ID: R-2719A

CONTRACT: C201965

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

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-D2-	10+00 TO 19+42	21, 22	86

LINE	STATION	XSECTS
-L-	129+00 TO 133+00	88-90
-L-	143+50 TO 150+50	91-93
-L-	174+00 TO 177+00	94-95
-L-	188+00 TO 194+50	96-99
-Y1-	16+00	100
-Y1-	18+00	101
-Y1-	22+00	102
-Y1-	24+00	103
-Y1-	32+00	104
-Y1-	34+00	105
-Y1-	43+00 TO 68+50	106-115
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STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
GEOTECHNICAL UNIT

ROADWAY SUBSURFACE INVESTIGATION

STATE PROJ. 34501.1.1 I.D. R-2719A F.A. PROJ. STP-0224(3)

COUNTY LENOIR

PROJECT DESCRIPTION CRESCENT RD. IN KINSTON FROM US 70 TO US 258

INVENTORY

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	R-2719A	1	139

STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION
34501.1.1	STP-0224(3)	PE
34501.2.4	STP-0224(8)	ROW, Util.
34501.3.4	STP-0224(12)	Const.

CAUTION NOTICE

THE SUBSURFACE INFORMATION AND THE SUBSURFACE INVESTIGATION ON WHICH IT IS BASED WAS 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 UNIT @ (919) 250-4088. NEITHER THE SUBSURFACE PLANS AND REPORTS, NOR THE FIELD BORING LOGS, ROCK CORES, OR SOIL TEST DATA IS PART OF THE CONTRACT.

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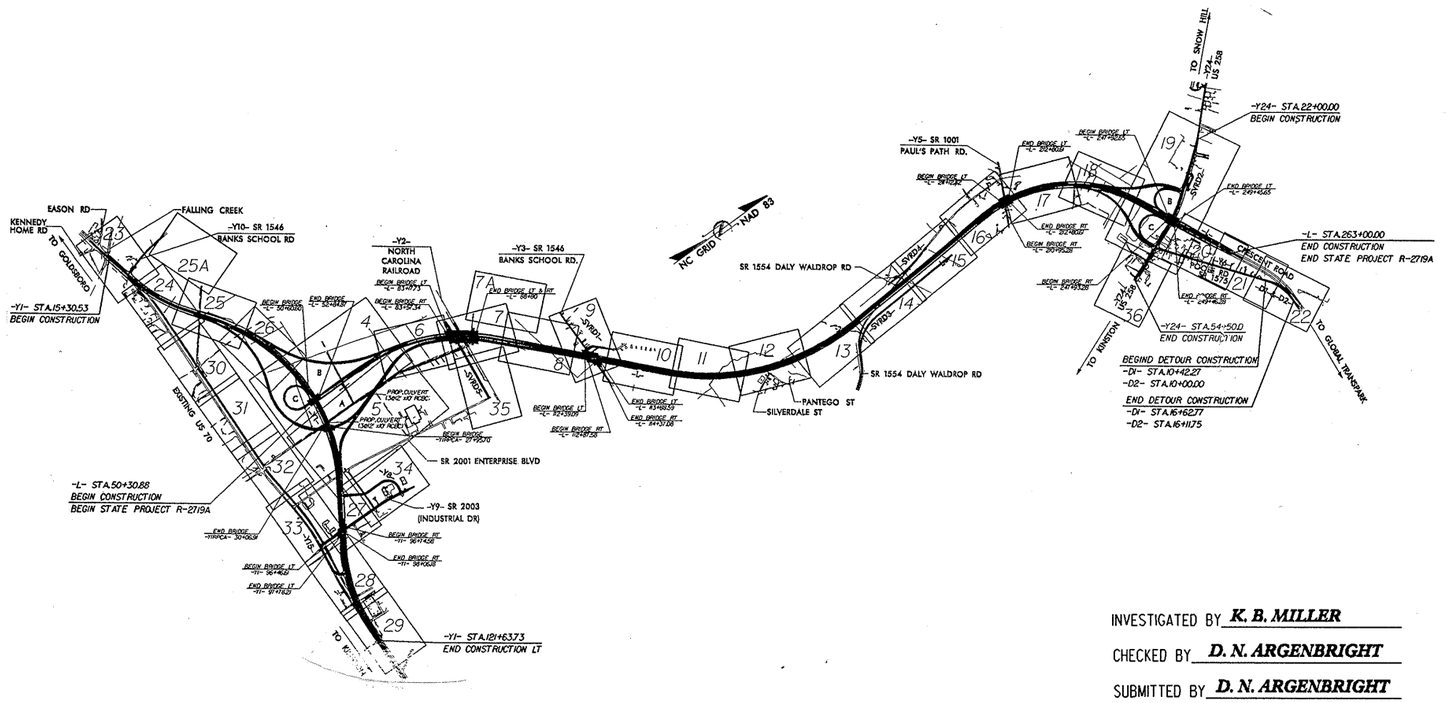

PERSONNEL

INVESTIGATED BY	K. B. MILLER
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DATE	DECEMBER, 2005

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NORTH CAROLINA LICENSED GEOLOGIST SEAL 1050 D. N. ARGENBRIGHT 12-9-05

DRAWN BY: K. B. MILLER, W. D. FIELDS

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NOTE - BY HAVING REQUESTED THIS INFORMATION THE CONTRACTOR SPECIFICALLY WAIVES ANY CLAIMS FOR INCREASED COMPENSATION OR EXTENSION OF TIME BASED ON DIFFERENCES BETWEEN THE CONDITIONS INDICATED HEREIN AND THE ACTUAL CONDITIONS AT THE PROJECT SITE.

ID	STATE PROJECT NO.	SHEET NO.	TOTAL SHEETS
R-2719A	34501.1.1	2	139

NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
GEOTECHNICAL UNIT

SUBSURFACE INVESTIGATION

SOIL AND ROCK LEGEND, TERMS, SYMBOLS, AND ABBREVIATIONS

SOIL DESCRIPTION

SOIL IS CONSIDERED TO BE THE UNCONSOLIDATED, SEMI-CONSOLIDATED OR WEATHERED EARTH MATERIALS WHICH CAN BE PENETRATED WITH A CONTINUOUS FLIGHT POWER AUGER, AND WHICH YIELDS LESS THAN 100 BLOWS PER FOOT ACCORDING TO STANDARD PENETRATION TEST (AASHTO T206, ASTM D-1586). SOIL CLASSIFICATION IS BASED ON THE AASHTO SYSTEM AND BASIC DESCRIPTIONS GENERALLY SHALL INCLUDE: CONSISTENCY, COLOR, TEXTURE, MOISTURE, AASHTO CLASSIFICATION, AND OTHER PERTINENT FACTORS SUCH AS MINERALOGICAL COMPOSITION, ANGULARITY, STRUCTURE, PLASTICITY, ETC. 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	
	A-1-a	A-1-b		A-2-4	A-2-5	A-2-6	A-2-7				A-7-5 A-7-6			
SYMBOL														
% PASSING #10 #40 #200	50 MX 30 MX 15 MX	50 MX 25 MX	51 MN 10 MX	35 MX	35 MX	35 MX	35 MX	36 MN	36 MN	36 MN	36 MN	GRANULAR SOILS	SILT-CLAY SOILS	MUCK, PEAT
LIQUID LIMIT	6 MX		N.P.	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		HIGHLY ORGANIC SOILS
PLASTIC INDEX				10 MX	10 MX	11 MN	11 MN	10 MX	10 MX	11 MN	11 MN			
GROUP INDEX	0		0	0		4 MX		8 MX	12 MX	16 MX	No MX			
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 A SUBGRADE	EXCELLENT TO GOOD							FAIR TO POOR				FAIR TO POOR	POOR	UNSUITABLE

P.I. OF A-7-5 ≤ L.L. - 30 ; P.I. OF A-7-6 > L.L. - 30

CONSISTENCY OR DENSENESS

PRIMARY SOIL TYPE	COMPACTNESS OR CONSISTENCY	RANGE OF STANDARD PENETRATION RESISTENCE (N-VALUE)	RANGE OF UNCONFINED COMPRESSIVE STRENGTH (TONS/FT²)
GENERALLY GRANULAR MATERIAL (NON-COHESIVE)	VERY LOOSE	<4	N/A
	LOOSE	4 TO 10	
	MEDIUM DENSE	10 TO 30	
	DENSE	30 TO 50	
	VERY DENSE	>50	
GENERALLY SILT-CLAY MATERIAL (COHESIVE)	VERY SOFT	<2	<0.25
	SOFT	2 TO 4	0.25 TO 0.5
	MEDIUM STIFF	4 TO 8	0.5 TO 1
	STIFF	8 TO 15	1 TO 2
	VERY STIFF	15 TO 30	2 TO 4
	HARD	>30	>4

TEXTURE OR GRAIN SIZE

U.S. STD. SIEVE SIZE	4	10	40	60	200	270
OPENING (MM)	4.76	2.0	0.42	0.25	0.075	0.053

BOULDER (BLDR.)	COBBLE (COB.)	GRAVEL (GR.)	COARSE SAND (CSE. 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
	- SATURATED - (SAT.)	USUALLY LIQUID; VERY WET, USUALLY FROM BELOW THE GROUND WATER TABLE
LL — LIQUID LIMIT (PLASTIC RANGE (PI))		
	- WET - (W)	SEMISOLID; REQUIRES DRYING TO ATTAIN OPTIMUM MOISTURE
PL — PLASTIC LIMIT		
	- MOIST - (M)	SOLID; AT OR NEAR OPTIMUM MOISTURE
OM — OPTIMUM MOISTURE SL — SHRINKAGE LIMIT		
	- DRY - (D)	REQUIRES ADDITIONAL WATER TO ATTAIN OPTIMUM MOISTURE

PLASTICITY

	PLASTICITY INDEX (PI)	DRY STRENGTH
NONPLASTIC	0-5	VERY LOW
LOW PLASTICITY	6-15	SLIGHT
MED. PLASTICITY	16-25	MEDIUM
HIGH PLASTICITY	26 OR MORE	HIGH

COLOR

DESCRIPTIONS MAY INCLUDE COLOR OR COLOR COMBINATIONS (TAN, RED, YEL-BRN, 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
UNIFORM- INDICATES THAT SOIL PARTICLES ARE ALL APPROXIMATELY THE SAME SIZE. (ALSO POORLY GRADED)
GAP-GRADED- INDICATES A MIXTURE OF UNIFORM PARTICLES OF TWO OR MORE SIZES.

ANGULARITY OF GRAINS

THE ANGULARITY OR ROUNDNESS OF SOIL GRAINS ARE 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 WHENEVER THEY ARE CONSIDERED OF SIGNIFICANCE.

COMPRESSIBILITY

SLIGHTLY COMPRESSIBLE	LIQUID LIMIT LESS THAN 30
MODERATELY COMPRESSIBLE	LIQUID LIMIT 31-50
HIGHLY COMPRESSIBLE	LIQUID LIMIT GREATER THAN 50

PERCENTAGE OF MATERIAL

ORGANIC 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 SEEPAGE

MISCELLANEOUS SYMBOLS

- ROADWAY EMBANKMENT WITH SOIL DESCRIPTION
- SOIL SYMBOL
- ARTIFICIAL FILL OTHER THAN ROADWAY EMBANKMENTS
- INFERRED SOIL BOUNDARIES
- INFERRED ROCK LINE
- ALLUVIAL SOIL BOUNDARY
- 25/025 — DIP/DIP DIRECTION OF ROCK STRUCTURES
- ● - SOUNDING ROD
- SPT CPT DPT DMT VST PMT — TEST BORING
- AUGER BORING
- CORE BORING
- MW — MONITORING WELL
- PIEZOMETER INSTALLATION
- SLOPE INDICATOR INSTALLATION
- SPT N-VALUE
- REF — SPT REFUSAL

SAMPLE DESIGNATIONS
S- BULK SAMPLE
SS- SPLIT SPOON SAMPLE
ST- SHELBY TUBE SAMPLE
RS- ROCK SAMPLE
RT- RECOMPACTED TRIAXIAL SAMPLE
CBR - CBR SAMPLE

ABBREVIATIONS

AR - AUGER REFUSAL
BT - BORING TERMINATED
CL. - CLAY
CPT - CONE PENETRATION TEST
CSE. - COARSE
DMT - DILATOMETER TEST
DPT - DYNAMIC PENETRATION TEST
e - VOID RATIO
F. - FINE
FOSS. - FOSSILIFEROUS
FRAC. - FRACTURED
FRAGS. - FRAGMENTS
MED. - MEDIUM
PMT - PRESSUREMETER TEST
SD. - SAND, SANDY
SL. - SILT, SILTY
SLI. - SLIGHTLY
TCR - TRICONE REFUSAL
γ - UNIT WEIGHT
γ_d - DRY UNIT WEIGHT
w - MOISTURE CONTENT
V. - VERY
VST - VANE SHEAR TEST

EQUIPMENT USED ON SUBJECT PROJECT

DRILL UNITS:
- [X] CME-750
- [X] BK-51
- [X] CME-45C
- [X] CME-45B
- [X] CME-45 GOTRAK
- [ ] OTHER _____
- [ ] OTHER _____

ADVANCING TOOLS:
- [X] CLAY BITS
- [X] 6" CONTINUOUS FLIGHT AUGER
- [X] 8" HOLLOW AUGERS
- [ ] HARD FACED FINGER BITS
- [ ] TUNG.-CARBIDE INSERTS
- [X] CASING [ ] W/ ADVANCER
- [X] TRICONE 2 15/16 " STEEL TEETH
- [ ] TRICONE _____ " TUNG.-CARB.
- [ ] CORE BIT
- [ ] OTHER _____

HAMMER TYPE:
- [X] AUTOMATIC [ ] MANUAL

CORE SIZE:
- [ ] -B_____
- [ ] -N_____
- [ ] -H_____

HAND TOOLS:
- [ ] POST HOLE DIGGER
- [X] HAND AUGER
- [X] SOUNDING ROD
- [ ] VANE SHEAR TEST
- [ ] OTHER _____

ROCK DESCRIPTION

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

WEATHERED ROCK (WR)	NON-COASTAL PLAIN MATERIAL THAT YIELDS SPT N VALUES > 100 BLOWS PER FOOT.
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 YEILD 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 ROCKS EXCEPT QUARTZ DISCOLORED OR STAINED. ROCK FABRIC CLEAR AND EVIDENT BUT REDUCED IN STRENGTH TO STRONG SOIL. IN GRANITOID ROCKS ALL FELDSPARS ARE KADLINIZED TO SOME EXTENT. SOME FRAGMENTS OF STRONG ROCK USUALLY REMAIN. *IF TESTED, YIELDS SPT N VALUES > 100 BPF*
VERY SEVERE (V. SEV.)	ALL ROCK EXCEPT QUARTZ DISCOLORED OR STAINED. ROCK FABRIC ELEMENTS ARE DISCERNIBLE BUT THE MASS IS EFFECTIVELY REDUCED TO SOIL STATUS, WITH ONLY FRAGMENTS OF STRONG ROCK REMAINING. SAPROLITE IS AN EXAMPLE OF ROCK WEATHERED TO A DEGREE SUCH THAT ONLY MINOR VESTIGES OF THE ORIGINAL ROCK FABRIC REMAIN. *IF TESTED, YIELDS 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 GEOLOGISTS 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 GEOLOGISTS PICK. HAND SPECIMENS CAN BE DETACHED BY MODERATE BLOWS.
MEDIUM HARD	CAN BE GROOVED OR GOUGED 0.05 INCHES DEEP BY FIRM PRESSURE OF KNIFE OR PICK POINT. CAN BE EXCAVATED IN SMALL CHIPS TO PEICES 1 INCH MAXIMUM SIZE BY HARD BLOWS OF THE POINT OF A GEOLOGISTS PICK.
SOFT	CAN BE GROVED 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

TERM	SPACING
VERY WIDE	MORE THAN 10 FEET
WIDE	3 TO 10 FEET
MODERATELY CLOSE	1 TO 3 FEET
CLOSE	0.16 TO 1 FEET
VERY CLOSE	LESS THAN 0.16 FEET

BEDDING

TERM	THICKNESS
VERY THICKLY BEDDED	> 4 FEET
THICKLY BEDDED	1.5 - 4 FEET
THINLY BEDDED	0.16 - 1.5 FEET
VERY THINLY BEDDED	0.03 - 0.16 FEET
THICKLY LAMINATED	0.008 - 0.03 FEET
THINLY LAMINATED	< 0.008 FEET

INDURATION

FOR SEDIMENTARY ROCKS, INDURATION IS THE HARDENING OF THE 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 WHICH HAVE BEEN TRANSPORTED BY WATER.

AQUIFER - A WATER BEARING FORMATION OR STRATA.

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

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

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

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

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

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

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

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

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

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

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

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

FLOOD PLAIN (F.P.) - 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 SOIL - SOIL FORMED IN PLACE BY THE WEATHERING OF ROCK.

ROCK QUALITY DESIGNATION (R.Q.D.) - 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 WHICH 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, WHICH 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 B.P.F.) 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 LESS THAN 0.1 FOOT PENETRATION WITH 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 (S.R.Q.D.) - A MEASURE OF ROCK QUALITY DESCRIBED BY: TOTAL LENGTH OF ROCK SEGMENTS WITHIN A STRATUM EQUAL TO OR GREATER THAN 10 CENTIMETERS DIVIDED BY THE TOTAL LENGTH OF STRATA AND EXPRESSED AS A PERCENTAGE.

TOPSOIL (T.S.) - SURFACE SOILS USUALLY CONTAINING ORGANIC MATTER.

BENCH MARK:

ELEVATION:

NOTES:

- ORGANIC SOIL BOUNDARY

REVISED 09/15/00

09/08/99

TIP PROJECT: R-2719A

CONTRACT:

PFI PLANS
JUNE 14, 2005

See Sheet 1-A For Index of Sheets
See Sheet 1-B For Standard Symbology Sheet

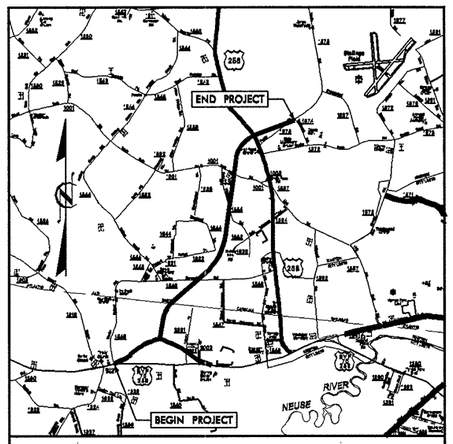
STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

LENOIR COUNTY

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	R-2719A	2A	139
STATE PROJ. NO.	F. A. PROJ. NO.	DESCRIPTION	
34501.1.1	STP-0224(3)	PE, ROW, UTIL.	

LOCATION: CRESCENT ROAD IN KINSTON FROM US 70 TO US 258

TYPE OF WORK: GRADING, PAVING, STRUCTURES, DRAINAGE



VICINITY MAP

CLEARING ON THIS PROJECT SHALL BE PERFORMED TO THE LIMITS ESTABLISHED BY METHOD II

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

THIS IS A CONTROLLED ACCESS PROJECT WITH ACCESS BEING LIMITED TO THE INTERCHANGES

PREPARED FOR
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
RALEIGH, NC

PLANS COORDINATED BY:
Davidian Byrd – Project Design Engineer (NCDOT)

GRAPHIC SCALES

50 25 0 50 100
PLANS

50 25 0 50 100
PROFILE (HORIZONTAL)

5 2.5 0 5 10
PROFILE (VERTICAL)

DESIGN DATA

ADT 2007 = 26,510
ADT 2027 = 46,060
DHV = 10 %
D ≐ 55 %
T = 14 % *
V = 70 MPH

* TTST 10% DUAL 4%

PROJECT LENGTH

LENGTH ROADWAY TIP PROJECT R-2719A = 3.772 MI

LENGTH STRUCTURE TIP PROJECT R-2719A = 0.256 MI

TOTAL LENGTH OF TIP PROJECT R-2719A = 4.028 MI

NOTE: SOUTHBOUND LANES WERE USED FOR PROJECT LENGTH CALCULATIONS

Prepared for the Division of Highways in the Office of:
URS CORPORATION – NORTH CAROLINA
1600 Perimeter Park Dr., Morrisville, North Carolina 27560
Telephone (919) 461-1100 Fax (919) 461-1415

2002 STANDARD SPECIFICATIONS

RIGHT OF WAY DATE: AUGUST 19, 2005

LETTING DATE: AUGUST 21, 2007

TIMOTHY H. KEENER, P.E.
PROJECT ENGINEER

MICHAEL LINDGREN, P.E.
PROJECT DESIGN ENGINEER

HYDRAULICS ENGINEER

SIGNATURE: P.E.

ROADWAY DESIGN ENGINEER

SIGNATURE: P.E.

DIVISION OF HIGHWAYS STATE OF NORTH CAROLINA

STATE DESIGN ENGINEER P.E.

DEPARTMENT OF TRANSPORTATION FEDERAL HIGHWAY ADMINISTRATION

APPROVED
DIVISION ADMINISTRATOR DATE

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION

MICHAEL F. EASLEY
GOVERNOR

LYNDO TIPPETT
SECRETARY

December 9, 2005

STATE PROJECT: 34501.1.1 R-2719A
F.A. PROJECT: STP-0224 (3)
COUNTY: Lenoir
DESCRIPTION: Crescent Rd in Kinston from US 70 to US 258

SUBJECT: Geotechnical Report - Inventory

Project Description

The project consists of constructing a four lane divided facility along a new location. The project begins just east of the intersection of SR 1519 (Eason Rd) and US 70 and extends approximately 3.8 miles northeast to the intersection of US 258 and ties into the existing Crescent Rd (R-2719BA). The geotechnical investigation of subsurface conditions was confined to the corridor of proposed new construction.

The following base lines were investigated for this project:

Line	Station(±)
-L-	50+30 to 263+00
-Y1-	15+30 to 121+63
-Y1RPA-	0+00 to 16+04
-Y1RPB-	0+00 to 35+55
-Y1RPCA-	0+00 to 68+73
-Y1LPC-	0+00 to 14+34
-Y6-	10+00 to 34+00
-Y8-	10+00 to 18+23
-Y9-	10+00 to 26+00
-Y10-	10+00 to 17+80
-Y14-	10+00 to 19+62
-Y15-	18+00 to 31+75
-SVRD1-	10+00 to 22+00
-SVRD2-	10+00 to 14+40
-SVRD3-	15+00 to 39+65
-SVRD4-	11+50 to 18+94
-SVRD5-	10+00 to 27+64
-Y24-	22+00 to 54+50
-Y24LPB-	0+00 to 11+63
-Y24RPB-	0+00 to 19+65
-Y24LPC-	0+00 to 12+38
-Y24RPC-	0+00 to 21+86
-D1-	10+00 to 20+09
-D2-	10+00 to 19+42

Areas of Special Geotechnical Interest

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

Line	Station (±)
-L-	69+25 to 79+00
-L-	86+50 to 105+50
-L-	143+00 to 153+50
-L-	158+50 to 163+00
-L-	187+25 to 199+00
-L-	205+00 to 212+50
-SVRD1-	14+80 to 22+00
-SVRD5-	12+10 to 27+64
-Y1-	43+20 to 44+75
-Y1-	49+25 to 69+75
-Y1-	83+00 to 87+20
-Y1-	101+60 to 104+25
-Y1LPC-	7+00 to 10+75
-Y1RPB-	23+20 to 26+90
-Y1RPCA-	0+00 to 16+75
-Y1RPCA-	33+00 to 39+00
-Y1RPCA-	43+25 to 63+00
-Y9-	14+80 to 19+25
-Y24RPB-	9+00 to 17+00

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

Line	Station (±)
-L-	128+70 to 133+25
-L-	135+80 to 140+90

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

Line	Station(±)
-L-	50+30 to 143+50
-L-	151+50 to 158+50
-L-	161+25 to 177+00
-L-	187+50 to 196+75
-L-	202+25 to 257+00
-SVRD2-	10+00 to 14+40
-SVRD5-	10+00 to 27+64
-Y1-	30+25 to 89+00
-Y1-	95+00 to 101+00
-Y1-	115+25 to 121+63
-Y1LPC-	0+00 to 14+34
-Y1RPA-	1+50 to 16+04
-Y1RPB-	0+00 to 35+55
-Y1RPCA-	0+00 to 24+00
-Y1RPCA-	47+00 to 66+73
-Y6-	10+00 to 23+00
-Y14-	10+00 to 19+50
-Y24-	22+00 to 35+00
-Y24-	41+00 to 54+50
-Y24LPB-	0+00 to 11+33
-Y24LPC-	0+00 to 12+38
-Y24RPB-	0+00 to 19+35
-Y24RPC-	0+00 to 21+86
-D1-	10+00 to 13+34

3) No water wells were noted within or in close proximity to the proposed right-of-way.

4) Springs and seeps were encountered from –L– Sta. 104+00 to 110+00.

Physiography, Geology and Surface Water

The project corridor is located in the Middle Coastal Plain Physiographic Province just west of the Surry Scarp, a relict Plio-Pliestocene shoreline. The southern third of the project area is characterized by an extensive broad ancient terrace cut by the present day Neuse River and lies at an elevation of 50± feet. The northern two-thirds of the project is composed of a smaller less prominent marine terrace/ancient shoreline ranging in elevation from 50 to 90 feet and to the north, a gently rolling to flat upland with elevations of 90 to 115 feet.

The geology of the project consists of Pleistocene to Recent age fluvial and coastal plain sediments overlying marine sediments of the Upper Cretaceous age Peedee Formation. The distinction between the Pleistocene to Recent age fluvial and coastal plain sediments is difficult to determine due the amount of re-working, similar composition and high degree of weathering. Therefore, generally no distinction is made between the two on the accompanying soil profile sheets. The Peedee Formation was primarily encountered in deep borings along the project. The project is drained by Falling Creek, Gum Swamp Creek, Briar Run, Poole's Branch and several unnamed streams all within the Neuse River water shed.

Ground Water

Ground water data was collected from December 2004 to February 2005 during average rainfall conditions. Typically, ground water levels were measured at depths of 1.0± to 3.0± feet below the natural ground surface in the southern third of the project area and 2± to 4± feet or more below the natural ground surface areas of the northern two-thirds of the project. Artesian conditions with a flow rate of less than 1 gallon per minute were noted at –L– Station 92+00. The flow originates from an aquifer below elevation 35 feet and will not be penetrated by roadway construction activities. Therefore, this condition should not impact the roadway portion of this project.

Soils

Soils occurring along the project are derived from marine and fluvial sediments ranging in age from Late Cretaceous to Recent. Soils encountered during this investigation are divided into three basic categories: Roadway Embankment, Alluvial and Coastal Plain.

Roadway Embankment soils occur along existing roadways primarily at the beginning and end of the project. Typically these soils consist of loose to medium dense sand and clayey sand (A-2-4, A-2-6) that exhibit good to excellent engineering properties.

Recent alluvial soils were encountered along –L– from station 128+70± to 133+25± and consist of very soft muck with an organic content of 32± percent. Also, moderately organic loose and soft silty sand and sandy silt with an organic content of 6± percent were noted from –L– station 135+80 to 140+90. These soils are highly to moderately organic and exhibit unsuitable engineering characteristics.

Soils categorized as Coastal Plain occur at or near the surface along the entire project and therefore will have the most influence on highway construction. Generally these soils are composed of very loose to dense sand and clayey sand (A-2-4, A-2-6) and very soft to hard sandy silt, sandy clay and silty sandy clay (A-4, A-6, A-7). The granular soils generally possess good to excellent engineering properties. The cohesive soils typically exhibit fair engineering properties with moderate to moderately high moisture contents, low to moderate plasticity indices and generally less than 50 percent passing the No. 200 sieve. These cohesive soils still may have the potential to cause subgrade stability and/or embankment stability as well as settlement problems.

The Peedee Formation underlies the Coastal Plain soils and was encountered across the project in mostly deep borings. Deposits of the Peedee Formation are generally very loose to very dense sand and clayey sand (A-2-4, A-2-6) with some calcium cemented sand layers with interbeds of stiff to hard sandy silt and sandy clay (A-4, A-6, A-7). Due to the depths of occurrence and the fact that the Peedee Formation is primarily composed of sandy sediments it should not impact the roadway portion of this project.

Culvert at –L– Station 139+60

Based on the Culvert Survey and Hydraulic Design Report dated June 27, 2005, a dual 9' x 8' RCBC is proposed for –L– along a tributary to Falling Creek at station 139+60. A SPT boring performed near the proposed culvert site shows 2.5 feet of soft sandy moderately organic silt (A-4) underlain by medium dense sand (A-2-4, A-3). Ground water was measured at an elevation of 69 feet.

Culvert at –L– Station 153+62

Based on the Culvert Survey and Hydraulic Design Report dated June 27, 2005, a dual 8' x 8' RCBC is proposed for –L– along a tributary to Falling Creek at station 153+62. An auger boring performed near the proposed culvert site shows 15 feet or more of loose to medium dense silty sandy (A-2-4). Ground water was measured at an elevation of 76 feet.

Culvert at –Y1– Station 38+22

Based on the Culvert Survey and Hydraulic Design Report dated June 27, 2005, a dual 9' x 6' RCBC is proposed for –Y1– along a tributary to Falling Creek at station 38+22. An auger boring performed near the proposed culvert site shows 13 feet of loose to medium dense sand (A-2-4) underlain by medium dense clayey sand (A-2-6). Ground water was measured at an elevation of 46.5 feet.

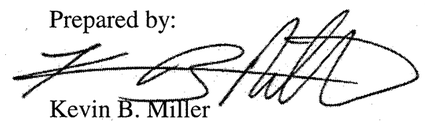
Culvert at –Y1– Station 74+43

Based on the Culvert Survey and Hydraulic Design Report dated June 27, 2005, a triple 12' x 10' RCBC is proposed for –Y1– along a tributary to Falling Creek at station 74+43. SPT and auger borings performed near the proposed culvert shows 25 feet or more of very loose to medium dense sand (A-2-4, A-3) is present at the site along with up to 3 feet of very soft to soft sandy silt in the existing channel. Ground water was measured at an elevation of 46 feet.

Culvert at –Y1RPCA– Station 16+14

Based on the Culvert Survey and Hydraulic Design Report dated June 27, 2005, a triple 12' x 10' RCBC is proposed for –Y1RPCA– along a tributary to Falling Creek at station 16+14. A SPT boring performed near the proposed culvert site shows 2 feet of loose to medium dense sand (A-2-4) underlain by 6 feet of soft sandy clay (A-6) underlain by 45 feet or more of medium dense to very dense sand (A-2-4, A-3, A-1-b). Ground water was measured at an elevation of 47 feet.

Prepared by:



Kevin B. Miller
Engineering Geologist II

EARTHWORK BALANCE SHEET (GRADING ONLY PROJECT)

Volumes in Cubic Yards

PROJECT R-2719A - Crescent Road COUNTY Lenoir DATE 6/3/2009 SHEET 1 OF 2 SHEETS

RD10S01C

LINE	STATION TO	STATION	TOTAL EXCAV. (UNCL.)	ROCK EXCAV.	UNDERCUT EXCAV.	UNSUIT. EXCAV.	SUITABLE EXCAV.	TOTAL EMB.	ROCK EMB.	UNDERCUT EMB.	EARTH EMB.	EMBANK. +25%	BORROW	SUITABLE WASTE	UNSUIT. WASTE	TOTAL WASTE
SUMMARY POINT 1																
-L-	STA. 50+30.88	STA. 50+60.60 (BEGIN BRIDGE)	0	0	0	0	0	1087	0	0	1087	1359	1359	0	0	0
-L-	STA. 52+84.87 (END BRIDGE)	STA. 83+73.82 (BEGIN BRIDGE)	0	0	0	0	0	306672	0	0	306672	383340	383340	0	0	0
-Y1LPC-	STA. 0+50.00	STA. 11+68.74	51	0	257	0	51	96852	0	257	96595	121065	121014	0	257	257
-Y1RPCA-	STA. 4+49.79	STA. 27+88.18 (BEGIN BRIDGE)	0	0	0	0	0	219678	0	0	219678	274597	274597	0	0	0
-Y1RPCA-	STA. 30+12.60 (END BRIDGE)	STA. 60+83.00	4505	0	1427	1731	2774	76712	0	1427	75285	95890	93116	0	3158	3158
-Y1RPA-	STA. 4+75.00	STA. 11+98.58	0	0	0	0	0	40455	0	0	40455	50569	50569	0	0	0
-Y1RPB-	STA. 6+99.53	STA. 29+08.02	0	0	0	0	0	38844	0	0	38844	48555	48555	0	0	0
SUBTOTAL SUMMARY POINT 1			**4556**	**0**	**1684**	**1731**	**2825**	**780300**	**0**	**1684**	**778616**	**975375**	**972550**	**0**	**3415**	**3415**
SUMMARY POINT 2																
-L-	STA. 88+00.00 (END BRIDGE)	STA 112+25.97 (BEGIN BRIDGE)	0	0	0	0	0	443821	0	0	443821	554777	554777	0	0	0
-SVRD1-	STA. 10+50.00	STA. 14+00.00	2285	0	0	0	2285	30	0	0	30	38	0	2247	0	2247
-SVRD5-	STA. 10+50.00	STA. 27+50.00	590	0	3535	0	590	4841	0	3535	4841	6051	5461	0	3535	3535
SUBTOTAL SUMMARY POINT 2			**2875**	**0**	**3535**	**0**	**2875**	**448692**	**0**	**3535**	**448692**	**560866**	**560238**	**2247**	**3535**	**5782**
SUMMARY POINT 3																
-L-	STA. 114+51.55 (END BRIDGE)	STA. 144+00.00	1064	0	13366	0	1064	183743	0	13366	170377	229679	228615	0	13366	13366
SUBTOTAL SUMMARY POINT 3			**1064**	**0**	**13366**	**0**	**1064**	**183743**	**0**	**13366**	**170377**	**229679**	**228615**	**0**	**13366**	**13366**
SUMMARY POINT 4																
-L-	STA. 144+00.00	STA. 174+00.00	56879	0	5623	6629	50250	45693	0	5623	40070	57117	6867	0	12252	12252
-SVRD3-	STA. 15+00.00	STA. 45+00.00	3469	0	0	0	3469	4430	0	0	4430	5538	2069	0	0	0
SUBTOTAL SUMMARY POINT 4			**60348**	**0**	**5623**	**6629**	**53719**	**50123**	**0**	**5623**	**44500**	**62655**	**8936**	**0**	**12252**	**12252**
SUMMARY POINT 5																
-L-	STA. 174+00.00	STA. 211+04.94 (BEGIN BRIDGE)	21806	0	3666	0	21806	172828	0	3666	169162	216036	194230	0	3666	3666
-SVRD4-	STA. 12+00.00	STA. 19+00.00	690	0	0	0	690	454	0	0	454	568	0	122	0	122
SUBTOTAL SUMMARY POINT 5			**22496**	**0**	**3666**	**0**	**22496**	**173282**	**0**	**3666**	**169616**	**216604**	**194230**	**122**	**3666**	**3788**
SUMMARY POINT 6																
-L-	STA. 212+72.83 (END BRIDGE)	STA. 247+80.30 (BEGIN BRIDGE)	4387	0	0	0	4387	302853	0	0	302853	378566	374179	0	0	0
-Y24RPB-	STA. 6+55.00	STA. 19+00.00	215	0	0	0	215	43888	0	0	43888	54860	54645	0	0	0
-Y24LPB-	STA. 3+15.00	STA. 6+70.00	0	0	0	0	0	22537	0	0	22537	28171	28171	0	0	0
-Y24RPC-	STA. 5+75.00	STA. 21+00.00	2671	0	0	0	2671	12409	0	0	12409	15511	12840	0	0	0
-Y24LPC-	STA. 3+00.00	STA. 7+75.00	0	0	0	0	0	15890	0	0	15890	19863	19863	0	0	0
SUBTOTAL SUMMARY POINT 6			**7273**	**0**	**0**	**0**	**7273**	**397577**	**0**	**0**	**397577**	**496971**	**489698**	**0**	**0**	**0**
SUMMARY POINT 7																
-L-	STA. 249+52.96 (END BRIDGE)	STA. 262+00.00	477	0	0	0	477	107874	0	0	107874	134843	134366	0	0	0
-Y24-	STA. 22+50.00	STA. 54+00.00	2389	0	0	0	2389	4836	0	0	4836	6045	3656	0	0	0
-Y6-	STA. 10+50.00	STA. 34+00.00	505	0	0	0	505	302	0	0	302	378	0	127	0	127
-D1- & -D2-	STA. 10+00	STA. 16+00.00	418	0	0	0	418	306	0	0	306	383	0	35	0	35
SUBTOTAL SUMMARY POINT 7			**3789**	**0**	**0**	**0**	**3789**	**113318**	**0**	**0**	**113318**	**141649**	**138022**	**162**	**0**	**162**
SUMMARY POINT 8																
-Y1-	STA. 30+00.00	STA. 45+00.00	3287	0	0	0	3287	40690	0	1693	38997	50862	47575	0	0	0
SUBTOTAL SUMMARY POINT 8			**3287**	**0**	**0**	**0**	**3287**	**40690**	**0**	**1693**	**38997**	**50862**	**47575**	**0**	**0**	**0**
SHEET TOTALS:			**105688**	**0**	**27874**	**8360**	**97328**	**2187726**	**0**	**29567**	**2161694**	**2734661**	**2639864**	**2531**	**36234**	**38765**

* EARTHWORK QUANTITIES ARE CALCULATED BY THE ROADWAY DESIGN UNIT. THESE EARTHWORK QUANTITIES ARE BASED IN PART ON SUBSURFACE DATA PROVIDED BY THE GEOTECHNICAL ENGINEERING UNIT.

** EMBANKMENT VOLUMES SHOWN INCLUDE ADDITIONAL VOLUME FOR 5" PLACED OVER SUBGRADE FOR GRADING & STRUCTURES ONLY PLANS.

EARTHWORK BALANCE SHEET (GRADING ONLY PROJECT)

Volumes in Cubic Yards

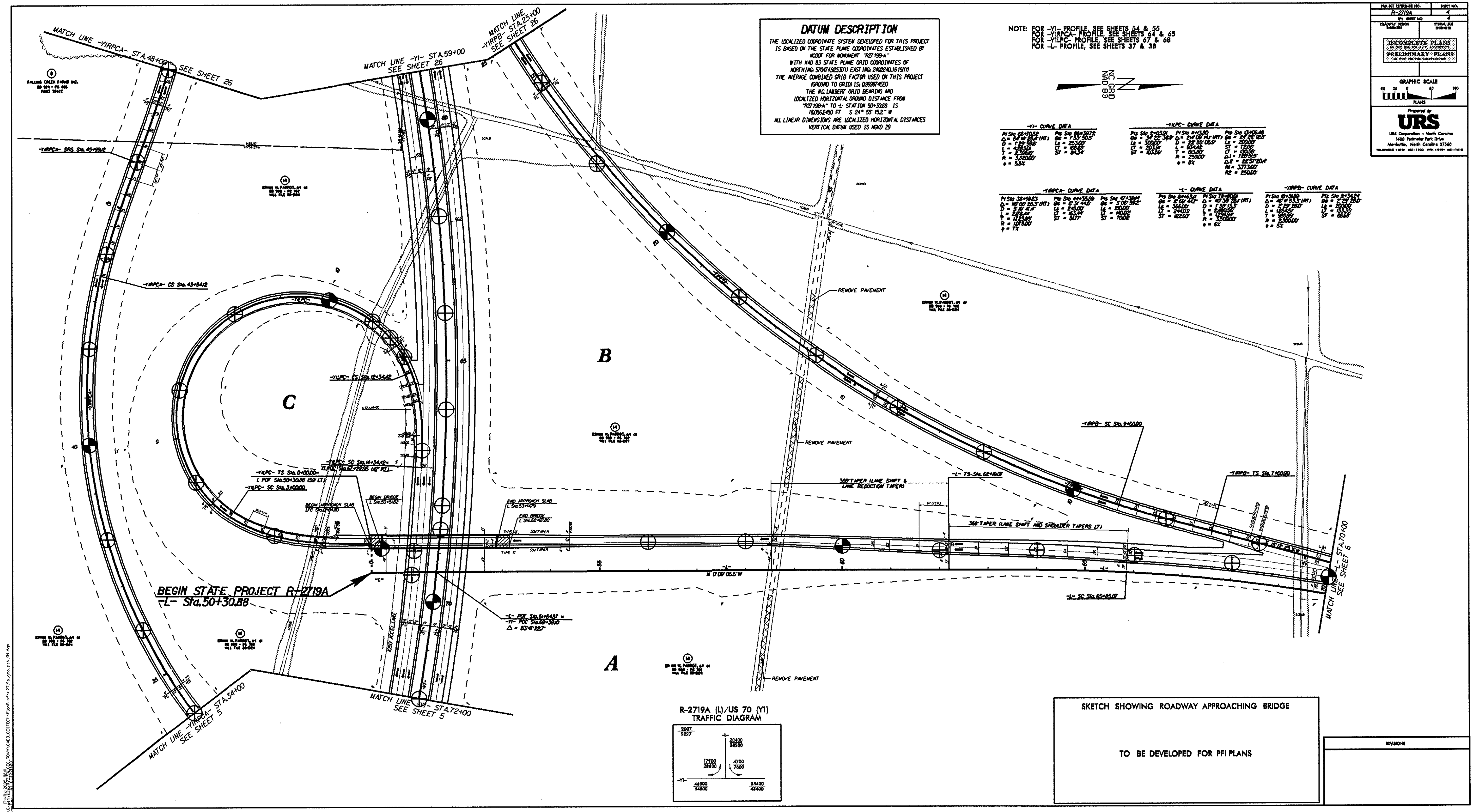
PROJECT R-2719A - Crescent Road COUNTY Lenoir DATE 6/3/2009 SHEET 2 OF 2 SHEETS

RD10S01C

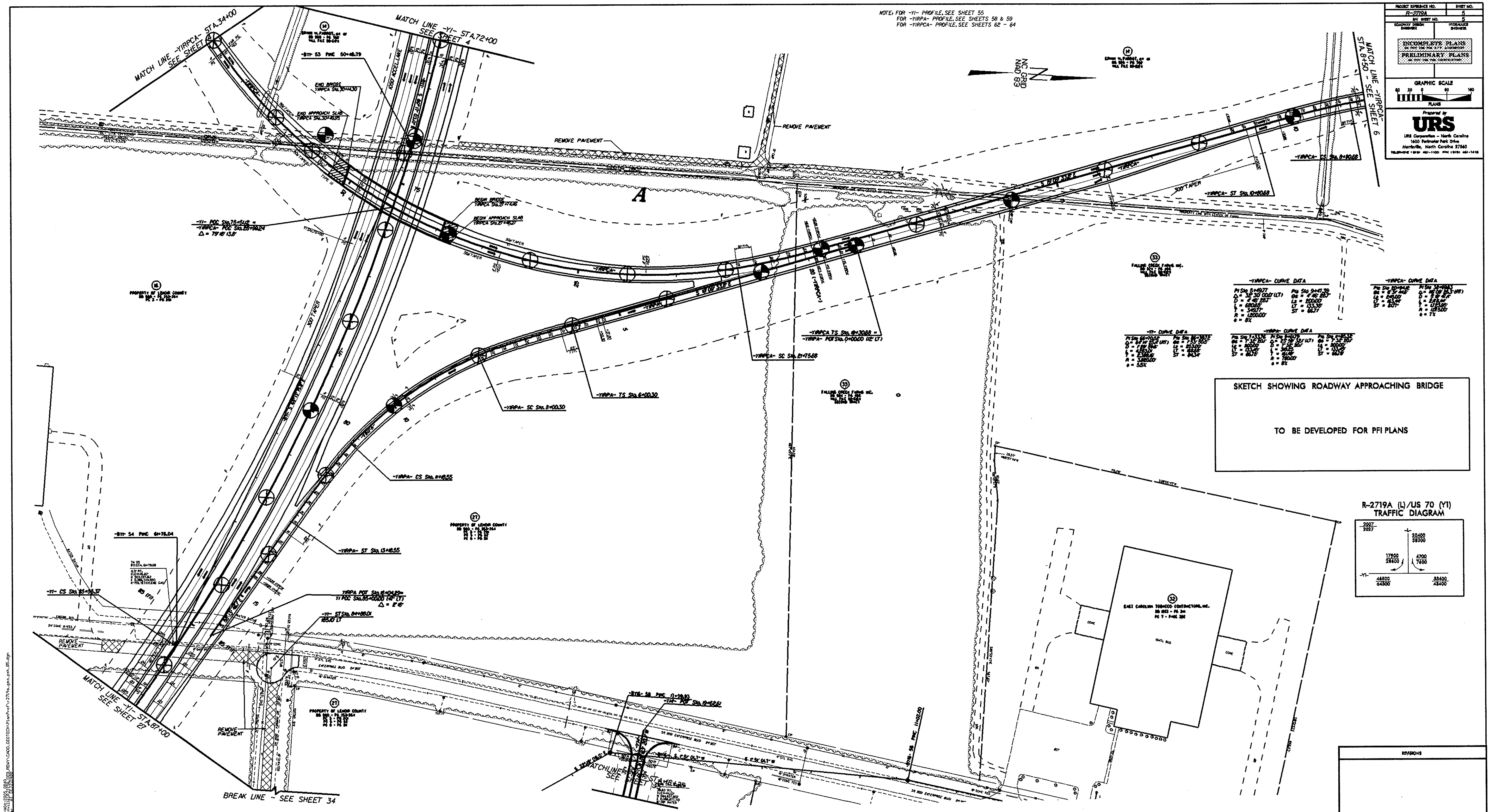
LINE	STATION TO	STATION	TOTAL EXCAV. (UNCL.)	ROCK EXCAV.	UNDERCUT	UNSUIT. EXCAV.	SUITABLE EXCAV.	TOTAL EMB.	ROCK EMB.	UNDERCUT EMB.	EARTH EMB.	EMBANK. +25%	BORROW	SUITABLE WASTE	UNSUIT. WASTE	TOTAL WASTE
SUMMARY POINT 9																
-Y1-	STA. 45+00.00	STA. 75+00.00	18	0	1693	0	18	75575	0	1693	73882	94469	94451	0	1693	1693
SUBTOTAL SUMMARY POINT 9			**18**	**0**	**1693**	**0**	**18**	**75575**	**0**	**1693**	**73882**	**94469**	**94451**	**0**	**1693**	**1693**
SUMMARY POINT 10																
-Y1-	STA. 75+00.00	STA. 96+60.50 (BEGIN BRIDGE	0	0	0	0	0	153173	0	0	153173	191466	191466	0	0	0
SUBTOTAL SUMMARY POINT 10			**0**	**0**	**0**	**0**	**0**	**153173**	**0**	**0**	**153173**	**191466**	**191466**	**0**	**0**	**0**
SUMMARY POINT 11																
-Y1-	STA. 97+92.21 (END BRIDGE)	STA. 105+00.00	4	0	0	0	4	79055	0	0	79055	98819	98815	0	0	0
-Y8-	STA. 11+00.00	STA. 14+50.00	1681	0	0	0	1681	6477	0	0	6477	8096	6415	0	0	0
SUBTOTAL SUMMARY POINT 11			**1685**	**0**	**0**	**0**	**1685**	**85532**	**0**	**0**	**85532**	**106915**	**105230**	**0**	**0**	**0**
SHEET SUBTOTALS (SUMMARIES 9-11):			**1703**	**0**	**1693**	**0**	**1703**	**314279**	**0**	**1693**	**312586**	**392850**	**391147**	**0**	**1693**	**1693**
PREVIOUS SHEET SUBTOTALS (SUMMARIES 1-8):			**105688**	**0**	**27874**	**8360**	**97328**	**2187726**	**0**	**29567**	**2161694**	**2734661**	**2639864**	**2531**	**36234**	**38765**
SUMMARY POINT SUBTOTALS:			**107391**	**0**	**29567**	**8360**	**99031**	**2502005**	**0**	**31260**	**2474280**	**3127511**	**3031011**	**2531**	**37927**	**40458**
SHOULDER MATERIAL								0			0	0	0			
WASTE IN LIEU OF BORROW													-2531	-2531		-2531
LOSS DUE TO CLEARING AND GRUBBING			-2200				-2200						2200			
ADDITIONAL UNDERCUT PER GEOTECHNICAL RECS					4500			4500		4500		5625	5625		4500	4500
PROJECT SUBTOTAL			**105191**		**34067**	**8360**	**96831**	**2506505**		**35760**	**2474280**	**3133136**	**3036305**	**0**	**42427**	**42427**
ESTIMATE 5% TO REPLACE TOPSOIL ON BORROW PIT													**151815**			
PROJECT TOTALS:			**105191**	**0**	**34067**								**3188120**	**0**	**42427**	**42427**
SAY:			**105,200**	**-**	**34,100**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**3,188,150**	**-**	**42,500**	**42,500**

* EARTHWORK QUANTITIES ARE CALCULATED BY THE ROADWAY DESIGN UNIT. THESE EARTHWORK QUANTITIES ARE BASED IN PART ON SUBSURFACE DATA PROVIDED BY THE GEOTECHNICAL ENGINEERING UNIT.

DRAINAGE DITCH EXCAVATION = 16,700 CY
PAVEMENT STRUCTURE VOLUME = 16,931 CY
FOR -L-, -Y24RPB-, -Y24RPC-, -Y10-, -SVRD1-, -SVRD3-, -SVRD5-



DATUM DESCRIPTION
THE LOCALIZED COORDINATE SYSTEM DEVELOPED FOR THIS PROJECT IS BASED ON THE STATE PLANE COORDINATES ESTABLISHED BY NCDOT FOR MONUMENT "R2719B-A"
WITH NAD 83 STATE PLANE GRID COORDINATES OF NORTHING: 570474.9253(ft) EASTING: 2402840.1615(ft)
THE AVERAGE COMBINED GRID FACTOR USED ON THIS PROJECT (GROUND TO GRID) IS: 0.99987452O
THE N.C. LAMBERT GRID BEARING AND LOCALIZED HORIZONTAL GROUND DISTANCE FROM "R2719B-A" TO -L- STATION 50+30.88 IS 18,056.2450 FT S 24° 55' 15.2" W
ALL LINEAR DIMENSIONS ARE LOCALIZED HORIZONTAL DISTANCES
VERTICAL DATUM USED IS NGVD 29
NOTE: FOR -Y1- PROFILE, SEE SHEETS 54 & 55
FOR -Y1RPCA- PROFILE, SEE SHEETS 64 & 65
FOR -Y1LPC- PROFILE, SEE SHEETS 67 & 68
FOR -L- PROFILE, SEE SHEETS 37 & 38
NC GRID NAD 83
-Y1- CURVE DATA
-Y1LPC- CURVE DATA
-Y1RPCA- CURVE DATA
-L- CURVE DATA
-Y1RPB- CURVE DATA
PROJECT REFERENCE NO. R-2719A
SHEET NO. 4
R/W SHEET NO. 4
ROADWAY DESIGN ENGINEER
HYDRAULICS ENGINEER
INCOMPLETE PLANS
PRELIMINARY PLANS
GRAPHIC SCALE
PLANS
Prepared by URS
URS Corporation – North Carolina
1600 Perimeter Park Drive
Morrisville, North Carolina 27560
MATCH LINE -Y1RPCA- STA. 48+00 SEE SHEET 26
MATCH LINE -Y1- STA. 59+00 SEE SHEET 26
MATCH LINE -Y1RPB- STA. 25+00 SEE SHEET 26
MATCH LINE -L- STA. 70+00 SEE SHEET 6
MATCH LINE -Y1RPCA- STA. 34+00 SEE SHEET 5
MATCH LINE -Y1- STA. 72+00 SEE SHEET 5
BEGIN STATE PROJECT R-2719A
-L- Sta. 50+30.88
A
B
C
REMOVE PAVEMENT
360' TAPER (LANE SHIFT & LANE REDUCTION TAPER)
360' TAPER (LANE SHIFT AND SHOULDER TAPERS (2))
R-2719A (L)/US 70 (Y1) TRAFFIC DIAGRAM
SKETCH SHOWING ROADWAY APPROACHING BRIDGE
TO BE DEVELOPED FOR PFI PLANS
REVISIONS


NOTE: FOR -Y1- PROFILE, SEE SHEET 55
FOR -Y1RPA- PROFILE, SEE SHEETS 58 & 59
FOR -Y1RPCA- PROFILE, SEE SHEETS 62 - 64
PROJECT REFERENCE NO. R-2719A
SHEET NO. 5
RW SHEET NO. 5
ROADWAY DESIGN ENGINEER
HYDRAULICS ENGINEER
INCOMPLETE PLANS
PRELIMINARY PLANS
GRAPHIC SCALE
PLANS
Prepared by
URS
URS Corporation - North Carolina
1600 Perimeter Park Drive
Morrisville, North Carolina 27560
NC GRID NAD 83
MATCH LINE -Y1RPCA- STA.34+00 SEE SHEET 4
MATCH LINE -Y1- STA.72+00 SEE SHEET 4
MATCH LINE -Y1RPCA- STA.8+50 - SEE SHEET 6
MATCH LINE -Y1- STA.87+00 SEE SHEET 27
BREAK LINE - SEE SHEET 34
REMOVE PAVEMENT
300' TAPER
-Y1RPCA- CS Sta. 8+80.68
-Y1RPCA- ST Sta. 10+80.68
-Y1RPA- SC Sta. 8+00.30
-Y1RPA- TS Sta. 6+00.30
-Y1RPA- CS Sta. 11+16.55
-Y1RPA- ST Sta. 13+16.55
SKETCH SHOWING ROADWAY APPROACHING BRIDGE
TO BE DEVELOPED FOR PFI PLANS
R-2719A (L)/US 70 (Y1)
TRAFFIC DIAGRAM
2007
2027
20400
38200
17900
28400
4700
7600
-Y1-
46500
64500
33400
43400
REVISIONS

-L- CURVE DATA	-YIRPB- CURVE DATA	-YIRPCA- CURVE DATA	
PI Sta 78+80.01	PIs Sta 0+66.67	PIs Sta 1+16.20	PI Sta 5+49.77
Δ = 40° 36' 26.1" (RT)	θs = 1° 36' 55.2"	θs = 6°26'23.1" (LT)	Δ = 32° 30' 00.0" (LT)
D = 1° 38' 13.3"	Ls = 200.00'	Ls = 200.00'	D = 4° 46' 28.7"
L = 2,480.56'	LT = 133.34'	ST = 84.00'	L = 680.68'
T = 1,294.94'	ST = 66.67'	LT = 116.20'	T = 349.77'
R = 3,500.00'		Δ1 = 13°50.7"	R = 1,200.00'
e = 6%		Δ2 = 4°46'32.3"	e = 8%
		R1 = 3,441.00'	
		R2 = 1,200.00'	

NOTE: FOR -L- PROFILE, SEE SHEETS 38 & 39
FOR -YIRPB- PROFILE, SEE SHEET 60
FOR -YIRPCA- PROFILE, SEE SHEET 62

GRAPHIC SCALE
50 25 0 50 100
PLANS

Prepared by
URS
URS Corporation – North Carolina
1600 Perimeter Park Drive
Morrisville, North Carolina 27560
TELEPHONE (919) 461-1100 FAX (919) 461-1415

PROJECT REFERENCE NO.	SHEET NO.
R-2719A	6
R/W SHEET NO.	6
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

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

NC GRID NAD 83

-YIRPB- ST Sta. 2+00.00

-YIRPB- CS Sta. 0+00.00=
L POC Sta.74+38.91 (47' LT)

-BL-6 PINC 45+45.88

(33) FALLING CREEK FARMS INC.
DB 924 - PG 406
WILL FILE 88-E124
SECOND TRACT

S 15° 12' 23.3" W

-BL- N 12° 02' 17.4" E

-BL- N 28° 33' 00.3" E

-L-

-YIRPB-

-YIRPCA-

50/1 TAPER

VAR PS

SCRUB

-YIRPCA- SCSta. 2+00.00

-YIRPCA- CS Sta.0+00.00=
L POC Sta.79+11.31 (59' RT)

MATCH LINE -L- STA.70+00 - SEE SHEET 4

MATCH LINE -L- STA.82+00 - SEE SHEET 7

MATCH LINE -YIRPCA- STA.8+50 - SEE SHEET 5

REVISIONS

8/17/99

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kbmiller AT GE122488

PROJECT REFERENCE NO.	SHEET NO.
R-2719A	7
R/W SHEET NO.	7
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION

PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION

Prepared by URS

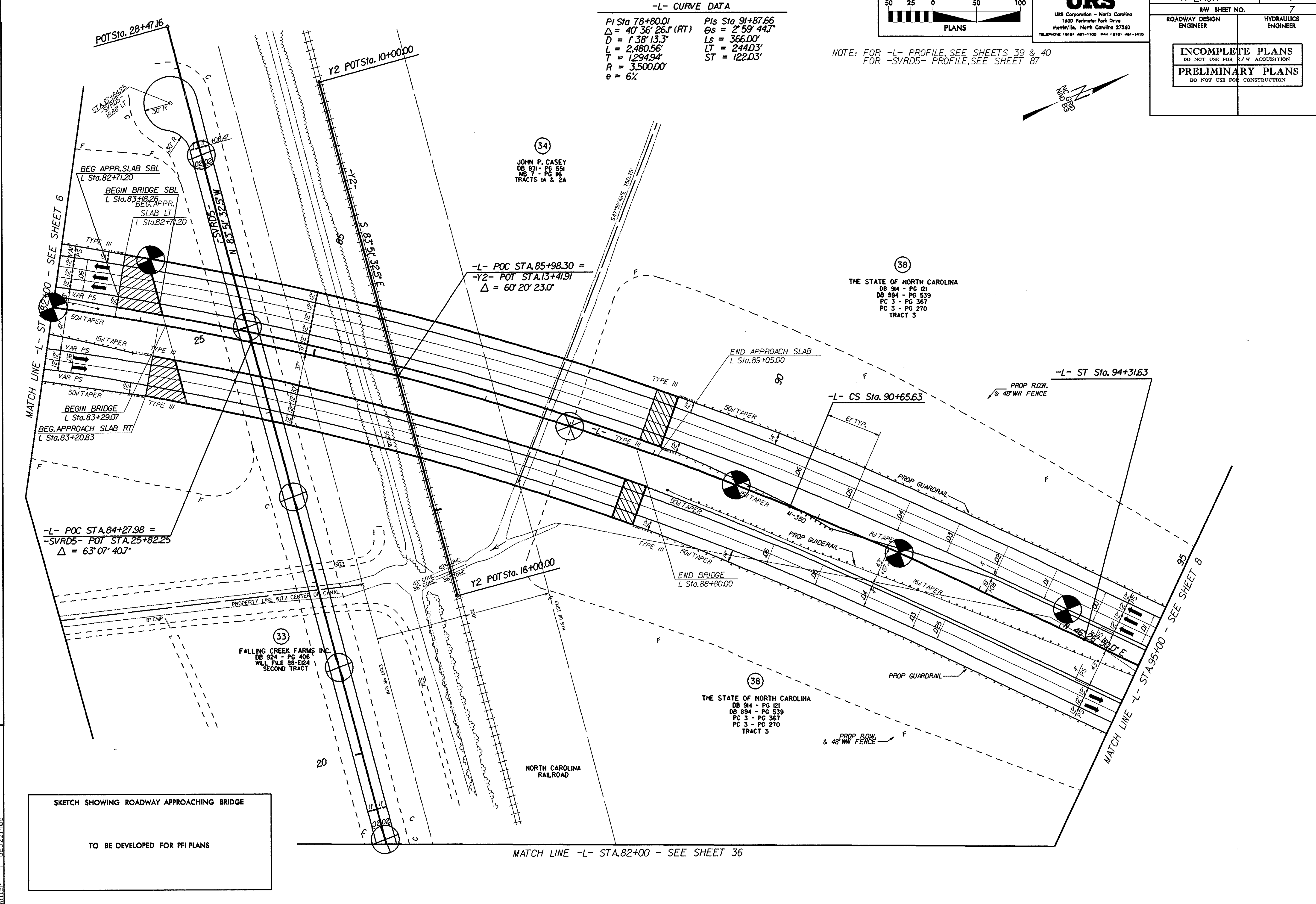
URS Corporation – North Carolina
1600 Perimeter Park Drive
Morrisville, North Carolina 27560
TELEPHONE (919) 461-1100 FAX (919) 461-1415

GRAPHIC SCALE 50 25 0 50 100 PLANS

-L- CURVE DATA

PI Sta 78+80.01	PIs Sta 91+87.66
Δ = 40° 36′ 26.1″ (RT)	θs = 2° 59′ 44.7″
D = 1° 38′ 13.3″	Ls = 366.00′
L = 2,480.56′	LT = 244.03′
T = 1,294.94′	ST = 122.03′
R = 3,500.00′	
e = 6%	

NOTE: FOR -L- PROFILE, SEE SHEETS 39 & 40
FOR -SVRD5- PROFILE, SEE SHEET 87



SKETCH SHOWING ROADWAY APPROACHING BRIDGE

TO BE DEVELOPED FOR PFI PLANS

REVISIONS

8/17/99

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kbmiller AT GE12221408

NOTE: FOR -L- PROFILE, SEE SHEETS 40 & 41

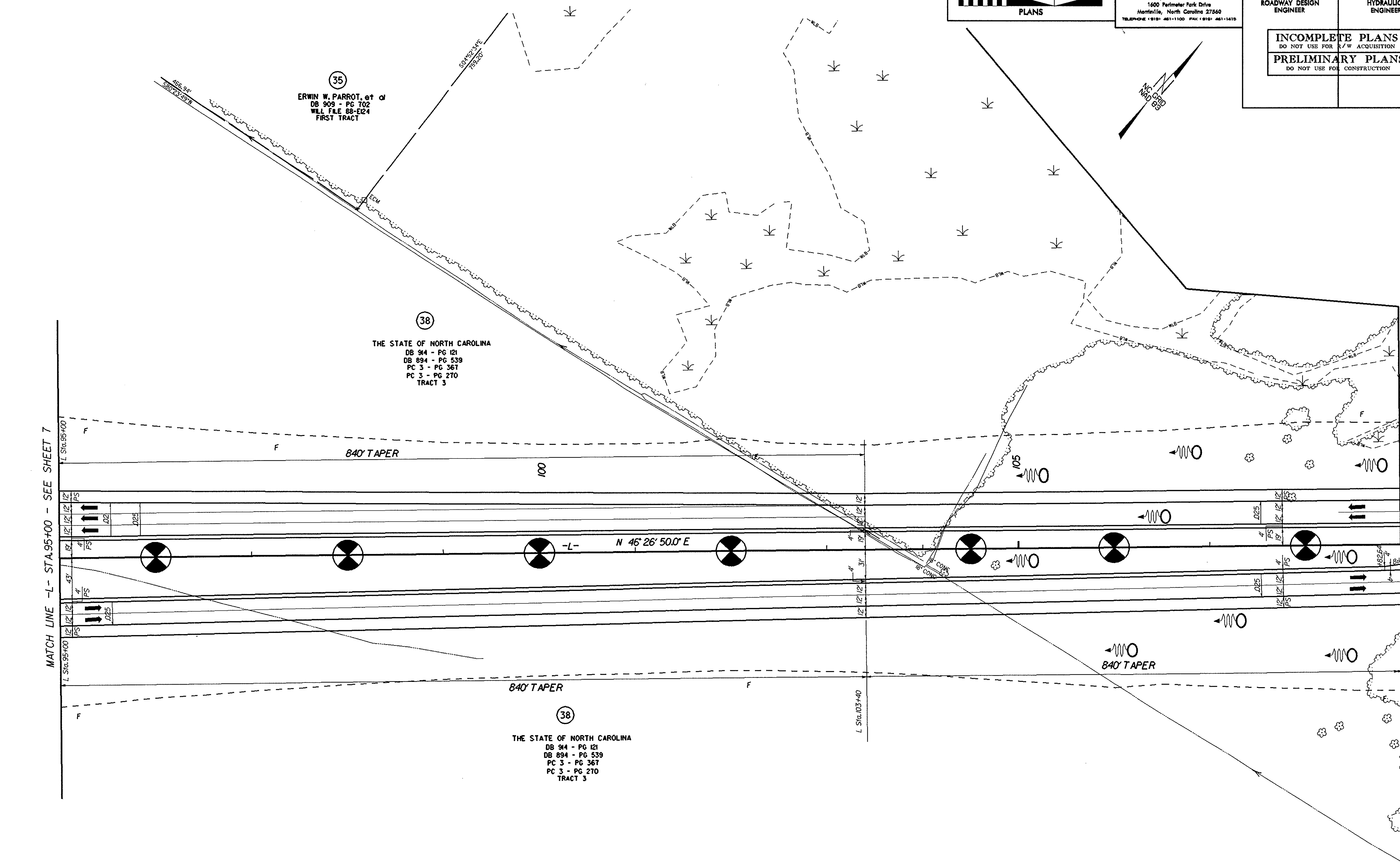
PROJECT REFERENCE NO.	SHEET NO.
R-2719A	8
R/W SHEET NO.	8

ROADWAY DESIGN ENGINEER | HYDRAULICS ENGINEER

INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION

PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION

Prepared by URS
URS Corporation – North Carolina
1600 Perimeter Park Drive
Morrisville, North Carolina 27560
TELEPHONE (919) 461-1100 FAX (919) 461-1415



REVISIONS

8/17/99

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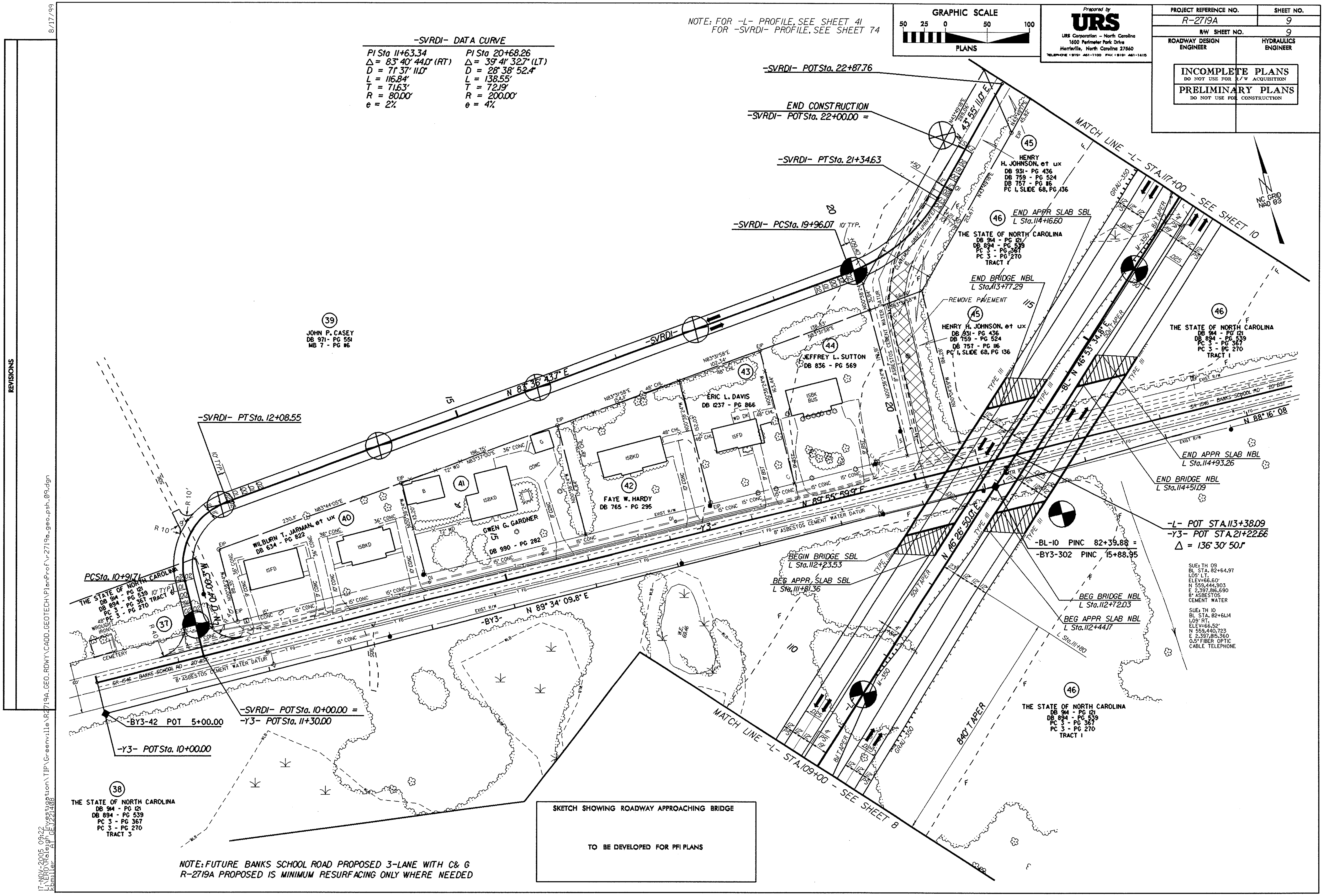


NOTE: FOR -L- PROFILE, SEE SHEET 41
FOR -SVRDI- PROFILE, SEE SHEET 74
GRAPHIC SCALE
50 25 0 50 100
PLANS
Prepared by URS
URS Corporation - North Carolina
1600 Perimeter Park Drive
Morrisville, North Carolina 27560
PROJECT REFERENCE NO. R-2719A
SHEET NO. 9
R/W SHEET NO. 9
ROADWAY DESIGN ENGINEER
HYDRAULICS ENGINEER
INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION
PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION
-SVRDI- DATA CURVE
PI Sta 11+63.34
Δ = 83° 40' 44.0" (RT)
D = 71° 37' 11.0"
L = 116.84'
T = 71.63'
R = 80.00'
e = 2%
PI Sta 20+68.26
Δ = 39° 41' 32.7" (LT)
D = 28° 38' 52.4"
L = 138.55'
T = 72.19'
R = 200.00'
e = 4%
-SVRDI- POT Sta. 22+87.76
END CONSTRUCTION
-SVRDI- POT Sta. 22+00.00 =
-SVRDI- PT Sta. 21+34.63
-SVRDI- PC Sta. 19+96.07
-SVRDI- PT Sta. 12+08.55
PC Sta. 10+91.71
-SVRDI- POT Sta. 10+00.00 =
-Y3- POT Sta. 11+30.00
-BY3-42 POT 5+00.00
-Y3- POT Sta. 10+00.00
N 83° 36' 43.7" E
N 89° 55' 59.9" E
N 89° 34' 09.8" E
N 88° 16' 08
MATCH LINE -L- STA. 117+00 - SEE SHEET 10
MATCH LINE -L- STA. 109+00 - SEE SHEET 8
NC GRID NAD 83
HENRY H. JOHNSON, et ux
DB 931 - PG 436
DB 759 - PG 524
DB 757 - PG 116
PC 1, SLIDE 68, PG 136
THE STATE OF NORTH CAROLINA
DB 914 - PG 121
DB 894 - PG 539
PC 3 - PG 367
PC 3 - PG 270
TRACT 1
JOHN P. CASEY
DB 971 - PG 551
MB 7 - PG 116
JEFFREY L. SUTTON
DB 836 - PG 569
ERIC L. DAVIS
DB 1237 - PG 866
FAYE W. HARDY
DB 765 - PG 295
GWEN G. GARDNER
DB 990 - PG 282
WILBURN T. JARMAN, et ux
DB 634 - PG 822
THE STATE OF NORTH CAROLINA
TRACT 3
END APPR SLAB SBL
L Sta. 114+16.60
END BRIDGE NBL
L Sta. 113+77.29
END APPR SLAB NBL
L Sta. 114+93.26
END BRIDGE NBL
L Sta. 114+51.09
-L- POT STA. 113+38.09
-Y3- POT STA. 21+22.66
Δ = 136° 30' 50.1"
-BL-10 PINC 82+39.88 =
-BY3-302 PINC 15+88.95
BEGIN BRIDGE SBL
L Sta. 112+23.53
BEG APPR SLAB SBL
L Sta. 111+81.36
BEG BRIDGE NBL
L Sta. 112+72.03
BEG APPR SLAB NBL
L Sta. 112+44.17
SUE: TH 09
BL STA. 82+64.97
1.05' LT.
ELEV=66.60'
N 559,444.903
E 2,397,816.690
8" ASBESTOS CEMENT WATER
SUE: TH 10
BL STA. 82+61.14
1.09' RT.
ELEV=66.52'
N 559,440.723
E 2,397,815.360
0.5" FIBER OPTIC CABLE TELEPHONE
REMOVE PAVEMENT
SR-1546 - BANKS SCHOOL RD
8" ASBESTOS CEMENT WATER DATUR
CEMETERY
840' TAPER
SKETCH SHOWING ROADWAY APPROACHING BRIDGE
TO BE DEVELOPED FOR PFI PLANS
NOTE: FUTURE BANKS SCHOOL ROAD PROPOSED 3-LANE WITH C& G
R-2719A PROPOSED IS MINIMUM RESURFACING ONLY WHERE NEEDED
REVISIONS
8/17/99
17-NOV-2005 09:22
kbmiller AT OEJ221408

8/17/99

REVISIONS

PROJECT REFERENCE NO.	SHEET NO.
R-2719A	10
R/W SHEET NO.	10
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

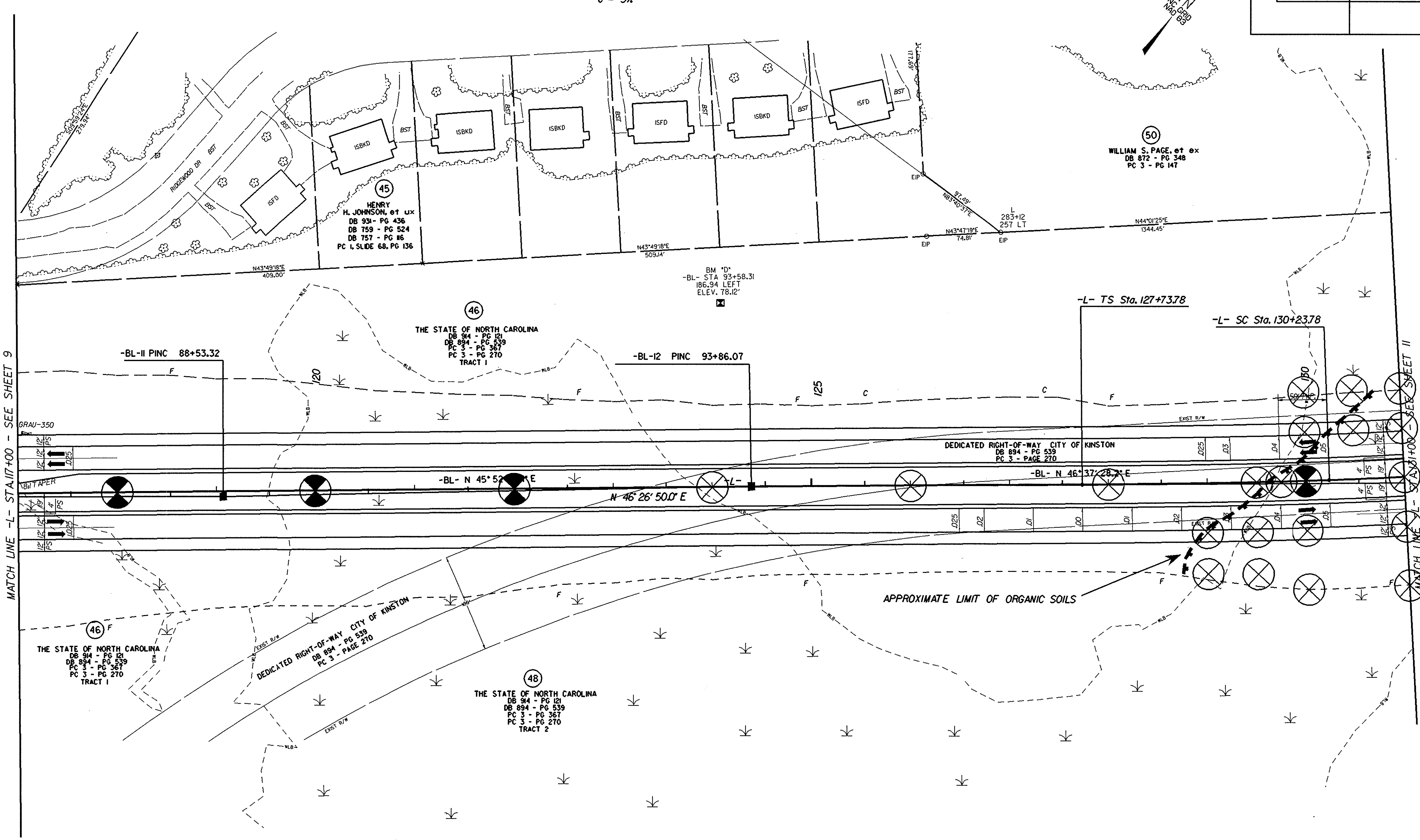
Prepared by
URS
URS Corporation – North Carolina
1600 Perimeter Park Drive
Morrisville, North Carolina 27560
TELEPHONE (919) 461-1100 FAX (919) 461-1415

GRAPHIC SCALE
50 25 0 50 100
PLANS

NOTE: FOR -L- PROFILE, SEE SHEET 42

-L- CURVE DATA

PIs Sta 129+40.45	PI Sta 151+30.46
Θs = 1° 30′ 28.0″	Δ = 47° 50′ 08.7″ (LT)
Ls = 250.00′	D = 1° 12′ 22.4″
LT = 166.67′	L = 3,965.73′
ST = 83.34′	T = 2106.68′
	R = 4,750.00′
	e = 5%



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kbmiller AT DEJ221408

PROJECT REFERENCE NO.	SHEET NO.
R-2719A	11
R/W SHEET NO.	11
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

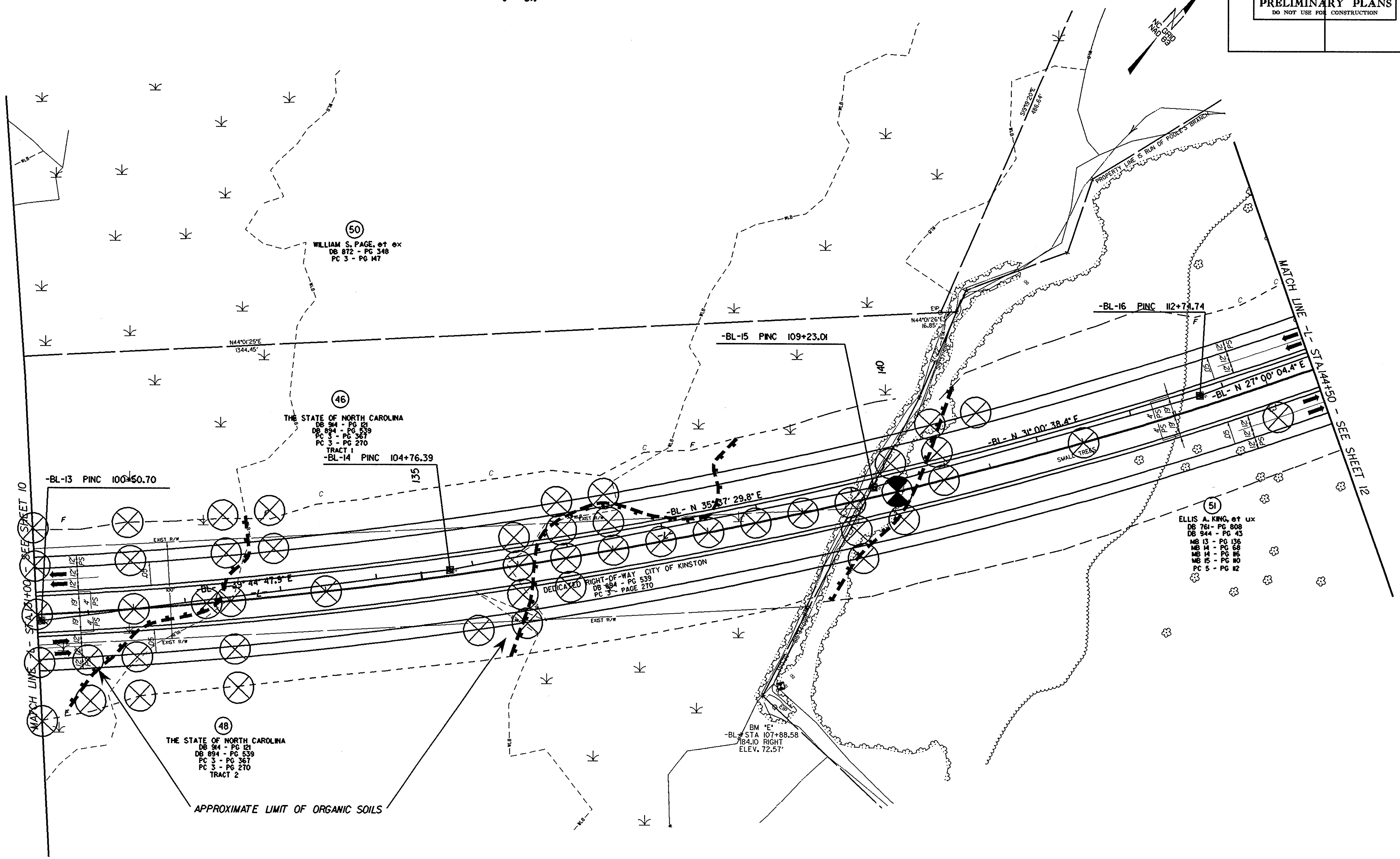
PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

Prepared by
URS
URS Corporation - North Carolina
1600 Perimeter Park Drive
Morrisville, North Carolina 27560
TELEPHONE (919) 461-1100 FAX (919) 461-1415

GRAPHIC SCALE
50 25 0 50 100
PLANS

-L- CURVE DATA
PI Sta 151+30.46
Δ = 47° 50' 08.7" (LT)
D = 1° 12' 22.4"
L = 3,965.73'
T = 2106.68'
R = 4750.00'
e = 5%

NOTE: FOR -L- PROFILE, SEE SHEET 43



REVISIONS

8/17/99

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kbmiller AT GEJ221408

NOTE: FOR -L- PROFILE, SEE SHEETS 43 & 44

GRAPHIC SCALE
50 25 0 50 100
PLANS

Prepared by
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1600 Perimeter Park Drive
Morrisville, North Carolina 27560
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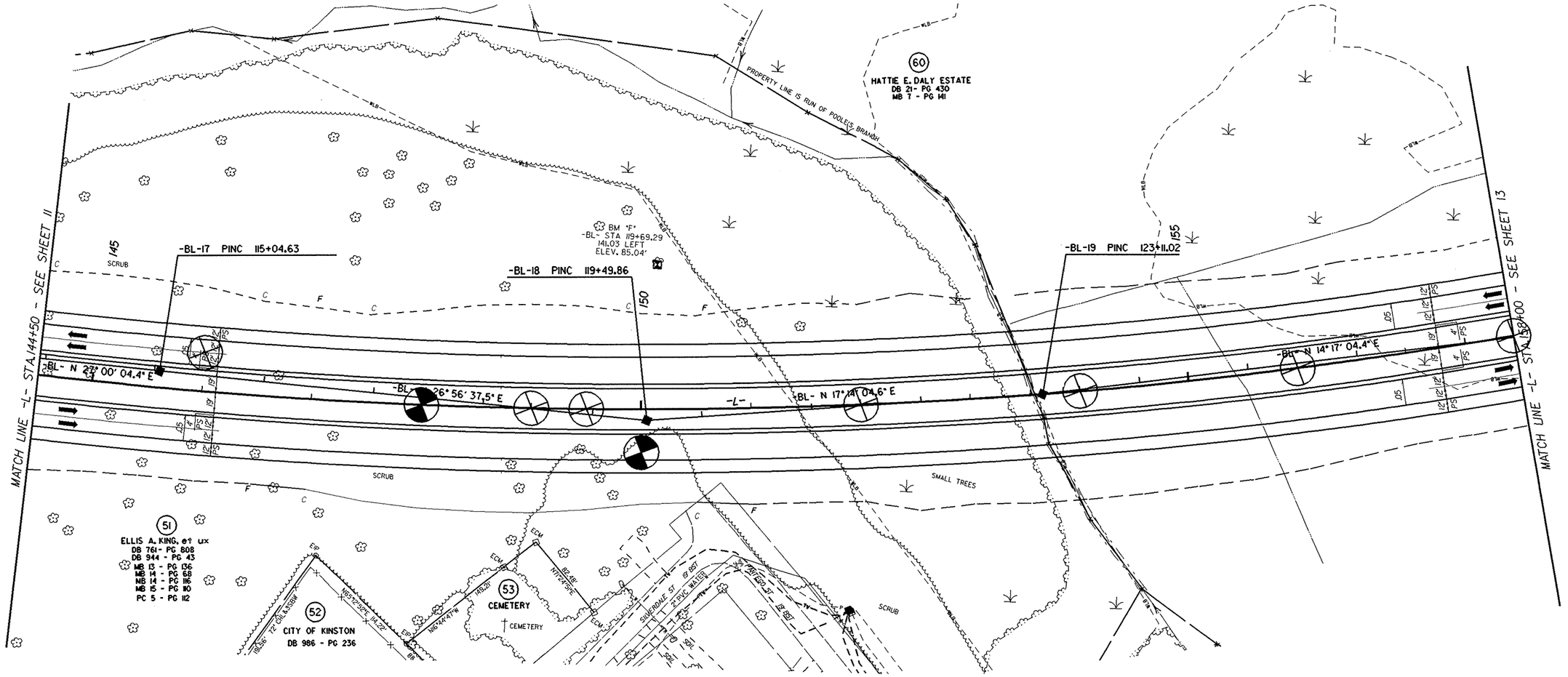
PROJECT REFERENCE NO.	SHEET NO.
R-2719A	12
R/W SHEET NO.	12
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

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

NC GRID NAD 83/99

REVISIONS
8/17/99



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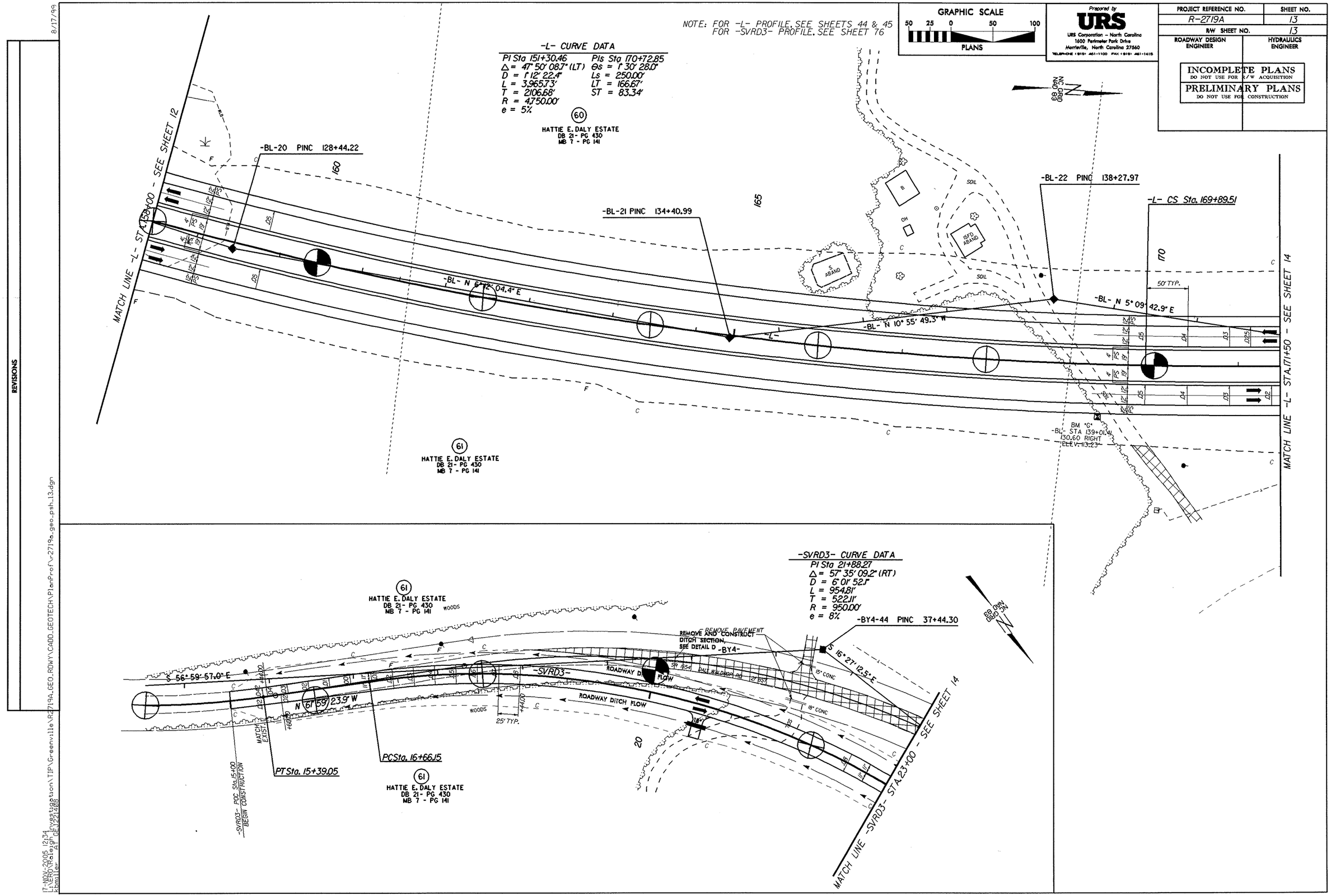
Compiler ejf 08/22/2005


NOTE: FOR -L- PROFILE, SEE SHEETS 44 & 45
FOR -SVRD3- PROFILE, SEE SHEET 76
GRAPHIC SCALE
50 25 0 50 100
PLANS
Prepared by
URS
URS Corporation - North Carolina
1600 Perimeter Park Drive
Morrisville, North Carolina 27560
TELEPHONE (919) 461-1100 FAX (919) 461-1415
PROJECT REFERENCE NO.
R-2719A
SHEET NO.
13
RW SHEET NO.
13
ROADWAY DESIGN ENGINEER
HYDRAULICS ENGINEER
INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION
PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION
REVISIONS
8/17/99
-L- CURVE DATA
PI Sta 151+30.46
Δ = 41° 50' 08.7" (LT)
D = 1° 12' 22.4"
L = 3,965.73'
T = 2106.68'
R = 4,750.00'
e = 5%
PI Sta 170+72.85
θs = 1° 30' 28.0"
Ls = 250.00'
LT = 166.67'
ST = 83.34'
-BL-20 PINC 128+44.22
-BL-21 PINC 134+40.99
-BL-22 PINC 138+27.97
-L- CS Sta. 169+89.51
-BL- N 6° 12' 04.4" E
-BL- N 10° 55' 49.3" W
-BL- N 5° 09' 42.9" E
50' TYP.
MATCH LINE -L- STA. 138+00 - SEE SHEET 12
MATCH LINE -L- STA. 171+50 - SEE SHEET 14
60
HATTIE E. DALY ESTATE
DB 21- PG 430
MB 7 - PG 141
61
HATTIE E. DALY ESTATE
DB 21- PG 430
MB 7 - PG 141
BM "G"
-BL- STA 139+01.41
130.60 RIGHT
ELEV.= 113.23'
NAD 83
SOIL
ISFD
ABAND
OH
-SVRD3- CURVE DATA
PI Sta 21+88.27
Δ = 57° 35' 09.2" (RT)
D = 6° 01' 52.1"
L = 954.81'
T = 522.11'
R = 950.00'
e = 8%
-BY4-44 PINC 37+44.30
S 16° 27' 12.5" E
S 56° 59' 57.0" E
N 61° 59' 23.9" W
-SVRD3-
REMOVE PAVEMENT
REMOVE AND CONSTRUCT
DITCH SECTION,
SEE DETAIL D -BY4-
ROADWAY DITCH FLOW
WOODS
25' TYP.
PT Sta. 15+39.05
PC Sta. 16+66.15
-SVRD3- POC Sta.15+00
-SVRD3- BEGIN CONSTRUCTION
MATCH EXIST.
15" CONC
18" CONC
MATCH LINE -SVRD3- STA.23+00 - SEE SHEET 14
17-NOV-2005 12:34
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khmiller
GE122108

-L- CURVE DATA	-SVRD3- CURVE DATA
PIs Sta 170+72.85	PI Sta 21+88.27
θs = 1° 30' 28.0"	Δ = 57° 35' 09.2" (RT)
Ls = 250.00'	D = 6° 01' 52.1"
LT = 166.67'	L = 954.81'
ST = 83.34'	T = 522.11'
	R = 950.00'
	e = 8%

NOTE: FOR -L- PROFILE, SEE SHEETS 45 & 46
FOR -SVRD3- PROFILE, SEE SHEET 76
FOR -SVRD4- PROFILE, SEE SHEET 78

GRAPHIC SCALE
50 25 0 50 100
PLANS

Prepared by
URS
URS Corporation – North Carolina
1600 Perimeter Park Drive
Morrisville, North Carolina 27560
TELEPHONE (919) 461-1100 FAX (919) 461-1415

PROJECT REFERENCE NO.	SHEET NO.
R-2719A	14
R/W SHEET NO.	14
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

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

NC GRID NAD 83

REVISIONS
8/17/99

(60)
HATTIE E. DALY ESTATE
DB 21 - PG 430
MB 7 - PG 141

(62)
NINA L. HILL
DB 22 - PG 249
MB 16 - PG 10

-SVRD4- POT Sta. 18+94.44
19' RT

-BY4-214 PINC 22+81.12
R2719A-14 GPS

-SVRD4- POT Sta. 21+44.44

S 4° 24' 14.3" E

-L- ST Sta. 172+39.51

-BL-23 PINC 143+23.25

-BL-24 PINC 149+08.31 =
-BY4-303 PINC 28+42.42

REMOVE PAVEMENT

S 15° 54' 25.0" E

N 4° 24' 14.7" W

-L-

-BL- N 4° 25' 11.1" W

SR 1554 DALY WALDROP RD 21' BST

S 16° 27' 12.5" E

-SVRD3-

N 4° 24' 14.7" W

(61)
HATTIE E. DALY ESTATE
DB 21 - PG 430
MB 7 - PG 141

-SVRD3- PT Sta. 26+20.96

MATCH LINE -L- STA.171+50 - SEE SHEET 13

MATCH LINE -L- STA.185+50 - SEE SHEET 15

MATCH LINE -SVRD3- STA.23+00 - SEE SHEET 13

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kbmiller
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Plan GE1221488

8/17/99

REVISIONS

-SVRD4- CURVE DATA
PI Sta 15+38.34
Δ = 11° 11' 22.0" (RT)
D = 2° 51' 53.2"
L = 390.59'
T = 195.92'
R = 2,000.00'
e = 2%

NOTE: FOR -L- PROFILE, SEE SHEETS 46 & 47
FOR -SVRD3- PROFILE, SEE SHEETS 76 & 77
FOR -SVRD4- PROFILE, SEE SHEET 78

GRAPHIC SCALE
50 25 0 50 100
PLANS

Prepared by
URS
URS Corporation – North Carolina
1600 Perimeter Park Drive
Morrisville, North Carolina 27560
TELEPHONE (919) 461-1100 FAX (919) 461-1415

PROJECT REFERENCE NO.	SHEET NO.
R-2719A	15
R/W SHEET NO.	15
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

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

-SVRD4- PT Sta. 17+33.01
-SVRD4- PC Sta. 13+42.43
-SVRD4- POT Sta. 10+00.00
-SVRD4- POT Sta. 11+50 BEGIN CONSTRUCTION
-SVRD4- S 15° 35' 36.8" E
-EY4-
-L- N 4° 24' 14.7" W
-SVRD3- N 4° 24' 14.7" W
-SVRD3- POT Sta. 39+65.00 19' RT
-SVRD3- POT Sta. 42+30.94
S 4° 24' 14.7" E
SR 1554 DALY WALDROP RD. (SR 1554)
PROPERTY LINE RUNS WITH DITCH
REMOVE PAVEMENT
EXIST R/W
EXISTING R/W
60'
SOIL
15" CONC
NC GRID NAD 83

63 NINA L. HILL
DB 212 - PG 249
MB 16 - PG 10

64 CHARLIE GRANT, et ux
DB 219 - PG 34
ESTATE FILE 90 E 320
MB 16 - PG 10

65 CHARLIE GRANT, et ux
DB 219 - PG 34
ESTATE FILE 90 E 320
MB 16 - PG 10

66 NINA L. HILL
DB 241 - PG 72
MB 16 - PG 10

67 NINA L. HILL
DB 241 - PG 72
MB 16 - PG 10

61 HATTIE E. DALY ESTATE
DB 21 - PG 430
MB 7 - PG 141

MATCH LINE -L- STA.185+50 - SEE SHEET 14

MATCH LINE -L- STA.199+50 - SEE SHEET 16

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PROJECT REFERENCE NO.	SHEET NO.
R-2719A	16
R/W SHEET NO.	16
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

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1600 Perimeter Park Drive
Morrisville, North Carolina 27560

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

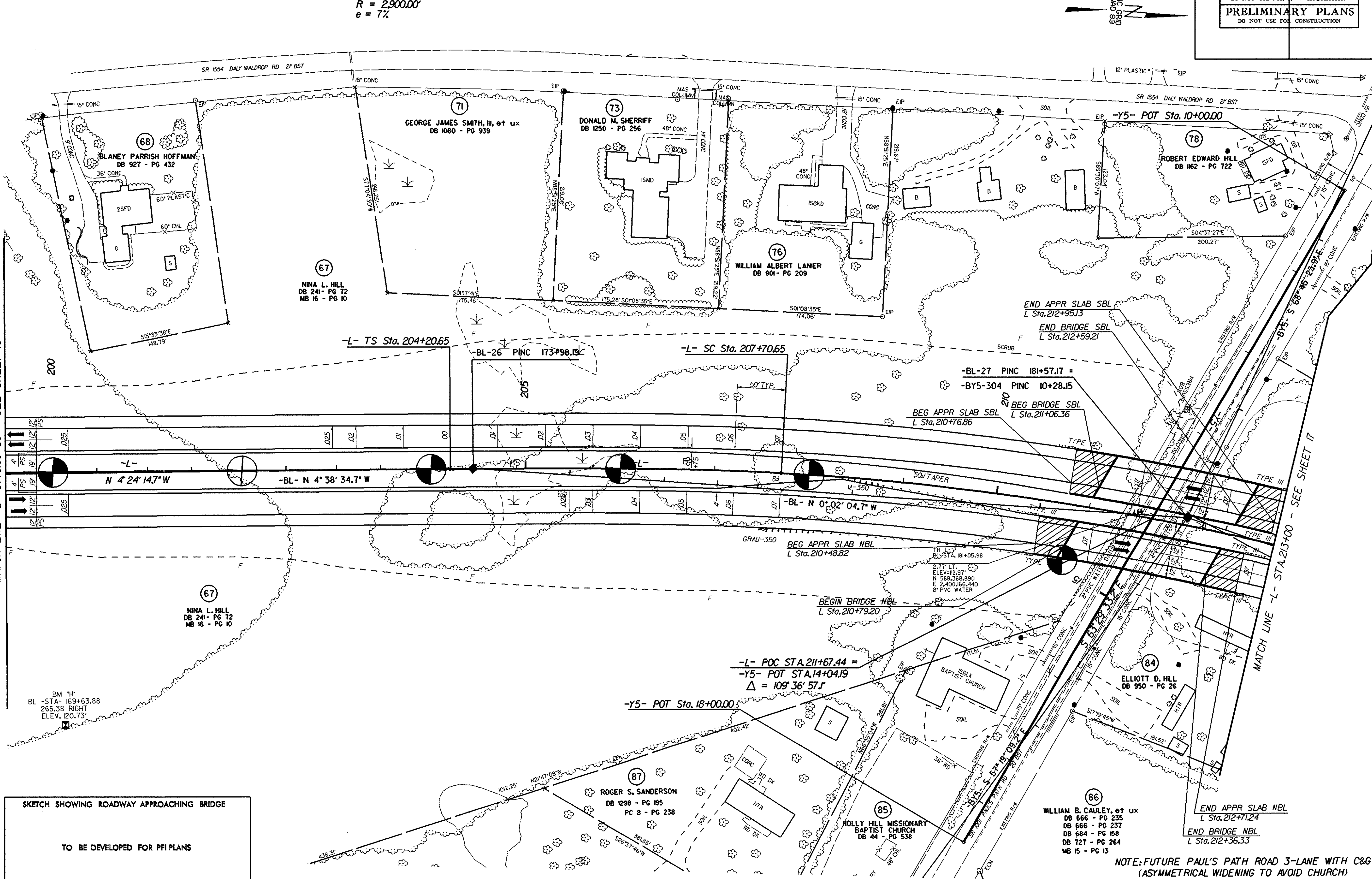
PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

GRAPHIC SCALE
50 25 0 50 100
PLANS

NOTE: FOR -L- PROFILE, SEE SHEETS 47 & 48

-L- CURVE DATA

PIs Sta 206+54.03	PI Sta 224+97.17
Θs = 3° 27' 27.0"	Δ = 61° 32' 05.9" (RT)
Ls = 350.00'	D = 1° 58' 32.6"
LT = 233.38'	L = 3,114.56'
ST = 116.71'	T = 1,726.52'
	R = 2,900.00'
	e = 7%



SKETCH SHOWING ROADWAY APPROACHING BRIDGE

TO BE DEVELOPED FOR PFI PLANS

NOTE: FUTURE PAUL'S PATH ROAD 3-LANE WITH C&G (ASYMMETRICAL WIDENING TO AVOID CHURCH) R-2719A PROPOSED IS MINIMUM RESURFACING ONLY WHERE NEEDED

REVISIONS

8/17/99

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kbmiller AT QEJ221408

NOTE: FOR -L- PROFILE, SEE SHEETS 48 & 49

GRAPHIC SCALE
50 25 0 50 100
PLANS

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PROJECT REFERENCE NO.	SHEET NO.
R-2719A	17
R/W SHEET NO.	17
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

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

-L- CURVE DATA
PI Sta 224+97.11
Δ = 6° 32' 05.9" (RT)
D = 1° 58' 32.6"
L = 3,114.56'
T = 1,726.52'
R = 2,900.00'
e = 7%

NC GRID NAD 83

REVISIONS
8/17/99

82 LEON H. CASH
DB 1019 - PG 911

83 NINA HILL
DB 212 - PG 249
DB 433 - PG 12
DB 950 - PG 29

84 ELLIOTT D. HILL
DB 950 - PG 26

86 WILLIAM B. CAULEY, et ux
DB 666 - PG 235
DB 666 - PG 237
DB 684 - PG 158
DB 727 - PG 264
MB 15 - PG 13

-BL-28 PINC 188+25.95

-BL- N 14° 18' 47.2" E

-BL- N 28° 31' 47.3" E

-L-

MATCH LINE -L- STA. 213+00 - SEE SHEET 16

MATCH LINE -L- STA. 236+00 - SEE SHEET 18

300' TAPER

GRAU-350

M-350

ISFD

WD DK

SOIL

215

220

225

[7-NOV-2005 13:37]
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kbmiller

8/17/99

REVISIONS

-L- CURVE DATA

PI Sta 224+97.17
Δ = 6° 32' 05.9" (RT)
D = 1° 58' 32.6"
L = 3,114.56'
T = 1,726.52'
R = 2,900.00'
e = 7%

PIs Sta 240+01.92
θs = 3° 27' 27.0"
Ls = 350.00'
LT = 233.38'
ST = 116.71'

-Y24RPB- CURVE DATA

PIs Sta 0+70.01
θs = 2°02'29.1"
Ls = 210.00'
LT = 140.01'
ST = 70.01'

PIs Sta 5+95.85
θs = 4° 35' 01.2"
Ls = 240.00'
LT = 160.05'
ST = 80.05'

PI Sta 8+30.75
Δ = 11° 47' 45.0" (LT)
D = 3° 49' 11.0"
L = 308.81'
T = 154.95'
R = 1,500.00'
e = 8%

-Y24RPC- CURVE DATA

PIs Sta 1+13.65
θs = 6°45'47.2"
Ls = 200.00'
ST = 86.57'
LT = 113.65'
Δ1 = 2°00'29.8"
Δ2 = 4°45'17.4"
R1 = 2,853.00'
R2 = 1,205.00'

PI Sta 7+15.43
Δ = 46°19'00.7" (RT)
D = 4°45' 17.4"
L = 974.10'
T = 515.43'
R = 1,205.00'
e = 8%

PIs Sta 12+67.55
θs = 6°39' 24.4"
Ls = 280.00'
LT = 186.80'
ST = 93.45'

NOTE: FOR -L- PROFILE, SEE SHEETS 49 & 50
FOR -Y24RPB- PROFILE, SEE SHEET 82
FOR -Y24RPC- PROFILE, SEE SHEET 84

GRAPHIC SCALE
50 25 0 50 100
PLANS

Prepared by
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1600 Perimeter Park Drive
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PROJECT REFERENCE NO.	SHEET NO.
R-2719A	18
R/W SHEET NO.	18
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

NC GRID NAD 83

(97) WILLIAM H. ROUSE, et ux
DB 1069 - PG 543
PC 3 - PG 260

-BL-30 PINC 202+29.52

-Y24RPB- ST Sta. 2+10.00

-Y24RPB- TS Sta. 4+35.71

-Y24RPB- SC Sta. 6+75.71

-Y24RPB-

-L- CS Sta. 238+85.22

MATCH LINE -Y24RPB- STA 6+50 SEE SHEET 19

N65°09'45"E 3017.09'

BM "1"
-BL- STA 196+33.91
288.08 RIGHT
ELEV. 106.62'

-Y24RPB- CS Sta. 0+00.00 =
-L- POC Sta. 230+06.15 (47' LT)

(86) WILLIAM B. CAULEY, et ux
DB 666 - PG 235
DB 666 - PG 237
DB 684 - PG 158
DB 727 - PG 264
MB 15 - PG 13

N 45° 15' 42.7" E

-L-

-BL- N 56° 03' 53.7" E

300' TAPER

MATCH LINE -L- STA 228+00 - SEE SHEET 17

-BL- N 43° 13' 15.2" E

-BL-29 PINC 196+33.91

-Y24RPC- SC Sta. 2+00.00

(86) WILLIAM B. CAULEY, et ux
DB 666 - PG 235
DB 666 - PG 237
DB 684 - PG 158
DB 727 - PG 264
MB 15 - PG 13

-Y24RPC-

-BL-31 PINC 208+41.74

-Y24RPC- CS Sta. 11+74.10

MATCH LINE -Y24RPC- STA 11+86.64 SEE SHEET 19

MATCH LINE -L- STA 239+50 - SEE SHEET 19

CONC

2SBKD

48" WID

-Y24RPC- CS Sta. 0+00.00 =
-L- POC Sta. 227+08.60 (47' RT)

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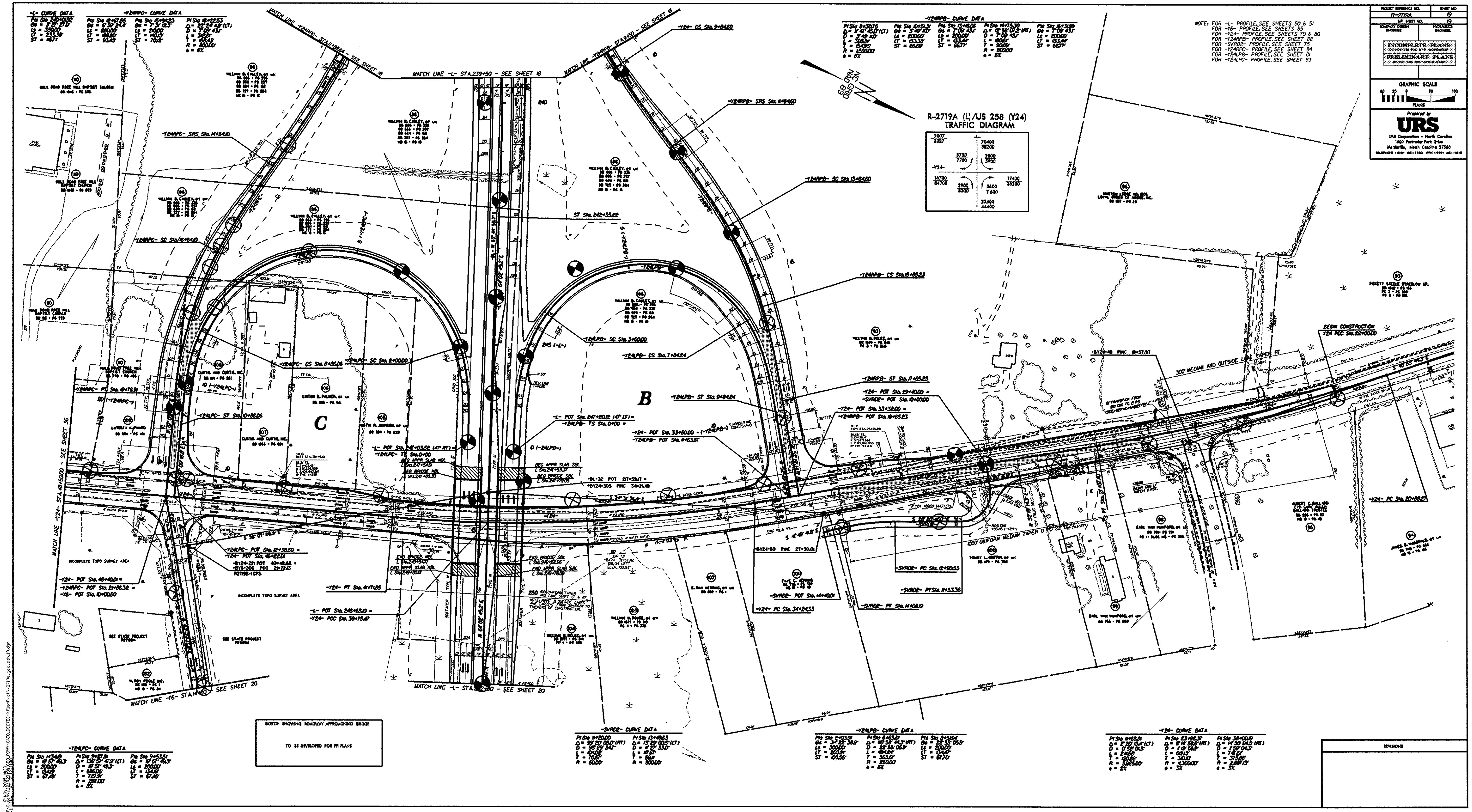

PROJECT REFERENCE NO. R-2719A
SHEET NO. 19
RW SHEET NO. 19
ROADWAY DESIGN ENGINEER
HYDRAULICS ENGINEER
INCOMPLETE PLANS
PRELIMINARY PLANS
GRAPHIC SCALE
PLANS
Prepared by
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URS Corporation – North Carolina
1600 Perimeter Park Drive
Morrisville, North Carolina 27560
NOTE: FOR -L- PROFILE, SEE SHEETS 50 & 51
FOR -Y6- PROFILE, SEE SHEETS 85
FOR -Y24- PROFILE, SEE SHEETS 79 & 80
FOR -Y24RPB- PROFILE, SEE SHEET 82
FOR -SVRD2- PROFILE, SEE SHEET 75
FOR -Y24RPC- PROFILE, SEE SHEET 84
FOR -Y24LPB- PROFILE, SEE SHEET 81
FOR -Y24LPC- PROFILE, SEE SHEET 83
R-2719A (L)/US 258 (Y24)
TRAFFIC DIAGRAM
2007
2027
-L-
-Y24-
20400
38200
3700
7700
2800
5900
16700
34700
17400
36200
3900
8200
5600
11600
23400
44400
NC GRID NAD 83
-Y24RPB- CURVE DATA
-L- CURVE DATA
-Y24RPC- CURVE DATA
-Y24LPC- CURVE DATA
-SVRD2- CURVE DATA
-Y24LPB- CURVE DATA
-Y24- CURVE DATA
MATCH LINE -L- STA.239+50 - SEE SHEET 18
MATCH LINE -L- - SEE SHEET 20
MATCH LINE -Y6- - SEE SHEET 20
MATCH LINE -Y24- - SEE SHEET 36
B
C
BEGIN CONSTRUCTION
300' MEDIAN AND OUTSIDE LANE TAPER
1000' UNIFORM MEDIAN TAPER
INCOMPLETE TOPO SURVEY AREA
SEE STATE PROJECT
SKETCH SHOWING ROADWAY APPROACHING BRIDGE
TO BE DEVELOPED FOR PFI PLANS
REVISIONS

NOTE: FOR -L- PROFILE, SEE SHEETS 51 & 52
FOR -Y6- PROFILE, SEE SHEET 85

GRAPHIC SCALE
50 25 0 50 100
PLANS

Prepared by
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PROJECT REFERENCE NO.	SHEET NO.
R-2719A	20
R/W SHEET NO.	20
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

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

NC GRID NAD 83

REVISIONS
8/17/99

MATCH LINE -L- STA 25+00 - SEE SHEET 19
MATCH LINE -L- STA 26+00 - SEE SHEET 21
MATCH LINE -Y6- STA 14+00 - SEE SHEET 19
MATCH LINE -Y6- STA 24+00 - SEE SHEET 21

-L- N 64°02'45.2" E
-Y6- S 64°41'13.6" W
-Y6- N 52°28'13.5" E
-BY6-222 PINC 11+05.18
GPS R2719B-1

EXISTING R/W
CRESCENT ROAD (R-2719BA)
24' BST
SR 1575 POOLE ROAD 22' BST
SOUTH PATCH
SEE STATE PROJECT R2719BA

(127) ROBERT A. BROW, et ux
DB 712 - PG 12
MB 19 - PG 34

(125) MORRIS L. THOMPSON, et ux
DB 948 - PG 149
MB 19 - PG 34

(123) RAYMOND E. JARMAN
DB 1035 - PG 204
MB 19 - PG 34

(121) DORIS T. HOFFMAN
DB 115 - PG 547
MB 19 - PG 34

(119) GARY J. KORNEGAY, et ux
DB 751 - PG 332
MB 19 - PG 34

(117) VICTOR D. TOODLE
DB 1244 - PG 369
MB 19 - PG 34

(114) THOMAS W. SUMNER, et ux
DB 729 - PG 171
MB 19 - PG 34

(129) JAMES D. ROUSE, et ux
DB 765 - PG 332
MB 19 - PG 34

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NOTE: FOR -L- PROFILE, SEE SHEET 52
FOR -Y6- PROFILE, SEE SHEET 85
FOR -DI- & -D2- PROFILE, SEE SHEET 86

GRAPHIC SCALE
50 25 0 50 100
PLANS

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PROJECT REFERENCE NO.	SHEET NO.
R-2719A	21
R/W SHEET NO.	21
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

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

NC GRID NAD 83

END CONSTRUCTION
END PROJECT
STATE PROJECT R-2719A
-L- POT Sta. 263+00.00

MATCH LINE -L- STA. 263+00 - SEE SHEET 20

-L- POT Sta. 265+68.01

-L- N 64° 02' 45.2" E

CRESCENT ROAD (R-2719BA)
24' BST

EXISTING R/W

MATCH LINE -DI- STA. 11+00 - SEE SHEET 22

-Y6- POT Sta. 34+00.00 =
BEGIN -DI- POT Sta. 10+00.00

OVERLAY EXIST CUL DE SAC PAVEMENT AFTER DETOUR IS REMOVED

SEE STATE PROJECT R2719BA

SR 1575 POOLE ROAD 22' BST

-Y6- N 52° 29' 13.5" E

EXISTING R/W

BEGIN -D2- PC Sta. 10+00.00 =
-DI- POT Sta. 10+42.27

-BY6- S 52° 32' 09.7" W

-BY6-66 PINC 5+00.00

MATCH LINE -Y6- STA. 24+00 - SEE SHEET 20

(113) SAMUEL A. PRINCE, et ux
DB 1132 - PG 551

(114) THOMAS W. SUMNER, et ux
DB 729 - PG 171
MB 19 - PG 34

(115) ANITA D. BRINSON
DB 887 - PG 51
MB 19 - PG 34

-D2- CURVE DATA
PI Sta 13+59.49
Δ = 39° 32' 45.6" (RT)
D = 5° 43' 46.5"
L = 690.21'
T = 359.49'
R = 1,000.00'
e = 5.1%

REVISIONS
8/17/99

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-D1- CURVE DATA	-D2- CURVE DATA
PI Sta 15+13.79	PI Sta 13+59.49
Δ = 39° 45' 06.6" (RT)	Δ = 39° 32' 45.6" (RT)
D = 5° 43' 46.5"	D = 5° 43' 46.5"
L = 693.80'	L = 690.21'
T = 361.52'	T = 359.49'
R = 1,000.00'	R = 1,000.00'
e = SEE PLANS	e = SEE PLANS
R.O. = SEE PLANS	R.O. = SEE PLANS

NOTE: FOR -D1- & -D2- PROFILE, SEE SHEET 86

GRAPHIC SCALE
50 25 0 50 100
PLANS

Prepared by
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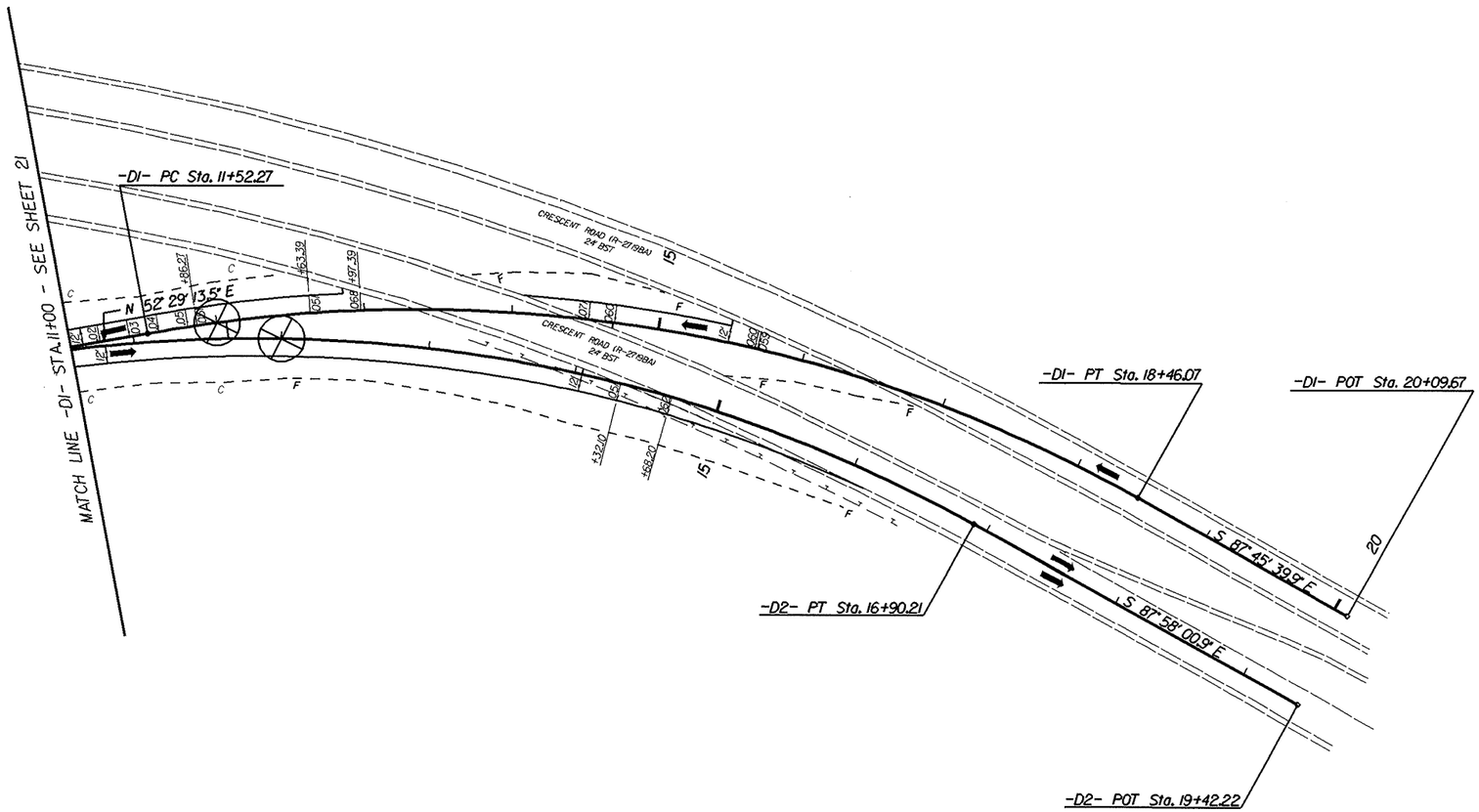
PROJECT REFERENCE NO.	SHEET NO.
R-2719A	22
R/W SHEET NO.	22
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

NC GRID NAD 83

REVISIONS 8/17/99



NOTE: WB TRAFFIC ON CRESCENT ROAD TO BE SHIFTED TO OUTSIDE LANE PRIOR TO DETOUR AS PART OF TRAFFIC CONTROL PLAN.

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kbmiller AT GEL221408

8/17/99

REVISIONS

NOTE: FOR -Y1- PROFILE, SEE SHEET 53
FOR -Y10- PROFILE, SEE SHEET 71

GRAPHIC SCALE
50 25 0 50 100
PLANS

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PROJECT REFERENCE NO.	SHEET NO.
R-2719A	23
R/W SHEET NO.	23
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

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

-Y10- CURVE DATA
PI Sta 15+59.87
Δ = 9°57'31.2" (RT)
D = 3°02'51.5"
L = 326.77'
T = 163.80'
R = 1,880.00'
e = 5.3%

-Y1- CURVE DATA
PIs Sta 23+18.69
Θs = 4°16'10.9"
Ls = 427.00'
LT = 284.75'
ST = 142.41'

MATCH LINE -Y10- STA. 15+00
SEE SHEET 36

300' UNIFORM TAPER RT

ADDITIONAL SURVEY NEEDED ALONG BANK SCHOOL ROAD

Y10 PC Sta. 13+96.07

NC GRID NAD 83

-BY-227 PINC 16+47.44
NCGS MON "TRINITY"

-Y10- POT Sta. 10+00.00 =
-Y1- POS Sta. 20+79.69

150 FT RT TURN TAPER

MATCH LINE -Y1- STA. 24+00
SEE SHEET 24

-Y1- TS Sta. 20+33.94

Y1 21+59.81
49.09 LT

-BY- N 75° 14' 12.7" E

-Y1- N 78° 09' 07.2" E

-BY- N 75° 14' 12.7" E

-Y1- N 78° 09' 07.2" E

-Y10- POT Sta. 10+00.00

-BY-210 POT 5+00.00
R2719A-10 GPS

PROPERTY LINE WITH RUN OF FALLING CREEK

FALLING CREEK

PROPERTY LINE WITH RUN OF FALLING CREEK

5 ERWIN W. PARROT, et al
DB 909 - PG 702
WILL FILE 88-E124
FOURTH TRACT

3 ERWIN W. PARROT, et al
DB 909 - PG 702
WILL FILE 88-E124
FIFTH TRACT

6 TRINITY UNITED METHODIST CHURCH
DB 11 - PG 254

8 FALLING CREEK FARMS INC.
DB 924 - PG 406
FIRST TRACT

4 BAPTIST CHILDREN'S HOME OF NORTH CAROLINA INC.
DB 800 - PG 258
PC 2, SLIDE 21, PG 41

7 EDWARD A. O'NEAL, et UX
DB 802 - PG 21
PC 2, SLIDE 21, PG 41

9 DSL ASSOCIATES LLC
DB 1103 - PG 664
PC 2, SLIDE 21, PG 41

2 JAMES L. DAUGHETY III
DB 1017 - PG 130
PC 2, SLIDE 21, PG 41

FELLOWSHIP HALL
ISBK TRINITY UNITED METHODIST CHURCH
ISBLK BUS
ISFD
ISMTL BUS
MTL CANOPY
SOIL
SCRUB
BANKS SCHOOL RD
SR 1324 KENNEDY HOME RD
US 70 WBL 24' BST
US 70 EBL 24' BST
EXISTING R/W
TIE TO EXISTING PARKING LOT PAVEMENT
VAR. DISTANCE TAPER TO EXISTING MATCH EXISTING AT BRIDGE (MILL AND TIE AT EXIST. ELEV.)
TYPE III
LT TURN TRANSITION
340.35' TRANSITION INSIDE WB SHOULDER
308.78' TRANSITION OUTSIDE WB SHOULDER
4" 200# PVC WATER DATUM
6" PVC WATER DATUM
8" WATER DATUM
16" DI WATER
30' TYP.
61' TYP.
SR 1559 EASON RD
72" CMP & SSW
S 602.79' S02°49'52"W
S 922.64' S02°49'46"W

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kmiller

8/17/99

REVISIONS

GRAPHIC SCALE
50 25 0 50 100
PLANS

Prepared by
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URS Corporation - North Carolina
1600 Perimeter Park Drive
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TELEPHONE (919) 461-1100 FAX (919) 461-1415

PROJECT REFERENCE NO.	SHEET NO.
R-2719A	24
R/W SHEET NO.	24
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

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

NOTE: FOR -Y1- PROFILE, SEE SHEET 53

-Y1-

PIs Sta 23+18.69
Θs = 4°16' 10.9"
Ls = 427.00'
LT = 284.75'
ST = 142.41'

PI Sta 28+66.38
Δ = 16°06' 33.3" (LT)
D = 1°59' 59.5"
L = 805.52'
T = 405.44'
R = 2,865.00'
e = 7%

PIs Sta 34+08.87
Θs = 4°16' 10.9"
Ls = 427.00'
LT = 284.75'
ST = 142.41'

NC GRID
NAD 83

931.37' FULL LANE
300' TAPER
100 FT LT TURN TAPER
150 FT RT TURN TAPER
REMOVE PAVEMENT
-Y1- CS Sta. 32+66.46
-BYI- 62 PINC 7+90.38
-BY- N 89° 01' 03.4" E
-BYI- S 88° 05' 35.6" E
-BY- N 15° 26' 53.5" W
-Y1- PC Sta. 24+60.94
-Y1- SCSta. 24+60.94
Y1 POC STA. 26+79.06
(OFFSET 112.49' RT)
1900' END OF AUX. LANE TAPER TO GORE
-BY-33 PINC 27+47.86
-BYI- PINC 5+00.00
MATCH LINE -Y1- STA. 34+00 - SEE SHEET 25
MATCH LINE -Y1- STA. 24+00 - SEE SHEET 23
MATCH LINE -EY- STA. 37+50 - SEE SHEET 30

8 FALLING CREEK FARMS INC.
DB 924 - PG 406
FIRST TRACT

9 DSL ASSOCIATES LLC
DB 1103 - PG 664
PC 2, SLIDE 21, PG 41

10 NORMAN MERCER, et ux
DB 815 - PG 42
PC 2, SLIDE 21, PG 41

11 WINSTON D. SUTTON
DB 1162 - PG 906
PC 2, SLIDE 21, PG 41

12 LEROY TAYLOR SR., et ux
DB 956 - PG 581
PC 2, SLIDE 21, PG 41

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8/17/99

REVISIONS

-YIRPCA- CURVE DATA

PI Sta 56+51.41	PIs Sta 64+82.65	PI Sta 66+39.81	PIs Sta 67+40.58
Δ = 47° 35' 39.3" (LT)	θs = 1° 00' 08.6"	Δ = 0° 39' 04.5" (LT)	θs = 0° 57' 17.7"
D = 2° 59' 59.2"	Ls = 210.00'	D = 0° 57' 17.7"	Ls = 200.00'
L = 1,586.59'	ST = 86.94'	L = 68.20'	LT = 133.34'
T = 842.30'	LT = 123.14'	T = 34.10'	ST = 66.67'
R = 1,910.00'	Δ1 = 0° 57' 17.7"	R = 6,000.00'	
e = 6%	Δ2 = 2° 59' 59.2"	e = 2.5%	
	R1 = 6,000.00'		
	R2 = 1,910.00'		

-YI- CURVE DATA

PIs Sta 34+08.87	PIs Sta 41+58.72	PI Sta 66+70.52
θs = 4° 16' 10.9"	θs = 2° 33' 26.3"	Δ = 64° 14' 25.4" (RT)
Ls = 427.00'	Ls = 341.00'	D = 1° 29' 59.6"
LT = 284.75'	LT = 227.36'	L = 4,283.01'
ST = 142.41'	ST = 113.69'	T = 2,398.16'
		R = 3,820.00'
		e = 5.5%

NOTE: FOR -YI- PROFILE, SEE SHEETS 53 & 54
FOR -YIRPCA- PROFILE, SEE SHEET 66

GRAPHIC SCALE
50 25 0 50 100
PLANS

Prepared by
URS
URS Corporation - North Carolina
1600 Perimeter Park Drive
Morrisville, North Carolina 27560
TELEPHONE (919) 461-1100 FAX (919) 461-1415

PROJECT REFERENCE NO.	SHEET NO.
R-2719A	25
R/W SHEET NO.	25
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

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

NC GRID NAD 83

931.37' FULL LANE

-BYI- 63 PINC 14+44.61

341' TAPER

-BYI- N 55° 14' 10.2" E

N 53° 30' 12.2" E

-BYI- N 52° 06' 14.3" E

-YI- ST Sta. 36+93.46

-YIRPCA- ST Sta. 68+73.91=
-YI- POT Sta. 37+00 (47' RT)

-YIRPCA- SC Sta. 66+05.71

-YI- TS Sta. 39+31.37

-YIRPCA- CS Sta. 66+73.91

-YIRPCA- CS Sta. 63+95.71

-YI- SC Sta. 42+72.37

1900' END OF AUX. LANE TAPER TO GORE

(8) FALLING CREEK FARMS INC.
DB 924 - PG 406
FIRST TRACT

MATCH LINE -YI- STA. 34+00 - SEE SHEET 24

MATCH LINE -YI- STA. 47+50 - SEE SHEET 26

MATCH LINE -YIRPCA- STA. 58+45 - SEE SHEET 26

STA. 43+60.04 (-)(-)

62' TYP.

61' TYP.

35' TYP.

SCRUB

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1 OF 1

-YI- CURVE DATA	-YIRPB- CURVE DATA		-YIRPCA- CURVE DATA	
PI Sta 66+70.52	PI Sta 18+81.89	PIs Sta 28+22.09	PIs Sta 47+39.14	PI Sta 56+51.41
Δ = 64° 14' 25.4" (RT)	Δ = 46° 11' 53.3" (RT)	θs = 2° 29' 28.0"	θs = 3° 08' 59.2"	Δ = 47° 35' 39.3" (LT)
D = 1° 29' 59.6"	D = 2° 29' 28.0"	Ls = 200.00'	Ls = 210.00'	D = 2° 59' 59.2"
L = 4,283.01'	L = 1,854.51'	LT = 133.35'	LT = 140.02'	L = 1,586.59'
T = 2,398.16'	T = 980.99'	ST = 66.68'	ST = 70.02'	T = 842.30'
R = 3,820.00'	R = 2,300.00'	PIs Sta 34+88.75		R = 1,910.00'
e = 5.5%	e = 5%	θs = 1° 28' 37.5"		e = 6%
		Ls = 200.00'		
		LT = 133.34'		
		ST = 66.67'		

NOTE: FOR -YI- PROFILE, SEE SHEET 54
FOR -YIRPCA- PROFILE, SEE SHEETS 65 & 66
FOR -YIRPB- PROFILE, SEE SHEETS 60 & 61

GRAPHIC SCALE
50 25 0 50 100
PLANS

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1600 Perimeter Park Drive
Morrisville, North Carolina 27560
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PROJECT REFERENCE NO.	SHEET NO.
R-2719A	26
R/W SHEET NO.	26
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

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

REVISIONS
8/17/99

-YIRPB- CS Sta. 27+55.41
-YIRPB- ST Sta. 29+55.41
-YIRPB- TS Sta. 33+55.41
-YIRPB- SC Sta. 35+55.41=
-YI- POC Sta. 48+62.35 (59' LT)
-YIRPCA- SC Sta. 48+09.12

(14) ERWIN W. PARROT, et al
DB 909 - PG 702
WILL FILE 88-E124

(8) FALLING CREEK FARMS INC.
DB 924 - PG 406
FIRST TRACT

-BYI- N 72° 44' 03.9" E
-BYI- 52 PINC 24+35.88
S 66° 23' 12.6" W -YIRPB-
-YI-
-YIRPCA-

MATCH LINE -YI- STA 47+50 - SEE SHEET 25
MATCH LINE -YIRPCA- STA 58+45 - SEE SHEET 25
MATCH LINE -YIRPB- STA 25+00 - SEE SHEET 4
MATCH LINE -YI- STA 59+00 - SEE SHEET 4
MATCH LINE -YIRPCA- STA 48+00 - SEE SHEET 4

A B C

NC GRID NAD 83

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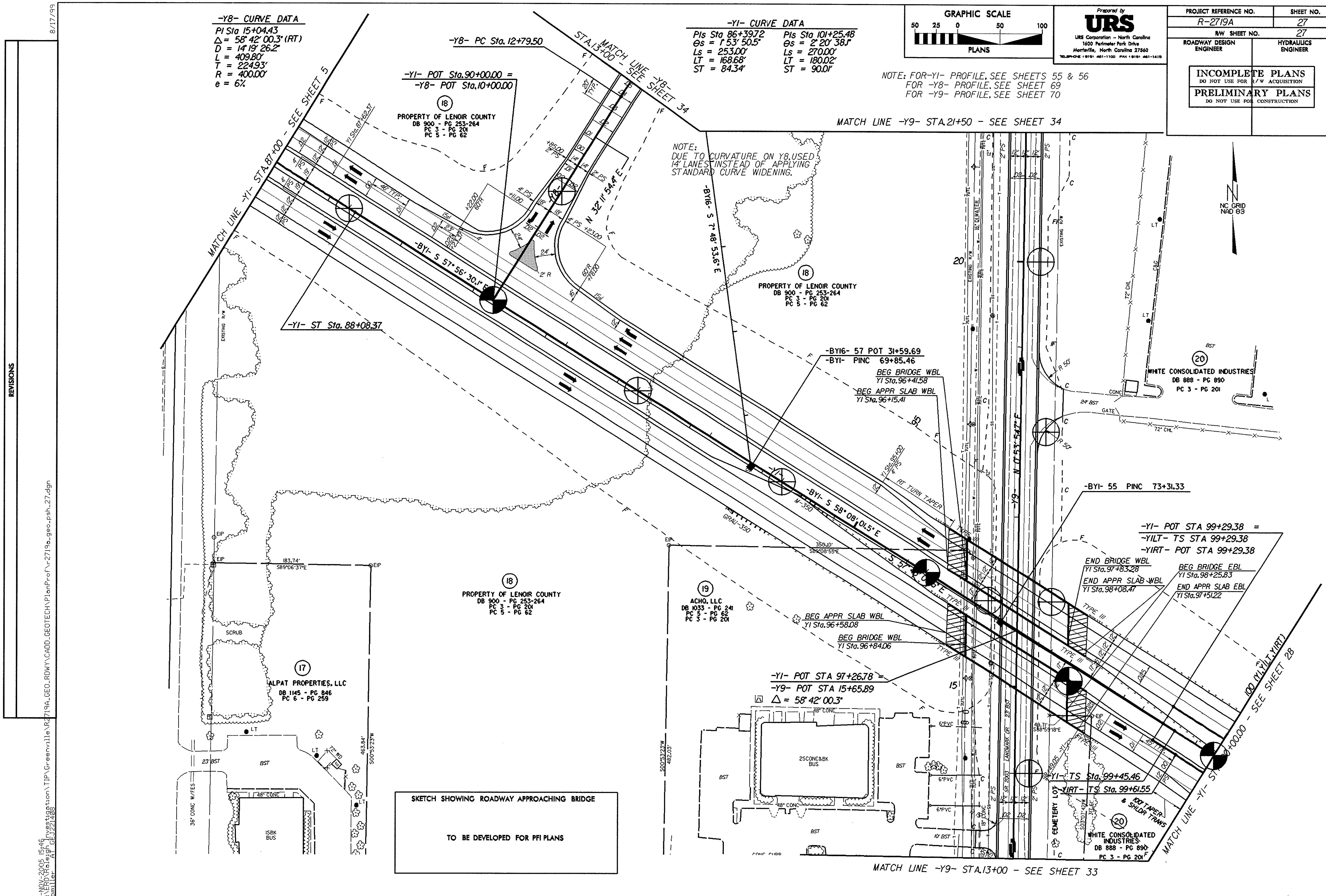
kbmiller


PROJECT REFERENCE NO. R-2719A
SHEET NO. 27
R/W SHEET NO. 27
ROADWAY DESIGN ENGINEER
HYDRAULICS ENGINEER
INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION
PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION
Prepared by URS
URS Corporation - North Carolina
1600 Perimeter Park Drive
Morrisville, North Carolina 27560
GRAPHIC SCALE
50 25 0 50 100
PLANS
-Y8- CURVE DATA
PI Sta 15+04.43
Δ = 58° 42' 00.3" (RT)
D = 14° 19' 26.2"
L = 409.80'
T = 224.93'
R = 400.00'
e = 6%
-Y1- CURVE DATA
PIs Sta 86+39.72
θs = 1° 53' 50.5"
Ls = 253.00'
LT = 168.68'
ST = 84.34'
PIs Sta 101+25.48
θs = 2° 20' 38.1"
Ls = 270.00'
LT = 180.02'
ST = 90.01'
NOTE: FOR -Y1- PROFILE, SEE SHEETS 55 & 56
FOR -Y8- PROFILE, SEE SHEET 69
FOR -Y9- PROFILE, SEE SHEET 70
MATCH LINE -Y9- STA. 21+50 - SEE SHEET 34
MATCH LINE -Y8- STA. 13+00 - SEE SHEET 34
MATCH LINE -Y1- STA. 87+00 - SEE SHEET 5
MATCH LINE -Y1- STA. 100+00.00 (Y1LT, Y1RT) - SEE SHEET 28
MATCH LINE -Y9- STA. 13+00 - SEE SHEET 33
-Y8- PC Sta. 12+79.50
-Y1- POT Sta. 90+00.00 =
-Y8- POT Sta. 10+00.00
-Y1- ST Sta. 88+08.37
NOTE:
DUE TO CURVATURE ON Y8, USED
14' LANES INSTEAD OF APPLYING
STANDARD CURVE WIDENING.
-BY1- S 57° 56' 30.1" E
-BY16- S 7° 48' 53.6" E
N 32° 11' 54.4" E
-BY1- S 58° 08' 01.5" E
-Y9- N 0° 53' 54.7" E
-BY16- 57 POT 31+59.69
-BY1- PINC 69+85.46
BEG BRIDGE WBL
Y1 Sta. 96+41.58
BEG APPR SLAB WBL
Y1 Sta. 96+15.41
-BY1- 55 PINC 73+31.33
-Y1- POT STA 99+29.38 =
-Y1LT- TS STA 99+29.38
-Y1RT- POT STA 99+29.38
END BRIDGE WBL
Y1 Sta. 97+83.28
END APPR SLAB WBL
Y1 Sta. 98+08.47
BEG BRIDGE EBL
Y1 Sta. 98+25.83
END APPR SLAB EBL
Y1 Sta. 97+51.22
BEG APPR SLAB WBL
Y1 Sta. 96+58.08
BEG BRIDGE WBL
Y1 Sta. 96+84.06
-Y1- POT STA 97+26.78 =
-Y9- POT STA 15+65.89
Δ = 58° 42' 00.3"
-Y1- TS Sta. 99+45.46
-Y1RT- TS Sta. 99+61.55
100' TAPER & SHLDR TRANS
RT TURN TAPER
18 PROPERTY OF LENOIR COUNTY
DB 900 - PG 253-264
PC 3 - PG 201
PC 5 - PG 62
19 ACHO, LLC
DB 1033 - PG 241
PC 5 - PG 62
PC 3 - PG 201
17 ALPAT PROPERTIES, LLC
DB 1145 - PG 846
PC 6 - PG 259
20 WHITE CONSOLIDATED INDUSTRIES
DB 888 - PG 890
PC 3 - PG 201
NC GRID NAD 83
SR 2003 LANDMARK DR
CEMETERY LOT
2SCONC&BK BUS
1SBK BUS
SKETCH SHOWING ROADWAY APPROACHING BRIDGE
TO BE DEVELOPED FOR PFI PLANS
REVISIONS
8/17/99
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REVISIONS

NOTE: FOR -Y1- PROFILE, SEE SHEETS 56 & 57
FOR -Y15- PROFILE, SEE SHEET 73

GRAPHIC SCALE
50 25 0 50 100
PLANS

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PROJECT REFERENCE NO.	SHEET NO.
R-2719A	28
R/W SHEET NO.	28
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

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

NC GRID
NAD 83

-Y1- CURVE DATA
PIs Sta 101+25.48
θs = 2° 20' 38.1"
Ls = 270.00'
LT = 180.02'
ST = 90.01'
PI Sta 109+51.23
Δ = 25° 08' 18.0" (LT)
D = 1° 44' 10.4"
L = 1,447.86'
T = 735.77'
R = 3,300.00'
e = 6%

-YILT- CURVE DATA
PIs Sta 101+09.40
θs = 2° 21' 37.3"
Ls = 270.00'
LT = 180.02'
ST = 90.01'
PI Sta 109+29.04
Δ = 25° 06' 19.5" (LT)
D = 1° 44' 54.3"
L = 1,435.89'
T = 729.66'
R = 3,277.00'
e = SEE -Y1-

-YIRT- CURVE DATA
PIs Sta 101+41.56
θs = 2° 19' 39.7"
Ls = 270.00'
LT = 180.02'
ST = 90.01'
PI Sta 109+73.44
Δ = 25° 10' 14.8" (LT)
D = 1° 43' 27.2"
L = 1,459.84'
T = 741.89'
R = 3,323.00'
e = SEE -Y1-

-Y15- CURVE DATA
PI Sta 29+70.94
Δ = 74° 37' 40.8" (LT)
D = 28° 38' 52.4"
L = 260.50'
T = 152.44'
R = 200.00'
e = 6%
R.O. = SEE PLANS

MATCH LINE -Y1- STA 80+00.00 - SEE SHEET 27

MATCH LINE -Y15- STA 24+30 - SEE SHEET 33

MATCH LINE -Y1- STA 114+00 - SEE SHEET 29

-YILT- SC Sta. 101+99.38

-Y1- SC Sta. 102+15.46

-YIRT- SC Sta. 102+31.55

-Y1- POC STA 106+00.00=
-Y15- POT STA 31+75.53

-YIRT- POC STA 106+03.82=
-Y15- POT STA 31+50.03

-Y15- PC Sta. 28+18.51

-Y15- PT Sta. 30+79.01

-BY- S 57° 45' 05.6" E

-BY- S 58° 10' 04.8" E

-BY- S 84° 09' 54.2" E

-BY- S 65° 08' 32.8" E

S 82° 11' 38.7" E

-BY1- 61 PINC 81+68.46

-BY-37 PINC 98+05.50
-BY1- POT 86+70.69

-BY-225 PINC 87+90.38
NCGS MON "DISH"

TH 06
BY1STA. 85+27.00
0.89' LT.
ELEV=44.86'
N 552,529.366
E 2,398,766.070
4" POLYETHYLENE GAS

TH 05
BY1STA. 85+49.87
3.09' LT.
ELEV=45.99'
N 552,521.749
E 2,398,787.750
0.5" FIBER OPTIC
CABLE TELEPHONE

(20) WHITE CONSOLIDATED INDUSTRIES
DB 888 - PG 890
PC 3 - PG 201

(20) WHITE CONSOLIDATED INDUSTRIES.
DB 888 - PG 890
PC 3 - PG 201

(15) REBECCA V. L. HODGES
C/O C. GRAY JOHNSEY
DB 933 - PG 149

(21) TCC VANDERBUILT LLC
DB 835 - PG 794
PC 6 - PG 230

(22) WALTER POOLE REALTY, INC.
DB 860 - PG 107

(23) THE HERRING FAMILY, LLC
DB 1202 - PG 592
MB 3 - PG 68

REMOVE PAVEMENT

MONOLITHIC CONC ISLAND

350' LANE DROP

"LEFT-OVER"

APPROX LOCATION OF UNDERGROUND JUNCTION BOX

EXISTING R/W

EXISTING EDGE OF PAVEMENT

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kbmiller
dgn: GEU223408

8/17/99

REVISIONS

-Y1- CURVE DATA

PI Sta 109+51.23
Δ = 25° 08' 18.0" (LT)
D = 1° 44' 10.4"
L = 1,447.86'
T = 735.77'
R = 3,300.00'
e = 6%

PIs Sta 117+53.34
θs = 2° 20' 38.5"
Ls = 270.00'
LT = 180.02'
ST = 90.01'

-Y1LT- CURVE DATA

PI Sta 109+29.04
Δ = 25° 06' 19.5" (LT)
D = 1° 44' 54.3"
L = 1,435.89'
T = 729.66'
R = 3,277.00'
e = SEE -Y1-

PIs Sta 117+25.28
θs = 2° 21' 37.3"
Ls = 270.00'
LT = 180.02'
ST = 90.01'

-Y1RT- CURVE DATA

PI Sta 109+73.44
Δ = 25° 10' 14.8" (LT)
D = 1° 43' 27.2"
L = 1,459.84'
T = 741.89'
R = 3,323.00'
e = SEE -Y1-

PIs Sta 117+81.40
θs = 2° 19' 39.7"
Ls = 270.00'
LT = 180.02'
ST = 90.01'

GRAPHIC SCALE
50 25 0 50 100
PLANS

NOTE: FOR -Y1- PROFILE, SEE SHEET 57

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Morrisville, North Carolina 27560
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PROJECT REFERENCE NO.	SHEET NO.
R-2719A	29
R/W SHEET NO.	29
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

NC GRID
NAD 83

MATCH LINE -Y1- STA.114+00- SEE SHEET 28

(22) WALTER POOLE REALTY, INC.
DB 860 - PG 107

(23) THE HERRING FAMILY, LLC
DB 1202 - PG 592
MB 3 - PG 68

(26) A.R.M. ASSOCIATES, INC.
DB 861 - PG 456
DB 856 - PG 86

-Y1- CS Sta. 116+63.32
-Y1RT- CS Sta. 116+91.38
-Y1LT- CS Sta. 116+35.27
-Y1LT- ST Sta. 119+05.27
-Y1RT- ST Sta. 119+61.38
-Y1- ST Sta. 119+33.32
-Y1LT- POT Sta. 123+85.90=
-Y1- POT Sta. 124+00 (31' LT)
-BY-38 PINC 110+19.91
END CONSTRUCTION
END PROJECT
-Y1- POT Sta. 121+63.73
-Y1RT- POT Sta. 124+14.31=
-Y1- POT Sta. 124+00 (31' RT)
-Y1- POT Sta. 126+97.56

-B11- S 87° 11' 16.9" E
-BY1- S 88° 43' 50.9" E
S 87° 37' 39.8" E

200' LT TURN TAPER
350' LANE DROP
MIN OVERLAY AND TAPER TO EXISTING

REMOVE EX.C&G TO +5153.84 LT
REMOVE EX.C&G TO +5712.84 LT

115 (-Y1-)
115 (-Y1LT-)
115 (-Y1RT-)
120 (-Y1-)
120 (-Y1LT-)
120 (-Y1RT-)
125 (-Y1-)

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GRAPHIC SCALE
50 25 0 50 100
PLANS

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PROJECT REFERENCE NO.	SHEET NO.
R-2719A	30
R/W SHEET NO.	30
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

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

NC GRID
NAD 83

REVISIONS
8/17/99

MATCH LINE -EY- STA.33+30.00 SEE SHEET 24

MATCH LINE -EY- STA.51+50.00 - SEE SHEET 31

-BY-34 PINC 38+50.21

-BYI- S 88° 05' 35.6" E

-BYI- S 88° 00' 37.0" E

TH 08
BY STA. 39+13.10
48.24' LT.
ELEV=46.86'
N 552,685.862
E 2,333,027.450
0.5" FIBER OPTIC
CABLE TELEPHONE

8
FALLING CREEK FARMS INC.
DB 924 - PG 406
FIRST TRACT

13
FALLING CREEK FARMS INC.
DB 924 - PG 409
WILL FILE 88-E124

13
FALLING CREEK FARMS INC.
DB 924 - PG 409
WILL FILE 88-E124

SCRUB
SCRUB
SCRUB
SCRUB
SCRUB
SOIL
SOIL
SOIL
SOIL
SOIL
ISBKD
EXISTING R/W
EXISTING R/W
EXISTING R/W
REMOVE PAVEMENT
REMOVE PAVEMENT
CONC
3X24" CONC
CONC HW
CONC HW
WD HW
15" CONC
15" CONC
15" CONC
48" CONC
54" CONC
54" CONC
12" CMP
12" CMP
12" CMP
16" DI WATER
16" DI WATER
2 BST
2 BST
2 BST
2 BST
2 BST
US 70 WBL 24' BST
US 70 EBL 24' BST
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EOS
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GRAPHIC SCALE
50 25 0 50 100
PLANS

Prepared by
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URS Corporation – North Carolina
1600 Perimeter Park Drive
Morrisville, North Carolina 27560
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PROJECT REFERENCE NO.	SHEET NO.
R-2719A	31
R/W SHEET NO.	31
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

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

NC GRID
NAD 83

REVISIONS
8/17/99

MATCH LINE -EY- STA.51+50.00 - SEE SHEET 30

(8)
FALLING CREEK FARMS INC.
DB 924 - PG 406
FIRST TRACT

1476.97'
S07°56'57"W

(14)
ERWIN W. PARROT, et al
DB 909 - PG 702
WILL FILE 88-E124

-BY-35 PINC 49+56.07

EXISTING R/W
15" SS
REMOVE PAVEMENT
7 FO
2 BST
-BYI- N 87° 44' 46.1" E
-BYI- S 88° 00' 37.0" E
15" CONC
DI
US 70 WBL 24' BST
-EY-
2 BST
US 70 EBL 24' BST
11 FO
60" WD RAIL
16" DI WATER
SOIL

(13)
FALLING CREEK FARMS INC.
DB 924 - PG 409
WILL FILE 88-E124

MATCH LINE -EY- STA.64+00.00- SEE SHEET 32

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wdfields GEOPSH400

8/17/99

REVISIONS

NOTE: FOR -Y15- PROFILE, SEE SHEET 73

GRAPHIC SCALE
50 25 0 50 100
PLANS

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Morrisville, North Carolina 27560
TELEPHONE (919) 461-1100 FAX (919) 461-1415

PROJECT REFERENCE NO.	SHEET NO.
R-2719A	32
R/W SHEET NO.	32
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

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

NC GRID
NAD 83

-L- N 0°13' 30.9" W

MATCH LINE -EY- STA.64+00.00 - SEE SHEET 31

(14) ERWIN W. PARROT, et al
DB 909 - PG 702
WILL FILE 88-E124

(16) PROPERTY OF LENOIR COUNTY
DB 900 - PG 253-264
PC 3 - PG 201

-BL-1 POT 5+00.00 =
-BY-300 PINC 61+24.65

-BY-226 PINC 68+97.89
NCGS MON "DROP"

-BY1- N 87° 44' 46.1" E

-BY1- S 81° 12' 41.2" E

-BY1- N 83° 22' 01.2" E

-Y15- POT Sta. 10+00.00

MATCH LINE -Y15- STA.10+50.00 - SEE SHEET 33

(13) FALLING CREEK FARMS INC.
DB 924 - PG 409
WILL FILE 88-E124

(15) REBECCA V. L. HODGES
C/O C. GRAY JOHNSEY
DB 933 - PG 149

SR 1540 PRUITT RD

B
S
ISFD
W/LT
CB
EOS
SOIL
EXISTING R/W
REMOVE PAVEMENT
2' BST
US 70 WBL 24' BST
US 70 EBL 24' BST
15" CONC
24" CONC
16" DIWATER
14" CONC HW
15" CONC WW
14" CONC WW
13" CONC HW
8" CONC WW
9" CONC WW
12" CONC
18" BST
SS
T FO

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kmiller

NOTE: FOR -Y15- PROFILE, SEE SHEET 73
FOR -Y9- PROFILE, SEE SHEET 70

GRAPHIC SCALE
50 25 0 50 100
PLANS

Prepared by
URS
URS Corporation - North Carolina
1600 Perimeter Park Drive
Morrisville, North Carolina 27560
TELEPHONE (919) 461-1100 FAX (919) 461-1415

PROJECT REFERENCE NO.	SHEET NO.
R-2719A	33
R/W SHEET NO.	33
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

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

-Y15- CURVE DATA
PI Sta 18+49.41
Δ = 13° 30' 03.6" (RT)
D = 1° 31' 01.1"
L = 890.00'
T = 447.07'
R = 3,777.00'
e = EXIST.

NC GRID
NAD 83

MATCH LINE -Y9- STA.13+00.00 - SEE SHEET 27

(17) ALPAT PROPERTIES, LLC
DB 1145 - PG 846
PC 6 - PG 259

(16) PROPERTY OF LENOIR COUNTY
DB 900 - PG 253-264
PC 3 - PG 201

(18) PROPERTY OF LENOIR COUNTY
DB 900 - PG 253-264
PC 3 - PG 201
PC 5 - PG 62

(19) ACHO, LLC
DB 1033 - PG 241
PC 5 - PG 62
PC 3 - PG 201

TH 07
BY STA. 79+76.22
86.45' LT.
ELEV=47.94'
N 552,692.631
E 2,397,076.530
4" POLYETHYLENE GAS

-BY-36 PINC 76+76.21

-Y9- POT STA 10+00.00
-Y15- POT STA 22+94.44

-BY1- N 83° 22' 01.2" E
-BY1- S 87° 32' 27.8" E
N 84° 18' 17.7" E
-Y15-

-Y15- PCSta. 14+02.34

BEGIN CONSTRUCTION
-Y15- POC STA 18+00
MATCH EXIST. WIDTH
AND CROSS SLOPE WITH
MINIMUM OVERLAY (3")

-Y15- PT Sta. 22+92.34

(15) REBECCA V. L. HODGES
C/O C. GRAY JOHNSEY
DB 933 - PG 149

MATCH LINE -Y15- STA.10+50.00 - SEE SHEET 32

MATCH LINE -Y15- STA.24+30.00 - SEE SHEET 28

REVISIONS 8/17/99

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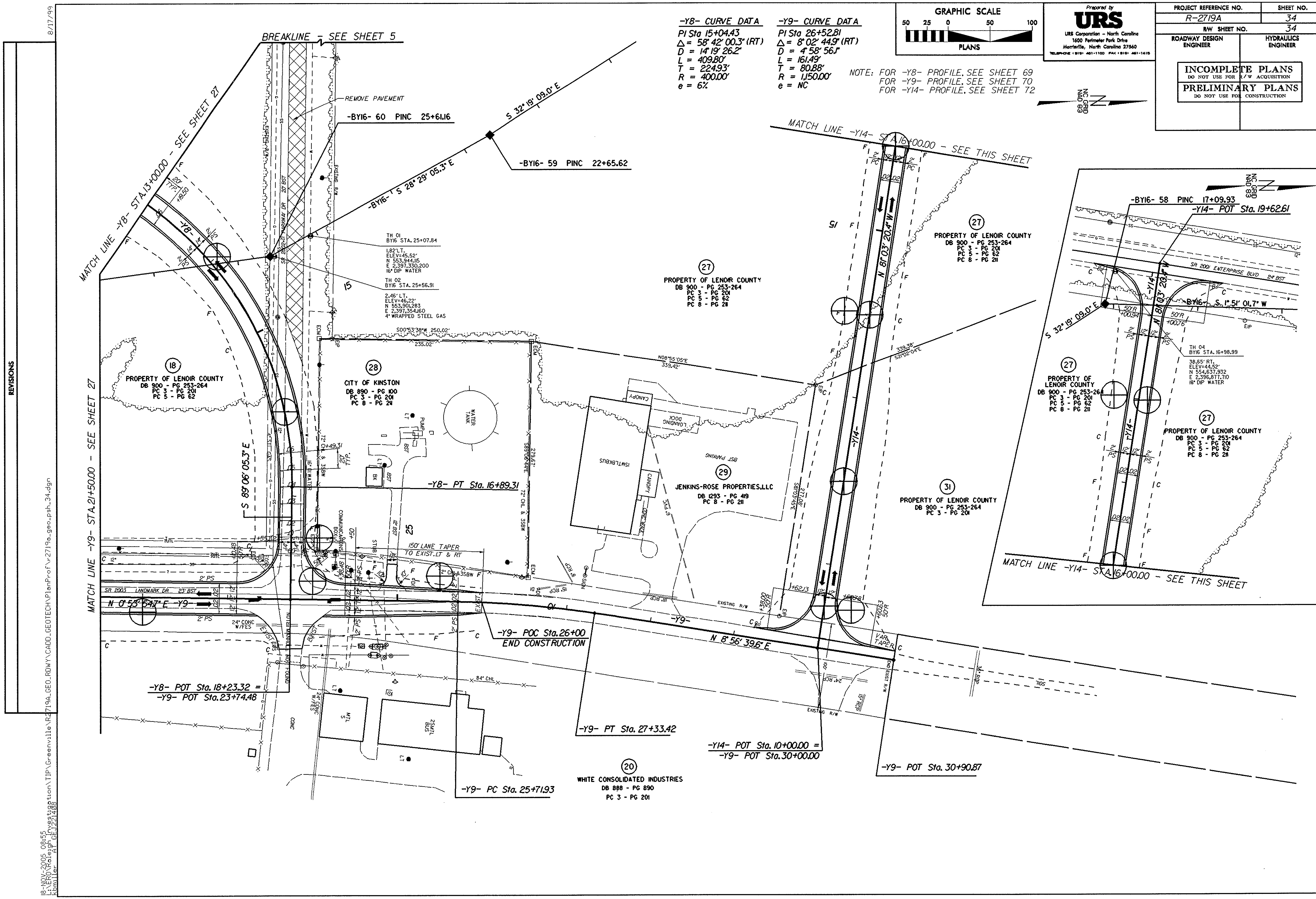
PROJECT REFERENCE NO.
SHEET NO.
R-2719A
34
R/W SHEET NO.
34
ROADWAY DESIGN ENGINEER
HYDRAULICS ENGINEER
INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION
PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION
Prepared by
URS
URS Corporation - North Carolina
1600 Perimeter Park Drive
Morrisville, North Carolina 27560
GRAPHIC SCALE
50 25 0 50 100
PLANS
-Y8- CURVE DATA
PI Sta 15+04.43
Δ = 58° 42' 00.3" (RT)
D = 14° 19' 26.2"
L = 409.80'
T = 224.93'
R = 400.00'
e = 6%
-Y9- CURVE DATA
PI Sta 26+52.81
Δ = 8° 02' 44.9" (RT)
D = 4° 58' 56.1"
L = 161.49'
T = 80.88'
R = 1,150.00'
e = NC
NOTE: FOR -Y8- PROFILE, SEE SHEET 69
FOR -Y9- PROFILE, SEE SHEET 70
FOR -Y14- PROFILE, SEE SHEET 72
NC GRID NAD 83
BREAKLINE - SEE SHEET 5
REMOVE PAVEMENT
-BY16- 60 PINC 25+61.16
S 32° 19' 09.0" E
-BY16- 59 PINC 22+65.62
-BY16- S 28° 29' 05.3" E
MATCH LINE -Y8- STA.13+00.00 - SEE SHEET 27
TH 01
BY16 STA. 25+07.84
1.82' LT.
ELEV=45.52'
N 553,944.115
E 2,397,330.200
16" DIP WATER
TH 02
BY16 STA. 25+56.91
2.46' LT.
ELEV=46.22'
N 553,901.283
E 2,397,354.160
4" WRAPPED STEEL GAS
MATCH LINE -Y14- STA.16+00.00 - SEE THIS SHEET
PROPERTY OF LENOIR COUNTY
DB 900 - PG 253-264
PC 3 - PG 201
PC 5 - PG 62
PC 8 - PG 211
PROPERTY OF LENOIR COUNTY
DB 900 - PG 253-264
PC 3 - PG 201
PC 5 - PG 62
CITY OF KINSTON
DB 890 - PG 100
PC 3 - PG 201
PC 8 - PG 211
S00°53'38"W 250.02'
N08°55'05"E 339.42'
339.38' S8°02'04"E
WATER TANK
JENKINS-ROSE PROPERTIES, LLC
DB 1293 - PG 419
PC 8 - PG 211
PROPERTY OF LENOIR COUNTY
DB 900 - PG 253-264
PC 3 - PG 201
-Y8- PT Sta. 16+89.31
S 89° 06' 05.3" E
MATCH LINE -Y9- STA.21+50.00 - SEE SHEET 27
150' LANE TAPER TO EXIST. LT & RT
SR 2003 LANDMARK DR
N 0° 53' 54.7" E -Y9-
-Y9- POC Sta. 26+00
END CONSTRUCTION
N 8° 56' 39.6" E
-Y8- POT Sta. 18+23.32 =
-Y9- POT Sta. 23+74.48
-Y9- PT Sta. 27+33.42
-Y14- POT Sta. 10+00.00 =
-Y9- POT Sta. 30+00.00
-Y9- POT Sta. 30+90.87
-Y9- PC Sta. 25+71.93
WHITE CONSOLIDATED INDUSTRIES
DB 888 - PG 890
PC 3 - PG 201
N 8° 03' 20.4" W
-Y14-
-BY16- 58 PINC 17+09.93
-Y14- POT Sta. 19+62.61
SR 2001 ENTERPRISE BLVD
-BY16- S. 1° 51' 01.7" W
S 32° 19' 09.0" E
TH 04
BY16 STA. 16+98.99
38.65' RT.
ELEV=44.52'
N 554,637.932
E 2,396,877.710
16" DIP WATER
PROPERTY OF LENOIR COUNTY
DB 900 - PG 253-264
PC 3 - PG 201
PC 5 - PG 62
PC 8 - PG 211
MATCH LINE -Y14- STA.16+00.00 - SEE THIS SHEET
REVISIONS
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kbmiller AT GEJ221408

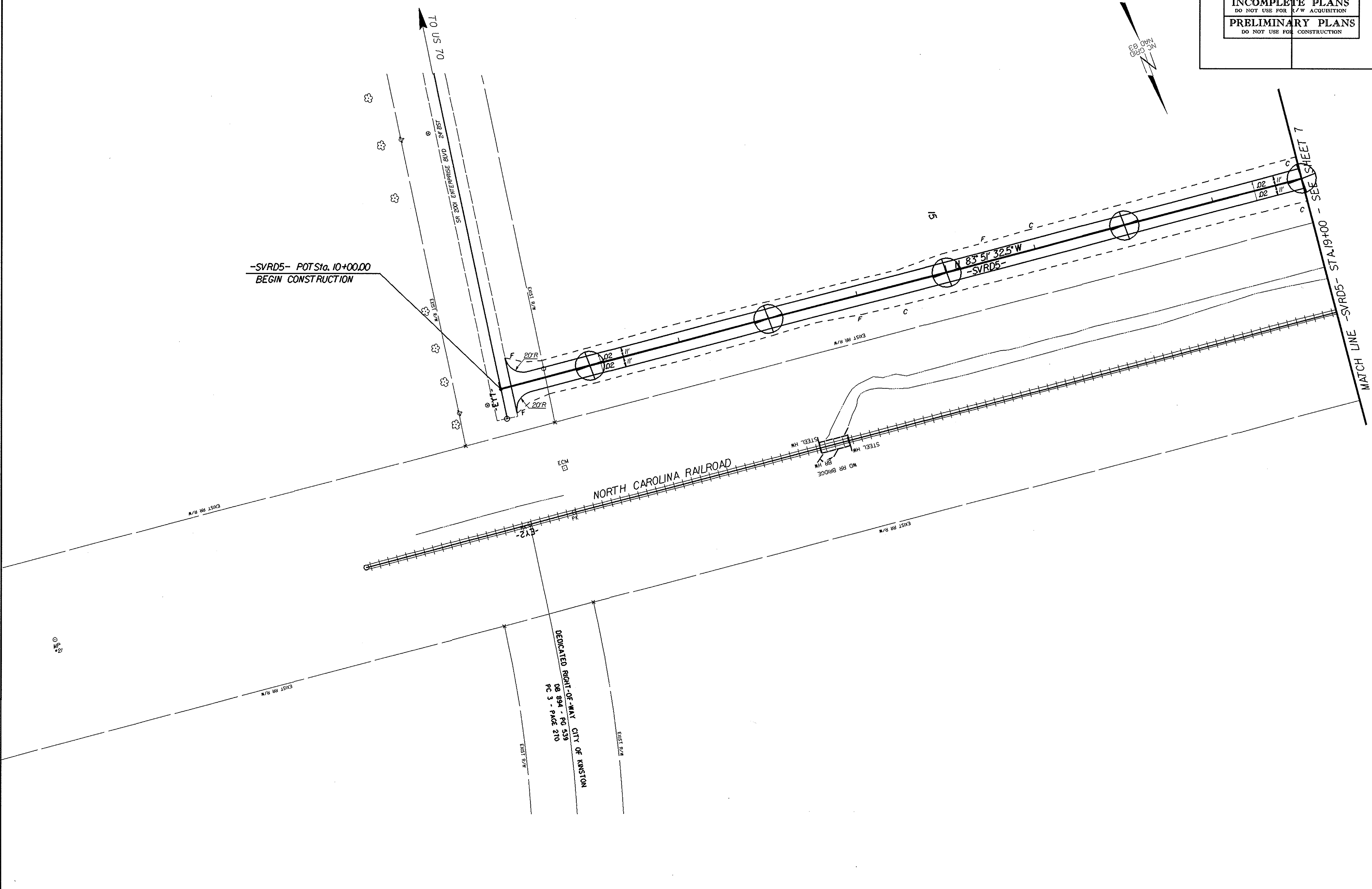
NOTE: FOR -SVRD5- PROFILE, SEE SHEET 87

GRAPHIC SCALE
50 25 0 50 100
PLANS

Prepared by
URS
URS Corporation - North Carolina
1600 Perimeter Park Drive
Morrisville, North Carolina 27560

PROJECT REFERENCE NO.	SHEET NO.
R-2719A	35
R/W SHEET NO.	35
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

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



REVISIONS

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8/17/99

REVISIONS

NOTE: FOR -Y10- PROFILE, SEE SHEET 71

NOTE: FOR -Y24- PROFILE, SEE SHEET 80

GRAPHIC SCALE
50 25 0 50 100
PLANS

Prepared by
URS
URS Corporation – North Carolina
1600 Perimeter Park Drive
Morrisville, North Carolina 27560
TELEPHONE (919) 461-1100 FAX (919) 461-1415

PROJECT REFERENCE NO.	SHEET NO.
R-2719A	36
R/W SHEET NO.	36
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

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

-Y10- CURVE DATA
PI Sta 15+59.87
Δ = 9°57'31.2" (RT)
D = 3°02'51.5"
L = 326.77'
T = 163.80'
R = 1,880.00'
e = 5.3%

MATCH LINE -Y10- STA 15+00 - SEE SHEET 23

-Y10-

300' UNIFORM TAPER RT

Y10 Sta. 17+80.00
END CONSTRUCTION

Y10 POT Sta. 20+74.55

N 7°44'14.3" W

Y10 PT Sta. 17+22.84

ADDITIONAL SURVEY REQUESTED ALONG BANK SCHOOL ROAD

(5)
ERWIN W. PARROT, et al
DB 909 - PG 702
WILL FILE 88-E124
FOURTH TRACT

(8)
FALLING CREEK FARMS INC.
DB 924 - PG 406
FIRST TRACT

POT Sta 54+50.00
END CONSTRUCTION -Y24-

-Y24- POT Sta. 54+61.25

(112)
BOFF INC.
DB 860 - PG 75
DB 875 - PG 647

(110)
HULL ROAD FREE WILL BAPTIST CHURCH
DB 947 - PG 773

(111)
BRADLEY F. WEST, et ux
DB 674 - PG 558

(110)
HULL ROAD FREE WILL BAPTIST CHURCH
DB 770 - PG 498

FOR PROPERTY INFO SEE STATE PROJECT R-2719BA

FOR PROPERTY INFO SEE STATE PROJECT R2719BA

S 22°50'41.2" E -Y24-

MATCH LINE -Y24- STA 48+50.00 - SEE SHEET 19

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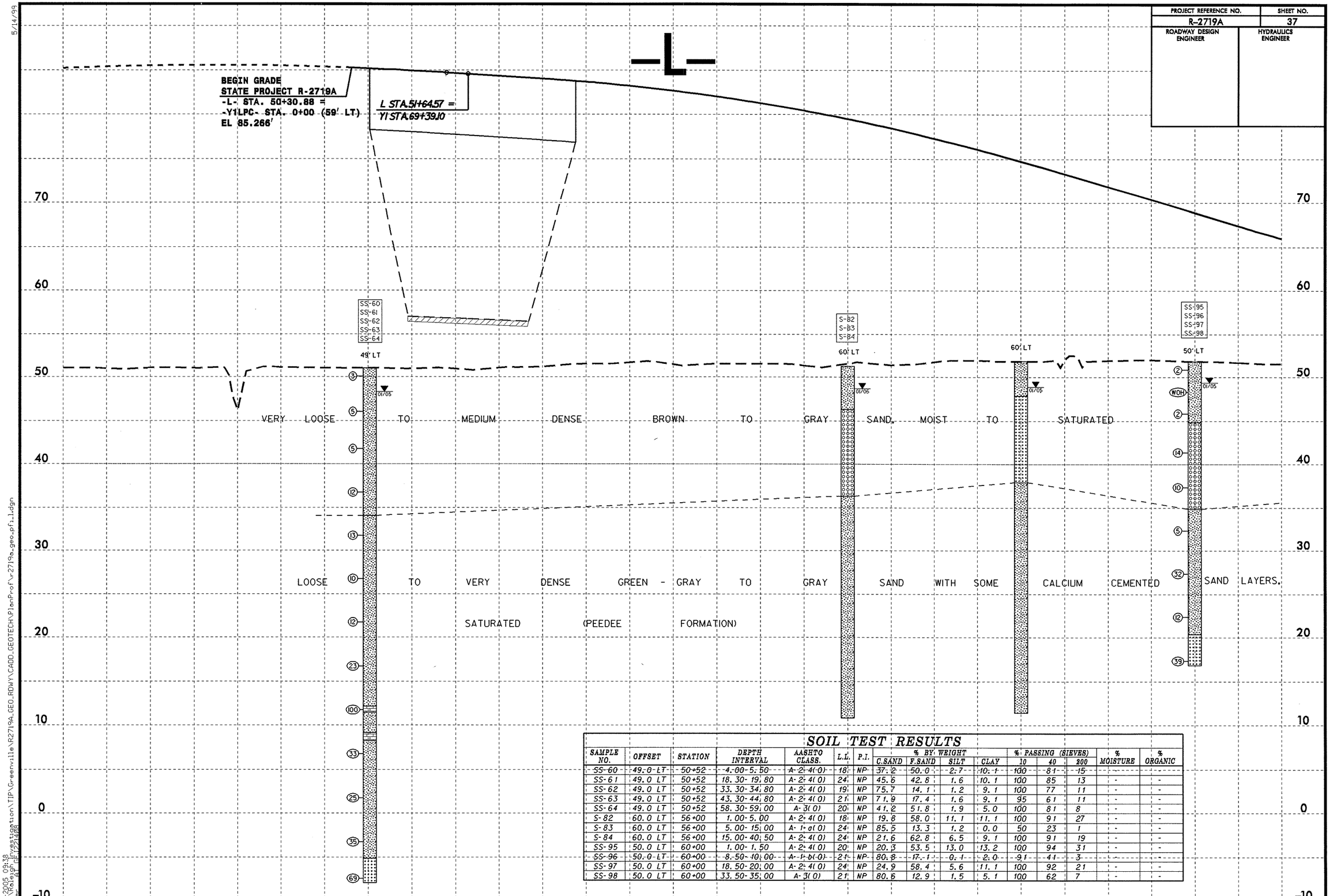
kbmiller
ATT GE\1221108

5/14/99

PROJECT REFERENCE NO.	SHEET NO.
R-2719A	37
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

BEGIN GRADE
STATE PROJECT R-2719A
-L- STA. 50+30.88 =
-Y1LPC- STA. 0+00 (59' LT)
EL 85.266'

L STA.51+64.57 =
Y1 STA.69+39.10



SOIL TEST RESULTS

SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT C.SAND	F.SAND	SILT	CLAY	% PASSING (SIEVES) 10	40	200	% MOISTURE	% ORGANIC
SS-60	49.0 LT	50+52	4.00-5.50	A-2-4(0)	18	NP	37.2	50.0	2.7	10.1	100	81	15	-	-
SS-61	49.0 LT	50+52	18.30-19.80	A-2-4(0)	24	NP	45.6	42.8	1.6	10.1	100	85	13	-	-
SS-62	49.0 LT	50+52	33.30-34.80	A-2-4(0)	19	NP	75.7	14.1	1.2	9.1	100	77	11	-	-
SS-63	49.0 LT	50+52	43.30-44.80	A-2-4(0)	21	NP	71.9	17.4	1.6	9.1	95	61	11	-	-
SS-64	49.0 LT	50+52	58.30-59.00	A-3(0)	20	NP	41.2	51.8	1.9	5.0	100	81	8	-	-
S-82	60.0 LT	56+00	1.00-5.00	A-2-4(0)	18	NP	19.8	58.0	11.1	11.1	100	91	27	-	-
S-83	60.0 LT	56+00	5.00-15.00	A-1-a(0)	24	NP	85.5	13.3	1.2	0.0	50	23	1	-	-
S-84	60.0 LT	56+00	15.00-40.50	A-2-4(0)	24	NP	21.6	62.8	6.5	9.1	100	91	19	-	-
SS-95	50.0 LT	60+00	1.00-1.50	A-2-4(0)	20	NP	20.3	53.5	13.0	13.2	100	94	31	-	-
SS-96	50.0 LT	60+00	8.50-10.00	A-1-b(0)	21	NP	80.8	17.1	0.1	2.0	91	41	3	-	-
SS-97	50.0 LT	60+00	18.50-20.00	A-2-4(0)	24	NP	24.9	58.4	5.6	11.1	100	92	21	-	-
SS-98	50.0 LT	60+00	33.50-35.00	A-3(0)	21	NP	80.6	12.9	1.5	5.1	100	62	7	-	-

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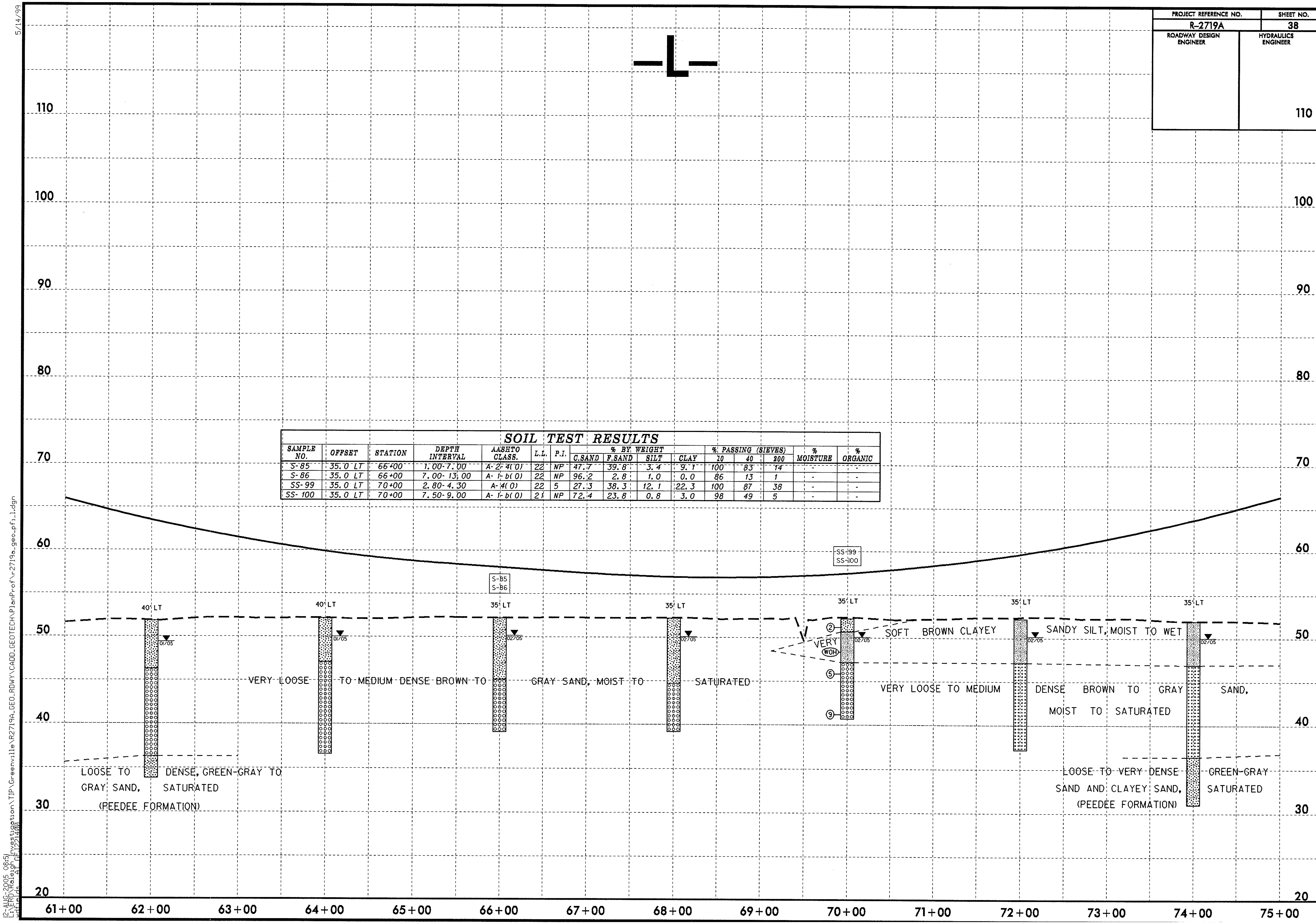
bmiller

PROJECT REFERENCE NO.	SHEET NO.
R-2719A	38
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

-L-



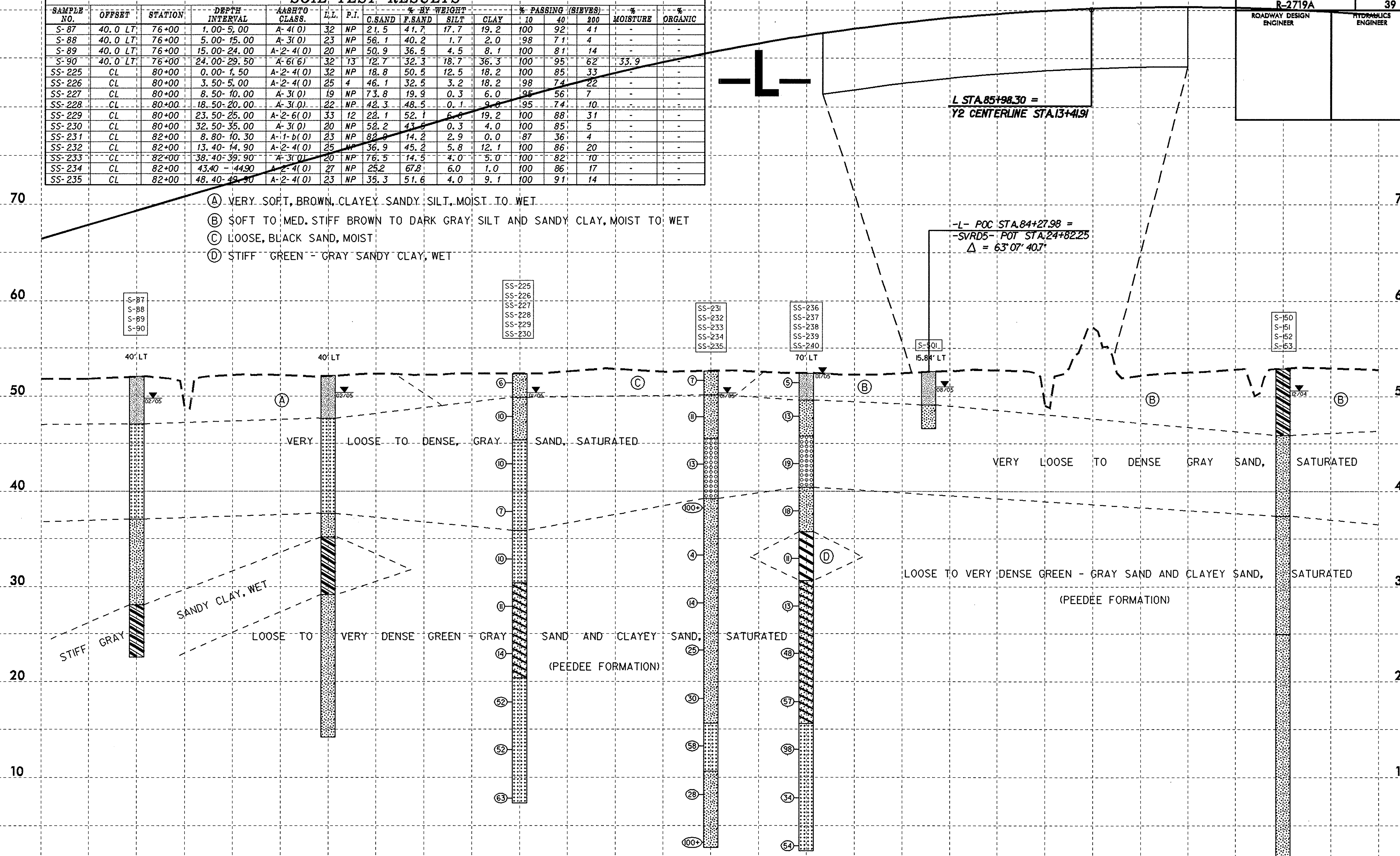
SOIL TEST RESULTS

SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT C.SAND	F.SAND	SILT	CLAY	% PASSING (SIEVES) 10	40	200	% MOISTURE	% ORGANIC
S-85	35.0 LT	66+00	1.00-7.00	A-2-4(0)	22	NP	47.7	39.8	3.4	9.1	100	83	14	-	-
S-86	35.0 LT	66+00	7.00-13.00	A-1-b(0)	22	NP	96.2	2.8	1.0	0.0	86	13	1	-	-
SS-99	35.0 LT	70+00	2.80-4.30	A-4(0)	22	5	27.3	38.3	12.1	22.3	100	87	38	-	-
SS-100	35.0 LT	70+00	7.50-9.00	A-1-b(0)	21	NP	72.4	23.8	0.8	3.0	98	49	5	-	-

PROJECT REFERENCE NO.	SHEET NO.
R-2719A	39
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

SOIL TEST RESULTS

SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT C.SAND	F.SAND	SILT	CLAY	% PASSING (SIEVES) 10	40	200	% MOISTURE	% ORGANIC
S-87	40.0 LT	76+00	1.00-5.00	A-4(0)	32	NP	21.5	41.7	17.7	19.2	100	92	41	-	-
S-88	40.0 LT	76+00	5.00-15.00	A-3(0)	23	NP	56.1	40.2	1.7	2.0	98	71	4	-	-
S-89	40.0 LT	76+00	15.00-24.00	A-2-4(0)	20	NP	50.9	36.5	4.5	8.1	100	81	14	-	-
S-90	40.0 LT	76+00	24.00-29.50	A-6(6)	32	13	12.7	32.3	18.7	36.3	100	95	62	33.9	-
SS-225	CL	80+00	0.00-1.50	A-2-4(0)	32	NP	18.8	50.5	12.5	18.2	100	85	33	-	-
SS-226	CL	80+00	3.50-5.00	A-2-4(0)	25	4	46.1	32.5	3.2	18.2	98	74	22	-	-
SS-227	CL	80+00	8.50-10.00	A-3(0)	19	NP	73.8	19.9	0.3	6.0	95	56	7	-	-
SS-228	CL	80+00	18.50-20.00	A-3(0)	22	NP	42.3	48.5	0.1	9.0	95	74	10	-	-
SS-229	CL	80+00	23.50-25.00	A-2-6(0)	33	12	22.1	52.1	6.6	19.2	100	88	31	-	-
SS-230	CL	80+00	32.50-35.00	A-3(0)	20	NP	52.2	43.5	0.3	4.0	100	85	5	-	-
SS-231	CL	82+00	8.80-10.30	A-1-b(0)	23	NP	82.9	14.2	2.9	0.0	87	36	4	-	-
SS-232	CL	82+00	13.40-14.90	A-2-4(0)	25	NP	36.9	45.2	5.8	12.1	100	86	20	-	-
SS-233	CL	82+00	38.40-39.90	A-3(0)	20	NP	76.5	14.5	4.0	5.0	100	82	10	-	-
SS-234	CL	82+00	43.40 - 44.90	A-2-4(0)	27	NP	25.2	67.8	6.0	1.0	100	86	17	-	-
SS-235	CL	82+00	48.40-49.90	A-2-4(0)	23	NP	35.3	51.6	4.0	9.1	100	91	14	-	-



SOIL TEST RESULTS

SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT C.SAND	F.SAND	SILT	CLAY	% PASSING (SIEVES) 10	40	200	% MOISTURE	% ORGANIC
SS-236	70.0 LT	83+00	0.00-1.50	A-4(0)	40	NP	24.1	38.2	27.6	10.1	100	84	40	-	-
SS-237	70.0 LT	83+00	3.50-5.00	A-2-4(0)	21	NP	44.5	35.4	8.0	12.1	99	74	22	-	-
SS-238	70.0 LT	83+00	18.50-20.00	A-7-6(4)	44	26	44.4	21.5	12.0	22.1	100	78	38	26.3	-
SS-239	70.0 LT	83+00	23.50-25.00	A-2-6(1)	37	16	20.9	50.3	10.8	18.1	98	85	33	-	-
SS-240	70.0 LT	83+00	38.50-40.00	A-3(0)	19	NP	78.8	13.5	2.7	5.0	100	73	10	-	-
S-501	CL	25+00	0.00-3.50	A-4 (0)	34	8	38.0	28.5	23.4	10.1	100	81	36	45	-

SOIL TEST RESULTS

SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT C.SAND	F.SAND	SILT	CLAY	% PASSING (SIEVES) 10	40	200	% MOISTURE	% ORGANIC
S-150	CL	88+00	1.00-7.00	A-6(4)	37	12	18.6	29.5	19.7	32.3	100	90	54	42.1	-
S-151	CL	88+00	7.00-15.50	A-2-4(0)	15	NP	62.2	23.6	8.2	6.1	94	52	15	-	-
S-152	CL	88+00	15.50-28.00	A-2-4(0)	23	5	25.4	44.6	9.8	20.2	99	87	32	-	-
S-153	CL	88+00	28.00-53.00	A-2-4(0)	19	NP	38.0	48.2	5.7	8.1	100	93	15	-	-

75+00 76+00 77+00 78+00 79+00 80+00 81+00 82+00 83+00 84+00 85+00 86+00 87+00 88+00 89+00

PROJECT REFERENCE NO.	SHEET NO.
R-2719A	40
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

SOIL TEST RESULTS

SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT C.SAND	F.SAND	SILT	CLAY	% PASSING (SIEVES) 10	40	200	% MOISTURE	% ORGANIC
SS-150	CL	90+00	3.40-4.90	A-6(3)	27	14	25.2	31.5	15.0	28.3	100	87	47	-	-
SS-151	CL	90+00	8.90-10.10	A-3(0)	24	NP	59.1	37.2	0.6	3.0	99	70	4	-	-
SS-152	CL	90+00	23.80-25.30	A-6(1)	37	15	26.5	41.6	11.7	20.2	99	90	37	34.0	
SS-153	CL	90+00	33.80-35.30	A-3(0)	21	NP	61.8	30.0	3.2	5.0	100	85	9	-	-
SS-154	CL	90+00	43.80-45.30	A-3(0)	23	NP	56.8	36.6	2.5	4.0	100	94	8	-	-
SS-155	CL	90+00	48.80-50.30	A-3(0)	21	NP	81.6	10.5	1.8	6.1	100	63	8	-	-

Ⓐ SOFT GRAY SILTY SANDY CLAY, WET

Ⓑ MEDIUM STIFF GRAY SANDY CLAY, WET

SS-150 SS-151 SS-152 SS-153 SS-154 SS-155

SS-156

SS-157 SS-158 SS-159

23' LT

SS-160 SS-161 SS-162 SS-163 SS-164

SS-165

SS-166 SS-167 SS-168 SS-169 SS-170 SS-171

SS-172

12/04

VERY LOOSE TO MEDIUM DENSE GRAY SAND, SATURATED

SOFT TO MEDIUM STIFF DARK GRAY SANDY CLAY AND SANDY CLAYEY SILT, WET

VERY LOOSE TO MEDIUM DENSE GRAY SAND, SATURATED

VERY LOOSE TO VERY DENSE BROWN - GRAY TO GREEN - GRAY SAND WITH SOME CALCIUM CEMENTED SAND LAYERS. SATURATED

(PEEDEE FORMATION)

* ARTESIAN

SOIL TEST RESULTS

SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT C.SAND	F.SAND	SILT	CLAY	% PASSING (SIEVES) 10	40	200	% MOISTURE	% ORGANIC
SS-156	6.0 LT	92+00	48.80-50.30	A-2-4(0)	32	NP	53.9	23.6	8.4	14.1	97	64	22	-	-
SS-157	23.0 LT	94+00	1.00-1.50	A-4(4)	32	10	13.5	31.5	22.7	32.3	100	93	58	-	-
SS-158	23.0 LT	94+00	13.70-15.20	A-2-4(0)	25	NP	12.1	73.0	5.9	9.1	100	96	17	-	-
SS-159	23.0 LT	94+00	18.70-20.20	A-2-4(0)	23	NP	41.6	38.2	5.0	15.1	98	88	21	-	-
SS-160	CL	96+00	0.50-2.00	A-4(3)	37	8	12.3	31.3	28.2	28.3	100	94	58	-	-
SS-161	CL	96+00	3.60-5.10	A-4(0)	18	NP	14.9	48.6	16.2	20.2	100	91	39	-	-
SS-162	CL	96+00	8.60-10.00	A-3(0)	23	NP	56.1	41.4	1.5	1.0	96	72	3	-	-
SS-163	CL	96+00	18.60-20.10	A-2-4(0)	21	NP	45.5	39.9	6.6	8.1	100	92	16	-	-
SS-164	CL	96+00	33.60-34.70	A-3(0)	21	NP	35.0	56.8	5.1	3.0	100	99	9	-	-
SS-165	CL	98+00	18.70-20.20	A-2-4(0)	26	NP	24.0	54.9	9.0	12.1	99	92	25	-	-
SS-166	CL	100+00	0.00-1.50	A-4(1)	25	9	11.5	42.6	23.7	22.2	100	93	48	-	-
SS-167	CL	100+00	3.60-5.10	A-2-4(0)	18	NP	13.9	56.7	15.2	14.1	100	90	32	-	-
SS-168	CL	100+00	8.60-10.10	A-6(2)	33	13	24.6	35.5	20.7	19.2	98	91	41	-	-
SS-169	CL	100+00	13.60-15.10	A-3(0)	19	NP	81.1	17.5	1.4	0.0	98	51	1	-	-
SS-170	CL	100+00	18.60-19.20	A-2-4(0)	22	NP	18.0	59.7	9.2	13.1	98	90	25	-	-
SS-171	CL	100+00	23.60-25.20	A-2-4(0)	24	NP	49.5	36.2	4.1	10.1	99	81	16	-	-
SS-172	CL	102+00	8.50-10.00	A-3(0)	21	NP	69.3	28.5	2.2	0.0	100	81	2	-	-

70 60 50 40 30 20 10 0 -10

89+00 90+00 91+00 92+00 93+00 94+00 95+00 96+00 97+00 98+00 99+00 100+00 101+00 102+00 103+00

5/14/99

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5/14/99

PROJECT REFERENCE NO.	SHEET NO.
R-2719A	41
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

(A) SOFT, ORANGE TO GRAY SANDY CLAY, WET

(B) SOFT TO MEDIUM STIFF DARK GRAY SANDY CLAY AND SANDY CLAYEY SILT, WET

L STA.113+38.09 = Y3 STA.21+22.66

SS-173
SS-174

SS-175

SS-176
SS-177
SS-178

SS-179
SS-180
SS-181
SS-182
SS-183

SS-184
SS-185
SS-186
SS-187
SS-188
84' RT.

SS-194
SS-195
SS-196
SS-197
SS-198

(B) LOOSE TO VERY LOOSE GRAY SAND, SATURATED

(A) LOOSE TO DENSE GRAY SAND, MOIST TO SATURATED

DENSE TO VERY DENSE BROWN - GRAY TO GREEN - GRAY SAND (PEEDEE FORMATION) WITH SOME CALCIUM CEMENTED SAND LAYERS.

SATURATED

VERY STIFF GRAY SANDY SILT, WET

90 80 70 60 50 40 30 20 10 0

103+00 104+00 105+00 106+00 107+00 108+00 109+00 110+00 111+00 112+00 113+00 114+00 115+00 116+00 117+00

SOIL TEST RESULTS

SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT C.SAND	F.SAND	SILT	CLAY	% PASSING (SIEVES) 10	40	200	% MOISTURE	% ORGANIC
SS-173	CL	104+50	8.70-10.20	A-2-4(0)	21	NP	20.0	67.5	7.5	5.0	100	99	14	-	-
SS-174	CL	104+50	23.70-25.20	A-2-4(0)	23	NP	29.5	48.9	7.5	14.1	100	91	25	-	-
SS-175	CL	106+00	3.70-5.20	A-2-4(0)	31	NP	41.4	42.7	12.9	3.0	100	82	18	-	-
SS-176	CL	108+00	18.60-20.20	A-2-4(0)	25	NP	11.1	69.2	7.6	12.1	100	97	23	-	-
SS-177	CL	108+00	28.60-30.20	A-2-4(0)	22	NP	38.0	43.0	5.9	13.1	99	84	21	-	-
SS-178	CL	108+00	33.60-35.20	A-2-4(0)	22	NP	44.1	41.3	4.5	10.1	100	89	16	-	-
SS-179	CL	110+00	0.50-2.00	A-2-4(0)	21	NP	30.1	50.1	13.8	6.1	100	85	23	-	-
SS-180	CL	110+00	3.50-5.00	A-7-6(8)	53	25	15.3	42.0	10.4	32.3	100	95	47	-	-
SS-181	CL	110+00	8.50-10.00	A-2-4(0)	25	NP	12.9	65.0	8.0	14.1	100	96	26	-	-
SS-182	CL	110+00	23.50-25.00	A-2-4(0)	23	NP	28.6	54.9	5.4	11.1	97	89	18	-	-
SS-183	CL	110+00	33.50-35.00	A-2-4(0)	24	NP	31.5	48.8	5.5	14.1	99	85	22	-	-
SS-184	84.0 RT	113+08	28.60-30.10	A-2-4(0)	23	NP	6.9	76.1	6.0	11.1	100	98	19	-	-
SS-185	84.0 RT	113+08	38.60-40.10	A-2-4(0)	23	NP	46.1	37.7	6.1	10.1	100	87	17	-	-
SS-186	84.0 RT	113+08	63.60-65.10	A-2-4(0)	24	NP	61.4	20.0	6.6	12.1	100	88	20	-	-
SS-187	84.0 RT	113+08	73.60-75.10	A-2-4(0)	25	NP	30.8	62.0	6.3	1.0	100	83	13	-	-
SS-188	84.0 RT	113+08	78.60-80.10	A-4(0)	28	NP	2.1	73.3	12.5	12.1	100	99	44	-	-
SS-194	CL	116+00	0.0-1.5	A-2-4(0)	23	NP	29.3	62.5	4.1	4.0	100	80	11	-	-
SS-195	CL	116+00	9.5-10.4	A-2-4(0)	21	2	15.8	59.5	10.7	14.1	100	90	28	-	-
SS-196	CL	116+00	13.9-15.4	A-2-4(0)	31	NP	12.2	64.7	9.0	14.1	100	95	30	-	-
SS-197	CL	116+00	18.9-20.4	A-2-4(0)	24	NP	39.2	43.3	6.4	11.1	99	92	19	-	-
SS-198	CL	116+00	33.9-35.4	A-2-4(0)	27	NP	10.1	66.2	9.6	14.1	100	94	29	-	-

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kbmiller

5/14/99

PROJECT REFERENCE NO.	SHEET NO.
R-2719A	42
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

SOIL TEST RESULTS

SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT C.SAND	F.SAND	SILT	CLAY	% PASSING (SIEVES) 10	40	200	% MOISTURE	% ORGANIC
SS-199	CL	118+00	13.8-15.3	A-3(0)	24	NP	7.2	87.1	3.6	2.0	100	99	7	-	-
SS-200	CL	118+00	18.80-20.30	A-2-4(0)	27	NP	4.9	75.4	3.6	16.1	99	96	21	-	-
SS-201	CL	120+00	0.00-1.50	A-2-4(0)	25	NP	23.3	64.7	0.0	12.0	100	89	14	-	-
SS-202	CL	120+00	8.60-10.10	A-1-b(0)	19	NP	61.6	31.9	0.4	6.0	74	39	6	-	-
SS-203	CL	120+00	18.60-20.10	A-2-4(0)	29	6	18.9	58.0	5.0	18.1	99	95	25	-	-
S-204	CL	126+00	4.00-5.50	A-3(0)	22	NP	27.6	63.9	0.5	8.0	100	86	9	-	-
S-205	CL	126+00	9.80-11.00	A-2-4(0)	19	NP	12.8	66.6	1.6	19.1	100	95	22	-	-
S-206	CL	128+00	5.00-6.50	A-6(2)	33	14	7.3	56.0	3.5	33.1	100	97	39	-	-

Ⓐ MEDIUM STIFF ORANGE TO GRAY SANDY CLAY, WET

Ⓑ VERY SOFT BLACK TO BROWN MUCK, SATURATED (ALLUVIUM)

SS-199
SS-200

SS-201
SS-202
SS-203

S-204
S-205

S-206

VERY LOOSE TO DENSE ORANGE TO GRAY SAND, MOIST TO SATURATED

LOOSE TO VERY DENSE
GREEN - GRAY SAND, SATURATED
(PEEDEE FORMATION)

DRY
01/05

LOOSE TO MEDIUM DENSE
GREEN - GRAY SAND, SATURATED
(PEEDEE FORMATION)

120 110 100 90 80 70 60 50 40 30

117+00 118+00 119+00 120+00 121+00 122+00 123+00 124+00 125+00 126+00 127+00 128+00 129+00 130+00 131+00

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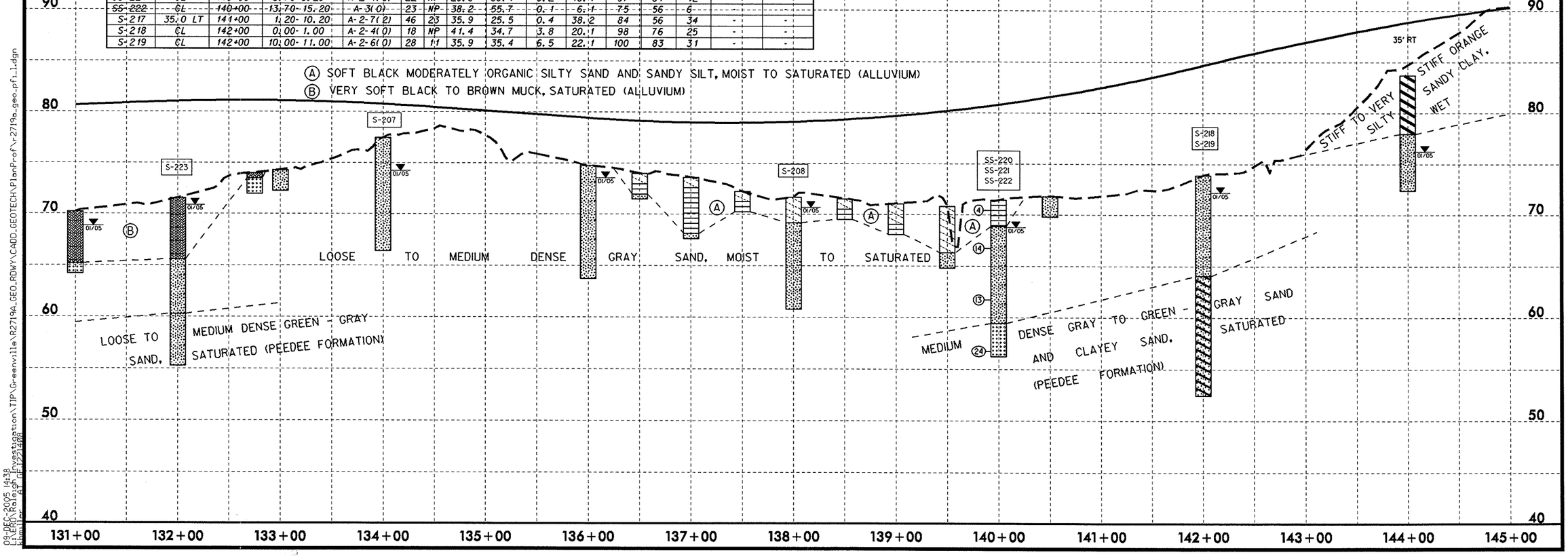
PROJECT REFERENCE NO.	SHEET NO.
R-2719A	43
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

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-223	CL	132+00	0.50- 1.50	A-5(1)	65	NP	16.7	37.1	28.1	18.1	98	88	47	-	32.3
S-207	CL	134+00	4.00- 5.50	A-2-4(0)	19	NP	12.6	68.9	0.5	18.1	100	95	21	-	-
S-208	CL	138+00	1.50- 3.00	A-2-4(0)	36	NP	17.9	65.6	8.5	8.0	99	91	18	-	6.2
SS-220	CL	140+00	0.00- 1.50	A-4(0)	32	NP	4.6	59.8	19.4	16.2	100	82	38	-	-
SS-221	CL	140+00	3.70- 5.20	A-2-4(0)	22	NP	20.6	69.1	0.2	10.1	97	84	12	-	-
SS-222	CL	140+00	13.70- 15.20	A-3(0)	23	NP	38.2	55.7	0.1	6.1	75	56	6	-	-
S-217	35.0 LT	141+00	1.20- 10.20	A-2-7(2)	46	23	35.9	25.5	0.4	38.2	84	56	34	-	-
S-218	CL	142+00	0.00- 1.00	A-2-4(0)	18	NP	41.4	34.7	3.8	20.1	98	76	25	-	-
S-219	CL	142+00	10.00- 11.00	A-2-6(0)	28	11	35.9	35.4	6.5	22.1	100	83	31	-	-



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bmiller

5/14/99

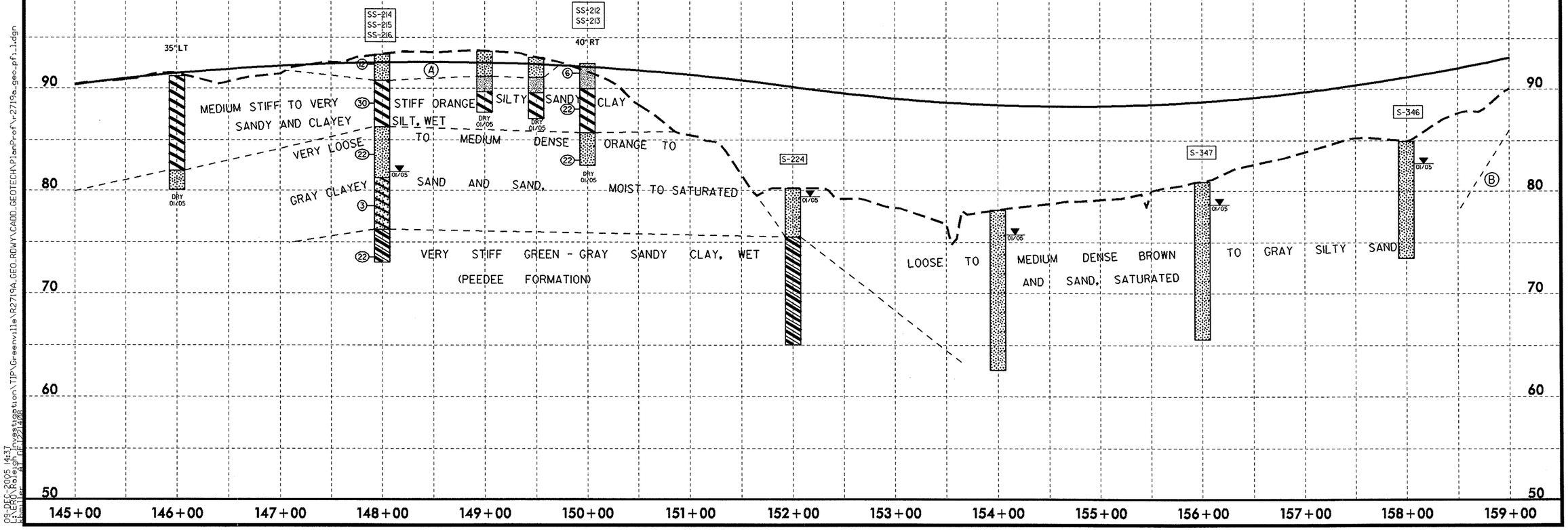
PROJECT REFERENCE NO.	SHEET NO.
R-2719A	44
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

SOIL TEST RESULTS

SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT C.SAND	F.SAND	SILT	CLAY	% PASSING (SIEVES) 10	40	200	% MOISTURE	% ORGANIC
SS-214	CL	148+00	0.00-1.50	A-2-4(0)	15	NP	29.5	41.2	13.1	16.2	100	86	32	-	-
SS-215	CL	148+00	13.80-15.30	A-2-6(0)	35	16	67.7	18.5	0.7	13.1	90	46	13	-	-
SS-216	CL	148+00	18.80-20.30	A-6(3)	32	17	19.4	39.4	6.9	34.3	100	91	44	-	-
SS-212	40.0 RT	150+00	3.50-5.00	A-7-5(18)	57	26	9.1	22.0	20.4	48.5	98	91	69	32.5	-
SS-213	40.0 RT	150+00	8.50-10.00	A-2-4(0)	24	NP	27.3	49.5	3.0	20.2	99	91	24	-	-
S-224	CL	152+00	1.50-3.00	A-2-4(0)	26	8	37.4	36.1	5.3	21.1	95	71	26	-	-
S-347	CL	156+00	1.00-2.00	A-2-4(0)	16	NP	19.2	56.7	13.0	11.1	100	90	26	-	-
S-346	CL	158+00	5.00-6.00	A-2-4(0)	25	NP	16.1	54.3	9.4	20.2	100	92	33	-	-

Ⓐ MEDIUM DENSE TAN SAND, MOIST

Ⓑ STIFF TO V. STIFF ORANGE SANDY CLAY, WET



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PROJECT REFERENCE NO.	SHEET NO.
R-2719A	45
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

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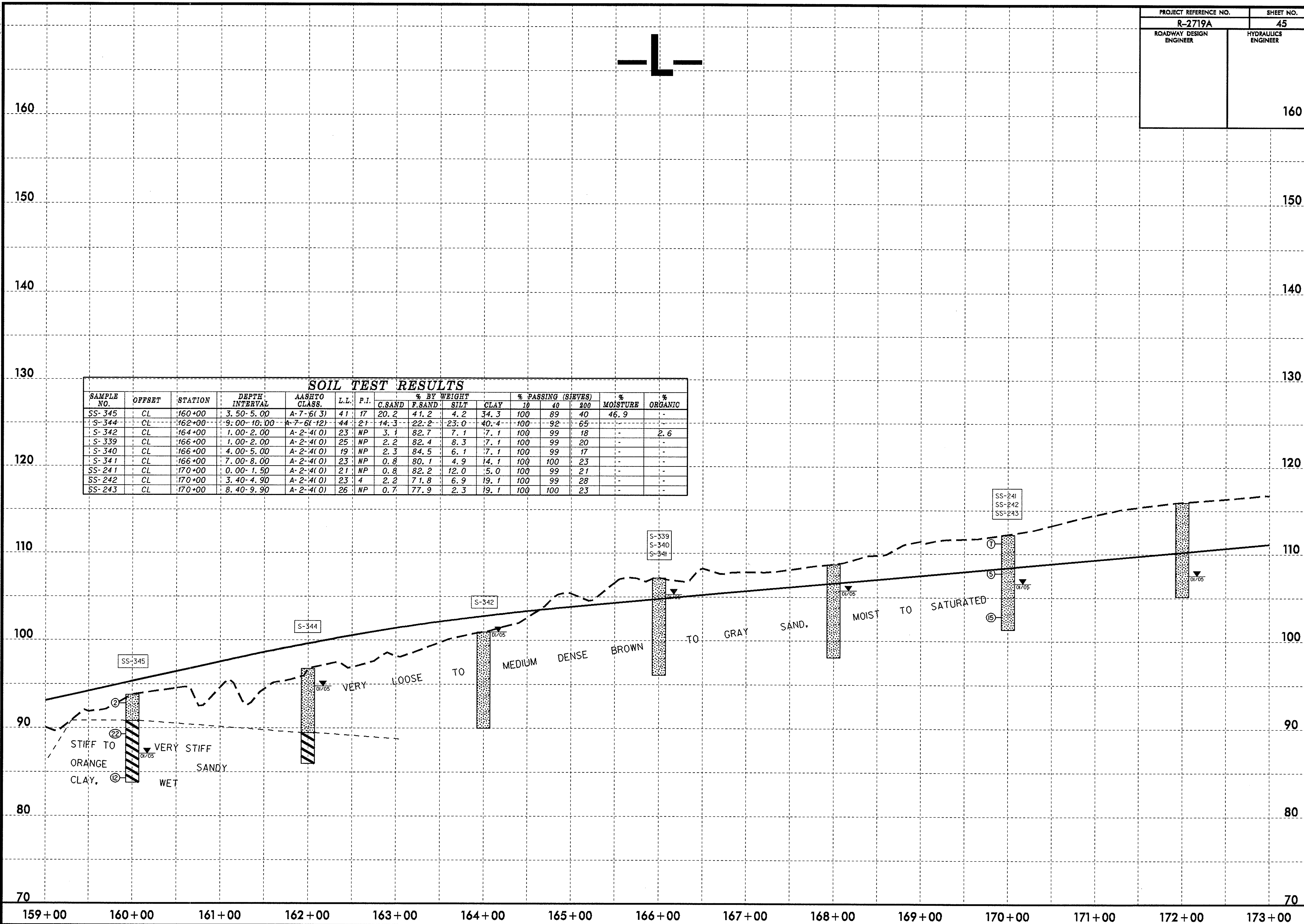
SOIL TEST RESULTS

SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT C.SAND	F.SAND	SILT	CLAY	% PASSING (SIEVES) 10	40	200	% MOISTURE	% ORGANIC
SS-345	CL	160+00	3.50-5.00	A-7-6(3)	41	17	20.2	41.2	4.2	34.3	100	89	40	46.9	-
S-344	CL	162+00	9.00-10.00	A-7-6(12)	44	21	14.3	22.2	23.0	40.4	100	92	65	-	-
S-342	CL	164+00	1.00-2.00	A-2-4(0)	23	NP	3.1	82.7	7.1	7.1	100	99	18	-	2.6
S-339	CL	166+00	1.00-2.00	A-2-4(0)	25	NP	2.2	82.4	8.3	7.1	100	99	20	-	-
S-340	CL	166+00	4.00-5.00	A-2-4(0)	19	NP	2.3	84.5	6.1	7.1	100	99	17	-	-
S-341	CL	166+00	7.00-8.00	A-2-4(0)	23	NP	0.8	80.1	4.9	14.1	100	100	23	-	-
SS-241	CL	170+00	0.00-1.50	A-2-4(0)	21	NP	0.8	82.2	12.0	5.0	100	99	21	-	-
SS-242	CL	170+00	3.40-4.90	A-2-4(0)	23	4	2.2	71.8	6.9	19.1	100	99	28	-	-
SS-243	CL	170+00	8.40-9.90	A-2-4(0)	26	NP	0.7	77.9	2.3	19.1	100	100	23	-	-



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PROJECT REFERENCE NO.	SHEET NO.
R-2719A	46
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

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-244	CL	174+00	1.00-2.00	A-2-4(0)	18	NP	3.2	76.1	9.6	11.1	100	99	31	-	-
S-245	CL	175+55	1.00-2.00	A-4(1)	26	10	0.7	60.1	13.1	26.2	100	99	42	-	-
S-246	CL	175+55	5.00-6.00	A-2-4(0)	25	4	1.8	71.9	6.1	20.1	100	100	28	-	-
S-247	CL	175+55	8.00-9.00	A-2-4(0)	22	NP	1.0	83.0	3.9	12.1	100	100	18	-	-
SS-248	14.0 RT	180+00	0.00-1.50	A-4(0)	15	NP	1.9	64.4	16.6	17.1	100	99	39	-	-
SS-249	14.0 RT	180+00	3.80-5.30	A-2-4(0)	26	7	0.8	70.1	7.9	21.1	100	99	31	-	-
S-250	CL	186+00	1.00-2.00	A-2-4(0)	19	NP	3.1	81.8	10.1	5.0	100	99	19	-	-
S-251	CL	186+00	6.00-7.00	A-2-4(0)	19	NP	1.0	81.7	6.2	11.1	100	99	20	-	-

(A) MEDIUM STIFF TO STIFF TAN TO GRAY CLAYEY SANDY SILT, MOIST TO WET

S-244

S-245
S-246
S-247

SS-248
SS-249

S-250
S-251

37' LT

14' RT

+10.909%

MEDIUM STIFF TAN TO GRAY CLAYEY SANDY SILT, MOIST TO WET

LOOSE TO MEDIUM DENSE TAN TO GRAY SAND, MOIST TO SATURATED

01/05

170 160 150 140 130 120 110 100 90 80

173+00 174+00 175+00 176+00 177+00 178+00 179+00 180+00 181+00 182+00 183+00 184+00 185+00 186+00 187+00

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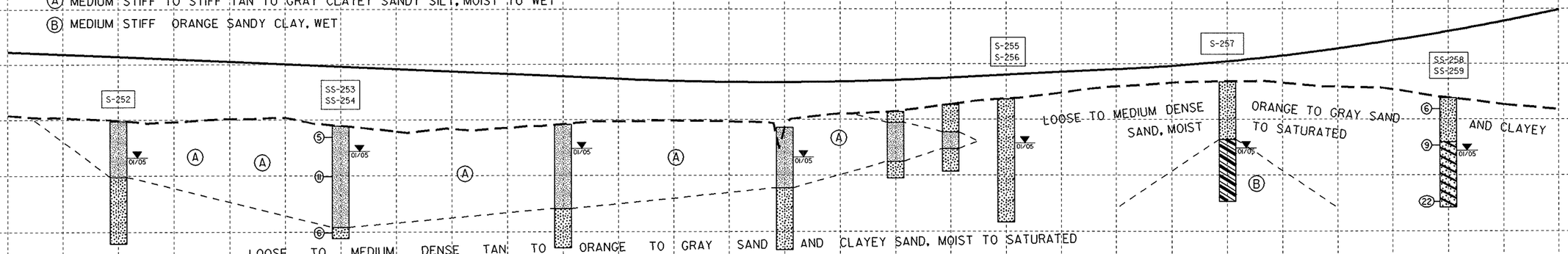
PROJECT REFERENCE NO.	SHEET NO.
R-2719A	47
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

SOIL TEST RESULTS

SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT C.SAND	% BY WEIGHT F.SAND	% BY WEIGHT SILT	% BY WEIGHT CLAY	% PASSING (SIEVES) 10	% PASSING (SIEVES) 40	% PASSING (SIEVES) 200	% MOISTURE	% ORGANIC
S-252	CL	188+00	6.00-7.00	A-2-4(0)	22	NP	1.2	79.7	6.0	13.1	100	100	32	-	-
SS-253	CL	190+00	0.00-1.50	A-4(2)	24	10	0.8	51.9	19.1	28.2	100	99	51	-	-
SS-254	CL	190+00	8.50-10.00	A-2-4(0)	22	NP	1.2	78.6	6.1	14.1	100	100	22	-	-
S-255	CL	196+00	1.00-2.00	A-2-4(0)	20	NP	1.2	77.9	8.8	12.1	100	99	25	-	-
S-256	CL	196+00	7.00-8.00	A-2-4(0)	22	NP	2.0	83.4	4.5	10.1	100	100	17	-	-
S-257	CL	198+00	7.00-8.00	A-6(2)	35	16	1.4	63.1	9.3	26.1	100	100	39	-	-
SS-258	CL	200+00	0.00-1.50	A-2-4(0)	18	NP	2.9	78.9	10.2	8.0	100	99	22	-	-
SS-259	CL	200+00	3.30-4.80	A-2-6(0)	30	12	2.5	65.6	7.7	24.1	100	99	34	-	-

(A) MEDIUM STIFF TO STIFF TAN TO GRAY CLAYEY SANDY SILT, MOIST TO WET

(B) MEDIUM STIFF ORANGE SANDY CLAY, WET



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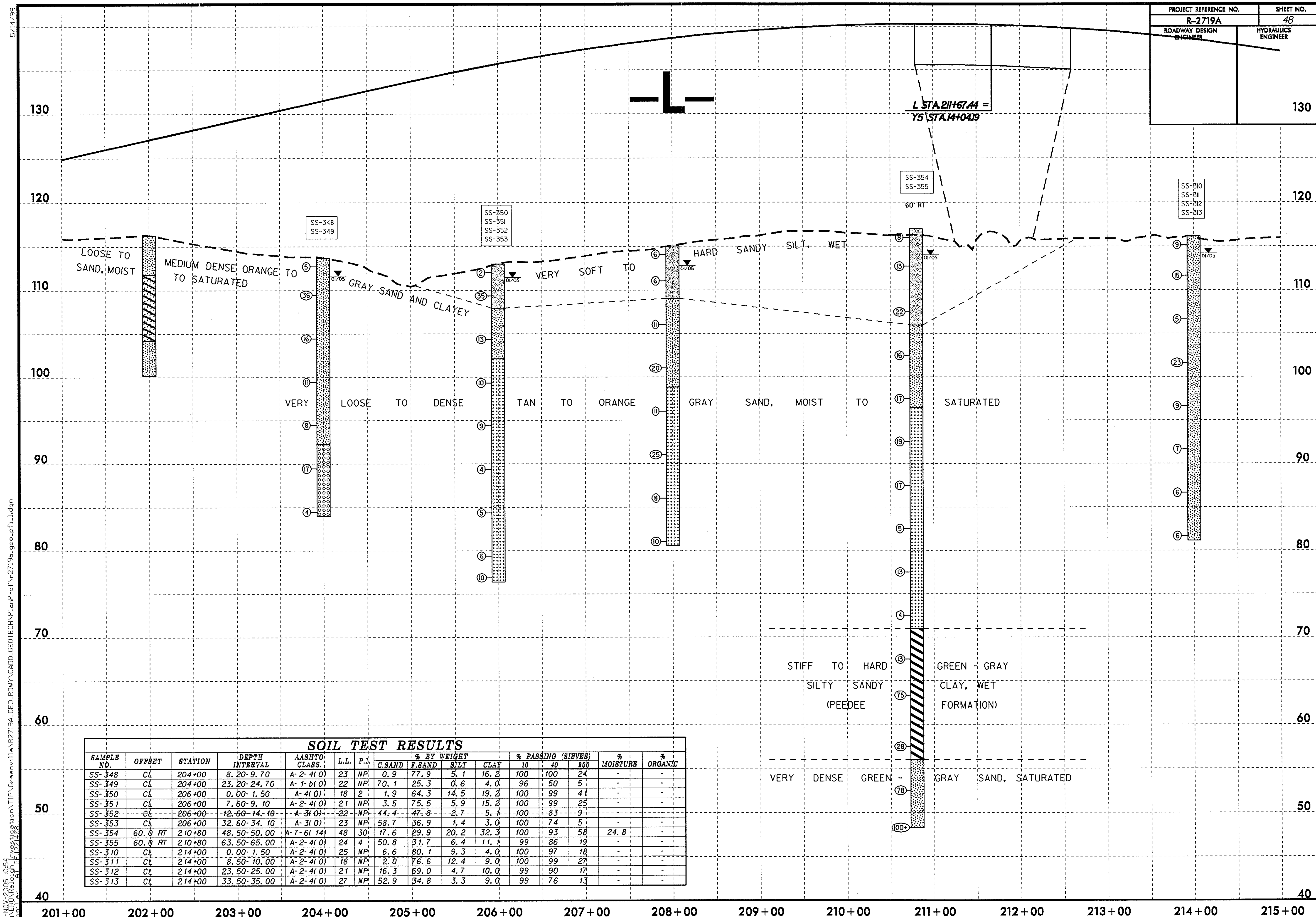

SOIL TEST RESULTS

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-348	CL	204+00	8.20-9.70	A-2-4(0)	23	NP	0.9	77.9	5.1	16.2	100	100	24	-	-
SS-349	CL	204+00	23.20-24.70	A-1-b(0)	22	NP	70.1	25.3	0.6	4.0	96	50	5	-	-
SS-350	CL	206+00	0.00-1.50	A-4(0)	18	2	1.9	64.3	14.5	19.2	100	99	41	-	-
SS-351	CL	206+00	7.60-9.10	A-2-4(0)	21	NP	3.5	75.5	5.9	15.2	100	99	25	-	-
SS-352	CL	206+00	12.60-14.10	A-3(0)	22	NP	44.4	47.8	2.7	5.1	100	83	9	-	-
SS-353	CL	206+00	32.60-34.10	A-3(0)	23	NP	58.7	36.9	1.4	3.0	100	74	5	-	-
SS-354	60.0 RT	210+80	48.50-50.00	A-7-6(14)	48	30	17.6	29.9	20.2	32.3	100	93	58	24.8	-
SS-355	60.0 RT	210+80	63.50-65.00	A-2-4(0)	24	4	50.8	31.7	6.4	11.1	99	86	19	-	-
SS-310	CL	214+00	0.00-1.50	A-2-4(0)	25	NP	6.6	80.1	9.3	4.0	100	97	18	-	-
SS-311	CL	214+00	8.50-10.00	A-2-4(0)	18	NP	2.0	76.6	12.4	9.0	100	99	27	-	-
SS-312	CL	214+00	23.50-25.00	A-2-4(0)	21	NP	16.3	69.0	4.7	10.0	99	90	17	-	-
SS-313	CL	214+00	33.50-35.00	A-2-4(0)	27	NP	52.9	34.8	3.3	9.0	99	76	13	-	-

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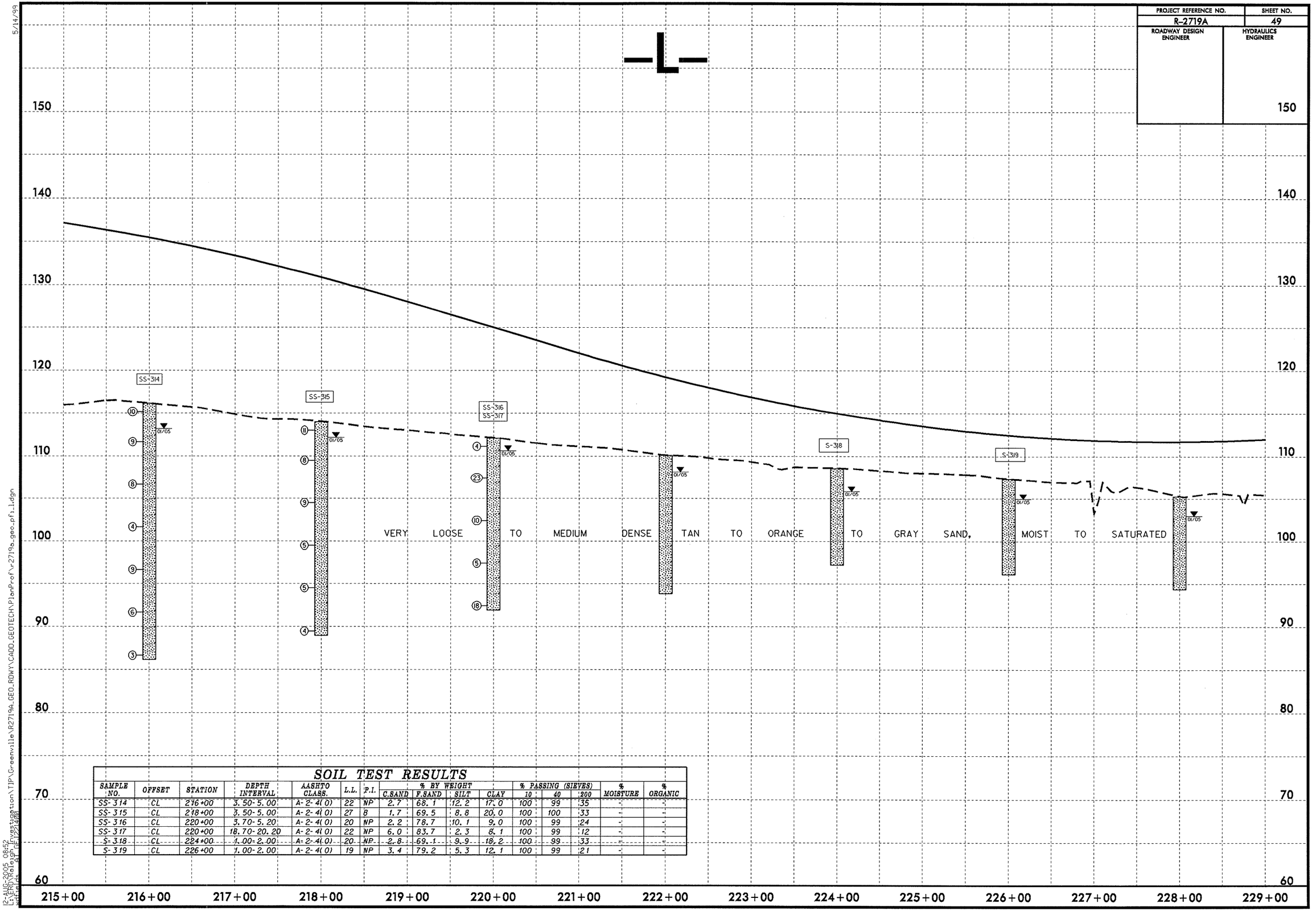
PROJECT REFERENCE NO.	SHEET NO.
R-2719A	49
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER



SOIL TEST RESULTS

SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT C.SAND	F.SAND	SILT	CLAY	% PASSING (SIEVES) 10	40	200	% MOISTURE	% ORGANIC
SS-314	CL	216+00	3.50-5.00	A-2-4(0)	22	NP	2.7	68.1	12.2	17.0	100	99	35	-	-
SS-315	CL	218+00	3.50-5.00	A-2-4(0)	27	8	1.7	69.5	8.8	20.0	100	100	33	-	-
SS-316	CL	220+00	3.70-5.20	A-2-4(0)	20	NP	2.2	78.7	10.1	9.0	100	99	24	-	-
SS-317	CL	220+00	18.70-20.20	A-2-4(0)	22	NP	6.0	83.7	2.3	8.1	100	99	12	-	-
S-318	CL	224+00	1.00-2.00	A-2-4(0)	20	NP	2.8	69.1	9.9	18.2	100	99	33	-	-
S-319	CL	226+00	1.00-2.00	A-2-4(0)	19	NP	3.4	79.2	5.3	12.1	100	99	21	-	-

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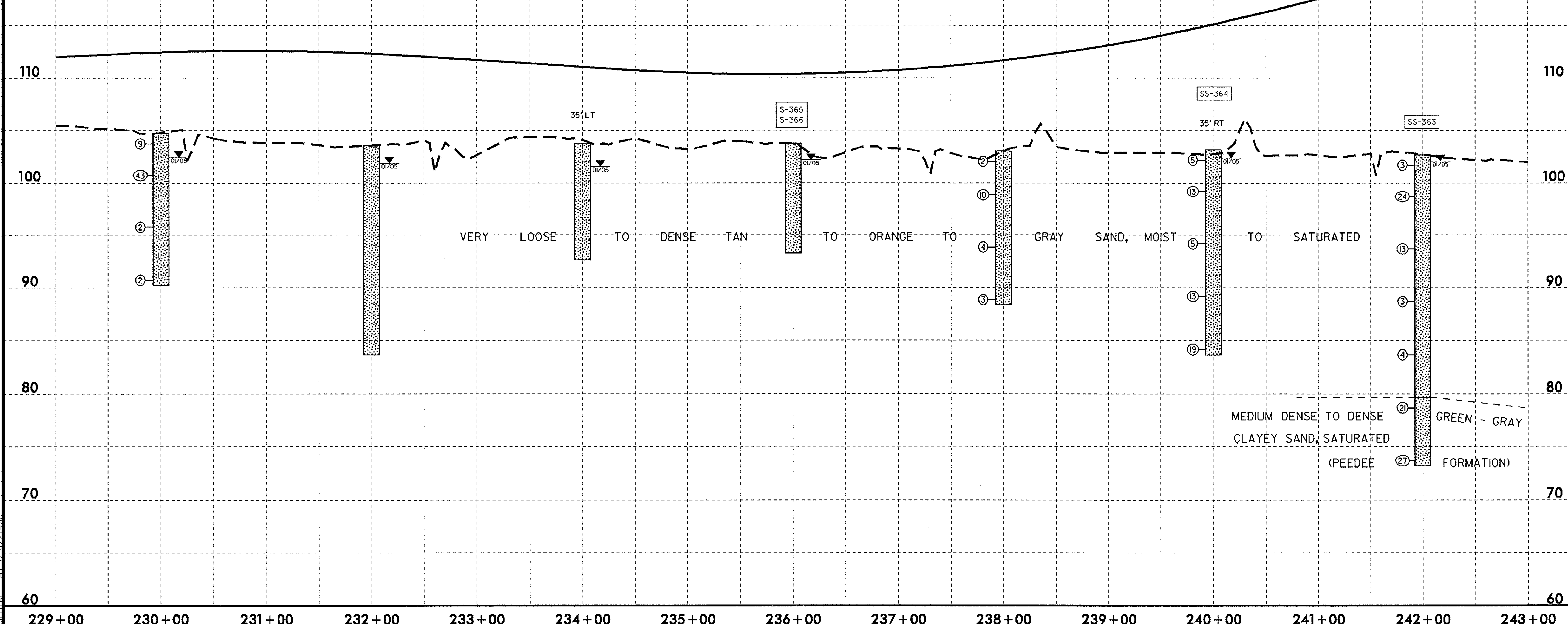
PROJECT REFERENCE NO.	SHEET NO.
R-2719A	50
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

-L-

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-365	CL	236+00	1.00-2.00	A-2-4(0)	26	NP	11.8	76.6	5.5	6.0	100	93	14	-	-
S-366	CL	236+00	5.00-2.00	A-2-4(0)	19	NP	20.2	67.1	2.6	10.1	100	90	15	-	-
SS-364	35.0 RT	240+00	18.00-19.50	A-2-4(0)	25	6	23.7	42.9	19.3	14.1	97	89	34	-	-
SS-363	CL	242+00	8.00-9.50	A-2-4(0)	22	NP	2.0	80.7	5.2	12.1	100	99	21	-	-



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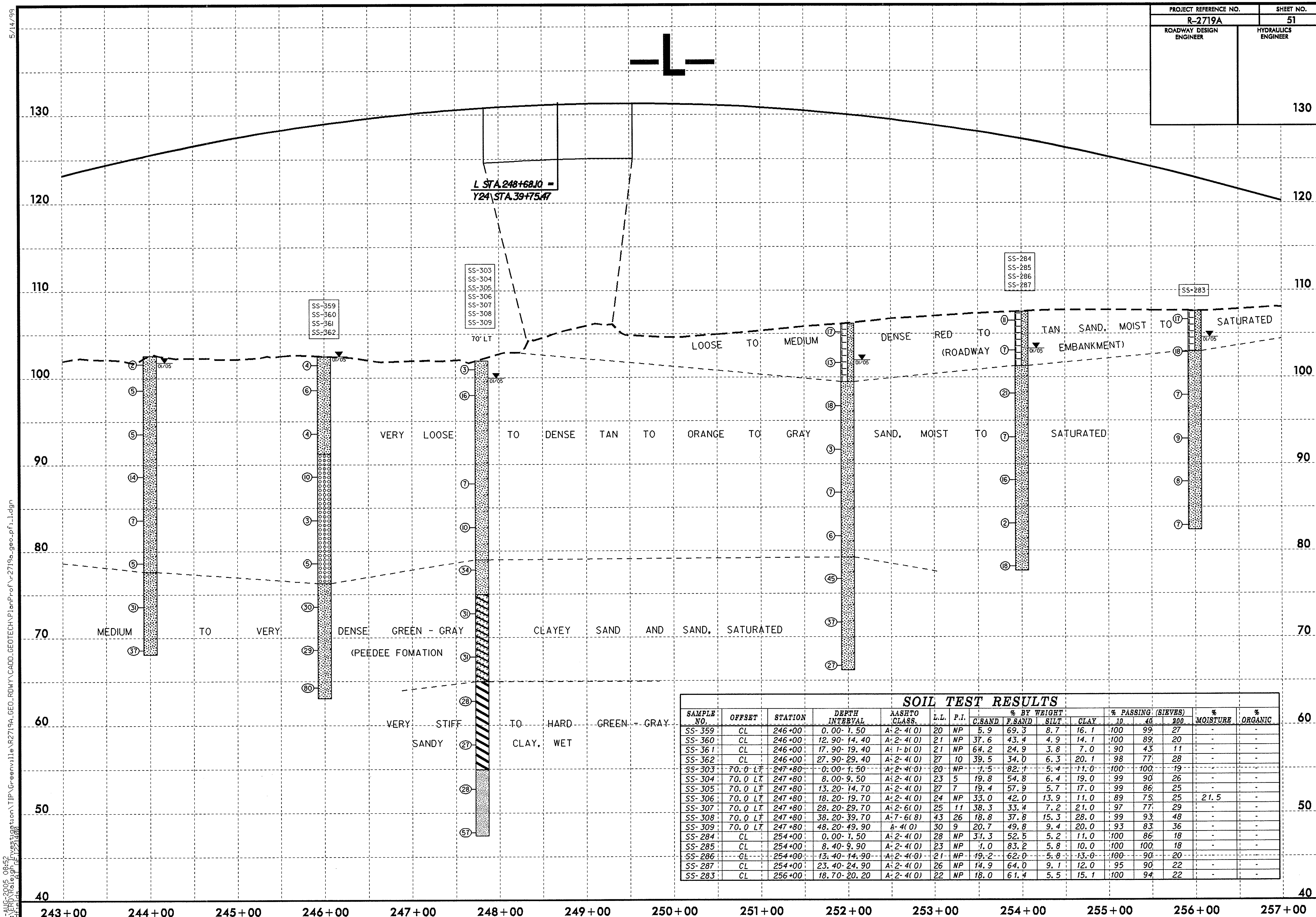
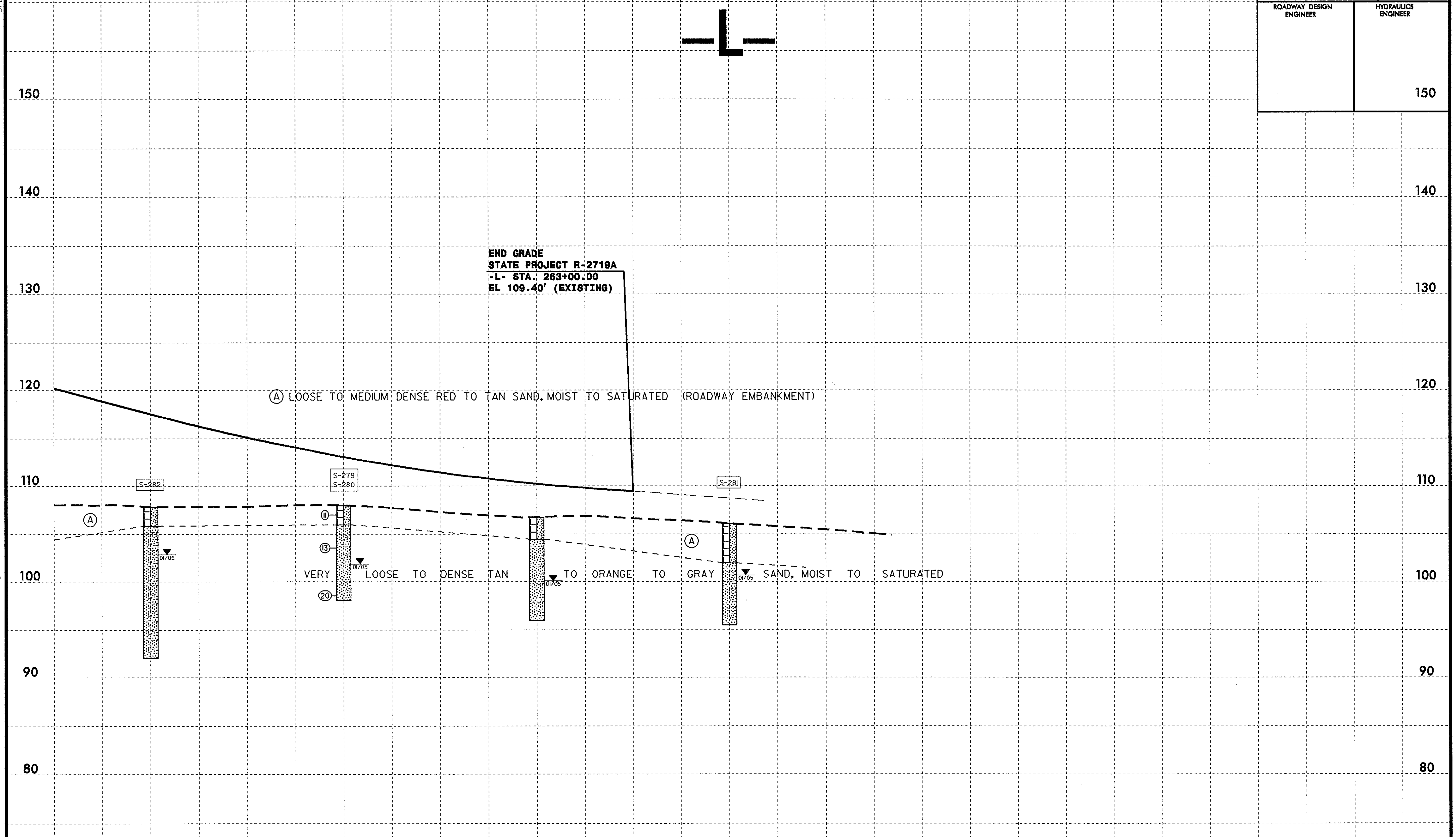


SOIL TEST RESULTS

SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT C.SAND	F.SAND	SILT	CLAY	% PASSING (SIEVES) 10	40	200	% MOISTURE	% ORGANIC
SS-359	CL	246+00	0.00-1.50	A-2-4(0)	20	NP	5.9	69.3	8.7	16.1	100	99	27	-	-
SS-360	CL	246+00	12.90-14.40	A-2-4(0)	21	NP	37.6	43.4	4.9	14.1	100	89	20	-	-
SS-361	CL	246+00	17.90-19.40	A-1-b(0)	21	NP	64.2	24.9	3.8	7.0	90	43	11	-	-
SS-362	CL	246+00	27.90-29.40	A-2-4(0)	27	10	39.5	34.0	6.3	20.1	98	77	28	-	-
SS-303	70.0 LT	247+80	0.00-1.50	A-2-4(0)	20	NP	1.5	82.1	5.4	11.0	100	100	19	-	-
SS-304	70.0 LT	247+80	8.00-9.50	A-2-4(0)	23	5	19.8	54.8	6.4	19.0	99	90	26	-	-
SS-305	70.0 LT	247+80	13.20-14.70	A-2-4(0)	27	7	19.4	57.9	5.7	17.0	99	86	25	-	-
SS-306	70.0 LT	247+80	18.20-19.70	A-2-4(0)	24	NP	33.0	42.0	13.9	11.0	89	75	25	21.5	-
SS-307	70.0 LT	247+80	28.20-29.70	A-2-6(0)	25	11	38.3	33.4	7.2	21.0	97	77	29	-	-
SS-308	70.0 LT	247+80	38.20-39.70	A-7-6(8)	43	26	18.8	37.8	15.3	28.0	99	93	48	-	-
SS-309	70.0 LT	247+80	48.20-49.90	A-4(0)	30	9	20.7	49.8	9.4	20.0	93	83	36	-	-
SS-284	CL	254+00	0.00-1.50	A-2-4(0)	28	NP	31.3	52.5	5.2	11.0	100	86	18	-	-
SS-285	CL	254+00	8.40-9.90	A-2-4(0)	23	NP	1.0	83.2	5.8	10.0	100	100	18	-	-
SS-286	CL	254+00	13.40-14.90	A-2-4(0)	21	NP	19.2	62.0	5.8	13.0	100	90	20	-	-
SS-287	CL	254+00	23.40-24.90	A-2-4(0)	26	NP	14.9	64.0	9.1	12.0	95	90	22	-	-
SS-283	CL	256+00	18.70-20.20	A-2-4(0)	22	NP	18.0	61.4	5.5	15.1	100	94	22	-	-

PROJECT REFERENCE NO.	SHEET NO.
R-2719A	52
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

-L-



SOIL TEST RESULTS

SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT C.SAND	F.SAND	SILT	CLAY	% PASSING (SIEVES) 10	40	200	% MOISTURE	% ORGANIC
S-282	CL	258+00	5.00-6.00	A-2-4(0)	21	NP	16.7	70.6	2.7	10.0	100	97	14	-	-
S-279	CL	260+00	0.00-1.50	A-2-4(0)	20	NP	41.3	44.7	3.9	10.1	99	80	16	-	-
S-280	CL	260+00	8.40-9.90	A-2-4(0)	22	NP	8.8	79.9	1.2	10.1	100	98	12	-	-
S-281	CL	264+00	5.00-6.00	A-2-4(0)	20	NP	17.6	68.8	8.6	5.0	100	93	16	-	-

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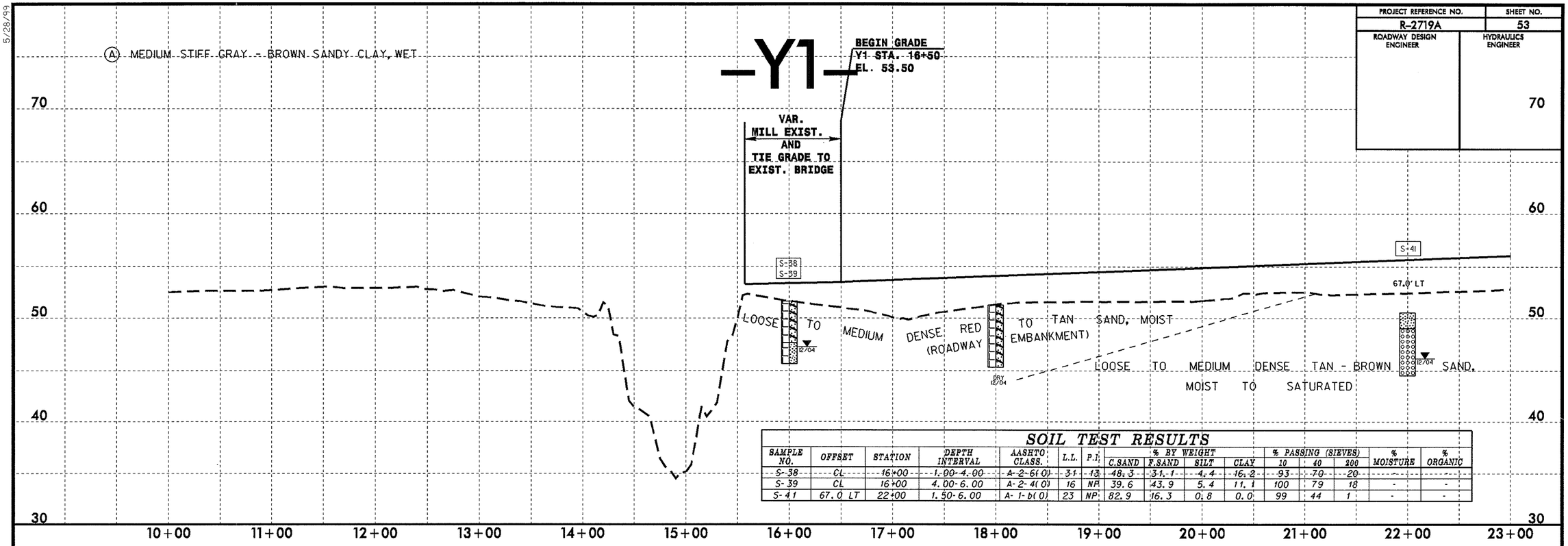
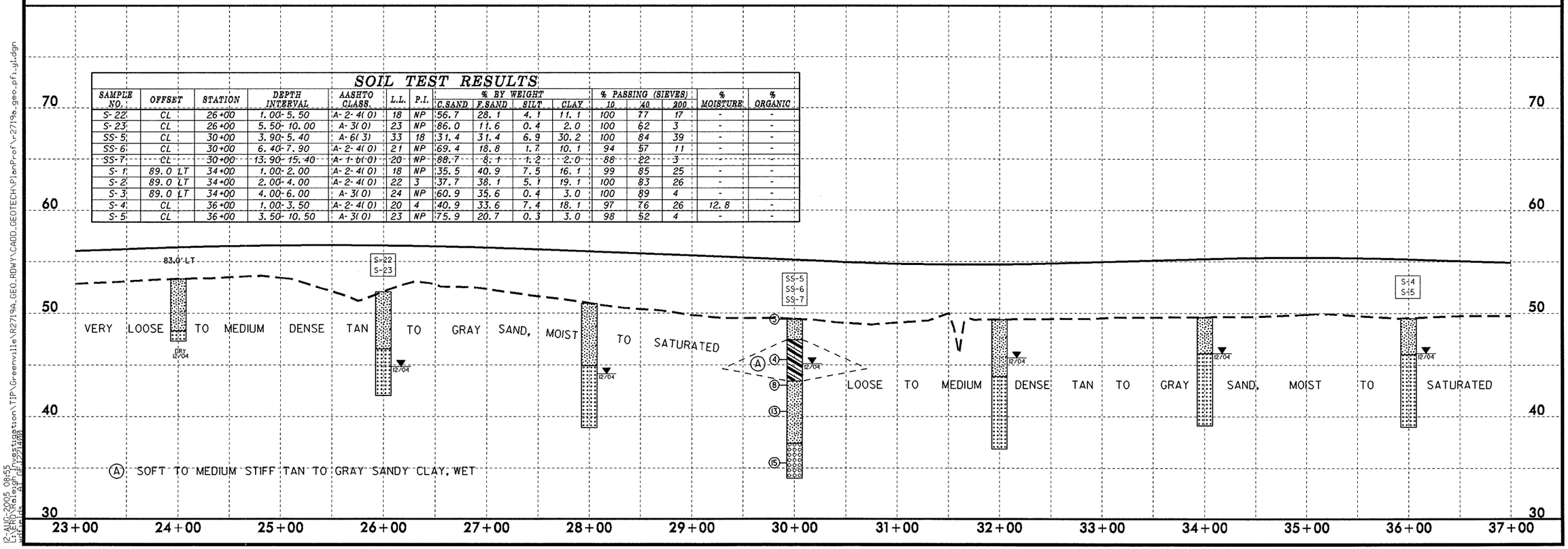
PROJECT REFERENCE NO.	SHEET NO.
R-2719A	53
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER



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-38	CL	16+00	1.00-4.00	A-2-6(0)	31	13	48.3	31.1	4.4	16.2	93	70	20	-	-
S-39	CL	16+00	4.00-6.00	A-2-4(0)	16	NP	39.6	43.9	5.4	11.1	100	79	18	-	-
S-41	67.0 LT	22+00	1.50-6.00	A-1-b(0)	23	NP	82.9	16.3	0.8	0.0	99	44	1	-	-



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PROJECT REFERENCE NO.	SHEET NO.
R-2719A	54
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

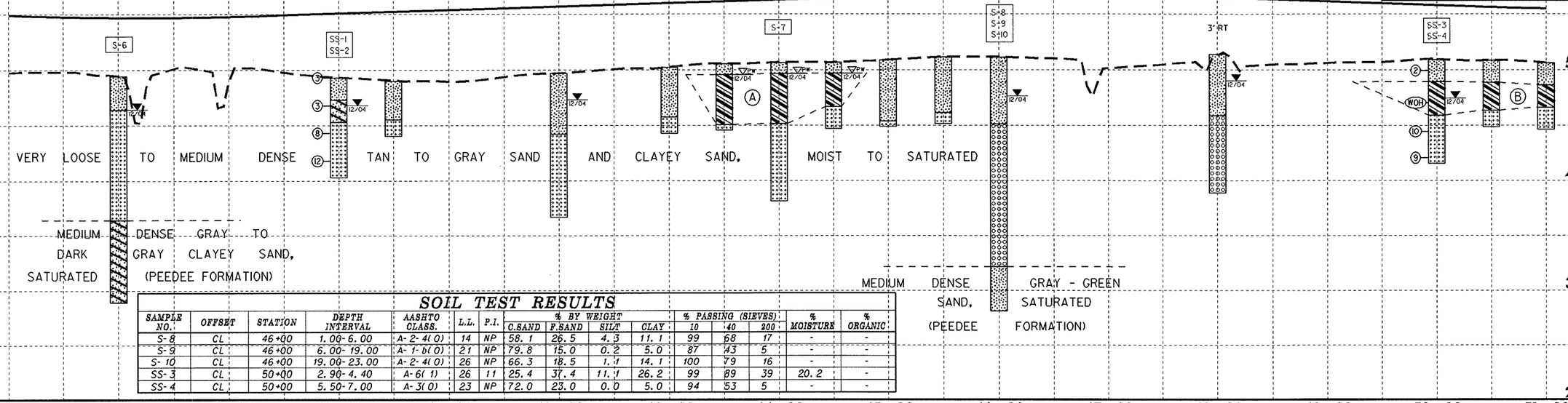
Ⓐ SOFT TO MEDIUM STIFF TAN TO GRAY SANDY CLAY, WET

Ⓑ VERY SOFT TO MEDIUM STIFF GRAY TO DARK GRAY SANDY CLAY, WET

-Y1-

SOIL TEST RESULTS

SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT C.SAND	F.SAND	SILT	CLAY	% PASSING (SIEVES) 10	40	200	% MOISTURE	% ORGANIC
S-6	CL	38+00	13.00-20.50	A-2-6(1)	39	15	29.9	44.8	6.1	19.1	99	82	29	26.8	-
SS-1	CL	40+00	2.50-4.00	A-2-6(0)	31	12	42.1	29.6	4.1	24.2	100	84	30	-	-
SS-2	CL	40+00	5.00-6.50	A-3(0)	22	NP	71.9	23.3	0.8	4.0	99	59	6	-	-
S-7	CL	44+00	1.00-5.50	A-6(2)	29	14	28.2	33.9	13.7	24.2	100	88	43	-	-

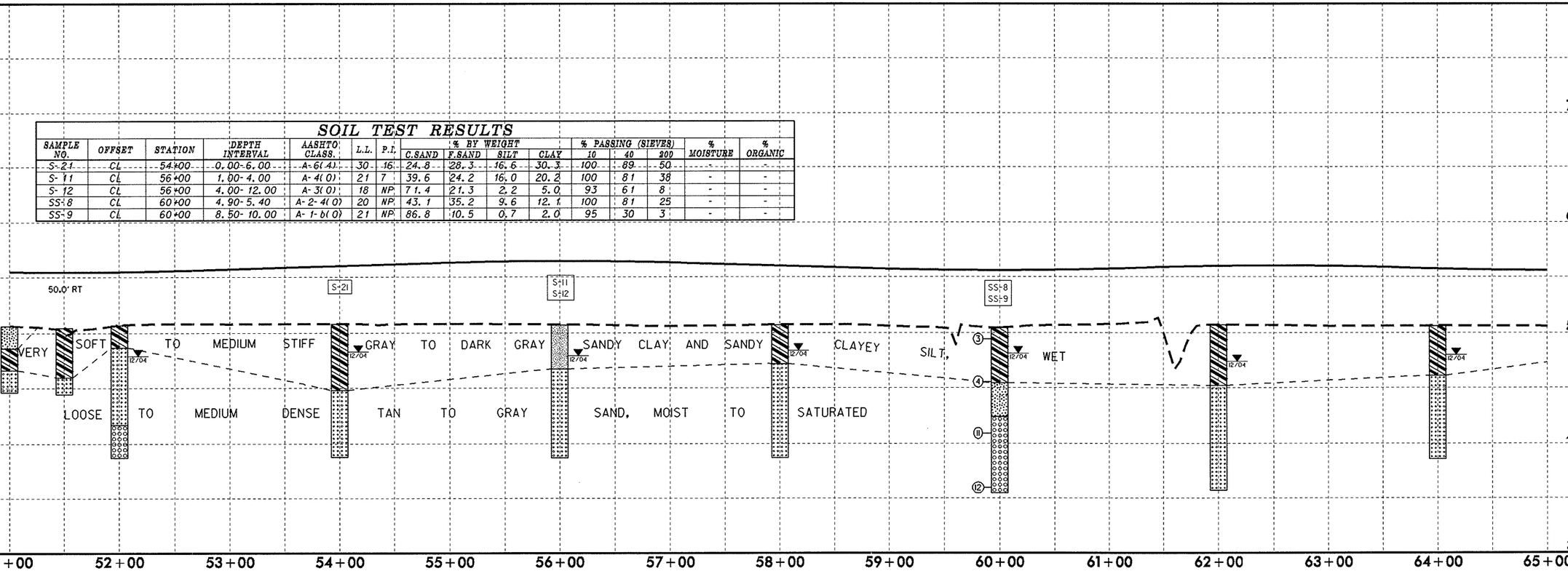


SOIL TEST RESULTS

SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT C.SAND	F.SAND	SILT	CLAY	% PASSING (SIEVES) 10	40	200	% MOISTURE	% ORGANIC
S-8	CL	46+00	1.00-6.00	A-2-4(0)	14	NP	58.1	26.5	4.3	11.1	99	68	17	-	-
S-9	CL	46+00	6.00-19.00	A-1-b(0)	21	NP	79.8	15.0	0.2	5.0	87	43	5	-	-
S-10	CL	46+00	19.00-23.00	A-2-4(0)	26	NP	66.3	18.5	1.1	14.1	100	79	16	-	-
SS-3	CL	50+00	2.90-4.40	A-6(1)	26	11	25.4	37.4	11.1	26.2	99	89	39	20.2	-
SS-4	CL	50+00	5.50-7.00	A-3(0)	23	NP	72.0	23.0	0.0	5.0	94	53	5	-	-

SOIL TEST RESULTS

SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT C.SAND	F.SAND	SILT	CLAY	% PASSING (SIEVES) 10	40	200	% MOISTURE	% ORGANIC
S-21	CL	54+00	0.00-6.00	A-6(4)	30	16	24.8	28.3	16.6	30.3	100	89	50	-	-
S-11	CL	56+00	1.00-4.00	A-4(0)	21	7	39.6	24.2	16.0	20.2	100	81	38	-	-
S-12	CL	56+00	4.00-12.00	A-3(0)	18	NP	71.4	21.3	2.2	5.0	93	61	8	-	-
SS-8	CL	60+00	4.90-5.40	A-2-4(0)	20	NP	43.1	35.2	9.6	12.1	100	81	25	-	-
SS-9	CL	60+00	8.50-10.00	A-1-b(0)	21	NP	86.8	10.5	0.7	2.0	95	30	3	-	-



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PROJECT REFERENCE NO.	SHEET NO.
R-2719A	55
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

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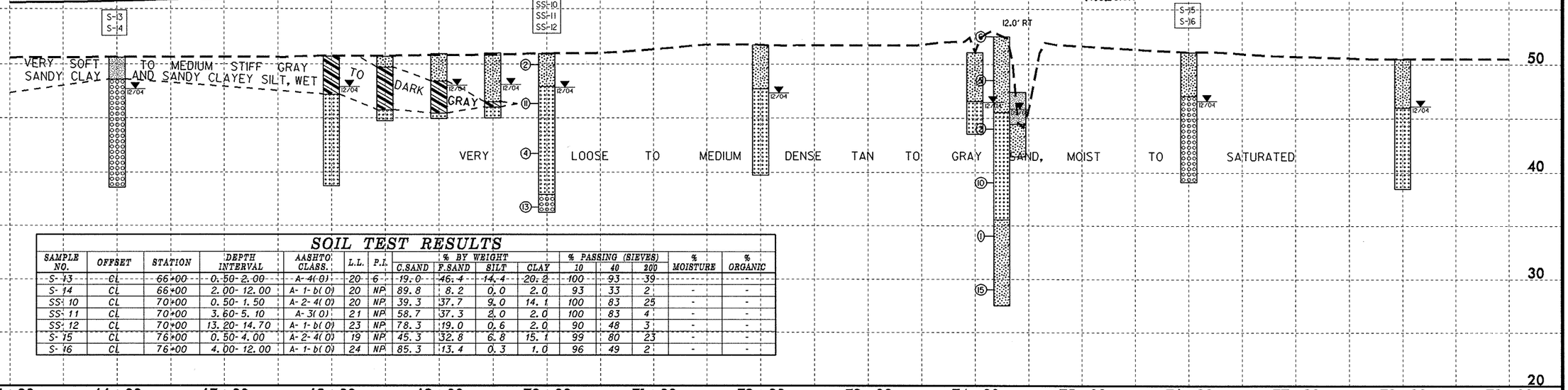
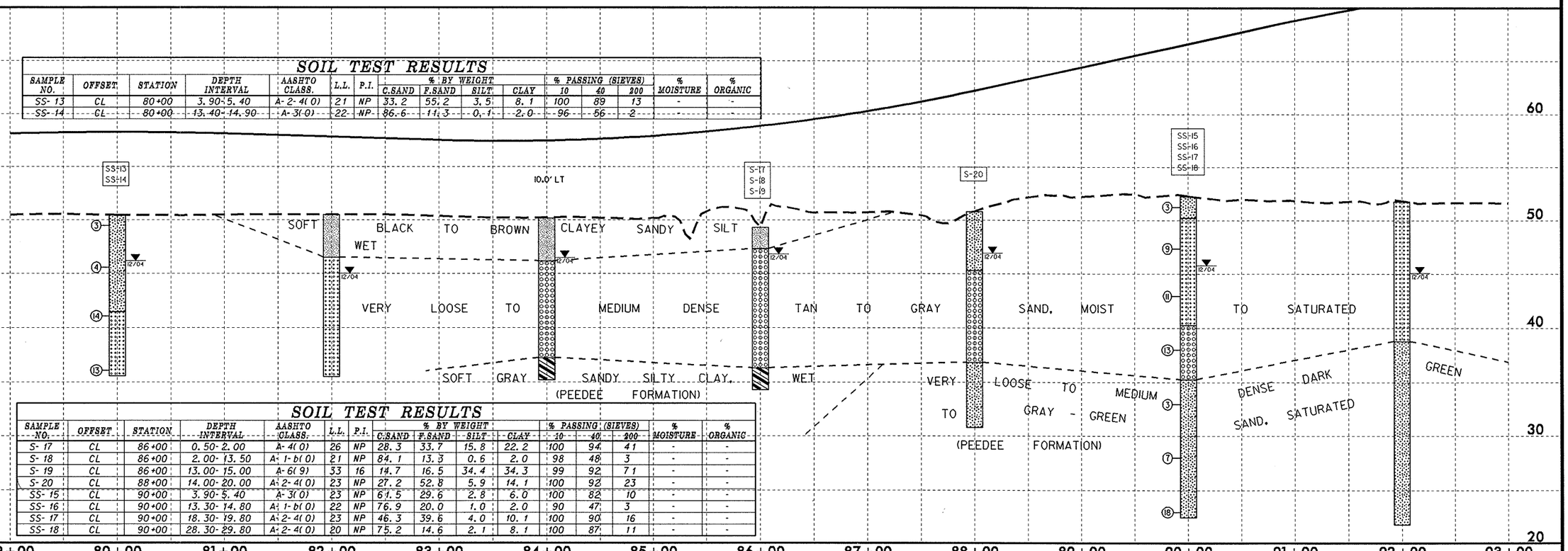


SOIL TEST RESULTS

SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT C.SAND	F.SAND	SILT	CLAY	% PASSING (SIEVES) 10	40	200	% MOISTURE	% ORGANIC
S-13	CL	66+00	0.50-2.00	A-4(0)	20	6	19.0	46.4	14.4	20.2	100	93	39	-	-
S-14	CL	66+00	2.00-12.00	A-1-b(0)	20	NP	89.8	8.2	0.0	2.0	93	33	2	-	-
SS-10	CL	70+00	0.50-1.50	A-2-4(0)	20	NP	39.3	37.7	9.0	14.1	100	83	25	-	-
SS-11	CL	70+00	3.60-5.10	A-3(0)	21	NP	58.7	37.3	2.0	2.0	100	83	4	-	-
SS-12	CL	70+00	13.20-14.70	A-1-b(0)	23	NP	78.3	19.0	0.6	2.0	90	48	3	-	-
S-15	CL	76+00	0.50-4.00	A-2-4(0)	19	NP	45.3	32.8	6.8	15.1	99	80	23	-	-
S-16	CL	76+00	4.00-12.00	A-1-b(0)	24	NP	85.3	13.4	0.3	1.0	96	49	2	-	-



SOIL TEST RESULTS

SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT C.SAND	F.SAND	SILT	CLAY	% PASSING (SIEVES) 10	40	200	% MOISTURE	% ORGANIC
SS-13	CL	80+00	3.90-5.40	A-2-4(0)	21	NP	33.2	55.2	3.5	8.1	100	89	13	-	-
SS-14	CL	80+00	13.40-14.90	A-3(0)	22	NP	86.6	11.3	0.1	2.0	96	56	2	-	-

SOIL TEST RESULTS

SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT C.SAND	F.SAND	SILT	CLAY	% PASSING (SIEVES) 10	40	200	% MOISTURE	% ORGANIC
S-17	CL	86+00	0.50-2.00	A-4(0)	26	NP	28.3	33.7	15.8	22.2	100	94	41	-	-
S-18	CL	86+00	2.00-13.50	A-1-b(0)	21	NP	84.1	13.3	0.6	2.0	98	48	3	-	-
S-19	CL	86+00	13.00-15.00	A-6(9)	33	16	14.7	16.5	34.4	34.3	99	92	71	-	-
S-20	CL	88+00	14.00-20.00	A-2-4(0)	23	NP	27.2	52.8	5.9	14.1	100	92	23	-	-
SS-15	CL	90+00	3.90-5.40	A-3(0)	23	NP	61.5	29.6	2.8	6.0	100	82	10	-	-
SS-16	CL	90+00	13.30-14.80	A-1-b(0)	22	NP	76.9	20.0	1.0	2.0	90	47	3	-	-
SS-17	CL	90+00	18.30-19.80	A-2-4(0)	23	NP	46.3	39.6	4.0	10.1	100	90	16	-	-
SS-18	CL	90+00	28.30-29.80	A-2-4(0)	20	NP	75.2	14.6	2.1	8.1	100	87	11	-	-

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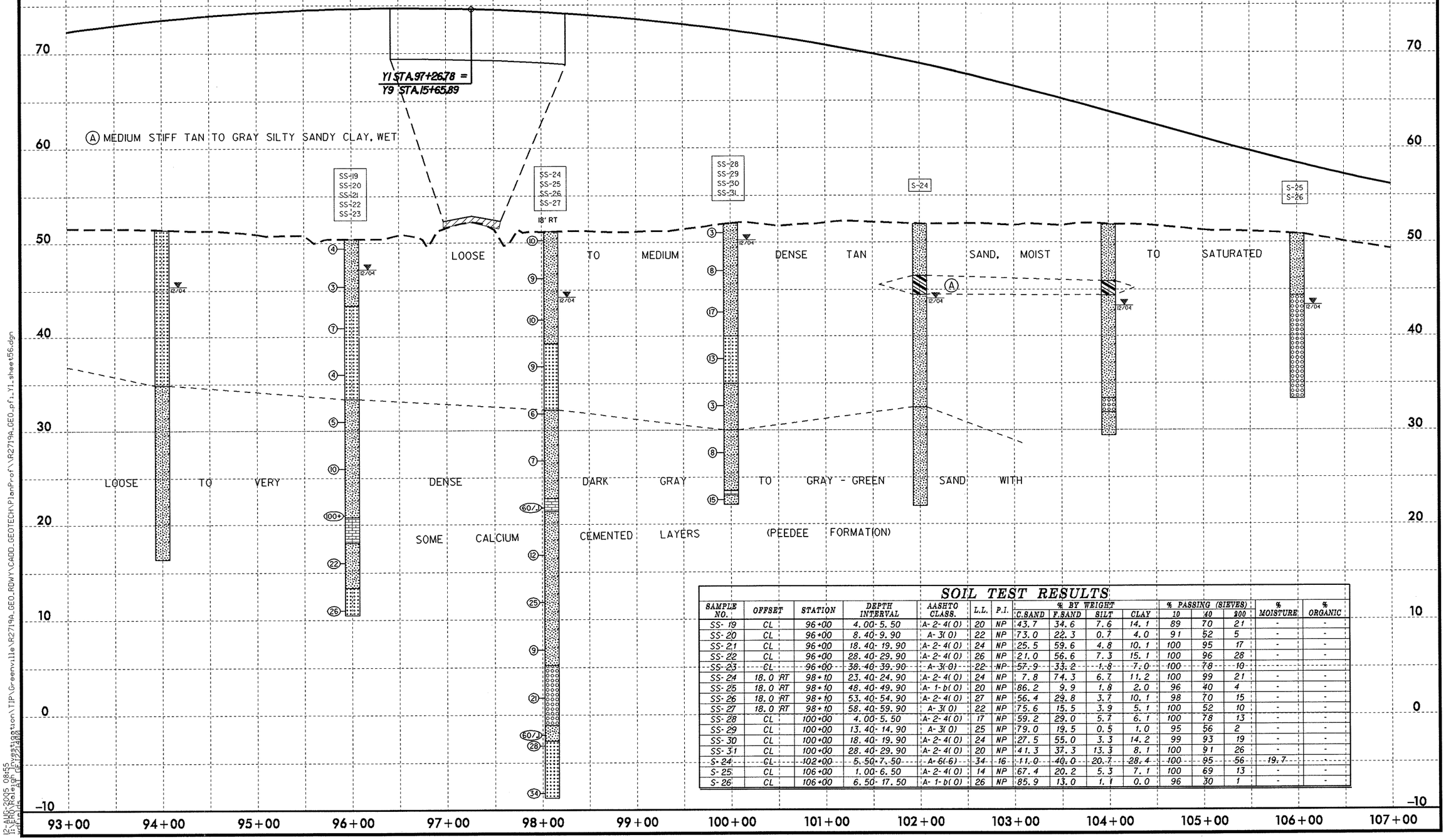
Bowman AP DF 1221408

PROJECT REFERENCE NO.	SHEET NO.
R-2719A	56
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

-Y1-



SOIL TEST RESULTS

SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT C.SAND	% BY WEIGHT F.SAND	% BY WEIGHT SILT	% BY WEIGHT CLAY	% PASSING (SIEVES) 10	% PASSING (SIEVES) 40	% PASSING (SIEVES) 200	% MOISTURE	% ORGANIC
SS-19	CL	96+00	4.00-5.50	A-2-4(0)	20	NP	43.7	34.6	7.6	14.1	89	70	21	-	-
SS-20	CL	96+00	8.40-9.90	A-3(0)	22	NP	73.0	22.3	0.7	4.0	91	52	5	-	-
SS-21	CL	96+00	18.40-19.90	A-2-4(0)	24	NP	25.5	59.6	4.8	10.1	100	95	17	-	-
SS-22	CL	96+00	28.40-29.90	A-2-4(0)	26	NP	21.0	56.6	7.3	15.1	100	96	28	-	-
SS-23	CL	96+00	38.40-39.90	A-3(0)	22	NP	57.9	33.2	1.8	7.0	100	78	10	-	-
SS-24	18.0 RT	98+10	23.40-24.90	A-2-4(0)	24	NP	7.8	74.3	6.7	11.2	100	99	21	-	-
SS-25	18.0 RT	98+10	48.40-49.90	A-1-b(0)	20	NP	86.2	9.9	1.8	2.0	96	40	4	-	-
SS-26	18.0 RT	98+10	53.40-54.90	A-2-4(0)	27	NP	56.4	29.8	3.7	10.1	98	70	15	-	-
SS-27	18.0 RT	98+10	58.40-59.90	A-3(0)	22	NP	75.6	15.5	3.9	5.1	100	52	10	-	-
SS-28	CL	100+00	4.00-5.50	A-2-4(0)	17	NP	59.2	29.0	5.7	6.1	100	78	13	-	-
SS-29	CL	100+00	13.40-14.90	A-3(0)	25	NP	79.0	19.5	0.5	1.0	95	56	2	-	-
SS-30	CL	100+00	18.40-19.90	A-2-4(0)	24	NP	27.5	55.0	3.3	14.2	99	93	19	-	-
SS-31	CL	100+00	28.40-29.90	A-2-4(0)	20	NP	41.3	37.3	13.3	8.1	100	91	26	-	-
S-24	CL	102+00	5.50-7.50	A-6(6)	34	16	11.0	40.0	20.7	28.4	100	95	56	19.7	-
S-25	CL	106+00	1.00-6.50	A-2-4(0)	14	NP	67.4	20.2	5.3	7.1	100	69	13	-	-
S-26	CL	106+00	6.50-17.50	A-1-b(0)	26	NP	85.9	13.0	1.1	0.0	96	30	1	-	-

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-Y1-

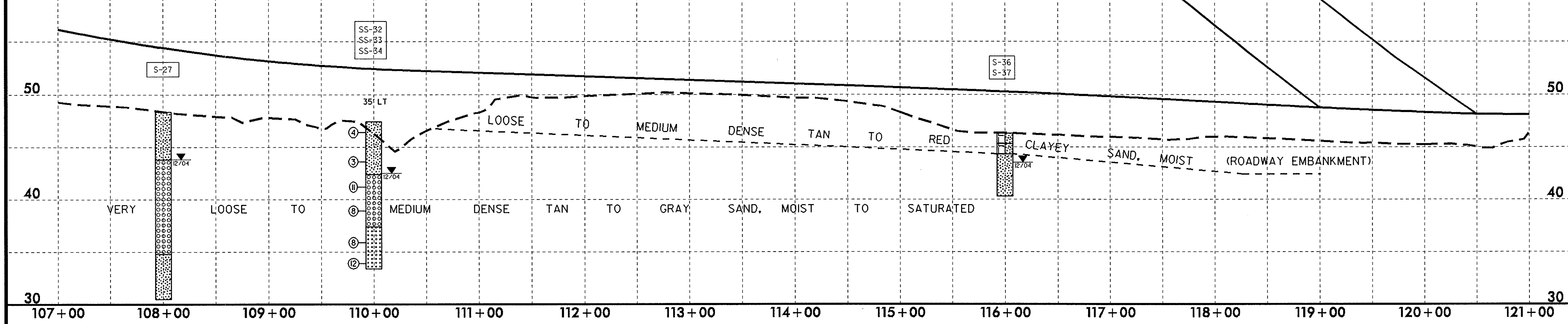
PROJECT REFERENCE NO.	SHEET NO.
R-2719A	57
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

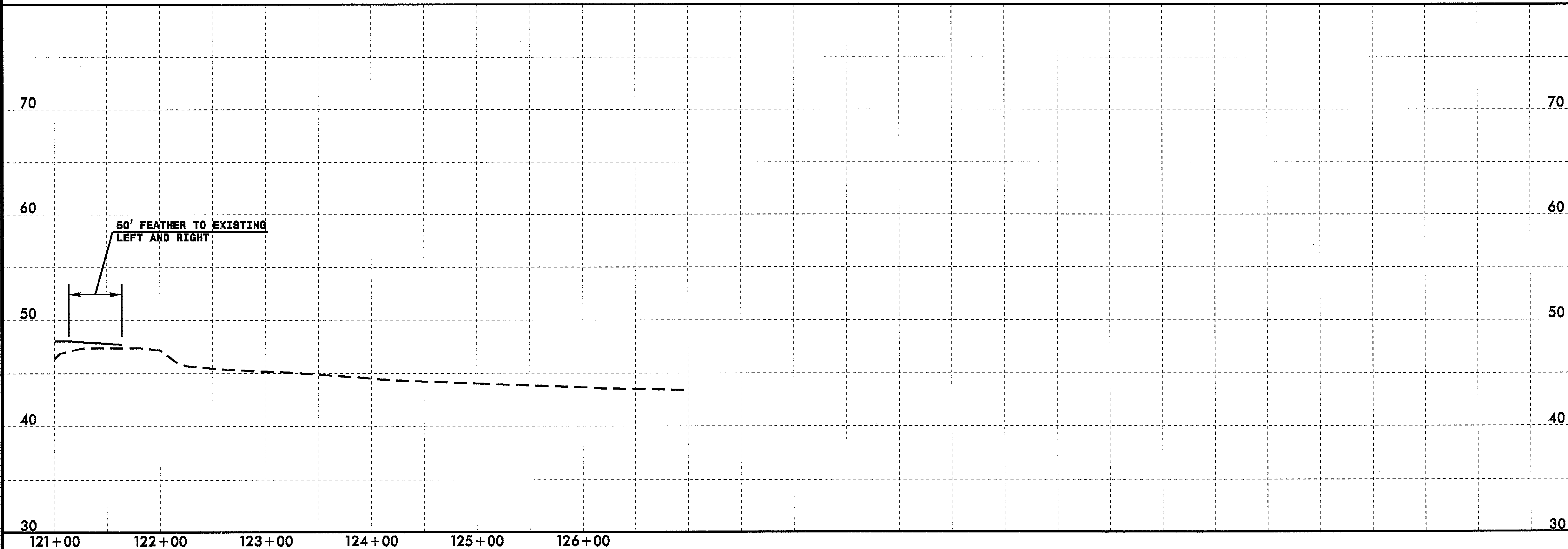
END GRADE -Y1- LEFT STA 119+00
ELEVATION 48.74 (3" ABOVE EXIST.)
TRANSITION FROM GRADE TO MINIMUM
OVERLAY FROM STA. 119+00 TO 119+50
MINIMUM OVERLAY LEFT FROM
STA. 119+50 TO 121+63.73

END GRADE -Y1- RIGHT STA 120+50
ELEVATION 48.09 (3" ABOVE EXIST.)
MINIMUM OVERLAY RIGHT FROM
STA. 120+50 TO 121+63.73

SOIL TEST RESULTS

SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT C.SAND	F.SAND	SILT	CLAY	% PASSING (SIEVES) 10	40	200	% MOISTURE	% ORGANIC
S-27	CL	108+00	13.50-17.80	A-2-4(0)	22	NP	68.6	16.0	4.3	11.2	100	72	16	-	-
SS-32	35.0 LT	110+00	2.80-4.30	A-2-4(0)	17	NP	73.0	15.0	2.8	9.1	90	56	12	-	-
SS-33	35.0 LT	110+00	5.20-6.70	A-1-b(0)	24	NP	86.8	12.2	1.0	0.0	95	45	1	-	-
SS-34	35.0 LT	110+00	10.50-12.00	A-3(0)	24	NP	70.8	28.2	1.0	0.0	96	61	1	-	-
S-36	CL	116+00	1.00-2.00	A-2-7(1)	41	18	45.1	26.1	4.6	24.2	97	75	30	-	-
S-38	CL	116+00	1.00-4.00	A-2-6(0)	31	13	48.3	31.1	4.4	16.2	93	70	20	-	-
S-37	CL	116+00	2.00-6.00	A-2-4(0)	21	NP	46.3	39.3	4.3	10.1	98	76	16		





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PROJECT REFERENCE NO.	SHEET NO.
R-2719A	58
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

-Y1RPA-

SOIL TEST RESULTS

SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT C.SAND	F.SAND	SILT	CLAY	% PASSING (SIEVES) 10	40	200	% MOISTURE	% ORGANIC
SS-67	CL	0+00	4.00-5.50	A-3(0)	24	NP	44.9	48.5	3.5	3.0	100	90	8	-	-
SS-68	CL	0+00	12.30-13.80	A-3(0)	22	NP	75.6	22.6	0.8	1.0	93	56	2	-	-
SS-69	CL	0+00	17.30-18.80	A-2-4(0)	24	NP	44.1	41.8	4.9	9.1	100	89	15	-	-
SS-70	CL	0+00	27.30-28.80	A-3(0)	21	NP	67.9	23.5	2.5	6.1	99	74	9	-	-
SS-71	CL	0+00	37.30-28.80	A-3(0)	20	NP	74.0	17.2	3.7	5.1	97	66	9	-	-
S-46	CL	4+00	1.00-5.50	A-2-4(0)	26	7	23.4	41.5	11.0	24.2	95	83	35	-	-
S-42	CL	6+00	1.00-4.50	A-2-4(0)	17	NP	24.5	56.5	6.9	12.1	94	88	20	-	-

BEGIN GRADE
Y1RPA STA. 0+00 =
Y1RPCA STA. 19+30.68 (12'LT)
EL. 81.34'

SS-67
SS-68
SS-69
SS-70
SS-71

S-46

S-42
S-43
S-44
S-45

SS-48
SS-49
SS-50
SS-51
SS-52

VERY LOOSE TO MEDIUM DENSE BROWN TO TAN SAND, MOIST TO SATURATED

VERY LOOSE TO VERY DENSE GRAY - GREEN TO GRAY SAND AND SILTY SAND, SATURATED

(PEEDEE FORMATION)

SOIL TEST RESULTS

SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT C.SAND	F.SAND	SILT	CLAY	% PASSING (SIEVES) 10	40	200	% MOISTURE	% ORGANIC
S-43	CL	6+00	4.50-16.00	A-1-b(0)	21	NP	83.0	15.5	0.5	1.0	99	45	2	-	-
S-44	CL	6+00	16.00-29.00	A-2-4(0)	25	3	11.4	65.6	9.0	14.1	86	84	25	-	-
S-45	CL	6+00	29.00-35.00	A-2-4(0)	20	NP	52.1	35.8	4.1	8.1	95	74	13	-	-
SS-48	CL	10+00	1.00-1.50	A-2-4(0)	23	NP	31.3	45.0	7.6	16.1	100	87	26	-	-
SS-49	CL	10+00	2.50-4.00	A-2-4(0)	20	NP	21.7	57.4	5.8	15.1	100	87	23	-	-
SS-50	CL	10+00	5.00-6.50	A-3(0)	22	NP	82.3	16.1	0.6	1.0	98	53	2	-	-
SS-51	CL	10+00	13.40-14.90	A-3(0)	18	NP	71.7	25.3	0.0	3.0	94	55	3	-	-
SS-52	CL	10+00	18.40-19.90	A-2-4(0)	24	NP	1.9	74.8	7.2	16.1	100	99	27	-	-

90 80 70 60 50 40 30 20 10 0

0 1+00 2+00 3+00 4+00 5+00 6+00 7+00 8+00 9+00 10+00 11+00 12+00 13+00

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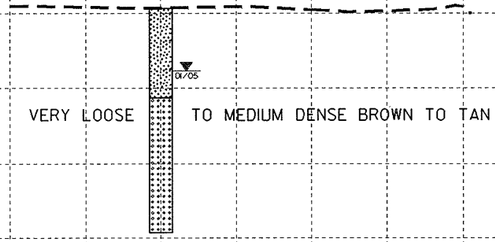
5/14/99

-Y1RPA-

PROJECT REFERENCE NO.	SHEET NO.
R-2719A	59
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

END GRADE
Y1RPA STA. 16+04.29 =
Y1 STA. 85+00 (47'LT)
EL. 59.19'



VERY LOOSE TO MEDIUM DENSE BROWN TO TAN SAND, MOIST TO SATURATED

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13+00 14+00 15+00 16+00

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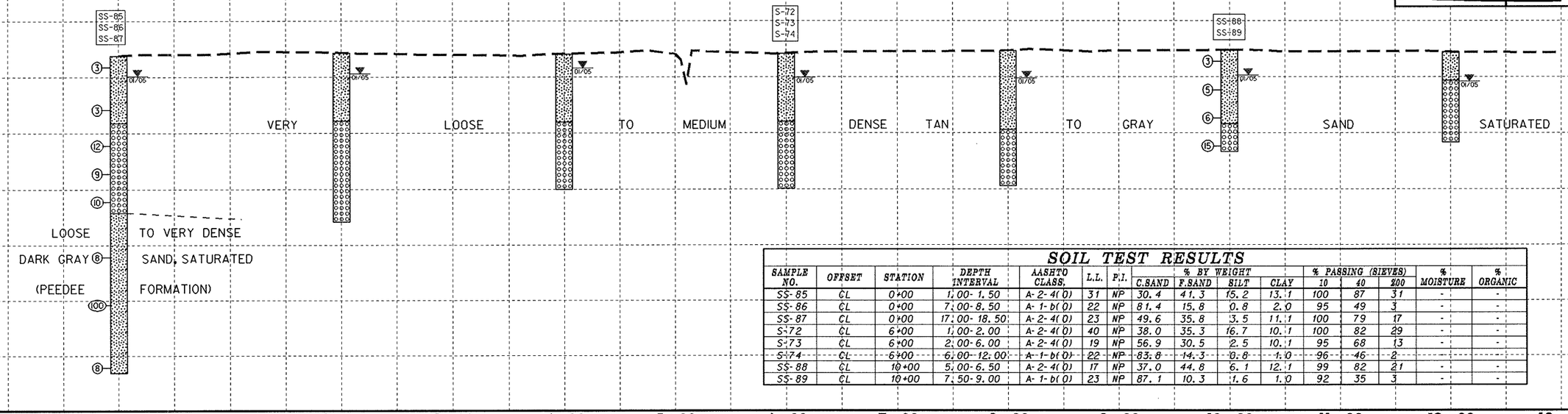
PROJECT REFERENCE NO.	SHEET NO.
R-2719A	60
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

-Y1RPB-

BEGIN GRADE
Y1RPB STA. 0+00 =
L STA. 74+38.91 (47' LT)
EL. 66.14

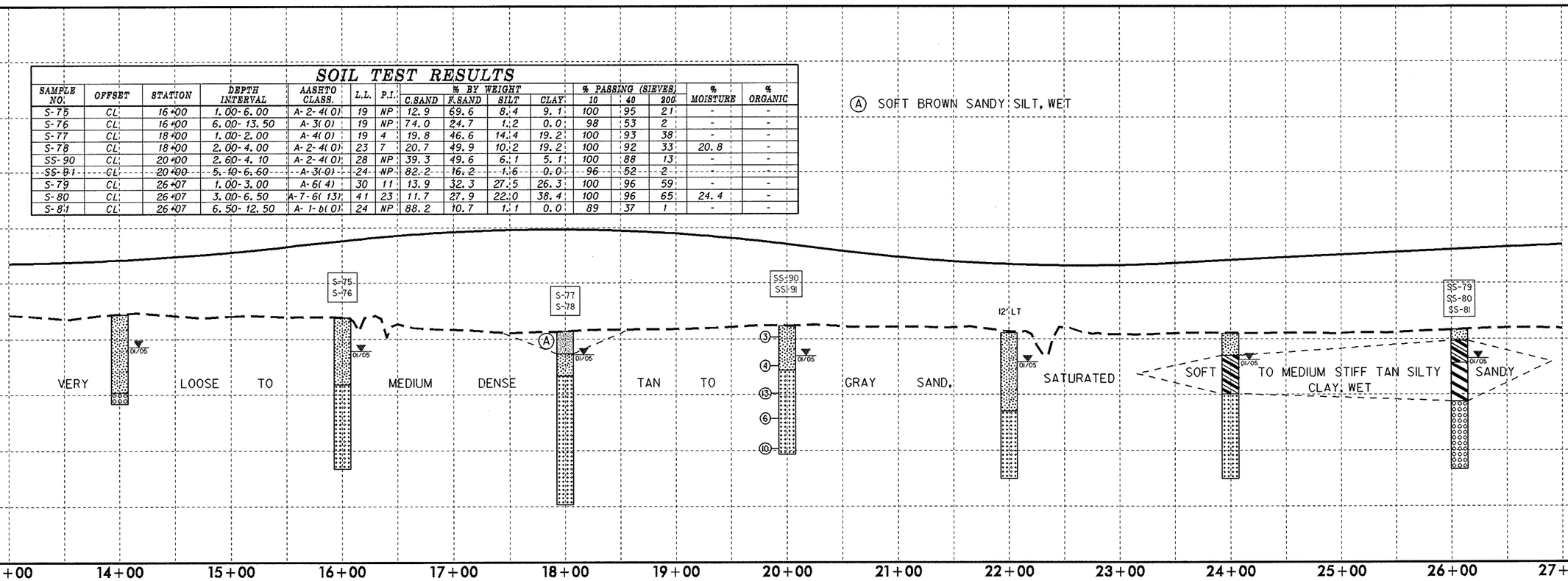


SOIL TEST RESULTS

SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT C.SAND	F.SAND	SILT	CLAY	% PASSING (SIEVES) 10	40	200	% MOISTURE	% ORGANIC
SS-85	CL	0+00	1.00- 1.50	A-2-4(0)	31	NP	30.4	41.3	15.2	13.1	100	87	31	-	-
SS-86	CL	0+00	7.00- 8.50	A-1-b(0)	22	NP	81.4	15.8	0.8	2.0	95	49	3	-	-
SS-87	CL	0+00	17.00- 18.50	A-2-4(0)	23	NP	49.6	35.8	3.5	11.1	100	79	17	-	-
S-72	CL	6+00	1.00- 2.00	A-2-4(0)	40	NP	38.0	35.3	16.7	10.1	100	82	29	-	-
S-73	CL	6+00	2.00- 6.00	A-2-4(0)	19	NP	56.9	30.5	2.5	10.1	95	68	13	-	-
S-74	CL	6+00	6.00- 12.00	A-1-b(0)	22	NP	83.8	14.3	0.8	1.0	96	46	2	-	-
SS-88	CL	10+00	5.00- 6.50	A-2-4(0)	17	NP	37.0	44.8	6.1	12.1	99	82	21	-	-
SS-89	CL	10+00	7.50- 9.00	A-1-b(0)	23	NP	87.1	10.3	1.6	1.0	92	35	3	-	-

SOIL TEST RESULTS

SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT C.SAND	F.SAND	SILT	CLAY	% PASSING (SIEVES) 10	40	200	% MOISTURE	% ORGANIC
S-75	CL	16+00	1.00- 6.00	A-2-4(0)	19	NP	12.9	69.6	8.4	9.1	100	95	21	-	-
S-76	CL	16+00	6.00- 13.50	A-3(0)	19	NP	74.0	24.7	1.2	0.0	98	53	2	-	-
S-77	CL	18+00	1.00- 2.00	A-4(0)	19	4	19.8	46.6	14.4	19.2	100	93	38	-	-
S-78	CL	18+00	2.00- 4.00	A-2-4(0)	23	7	20.7	49.9	10.2	19.2	100	92	33	20.8	-
SS-90	CL	20+00	2.60- 4.10	A-2-4(0)	28	NP	39.3	49.6	6.1	5.1	100	88	13	-	-
SS-91	CL	20+00	5.10- 6.60	A-3(0)	24	NP	82.2	16.2	1.6	0.0	96	52	2	-	-
S-79	CL	26+07	1.00- 3.00	A-6(4)	30	11	13.9	32.3	27.5	26.3	100	96	59	-	-
S-80	CL	26+07	3.00- 6.50	A-7-6(13)	41	23	11.7	27.9	22.0	38.4	100	96	65	24.4	-
S-81	CL	26+07	6.50- 12.50	A-1-b(0)	24	NP	88.2	10.7	1.1	0.0	89	37	1	-	-



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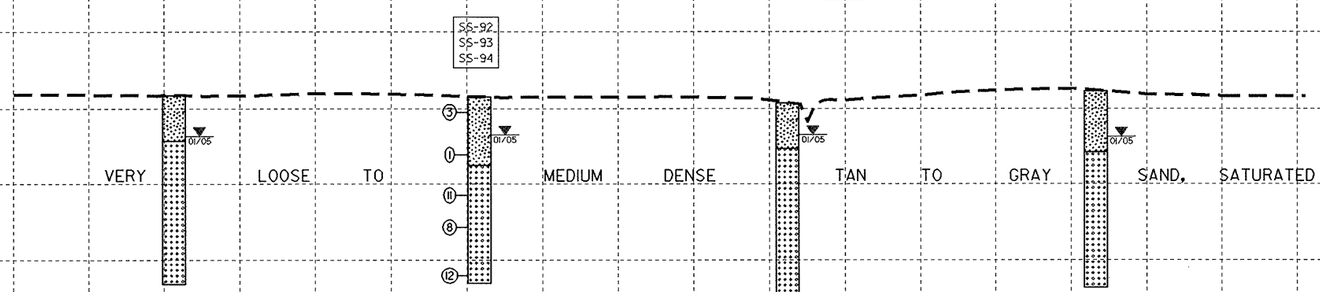
PROJECT REFERENCE NO.	SHEET NO.
R-2719A	61
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

-Y1RPB-

END GRADE
Y1RPB STA. 35+55.41 =
Y1 STA. 48+62.35 (59' LT)
EL. 58.24

SOIL TEST RESULTS

SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT C.SAND	F.SAND	SILT	CLAY	% PASSING (SIEVES) 10	40	200	% MOISTURE	% ORGANIC
SS-92	CL	30+08	1.00- 1.50	A-2-4(0)	18	3	36.6	33.5	17.8	12.1	99	78	33	-	-
SS-93	CL	30+08	2.80- 4.30	A-2-4(0)	24	8	35.3	38.3	10.3	16.2	100	80	30	-	-
SS-94	CL	30+08	10.80- 12.30	A-3(0)	21	NP	83.1	14.4	1.4	1.0	94	52	3	-	-



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-Y1RPCA-

PROJECT REFERENCE NO.	SHEET NO.
R-2719A	62
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

BEGIN GRADE
Y1RPCA STA. 0+00 =
L STA. 79+11.31 (59' RT)
EL. 76.23

SS-80 SS-81 SS-82 SS-83 SS-84 | S-70 S-71 | S-67 S-68 S-69 | SS-77 SS-78 SS-79 | S-66

SOFT BROWN SANDY SILT. WET

LOOSE TO MEDIUM DENSE TAN TO GRAY SAND, SATURATED

MEDIUM DENSE (PEEDEE FORMATION) GRAY SAND, SATURATED

MEDIUM STIFF DARK GRAY SANDY CLAY, WET

MEDIUM DENSE DARK GRAY TO GREEN SAND, SATURATED

LOOSE TO TAN TO SATURATED MEDIUM DENSE GRAY SAND,

LOOSE TO GRAY - GREEN SAND, (PEEDEE FORMATION) MEDIUM DENSE SATURATED

SOIL TEST RESULTS

SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT C.SAND	F.SAND	SILT	CLAY	% PASSING (SIEVES) #10	#40	#200	% MOISTURE	% ORGANIC
SS-80	CL	0+00	3.80-5.30	A-4(0)	23	9	23.8	41.6	9.3	25.3	100	90	37	21.9	-
SS-81	CL	0+00	7.10-8.60	A-3(0)	25	NP	69.2	28.1	1.7	1.0	99	69	3	-	-
SS-82	CL	0+00	17.10-18.60	A-3(0)	24	NP	86.9	11.0	0.1	2.0	100	63	3	-	-
SS-83	CL	0+00	22.10-23.60	A-6(4)	40	19	50.5	14.1	11.1	24.2	100	88	42	-	-
SS-84	CL	0+00	27.10-28.60	A-2-4(0)	23	NP	63.6	26.5	1.8	8.1	100	80	11	-	-
S-70	CL	2+00	21.00-27.00	A-7-6(32)	69	48	8.1	29.9	17.6	44.4	99	95	69	39.1	-
S-71	CL	2+00	27.00-30.00	A-2-4(0)	22	NP	56.3	29.3	4.3	10.1	99	76	16	-	-
S-67	CL	6+00	1.00-4.00	A-4(0)	34	NP	32.5	31.7	16.6	19.2	98	78	38	-	-
S-68	CL	6+00	4.00-6.00	A-2-4(0)	18	NP	59.3	24.1	5.5	11.1	94	64	18	-	-
S-69	CL	6+00	6.00-10.00	A-1-b(0)	20	NP	80.2	17.0	1.8	1.0	93	43	3	-	-
SS-77	CL	10+00	3.10-4.60	A-2-4(0)	19	NP	32.1	46.2	8.6	13.1	100	84	25	-	-
SS-78	CL	10+00	5.40-6.90	A-3(0)	24	NP	65.7	27.5	0.8	6.1	91	60	7	-	-
SS-79	CL	10+00	7.40-8.90	A-1-b(0)	20	NP	86.6	11.2	0.2	2.0	95	36	3	-	-
S-66	CL	12+00	4.00-7.00	A-4(1)	23	8	8.8	51.4	16.6	23.2	100	98	45	19.2	-

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5/14/99

PROJECT REFERENCE NO.	SHEET NO.
R-2719A	63
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

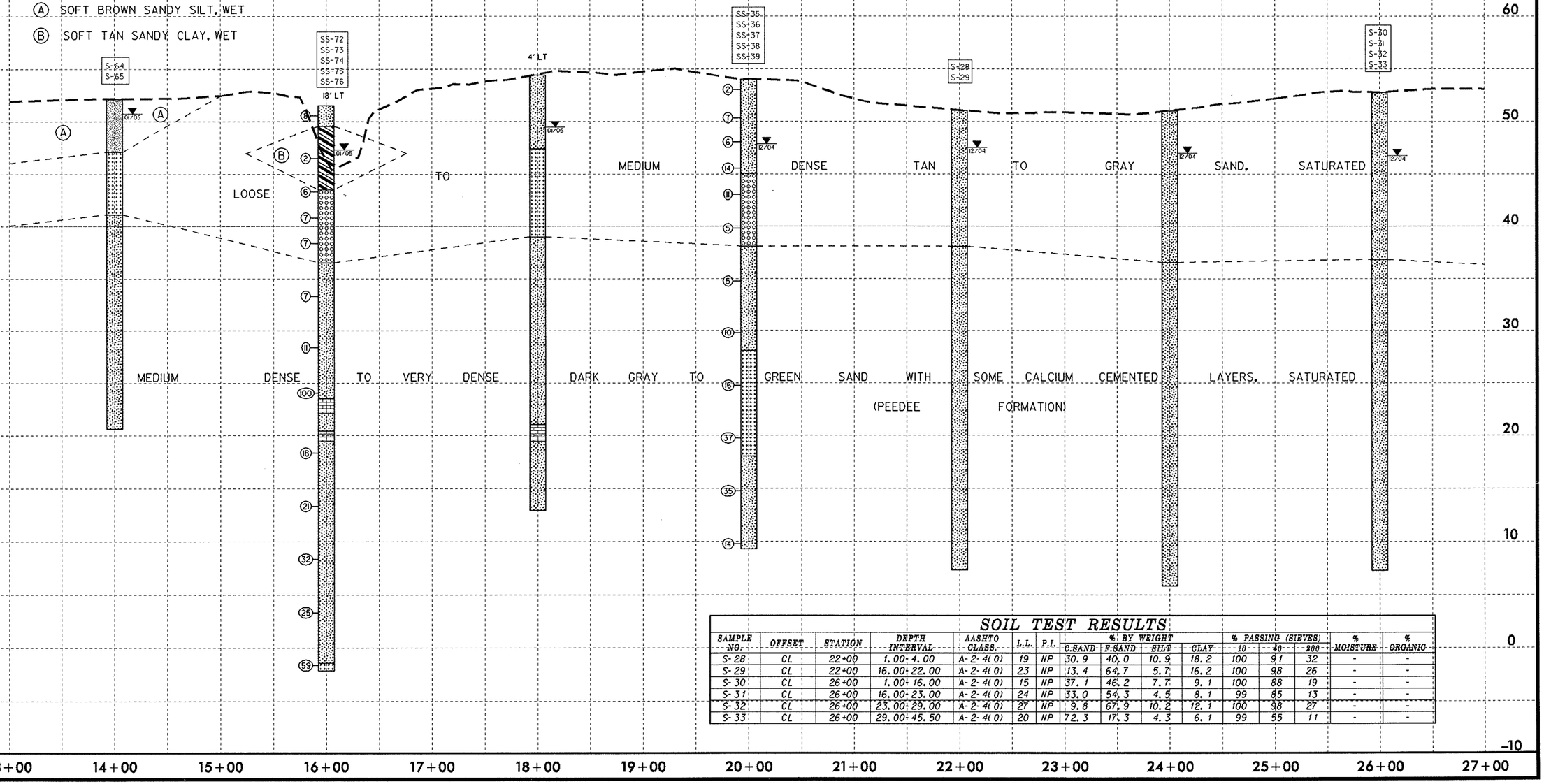
-Y1RPCA-

SOIL TEST RESULTS

SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT C.SAND	F.SAND	SILT	CLAY	% PASSING (SIEVES) 10	40	200	% MOISTURE	% ORGANIC
S-64	CL	14+00	1.00-5.00	A-4(1)	29	9	16.8	42.0	21.0	20.2	100	93	47	-	-
S-65	CL	14+00	24.00-31.50	A-2-4(0)	27	8	34.2	42.4	9.2	14.1	99	83	26	23.2	-
SS-72	18.0 LT	16+00	4.00-5.50	A-6(5)	31	15	22.8	30.7	18.2	28.3	100	86	53	-	-
SS-73	18.0 LT	16+00	9.70-11.20	A-1-b(0)	23	NP	81.1	15.6	0.3	3.0	92	38	4	-	-

SOIL TEST RESULTS

SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT C.SAND	F.SAND	SILT	CLAY	% PASSING (SIEVES) 10	40	200	% MOISTURE	% ORGANIC
SS-74	18.0 LT	16+00	17.20-18.70	A-2-4(0)	24	NP	33.4	54.1	2.3	10.1	100	93	14	-	-
SS-75	18.0 LT	16+00	32.20-33.70	A-2-4(0)	23	NP	72.5	15.7	1.7	10.1	100	66	13	-	-
SS-76	18.0 LT	16+00	47.20-48.70	A-2-4(0)	27	NP	68.5	18.2	3.2	10.1	98	58	14	-	-
SS-35	CL	20+00	2.70-4.20	A-2-4(0)	18	NP	36.7	53.1	5.1	5.1	100	88	12	-	-
SS-36	CL	20+00	10.00-11.50	A-1-b(0)	27	NP	79.7	18.3	1.0	1.0	87	42	2	-	-
SS-37	CL	20+00	18.30-19.80	A-2-4(0)	24	NP	20.4	62.0	7.5	10.1	99	95	20	-	-
SS-38	CL	20+00	28.30-29.80	A-3(0)	21	NP	72.0	20.0	2.9	5.1	100	63	9	-	-
SS-39	CL	20+00	38.30-39.80	A-2-4(0)	20	NP	64.2	26.0	3.8	6.1	99	74	11	-	-



SOIL TEST RESULTS

SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT C.SAND	F.SAND	SILT	CLAY	% PASSING (SIEVES) 10	40	200	% MOISTURE	% ORGANIC
S-28	CL	22+00	1.00-4.00	A-2-4(0)	19	NP	30.9	40.0	10.9	18.2	100	91	32	-	-
S-29	CL	22+00	16.00-22.00	A-2-4(0)	23	NP	13.4	64.7	5.7	16.2	100	98	26	-	-
S-30	CL	26+00	1.00-16.00	A-2-4(0)	15	NP	37.1	46.2	7.7	9.1	100	88	19	-	-
S-31	CL	26+00	16.00-23.00	A-2-4(0)	24	NP	33.0	54.3	4.5	8.1	99	85	13	-	-
S-32	CL	26+00	23.00-29.00	A-2-4(0)	27	NP	9.8	67.9	10.2	12.1	100	98	27	-	-
S-33	CL	26+00	29.00-45.50	A-2-4(0)	20	NP	72.3	17.3	4.3	6.1	99	55	11	-	-

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Default

5/14/99

PROJECT REFERENCE NO.	SHEET NO.
R-2719A	64
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

-Y1RPCA-

Y1RPCA STA 28+99.24 = Y1 STA 75+51.12

Y1RPCA STA 37+26.05 = L STA 45+11.56

Ⓐ SOFT TAN TO GRAY CLAYEY SANDY SILT, WET

Ⓑ VERY SOFT GRAY - BROWN SANDY SILTY CLAY, WET

SS-40
SS-41
SS-42
SS-43
SS-44
SS-45
SS-46
SS-47

S-34
S-35

SS-53
SS-54

25' RT

VERY LOOSE TO MEDIUM DENSE TAN SAND, MEDIUM STIFF TAN TO GRAY SANDY CLAY AND SANDY SILT, MOIST TO WET

MOIST TO SATURATED

LOOSE TO VERY DENSE DARK GRAY TO GREEN SAND WITH SOME CALCIUM CEMENTED LAYERS, SATURATED (PEEDEE FORMATION)

70
60
50
40
30
20
10
0
-10

27+00 28+00 29+00 30+00 31+00 32+00 33+00 34+00 35+00 36+00 37+00 38+00 39+00 40+00 41+00

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-40	CL	27+74	4.00-5.50	A-3(0)	22	NP	65.3	25.7	0.0	9.0	99	76	10	-	-
SS-41	CL	27+74	13.50-15.00	A-6(17)	40	25	7.4	21.3	25.1	46.2	100	97	76	64.3	-
SS-42	CL	27+74	19.00-20.00	A-2-4(0)	20	NP	59.5	23.5	0.9	16.1	100	78	18	-	-
SS-43	CL	27+74	23.50-25.00	A-2-4(0)	26	NP	9.3	71.4	2.2	17.1	100	97	24	32.0	-
SS-44	CL	27+74	32.70-34.20	A-2-4(0)	24	NP	57.2	26.7	0.0	16.1	100	78	18	-	-
SS-45	CL	27+74	38.50-40.00	A-2-4(0)	21	NP	75.1	14.9	0.0	10.0	100	52	11	-	-
SS-46	CL	27+74	48.50-50.00	A-1-b(0)	20	NP	88.0	6.4	0.6	5.0	99	25	6	-	-
SS-47	CL	27+74	58.50-60.00	A-2-4(0)	30	NP	4.6	76.7	3.6	15.1	100	98	23	35.6	-
S-34	CL	36+00	1.00-5.00	A-6(4)	32	19	30.9	27.9	11.0	30.1	99	82	43	-	-
S-35	CL	36+00	5.00-15.00	A-1-b(0)	25	NP	66.9	31.5	0.6	1.0	94	41	2	-	-
SS-53	CL	40+00	2.90-4.40	A-4(0)	25	8	27.2	39.2	9.5	24.1	100	87	38	-	-
SS-54	CL	40+00	5.20-6.70	A-3(0)	22	NP	77.0	19.5	0.5	3.0	96	54	4	-	-

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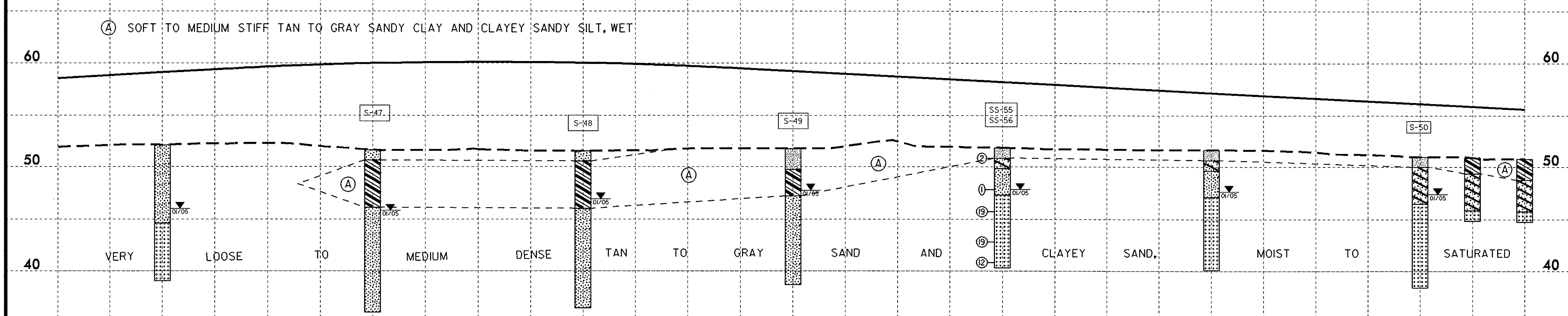
kimmiller

PROJECT REFERENCE NO.	SHEET NO.
R-2719A	65
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

–Y1RPCA–

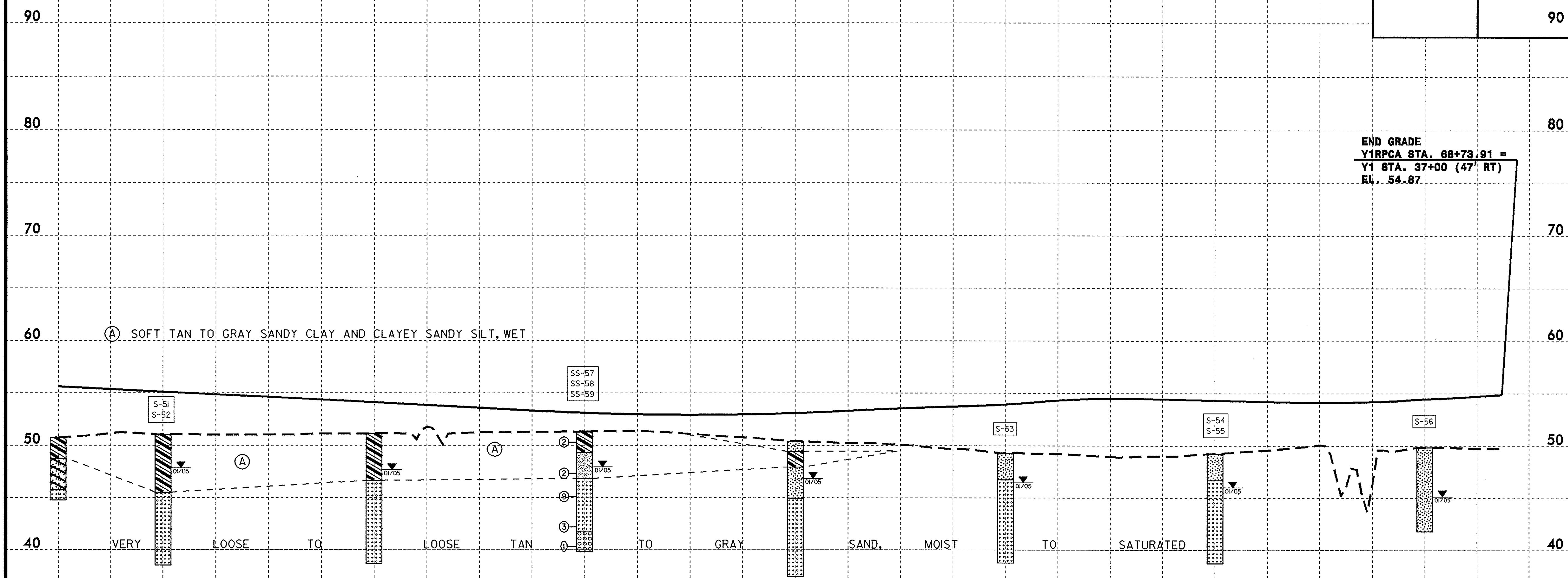


SOIL TEST RESULTS

SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT C.SAND	F.SAND	SILT	CLAY	% PASSING (SIEVES) 10	40	200	% MOISTURE	% ORGANIC
S-47	CL	44+00	1.00-5.50	A-6(5)	35	19	26.4	31.8	13.6	28.2	100	87	46	16.8	-
S-48	CL	46+00	5.50-15.00	A-2-4(0)	19	NP	69.8	19.9	1.2	9.1	99	57	11	-	-
S-49	CL	48+00	1.00-2.00	A-4(0)	22	6	17.5	46.9	15.4	20.1	96	81	38	-	-
SS-55	CL	50+00	3.00-4.50	A-2-4(0)	19	NP	26.1	50.2	6.6	17.1	100	84	29	-	-
SS-56	CL	50+00	5.10-6.60	A-3(0)	21	NP	61.2	33.2	0.5	5.0	95	56	6	-	-
S-50	CL	54+00	1.00-4.50	A-2-6(0)	26	12	36.1	28.0	11.8	24.2	92	76	35	16.5	-

PROJECT REFERENCE NO.	SHEET NO.
R-2719A	66
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

-Y1RPCA-



SOIL TEST RESULTS

SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT C.SAND	F.SAND	SILT	CLAY	% PASSING (SIEVES) 10	40	200	% MOISTURE	% ORGANIC
S-51	CL	56+00	1.00-2.00	A-6(2)	29	11	18.7	36.7	18.4	26.2	100	92	49	-	-
S-52	CL	56+00	5.50-12.50	A-3(0)	19	NP	77.3	18.0	1.6	3.0	99	53	5	-	-
SS-57	CL	60+00	3.00-4.50	A-4(1)	26	10	28.0	36.4	11.4	24.1	100	88	42	-	-
SS-58	CL	60+00	5.20-6.70	A-3(0)	22	NP	64.7	28.7	0.6	6.0	95	60	7	-	-
SS-59	CL	60+00	10.00-11.50	A-1-b(0)	21	NP	78.9	17.4	1.7	2.0	94	49	4	-	-
S-53	CL	64+00	1.50-2.50	A-2-4(0)	29	NP	16.1	66.1	11.8	6.0	93	84	19	-	-
S-54	CL	66+00	2.50-8.50	A-3(0)	20	NP	60.6	31.5	1.8	6.0	96	64	8	-	-
S-55	CL	66+00	8.50-10.50	A-3(0)	18	NP	80.3	15.4	2.3	2.0	99	51	5	-	-
S-56	CL	68+00	2.00-5.50	A-2-4(0)	18	NP	22.3	53.3	6.3	18.1	95	86	25	-	-

55+00 56+00 57+00 58+00 59+00 60+00 61+00 62+00 63+00 64+00 65+00 66+00 67+00 68+00

5/14/99

PROJECT REFERENCE NO.	SHEET NO.
R-2719A	67
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

-Y1LPC-

BEGIN GRADE
Y1LPC STA. 0+00 =
L STA. 50+30.88 (59' LT)
EL. 84.37

S-57 S-58 S-59 S-60 S-63 SS-65 SS-66 S-61

VERY LOOSE TO MEDIUM DENSE TAN TO GRAY SAND, MOIST TO SATURATED

MEDIUM STIFF TAN TO GRAY SANDY CLAY AND SANDY CLAYEY SILT, MOIST TO WET

SOFT GRAY - BROWN CLAYEY SANDY SILT, MOIST

MEDIUM DENSE GREEN - GRAY SAND, SATURATED (PEEDEE FORMATION)

GEO
Y1LPC
000.000000
40
100
10
NOGAP

70 60 50 40 30 20 10 0 -10

0 1+00 2+00 3+00 4+00 5+00 6+00 7+00 8+00 9+00 10+00 11+00 12+00 13+00

SOIL TEST RESULTS

SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT C.SAND	F.SAND	SILT	CLAY	% PASSING (SIEVES) 10	40	200	% MOISTURE	% ORGANIC
S-57	CL	4+00	13.00-16.00	A-4(2)	26	8	14.5	37.0	22.3	26.2	100	95	54	33.8	-
S-58	CL	6+00	1.00-6.50	A-2-4(0)	27	NP	30.2	47.3	6.4	16.1	98	70	24	-	-
S-59	CL	6+00	6.50-12.50	A-1-b(0)	24	NP	78.5	18.0	0.5	3.0	94	43	5	-	-
S-60	CL	6+00	18.50-30.00	A-2-4(0)	22	NP	70.2	19.2	0.5	10.1	100	80	13	-	-
S-63	CL	8+00	1.00-6.00	A-6(1)	29	13	39.4	27.6	6.8	26.2	98	74	37	21.2	-
SS-65	CL	10+00	2.50-4.00	A-6(8)	37	21	21.2	29.1	17.4	32.3	99	89	54	20.2	-
SS-66	CL	10+00	6.80-8.30	A-1-b(0)	22	NP	81.5	16.6	0.9	1.0	93	43	2	-	-
S-61	CL	12+00	2.50-6.50	A-2-4(0)	22	6	36.2	38.8	2.8	22.1	100	87	28	26.2	-

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jbmiller

PROJECT REFERENCE NO.	SHEET NO.
R-2719A	68
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

-Y1LPC-

SOIL TEST RESULTS

SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT C.SAND	% BY WEIGHT F.SAND	% BY WEIGHT SILT	% BY WEIGHT CLAY	% PASSING (SIEVES) 10	% PASSING (SIEVES) 40	% PASSING (SIEVES) 200	% MOISTURE	% ORGANIC
S-62	CL	14+00	1.00-5.00	A-2-4(0)	21	NP	26.8	44.7	12.5	16.1	100	89	33	-	-

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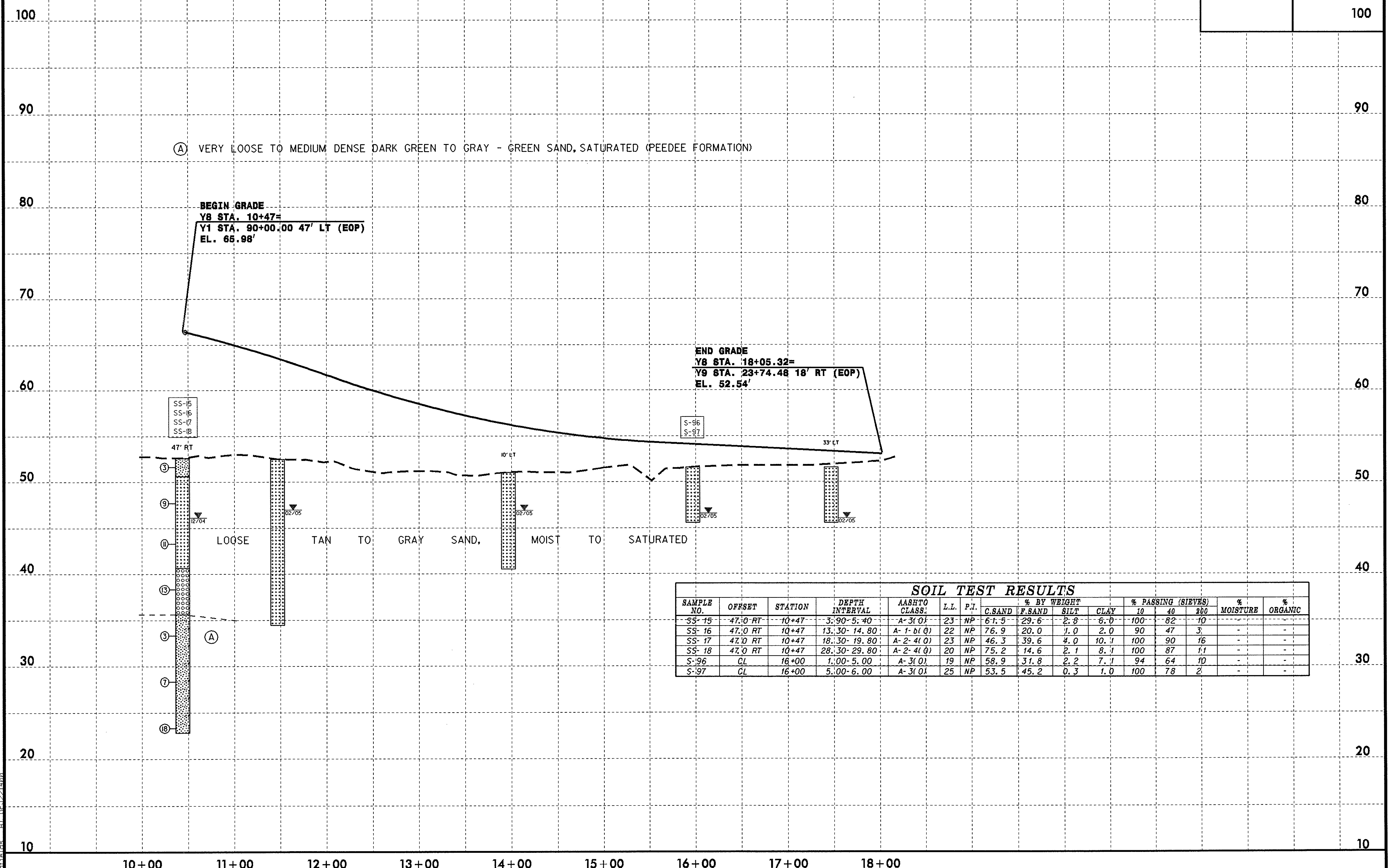
kbmiller AT GFJ221408

-Y8-



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-15	47.0 RT	10+47	3.90-5.40	A-3(0)	23	NP	61.5	29.6	2.8	6.0	100	82	10	-	-
SS-16	47.0 RT	10+47	13.30-14.80	A-1-b(0)	22	NP	76.9	20.0	1.0	2.0	90	47	3	-	-
SS-17	47.0 RT	10+47	18.30-19.80	A-2-4(0)	23	NP	46.3	39.6	4.0	10.1	100	90	16	-	-
SS-18	47.0 RT	10+47	28.30-29.80	A-2-4(0)	20	NP	75.2	14.6	2.1	8.1	100	87	11	-	-
S-96	CL	16+00	1.00-5.00	A-3(0)	19	NP	58.9	31.8	2.2	7.1	94	64	10	-	-
S-97	CL	16+00	5.00-6.00	A-3(0)	25	NP	53.5	45.2	0.3	1.0	100	78	2	-	-

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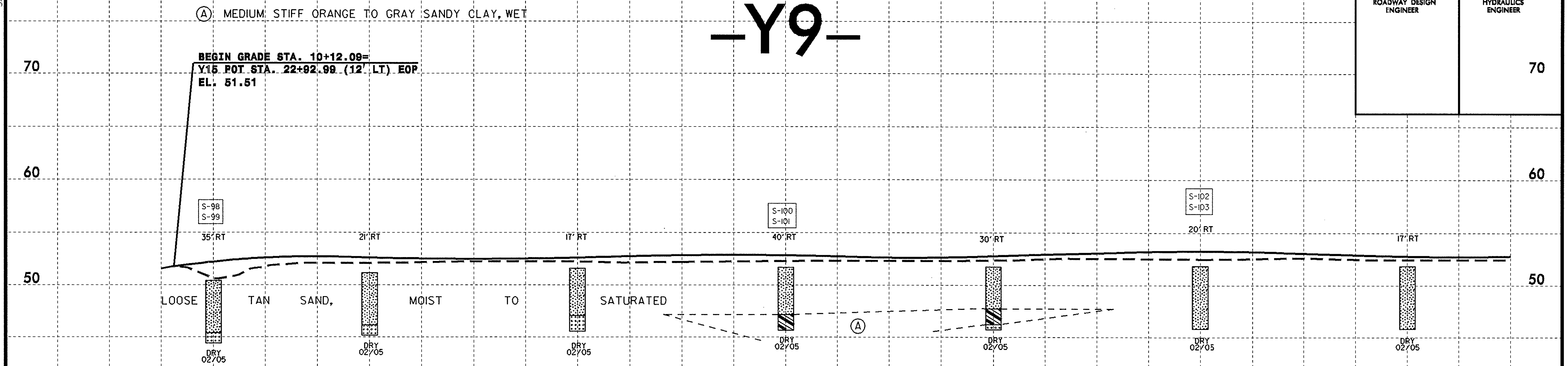
wdfields AT GEJ221400

PROJECT REFERENCE NO.	SHEET NO.
R-2719A	70
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

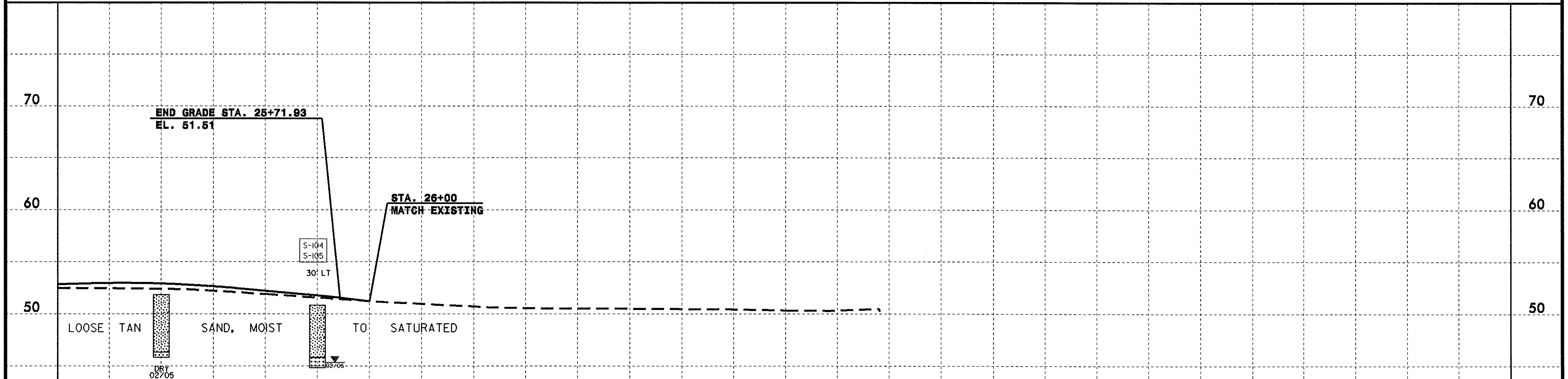
-Y9-



SOIL TEST RESULTS

SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT C.SAND	F.SAND	SILT	CLAY	% PASSING (SIEVES) 10	40	200	% MOISTURE	% ORGANIC
S-98	35.0 RT	10+50	1.00-5.00	A-2-4(0)	19	NP	46.1	31.8	8.0	14.1	99	78	24	-	-
S-99	35.0 RT	10+50	5.00-6.00	A-3(0)	21	NP	54.2	38.5	2.2	5.0	100	79	8	-	-
S-100	40.0 RT	16+00	1.00-4.50	A-2-4(0)	16	NP	62.3	24.6	4.0	9.1	100	78	15	-	-
S-101	40.0 RT	16+00	4.50-6.00	A-6(3)	28	13	26.4	32.9	13.4	27.2	100	93	48	21.8	-
S-102	20.0 RT	20+00	1.00-5.00	A-2-4(0)	21	5	54.6	21.9	4.3	19.2	100	80	25	-	-
S-103	20.0 RT	20+00	5.00-6.00	A-2-4(0)	18	NP	63.6	26.8	3.5	6.1	100	82	11	-	-

10+00 11+00 12+00 13+00 14+00 15+00 16+00 17+00 18+00 19+00 20+00 21+00 22+00 23+00



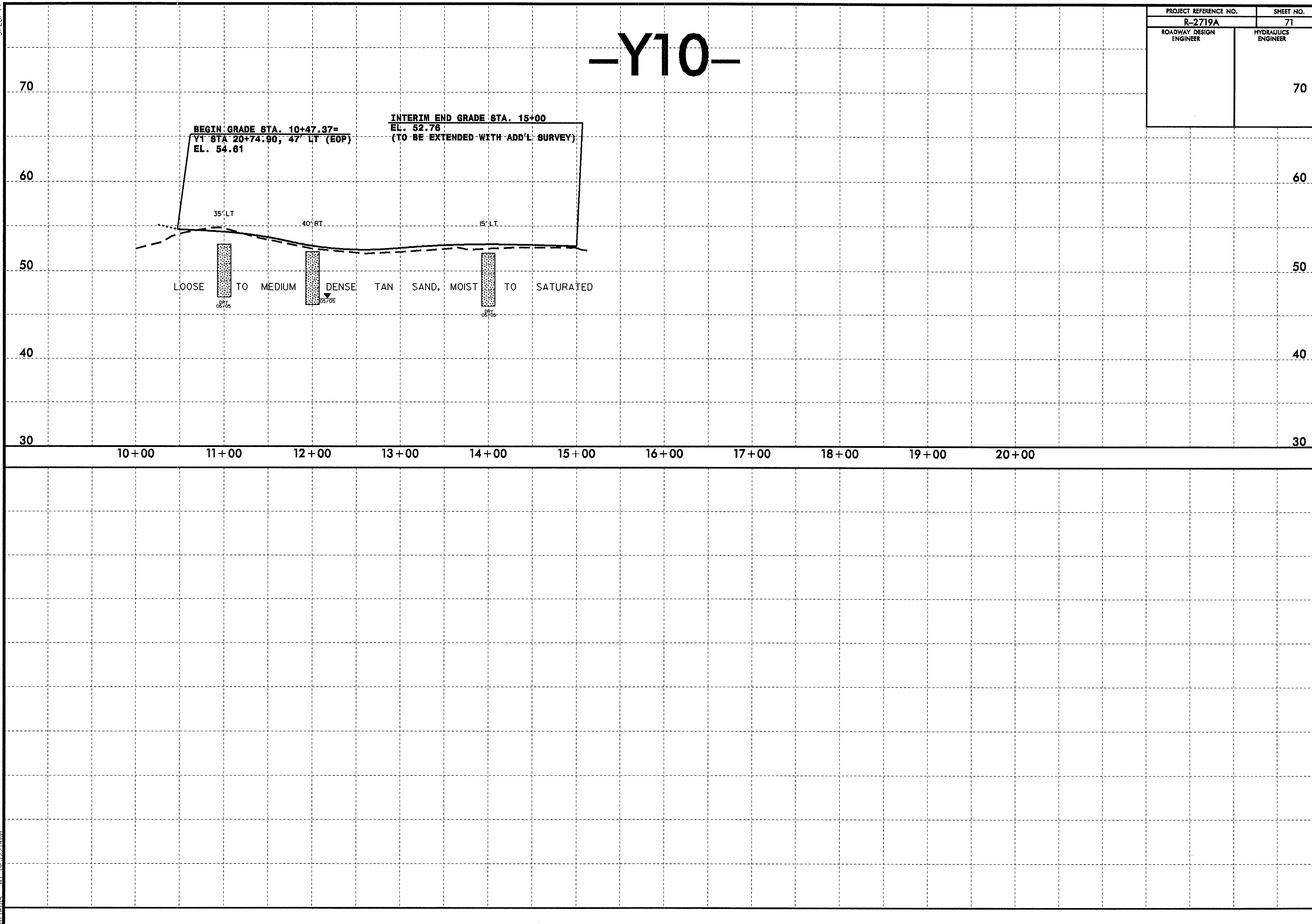
SOIL TEST RESULTS

SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT C.SAND	F.SAND	SILT	CLAY	% PASSING (SIEVES) 10	40	200	% MOISTURE	% ORGANIC
S-104	30.0 LT	25+50	1.00-5.00	A-2-4(0)	27	NP	31.7	48.5	8.7	11.1	100	90	23	-	-
S-105	30.0 LT	25+50	5.00-6.00	A-3(0)	26	NP	67.5	31.5	1.0	0.0	99	73	1	-	-

23+00 24+00 25+00 26+00 27+00 28+00 29+00 30+00

PROJECT REFERENCE NO.	SHEET NO.
R-2719A	71
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

-Y10-



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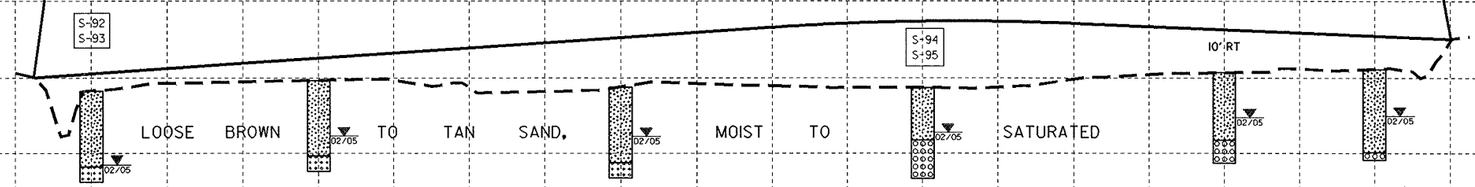
PROJECT REFERENCE NO.	SHEET NO.
R-2719A	72
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

-Y14-

BEGIN GRADE STA. 10+12.25=
Y9 POT STA.30+00 (12.25' LT)
EXIST. EOP
EL. 49.99

END GRADE STA. 19+50.85
EL. 52.53 (EXIST. EOP)



SOIL TEST RESULTS

SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT C.SAND	F.SAND	SILT	CLAY	% PASSING (SIEVES) 10	40	200	% MOISTURE	% ORGANIC
S-92	CL	10+50	1.00-5.00	A-2-4(0)	21	NP	32.2	47.0	8.7	12.1	100	84	24	-	-
S-93	CL	10+50	5.00-6.00	A-3(0)	22	NP	64.1	30.0	0.9	5.0	96	59	7	-	-
S-94	CL	18+00	1.00-3.50	A-2-4(0)	19	NP	31.2	54.3	5.4	9.1	100	90	16	-	-
S-95	CL	18+00	3.50-6.00	A-1-b(0)	21	NP	70.9	24.5	1.5	3.0	91	49	5	-	-

70 60 50 40 30

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

70 60 50 40 30

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

70 60 50 40 30

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ddavis

5/28/99

-Y15-

PROJECT REFERENCE NO.	SHEET NO.
R-2719A	73
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

70 60 50 40 30

10+00 11+00 12+00 13+00 14+00 15+00 16+00 17+00 18+00 19+00 20+00 21+00 22+00 23+00

END GRADE
Y15 STA. 31+26.03=
Y1RT STA. 106+03.93 24' RT (EOP)
(Y1 STA. 106+00 49.49' RT)
EL. 59.78'

STA. 26+00
MATCH EXIST.

BEGIN GRADE
Y15 STA. 26+57.51
EL. 52.24'

15' RT

30' RT

LOOSE TO MEDIUM DENSE TAN SAND AND CLAYEY SAND, MOIST (ROADWAY EMBANKMENT)

LOOSE TO MEDIUM DENSE TAN SAND, MOIST TO SATURATED

70 60 50 40 30

24+00 25+00 26+00 27+00 28+00 29+00 30+00 31+00

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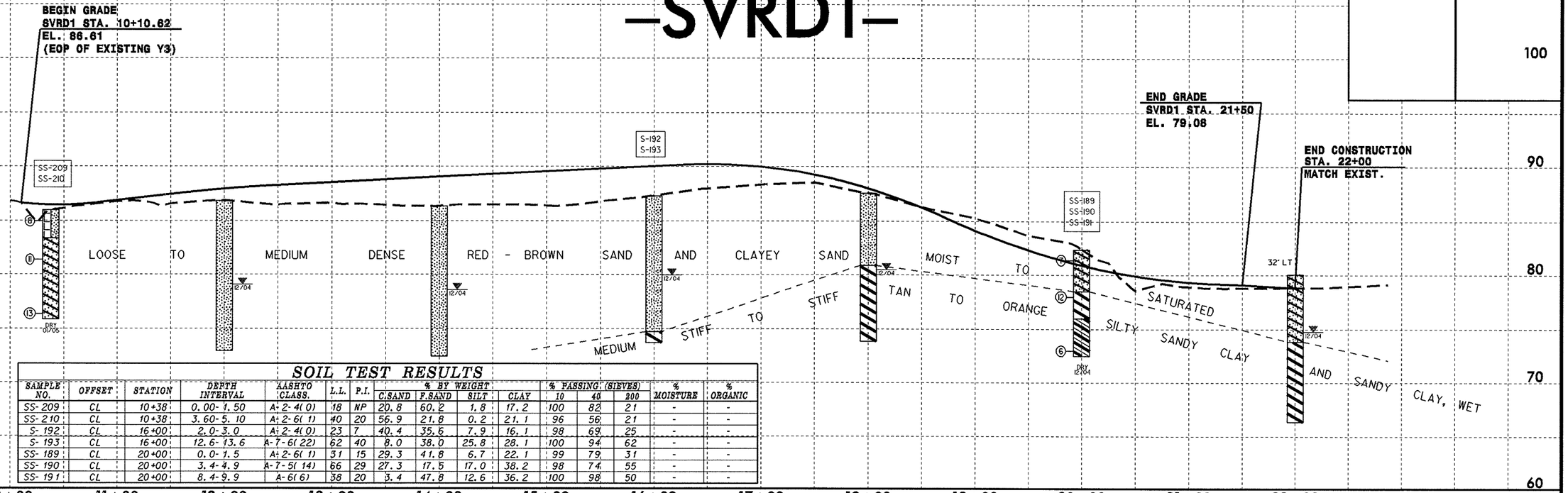
5/28/99

-SVRD1-

PROJECT REFERENCE NO.	SHEET NO.
R-2719A	74
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
	100



SOIL TEST RESULTS

SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT C.SAND	F.SAND	SILT	CLAY	% PASSING (SIEVES) 10	40	200	% MOISTURE	% ORGANIC
SS-209	CL	10+38	0.00-1.50	A-2-4(0)	18	NP	20.8	60.2	1.8	17.2	100	82	21	-	-
SS-210	CL	10+38	3.60-5.10	A-2-6(1)	40	20	56.9	21.8	0.2	21.1	96	56	21	-	-
S-192	CL	16+00	2.0-3.0	A-2-4(0)	23	7	40.4	35.6	7.9	16.1	98	69	25	-	-
S-193	CL	16+00	12.6-13.6	A-7-6(22)	62	40	8.0	38.0	25.8	28.1	100	94	62	-	-
SS-189	CL	20+00	0.0-1.5	A-2-6(1)	31	15	29.3	41.8	6.7	22.1	99	79	31	-	-
SS-190	CL	20+00	3.4-4.9	A-7-5(14)	66	29	27.3	17.5	17.0	38.2	98	74	55	-	-
SS-191	CL	20+00	8.4-9.9	A-6(6)	38	20	3.4	47.8	12.6	36.2	100	98	50	-	-

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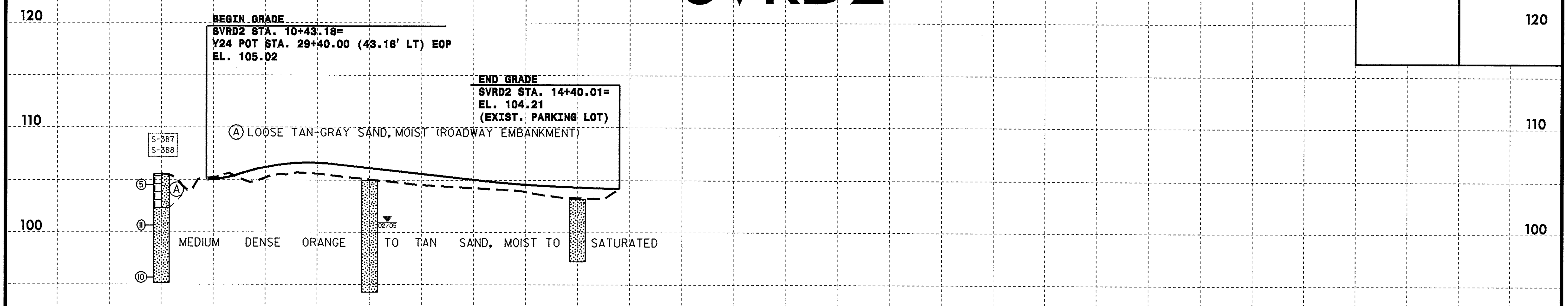
PROJECT REFERENCE NO.	SHEET NO.
R-2719A	75
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

-SVRD2-



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-387	CL	10+00	0.00-1.50	A-2-4(0)	18	NP	9.9	71.9	8.2	10.1	100	96	21	-	-
S-388	CL	10+00	3.90-5.40	A-2-4(0)	21	NP	1.8	79.4	4.7	14.1	99	98	21	-	-

80 80

10+00 11+00 12+00 13+00 14+00

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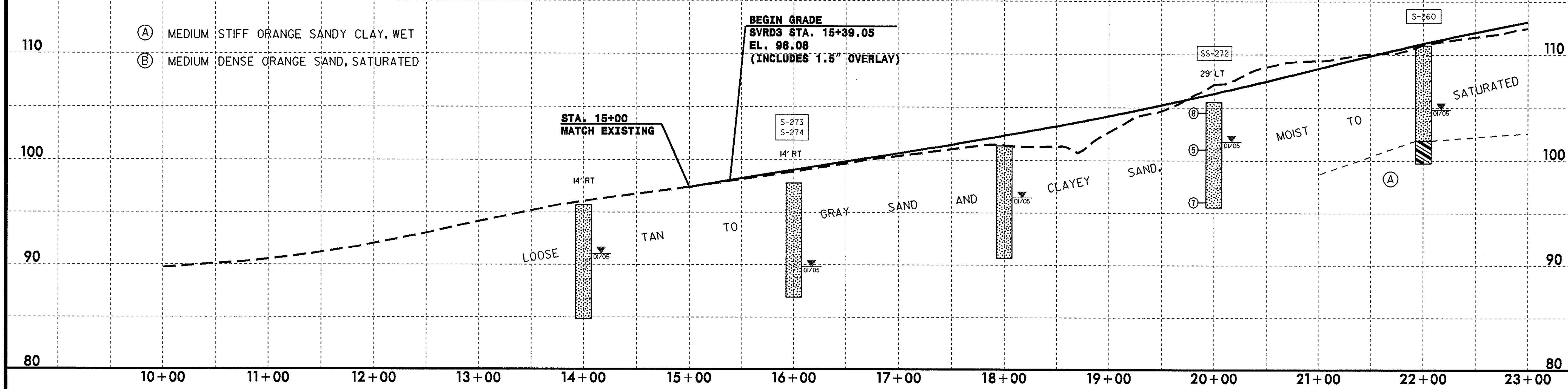
PROJECT REFERENCE NO.	SHEET NO.
R-2719A	76
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

-SVRD3-

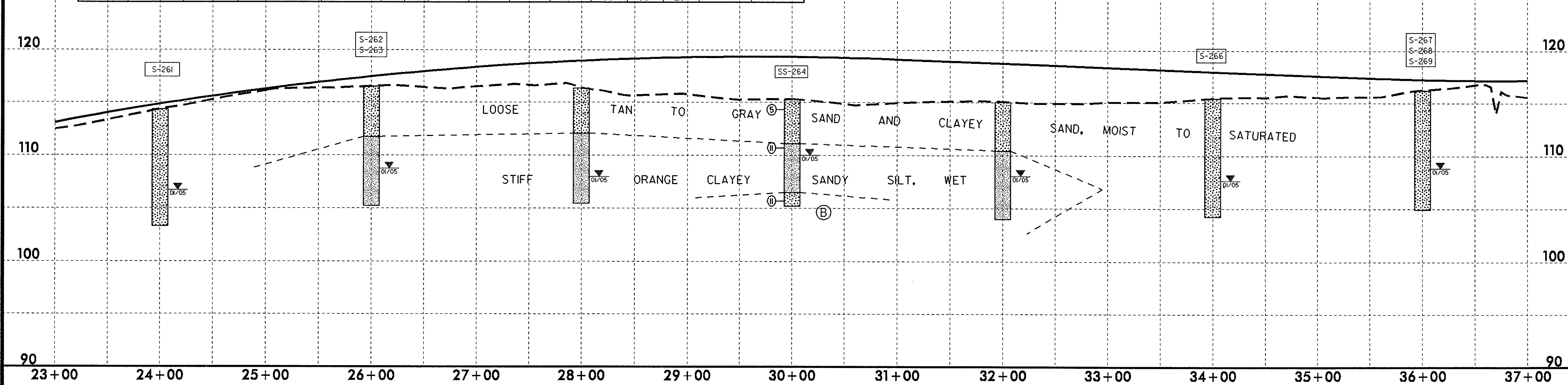
SOIL TEST RESULTS

SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT C.SAND	% BY WEIGHT F.SAND	% BY WEIGHT SILT	% BY WEIGHT CLAY	% PASSING (SIEVES) 10	% PASSING (SIEVES) 40	% PASSING (SIEVES) 200	% MOISTURE	% ORGANIC
S-273	14.0 LT	16+00	1.00-2.00	A-2-4(0)	22	3	2.3	67.7	9.8	20.2	100	99	32	-	-
S-274	14.0 RT	16+00	7.00-8.00	A-2-4(0)	23	NP	2.5	80.6	3.7	13.1	100	100	19	-	-
SS-272	29.0 LT	20+00	8.50-10.00	A-2-4(0)	23	NP	17.6	71.2	3.1	8.1	100	95	13	-	-
S-260	CL	22+00	7.00-8.00	A-2-4(0)	26	6	0.9	72.3	7.7	19.1	100	100	30	25.5	-



SOIL TEST RESULTS

SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT C.SAND	% BY WEIGHT F.SAND	% BY WEIGHT SILT	% BY WEIGHT CLAY	% PASSING (SIEVES) 10	% PASSING (SIEVES) 40	% PASSING (SIEVES) 200	% MOISTURE	% ORGANIC
S-261	CL	24+00	9.00-10.00	A-6(7)	38	22	3.0	49.4	9.3	38.2	100	99	50	33.3	-
S-262	CL	26+00	1.00-2.00	A-2-4(0)	17	NP	2.2	70.2	11.6	16.1	100	99	31	-	-
S-263	CL	26+00	5.00-6.00	A-4(0)	31	9	1.8	63.2	8.8	26.1	100	99	38	-	-
SS-264	CL	30+00	8.60-10.10	A-2-4(0)	24	NP	11.3	71.1	3.6	14.1	100	99	19	-	-
S-266	CL	34+00	5.00-6.00	A-2-4(0)	24	4	1.1	76.9	4.9	17.1	100	100	24	-	-
S-267	CL	36+00	0.00-1.00	A-2-4(0)	20	2	1.9	69.2	11.8	17.1	100	100	32	-	-
S-268	CL	36+00	3.00-4.00	A-2-4(0)	26	5	2.1	73.7	6.1	18.1	100	100	27	-	-
S-269	CL	36+00	8.00-9.00	A-2-4(0)	25	NP	0.7	78.4	4.7	16.1	100	100	23		



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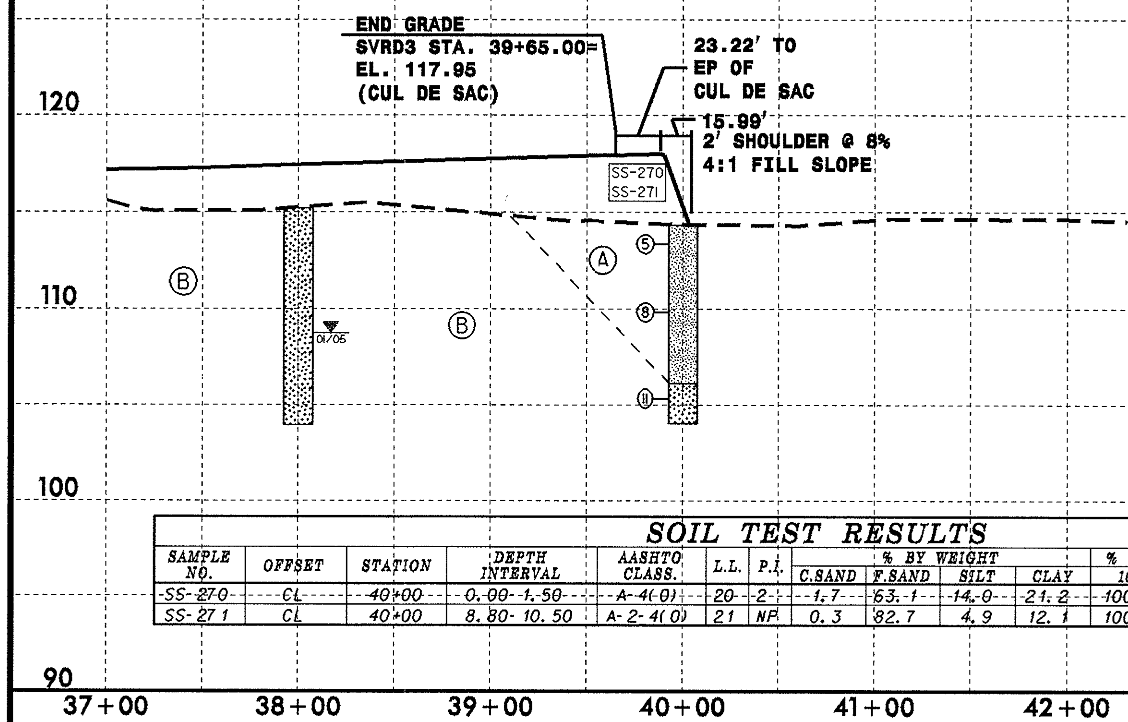
-SVRD3-

Ⓐ MEDIUM STIFF GRAY CLAYEY SANDY SILT, WET

Ⓑ LOOSE TO MEDIUM DENSE TAN TO GRAY SAND AND CLAYEY SAND, MOIST TO SATURATED



SOIL TEST RESULTS

SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT C.SAND	F.SAND	SILT	CLAY	% PASSING (SIEVES) 10	40	200	% MOISTURE	% ORGANIC
SS-270	CL	40+00	0.00-1.50	A-4(0)	20	2	1.7	63.1	14.0	21.2	100	99	39	-	-
SS-271	CL	40+00	8.80-10.50	A-2-4(0)	21	NP	0.3	82.7	4.9	12.1	100	100	20	-	-

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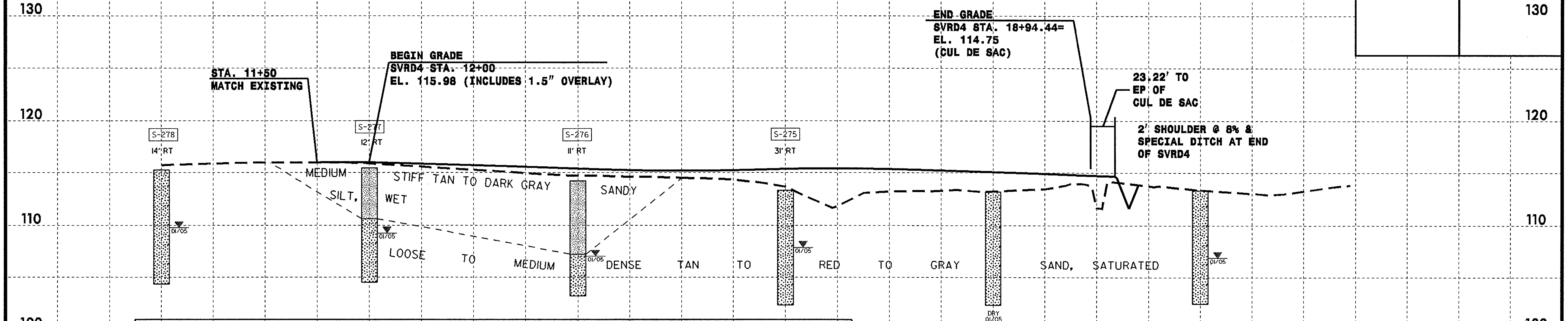
PROJECT REFERENCE NO.	SHEET NO.
R-2719A	78
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

–SVRD4–



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-278	14.0 RT	10+00	9.00-10.00	A-2-4(0)	23	1	0.9	77.8	4.1	17.1	100	100	24	-	-
S-277	12.0 RT	12+00	5.00-6.00	A-2-4(0)	25	7	3.3	71.8	5.7	19.2	100	99	28	-	-
S-276	11.0 RT	14+00	1.00-2.00	A-4(0)	18	3	3.2	60.7	20.0	16.1	100	99	41	-	-
S-275	31.0 RT	16+00	1.00-2.00	A-2-4(0)	18	NP	1.7	69.0	13.2	16.1	100	99	34	-	-

90

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

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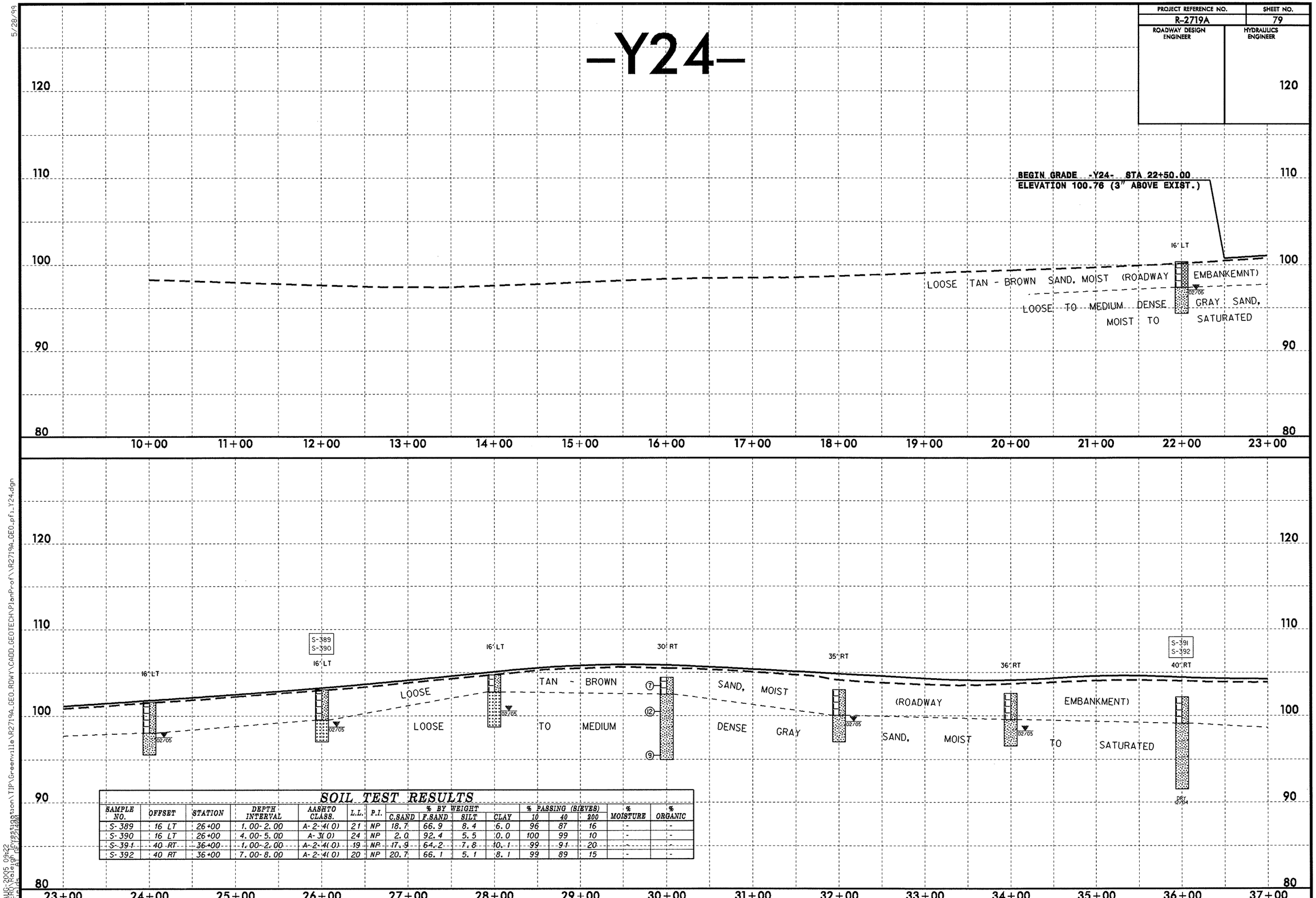
-Y24-

PROJECT REFERENCE NO.	SHEET NO.
R-2719A	79
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER



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-389	16 LT	26+00	1.00-2.00	A-2-4(0)	21	NP	18.7	66.9	8.4	6.0	96	87	16	-	-
S-390	16 LT	26+00	4.00-5.00	A-3(0)	24	NP	2.0	92.4	5.5	0.0	100	99	10	-	-
S-391	40 RT	36+00	1.00-2.00	A-2-4(0)	19	NP	17.9	64.2	7.8	10.1	99	91	20	-	-
S-392	40 RT	36+00	7.00-8.00	A-2-4(0)	20	NP	20.7	66.1	5.1	8.1	99	89	15	-	-

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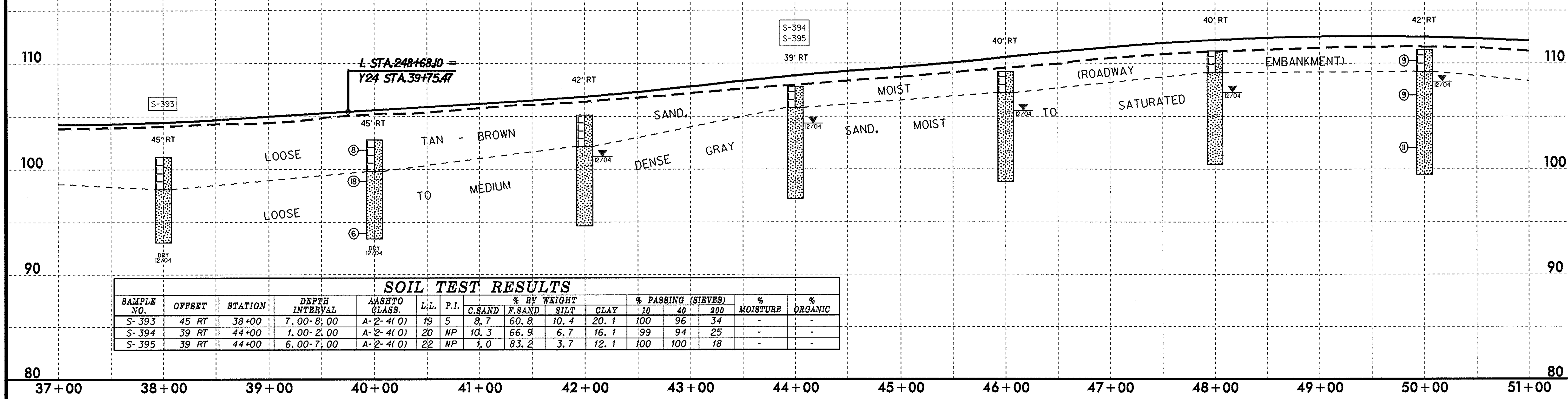
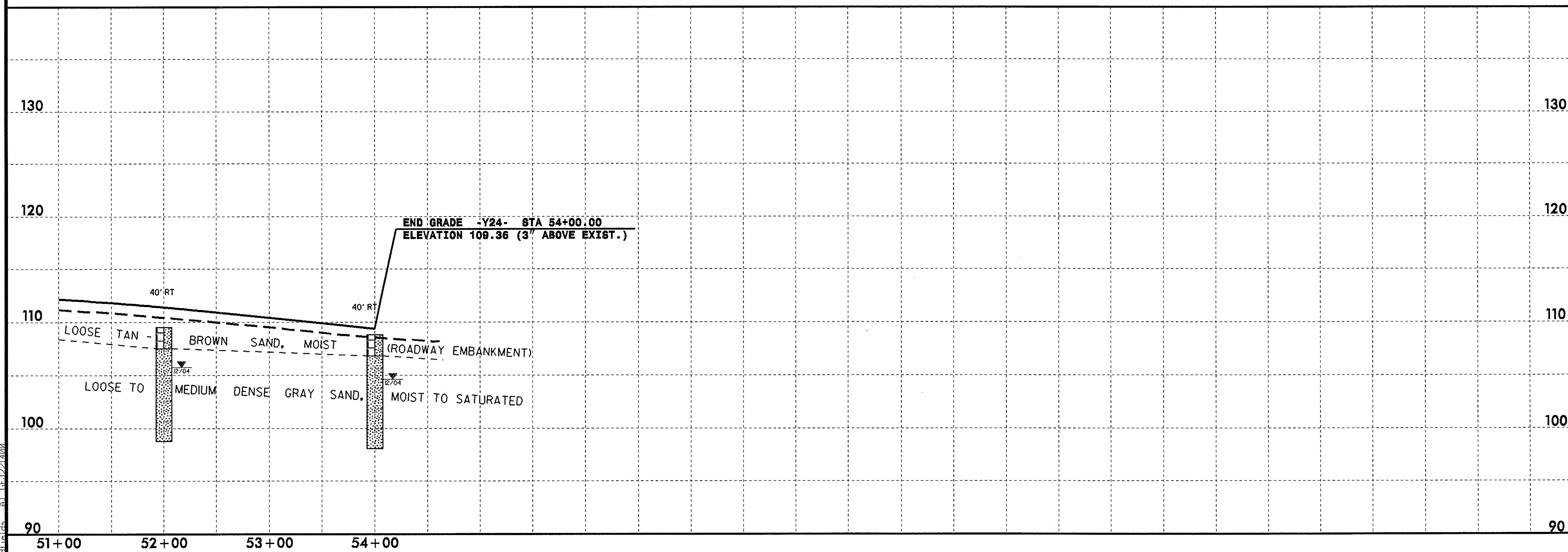
PROJECT REFERENCE NO.	SHEET NO.
R-2719A	80
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

-Y24-



SOIL TEST RESULTS

SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT C.SAND	F.SAND	SILT	CLAY	% PASSING (SIEVES) 10	40	200	% MOISTURE	% ORGANIC
S-393	45 RT	38+00	7.00-8.00	A-2-4(0)	19	5	8.7	60.8	10.4	20.1	100	96	34	-	-
S-394	39 RT	44+00	1.00-2.00	A-2-4(0)	20	NP	10.3	66.9	6.7	16.1	99	94	25	-	-
S-395	39 RT	44+00	6.00-7.00	A-2-4(0)	22	NP	1.0	83.2	3.7	12.1	100	100	18	-	-



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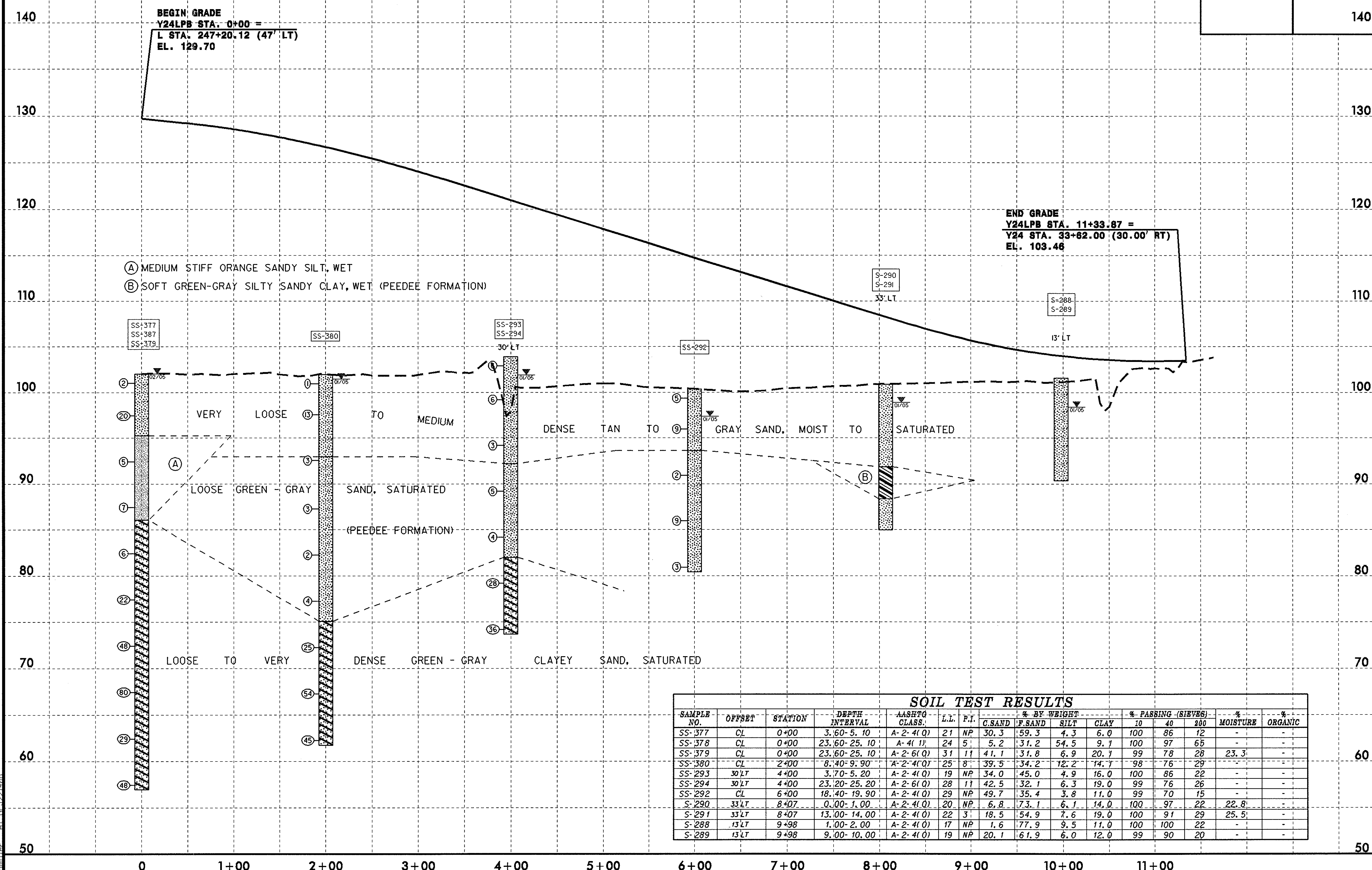
ROADWAY DESIGN ENGINEER | HYDRAULICS ENGINEER

-Y24LPB-



SOIL TEST RESULTS

SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT C.SAND	% BY WEIGHT F.SAND	% BY WEIGHT SILT	% BY WEIGHT CLAY	% PASSING (SIEVES) 10	% PASSING (SIEVES) 40	% PASSING (SIEVES) 200	% MOISTURE	% ORGANIC
SS-377	CL	0+00	3.60-5.10	A-2-4(0)	21	NP	30.3	59.3	4.3	6.0	100	86	12	-	-
SS-378	CL	0+00	23.60-25.10	A-4(1)	24	5	5.2	31.2	54.5	9.1	100	97	65	-	-
SS-379	CL	0+00	23.60-25.10	A-2-6(0)	31	11	41.1	31.8	6.9	20.1	99	78	28	23.3	-
SS-380	CL	2+00	8.40-9.90	A-2-4(0)	25	8	39.5	34.2	12.2	14.1	98	76	29	-	-
SS-293	30 LT	4+00	3.70-5.20	A-2-4(0)	19	NP	34.0	45.0	4.9	16.0	100	86	22	-	-
SS-294	30 LT	4+00	23.20-25.20	A-2-6(0)	28	11	42.5	32.1	6.3	19.0	99	76	26	-	-
SS-292	CL	6+00	18.40-19.90	A-2-4(0)	29	NP	49.7	35.4	3.8	11.0	99	70	15	-	-
S-290	33 LT	8+07	0.00-1.00	A-2-4(0)	20	NP	6.8	73.1	6.1	14.0	100	97	22	22.8	-
S-291	33 LT	8+07	13.00-14.00	A-2-4(0)	22	3	18.5	54.9	7.6	19.0	100	91	29	25.5	-
S-288	13 LT	9+98	1.00-2.00	A-2-4(0)	17	NP	1.6	77.9	9.5	11.0	100	100	22	-	-
S-289	13 LT	9+98	9.00-10.00	A-2-4(0)	19	NP	20.1	61.9	6.0	12.0	99	90	20	-	-

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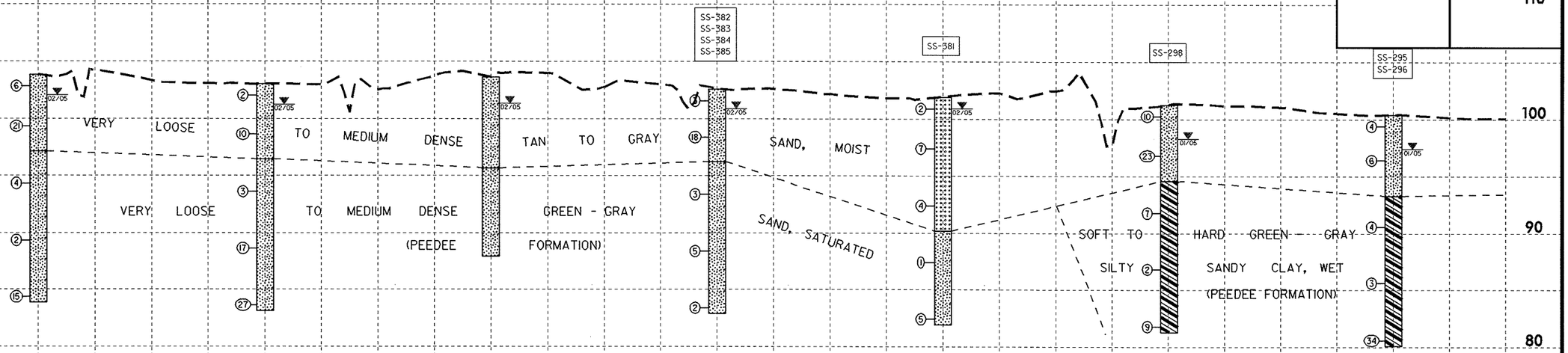
PROJECT REFERENCE NO.	SHEET NO.
R-2719A	82
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

BEGIN GRADE
Y24RPB STA. 0+00
L STA. 230+06.15 (47' LT)
EL. 114.15'

-Y24RPB-



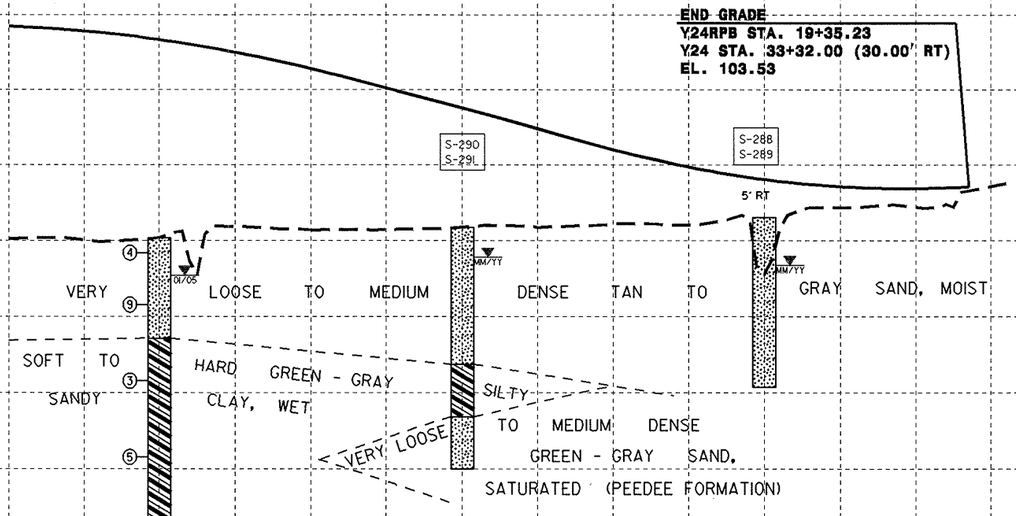
SOIL TEST RESULTS

SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT C.SAND	F.SAND	SILT	CLAY	% PASSING (SIEVES) 10	40	200	% MOISTURE	% ORGANIC
SS-382	CL	6+00	0.00-1.50	A-2-4(0)	22	NP	14.7	64.2	13.0	8.1	100	94	24	-	-
SS-383	CL	6+00	8.20-9.20	A-2-4(0)	19	NP	12.0	65.2	7.8	15.1	100	96	26	-	-
SS-384	CL	6+00	13.20-19.70	A-2-4(0)	20	NP	56.8	28.1	6.0	9.1	95	63	15	-	-
SS-385	CL	6+00	18.20-19.70	A-2-4(0)	28	NP	25.4	60.0	9.6	5.0	98	90	16	-	-

SOIL TEST RESULTS

SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT C.SAND	F.SAND	SILT	CLAY	% PASSING (SIEVES) 10	40	200	% MOISTURE	% ORGANIC
SS-381	CL	8+00	18.50-20.00	A-2-4(0)	25	NP	11.4	67.4	13.2	8.1	95	90	22	-	-
SS-298	CL	10+00	3.50-5.00	A-2-4(0)	22	NP	8.0	73.5	6.5	12.0	100	97	21	-	-
SS-295	CL	12+00	0.00-1.50	A-2-4(0)	22	5	9.5	59.2	9.3	22.0	100	95	34	-	-
SS-296	CL	12+00	8.80-10.30	A-6(5)	33	16	27.8	22.2	27.9	22.0	98	83	52	-	-

END GRADE
Y24RPB STA. 19+35.23
Y24 STA. 33+32.00 (30.00' RT)
EL. 103.53



SOIL TEST RESULTS

SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT C.SAND	F.SAND	SILT	CLAY	% PASSING (SIEVES) 10	40	200	% MOISTURE	% ORGANIC
S-290	CL	16+00	0.00-1.00	A-2-4(0)	20	NP	6.8	73.1	6.1	14.0	100	97	22	22.8	-
S-291	CL	16+00	13.00-14.00	A-2-4(0)	22	3	18.5	54.9	7.6	19.0	100	91	29	25.5	-
S-288	5.0 RT	18+00	1.00-2.00	A-2-4(0)	17	NP	1.6	77.9	9.5	11.0	100	100	22	-	-
S-289	5.0 RT	18+00	9.00-10.00	A-2-4(0)	19	NP	20.1	61.9	6.0	12.0	99	90	20	-	-

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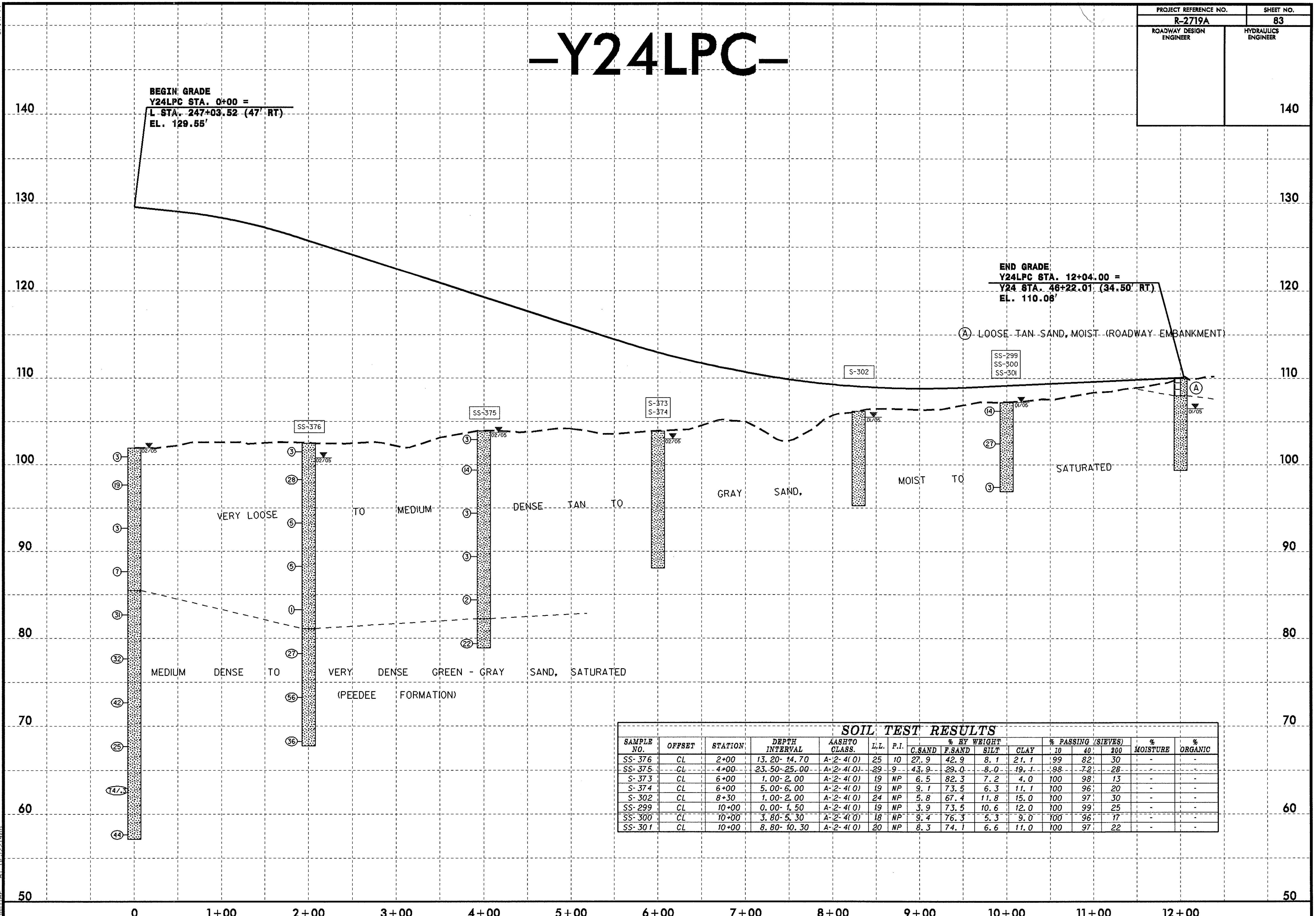
PROJECT REFERENCE NO.	SHEET NO.
R-2719A	83
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

-Y24LPC-



SOIL TEST RESULTS

SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT C.SAND	% BY WEIGHT F.SAND	% BY WEIGHT SILT	% BY WEIGHT CLAY	% PASSING (SIEVES) 10	% PASSING (SIEVES) 40	% PASSING (SIEVES) 200	% MOISTURE	% ORGANIC
SS-376	CL	2+00	13.20-14.70	A-2-4(0)	25	10	27.9	42.9	8.1	21.1	99	82	30	-	-
SS-375	CL	4+00	23.50-25.00	A-2-4(0)	29	9	43.9	29.0	8.0	19.1	98	72	28	-	-
S-373	CL	6+00	1.00-2.00	A-2-4(0)	19	NP	6.5	82.3	7.2	4.0	100	98	13	-	-
S-374	CL	6+00	5.00-6.00	A-2-4(0)	19	NP	9.1	73.5	6.3	11.1	100	96	20	-	-
S-302	CL	8+30	1.00-2.00	A-2-4(0)	24	NP	5.8	67.4	11.8	15.0	100	97	30	-	-
SS-299	CL	10+00	0.00-1.50	A-2-4(0)	19	NP	3.9	73.5	10.6	12.0	100	99	25	-	-
SS-300	CL	10+00	3.80-5.30	A-2-4(0)	18	NP	9.4	76.3	5.3	9.0	100	96	17	-	-
SS-301	CL	10+00	8.80-10.30	A-2-4(0)	20	NP	8.3	74.1	6.6	11.0	100	97	22	-	-

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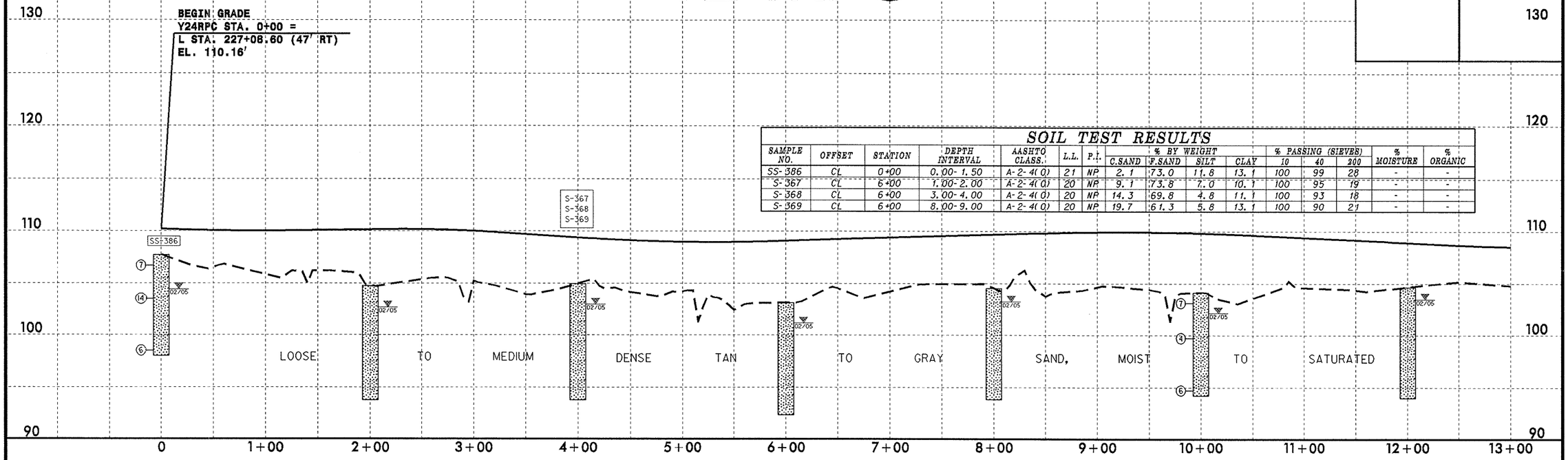
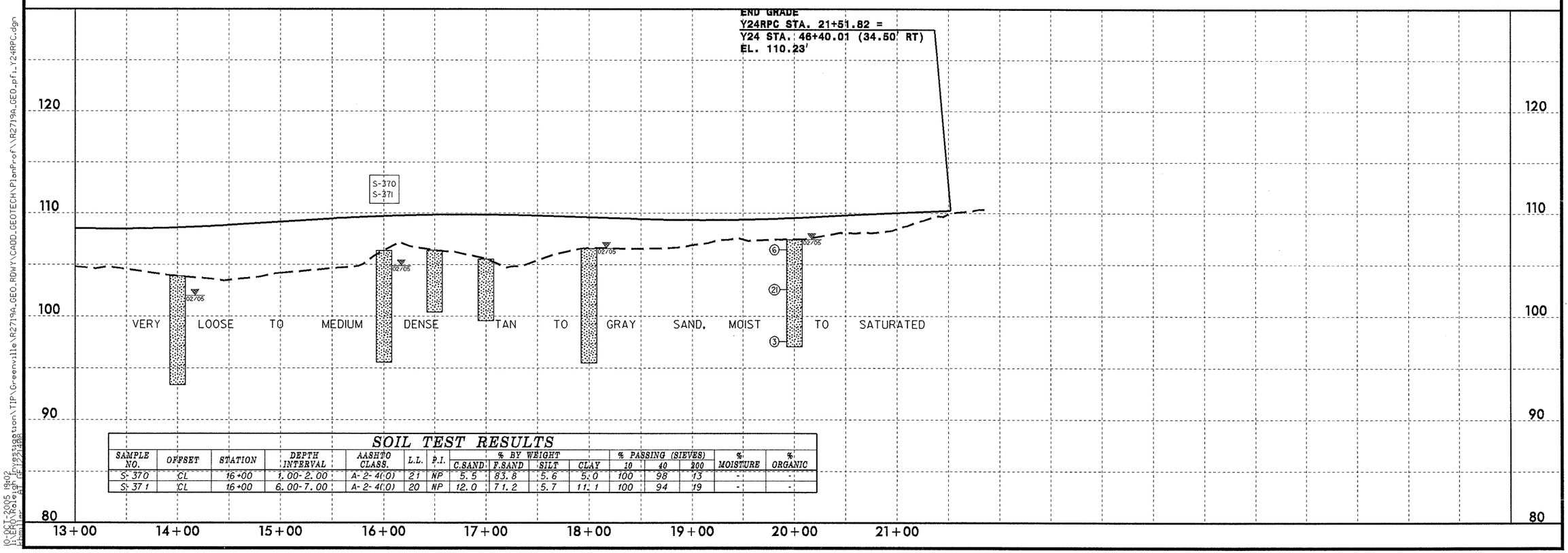
-Y24RPC-

PROJECT REFERENCE NO.	SHEET NO.
R-2719A	84
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER



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-386	CL	0+00	0.00-1.50	A-2-4(0)	21	NP	2.1	73.0	11.8	13.1	100	99	28	-	-
S-367	CL	6+00	1.00-2.00	A-2-4(0)	20	NP	9.1	73.8	7.0	10.1	100	95	19	-	-
S-368	CL	6+00	3.00-4.00	A-2-4(0)	20	NP	14.3	69.8	4.8	11.1	100	93	18	-	-
S-369	CL	6+00	8.00-9.00	A-2-4(0)	20	NP	19.7	61.3	5.8	13.1	100	90	21	-	-



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-370	CL	16+00	1.00-2.00	A-2-4(0)	21	NP	5.5	83.8	5.6	5.0	100	98	13	-	-
S-371	CL	16+00	6.00-7.00	A-2-4(0)	20	NP	12.0	71.2	5.7	11.1	100	94	19	-	-

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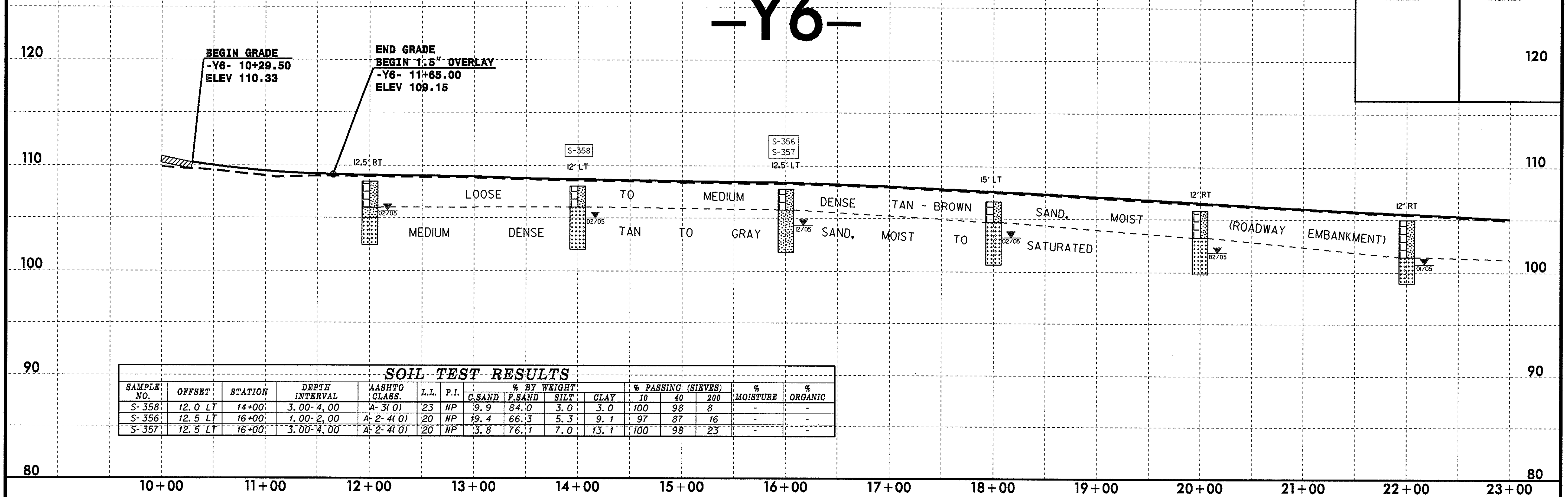
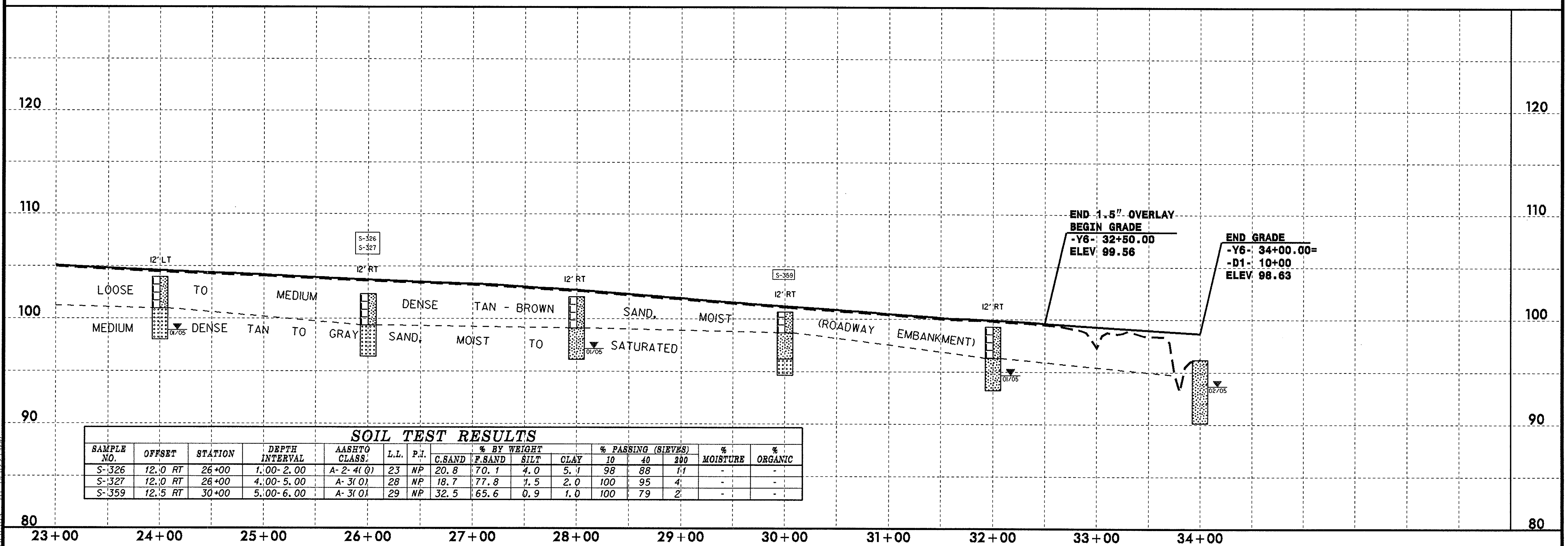
PROJECT REFERENCE NO.	SHEET NO.
R-2719A	85
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

-Y6-



SOIL TEST RESULTS

SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT C.SAND	F.SAND	SILT	CLAY	% PASSING (SIEVES) 10	40	200	% MOISTURE	% ORGANIC
S-358	12.0 LT	14+00	3.00-4.00	A-3(0)	23	NP	9.9	84.0	3.0	3.0	100	98	8	-	-
S-356	12.5 LT	16+00	1.00-2.00	A-2-4(0)	20	NP	19.4	66.3	5.3	9.1	97	87	16	-	-
S-357	12.5 LT	16+00	3.00-4.00	A-2-4(0)	20	NP	3.8	76.1	7.0	13.1	100	98	23	-	-



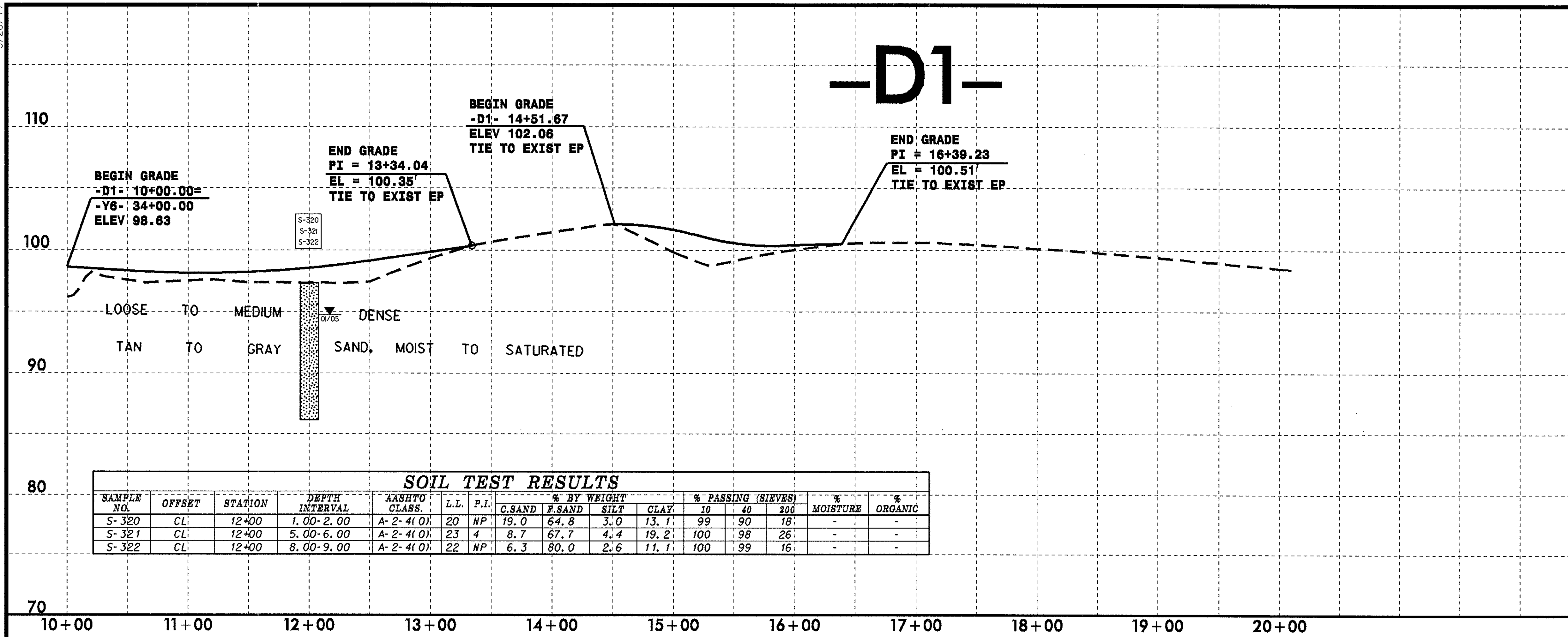
SOIL TEST RESULTS

SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT C.SAND	F.SAND	SILT	CLAY	% PASSING (SIEVES) 10	40	200	% MOISTURE	% ORGANIC
S-326	12.0 RT	26+00	1.00-2.00	A-2-4(0)	23	NP	20.8	70.1	4.0	5.1	98	88	11	-	-
S-327	12.0 RT	26+00	4.00-5.00	A-3(0)	28	NP	18.7	77.8	1.5	2.0	100	95	4	-	-
S-359	12.5 RT	30+00	5.00-6.00	A-3(0)	29	NP	32.5	65.6	0.9	1.0	100	79	2	-	-

PROJECT REFERENCE NO.	SHEET NO.
R-2719A	86

ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

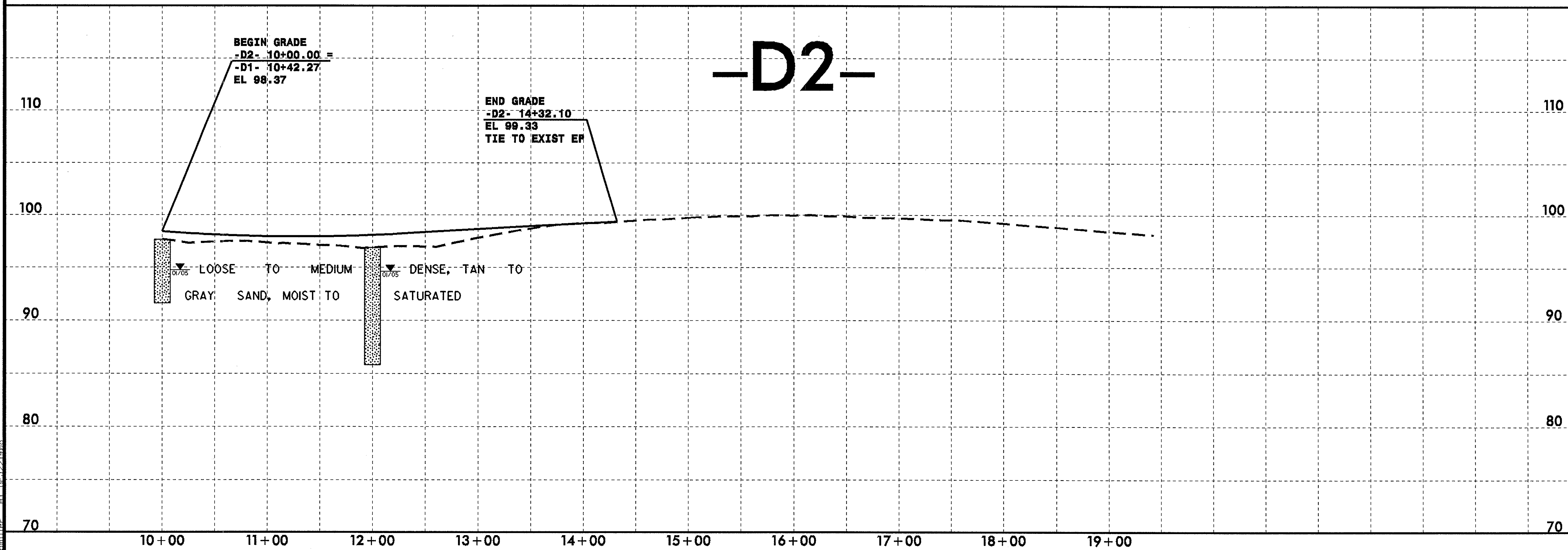
-D1-



SOIL TEST RESULTS

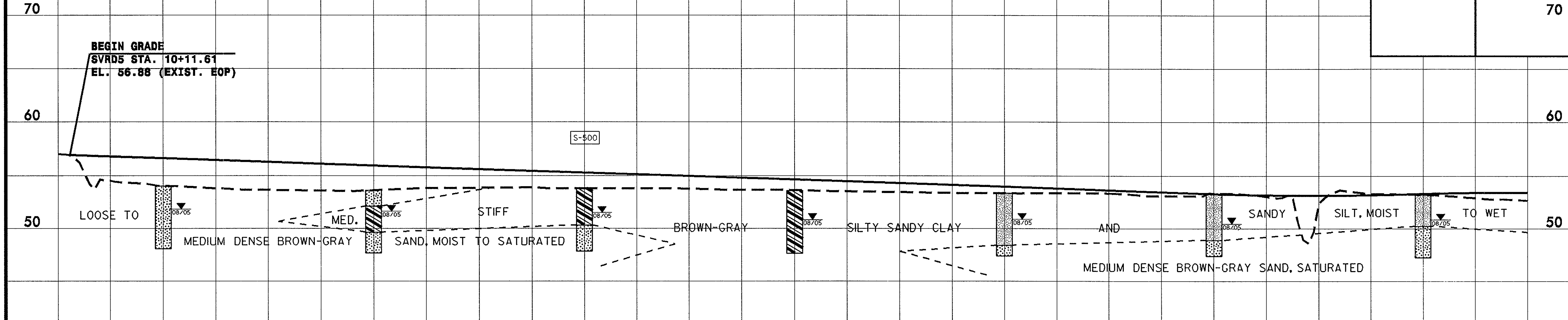
SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT				% PASSING (SIEVES)			% MOISTURE	% ORGANIC
							C.SAND	F.SAND	SILT	CLAY	10	40	200		
S-320	CL	12+00	1.00-2.00	A-2-4(0)	20	NP	19.0	64.8	3.0	13.1	99	90	18	-	-
S-321	CL	12+00	5.00-6.00	A-2-4(0)	23	4	8.7	67.7	4.4	19.2	100	98	26	-	-
S-322	CL	12+00	8.00-9.00	A-2-4(0)	22	NP	6.3	80.0	2.6	11.1	100	99	16	-	-

-D2-



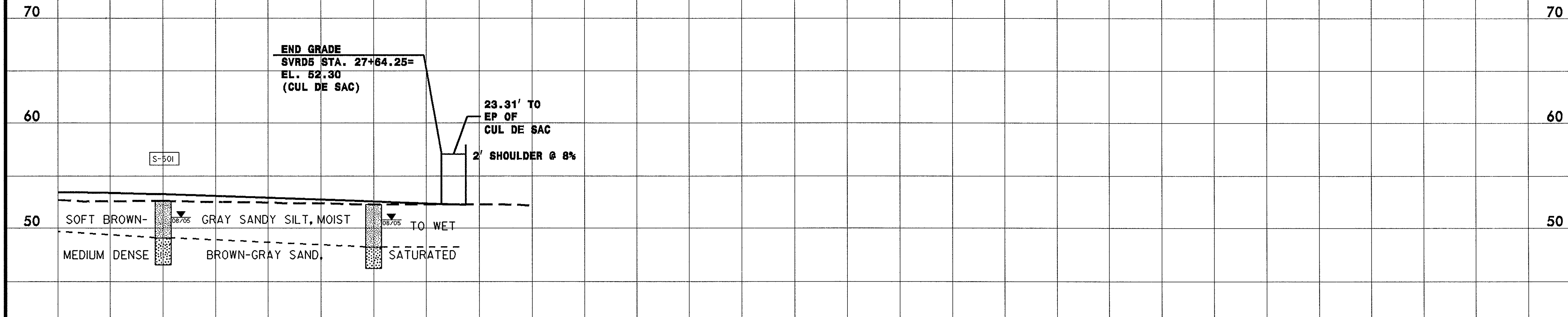
PROJECT REFERENCE NO.	SHEET NO.
R-2719A	87
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

-SVRD5-



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-500	CL	15+00	0.00-3.50	A-6 (3)	33	11	22.8	30.5	34.5	12.1	100	89	49	29	-

10+00 11+00 12+00 13+00 14+00 15+00 16+00 17+00 18+00 19+00 20+00 21+00 22+00 23+00 24+00



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-501	CL	25+00	0.00-3.50	A-4 (0)	34	8	38.0	28.5	23.4	10.1	100	81	36	45	-

24+00 25+00 26+00 27+00 28+00

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kbmiller AT GF1221408

8/23/99

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-2719A	88

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

80
70
60
50

SOFT BROWN SANDY SILT, WET (ALLUVIUM)

VERY SOFT BLACK TO BROWN MUCK, SATURATED (ALLUVIUM)

VERY LOOSE TO DENSE TO GRAY SAND, MOIST TO SATURATED

LOOSE TO MEDIUM DENSE GREEN-GRAY SAND, SATURATED (PEEDEE FORMATION)

130+50.00

80
70
60
50

① ⑯ ⑰ ⑧

VERY SOFT BLACK TO BROWN MUCK, SATURATED (ALLUVIUM)

VERY LOOSE TO DENSE TO GRAY SAND, MOIST TO SATURATED

LOOSE TO MEDIUM DENSE GREEN-GRAY SAND, SATURATED (PEEDEE FORMATION)

130+00.00

80
70
60

VERY LOOSE TO DENSE TO GRAY SAND, MOIST TO SATURATED

VERY SOFT BLACK TO BROWN MUCK, SATURATED (ALLUVIUM)

129+50.00

80
70
60

VERY SOFT BLACK TO BROWN MUCK, SAT. (ALLUVIUM)

129+00.00

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

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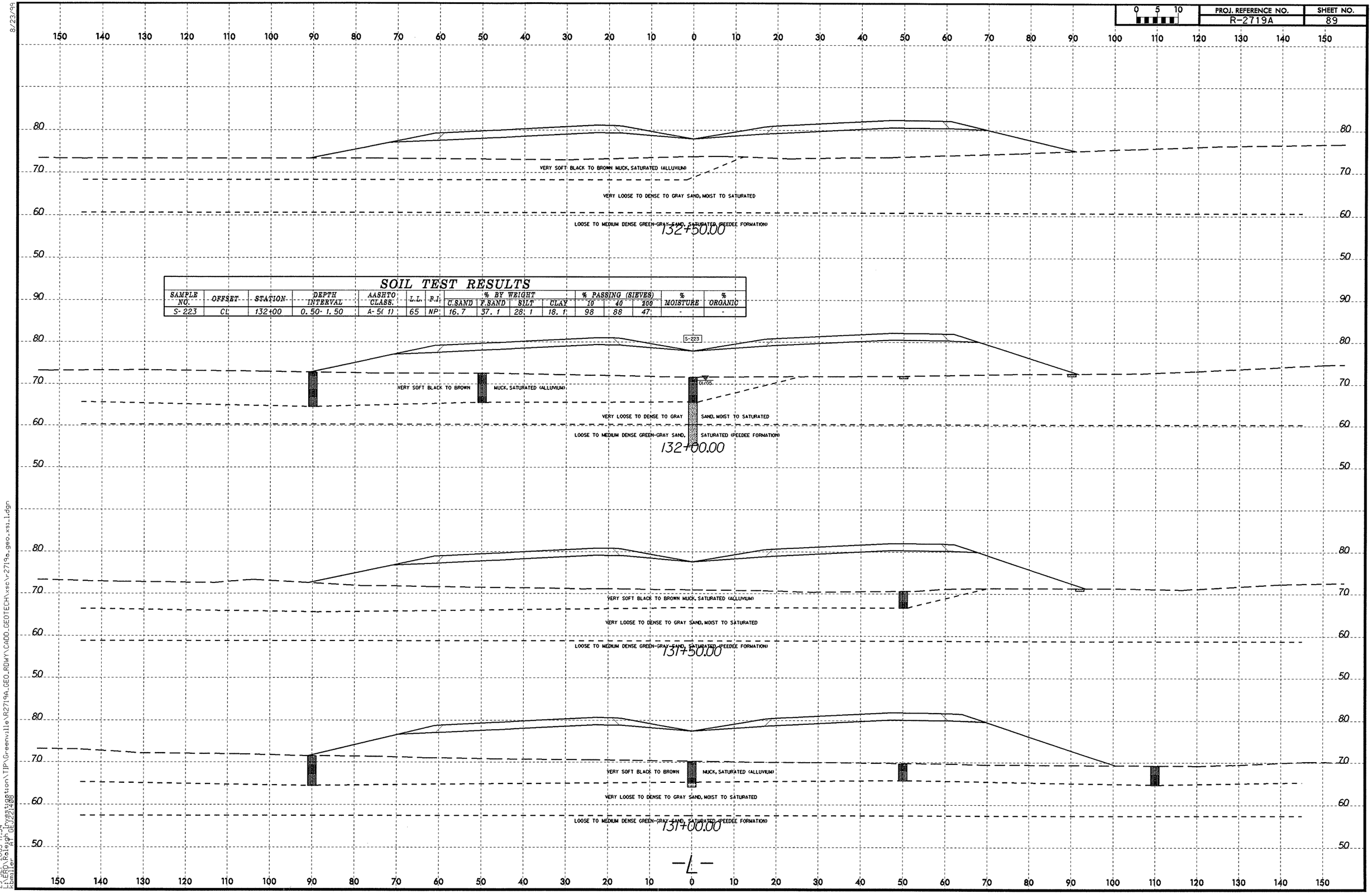
0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-2719A	89

SOIL TEST RESULTS

SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT				% PASSING (SIEVES)			% MOISTURE	% ORGANIC
							C.SAND	F.SAND	SILT	CLAY	10	40	200		
S-223	CL	132+00	0.50- 1.50	A-5(1)	65	NP	16.7	37.1	28.1	18.1	98	88	47	-	-



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0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-2719A	90

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

80

70

VERY SOFT BLACK TO BROWN MUCK SATURATED (ALLUVIUM)

VERY LOOSE TO DENSE TO GRAY SAND, MOIST TO SATURATED

133+00.00

—L—

80

70

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

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0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-2719A	91

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

90
80
70

STIFF TO VERY STIFF ORANGE SILTY SANDY CLAY, WET

LOOSE TO MEDIUM DENSE GRAY SAND, MOIST TO SATURATED

145+50.00

STIFF TO VERY STIFF ORANGE SILTY SANDY CLAY, WET

LOOSE TO MEDIUM DENSE GRAY SAND, MOIST TO SATURATED

145+00.00

STIFF TO VERY STIFF ORANGE SILTY SANDY CLAY, WET

LOOSE TO MEDIUM DENSE GRAY SAND, MOIST TO SATURATED

144+50.00

STIFF TO VERY STIFF ORANGE SILTY SANDY CLAY, WET

LOOSE TO MEDIUM DENSE GRAY SAND, MOIST TO SATURATED

01/05

144+00.00

STIFF TO VERY STIFF ORANGE SILTY SANDY CLAY, WET

LOOSE TO MEDIUM DENSE GRAY SAND, MOIST TO SATURATED

143+50.00

—L—

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AT GEJ221488

8/23/99

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-2719A	92

SOIL TEST RESULTS

SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT C.SAND	F.SAND	SILT	CLAY	% PASSING (SIEVES) 10	40	200	% MOISTURE	% ORGANIC
SS-214	CL	148+00	0.00- 1.50	A-2-4(0)	15	NP	29.5	41.2	13.1	16.2	100	86	32	-	-
SS-215	CL	148+00	13.80- 15.30	A-2-6(0)	35	16	67.7	18.5	0.7	13.1	90	46	13	-	-
SS-216	CL	148+00	18.80- 20.30	A-6(3)	32	17	19.4	39.4	6.9	34.3	100	91	44	-	-

SS-214
SS-215
SS-216

(A) MEDIUM DENSE TAN SAND, MOIST

12 (A)

30 STIFF TO VERY STIFF ORANGE SILTY SANDY CLAY, WET

22 VERY LOOSE TO MEDIUM DENSE ORANGE TO GRAY CLAYEY SAND, MOIST TO SATURATED

01/05

3

VERY STIFF GREEN-GRAY SANDY CLAY, WET (PEEDEE FORMATION)

22

148+00.00

(A) MEDIUM DENSE TAN SAND, MOIST

(A)

STIFF TO VERY STIFF ORANGE SILTY SANDY CLAY, WET

VERY LOOSE TO MEDIUM DENSE ORANGE TO GRAY CLAYEY SAND, MOIST TO SATURATED

VERY STIFF GREEN-GRAY SANDY CLAY, WET (PEEDEE FORMATION)

147+50.00

STIFF TO VERY STIFF ORANGE SILTY SANDY CLAY, WET

VERY LOOSE TO MEDIUM DENSE ORANGE TO GRAY CLAYEY SAND AND SAND, MOIST TO SATURATED

147+00.00

STIFF TO VERY STIFF ORANGE SILTY SANDY CLAY, WET

VERY LOOSE TO MEDIUM DENSE ORANGE TO GRAY CLAYEY SAND AND SAND, MOIST TO SATURATED

146+50.00

STIFF TO VERY STIFF ORANGE SILTY SANDY CLAY, WET

VERY LOOSE TO MEDIUM DENSE ORANGE TO GRAY CLAYEY SAND AND SAND, MOIST TO SATURATED

146+00.00

—L—

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8/23/99

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-2719A	93

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

90
80
70
110
100
90
80
70

MEDIUM DENSE TAN SAND, MOIST
MEDIUM STIFF TAN TO ORANGE CLAYEY SANDY SILT, WET
STIFF TO VERY STIFF ORANGE SILTY SANDY CLAY, WET

150+50.00

SOIL TEST RESULTS

SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT C.SAND	F.SAND	SILT	CLAY	% PASSING (SIEVES) 10	40	200	% MOISTURE	% ORGANIC
SS-211	40.0 RT	150+00	0.00- 1.50	A-4(0)	19	4	28.2	33.9	15.7	22.2	98	84	39	-	-
SS-212	40.0 RT	150+00	3.50- 5.00	A-7-5(18)	57	26	9.1	22.0	20.4	48.5	98	91	69	32.5	-
SS-213	40.0 RT	150+00	8.50- 10.00	A-2-4(0)	24	NP	27.3	49.5	3.0	20.2	99	91	24	-	-

SS-211
SS-212
SS-213

MEDIUM DENSE TAN SAND, MOIST
MEDIUM STIFF TAN TO ORANGE CLAYEY SANDY SILT, WET
STIFF TO VERY STIFF ORANGE SILTY SANDY CLAY, WET

6
22
22
DRY
01-05

150+00.00

MEDIUM DENSE TAN SAND, MOIST
MEDIUM STIFF TAN TO ORANGE CLAYEY SANDY SILT, WET
STIFF TO VERY STIFF ORANGE SILTY SANDY CLAY, WET
DRY
MM/YY

149+50.00

MEDIUM DENSE TAN SAND, MOIST
VERY STIFF TAN TO ORANGE CLAYEY SANDY SILT, WET
STIFF TO VERY STIFF ORANGE SILTY SANDY CLAY, WET
DRY
MM/YY

149+00.00

(A) MEDIUM DENSE TAN SAND, MOIST
(A)
STIFF TO VERY STIFF ORANGE SILTY SANDY CLAY, WET
VERY LOOSE TO MEDIUM DENSE ORANGE TO GRAY CLAYEY SAND, MOIST TO SATURATED
VERY STIFF GREEN/GRAY SANDY CLAY, WET (PEEDEE FORMATION)

148+50.00

—L—

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0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-2719A	94

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

120
110
100

MEDIUM STIFF TAN TO GRAY CLAYEY SANDY SILT, MOIST TO WET

LOOSE TO MEDIUM DENSE, TAN TO SAND, MOIST TO SATURATED

176+00.00

SOIL TEST RESULTS

SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT C.SAND	F.SAND	SILT	CLAY	% PASSING (SIEVES) 10	40	200	% MOISTURE	% ORGANIC
S-245	CL	175+55	1.00-2.00	A-4(1)	26	10	0.7	60.1	13.1	26.2	100	99	42	-	-
S-246	CL	175+55	5.00-6.00	A-2-4(0)	25	4	1.8	71.9	6.1	20.1	100	100	28	-	-
S-247	CL	175+55	8.00-9.00	A-2-4(0)	22	NP	1.0	83.0	3.9	12.1	100	100	18	-	-

S-245
S-246
S-247

130
120
110
100

MEDIUM STIFF TAN TO GRAY CLAYEY SANDY SILT, MOIST TO WET

01/05

LOOSE TO MEDIUM DENSE, TAN TO SAND, MOIST TO SATURATED

175+50.00

120
110
100

VERY LOOSE TO MEDIUM DENSE, BROWN TO GRAY SAND, MOIST TO SATURATED
MEDIUM STIFF TAN TO GRAY CLAYEY SANDY SILT, MOIST TO WET

175+00.00

120
110
100

VERY LOOSE TO MEDIUM DENSE, BROWN TO GRAY SAND, MOIST TO SATURATED
MEDIUM STIFF TAN TO GRAY CLAYEY SANDY SILT, MOIST TO WET

174+50.00

SOIL TEST RESULTS

SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT C.SAND	F.SAND	SILT	CLAY	% PASSING (SIEVES) 10	40	200	% MOISTURE	% ORGANIC
S-244	CL	174+00	1.00-2.00	A-2-4(0)	18	NP	3.2	76.1	9.6	11.1	100	99	31	-	-

S-244

130
120
110
100

VERY LOOSE TO MEDIUM DENSE, BROWN TO GRAY SAND, MOIST TO SATURATED

01/05

174+00.00

—L—

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0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-2719A	95

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

120
110
100

MEDIUM STIFF TAN TO GRAY CLAYEY SANDY SILT, MOIST TO WET

LOOSE TO MEDIUM DENSE TAN TO SAND, MOIST TO SATURATED

177+00.00

120
110
100

MEDIUM STIFF TAN TO GRAY CLAYEY SANDY SILT, MOIST TO WET

LOOSE TO MEDIUM DENSE TAN TO SAND, MOIST TO SATURATED

176+50.00

—L—

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0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-2719A	96

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

120
110
100

MEDIUM STIFF TO STIFF TAN TO GRAY CLAYEY SANDY SILT, MOIST TO WET

LOOSE TO MEDIUM DENSE, TAN TO ORANGE TO GRAY SAND AND CLAYEY SAND, MOIST TO SATURATED

189+50.00

MEDIUM STIFF TO STIFF TAN TO GRAY CLAYEY SANDY SILT, MOIST TO WET

LOOSE TO MEDIUM DENSE TAN TO ORANGE TO GRAY SAND AND CLAYEY SAND, MOIST TO SATURATED

189+00.00

MEDIUM STIFF TO STIFF TAN TO GRAY CLAYEY SANDY SILT, MOIST TO WET

LOOSE TO MEDIUM DENSE TAN TO ORANGE TO GRAY SAND AND CLAYEY SAND, MOIST TO SATURATED

188+50.00

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-252	CL	188+00	6.00-7.00	A-2-4(0)	22	NP	1.2	79.7	6.0	13.1	100	100	32	- - -	- - -

S-252

MEDIUM STIFF TO STIFF TAN TO GRAY CLAYEY SANDY SILT, MOIST TO WET

01/05

LOOSE TO MEDIUM DENSE TAN TO ORANGE TO GRAY SAND AND CLAYEY SAND, MOIST TO SATURATED

188+00.00

—L—

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

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0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-2719A	97

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

120 110 100

MEDIUM STIFF TO STIFF TAN TO GRAY CLAYEY SANDY SILT, MOIST TO WET

LOOSE TO MEDIUM DENSE, TAN TO ORANGE TO GRAY SAND AND CLAYEY SAND, MOIST TO SATURATED

191+50.00

120 110 100

MEDIUM STIFF TO STIFF TAN TO GRAY CLAYEY SANDY SILT, MOIST TO WET

LOOSE TO MEDIUM DENSE, TAN TO ORANGE TO GRAY SAND AND CLAYEY SAND, MOIST TO SATURATED

191+00.00

120 110 100

MEDIUM STIFF TO STIFF TAN TO GRAY CLAYEY SANDY SILT, MOIST TO WET

LOOSE TO MEDIUM DENSE, TAN TO ORANGE TO GRAY SAND AND CLAYEY SAND, MOIST TO SATURATED

190+50.00

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-253	CL	190+00	0.00-1.50	A-4(2)	24	10	0.8	51.9	19.1	28.2	100	99	51	-	-
SS-254	CL	190+00	9.00-10.00	A-2-4(0)	22	NP	1.2	78.6	6.1	14.1	100	100	22	-	-

130

120 110 100

SS-253
SS-254

5
11
6
01/05

MEDIUM STIFF TO STIFF TAN TO GRAY CLAYEY SANDY SILT, MOIST TO WET

LOOSE TO MEDIUM DENSE, TAN TO ORANGE TO GRAY SAND AND CLAYEY SAND, MOIST TO SATURATED

190+00.00

—L—

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

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kmiller
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8/23/99

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-2719A	98

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

120
110
100

MEDIUM STIFF TO STIFF TAN TO GRAY - CLAYEY SANDY SILT, MOIST TO WET

LOOSE TO MEDIUM DENSE, TAN TO ORANGE TO GRAY, SAND AND CLAYEY SAND, MOIST TO SATURATED

193+50.00

120
110
100

MEDIUM STIFF TO STIFF TAN TO GRAY CLAYEY SANDY SILT, MOIST TO WET

LOOSE TO MEDIUM DENSE, TAN TO ORANGE TO GRAY SAND AND CLAYEY SAND, MOIST TO SATURATED

193+00.00

120
110
100

MEDIUM STIFF TO STIFF TAN TO GRAY CLAYEY SANDY SILT, MOIST TO WET

LOOSE TO MEDIUM DENSE, TAN TO ORANGE TO GRAY SAND AND CLAYEY SAND, MOIST TO SATURATED

192+50.00

120
110
100
90

01/05

MEDIUM STIFF TO STIFF TAN TO GRAY CLAYEY SANDY SILT, MOIST TO WET

LOOSE TO MEDIUM DENSE, TAN TO ORANGE TO GRAY SAND AND CLAYEY SAND, MOIST TO SATURATED

192+00.00

—L—

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kbmiller
AT GE122108

8/23/95

PROJ. REFERENCE NO.	SHEET NO.
R-2719A	99

0 5 10

MEDIUM STIFF TO STIFF TAN TO GRAY CLAYEY SANDY SILT, MOIST TO WET

LOOSE TO MEDIUM DENSE, TAN TO ORANGE TO GRAY SAND AND CLAYEY SAND, MOIST TO SATURATED

194+50.00

MEDIUM STIFF TO STIFF TAN TO GRAY

01/05

CLAYEY SANDY SILT, MOIST TO WET

LOOSE TO MEDIUM DENSE, TAN TO ORANGE TO GRAY

SAND AND CLAYEY SAND, MOIST TO SATURATED

194+60.00

—L—

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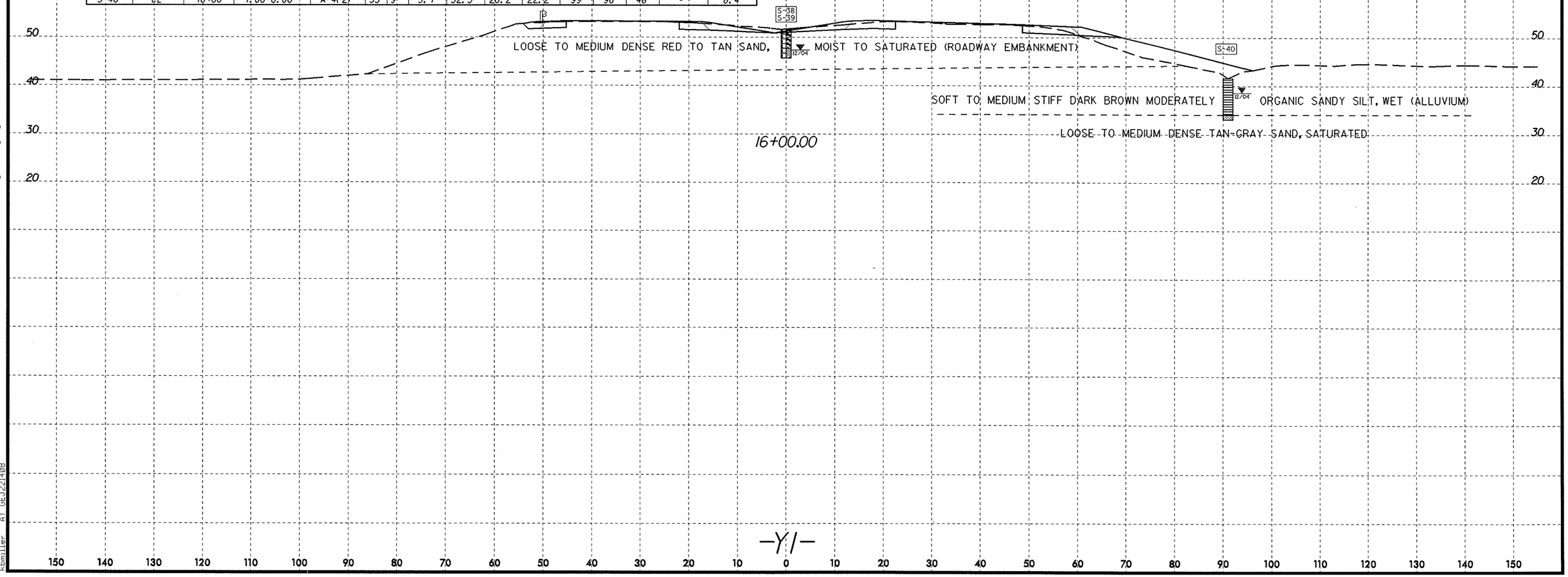
Komiller AT GEV221408

8/23/99

PROJ. REFERENCE NO.	SHEET NO.
R-2719A	100

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-38	CL	16+00	1.00-4.00	A-2-6(0)	31	13	48.3	31.1	4.4	16.2	93	70	20	-	-
S-39	CL	16+00	4.00-6.00	A-2-4(0)	16	NP	39.6	43.9	5.4	11.1	100	79	18	-	-
S-40	CL	16+00	1.00-6.00	A-4(2)	33	9	5.1	52.5	20.2	22.2	99	98	46	-	8.4



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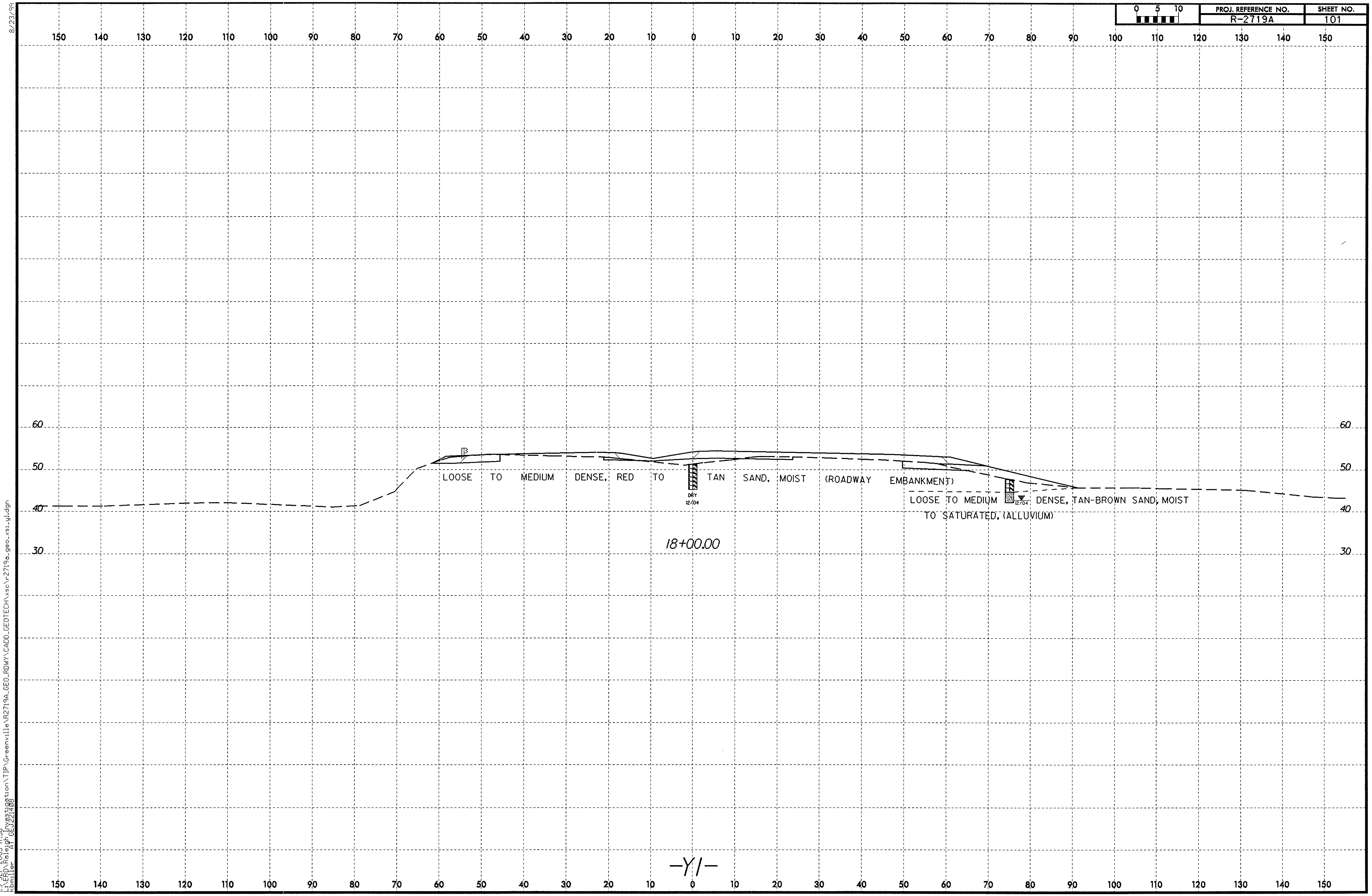
kbmiller
AT GEJ221108

PROJ. REFERENCE NO.	SHEET NO.
R-2719A	101



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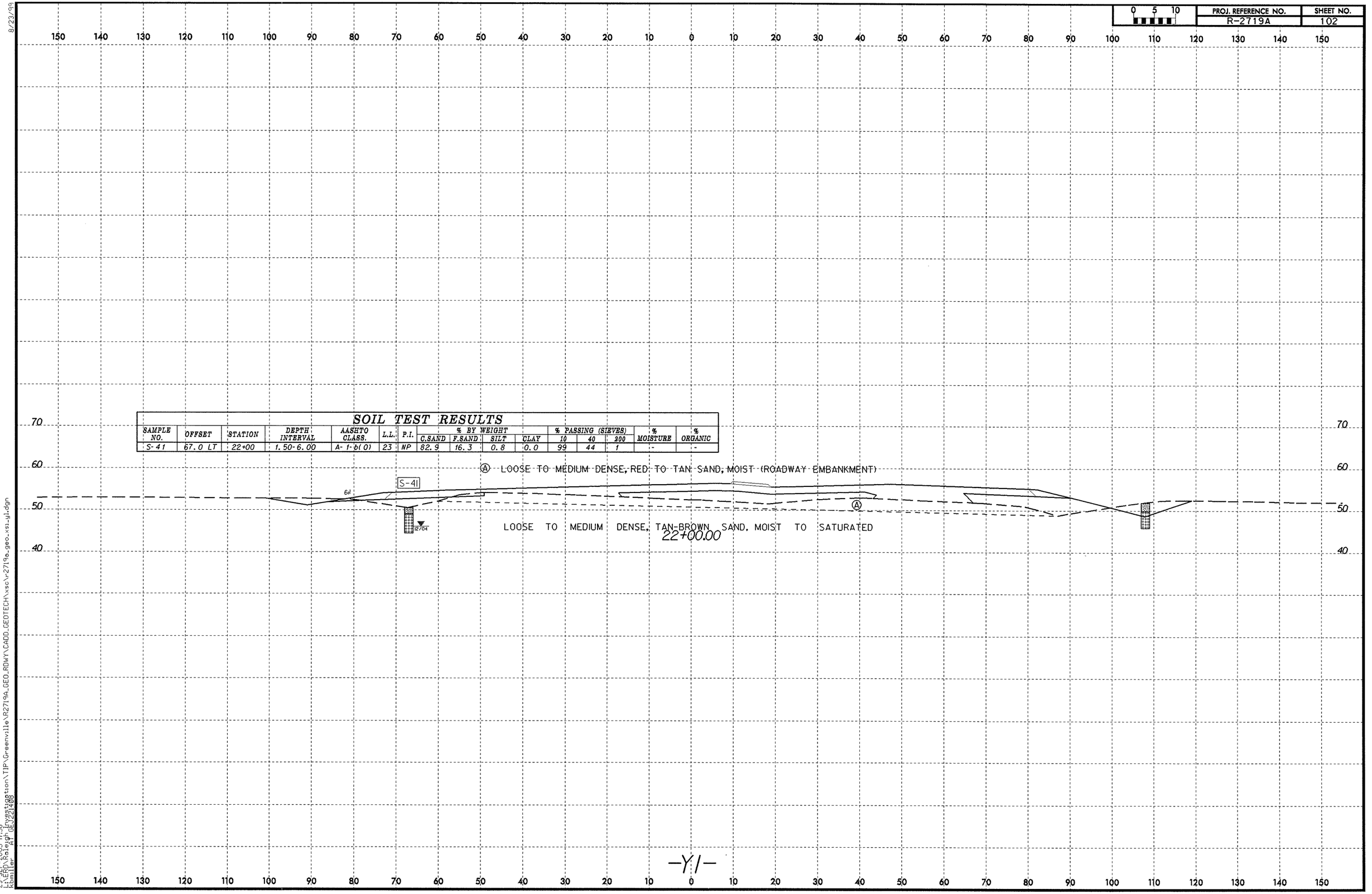
kbmiller AT GEJ22140B

8/23/99

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-2719A	102

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-41	67.0 LT	22+00	1.50-6.00	A-1-b(0)	23	NP	82.9	16.3	0.8	0.0	99	44	1	-	-



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kmiller

8/23/99

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-2719A	103

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

60 50 40 30

6sl

DRY
12/04

LOOSE TO MEDIUM DENSE TAN TO GRAY SAND, MOIST TO SATURATED

LOOSE TAN-BROWN SAND, MOIST

(ROADWAY EMBANKMENT)

DRY
12/04

24+00.00

-Y1-

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

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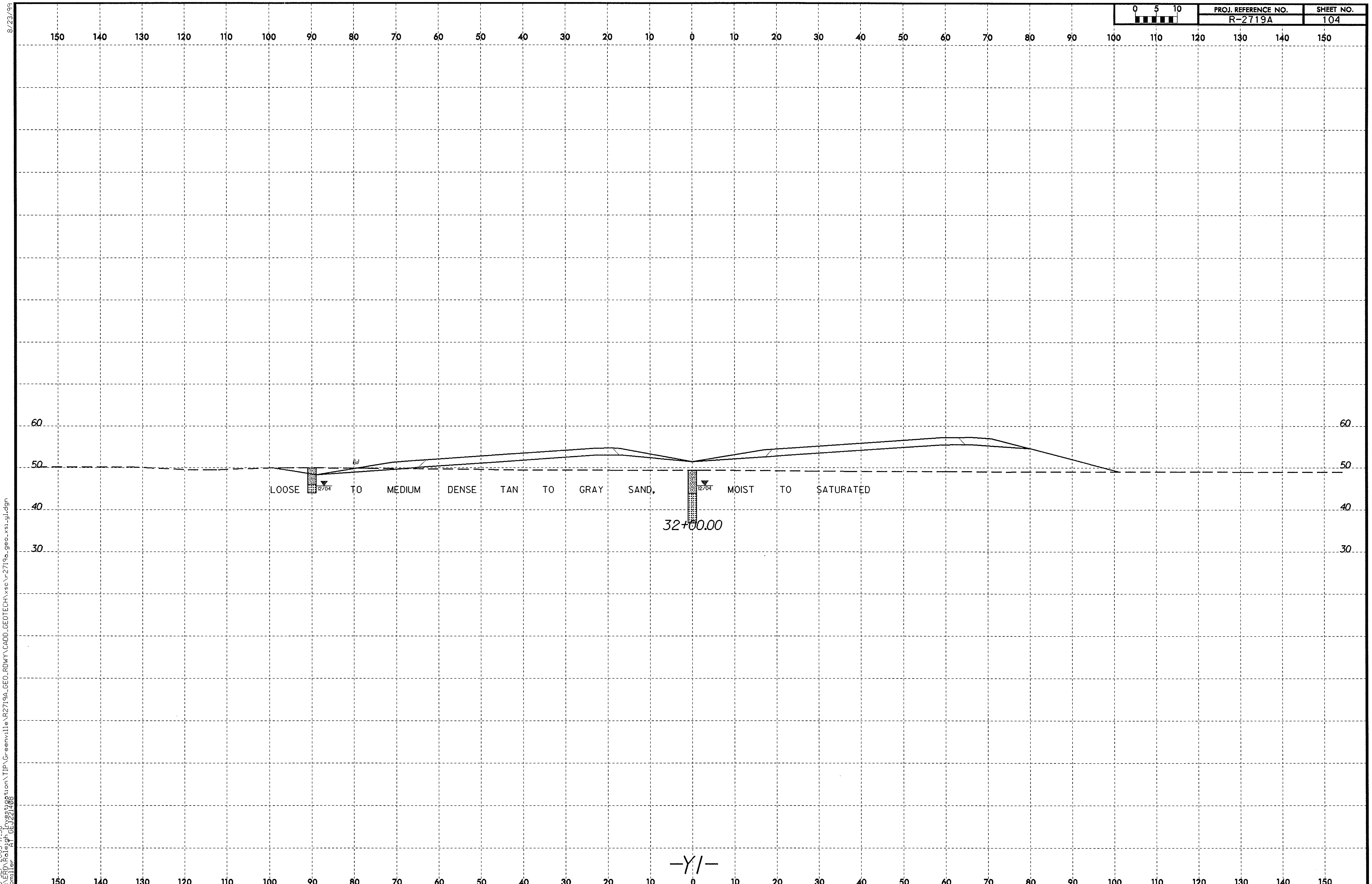
GEOTECH



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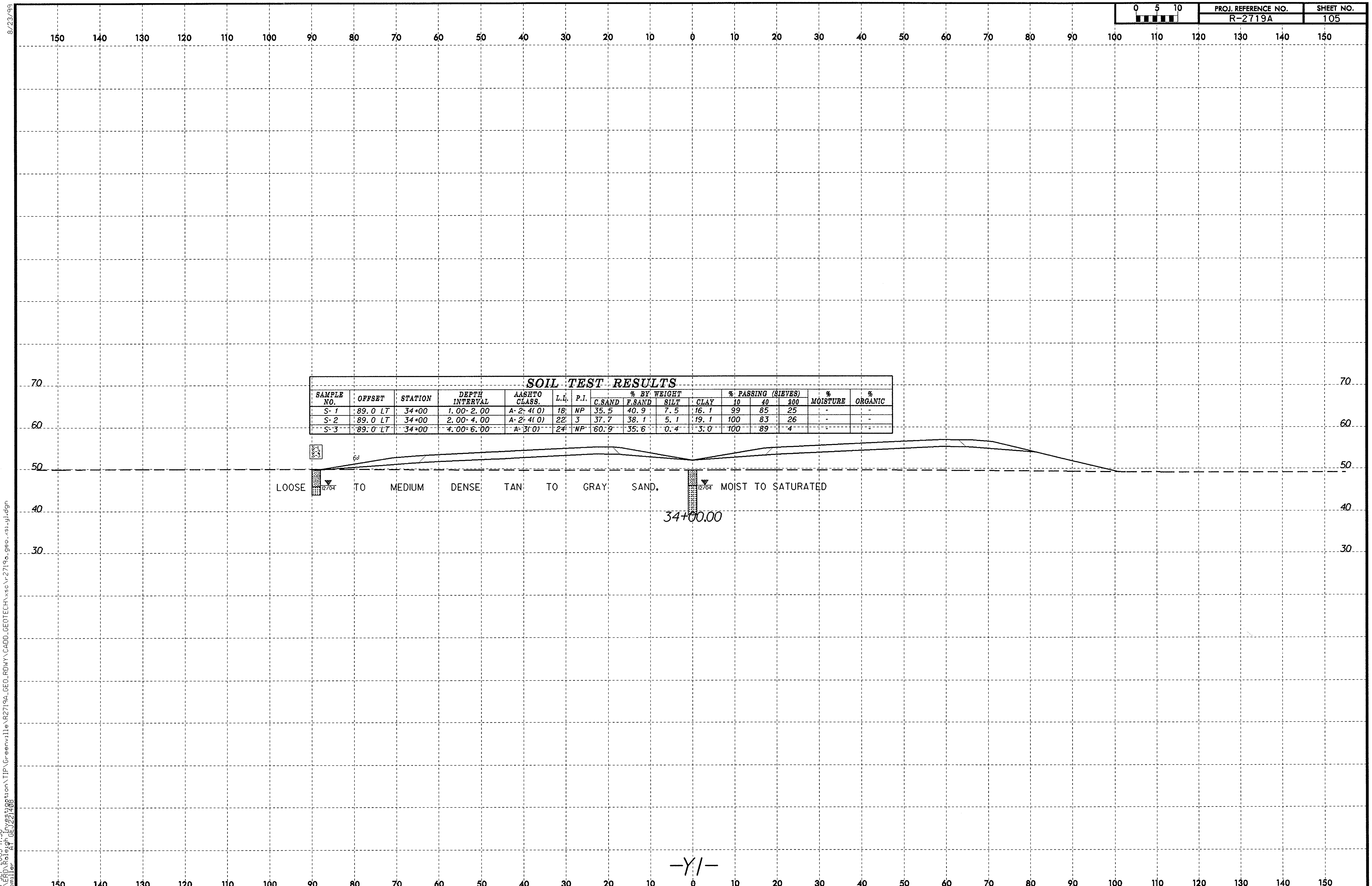
kbmiller AT GEJ221408

PROJ. REFERENCE NO.	SHEET NO.
R-2719A	105

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-1	89.0 LT	34+00	1.00-2.00	A-2-4(0)	18	NP	35.5	40.9	7.5	16.1	99	85	25	-	-
S-2	89.0 LT	34+00	2.00-4.00	A-2-4(0)	22	3	37.7	38.1	5.1	19.1	100	83	26	-	-
S-3	89.0 LT	34+00	4.00-6.00	A-3(0)	24	NP	60.9	35.6	0.4	3.0	100	89	4	-	-



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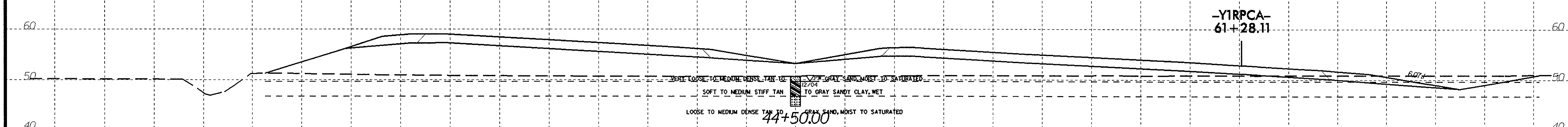
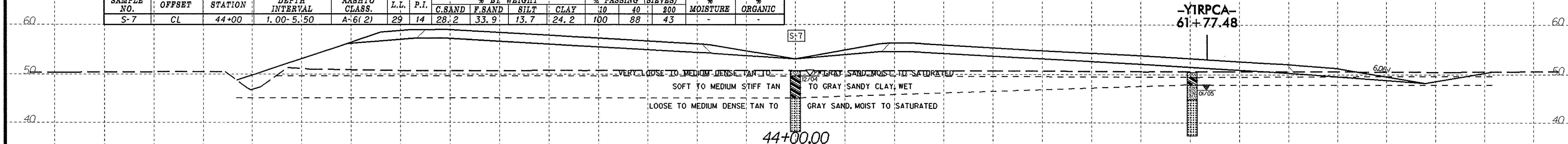
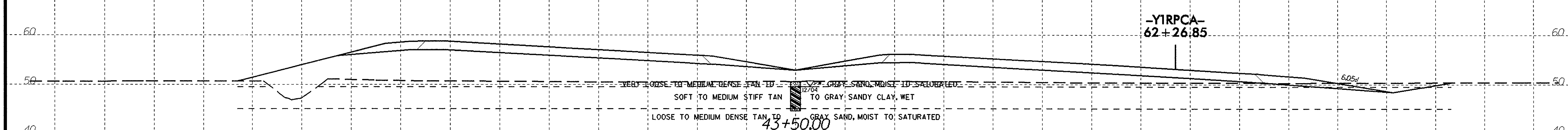
R-2719A	106

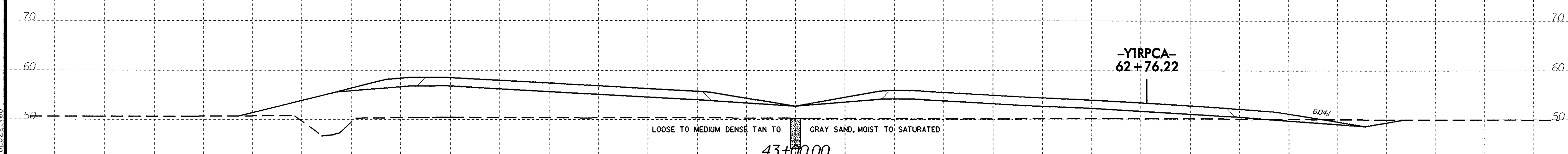


SOIL TEST RESULTS

SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT C.SAND	% BY WEIGHT F.SAND	% BY WEIGHT SILT	% BY WEIGHT CLAY	% PASSING (SIEVES) 10	% PASSING (SIEVES) 40	% PASSING (SIEVES) 200	% MOISTURE	% ORGANIC
S-7	CL	44+00	1.00-5.50	A-6(2)	29	14	28.2	33.9	13.7	24.2	100	88	43	-	-







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kbmiller AT GEO221408

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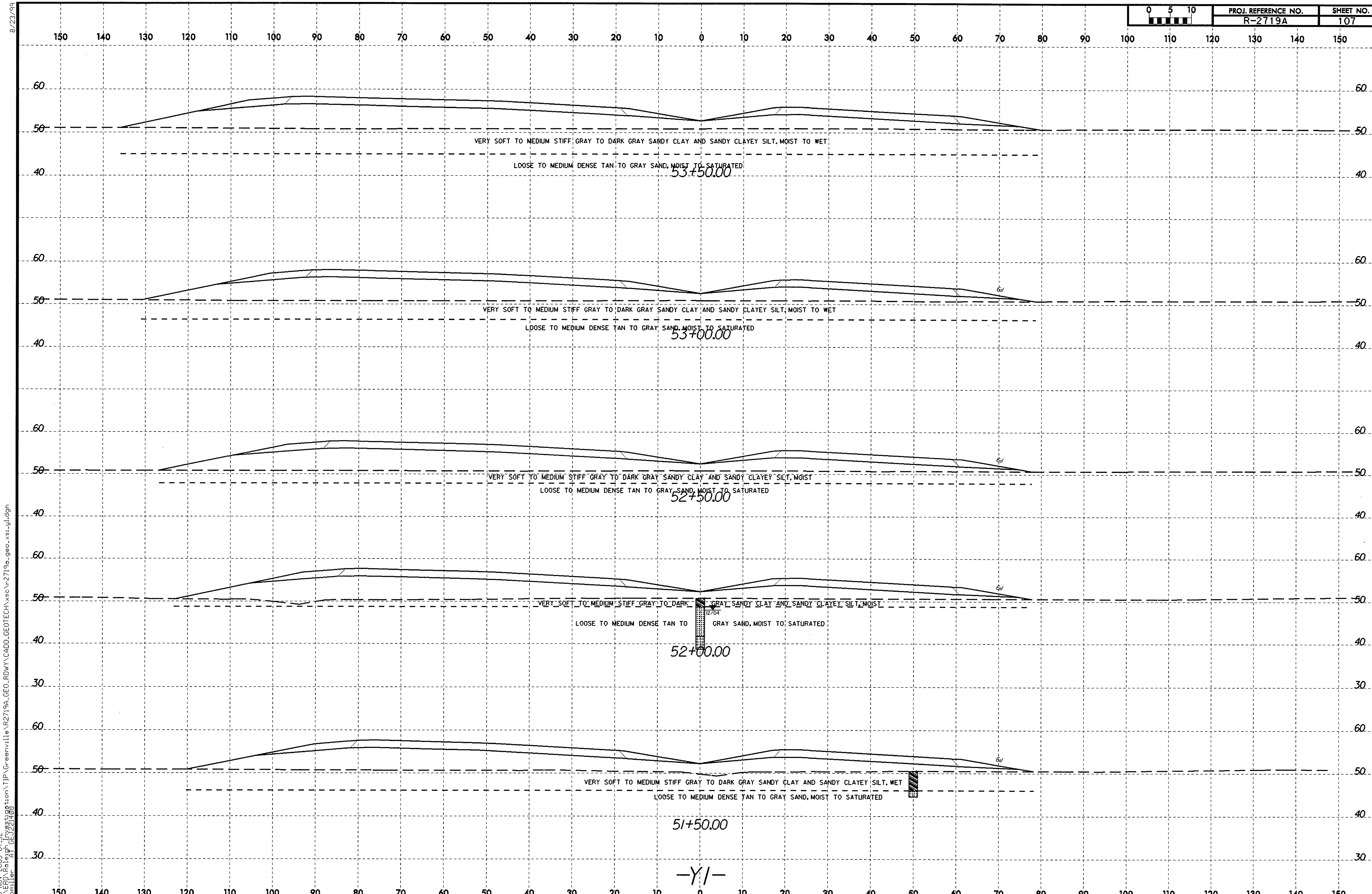
R-2719A	107



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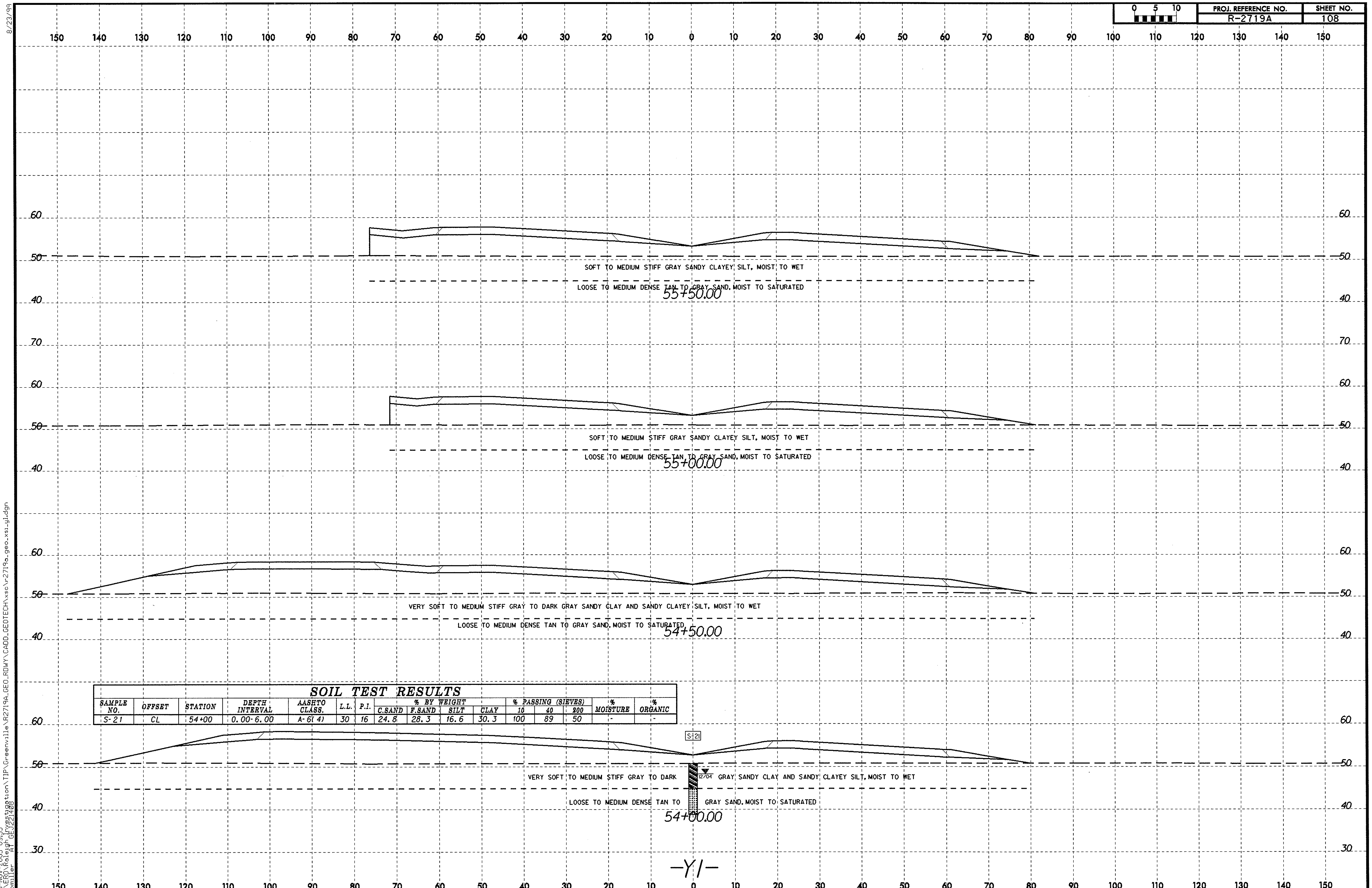
kbmiller AT GEJ221408

PROJ. REFERENCE NO.	SHEET NO.
R-2719A	108

SOIL TEST RESULTS

SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT C.SAND	% BY WEIGHT F.SAND	% BY WEIGHT SILT	% BY WEIGHT CLAY	% PASSING (SIEVES) 10	% PASSING (SIEVES) 40	% PASSING (SIEVES) 200	% MOISTURE	% ORGANIC
S-21	CL	54+00	0.00-6.00	A-6(4)	30	16	24.8	28.3	16.6	30.3	100	89	50	-	-



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0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-2719A	109

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

60
50
40

SOFT TO MEDIUM STIFF GRAY TO DARK GRAY SANDY CLAY, MOIST TO WET

LOOSE TO MEDIUM DENSE TAN TO GRAY SAND, MOIST TO SATURATED

57+50.00

SOFT TO MEDIUM STIFF GRAY SANDY CLAYEY SILT, MOIST TO WET

LOOSE TO MEDIUM DENSE TAN TO GRAY SAND, MOIST TO SATURATED

57+00.00

SOFT TO MEDIUM STIFF GRAY SANDY CLAYEY SILT, MOIST TO WET

LOOSE TO MEDIUM DENSE TAN TO GRAY SAND, MOIST TO SATURATED

56+50.00

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-11	CL	56+00	1.00-4.00	A-4(0)	21	7	39.6	24.2	16.0	20.2	100	81	38	-	-
S-12	CL	56+00	4.00-12.00	A-3(0)	18	NP	71.4	21.3	2.2	5.0	93	61	8	-	-

S-11
S-12

SOFT TO MEDIUM STIFF GRAY ▼ SANDY CLAYEY SILT, MOIST TO WET
12/04

LOOSE TO MEDIUM DENSE TAN TO GRAY SAND, MOIST TO SATURATED

56+00.00

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AT GEO221488

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0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-2719A	110

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

60 50 40

SOFT TO MEDIUM STIFF GRAY TO DARK GRAY SANDY CLAY, MOIST TO WET

LOOSE TO MEDIUM DENSE TAN TO GRAY SAND, MOIST TO SATURATED

59+50.00

60 50 40

SOFT TO MEDIUM STIFF GRAY TO DARK GRAY SANDY CLAY, MOIST TO WET

LOOSE TO MEDIUM DENSE TAN TO GRAY SAND, MOIST TO SATURATED

59+00.00

60 50 40

SOFT TO MEDIUM STIFF GRAY TO DARK GRAY SANDY CLAY, MOIST TO WET

LOOSE TO MEDIUM DENSE TAN TO GRAY SAND, MOIST TO SATURATED

58+50.00

60 50 40 30

SOFT TO MEDIUM STIFF GRAY TO DARK GRAY SANDY CLAY, MOIST TO WET

12/04

LOOSE TO MEDIUM DENSE TAN TO GRAY SAND, MOIST TO SATURATED

58+00.00

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

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0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-2719A	111

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

60
50
40

SOFT TO MEDIUM STIFF GRAY TO DARK GRAY SANDY CLAY, MOIST TO WET

LOOSE TO MEDIUM DENSE TAN TO GRAY SAND, MOIST TO SATURATED

61+50.00

SOFT TO MEDIUM STIFF GRAY TO DARK GRAY SANDY CLAY, MOIST TO WET

LOOSE TO MEDIUM DENSE TAN TO GRAY SAND, MOIST TO SATURATED

61+00.00

SOFT TO MEDIUM STIFF GRAY TO DARK GRAY SANDY CLAY, MOIST TO WET

LOOSE TO MEDIUM DENSE TAN TO GRAY SAND, MOIST TO SATURATED

60+50.00

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-8	CL	60+00	4.90- 5.40	A-2-4(0)	20	NP	43.1	35.2	9.6	12.1	100	81	25	-	-
SS-9	CL	60+00	8.50- 10.00	A-1-b(0)	21	NP	86.8	10.5	0.7	2.0	95	30	3	-	-

SS-8
SS-9

SOFT TO MEDIUM STIFF GRAY TO DARK GRAY SANDY CLAY, MOIST TO WET

12/04

LOOSE TO MEDIUM DENSE TAN TO GRAY SAND, MOIST TO SATURATED

60+00.00

30

-Y/-

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8/23/99

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-2719A	112

63+50.00

MEDIUM STIFF GRAY SANDY CLAY, MOIST TO WET

LOOSE TO MEDIUM DENSE TAN TO GRAY SAND, MOIST TO SATURATED

63+00.00

MEDIUM STIFF GRAY SANDY CLAY, MOIST TO WET

LOOSE TO MEDIUM DENSE TAN TO GRAY SAND, MOIST TO SATURATED

62+50.00

SOFT TO MEDIUM STIFF GRAY TO DARK GRAY SANDY CLAY, MOIST TO WET

LOOSE TO MEDIUM DENSE TAN TO GRAY SAND, MOIST TO SATURATED

62+00.00

SOFT TO MEDIUM STIFF GRAY TO DARK GRAY SANDY CLAY, MOIST TO WET

12/04

LOOSE TO MEDIUM DENSE TAN TO GRAY SAND, MOIST TO SATURATED

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AT GEO22H00

8/23/99

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-2719A	113

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

60 50 40

-Y1LPC-
12+62.47

4J73d

MEDIUM STIFF TAN TO GRAY SANDY CLAYEY SILT, MOIST TO WET

LOOSE TO MEDIUM DENSE TAN TO GRAY SAND, MOIST TO SATURATED

65+50.00

-Y1LPC-
12+09.78

4d

MEDIUM STIFF TAN TO GRAY SANDY CLAY AND SANDY CLAYEY SILT, MOIST TO WET

LOOSE TO MEDIUM DENSE TAN TO GRAY SAND, MOIST TO SATURATED

65+00.00

-Y1LPC-
11+51.53

MEDIUM STIFF TAN TO GRAY SANDY CLAY AND SANDY CLAYEY SILT, MOIST TO WET

LOOSE TO MEDIUM DENSE TAN TO GRAY SAND, MOIST TO SATURATED

64+50.00

6d

MEDIUM STIFF GRAY SANDY CLAY, MOIST TO WET

12704

LOOSE TO MEDIUM DENSE TAN TO GRAY SAND, MOIST TO SATURATED

64+00.00

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kbmiller
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8/23/99

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-2719A	114

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60 50 40

6:1

MEDIUM STIFF GRAY SANDY CLAY AND SANDY CLAYEY SILT, WET

LOOSE TO MEDIUM DENSE TAN TO GRAY SAND, MOIST TO SATURATED

67+50.00

-Y1LPC-
14+11.76

4:1

MEDIUM STIFF TAN TO GRAY SANDY CLAYEY SILT, MOIST

LOOSE TO MEDIUM DENSE TAN TO GRAY SAND, MOIST TO SATURATED

67+00.00

-Y1LPC-
13+62.36

4.005:1

MEDIUM STIFF TAN TO GRAY SANDY CLAYEY SILT, MOIST

LOOSE TO MEDIUM DENSE TAN TO GRAY SAND, MOIST TO SATURATED

66+50.00

SOIL TEST RESULTS

SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT C.SAND	% BY WEIGHT F.SAND	% BY WEIGHT SILT	% BY WEIGHT CLAY	% PASSING (SIEVES) 10	% PASSING (SIEVES) 40	% PASSING (SIEVES) 200	% MOISTURE	% ORGANIC
S-13	CL	66+00	0.50-2.00	A-4(0)	20	6	19.0	46.4	14.4	20.2	100	93	39	-	-
S-14	CL	66+00	2.00-12.00	A-1-b(0)	20	NP	89.8	8.2	0.0	2.0	93	33	2	-	-

-Y1LPC-
13+12.80

4.04:1

S-13
S-14

MEDIUM STIFF TAN TO GRAY SANDY CLAYEY SILT, MOIST

12.04

LOOSE TO MEDIUM DENSE TAN TO GRAY SAND, MOIST TO SATURATED

66+00.00

-Y1-

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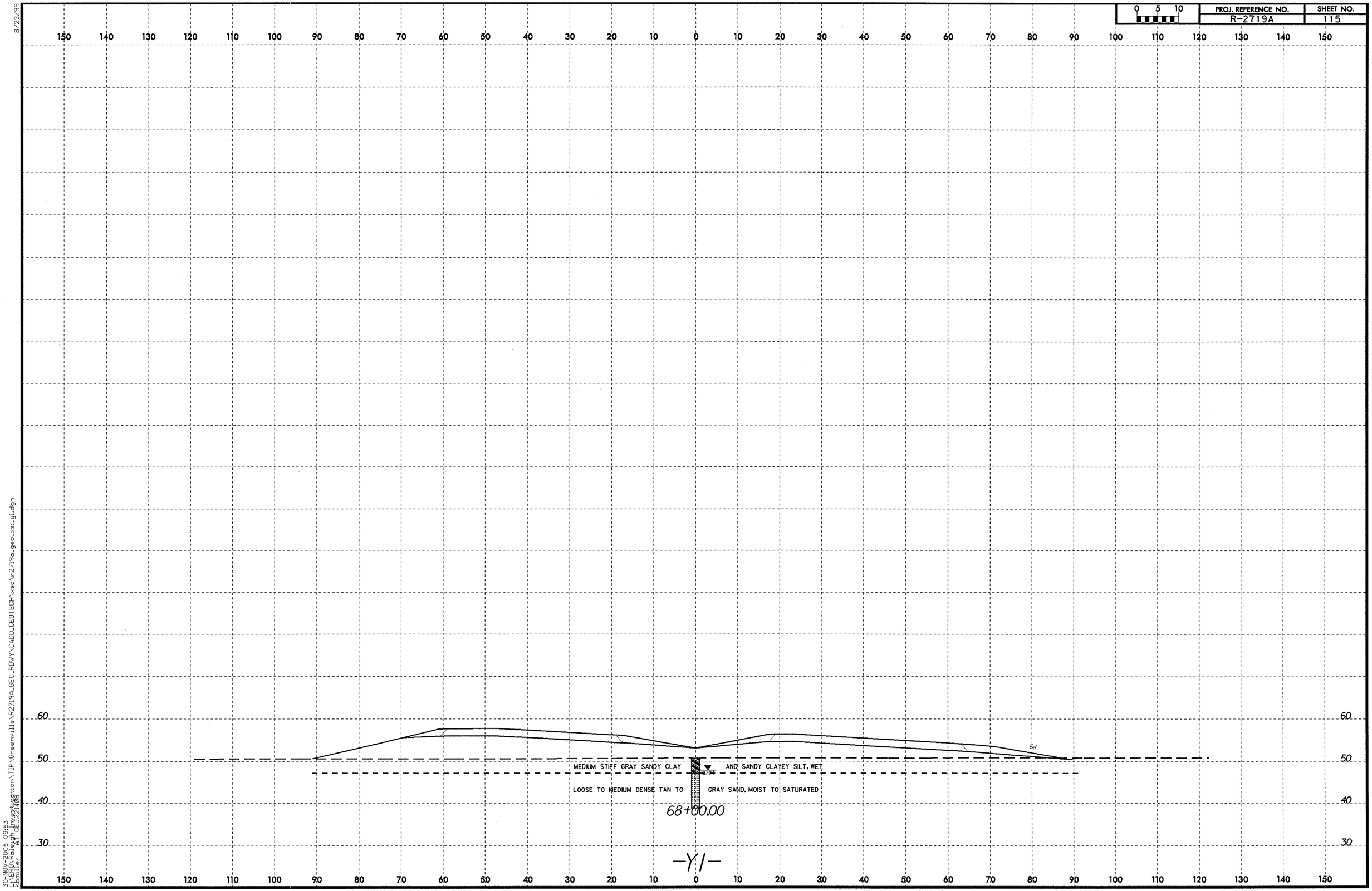
kbmiller
AT GEO122408

8/23/99

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-2719A	115



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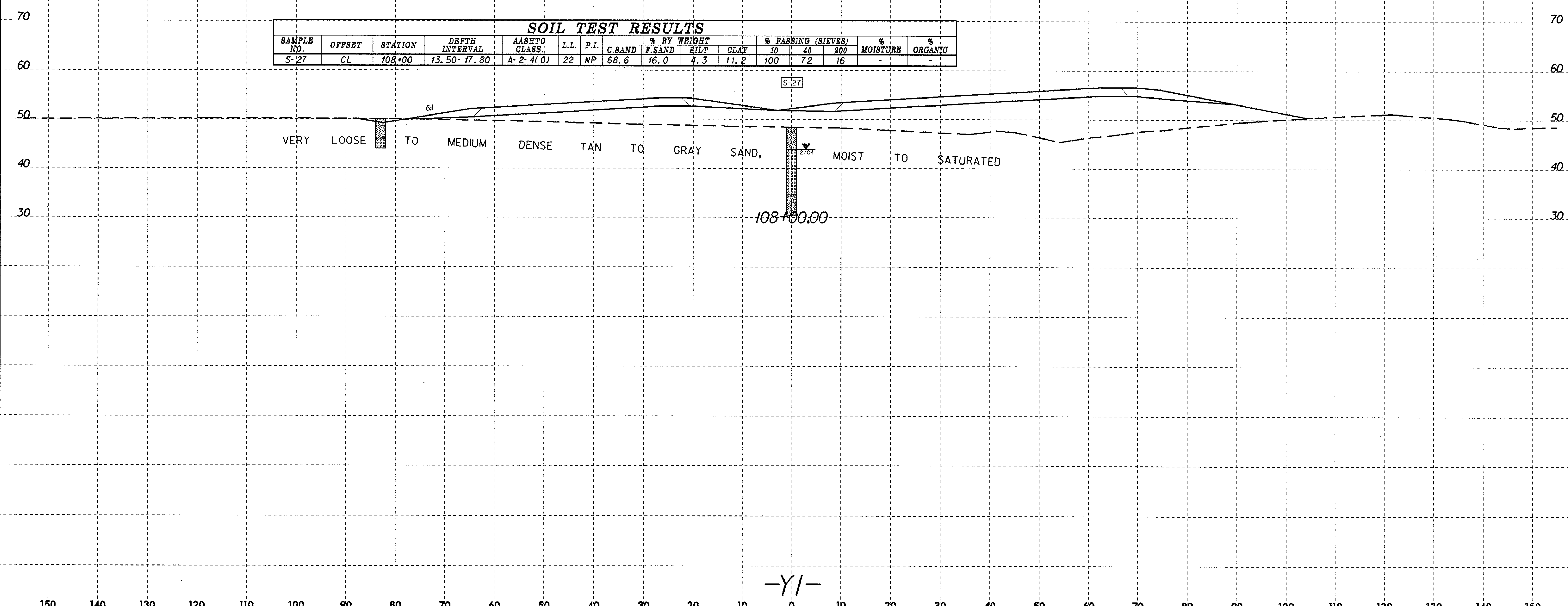
kbmiller
AT GEJ221408

8/23/99

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		
S-27	CL	108+00	13.50-17.80	A-2-4(0)	22	NP	68.6	16.0	4.3	11.2	100	72	16	-	-



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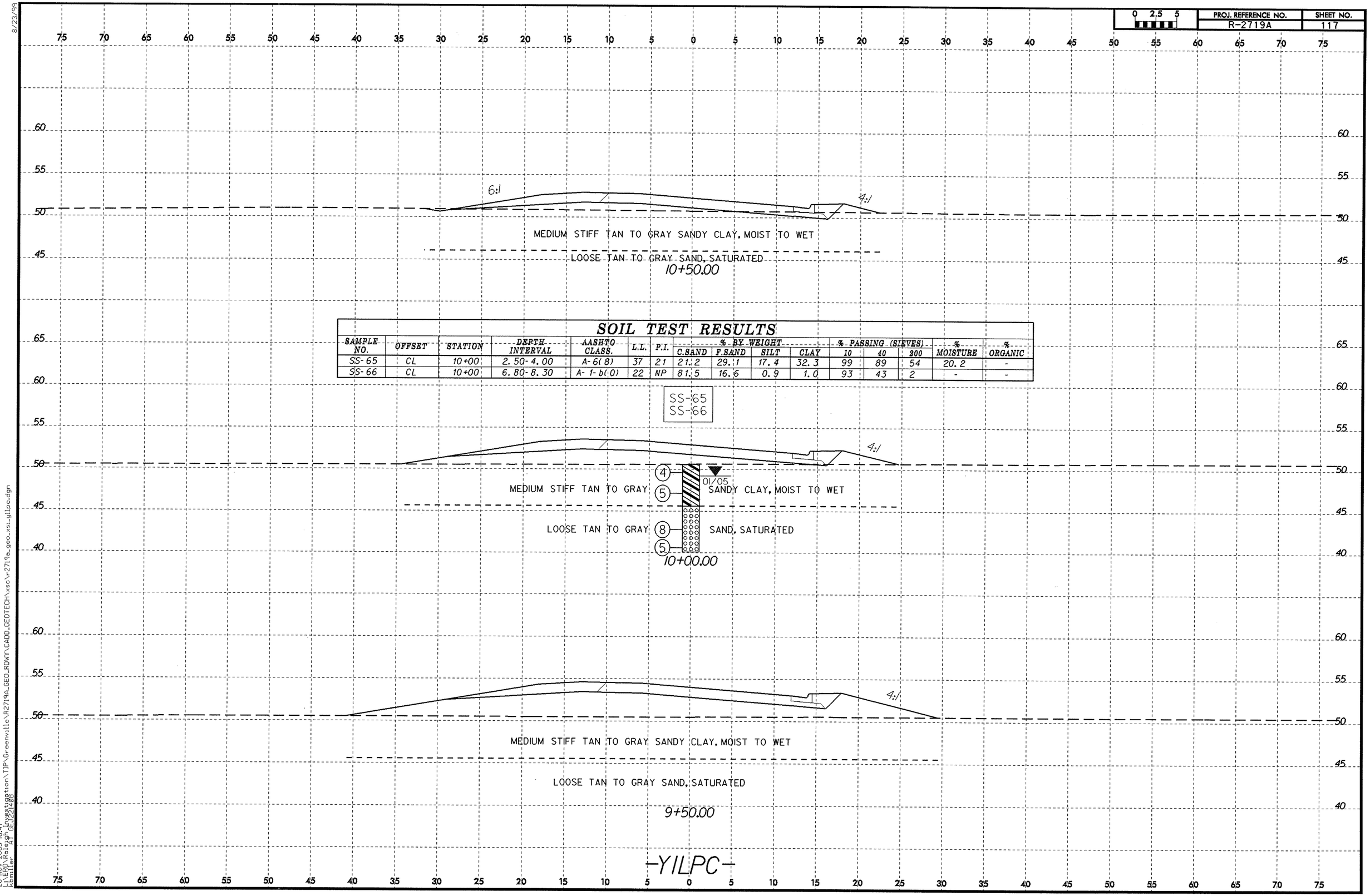
kbmiller AT GE221408



SOIL TEST RESULTS

SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT				% PASSING (SIEVES)			% MOISTURE	% ORGANIC
							C.SAND	F.SAND	SILT	CLAY	10	40	200		
SS-65	CL	10+00	2.50-4.00	A-6(8)	37	21	21.2	29.1	17.4	32.3	99	89	54	20.2	-
SS-66	CL	10+00	6.80-8.30	A-1-b(0)	22	NP	81.5	16.6	0.9	1.0	93	43	2	-	-

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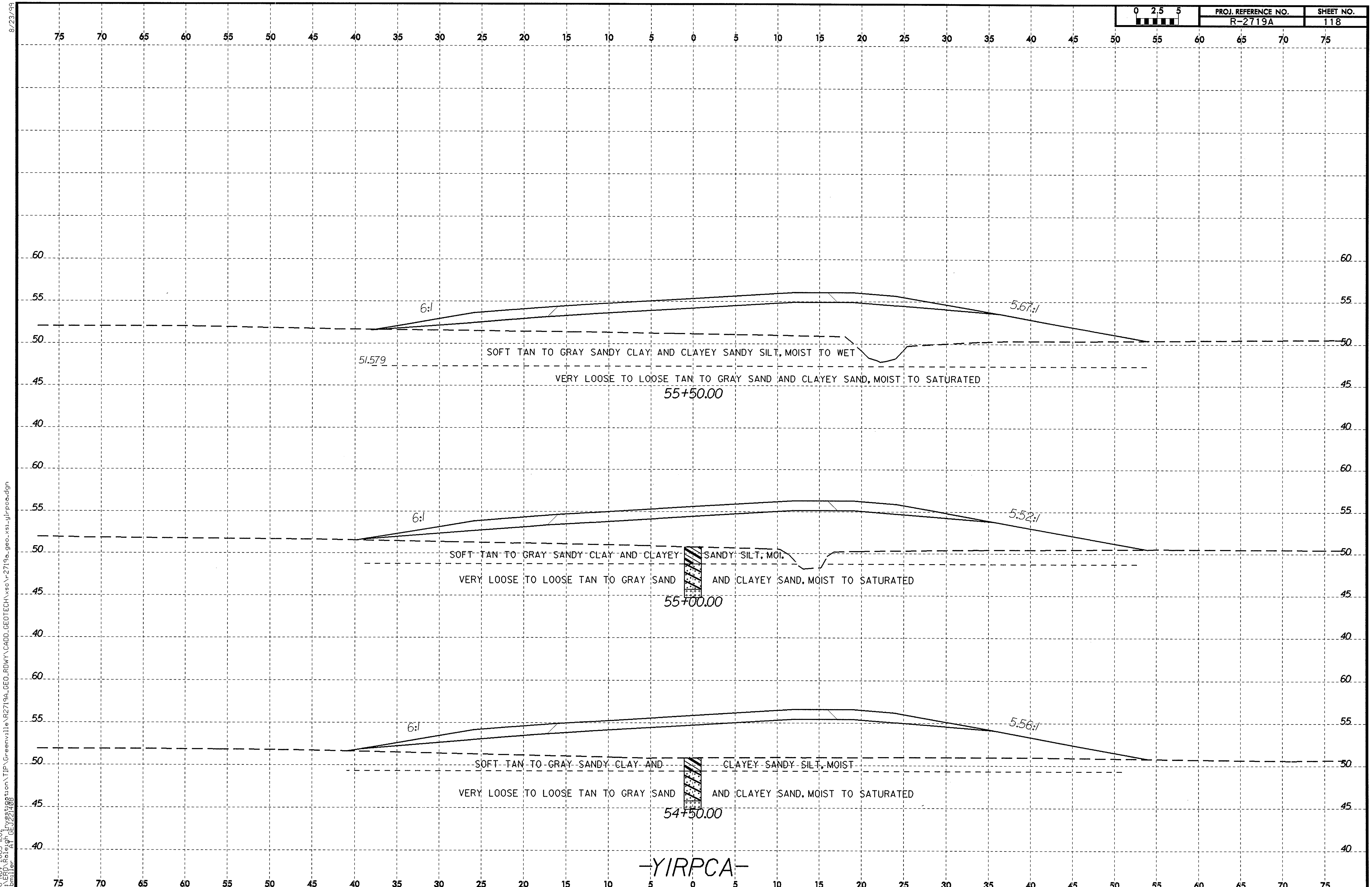
Admiller



PROJ. REFERENCE NO.
R-2719A
SHEET NO.
118
0 2.5 5
8/23/99
6:1
5.67:1
SOFT TAN TO GRAY SANDY CLAY AND CLAYEY SANDY SILT, MOIST TO WET
51.579
VERY LOOSE TO LOOSE TAN TO GRAY SAND AND CLAYEY SAND, MOIST TO SATURATED
55+50.00
6:1
5.52:1
SOFT TAN TO GRAY SANDY CLAY AND CLAYEY SANDY SILT, MOI.
VERY LOOSE TO LOOSE TAN TO GRAY SAND AND CLAYEY SAND, MOIST TO SATURATED
55+00.00
6:1
5.56:1
SOFT TAN TO GRAY SANDY CLAY AND CLAYEY SANDY SILT, MOIST
VERY LOOSE TO LOOSE TAN TO GRAY SAND AND CLAYEY SAND, MOIST TO SATURATED
54+50.00
-YIRPCA-
30-NOV-2005

8/23/99

PROJ. REFERENCE NO.	SHEET NO.
R-2719A	119

0 2.5 5

6:1

4.4:1

SOFT TAN TO GRAY SANDY CLAY AND CLAYEY SANDY SILT, MOIST TO WET

50.805

VERY LOOSE TO LOOSE TAN TO GRAY SAND, SATURATED

57+00.00

6:1

5.78:1

SOFT TAN TO GRAY SANDY CLAY AND CLAYEY SANDY SILT, MOIST TO WET

51.063

VERY LOOSE TO LOOSE TAN TO GRAY SAND, SATURATED

56+50.00

SOIL TEST RESULTS

SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT C.SAND	F.SAND	SILT	CLAY	% PASSING (SIEVES) 10	40	200	% MOISTURE	% ORGANIC
S-51	CL	56+00	1.00-2.00	A-6(2)	29	11	18.7	36.7	18.4	26.2	100	92	49	-	-
S-52	CL	56+00	5.50-12.50	A-3(0)	19	NP	77.3	18.0	1.6	3.0	99	53	5	-	-

S-51
S-52

6:1

5.95:1

SOFT TAN TO GRAY SANDY CLAY AND CLAYEY SANDY SILT, MOIST TO WET

51.321

01/05

VERY LOOSE TO LOOSE TAN TO GRAY SAND, SATURATED

56+00.00

-YIRPCA-

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kbmiller
AT GE1221108

8/23/99

0 2.5 5	PROJ. REFERENCE NO.	SHEET NO.
	R-2719A	120

75 70 65 60 55 50 45 40 35 30 25 20 15 10 5 0 5 10 15 20 25 30 35 40 45 50 55 60 65 70 75

60 55 50 45 40

6:1 6:1 6:1

SOFT TAN TO GRAY SANDY CLAY AND CLAYEY SANDY SILT, MOIST TO WET

50.068

VERY LOOSE TO LOOSE TAN TO GRAY SAND, SATURATED

58+42.70

60 55 50 45 40

6:1 6:1

SOFT TAN TO GRAY SANDY CLAY AND CLAYEY SANDY SILT, MOIST TO WET

50.289 01.05

VERY LOOSE TO LOOSE TAN TO GRAY SAND, SATURATED

58+00.00

60 55 50 45 40

6:1 6:1

SOFT TAN TO GRAY SANDY CLAY AND CLAYEY SANDY SILT, MOIST TO WET

50.547

VERY LOOSE TO LOOSE TAN TO GRAY SAND, SATURATED

57+50.00

75 70 65 60 55 50 45 40 35 30 25 20 15 10 5 0 5 10 15 20 25 30 35 40 45 50 55 60 65 70 75

-YIRPCA-

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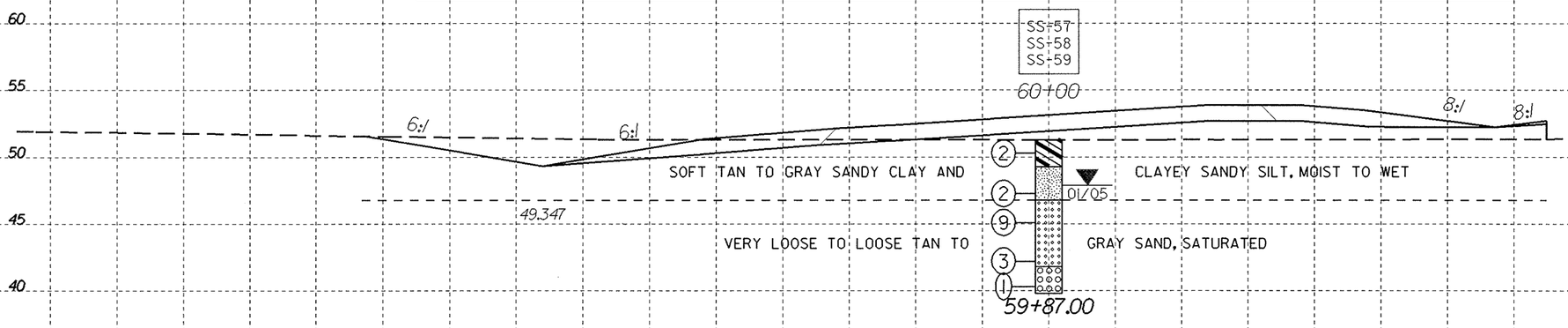
kbmiller
AT GEJ221408

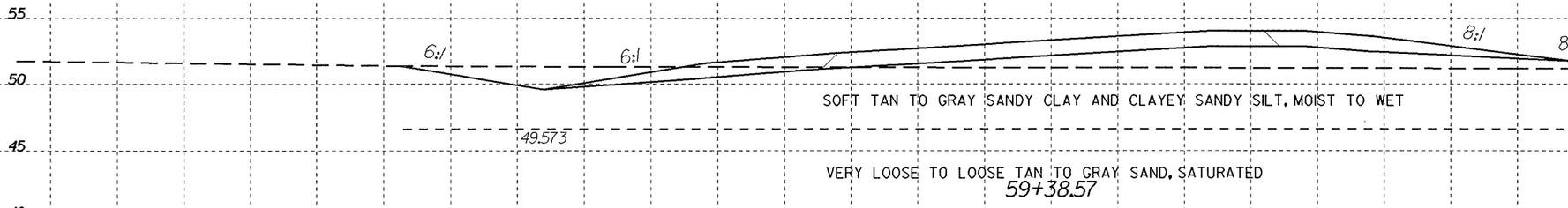
8/23/99

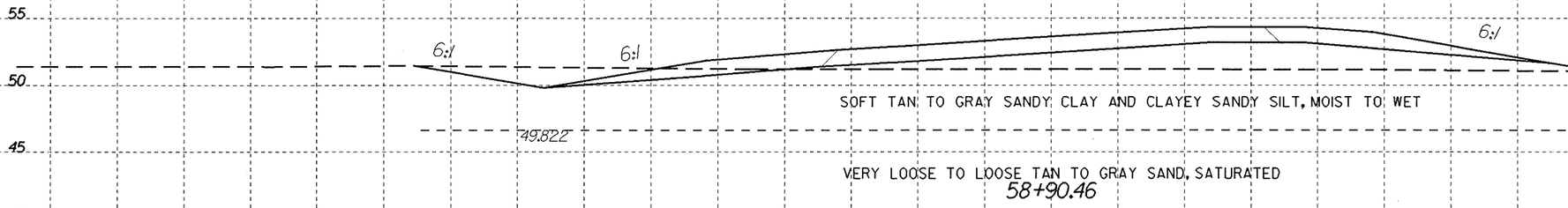
0 2.5 5	PROJ. REFERENCE NO.	SHEET NO.
	R-2719A	121

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-57	CL	60+00	3.00-4.50	A-4(11)	26	10	28.0	36.4	11.4	24.1	100	88	42	-	-
SS-58	CL	60+00	5.20-6.70	A-3(0)	22	NP	64.7	28.7	0.6	6.0	95	60	7	-	-
SS-59	CL	60+00	10.00-11.50	A-1-b(0)	21	NP	78.9	17.4	1.7	2.0	94	49	4	-	-







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30-NOV-2005 11:03
kbmiller
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GEOTECH

8/23/99

0 2.5 5	PROJ. REFERENCE NO.	SHEET NO.
	R-2719A	122

12.5:1 (SHLDR) 12:1

6:1 6:1

SOFT TAN TO GRAY SANDY CLAY AND CLAYEY SANDY SILT, MOIST

49.130

VERY LOOSE TO LOOSE TAN TO GRAY SAND, MOIST TO SATURATED

60+83.00

10:1 10:1

6:1 6:1

SOFT TAN TO GRAY SANDY CLAY AND CLAYEY SANDY SILT, MOIST TO WET

49.200

VERY LOOSE TO LOOSE TAN TO GRAY SAND, SATURATED

60+34.83

-YIRPCA-

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Lowmier

8/23/99

0 2.5 5	PROJ. REFERENCE NO.	SHEET NO.
	R-2719A	123

75 70 65 60 55 50 45 40 35 30 25 20 15 10 5 0 5 10 15 20 25 30 35 40 45 50 55 60 65 70 75

115 110 105 100 95 90

4:1

LOOSE TO MEDIUM DENSE

MED. DENSE TAN-BROWN SAND, MOI. (ROADWAY EMBANKMENT)

S.S. 101.895

01/05

TAN TO GRAY SAND, MOIST TO SATURATED

4:1

S.S. 98.665

01/05

24+00.00

-Y6-

30-NOV-2005 11:07
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ktmiller
AT GEU221408

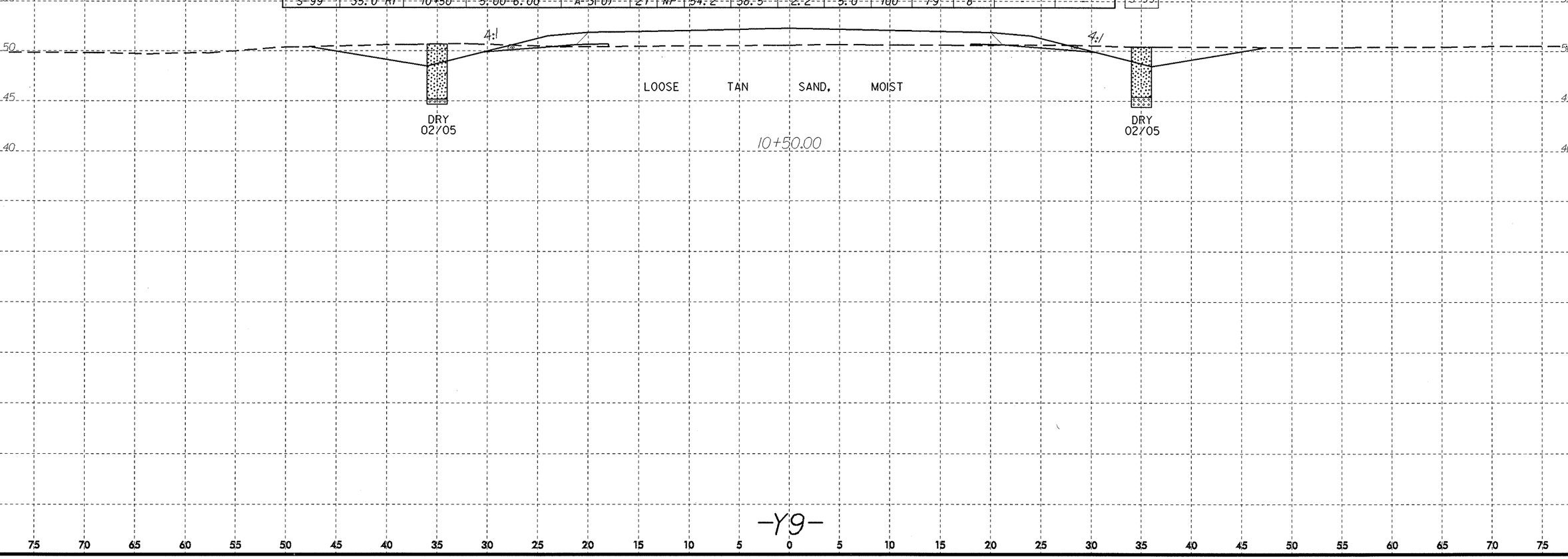
8/23/99

0 2,5 5	PROJ. REFERENCE NO.	SHEET NO.
	R-2719A	124

SOIL TEST RESULTS

SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT C.SAND	F.SAND	SILT	CLAY	% PASSING (SIEVES) 10	40	200	% MOISTURE	% ORGANIC
S-98	35.0 RT	10+50	1.00-5.00	A-2-4(0)	19	NP	46.1	31.8	8.0	14.1	99	78	24	-	-
S-99	35.0 RT	10+50	5.00-6.00	A-3(0)	21	NP	54.2	38.5	2.2	5.0	100	79	8	-	-

S-98
S-99



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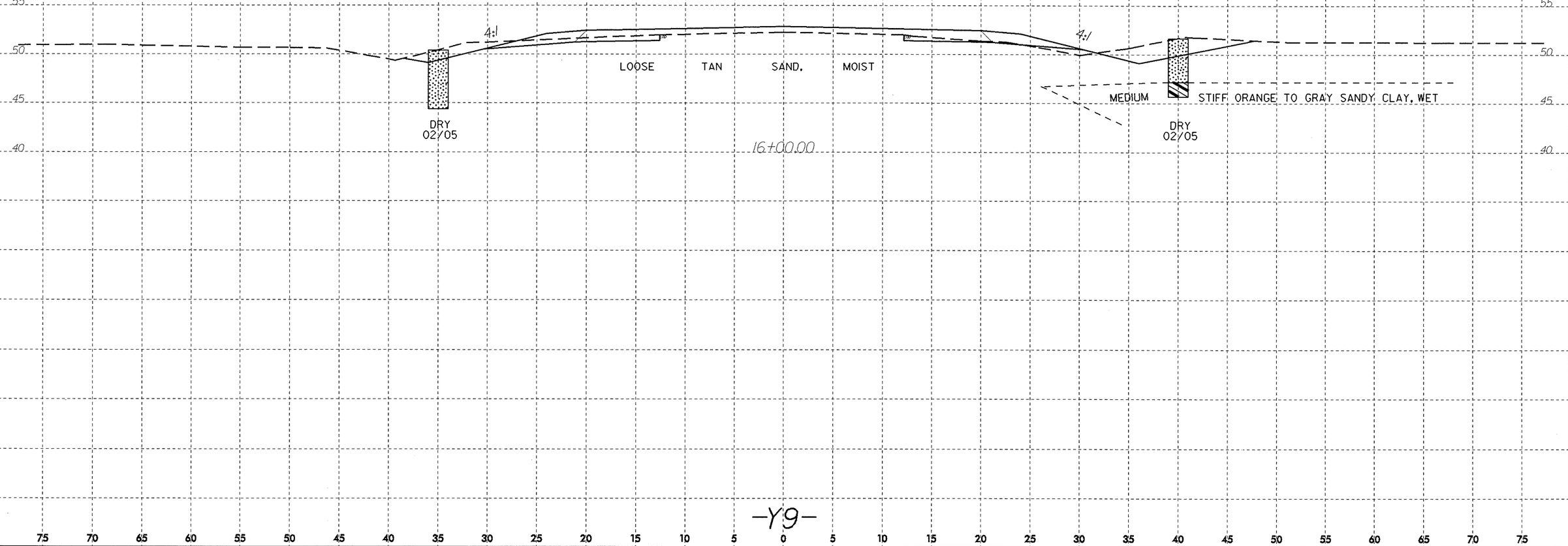
kbmiller
GEJ221408

8/23/99

0 2.5 5	PROJ. REFERENCE NO.	SHEET NO.
	R-2719A	125

75 70 65 60 55 50 45 40 35 30 25 20 15 10 5 0 5 10 15 20 25 30 35 40 45 50 55 60 65 70 75

55 55



50 50

45 45

40 40

-Y9-

75 70 65 60 55 50 45 40 35 30 25 20 15 10 5 0 5 10 15 20 25 30 35 40 45 50 55 60 65 70 75

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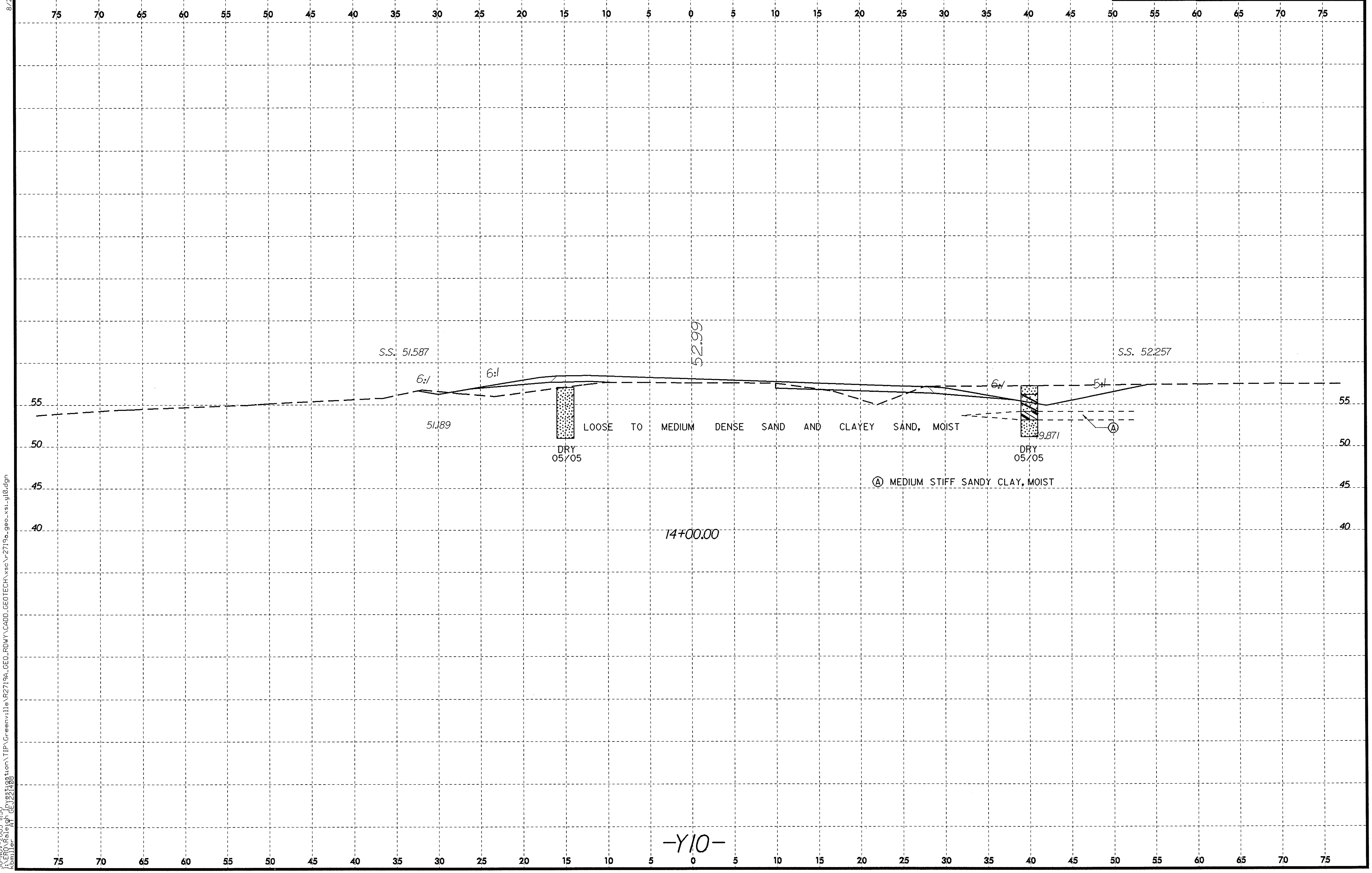
kbmiller AT GEJ221408

	PROJ. REFERENCE NO.	SHEET NO.
0 2.5 5	R-2719A	126



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kbmiller AT GEJ22140B

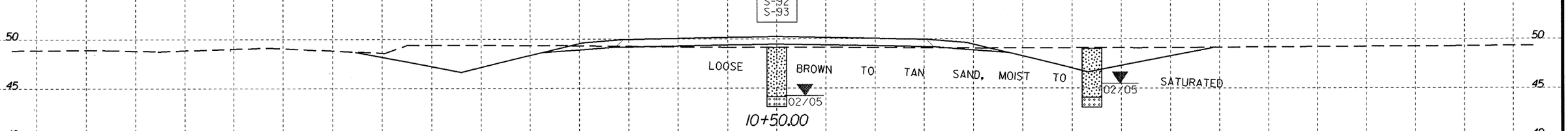
8/23/99

PROJ. REFERENCE NO.	SHEET NO.
R-2719A	127

0 2.5 5

SOIL TEST RESULTS

SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT				% PASSING (SIEVES)			% MOISTURE	% ORGANIC
							C.SAND	F.SAND	SILT	CLAY	10	40	200		
S-92	CL	10+50	1.00-5.00	A-2-4(0)	21	NP	32.2	47.0	8.7	12.1	100	84	24	-	-
S-93	CL	10+50	5.00-6.00	A-3(0)	22	NP	64.1	30.0	0.9	5.0	96	59	7	-	-



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kbmiller
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8/23/99

0 2,5 5	PROJ. REFERENCE NO.	SHEET NO.
	R-2719A	128

75 70 65 60 55 50 45 40 35 30 25 20 15 10 5 0 5 10 15 20 25 30 35 40 45 50 55 60 65 70 75

55 55

50 50

45 45

40 40

LOOSE 02/05 BROWN TO TAN SAND, MOIST 02/05 TO SATURATED

14+00.00

-Y14-

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kbmiller
AT GEJ221408

8/23/99

0 2.5 5	PROJ. REFERENCE NO.	SHEET NO.
	R-2719A	129

75 70 65 60 55 50 45 40 35 30 25 20 15 10 5 0 5 10 15 20 25 30 35 40 45 50 55 60 65 70 75

55

50

45

40

18+00.00

55

50

45

40

-Y14-

75 70 65 60 55 50 45 40 35 30 25 20 15 10 5 0 5 10 15 20 25 30 35 40 45 50 55 60 65 70 75

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kbmiller
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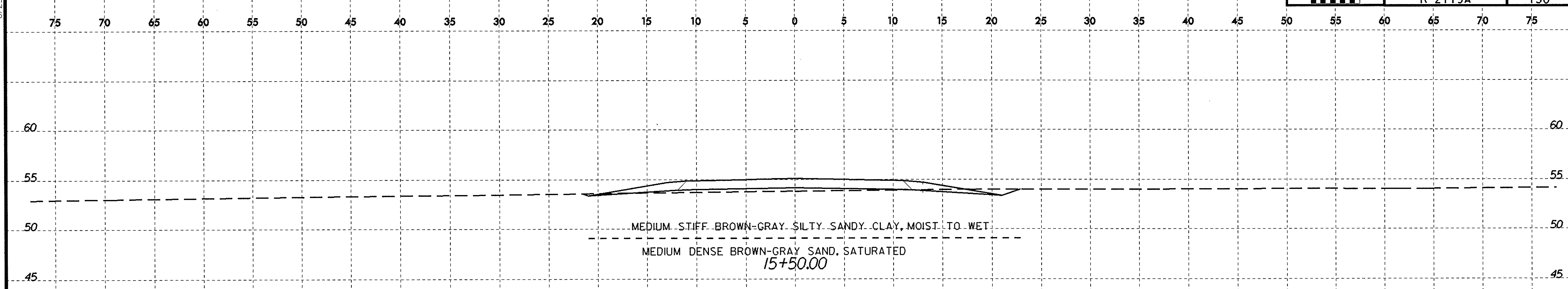
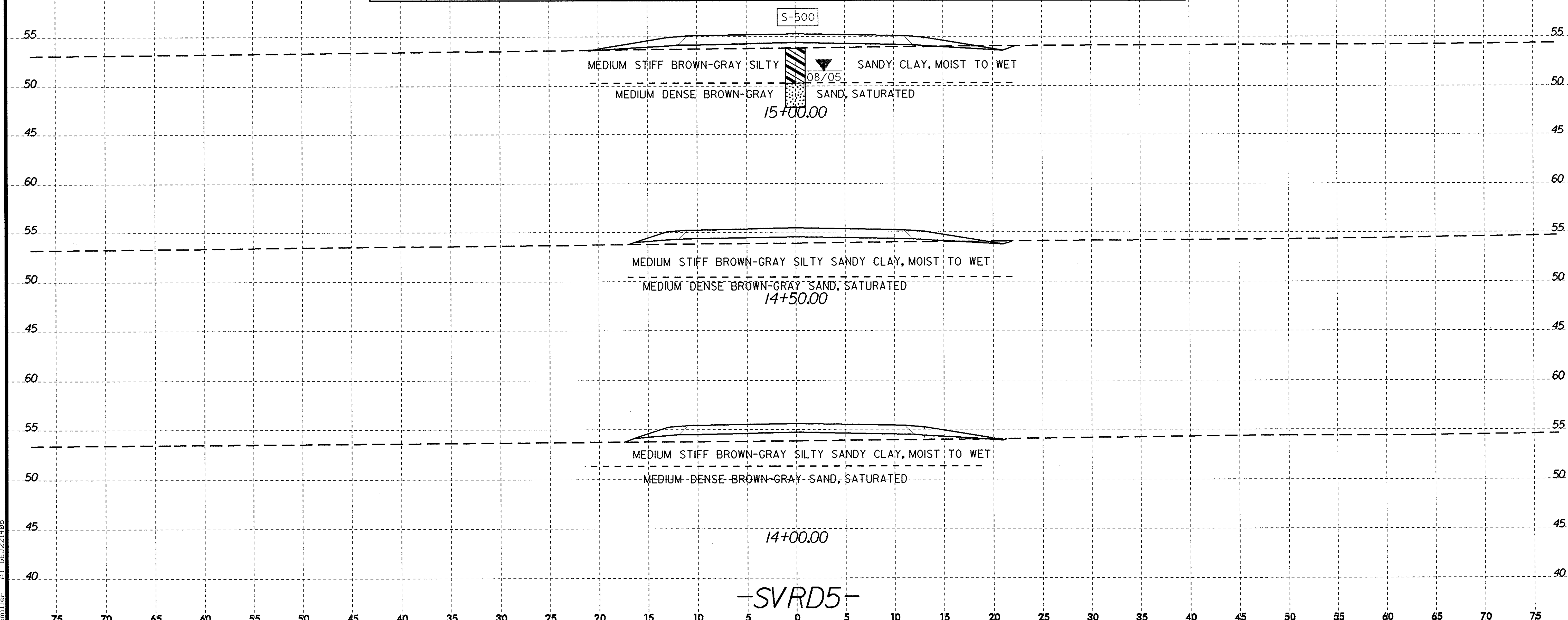
PROJ. REFERENCE NO.	SHEET NO.
R-2719A	130



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-500	CL	15+00	0.00-3.50	A-6 (3)	33	11	22.8	30.5	34.5	12.1	100	89	49	29	-



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8/23/99

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kbmiller AT GEJ221408

8/23/99

0 2.5 5	PROJ. REFERENCE NO.	SHEET NO.
	R-2719A	131

75 70 65 60 55 50 45 40 35 30 25 20 15 10 5 0 5 10 15 20 25 30 35 40 45 50 55 60 65 70 75

60 55 50 45

MEDIUM STIFF BROWN-GRAY SILTY SANDY CLAY, MOIST TO WET

17+50.00

60 55 50 45

MEDIUM STIFF BROWN-GRAY SILTY SANDY CLAY, MOIST TO WET

08/05

17+00.00

60 55 50 45

MEDIUM STIFF BROWN-GRAY SILTY SANDY CLAY, MOIST TO WET

16+50.00

60 55 50 45

MEDIUM STIFF BROWN-GRAY SILTY SANDY CLAY, MOIST TO WET

16+00.00

60 55 50 45

-SVRD5-

75 70 65 60 55 50 45 40 35 30 25 20 15 10 5 0 5 10 15 20 25 30 35 40 45 50 55 60 65 70 75

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Lemiller
ALT_GEOPAK108

PROJ. REFERENCE NO.	SHEET NO.
R-2719A	132

0 2.5 5

MED. STIFF BROWN-GRAY SANDY SILT, MOI. TO WET

MEDIUM DENSE BROWN-GRAY SAND, SATURATED

19+50.00

MED. STIFF BROWN-GRAY 08/05 SANDY SILT, MOI. TO WET

MEDIUM DENSE BROWN-GRAY SAND, SATURATED

19+00.00

MED. STIFF BROWN-GRAY SILTY SANDY CLAY AND SANDY SILT, MOI. TO WET

MEDIUM DENSE BROWN-GRAY SAND, SATURATED

18+50.00

MED. STIFF BROWN-GRAY SILTY SANDY CLAY AND SANDY SILT, MOI. TO WET

18+00.00

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0 2.5 5	PROJ. REFERENCE NO.	SHEET NO.
	R-2719A	133

75 70 65 60 55 50 45 40 35 30 25 20 15 10 5 0 5 10 15 20 25 30 35 40 45 50 55 60 65 70 75

55
50
45

MED. STIFF BROWN-GRAY SANDY SILT, MOI. TO WET
MEDIUM DENSE BROWN-GRAY SAND, SATURATED
22+00.00

55
50
45

MED. STIFF BROWN-GRAY SANDY SILT, MOI. TO WET
MEDIUM DENSE BROWN-GRAY SAND, SATURATED
21+50.00

60
55
50
45

MED. STIFF BROWN-GRAY 08/05 SANDY SILT, MOI. TO WET
MEDIUM DENSE BROWN-GRAY SAND, SATURATED
21+00.00

60
55
50
45

MED. STIFF BROWN-GRAY SANDY SILT, MOI. TO WET
MEDIUM DENSE BROWN-GRAY SAND, SATURATED
20+50.00

60
55
50
45

MED. STIFF BROWN-GRAY SANDY SILT, MOI. TO WET
MEDIUM DENSE BROWN-GRAY SAND, SATURATED
20+00.00

-SVRD5-

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0 2.5 5	PROJ. REFERENCE NO.	SHEET NO.
	R-2719A	134

75 70 65 60 55 50 45 40 35 30 25 20 15 10 5 0 5 10 15 20 25 30 35 40 45 50 55 60 65 70 75

60 55 50 45

MED. STIFF BROWN-GRAY SANDY SILT, MOI. TO WET

MEDIUM DENSE BROWN-GRAY SAND, SATURATED

24+00.00

60 55 50 45

MED. STIFF BROWN-GRAY SANDY SILT, MOI. TO WET

MEDIUM DENSE BROWN-GRAY SAND, SATURATED

23+50.00

60 55 50 45

MED. STIFF BROWN-GRAY SANDY SILT, MOI. TO WET

08/05

MEDIUM DENSE BROWN-GRAY SAND, SATURATED

23+00.00

55 50 45

MED. STIFF BROWN-GRAY SANDY SILT, MOI. TO WET

MEDIUM DENSE BROWN-GRAY SAND, SATURATED

22+50.00

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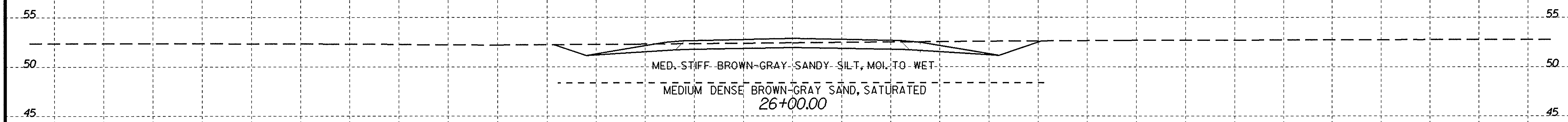
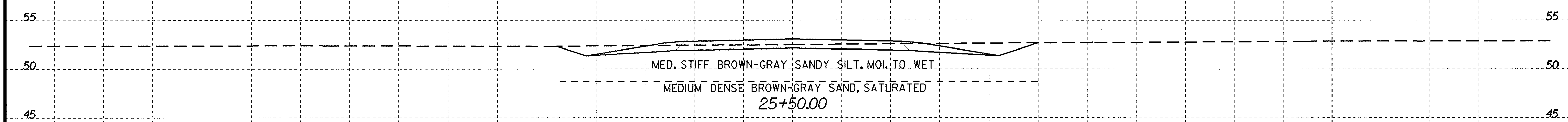


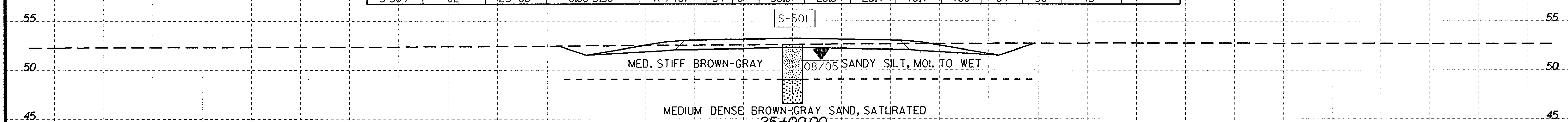
26+00.00



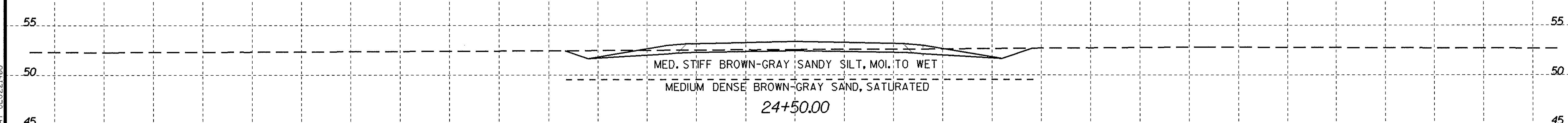
25+50.00

SOIL TEST RESULTS

SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT C.SAND	F.SAND	SILT	CLAY	% PASSING (SIEVES) 10	40	200	% MOISTURE	% ORGANIC
S-501	CL	25+00	0.00-3.50	A-4 (0)	34	8	38.0	28.5	23.4	10.1	100	81	36	45	-



25+00.00



24+50.00

-SVRD5-

8/23/99
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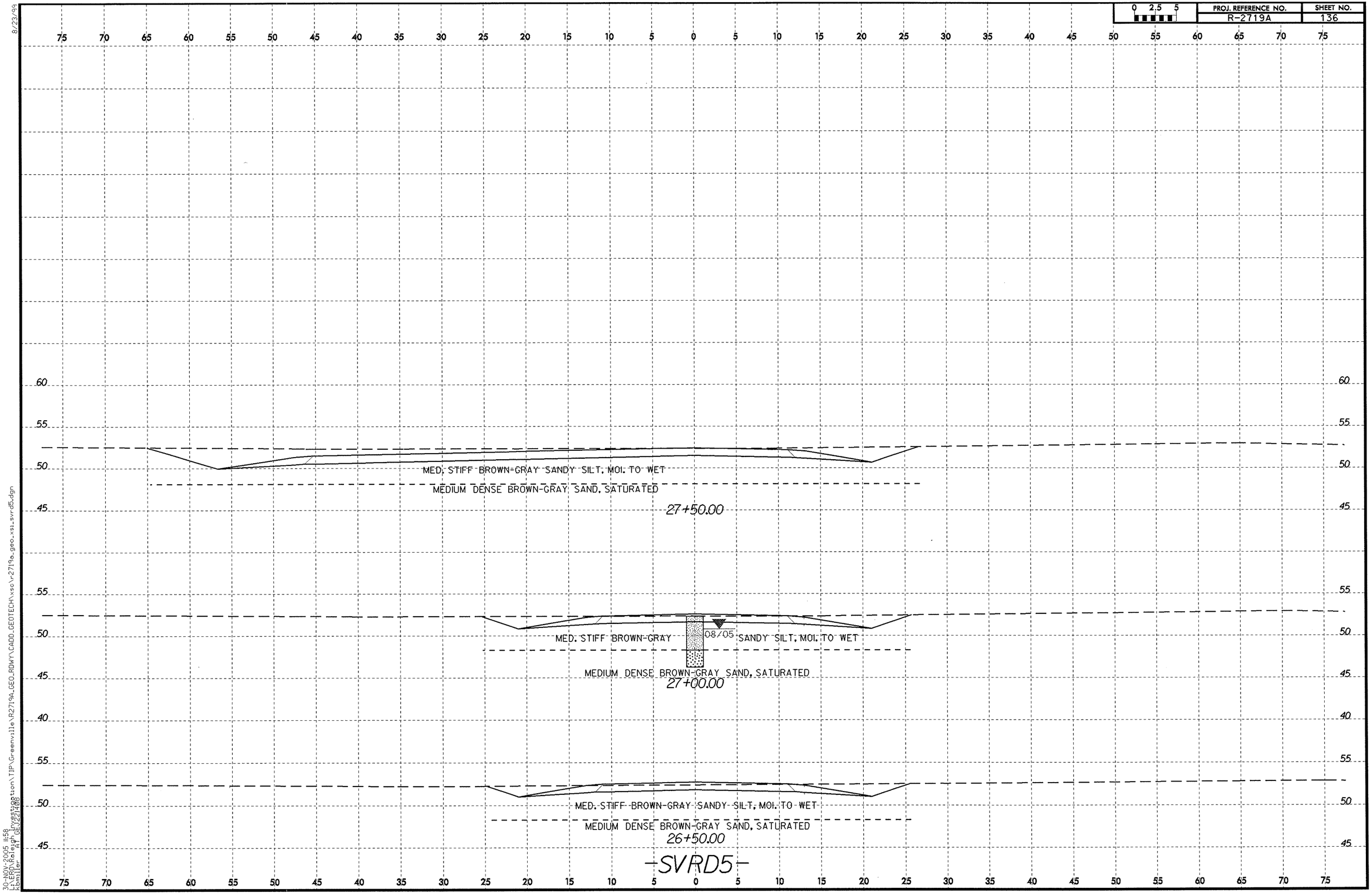
kbmiller AT GE3221408



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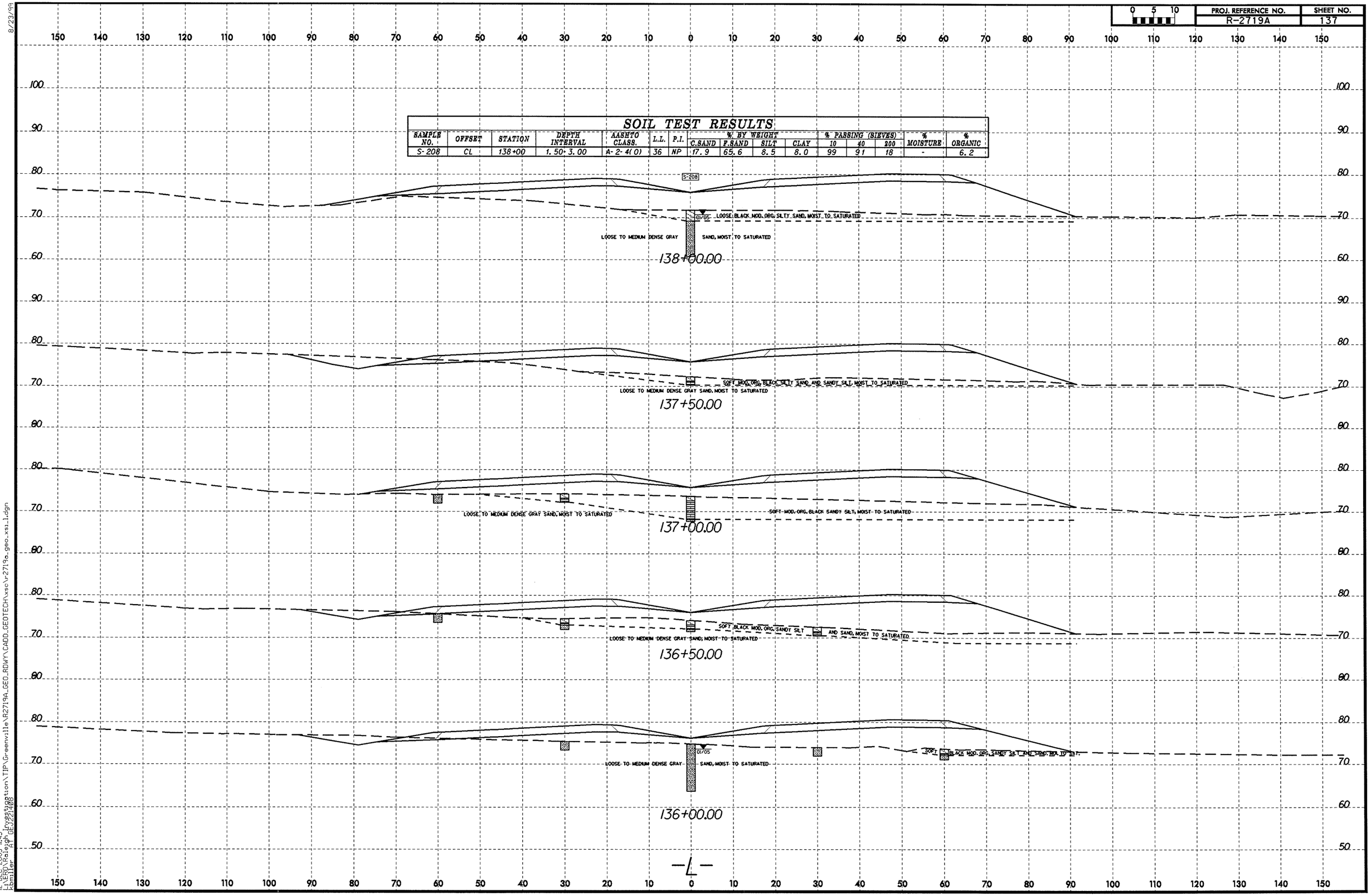
Emiller
Arf_GEOPAK86

8/23/99

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-2719A	137

SOIL TEST RESULTS

SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT C.SAND	F.SAND	SILT	CLAY	% PASSING (SIEVES) 10	40	200	% MOISTURE	% ORGANIC
S-208	CL	138+00	1.50-3.00	A-2-4(0)	36	NP	17.9	65.6	8.5	8.0	99	91	18	-	6.2



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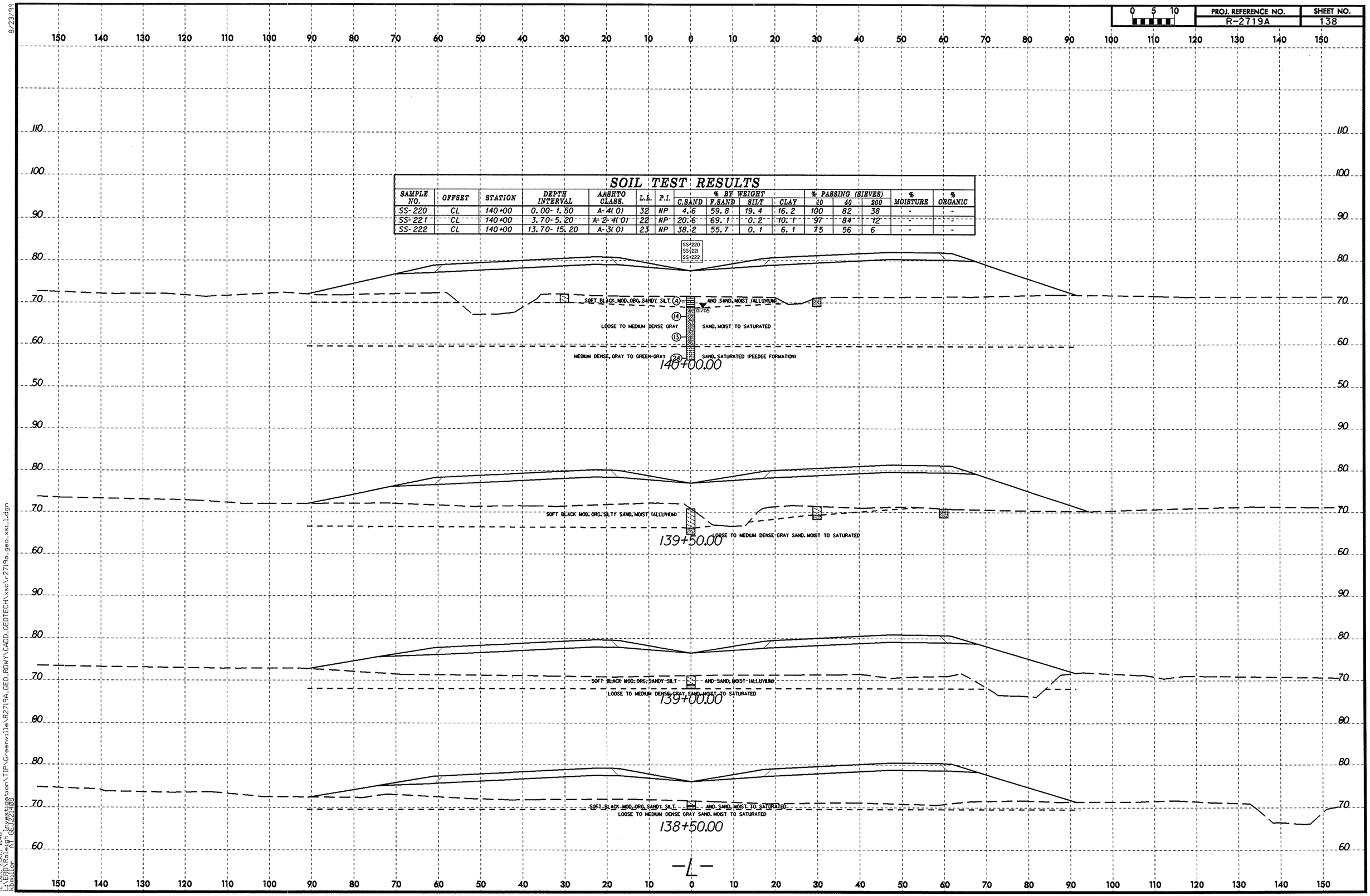
8/23/99

0 5 10	PROJ. REFERENCE NO.	SHEET NO.
	R-2719A	138

SOIL TEST RESULTS

SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT C.SAND	F.SAND	SILT	CLAY	% PASSING (SIEVES) 10	40	200	% MOISTURE	% ORGANIC
SS-220	CL	140+00	0.00-1.50	A-4(0)	32	NP	4.6	59.8	19.4	16.2	100	82	38	-	-
SS-221	CL	140+00	3.70-5.20	A-2-4(0)	22	NP	20.6	69.1	0.2	10.1	97	84	12	-	-
SS-222	CL	140+00	13.70-15.20	A-3(0)	23	NP	38.2	55.7	0.1	6.1	75	56	6	-	-



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41 DEC22408

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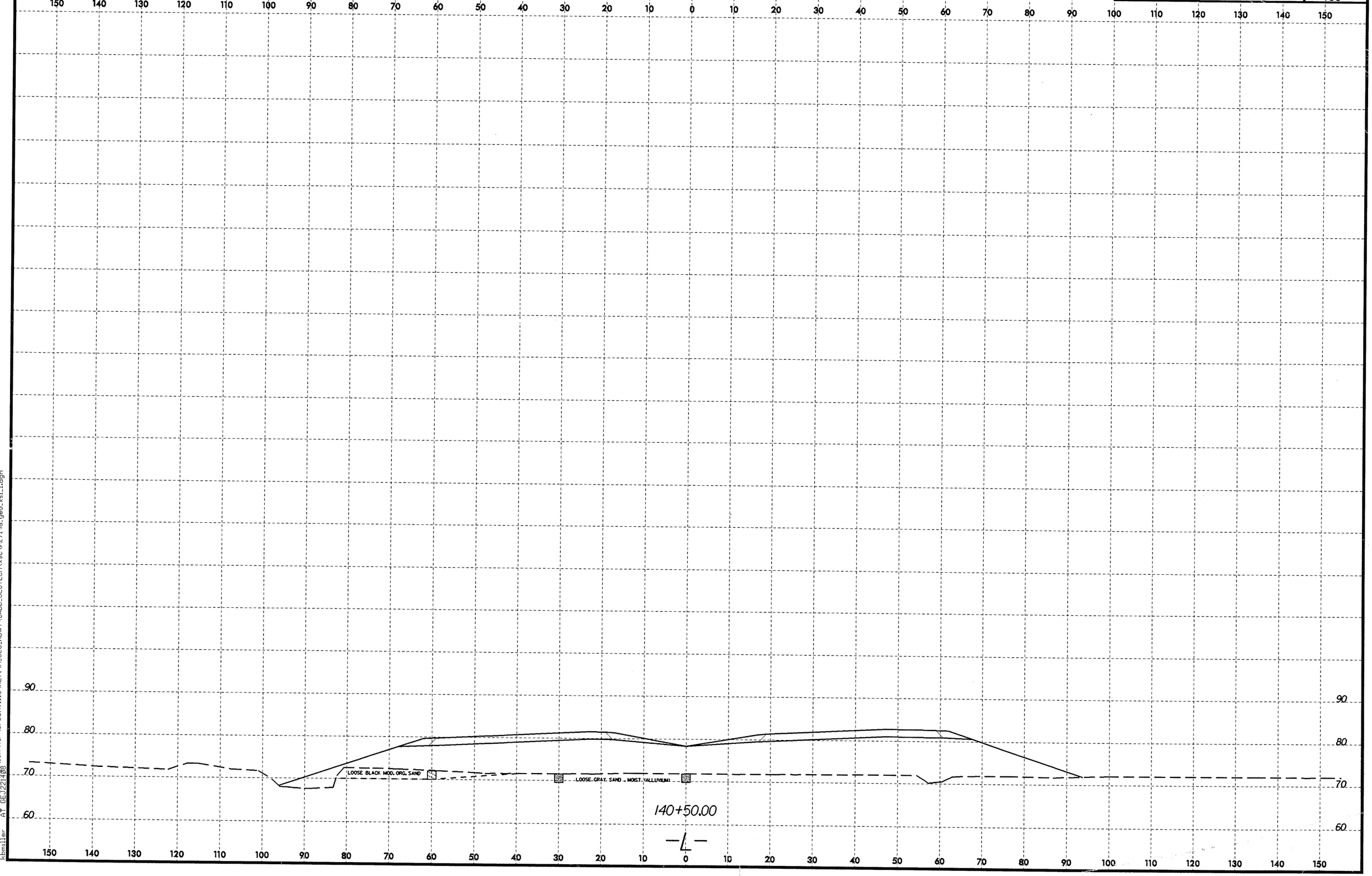
PROJ. REFERENCE NO.	SHEET NO.
R-2719A	139

0 5 10



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