMATELY UNIFORM THICKNESS AND RELATIVELY THIN COMPARED WITH ITS LATERAL EXTENT, THAT HAS BEEN EMPLACED PARALLEL TO THE BEDDING OR SCHISTOSITY OF THE INTRUDED ROCKS.

SLICKENSIDE - POLISHED AND STRIATED SURFACE THAT RESULTS FROM FRICTION ALONG A FAULT OR SLIP PLANE.

STANDARD PENETRATION TEST (PENETRATION RESISTANCE) (SPT) - NUMBER OF BLOWS (N OR BPF) OF A 140 LB. HAMMER FALLING 30 INCHES REQUIRED TO PRODUCE A PENETRATION OF 1 FOOT INTO SOIL WITH A 2 INCH OUTSIDE DIAMETER SPLIT SPOON SAMPLER. SPT REFUSAL IS PENETRATION EQUAL TO OR LESS THAN 0.1 FOOT PER 60 BLOWS.

STRATA CORE RECOVERY (SREC.) - TOTAL LENGTH OF STRATA MATERIAL RECOVERED DIVIDED BY TOTAL LENGTH OF STRATUM AND EXPRESSED AS A PERCENTAGE.

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.

TOPSOIL (TS.) - SURFACE SOILS USUALLY CONTAINING ORGANIC MATTER.

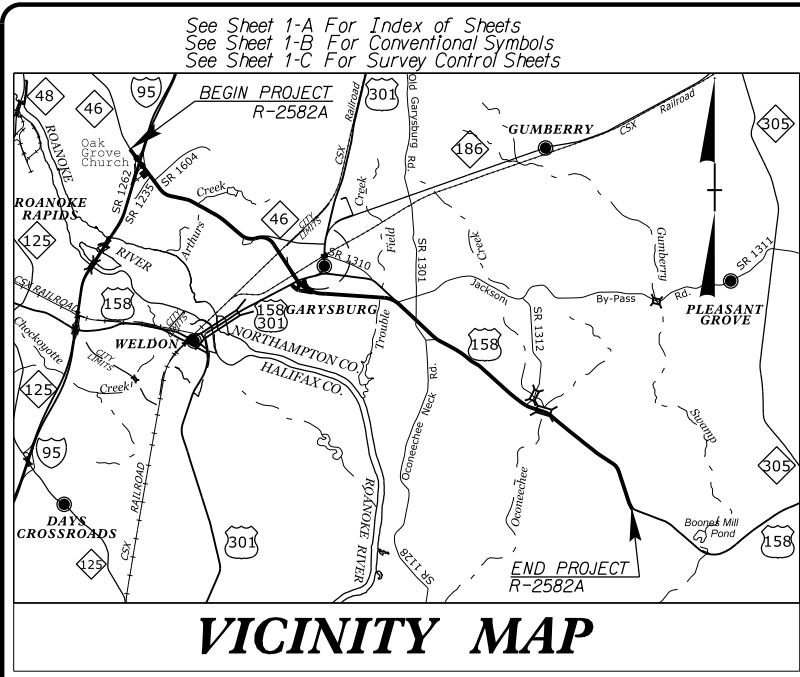
BENCH MARK:

ELEVATION:	FEET
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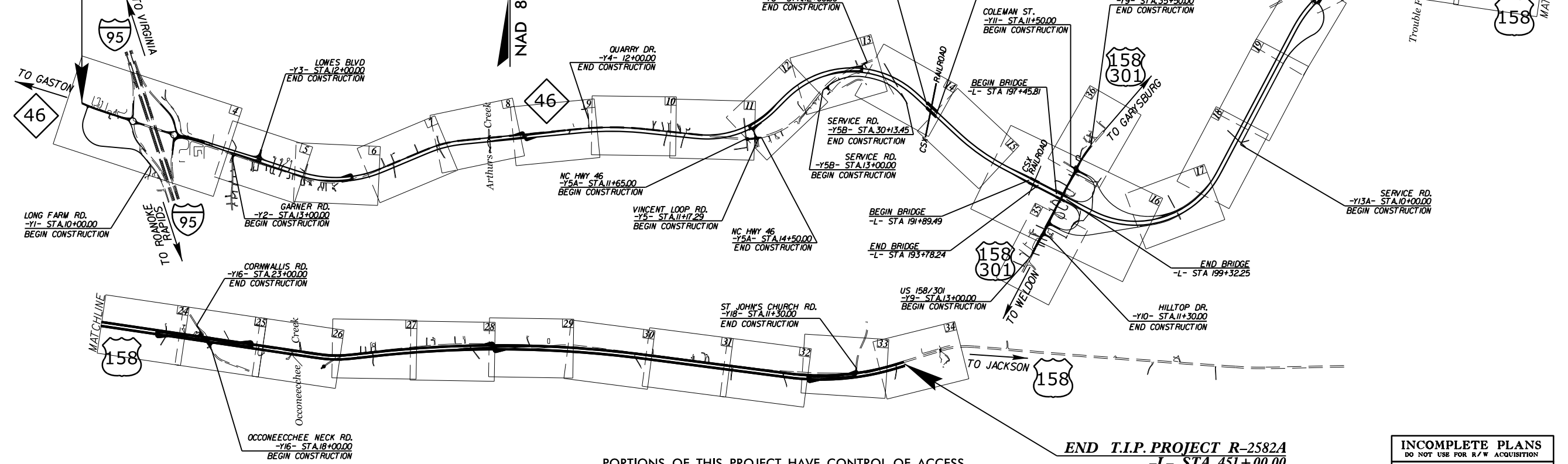
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16-FEB-2015 11:07
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 cptTurner AT GEG27230

CONTRACT: R-2582A



BEGIN T.I.P. PROJECT R-2582A
-L- STA. 10+00.00



END T.I.P. PROJECT R-2582A
-L- STA. 451+00.00

PORTIONS OF THIS PROJECT HAVE CONTROL OF ACCESS.
 A PORTION OF THIS PROJECT IS WITHIN THE MUNICIPAL BOUNDARIES OF GARYSBURG.
 CLEARING ON THIS PROJECT SHALL BE PERFORMED TO THE LIMITS ESTABLISHED BY METHOD _____.

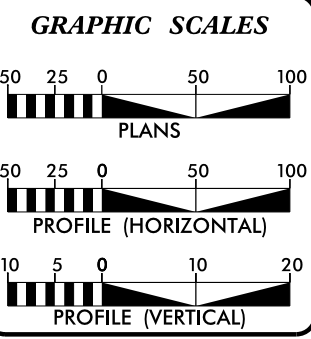
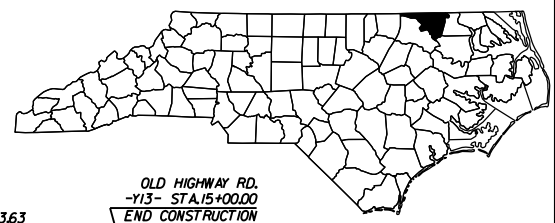
STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

NORTHAMPTON COUNTY

LOCATION: US 158 FROM I-95/NC 46 IN ROANOKE RAPIDS TO SR 1312 (ST. JOHN CHURCH RD)

TYPE OF WORK: GRADING, DRAINAGE, PAVING, RESURFACING, GUARDRAIL, SIGNALS AND STRUCTURES.

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	R-2582A	3	260
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	
34472.1.4	NHF-158(7)	PE	



DESIGN DATA

ADT 2016 =	6100
ADT 2035 =	8000
DHV =	11 %
D =	60 %
T =	21 % *
V =	70 MPH
* TTST =	14 DUAL = 7
FUNC CLASS =	EXPRESSWAY/FREEWAY
REGIONAL TIER	

PROJECT LENGTH

LENGTH ROADWAY T.I.P. PROJECT R-2582A =	8.24 MILES
LENGTH STRUCTURE T.I.P. PROJECT R-2582A =	0.115 MILES
TOTAL LENGTH OF T.I.P. PROJECT R-2582A =	8.35 MILES

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

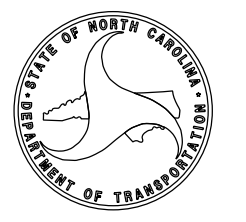
2012 STANDARD SPECIFICATIONS	
RIGHT OF WAY DATE:	JASON MOORE, PE PROJECT ENGINEER
LETTING DATE:	BRYAN C. KEY, PE PROJECT DESIGN ENGINEER

HYDRAULICS ENGINEER

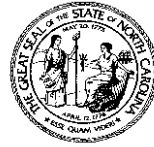
SIGNATURE: _____ P.E.

ROADWAY DESIGN ENGINEER

SIGNATURE: _____ P.E.



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



STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION

PAT MCCRORY
GOVERNOR

ANTHONY J. TATA
SECRETARY

October 23, 2014

STATE PROJECT: 34472.1.4 (R-2582A)
F.A. PROJECT: NHF-157(7)
COUNTY: Northampton
DESCRIPTION: US 158 From I-95/ NC 46 in Roanoke Rapids to SR 1312 (St. John's Church Rd.)

SUBJECT: Geotechnical Inventory Report

Project Description

This project begins just west of the existing I-95/ NC 46 intersection in Northampton County, and extends southeast approximately 8 miles. This geotechnical investigation was confined to the areas of proposed construction.

Fieldwork was conducted between February 2013 and September 2014. Standard Penetration Tests, Cone Penetration Tests and hand auger borings were completed at various offsets along the project corridor. 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-	10+00 to 451+00
-Y1-	10+00 to 28+85
-Y2-	13+00 to 14+34
-Y3-	10+00 to 12+00
-Y4-	10+00 to 12+00
-Y5-	11+17 to 13+97
-Y5A-	11+65 to 14+50

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

TELEPHONE: 919-707-6850
FAX: 919-250-4237
connect.ncdot.gov/resources/Geological

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

<u>Line</u>	<u>Station(±)</u>
-Y5B-	13+00 to 30+13
-Y6-	10+03 to 12+00
-Y9-	13+00 to 35+50
-Y9LPA-	10+00 to 20+83
-Y9LPD-	10+00 to 20+62
-Y9RPA-	10+00 to 33+30
-Y9RPD-	10+00 to 28+97
-Y10-	10+00 to 11+30
-Y11-	11+50 to 12+62
-Y13-	10+00 to 15+00
-Y13A-	10+00 to 41+08
-Y14-	11+82 to 17+63
-Y15-	11+65 to 13+00
-Y16-	18+00 to 23+00
-Y17-	10+00 to 11+00
-Y18-	10+00 to 11+30
-RPABR-	10+00 to 13+14
-RPCDR-	10+00 to 13+14
-I95RPA-	13+00 to 17+17
-I95RPB-	12+00 to 18+37
-I95RPC-	10+50 to 14+19
-I95RPD-	12+00 to 18+08

Areas of Special Geotechnical Interest

- 1) The following intervals were found to exhibit a high water table, seasonal high ground water or the potential for ground water related construction problems:

<u>Line</u>	<u>Station(±)</u>
-L-	10+00 to 13+00
-L-	24+00 to 28+00
-L-	33+00 to 35+00
-L-	39+00 to 43+00
-L-	51+00 to 53+00

<u>Line</u>	<u>Station(±)</u>
-L-	59+00 to 61+00
-L-	67+00 to 71+00
-L-	79+00 to 88+00
-L-	105+00 to 107+00
-L-	109+00 to 111+00
-L-	113+00 to 115+00
-L-	123+00 to 125+00
-L-	131+00 to 133+00
-L-	148+00 to 150+00
-L-	157+00 to 159+00
-L-	179+00 to 181+00
-L-	185+00 to 199+50
-L-	205+00 to 207+00
-L-	227+00 to 229+00
-L-	237+00 to 239+00
-L-	263+00 to 265+00
-L-	277+00 to 287+00
-L-	293+00 to 295+00
-L-	298+00 to 305+00
-L-	312+00 to 314+00
-L-	324+00 to 326+00
-L-	328+00 to 330+00
-L-	332+00 to 334+00
-L-	342+00 to 344+00
-L-	352+00 to 354+00
-L-	362+00 to 364+00
-L-	373+00 to 375+00
-L-	379+00 to 381+00
-L-	383+00 to 385+00
-L-	391+00 to 393+00
-L-	395+00 to 399+00
-L-	403+00 to 407+00
-L-	413+00 to 415+00
-L-	425+00 to 427+00
-L-	435+00 to 437+00
-L-	442+50 to 447+00
-Y1-	13+00 to 25+00
-Y3-	10+00 to 12+00
-Y5-	11+17 to 13+97
-Y5B-	15+00 to 21+00
-Y9LPA-	12+00 to 17+00
-Y9LPA-	19+00 to 20+83
-Y9RPA-	25+00 to 27+00

<u>Line</u>	<u>Station(±)</u>
-Y9RPA-	31+00 to 33+30
-Y9RPD-	17+00 to 19+00
-Y13A-	10+00 to 12+00
-Y15-	11+65 to 13+00

- 2) The entire project contains cohesive soils which have the potential to cause embankment/subgrade and or slope stability problems during construction.
- 3) The following sections contain organic soils that have the potential to cause embankment/subgrade or slope stability problems during construction.

<u>Line</u>	<u>Station(±)</u>
-L-	169+00 to 172+00
-L-	179+50 to 180+50

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 ranged from 68± to 152± feet above sea level.

Surficial soils in this area are classified as undivided coastal plain sediments.

Ground Water

Ground water data was collected between February 2013 and September 2014, during a time of normal precipitation. Ground water elevations ranged from 63± to 139± feet above sea level.

Soils

Soils encountered within this project area have been divided into seven categories: roadway embankment, Tertiary deposits, artificial fill, alluvial, undivided coastal plain, formational and residual.

Roadway embankment soils were found along the existing NC 46 and US 158 corridors as well as intersecting alignments. Where encountered it was composed of 1± to 20± feet of loose to medium dense sand (A-2-4, A-2-6) and 1± to 3± feet of medium stiff to stiff sandy clay (A-6).

Tertiary deposits are composed of 1± to 23± feet of loose to medium dense sand and clayey sand (A-2-4, A-2-6) and 1± to 9± feet of stiff to very stiff sandy silt and sandy clay (A-4, A-6, A-7-6).

Artificial fill soils are composed of up to 2± feet of loose sand (A-2-4).

Alluvial soils are composed of 1± to 9± feet of very loose sand (A-3) and 1± to 9± feet of soft to medium stiff sandy silt and sandy clay (A-4, A-6).

Soils identified as undivided coastal plain are composed of 3± to 63± feet of very loose to very dense clayey sand and sand (A-2-4, A-2-6, A-3, A-1-a, A-1-b) and up to 33± feet of very soft to very stiff sandy silt and sandy and silty clay (A-4, A-6, A-7-6). Moisture samples taken within these cohesive units returned natural moisture contents from 14% to 88%. Soils with little organic content were also identified. These soils were typically 1± foot thick and composed of stiff to very stiff sandy clay (A-7-6). Organic samples taken within these soils returned organic percentages ranging from 5% to 8%.

Formational soils were encountered beneath the alluvial and undivided coastal plain soils. Soils belonging to the Yorktown Formation are composed of 1± to 15± feet of very loose to very dense sand (A-2-4, A-3, A-1-a, A-1-b) and 1± to 34± feet of very soft to stiff sandy silt and sandy and silty clay (A-4, A-6, A-7-6). Organic samples collected within these cohesive units returned organic percentages around 3%. Soils belonging to the Cape Fear Formation are composed of 3± feet of dense sand and 3± to 13± feet of medium stiff to very stiff sandy and silty clay.

Residual and saprolitic metavolcanic soils encountered are composed of 5± to 55± feet of very stiff to hard clayey silt and sandy and silty clay (A-5, A-6, A-7-5) along with 16± feet of felsic metavolcanic crystalline rock.

Undisturbed Samples

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

<u>Sample No.</u>	<u>Station</u>	<u>Depth</u>	<u>Test</u>
ST-6	-L- 246+00, 45'RT	3.0-5.0	Triaxial/Consolidation
ST-7	-L- 200+00, CL	15.0-17.0	Triaxial/Consolidation
ST-8	-L- 250+00, CL	1.0-3.0	Triaxial/Consolidation
ST-9	-L- 165+00, CL	6.0-8.0	Triaxial/Consolidation
ST-10	-L- 140+00, CL	1.0-3.0	Triaxial/Consolidation
ST-12	-L- 196+00, CL	20.0-22.0	Triaxial/Consolidation
ST-13	-L- 196+00, CL	25.0-27.0	Triaxial/Consolidation
ST-14	-L- 180+00, CL	65.0-67.0	Triaxial/Consolidation
ST-15	-L- 186+00, CL	51.5-53.5	Triaxial/Consolidation
ST-16	-L- 186+00, CL	61.5-63.5	Triaxial/Consolidation
ST-20	-L- 169+40, CL	5.5-7.0	Triaxial/Consolidation
ST-21	-L- 171+00, CL	5.5-7.6	Triaxial/Consolidation
ST-23	-L- 193+55, CL	11.1-13.1	Triaxial/Consolidation

<u>Sample No.</u>	<u>Station</u>	<u>Depth</u>	<u>Test</u>
ST-25	-L- 193+55, CL	21.1-23.1	Triaxial/Consolidation
ST-26	-L- 193+55, CL	26.1-28.1	Triaxial/Consolidation
ST-27	-L- 192+15, CL	6.0-8.0	Triaxial/Consolidation
ST-28	-L- 192+15, CL	10.0-12.0	Triaxial/Consolidation
ST-30	-L- 192+15, CL	21.6-23.6	Triaxial/Consolidation
ST-31	-L- 197+82, 67'RT	4.5-6.5	Triaxial/Consolidation
ST-34	-L- 197+82, 67'RT	19.5-21.5	Triaxial/Consolidation
*ST-35	-L- 198+98, 67'LT	4.5-5.5	Triaxial/Consolidation
*ST-37	-L- 198+98, 67'LT	16.6-18.6	Triaxial/Consolidation

Culvert at -L- Station 85+72

Natural ground elevations range from 62± feet in the bottom of the stream bed to 78± feet along the existing NC 46 embankment. Borings completed in the vicinity indicate 9± feet of existing roadway embankment composed of loose sand (A-2-6) and medium stiff sandy clay (A-6) underlain by 1± to 5± feet of very loose alluvial sand (A-1-b) and soft to medium stiff sandy silt and sandy clay (A-4, A-6). Felsic metavolcanic rock was encountered immediately beneath the alluvial sand and clay. At the time of this investigation ground water was measured at an elevation of 69± feet.

Culvert at -L- Station 286+51

Natural ground elevations range from 70± feet in the bottom of the stream bed to 83± feet along the existing NC 46 embankment. Borings completed in the vicinity indicate 6± feet of existing roadway embankment composed of loose sand (A-2-4) and sandy clay (A-6) underlain by 6± to 7± feet of loose alluvial sand (A-2-6, A-1-b). At the time of this investigation ground water was measured at an elevation of 69± feet.

* Shown on bridge inventory report dated September 2014 for structures 124 and 125, -L- over -Y9-.

2016 AVERAGE DAILY TRAFFIC		I-95	
6,727	6,741	741	968
8,800	8,900	1,000	1,400
		3,545	2,677
		5,100	3,800
		NC 46	
		43,627	
		62,800	
		I-95	
		LONG FARM RD.	

PROJECT REFERENCE NO.	SHEET NO.
R-248A	7
ENGINEER	DATE
INCOMPLETE PLANS	DO NOT USE FOR CONSTRUCTION
PRELIMINARY PLANS	

-L-

PI Stn 0+000	PI Stn 0+075	PI Stn 0+150
Δ = 5' 4" (0.5' LT)	Δ = 0' 22" (0' LT)	Δ = 1' 5" (0.5' INT)
D = 120' 0"	D = 120' 0"	D = 120' 0"
L = 285.5'	L = 103.5'	L = 156.5'
E = 285.00'	E = 228.00'	E = 171.00'
SE = 0°	SE = 1°	SE = 0°
ψ = 30°	ψ = 30°	ψ = 30°

-I-95 RAMP A- **-I-95 RAMP B-** **-I-95 RAMP D-**

PI Stn 0+000	PI Stn 0+075	PI Stn 0+150
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D = 120' 0"	D = 120' 0"	D = 120' 0"
L = 285.5'	L = 103.5'	L = 156.5'
E = 285.00'	E = 228.00'	E = 171.00'
SE = 0°	SE = 1°	SE = 0°
ψ = 30°	ψ = 30°	ψ = 30°

-YI-

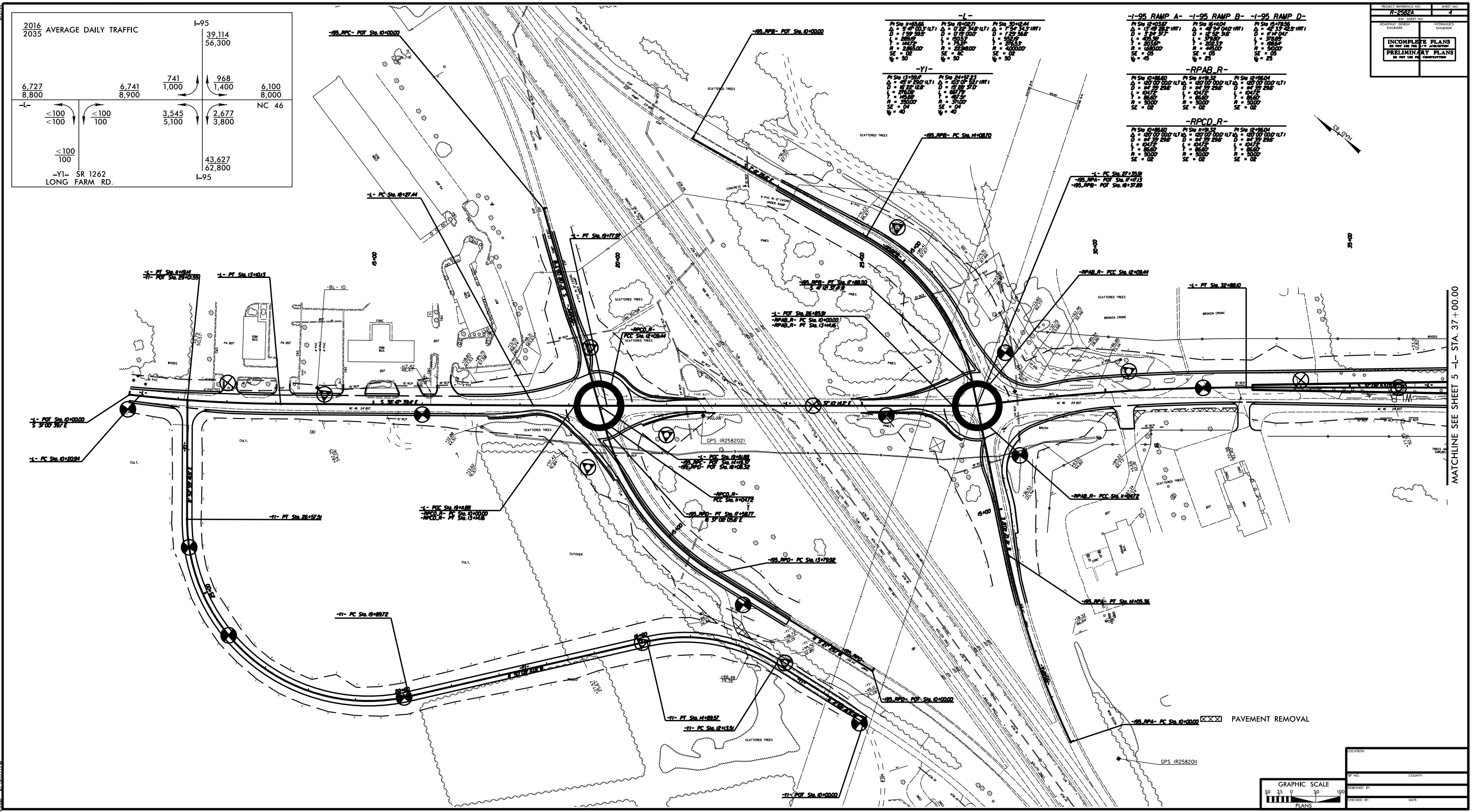
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L = 285.5'	L = 103.5'	L = 156.5'
E = 285.00'	E = 228.00'	E = 171.00'
SE = 0°	SE = 1°	SE = 0°
ψ = 30°	ψ = 30°	ψ = 30°

-RPAB R-

PI Stn 0+000	PI Stn 0+075	PI Stn 0+150
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D = 120' 0"	D = 120' 0"	D = 120' 0"
L = 285.5'	L = 103.5'	L = 156.5'
E = 285.00'	E = 228.00'	E = 171.00'
SE = 0°	SE = 1°	SE = 0°
ψ = 30°	ψ = 30°	ψ = 30°

-RPCD R-

PI Stn 0+000	PI Stn 0+075	PI Stn 0+150
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D = 120' 0"	D = 120' 0"	D = 120' 0"
L = 285.5'	L = 103.5'	L = 156.5'
E = 285.00'	E = 228.00'	E = 171.00'
SE = 0°	SE = 1°	SE = 0°
ψ = 30°	ψ = 30°	ψ = 30°



PROJECT NO. R-248A
 SHEET NO. 7
 DATE: 10/15/14
 DRAWN BY: J. B. [unreadable]
 CHECKED BY: [unreadable]

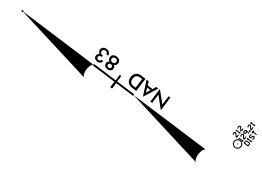
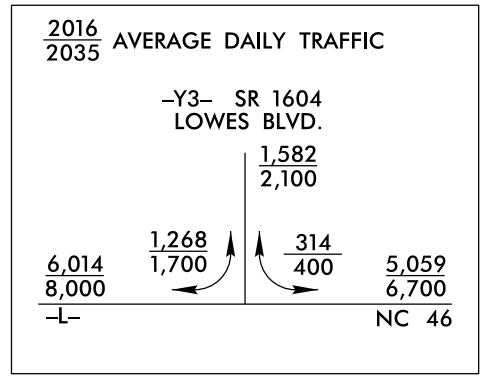
PROJECT REFERENCE NO. R-2582A	SHEET NO. 5
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
INCOMPLETE PLANS DO NOT USE FOR A/W ACQUISITION	
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	

-L-

Pls Sta 51+18.42 θs = 4° 05' 33.2" Ls = 300.00' LT = 200.05' ST = 100.05'	Pls Sta 58+36.35 Δ = 32° 47' 46.4" (LT) D = 2° 43' 42.1" L = 1,202.04' T = 617.99' R = 2,100.00' SE = 06 V _g = 70	Pls Sta 65+20.46 θs = 4° 05' 33.2" Ls = 300.00' LT = 200.05' ST = 100.05'
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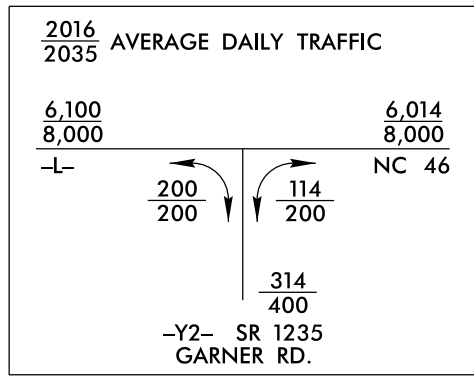
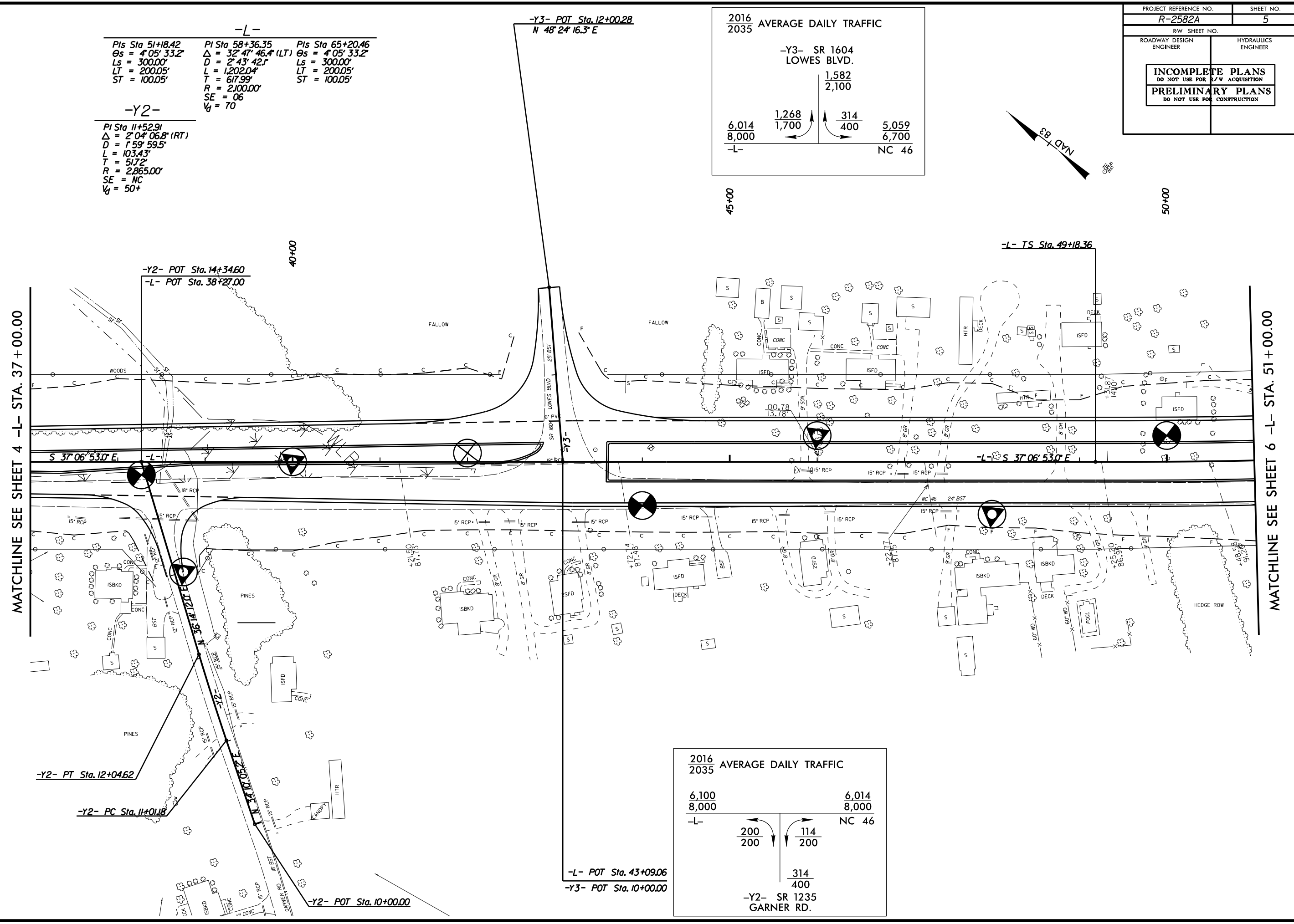
-Y2-

PI Sta 11+52.91 Δ = 2° 04' 06.8" (RT) D = 1° 59' 59.5" L = 103.43' T = 51.72' R = 2,865.00' SE = NC V _g = 50+



MATCHLINE SEE SHEET 4 -L- STA. 37 + 00.00

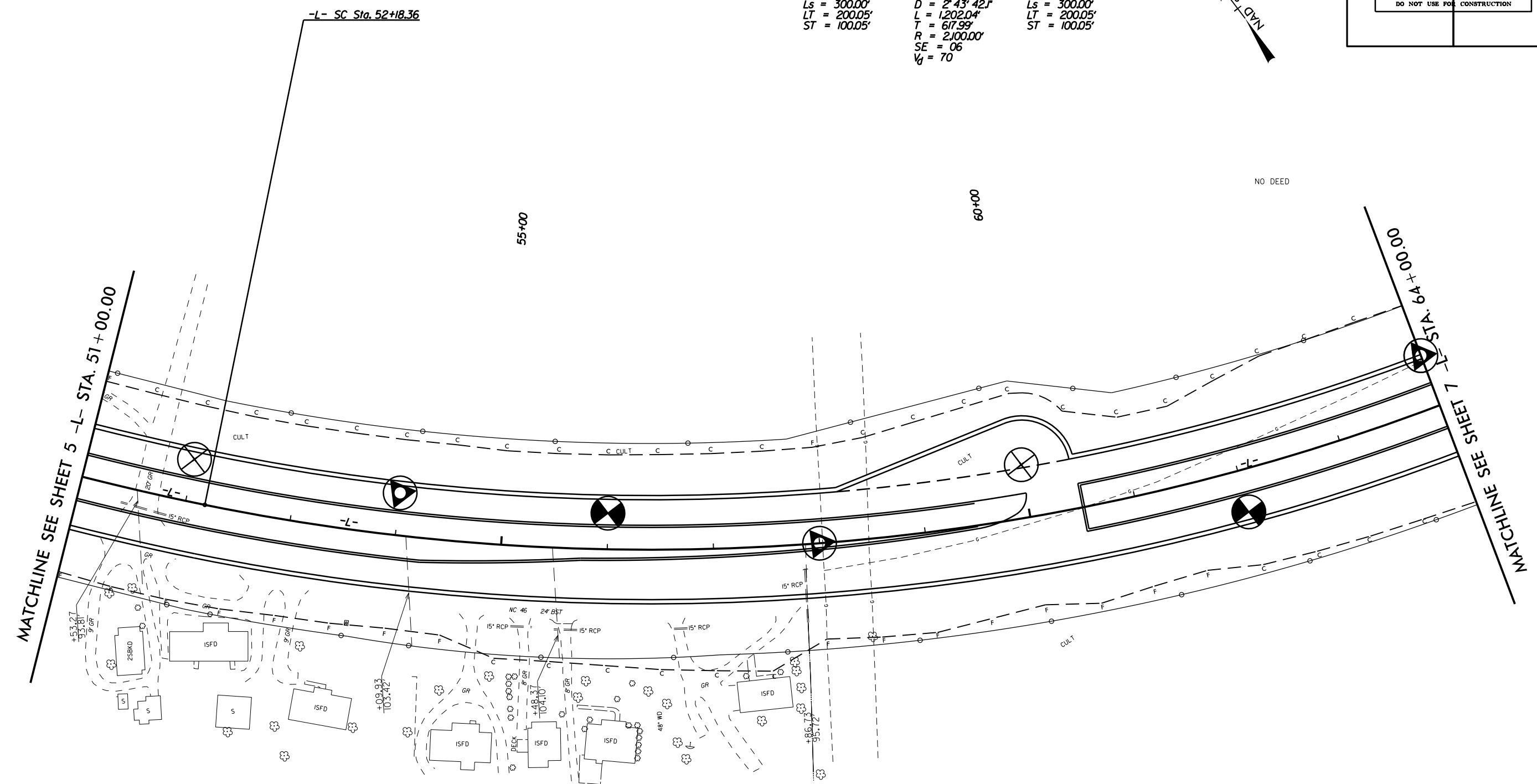
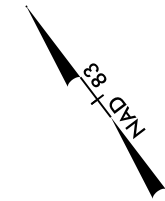
MATCHLINE SEE SHEET 6 -L- STA. 51 + 00.00



16-FEB-2015 10:05
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PROJECT REFERENCE NO.	SHEET NO.
R-2582A	6
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
INCOMPLETE PLANS DO NOT USE FOR A/W ACQUISITION PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	

-L-		
PIs Sta 51+18.42 $\theta_s = 4'05'33.2"$ $L_s = 300.00'$ $LT = 200.05'$ $ST = 100.05'$	PI Sta 58+36.35 $\Delta = 32'47'46.4" (LT)$ $D = 2'43'42.1"$ $L = 1,202.04'$ $T = 617.99'$ $R = 2,100.00'$ $SE = .06$ $V_g = 70$	PIs Sta 65+20.46 $\theta_s = 4'05'33.2"$ $L_s = 300.00'$ $LT = 200.05'$ $ST = 100.05'$



16-FEB-2015 10:05
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 8/17/99

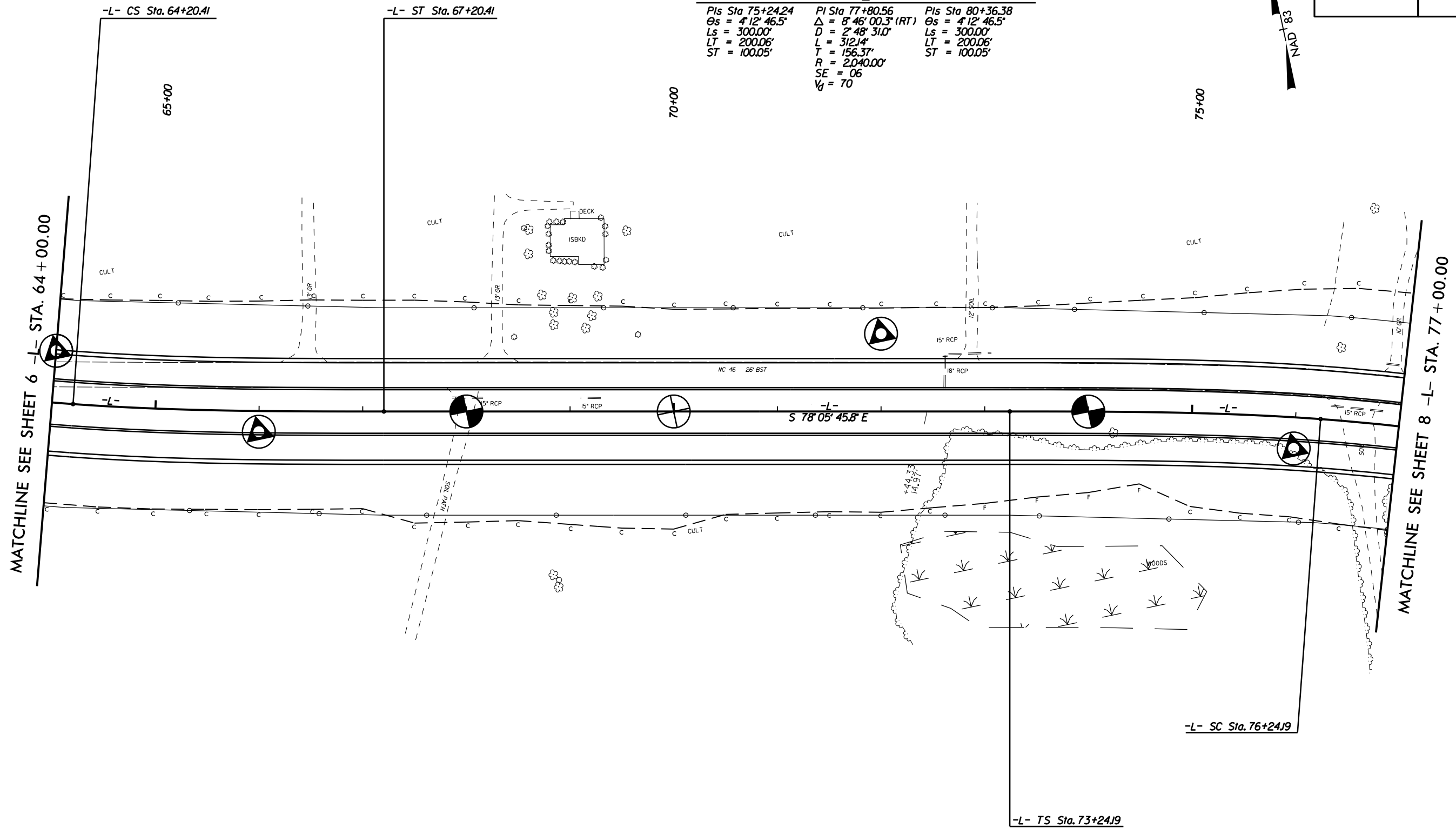
PROJECT REFERENCE NO.	SHEET NO.
R-2582A	7
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
INCOMPLETE PLANS DO NOT USE FOR A/W ACQUISITION	
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	

-L-

Pls Sta 51+18.42	Pls Sta 58+36.35	Pls Sta 65+20.46
$\theta_s = 4' 05' 33.2''$	$\Delta = 32' 47' 46.4''$ (LT)	$\theta_s = 4' 05' 33.2''$
LS = 300.00'	D = 2' 43' 42.1"	LS = 300.00'
LT = 200.05'	L = 1,202.04'	LT = 200.05'
ST = 100.05'	T = 617.99'	ST = 100.05'
	R = 2,100.00'	
	SE = 06	
	V _d = 70	

-L-

Pls Sta 75+24.24	Pls Sta 77+80.56	Pls Sta 80+36.38
$\theta_s = 4' 12' 46.5''$	$\Delta = 8' 46' 00.3''$ (RT)	$\theta_s = 4' 12' 46.5''$
LS = 300.00'	D = 2' 48' 31.0"	LS = 300.00'
LT = 200.06'	L = 312.14'	LT = 200.06'
ST = 100.05'	T = 156.37'	ST = 100.05'
	R = 2,040.00'	
	SE = 06	
	V _d = 70	



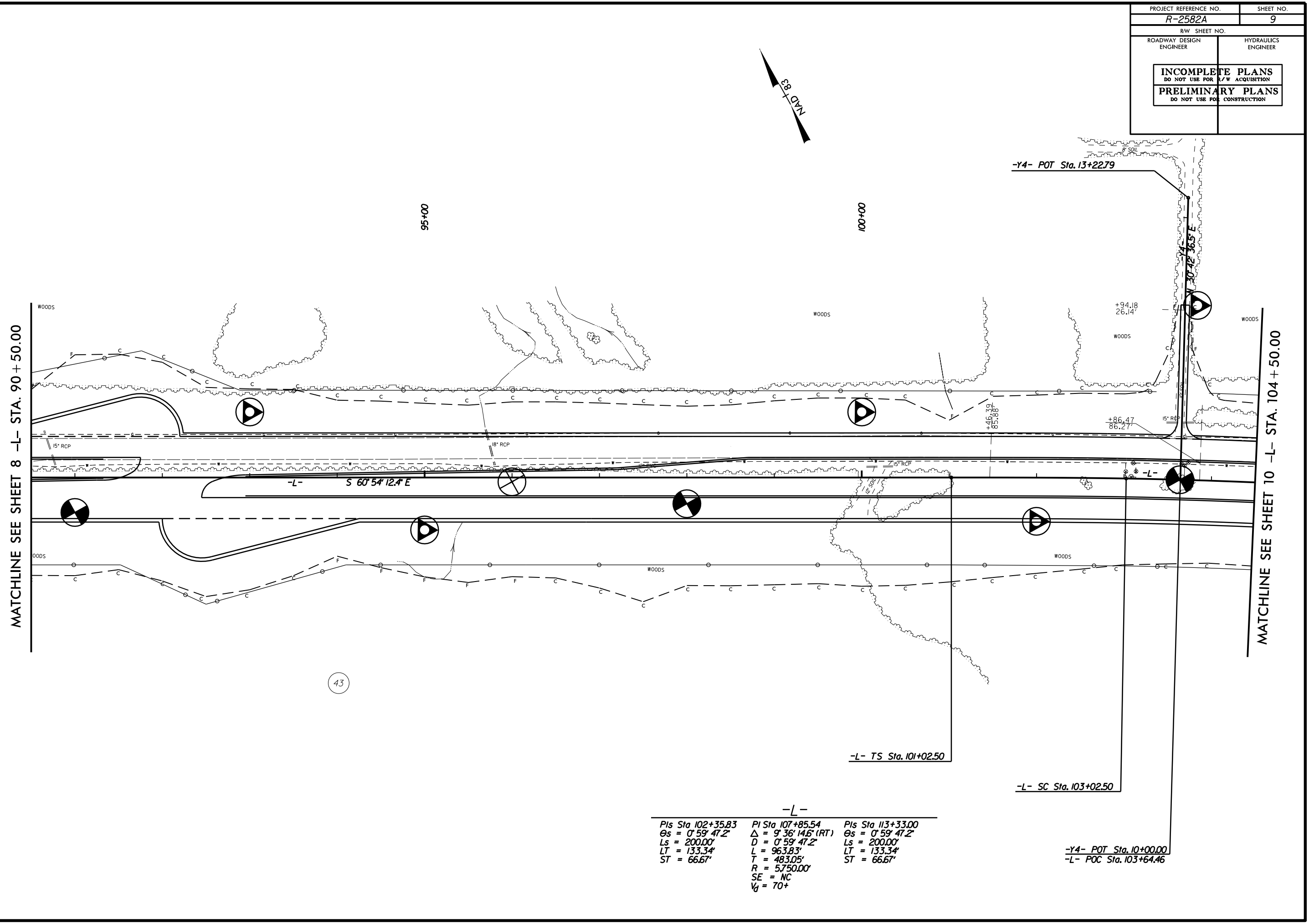
MATCHLINE SEE SHEET 6 -L- STA. 64+00.00

MATCHLINE SEE SHEET 8 -L- STA. 77+00.00



PROJECT REFERENCE NO.	SHEET NO.
R-2582A	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	

16-FEB-2015 10:05 L:\ERD\Green\16_investigation\TIP\AR2582A_GEO_RDWY\CADD_GEO\TECH\Site&Sub\AR-2582A-Rdy_psh_9.dgn
 8/17/99



-L-

PIs Sta 102+35.83 $\theta_s = 0^\circ 59' 47.2''$ $L_s = 200.00'$ $LT = 133.34'$ $ST = 66.67'$	PI Sta 107+85.54 $\Delta = 9^\circ 36' 14.6'' (RT)$ $D = 0^\circ 59' 47.2''$ $L = 963.83'$ $T = 483.05'$ $R = 5,750.00'$ $SE = NC$ $V_d = 70+$	PIs Sta 113+33.00 $\theta_s = 0^\circ 59' 47.2''$ $L_s = 200.00'$ $LT = 133.34'$ $ST = 66.67'$
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-L- SC Sta. 103+02.50

-Y4- POT Sta. 10+00.00

-L- POC Sta. 103+64.46

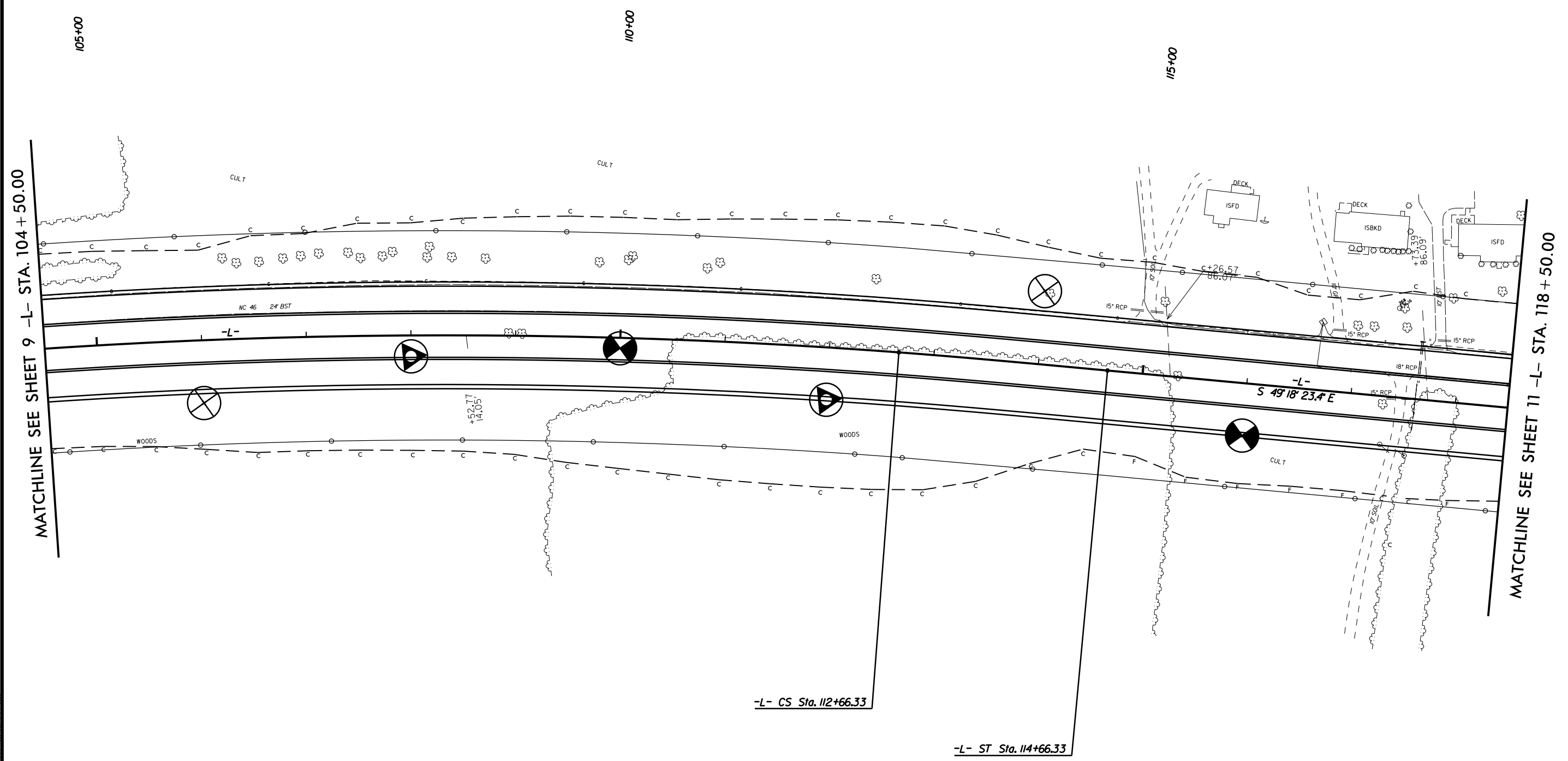
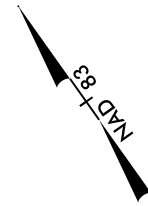
MATCHLINE SEE SHEET 8 -L- STA. 90 + 50.00

MATCHLINE SEE SHEET 10 -L- STA. 104 + 50.00

PROJECT REFERENCE NO. R-2582A	SHEET NO. 10
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
INCOMPLETE PLANS DO NOT USE FOR A/W ACQUISITION	
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	

-L-

PIs Sta 102+35.83 $\Theta_s = 0^\circ 59' 47.2"$ $L_s = 200.00'$ $LT = 133.34'$ $ST = 66.67'$	PI Sta 107+85.54 $\Delta = 9^\circ 36' 14.6" (RT)$ $D = 0^\circ 59' 47.2"$ $L = 963.83'$ $T = 483.05'$ $R = 5,750.00'$ $SE = NC$ $V_d = 70+$	PIs Sta 113+33.00 $\Theta_s = 0^\circ 59' 47.2"$ $L_s = 200.00'$ $LT = 133.34'$ $ST = 66.67'$
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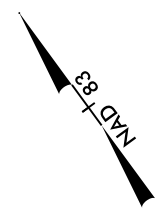


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 8/17/99

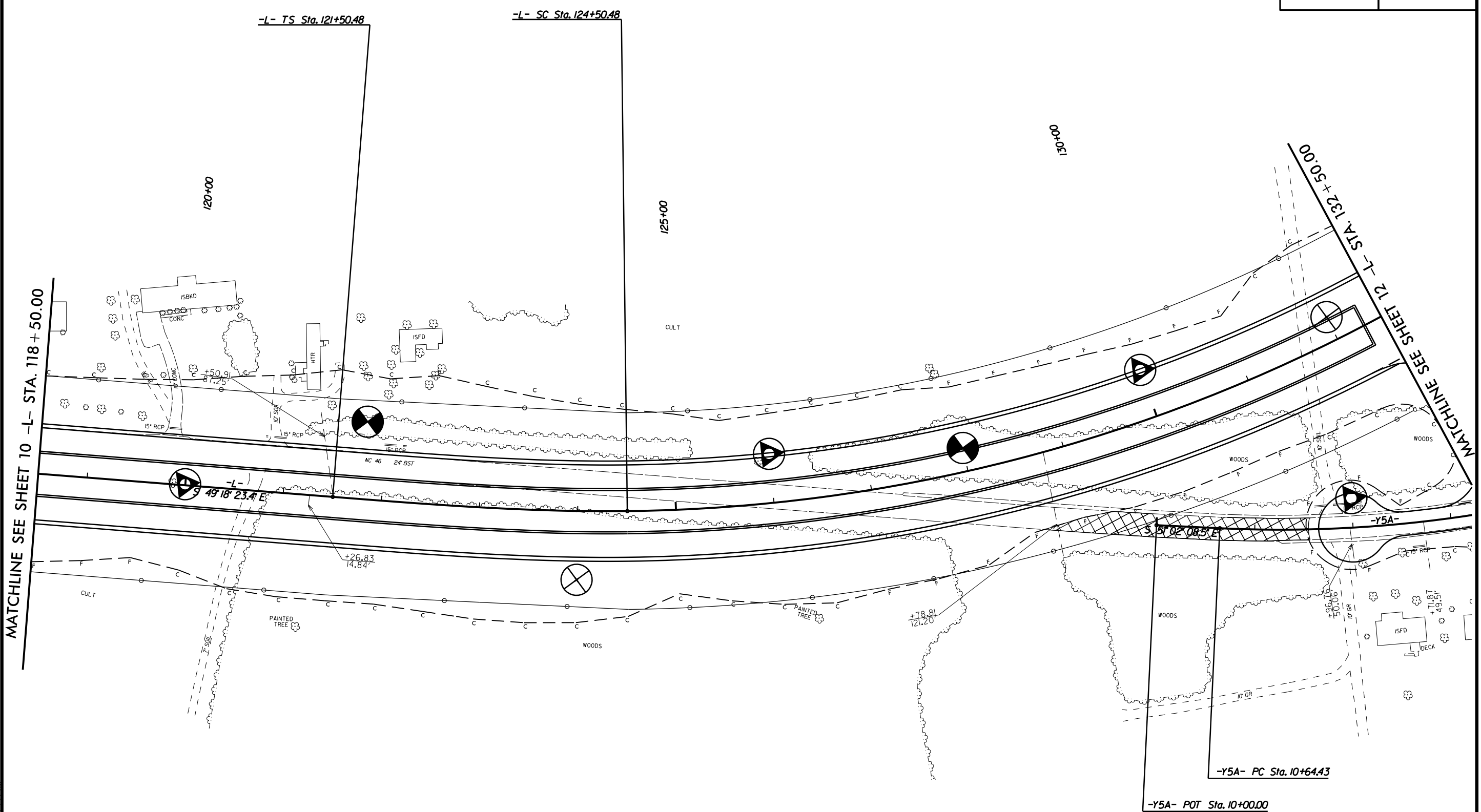
8/17/99

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continued at 11627230

-L-						-Y5A-	
PIs Sta 123+50.56	PI Sta 130+71.11	PIs Sta 137+38.40	PIs Sta 141+38.41	PI Sta 155+83.30	PIs Sta 165+99.14	PI Sta 12+93.94	
$\theta_s = 5'10''38.4''$	$\Delta = 40'59''57.1''$ (LT)	$\theta_s = 5'10''38.4''$	$\theta_s = 5'10''38.4''$	$\Delta = 78'01''49.4''$ (RT)	$\theta_s = 5'10''38.4''$	$\Delta = 20'19''50.5''$ (LT)	
$L_s = 300.00'$	$D = 3'27''05.6''$	$L_s = 300.00'$	$L_s = 300.00'$	$D = 3'27''05.6''$	$L_s = 300.00'$	$D = 4'28''34.4''$	
$LT = 200.09'$	$L = 1187.85'$	$LT = 200.09'$	$LT = 200.09'$	$L = 2260.73'$	$LT = 200.09'$	$L = 454.19'$	
$ST = 100.08'$	$T = 620.64'$	$ST = 100.08'$	$ST = 100.08'$	$T = 1344.97'$	$ST = 100.08'$	$T = 229.51'$	
	$R = 1660.00'$			$R = 1660.00'$		$R = 1280.00'$	
	$SE = 06$			$SE = 06$		$SE = NC$	
	$V_f = 65$			$V_f = 65$		$V_f = 60+$	



PROJECT REFERENCE NO. R-2582A	SHEET NO. 11
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
INCOMPLETE PLANS DO NOT USE FOR A/W ACQUISITION	
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	

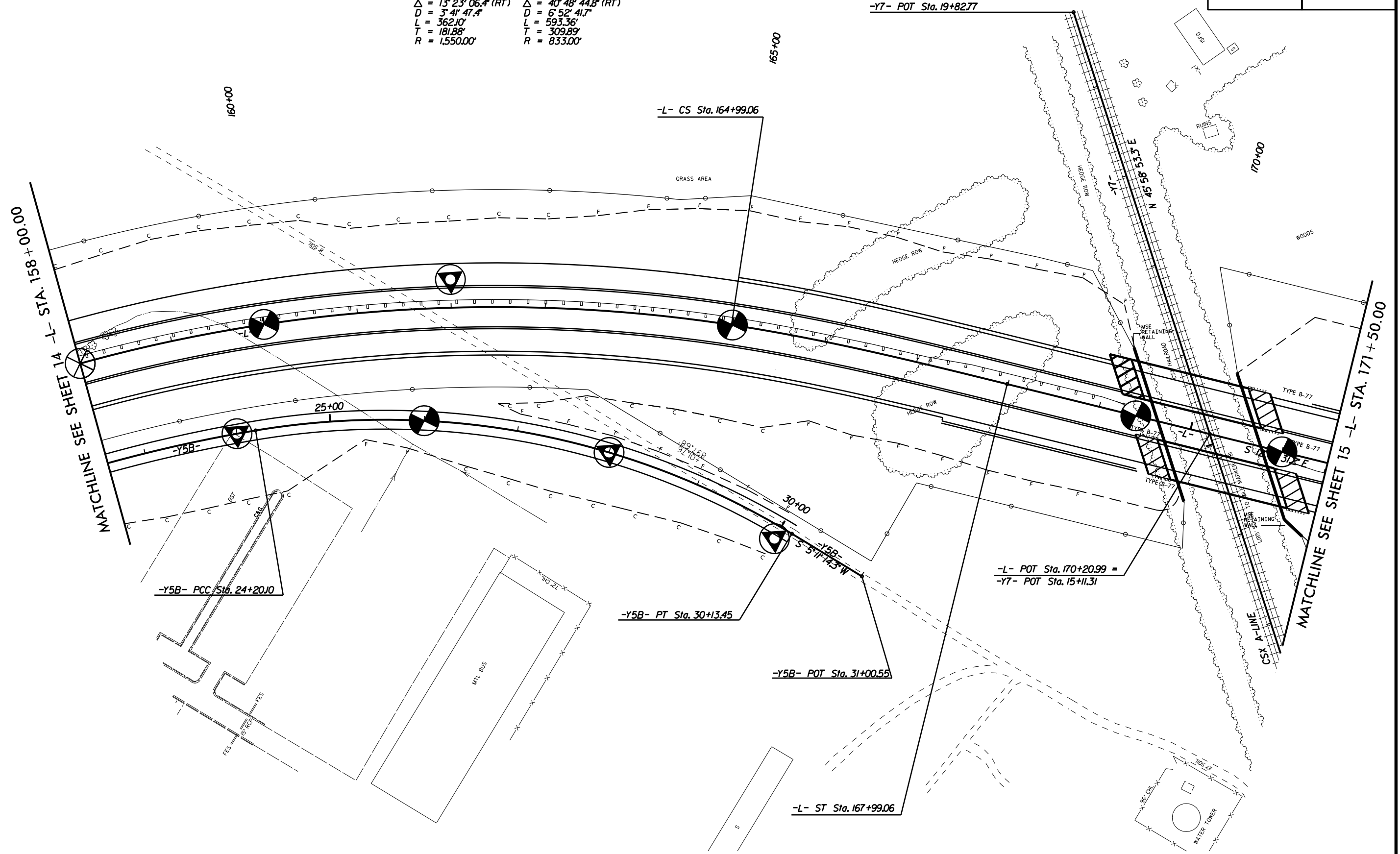


PAVEMENT REMOVAL

PROJECT REFERENCE NO.	SHEET NO.
R-2582A	14
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
INCOMPLETE PLANS DO NOT USE FOR A/W ACQUISITION PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	

PIs Sta 123+50.56 $\Theta_s = 5^\circ 10' 38.4''$ $L_s = 300.00'$ $LT = 200.09'$ $ST = 100.08'$	PI Sta 130+71.11 $\Delta = 40^\circ 59' 57.1''$ (LT) $D = 3^\circ 27' 05.6''$ $L = 1,187.85'$ $T = 620.64'$ $R = 1,660.00'$ $SE = 06$ $V_d = 65$	PIs Sta 137+38.40 $\Theta_s = 5^\circ 10' 38.4''$ $L_s = 300.00'$ $LT = 200.09'$ $ST = 100.08'$	PIs Sta 141+38.41 $\Theta_s = 5^\circ 10' 38.4''$ $L_s = 300.00'$ $LT = 200.09'$ $ST = 100.08'$	PI Sta 155+83.30 $\Delta = 78^\circ 01' 49.4''$ (RT) $D = 3^\circ 27' 05.6''$ $L = 2,260.73'$ $T = 1,344.97'$ $R = 1,660.00'$ $SE = 06$ $V_d = 65$	PIs Sta 165+99.14 $\Theta_s = 5^\circ 10' 38.4''$ $L_s = 300.00'$ $LT = 200.09'$ $ST = 100.08'$
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PI Sta 22+39.87 $\Delta = 13^\circ 23' 06.4''$ (RT) $D = 3^\circ 41' 47.4''$ $L = 362.10'$ $T = 181.88'$ $R = 1,550.00'$	PI Sta 27+29.99 $\Delta = 40^\circ 48' 44.8''$ (RT) $D = 6^\circ 52' 41.7''$ $L = 593.36'$ $T = 309.89'$ $R = 833.00'$
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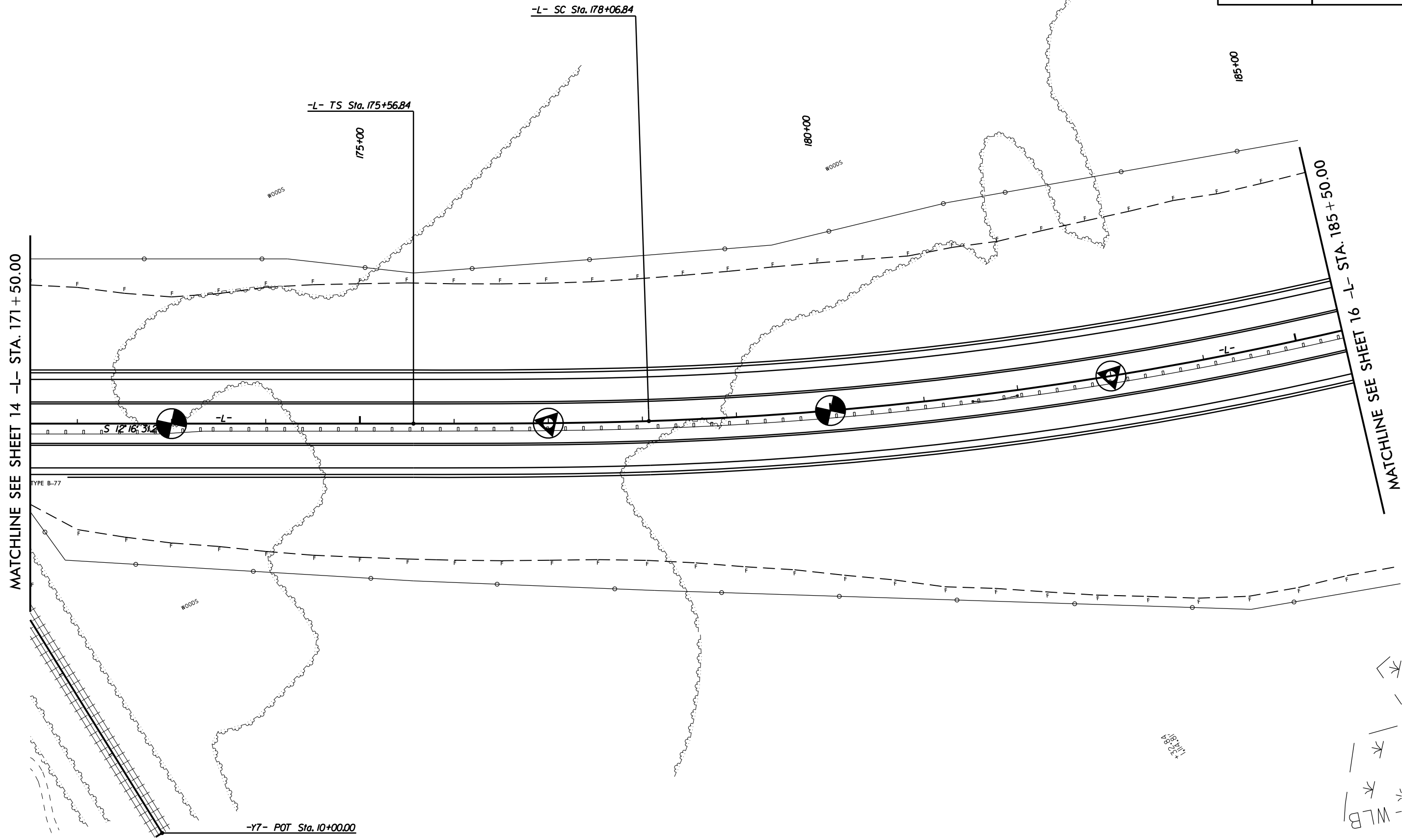
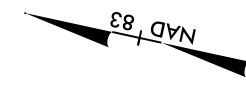
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 Author: AT 16127230

8/17/99

PROJECT REFERENCE NO. R-2582A	SHEET NO. 15
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
INCOMPLETE PLANS DO NOT USE FOR A/W ACQUISITION	
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	

-L-

PIs Sta 177+23.52 θs = 1° 52' 29.5" Ls = 250.00' LT = 166.68' ST = 83.34'	PI Sta 182+08.93 Δ = 12° 0' 02.4" (LT) D = 1° 29' 59.6" L = 801.22' T = 402.08' R = 3,820.00' SE = NC V _d = 70+	PIs Sta 186+91.40 θs = 1° 52' 29.5" Ls = 250.00' LT = 166.68' ST = 83.34'
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MATCHLINE SEE SHEET 14 -L- STA. 171 + 50.00

MATCHLINE SEE SHEET 16 -L- STA. 185 + 50.00

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-Y7- POT Sta. 10+00.00

MLB

REVISIONS

NO.	DATE	DESCRIPTION

Pn Sta 17+13.52 Gs = 1.50 23.5 Ls = 250.0 Lt = 83.34 Sf = 200.0 V = 70.1	Pn Sta 18+10.00 Gs = 1.50 23.5 Ls = 250.0 Lt = 83.34 Sf = 200.0 V = 70.1	Pn Sta 19+10.00 Gs = 1.50 23.5 Ls = 250.0 Lt = 83.34 Sf = 200.0 V = 70.1	Pn Sta 20+10.00 Gs = 1.50 23.5 Ls = 250.0 Lt = 83.34 Sf = 200.0 V = 70.1	Pn Sta 21+10.00 Gs = 1.50 23.5 Ls = 250.0 Lt = 83.34 Sf = 200.0 V = 70.1	Pn Sta 22+10.00 Gs = 1.50 23.5 Ls = 250.0 Lt = 83.34 Sf = 200.0 V = 70.1
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-Y9-
 Pn Sta 17+13.52
 Gs = 1.50 23.5
 Ls = 250.0
 Lt = 83.34
 Sf = 200.0
 V = 70.1

-Y9 LOOP A-
 Pn Sta 18+10.00
 Gs = 1.50 23.5
 Ls = 250.0
 Lt = 83.34
 Sf = 200.0
 V = 70.1

-Y9 RAMP A-
 Pn Sta 18+10.00
 Gs = 1.50 23.5
 Ls = 250.0
 Lt = 83.34
 Sf = 200.0
 V = 70.1

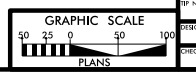
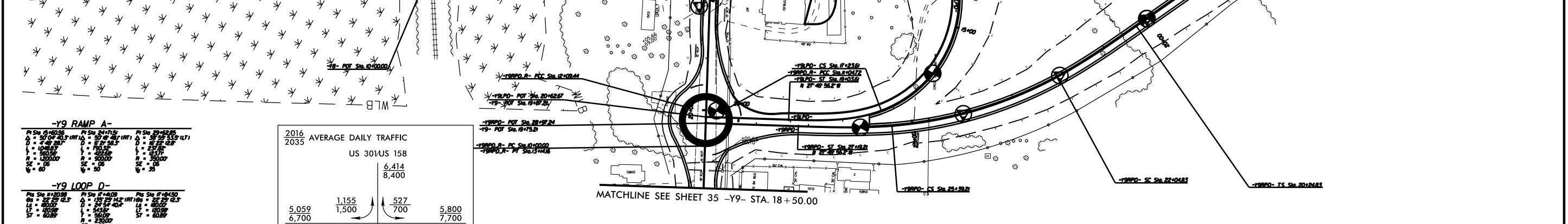
-Y9 LOOP D-
 Pn Sta 19+10.00
 Gs = 1.50 23.5
 Ls = 250.0
 Lt = 83.34
 Sf = 200.0
 V = 70.1

-Y9 RAMP D-
 Pn Sta 20+10.00
 Gs = 1.50 23.5
 Ls = 250.0
 Lt = 83.34
 Sf = 200.0
 V = 70.1

-Y11-
 Pn Sta 21+10.00
 Gs = 1.50 23.5
 Ls = 250.0
 Lt = 83.34
 Sf = 200.0
 V = 70.1

2016 AVERAGE DAILY TRAFFIC
 2035

US 301/US 158			
	6,414		
8,400			
5,059	1,155	527	5,800
6,700	1,500	700	7,700
			NC 46
1,795		3,164	
2,400		4,200	
			9,691
			12,800
US 301/US 158			



LOCATION:

DESIGNED BY: COUNTY:

CHECKED BY: DATE:

8/17/99

PROJECT REFERENCE NO. R-2582A	SHEET NO. 17
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
INCOMPLETE PLANS DO NOT USE FOR A/W ACQUISITION	
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	

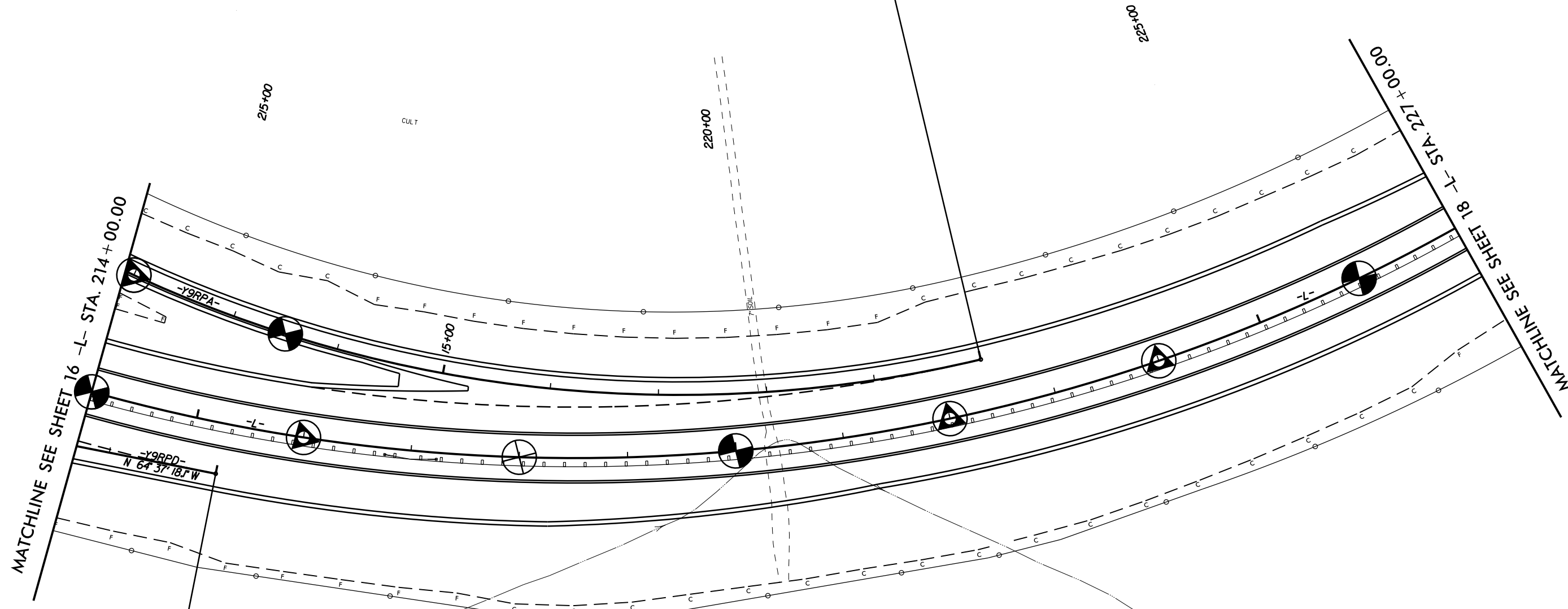
-L-

PIs Sta 205+17.28 Δs = 5' 10" 38.4" Ls = 300.00' LT = 200.09' ST = 100.08'	PI Sta 219+89.00 Δ = 79' 08" 23.8" (LT) D = 3' 27" 05.6" L = 2,292.88' T = 1,371.81' R = 1,660.00' SE = 06 V _d = 65	PIs Sta 230+10.15 Δs = 5' 10" 38.4" Ls = 300.00' LT = 200.09' ST = 100.08'
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-Y9 RAMP A-

PI Sta 15+60.56 Δ = 50' 04" 40.3" (RT) D = 4' 46" 28.7" L = 1,048.83' T = 560.56' R = 1,200.00' SE = 06 V _d = 60	PI Sta 24+71.51 Δ = 50' 18" 48.1" (RT) D = 6' 21" 58.3" L = 790.32' T = 422.68' R = 900.00' SE = 06 V _d = 50	PI Sta 29+62.85 Δ = 38' 55" 53.5" (LT) D = 16' 22" 12.8" L = 237.82' T = 123.71' R = 350.00' SE = 06 V _d = 35
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-Y9RPA- PC Sta. 10+00.00
-L- POC Sta. 222+40.28
OFFSET -47



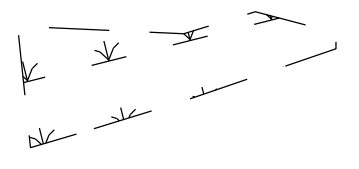
MATCHLINE SEE SHEET 16 -L- STA. 214+00.00

MATCHLINE SEE SHEET 18 -L- STA. 227+00.00

-Y9RPD- POT Sta. 10+00.00
-L- POC Sta. 215+26.99
OFFSET 47

-Y9 RAMP D-

PIs Sta 21+44.91 Δs = 6' 26' 44.8" Ls = 180.00' LT = 120.08' ST = 60.07'	PI Sta 23+74.49 Δ = 23' 56' 52.4" (RT) D = 7' 09' 43.1" L = 334.38' T = 169.67' R = 800.00' SE = 06 V = 50	PIs Sta 25+99.28 Δs = 6' 26' 44.8" Ls = 180.00' LT = 120.08' ST = 60.07'
--	---	--

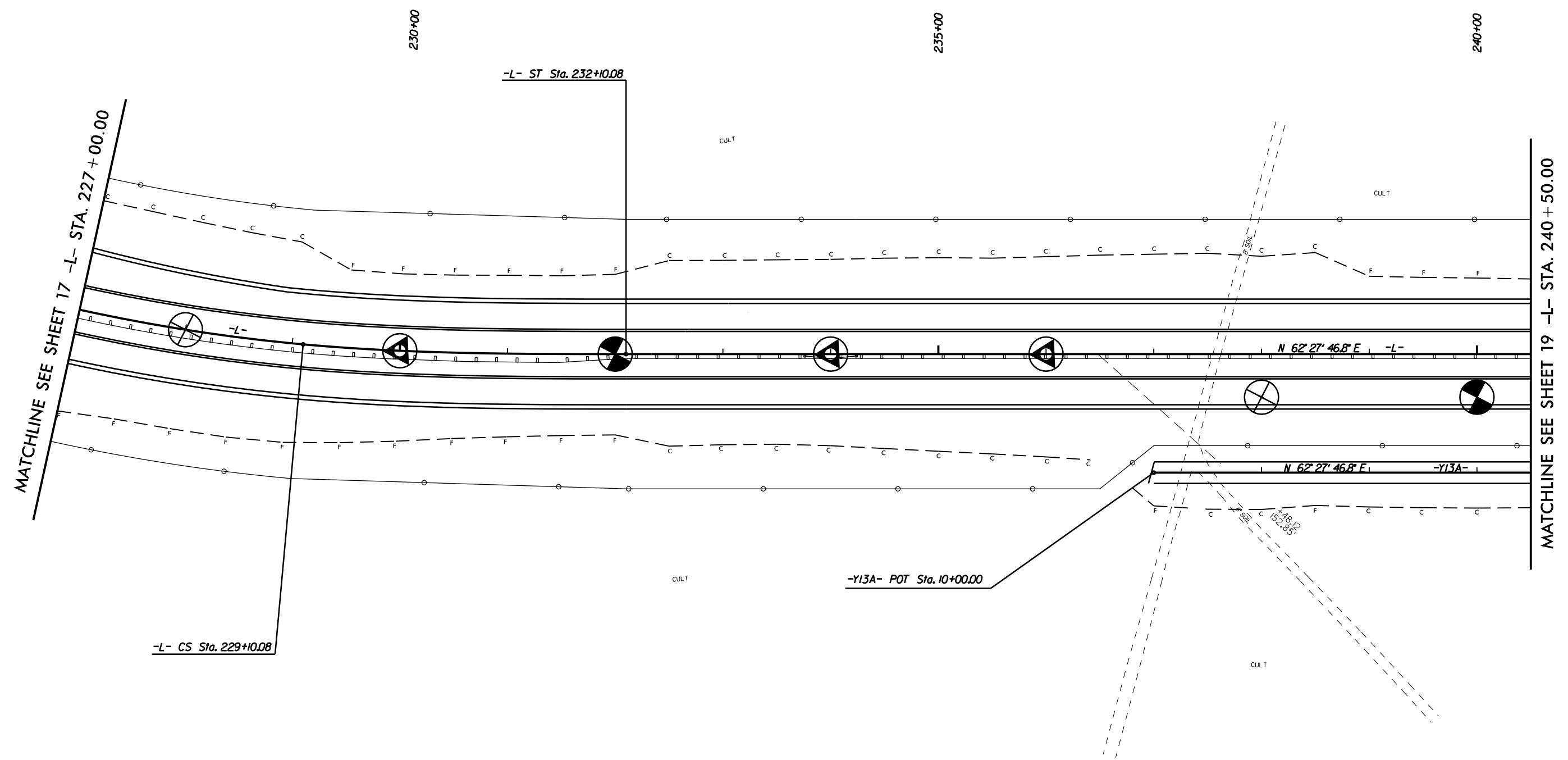
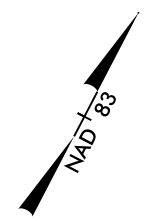


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-L-

Pis Sta 205+17.28 $\theta_s = 5'10''38.4''$ $L_s = 300.00'$ $LT = 200.09'$ $ST = 100.08'$	PI Sta 219+89.00 $\Delta = 79'08''23.8'' (LT)$ $D = 3'27''05.6''$ $L = 2,292.88'$ $T = 1,371.81'$ $R = 1,660.00'$ $SE = 06$ $V_f = 65$	Pis Sta 230+10.15 $\theta_s = 5'10''38.4''$ $L_s = 300.00'$ $LT = 200.09'$ $ST = 100.08'$
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PROJECT REFERENCE NO. R-2582A	SHEET NO. 18
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
INCOMPLETE PLANS DO NOT USE FOR A/W ACQUISITION PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	

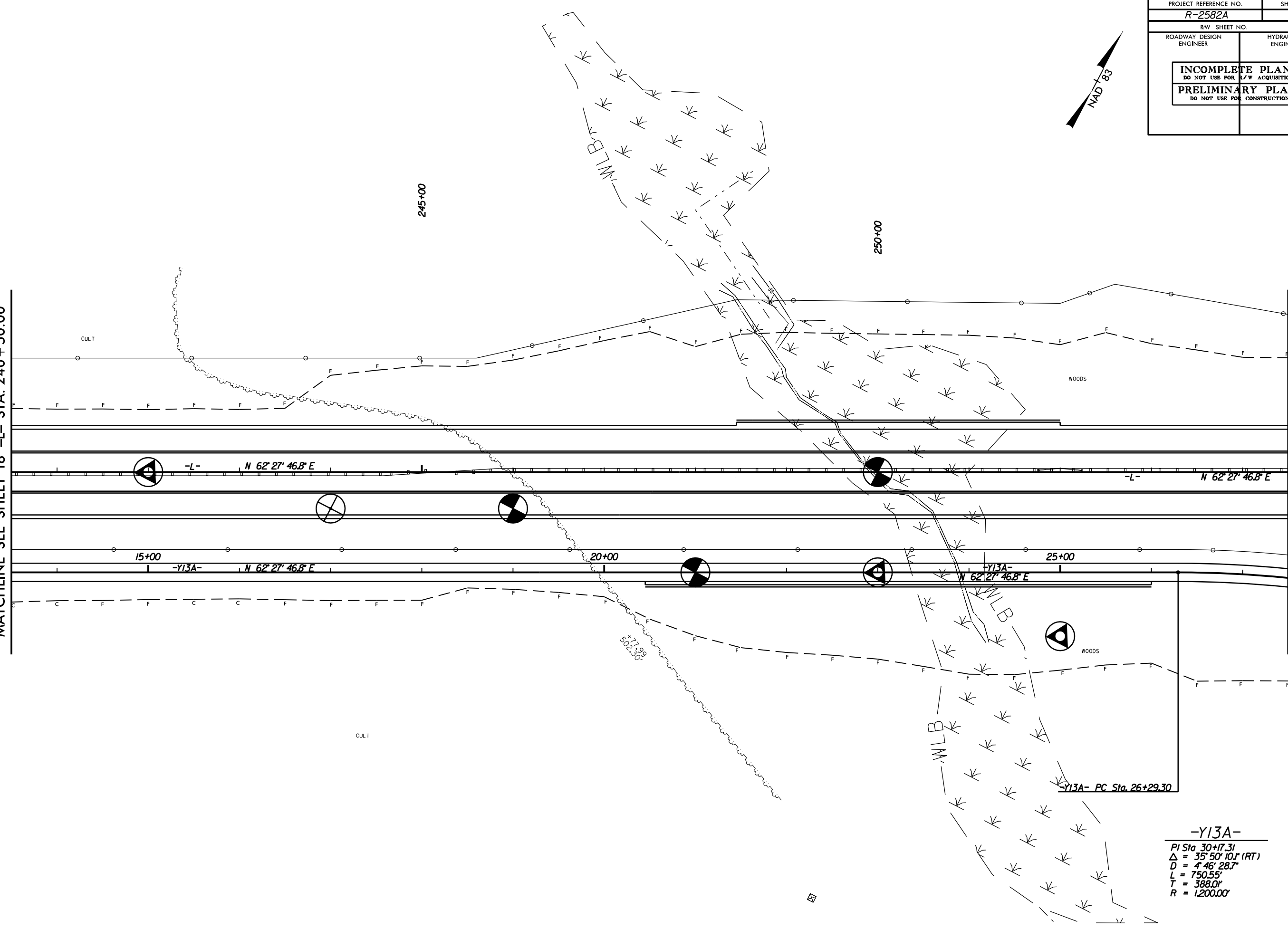


PROJECT REFERENCE NO.		SHEET NO.	
R-2582A		19	
RW SHEET NO.			
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER	
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION		PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	



MATCHLINE SEE SHEET 18 -L- STA. 240 + 50.00

MATCHLINE SEE SHEET 20 -L- STA. 254 + 50.00



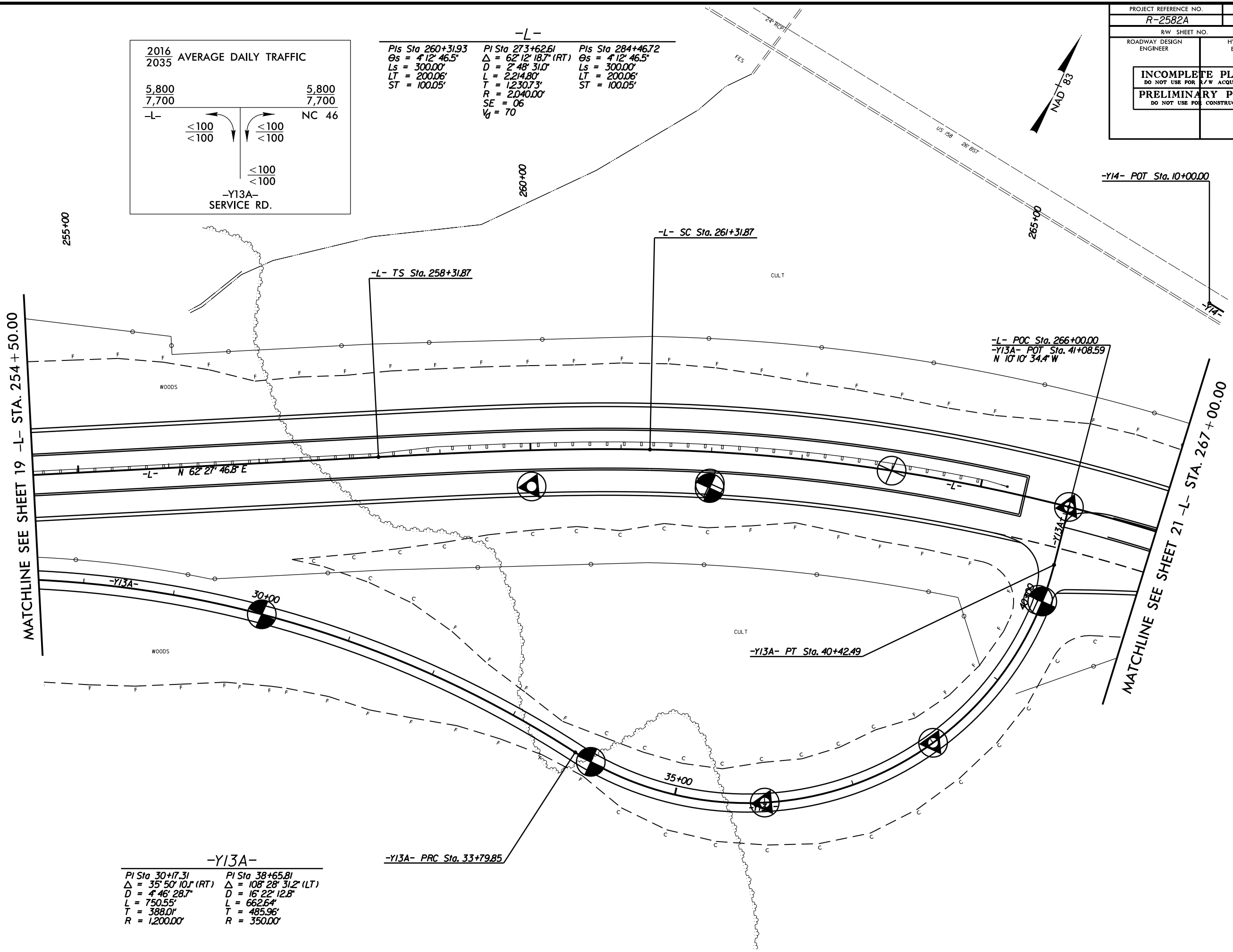
-Y13A-
 PI Sta 30+17.31
 $\Delta = 35^\circ 50' 10.1''$ (RT)
 $D = 4' 46.287''$
 $L = 750.55'$
 $T = 388.01'$
 $R = 1,200.00'$

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 8/17/99
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 8/17/99

PROJECT REFERENCE NO. R-2582A	SHEET NO. 20
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
INCOMPLETE PLANS DO NOT USE FOR A/W ACQUISITION	
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	

2016 AVERAGE DAILY TRAFFIC	
2035 AVERAGE DAILY TRAFFIC	
5,800	5,800
7,700	7,700
-L- NC 46	
<100	<100
<100	<100
-Y13A- SERVICE RD.	
<100	
<100	

-L-		
PI Sta 260+31.93	PI Sta 273+62.61	PI Sta 284+46.72
$\theta_s = 4'12''46.5''$	$\Delta = 62'12''18.7''$ (RT)	$\theta_s = 4'12''46.5''$
$L_s = 300.00'$	$D = 2'48''31.0''$	$L_s = 300.00'$
$LT = 200.06'$	$L = 2,214.80'$	$LT = 200.06'$
$ST = 100.05'$	$T = 1,230.73'$	$ST = 100.05'$
	$R = 2,040.00'$	
	$SE = 06$	
	$V_d = 70$	



-Y13A-	
PI Sta 30+17.31	PI Sta 38+65.81
$\Delta = 35'50''10.1''$ (RT)	$\Delta = 108'28''31.2''$ (LT)
$D = 4'46''28.7''$	$D = 16'22''12.8''$
$L = 750.55'$	$L = 662.64'$
$T = 388.01'$	$T = 485.96'$
$R = 1,200.00'$	$R = 350.00'$

-Y13A- PRC Sta. 33+79.85

MATCHLINE SEE SHEET 19 -L- STA. 254+50.00

MATCHLINE SEE SHEET 21 -L- STA. 267+00.00

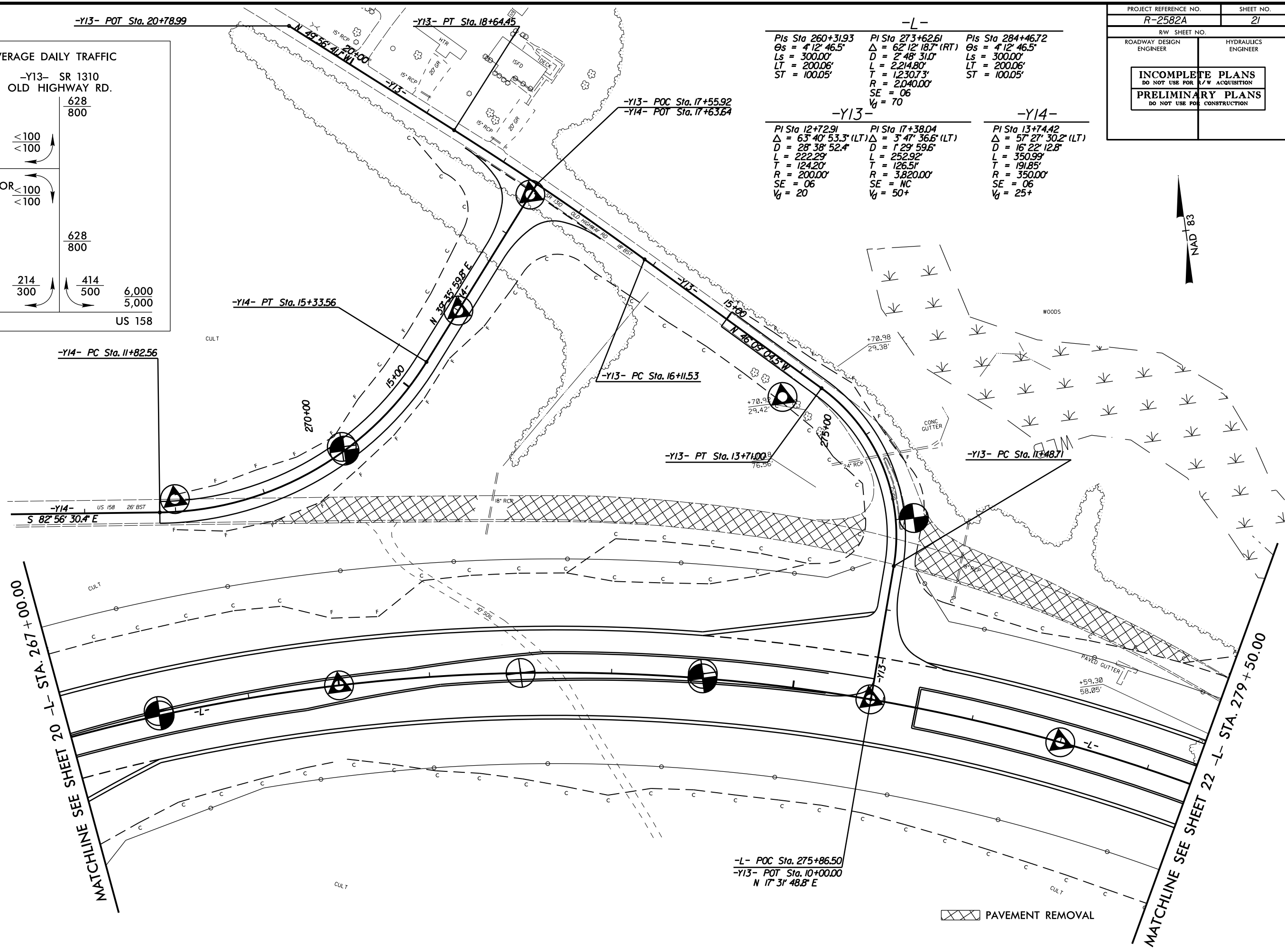
8/17/99

2016
2035 AVERAGE DAILY TRAFFIC

-Y13- SR 1310 OLD HIGHWAY RD.			
	628		
	800		
<100	<100		
<100	<100		
US 158 CONNECTOR			
	628		
	800		
5,800	214	414	6,000
7,700	300	500	5,000
-L-		US 158	

PROJECT REFERENCE NO. R-2582A	SHEET NO. 21
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
INCOMPLETE PLANS DO NOT USE FOR A/W ACQUISITION PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	

-L- PIs Sta 260+31.93 $\theta_s = 4'12'46.5"$ $L_s = 300.00'$ $LT = 200.06'$ $ST = 100.05'$	-L- PIs Sta 273+62.61 $\Delta = 62'12'18.7" (RT)$ $D = 2'48'31.0"$ $L = 2,214.80'$ $T = 1,230.73'$ $R = 2,040.00'$ $SE = 06$ $V_f = 70$	-L- PIs Sta 284+46.72 $\theta_s = 4'12'46.5"$ $L_s = 300.00'$ $LT = 200.06'$ $ST = 100.05'$
-Y13- PIs Sta 12+72.91 $\Delta = 63'40'53.3" (LT)$ $D = 28'38'52.4"$ $L = 222.29'$ $T = 124.20'$ $R = 200.00'$ $SE = 06$ $V_f = 20$	-Y13- PIs Sta 17+38.04 $\Delta = 3'47'36.6" (LT)$ $D = 1'29'59.6"$ $L = 252.92'$ $T = 126.51'$ $R = 3,820.00'$ $SE = NC$ $V_f = 50+$	-Y14- PIs Sta 13+74.42 $\Delta = 57'27'30.2" (LT)$ $D = 16'22'12.8"$ $L = 350.99'$ $T = 191.85'$ $R = 350.00'$ $SE = 06$ $V_f = 25+$



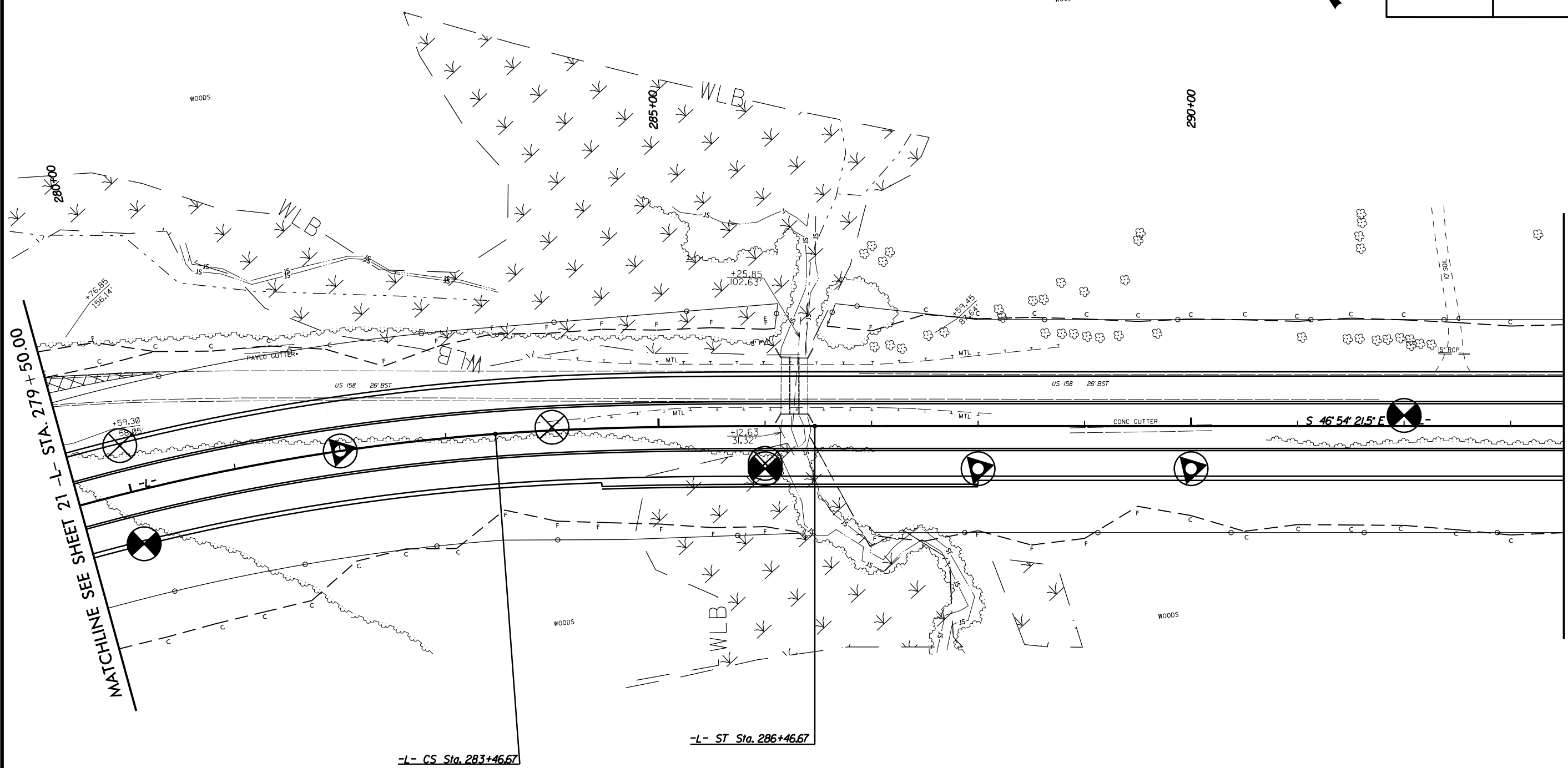
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Author: AT 16/02/2013

8/17/99

PROJECT REFERENCE NO. R-2582A	SHEET NO. 22
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
INCOMPLETE PLANS DO NOT USE FOR A/W ACQUISITION	
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	

-L-

PI Sta 260+31.93 Os = 4'12" 46.5" Ls = 300.00' LT = 200.06' ST = 100.05'	PI Sta 273+62.61 Δ = 62°12' 18.7" (RT) D = 2' 48" 31.0" L = 2,214.80' T = 1,230.73' R = 2,040.00' SE = 06 V _g = 70	PI Sta 284+46.72 Os = 4'12" 46.5" Ls = 300.00' LT = 200.06' ST = 100.05'
--	--	--



MATCHLINE SEE SHEET 21 -L- STA. 279 + 50.00

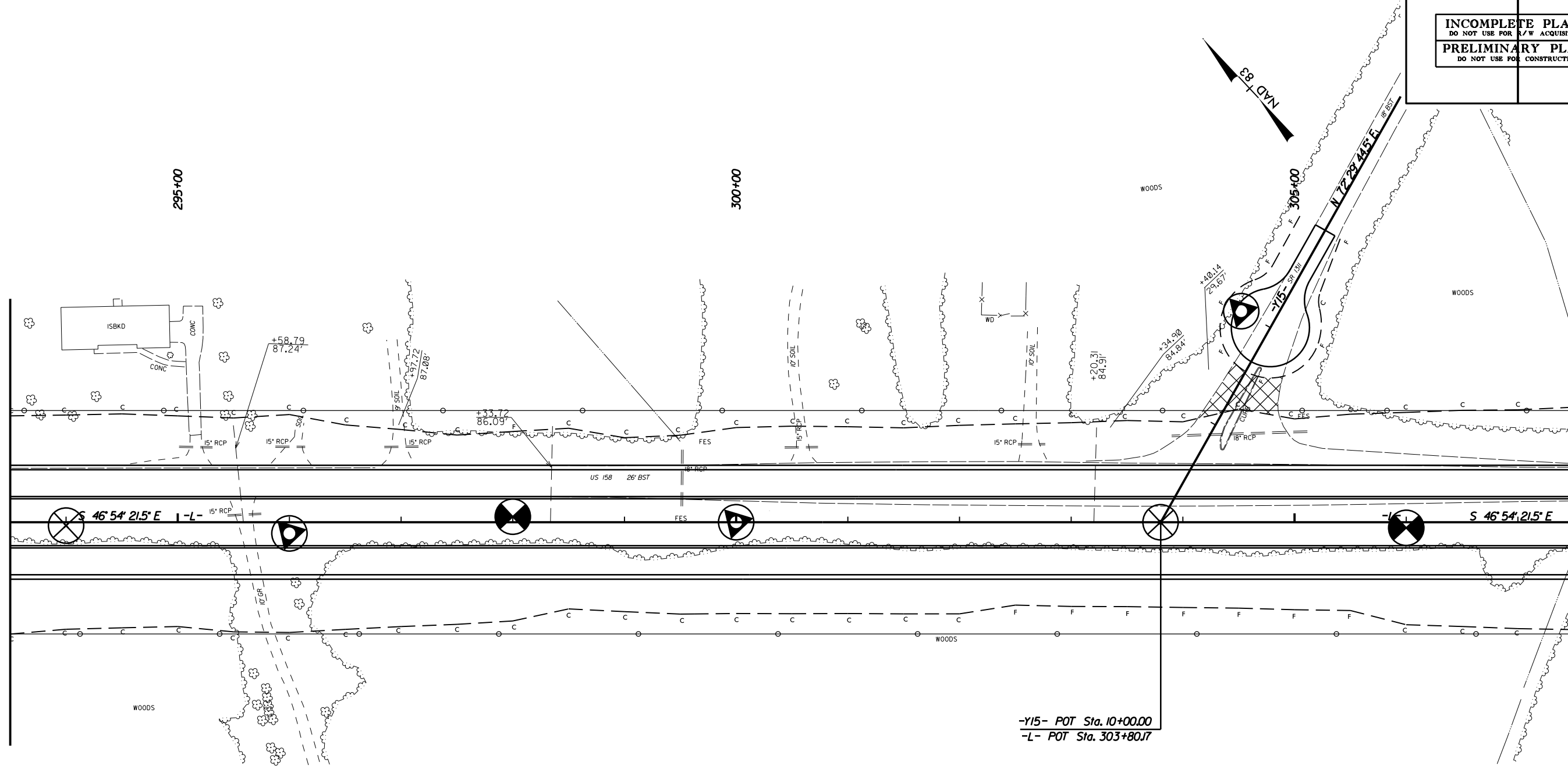
MATCHLINE SEE SHEET 23 -L- STA. 293 + 50.00

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PAVEMENT REMOVAL

PROJECT REFERENCE NO. R-2582A	SHEET NO. 23
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
INCOMPLETE PLANS DO NOT USE FOR A/W ACQUISITION	
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	

MATCHLINE SEE SHEET 22 -L- STA. 293 + 50.00



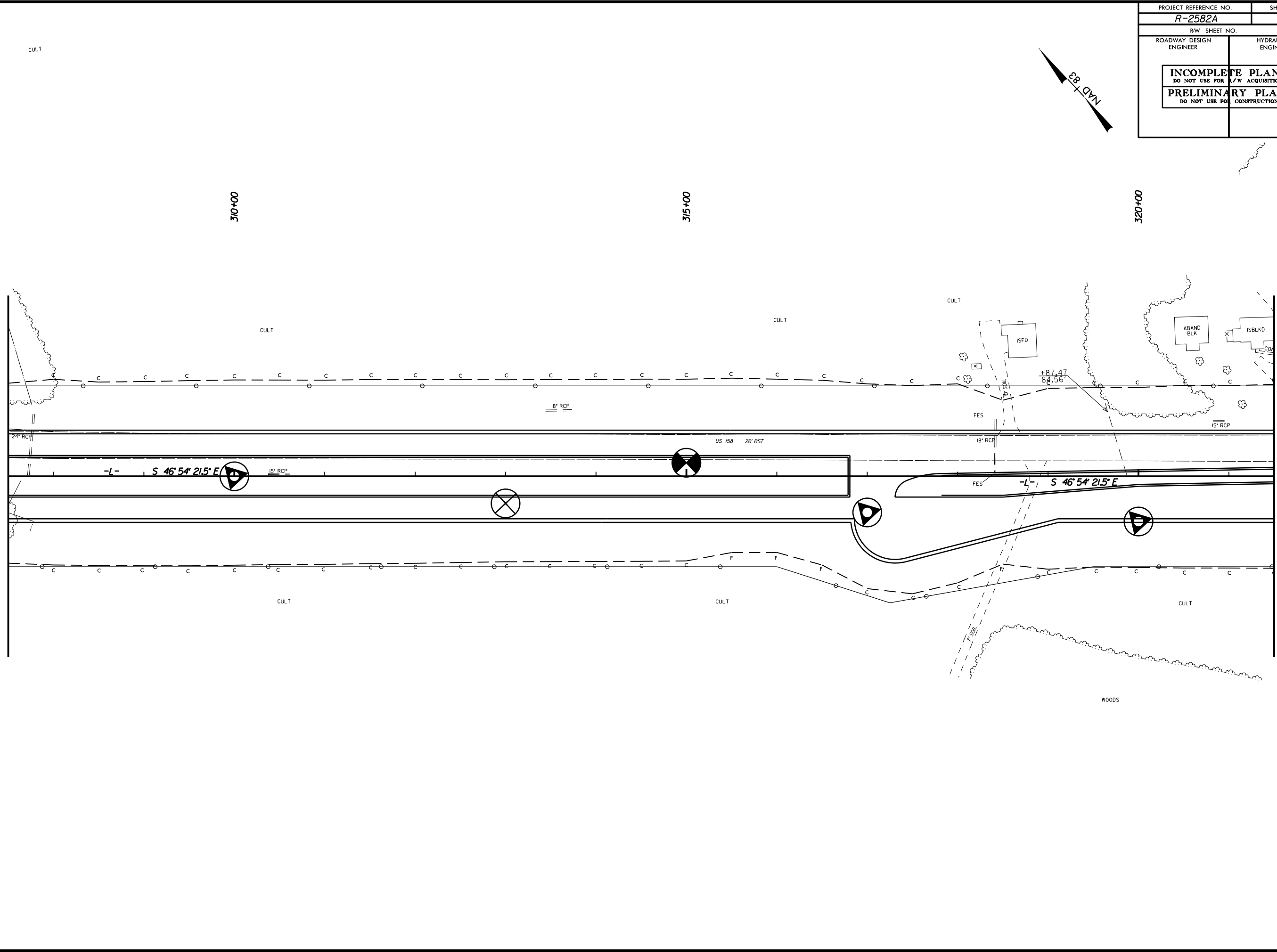
MATCHLINE SEE SHEET 24 -L- STA. 307 + 50.00

-Y15- POT Sta. 10+00.00
-L- POT Sta. 303+80.17

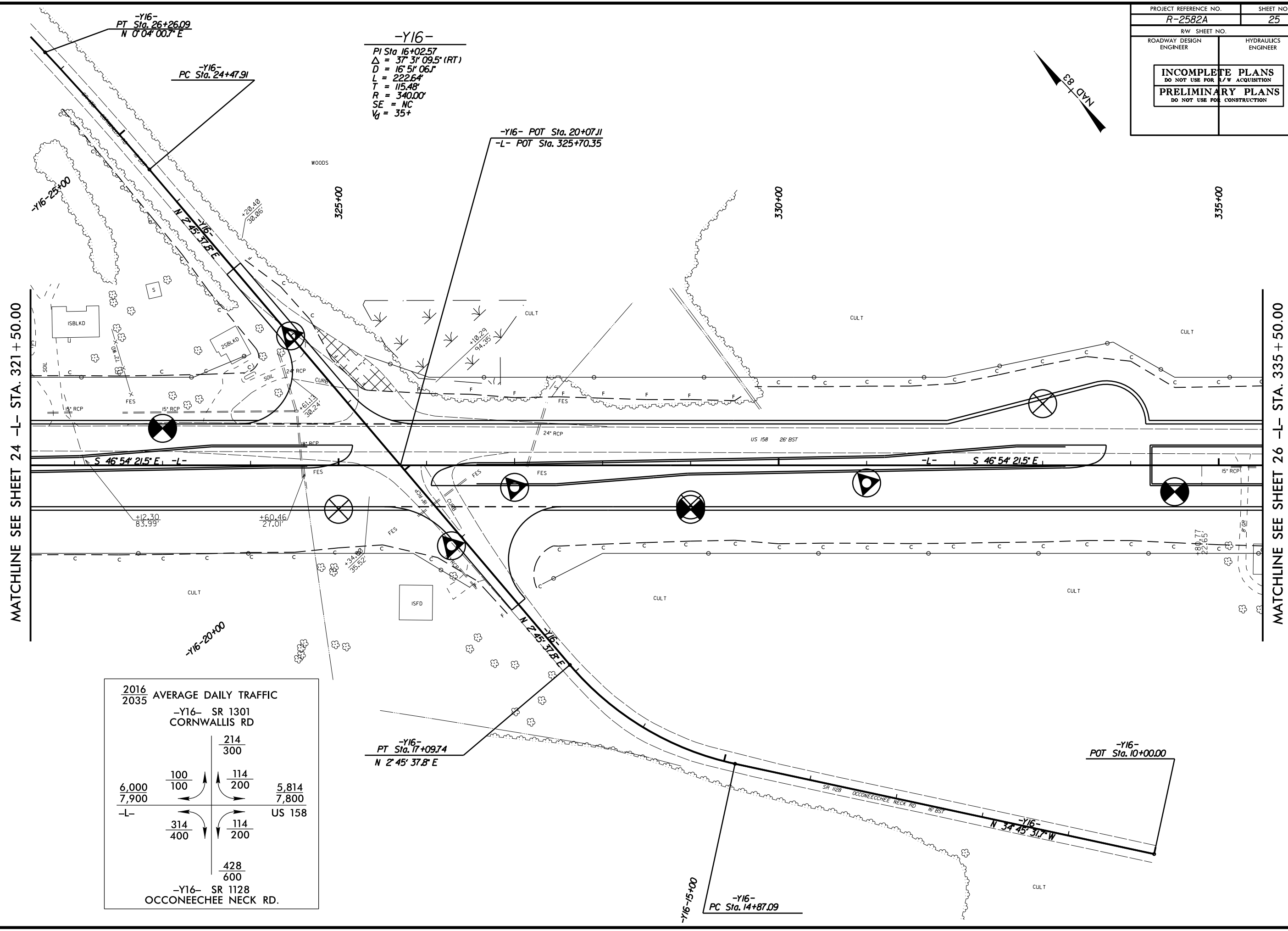
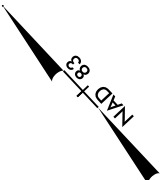
PROJECT REFERENCE NO. R-2582A	SHEET NO. 24
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
INCOMPLETE PLANS DO NOT USE FOR A/W ACQUISITION	
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	

MATCHLINE SEE SHEET 23 -L- STA. 307 + 50.00

MATCHLINE SEE SHEET 25 -L- STA. 321 + 50.00



PROJECT REFERENCE NO. R-2582A	SHEET NO. 25
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
INCOMPLETE PLANS DO NOT USE FOR A/W ACQUISITION PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	



MATCHLINE SEE SHEET 24 -L- STA. 321+50.00

MATCHLINE SEE SHEET 26 -L- STA. 335+50.00

-Y16-
 PI Sta. 16+02.57
 $\Delta = 37^\circ 31' 09.5''$ (RT)
 $D = 16' 51' 06.1''$
 $L = 222.64'$
 $T = 115.48'$
 $R = 340.00'$
 $SE = NC$
 $V_g = 35+$

2016		2035	
AVERAGE DAILY TRAFFIC			
-Y16- SR 1301 CORNWALLIS RD			
	214	114	
	300	200	
6,000	100	114	5,814
7,900	100	200	7,800
-L- US 158			
	314	114	
	400	200	
	428	600	
-Y16- SR 1128 OCCONEECHEE NECK RD.			

8/17/99
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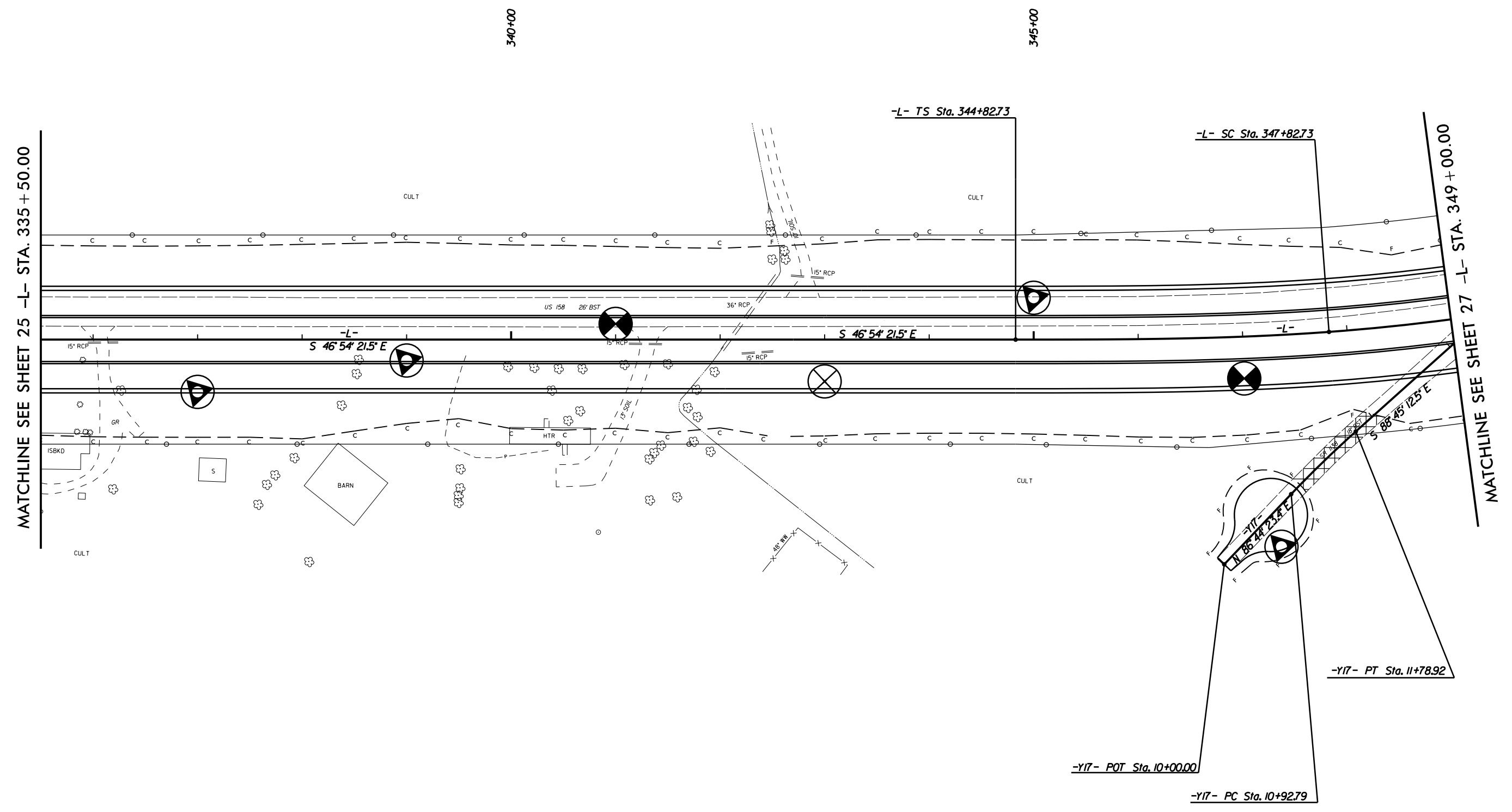
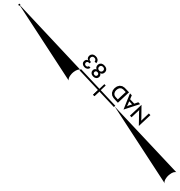
PROJECT REFERENCE NO.	SHEET NO.
R-2582A	26
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
INCOMPLETE PLANS DO NOT USE FOR A/W ACQUISITION	
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	

-L-

PIs Sta 346+82.79	PI Sta 348+94.01	PIs Sta 351+05.13
$\Theta_s = 4' 12' 46.5''$	$\Delta = 6' 14' 41.4''$ (LT)	$\Theta_s = 4' 12' 46.5''$
Ls = 300.00'	D = 2' 48' 31.0'	Ls = 300.00'
LT = 200.06'	L = 222.35'	LT = 200.06'
ST = 100.05'	T = 111.28'	ST = 100.05'
	R = 2,040.00'	
	SE = 06	
	$V_g = 70$	

-Y17-

PI Sta 11+35.88
$\Delta = 4' 30' 24.2''$ (RT)
D = 5' 13' 57.0'
L = 86.13'
T = 43.09'
R = 1,095.00'
SE = NC
$V_g = 50+$



8/17/99
 16-FEB-2015 10:06
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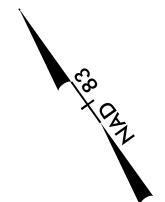
PROJECT REFERENCE NO. R-2582A	SHEET NO. 27
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION	
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	

-L-

PIs Sta 346+82.79 θs = 4°12'46.5" Ls = 300.00' LT = 200.06' ST = 100.05'	PI Sta 348+94.01 Δ = 6°14'41.4" (LT) D = 2°48'31.0" L = 222.35' T = 111.28' R = 2,040.00' SE = 06 V _g = 70	PIs Sta 351+05.13 θs = 4°12'46.5" Ls = 300.00' LT = 200.06' ST = 100.05'
--	--	--

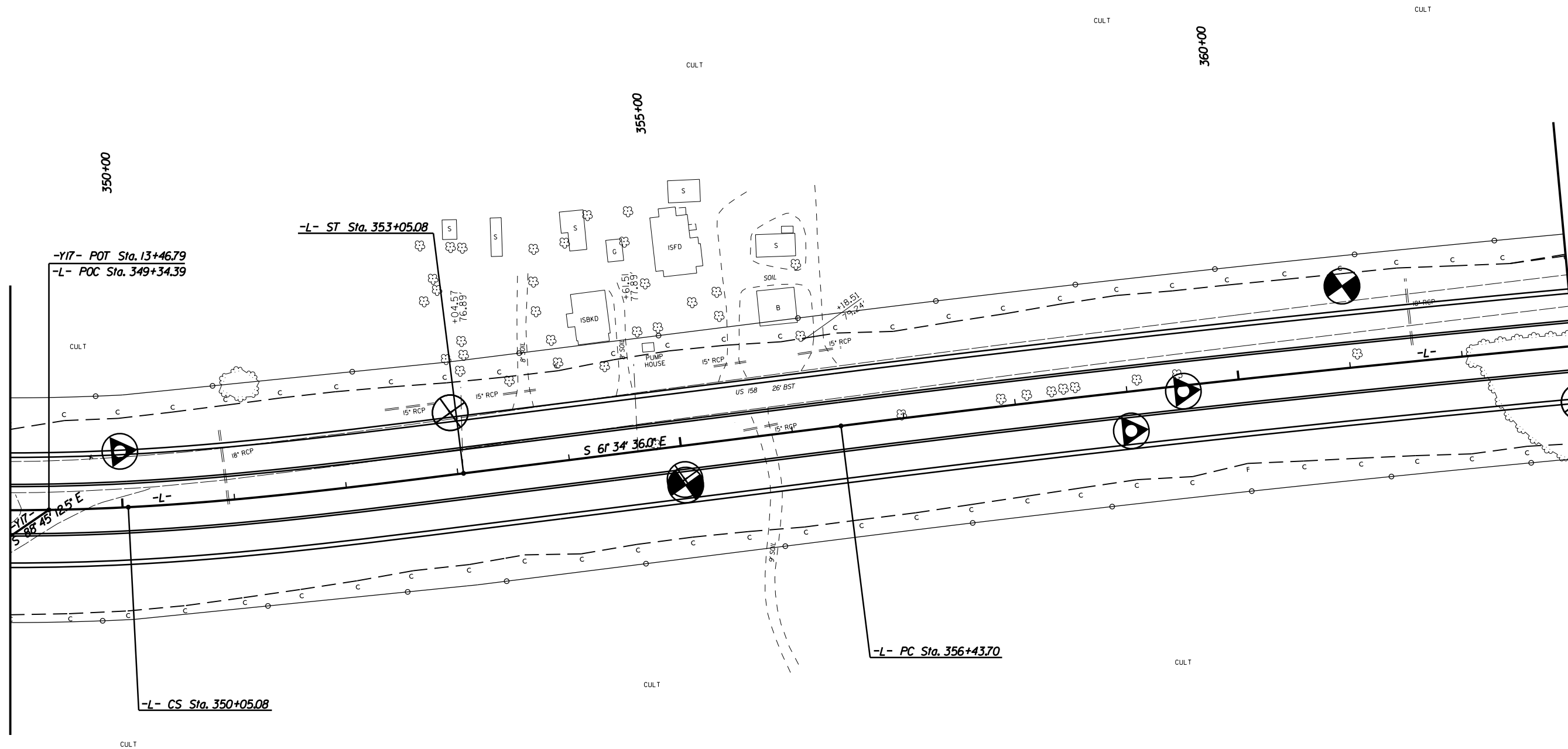
-L-

PI Sta 380+35.95 Δ = 13°38'30.3" (RT) D = 0°17'11.3" L = 4,761.87' T = 2,392.25' R = 20,000.00' SE = NC V _g = 70+



MATCHLINE SEE SHEET 26 -L- STA. 349 + 00.00

MATCHLINE SEE SHEET 28 -L- STA. 363 + 00.00



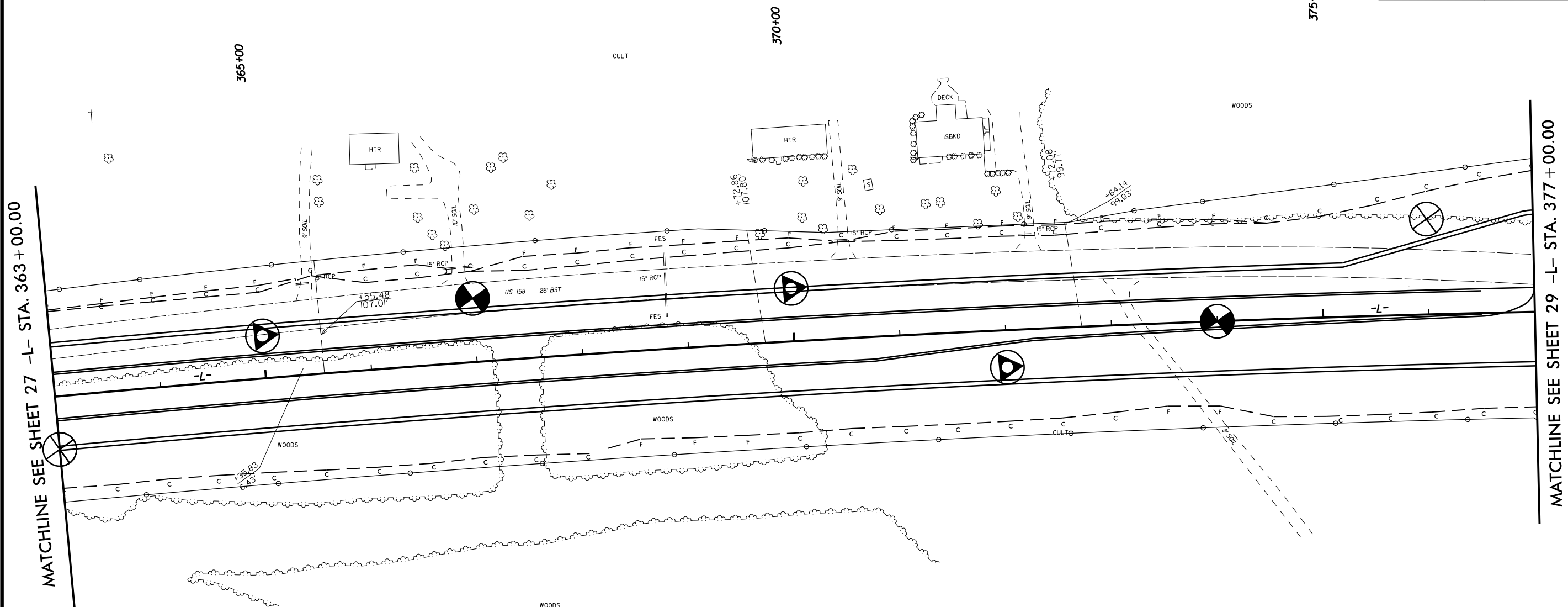
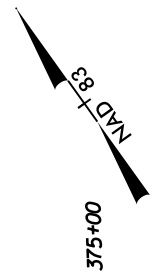
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16-FEB-2015 10:07
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continued at 1627230

-L-

PI Sta 380+35.95
 $\Delta = 13^{\circ} 38' 30.3" (RT)$
 $D = 0' 17" 11.3"$
 $L = 4761.87'$
 $T = 2392.25'$
 $R = 20,000.00'$
 $SE = NC$
 $V_d = 70+$

PROJECT REFERENCE NO. R-2582A	SHEET NO. 28
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
INCOMPLETE PLANS DO NOT USE FOR A/W ACQUISITION PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	



16-FEB-2015 10:07

8/17/99

16-FEB-2015 10:07
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c:\user

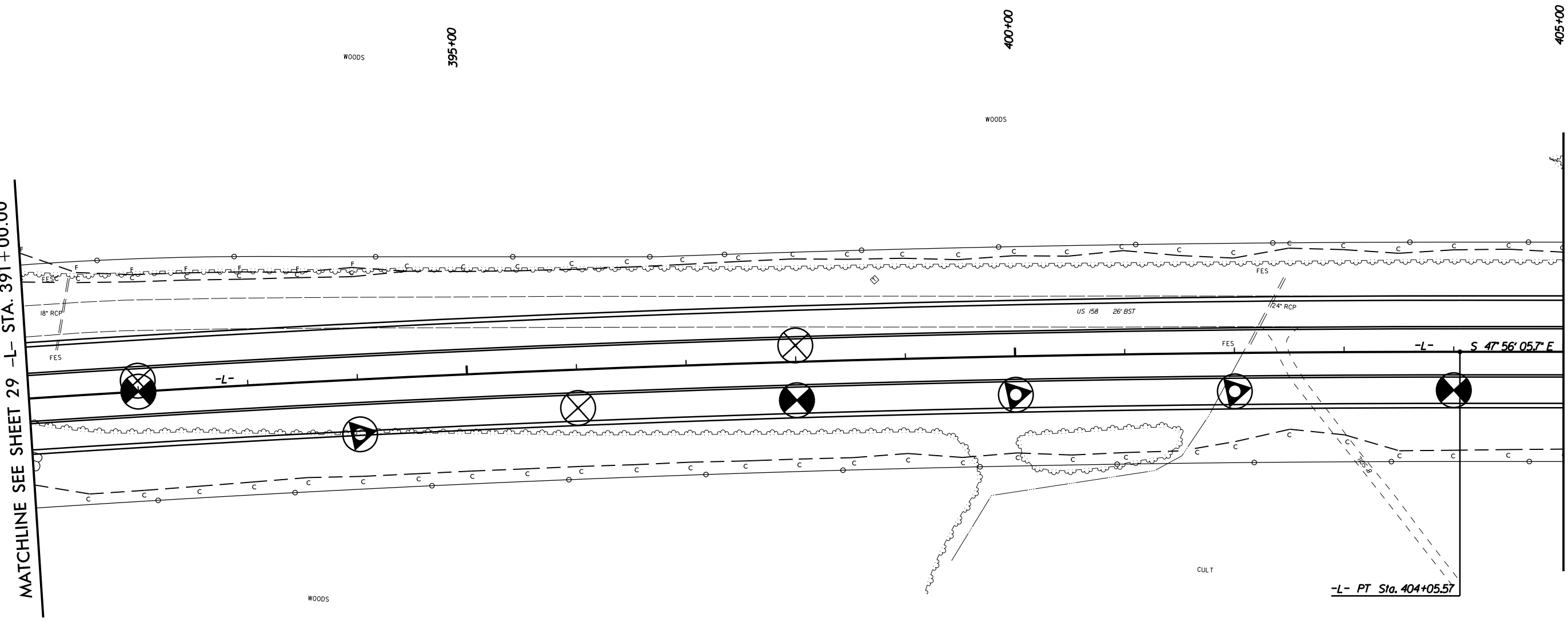
-L-
PI Sta 380+35.95
 $\Delta = 13^\circ 38' 30.3" (RT)$
D = 0' 17" 11.3"
L = 4761.87'
T = 2,392.25'
R = 20,000.00'
SE = NC
 $V_f = 70+$

PROJECT REFERENCE NO. R-2582A	SHEET NO. 30
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
INCOMPLETE PLANS DO NOT USE FOR A/W ACQUISITION PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	



MATCHLINE SEE SHEET 29 -L- STA. 391+00.00

MATCHLINE SEE SHEET 31 -L- STA. 405+00.00



WOODS

395+00

400+00

WOODS

405+00

-L-

-L-

-L- PT Sta. 404+05.57

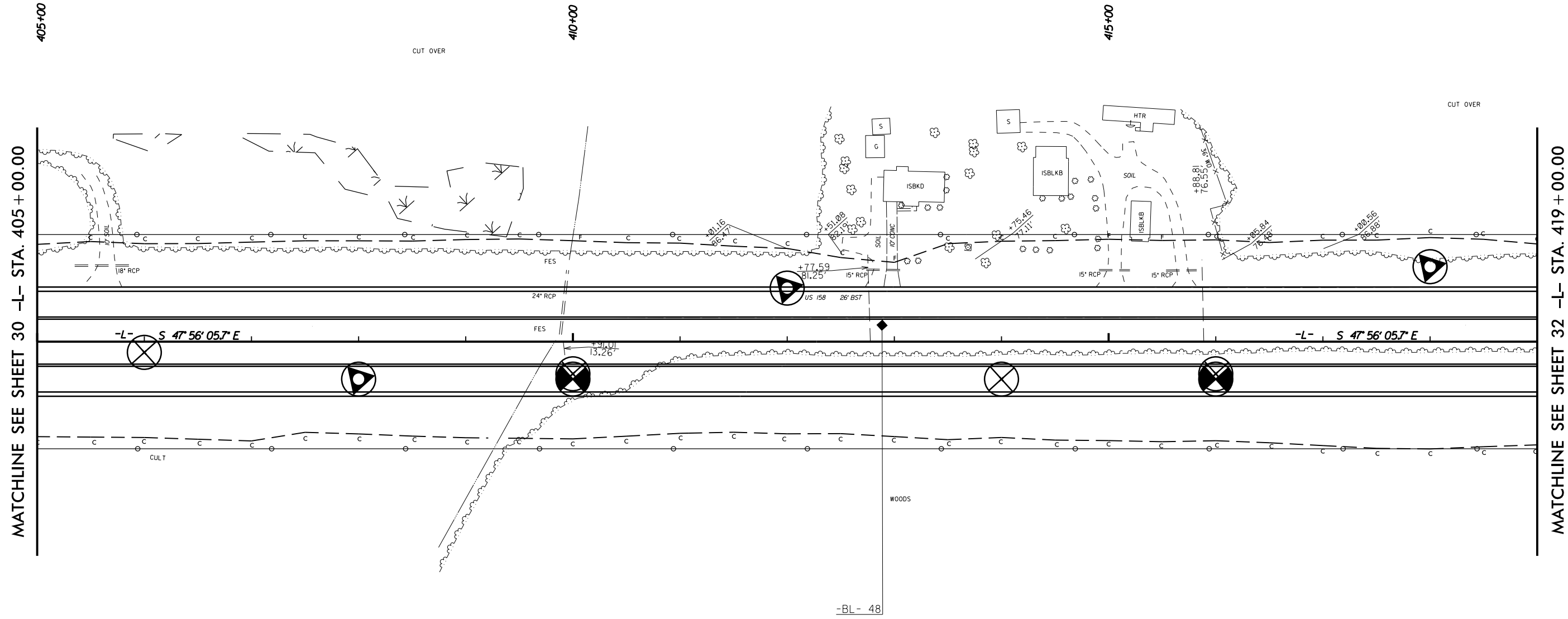
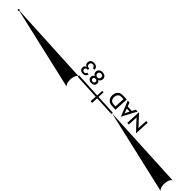
US 158 26' BST

1/24" RCP

S 47° 56' 05.7" E

CULT

PROJECT REFERENCE NO. R-2582A	SHEET NO. 31
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
INCOMPLETE PLANS DO NOT USE FOR A/W ACQUISITION	
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	



MATCHLINE SEE SHEET 30 -L- STA. 405 + 00.00

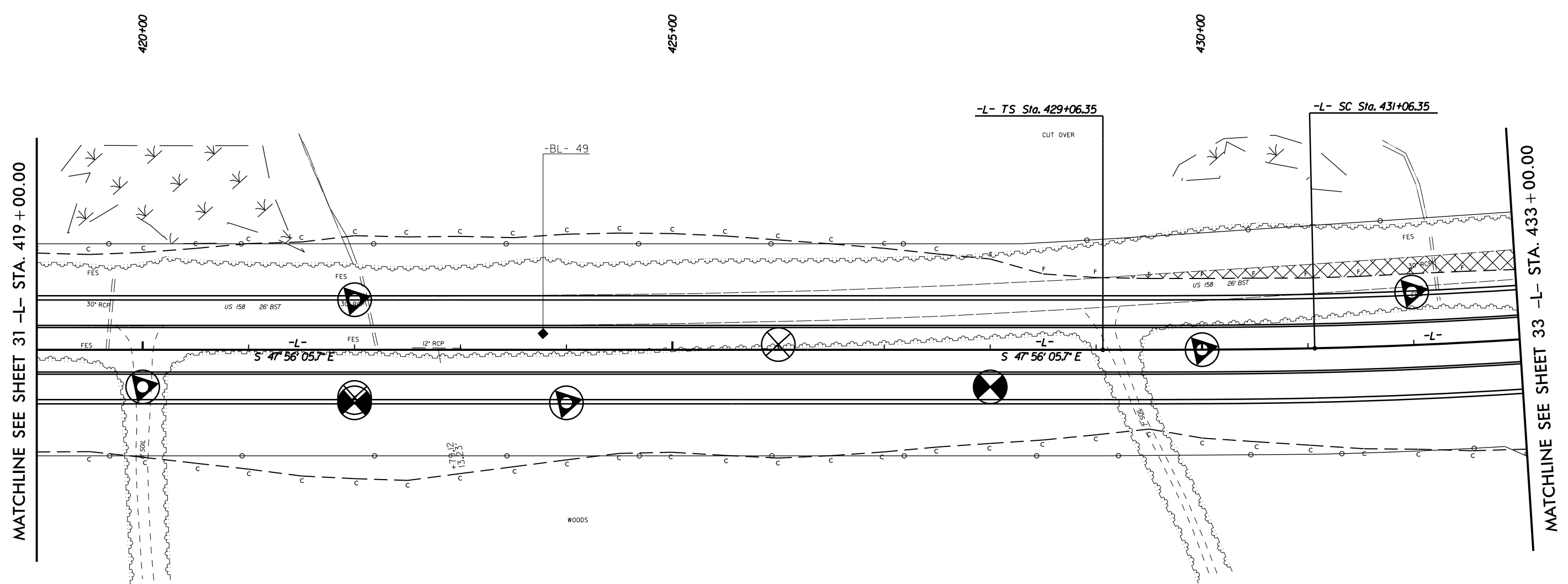
MATCHLINE SEE SHEET 32 -L- STA. 419 + 00.00

-BL- 48

-L-

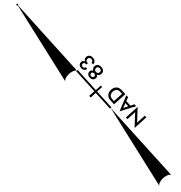
Pls Sta 430+39.69	PI Sta 439+89.95	Pls Sta 449+18.50
$\Theta_s = 1'15''33.3''$	$\Delta = 21'58''47.6'' (LT)$	$\Theta_s = 1'15''33.3''$
$L_s = 200.00'$	$D = 1'15''33.3''$	$L_s = 200.00'$
$LT = 133.34'$	$L = 1,745.48'$	$LT = 133.34'$
$ST = 66.67'$	$T = 883.60'$	$ST = 66.67'$
	$R = 4,550.00'$	
	$SE = NC$	
	$V_d = 70+$	

PROJECT REFERENCE NO. R-2582A	SHEET NO. 32
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
INCOMPLETE PLANS DO NOT USE FOR A/W ACQUISITION PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	



MATCHLINE SEE SHEET 31 -L- STA. 419 + 00.00

MATCHLINE SEE SHEET 33 -L- STA. 433 + 00.00



WOODS

CUT OVER

-L- TS Sta. 429+06.35

-L- SC Sta. 431+06.35

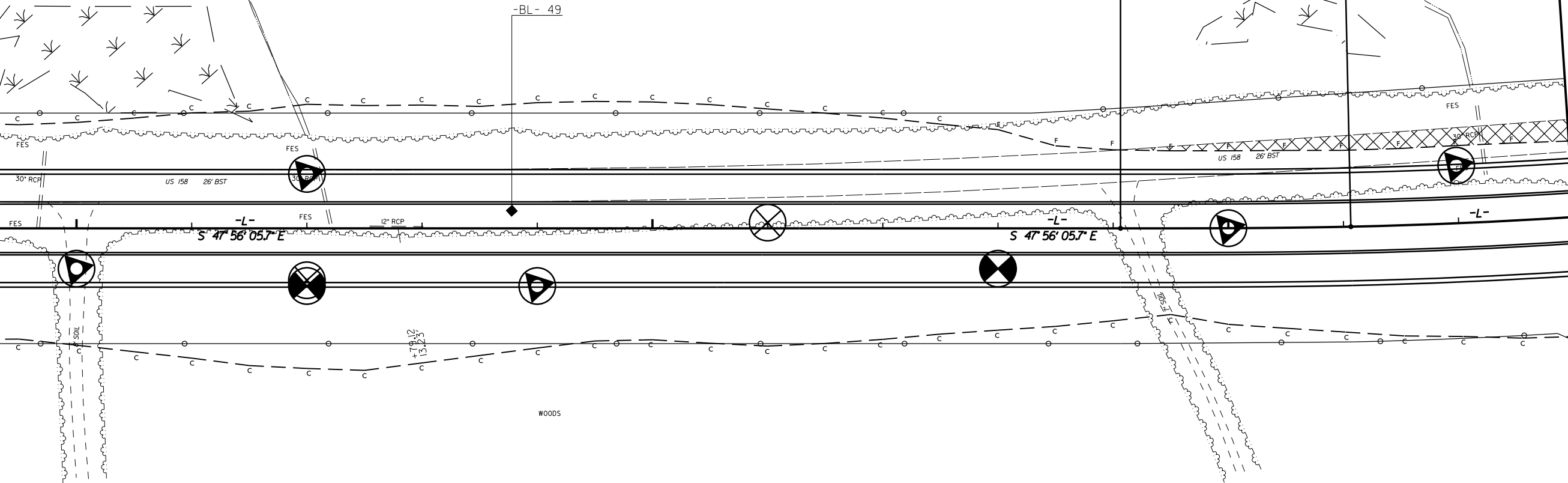
S 47° 56' 05.7" E

S 47° 56' 05.7" E

420+00

425+00

430+00



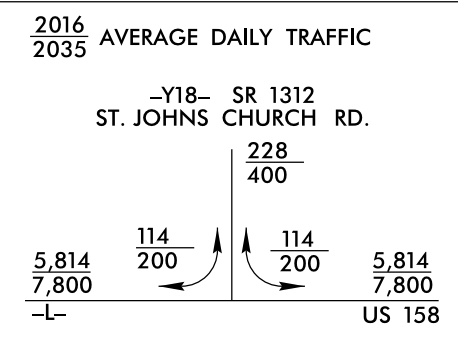
PROJECT REFERENCE NO. R-2582A	SHEET NO. 33
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
INCOMPLETE PLANS DO NOT USE FOR A/W ACQUISITION	
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	

-L-

<i>PIs Sta 430+39.69</i>	<i>PI Sta 439+89.95</i>	<i>PIs Sta 449+18.50</i>
$\Theta_s = 1' 15' 33.3"$	$\Delta = 21' 58' 47.6" (LT)$	$\Theta_s = 1' 15' 33.3"$
$L_s = 200.00'$	$D = 1' 15' 33.3"$	$L_s = 200.00'$
$LT = 133.34'$	$L = 1,745.48'$	$LT = 133.34'$
$ST = 66.67'$	$T = 883.60'$	$ST = 66.67'$
	$R = 4,550.00'$	
	$SE = NC$	
	$V_0 = 70+$	

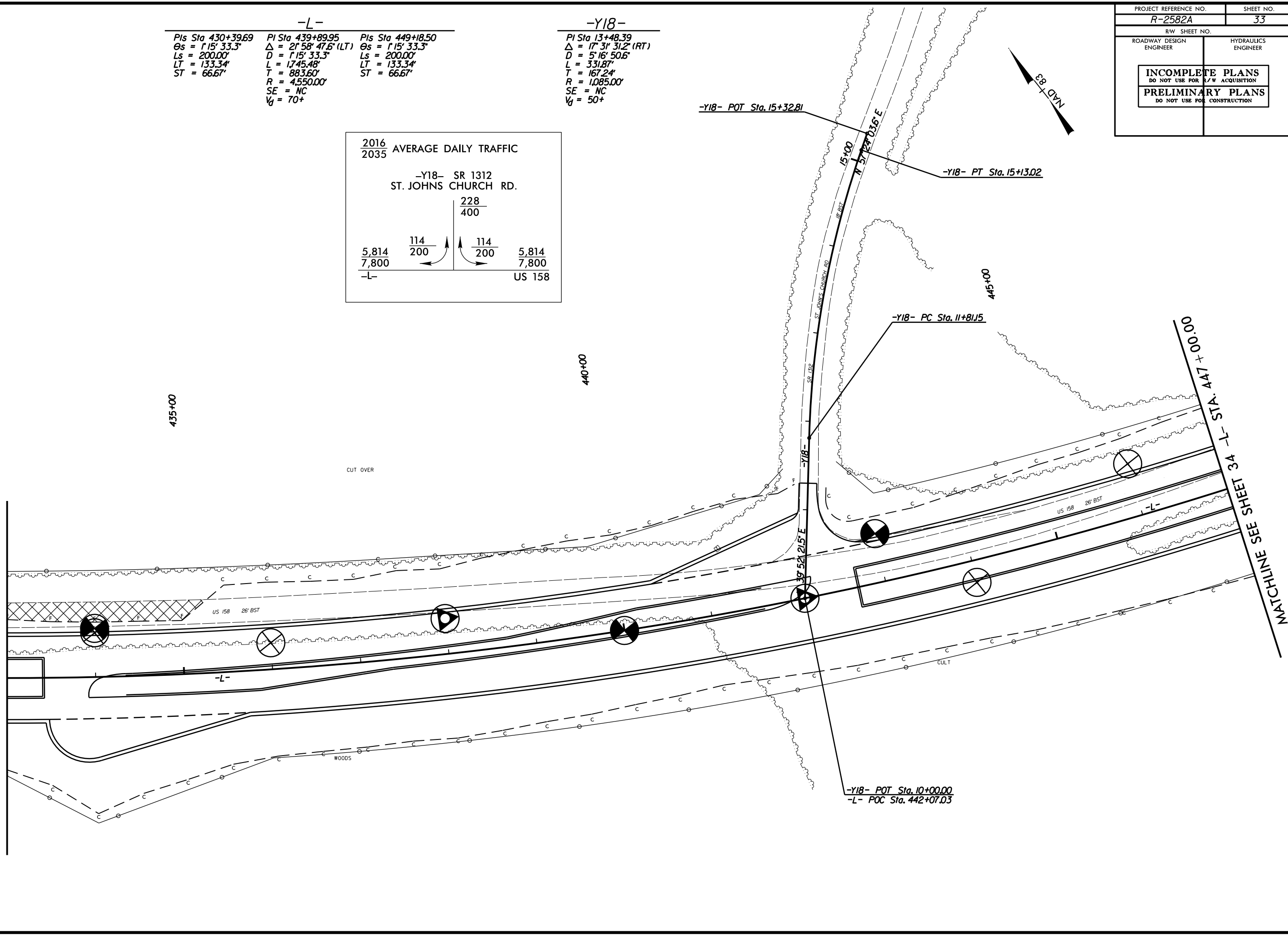
-Y18-

<i>PI Sta 13+48.39</i>
$\Delta = 17' 31' 31.2" (RT)$
$D = 5' 16' 50.6"$
$L = 331.87'$
$T = 167.24'$
$R = 1,085.00'$
$SE = NC$
$V_0 = 50+$



MATCHLINE SEE SHEET 32 -L- STA. 433 + 00.00

MATCHLINE SEE SHEET 34 -L- STA. 447 + 00.00

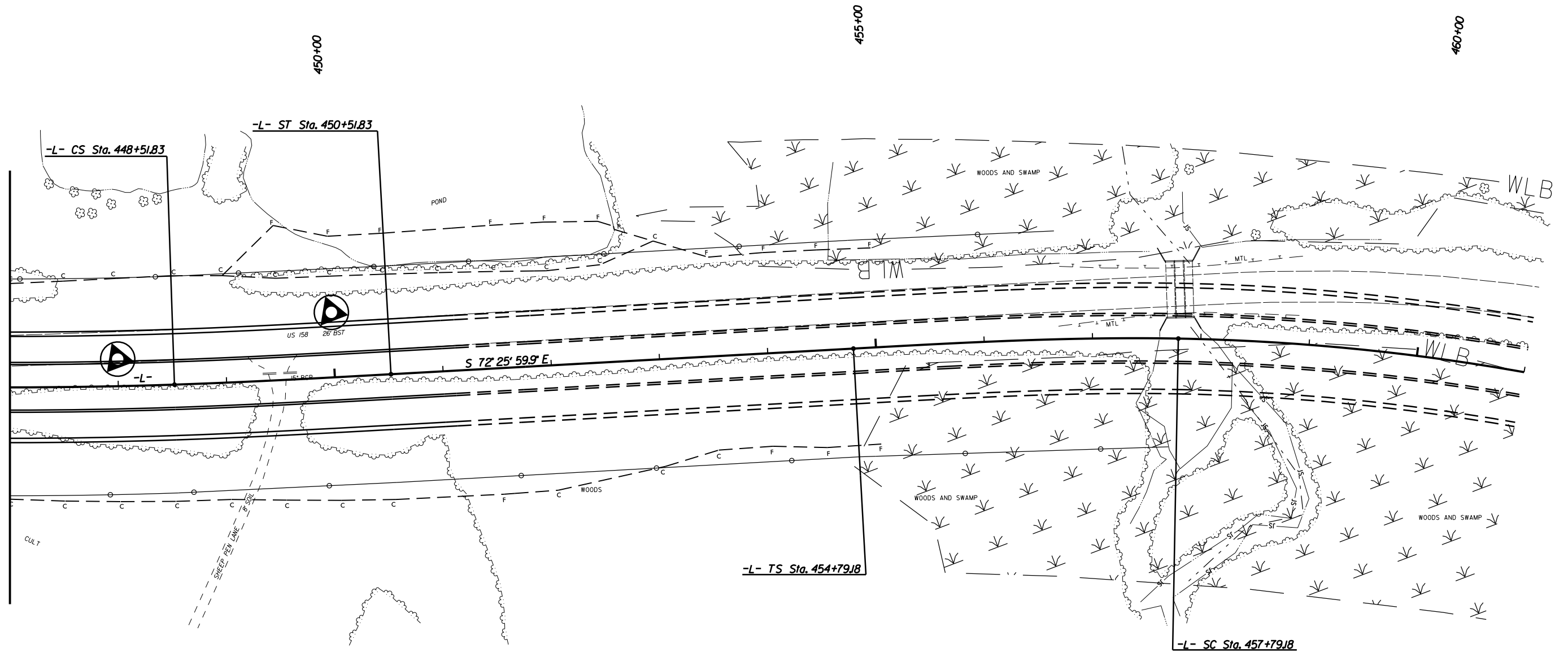


PROJECT REFERENCE NO. R-2582A	SHEET NO. 34
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
INCOMPLETE PLANS DO NOT USE FOR A/W ACQUISITION	
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	

-L-			-L-		
<i>Pls Sta 430+39.69</i>	<i>Pls Sta 439+89.95</i>	<i>Pls Sta 449+18.50</i>	<i>Pls Sta 456+79.23</i>	<i>Pls Sta 460+08.87</i>	<i>Pls Sta 463+36.68</i>
<i>Θs = 1°15' 33.3"</i>	<i>Δ = 2°58' 47.6" (LT)</i>	<i>Θs = 1°15' 33.3"</i>	<i>Θs = 4°12' 46.5"</i>	<i>Δ = 12°50' 53.3" (RT)</i>	<i>Θs = 4°12' 46.5"</i>
<i>Ls = 200.00'</i>	<i>D = 1°15' 33.3"</i>	<i>Ls = 200.00'</i>	<i>Ls = 300.00'</i>	<i>D = 2°48' 31.0"</i>	<i>Ls = 300.00'</i>
<i>LT = 133.34'</i>	<i>L = 1,745.48'</i>	<i>LT = 133.34'</i>	<i>LT = 200.06'</i>	<i>L = 457.45'</i>	<i>LT = 200.06'</i>
<i>ST = 66.67'</i>	<i>T = 883.60'</i>	<i>ST = 66.67'</i>	<i>ST = 100.05'</i>	<i>T = 229.69'</i>	<i>ST = 100.05'</i>
	<i>R = 4,550.00'</i>			<i>R = 2,040.00'</i>	
	<i>SE = NC</i>			<i>SE = 06</i>	
	<i>Vg = 70+</i>			<i>Vg = 70</i>	

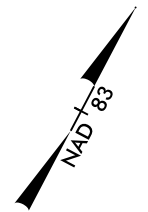
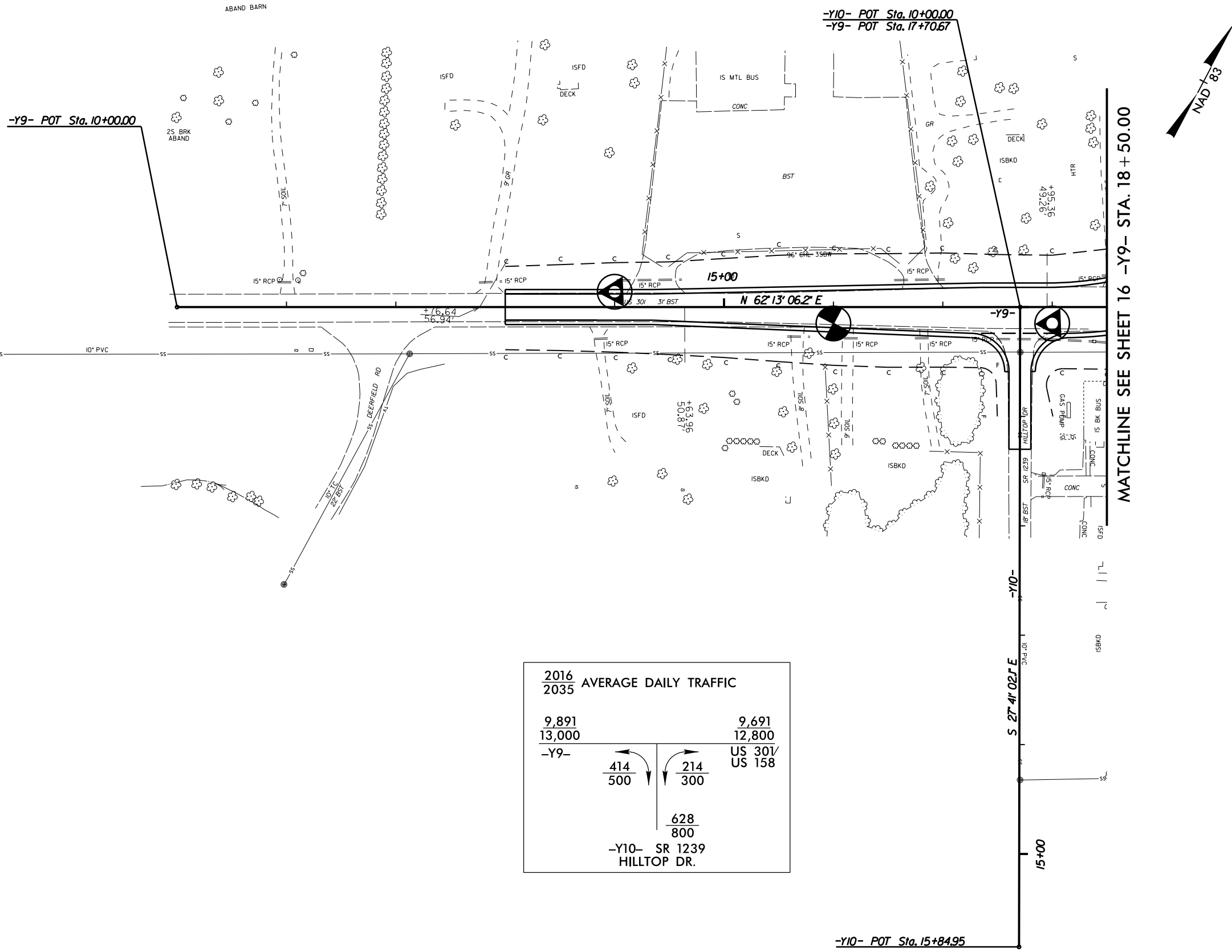


MATCHLINE SEE SHEET 33 -L- STA. 447 + 00.00



PROJECT REFERENCE NO.	SHEET NO.
R-2582A	35
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	

8/17/99

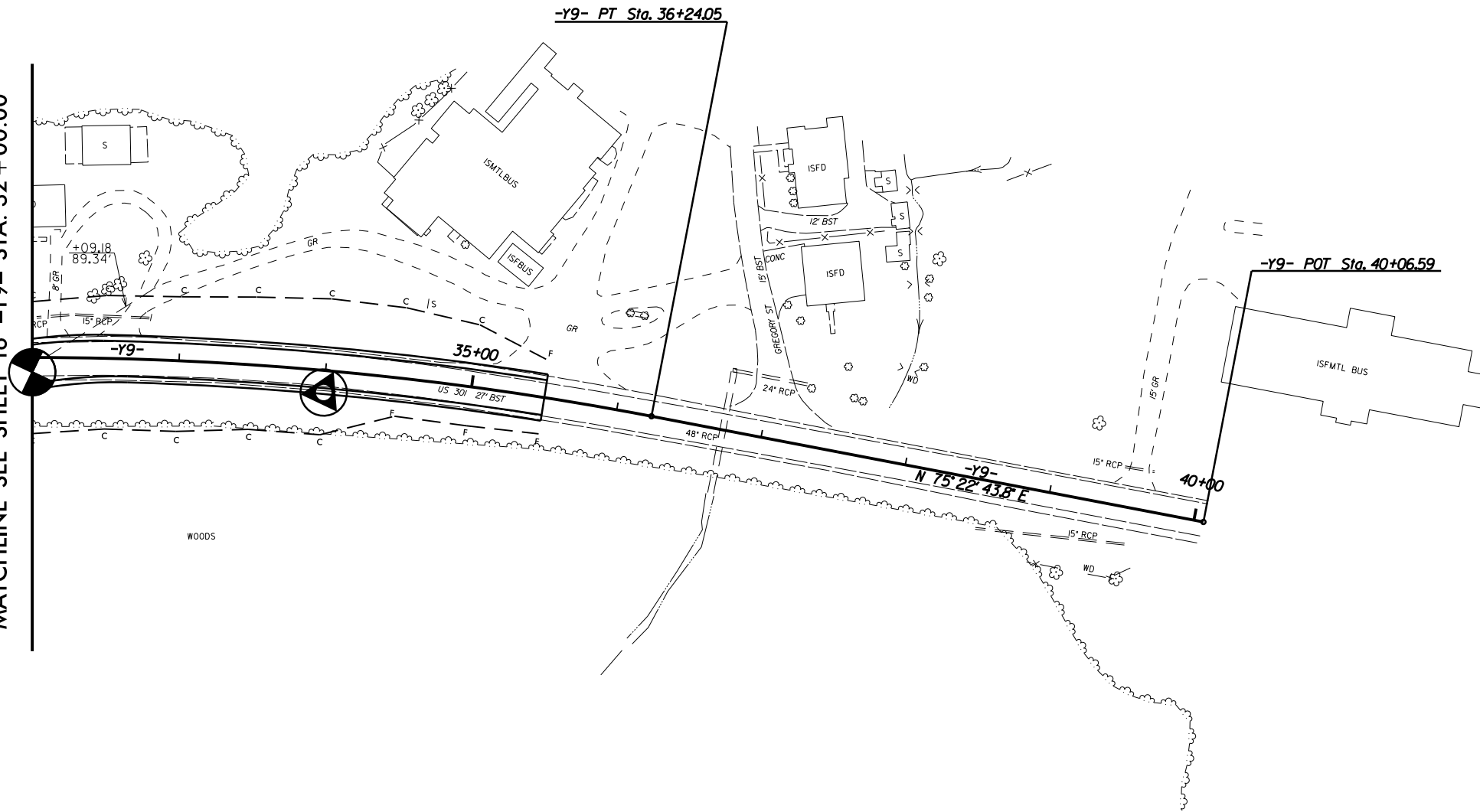


MATCHLINE SEE SHEET 16 -Y9- STA. 18 + 50.00

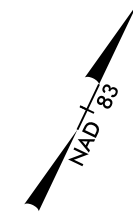
2016		2035	
AVERAGE DAILY TRAFFIC			
9,891			9,691
13,000			12,800
-Y9-			US 301 US 158
	414	214	
	500	300	
		628	
		800	
		-Y10- SR 1239 HILLTOP DR.	

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MATCHLINE SEE SHEET 16 -Y9- STA. 32+00.00



-Y9-
 PI Sta 33+67.93
 $\Delta = 13^{\circ} 09' 37.6''$ (RT)
 $D = 2^{\circ} 33' 28.3''$
 $L = 514.51'$
 $T = 258.39'$
 $R = 2,240.00'$
 $SE = 08$
 $V_g = 60+$



PROJECT REFERENCE NO.	SHEET NO.
R-2582A	36
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
INCOMPLETE PLANS DO NOT USE FOR A/W ACQUISITION	
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	

NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
GEOTECHNICAL ENGINEERING UNIT
SUBSURFACE INVESTIGATION
INVENTORY
SECTION 2

REFERENCE: R-2582A

PROJECT: 34472

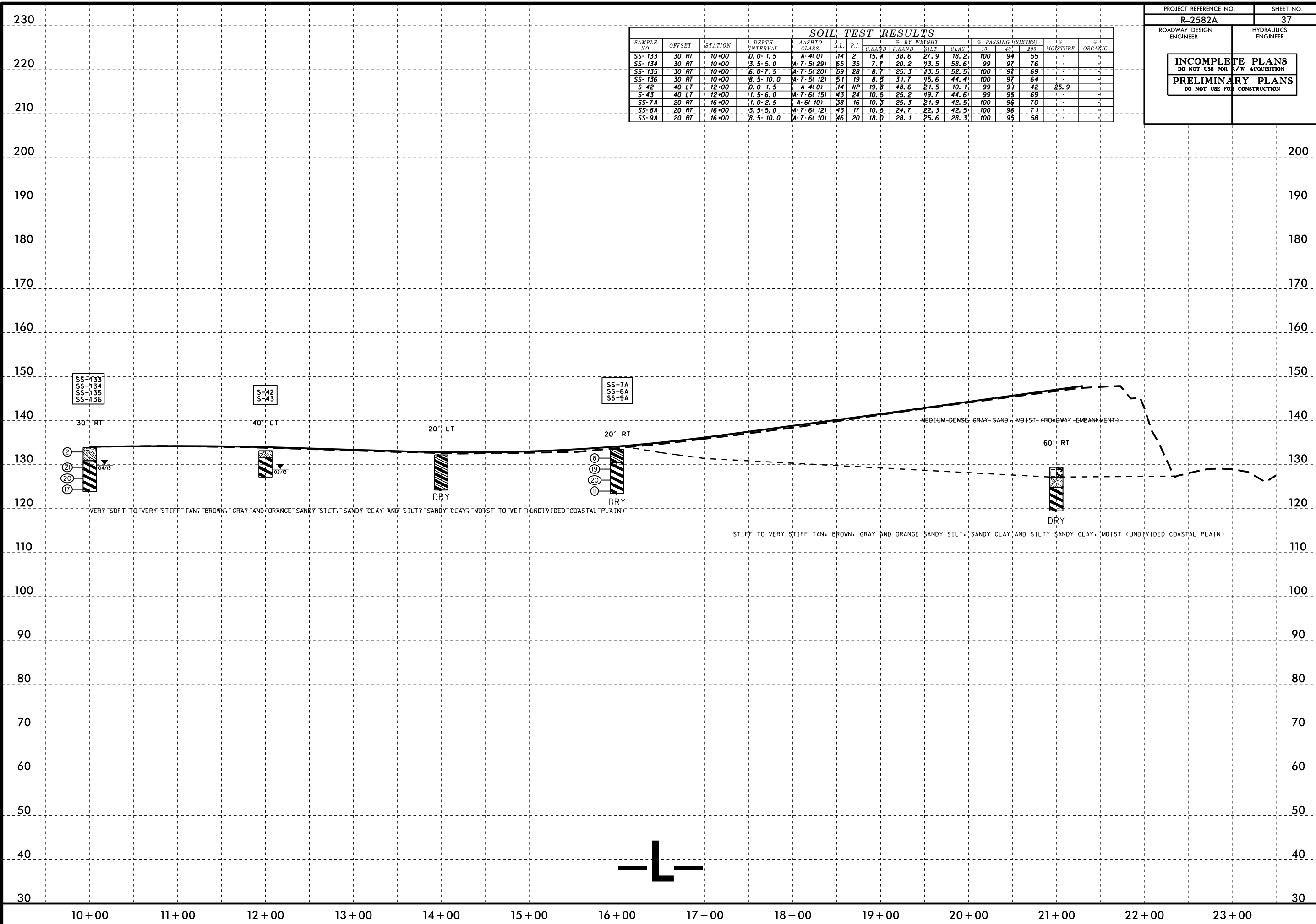
DS
7CB
INITIALS

3/11/2015
DATE

5/14/99

PROJECT REFERENCE NO.	SHEET NO.
R-2582A	37
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION	
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	

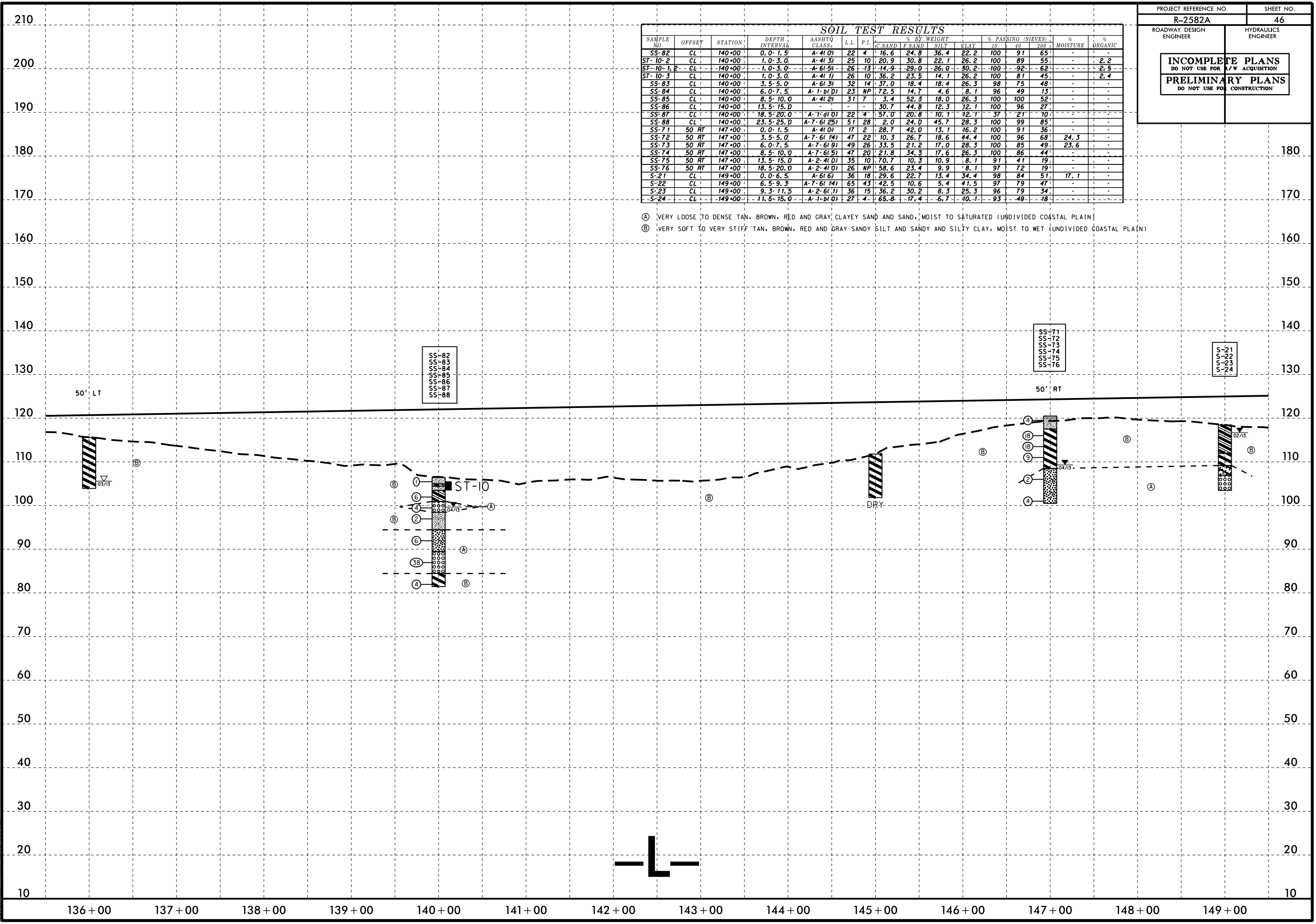
SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT				% PASSING (SIEVES)			% MOISTURE	% ORGANIC
							C. SAND	F SAND	SILT	CLAY	10	40	200		
SS-133	30 RT	10+00	0.0-1.5	A-4(0)	14	2	15.4	38.6	27.9	18.2	100	94	55	-	-
SS-134	30 RT	10+00	3.5-5.0	A-7-5(29)	65	35	7.7	20.2	13.5	58.6	99	97	76	-	-
SS-135	30 RT	10+00	6.0-7.5	A-7-5(20)	59	28	8.7	25.3	13.5	52.5	100	97	69	-	-
SS-136	30 RT	10+00	8.5-10.0	A-7-5(12)	51	19	8.3	31.7	15.6	44.4	100	97	64	-	-
S-42	40 LT	12+00	0.0-1.5	A-4(0)	14	NP	19.8	48.6	21.5	10.1	99	91	42	25.9	-
S-43	40 LT	12+00	1.5-6.0	A-7-6(15)	43	24	10.5	25.2	19.7	44.6	99	95	69	-	-
SS-7A	20 RT	16+00	1.0-2.5	A-6(10)	38	16	10.3	25.3	21.9	42.5	100	96	70	-	-
SS-8A	20 RT	16+00	3.5-5.0	A-7-6(12)	43	17	10.5	24.7	22.3	42.5	100	96	71	-	-
SS-9A	20 RT	16+00	8.5-10.0	A-7-6(10)	46	20	18.0	28.1	25.6	28.3	100	95	58	-	-



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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
							G SAND	F SAND	SILT	CLAY	10	40	200		
SS-82	CL	140+00	0.0-1.5	A-4(0)	22	4	16.6	24.8	36.4	22.2	100	91	65	-	-
ST-10-2	CL	140+00	1.0-3.0	A-4(3)	25	10	20.9	30.8	22.1	26.2	100	89	55	-	2.2
ST-10-1,2	CL	140+00	1.0-3.0	A-6(5)	26	13	14.9	29.0	26.0	30.2	100	92	62	-	2.5
ST-10-3	CL	140+00	1.0-3.0	A-4(1)	26	10	36.2	23.5	14.1	26.2	100	81	45	-	2.4
SS-83	CL	140+00	3.5-5.0	A-6(3)	32	14	37.0	18.4	18.4	26.3	98	75	48	-	-
SS-84	CL	140+00	6.0-7.5	A-1-B(0)	23	NP	72.5	14.7	4.6	8.1	96	49	13	-	-
SS-85	CL	140+00	8.5-10.0	A-4(2)	31	7	3.4	52.5	18.0	26.3	100	100	52	-	-
SS-86	CL	140+00	13.5-15.0	-	-	-	30.7	44.8	12.3	12.1	100	96	27	-	-
SS-87	CL	140+00	18.5-20.0	A-1-B(0)	22	4	57.0	20.8	10.7	12.1	37	21	10	-	-
SS-88	CL	140+00	23.5-25.0	A-7-6(25)	51	28	2.0	24.0	45.7	28.3	100	99	85	-	-
SS-71	50 RT	147+00	0.0-1.5	A-4(0)	17	2	28.7	42.0	13.1	16.2	100	91	36	-	-
SS-72	50 RT	147+00	3.5-5.0	A-7-6(14)	47	22	10.3	26.7	18.6	44.4	100	96	68	24.3	-
SS-73	50 RT	147+00	6.0-7.5	A-7-6(9)	49	26	33.5	21.2	17.0	28.3	100	85	49	23.6	-
SS-74	50 RT	147+00	8.5-10.0	A-7-6(5)	47	20	21.8	34.5	17.6	26.3	100	86	44	-	-
SS-75	50 RT	147+00	13.5-15.0	A-2-4(0)	35	10	70.7	10.3	10.9	8.1	91	41	19	-	-
SS-76	50 RT	147+00	18.5-20.0	A-2-4(0)	26	NP	58.6	23.4	9.9	8.1	97	72	19	-	-
S-21	CL	149+00	0.0-6.5	A-6(6)	36	18	29.6	22.7	13.4	34.4	98	84	51	17.1	-
S-22	CL	149+00	6.5-9.3	A-7-6(14)	65	43	42.5	10.6	5.4	41.5	97	79	47	-	-
S-23	CL	149+00	9.3-11.5	A-2-6(11)	36	15	36.2	30.2	8.3	25.3	96	79	34	-	-
S-24	CL	149+00	11.5-15.0	A-1-B(0)	27	4	65.8	17.4	6.7	10.1	93	49	18	-	-

(A) VERY LOOSE TO DENSE TAN, BROWN, RED AND GRAY CLAYEY SAND AND SAND, MOIST TO SATURATED (UNDIVIDED COASTAL PLAIN)
 (B) VERY SOFT TO VERY STIFF TAN, BROWN, RED AND GRAY SANDY SILT AND SANDY AND SILTY CLAY, MOIST TO WET (UNDIVIDED COASTAL PLAIN)



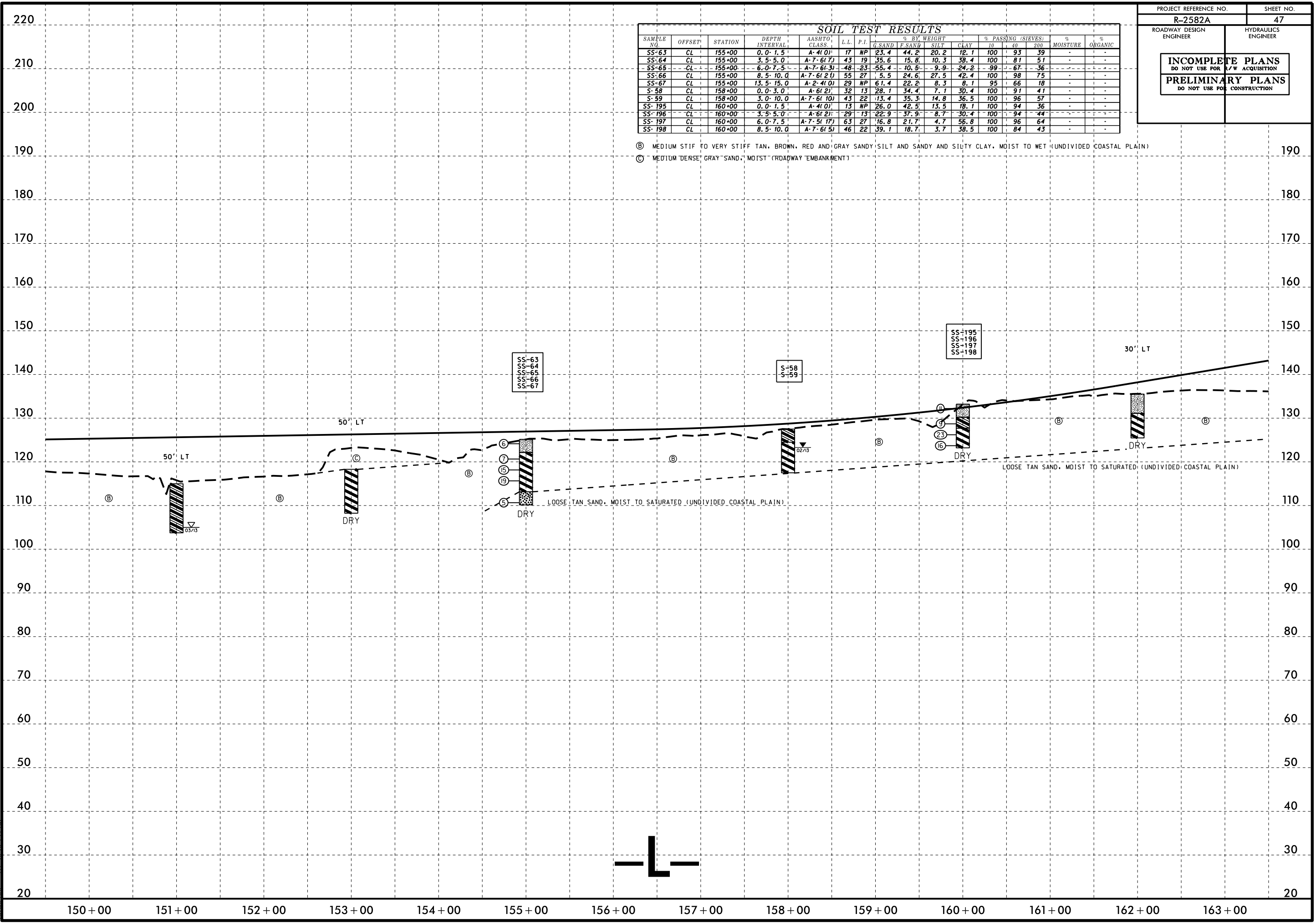
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SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT				% PASSING (SIEVES)			% MOISTURE	% ORGANIC
							G. SAND	F. SAND	SILT	CLAY	10	40	200		
SS-63	CL	155+00	0.0-1.5	A-4(0)	17	NP	23.4	44.2	20.2	12.1	100	93	39	-	-
SS-64	CL	155+00	3.5-5.0	A-7-6(7)	43	19	35.6	15.8	10.3	38.4	100	81	51	-	-
SS-65	CL	155+00	6.0-7.5	A-7-6(3)	48	23	55.4	10.5	9.9	24.2	99	67	36	-	-
SS-66	CL	155+00	8.5-10.0	A-7-6(2)	55	27	5.5	24.6	27.5	42.4	100	98	75	-	-
SS-67	CL	155+00	13.5-15.0	A-2-4(0)	29	NP	61.4	22.2	8.3	8.1	95	66	18	-	-
S-58	CL	158+00	0.0-3.0	A-6(2)	32	13	28.1	34.4	7.1	30.4	100	91	41	-	-
S-59	CL	158+00	3.0-10.0	A-7-6(10)	43	22	13.4	35.3	14.8	36.5	100	96	57	-	-
SS-195	CL	160+00	0.0-1.5	A-4(0)	13	NP	26.0	42.5	13.5	18.1	100	94	36	-	-
SS-196	CL	160+00	3.5-5.0	A-6(2)	29	13	22.9	37.9	8.7	30.4	100	94	44	-	-
SS-197	CL	160+00	6.0-7.5	A-7-6(17)	63	27	16.8	21.7	4.7	56.8	100	96	64	-	-
SS-198	CL	160+00	8.5-10.0	A-7-6(5)	46	22	39.1	18.7	3.7	38.5	100	84	43	-	-

ⓑ MEDIUM STIFF TO VERY STIFF TAN, BROWN, RED AND GRAY SANDY SILT AND SANDY AND SILTY CLAY, MOIST TO WET (UNDIVIDED COASTAL PLAIN)
 ⓒ MEDIUM DENSE GRAY SAND, MOIST (ROADWAY EMBANKMENT)

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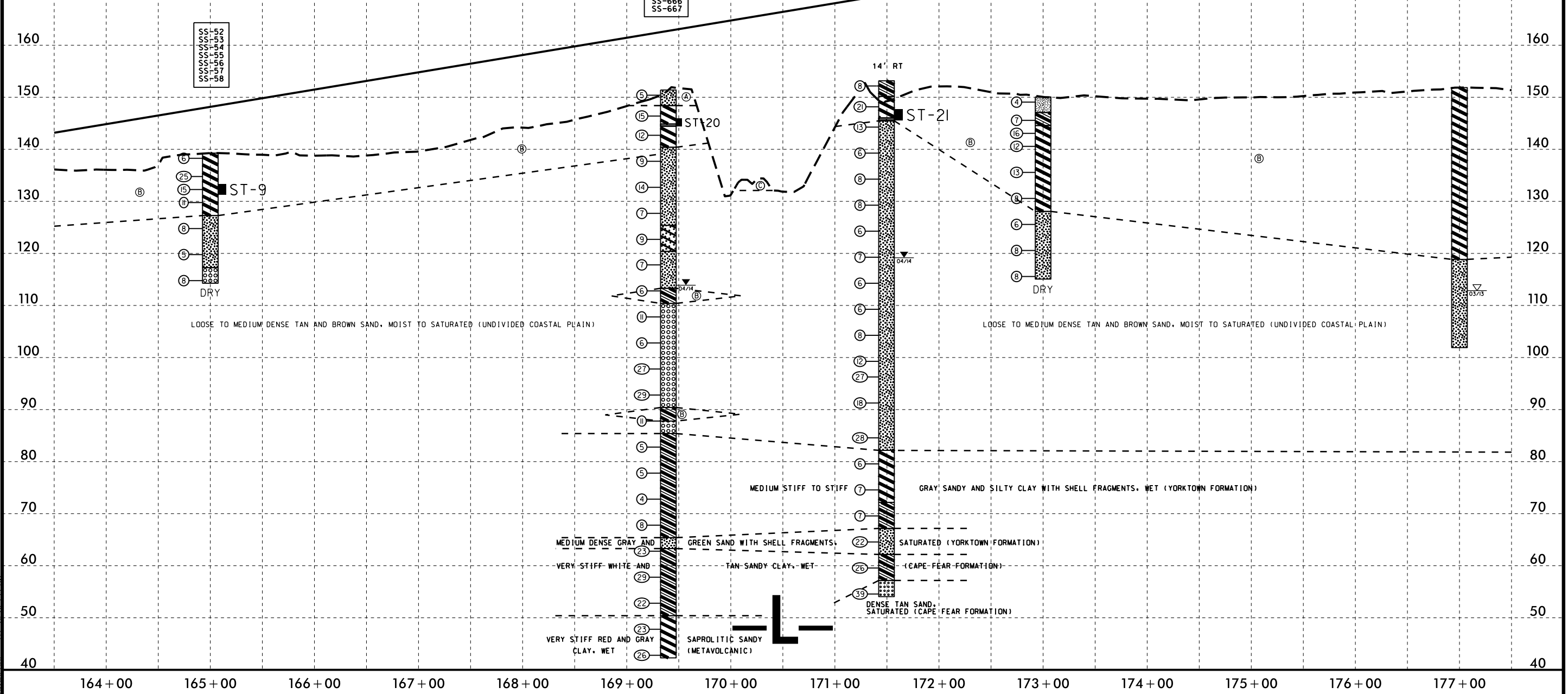


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PROJECT REFERENCE NO.	SHEET NO.
R-2582A	48
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
INCOMPLETE PLANS DO NOT USE FOR A/W ACQUISITION	
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	

SOIL TEST RESULTS															
SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	ASTM CLASS	L.L.	P.I.	% BY WEIGHT				% PASSING (SIEVES)			MOISTURE	ORGANIC
							C SAND	F SAND	SILT	CLAY	10	40	200		
SS-52	CL	165+00	0.0-1.5	A-7-61(15)	46	27	11.5	29.3	13.0	46.2	100	97	64	20.5	-
SS-53	CL	165+00	3.5-5.0	A-7-51(11)	50	17	9.6	28.5	13.6	48.2	100	97	66	25.0	-
SS-54	CL	165+00	6.0-7.5	A-7-51(9)	53	20	20.3	26.9	6.5	46.2	100	97	54	54.1	-
ST-9-1,2	CL	165+00	6.0-8.0	A-7-51(11)	54	23	13.5	33.7	10.3	42.4	100	98	55	-	-
ST-9-3	CL	165+00	6.0-8.5	A-7-61(4)	43	16	27.7	27.3	14.7	30.3	100	97	47	-	-
SS-55	CL	165+00	8.5-10.0	A-7-61(4)	43	15	26.9	28.9	14.0	30.2	100	93	46	-	-
SS-56	CL	165+00	13.5-15.0	A-2-41(0)	32	5	27.1	43.0	11.8	18.1	100	91	33	-	-
SS-57	CL	165+00	18.5-20.0	A-2-41(0)	27	NP	62.2	19.0	9.7	9.0	100	59	21	-	-
SS-58	CL	165+00	23.5-25.0	A-1-b1(0)	27	5	68.1	13.1	8.7	10.1	97	48	20	-	-
SS-650	CL	169+40	0.0-1.5	A-2-41(0)	18	NP	34.9	35.4	11.5	18.2	100	88	35	-	-
ST-20-1	CL	169+40	5.5-7.0	A-61(6)	33	17	18.5	30.6	12.7	38.2	100	96	55	-	2.9
ST-20-2	CL	169+40	5.5-7.0	A-7-61(17)	55	26	13.5	22.9	7.2	56.3	100	97	66	-	5.0
SS-651	CL	169+40	7.7-9.2	A-7-61(16)	52	26	14.7	22.2	8.5	54.5	100	97	65	-	-
SS-652	CL	169+40	12.7-14.2	A-2-41(0)	26	5	64.0	17.2	8.7	10.1	100	78	20	-	-
SS-653	CL	169+40	27.7-29.2	A-2-71(0)	42	15	68.5	11.3	10.1	10.1	90	37	20	-	-
SS-659	CL	169+40	37.6-39.1	A-61(14)	39	26	15.1	22.2	24.5	38.3	100	95	65	-	-
SS-660	CL	169+40	47.6-49.1	A-1-b1(0)	22	NP	78.5	9.9	5.5	6.0	85	31	11	-	-
SS-661	CL	169+40	57.6-59.1	A-1-a1(0)	27	NP	72.3	13.5	6.1	8.1	47	20	8	-	-
SS-662	CL	169+40	67.6-69.1	A-61(4)	40	13	14.1	42.3	33.5	10.1	90	83	50	-	-
SS-663	CL	169+40	77.6-79.1	A-61(4)	34	16	29.0	27.6	21.2	22.2	95	75	45	-	-
SS-664	CL	169+40	87.6-88.1	A-2-41(0)	20	NP	20.5	52.8	18.6	8.1	100	87	29	-	-
SS-665	CL	169+40	88.1-89.1	A-61(8)	30	16	9.7	29.8	28.3	32.2	100	95	67	-	-
SS-666	CL	169+40	97.6-99.1	A-61(1)	37	13	48.5	12.3	13.0	26.2	88	57	36	-	-
SS-667	CL	169+40	102.6-104.1	A-7-51(7)	44	12	28.2	12.1	31.5	28.2	100	81	61	-	-
SS-654	14 RT	171+50	4.0-5.5	A-7-51(29)	66	35	8.5	20.2	16.8	54.5	100	97	76	-	-
ST-21	14 RT	171+50	5.5-7.6	A-7-51(18)	58	25	14.5	21.7	13.6	50.3	100	96	68	-	8.0
SS-655	14 RT	171+50	12.9-14.4	A-2-41(0)	29	NP	60.2	21.8	9.9	8.1	100	80	20	-	-
SS-656	14 RT	171+50	27.9-29.4	A-2-41(0)	23	NP	58.6	24.4	12.9	4.0	100	83	19	-	-
SS-657	14 RT	171+50	37.9-39.4	A-2-41(0)	26	NP	60.8	23.4	11.7	4.0	100	67	17	-	-
SS-658	14 RT	171+50	47.9-49.4	A-2-41(0)	14	NP	74.7	14.1	7.1	4.0	100	60	13	-	-
SS-668	14 RT	171+50	67.6-69.1	-	-	-	61.6	14.3	9.9	14.1	44	22	12	-	-
SS-669	14 RT	171+50	72.6-74.1	A-7-61(15)	45	19	5.3	30.7	41.8	22.2	100	97	76	-	-
SS-670	14 RT	171+50	82.6-84.1	A-61(1)	30	12	21.3	40.0	10.4	28.3	96	86	38	-	-
SS-671	14 RT	171+50	92.6-94.1	A-61(8)	33	16	13.9	23.8	17.8	44.4	100	92	67	-	-
SS-218	CL	173+00	0.0-1.5	A-41(0)	15	NP	31.3	37.0	13.4	18.2	100	88	37	-	-
SS-219	CL	173+00	3.5-5.0	A-61(1)	40	24	21.4	25.1	11.0	42.5	100	93	58	-	-
SS-220	CL	173+00	6.0-7.5	A-7-61(10)	56	31	42.5	12.3	0.7	44.5	100	84	46	-	-
SS-221	CL	173+00	23.5-25.0	A-2-41(0)	24	NP	52.6	28.1	9.2	10.1	97	76	22	-	-

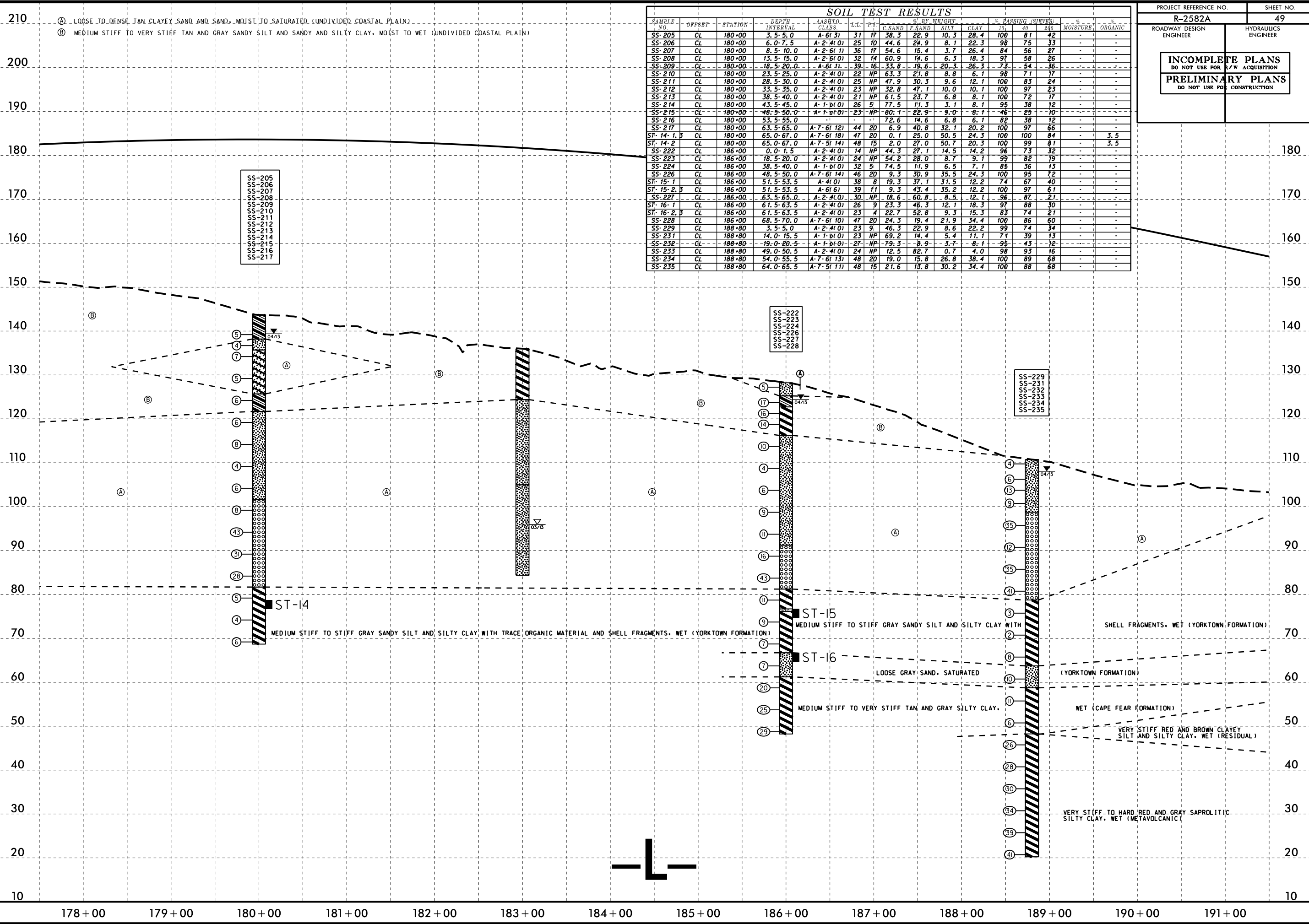
- (A) MEDIUM DENSE ORANGE SAND, MOIST (UNDIVIDED COASTAL PLAIN)
- (B) MEDIUM STIFF TO VERY STIFF TAN AND GRAY SANDY CLAY WITH LITTLE ORGANIC MATERIAL, MOIST TO WET (UNDIVIDED COASTAL PLAIN)
- (C) LOOSE TO MEDIUM DENSE GRAY SAND, MOIST (ROADWAY EMBANKMENT)



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- Ⓐ LOOSE TO DENSE TAN CLAYEY SAND AND SAND, MOIST TO SATURATED (UNDIVIDED COASTAL PLAIN)
- Ⓑ MEDIUM STIFF TO VERY STIFF TAN AND GRAY SANDY SILT AND SANDY AND SILTY CLAY, MOIST TO WET (UNDIVIDED COASTAL PLAIN)

- SS-205
- SS-206
- SS-207
- SS-208
- SS-209
- SS-210
- SS-211
- SS-212
- SS-213
- SS-214
- SS-215
- SS-216
- SS-217

- SS-222
- SS-223
- SS-224
- SS-226
- SS-227
- SS-228

- SS-229
- SS-231
- SS-232
- SS-233
- SS-234
- SS-235

SOIL TEST RESULTS															
SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	ASTM CLASS	L.L.	P.L.	% BY WEIGHT			% PASSING (SIEVES)			% MOISTURE	% ORGANIC	
							C SAND	F SAND	SILT	10	40	200			
SS-205	CL	180+00	3.5-9.0	A-6(3)	31	17	38.3	22.9	10.3	28.4	100	81	42	-	-
SS-206	CL	180+00	6.0-7.5	A-2(4)(0)	25	10	44.6	24.9	8.1	22.3	98	75	33	-	-
SS-207	CL	180+00	8.5-10.0	A-2(6)(1)	36	17	54.6	15.4	3.7	26.4	84	56	27	-	-
SS-208	CL	180+00	13.5-15.0	A-2(6)(0)	32	14	60.9	14.6	6.3	18.3	97	58	26	-	-
SS-209	CL	180+00	18.5-20.0	A-6(3)	39	16	33.8	19.6	20.3	26.3	73	54	36	-	-
SS-210	CL	180+00	23.5-25.0	A-2(4)(0)	22	NP	63.3	21.8	8.8	6.1	98	71	17	-	-
SS-211	CL	180+00	28.5-30.0	A-2(4)(0)	25	NP	47.9	30.3	9.6	12.1	100	83	24	-	-
SS-212	CL	180+00	33.5-35.0	A-2(4)(0)	23	NP	32.8	47.1	10.0	10.1	100	97	23	-	-
SS-213	CL	180+00	38.5-40.0	A-2(4)(0)	21	NP	61.5	23.7	6.8	8.1	100	72	17	-	-
SS-214	CL	180+00	43.5-45.0	A-1(6)(0)	26	5	77.5	11.3	3.1	8.1	95	38	12	-	-
SS-215	CL	180+00	48.5-50.0	A-1(6)(0)	23	NP	60.1	22.9	9.0	8.1	46	25	10	-	-
SS-216	CL	180+00	53.5-55.0	-	-	-	72.6	14.6	6.8	6.1	82	38	12	-	-
SS-217	CL	180+00	63.5-65.0	A-7(6)(2)	44	20	6.9	40.8	32.1	20.2	100	97	66	-	-
ST-14-1,3	CL	180+00	65.0-67.0	A-7(6)(8)	47	20	0.1	25.0	50.5	24.3	100	100	84	-	3.5
ST-14-2	CL	180+00	65.0-67.0	A-7(5)(14)	48	15	2.0	27.0	50.7	20.3	100	99	81	-	3.5
SS-222	CL	186+00	0.0-1.5	A-2(4)(0)	14	NP	44.3	27.1	14.5	14.2	96	73	32	-	-
SS-223	CL	186+00	18.5-20.0	A-2(4)(0)	24	NP	54.2	28.0	8.7	9.1	99	82	19	-	-
SS-224	CL	186+00	38.5-40.0	A-2(4)(0)	32	5	74.5	11.9	6.5	7.1	85	36	13	-	-
SS-226	CL	186+00	48.5-50.0	A-7(6)(14)	46	20	9.3	30.9	35.5	24.3	100	95	72	-	-
ST-15-1	CL	186+00	51.5-53.5	A-4(0)	38	8	19.3	37.1	31.5	12.2	74	67	40	-	-
ST-15-2,3	CL	186+00	51.5-53.5	A-6(6)	39	11	9.3	43.4	35.2	12.2	100	97	61	-	-
SS-227	CL	186+00	63.5-65.0	A-2(4)(0)	30	NP	18.6	60.8	8.5	12.1	96	87	21	-	-
ST-16-1	CL	186+00	61.5-63.5	A-2(4)(0)	26	9	23.3	46.3	12.1	18.3	97	88	30	-	-
ST-16-2,3	CL	186+00	61.5-63.5	A-2(4)(0)	23	4	22.7	52.8	9.3	15.3	83	74	21	-	-
SS-228	CL	186+00	68.5-70.0	A-7(6)(10)	47	20	24.3	19.4	21.9	34.4	100	86	60	-	-
SS-229	CL	188+80	3.5-5.0	A-2(4)(0)	23	9	46.3	22.9	8.6	22.2	99	74	34	-	-
SS-231	CL	188+80	14.0-15.5	A-1(6)(0)	23	NP	69.2	14.4	5.4	11.1	71	39	13	-	-
SS-232	CL	188+80	19.0-20.5	A-1(6)(0)	27	NP	79.3	8.9	3.7	8.1	95	43	12	-	-
SS-233	CL	188+80	49.0-50.5	A-2(4)(0)	24	NP	12.5	82.7	0.7	4.0	98	93	16	-	-
SS-234	CL	188+80	54.0-55.5	A-7(6)(13)	48	20	19.0	15.8	26.8	38.4	100	89	68	-	-
SS-235	CL	188+80	64.0-65.5	A-7(5)(11)	48	15	21.6	13.8	30.2	34.4	100	88	68	-	-

PROJECT REFERENCE NO. R-2582A	SHEET NO. 49
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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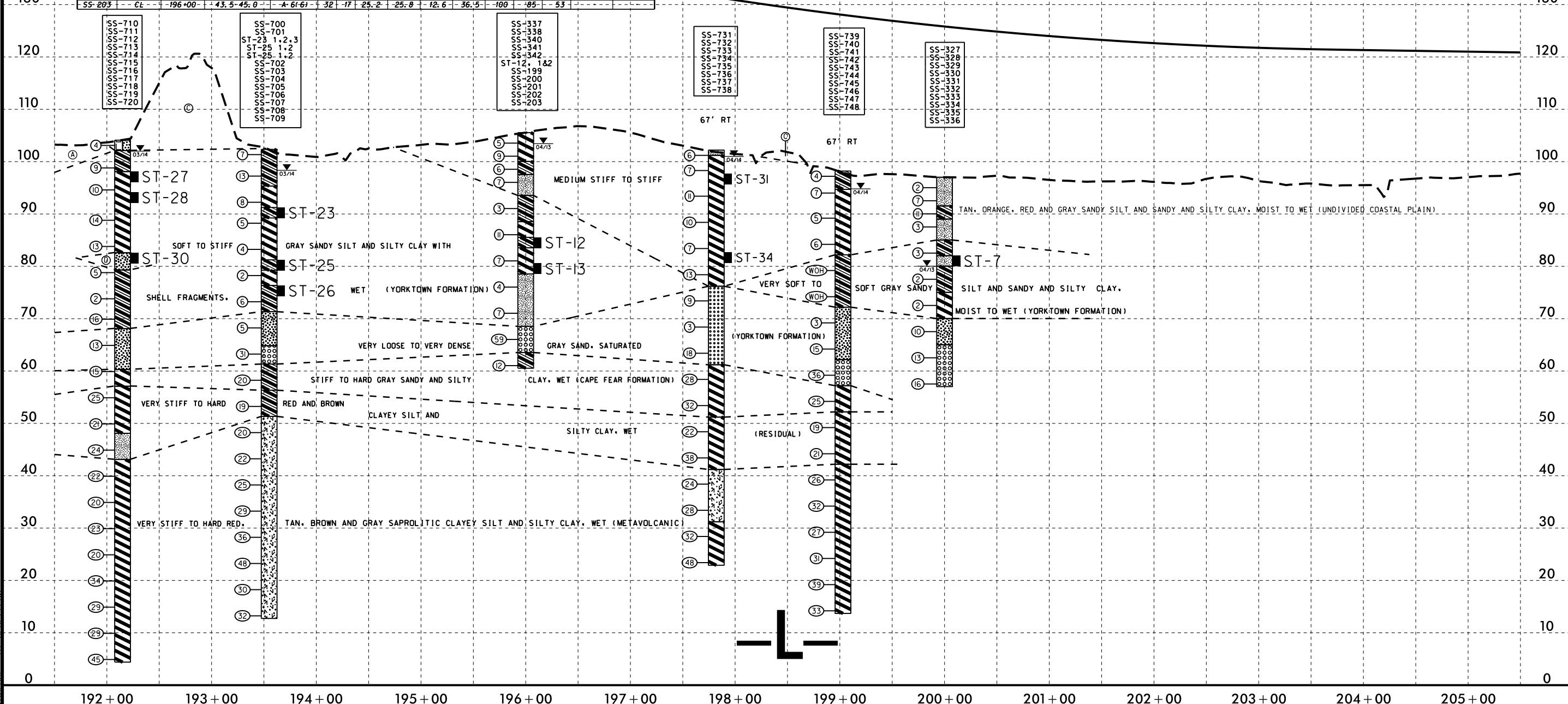
SOIL TEST RESULTS

SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	ASHO CLASS.	L.L.	P.I.	% BY WEIGHT				% PASSING (SIEVES)		MOISTURE	ORGANIC	
							C SAND	F SAND	SILT	CLAY	10	200			
SS-710	CL	192+15	4.3-5.8	A-6(11)	35	17	3.7	29.6	28.2	38.5	100	99	76	17.5	-
SS-711	CL	192+15	14.3-15.8	A-7-6(28)	55	26	0.2	15.4	45.8	38.5	100	100	92	30.7	-
SS-712	CL	192+15	24.8-25.8	A-6(7)	34	13	6.7	34.5	36.5	22.3	100	99	68	-	-
SS-713	CL	192+15	33.2-34.7	A-6(2)	32	15	19.3	40.6	17.8	22.3	100	95	42	-	-
SS-714	CL	192+15	38.2-39.7	A-2-4(0)	18	NP	13.0	63.1	15.8	8.1	97	91	24	-	-
SS-715	CL	192+15	48.2-49.7	A-7-5(11)	46	16	18.5	13.0	23.9	44.6	100	91	70	-	-
SS-716	CL	192+15	58.2-59.7	A-4(6)	40	8	21.7	11.8	38.1	28.4	100	87	68	-	-
SS-717	CL	192+15	68.2-69.7	A-7-5(15)	56	17	20.5	8.5	22.3	48.7	100	86	73	-	-
SS-718	CL	192+15	78.2-79.7	A-7-5(10)	51	14	26.8	8.5	20.1	44.6	99	78	65	-	-
SS-719	CL	192+15	88.2-89.7	A-7-5(8)	49	14	29.8	10.5	27.2	32.5	95	74	59	-	-
SS-720	CL	192+15	98.2-99.7	A-7-5(10)	53	19	31.2	12.2	24.1	32.5	99	78	58	-	-
SS-700	CL	193+55	0.0-1.5	A-6(14)	40	21	14.3	14.1	23.2	48.4	98	90	74	-	-
SS-701	CL	193+55	9.1-10.6	A-7-6(17)	42	19	1.4	21.6	34.7	42.3	100	100	85	30.8	-
ST-23 1, 2, 3	CL	193+55	11.1-13.1	A-6(12)	37	17	3.2	31.4	37.3	28.1	100	99	75	-	-
ST-25 1, 2	CL	193+55	21.1-23.1	A-6(11)	35	13	0.2	21.1	40.5	38.2	100	100	87	-	-
ST-25 1, 2	CL	193+55	21.1-23.1	A-6(12)	37	12	0.0	19.3	46.5	34.2	100	100	91	-	-
SS-702	CL	193+55	28.1-29.6	A-6(6)	37	12	3.2	43.5	35.1	18.1	98	97	63	33.0	-
SS-703	CL	193+55	33.1-34.6	A-2-4(0)	26	NP	13.3	59.9	18.8	8.1	97	96	33	-	-
SS-704	CL	193+55	38.1-39.6	A-1-0(0)	20	NP	65.1	21.6	9.3	4.0	40	20	7	-	-
SS-705	CL	193+55	43.1-44.6	A-6(12)	39	23	20.4	19.6	17.7	42.3	100	90	63	24.2	-
SS-706	CL	193+55	53.1-54.6	A-5(7)	43	9	18.5	12.5	32.7	36.3	100	90	71	-	-
SS-707	CL	193+55	63.1-64.6	A-5(10)	46	10	14.7	9.5	31.5	44.4	100	92	78	-	-
SS-708	CL	193+55	73.1-74.6	A-5(8)	45	9	19.0	10.3	32.5	38.3	100	89	73	-	-
SS-709	CL	193+55	83.1-84.6	A-5(6)	44	10	28.6	9.1	50.2	12.1	94	74	60	-	-
SS-337	CL	196+00	1.0-2.5	A-7-6(21)	43	24	4.9	13.8	22.5	58.8	100	99	85	-	-
SS-338	CL	196+00	0.0-0.0	A-7-6(24)	53	34	3.0	32.7	21.7	42.6	100	99	73	-	-
SS-339	CL	196+00	6.0-7.5	A-6(6)	34	17	2.0	55.0	18.7	24.3	100	100	54	-	-
SS-340	CL	196+00	8.5-10.0	A-4(0)	25	2	2.1	64.5	16.1	17.2	100	100	46	-	-
SS-341	CL	196+00	13.5-15.0	A-6(10)	33	13	0.2	28.2	41.2	30.4	100	100	83	-	-
SS-342	CL	196+00	18.5-20.0	A-7-5(32)	57	27	0.2	7.9	55.4	36.5	100	100	97	-	-
ST-12 #1	CL	196+00	20.0-22.0	A-6(9)	32	11	0.2	23.8	47.6	28.4	100	100	88	-	-
ST-12 #2	CL	196+00	20.0-22.0	A-6(10)	32	13	0.2	30.3	43.1	26.4	100	100	83	-	-
SS-199	CL	196+00	23.5-25.0	A-7-5(31)	56	25	0.2	3.9	49.3	46.7	100	100	99	-	-
ST-13	CL	196+00	25.0-27.0	A-7-6(28)	52	24	0.2	2.0	43.6	54.2	100	100	99	-	-
ST-13	CL	196+00	25.0-27.0	A-7-5(29)	54	24	1.0	1.4	31.3	66.3	100	99	98	-	-
SS-200	CL	196+00	28.5-30.0	A-4(0)	21	NP	10.1	59.0	20.7	10.1	100	99	41	-	-
SS-201	CL	196+00	32.5-35.0	-	-	-	30.4	20.9	24.3	24.3	46	34	24	-	-
SS-202	CL	196+00	38.5-40.0	A-1-0(0)	20	NP	51.1	29.6	13.2	6.1	33	21	8	-	-
SS-203	CL	196+00	43.5-45.0	A-6(6)	32	17	25.2	25.8	12.6	36.5	100	85	53	-	-

EBI-B SOIL TEST RESULTS

SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	ASHO CLASS.	L.L.	P.I.	% BY WEIGHT				% PASSING (SIEVES)		MOISTURE	ORGANIC	
							C SAND	F SAND	SILT	CLAY	10	200			
SS-731	67 RT	197+82	2.9-4.4	A-7-6(30)	65	41	5.9	26.4	17.3	50.5	100	98	173	33.2	-
SS-732	67 RT	197+82	12.8-14.3	A-7-6(21)	44	19	0.2	9.3	46.1	44.4	100	100	96	28.8	-
SS-733	67 RT	197+82	22.8-24.3	A-7-6(20)	45	18	1.0	9.9	46.7	42.4	100	99	95	-	-
SS-734	67 RT	197+82	32.8-34.3	A-3(0)	18	NP	64.0	26.5	3.4	6.1	100	87	10	-	-
SS-735	67 RT	197+82	42.8-44.3	A-7-6(17)	46	31	17.6	22.2	19.9	40.4	100	93	63	-	-
SS-736	67 RT	197+82	52.8-54.3	A-7-5(26)	68	29	12.5	11.7	15.2	60.5	100	95	77	-	-
SS-737	67 RT	197+82	62.8-64.3	A-5(9)	46	9	14.1	13.9	33.6	38.3	100	94	75	-	-
SS-738	67 RT	197+82	72.8-74.3	A-7-5(9)	49	13	21.8	13.3	26.5	38.3	97	82	65	-	-
SS-739	67 RT	199+03	0.0-1.5	A-6(2)	25	11	12.9	44.6	14.2	28.3	100	96	49	-	-
SS-740	67 RT	199+03	8.0-9.5	A-7-6(24)	49	23	2.0	13.3	36.2	48.4	100	99	91	31.4	-
SS-741	67 RT	199+03	18.0-19.5	A-6(12)	36	12	0.0	17.3	48.6	34.1	100	100	93	36.5	-
SS-742	67 RT	199+03	28.0-29.5	A-2-4(0)	21	NP	18.9	53.6	19.6	8.0	100	97	35	-	-
SS-743	67 RT	199+03	38.0-39.5	A-1-0(0)	20	NP	63.0	20.3	10.7	6.0	45	26	9	-	-
SS-744	67 RT	199+03	43.0-44.5	A-7-6(31)	60	38	9.4	15.4	10.9	64.2	100	95	78	-	-
SS-745	67 RT	199+03	53.0-54.5	A-7-5(21)	66	24	18.9	8.2	32.8	40.1	100	87	74	-	-
SS-746	67 RT	199+03	63.0-64.5	A-7-5(11)	52	15	24.5	10.2	43.2	22.1	100	83	67	-	-
SS-747	67 RT	199+03	73.0-74.5	A-7-5(14)	55	18	23.1	10.0	36.8	30.1	100	83	69	-	-
SS-748	67 RT	199+03	83.0-84.5	A-7-6(11)	43	17	18.3	15.8	47.8	18.1	100	88	70	-	-
SS-327	CL	200+00	1.0-2.5	A-4(0)	16	NP	18.3	45.2	20.3	16.2	100	94	45	-	-
SS-328	CL	200+00	3.5-5.0	A-4(3)	26	10	13.8	39.1	20.7	26.4	99	95	55	-	-
SS-329	CL	200+00	6.0-7.5	A-6(3)	33	15	35.1	23.1	17.4	24.3	100	93	46	-	-
SS-330	CL	200+00	8.5-10.0	A-4(5)	32	10	4.5	42.0	27.2	26.4	100	99	68	-	-
SS-331	CL	200+00	13.5-15.0	A-6(11)	34	14	0.2	26.4	36.9	36.5	100	100	84	-	-
ST-7-1	CL	200+00	15.0-17.0	A-4(7)	31	10	0.6	35.9	27.0	36.5	100	100	77	-	-
ST-7-2, 3	CL	200+00	15.0-17.0	A-4(1)	26	4	0.4	48.5	18.7	32.5	100	100	63	-	-
SS-332	CL	200+00	18.5-20.0	A-6(10)	34	12	0.2	27.0	42.4	30.4	100	100	84	-	-
SS-333	CL	200+00	23.5-25.0	A-7-6(19)	46	18	2.0	11.2	40.2	46.7	100	99	91	-	-
SS-334	CL	200+00	28.5-30.0	A-2-4(0)	19	NP	55.1	32.2	8.7	4.1	95	61	16	-	-
SS-335	CL	200+00	33.5-35.0	A-1-0(0)	17	NP	74.6	17.2	8.1	0.0	65	32	7	-	-
SS-336	CL	200+00	38.5-40.0	A-1-0(0)	21	NP	70.6	19.1	8.3	2.0	36	16	5	-	-

- (A) LOOSE TO DENSE TAN CLAYEY SAND AND SAND, MOIST TO SATURATED (UNDIVIDED COASTAL PLAIN)
- (B) MEDIUM STIFF TO STIFF TAN, ORANGE AND GRAY SANDY SILT AND SANDY AND SILTY CLAY, MOIST TO WET (UNDIVIDED COASTAL PLAIN)
- (C) LOOSE TO MEDIUM DENSE RED, BROWN AND GRAY SAND, MOIST (ROADWAY EMBANKMENT)
- (D) LOOSE TO MEDIUM DENSE GRAY SAND, SATURATED (YORKTOWN FORMATION)



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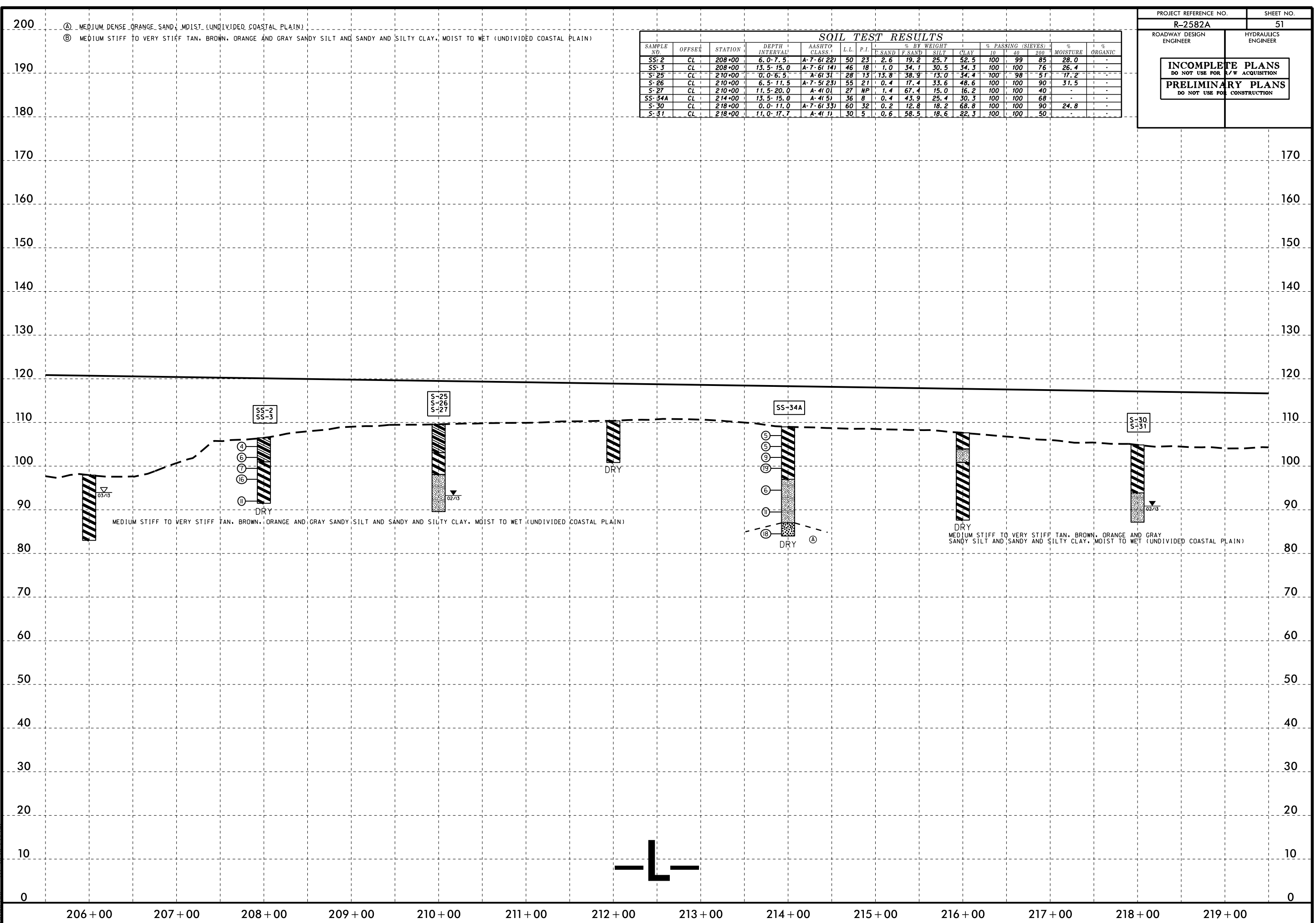
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PROJECT REFERENCE NO.	SHEET NO.
R-2582A	51
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION	
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	

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		
SS-2	CL	208+00	6.0-7.5	A-7-6(22)	50	23	2.6	19.2	25.7	52.5	100	99	85	28.0	-
SS-3	CL	208+00	13.5-15.0	A-7-6(14)	46	18	1.0	34.1	30.5	34.3	100	100	76	26.4	-
S-25	CL	210+00	0.0-6.5	A-6(3)	28	13	13.8	38.9	13.0	34.4	100	98	51	17.2	-
S-26	CL	210+00	6.5-11.5	A-7-5(23)	55	21	0.4	17.4	33.6	48.6	100	100	90	31.5	-
S-27	CL	210+00	11.5-20.0	A-4(1)	27	NP	1.4	67.4	15.0	16.2	100	100	40	-	-
SS-34A	CL	214+00	13.5-15.0	A-4(5)	36	8	0.4	43.9	25.4	30.3	100	100	68	-	-
S-30	CL	218+00	0.0-11.0	A-7-6(33)	60	32	0.2	12.8	18.2	68.8	100	100	90	24.8	-
S-31	CL	218+00	11.0-17.7	A-4(1)	30	5	0.6	58.5	18.6	22.3	100	100	50	-	-

- (A) MEDIUM DENSE ORANGE SAND, MOIST (UNDIVIDED COASTAL PLAIN)
- (B) MEDIUM STIFF TO VERY STIFF TAN, BROWN, ORANGE AND GRAY SANDY SILT AND SANDY AND SILTY CLAY, MOIST TO WET (UNDIVIDED COASTAL PLAIN)

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ROADWAY DESIGN ENGINEER

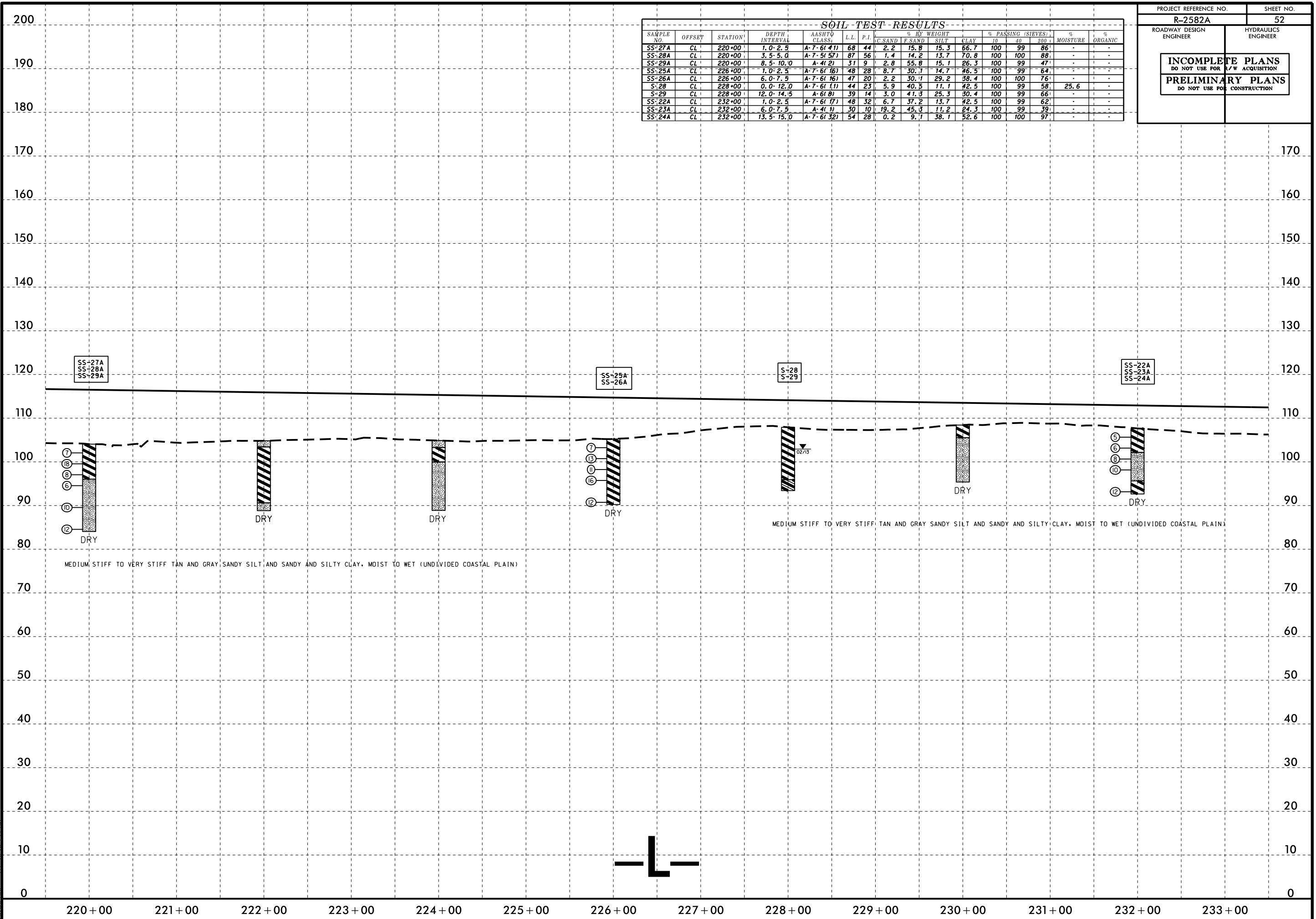
HYDRAULICS ENGINEER

INCOMPLETE PLANS
DO NOT USE FOR A/W 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	200			
SS-27A	CL	220+00	1.0-2.5	A-7-6(41)	68	44	2.2	15.8	15.3	66.7	100	99	86	-	-
SS-28A	CL	220+00	3.5-5.0	A-7-5(57)	87	56	1.4	14.2	13.7	70.8	100	100	88	-	-
SS-29A	CL	220+00	8.5-10.0	A-4(2)	31	9	2.8	55.8	15.1	26.3	100	99	47	-	-
SS-25A	CL	226+00	1.0-2.5	A-7-6(16)	48	28	8.7	30.1	14.7	46.5	100	99	64	-	-
SS-26A	CL	226+00	6.0-7.5	A-7-6(16)	47	20	2.2	30.1	29.2	38.4	100	100	76	-	-
S-28	CL	228+00	0.0-12.0	A-7-6(11)	44	23	5.9	40.5	11.1	42.5	100	99	58	25.6	-
S-29	CL	228+00	12.0-14.5	A-6(8)	39	14	3.0	41.3	25.3	30.4	100	99	66	-	-
SS-22A	CL	232+00	1.0-2.5	A-7-6(17)	48	32	6.7	37.2	13.7	42.5	100	99	62	-	-
SS-23A	CL	232+00	6.0-7.5	A-4(1)	30	10	19.2	45.3	11.2	24.3	100	99	39	-	-
SS-24A	CL	232+00	13.5-15.0	A-7-6(32)	54	28	0.2	9.1	38.1	52.6	100	100	97	-	-



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SS-28A
SS-29A

SS-25A
SS-26A

S-28
S-29

SS-22A
SS-23A
SS-24A

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DRY

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

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

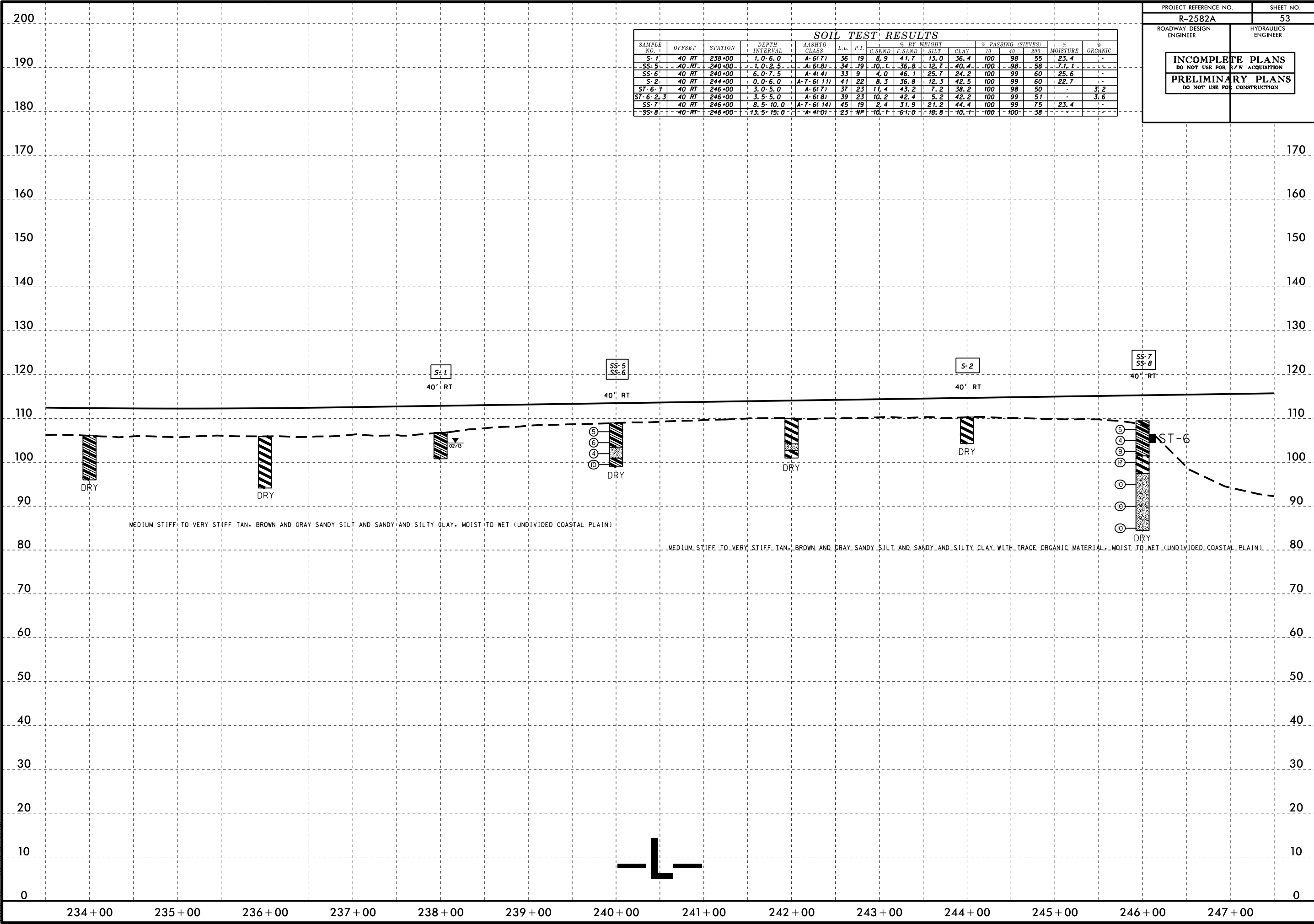
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ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION	
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	

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-1	40 RT	238+00	1.0-6.0	A-6(7)	36	19	8.9	41.7	13.0	36.4	100	98	55	23.4	-
SS-5	40 RT	240+00	1.0-2.5	A-6(B)	34	19	10.1	36.8	12.7	40.4	100	98	58	7.1	-
SS-6	40 RT	240+00	6.0-7.5	A-4(4)	33	9	4.0	46.1	25.7	24.2	100	99	60	25.6	-
S-2	40 RT	244+00	0.0-6.0	A-7-6(11)	41	22	8.3	36.8	12.3	42.5	100	99	60	22.7	-
ST-6-1	40 RT	246+00	3.0-5.0	A-6(7)	37	23	11.4	43.2	7.2	38.2	100	98	50	-	3.2
ST-6-2,3	40 RT	246+00	3.5-5.0	A-6(B)	39	23	10.2	42.4	5.2	42.2	100	99	51	-	3.6
SS-7	40 RT	246+00	8.5-10.0	A-7-6(14)	45	19	2.4	31.9	21.2	44.4	100	99	75	23.4	-
SS-8	40 RT	246+00	13.5-15.0	A-4(0)	23	NP	10.1	61.0	18.8	10.1	100	100	38	-	-

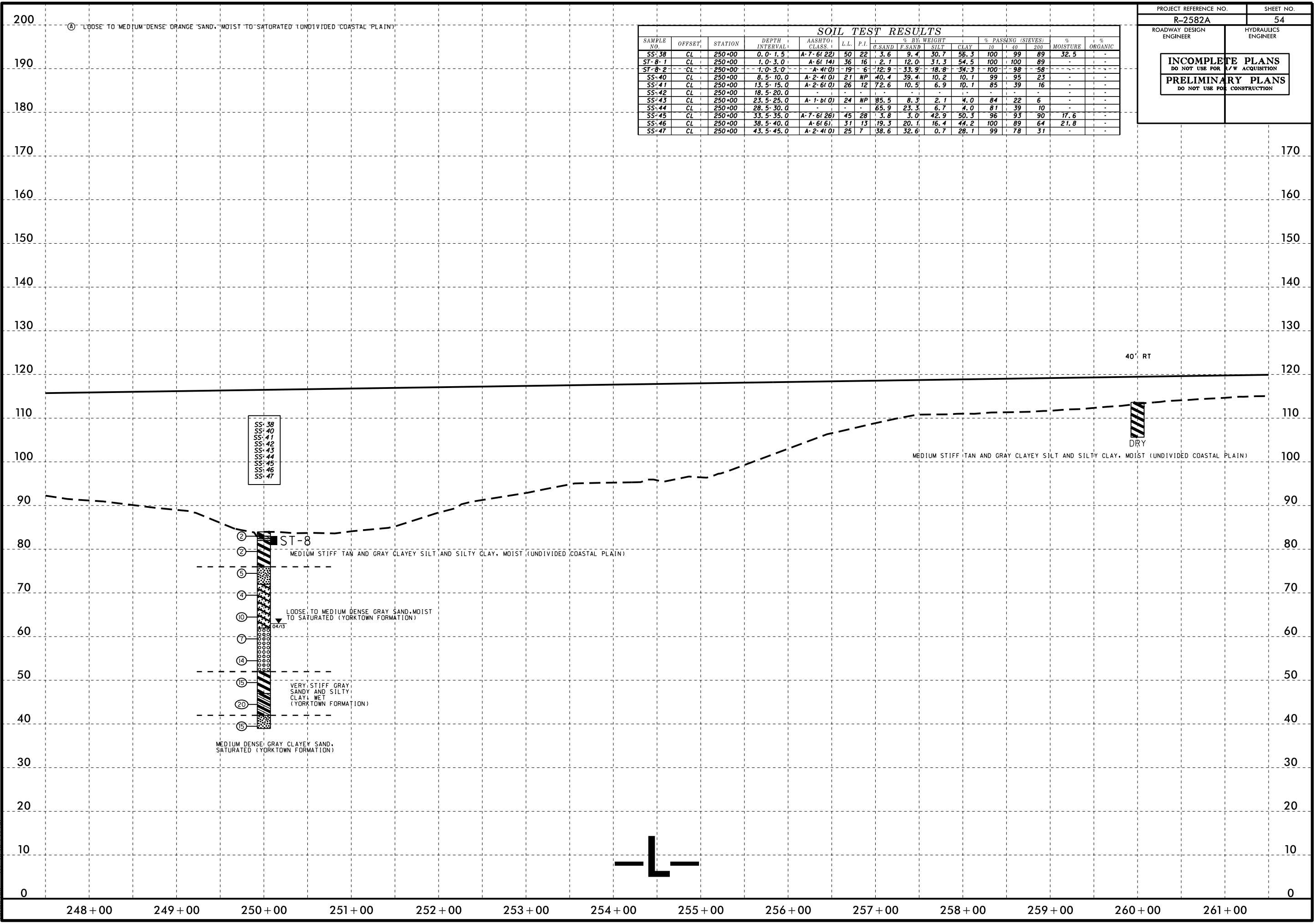
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PROJECT REFERENCE NO.	SHEET NO.
R-2582A	54
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
INCOMPLETE PLANS DO NOT USE FOR ACQUISITION	
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	

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	200		
SS-38	CL	250+00	0.0-1.5	A-7-6(22)	50	22	3.6	9.4	30.7	56.3	100	99	89	32.5	-
ST-8-1	CL	250+00	1.0-3.0	A-6(14)	36	16	2.1	12.0	31.3	54.5	100	100	89	-	-
ST-8-2	CL	250+00	1.0-3.0	A-4(0)	19	6	12.9	33.9	18.8	34.3	100	98	58	-	-
SS-40	CL	250+00	8.5-10.0	A-2-4(0)	21	NP	40.4	39.4	10.2	10.1	99	95	23	-	-
SS-41	CL	250+00	13.5-15.0	A-2-6(0)	26	12	72.6	10.5	6.9	10.1	85	39	16	-	-
SS-42	CL	250+00	18.5-20.0	-	-	-	-	-	-	-	-	-	-	-	-
SS-43	CL	250+00	23.5-25.0	A-1-b(0)	24	NP	85.5	8.3	2.1	4.0	84	22	6	-	-
SS-44	CL	250+00	28.5-30.0	-	-	-	65.9	23.3	6.7	4.0	81	39	10	-	-
SS-45	CL	250+00	33.5-35.0	A-7-6(26)	45	28	3.8	3.0	42.9	50.3	96	93	90	17.6	-
SS-46	CL	250+00	38.5-40.0	A-6(6)	31	13	19.3	20.1	16.4	44.2	100	89	64	21.8	-
SS-47	CL	250+00	43.5-45.0	A-2-4(0)	25	7	38.6	32.6	0.7	28.1	99	78	31	-	-



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ROADWAY DESIGN ENGINEER

HYDRAULICS ENGINEER

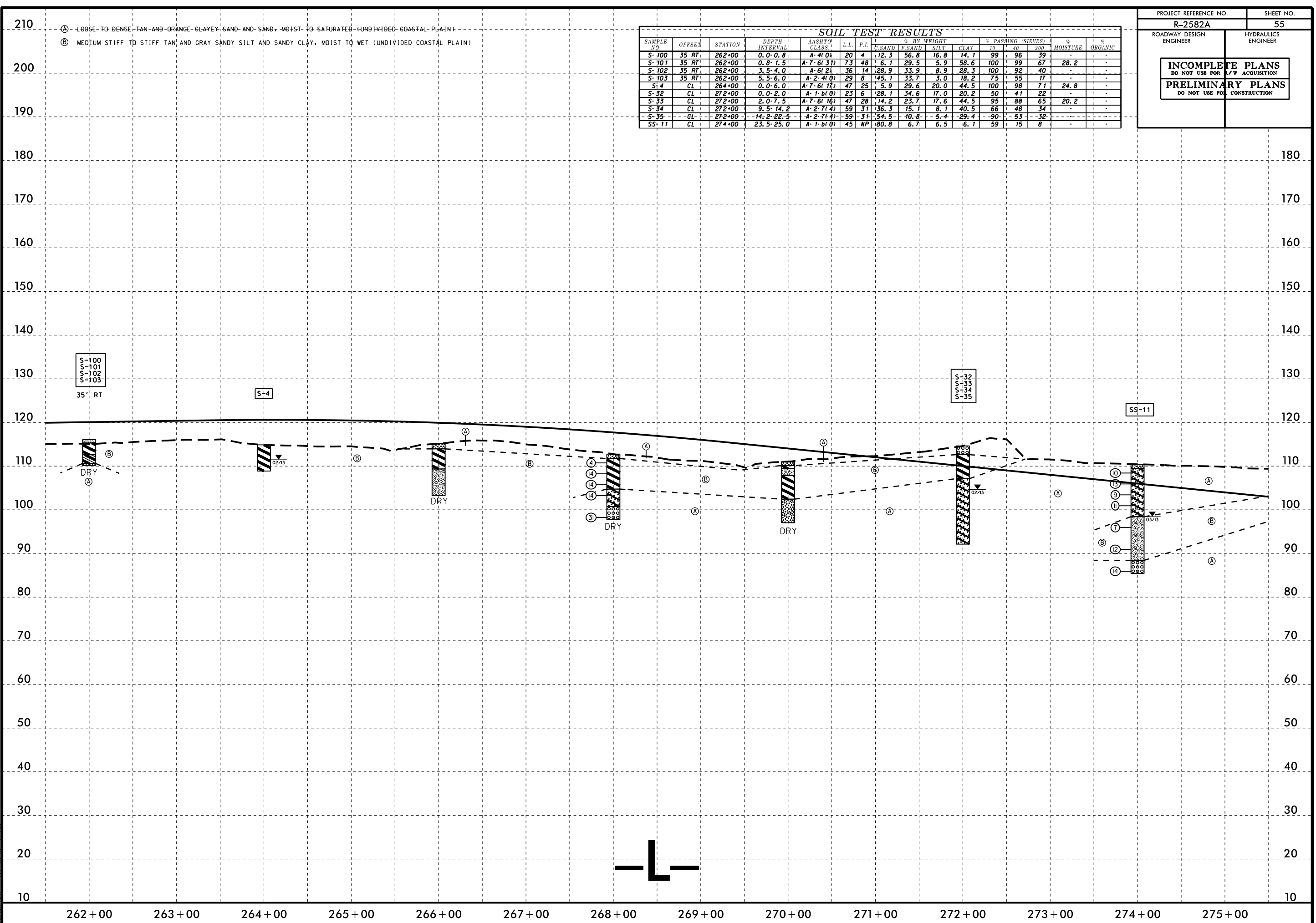
INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

Ⓐ - LOOSE TO DENSE TAN AND ORANGE CLAYEY SAND AND SAND, MOIST TO SATURATED (UNDIVIDED COASTAL PLAIN)

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

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-100	35 RT	262+00	0.0-0.8	A-4(0)	20	4	12.3	56.8	16.8	14.1	99	96	39	-	-
S-101	35 RT	262+00	0.8-1.5	A-7(61.3)	73	48	6.1	29.3	5.9	58.6	100	99	67	28.2	-
S-102	35 RT	262+00	3.5-4.0	A-6(2)	36	14	28.9	33.9	8.9	28.3	100	92	40	-	-
S-103	35 RT	262+00	5.5-6.0	A-2(41.0)	29	8	45.1	33.7	3.0	18.2	75	55	17	-	-
S-4	CL	264+00	0.0-6.0	A-7(61.7)	47	25	5.9	29.6	20.0	44.5	100	98	71	24.8	-
S-32	CL	272+00	0.0-2.0	A-1(61.0)	23	6	28.1	34.6	17.0	20.2	50	41	22	-	-
S-33	CL	272+00	2.0-7.5	A-7(61.6)	47	28	14.2	23.7	17.6	44.5	95	88	65	20.2	-
S-34	CL	272+00	9.5-14.2	A-2(71.4)	59	31	36.3	15.1	8.1	40.5	66	48	34	-	-
S-35	CL	272+00	14.2-22.5	A-2(71.4)	59	31	34.5	10.8	5.4	29.4	90	53	32	-	-
SS-11	CL	274+00	23.5-25.0	A-1(61.0)	45	NP	80.8	6.7	6.5	6.1	59	15	8	-	-



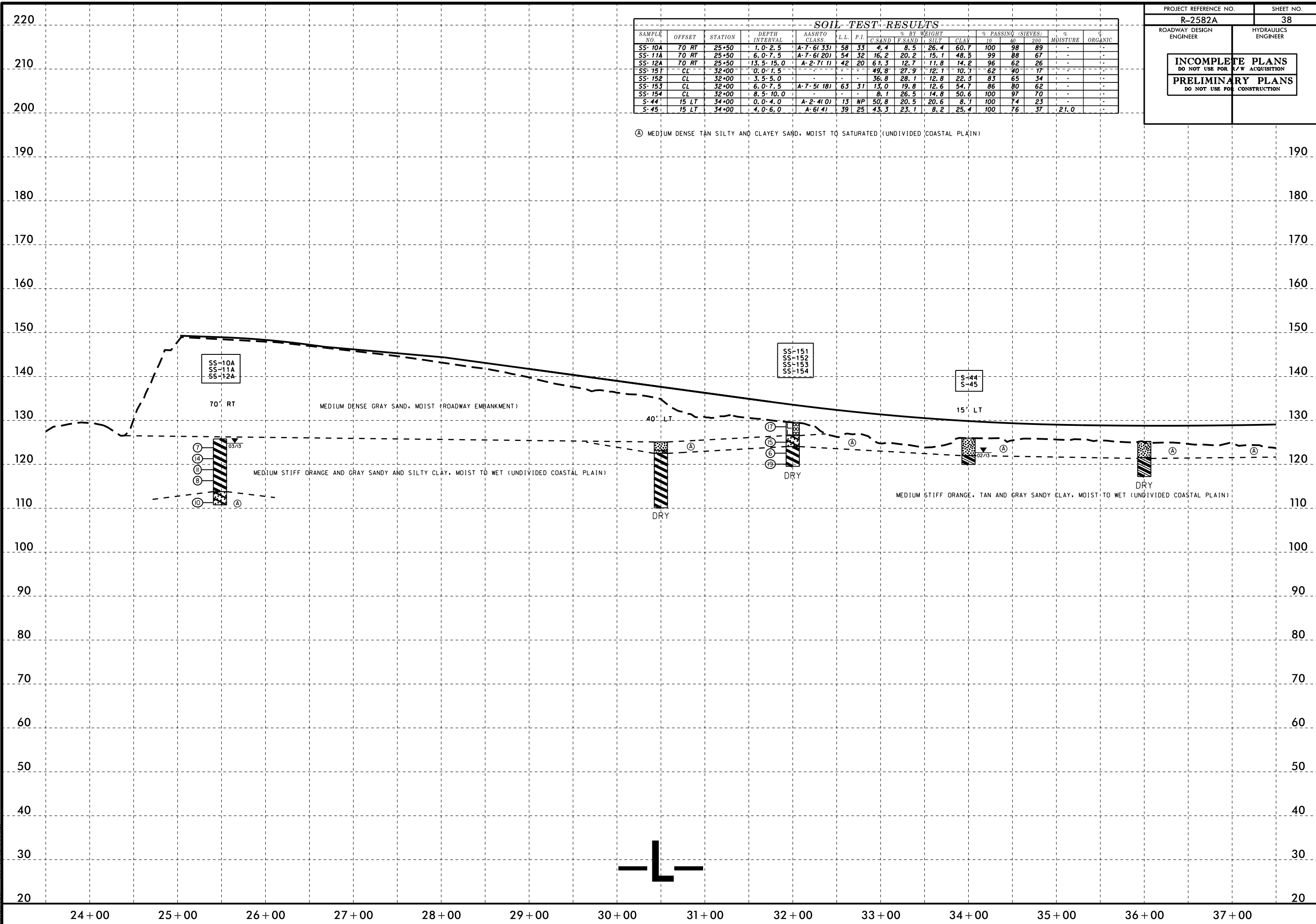
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PROJECT REFERENCE NO.	SHEET NO.
R-2582A	38
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
INCOMPLETE PLANS DO NOT USE FOR A/W ACQUISITION	
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	

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	200		
SS-10A	70 RT	25+50	1.0-2.5	A-7-6(33)	58	33	4.4	8.5	26.4	60.7	100	98	89	-	-
SS-11A	70 RT	25+50	6.0-7.5	A-7-6(20)	54	32	16.2	20.2	15.1	48.5	99	88	67	-	-
SS-12A	70 RT	25+50	13.5-15.0	A-2-7(1)	42	20	61.3	12.7	11.8	14.2	96	62	26	-	-
SS-151	CL	32+00	0.0-1.5	-	-	-	49.8	27.9	12.1	10.1	62	40	17	-	-
SS-152	CL	32+00	3.5-5.0	-	-	-	36.8	28.1	12.8	22.3	83	65	34	-	-
SS-153	CL	32+00	6.0-7.5	A-7-5(18)	63	31	13.0	19.8	12.6	54.7	86	80	62	-	-
SS-154	CL	32+00	8.5-10.0	-	-	-	8.1	26.5	14.8	50.6	100	97	70	-	-
S-44	15 LT	34+00	0.0-4.0	A-2-4(0)	13	NP	50.8	20.5	20.6	8.1	100	74	23	-	-
S-45	15 LT	34+00	4.0-6.0	A-6(4)	39	25	43.3	23.1	8.2	25.4	100	76	37	21.0	-

(A) MEDIUM DENSE TAN SILTY AND CLAYEY SAND, MOIST TO SATURATED (UNDIVIDED COASTAL PLAIN)



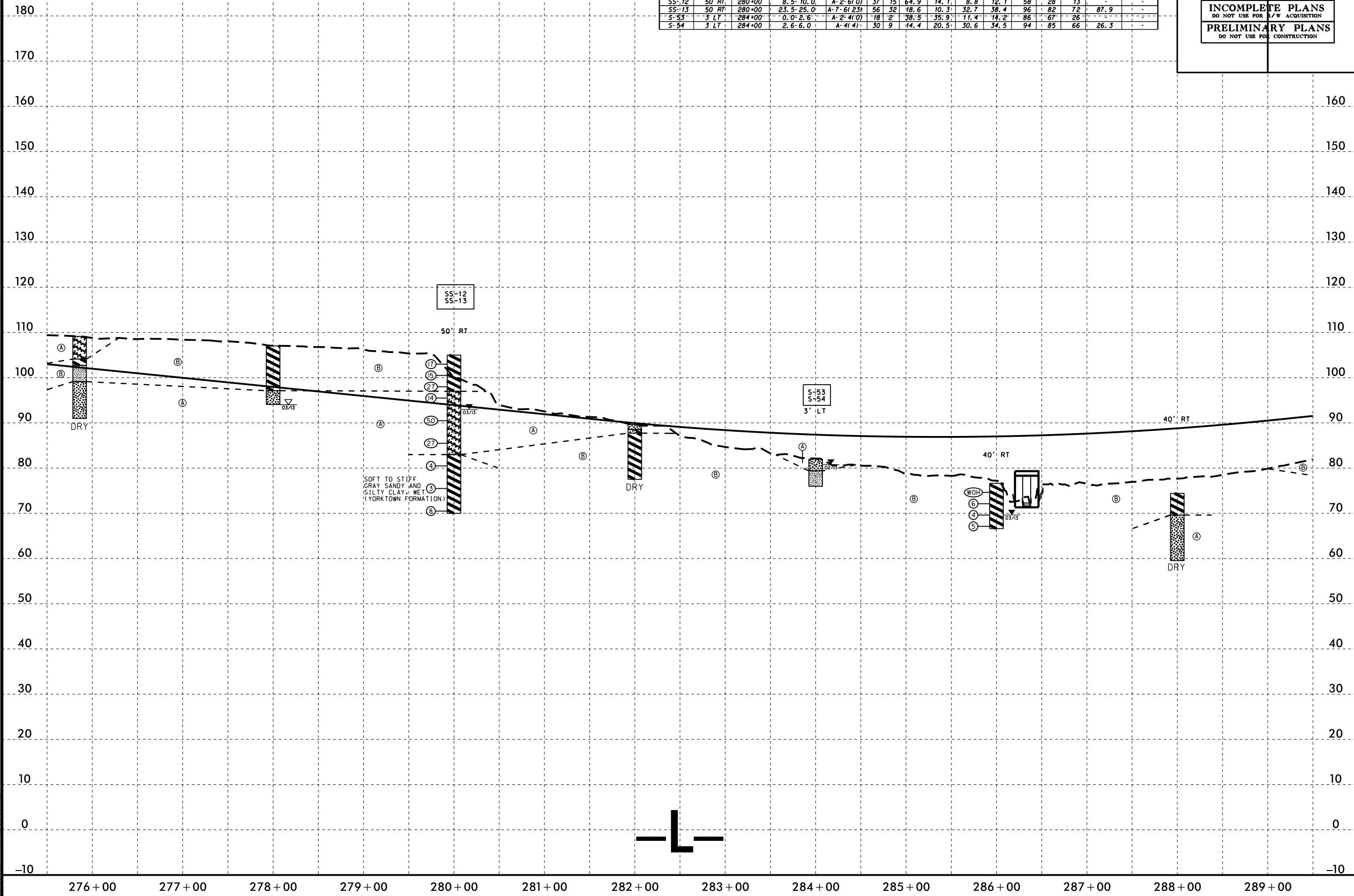
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- (A) LOOSE TO DENSE, ORANGE AND GRAY SAND, MOIST TO SATURATED (UNDIVIDED COASTAL PLAIN)
- (B) VERY SOFT TO VERY STIFF TAN, ORANGE AND GRAY CLAYEY SILT AND SILTY CLAY, MOIST TO WET (UNDIVIDED COASTAL PLAIN)

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	CLAY	10	40	200		
SS-12	50 RT	280+00	8.5-10.0	A-2-6(0)	37	15	64.9	14.1	8.8	12.1	58	28	13	-	-
SS-13	50 RT	280+00	23.5-25.0	A-7-6(23)	56	32	18.6	10.3	32.7	38.4	96	82	72	87.9	-
S-53	3 LT	284+00	0.0-2.6	A-2-4(0)	18	2	38.5	35.9	11.4	14.2	86	67	26	-	-
S-54	3 LT	284+00	2.6-6.0	A-4(4)	30	9	14.4	20.5	30.6	34.5	94	85	66	26.3	-

PROJECT REFERENCE NO. R-2582A	SHEET NO. 56
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
INCOMPLETE PLANS DO NOT USE FOR A/W ACQUISITION	
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	

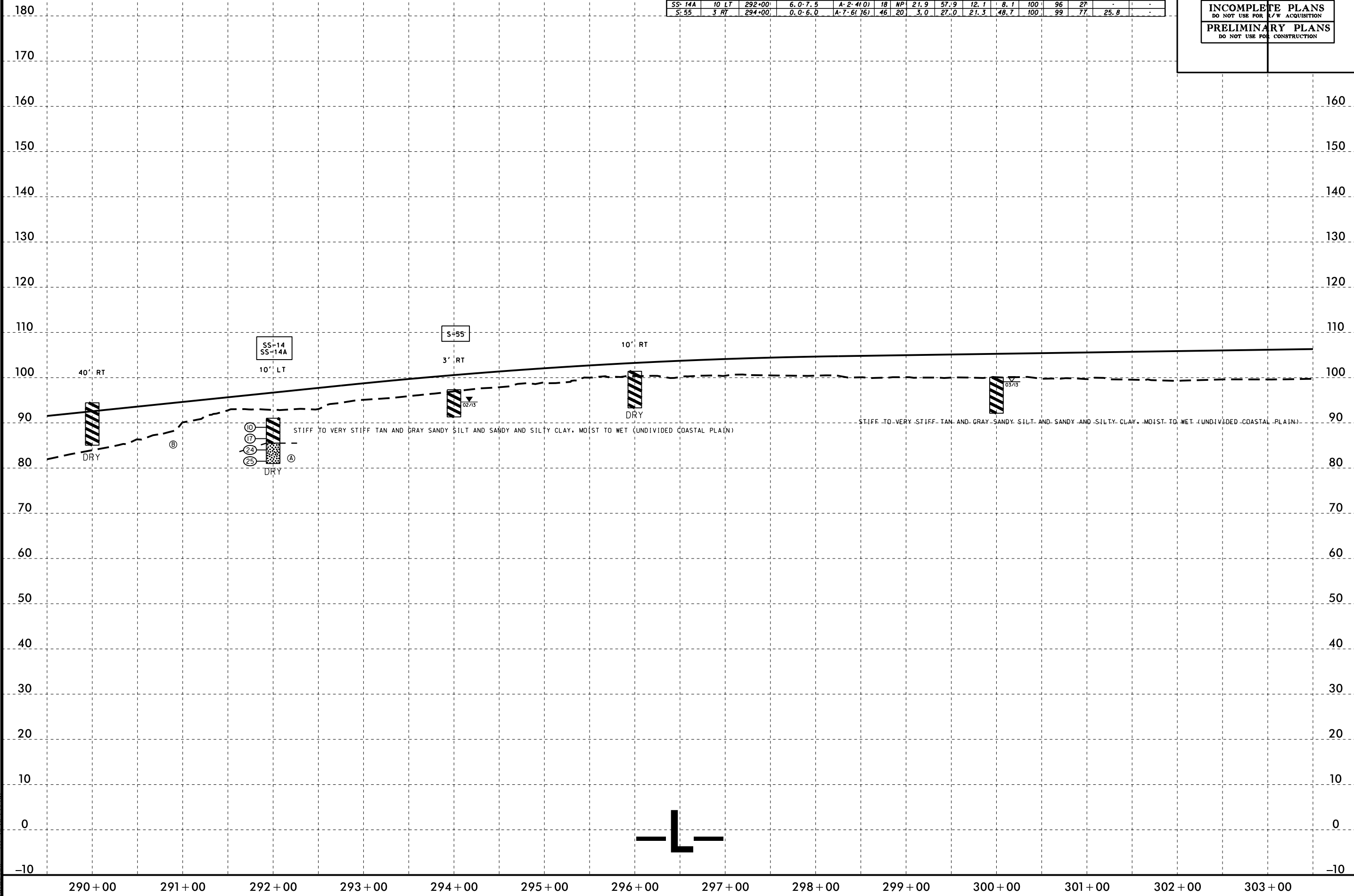


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Ⓐ LOOSE TO DENSE ORANGE AND GRAY SAND; MOIST TO SATURATED (UNDIVIDED COASTAL PLAIN)

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	40	200			
SS-14	10 LT	292+00	1.0-2.5	A-7-61/221	49	29	7.3	21.4	26.9	44.4	100	98	76	32.3
SS-14A	10 LT	292+00	6.0-7.5	A-2-41/01	18	NP	21.9	57.9	12.1	8.1	100	96	27	-
S-55	3 RT	294+00	0.0-6.0	A-7-61/161	46	20	3.0	27.0	21.3	48.7	100	99	77	25.8

PROJECT REFERENCE NO. R-2582A	SHEET NO. 57
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
INCOMPLETE PLANS DO NOT USE FOR A/W ACQUISITION	
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	

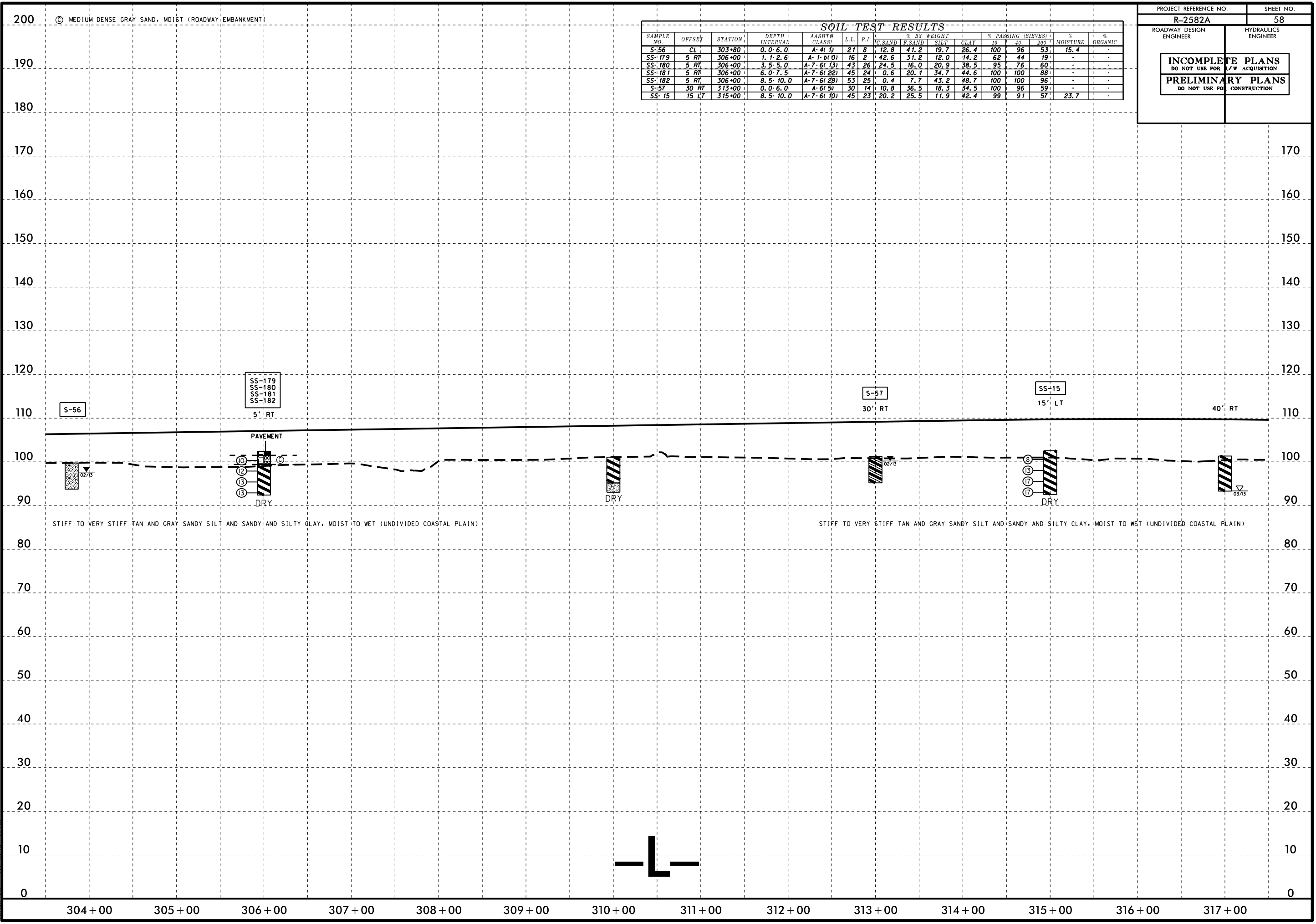


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PROJECT REFERENCE NO.	SHEET NO.
R-2582A	58
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
INCOMPLETE PLANS DO NOT USE FOR A/W ACQUISITION	
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	

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	200		
S-56	CL	303+80	0.0-6.0	A-4(1)	21	8	12.8	41.2	19.7	26.4	100	96	53	15.4	-
SS-179	5 RT	306+00	1.1-2.0	A-1(10)	16	2	42.6	31.2	12.0	14.2	62	44	19	-	-
SS-180	5 RT	306+00	3.5-5.0	A-7(613)	43	26	24.5	16.0	20.9	38.5	95	76	60	-	-
SS-181	5 RT	306+00	6.0-7.5	A-7(6122)	45	24	0.6	20.1	34.7	44.6	100	100	88	-	-
SS-182	5 RT	306+00	8.5-10.0	A-7(6128)	53	25	0.4	7.7	43.2	48.7	100	100	96	-	-
S-57	30 RT	313+00	0.0-6.0	A-6(5)	30	14	10.8	36.5	18.3	34.5	100	96	59	-	-
SS-15	15 LT	315+00	8.5-10.0	A-7(610)	45	23	20.2	25.5	11.9	42.4	99	91	57	23.7	-

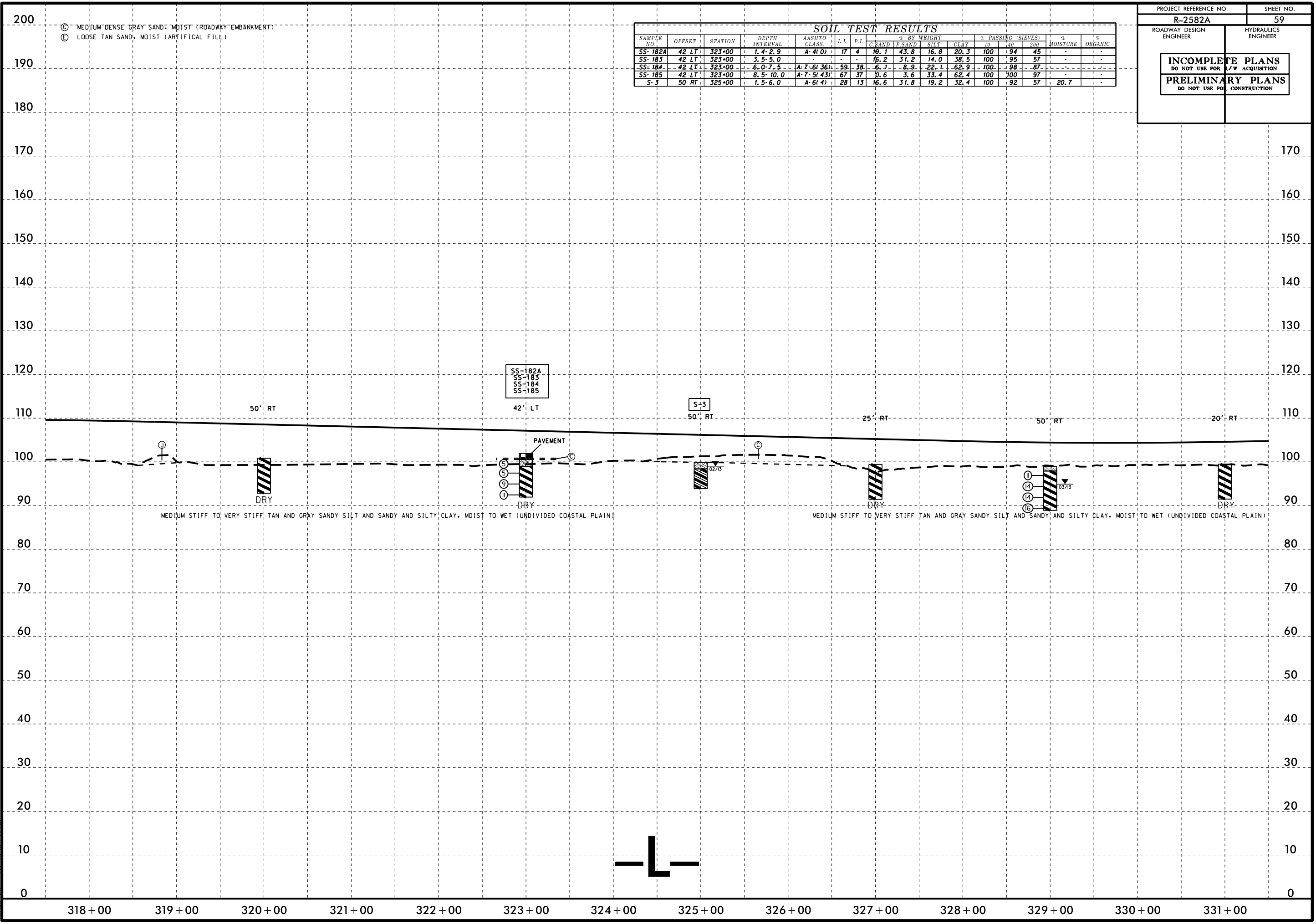


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PROJECT REFERENCE NO.	SHEET NO.
R-2582A	59
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
INCOMPLETE PLANS DO NOT USE FOR A/W ACQUISITION	
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	

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	200		
SS-182A	42' LT	323+00	1.4'-2.9'	A-4(0)	17	4	19.7	43.8	16.8	20.3	100	94	45	-	-
SS-183	42' LT	323+00	3.5'-5.0'	-	-	-	16.2	31.2	14.0	38.5	100	95	57	-	-
SS-184	42' LT	323+00	6.0'-7.5'	A-7-6(36)	59	38	6.7	8.9	22.1	62.9	100	98	87	-	-
SS-185	42' LT	323+00	8.5'-10.0'	A-7-5(43)	67	37	0.6	3.6	33.4	62.4	100	100	97	-	-
S-3	50' RT	325+00	1.5'-6.0'	A-6(4)	28	13	16.6	31.8	19.2	32.4	100	92	57	20.7	-



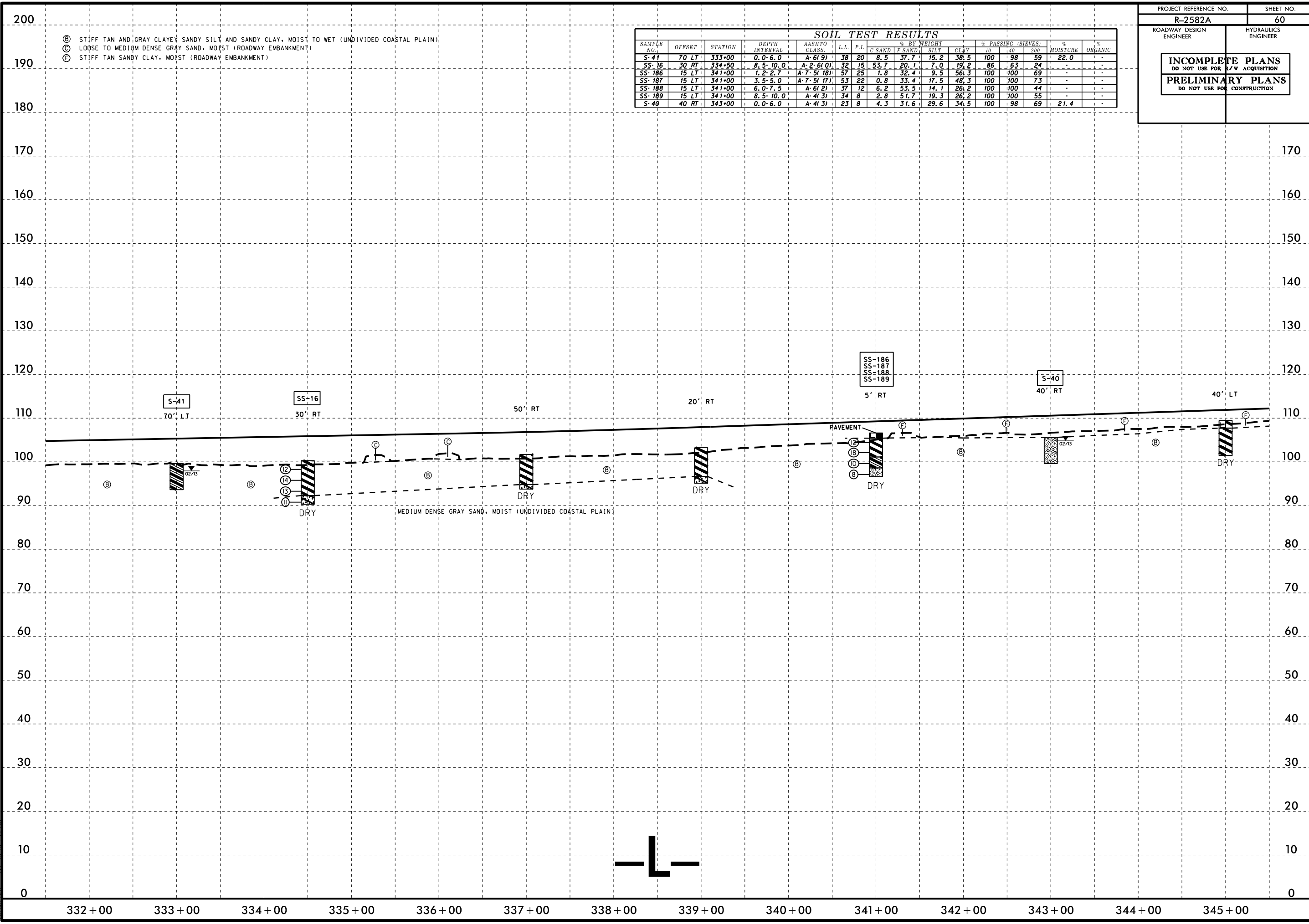
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5/14/99

PROJECT REFERENCE NO.	SHEET NO.
R-2582A	60
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
INCOMPLETE PLANS DO NOT USE FOR A/W ACQUISITION	
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	

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		
S-41	70' LT	333+00	0.0-6.0	A-6(9)	38	20	8.5	37.7	15.2	38.5	100	98	59	22.0	-
SS-16	30' RT	334+50	8.5-10.0	A-2(6)0	32	15	53.7	20.1	7.0	19.2	86	63	24	-	-
SS-186	15' LT	341+00	1.2-2.7	A-7-5(18)	57	25	11.8	32.4	9.5	56.3	100	100	69	-	-
SS-187	15' LT	341+00	3.5-5.0	A-7-5(17)	53	22	10.8	33.4	17.5	48.3	100	100	73	-	-
SS-188	15' LT	341+00	6.0-7.5	A-6(2)	37	12	6.2	53.5	14.1	26.2	100	100	44	-	-
SS-189	15' LT	341+00	8.5-10.0	A-4(3)	34	8	2.8	51.7	19.3	26.2	100	100	55	-	-
S-40	40' RT	343+00	0.0-6.0	A-4(3)	23	8	4.3	31.6	29.6	34.5	100	98	69	21.4	-

- ⓑ STIFF TAN AND GRAY CLAYEY SANDY SILT AND SANDY CLAY, MOIST TO WET (UNDIVIDED COASTAL PLAIN)
- ⓒ LOOSE TO MEDIUM DENSE GRAY SAND, MOIST (ROADWAY EMBANKMENT)
- ⓓ STIFF TAN SANDY CLAY, MOIST (ROADWAY EMBANKMENT)



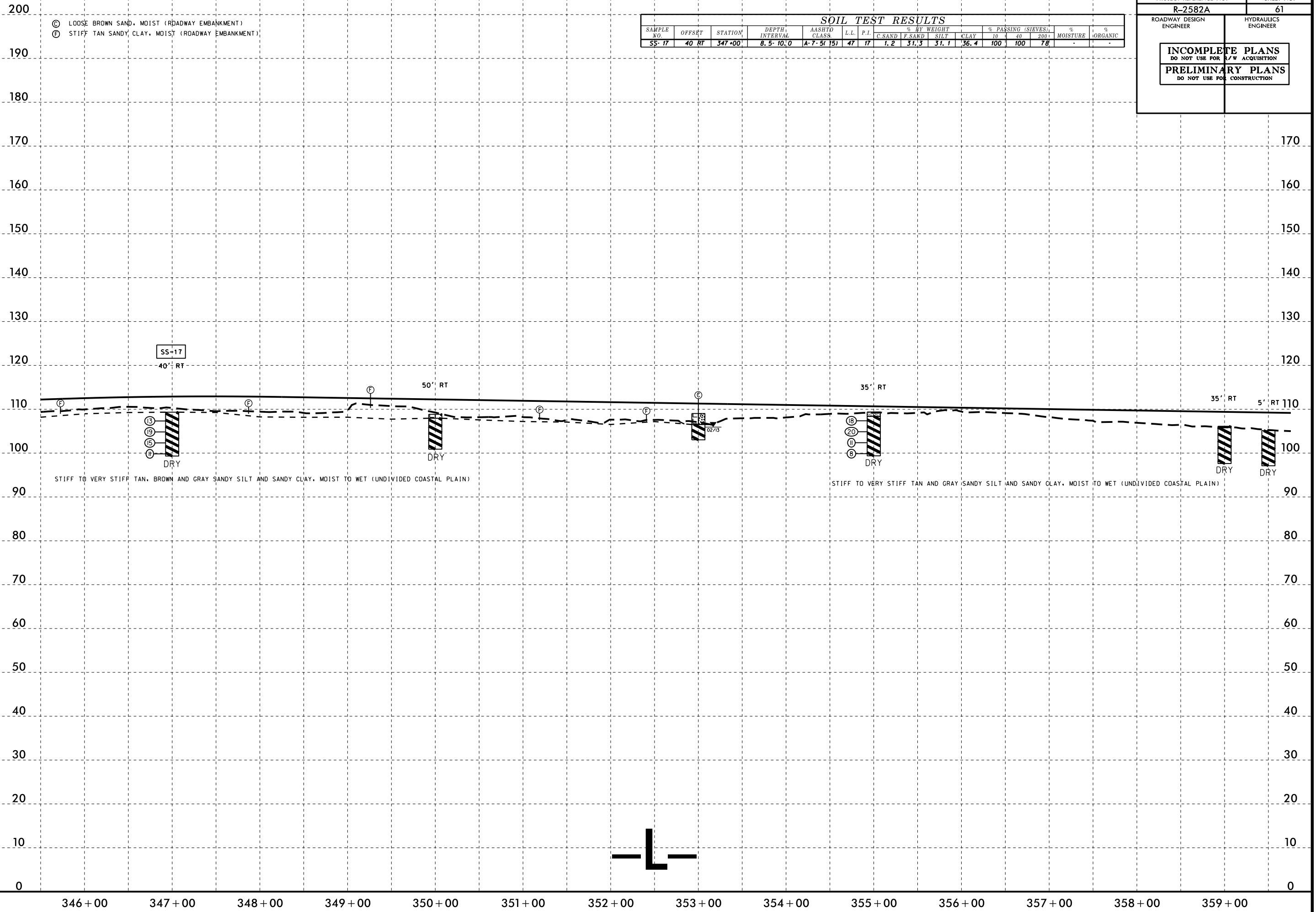
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5/14/99

PROJECT REFERENCE NO.	SHEET NO.
R-2582A	61
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	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT				% PASSING (SIEVES)			% MOISTURE	% ORGANIC
							C. SAND	F. SAND	SILT	CLAY	10	40	200		
SS-17	40' RT	347+00	8.5-10.0	A-7-5(15)	47	17	1.2	31.3	31.1	36.4	100	100	78	-	-

- Ⓢ LOOSE BROWN SAND, MOIST (ROADWAY EMBANKMENT)
- Ⓣ STIFF TAN SANDY CLAY, MOIST (ROADWAY EMBANKMENT)

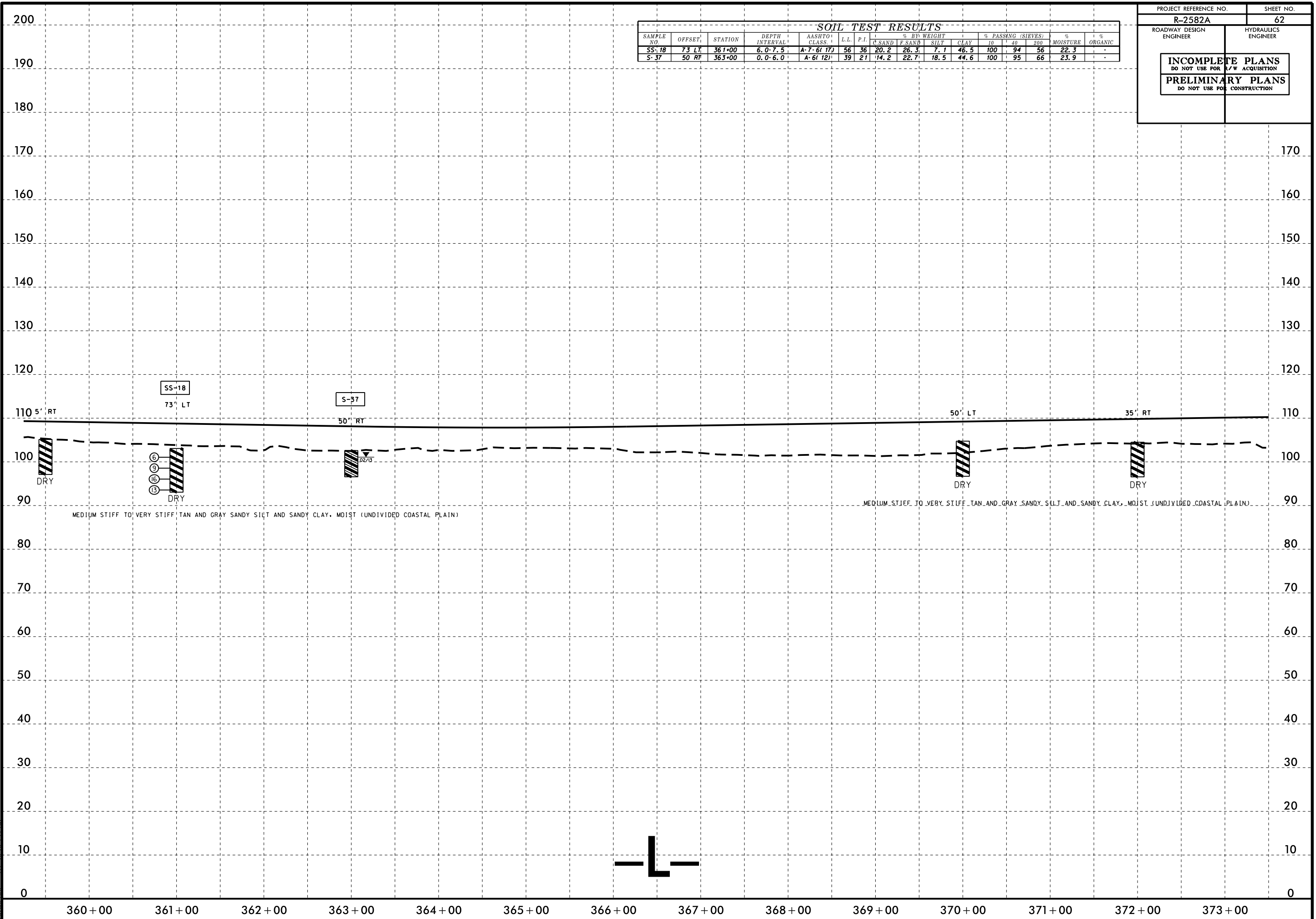


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5/14/99

PROJECT REFERENCE NO. R-2582A	SHEET NO. 62
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	
							SAND	F.SAND	SILT	10	40	200			
SS-18	73 LT	361+00	6.0-7.5	A-7-6(17)	56	36	20.2	26.3	7.1	46.5	100	94	56	22.3	-
S-37	50 RT	363+00	0.0-6.0	A-6(12)	39	21	14.2	22.7	18.5	44.6	100	95	66	23.9	-



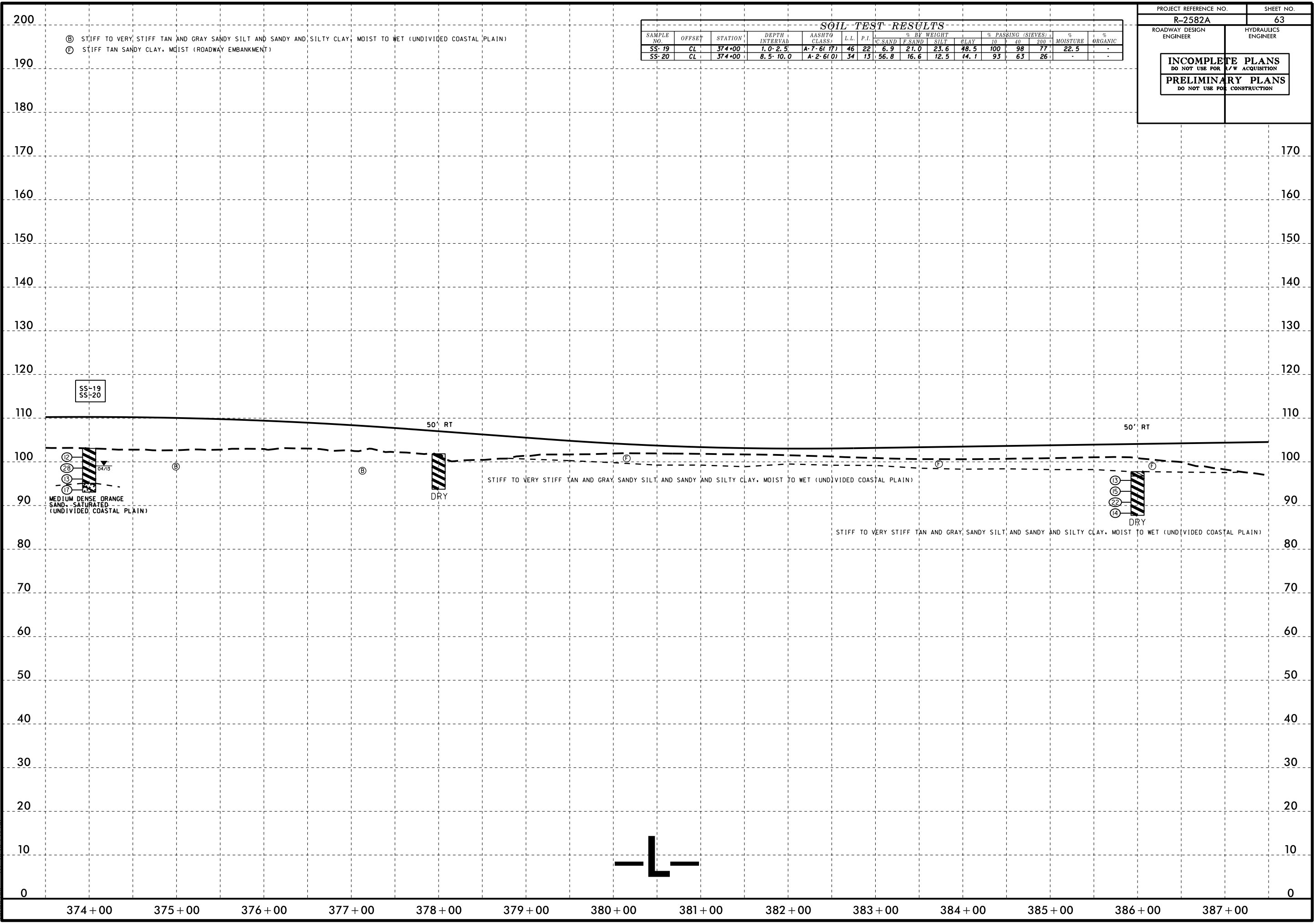
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SOIL TEST RESULTS															
SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS	L.L.	P.I.	% BY WEIGHT				% PASSING (SIEVES)			% MOISTURE	% ORGANIC
							W SAND	F SAND	SILT	CLAY	10	40	200		
SS-19	CL	374+00	1.0-2.5	A-7-6(17)	46	22	6.9	21.0	23.6	48.5	100	98	77	22.5	-
SS-20	CL	374+00	8.5-10.0	A-2-6(0)	34	13	56.8	16.6	12.5	14.1	93	63	26	-	-

ⓑ STIFF TO VERY STIFF TAN AND GRAY SANDY SILT AND SANDY AND SILTY CLAY, MOIST TO WET (UNDIVIDED COASTAL PLAIN)
 ⓕ STIFF TAN SANDY CLAY, MOIST (ROADWAY EMBANKMENT)

INCOMPLETE PLANS
DO NOT USE FOR ACQUISITION
PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

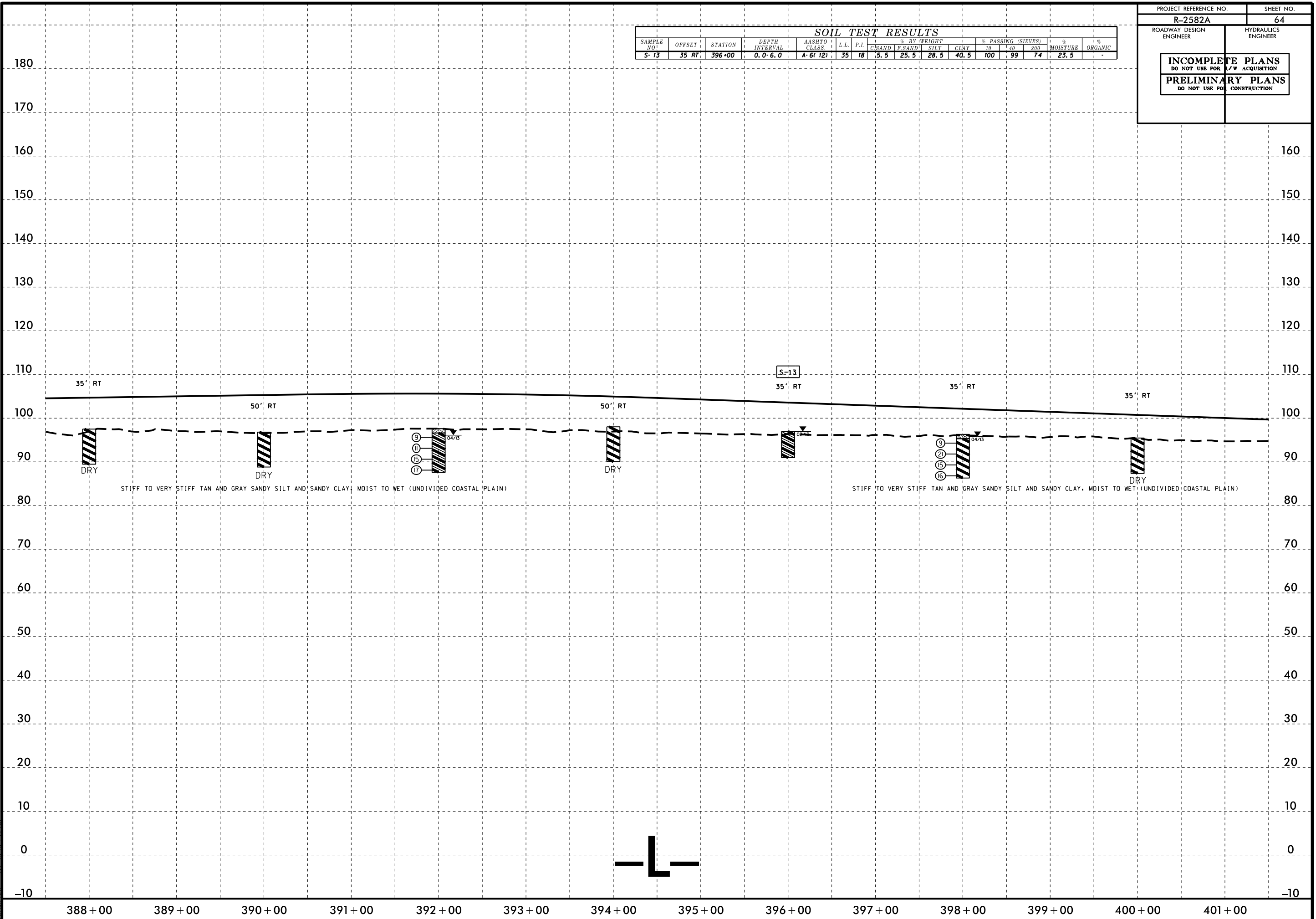


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5/14/99

PROJECT REFERENCE NO.	SHEET NO.
R-2582A	64
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
INCOMPLETE PLANS DO NOT USE FOR A/W 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	200		
S-13	35 RT	396+00	0.0-6.0	A-6(12)	35	18	5.5	25.5	28.5	40.5	100	99	74	23.5	-



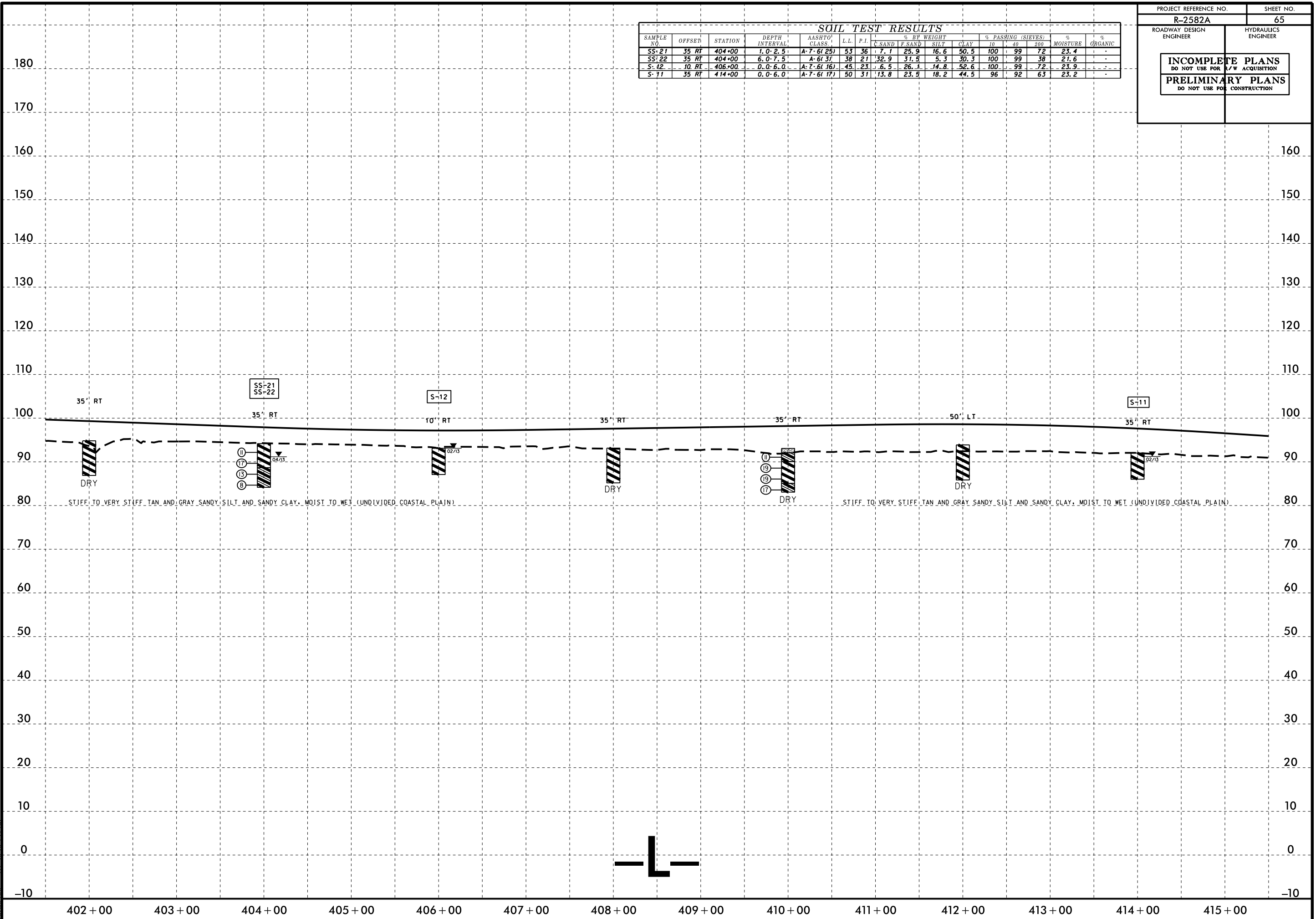
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5/14/99

PROJECT REFERENCE NO.	SHEET NO.
R-2582A	65
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
INCOMPLETE PLANS DO NOT USE FOR A/W ACQUISITION	
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	

SOIL TEST RESULTS															
SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.		% BY WEIGHT				% PASSING (SIEVES)			% MOISTURE		% ORGANIC
				U.C.	M.C.	SAND	F. SAND	SILT	CLAY	10	40	200	WET	SHRUNK	
SS-21	35 RT	404+00	1.0-2.5	A-7-6(25)	53	36	7.1	25.9	16.6	50.5	100	99	72	23.4	-
SS-22	35 RT	404+00	6.0-7.5	A-6(3)	38	21	32.9	31.8	5.3	30.3	100	99	38	21.6	-
S-12	10 RT	406+00	0.0-6.0	A-7-6(16)	45	23	6.5	26.1	14.8	52.6	100	99	72	23.9	-
S-11	35 RT	414+00	0.0-6.0	A-7-6(17)	50	31	13.8	23.8	18.2	44.5	96	92	63	23.2	-

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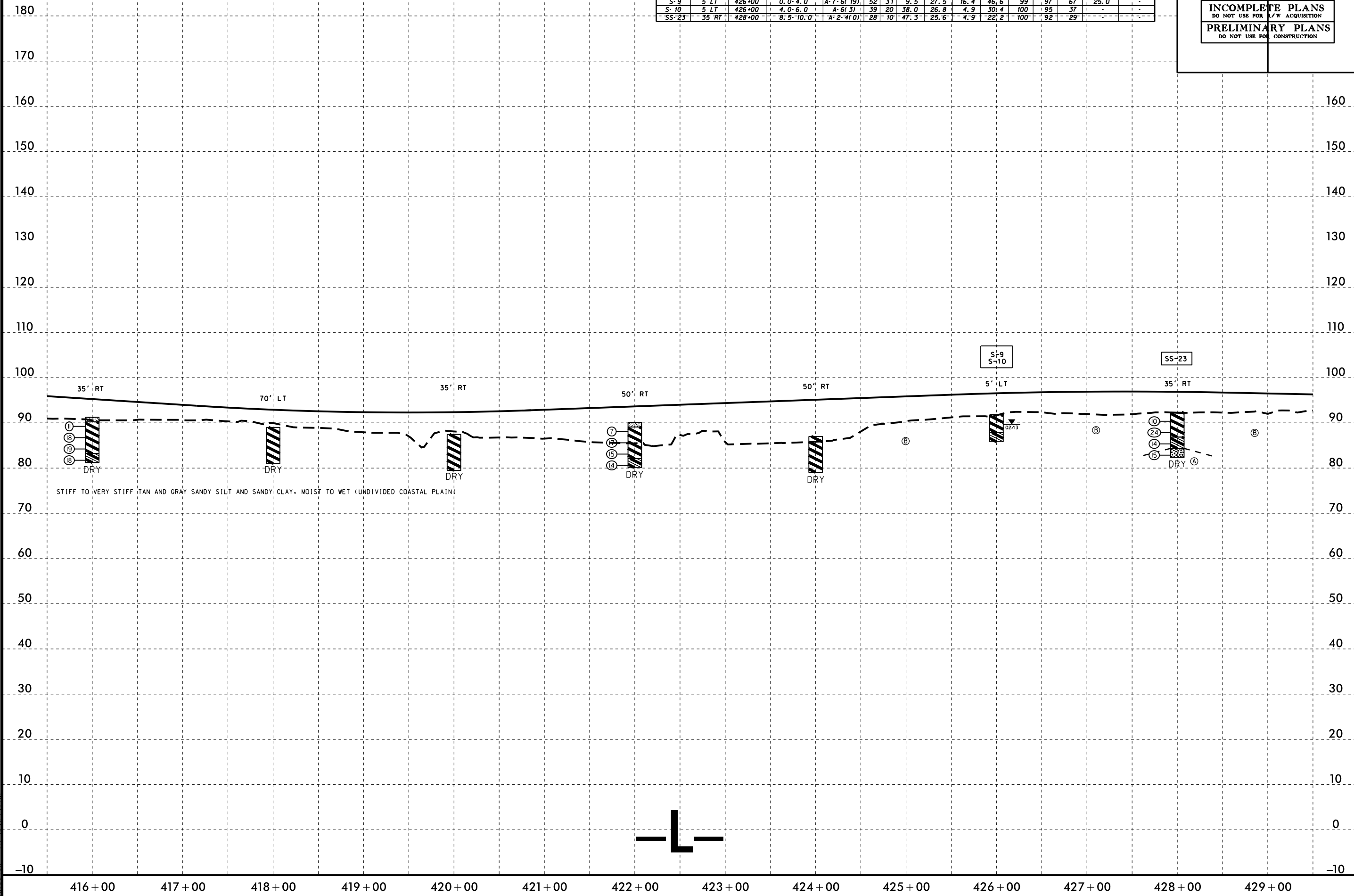
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5/14/99

- Ⓐ MEDIUM-DENSE ORANGE SAND, MOIST UNDIVIDED COASTAL PLAIN
- Ⓑ STIFF TO VERY STIFF TAN AND GRAY SANDY SILT AND SANDY CLAY, MOIST TO 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	CLAY	10	40	200		
S-9	5 LT	426+00	0.0-4.0	A-7-6(19)	52	31	9.5	27.5	16.4	46.6	99	97	67	25.0	-
S-10	5 LT	426+00	4.0-6.0	A-6(3)	39	20	36.0	26.8	4.9	30.4	100	95	37	-	-
SS-23	35 RT	428+00	8.5-10.0	A-2-4(0)	28	10	47.3	25.6	4.9	22.2	100	92	29	-	-

PROJECT REFERENCE NO. R-2582A	SHEET NO. 66
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
INCOMPLETE PLANS DO NOT USE FOR A/W ACQUISITION	
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	



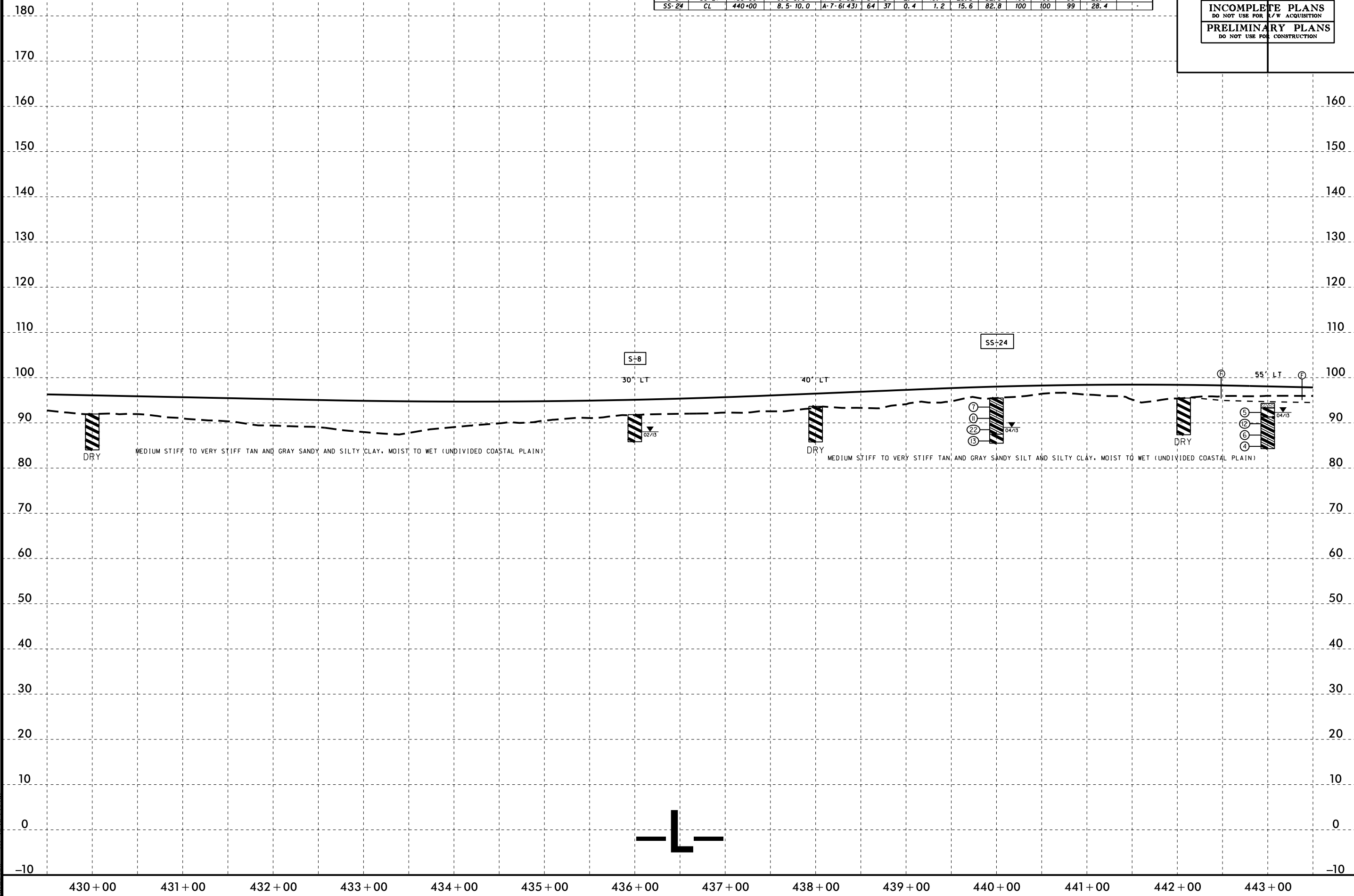
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PROJECT REFERENCE NO. R-2582A	SHEET NO. 67
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
INCOMPLETE PLANS DO NOT USE FOR A/W ACQUISITION PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	

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	200		
S-8	30 LT	436+00	0.0-6.0	A-7-6(32)	57	37	2.4	19.4	25.5	52.6	100	100	83	25.4	-
SS-24	CL	440+00	8.5-10.0	A-7-6(43)	64	37	0.4	1.2	15.6	82.8	100	100	99	28.4	-

Ⓢ STIFF TAN SILTY CLAY, MOIST (ROADWAY EMBANKMENT)

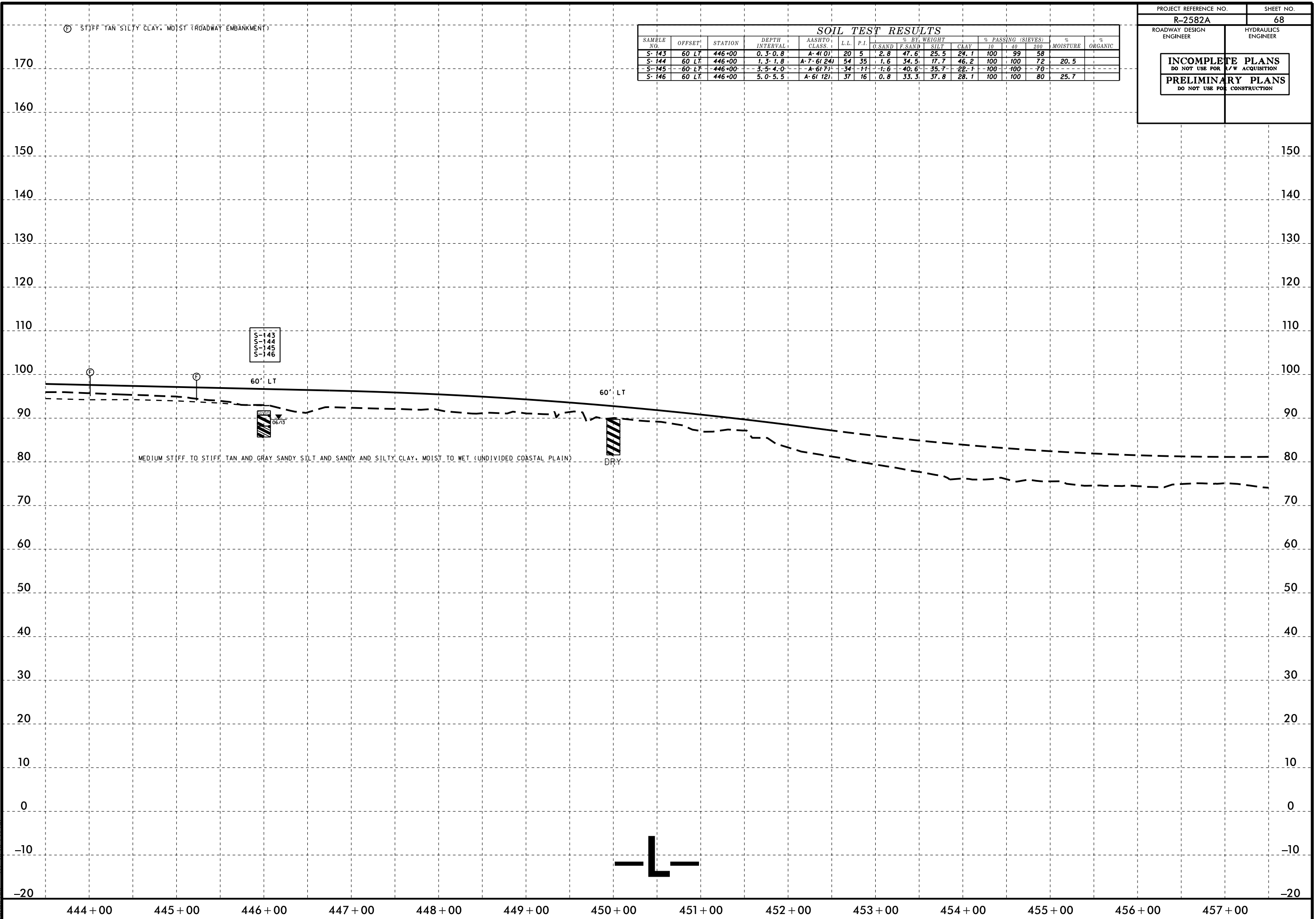


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5/14/99

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		
S-143	60 LT	446+00	0.3-0.8	A-4(0)	20	5	2.8	47.6	25.5	24.1	100	99	58		
S-144	60 LT	446+00	1.3-1.8	A-7-6(24)	54	35	1.6	34.5	17.7	46.2	100	100	72	20.5	
S-145	60 LT	446+00	3.5-4.0	A-6(7)	34	11	1.6	40.6	35.7	22.1	100	100	70		
S-146	60 LT	446+00	5.0-5.5	A-6(12)	37	16	0.8	33.3	37.8	28.1	100	100	80	25.7	

ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
INCOMPLETE PLANS DO NOT USE FOR ACQUISITION	
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	



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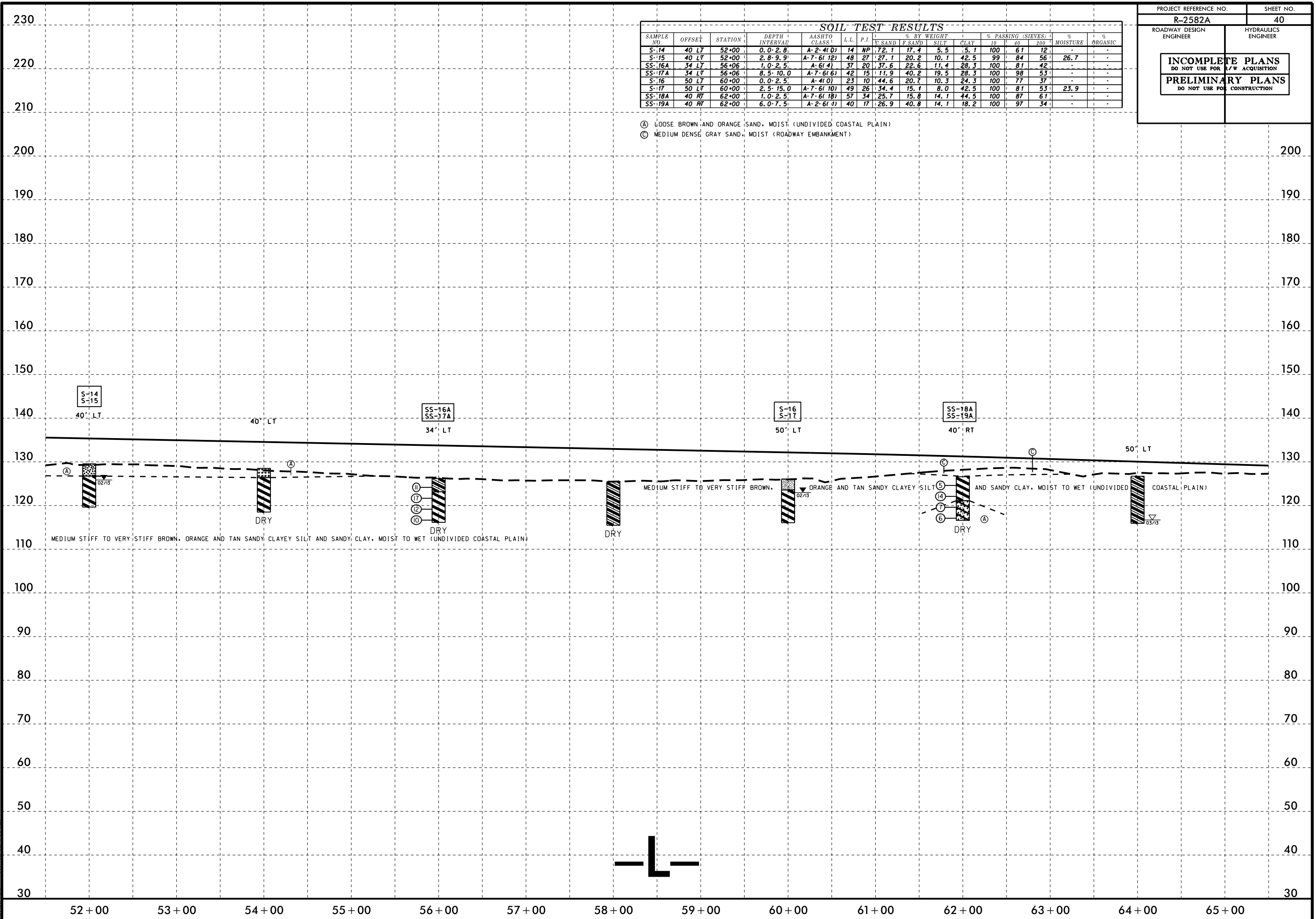
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PROJECT REFERENCE NO. R-2582A	SHEET NO. 40
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION	
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	

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	CLAY	10	40	200		
S-14	40 LT	52+00	0.0-2.8	A-2-4(0)	14	NP	72.1	17.4	5.5	100	61	12	-	-
S-15	40 LT	52+00	2.8-9.9	A-7-6(12)	48	27	27.1	20.2	10.7	42.5	99	84	56	-
SS-16A	34 LT	56+06	1.0-2.5	A-6(4)	37	20	37.6	22.6	11.4	28.3	100	81	42	-
SS-17A	34 LT	56+06	8.5-10.0	A-7-6(6)	42	15	11.9	40.2	19.5	28.3	100	98	53	-
S-16	50 LT	60+00	0.0-2.5	A-4(0)	23	10	44.6	20.7	10.3	24.3	100	77	37	-
S-17	50 LT	60+00	2.5-15.0	A-7-6(10)	49	26	34.4	15.1	8.0	42.5	100	81	53	23.9
SS-18A	40 RT	62+00	1.0-2.5	A-7-6(18)	57	34	25.7	15.8	14.1	44.5	100	87	61	-
SS-19A	40 RT	62+00	6.0-7.5	A-2-6(1)	40	17	26.9	40.8	14.1	18.2	100	97	34	-

- (A) LOOSE BROWN AND ORANGE SAND, MOIST (UNDIVIDED COASTAL PLAIN)
- (C) MEDIUM DENSE GRAY SAND, MOIST (ROADWAY EMBANKMENT)

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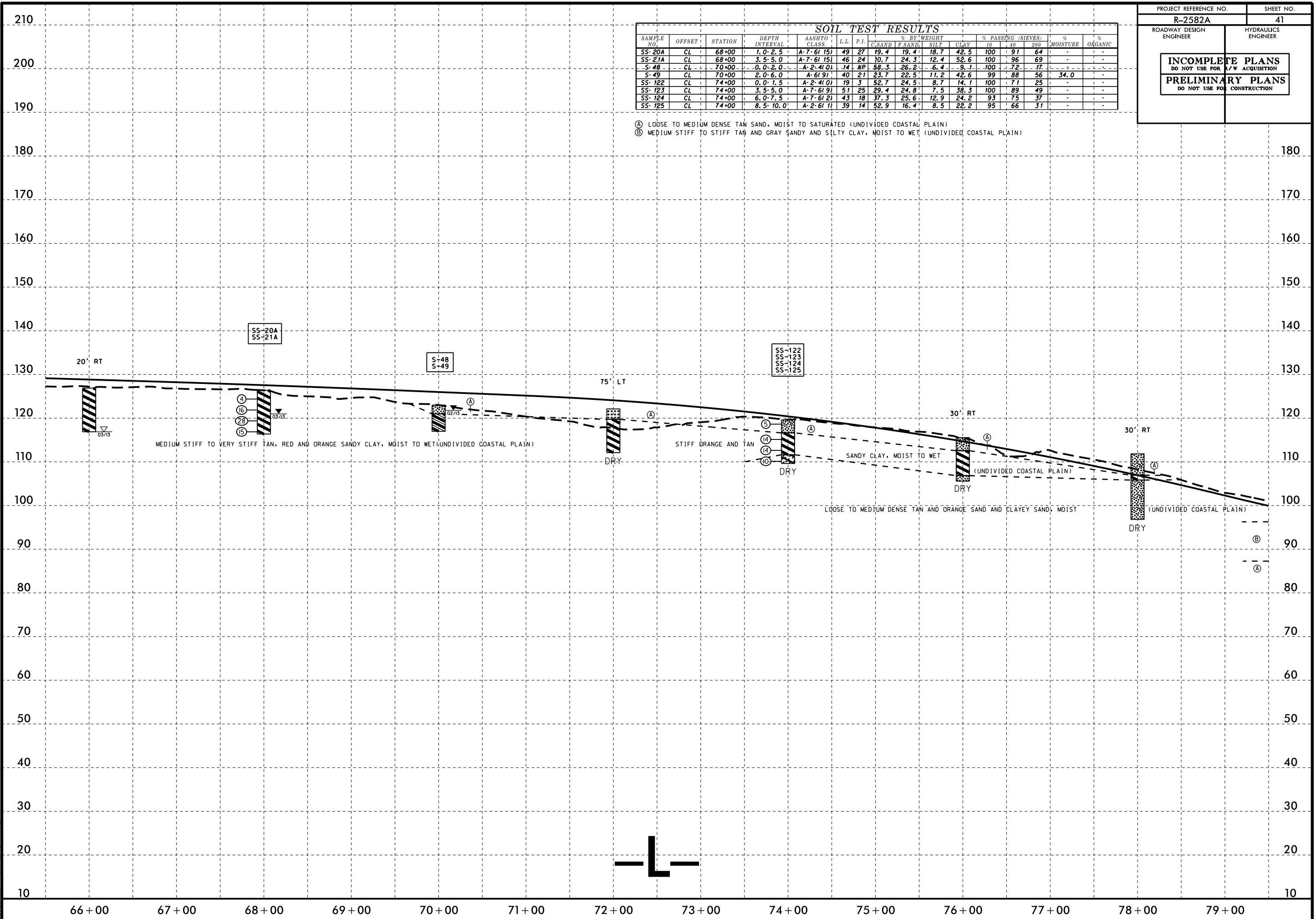
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5/14/99

PROJECT REFERENCE NO.	SHEET NO.
R-2582A	41
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
INCOMPLETE PLANS DO NOT USE FOR R/W 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
							G SAND	F SAND	SILT	CLAY	10	200		
SS-20A	CL	68+00	1.0-2.5	A-7-6(15)	49	27	19.4	19.4	18.7	42.5	100	91	64	-
SS-21A	CL	68+00	3.5-5.0	A-7-6(15)	46	24	10.7	24.3	12.4	52.6	100	96	69	-
S-48	CL	70+00	0.0-2.0	A-2-4(0)	14	NP	58.3	26.2	6.4	9.7	100	72	37	-
S-49	CL	70+00	2.0-6.0	A-6(9)	40	21	23.7	22.5	11.2	42.6	99	88	56	34.0
SS-122	CL	74+00	0.0-1.5	A-2-4(0)	19	3	52.7	24.5	8.7	14.7	100	71	25	-
SS-123	CL	74+00	3.5-5.0	A-7-6(9)	51	25	29.4	24.8	7.5	38.3	100	89	49	-
SS-124	CL	74+00	6.0-7.5	A-7-6(2)	43	18	37.3	25.6	12.9	24.2	93	75	37	-
SS-125	CL	74+00	8.5-10.0	A-2-6(1)	39	14	52.9	16.4	8.5	22.2	95	66	31	-

- (A) LOOSE TO MEDIUM DENSE TAN SAND, MOIST TO SATURATED (UNDIVIDED COASTAL PLAIN)
- (B) MEDIUM STIFF TO STIFF TAN AND GRAY SANDY AND SILTY CLAY, MOIST TO WET (UNDIVIDED COASTAL PLAIN)

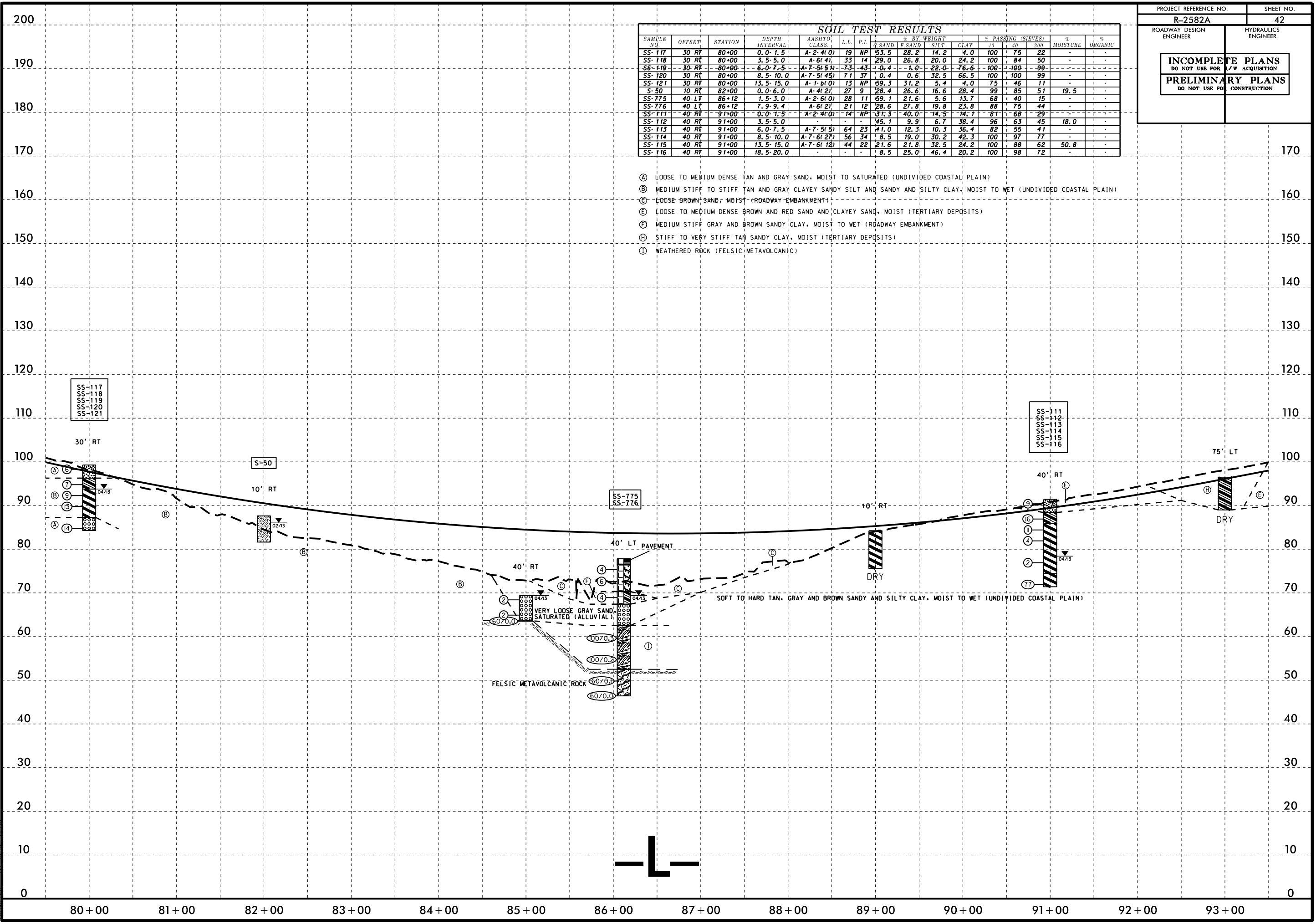


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SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS	L.L.	P.I.	% BY WEIGHT				% PASSING (SIEVES)		% MOISTURE	% ORGANIC
							G SAND	F SAND	SILT	CLAY	10	200		
SS-117	30 RT	80+00	0.0-1.5	A-2-4(0)	19	NP	53.5	28.2	14.2	4.0	100	75	22	-
SS-118	30 RT	80+00	3.5-5.0	A-6(4)	33	14	29.0	26.8	20.0	24.2	100	84	50	-
SS-119	30 RT	80+00	6.0-7.5	A-7-5(5)	73	43	0.4	1.0	22.0	76.6	100	100	99	-
SS-120	30 RT	80+00	8.5-10.0	A-7-5(45)	71	37	0.4	0.6	32.5	66.5	100	100	99	-
SS-121	30 RT	80+00	13.5-15.0	A-1-b(0)	13	NP	59.3	31.2	5.4	4.0	75	46	11	-
S-50	10 RT	82+00	0.0-6.0	A-4(2)	27	9	28.4	26.6	16.6	28.4	99	85	51	19.5
SS-775	40 LT	86+12	1.5-3.0	A-2-6(0)	28	11	59.1	21.6	5.6	13.7	68	40	15	-
SS-776	40 LT	86+12	7.9-9.4	A-6(2)	21	12	28.6	27.8	19.8	23.8	88	75	44	-
SS-111	40 RT	91+00	0.0-1.5	A-2-4(0)	14	NP	31.3	40.0	14.5	14.1	81	68	29	-
SS-112	40 RT	91+00	3.5-5.0	-	-	-	45.1	9.9	6.7	38.4	96	63	45	18.0
SS-113	40 RT	91+00	6.0-7.5	A-7-5(5)	64	23	41.0	12.3	10.3	36.4	82	55	41	-
SS-114	40 RT	91+00	8.5-10.0	A-7-6(27)	56	34	8.5	19.0	30.2	42.3	100	97	77	-
SS-115	40 RT	91+00	13.5-15.0	A-7-6(12)	44	22	21.6	21.8	32.5	24.2	100	88	62	50.8
SS-116	40 RT	91+00	18.5-20.0	-	-	-	8.5	25.0	46.4	20.2	100	98	72	-

- (A) LOOSE TO MEDIUM DENSE TAN AND GRAY SAND, MOIST TO SATURATED (UNDIVIDED COASTAL PLAIN)
- (B) MEDIUM STIFF TO STIFF TAN AND GRAY CLAYEY SANDY SILT AND SANDY AND SILTY CLAY, MOIST TO WET (UNDIVIDED COASTAL PLAIN)
- (C) LOOSE BROWN SAND, MOIST (ROADWAY EMBANKMENT)
- (E) LOOSE TO MEDIUM DENSE BROWN AND RED SAND AND CLAYEY SAND, MOIST (TERTIARY DEPOSITS)
- (F) MEDIUM STIFF GRAY AND BROWN SANDY CLAY, MOIST TO WET (ROADWAY EMBANKMENT)
- (H) STIFF TO VERY STIFF TAN SANDY CLAY, MOIST (TERTIARY DEPOSITS)
- (I) WEATHERED ROCK (FELSIC METAVOLCANIC)

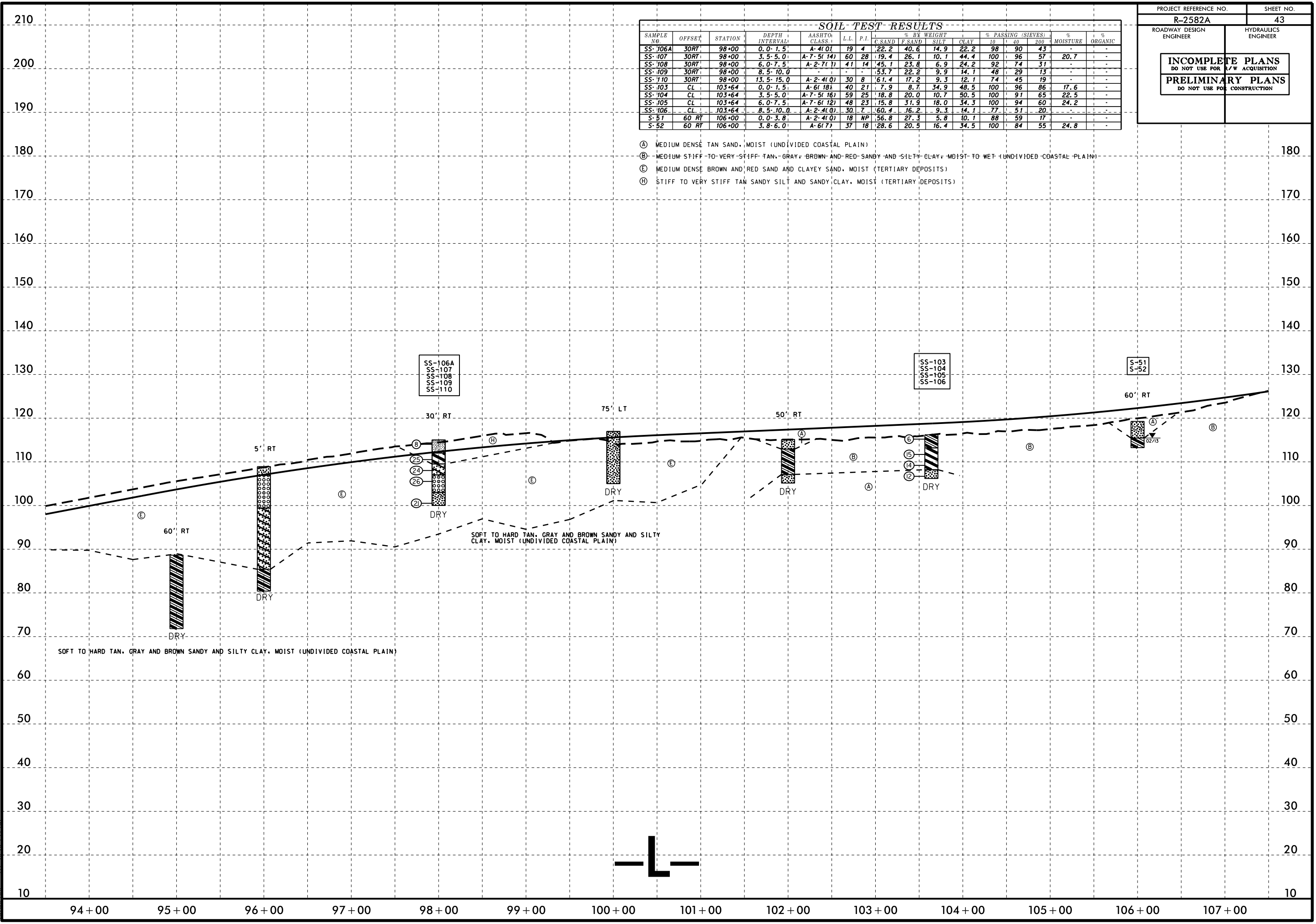


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SOIL TEST RESULTS														
SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS	L.L.	P.I.	% BY WEIGHT			% PASSING (SIEVES)			% MOISTURE	% ORGANIC
							C. SAND	F. SAND	SILT	CLAY	10	40		
SS-106A	30RT	98+00	0.0-1.5'	A-4(0)	19	4	22.2	40.6	14.9	22.2	98	90	43	-
SS-107	30RT	98+00	3.5-5.0'	A-7-5(14)	60	28	19.4	26.1	10.1	44.4	100	96	57	20.7
SS-108	30RT	98+00	6.0-7.5'	A-2-7(1)	41	14	45.1	23.8	6.9	24.2	92	74	31	-
SS-109	30RT	98+00	8.5-10.0'	-	-	-	53.7	22.2	9.9	14.1	48	29	13	-
SS-110	30RT	98+00	13.5-15.0'	A-2-4(0)	30	8	61.4	17.2	9.3	12.1	74	45	19	-
SS-103	CL	103+64	0.0-1.5'	A-6(18)	40	21	7.9	8.7	34.9	48.5	100	96	86	17.6
SS-104	CL	103+64	3.5-5.0'	A-7-5(16)	59	25	18.8	20.0	10.7	50.5	100	91	65	22.5
SS-105	CL	103+64	6.0-7.5'	A-7-6(12)	48	23	15.8	31.9	18.0	34.3	100	94	60	24.2
SS-106	CL	103+64	8.5-10.0'	A-2-4(0)	30	7	60.4	16.2	9.3	14.1	77	51	20	-
S-51	60 RT	106+00	0.0-3.8'	A-2-4(0)	18	NP	56.8	27.3	5.8	10.1	88	59	17	-
S-52	60 RT	106+00	3.8-6.0'	A-6(7)	37	18	28.6	20.5	16.4	34.5	100	84	55	24.8

- (A) MEDIUM DENSE TAN SAND, MOIST (UNDIVIDED COASTAL PLAIN)
- (B) MEDIUM STIFF TO VERY STIFF TAN, GRAY, BROWN AND RED SANDY AND SILTY CLAY, MOIST TO WET (UNDIVIDED COASTAL PLAIN)
- (E) MEDIUM DENSE BROWN AND RED SAND AND CLAYEY SAND, MOIST (TERTIARY DEPOSITS)
- (H) STIFF TO VERY STIFF TAN SANDY SILT AND SANDY CLAY, MOIST (TERTIARY DEPOSITS)



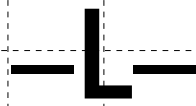
SS-106A
SS-107
SS-108
SS-109
SS-110

SS-103
SS-104
SS-105
SS-106

S-51
S-52

SOFT TO HARD TAN, GRAY AND BROWN SANDY AND SILTY CLAY, MOIST (UNDIVIDED COASTAL PLAIN)

SOFT TO HARD TAN, GRAY AND BROWN SANDY AND SILTY CLAY, MOIST (UNDIVIDED COASTAL PLAIN)

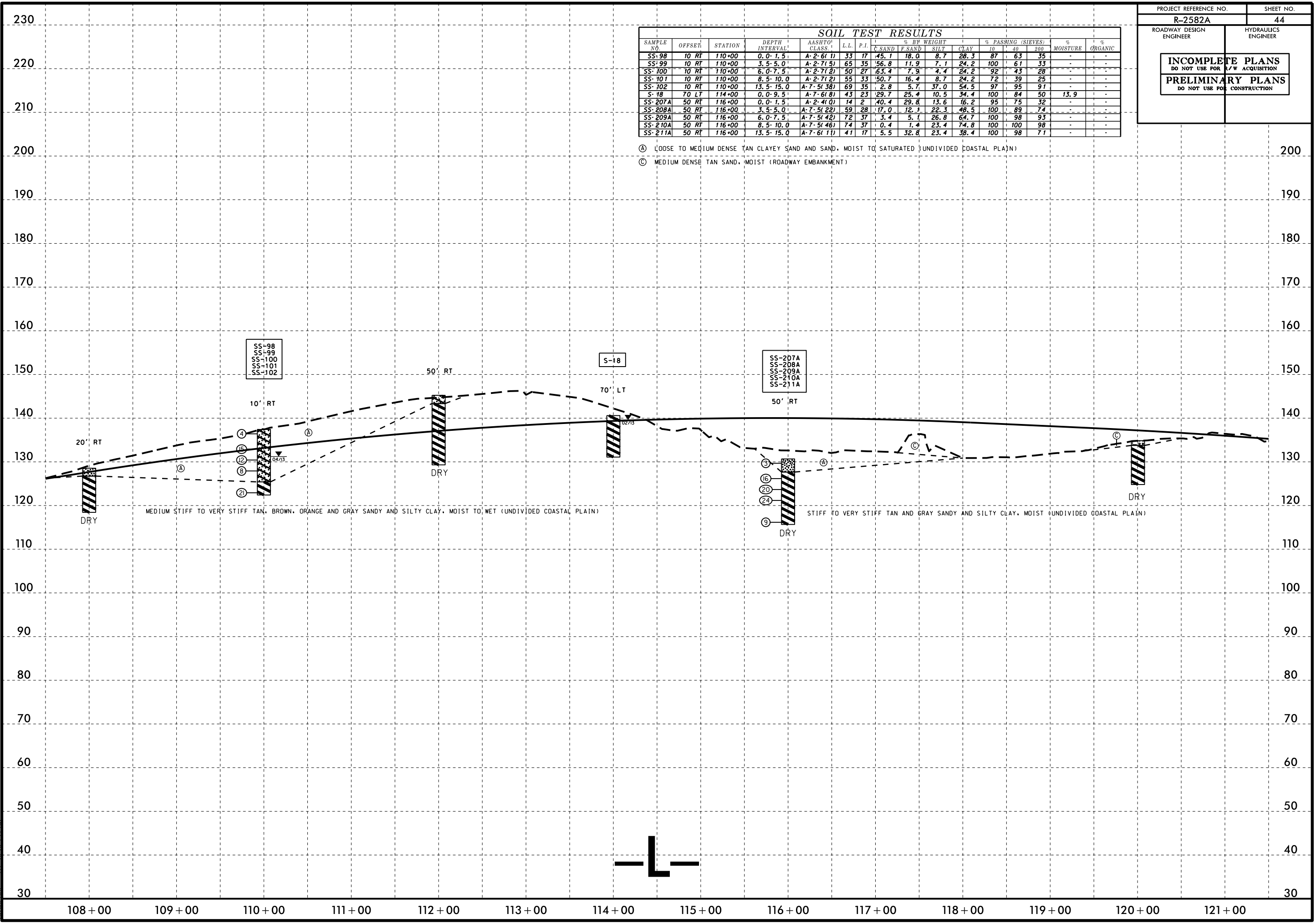


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SOIL TEST RESULTS															
SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT				% PASSING (SIEVES)			% MOISTURE	% ORGANIC
							C SAND	F SAND	SILT	CLAY	10	40	200		
SS-98	10 RT	110+00	0.0-1.5'	A-2-6(1)	33	17	45.1	18.0	8.7	28.3	87	63	35	-	-
SS-99	10 RT	110+00	3.5-5.0'	A-2-7(5)	65	35	56.8	11.9	7.1	24.2	100	61	33	-	-
SS-100	10 RT	110+00	6.0-7.5'	A-2-7(2)	50	27	63.4	7.9	4.4	24.2	92	43	28	-	-
SS-101	10 RT	110+00	8.5-10.0'	A-2-7(2)	55	33	50.7	16.4	8.7	24.2	72	39	25	-	-
SS-102	10 RT	110+00	13.5-15.0'	A-7-5(38)	69	35	2.8	5.7	37.0	54.5	97	95	91	-	-
S-18	70 LT	114+00	0.0-9.5'	A-7-6(8)	43	23	29.7	25.4	10.5	34.4	100	84	50	13.9	-
SS-207A	50 RT	116+00	0.0-1.5'	A-2-4(0)	14	2	40.4	29.8	13.6	16.2	95	75	32	-	-
SS-208A	50 RT	116+00	3.5-5.0'	A-7-5(22)	59	28	17.0	12.1	22.3	48.5	100	89	74	-	-
SS-209A	50 RT	116+00	6.0-7.5'	A-7-5(42)	72	37	3.4	5.1	26.8	64.7	100	98	93	-	-
SS-210A	50 RT	116+00	8.5-10.0'	A-7-5(46)	74	37	0.4	1.4	23.4	74.8	100	100	98	-	-
SS-211A	50 RT	116+00	13.5-15.0'	A-7-6(11)	41	17	5.5	32.8	23.4	38.4	100	98	71	-	-

- Ⓐ LOOSE TO MEDIUM DENSE TAN CLAYEY SAND AND SAND, MOIST TO SATURATED (UNDIVIDED COASTAL PLAIN)
- Ⓒ MEDIUM DENSE TAN SAND, MOIST (ROADWAY EMBANKMENT)

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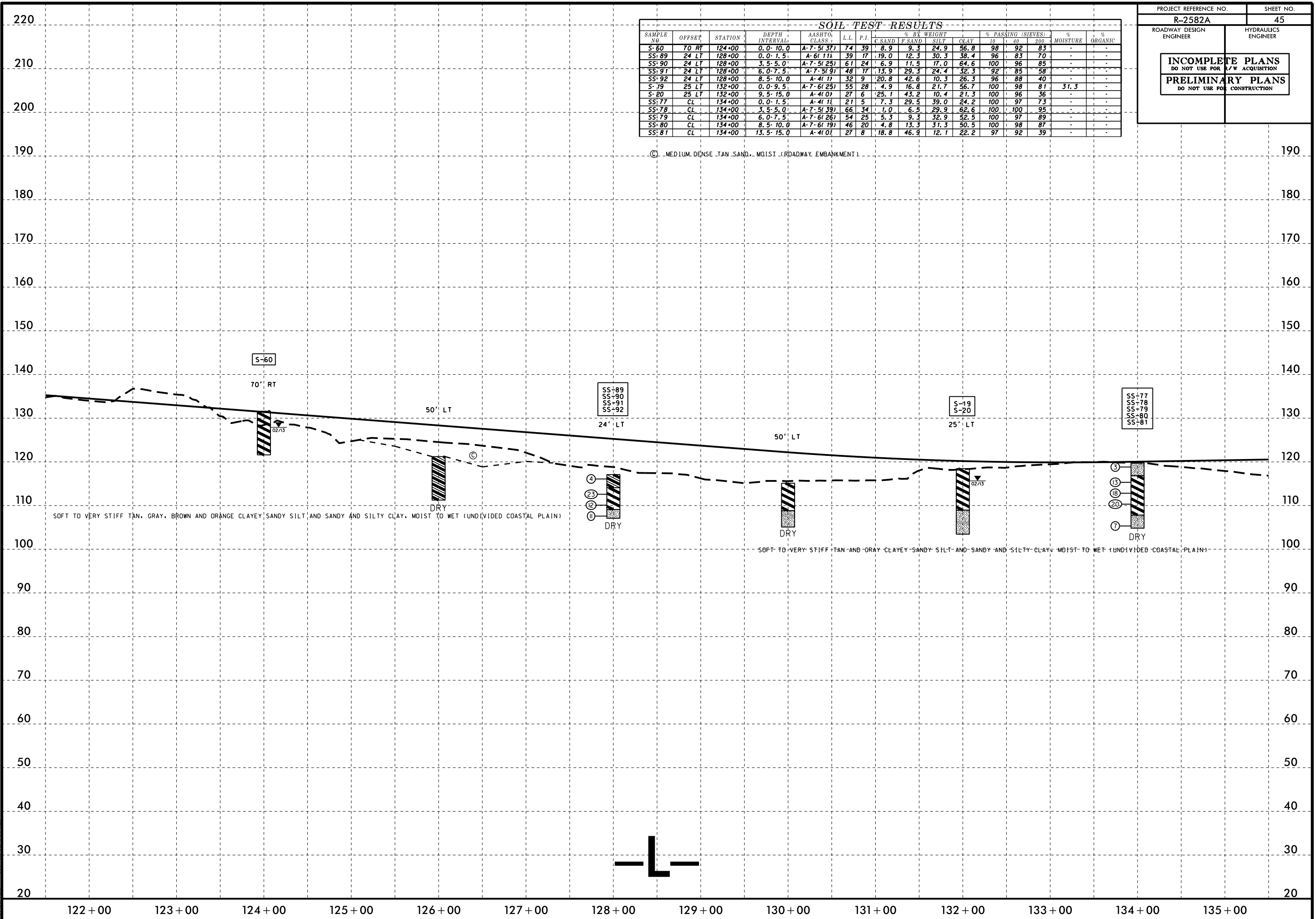


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PROJECT REFERENCE NO.	SHEET NO.
R-2582A	45
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
INCOMPLETE PLANS DO NOT USE FOR A/W ACQUISITION	
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	

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-60	70' RT	124+00	0.0-10.0	A-7-5(37)	74	39	8.9	9.3	24.9	56.8	98	92	83	-	-
SS-89	24' LT	128+00	0.0-1.5	A-6(11)	39	17	19.0	12.3	30.3	38.4	96	83	70	-	-
SS-90	24' LT	128+00	3.5-5.0	A-7-5(25)	61	24	6.9	11.5	17.0	64.6	100	96	85	-	-
SS-91	24' LT	128+00	6.0-7.5	A-7-5(9)	48	17	13.9	29.3	24.4	32.3	92	85	58	-	-
SS-92	24' LT	128+00	8.5-10.0	A-4(1)	32	9	20.8	42.6	10.3	26.3	96	88	40	-	-
S-19	25' LT	132+00	0.0-9.5	A-7-6(25)	55	28	4.9	16.8	21.7	56.7	100	98	81	31.3	-
S-20	25' LT	132+00	9.5-15.0	A-4(0)	27	6	25.1	43.2	10.4	21.3	100	96	36	-	-
SS-77	CL	134+00	0.0-1.5	A-4(1)	21	5	7.3	29.5	39.0	24.2	100	97	73	-	-
SS-78	CL	134+00	3.5-5.0	A-7-5(39)	66	34	1.0	6.5	29.9	62.6	100	100	95	-	-
SS-79	CL	134+00	6.0-7.5	A-7-6(26)	54	25	5.3	9.3	32.9	52.5	100	97	89	-	-
SS-80	CL	134+00	8.5-10.0	A-7-6(19)	46	20	4.8	13.3	31.3	50.5	100	98	87	-	-
SS-81	CL	134+00	13.5-15.0	A-4(0)	27	8	18.8	46.9	12.1	22.2	97	92	39	-	-

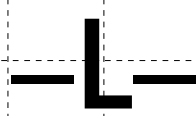
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SOFT TO VERY STIFF TAN, GRAY, BROWN AND ORANGE CLAYEY SANDY SILT AND SANDY AND SILTY CLAY, MOIST TO WET (UNDIVIDED COASTAL PLAIN)

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

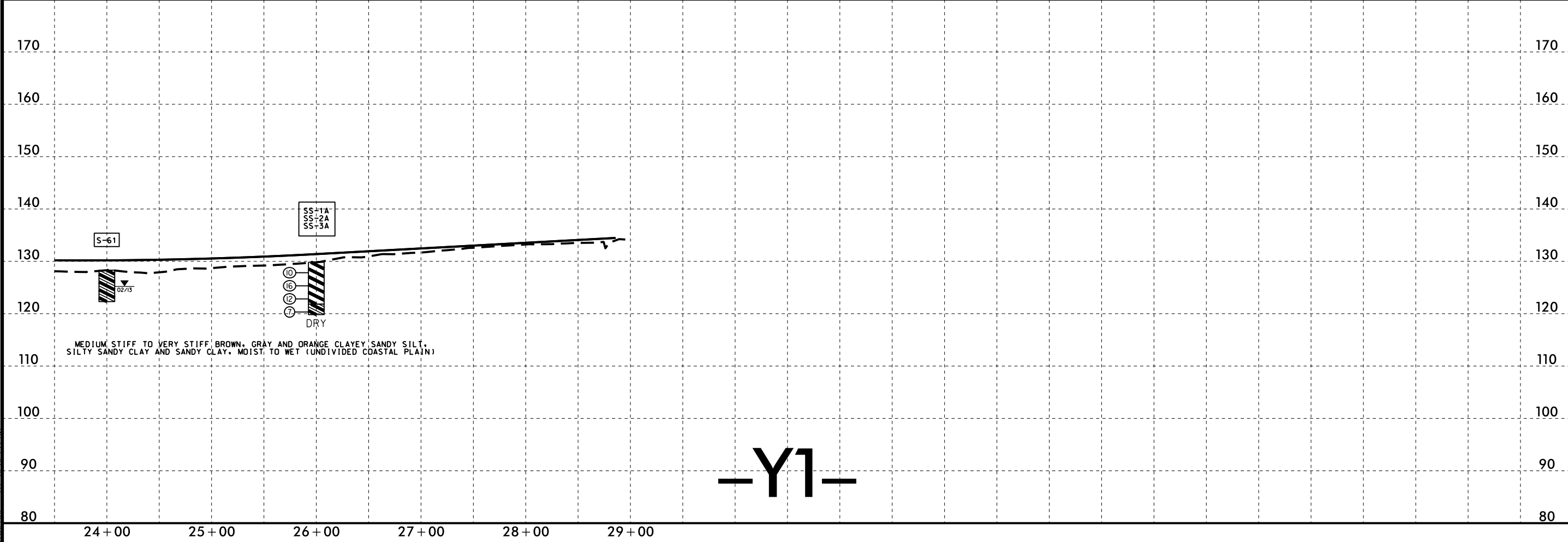
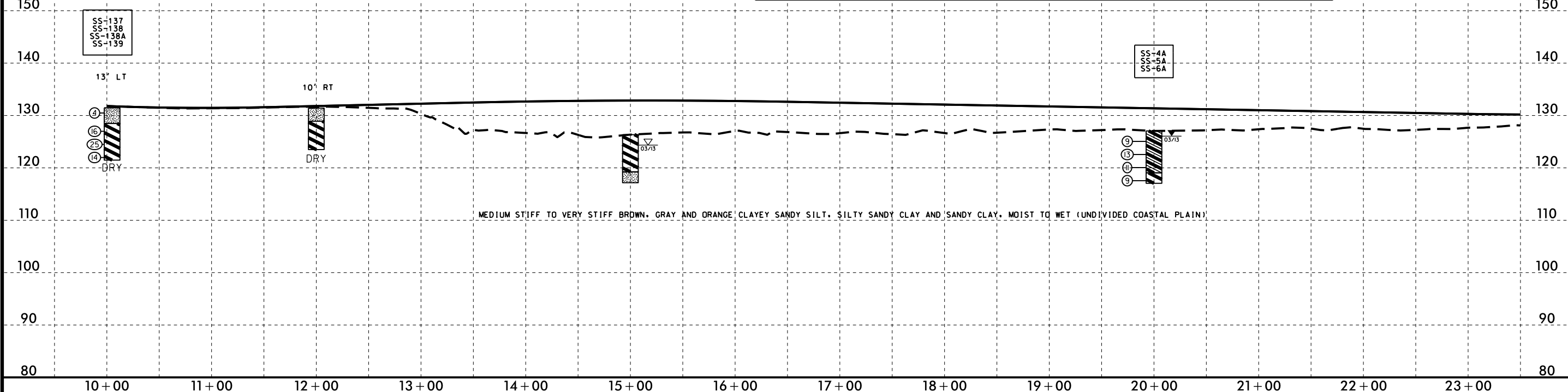
© MEDIUM DENSE TAN SAND, MOIST (ROADWAY EMBANKMENT)



5/28/99

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-137	13 LT	10+05	0.0-1.5	A-4(0)	75	4	32.6	27.5	17.6	22.3	100	84	46	-	-
SS-138	13 LT	10+05	3.5-5.0	A-7-6(11)	48	21	26.3	18.0	13.2	42.5	98	85	59	-	-
SS-138A	13 LT	10+05	6.0-7.5	A-7-5(21)	63	29	8.5	22.5	14.4	54.7	95	91	70	-	-
SS-139	13 LT	10+05	8.5-10.0	A-7-6(11)	49	20	11.1	33.2	17.2	38.5	100	98	62	-	-
SS-4A	CL	20+00	1.0-2.5	A-6(10)	35	18	12.3	26.7	23.2	38.4	100	95	67	-	-
SS-5A	CL	20+00	6.0-7.5	A-6(10)	37	20	12.9	28.5	22.1	36.4	100	95	64	-	-
SS-6A	CL	20+00	8.5-10.0	A-7-6(11)	49	26	11.5	36.6	13.4	38.4	100	98	54	-	-
S-61	CL	24+00	0.0-6.0	A-6(7)	37	17	17.6	28.8	17.0	36.5	100	93	58	-	-
SS-1A	CL	26+00	1.0-2.5	A-7-6(36)	70	44	6.3	20.0	19.1	54.6	100	98	77	-	-
SS-2A	CL	26+00	3.5-5.0	A-7-6(23)	57	30	5.1	25.7	18.7	50.6	100	99	75	-	-
SS-3A	CL	26+00	8.5-10.0	A-6(5)	40	17	16.2	39.8	17.7	26.3	100	96	49	-	-

PROJECT REFERENCE NO. R-2582A	SHEET NO. 69
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
INCOMPLETE PLANS DO NOT USE FOR A/W ACQUISITION	
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	



-Y1-

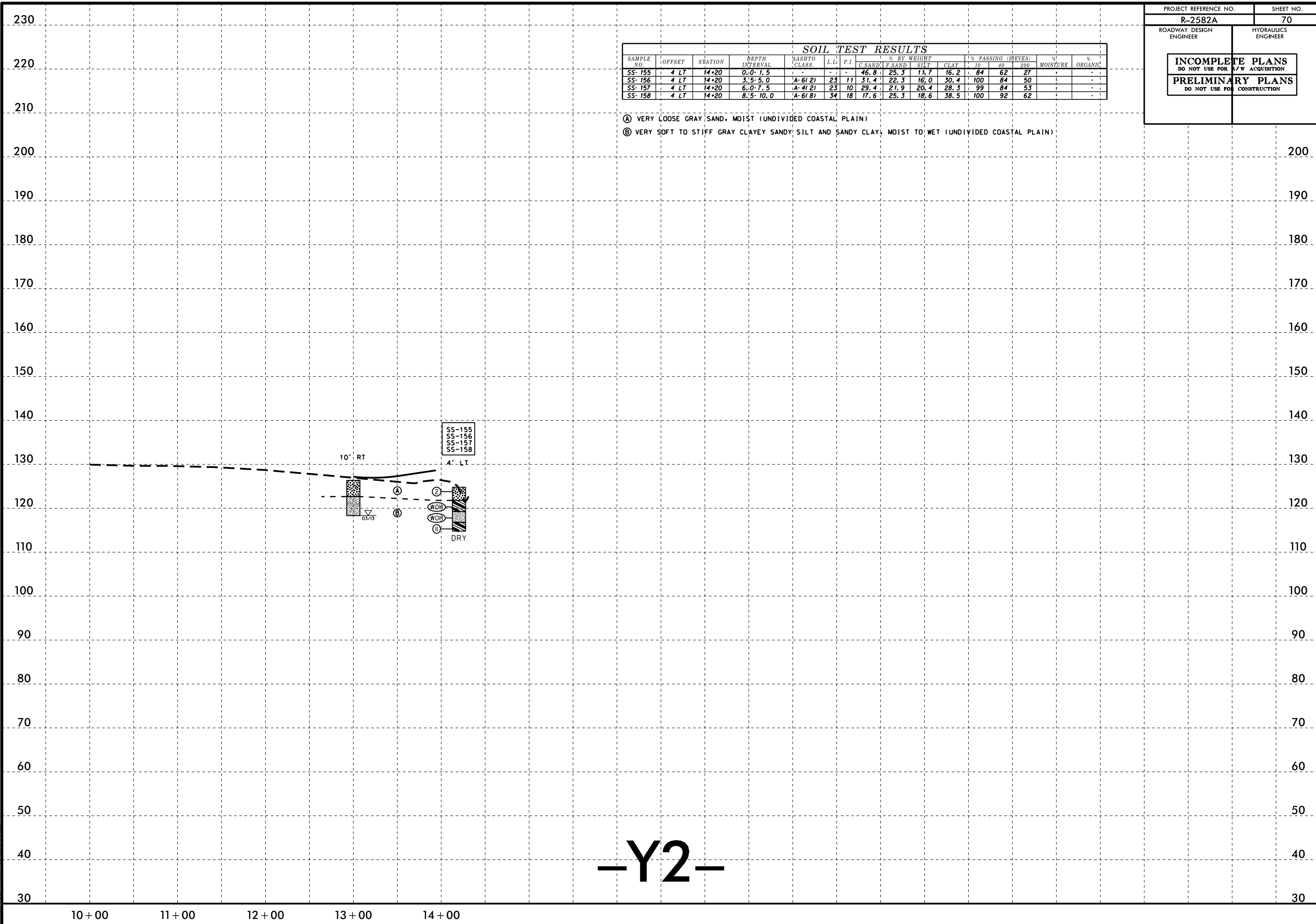
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5/14/99

PROJECT REFERENCE NO. R-2582A	SHEET NO. 70
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
INCOMPLETE PLANS DO NOT USE FOR A/W ACQUISITION	
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	

SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	HASHTO CLASS	L.L.	P.I.	% BY WEIGHT				% PASSING (STEVES)			% MOISTURE	% ORGANIC
							C SAND	F SAND	SILT	CLAY	# 10	# 40	# 200		
SS-155	4 LT	14+20	0.0-1.5	-	-	-	46.8	25.3	11.7	16.2	84	62	27	-	-
SS-156	4 LT	14+20	3.5-5.0	(A-6) 2)	23	11	31.4	22.3	16.0	30.4	100	84	50	-	-
SS-157	4 LT	14+20	6.0-7.5	(A-4) 2)	23	10	29.4	21.9	20.4	28.3	99	84	53	-	-
SS-158	4 LT	14+20	8.5-10.0	(A-6) 8)	34	18	17.6	25.3	18.6	38.5	100	92	62	-	-

- Ⓐ VERY LOOSE GRAY SAND, MOIST (UNDIVIDED COASTAL PLAIN)
- Ⓑ VERY SOFT TO STIFF GRAY CLAYEY SANDY SILT AND SANDY CLAY, MOIST TO WET (UNDIVIDED COASTAL PLAIN)



-Y2-

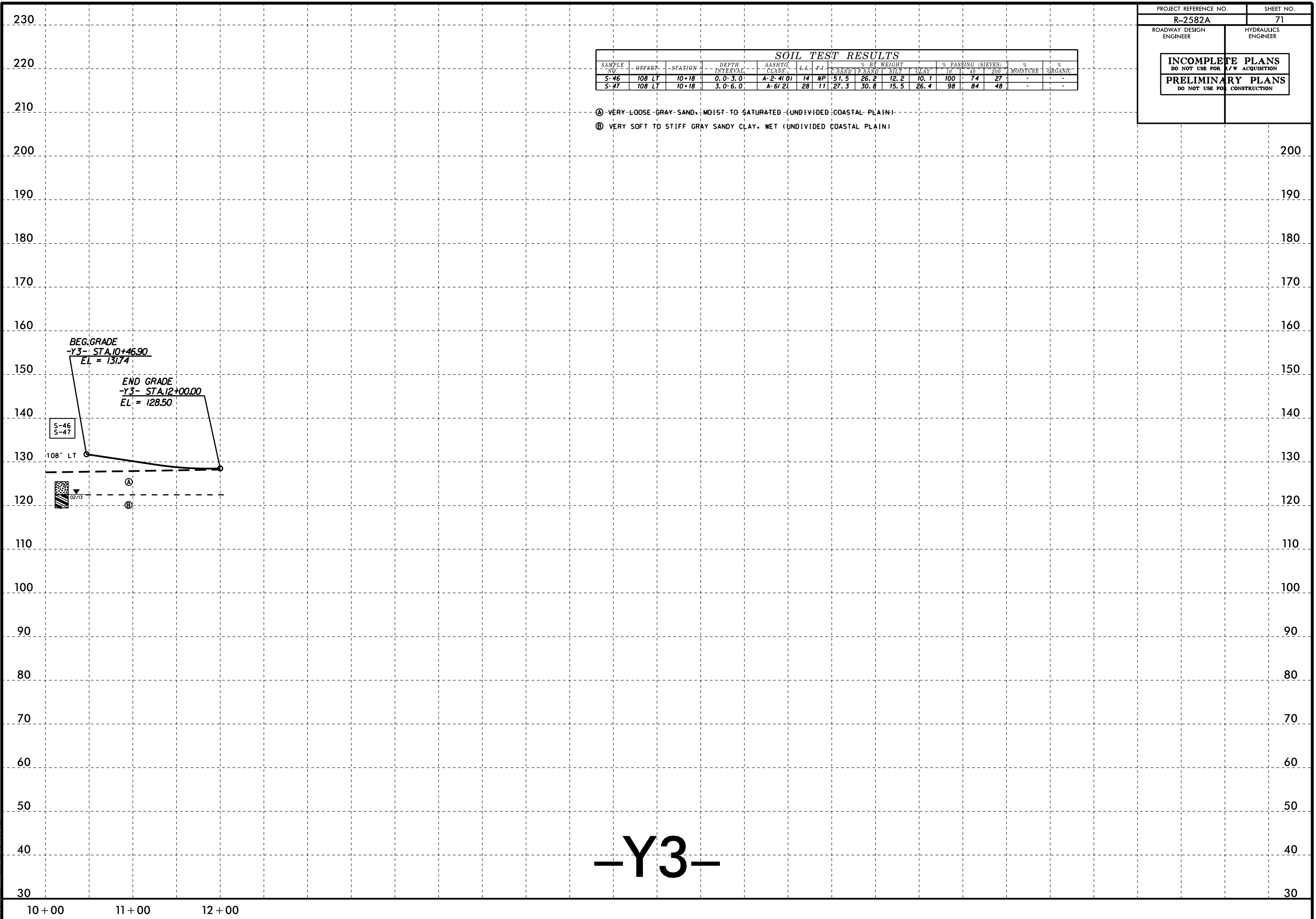
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PROJECT REFERENCE NO. R-2582A	SHEET NO. 71
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
INCOMPLETE PLANS DO NOT USE FOR ACQUISITION	
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	

SOIL TEST RESULTS															
SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS	L.L.	P.I.	% BY WEIGHT				% PASSING (SIEVES)			% MOISTURE	% ORGANIC
							SAND	F SAND	SILT	CLAY	#10	#40	#200		
S-46	108 LT	10+18	0.0-3.0'	A-2-4(0)	14	NP	51.5	26.2	12.2	10.1	100	74	27	-	-
S-47	108 LT	10+18	3.0-6.0'	A-6(2)	28	11	27.3	30.8	15.5	26.4	98	84	48	-	-

- Ⓐ VERY LOOSE GRAY SAND, MOIST TO SATURATED (UNDIVIDED COASTAL PLAIN)
- Ⓑ VERY SOFT TO STIFF GRAY SANDY CLAY, WET (UNDIVIDED COASTAL PLAIN)



BEG. GRADE
-Y3- STA. 10+46.90
EL = 131.74

END GRADE
-Y3- STA. 12+00.00
EL = 128.50

S-46
S-47

108' LT



Ⓐ

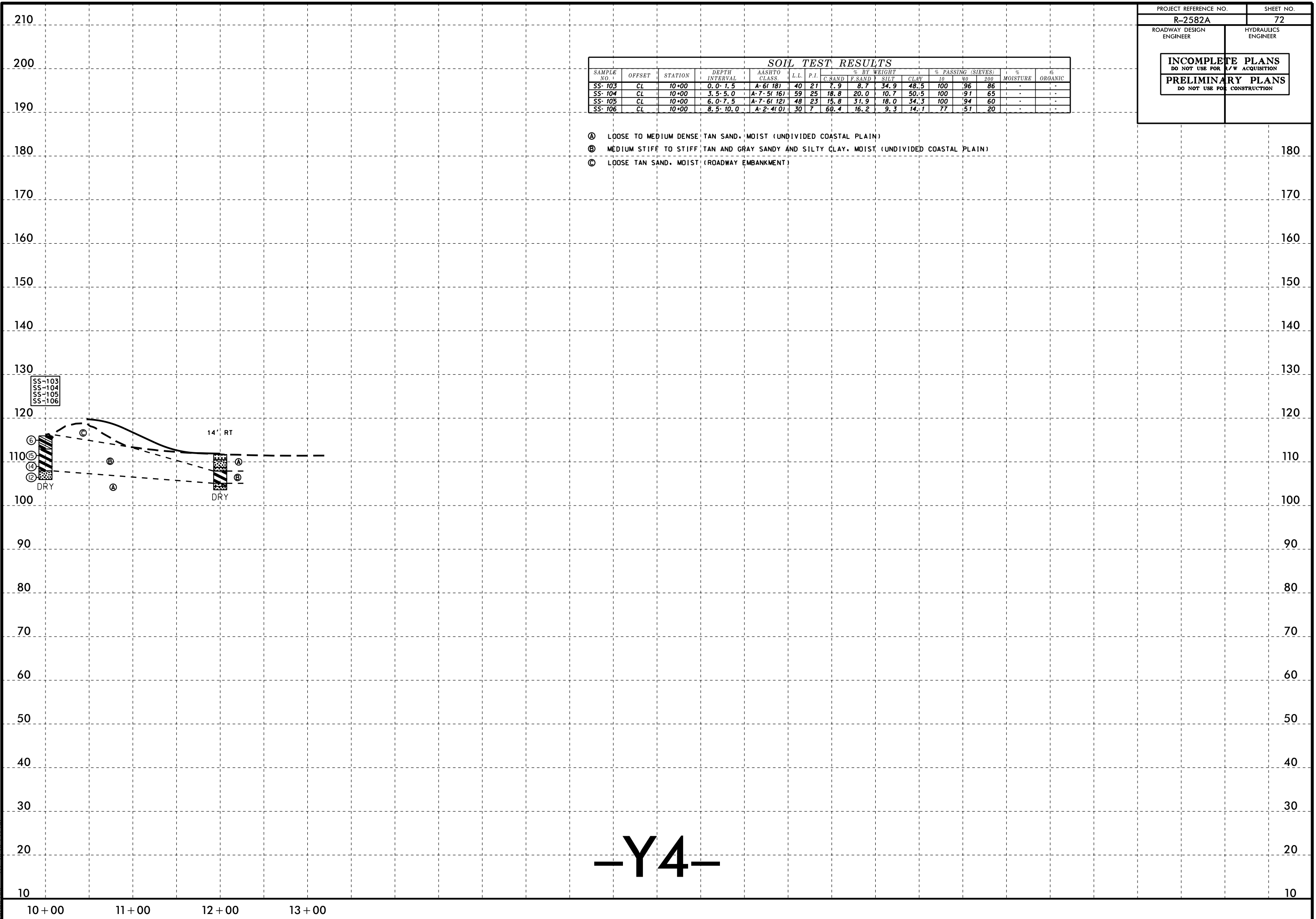
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-Y3-

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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-103	CL	10+00	0.0-1.5	A-6(18)	40	21	7.9	8.7	34.9	48.5	100	96	86	-	-
SS-104	CL	10+00	3.5-5.0	A-7-5(16)	59	25	18.8	20.0	10.7	50.5	100	91	65	-	-
SS-105	CL	10+00	6.0-7.5	A-7-6(12)	48	23	15.8	31.9	18.0	34.3	100	94	60	-	-
SS-106	CL	10+00	8.5-10.0	A-2-4(0)	30	7	60.4	16.2	9.3	14.1	77	51	20	-	-

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

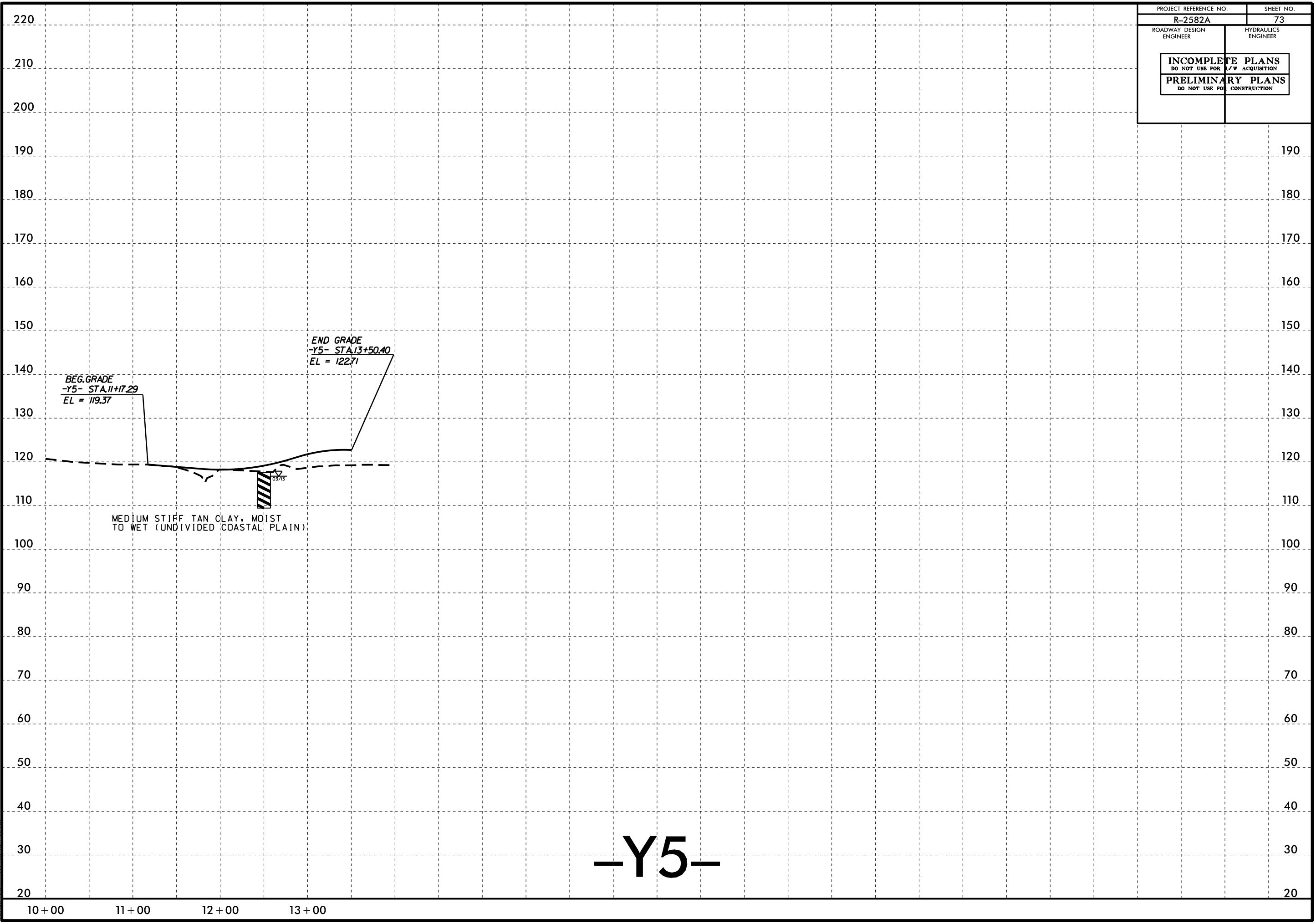


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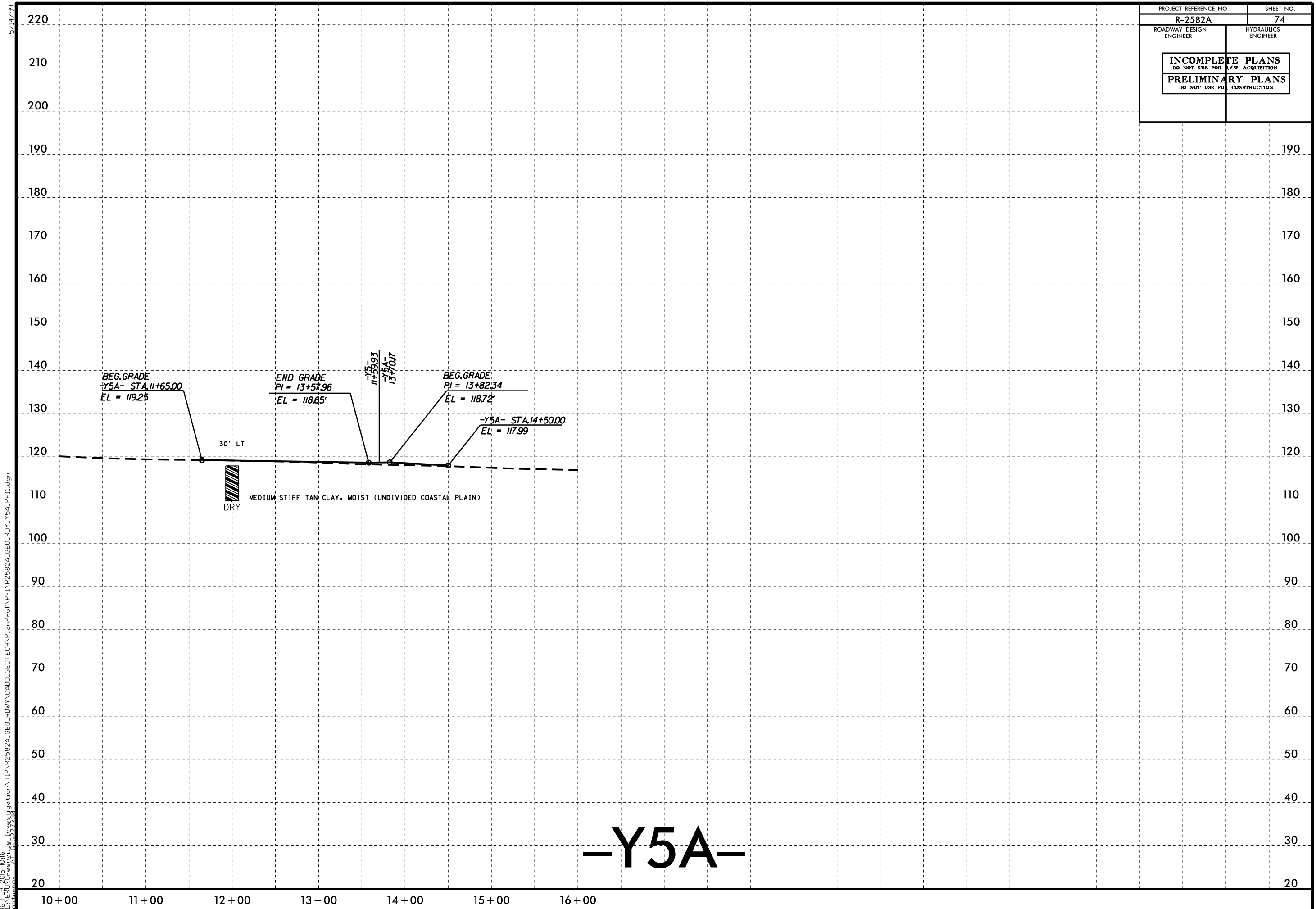
PROJECT REFERENCE NO.	SHEET NO.
R-2582A	73
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
INCOMPLETE PLANS DO NOT USE FOR ACQUISITION	
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	

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-Y5-

PROJECT REFERENCE NO.	SHEET NO.
R-2582A	74
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION	
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	



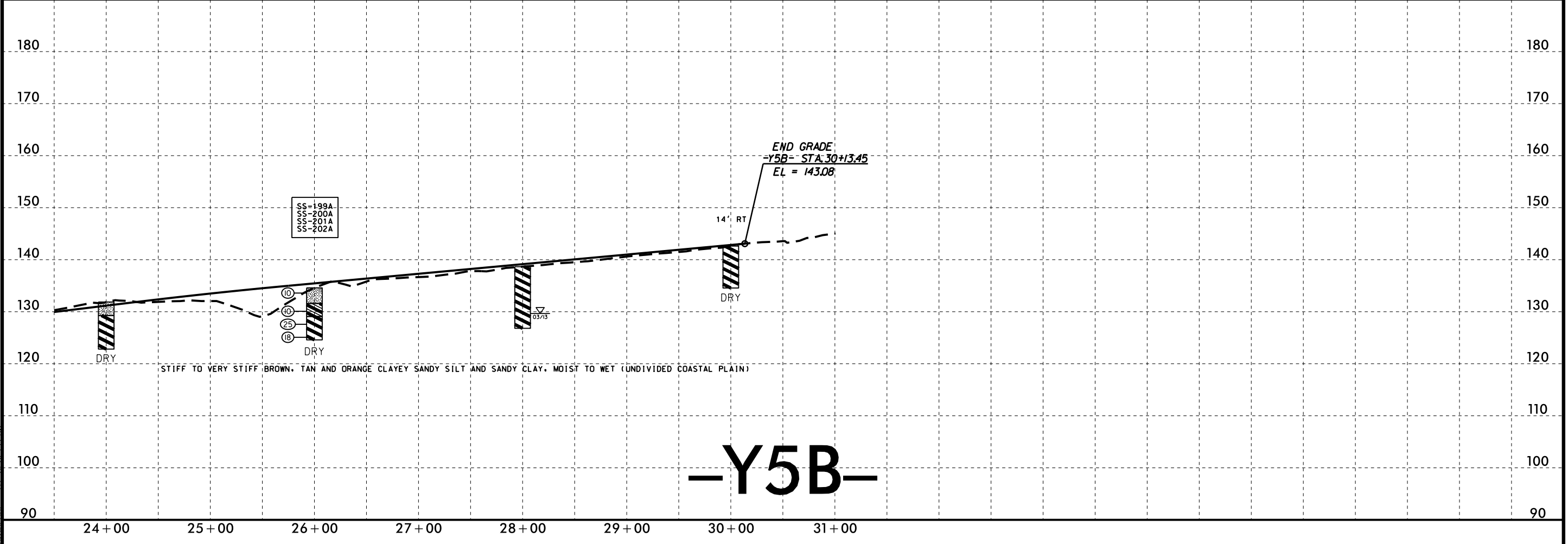
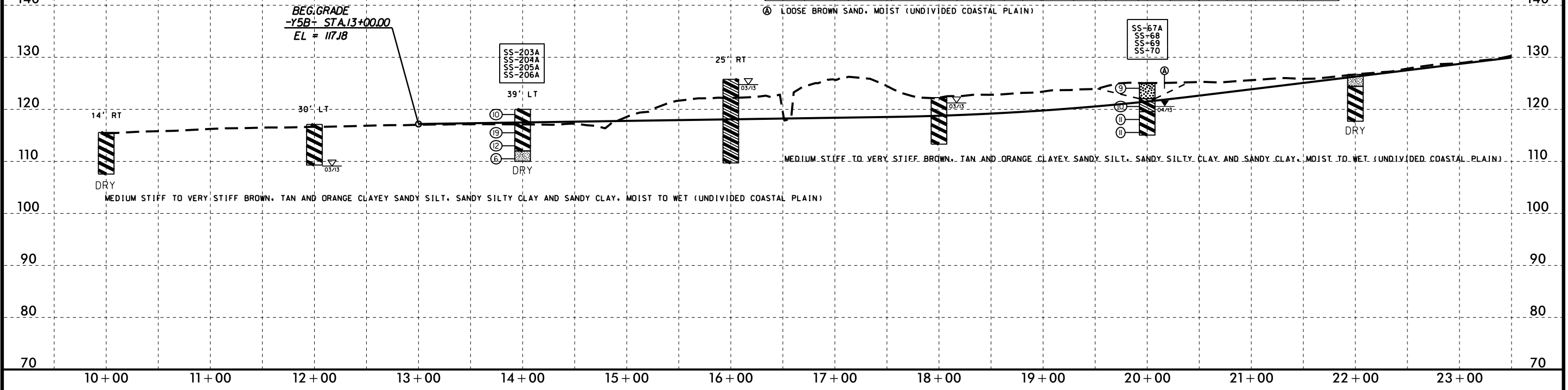
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5/28/99

PROJECT REFERENCE NO.	SHEET NO.
R-2582A	75
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
INCOMPLETE PLANS DO NOT USE FOR A/W 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
							F SAND	SILT	CLAY	10	40	200		
SS-203A	39' LT	14+00	0.0-1.5	A-7-6(3)	42	15	37.5	20.7	7.3	34.5	100	80	44	-
SS-204A	39' LT	14+00	3.5-5.0	A-7-6(2)	43	16	53.7	12.0	6.5	28.4	100	70	37	-
SS-205A	39' LT	14+00	6.0-7.5	A-7-5(24)	59	25	5.9	22.3	33.3	38.5	100	96	82	-
SS-206A	39' LT	14+00	8.5-10.0	A-4(0)	30	3	6.9	58.6	14.2	20.3	100	100	38	-
SS-67A	CL	20+00	0.0-1.5	A-2-4(0)	19	NP	36.6	48.1	9.3	6.1	100	87	20	-
SS-68	CL	20+00	3.5-5.0	A-6(5)	40	18	32.7	23.0	7.9	36.4	100	85	46	-
SS-69	CL	20+00	6.0-7.5	A-7-6(4)	48	26	55.4	10.5	7.9	26.3	100	66	36	-
SS-70	CL	20+00	8.5-10.0	A-7-6(3)	45	21	48.7	12.9	10.1	28.3	94	62	38	-
SS-199A	CL	26+00	0.0-1.5	A-4(0)	17	5	18.3	38.5	18.9	24.3	100	96	49	-
SS-200A	CL	26+00	3.5-5.0	A-6(9)	39	21	16.4	30.2	8.7	44.6	100	96	57	-
SS-201A	CL	26+00	6.0-7.5	A-7-5(10)	50	18	22.3	20.3	4.7	62.7	100	97	59	-
SS-202A	CL	26+00	8.5-10.0	A-7-5(7)	50	16	29.4	18.3	7.7	44.6	100	93	54	-



-Y5B-

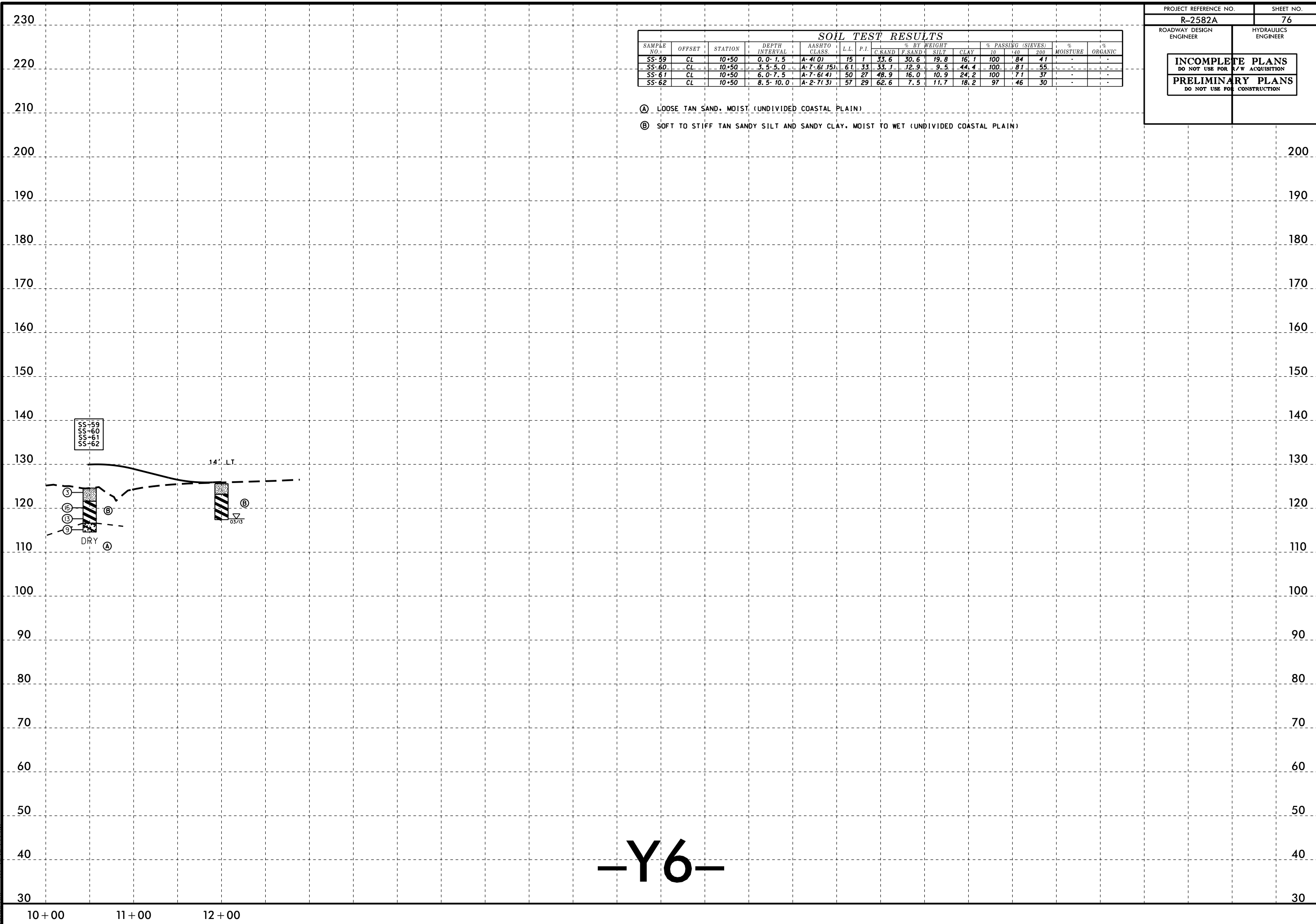
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PROJECT REFERENCE NO.	SHEET NO.
R-2582A	76
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION	
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	

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		
SS-59	CL	10+50	0.0-1.5	A-4(0)	15	1	33.6	30.6	19.8	16.1	100	84	41	-	-
SS-60	CL	10+50	3.5-5.0	A-7-6(15)	61	33	33.7	32.9	9.5	44.4	100	87	55	-	-
SS-61	CL	10+50	6.0-7.5	A-7-6(4)	50	27	48.9	16.0	10.9	24.2	100	77	37	-	-
SS-62	CL	10+50	8.5-10.0	A-2-7(3)	57	29	62.6	7.5	11.7	18.2	97	46	30	-	-

- Ⓐ LOOSE TAN SAND, MOIST (UNDIVIDED COASTAL PLAIN)
- Ⓑ SOFT TO STIFF TAN SANDY SILT AND SANDY CLAY, MOIST TO WET (UNDIVIDED COASTAL PLAIN)



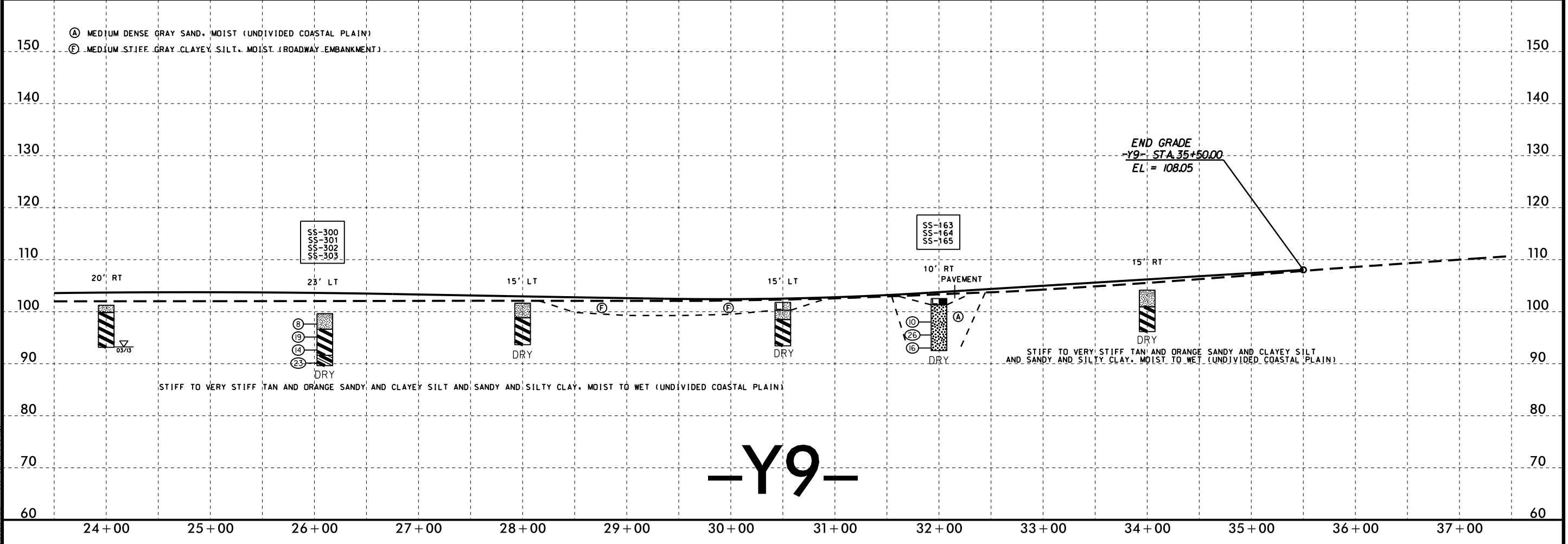
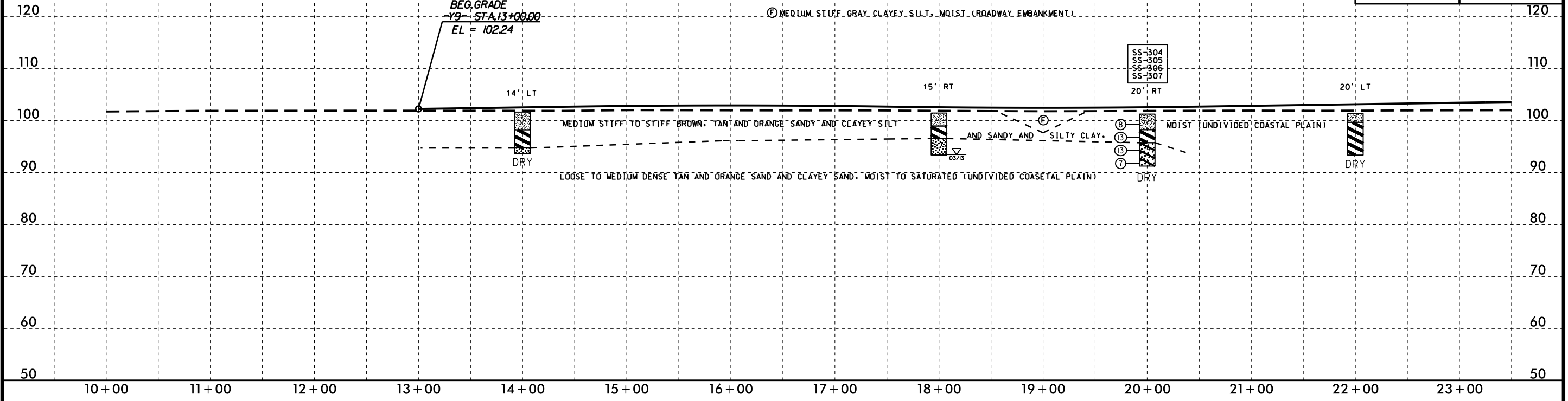
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SOIL TEST RESULTS														
SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT				% PASSING (SIEVES)		% MOISTURE	% ORGANIC
							C. SAND	F. SAND	SILT	CLAY	#10	#200		
SS-304	20 RT	20+00	1.0-2.5	A-4(0)	19	NP	26.1	44.3	12.4	17.2	99	90	36	2.2
SS-305	20 RT	20+00	3.5-5.0	A-7-6(9)	51	31	18.7	38.8	5.1	37.4	100	95	49	-
SS-306	20 RT	20+00	6.0-7.5	A-2-6(1)	38	17	54.0	19.4	4.3	22.2	97	64	27	-
SS-307	20 RT	20+00	8.5-10.0	A-2-6(0)	34	11	41.3	33.7	3.8	21.2	98	83	26	-
SS-300	23 LT	26+10	1.0-2.5	A-4(0)	21	NP	11.9	39.4	28.4	20.2	100	94	59	-
SS-301	23 LT	26+10	3.5-5.0	A-7-6(26)	53	24	0.8	16.2	32.5	50.6	100	100	92	-
SS-302	23 LT	26+10	6.0-7.5	A-7-6(21)	44	20	1.6	15.4	40.5	42.5	100	99	93	-
SS-303	23 LT	26+10	8.5-10.0	A-6(10)	34	11	1.4	25.7	38.5	34.4	100	99	87	-
SS-163	10 RT	32+00	3.5-5.0	A-2-4(0)	15	NP	43.3	32.2	12.5	12.1	94	73	28	-
SS-164	10 RT	32+00	6.0-7.5	A-2-4(0)	18	NP	49.5	35.6	6.8	8.0	82	61	16	-
SS-165	10 RT	32+00	8.5-10.0	A-2-4(0)	15	NP	41.0	38.4	10.5	10.1	91	71	24	-

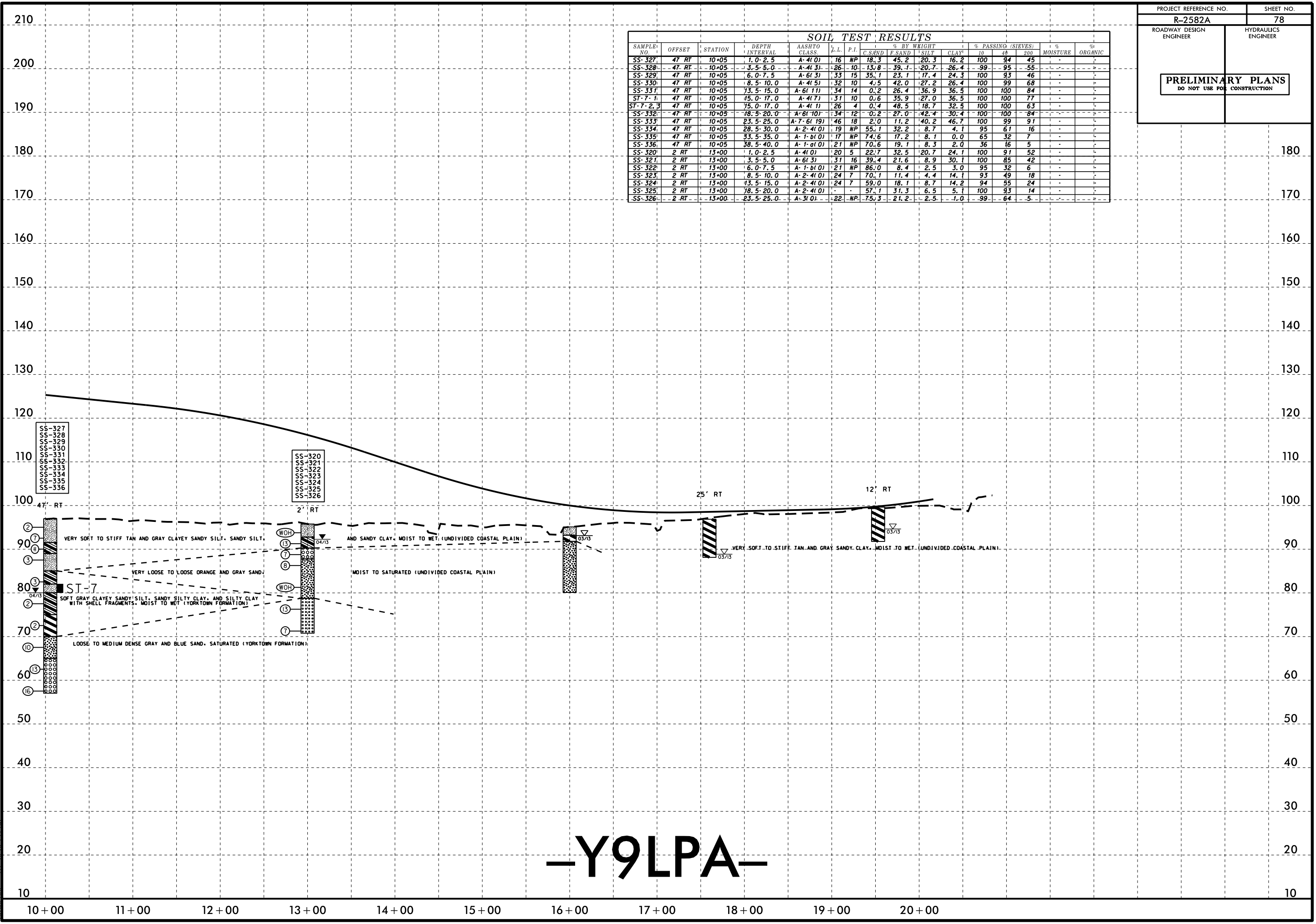
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ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
INCOMPLETE PLANS DO NOT USE FOR A/W ACQUISITION	
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	



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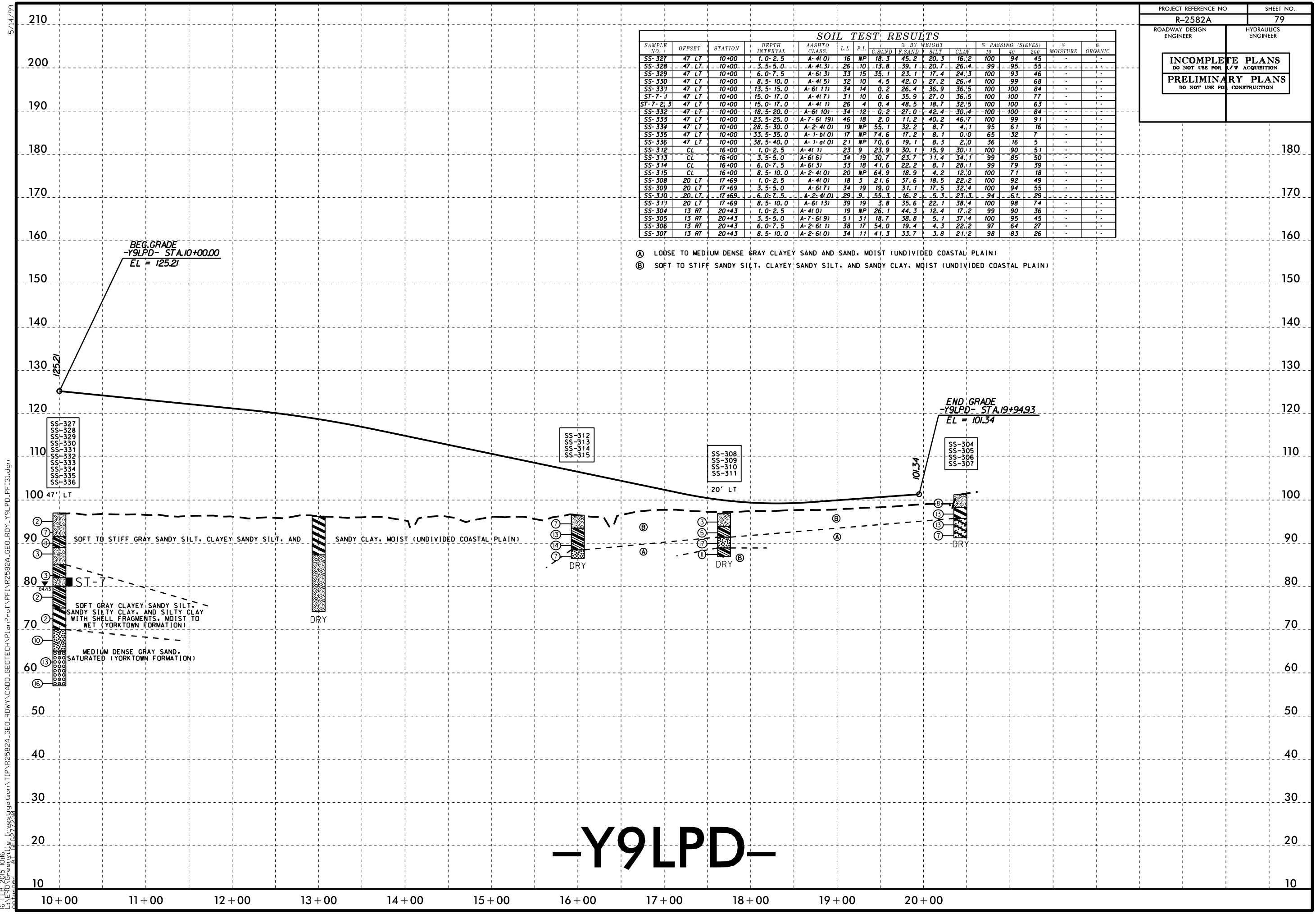
SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT				% PASSING (SIEVES)			MOISTURE	% ORGANIC
							C. SAND	F. SAND	SILT	CLAY	10	40	200		
SS-327	47' RT	10+05	1.0-2.5	A-4(0)	16	NP	18.3	45.2	20.3	16.2	100	94	45	-	-
SS-328	47' RT	10+05	3.5-5.0	A-4(3)	26	10	13.8	39.1	20.7	26.4	99	95	55	-	-
SS-329	47' RT	10+05	6.0-7.5	A-6(3)	33	15	35.1	23.1	17.4	24.3	100	93	46	-	-
SS-330	47' RT	10+05	8.5-10.0	A-4(5)	32	10	4.5	42.0	27.2	26.4	100	99	68	-	-
SS-331	47' RT	10+05	13.5-15.0	A-6(11)	34	14	0.2	26.4	36.9	36.5	100	100	84	-	-
ST-7-1	47' RT	10+05	15.0-17.0	A-4(7)	31	10	0.6	35.9	27.0	36.5	100	100	77	-	-
ST-7-2,3	47' RT	10+05	15.0-17.0	A-4(1)	26	4	0.4	48.5	18.7	32.5	100	100	63	-	-
SS-332	47' RT	10+05	18.5-20.0	A-6(10)	34	12	0.2	27.0	42.4	30.4	100	100	84	-	-
SS-333	47' RT	10+05	23.5-25.0	A-7(6/19)	46	18	2.0	11.2	40.2	46.7	100	99	91	-	-
SS-334	47' RT	10+05	28.5-30.0	A-2(4(0))	19	NP	55.1	32.2	8.7	4.1	95	61	16	-	-
SS-335	47' RT	10+05	33.5-35.0	A-1(4(0))	17	NP	74.6	17.2	8.1	0.0	65	32	7	-	-
SS-336	47' RT	10+05	38.5-40.0	A-1(4(0))	21	NP	70.6	19.1	8.3	2.0	36	16	5	-	-
SS-320	2 RT	13+00	1.0-2.5	A-4(0)	20	5	22.7	32.5	20.7	24.1	100	91	52	-	-
SS-321	2 RT	13+00	3.5-5.0	A-6(3)	31	16	39.4	21.6	8.9	30.1	100	85	42	-	-
SS-322	2 RT	13+00	6.0-7.5	A-1(4(0))	21	NP	86.0	8.4	2.5	3.0	95	32	6	-	-
SS-323	2 RT	13+00	8.5-10.0	A-2(4(0))	24	7	70.1	11.4	4.4	14.1	93	49	18	-	-
SS-324	2 RT	13+00	13.5-15.0	A-2(4(0))	24	7	59.0	18.1	8.7	14.2	94	55	24	-	-
SS-325	2 RT	13+00	18.5-20.0	A-2(4(0))	-	-	57.1	31.3	6.5	5.1	100	93	14	-	-
SS-326	2 RT	13+00	23.5-25.0	A-3(0)	22	NP	75.3	21.2	2.5	1.0	99	64	5	-	-

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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-327	47 LT	10+00	1.0-2.5	A-4(0)	16	NP	18.3	45.2	20.3	16.2	100	94	45	-	-
SS-328	47 LT	10+00	3.5-5.0	A-4(3)	26	10	13.8	39.1	20.7	26.4	99	95	55	-	-
SS-329	47 LT	10+00	6.0-7.5	A-6(3)	33	15	35.1	23.1	17.4	24.3	100	93	46	-	-
SS-330	47 LT	10+00	8.5-10.0	A-4(5)	32	10	4.5	42.0	27.2	26.4	100	99	68	-	-
SS-331	47 LT	10+00	13.5-15.0	A-6(11)	34	14	0.2	26.4	36.9	36.5	100	100	84	-	-
ST-7-1	47 LT	10+00	15.0-17.0	A-4(7)	31	NP	0.6	35.9	27.0	36.5	100	100	77	-	-
ST-7-2,3	47 LT	10+00	15.0-17.0	A-4(1)	26	4	0.4	48.5	18.7	32.5	100	100	63	-	-
SS-332	47 LT	10+00	18.5-20.0	A-6(10)	34	12	0.2	27.0	42.4	30.4	100	100	84	-	-
SS-333	47 LT	10+00	23.5-25.0	A-7(619)	46	18	2.0	11.2	40.2	46.7	100	99	91	-	-
SS-334	47 LT	10+00	28.5-30.0	A-2-4(0)	19	NP	55.1	32.2	8.7	4.1	95	61	16	-	-
SS-335	47 LT	10+00	33.5-35.0	A-1-b(0)	17	NP	74.6	17.2	8.1	0.0	65	32	7	-	-
SS-336	47 LT	10+00	38.5-40.0	A-1-a(0)	21	NP	70.6	19.1	8.3	2.0	36	16	5	-	-
SS-312	CL	16+00	1.0-2.5	A-4(1)	23	9	23.9	30.1	15.9	30.1	100	90	51	-	-
SS-313	CL	16+00	3.5-5.0	A-6(6)	34	19	30.7	23.7	11.4	34.1	99	85	50	-	-
SS-314	CL	16+00	6.0-7.5	A-6(3)	33	18	41.6	22.2	8.1	28.1	99	79	39	-	-
SS-315	CL	16+00	8.5-10.0	A-2-4(0)	20	NP	64.9	18.9	4.2	12.0	100	71	18	-	-
SS-308	20 LT	17+69	1.0-2.5	A-4(0)	18	3	21.6	37.6	18.5	22.2	100	92	49	-	-
SS-309	20 LT	17+69	3.5-5.0	A-6(7)	34	19	19.0	31.1	17.5	32.4	100	94	55	-	-
SS-310	20 LT	17+69	6.0-7.5	A-2-4(0)	29	9	55.3	16.2	5.3	23.3	94	61	29	-	-
SS-311	20 LT	17+69	8.5-10.0	A-6(13)	39	19	3.8	35.6	22.1	38.4	100	98	74	-	-
SS-304	13 RT	20+43	1.0-2.5	A-4(0)	19	NP	26.1	44.3	12.4	17.2	99	90	36	-	-
SS-305	13 RT	20+43	3.5-5.0	A-7-6(9)	51	31	18.7	38.8	5.1	37.4	100	95	45	-	-
SS-306	13 RT	20+43	6.0-7.5	A-2-6(1)	38	17	54.0	19.4	4.3	22.2	97	64	27	-	-
SS-307	13 RT	20+43	8.5-10.0	A-2-6(0)	34	11	41.3	33.7	3.8	21.2	98	83	26	-	-

- Ⓐ LOOSE TO MEDIUM DENSE GRAY CLAYEY SAND AND SAND, MOIST (UNDIVIDED COASTAL PLAIN)
- Ⓑ SOFT TO STIFF SANDY SILT, CLAYEY SANDY SILT, AND SANDY CLAY, MOIST (UNDIVIDED COASTAL PLAIN)



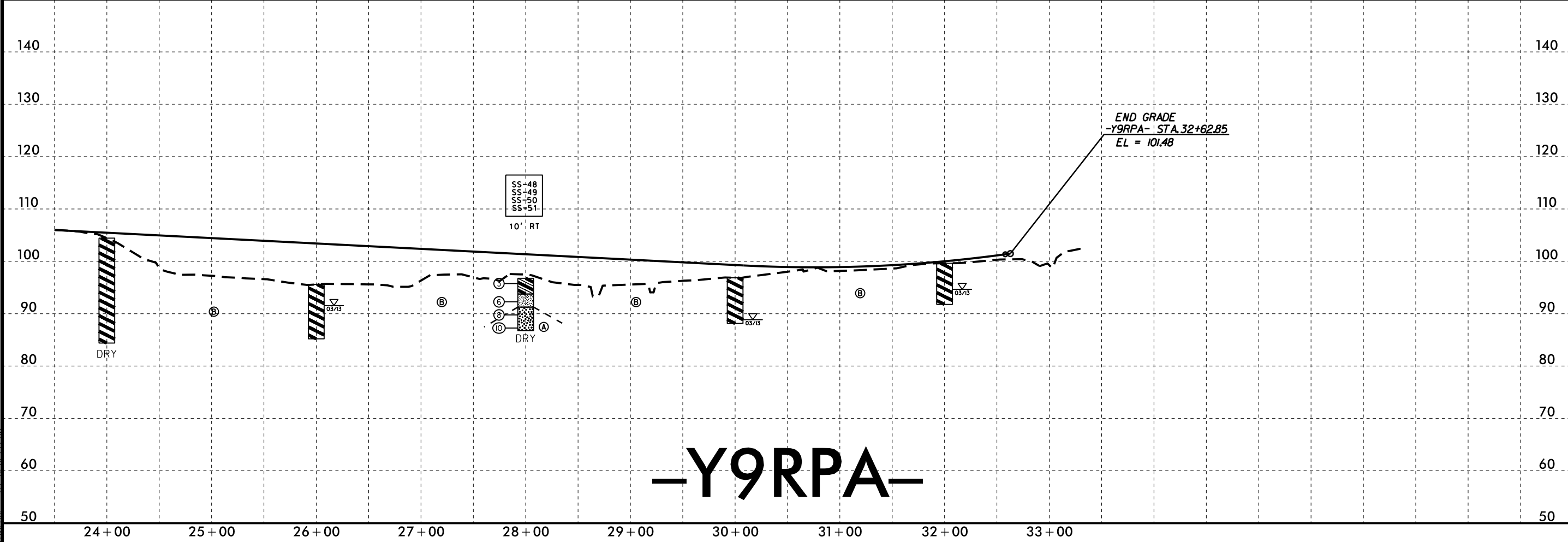
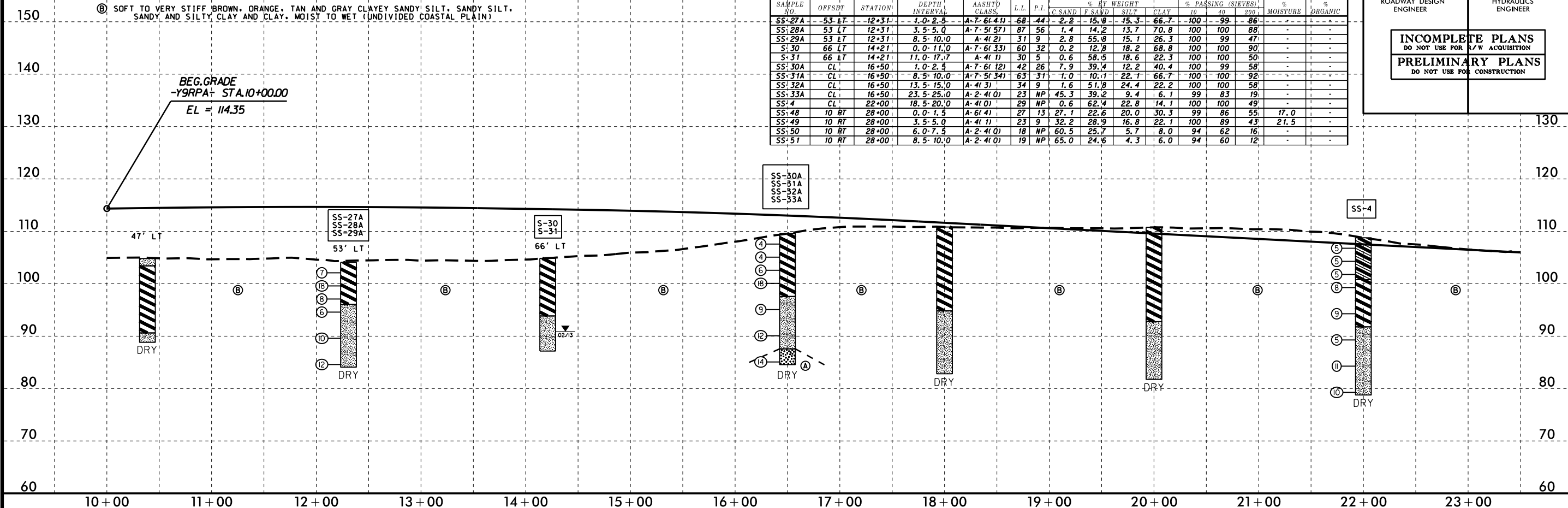
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5/28/99

- (A) LOOSE TO MEDIUM DENSE ORANGE AND TAN SAND, MOIST (UNDIVIDED COASTAL PLAIN)
- (B) SOFT TO VERY STIFF BROWN, ORANGE, TAN AND GRAY CLAYEY SANDY SILT, SANDY SILT, SANDY AND SILTY CLAY AND CLAY, MOIST TO 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	CLAY	10	40	200		
SS-27A	53' LT	12+31	1.0-2.5	A-7-6(4)1	68	44	2.2	15.8	15.3	66.7	100	99	86	-	-
SS-28A	53' LT	12+31	3.5-5.0	A-7-5(5)7	87	56	1.4	14.2	13.7	70.8	100	100	88	-	-
SS-29A	53' LT	12+31	8.5-10.0	A-4(2)	31	9	2.8	55.8	15.1	26.3	100	99	47	-	-
S-30	66' LT	14+21	0.0-11.0	A-7-6(3)3	60	32	0.2	12.8	18.2	68.8	100	100	90	-	-
S-31	66' LT	14+21	11.0-17.7	A-4(1)	30	5	0.6	58.5	18.6	22.3	100	100	50	-	-
SS-30A	CL	16+50	1.0-2.5	A-7-6(1)2	42	26	7.9	39.4	12.2	40.4	100	99	58	-	-
SS-31A	CL	16+50	8.5-10.0	A-7-5(3)4	63	31	1.0	10.1	22.1	66.7	100	100	92	-	-
SS-32A	CL	16+50	13.5-15.0	A-4(3)	34	9	1.6	51.8	24.4	22.2	100	100	58	-	-
SS-33A	CL	16+50	23.5-25.0	A-2-4(0)	23	NP	45.3	39.2	9.4	6.1	99	83	19	-	-
SS-4	CL	22+00	18.5-20.0	A-4(0)	29	NP	0.6	62.4	22.8	14.1	100	100	49	-	-
SS-48	10' RT	28+00	0.0-1.5	A-6(4)	27	13	27.1	22.6	20.0	30.3	99	86	55	17.0	-
SS-49	10' RT	28+00	3.5-5.0	A-4(1)	23	9	32.2	28.9	16.8	22.1	100	89	43	21.5	-
SS-50	10' RT	28+00	6.0-7.5	A-2-4(0)	18	NP	60.5	25.7	5.7	8.0	94	62	16	-	-
SS-51	10' RT	28+00	8.5-10.0	A-2-4(0)	19	NP	65.0	24.6	4.3	6.0	94	60	12	-	-

PROJECT REFERENCE NO. R-2582A	SHEET NO. 80
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
INCOMPLETE PLANS DO NOT USE FOR A/W ACQUISITION	
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	



-Y9RPA-

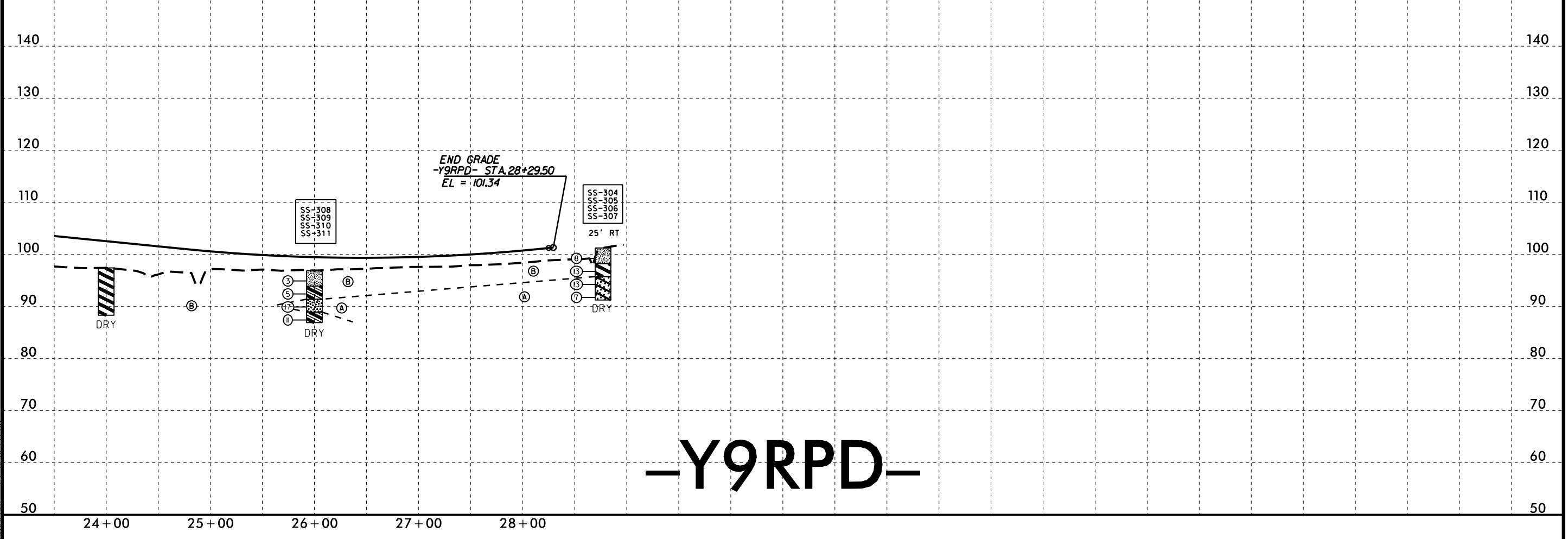
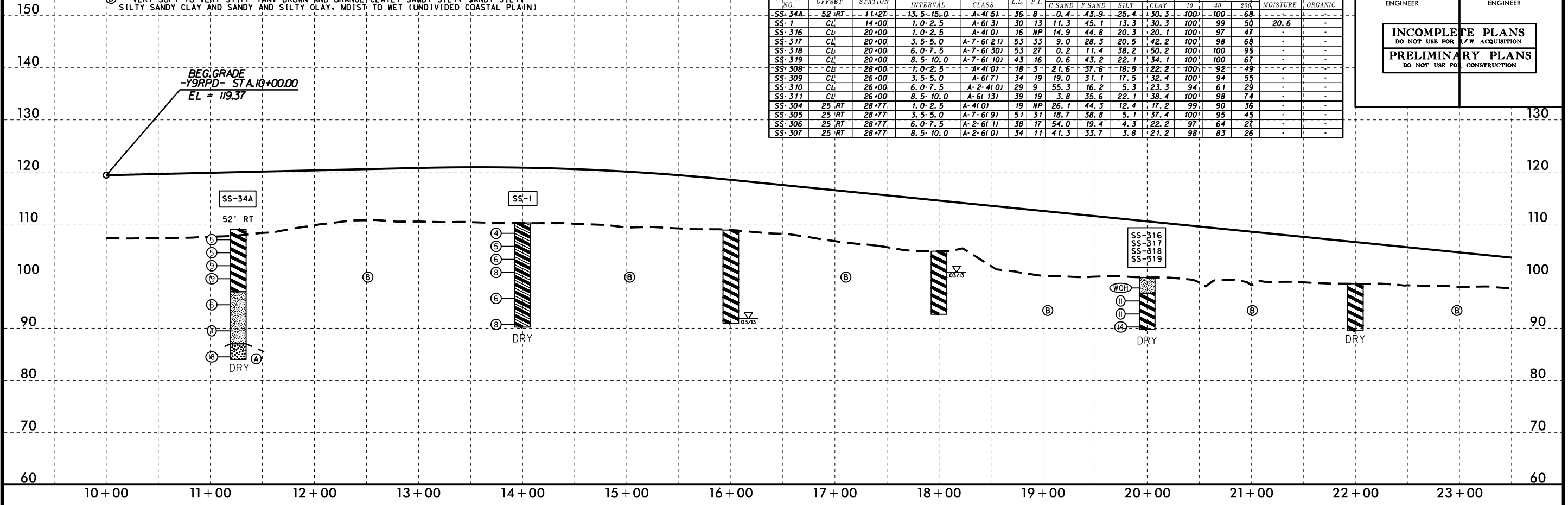
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5/28/99

- (A) LOOSE TO MEDIUM DENSE ORANGE AND TAN CLAYEY SAND AND SAND, MOIST (UNDIVIDED COASTAL PLAIN)
- (B) VERY SOFT TO VERY STIFF TAN, BROWN AND ORANGE CLAYEY SANDY SILT, SANDY SILT, SILTY SANDY CLAY AND SANDY AND SILTY CLAY, MOIST TO 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-34A	52' RT	11+27	13.5-15.0	A-4(6)	36	8	0.4	43.9	25.4	30.3	100	100	68	-
SS-1	CL	14+00	1.0-2.5	A-6(3)	30	13	11.3	45.7	13.3	30.3	100	99	50	20.6
SS-316	CL	20+00	1.0-2.5	A-4(0)	16	NP	14.9	44.8	20.3	20.1	100	97	47	-
SS-317	CL	20+00	3.5-5.0	A-7-6(2.1)	53	33	9.0	28.3	20.5	42.2	100	98	68	-
SS-318	CL	20+00	6.0-7.5	A-7-6(3.0)	53	27	0.2	11.4	38.2	50.2	100	100	95	-
SS-319	CL	20+00	8.5-10.0	A-7-6(1.0)	43	16	0.6	43.2	22.1	34.1	100	100	67	-
SS-308	CL	26+00	1.0-2.5	A-4(0)	18	3	21.6	37.6	18.5	22.2	100	92	49	-
SS-309	CL	26+00	3.5-5.0	A-6(7)	34	19	19.0	31.1	17.5	32.4	100	94	55	-
SS-310	CL	26+00	6.0-7.5	A-2-4(0)	29	9	55.3	16.2	5.3	23.3	94	61	29	-
SS-311	CL	26+00	8.5-10.0	A-6(13)	39	19	3.8	35.6	22.1	38.4	100	98	74	-
SS-304	25' RT	28+77	1.0-2.5	A-4(0)	19	NP	26.1	44.3	12.4	17.2	99	90	36	-
SS-305	25' RT	28+77	3.5-5.0	A-7-6(9)	51	31	18.7	38.8	5.1	37.4	100	95	45	-
SS-306	25' RT	28+77	6.0-7.5	A-2-6(1)	38	17	54.0	19.4	4.3	22.2	97	64	27	-
SS-307	25' RT	28+77	8.5-10.0	A-2-6(0)	34	11	41.3	33.7	3.8	21.2	98	83	26	-

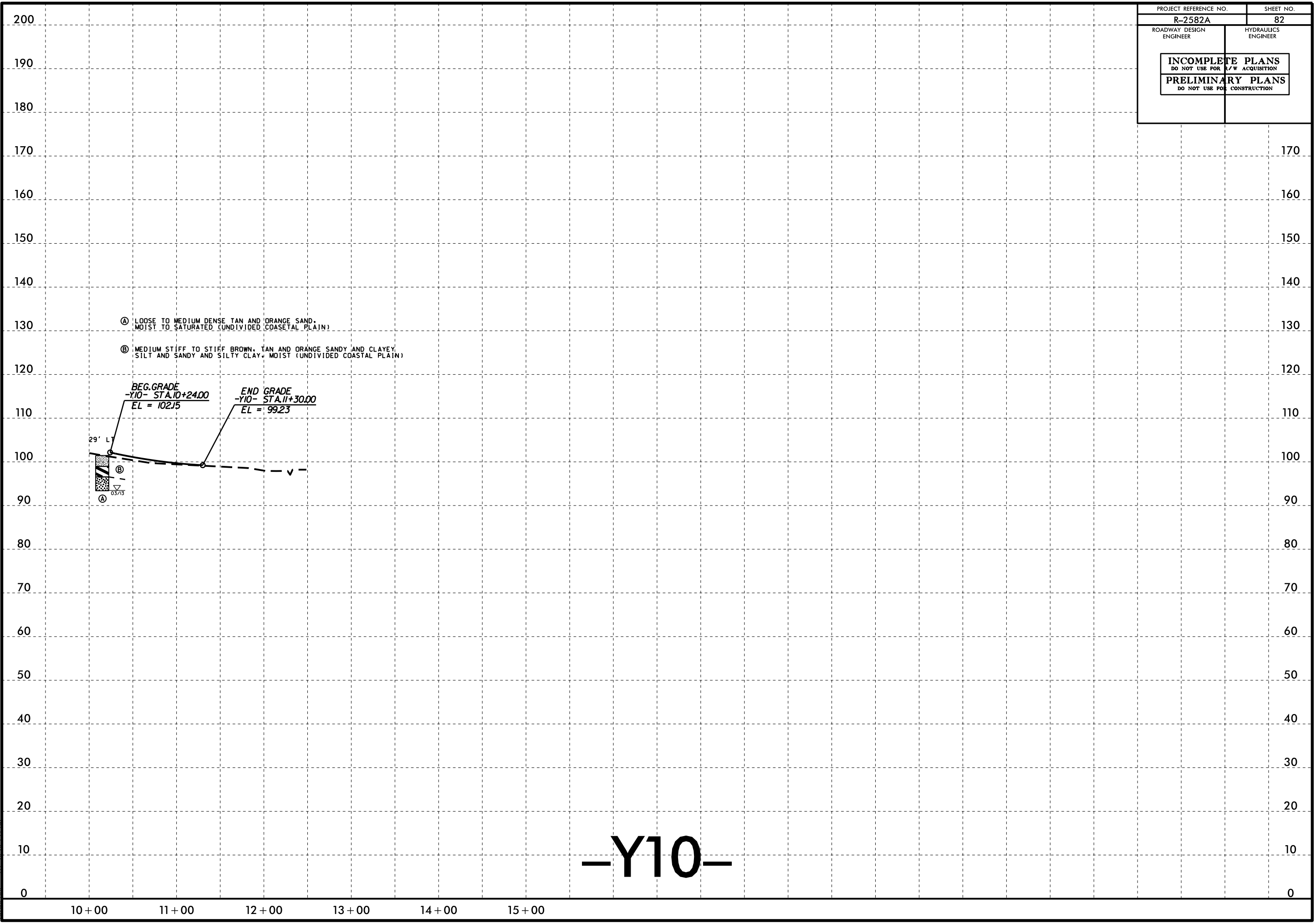
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ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
INCOMPLETE PLANS DO NOT USE FOR A/W ACQUISITION	
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	



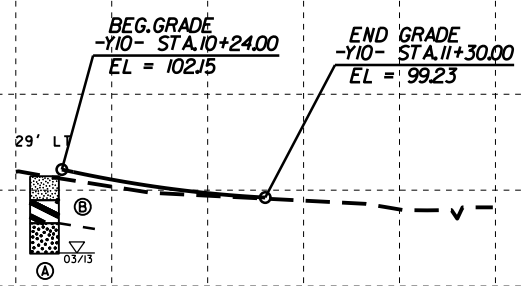
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PROJECT REFERENCE NO.	SHEET NO.
R-2582A	82
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION	
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	

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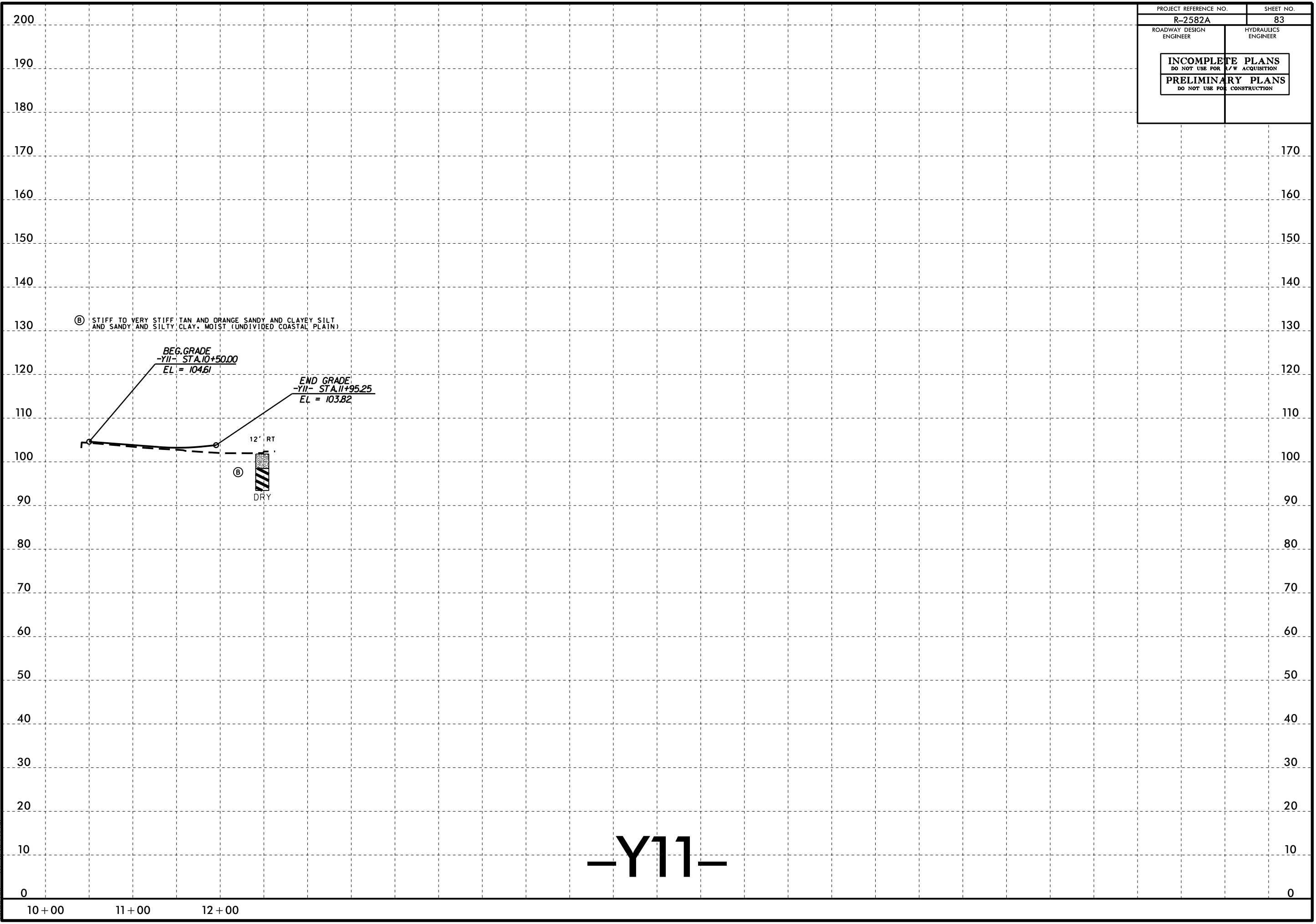


- Ⓐ LOOSE TO MEDIUM DENSE TAN AND ORANGE SAND, MOIST TO SATURATED (UNDIVIDED COASTAL PLAIN)
- Ⓑ MEDIUM STIFF TO STIFF BROWN, TAN AND ORANGE SANDY AND CLAYEY SILT AND SANDY AND SILTY CLAY, MOIST (UNDIVIDED COASTAL PLAIN)



PROJECT REFERENCE NO.	SHEET NO.
R-2582A	83
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION	
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	

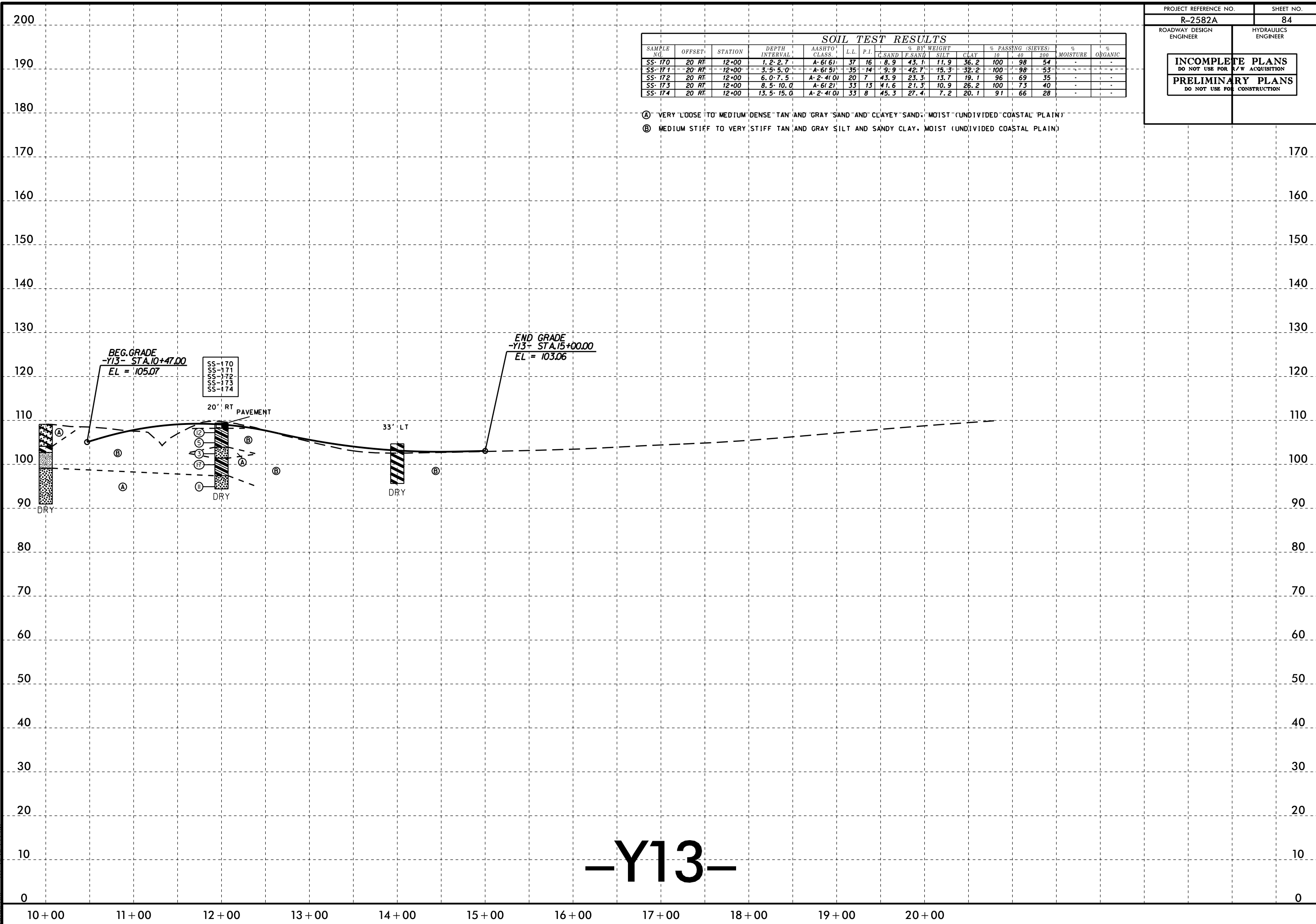
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5/14/99

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-170	20 RT	12+00	1.2-2.7	A-6(6)	37	16	8.9	43.1	11.9	36.2	100	98	54	-	-
SS-171	20 RT	12+00	3.5-5.0	A-6(5)	35	14	9.9	42.7	15.3	32.2	100	98	53	-	-
SS-172	20 RT	12+00	6.0-7.5	A-2(4)	20	7	43.9	23.3	13.7	19.1	96	69	35	-	-
SS-173	20 RT	12+00	8.5-10.0	A-6(2)	33	13	41.6	21.3	10.9	26.2	100	73	40	-	-
SS-174	20 RT	12+00	13.5-15.0	A-2(4)	33	8	45.3	27.4	7.2	20.1	91	66	28	-	-

- Ⓐ VERY LOOSE TO MEDIUM DENSE TAN AND GRAY SAND AND CLAYEY SAND, MOIST (UNDIVIDED COASTAL PLAIN)
- Ⓑ MEDIUM STIFF TO VERY STIFF TAN AND GRAY SILT AND SANDY CLAY, MOIST (UNDIVIDED COASTAL PLAIN)



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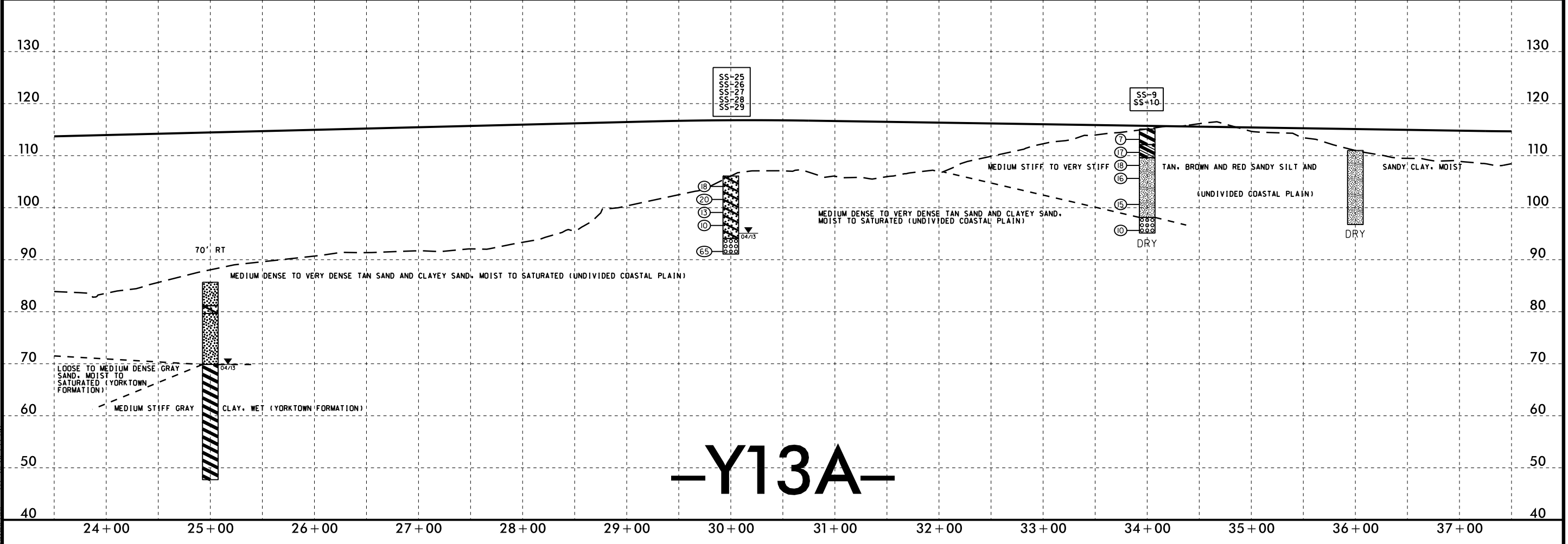
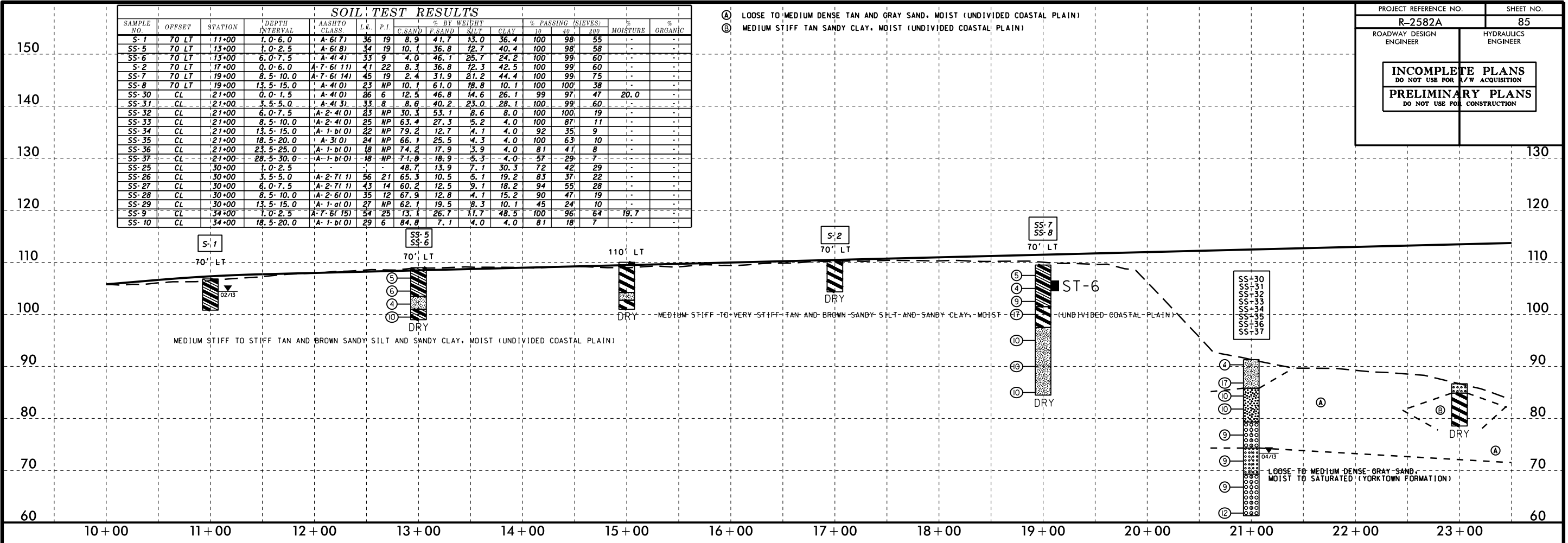
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SOIL TEST RESULTS														
SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS	L.L.	P.I.	% BY WEIGHT			% PASSING SIEVES			% MOISTURE	% ORGANIC
							% SAND	% SILT	% CLAY	#10	#40	#200		
SS-1	70' LT	11+00	1.0-6.0	A-6(7)	36	19	8.9	41.7	13.0	36.4	100	98	55	
SS-5	70' LT	13+00	1.0-2.5	A-6(8)	34	19	10.7	36.8	12.7	40.4	100	98	58	
SS-6	70' LT	13+00	6.0-7.5	A-4(4)	33	9	4.0	46.1	26.7	24.2	100	99	60	
S-2	70' LT	17+00	0.0-6.0	A-7(611)	41	22	8.3	36.8	12.3	42.5	100	99	60	
SS-7	70' LT	19+00	8.5-10.0	A-4(0)	45	19	2.4	31.9	21.2	44.4	100	99	75	
SS-8	70' LT	19+00	13.5-15.0	A-7(611)	23	NP	10.1	61.0	18.8	10.1	100	100	38	
SS-30	CL	21+00	0.0-1.5	A-4(3)	26	6	12.5	46.8	14.6	26.1	99	97	47	20.0
SS-31	CL	21+00	1.5-5.0	A-4(3)	33	8	8.6	40.2	23.0	28.1	100	99	60	
SS-32	CL	21+00	6.0-7.5	A-2(410)	23	NP	30.3	53.1	8.6	8.0	100	100	19	
SS-33	CL	21+00	8.5-10.0	A-2(410)	25	NP	63.4	27.3	5.2	4.0	100	87	11	
SS-34	CL	21+00	13.5-15.0	A-1(010)	22	NP	79.2	12.7	4.1	4.0	92	35	9	
SS-35	CL	21+00	18.5-20.0	A-3(0)	24	NP	66.1	25.5	4.3	4.0	100	63	10	
SS-36	CL	21+00	23.5-25.0	A-1(010)	18	NP	74.2	17.9	3.9	4.0	81	41	8	
SS-37	CL	21+00	28.5-30.0	A-1(010)	18	NP	71.8	18.9	6.3	4.0	57	29	7	
SS-25	CL	30+00	1.0-2.5	-	-	-	48.7	13.9	7.1	30.3	72	42	29	
SS-26	CL	30+00	3.5-5.0	A-2(711)	56	21	65.3	10.5	6.1	19.2	83	37	22	
SS-27	CL	30+00	6.0-7.5	A-2(711)	43	14	60.2	12.5	9.1	18.2	94	55	28	
SS-28	CL	30+00	8.5-10.0	A-2(610)	35	12	67.9	12.8	4.1	15.2	90	47	19	
SS-29	CL	30+00	13.5-15.0	A-1(010)	27	NP	62.1	19.5	8.3	10.1	45	24	10	
SS-9	CL	34+00	1.0-2.5	A-7(611)	54	25	13.1	26.7	11.7	48.5	100	96	64	19.7
SS-10	CL	34+00	18.5-20.0	A-1(010)	29	6	84.8	7.1	4.0	4.0	81	18	7	

- (A) LOOSE TO MEDIUM DENSE TAN AND GRAY SAND, MOIST (UNDIVIDED COASTAL PLAIN)
- (B) MEDIUM STIFF TAN SANDY CLAY, MOIST (UNDIVIDED COASTAL PLAIN)

PROJECT REFERENCE NO. R-2582A	SHEET NO. 85
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
INCOMPLETE PLANS DO NOT USE FOR A/W ACQUISITION	
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	



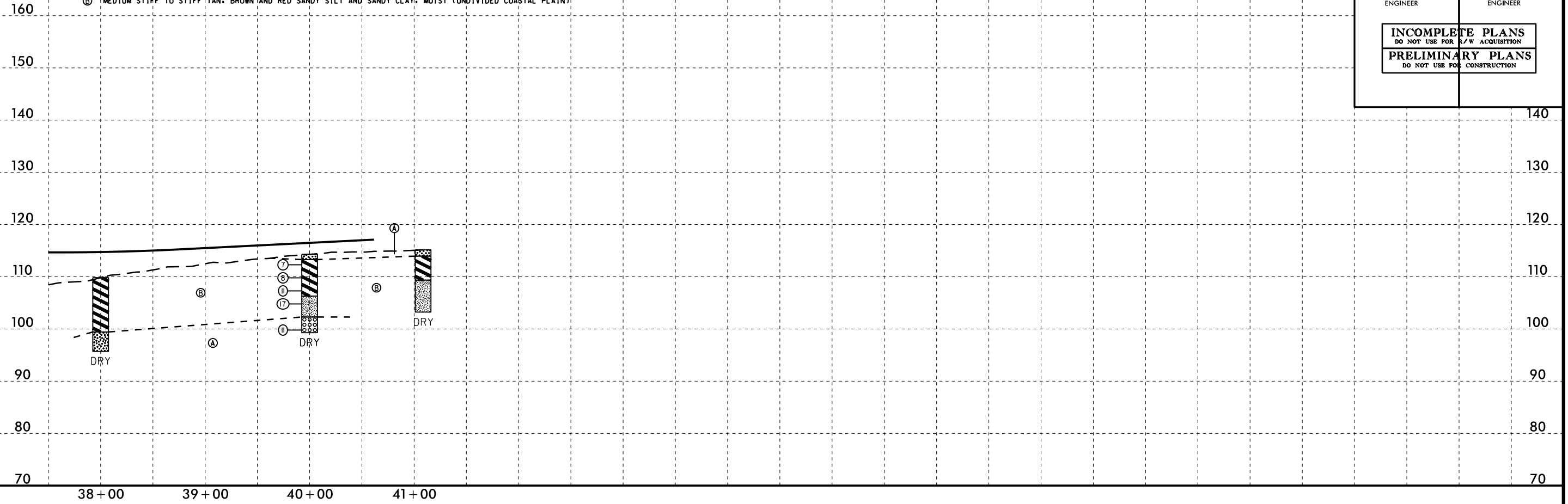
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5/28/99

- Ⓐ LOOSE TO MEDIUM DENSE GRAY SAND, MOIST (UNDIVIDED COASTAL PLAIN)
- Ⓑ MEDIUM STIFF TO STIFF TAN. BROWN AND RED SANDY SILT AND SANDY CLAY, MOIST (UNDIVIDED COASTAL PLAIN)

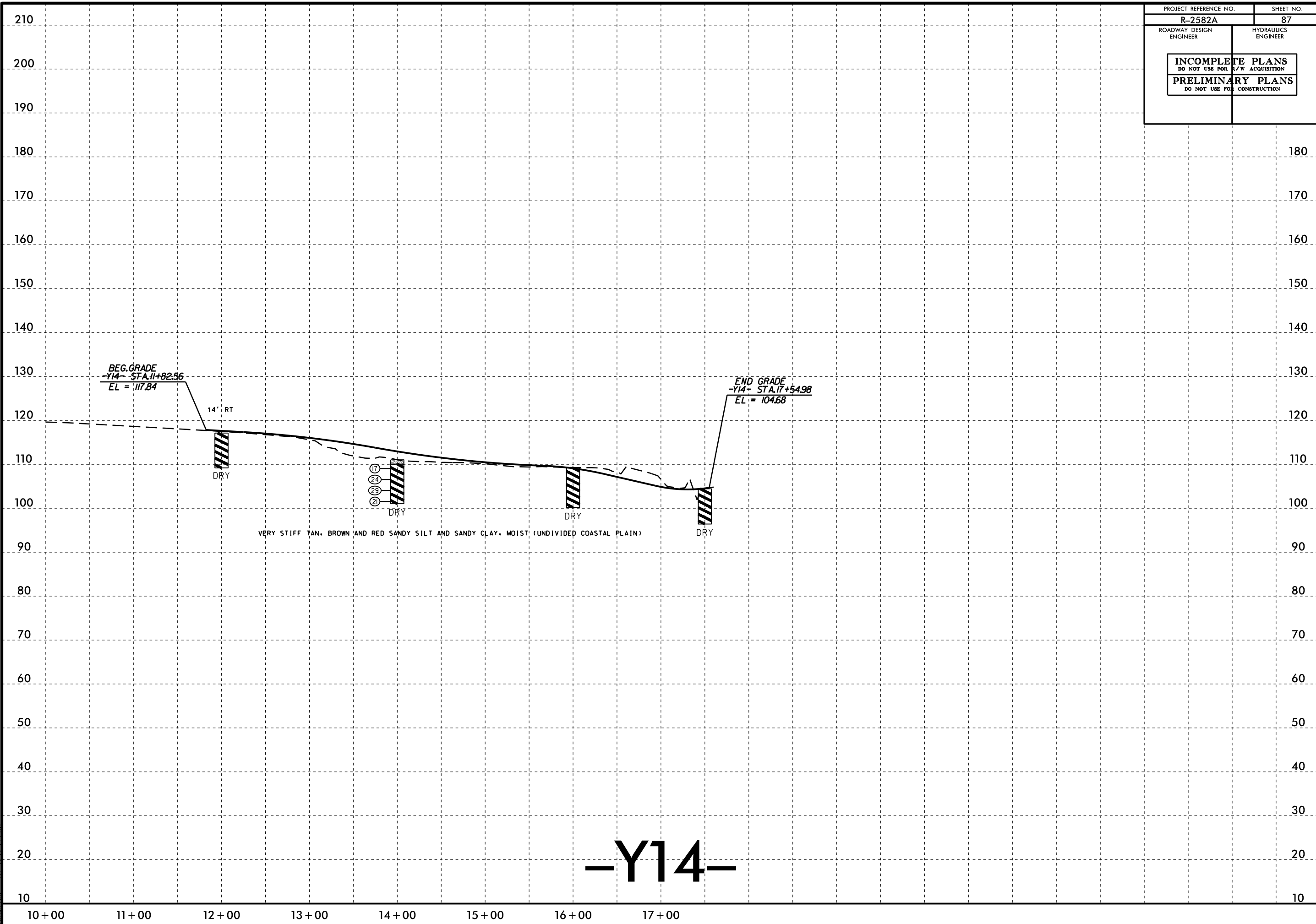
PROJECT REFERENCE NO.	SHEET NO.
R-2582A	86
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION	
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	



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Author: AT 16/07/23

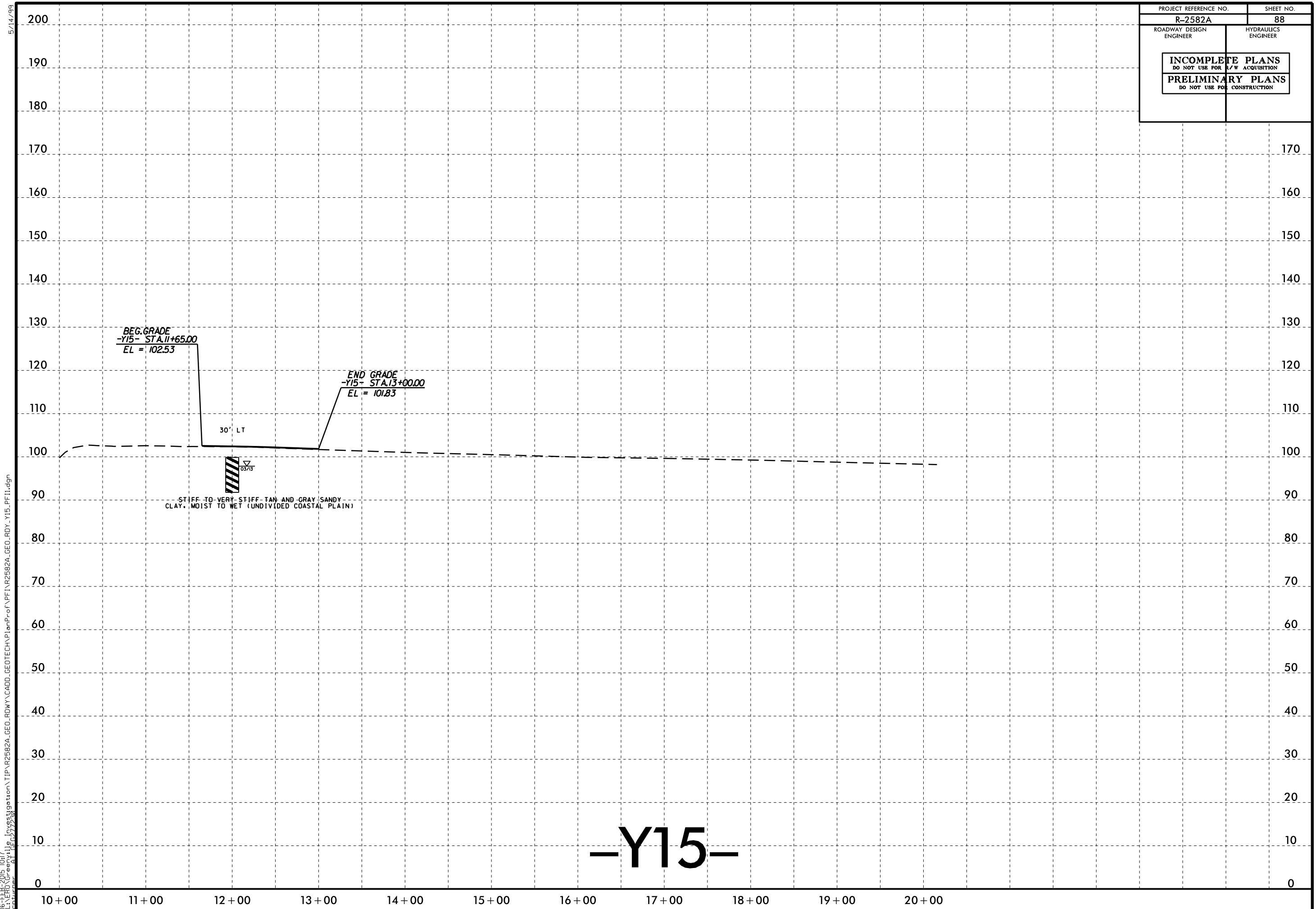
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PROJECT REFERENCE NO.	SHEET NO.
R-2582A	87
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
INCOMPLETE PLANS DO NOT USE FOR ACQUISITION	
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	



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PROJECT REFERENCE NO.	SHEET NO.
R-2582A	88
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
INCOMPLETE PLANS DO NOT USE FOR ACQUISITION	
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	



BEG. GRADE
 -Y15- STA. 11+65.00
 EL = 102.53

END GRADE
 -Y15- STA. 13+00.00
 EL = 101.83

30" LT

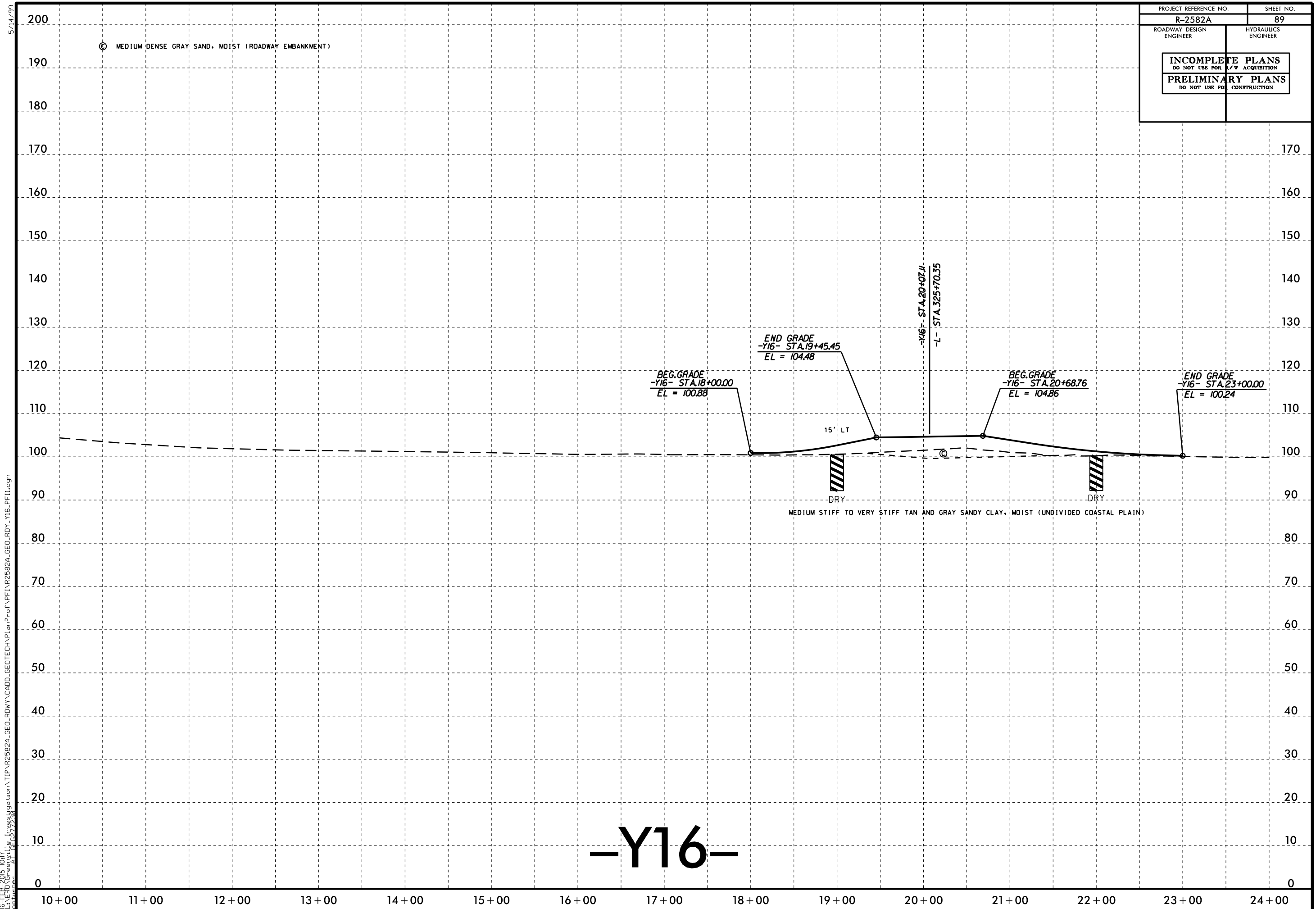


STIFF TO VERY STIFF TAN AND GRAY SANDY CLAY, MOIST TO WET (UNDIVIDED COASTAL PLAIN)

-Y15-

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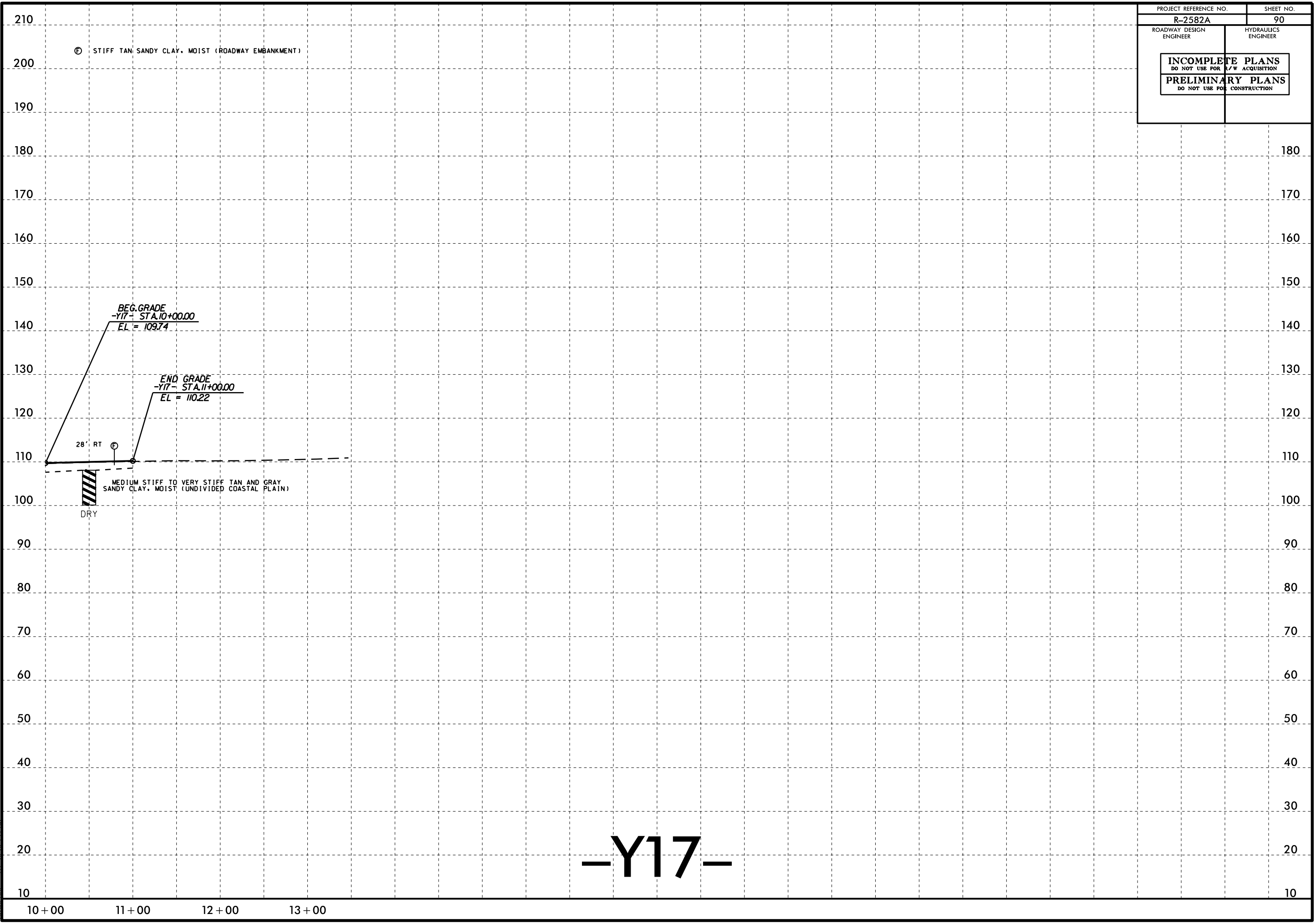
PROJECT REFERENCE NO.	SHEET NO.
R-2582A	89
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
INCOMPLETE PLANS DO NOT USE FOR A/W ACQUISITION	
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	



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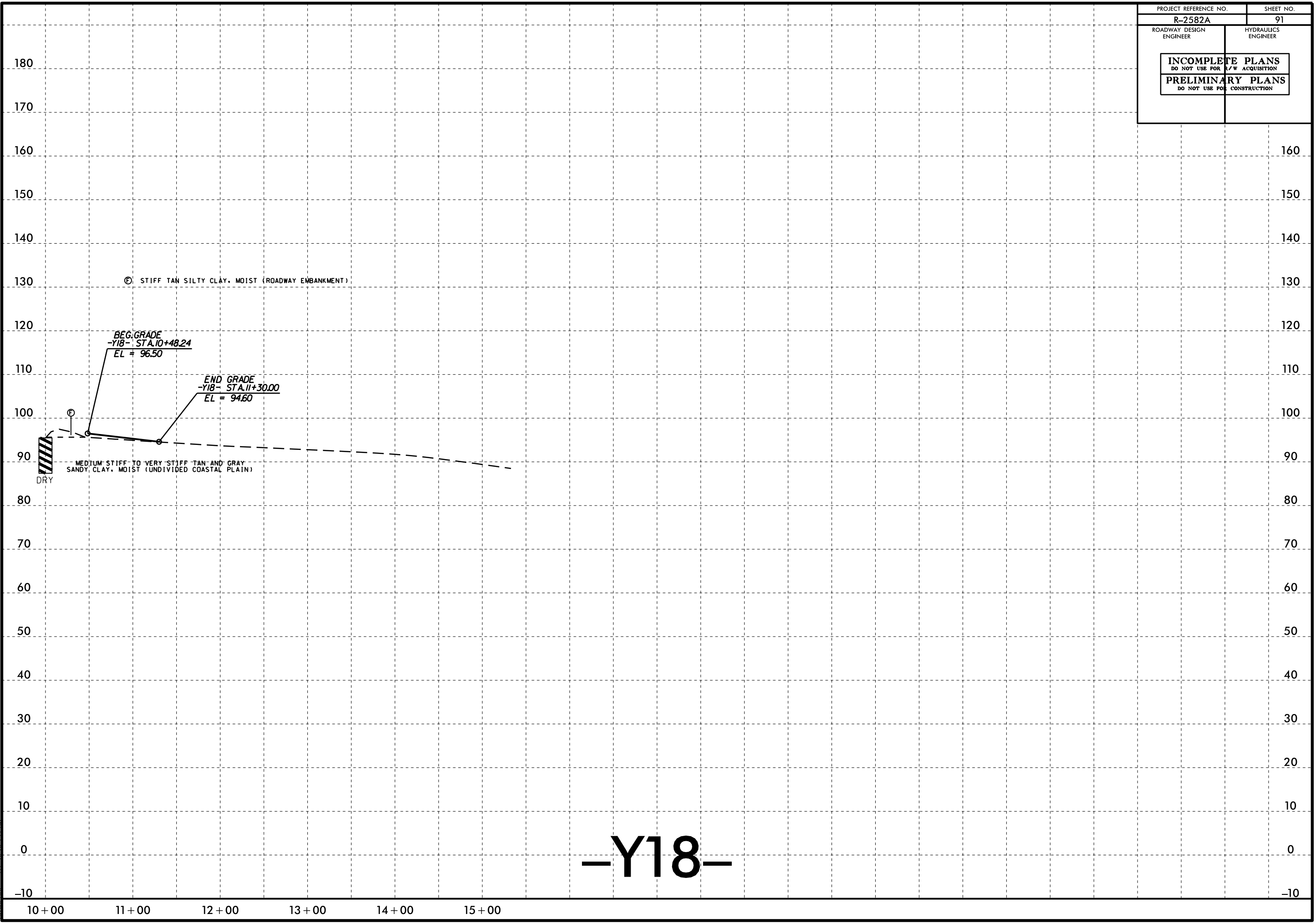
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R-2582A	90
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION	
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	

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PROJECT REFERENCE NO.	SHEET NO.
R-2582A	91
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION	
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	

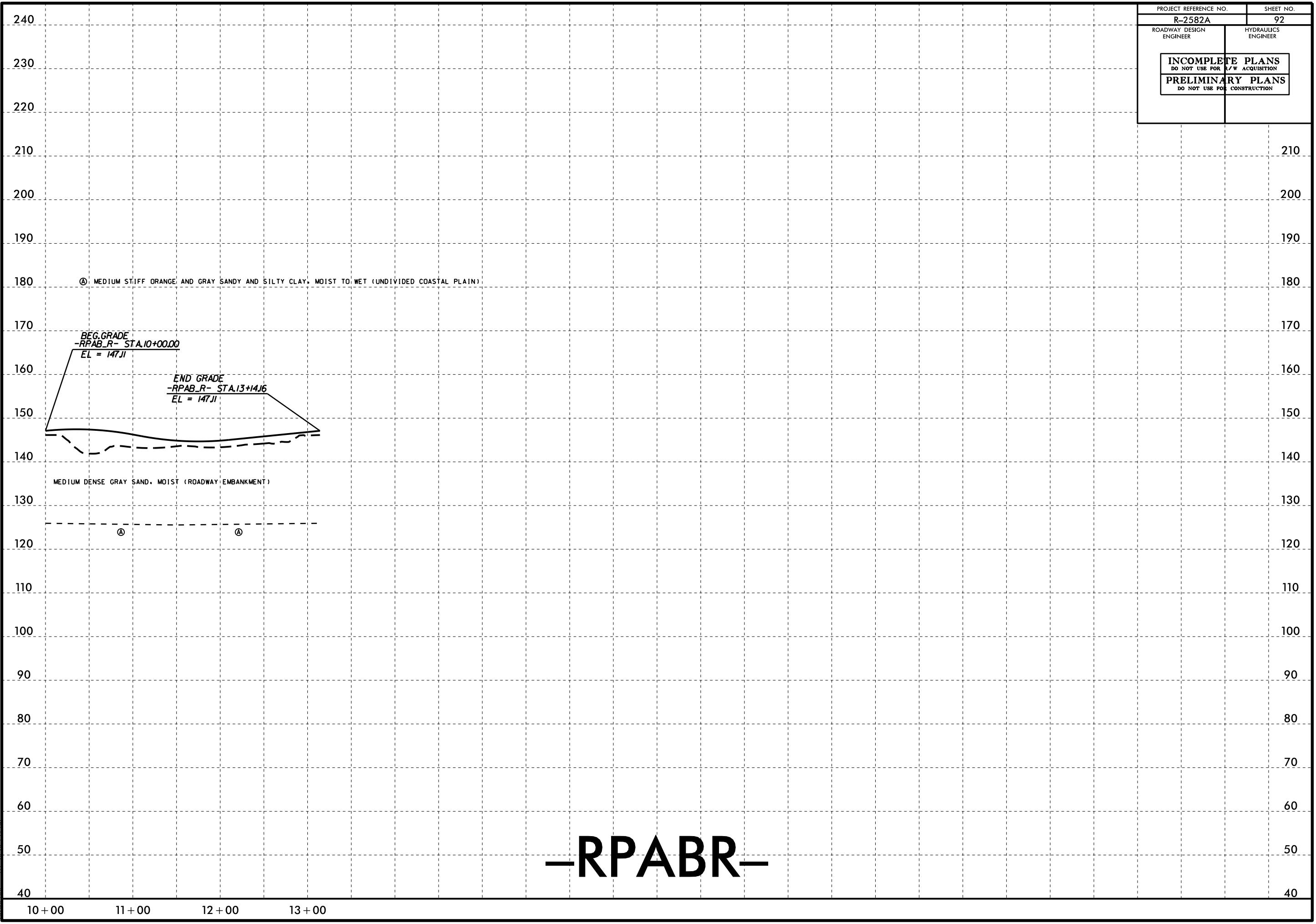
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-Y18-

PROJECT REFERENCE NO.	SHEET NO.
R-2582A	92
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION	
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	

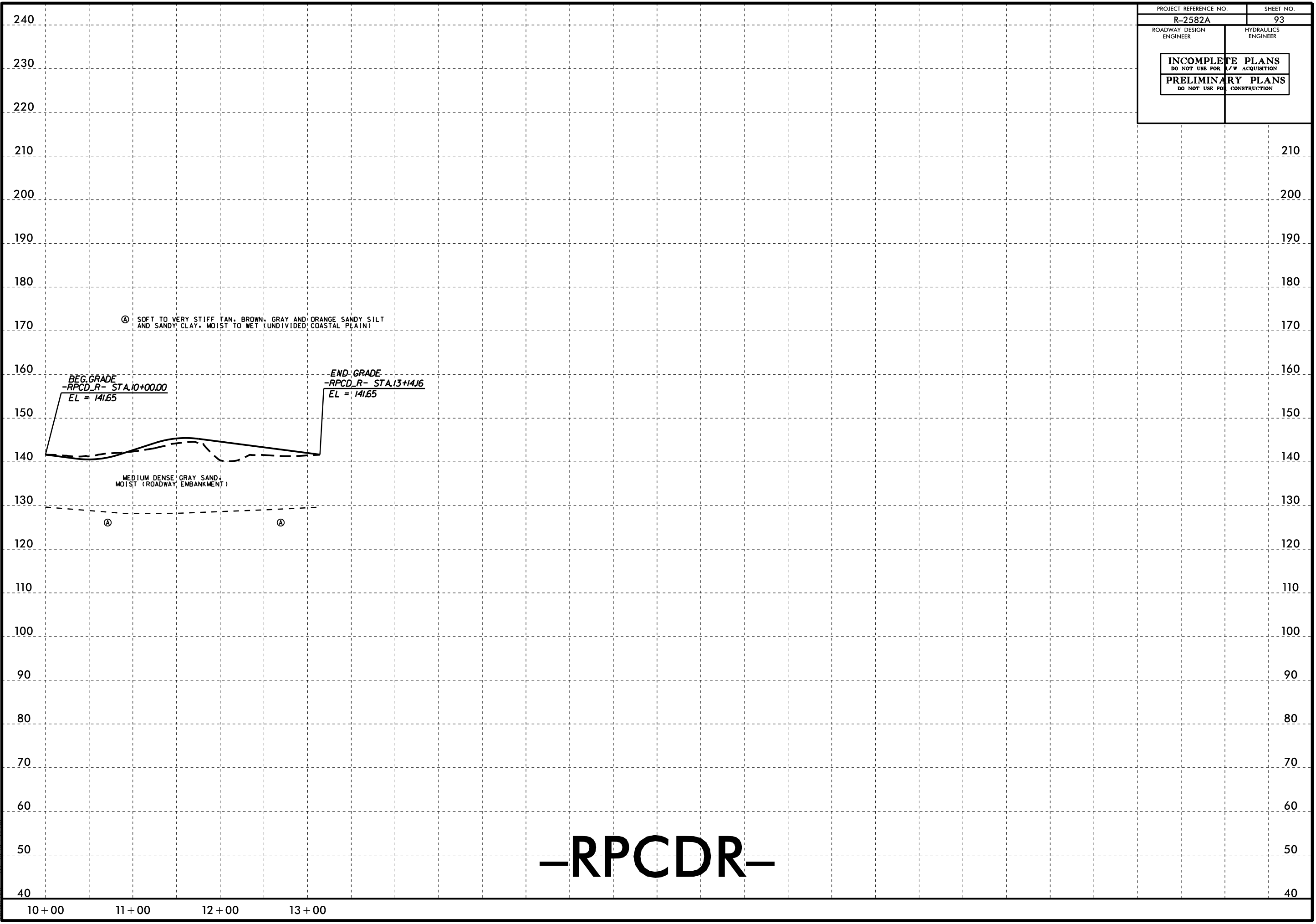
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-RPABR-

PROJECT REFERENCE NO.	SHEET NO.
R-2582A	93
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
INCOMPLETE PLANS DO NOT USE FOR A/W ACQUISITION	
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	

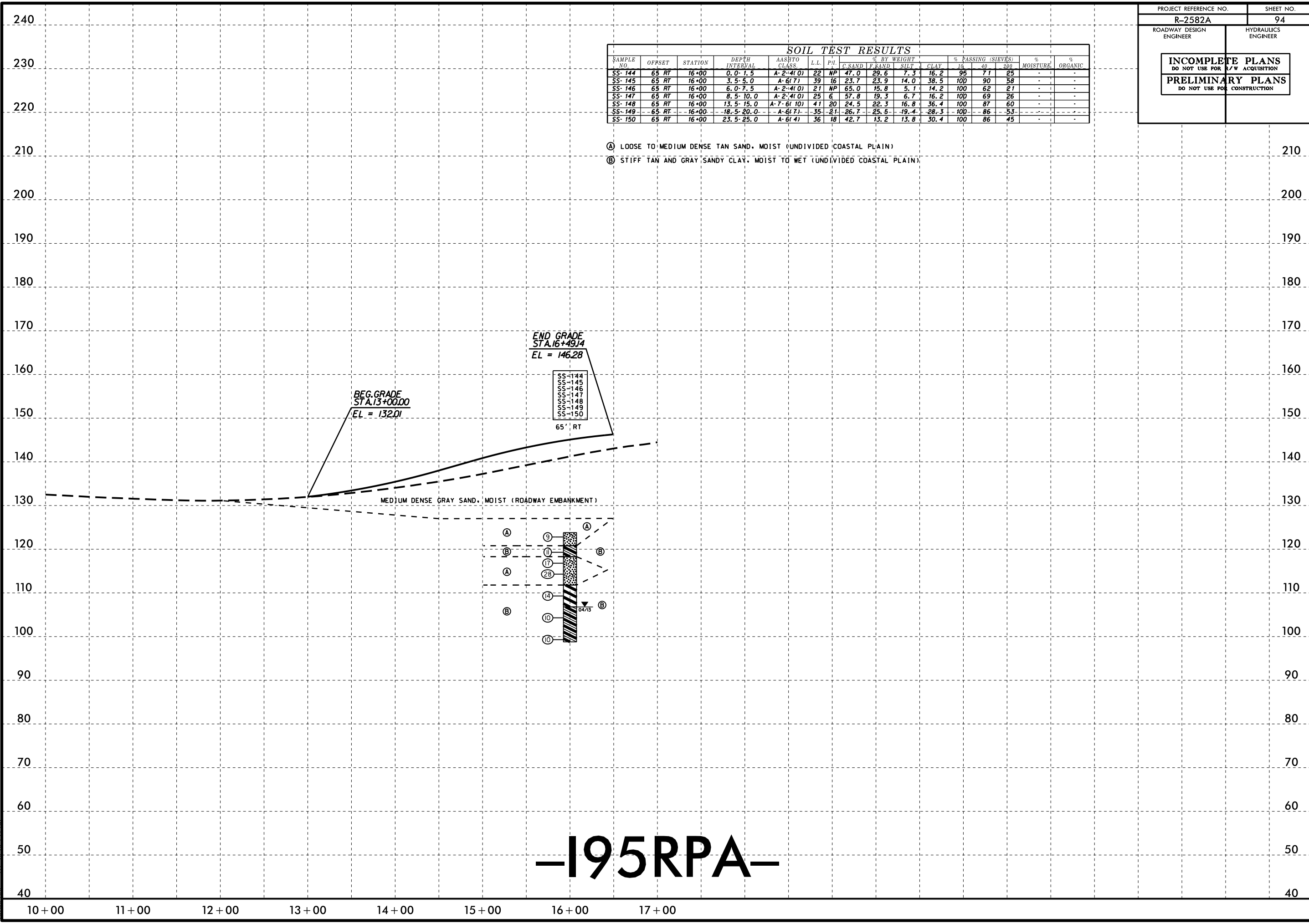
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SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS	LL	PL	% BY WEIGHT			% PASSING (SIEVES)			% MOISTURE	% ORGANIC	
							SAND	FINE SAND	SILT	NO. 10	NO. 40	NO. 200			
SS-144	65 RT	16+00	0.0-1.5	A-2(410)	22	NP	47.0	29.6	7.3	16.2	95	71	25	-	-
SS-145	65 RT	16+00	3.5-5.0	A-6(71)	39	16	23.7	23.9	14.0	38.5	100	90	58	-	-
SS-146	65 RT	16+00	6.0-7.5	A-2(410)	21	NP	65.0	15.8	5.1	14.2	100	62	21	-	-
SS-147	65 RT	16+00	8.5-10.0	A-2(410)	25	6	57.8	19.3	6.7	16.2	100	69	26	-	-
SS-148	65 RT	16+00	13.5-15.0	A-7(6110)	41	20	24.5	22.3	16.8	36.4	100	87	60	-	-
SS-149	65 RT	16+00	18.5-20.0	A-6(71)	35	21	26.7	25.8	19.4	28.3	100	86	53	-	-
SS-150	65 RT	16+00	23.5-25.0	A-6(71)	36	18	42.7	13.2	13.8	30.4	100	86	45	-	-

- Ⓐ LOOSE TO MEDIUM DENSE TAN SAND, MOIST (UNDIVIDED COASTAL PLAIN)
- Ⓑ STIFF TAN AND GRAY SANDY CLAY, MOIST TO WET (UNDIVIDED COASTAL PLAIN)

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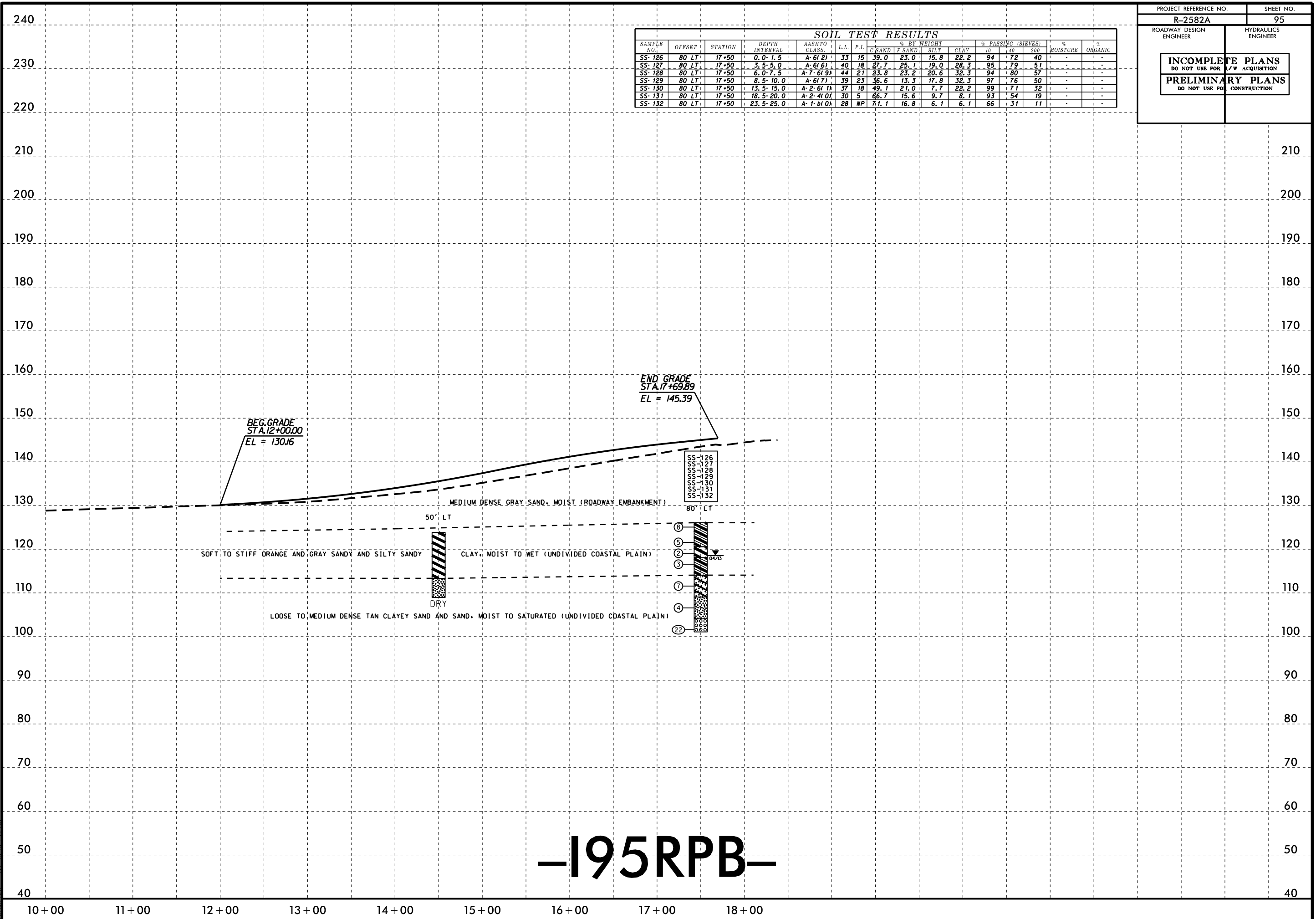


-195RPA-

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PROJECT REFERENCE NO.	SHEET NO.
R-2582A	95
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
INCOMPLETE PLANS DO NOT USE FOR A/W ACQUISITION	
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	

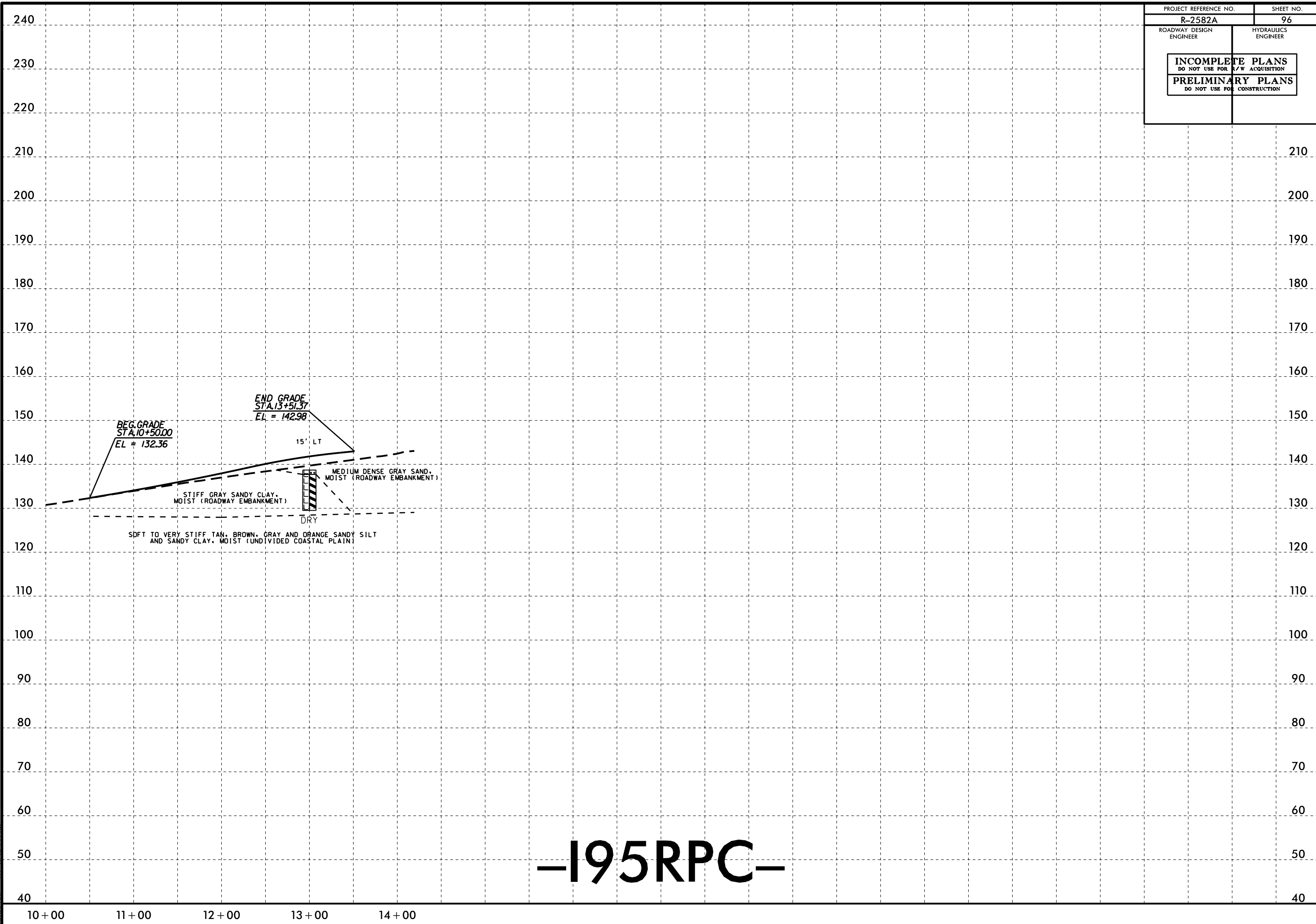
SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS	L.L.	P.I.	% BY WEIGHT					% PASSING (SIEVES)		% MOISTURE	% ORGANIC		
							SAND			SILT		CLAY				40	200
							F	M	S	CL	CI	LL	UL				
SS-126	80 LT	17+50	0.0-1.5	A-6(2)	33	15	39.0	23.0	15.8	22.2	94	72	40	-			
SS-127	80 LT	17+50	3.5-5.0	A-6(6)	40	18	27.7	25.1	19.0	28.3	95	79	51	-			
SS-128	80 LT	17+50	6.0-7.5	A-7-6(9)	44	21	23.8	23.2	20.6	32.3	94	80	57	-			
SS-129	80 LT	17+50	8.5-10.0	A-6(7)	39	23	36.6	13.3	17.8	32.3	97	76	50	-			
SS-130	80 LT	17+50	13.5-15.0	A-2-6(1)	37	18	49.1	21.0	7.7	22.2	99	71	32	-			
SS-131	80 LT	17+50	18.5-20.0	A-2-4(0)	30	5	66.7	15.6	9.7	6.1	93	54	19	-			
SS-132	80 LT	17+50	23.5-25.0	A-1-0(0)	28	NP	71.1	16.8	6.1	6.1	66	31	11	-			



-195RPB-

PROJECT REFERENCE NO.	SHEET NO.
R-2582A	96
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
INCOMPLETE PLANS DO NOT USE FOR A/W ACQUISITION	
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	

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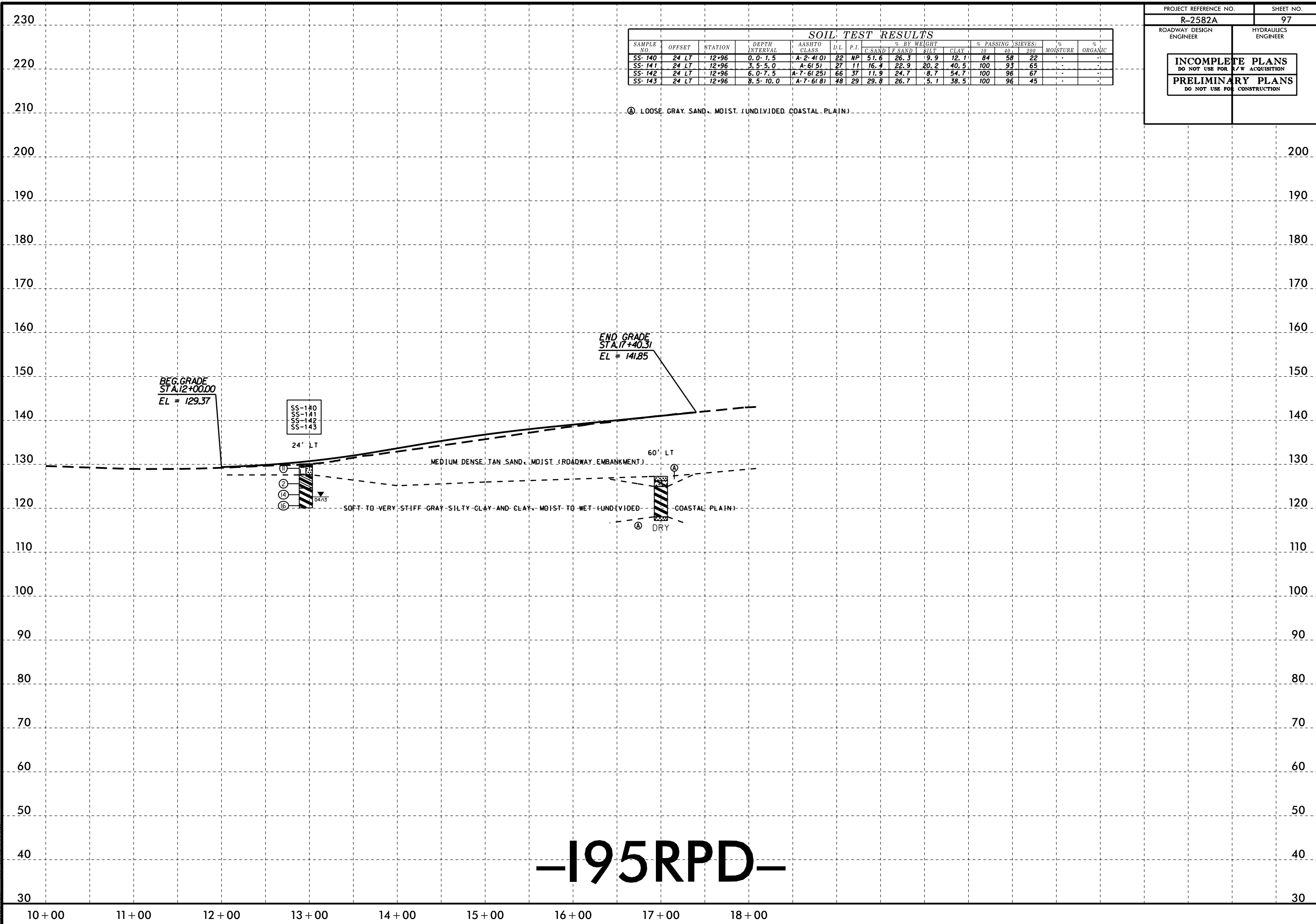
-195RPC-

5/14/99

PROJECT REFERENCE NO.	SHEET NO.
R-2582A	97
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
INCOMPLETE PLANS DO NOT USE FOR A/W ACQUISITION	
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	

SOIL TEST RESULTS															
SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	D.L.	P.I.	% BY WEIGHT				% PASSING (SIEVES)			% MOISTURE	% ORGANIC
							C SAND	F SAND	SILT	CLAY	10	40	200		
SS-140	24 LT	12+96	0.0-1.5	A-2-4(0)	22	NP	51.6	26.3	19.9	12.1	84	58	22	-	-
SS-141	24 LT	12+96	3.5-5.0	A-6(5)	27	11	16.4	22.9	20.2	40.5	100	93	65	-	-
SS-142	24 LT	12+96	6.0-7.5	A-7-6(25)	66	37	11.9	24.7	8.7	54.7	100	96	67	-	-
SS-143	24 LT	12+96	8.5-10.0	A-7-6(8)	48	29	29.8	26.7	5.1	38.5	100	96	45	-	-

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-195RPD-