9/09/99

R-0609IA

CONTRACT: 34345.1.1

CONTENTS:		SHEET NUMBERS		
LINE	STATION	PLAN	PROFILE	X-SECTS.
-L-	10+00 - 61+00	4-18	38-45	72-97
NBCD	10+00 - 32+74.76	16,28-33	46-49	
SBCD	10+00 - 29+85.09	16,28-33	50-52	
NBCD RAMP	10+00 - 13+49	32-33	53	
SBCD RAMP	10+00 - 12+80	32-33	53	
LOOP A	10+00 - 12+71	16	54	
LOOP B	10+00 - 12+74.40	16	54	
LOOP C	10+00 - 12+69.61	16	55	
RAMP A	10+00 - 15+91.59	16,17,30	56	
RAMP B	10+00 - 16+57.50	15,16,30	57	
RAMP C	10+00 - 15+54.75	15,16,31	58	
RAMP D	10+00 - 16+39.76	16,17,31	59	
-FLY-	10+00 - 28+18	14,15,16,30	60-63	98
-Y-	10+00 - 13+64.39	19-20	64	
-Y1-	10+00 - 14+20	5,20	65	
-Y2-	10+00 - 17+40	10,21,22	66-67	99
-Y3-	10+00 - 14+40	13,23,24	68	
-Y4-	10+00 - 16+52.48	13,14,23,26	69	
-Y5-	10+00 - 18+97.15	14,15,25,31	70-71	
-Y6-	13+40 - 50+00	16,27-36		100-128

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS
GEOTECHNICAL UNIT

SUBSURFACE INVESTIGATION

METRIC
ALL DIMENSIONS IN THESE PLANS ARE IN METERS

STATE	STATE PROJECT REFERENCE NO.	
N.C.	R-0609IA	1
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION
34345.1.1	MAF-F-119-1(1)	PE
34345.2.7	STP-NHF-119-1(11)	ROW & UTILITIES

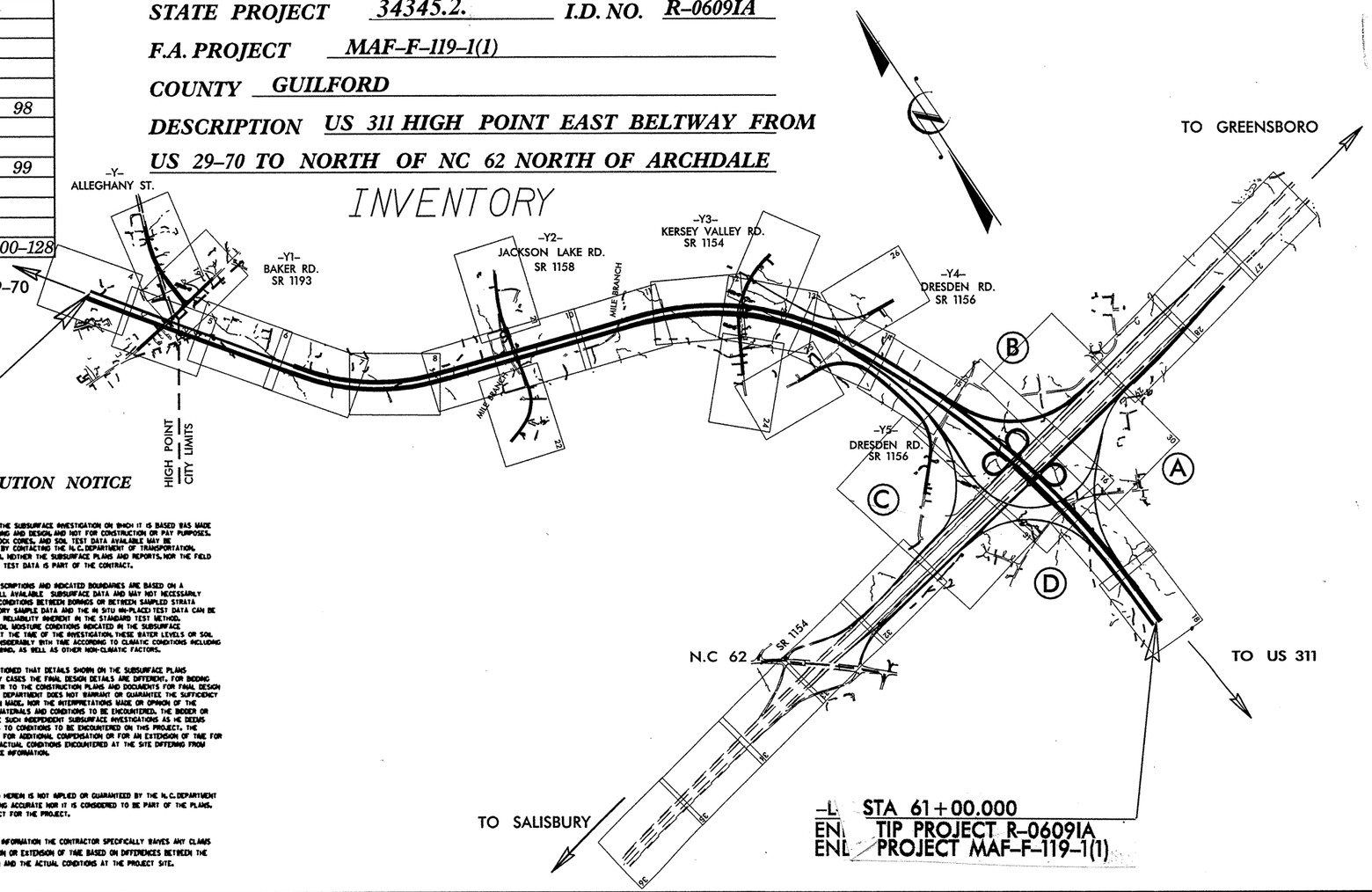
STATE PROJECT 34345.2. I.D. NO. R-0609IA

F.A. PROJECT MAF-F-119-1(1)

COUNTY GUILFORD

DESCRIPTION US 311 HIGH POINT EAST BELTWAY FROM US 29-70 TO NORTH OF NC 62 NORTH OF ARCHDALE

INVENTORY



-L- STA 11+98.805
BEGIN TIP PROJECT R=0609IA
BEGIN PROJECT MAF-F-119-1(1)

-L- STA 61+00.000
END TIP PROJECT R-0609IA
END PROJECT MAF-F-119-1(1)

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 @ 1919 250-4088. NEITHER THE SUBSURFACE PLANS AND REPORTS, NOR THE FIELD BORING LOGS, ROCK CORES, OR SOIL TEST DATA IS PART OF THE CONTRACT.

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

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

NOTE - THE INFORMATION CONTAINED HEREIN IS NOT APPLIED OR GUARANTEED BY THE N.C. DEPARTMENT OF TRANSPORTATION AS BEING ACCURATE NOR IT IS CONSIDERED TO BE PART OF THE PLANS, SPECIFICATIONS, OR CONTRACT FOR THE PROJECT.

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

DRAWN BY: J.E. BEVERLY

GRAPHIC SCALES

PLANS 5 0 10

PROFILE (HORIZONTAL) 5 0 10

PROFILE (VERTICAL) 1 0 2

PROJECT LENGTH

LENGTH ROADWAY F.A PROJECT MAF-F-119-1(1) = 5.120 KM

LENGTH STRUCTURE F.A PROJECT MAF-F-119-1(1) = KM

TOTAL LENGTH STATE PROJECT 8.1570601 = 5.120 KM

NORTH CAROLINA LICENSED SEAL 1104 GEOLOGIST CLINTON B. LITTLE

SEAL

SIGNATURE

INVESTIGATED BY J.E. BEVERLY PERSONNEL T.A. MECHUM

CHECKED BY C.B. LITTLE J.E. ESTEP

SUBMITTED BY C.B. LITTLE M.L. SMITH

DATE 3-27-01 J.K. STICKNEY

C.E. BURRIS

C. L. SMITH

$$$$$SYSTIME$$$$$
$$$$$CONS$$$$$$$$$$$$$$$$$$$$$
$$$$$USERNAME$$$$$

ID	STATE PROJECT NO.	SHEET NO.	TOTAL SHEETS
R-0609IA	8.1570601	2	128

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 ACCORDING TO STANDARD PENETRATION TEST (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-7-5, A-7-6)	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					
SYMBOL												
% PASSING #10	50 MX										GRANULAR SOILS	SILT-CLAY SOILS	MUCK, PEAT
#40	30 MX	50 MX	51 MN									
#200	15 MX	25 MX	10 MX	35 MX	35 MX	35 MX	35 MX	36 MN	36 MN	36 MN	36 MN	
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-7-5 > L.L. - 30

CONSISTENCY OR DENSENESS

PRIMARY SOIL TYPE	COMPACTNESS OR CONSISTENCY	RANGE OF STANDARD PENETRATION RESISTENCE (BLOWS)	RANGE OF UNCONFINED COMPRESSIVE STRENGTH (kN/m^2)
GENERALLY GRANULAR MATERIAL	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	VERY SOFT	<2	<25
	SOFT	2 TO 4	25 TO 50
	MEDIUM STIFF	4 TO 8	50 TO 100
	STIFF	8 TO 15	100 TO 200
	VERY STIFF	15 TO 30	200 TO 400
	HARD	>30	>400

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	COBBLE	GRAVEL	COARSE SAND	FINE SAND	SILT	CLAY

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		
OM — OPTIMUM MOISTURE	- MOIST - (M)	SOLID; AT OR NEAR OPTIMUM MOISTURE
SL — SHRINKAGE LIMIT		
	- DRY - (D)	REQUIRES ADDITIONAL WATER TO ATTAIN OPTIMUM MOISTURE

PLASTICITY

	PLASTICITY INDEX	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, MOTTLED, 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

ROCK DESCRIPTION

IN THE BROADEST MEANING, HARD ROCK IS CONSIDERED THAT MATERIAL WHICH CANNOT BE SAMPLED BY CONVENTIONAL SOIL SAMPLING TOOLS OR TECHNIQUES. THE BOUNDARY BETWEEN SOIL AND ROCK IS ARBITRARY. TRANSITION BETWEEN SOIL AND ROCK IS OFTEN REPRESENTED BY A ZONE OF "WEATHERED ROCK". FOR THE PURPOSE OF THIS INVESTIGATION, THESE MATERIALS ARE DIVIDED AS FOLLOWS:

WEATHERED ROCK (SWR) (HWR)		SOFT WEATHERED ROCK	MATERIAL THAT CAN BE PENETRATED WITH SOME DIFFICULTY USING POWER AUGERS AND YIELDS SPT VALUES > 100 BLOWS BUT < SPT REFUSAL
		HARD WEATHERED ROCK	MATERIAL THAT CAN BE PENETRATED WITH GREAT DIFFICULTY USING POWER AUGERS AND YIELDS SPT REFUSAL.*
HARD ROCK (HR)	CORED ROCK	INFERRED ROCK LINE**	MATERIAL THAT CANNOT BE PENETRATED BY POWER AUGERS, EXCEPT IN THIN LEDGES, AND REQUIRES ROCK CORING TOOLS FOR OBTAINING A SAMPLE.

*SPT REFUSAL ≤2.5cm OF PENETRATION PER 50 BLOWS.

**AN INFERRED ROCK LINE INDICATES THE LEVEL AT WHICH AUGERS COULD NO LONGER PENETRATE. THE HARD ROCK SYMBOL IS SHOWN WHEN ROCK IS CORED AND ONLY TO THAT DEPTH CORED. A DESCRIPTION OF ROCK IS GIVEN INCLUDING:

CORE RECOVERY (REC.)- TOTAL LENGTH OF ROCK RECOVERED IN THE CORE BARREL DIVIDED BY THE TOTAL LENGTH OF THE CORE RUN TIMES 100%.

ROCK QUALITY DESIGNATION (RQD)- TOTAL LENGTH OF SOUND ROCK SEGMENTS RECOVERED THAT ARE LONGER THAN OR EQUAL TO 0.1m DIVIDED BY THE TOTAL LENGTH OF THE CORE RUN TIMES 100%.

GROUND WATER

- WATER LEVEL IN BORE HOLE IMMEDIATELY AFTER DRILLING.
- STATIC WATER LEVEL AFTER 24 HOURS.
- PERCHED WATER, SATURATED ZONE OR WATER BEARING STRATA
- SPRING OR SEEPAGE

MISCELLANEOUS SYMBOLS AND ABBREVIATIONS

- ROADWAY EMBANKMENT WITH SOIL DESCRIPTION
- SOIL SYMBOL
- ARTIFICIAL FILL OTHER THAN ROADWAY EMBANKMENTS
- INFERRED SOIL BOUNDARIES
- ALLUVIAL/RESIDUAL BOUNDARIES
- 25° DIP DIRECTION AND DIP OF STRUCTURES
- APPARENT DIP (NORMAL TO_____)
- SPT, DPT, VST TEST BORING
- AUGER BORING
- CORE BORING
- MW MONITORING WELL
- PIEZOMETER INSTALLATION
- SLOPE INDICATOR INSTALLATION
- SPT N-COUNT

SAMPLE DESIGNATIONS
S- BULK SAMPLE
SS- SPLIT SPOON SAMPLE
ST- SHELBY TUBE SAMPLE
RS- ROCK SAMPLE
● - SOUNDING ROD

EQUIPMENT USED ON SUBJECT PROJECT

DRILL UNITS:
- ☐ MOBILE B
- ☐ BK-51
- ☐ CME-45
- ☒ CME-550
- ☐ PORTABLE HOIST
- ☐ OTHER _____
- ☐ OTHER _____

AUGER TOOLS:
- ☒ 6" (152 mm) CONTINUOUS FLIGHT
- ☒ 8" (203 mm) HOLLOW AUGERS
- ☐ HARD FACED FINGER BITS
- ☒ TUNG. - CARBIDE INSERTS
- ☐ CLAY BITS

OTHER:

HAMMER TYPE:
- ☒ AUTOMATIC ☐ MANUAL

CORE BORING TOOLS:
- ☐ -AX ☐ -BX ☐ -NX

HAND TOOLS:
- ☐ POST HOLE DIGGER
- ☒ HAND AUGER
- ☒ SOUNDING ROD
- ☐ VANE SHEAR TEST

TERMS AND DEFINITIONS

ALLUVIUM (ALLUV.) - SOILS WHICH HAVE BEEN TRANSPORTED BY WATER.
APPARENT DIP - THE DIP OF ROCK STRATA NOT PERPENDICULAR TO STRIKE.
AQUIFER - A WATER BEARING FORMATION OR STRATA.
AUGER REFUSAL (A.R.) - POINT AT WHICH POWER AUGERS WILL NOT PENETRATE.
BEDDED - SOIL OR ROCK LYING IN A POSITION ESSENTIALLY PARALLEL.
BEDROCK - ROCK OF RELATIVELY GREAT THICKNESS AND EXTENT IN ITS ORIGINAL LOCATION.
CALCAREOUS (CALC.) - SOILS WHICH CONTAIN APPRECIABLE AMOUNTS OF CALCIUM CARBONATE.
COHESIVE SOIL - A SOIL THAT WHEN UNCONFINED HAS CONSIDERABLE DRY STRENGTH AND SIGNIFICANT COHESION WHEN SUBMERGED.
COLLUVIUM - ROCK FRAGMENTS MIXED WITH SOIL DEPOSITED BY GRAVITY ON SLOPE OR AT BOTTOM OF SLOPE.
CORE RECOVERY (% REC.) - TOTAL LENGTH OF ALL ROCK DIVIDED BY TOTAL LENGTH OF CORE RUN AND EXPRESSED AS A PERCENTAGE.
COQUINA - A ROCK TYPE COMPOSED ESSENTIALLY OF MARINE SHELLS CEMENTED BY CALCIUM CARBONATE.
DIKE - IGNEOUS ROCK INTRUSION WHICH IS NARROW COMPARED WITH ITS OTHER DIMENSIONS.
DIP - THE ANGLE BETWEEN A BEDDING PLANE, JOINT PLANE OR FAULT PLANE AND THE HORIZONTAL, MEASURED PERPENDICULAR TO THE STRIKE.
DUMPS - UNCOVERED DEPOSITS OF WASTE MATERIAL SUCH AS WOOD, MASONRY DEBRIS OR GARBAGE.
FAULT - A BREAK IN THE CONTINUITY OF A BODY OF ROCK, ATTENDED BY A MOVEMENT ON EITHER OR BOTH SIDES OF THE BREAK.
FINES - PORTIONS OF A SOIL FINER THAN NO. 200 U.S. STANDARD SIEVE.
FISSILITY OR FISSILE - A PROPERTY OF SPLITTING EASILY ALONG CLOSELY SPACED PARALLEL PLANES.
FLOAT - ROCK FRAGMENTS ON SURFACE NEAR THEIR ORIGINAL POSITION AND DISLODGED FROM PARENT MATERIAL.
FLOODPLAIN - LAND BORDERING A STREAM, BUILT OF SEDIMENTS DEPOSITED BY THE STREAM.
FORMATION - A MAPPABLE UNIT THAT CAN BE RECOGNIZED AND TRACED IN THE FIELD.
FRACTURE - A CRACK LARGE ENOUGH TO BE VISIBLE TO THE UNAIDED EYE.
FRIABLE - EASY TO BREAK OR CRUMBLE.
GRANULAR MATERIAL - SOIL THAT WHEN UNCONFINED HAS LITTLE OR NO DRY STRENGTH AND HAS LITTLE OR NO COHESION WHEN SUBMERGED.
GROUNDWATER (G.W.) - WATER THAT IS FREE TO MOVE THROUGH SOIL MASS UNDER THE INFLUENCE OF GRAVITY.
GROUNDWATER LEVEL - LEVEL OF WATER WITH RESPECT TO EXISTING GROUND SURFACE.
HARDPAN - A GENERAL TERM USED TO DESCRIBE A HARD CEMENTED SOIL LAYER WHICH DOES NOT SOFTEN WHEN WET.
INDURATED - EARTH MATERIAL HARDENED BY HEAT, PRESSURE OR CEMENTATION.
INTERBEDDED - ALTERNATING LENSES OR LAYERS OF SOIL AND/OR ROCK MATERIALS.
JOINT - FRACTURE IN ROCK ALONG WHICH NO APPRECIABLE MOVEMENT HAS OCCURRED.
LAMINATED - VERY THIN ALTERNATING LAYERS LESS THAN 1INCH.
LAYER - SUBJECT MATERIAL GREATER THAN 1INCH IN THICKNESS.
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.
MARL - A NON-INDURATED, CALCAREOUS DEPOSIT OF CLAYS, SILTS AND SANDS, OFTEN CONTAINING SHELLS.
MICACEOUS SOIL (MIC.) - A SOIL OR ROCK TYPE CONTAINING AN APPRECIABLE AMOUNT OF MICA.
MUCK (MK.) - A HIGHLY ORGANIC SOIL OF VERY SOFT CONSISTENCY, GENERALLY FOUND ON TIDAL FLATS, LAKE OR STREAM FLOODPLAINS.
PEAT (PT) - A FIBROUS MASS OF ORGANIC MATTER IN VARIOUS STAGES OF DECOMPOSITION.
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 - SEE LEGEND
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 EXPRESSED AS A PERCENTAGE.
SANITARY LANDFILLS - COMPACTED AND/OR COVERED LAYERS OF SOIL AND WASTE PRODUCTS.
SAPROLITE (SAP.) - RESIDUAL SOIL WHICH RETAINS THE RELIC STRUCTURE OR FABRIC OF THE PARENT ROCK.
SLICKENSIDE - POLISHED AND STRIATED SURFACE THAT RESULTS FROM FRICTION ALONG A FAULT OR SLIP PLAIN.
SILL - AN IGNEOUS SHEET OF INTRUSIVE ROCK WHOSE THICKNESS IS SLIGHT COMPARED TO ITS LATERAL EXTENT.
SOME - PRESENCE OF 5% TO 30% OF SUBJECT MATERIAL.
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 PENETRATION RESISTANCE OF LESS THAN 1INCH WITH 50 BLOWS.
STRIKE - THE DIRECTION OR BEARING OF A HORIZONTAL LINE IN THE PLANE OF AN INCLINED STRATUM, JOINT, FAULT OR OTHER STRUCTURAL PLANE.
SUBGRADE - THE SOIL PREPARED TO SUPPORT A STRUCTURE OR A PAVEMENT SYSTEM.
TOPSOIL (T.S.) - SURFACE SOILS USUALLY CONTAINING ORGANIC MATTER.
TRACE - PRESENCE OF LESS THAN 5% OF SUBJECT MATERIAL.

ABBREVIATIONS

BLDR. - BOULDER
CL. - CLAY
COB. - COBBLE
CSE. - COARSE
EST. - ESTIMATED
F. - FINE
FOSS. - FOSSILIFEROUS
FRAC. - FRACTURED
GR. - GRAVEL
LL - LIQUID LIMIT
MED. - MEDIUM
W - MOISTURE CONTENT
MOT. - MOTTLED
OM - OPTIMUM MOISTURE
ORG. - ORGANIC
PL - PLASTIC LIMIT
PI - PLASTICITY INDEX
n - POROSITY
SD. - SAND
SAT. - SATURATED
SL. - SILT, SILTY
SLI. - SLIGHTLY
G_s - SPECIFIC GRAVITY
qu - UNCONFINED COMPRESSIVE STRENGTH
γ - UNIT WEIGHT (WET UNIT WEIGHT)
γ_d - DRY UNIT WEIGHT
γ_{SAT} - SATURATED UNIT WEIGHT
e - VOID RATIO
V. - VERY

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. SOME DATA OBTAINED MAY BE OMITTED FROM THIS RELEASE.

ADDITIONAL INFORMATION MAY BE AVAILABLE, INCLUDING, BUT NOT LIMITED TO THE FOLLOWING:

FIELD BORING LOGS
ROCK CORES
SOIL & ROCK TEST DATA
SUBSURFACE REPORT

THIS INFORMATION MAY BE VIEWED BY APPOINTMENT 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.

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

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

NOTE – THE INFORMATION CONTAINED HEREIN IS NOT IMPLIED OR GUARANTEED BY THE N.C.DEPARTMENT OF TRANSPORTATION AS BEING ACCURATE NOR IS IT CONSIDERED TO BE PART OF THE PLANS, SPECIFICATIONS, OR CONTRACT FOR THE PROJECT.

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

NOTES:

REVISED AUGUST 10, 1998

See Sheet 1-A For Index of Sheets

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

GUILFORD COUNTY

METRIC

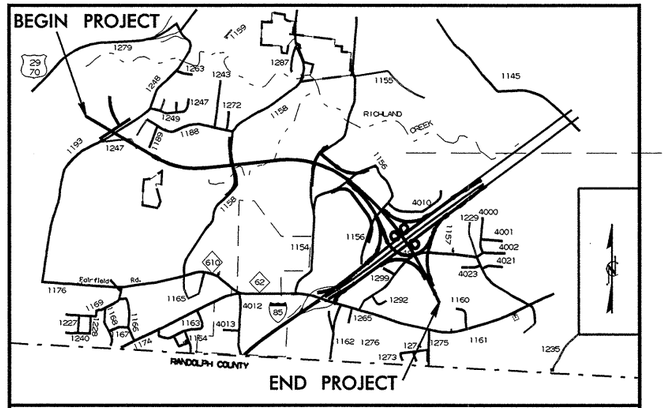
ALL DIMENSIONS IN THESE PLANS ARE IN METERS

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	R-06091A	2A	128

STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION
8.1570601	MAF-F-119-1(1)	PE

R-06091A

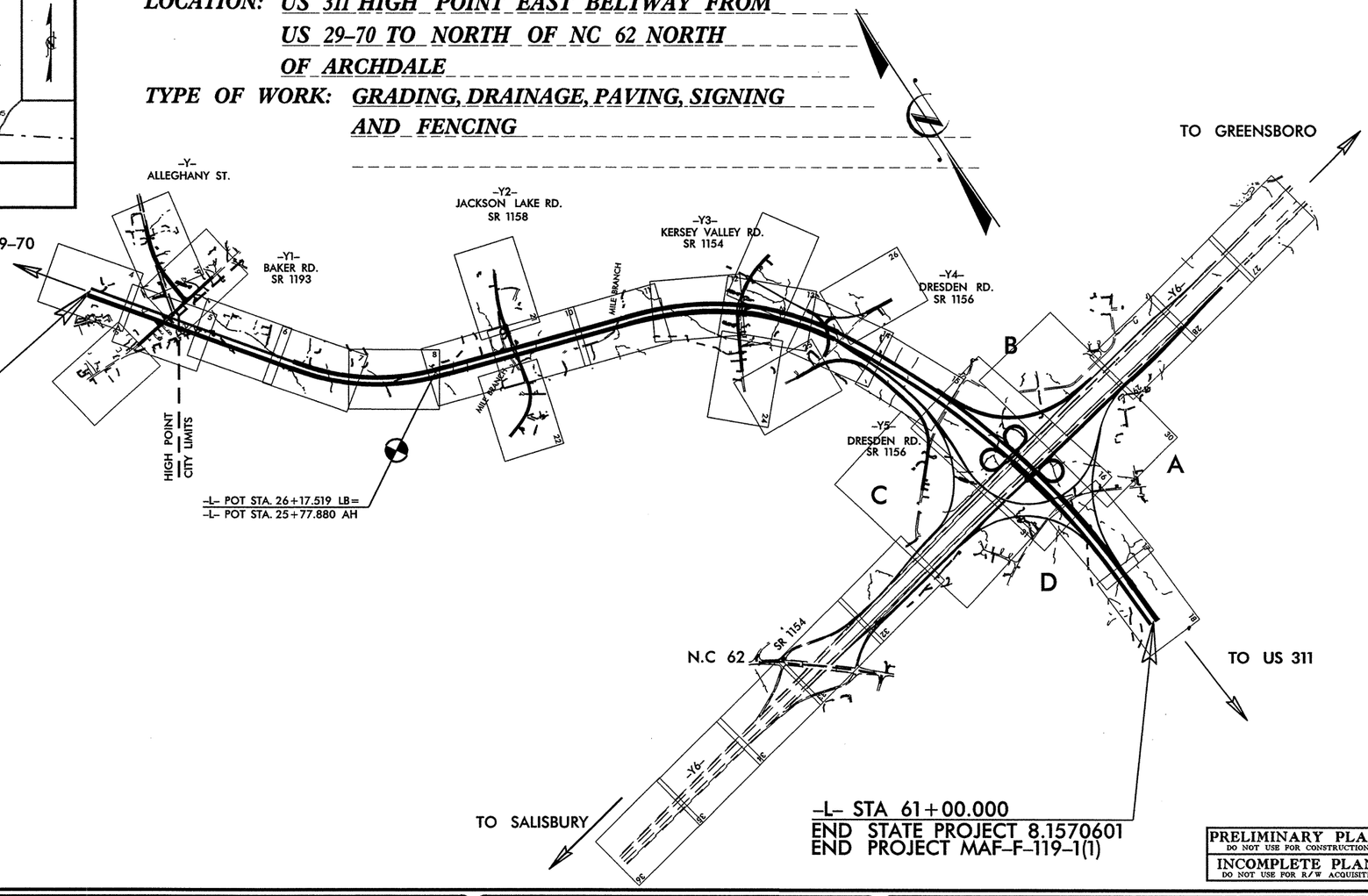
PROJECT: 8.1570601



VICINITY MAP

LOCATION: US 311 HIGH POINT EAST BELTWAY FROM US 29-70 TO NORTH OF NC 62 NORTH OF ARCHDALE

TYPE OF WORK: GRADING, DRAINAGE, PAVING, SIGNING AND FENCING



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

CLEARING ON THIS PROJECT SHALL BE PREFORMED TO THE LIMITS ESTABLISHED BY METHOD _____.

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

GRAPHIC SCALES

5 0 10 PLANS

5 0 10 PROFILE (HORIZONTAL)

1 0 2 PROFILE (VERTICAL)

DESIGN DATA

ADT 2002	=	25,200
ADT 2025	=	39,000
DHV	=	10 %
D	=	60 %
T	=	13 % *
V	=	110 km/h

* TTST 7 % DUAL 6 %

PROJECT LENGTH

LENGTH ROADWAY F.A PROJECT MAF-F-119-1(1) = 4.941 KM

LENGTH STRUCTURE F.A PROJECT MAF-F-119-1(1) = KM

TOTAL LENGTH STATE PROJECT 8.1570601 = 4.941 KM

Prepared In the Office of:

DIVISION OF HIGHWAYS
1000 Birch Ridge Dr., Raleigh, NC 27610

1995 STANDARD SPECIFICATIONS

RIGHT OF WAY DATE: MAY 17, 2002

LETTING DATE: MAY 18, 2004

JIMMY GOODNIGHT, PE
PROJECT ENGINEER

JASON MOORE, PE
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

P.O. BOX 25201, RALEIGH, N.C. 27611-5201

LYNDO TIPPETT
SECRETARY

March 27, 2001

STATE PROJECT: 8.1570601 (R-0609IA)
F.A. PROJECT: MAF-F-119-1(1)
COUNTY: Guilford
DESCRIPTION: US 311 High Point East Beltway from US 29-70 to North of NC 62 North of Archdale

SUBJECT: Geotechnical Report - Inventory

This report presents the findings of the Geotechnical Investigation for section IA of the proposed US 311 High Point Beltway. Stations encompassed on this project are from -L- 10+00 to 61+00. The project generally proceeds in a south to southeast direction from beginning to end.

The geotechnical field investigation for this project was conducted between June and October of 2000. An ATV mounted CME 550 drill machine was utilized for this investigation.

The following survey lines were investigated:

Line	Station
-L-	10+00 – 61+00
NBCD	10+00 – 32+74.76
SBCD	10+00 – 29+85.09
NBCD RAMP	10+00 – 13+49
SBCD RAMP	10+00 – 12+80
LOOP A	10+00 – 12+71
LOOP B	10+00 – 12+74.40
LOOP C	10+00 – 12+69.61
RAMP A	10+00 – 15+91.59
RAMP B	10+00 – 16+57.50
RAMP C	10+00 – 15+54.75
RAMP D	10+00 – 16+39.76
FLYOVER	10+00 – 28+18
-Y- (Alleghany Rd.)	10+00 – 13+64.39

Line	Station
-Y1- (Baker Rd.)	10+00 – 14+20
-Y2- (Jackson Lake Rd.)	10+00 – 17+40
-Y3- (Kersey Valley Rd.)	10+00 – 14+40
-Y4- (Dresden Rd.)	10+00 – 16+52.48
-Y5- (Dresden Rd.)	10+00 – 18+97.15
-Y6- (I-85)	13+40 – 50+00

Areas of Special Geotechnical Interest:

1. *Groundwater:*

Groundwater was encountered in many instances throughout the project corridor. The following is a list of areas where groundwater was encountered at or above proposed grade.

Line	Station Range
-L-	11+20 to 15+40
-L-	26+20 to 27+50
-L-	29+50 to 31+40
-L-	36+00 to 38+80
-L-	39+30 to 39+50
-L-	40+90 to 41+10
-L-	41+30 to 44+80
-L-	46+80 to 49+90
NBCD	14+40 to 15+80
NBCD	18+30 to 18+80
NBCD	27+00 to 30+50
NBCD Ramp	11+00 to 11+60
Ramp B	14+50 to 16+57
Ramp C	10+00 to 10+40
FLY	10+00 to 12+20
FLY	14+40 to 15+50
FLY	25+80 to 28+18
-Y5-	12+20 to 14+25
-Y6-	39+30 to 40+00

2. *Rock:*

Hard rock was encountered at many locations throughout the proposed project corridor. The following is a list of locations where rock was discovered at or above proposed grade and is so represented on the geotechnical cross section sheets.

Alignment	Location	Relationship of Rock to Proposed Grade
-L-	12+80 to 14+30	Above grade
-L-	28+70 to 29+30	Above grade
-L-	29+30 to 30+30	At grade or within 1 meter
-L-	30+30 to 31+90	Above grade
-L-	35+00 to 38+70	Above grade
-L-	38+70 to 39+50	Within 1 to 2 meters of grade
-L-	40+90 to 43+20	Above grade
-L-	43+20 to 43+50	Within 2 meters of grade
-L-	47+10 to 49+50	Above grade
-L-	49+50 to 49+70	Within 2 meters
-L-	49+70 to 49+90	Above grade
-L-	49+90 to 50+50	Within 1 to 2 meters
-L-	50+50 to 50+70	Above grade
-FLY-	11+50 to 11+70	Within 2 meters
-FLY-	13+90 to 14+10	Within 2 meters
-FLY-	26+00 to 26+50	Above grade
-FLY-	27+00 to 28+15	Above grade
-Y6-	13+30 to 13+50	At grade
-Y6-	14+10 to 14+30	At grade
-Y6-	14+90 to 16+50	At grade to above grade
-Y6-	16+90 to 17+50	At grade
-Y6-	17+80 to 18+70	Above grade
-Y6-	20+20 to 22+50	Above grade
-Y6-	23+90 to 24+30	Above grade
-Y6-	31+70 to 32+10	Within 1 to 2 meters
-Y6-	32+10 to 32+30	Above grade
-Y6-	32+30 to 33+50	Within 1 to 2 meters
-Y6-	34+70 to 34+90	Above grade
-Y6-	34+90 to 35+10	Within 1 to 2 meters
-Y6-	35+10 to 36+30	At or above grade
-Y6-	32+30 to 32+50	At grade
-Y6-	39+70 to 39+90	Within 2 meters
NBCD	10+00 to 11+60	At grade to within 2 meters
NBCD	12+00 to 12+90	Above grade
NBCD	14+40 to 16+80	Above grade
NBCD	18+30 to 18+50	Above grade
NBCD	25+90 to 26+30	Within 2 meters
NBCD	26+30 to 26+70	Above grade
NBCD	26+70 to 27+60	Within 2 meters
NBCD	32+30 to 32+60	Within 2 meters
NBCD Ramp	10+00 to 11+20	Above grade

Alignment	Location	Relationship of Rock to Proposed Grade
NBCD Ramp	11+20 to 11+80	Within 1 to 2 meters
RAMP B	16+70 to 16+57	Above grade

Note: Most station ranges which have rock designated above proposed grade begin and end with transition zones where rock is at or slightly below proposed grade.

3. *High PI Soils:* (PI's Greater than 30)

A. The area left of -L- stations 13+10 to 13+50 contains a medium stiff to stiff silty clay (A-7-6) with a Plasticity Index of 32. Thickness of the clay layer extends from the ground surface to 1.0 meter deep.

B. The area between -L- stations 18+00 to 18+70 contains a very stiff sandy silty clay (A-7-5) with a Plasticity Index of 34. The clay layer extends approximately 2.0 meters below the ground surface.

C. The area between -L- stations 24+70 to 25+40 contains a medium stiff silty sandy clay (A-7-5) with Plasticity Index of 33. The clay layer extends from the surface to approximately 1.0 meter deep.

D. The area between -L- stations 31+90 to 32+60 contains a stiff silty sandy clay (A-7-5) with a Plasticity Index of 31. The clay layer begins 1.0 meter below the ground surface and extends to 2.0 meters in depth.

E. The area between -L- stations 38+05 to 38+55 contains a stiff silty sandy clay (A-7-6) with a Plasticity Index of 40. The clay layer begins 1.0 meter below the ground surface and extends to 1.5 meters in depth.

F. The area left of -L- station 41+70 to 42+10 contains a stiff to hard silty sandy clay (A-7-6) with a Plasticity Index of 30. The clay layer lies between 2.0 to 3.5 meters below the ground surface.

G. The area right of -L- stations 42+50 to 42+90 contains a stiff to very stiff silty sandy clay (A-7-6) with a Plasticity Index of 33. The clay layer extends from the ground surface to approximately 2.0 meters in depth.

H. The area between -L- stations 43+50 to 44+20 contains a stiff silty sandy clay (A-7-5) with a Plasticity Index of 30. The clay layer extends from the ground surface to approximately 2.0 meters in depth.

I. The area left of -L- stations 47+50 to 47+90 contains a stiff to hard silty sandy clay (A-7-6) with a Plasticity Index of 31. This clay soil extends from the ground surface to approximately 2.0 meters in depth.

J. The area between -L- stations 48+85 to 49+20 contains a very stiff sandy clay (A-7-6) with a Plasticity Index of 39. The clay layer extends from the ground surface to a depth of 1.0 meter.

K. The area right of Flyover stations 13+30 to 13+50 contains a stiff silty sandy clay (A-7-6) with a Plasticity Index of 30. The clay layer extends from the ground surface to a depth of 0.50 meters.

L. The area between Flyover stations 13+75 to 14+15 contains a very stiff to hard sandy silty clay (A-7-6) with a Plasticity Index of 35. The clay layer extends from the ground surface to a depth of approximately 1.0 meter.

M. The area between -Y4- stations 11+70 to 12+65 contains a very stiff sandy clay (A-7-6) with a Plasticity Index of 47. The clay layer extends from the ground surface to approximately 1.5 meters in depth.

N. The area between -Y5- stations 10+00 to 11+55 contains a stiff silty sandy clay (A-7-5) with a Plasticity Index of 39. The clay layer begins at the ground surface and extends to as much as 4.0 meters in depth.

O. The area between -Y5- stations 14+70 to 15+05 contains a stiff silty sandy clay (A-7-6) with a Plasticity Index of 30. The clay layer begins at the ground surface and extends to 0.50 meters deep.

P. The area between -Y5- stations 16+80 to 17+20 contains a stiff silty sandy clay (A-7-5) with a Plasticity Index of 37. Thickness of the clay layer extends from the ground surface to 1.0 meter deep.

Q. The area right of -Y6- stations 42+40 to 42+80 contains existing roadway fill composed of medium stiff to hard silty sandy clay (A-7-6) with a Plasticity Index of 32. Thickness of this clay layer ranges from the ground surface to approximately 4.0 meters deep.

R. The area left of -Y6- stations 43+60 to 44+00 contains existing roadway fill composed of stiff to hard silty sandy clay (A-7-6) with a Plasticity Index of 40. Thickness of this clay layer ranges from the ground surface to approximately 2.5 meters deep.

S. The area right of -Y6- stations 49+40 to 49+80 contains a stiff sandy silty clay (A-7-5) with a Plasticity Index of 32. The clay layer extends from the ground surface to approximately 2.0 meters in depth.

4. *Alluvial Soils / Wet Areas:*

There are many areas containing alluvial soils throughout the project corridor. Most of these areas are the result of adjacent streams and tributaries which contain soft to medium stiff silt and clay soils and loose silty sand soils which should be of no special interest. The following is a list of areas which do contain very soft to soft alluvial soils which may be of concern. Organic matter is also associated with alluvial soils in some of these areas and is so noted:

Line	Station Range
-L-	12+35 – 12+60 (pond sediments)
-L-	28+10 – 29+38 (slightly organic stream sediments)
-L-	45+55 – 46+35 (pond sediments)
-L-	60+65 – 61+25 (pond sediments)
-Y2-	14+00 – 14+60 Right of centerline, (stream floodplain)
-Y5-	12+00 – 12+60 (stream sediments)

Physiography/Geology:

The project area is located in Guilford County in the northern-central piedmont region of North Carolina. The topography ranges from flat to gently rolling with gently sloping interstream areas. The proposed project corridor is generally well drained and is bisected by several stream and wet weather drainage features. The project is surrounded by a combination of densely wooded areas, urban areas and open fields. Elevations within the project area range from approximately 210 to 260 meters.

Geologically this site is part of the Carolina Slate Belt and is underlain by granitic and meta-granitic rock types.

Soil Properties:

1. *Residual Soils:*

These soils are derived from in place weathering of parent materials. They occur in a variety of consistencies, classifications, and stratigraphic sequences. Residual soils are further subdivided into clays, silts, and sands.

Clays are found consistently throughout the project corridor as both near surface soils and subsoils. They consist primarily of medium stiff to hard red-brown and tan silty sandy clay (A-6, A-7-5, A-7-6) 0.5 to 9 meters thick. These soils are typically well drained and possess Atterburg Limits in the

intermediate range. Soil test results for these soils indicate a plasticity index range of 11 to 47 and a liquid limit range of 26 to 77.

Silts encountered on the project were of both the A-4 and A-5 AASHTO Classifications and occur as both near surface soils and subsoils. They generally consist of medium stiff to hard red-brown, tan, and gray sandy silt with depths ranging from 0.5 to 10 meters thick.

Sands encountered on the project were of the A-1-b, A-2-4, A-2-6 and A-2-7 AASHTO Classification and occur as both near surface soils and subsoils. The sandy soil generally consists of a medium dense to very dense silty sand with depths ranging from 0.5 to 10 meters thick.

2. *Alluvial Soils:*

Alluvial soils originate from water transportation and deposition in a floodplain environment. These deposits are usually shallow, but range up to 3 meters in thickness. Alluvial soils consist of soft to

medium stiff clayey sandy silt (A-4), soft to stiff sandy silty clay (A-6, A-7-5, A-7-6) and very loose to medium dense clayey silty sand (A-2-4).

3. *Fill Soils:*

Only two instances of uncompacted fill material were encountered during the course of this investigation. An area left of NBCD station 17+77 contains approximately 2.5 meters of loose to medium dense clayey sand (A-2-4) overlying 1 meter of very stiff sandy clay (A-7-6). The artificial fill soil is the result of backfill material around an existing drainpipe. The second area is also due to an in-place drainpipe at NBCD station 25+80. Artificial fill material at this location consists of 2 meters of medium stiff to stiff sandy silty clay with rock fragments.

Roadway fill soils were prevalent throughout the project corridor and encountered around existing -Y- lines, and in particular around the existing -Y6- (I-85) interchange area.

Rock Properties:

Rock is defined as that material which refuses penetration of power augers. Large quantities of hard rock were encountered throughout the project corridor.

Wells:

The following wells were encountered during our investigation but due to the number of rural homes within the project corridor there is the possibility for additional wells which remain undetected at this time.

Survey Line	Station / Offset (m)
-L-	16+93, Left of centerline
-L-	27+45, Left of centerline
-Y2-	13+17, Left of centerline
Ramp D	13+10, Right of centerline
-Y4-	16+22, Right of centerline

Special Samples:

Sample #	Location	Depth Interval (meters)	AASHTO Classification
CBR-2	-L- 27+20, 35 LT	6.0 – 8.5	A-2-4(0)

Respectfully Submitted,

J E Beverly

J.E. Beverly, Project Geologist

Volumes in Cubic Meters

PROJECT: R-609IA **COUNTY :GUILFORD** **DATE 4/24/2006** **COMPILED BY: WPW**

RD10S01C

LINE	STATION	STATION	EXCAVATION					EMBANKMENT				BORROW	WASTE			
			TOTAL UNCLASS.	ROCK	UNDERCUT	UNSUIT. UNCLASS.	SUITABLE UNCLASS.	TOTAL	ROCK	EARTH	EMBANK. (+) 20%		ROCK	SUITABLE	UNSUIT.	T0TAL
SUMMARY NO.1																
L	11+98.805	19+00.000	163668	16162			147506	2638	2638		2638		13524	147506		161030
Y	10+00.000	13+40.000	3850				3850	462		462	554			3296		3296
Y1	10+00.000	12+26.533	1395				1395	484		484	581			814		814
Y1	13+03.733	14+20.000	507				507	89		89	107			400		400
Y1 DET	10+29.363	14+16.948	2827				2827	3753		3753	4504	1677				
DET REM.	11+03.615	13+60.680						2552		2552	3062	3062				
SUB - TOTAL			**172247**	**16162**			**156085**	**9978**	**2638**	**7340**	**11446**	**4739**	**13524**	**152016**		**165540**
SUMMARY NO. 2																
L	19+00.000	26+17.519 LB	24365				24365	121436		121436	145723	121358				
SUB - TOTAL			**24365**				**24365**	**121436**		**121436**	**145723**	**121358**				
SUMMARY NO.3																
L	25+77.880 LA	35+00.000	168012	6758	1300		161254	91831	6758	85073	108846			59166	1300	60466
Y2	10+00.000	13+20.691	5013				5013	5725		5725	6870	1857				
Y2	14+03.293	17+39.078	768		600		768	20229		20229	24275	23507			600	600
SUB - TOTAL			**173793**	**6758**	**1900**		**167035**	**117785**	**6758**	**111027**	**139991**	**25364**		**59166**	**1900**	**61066**
SUMMARY NO. 4																
L	35+00.000	44+00.000	343420	16746			326674	32029	16746	15283	35086			308334		308334
Y3	10+00.000	12+26.944	1633				1633	809		809	971			662		662
Y3	13+02.264	14+54.746	1097				1097	575		575	690			407		407
Y4	10+00.000	16+55.785	4324				4324	21792		21792	26150	21826				
DET 2	12+37.210	15+52.083	5014				5014	376		376	451			4563		4563
DET 3	12+51.082	12+95.313	84				84							84		84
SUB - TOTAL			**355572**	**16746**			**338826**	**55581**	**16746**	**38835**	**63348**	**21826**		**314050**		**314050**

3E

Volumes in Cubic Meters

PROJECT: R-0609IA **COUNTY: GUILFORD** **DATE: 05/24/2006** **COMPILED BY: WPW** **SHEET 2 OF 3 SHEETS**

LINE	STATION	STATION	EXCAVATION					EMBANKMENT				BORROW	WASTE			
			TOTAL UNCLASS.	ROCK	UNDERCUT	UNSUIT. UNCLASS.	SUITABLE UNCLASS.	TOTAL	ROCK	EARTH	EMBANK. (+) 20%		ROCK	SUITABLE	UNSUIT.	T0TAL
SUMMARY NO. 5																
L	44+00.000	53+00.000	396205	26211	9200		369994	50143	26211	23932	54929			341276	9200	350476
Y5	10+00.000	19+45.115	5219		800	855	4364	1608		1608	1930			2434	1655	4089
RAMPB	11+53.455	15+26.124	21810				21810	23315		23315	27978	6168				
RAMPC	11+94.366	14+94.366	543				543	26678		26678	32014	31471				
LOOPB	10+67.281	12+51.310						51910		51910	62292	62292				
LOOPC	10+43.870	12+30.352	5399				5399	25769		25769	30923	25524				
FLY	12+76.258	18+50.963	45289				45289	126321		126321	151585	106296				
Y6 SBCD	13+38.426	20+85.589	12910				12910	14423		14423	17308	4398				
Y6 SBCD	21+69.189	28+00.000	25899				25899	39430		39430	47316	21417				
Y6 SBCD	28+00.000	36+00.000	25504				25504	39522		39522	47426	21922				
Y6 SBCD	36+00.000	45+00.000	9727				9727	88		88	106			9621		9621
Y6 SBCD	45+00.000	49+70.000	1887				1887	349		349	419			1468		1468
	SUB-TOTAL		**550392**	**26211**	**10000**	**855**	**523326**	**399556**	**26211**	**373345**	**474226**	**279488**		**354799**	**10855**	**365654**
SUMMARY NO.6																
L	53+00.000	61+00.000	25225				25225	163746		163746	196495	171270				
RAMPA	11+14.406	14+23.096						80310		80310	96372	96372				
RAMPD	11+30.762	14+87.240	35027				35027	8542		8542	10250			24777		24777
LOOPA	10+34.440	12+28.790						47136		47136	56563	56563				
FLY	20+12.663	21+45.365	48				48	47858		47858	57430	57382				
FLY	22+45.365	27+05.599	28653	358			28295	103723	358	103365	124396	95743				
Y6NBCD	13+27.416	20+92.218	26713	1381			25332	9565	1381	8184	11202			15511		15511
Y6NBCD	21+75.818	28+00.000	30058	6728			23330	34781	6728	28053	40392	10334				
Y6NBCD	28+00.000	37+00.000	54683	1142			53541	29984	1142	28842	35752			18931		18931
Y6NBCD	37+00.000	45+80.000	10026				10026	527		527	632			9394		9394
	SUB-TOTAL		**210433**	**9609**			**200824**	**526172**	**9609**	**516563**	**629484**	**487664**		**68613**		**68613**

Volumes in Cubic Meters

PROJECT: R-0609IA COUNTY: GUILFORD DATE: 05/24/2006 COMPILED BY: WPW SHEET 3 OF 3 SHEETS

RD10S01C

LINE	STATION	STATION	EXCAVATION TOTAL UNCLASS.	EXCAVATION ROCK	EXCAVATION UNDERCUT	EXCAVATION UNSUIT. UNCLASS.	EXCAVATION SUITABLE UNCLASS.	EMBANKMENT TOTAL	EMBANKMENT ROCK	EMBANKMENT EARTH	EMBANK. (+) 20%	BORROW	WASTE ROCK	WASTE SUITABLE	WASTE UNSUIT.	WASTE T0TAL
SUMMARY TOTALS			1,486,802	75,486	11,900	855	1,410,461	1,230,508	61,962	1,168,546	1,464,218	940,439	13,524	948,644	12,755	974,923
ADDITIONAL UNDERCUT					7,000			7,000		7,000	8,400	8,400			7,000	7,000
LOST DUE TO CLR. & GRUB.			-15,000				-15,000					15,000				
ROCK WASTE IN LIEU BORROW									13,524	-13,524		-13,524	-13,524			-13,524
EARTH WASTE IN LIEU BORROW												-948,644		-948,644		-948,644
ADJ. FOR ROCK WASTE											-2,705	-2,705				
SHOULDER MATERIAL								60,500		60,500	72,600	72,600				
PROJECT TOTALS			**1,471,802**	**75,486**	**18,900**	**855**	**1,395,461**	**1,298,008**	**75,486**	**1,222,522**	**1,542,513**	**71,566**			**19,755**	**19,755**
EST. TO REPLACE TOP																
SOIL ON BORROW PITS												3,578				
GRAND TOTALS			**1,471,802**		**18900**							**75,144**				**19,755**
	SAY		**1,472,000**									**75,200**				
PAV'T STRUCTURE VOLUME -L- =29,956 ~~square~~ meters																
			cubic													

EARTHWORK TOTALS FOR ALTERNATE PAV'T DESIGN

SUMMARY TOTALS	1,486,802	75,486	11,900	855	1,410,461	1,230,508	61,962	1,168,546	1,464,218	940,439	13,524	948,644	12,755	974,923
ADJ. FOR ALT. PAVT DESIGN	-16,000				-16,000	8,435		8,435	10,122	10,122		-16,000		-16,000
ADDITIONAL UNDERCUT			7,000			7,000		7,000	8,400	8,400			7,000	7,000
LOSS DUE TO CLR. & GRUB.	-15000				-15,000					15,000				
ROCK WASTE IN LIEU OF BORROW							13,524	-13,524		-13524	-13524			-13524
EARTH WASTE IN LIEU OF BORROW										-932,644		-932,644		-932644
ADJUSTMENT FOR ROCK WASTE									-2,705	-2,705				
SHOULDER MATERIAL						43,375		45,375	54,450	54,450				
PROJECT TOTALS	**1,455,802**	**75,486**	**18,900**	**855**	**1,379,461**	**1,289,318**	**75,486**	**1,215,832**	**1,534,485**	**79,538**			19755	19755
EST. TO REPLACE TOP														
SOIL ON BORROW PITS										3,977				
TOTAL	**1,455,802**		**18,900**							**83,515**				
SAY	**1,455,900**		**18,900**							**83,600**				
PAV'T STRUCTURE VOLUME -L- =28,458 ~~square~~ meters														
			cubic											

PROJECT REFERENCE NO.	SHEET NO.
R-0609IA	4
R /W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

METRIC

5 0 10

CONST.REV. _____

R /W REV. _____

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

REVISIONS

8/17/99

NAD 83

DATUM DESCRIPTION

THE LOCALIZED COORDINATE SYSTEM DEVELOPED FOR THIS PROJECT IS BASED ON THE STATE PLANE COORDINATES ESTABLISHED BY NCGS FOR MONUMENT "HOLLAND" WITH NAD 83 STATE PLANE GRID COORDINATES OF NORTHING: 243098.3720(m) EASTING: 525132.3280(m)
THE AVERAGE COMBINED GRID FACTOR USED ON THIS PROJECT (GROUND TO GRID) IS: 0.999908360
THE N.C. LAMBERT GRID BEARING LOCALIZED HORIZONTAL GROUND DISTANCE FROM "HOLLAND" TO -L- STATION (supplied by roadway) IS

ALL LINEAR DIMENSIONS ARE LOCALIZED HORIZONTAL DISTANCES
VERTICAL DATUM USED IS NGVD 29

SEE SHEET 2-D FOR CURVE DATA
SEE SHEETS 2-E THRU 2-R FOR SHEAR POINT DIAGRAM

M.C. DEVELOPMENT COMPANY
DB 3582 PG 1909
6.014 HA (TAX MAP)

N 3° 40' 48" W
69.987

35' SCNL

35' SCNL

3.0PS
3.6
3.6
1.2PS

S 60° 05' 21.9" E

11+00

19' SCNL

1.2PS
3.6
3.6
3.0PS

MATCHLINE SHEET 5

CLINARD INVESTMENTS, LLC
DB 4354 PG 1249
PB 89 PG 39
0.491 HA (TAX MAP)

N 47° 09' 30" W
58.877

S 86° 32' 26" W
78.838

N 77° 30' 26" E
93.788

M.C. DEVELOPMENT COMPANY
DB 3582 PG 1909
6.014 HA (TAX MAP)

ISBK BUS

CONC

BST

GR

EIP

EIP

$$$$$$$$SYSTIME$$$$$$$$
$$$$$$$$USERNAME$$$$$$$$
$$$$$$$$DGN$$$$$$$$$$$$$$$$

PROJECT REFERENCE NO.	SHEET NO.
R-06091A	5
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

METRIC

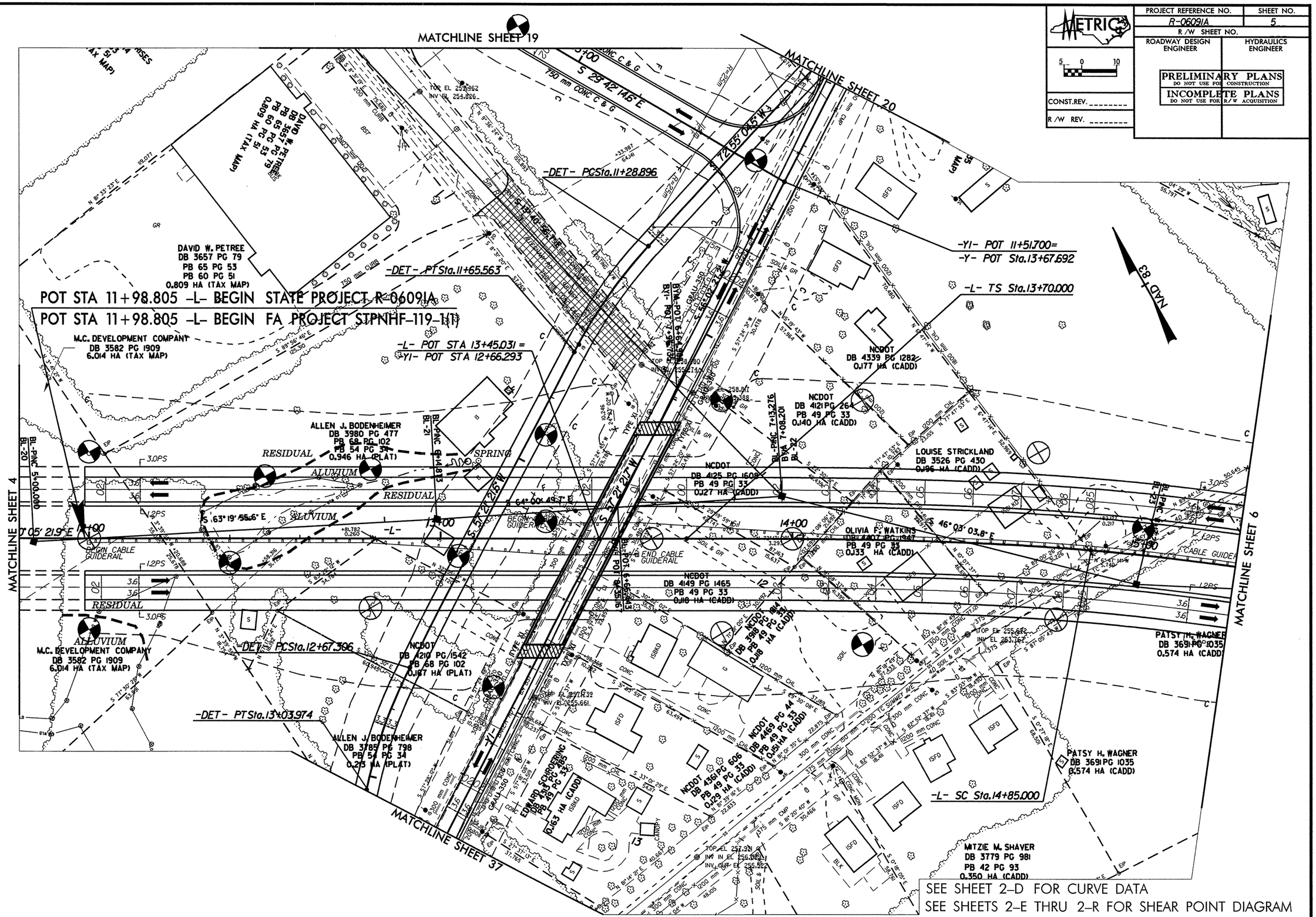
5 0 10

CONST.REV. _____

R/W REV. _____

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

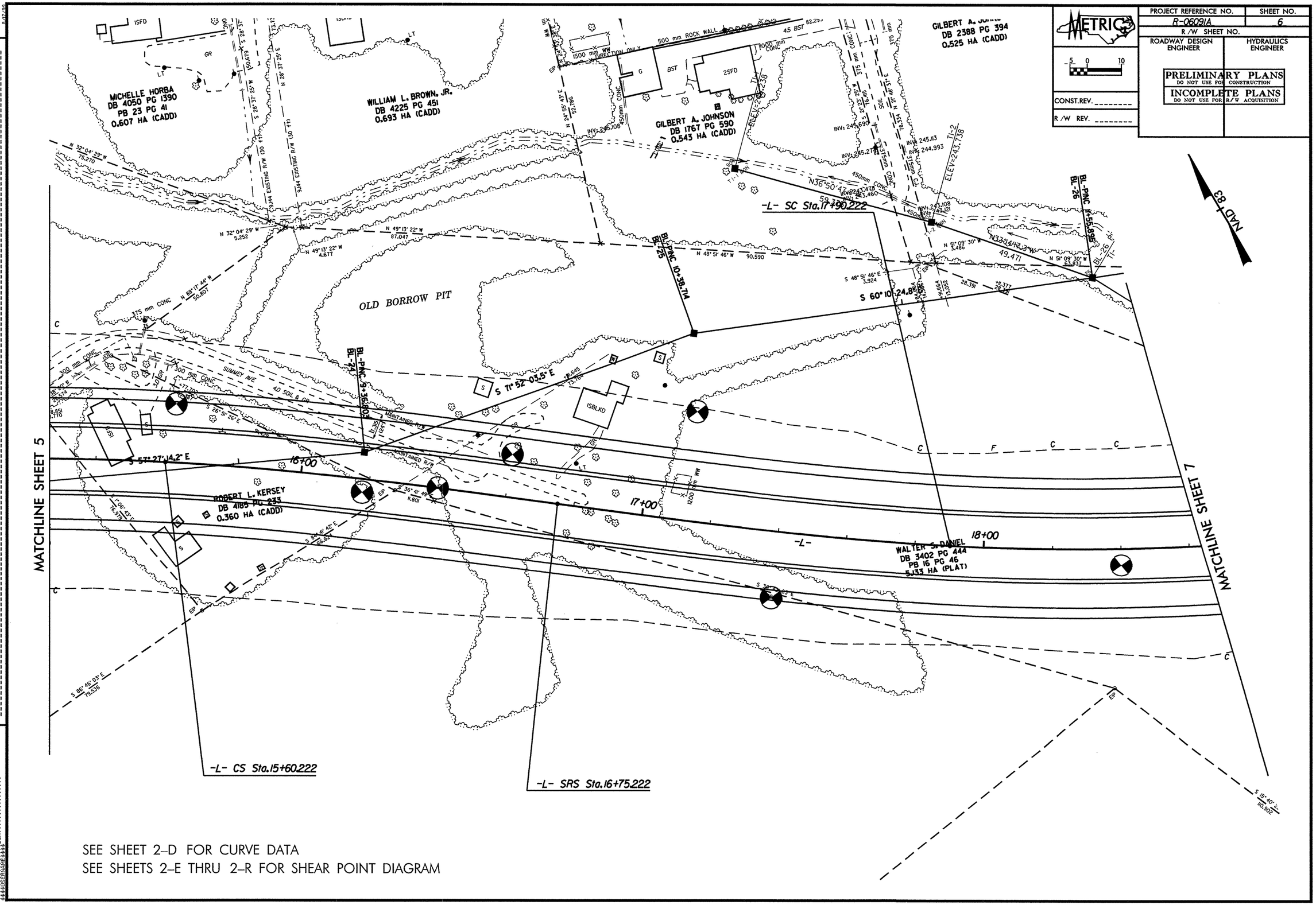
INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION



SEE SHEET 2-D FOR CURVE DATA

SEE SHEETS 2-E THRU 2-R FOR SHEAR POINT DIAGRAM

REVISIONS



SEE SHEET 2-D FOR CURVE DATA
SEE SHEETS 2-E THRU 2-R FOR SHEAR POINT DIAGRAM

REVISIONS

SEE SHEET 2-D FOR CURVE DATA

SEE SHEETS 2-E THRU 2-R FOR SHEAR POINT DIAGRAM

PROJECT REFERENCE NO.	SHEET NO.
R-0609IA	8
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

METRIC

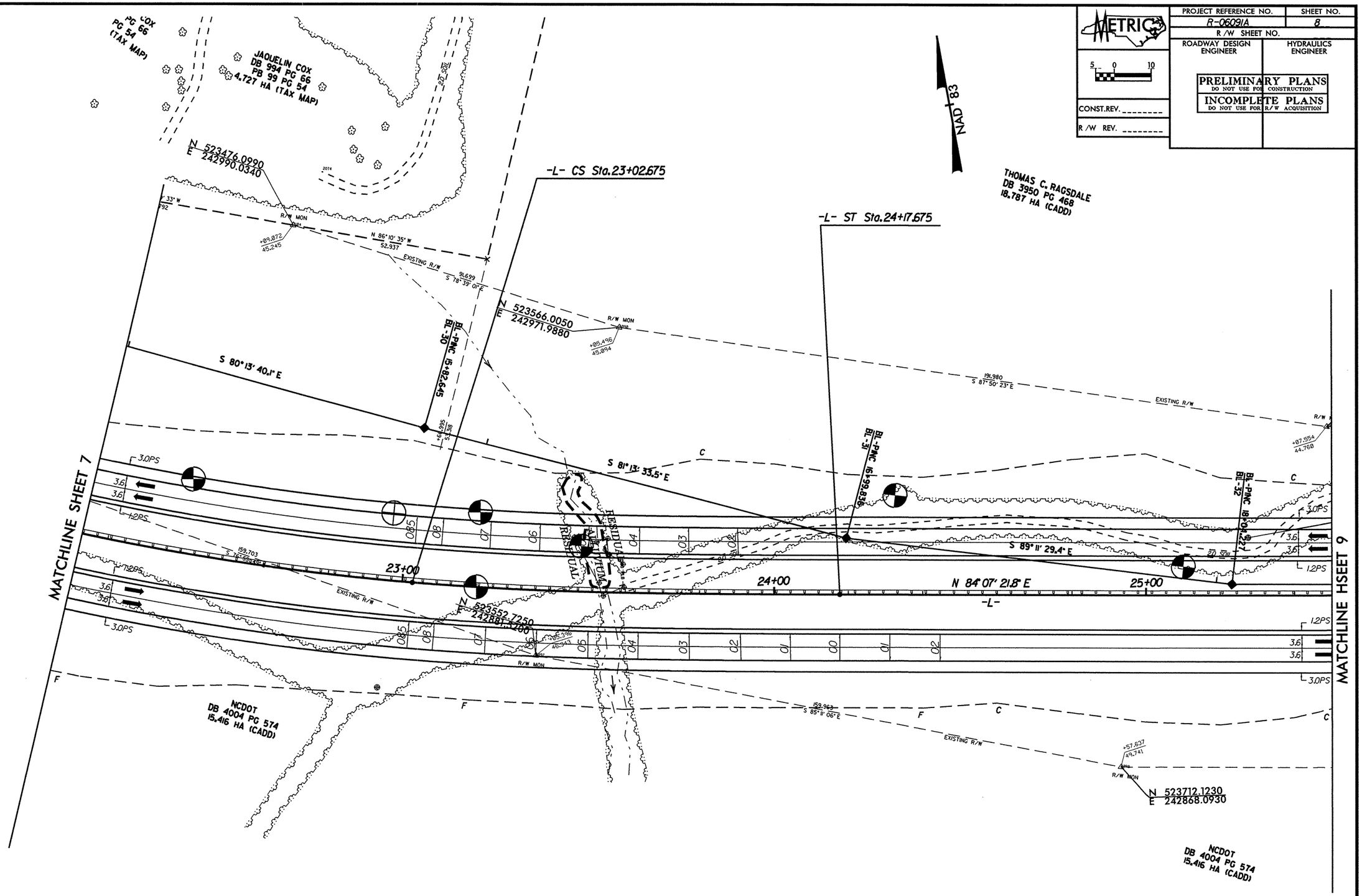
5 0 10

CONST.REV. _____

R/W REV. _____

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION



SEE SHEET 2-D FOR CURVE DATA

SEE SHEETS 2-E THRU 2-R FOR SHEAR POINT DIAGRAM

REVISIONS

PROJECT REFERENCE NO.	SHEET NO.
R-06091A	9
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

METRIC

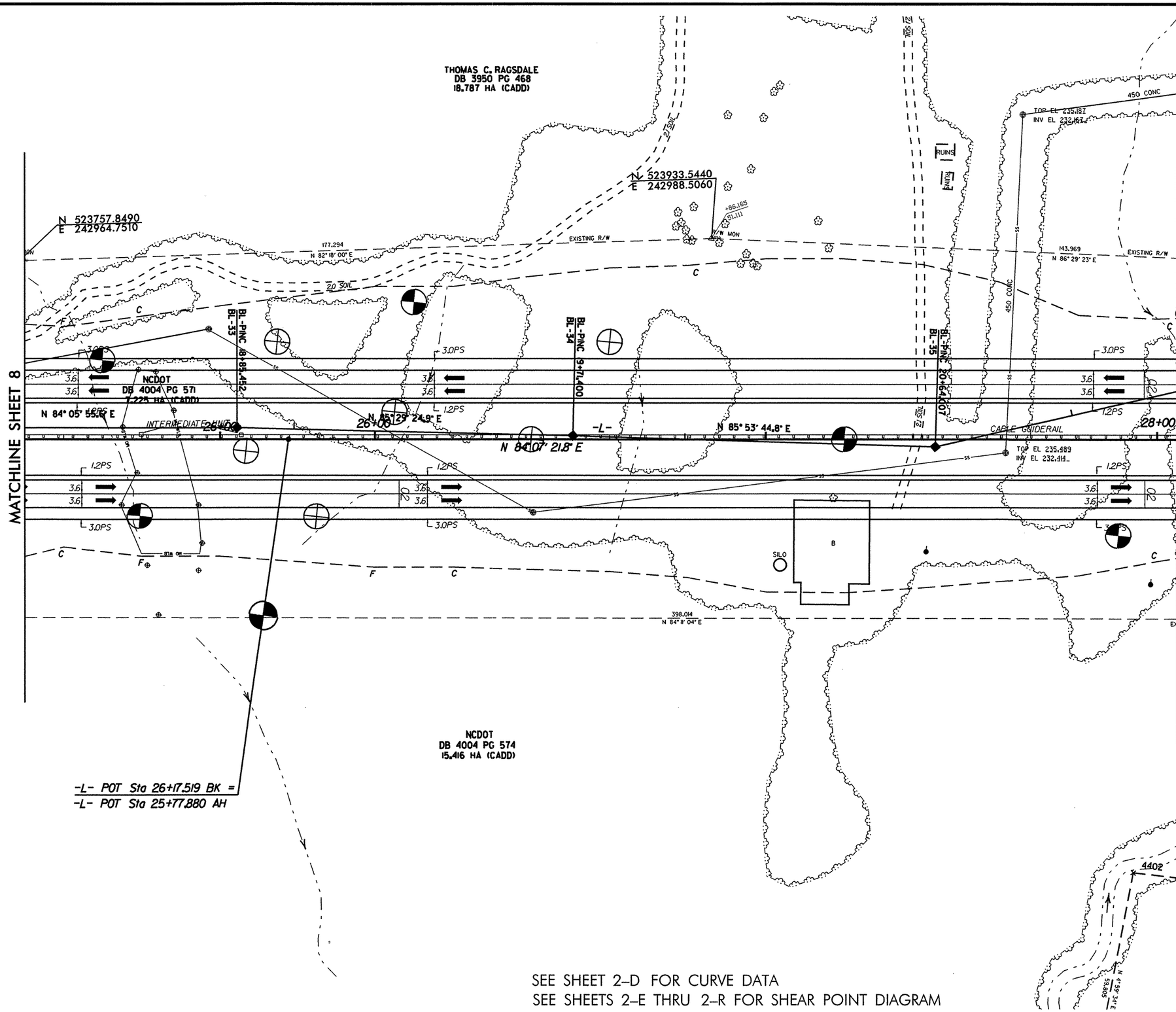
5 0 10

CONST.REV. _____

R/W REV. _____

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION



SEE SHEET 2-D FOR CURVE DATA
SEE SHEETS 2-E THRU 2-R FOR SHEAR POINT DIAGRAM

REVISIONS

PROJECT REFERENCE NO.	SHEET NO.
R-0609IA	10
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

METRIC

-5 0 10

CONST.REV. _____

R/W REV. _____

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

REVISIONS

MATCHLINE SHEET 21

MATCHLINE SHEET 9

MATCHLINE SHEET 11

MATCHLINE SHEET 22

NAD 83

W. L. JACKSON
DB 1846 PG 622
0.789 HA (TAX MAP)

ROY E. WHITE
DB 2101 PG 210
3.880 HA (CADD)

LAWSON J. INGRAM
DB 1847 PG 636
3.300 HA (CADD)

CLIFFORD L. HILL
DB 3363 PG 589
9.712 HA (TAX MAP)

NCDOT
DB 4004 PG 574
15.416 HA (CADD)

NCDOT
DB 4015 PG 1743
0.166 HA (CADD)

CLIFFORD L. HILL
DB 2597 PG 74
11.785 HA (TAX MAP)

-L- POT STA 28+77.454 =
-Y2- POT STA 13+41.484

SEE SHEET 2-D FOR CURVE DATA
SEE SHEETS 2-E THRU 2-R FOR SHEAR POINT DIAGRAM

PROJECT REFERENCE NO.	SHEET NO.
R-0609IA	11
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

METRIC

-5 0 10

CONST.REV. _____

R/W REV. _____

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

REVISIONS

8/17/98

NAD '83

CLIFFORD L. HILL
DB 3363 PG 589
9.712 HA (TAX MAP)

-L- TS Sta. 33+70.459

-L- SC Sta. 34+65.459

T3-2
ELEV=217.640

T3-1
ELEV=217.655

N 32°06.0'E
38.594

N 41°01'05.2"E
71.740

BL-39 PNC 26+28.033
T2
ELEV=214.165

BL-PNC
BL-39
26+28.033

BL-PNC
BL-40
27+65.388

MARJORIE SURRETT
DB 3201 PG 486
4.848 HA (TAX MAP)

MATCHLINE SHEET 10

MATCHLINE SHEET 12

32+00

N 84° 26' 33.2" E

N 84° 07' 21.8" E

33+00

N 84° 53' 13.7" E

34+00

-L-

N 87° 02' 53.3" E

35+

T3-4
ELEV=216.356

T3-3
ELEV=216.092

S 43°06'53.9"W
49.567

1648
MON. T3-3

1647
MON. T3-4

S79°09'01.0"W
76.150

214.572

0.0"W

640

4441

S 88° 25' 24" E
151.893

4SBW

CLIFFORD L. HILL
DB 3363 PG 589
9.712 HA (TAX MAP)

MARJORIE SURRETT
DB 3201 PG 486
4.848 HA (TAX MAP)

VIRGINIA HUBBARD
DB 2454 PG 723
DB 2583 PG 408
2.902 HA (TAX MAP)

CLIFFORD L. HILL
DB 2597 PG 74
11.785 HA (TAX MAP)

STONE

1200 mm WW @ 45BW

SEE SHEET 2-D FOR CURVE DATA

SEE SHEETS 2-E THRU 2-R FOR SHEAR POINT DIAGRAM

$$$$$$$$SETTIME$$$$$$$$
$$$$$$$$SESSIONS$$$$$$$$
$$$$$$$$USERNAME$$$$$$$$

PROJECT REFERENCE NO.	SHEET NO.
R-0609IA	12
R /W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

METRIC

5 0 10

CONST.REV. _____

R /W REV. _____

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

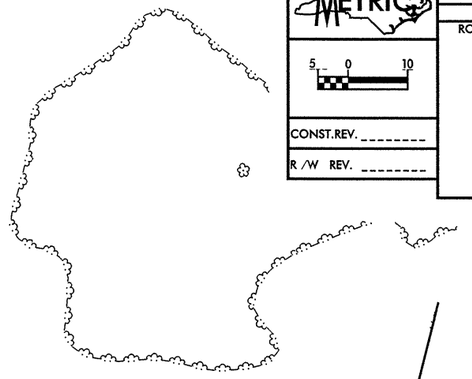
INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

REVISIONS

8/17/99

NAD 83

BEAZER MATERIALS & SERVICES, INC.
DB 3740 PG 532
7.588 HA (TAX MAP)



N 86° 07' 56" W
417.189

MARJORIE SURRETT
DB 3201 PG 486
4.848 HA (TAX MAP)

C

F

F

C

BL-PNC 29+11.449
BL-42

BL-PNC 29+86.473
BL-43

BL-PNC 30+85.816
BL-44

RESIDUAL

ALLUVIUM

RESIDUAL

36+00

-L-

37+00

S 88° 02' 13.2" E

S 85° 11' 59.4" E

S 83° 03' 41.7" E

S 81° 25' 14.28" E

MATCHLINE SHEET 11

MATCHLINE SHEET 13

RESIDUAL

ALLUVIUM

RESIDUAL

C

C

MARJORIE SURRETT
DB 3201 PG 486
4.848 HA (TAX MAP)

S 85° 57' 45" E
303.473

EIP

S 85° 57' 48" E
88.647

N 15° 50' 15" E
36.099

PHYLLIS P. NANCE
DB 4176 PG 723
5.621 HA (CADD)

TO SOW

SEE SHEET 2-D FOR CURVE DATA
SEE SHEETS 2-E THRU 2-R FOR SHEAR POINT DIAGRAM

PROJECT REFERENCE NO.	SHEET NO.
R-0609IA	13
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

METRIC

CONST. REV.

R/W REV.

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

REVISIONS

SEE SHEET 2-D FOR CURVE DATA

SEE SHEETS 2-E THRU 2-R FOR SHEAR POINT DIAGRAM

PROJECT REFERENCE NO.	SHEET NO.
R-0609IA	14
R /W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

METRIC

-5 0 10

CONST.REV. _____

R /W REV. _____

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

REVISIONS

-DET3-
PI Sta 12+71.996
Δ = 45° 23' 51.0" (LT)
L = 39.617
T = 20.914
R = 50.000

BOBBY L. CECIL
DB 3730 PG 1986
46.462 HA (TAX MAP)

WEST WEATHERS RUN

MATCHLINE SHEET 26

N 79° 02' 31.6" E

-DET2- PCSta.13+44.338

-Y4-

-DET3- POTSta.12+44.513

-DET3- PTSta.12+90.699

-DET3- PCSta.12+51.082

-DET3- POTSta.12+98.913

-L- CS Sta.42+74.305

-L- SC Sta.43+34.305

S 53° 33' 37.6" W

NCDOT
DB 4523 PG 1594
5.866 HA (DEED)

MATCHLINE SHEET 13

42+00

43+00

44+00

-L-

BL-PINC 35+25.249
BL-47

S 54° 41' 55.8" E

S 41° 59' 53.1" W

BL-PINC 36+41.712
BK 28.137
48° 36' 35.1" E

11+00

S 31° 21' 10.9" E

MATCHLINE TO SHEET 15

-DET2-

NCDOT
DB 4523 PG 1594
5.866 HA (DEED)

N 54° 54' 51" E
CR = 31.098
CR = 825.134

-DET2-

-FLY- TS Sta.10+86.259

-FLY- SC Sta.11+46.259

-DET2-
PI Sta 14+80.906
Δ = 107° 34' 26.8" (RT)
L = 187.752
T = 136.568
R = 100.000

-FLY- POT Sta.10+00.000 =
-L- POC STA 43+01.992 (RT.10.8M)
Δ = 4.000

-DET2- PTSta.15+32.090

S 15° 22' 27" W

S 54° 08' 43.5" E

MATCHLINE SHEET 25

GUY

RESIDUAL
ALLUVIUM

RESIDUAL

13+00

ALLUVIUM

RESIDUAL

12+00

BOBBY L. CECIL
DB 3966 PG 484
0.963 HA (TAX MAP)

-Y5- CS Sta.13+00.652

-Y5- SC Sta.11+25.000

BOBBY L. CECIL
DB 3730 PG 1986
46.462 HA (TAX MAP)

N 71° 14' 48" W
159.274

NAD 83

SEE SHEET 2-D FOR CURVE DATA
SEE SHEETS 2-E THRU 2-R FOR SHEAR POINT DIAGRAM

$$$$$$SYSTIME$$$$$$
$$$$$$DESIGN$$$$$$
$$$$$$USERNAME$$$$$$

METRIC	PROJECT REFERENCE NO.	SHEET NO.
	R-0609IA	15
	R /W SHEET NO.	
	ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
CONST.REV.	PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	
R /W REV.	INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION	

-5 0 10

NAD 83

REVISIONS

MATCHLINE SHEET 14

MATCHLINE SHEET 16

BOBBY L. CECIL
DB 3730 PG 1986
46.462 HA (TAX MAP)

-RAMP B- ST Sta.16+39.504 =
-L- POC STA.48+08.278 (LT 21.3)

ROLAND J. GREER
DB 4222 PG 177
0.692 HA (TAX MAP)

C F F C

45+00 BL-PNC 38+25.695 BL-49

PROBE PROBE 46+00 PROBE

BL-PNC 39+88.138 BL-50

47+00

BL-PNC 40+84.202 BL-51

48+00

POND

S 49° 30' 27.6" E

S 45° 17' 06.2" E

S 45° 38' 37.9" E

PROBE PROBE PROBE PROBE PROBE

13+00

PI Sta 14+15.065
Δ = 25° 21' 16.0" (RT)
D 5.28830
R 268.806
T 60.000
L 119.000

-FLY-

14+00

-RAMP C- CS Sta.10+00.000 =
-FLY- STA 15+05.617 (RT.7.2M)
Δ = 4.000

14+00

PROBE PROBE PROBE PROBE PROBE

15+00

-Y5-

16+00

NCDOT
DB 4509 PG 1519
2.227 HA (CADD)

-Y5- SC Sta.13+65.652

BOBBY L. CECIL
DB 3730 PG 1986
46.462 HA (TAX MAP)

-Y5- CS Sta.15+60.960

-Y5- SC Sta.16+25.960

445T

SEE SHEET 2-D FOR CURVE DATA
SEE SHEETS 2-E THRU 2-R FOR SHEAR POINT DIAGRAM

REVISIONS

METRIC

PROJECT REFERENCE NO.	SHEET NO.
R0825A	2-C
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

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

CONST. REV. _____
R/W REV. _____

SEE SHEET 2-D FOR CURVE DATA
SEE SHEETS 2-E THRU 2-R FOR SHEAR POINT DIAGRAM

MATCHLINE SHEET 30

MATCHLINE SHEET 30

MATCHLINE SHEET 15

MATCHLINE SHEET 17

MATCHLINE SHEET 31

-RAMP B- CS Sta.5+74.924

-RAMP B- SC Sta.8+00.000

-LOOP B- ST Sta.10+00.000
-SECD- POT STA 20+88.39 (17.39)

-LOOP B- CS Sta.12+34.65

-LOOP B- ST Sta.12+94.65 =
-SECD- POT STA 20+88.39 (17.39)

-LOOP A- SC Sta.10+60.000

-LOOP A- CS Sta.11+90.838

-LOOP A- ST Sta.12+90.838 =
-SECD- POT STA 52+99.566 (17.39)

-LOOP A- ST Sta.10+00.000 =
-SECD- POT STA 20+88.39 (17.39)

-LOOP C- CS Sta.12+89.83

-LOOP C- ST Sta.12+89.83
-1- POT STA 54+80.89 (INT. 25.30)

-LOOP C- SC Sta.10+60.000

-LOOP C- ST Sta.10+00.000=
-SECD- POT STA 21+68.405 (INT. 1.64)

-F17- CS Sta.15+73.089

-F17- SRS Sta.17+35.089

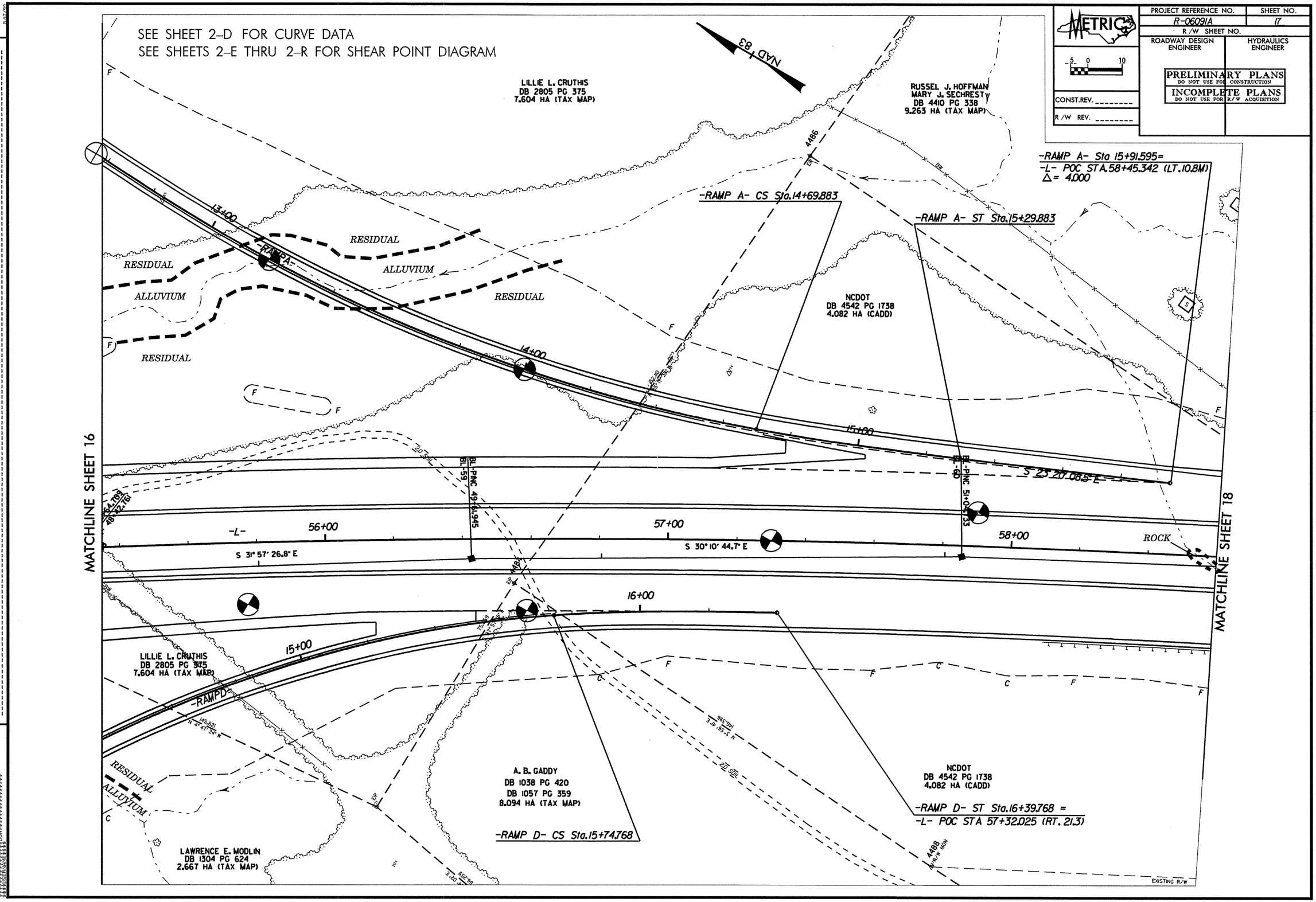
-F17- SC Sta.18+35.089

-RAMP C- SC Sta.10+65.000

-F9- CS Sta.5+45.45

RESIDUAL
ALLUVIUM
ROCK

LOCATION: _____
TIP NO. _____ COUNTY: _____
DESIGNED BY: _____ DATE: _____
CHECKED BY: _____ DATE: _____



SEE SHEET 2-D FOR CURVE DATA
SEE SHEETS 2-E THRU 2-R FOR SHEAR POINT DIAGRAM
NAD 83
METRIC
PROJECT REFERENCE NO.
R-06091A
SHEET NO.
17
R/W SHEET NO.
ROADWAY DESIGN ENGINEER
HYDRAULICS ENGINEER
PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION
INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION
CONST.REV.
R/W REV.
LILLIE L. CRUTHIS
DB 2805 PG 375
7.604 HA (TAX MAP)
RUSSEL J. HOFFMAN
MARY J. SECHREST
DB 4410 PG 338
9.263 HA (TAX MAP)
-RAMP A- Sta 15+91.595=
-L- POC STA.58+45.342 (LT.10.8M)
Δ= 4.000
-RAMP A- CS Sta.14+69.883
-RAMP A- ST Sta.15+29.883
RESIDUAL
ALLUVIUM
RESIDUAL
ALLUVIUM
RESIDUAL
RESIDUAL
NCDOT
DB 4542 PG 1738
4.082 HA (CADD)
13+00
14+00
15+00
16+00
-RAMP A-
-RAMP D-
S 23° 20' 08.5" E
BL-PINC 49+61.945
BL-59
BL-PINC 51+04.33
BL-60
-L-
56+00
57+00
58+00
S 31° 57' 26.8" E
S 30° 10' 44.7" E
ROCK
MATCHLINE SHEET 16
MATCHLINE SHEET 18
LILLIE L. CRUTHIS
DB 2805 PG 375
7.604 HA (TAX MAP)
A. B. GADDY
DB 1038 PG 420
DB 1057 PG 359
8.094 HA (TAX MAP)
-RAMP D- CS Sta.15+74.768
NCDOT
DB 4542 PG 1738
4.082 HA (CADD)
-RAMP D- ST Sta.16+39.768 =
-L- POC STA 57+32.025 (RT. 21.3)
LAWRENCE E. MODLIN
DB 1304 PG 624
2.667 HA (TAX MAP)
EXISTING R/W

REVISIONS

METRIC	PROJECT REFERENCE NO.	SHEET NO.
5 0 10	R-0609IA	18
	R /W SHEET NO.	
CONST.REV. _____	ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
R /W REV. _____	PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	
	INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION	

REVISIONS

MATCHLINE SHEET 17

NAD 83

POT STA. 61+00.000 -L- END STATE PROJECT R-0609IA
POT STA. 61+00.000 -L- END FA PROJECT STPNHF-119-1(1)

FAIRFIELD GOLF CLUB, INC.
DB 3345 PG 707
PB 5 PG 351
22.140 HA (TAX MAP)

S 3° 44' 02" W 481.042

S 88° 25' 13" E 89.440

4241

LESSIE COX HEIRS
DB 3345 PG 707
PB 5 PG 351
1.025 HA (CADD)

ISLND

S 2° 42' 12" W 111.207

1600 cm CML

4239

DUCK HOUSES

RUSSEL J. HOFFMAN
MARY J. SECHREST
DB 4410 PG 338
9.263 HA (TAX MAP)

-L- CS Sta.58+99.593

-L- ST Sta.59+34.593

NEW MANMADE POND - WATER DEPTH APPROXIMATELY 1.0 METER DEEP

RESIDUAL

ALLUVIUM

BL-PNC 52+82.602
BL-61

BL-PNC 53+36.630
BL-62

BL-PNC 54+72.525
BL-63

S 27° 44' 14.9" E

59+00

60+00

S 23° 06' 10.2" E

S 25° 48' 31.0" E

POND 61+00

S 27° 17' 43.4" E

S 32° 12' 08.3" E

ALLUVIUM

RESIDUAL

RUSSEL J. HOFFMAN
MARY J. SECHREST
DB 4410 PG 338
9.263 HA (TAX MAP)

20 SOIL

12 SOIL

NCDOT
DB 4542 PG 1738
4.082 HA (CADD)

4490
R/W MON

S 27° 28' 16" E
242.654

S 25° 47' 00" E
48.914

EXISTING R/W

4489
R/W MON

12 SOIL

20 SOIL

ABLE

S 19° 28' 08" E

SEE SHEET 2-D FOR CURVE DATA
SEE SHEETS 2-E THRU 2-R FOR SHEAR POINT DIAGRAM

POND

$$$$USERNAME$$$$
$$$$SYSTIME$$$$

METRIC	PROJECT REFERENCE NO.	SHEET NO.
5 0 10	R-0609IA	19
CONST.REV. _____	R /W SHEET NO.	
R /W REV. _____	ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

REVISIONS

NAD 83

BEGIN CONSTRUCTION
-Y- POT Sta.10+00.000

-Y- PC Sta.10+61.541

QUICK/HART ENTERPRISES
DB 3574 PG 1160
PB 118 PG 141
1.651 HA (TAX MAP)

QUICK/HART ENTERPRISES
DB 3865 PG 1067
PB 118 PG 141
0.761 HA (TAX MAP)

QUICK/HART ENTERPRISE
DB 4224 PG 1135
0.194 HA (TAX MAP)

THOMAS J. BEAVER
DB 3210 PG 979
PB 65 PG 53
PB 60 PG 51
0.651 HA (TAX MAP)

THOMAS J. BEAVER
DB 3605 PG 1188
PB 65 PG 53
PB 60 PG 51
0.809 HA (TAX MAP)

OPAL WITCHER
DB 2647 PG 783
0.243 HA (TAX MAP)

QUICK/HART ENTERPR
DB 3640 PG 12
PB 65 PG
PB 60 PG
0.809 HA (T

MATCHLINE SHEET 20

SEE SHEET 2-D FOR CURVE DATA
SEE SHEETS 2-E THRU 2-R FOR SHEAR POINT DIAGRAM

*****SYSTIME*****
*****USERNAME*****

METRIC	PROJECT REFERENCE NO.	SHEET NO.
	R-0609IA	20
	R /W SHEET NO.	
-5 0 10	ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
CONST.REV. _____	PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	
R /W REV. _____	INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION	

REVISIONS

-Y1- POT STA.10+00.000

-DET- POTSta.10+00.000

SHANNON T. QUEEN
DB 4354 PG 47
0.405 HA (TAX MAP)

JERRY FOX
DB 3045 PG
1.295 HA (TAX

ISFD

ISBKD

SOIL

900 mm CONC

300 mm CONC

100 mm PL
TOP EL 259.089
INV EL 256.201

200 LF

EXISTING R/W

BYL-PINC 5+00.000
GPS-5

BAKER RD 6.4 BST

-YL- S 57° 21' 22.8" W

300 mm CMP

375 mm CONC

-DET- PCSta.10+13.572

-DET- PTSta.10+50.239

BST

GR

80 OR

CONC

2.545 HA (TAX MAP)
DB 2902 PG 874
GRIFFIN UPHOLSTERY COMPANY
ISBK
BUS

BEGIN CONSTRUCTION
-Y1- POT STA.10+20.000

0.850 HA (TAX MAP)
DB 1691 PG 609
DELLA T. GRIFFIN

750 mm

-Y- PT Sta.12+49.168

DELLA T. GRIFFIN
DB 3573 PG 1676
1.182 HA (TAX MAP)

MATCHLINE SHEET 5

MATCHLINE SHEET 19

NAD 83

SEE SHEET 2-D FOR CURVE DATA
SEE SHEETS 2-E THRU 2-R FOR SHEAR POINT DIAGRAM

PROJECT REFERENCE NO.	SHEET NO.
R-06091A	21
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

METRIC

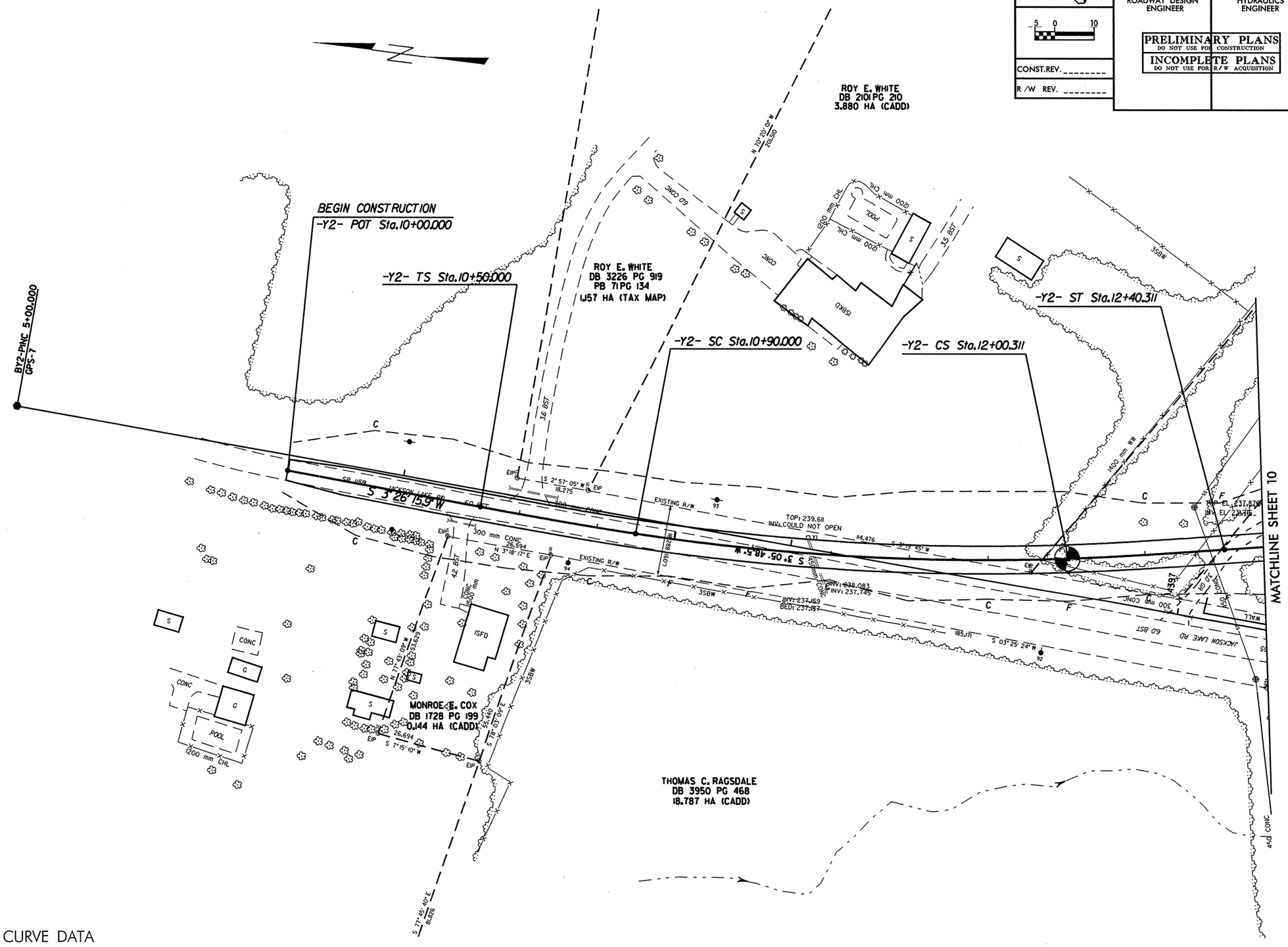
5 0 10

CONST.REV. _____

R/W REV. _____

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION



SEE SHEET 2-D FOR CURVE DATA
SEE SHEETS 2-E THRU 2-R FOR SHEAR POINT DIAGRAM

REVISIONS

8/17/99

$$$$SYSTIME$$$$
$$$$DGN$$$$
$$$$USERNAME$$$$

PROJECT REFERENCE NO.	SHEET NO.
R-0609IA	22
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

CONST.REV. _____

R/W REV. _____

REVISIONS

NAD 83

MATCHLINE SHEET 10

OSROE W. WELCH
DB 1843 PG 106
0.292 HA (CADD)

OSROE W. WELCH
DB 2856 PG 870
0.196 HA (CADD)

KENNETH L. MYERS
DB 3215 PG 826
PB 71PG 88
2.033 HA (TAX MAP)

KENNETH L. MYERS
DB 2651PG 211
PB 71PG 88
0.396 HA (TAX MAP)

GUY N. CUROL
DB 4189 PG 457
0.986 HA (CADD)

KENNETH L. MYERS
DB 4132 PG 1488
PB 71PG 87
0.847 HA (TAX MAP)

KENNETH L. MYERS
DB 4132 PG 1488
PB 71PG 88
0.583 HA (TAX MAP)

-Y2- PC Sta.14+85.318

-Y2- PT Sta.16+67.312

END CONSTRUCTION
-Y2- POT Sta.17+41.032

SEE SHEET 2-D FOR CURVE DATA
SEE SHEETS 2-E THRU 2-R FOR SHEAR POINT DIAGRAM

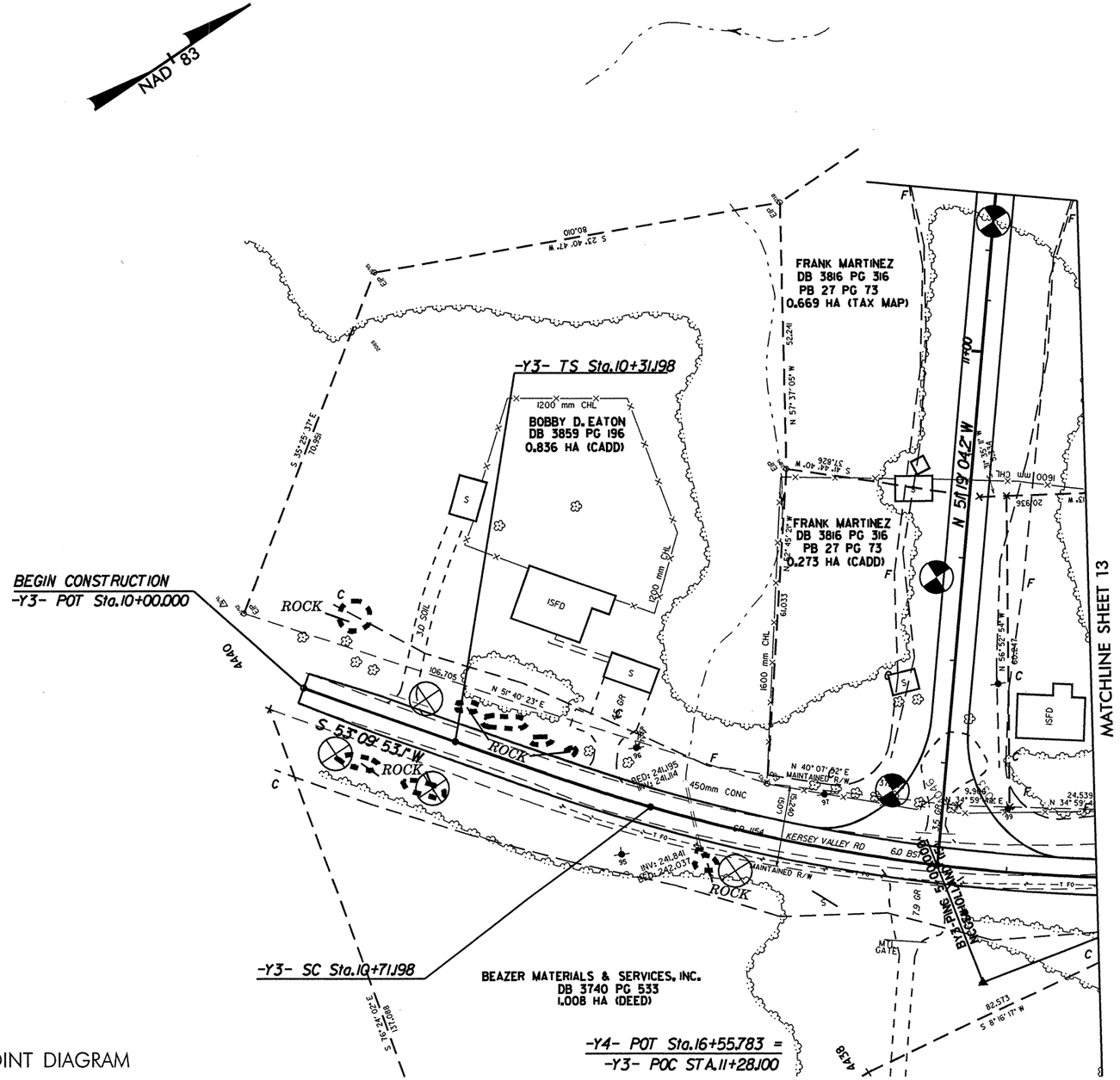
METRIC	PROJECT REFERENCE NO.	SHEET NO.
5 0 10	R-0609IA	23
CONST.REV. _____	R /W SHEET NO.	
R /W REV. _____	ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

REVISIONS

NAD 83



SEE SHEET 2-D FOR CURVE DATA
SEE SHEETS 2-E THRU 2-R FOR SHEAR POINT DIAGRAM

PROJECT REFERENCE NO.	SHEET NO.
R-6091A	24
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

METRIC

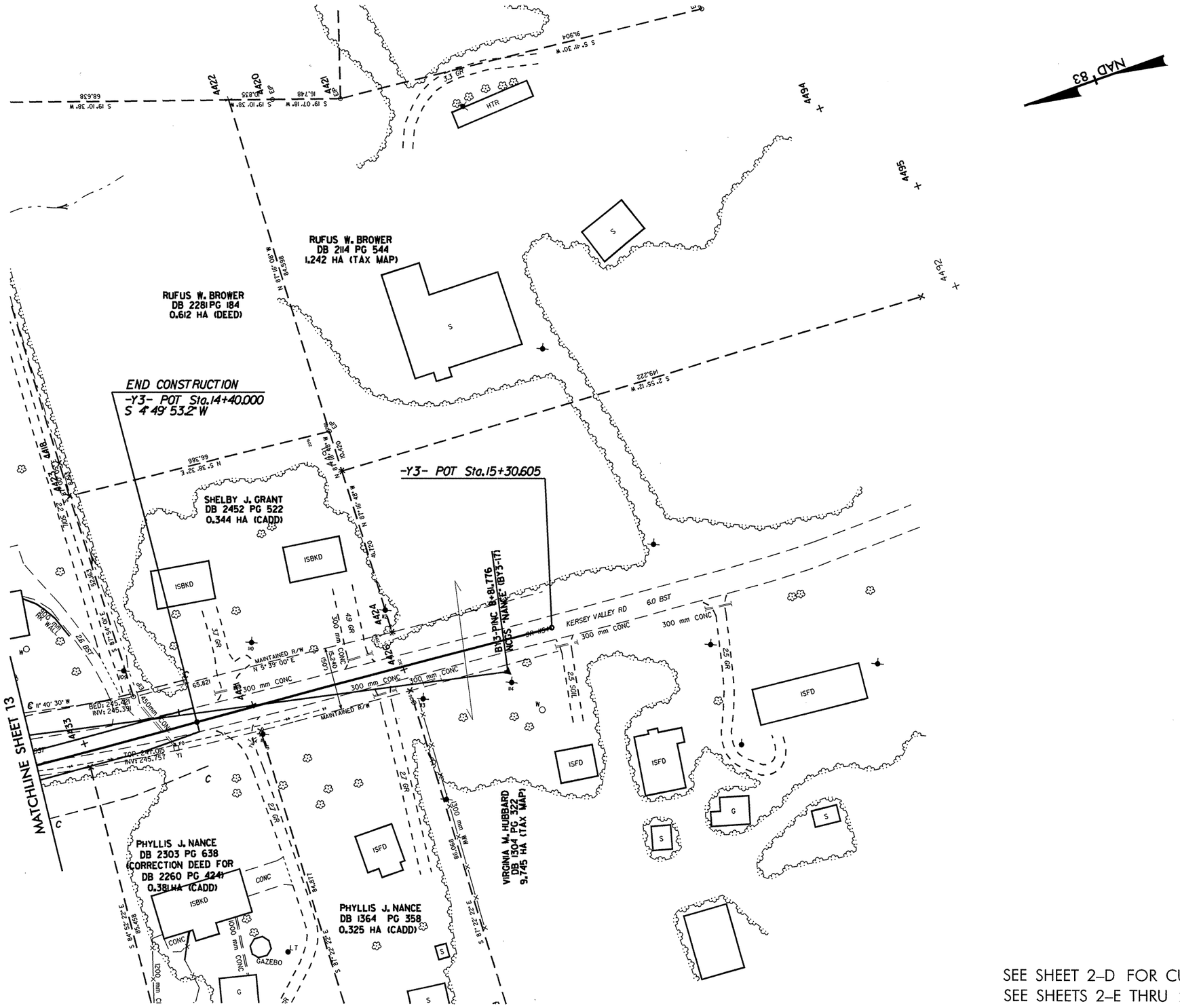
5 0 10

CONST.REV. _____

R/W REV. _____

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION



SEE SHEET 2-D FOR CURVE DATA
SEE SHEETS 2-E THRU 2-R FOR SHEAR POINT DIAGRAM

REVISIONS

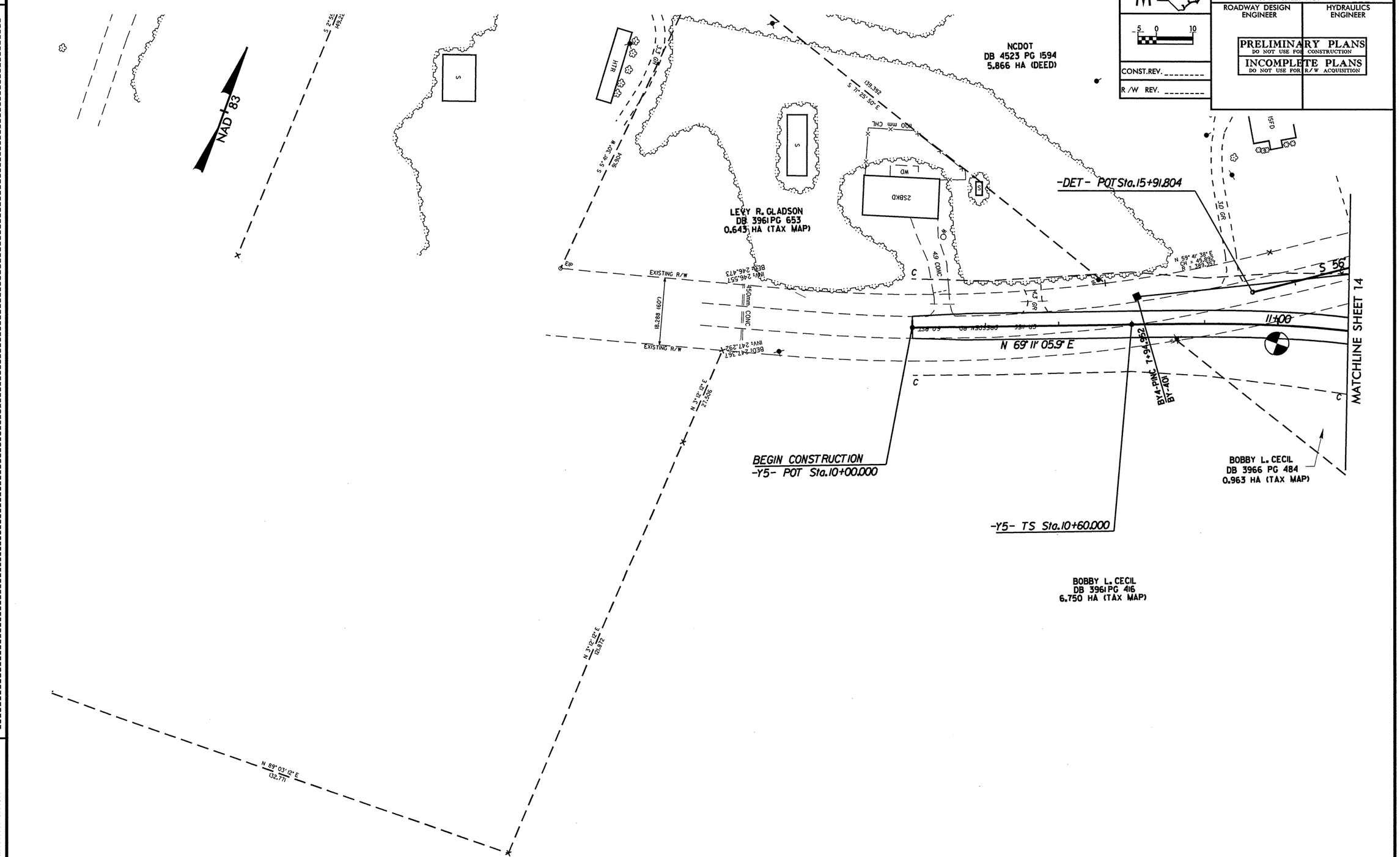
PROJECT REFERENCE NO.	SHEET NO.
R-06091A	25
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

METRIC

CONST.REV. _____

R/W REV. _____

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



SEE SHEET 2-D FOR CURVE DATA
SEE SHEETS 2-E THRU 2-R FOR SHEAR POINT DIAGRAM

REVISIONS

PROJECT REFERENCE NO.	SHEET NO.
R-06091A	26
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

METRIC

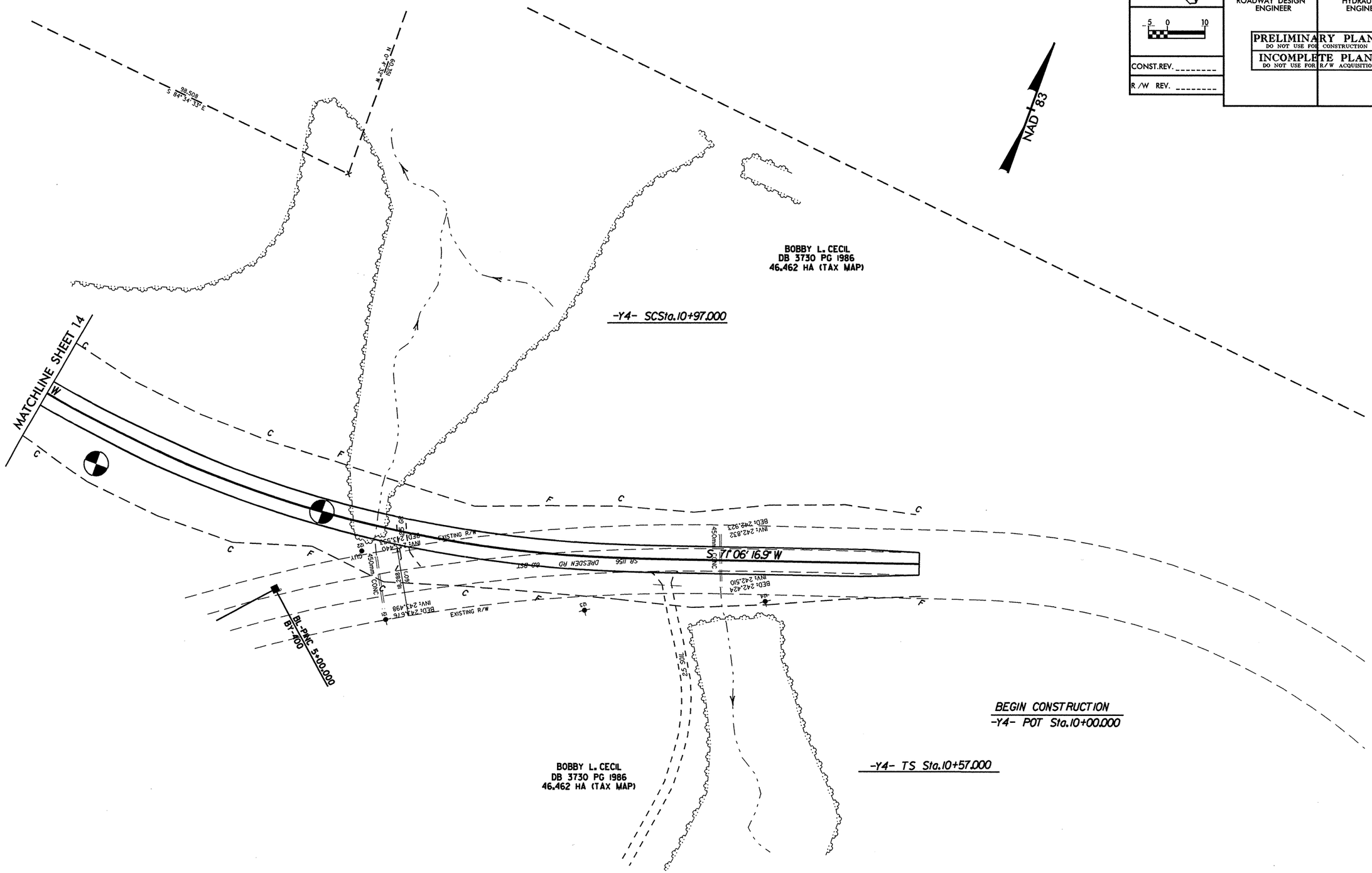
5 0 10

CONST.REV. _____

R/W REV. _____

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION



SEE SHEET 2-D FOR CURVE DATA
SEE SHEETS 2-E THRU 2-R FOR SHEAR POINT DIAGRAM

REVISIONS

8/17/99

PROJECT REFERENCE NO.	SHEET NO.
R-0609IA	27
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

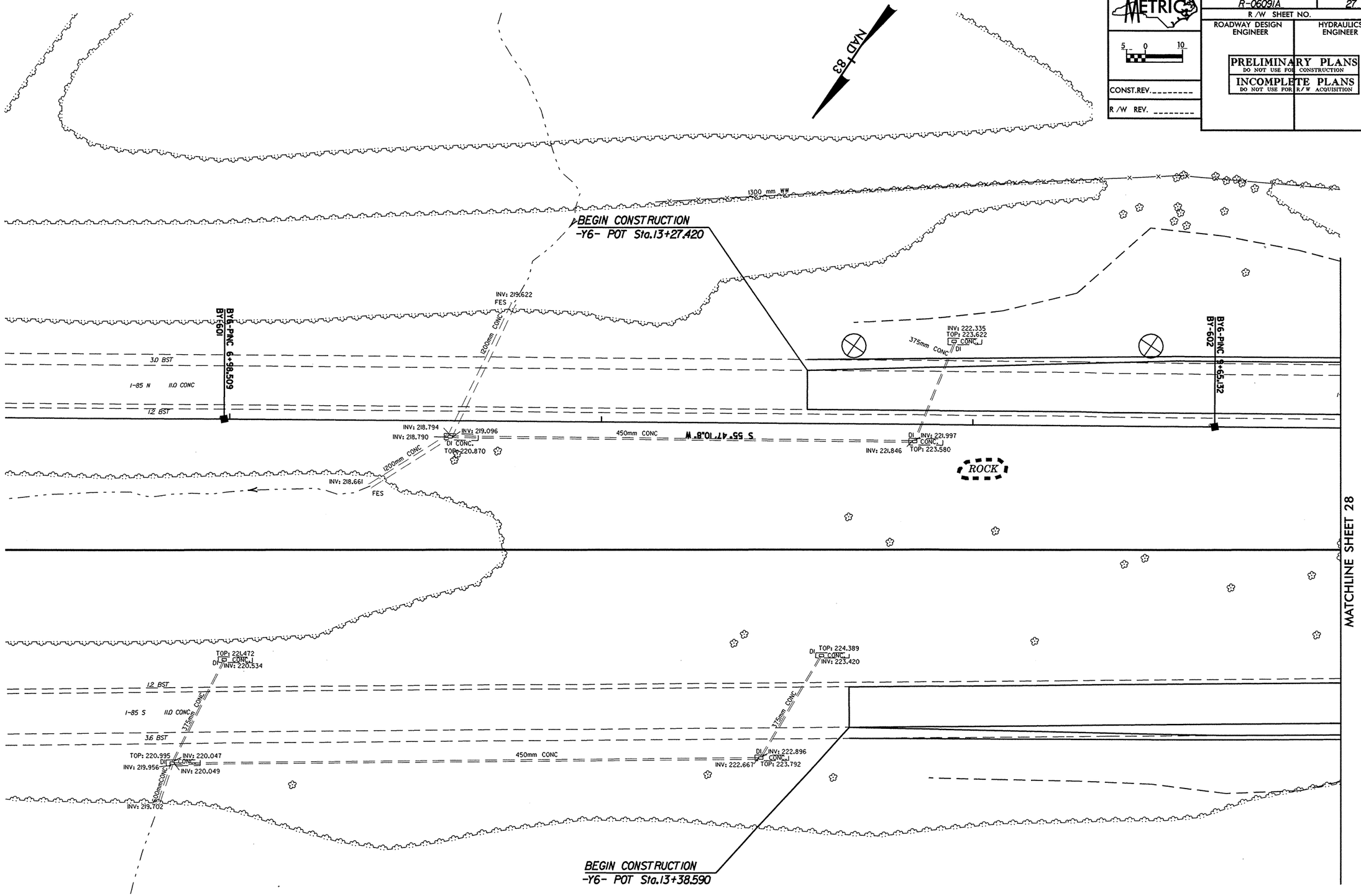
METRIC

5 0 10

CONST.REV.

R/W REV.

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



SEE SHEET 2-D FOR CURVE DATA
SEE SHEETS 2-E THRU 2-R FOR SHEAR POINT DIAGRAM

REVISIONS

8/17/99

PROJECT REFERENCE NO.	SHEET NO.
R-06091A	28
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

METRIC

5 0 10

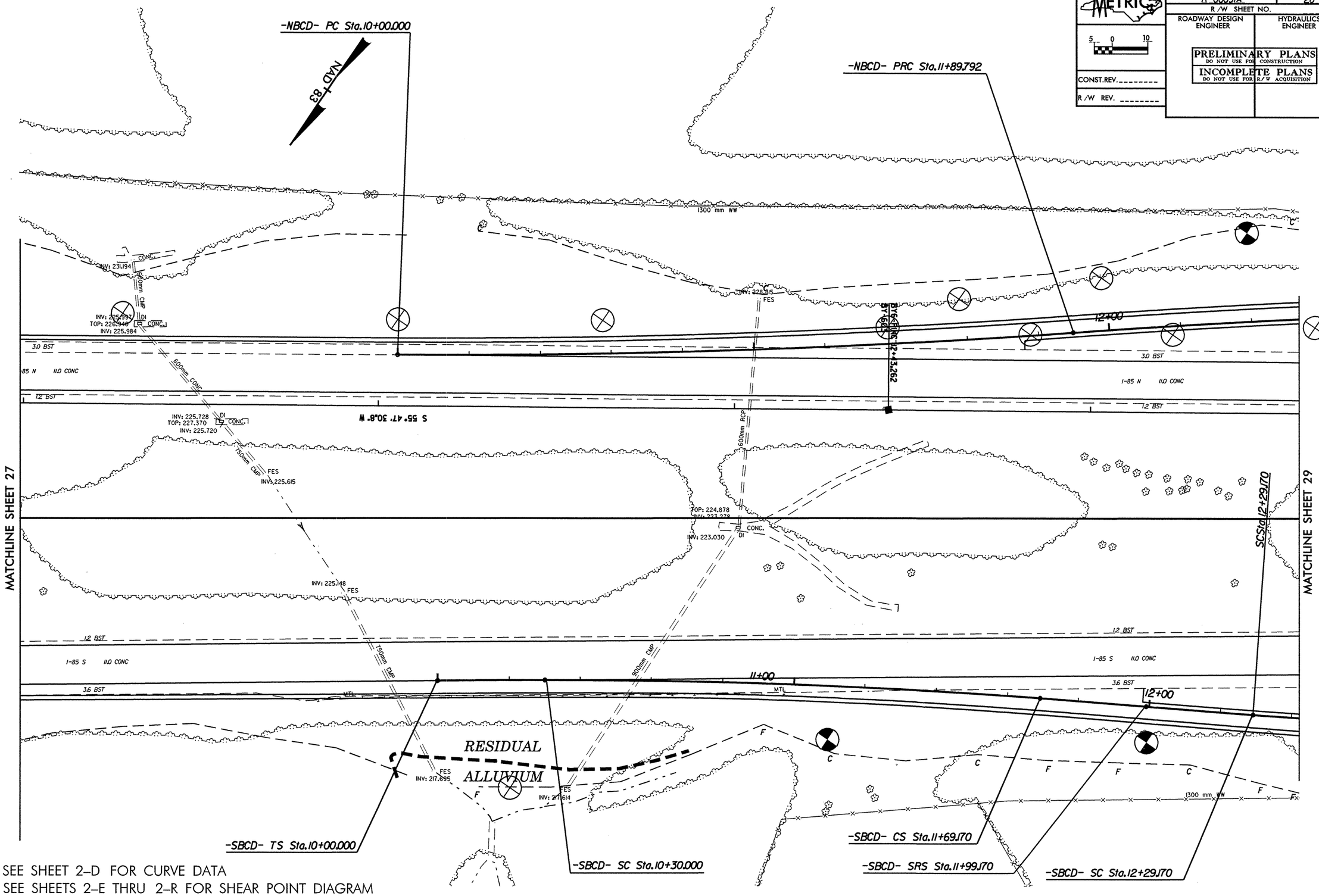
CONST.REV. _____

R/W REV. _____

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

REVISIONS



SEE SHEET 2-D FOR CURVE DATA
SEE SHEETS 2-E THRU 2-R FOR SHEAR POINT DIAGRAM

PROJECT REFERENCE NO.
R0609IA
SHEET NO.
29
R/W SHEET NO.
ROADWAY DESIGN ENGINEER
HYDRAULICS ENGINEER
METRIC
CONST.REV.
R/W REV.
PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION
INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION
REVISIONS
NAD 83
-NBCD- PT Sta.13+79.583
-FLY- ST Sta.28+18.083 =
-NBCD- POT STA 15+50.882 (RT.3.6m)
W. GERALD LEONARD
DB 2799 PG 118
2.258 HA (DEED)
POND
550 mm PLASTIC
RIP RAP
EXISTING R/W
N 54° 16' 05" E
182.064
1300 mm WW
1300 mm WD
R/W MON
MTL
POOL
CONC
1800 mm CHL
900 mm BK WALL
1800 mm BK WALL
5.8 GR
3.6 CONC
64.008
N 59° 09' 47" E
80.143
INV: 227.757
FES
INV: 230.974
450mm CONC
14+00
15+00
16+00
BY6-PINC 15+21.460
BY-604
TOP: 235.970
INV: 234.997
DI
CONC.
375mm CONC
INV: 235.138
3.0 BST
I-85 N
11.0 CONC
1.2 BST
S 55° 46' 10.2" W
S 55° 47' 12.6" W
DI
CONC.
TOP: 236.215
INV: 235.333
MATCHLINE SHEET 28
MATCHLINE SHEET 30
900mm CMP
INV: 224.678
TOP: 227.122
INV: 224.666
-SBCD- ST Sta.13+98.340
TOP: 232.740
1.2 BST
I-85 S
11.0 CONC
3.6 BST
1050mm CMP
375mm CONC
INV: 230.977
INV: 230.894
TOP: 232.340
INV: 230.942
600mm CONC
13+00
14+00
15+00
RESIDUAL
WET
ALLUVIUM
RESIDUAL
FES
INV: 221.437
INV: 230.333
S 54° 52' 39" W
120.751
S 55° 05' 05" W
23.398
1300 mm WW & ISBW
-SBCD- CS Sta.13+68.340
SEE SHEET 2-D FOR CURVE DATA
SEE SHEETS 2-E THRU 2-R FOR SHEAR POINT DIAGRAM

REVISIONS

MATCHLINE SHEET 29

-RAMP B- POT Sta.10+00.00 =
-SRCD- POT STA.9+00.25 LRT. 3.6M
Δ = 4.000

-RAMP B- TS Sta.10+33.26

-RAMP B- SC Sta.10+98.26

-FLY- CS Sta.9+34.74

RESIDUAL

ALLUVIUM

RESIDUAL

-FLY- CS Sta.25+35.85

-FLY- SC Sta.25+97.22

-RAMP A- POT Sta.10+00.00 =
-FLY- POT STA.25+3.25 LRT. 3.6M
Δ = 4.000

-FLY- ST Sta.24+88.95

-RAMP A- TS Sta.10+36.32

-FLY- TS Sta.25+32.22

-RAMP A- SC Sta.9+36.32

-FLY- CS Sta.24+29.95

RESIDUAL

ALLUVIUM

RESIDUAL

MATCHLINE SHEET 16

MATCHLINE SHEET 16

SEE SHEET 2-D FOR CURVE DATA
SEE SHEETS 2-E THRU 2-R FOR SHEAR POINT DIAGRAM

METRIC

PROJECT REFERENCE NO. | SHEET NO.
R-2024 | 30
R/W SHEET NO.

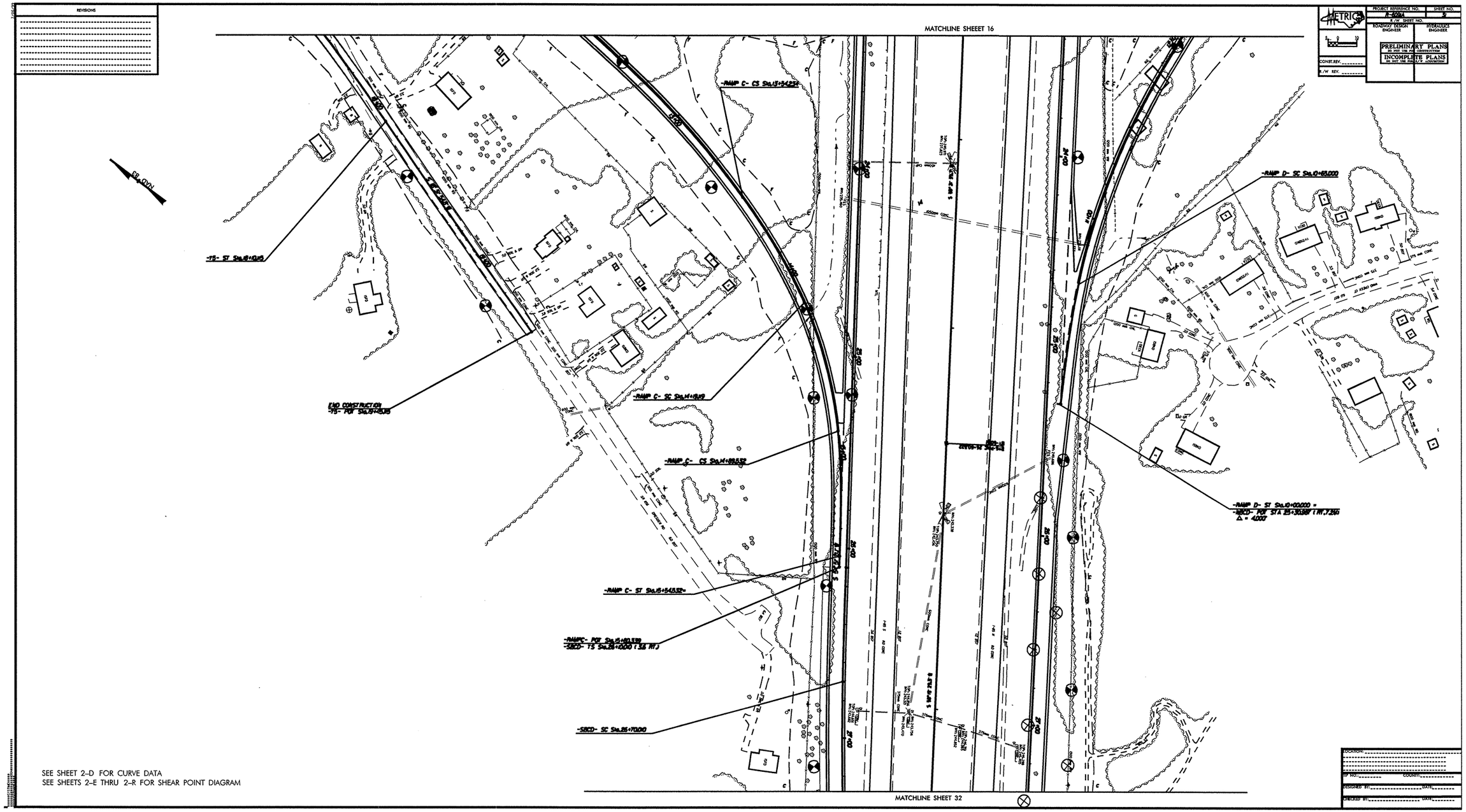
ROADWAY DESIGN ENGINEER | HYDRAULICS ENGINEER

PRELIMINARY PLANS
NOT FOR CONSTRUCTION, R/W ACQUISITION OR UTILITY ACQUISITION

INCOMPLETE PLANS
NOT FOR CONSTRUCTION OR R/W ACQUISITION

CONST.REV. _____
R/W REV. _____

LOCATION: _____
TIP NO. _____ COUNTY _____
DESIGNED BY _____ DATE _____
CHECKED BY _____ DATE _____



SEE SHEET 2-D FOR CURVE DATA
SEE SHEETS 2-E THRU 2-R FOR SHEAR POINT DIAGRAM

PROJECT REFERENCE NO.	SHEET NO.
R-0609IA	32
R /W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

METRIC
-5 0 10

CONST.REV. _____

R /W REV. _____

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

REVISIONS

-NBCD RAMP- POT Sta.10+00.000=
-NBCD- Sta.28+64.347 (3.6m RT)

NAD 83

-NBCD RAMP- TS Sta.11+47.607

-NBCD RAMP- SC Sta.12+12.607

-NBCD- CS Sta.30+36.448

-NBCD- SRS Sta.30+66.448

-NBCD- TS Sta.28+43.822

-NBCD- SC Sta.29+03.822

-SBCD- CS Sta.27+81.817

-SBCD- SC Sta.28+41.817

-SBCD- SRS Sta.28+11.817

-SBCD- CS Sta.29+52.609

-SBCD- ST Sta.29+82.609

-SBCD- POT Sta 29+85.094=
-SBCD RAMP- POT Sta 10+00.000

-SBCD RAMP- SC Sta.10+61.535

-SBCD RAMP- TS Sta.10+01.535

BY-609 BY6-PNC 29+19.632

MATCHLINE SHEET 31

MATCHLINE SHEET 33

SEE SHEET 2-D FOR CURVE DATA
SEE SHEETS 2-E THRU 2-R FOR SHEAR POINT DIAGRAM

PROJECT REFERENCE NO.	SHEET NO.
R-06091A	33
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

METRIC

5 0 10

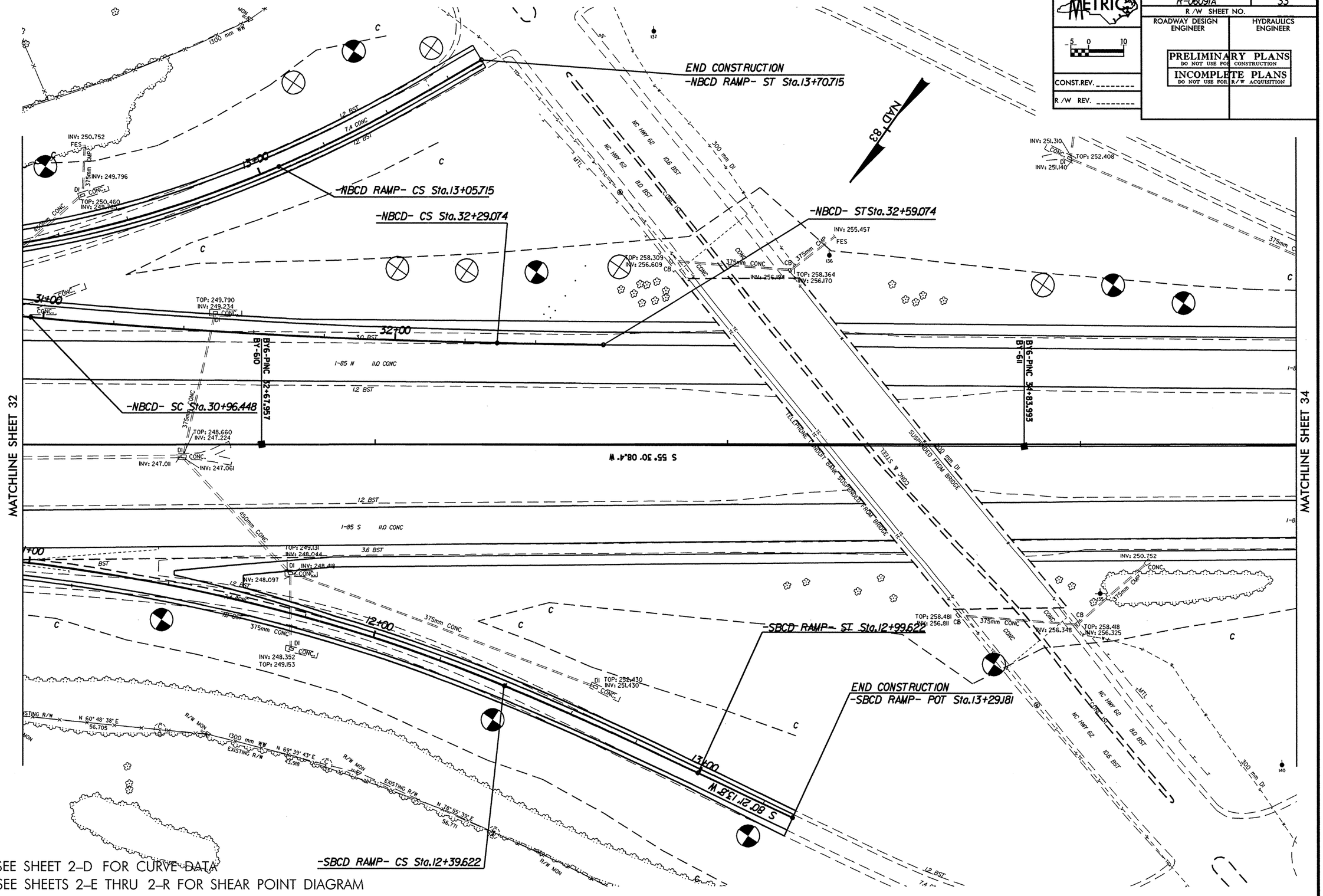
CONST.REV. _____

R/W REV. _____

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

REVISIONS



SEE SHEET 2-D FOR CURVE DATA
SEE SHEETS 2-E THRU 2-R FOR SHEAR POINT DIAGRAM

PROJECT REFERENCE NO.	SHEET NO.
R-06091A	34
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

METRIC

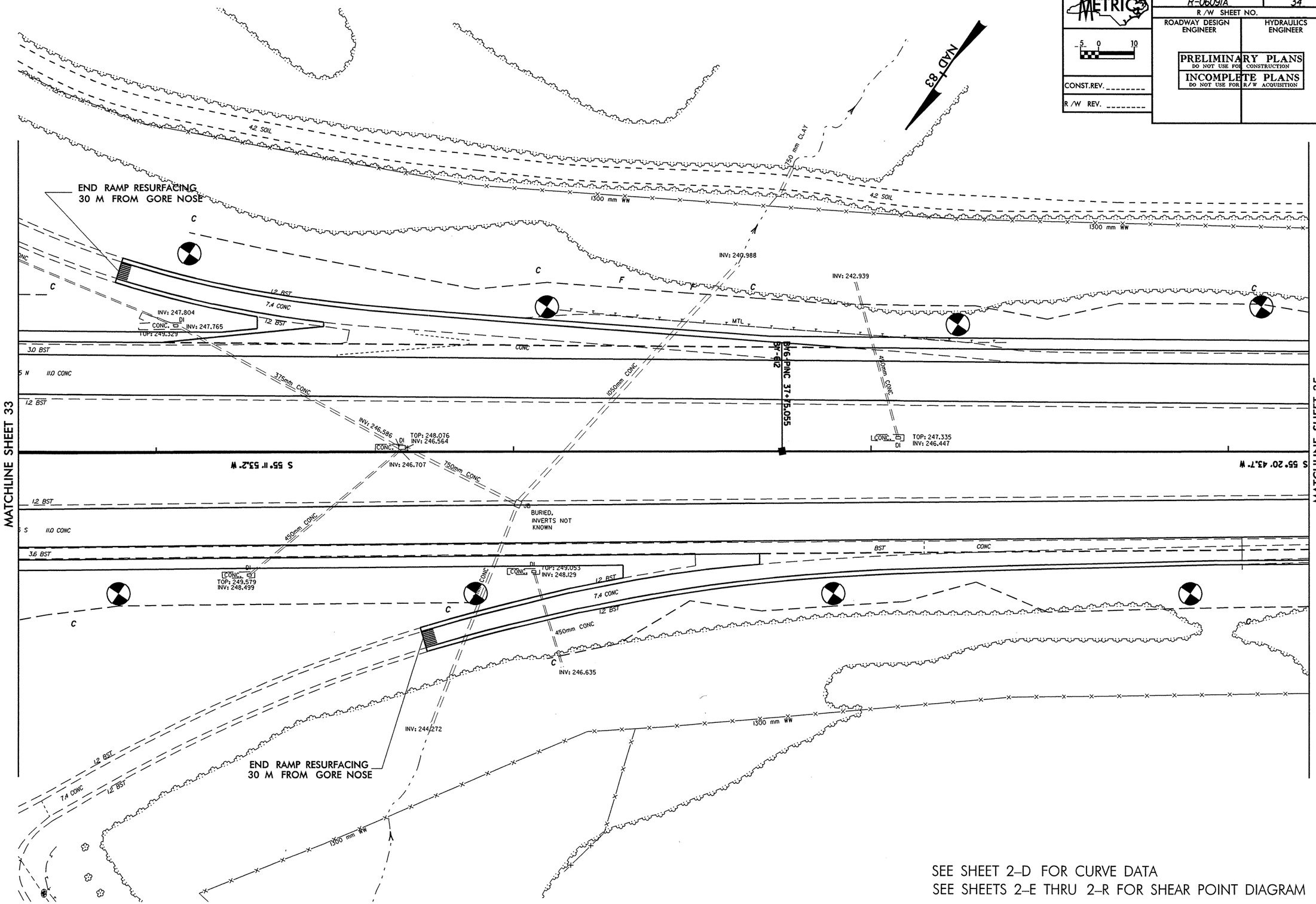
5 0 10

CONST.REV. _____

R/W REV. _____

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION



SEE SHEET 2-D FOR CURVE DATA
SEE SHEETS 2-E THRU 2-R FOR SHEAR POINT DIAGRAM

REVISIONS

8/17/99

PROJECT REFERENCE NO.	SHEET NO.
R-06091A	35
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

METRIC

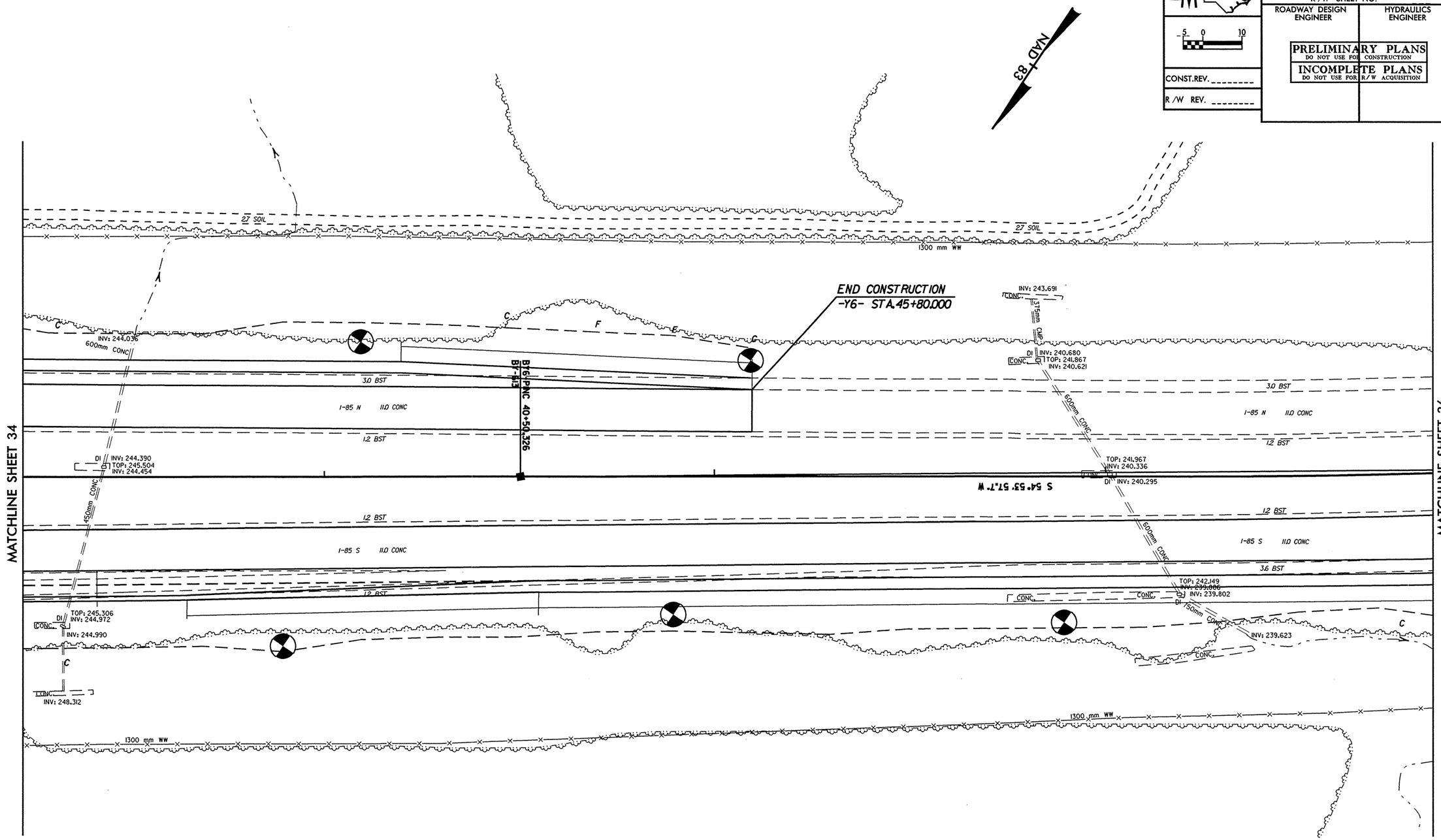
5 0 10

CONST.REV. _____

R/W REV. _____

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION



SEE SHEET 2-D FOR CURVE DATA
SEE SHEETS 2-E THRU 2-R FOR SHEAR POINT DIAGRAM

REVISIONS

8/17/99

$$$$$$SYSTIME$$$$$$
$$$$$$DGN$$$$$$
$$$$$$USERNAME$$$$$$

PROJECT REFERENCE NO.	SHEET NO.
R-06091A	36
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

METRIC

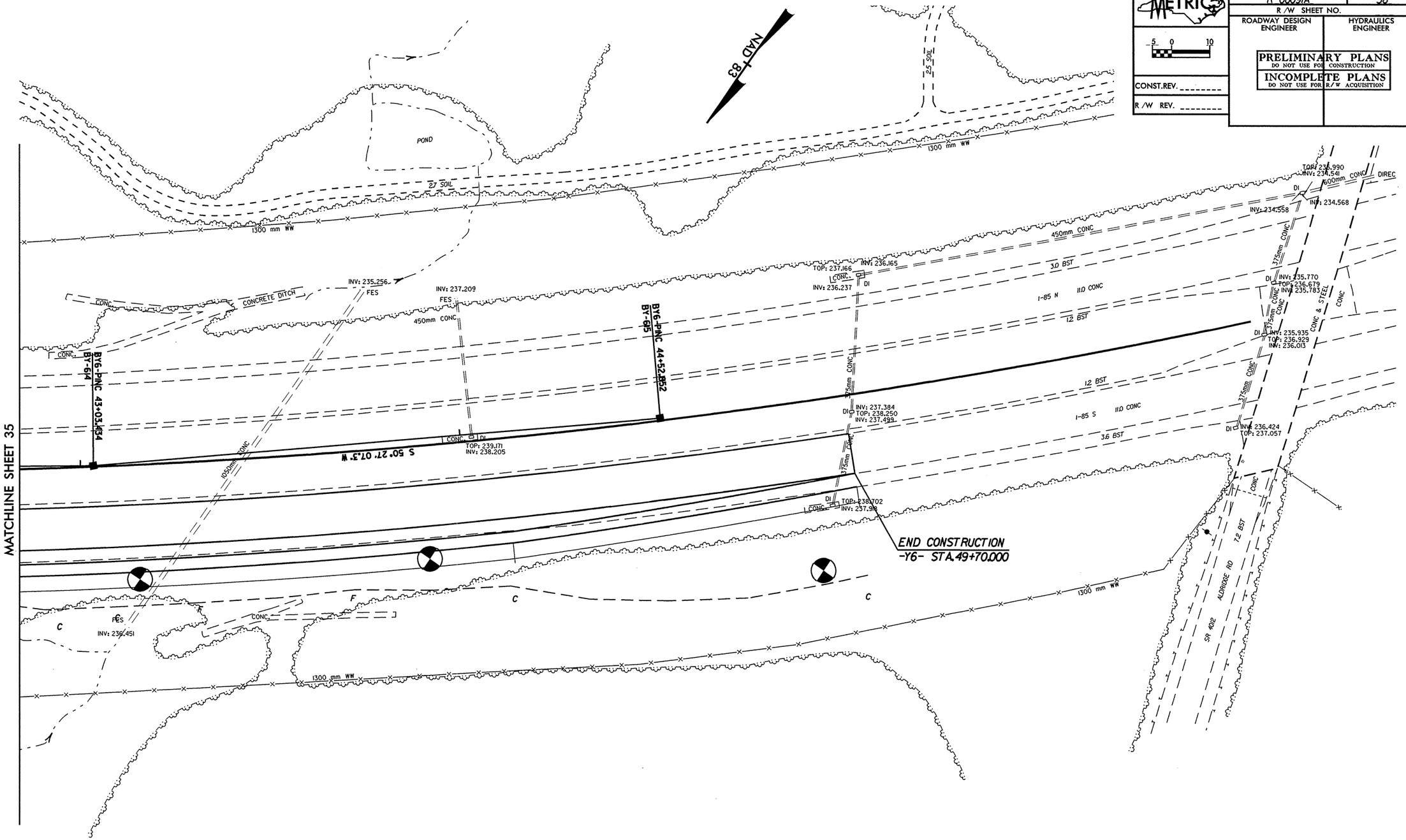
5 0 10

CONST.REV. _____

R/W REV. _____

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION



SEE SHEET 2-D FOR CURVE DATA
SEE SHEETS 2-E THRU 2-R FOR SHEAR POINT DIAGRAM

REVISIONS

8/17/99

PROJECT REFERENCE NO.	SHEET NO.
R-0609IA	37
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

METRIC

5 0 10

CONST.REV. _____

R/W REV. _____

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

REVISIONS

8/17/99

NAD 83

MATCHLINE *** SEE SHEET ***

ISBK BUS

PROPOSED BUS ADDITION (PHASE I)

PROPOSED BUS ADDITION (PHASE II)

ISMTL BUS

ISBKD BUS

ROBERT W. WARD
DB 3223 PG 528
PB 40 PG 78
1.849 HA (TAX MAP)

ROBERT W. WARD
DB 2714 PG 455
PB 40 PG 78
1.562 HA (TAX MAP)

ALLEN J. BODENHEIMER
DB 3785 PG 798
PB 54 PG 34
0.213 HA (PLAT)

JOY B. HILTON
DB 2742 PG 401
PB 49 PG 33
0.158 HA (DEED)

SPRINGFIELD ROAD BAPTIST CHURCH
DB 1336 PG 324
PB 48 PG 78
PB 33 PG 18
1.813 HA (TAX MAP)

SPRINGFIELD ROAD BAPTIST CHURCH
DB 3251 PG 101
1.829 HA (TAX MAP)

JAMES E. TUMLIN
DB 2661 PG 208
PB 54 PG 22
7.220 HA (TAX MAP)

DAVID B. WATTS
DB 3948 PG 1599
PB 54 PG 22
0.176 HA (CADD)

-DET- PTSta.14+35.346

-DET- PCSta.13+78.070

-YI- POT Sta.14+20.000
END CONSTRUCTION

-YI- POT Sta.14+28.663

-DET- POTSta.14+51.925

PI Sta 14+07.145
Δ = 24° 18' 31.2" (RT)
L = 57.276
T = 29.075
R = 135.000

PI Sta 12+85.753
Δ = 15° 33' 45.0" (LT)
L = 36.668
T = 18.448
R = 135.000

SEE SHEET 2-D FOR CURVE DATA
SEE SHEETS 2-E THRU 2-R FOR SHEAR POINT DIAGRAM

SOIL TEST RESULTS

SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	PL. I	% BY WEIGHT C. SAND	F. SAND	SILT	CLAY	% PASSING SIEVES 10	40	200	% MOISTURE	% ORGANIC
SS-24	CL	12+00	1.09-1.54	A-4(3)	33	7	12.3	36.5	33	18.2	100	95	62		
SS-16	7 RT	12+40	0.06-0.51	A-6(3)	28	11	21.2	30.1	20.5	28.3	97	86	54		
SS-17	7 RT	12+40	1.20-1.65	A-4(0)	33	3	19.4	50.3	18.3	12.1	100	92	39		
SS-18	7 RT	12+40	2.72-3.17	A-4(1)	30	8	28.9	31.7	23.3	16.1	97	87	47		
SS-21	18 LT	12+50	0.08-0.53	A-4(0)	19	5	27.6	29.9	18.3	24.2	95	80	45		
SS-22	18 LT	12+50	1.23-1.68	A-4(0)	29	6	16.3	50.1	19.5	14.1	100	96	41		
SS-23	18 LT	12+50	4.27-4.72	A-1-a(0)	20	NP	50.7	28.7	10.6	10.1	34	21	9		
SS-8	5 LT	13+30	0.78-1.23	A-4-0(0)	18	4	30.5	35.7	15.6	18.2	97	83	38		
SS-29	40 LT	13+80	1.10-1.55	A-7-5(19)	56	24	12.1	20.3	25.4	42.2	100	94	73	28	
SS-30	40 LT	13+80	2.62-3.07	A-4(0)	29	5	30.4	36.6	21	12.1	94	80	37		
S-28	40 RT	14+20	4.50-6.00	A-7-6(7)	41	14	9.6	42.2	30.1	18.1	100	97	61		
SS-33	7 LT	14+99	1.15-1.60	A-4(0)	26	NP	21.3	48.2	20.4	10.1	100	93	39		
SS-34	7 LT	14+99	4.19-4.64	A-2-4(0)	29	NP	31.2	42.2	16.6	10.1	95	80	32		
SS-35	7 LT	14+99	7.23-7.68	A-2-4(0)	26	NP	42.8	34.8	16.4	6	86	62	25		
SS-36	17 LT	15+62	1.11-1.56	A-7-6(13)	42	16	2.4	28.1	45.3	24.1	100	99	78		
SS-37	17 LT	15+62	2.63-3.08	A-4(6)	38	8	7.4	31.4	47.1	14.1	100	97	71		
SS-38	17 LT	15+62	4.15-4.60	A-4(3)	34	6	10.1	36.8	45.1	8	100	95	64		
SS-39	3 LT	15+65	7.19-7.64	A-4(0)	28	7	37.6	22.5	27.8	12.1	95	66	43		
SS-40	3 RT	16+18	1.12-1.57	A-7-5(26)	77	43	22.5	11.5	11.8	54.3	92	78	62		
SS-41	3 RT	16+18	2.64-3.09	A-7-5(22)	66	25	12.5	17.9	23.4	46.2	100	92	75		
SS-42	3 RT	16+18	4.16-4.61	A-4(0)	40	NP	31	32.2	26.8	10.1	100	81	45		
SS-43	32 RT	17+12	1.18-1.63	A-7-5(13)	50	19	7.2	25.9	34.7	32.2	91	88	68		
SS-400	CL	16+40	1.20-1.50	A-2-4(0)	24	NP	52.3	23.4	20.2	4	94	57	27		
SS-401	CL	16+40	5.76-6.06	A-4(0)	35	6	38.3	30.1	25.7	6	98	74	36		

-L-

BEGIN GRADE -L- STA 11+98.800
EL = 250.547

METRIC

PROJECT REFERENCE NO. R-0609IA | SHEET NO. 38

ROADWAY DESIGN ENGINEER | HYDRAULICS ENGINEER

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

CONST.REV. _____

R/W REV. _____

SS-8
SS-9

13+60 -CL-

SS-24

12+00 -CL-

SS-16
SS-17
SS-18

12+40 7 RT

SS-21
SS-22
SS-23

12+50 18 LT

POND

12+80 20 RT

13+05 5 RT

13+30 5 LT

SANDY SILTY CLAY, DENSE TO VERY DENSE SILTY SAND, MOIST

DRY 6-00

SILT & MED. TAN-BROWN

RESIDUAL - MEDIUM STIFF TO HARD TAN & GRAY

MEDIUM DENSE TO VERY DENSE TAN-WHITE SILTY SAND, MOIST

MEDIUM DENSE TO VERY DENSE TAN-BROWN SILTY SAND, MOIST

MOTTLED SANDY

WEATHERED ROCK

HARD ROCK

(-Y1-) SR 1193 BAKER ST. @ STA 13+45.031 (-L-)

Ⓐ ALLUVIUM - VERY SOFT TO MEDIUM STIFF SILTY SANDY CLAY, MOIST TO WET

MS-29
SS-29
SS-30

13+80 40 LT

S-28

14+20 40 LT

SS-33
SS-34
SS-35

14+68 27 LT

14+99 7 LT

SS-36
SS-37
SS-38
SS-39

15+62 17 LT

SS-40
SS-41
SS-42

16+18 3 RT

SS-400
SS-401

16+40 CL

16+60 12 LT

SS-43

17+12 32 RT

13+60 -CL-

14+00 -CL-

RESIDUAL

STIFF TO V. HARD

STIFF TAN-BROWN SANDY SILTY CLAY, MOIST

WEATHERED ROCK (SILTY SAND)

HARD ROCK

MEDIUM DENSE BROWN SILTY SAND, MOIST

DENSE TO VERY DENSE BROWN SILTY SAND, MOIST

WEATHERED ROCK (SILTY SAND)

STIFF TO HARD TAN-BROWN CLAYEY SILT, MOIST

RESIDUAL VERY STIFF TAN SILTY SANDY CLAY, HIGH PI MOIST

SILTY SAND

WEATHERED ROCK (SILTY SAND)

DRY 6-00

DRY 3-01

RESIDUAL - VERY STIFF TAN SILTY SANDY CLAY, MOIST

STIFF TO HARD TAN-BROWN SANDY SILT, MOIST

WEATHERED ROCK

DRY 6-00

HARD ROCK

DRY 6-00

SYSTIME $SYSTIME$
USERNAME $USERNAME$
DGN DGN

PROJECT REFERENCE NO.	SHEET NO.
R-06091A	39
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

METRIC

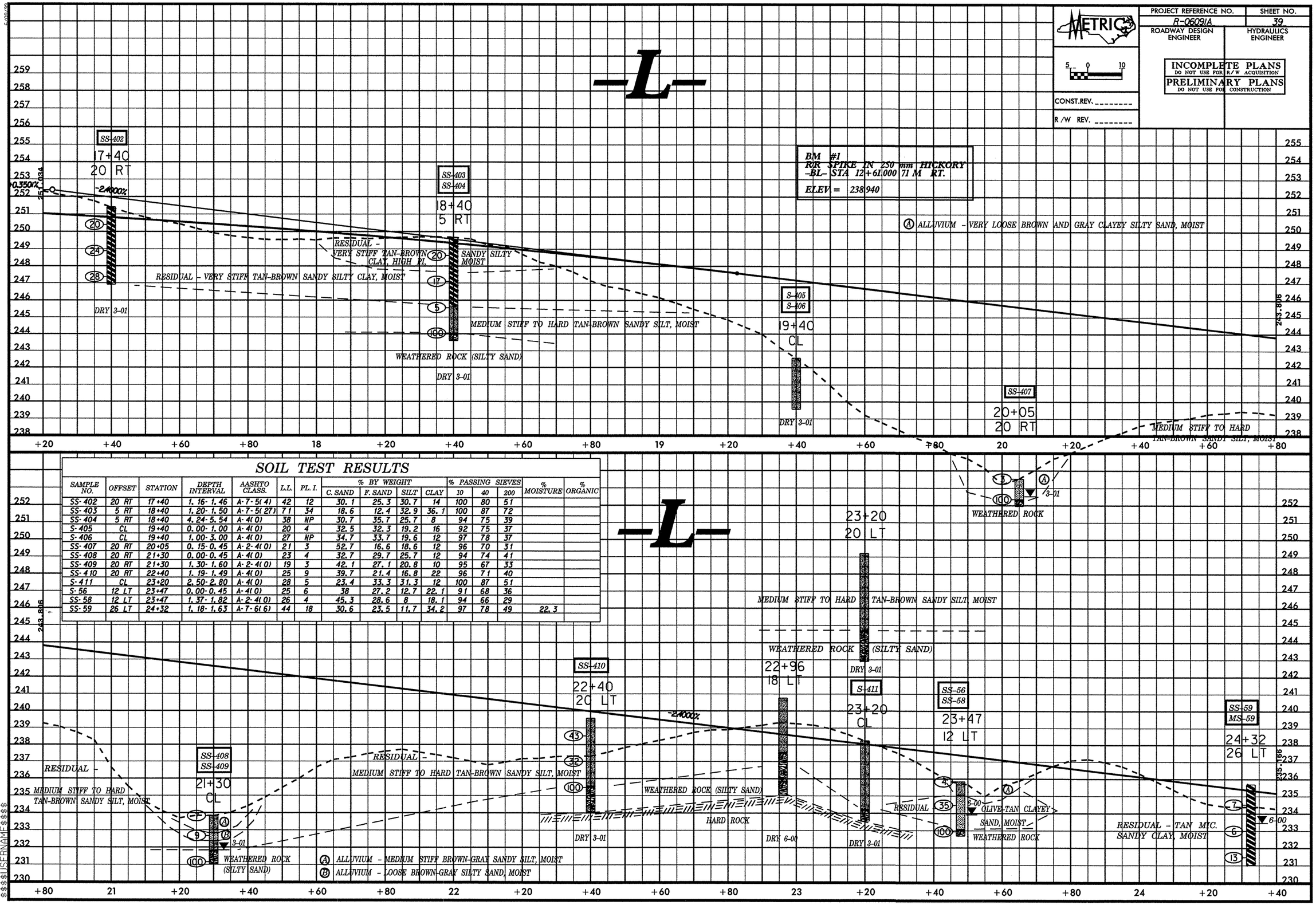
5 0 10

CONST.REV. _____

R/W REV. _____

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION



SOIL TEST RESULTS

SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	PL. 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-402	20 RT	17+40	1.16-1.46	A-7-5(4)	42	12	30.1	25.3	30.7	14	100	80	51		
SS-403	5 RT	18+40	1.20-1.50	A-7-5(27)	71	34	18.6	12.4	32.9	36.1	100	87	72		
SS-404	5 RT	18+40	4.24-5.54	A-4(0)	38	NP	30.7	35.7	25.7	8	94	75	39		
S-405	CL	19+40	0.00-1.00	A-4(0)	20	4	32.5	32.3	19.2	16	92	75	37		
S-406	CL	19+40	1.00-3.00	A-4(0)	27	NP	34.7	33.7	19.6	12	97	78	37		
SS-407	20 RT	20+05	0.15-0.45	A-2-4(0)	21	3	52.7	16.6	18.6	12	96	70	31		
SS-408	20 RT	21+30	0.00-0.45	A-4(0)	23	4	32.7	29.7	25.7	12	94	74	41		
SS-409	20 RT	21+30	1.30-1.60	A-2-4(0)	19	3	42.1	27.1	20.8	10	95	67	33		
SS-410	20 RT	22+40	1.19-1.49	A-4(0)	25	9	39.7	21.4	16.8	22	96	71	40		
S-411	CL	23+20	2.50-2.80	A-4(0)	28	5	23.4	33.3	31.3	12	100	87	51		
S-56	12 LT	23+47	0.00-0.45	A-4(0)	25	6	38	27.2	12.7	22.1	91	68	36		
SS-58	12 LT	23+47	1.37-1.82	A-2-4(0)	26	4	45.3	28.6	8	18.1	94	66	29		
SS-59	26 LT	24+32	1.18-1.63	A-7-6(6)	44	18	30.6	23.5	11.7	34.2	97	78	49	22.3	

SOIL TEST RESULTS

SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	PL. I.	% BY WEIGHT C. SAND	F. SAND	SILT	CLAY	% PASSING SIEVES 10	40	200	% MOISTURE	% ORGANIC
S-60	7 LT	25+10	0.00-1.00	A-7-5(23)	26	33	20.1	10.9	10.9	6.6	96	82	68	29.1	
SS-61	7 LT	25+10	1.18-1.63	A-7-6(15)	64	24	23.3	15.5	15.5	20.9	96	78	64		
SS-62	7 LT	25+10	2.70-3.15	A-5(2)	53	9	29.8	34.4	34.4	21.7	98	78	44		
SS-63	7 LT	25+10	4.22-4.67	A-2-4(0)	44	NP	42.9	34.8	34.8	10.3	97	69	27		
SS-64	20 LT	25+69	0.00-0.45	A-2-4(0)	26	4	39	27.2	15.7	18.1	91	67	35		3.8
SS-65	19 RT	25+79	0.07-0.52	A-4(0)	17	NP	36.4	30.8	16.7	16.1	96	73	36		1.5
S-68	CL	26+40	2.00-4.00	A-4(5)	30	9	6.2	28	35.6	30.2	100	98	74	15.1	
SS-67	35 LT	27+20	1.23-1.68	A-2-4(0)	22	1	47.5	26.4	8	18.1	85	57	26		
SS-69	20 RT	28+20	0.04-0.45	A-2-4(0)	23	NP	54.1	23.5	8.2	14.1	95	58	24		
SS-70	20 RT	28+20	1.25-1.70	A-4(3)	30	7	16.7	24.3	34.8	24.1	100	90	65	31.5	
SS-71	20 RT	28+20	1.97-2.42	A-2-4(0)	15	NP	47.9	17.5	18.5	16.1	98	71	27		
SS-72	10 LT	28+30	0.00-0.45	A-4(0)	20	4	33.6	29.2	21.1	16.1	92	73	39		2.7
SS-73	10 LT	28+30	0.55-1.00	A-4(0)	22	8	29.6	26.6	15.7	28.2	85	69	41		
SS-74	10 LT	28+30	1.29-1.74	A-4(0)	31	7	32.4	31.4	12.1	24.1	96	79	40		
SS-85	CL	29+80	1.05-1.50	A-4(6)	37	9	3.9	39.9	33.9	22.3	100	98	71	16.5	
SS-86	30 RT	30+00	2.66-3.11	A-2-4(0)	27	NP	37.1	36.1	12.7	14.2	96	73	33		
S-87	CL	30+20	0.00-2.00	A-6(9)	38	20	21.1	22.1	14.3	42.6	98	85	60		
S-88	CL	30+20	2.50-5.00	A-4(2)	32	7	23.3	28.2	22.2	26.3	97	82	54		

-L-

MS-60
S-60
SS-61
SS-62
SS-63
25+10
7 LT
235.166
RESIDUAL - MEDIUM STIFF SANDY CLAY, HIGH PI, MOIST
MEDIUM STIFF RED-TAN SILTY SANDY CLAY, MOIST
MEDIUM STIFF SANDY CLAYEY SILT, MOIST
MEDIUM DENSE TO DENSE SILTY SAND, MOIST
-100Z%
6-00

PI = 25+23.283
EL = 233.167 m
VC = 80 m
K = 60

SS-64 SS-65
25+69
20 LT
25+79
19 RT
WEATHERED ROCK
HARD ROCK
6-00

-L- 26+17.519 LB=
-L- 25+77.880 LA
EL 232.222
26+06
3 RT

S-68
MS-68
26+40
CL
RESIDUAL - STIFF TO HARD TAN-BROWN SANDY SILT AND MEDIUM DENSE TO VERY DENSE SILTY SAND, MOIST

SS-67
27+20
CL
WEATHERED ROCK (SILTY SAND)
27+90
25 RT
230.398

BM #2
-RR SPIKE IN 700 mm WHITE OAK-
-BL- STA 20+64.000 106 M LT.
ELEV = 237.470

(A) ALLUVIUM - LOOSE GRAY SILTY SAND AND MEDIUM STIFF TAN SANDY SILT WITH SOME ORGANICS, MOIST TO WET

-L-

S-87
S-88
30+20
CL

SS-69
SS-70
SS-71
SS-72
SS-73
SS-74
230.396
28+20
20 RT
28+30
10 LT
RESIDUAL - STIFF TO HARD TAN SANDY SILT, MOIST
WEATHERED ROCK
HARD ROCK
6-00

29+30
CL
RESIDUAL - DENSE TO VERY DENSE TAN SILTY SAND, MOIST
DRY 6-00

MS-85
SS-85
29+80
CL
RESIDUAL - STIFF TO HARD TAN-BROWN SANDY SILTY CLAY, MOIST
VERY STIFF TO HARD TAN-BROWN SANDY CLAYEY SILT, MOIST
WEATHERED ROCK (SANDY SILT)
HARD ROCK

30+75
CL
DRY 6-00

31+20
CL
STIFF TO HARD TAN-BROWN SANDY CLAYEY
HARD ROCK
DRY 6-00

31+60
CL
226.788
DRY 6-00

(-Y2-) SR 1158 JACKSON LAKE RD.
@ -L- STA 28+77.454

(A) ALLUVIUM - VERY LOOSE TAN-BROWN SLIGHTLY ORGANIC SILTY SAND, WET AND VERY SOFT TO STIFF TAN SANDY SILT, MOIST TO WET

$$$$USERNAME$$$$ $$$$SYSTIME$$$$ $$$$DGN$$$$

METRIC

5 0 10

CONST.REV. _____

R/W REV. _____

SS-96

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

6/09/98

-L-

PT = 32+17.013
EL = 225.814 m
VC = 190 m
K = 60

-1.05992%

+2.11182%

31+60 -CL-

S-91
SS-92

32+20 -CL-

S-93

33+00 -CL-

SS-94
SS-95

33+60 -CL-

34+40 30 RT

35+20 5 RT

HARD ROCK
DRY 6-00
RESIDUAL - STIFF TO HARD
STIFF TAN SILTY
RESIDUAL - STIFF TO HARD SANDY CLAY, HIGH PI, MOIST
BROWN SANDY SILT, MOIST
TAN-BROWN SANDY CLAY, MOIST
WEATHERED ROCK
RESIDUAL - VERY STIFF TO HARD TAN MIC SANDY SILT, MOIST
WEATHERED ROCK (SILTY SAND)
HARD CLAY
WEATHERED ROCK (SILTY SAND)

+60 +80 32 +20 +40 +60 +80 33 +20 +40 +60 +80 34 +20 +40 +60 +80 35 +20

SOIL TEST RESULTS

SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	PL. I.	% BY WEIGHT C. SAND	F. SAND	SILT	CLAY	% PASSING SIEVES 10	40	200	% MOISTURE	% ORGANIC
S-91	CL	32+20	0.00-1.00	A-6(2)	27	12	28.6	28.2	4.7	38.5	98	86	45		
SS-92	CL	32+20	1.18-1.63	A-7-5(24)	62	31	16.2	10.5	14.5	58.8	98	87	74	33.2	
S-93	CL	33+00	0.00-1.35	A-6(7)	37	18	24.3	20.9	14.3	40.5	97	83	57		
SS-94	CL	33+60	0.95-1.40	A-4(0)	28	6	39.3	28	8.4	24.3	99	76	37		
SS-95	CL	33+60	2.47-2.92	A-2-4(0)	21	NP	45.8	31.2	10.8	12.2	92	67	25		
S-102	CL	36+00	0.00-1.00	A-6(4)	34	13	27.3	24.5	18	30.2	100	85	52		
S-115	25 RT	37+00	2.00-3.35	A-4(2)	28	4	3	33.9	54.9	8.1	97	96	73	9.1	
S-120	CL	37+40	0.00-1.00	A-6(2)	28	12	22.5	31	20.3	26.2	89	80	45		
SS-121	CL	37+40	1.36-1.81	A-7-6(13)	43	17	7.4	13.7	50.7	28.2	88	83	75		
SS-122	CL	37+40	2.88-3.33	A-4(0)	30	5	19.1	34.8	34	12.1	88	78	48		
S-116	20 RT	37+60	1.50-2.25	A-6(4)	28	13	18.8	28.3	26.7	26.3	98	89	57	17.8	
SS-110	CL	37+80	0.85-1.30	A-4(0)	23	6	25.7	26.7	29.4	18.1	99	84	51		
SS-111	CL	37+80	2.37-2.82	A-2-4(0)	27	5	41.8	26.9	21.2	10.1	97	69	35		
SS-112	CL	37+80	3.89-4.34	A-4(3)	36	9	30.8	18.5	36.7	14.1	95	71	53		
SS-113	CL	37+80	5.41-5.49	A-2-4(0)	29	10	41.2	16.5	22.2	20.1	65	42	30		
SS-114	CL	37+80	0.00-0.45	A-4(0)	23	6	20.8	33.3	23.6	22.2	97	89	49		
S-107	CL	38+20	0.00-1.35	A-7-6(31)	61	40	12.5	14.1	15.2	58.3	100	94	76	26.7	
SS-96	25 RT	35+00	2.58-2.94	A-2-4(0)	23	NP	42.8	37.7	9.4	10.1	95	65	23		

S-102
36+00 -CL-
36+20 10 RT
36+40 -CL-
36+80 -CL-
S-115 MS-115
37+00 25 RT
SS-120 SS-121 SS-122
37+40 -CL-
SS-110 SS-111 SS-112 SS-113 SS-114
37+80 -CL-
38+00 25 RT
SS-107 MS-107
38+20 -CL-
35+20 5 RT

RESIDUAL - STIFF TO HARD SANDY SILT, MOIST
HARD SILTY CLAY, MOIST
RESIDUAL - STIFF TO HARD SANDY SILTY CLAY, MOIST
WEATHERED ROCK
TAN MIC.
RESIDUAL - STIFF TO HARD TAN SANDY CLAYEY SILT, MOIST
WEATHERED ROCK (SILTY SAND)
VERY STIFF TAN SILTY CLAY, MOIST
STIFF TO HARD SANDY
WEATHERED ROCK
RESIDUAL STIFF TAN SILTY SANDY CLAY, HIGH PI, MOIST
WEATHERED ROCK (SILTY SAND)
-0.4048%
+2.402%
237.554

Ⓐ ALLUVIUM - MEDIUM STIFF BROWN SANDY SILT, AND LOOSE BROWN SILTY SAND, MOIST

(-Y3-) SR 1154 KERSEY VALLEY RD.
@ -L- STA 38+45.624

+20 +40 +60 +80 36 +20 +40 +60 +80 37 +20 +40 +60 +80 38 +20 +40 +60 +80

$$$$SYSTIME$$$$
$$$$DGN$$$$
$$$$USERNAME$$$$

PROJECT REFERENCE NO.	SHEET NO.
R-0609IA	42

ROADWAY DESIGN ENGINEER

HYDRAULICS ENGINEER

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

METRIC

CONST.REV. ________

R/W REV. ________

-L-

SOIL TEST RESULTS

SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	PL. I.	% BY WEIGHT				% PASSING SIEVES			% MOISTURE	% ORGANIC
							C. SAND	F. SAND	SILT	CLAY	10	40	200		
SS-136	CL	39+00	0.97-1.42	A-4(26)	23	5	30.9	28.7	16.2	24.2	98	82	44		
SS-137	CL	39+00	7.05-7.50	A-4(2)	29	7	12.7	32.1	37	18.2	96	90	61	19.1	
S-140	CL	39+80	0.00-1.00	A-7-6(12)	41	15	7.3	18.2	30.1	44.4	100	97	79		
S-182	CL	41+80	1.00-3.00	A-4(3)	30	10	17.8	30.7	25.3	26.3	100	93	57		
SS-144	CL	43+00	1.13-1.58	A-7-6(13)	48	27	24.6	19.2	17.8	38.4	98	83	58		
SS-145	CL	43+00	2.65-3.10	A-2-6(1)	37	15	38.6	27.1	18.2	16.2	90	65	35		
SS-146	CL	43+00	4.17-4.62	A-4(0)	35	7	27.1	38	22.8	12.1	98	83	42		
S-148	25 LT	43+80	0.00-1.00	A-7-6(11)	49	29	31.3	17.8	12.5	38.4	97	78	52		
SS-149	25 LT	43+80	1.18-1.63	A-7-5(19)	63	30	22	15.2	22.4	40.4	97	81	64		
SS-150	25 LT	43+80	2.70-3.15	A-7-6(8)	49	23	30.1	23.4	24.2	22.2	98	77	50		
SS-151	25 LT	43+80	5.74-6.19	A-2-4(0)	37	NP	41.6	35.4	19	4	98	73	28		
SS-152	25 LT	43+80	10.30-10.69	A-1-b(0)	25	NP	56.8	25.5	13.7	4	77	45	16		
SS-153	20 LT	44+40	8.91-9.33	A-2-4(0)	25	NP	49.1	32.9	16	2	99	69	22		
S-157	10 RT	44+95	0.00-1.00	A-6(3)	27	11	21.6	31.1	23	24.2	100	89	52		
SS-158	10 RT	44+95	5.77-6.07	A-4(2)	33	4	8.9	33.1	47.9	10.1	100	95	68		
SS-161	20 LT	45+50	0.00-0.45	A-6(2)	27	12	36.5	19.9	5.3	38.3	98	74	45		
SS-162	20 LT	45+50	1.05-1.50	A-6(6)	39	21	36.3	19.1	6.3	38.3	97	74	46		
SS-163	20 LT	45+50	2.57-3.02	A-7-6(4)	42	22	35.8	27.1	8.9	28.3	100	79	41		
SS-164	20 LT	45+50	4.09-4.49	A-2-4(0)	19	NP	50.6	31.7	10.6	7.1	97	65	21		

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

CONST.REV. _____
R /W REV. _____

SOIL TEST RESULTS

SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	PL. I.	% BY WEIGHT C. SAND	F. SAND	SILT	CLAY	% PASSING SIEVES 10	40	200	% MOISTURE	% ORGANIC
S-193	10 RT	47+00	0.00-1.00	A-6(5)	35	18	29.1	22	14.6	34.3	90	73	47		
S-194	20 RT	47+40	2.50-4.00	A-7-6(11)	48	26	27.9	20.2	15.6	36.3	98	80	55		
S-195	CL	47+60	0.00-3.00	A-7-6(14)	52	25	22.8	17.4	15.4	44.4	100	87	63		
SS-199	CL	48+40	1.15-1.60	A-2-6(0)	37	11	38.3	31.5	14	16.1	100	78	35		
SS-203	10 LT	46+40	0.00-0.20	A-7-6(12)	47	23	21.4	21.6	16.6	40.4	99	87	60		
SS-204	10 LT	46+40	0.20-0.45	A-2-4(0)	29	6	36.7	36.3	14.8	12.1	99	79	31		

-L-

S-193 47+00 10 LT
S-194 47+40 20 RT
S-195 47+60 CL
SS-199 48+40 CL
48+60 20 RT
S-219 SS-220 49+00 25 RT
49+30 25 RT
S-227 49+60 20 RT
SS-203 SS-204 46+40 10 LT
47+20 CL

-0.404%

PROBE
POND
WATER
(A) ALLUVIUM - VERY SOFT TO STIFF TAN SANDY SILTY CLAY, WET

RESIDUAL - DENSE TO VERY DENSE TAN MIC. SILTY SAND, MOIST
WEATHERED ROCK (SILTY SAND)
HARD ROCK
WEATHERED ROCK
RESIDUAL - STIFF TO HARD TAN MIC. SILTY SANDY CLAY, MOIST
RESIDUAL - VERY STIFF TO HARD TAN MIC. SANDY SILT, MOIST
VERY DENSE SILTY SAND
RESIDUAL - LOOSE TO VERY DENSE TAN MIC. SILTY CLAYEY SAND, MOIST
RESIDUAL - VERY STIFF TAN CLAY, HIGH PLASTICITY
RESIDUAL - STIFF TO VERY STIFF TAN-BROWN SANDY SILTY CLAY, MOIST
DENSE TO VERY DENSE
TAN MIC. SILTY SAND, MOIST

7-00

SOIL TEST RESULTS

SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	PL. I.	% BY WEIGHT C. SAND	F. SAND	SILT	CLAY	% PASSING SIEVES 10	40	200	% MOISTURE	% ORGANIC
S-219	25 RT	49+00	0.00-1.00	A-7-6(31)	63	39	13.9	11.3	16.2	58.6	100	92	77		
S-227	20 RT	49+60	0.00-1.40	A-6(4)	33	15	32.1	22.4	11.4	34.1	99	78	49		
SS-220	25 RT	49+00	1.12-1.57	A-2-4(0)	27	5	49.3	24.2	16.4	10.1	97	63	29		
SS-225	30 LT	50+00	1.18-1.63	A-2-4(0)	24	2	51.9	22.7	13.3	12	95	59	27		
SS-226	30 LT	50+00	4.22-4.67	A-4(2)	32	3	5.8	32.1	50.1	12	100	96	70		
SS-248	CL	51+20	0.00-0.50	A-4(0)	19	4	34.9	28.1	16.6	20.4	97	79	39		
SS-249	CL	51+60	1.19-1.62	A-2-4(0)	24	NP	50.6	31.4	11.9	6.1	99	68	22		
SS-250	CL	51+60	5.75-5.96	A-4(1)	31	6	21.2	24.1	46.6	8.2	77	66	47		

-L-

S-227 49+60 20 RT
SS-225 SS-226 50+00 CL
50+30 25 LT
SS-248 51+20 CL
SS-249 SS-250 51+60 CL
53+05 33 LT

RESIDUAL - CLAY
RESIDUAL - VERY DENSE TAN MIC. SILTY SAND, MOIST
WEATHERED ROCK
HARD ROCK
RESIDUAL - V. STIFF TO HARD TAN MIC. SANDY SILT, MOIST
RESIDUAL - VERY DENSE TAN MIC. SILTY SAND
WEATHERED ROCK
DRY 7-00
RESIDUAL - V. STIFF TO HARD TAN MIC. SANDY SILT, MOIST
WEATHERED ROCK (SANDY SILT)
HARD ROCK
RESIDUAL - DENSE TO VERY DENSE TAN MIC. SILTY SAND, MOIST
WEATHERED ROCK (SANDY SILT)
RESIDUAL - DENSE TO VERY DENSE TAN MIC. SILTY SAND, MOIST
WEATHERED ROCK (SANDY SILT)

-0.693%
+2.542%

NBCD @ -L- STA 52+93.640
(-Y6-) I-85 @ -L- STA 52+39.294
SBCD @ -L- STA 51+85.394

9-00

$$$$USERNAME$$$$ $$$$SYSTIME$$$$ $$$$DGN$$$$

PROJECT REFERENCE NO.	SHEET NO.
R-0609IA	44
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

METRIC

5 0 10

CONST.REV. _____

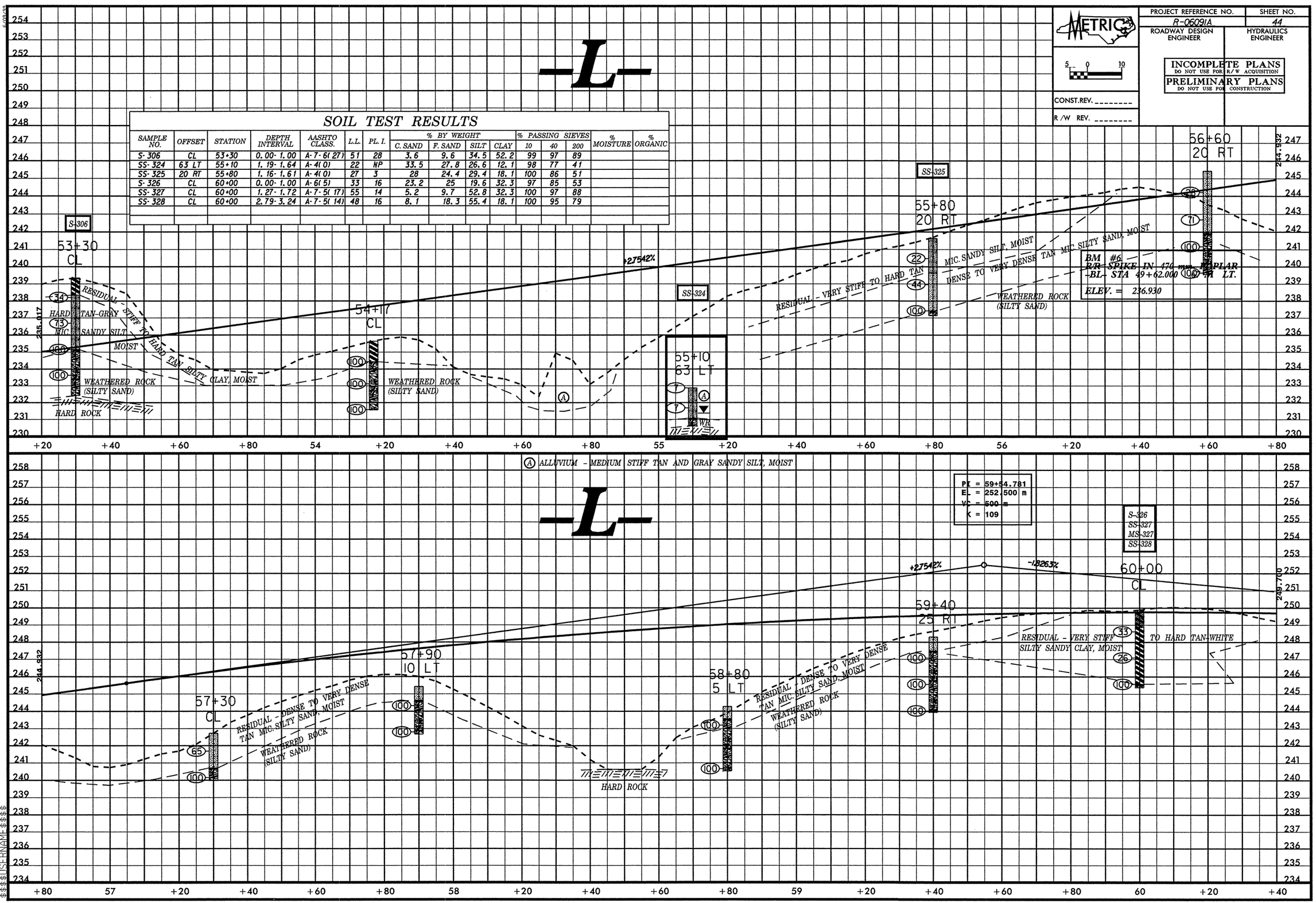
R/W REV. _____

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

SOIL TEST RESULTS

SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	PL. I.	% BY WEIGHT C. SAND	F. SAND	SILT	CLAY	% PASSING SIEVES 10	40	200	% MOISTURE	% ORGANIC
S-306	CL	53+30	0.00-1.00	A-7-6(27)	51	28	3.6	9.6	34.5	52.2	99	97	89		
SS-324	63 LT	55+10	1.19-1.64	A-4(0)	22	NP	33.5	27.8	26.6	12.1	98	77	41		
SS-325	20 RT	55+80	1.16-1.61	A-4(0)	27	3	28	24.4	29.4	18.1	100	86	51		
S-326	CL	60+00	0.00-1.00	A-6(5)	33	16	23.2	25	19.6	32.3	97	85	53		
SS-327	CL	60+00	1.27-1.72	A-7-5(17)	55	14	5.2	9.7	52.8	32.3	100	97	88		
SS-328	CL	60+00	2.79-3.24	A-7-5(14)	48	16	8.1	18.3	55.4	18.1	100	95	79		



PROJECT REFERENCE NO.	SHEET NO.
R-0609IA	45
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

METRIC

5 0 10

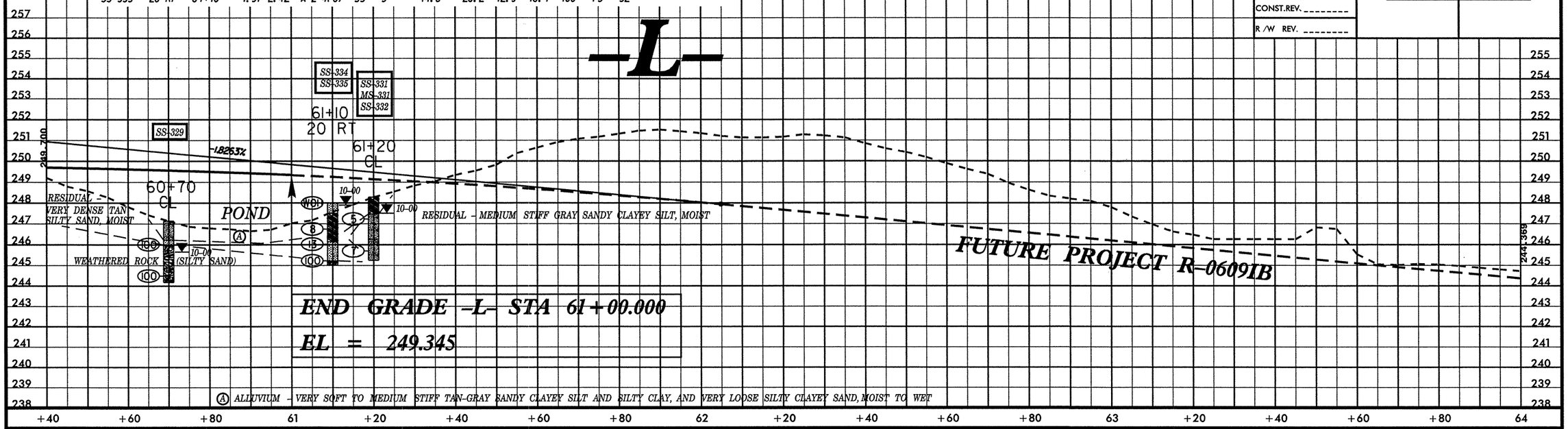
CONST.REV. _____

R/W REV. _____

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

SOIL TEST RESULTS

SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	PL. I.	% BY WEIGHT C. SAND	F. SAND	SILT	CLAY	% PASSING SIEVES 10	40	200	% MOISTURE	% ORGANIC
SS-329	CL	60+70	0.00-0.45	A-4(0)	28	10	44	21.4	12.5	22.2	98	74	36		
SS-331	CL	61+20	1.05-1.50	A-4(5)	39	7	7.1	29.4	47.4	16.1	100	96	71		
SS-332	CL	61+20	2.57-3.02	A-4(3)	36	3	2.4	34.3	49.2	14.1	100	100	71		
SS-334	20 RT	61+10	1.25-1.70	A-6(2)	29	15	39.5	23.2	13.1	24.2	99	77	39		
SS-335	20 RT	61+10	1.97-2.42	A-2-4(0)	35	9	44.8	26.2	12.9	16.1	100	73	32		



$$$$$$SYSTIME$$$$$$DGN$$$$$$USERNAME$$$$$$

PROJECT REFERENCE NO.	SHEET NO.
R-0609IA	46
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

METRIC

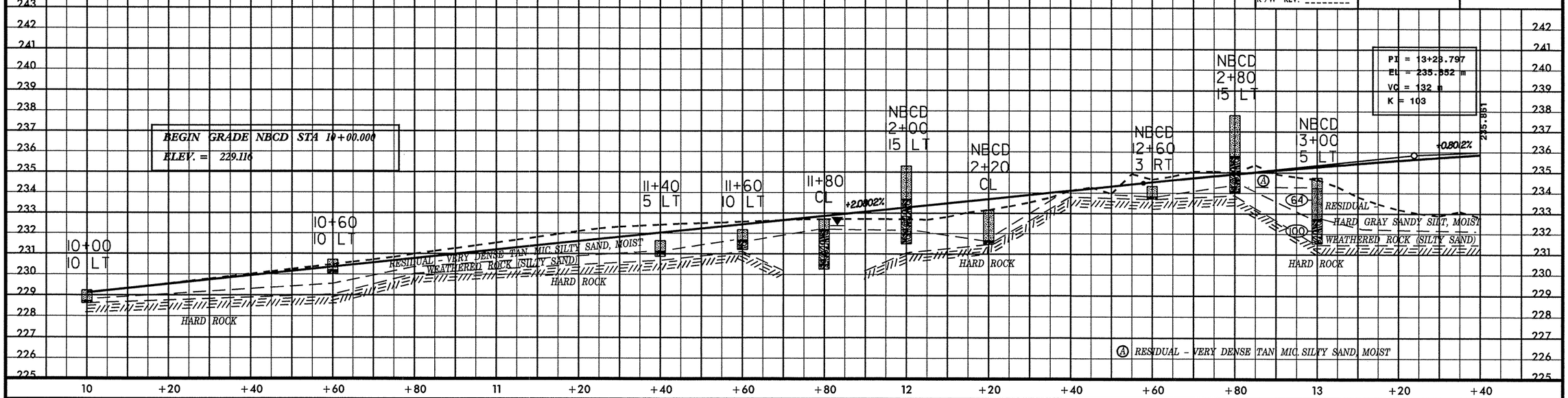
5 0 10

CONST.REV. _____

R/W REV. _____

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

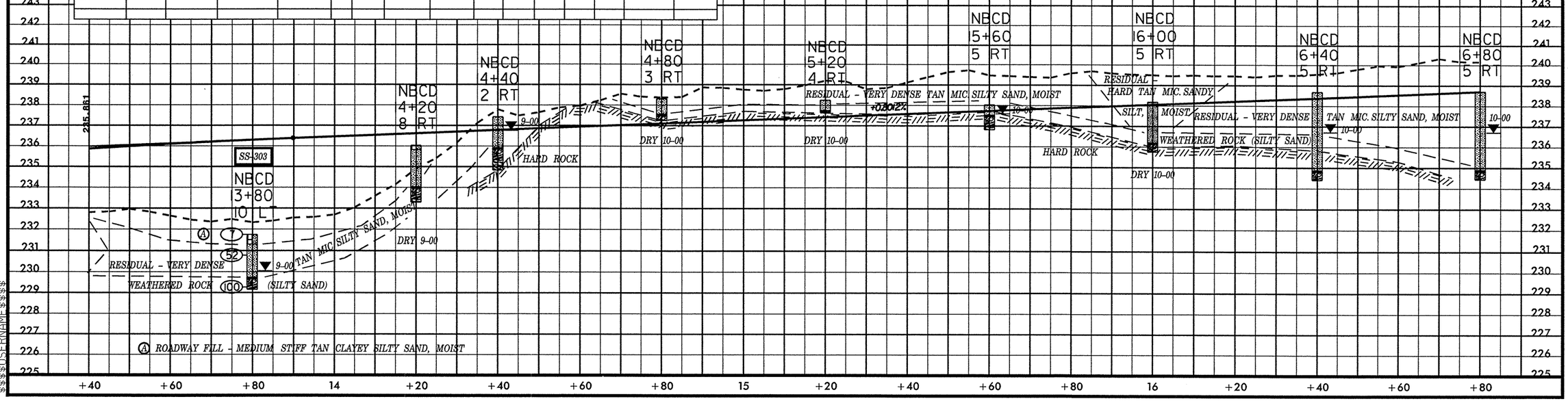
NBCD



NBCD

SOIL TEST RESULTS

SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	PL. I.	% BY WEIGHT C. SAND	F. SAND	SILT	CLAY	% PASSING SIEVES 10	40	200	% MOISTURE	% ORGANIC
SS-303	10 LT	13+80	0.00-0.45	A-2-4(0)	22	4	27.1	39	17.9	16.1	88	74	32		



$$$$$$SYSTIME$$$$$$
$$$$$$USERNAME$$$$$$DGN$$$$$$

PROJECT REFERENCE NO.	SHEET NO.
R-06091A	47
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

METRIC

5 0 10

CONST.REV. _____

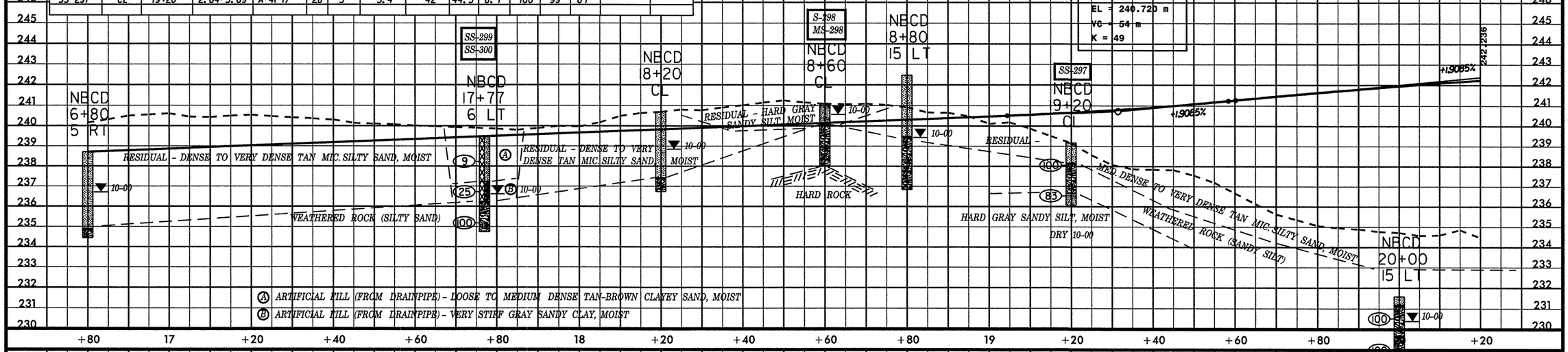
R/W REV. _____

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

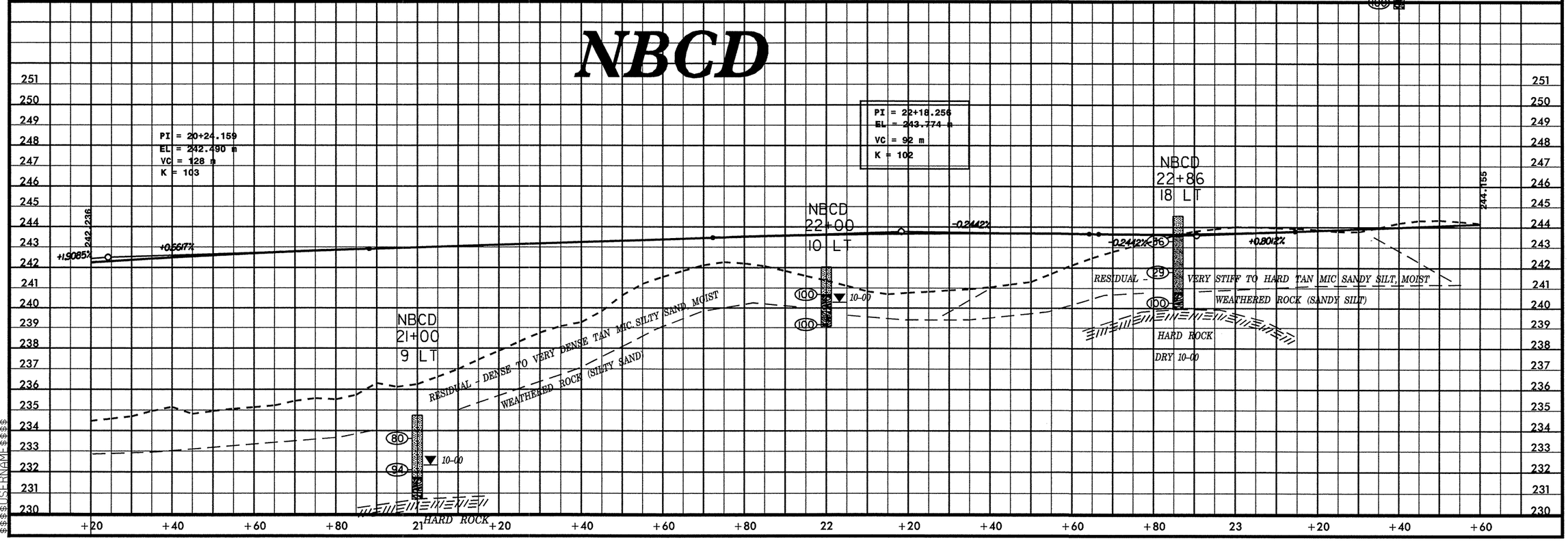
NBCD

SOIL TEST RESULTS

SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	PL. 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-299	6 LT	17+77	1.26-1.71	A-2-4(0)	16	2	42.6	26.8	14.4	16.1	97	72	32		
S-298	20 LT	18+40	0.00-1.00	A-7-6(11)	44	19	18.8	17.4	35.6	28.3	96	86	64	25.5	
SS-297	CL	19+20	2.64-3.09	A-4(1)	28	5	5.4	42	44.5	8.1	100	99	61		



NBCD



PROJECT REFERENCE NO.	SHEET NO.
R-06091A	48
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

METRIC

5 0 10

CONST.REV. _____

R/W REV. _____

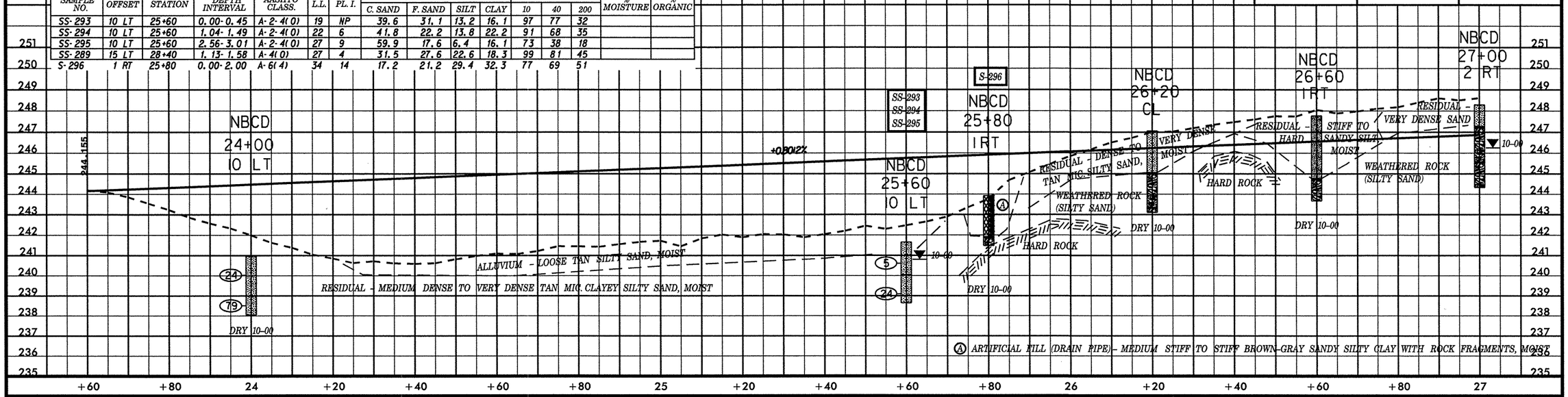
INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

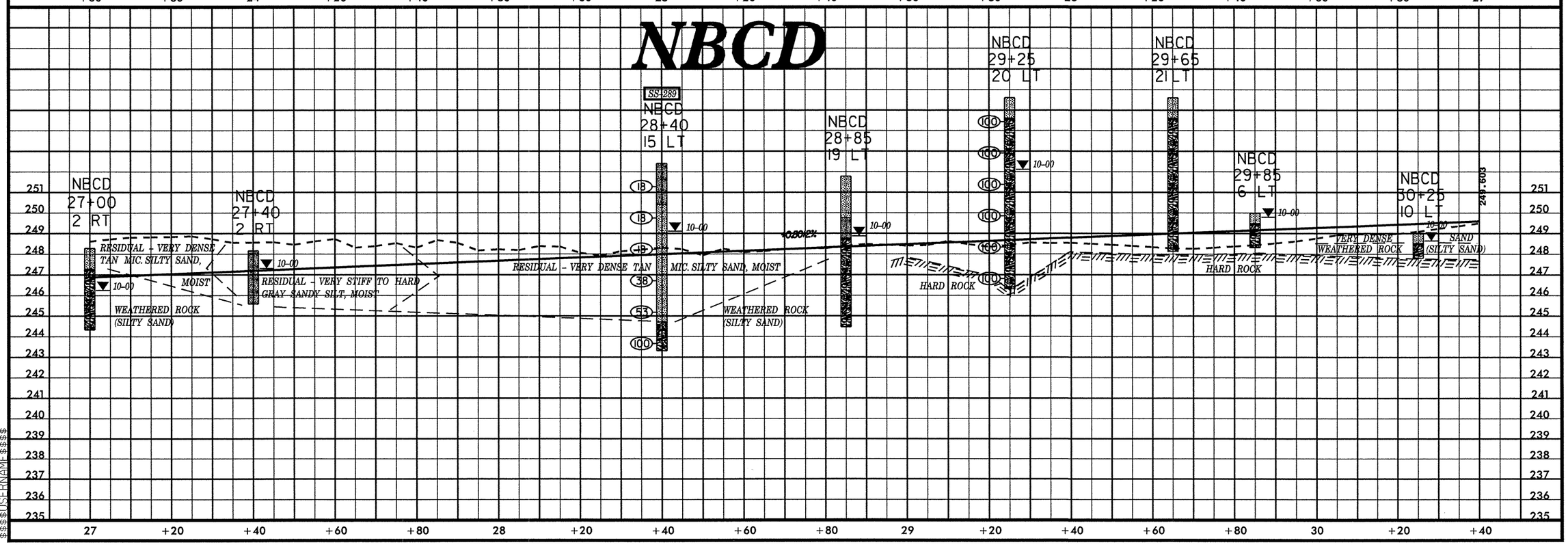
PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

NBCD

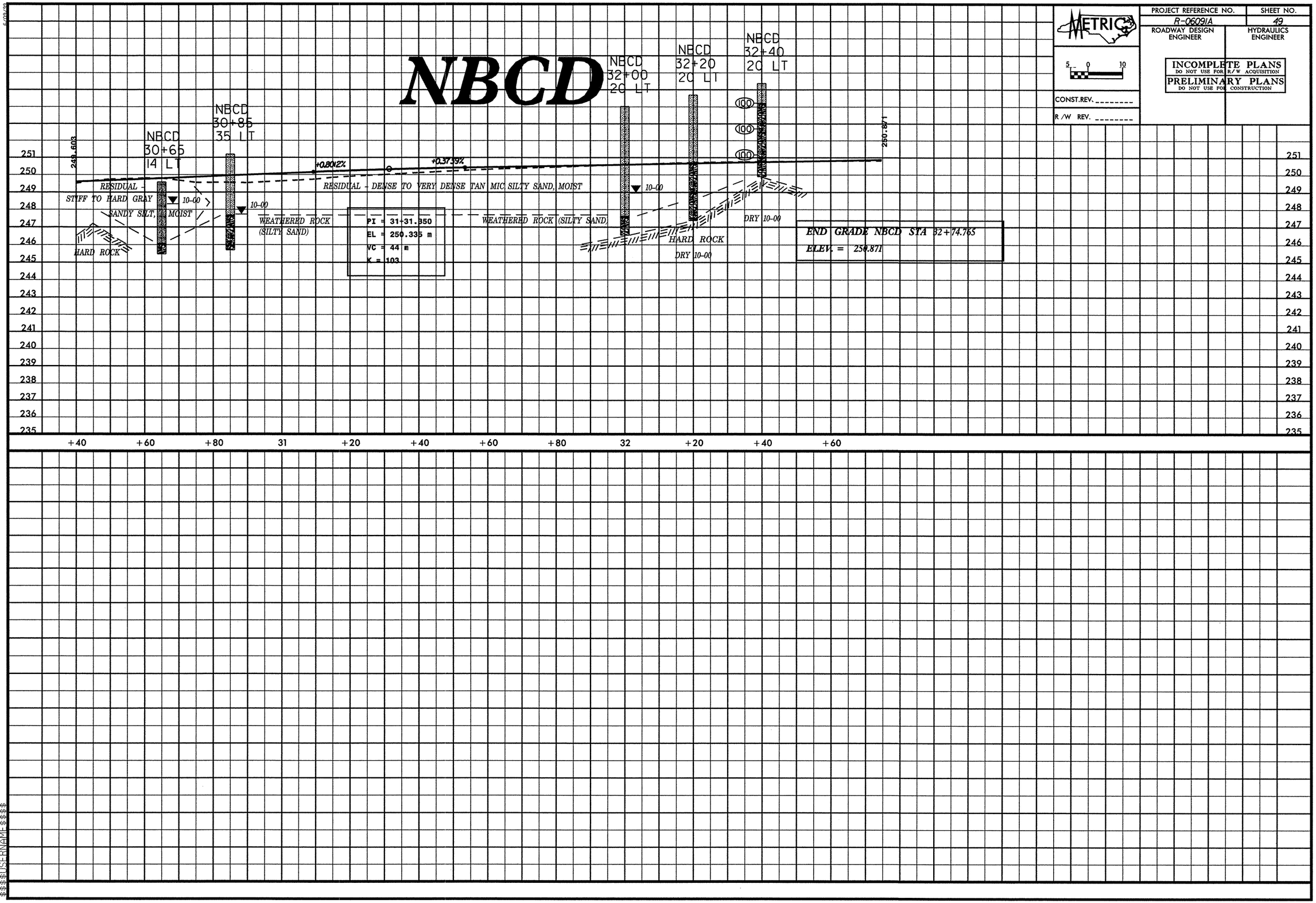
SOIL TEST RESULTS

SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	PL. 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-293	10 LT	25+60	0.00-0.45	A-2-4(0)	19	NP	39.6	31.1	13.2	16.1	97	77	32		
SS-294	10 LT	25+60	1.04-1.49	A-2-4(0)	22	6	41.8	22.2	13.8	22.2	91	68	35		
SS-295	10 LT	25+60	2.56-3.01	A-2-4(0)	27	9	59.9	17.6	6.4	16.1	73	38	18		
SS-289	15 LT	28+40	1.13-1.58	A-4(0)	27	4	31.5	27.6	22.6	18.3	99	81	45		
S-296	1 RT	25+80	0.00-2.00	A-6(4)	34	14	17.2	21.2	29.4	32.3	77	69	51		





$$$$$SYSTIME$$$$$
$$$$$USERNAME$$$$$DGN$$$$$



NBCD
NBCD 30+65 14 LT
NBCD 30+85 35 LT
NBCD 32+00 20 LT
NBCD 32+20 20 LT
NBCD 32+40 20 LT
249.603
250.871
+0.8012%
+0.3739%
RESIDUAL - STIFF TO HARD GRAY SANDY SILT, MOIST
10-00
WEATHERED ROCK (SILTY SAND)
RESIDUAL - DENSE TO VERY DENSE TAN MIC SILTY SAND, MOIST
HARD ROCK
DRY 10-00
PI = 31+31.350
EL = 250.335 m
VC = 44 m
K = 103
END GRADE NBCD STA 32+74.765
ELEV. = 250.871
251
250
249
248
247
246
245
244
243
242
241
240
239
238
237
236
235
+40
+60
+80
31
+20
+40
+60
+80
32
+20
+40
+60
METRIC
5 0 10
CONST.REV.
R/W REV.
PROJECT REFERENCE NO.
R-06091A
SHEET NO.
49
ROADWAY DESIGN ENGINEER
HYDRAULICS ENGINEER
INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION
PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

SBCD

PROJECT REFERENCE NO.	SHEET NO.
R-0609IA	50

ROADWAY DESIGN ENGINEER | HYDRAULICS ENGINEER

METRIC

5 0 10

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

CONST.REV. _____

R/W REV. _____

SOIL TEST RESULTS

SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	PL. I.	% BY WEIGHT				% PASSING SIEVES			% MOISTURE	% ORGANIC
							C. SAND	F. SAND	SILT	CLAY	10	40	200		
S-263	30 RT	10+20	0.00-1.40	A-4(1)	28	3	17.5	24.1	40.4	18.1	100	88	64		5
SS-262	CL	12+60	1.15-1.55	A-4(3)	39	5	21.9	23.9	46.2	8	100	85	62		
SS-261	CL	14+00	1.14-1.59	A-4(4)	33	6	8	36.3	47.6	8	99	94	71		
SS-259	15 RT	16+40	1.23-1.68	A-2-4(0)	27	5	46.1	25.3	16.5	12	99	67	32		

BEGIN GRADE SBCD STA 10+00.000
ELEV. = 229.129

S-263
SBCD 10+20 30 RT
8-00
HARD ROCK

Ⓑ ALLUVIUM - SOFT TO MEDIUM STIFF GRAY SANDY SILT, WET

229.129

RESIDUAL - DENSE TO VERY DENSE TAN SILTY SAND, MOIST

SBCD 11+10 15 RT
WEATHERED ROCK (SILTY SAND)
DRY 8-00

0.9682%

SBCD 12+00 10 RT
RESIDUAL - HARD GRAY SANDY SILT, MOIST
WR
DRY 8-00

SS-262
SBCD 2+60 CL
Ⓐ RESIDUAL - VERY DENSE TAN SILTY SAND, MOIST
WEATHERED ROCK (SILTY SAND)
HARD ROCK
DRY 8-00

232.422

SBCD 3+20 10 RT
RESIDUAL - VERY STIFF TO HARD GRAY SANDY SILT, MOIST
8-00

10 +20 +40 +60 +80 11 +20 +40 +60 +80 12 +20 +40 +60 +80 13 +20 +40

DRY 8-00

Ⓐ RESIDUAL - VERY DENSE TAN SILTY SAND, MOIST

SS-259
SBCD 6+60 15 RT
8-00

235.713

SS-261
SBCD 14+00 CL
RESIDUAL - VERY DENSE TAN MIC. SILTY SAND, MOIST TO DRY
HARD TAN MIC SANDY SILT, MOIST
DRY 8-00

SBCD 14+60 10 RT
WEATHERED ROCK (SILTY SAND)
DRY 8-00

0.9682%

SBCD 15+20 10 RT
8-00

RESIDUAL - DENSE TO VERY DENSE TAN MIC SILTY SAND, MOIST TO DRY

SBCD 16+20 10 RT
WEATHERED ROCK (SILTY SAND)
DRY 8-00

+40 +60 +80 14 +20 +40 +60 +80 15 +20 +40 +60 +80 16 +20 +40 +60 +80

$$$$USERNAME$$$$SYSTIME$$$$DGN$$$$

6/09/23

SOIL TEST RESULTS

SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	PL. I.	% BY WEIGHT				% PASSING SIEVES			% MOISTURE	% ORGANIC
							C. SAND	F. SAND	SILT	CLAY	10	40	200		
SS-256	CL	17+00	1.44-1.89	A-7-6(13)	43	19	8	24.3	39.2	28.5	100	98	73		
SS-257	CL	17+00	4.48-4.93	A-7-6(12)	46	18	10	28.1	49.6	12.2	100	97	70		
SS-258	10 RT	19+00	2.78-3.23	A-4(5)	36	8	14.1	25.7	48	12.2	100	92	67		
S-266	8 RT	22+10	0.00-0.90	A-4(0)	25	8	36.3	23.8	17.2	22.6	92	72	39		

SBCD

METRIC

5 0 10

CONST.REV. _____

R/W REV. _____

PROJECT REFERENCE NO.	SHEET NO.
R-0609IA	5I
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

SS-256
SS-257

SBCD
7+00
CL

235.713

17
8
15
14 8-00
100

RESIDUAL - STIFF GRAY SANDY SILTY CLAY MOIST TO WET

WEATHERED ROCK (SILTY SAND)

SS-258

SBCD
9+00
10 RT

0.9682%

239.004

75
80

HARD TAN MIC. SANDY SILT, MOIST

DRY 8-00

SBCD
9+60
10 RT

RESIDUAL - STIFF TO HARD TAN SANDY SILTY CLAY, MOIST TO WET

51
100

WEATHERED ROCK (SILTY SAND)

DRY 8-00

SBCD

239.004

0.9682%

242.296

S-266

SBCD
22+10
8 RT

RESIDUAL - STIFF TO HARD TAN SANDY SILTY CLAY, MOIST TO WET

WEATHERED ROCK (SILTY SAND)

RESIDUAL - MEDIUM DENSE TO DENSE TAN MIC. SILTY SAND, MOIST

15
100 9-00

ROADWAY FILL - STIFF BROWN SANDY CLAYEY SILT, MOIST

SBCD
22+95 SBCD
10 RT 23+05
3 RT

ROADWAY FILL - STIFF TAN-GRAY MIC. SANDY SILTY CLAY WITH ROCK FRAGMENTS, MOIST

9-00 9-00

9 8
57 34

WEATHERED ROCK (SILTY SAND)

$$$$SYSTIME$$$$
$$$$SDGN$$$$
$$$$SFILE$$$$

PROJECT REFERENCE NO.	SHEET NO.
R-0609IA	52
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

METRIC

5 0 10

CONST.REV. _____

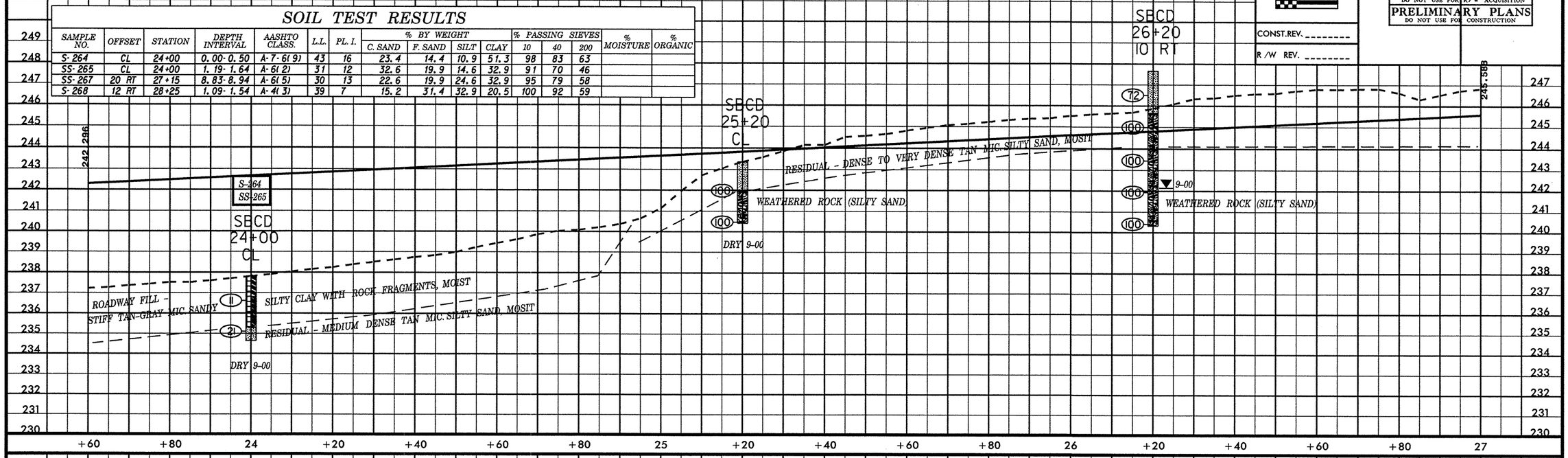
R/W REV. _____

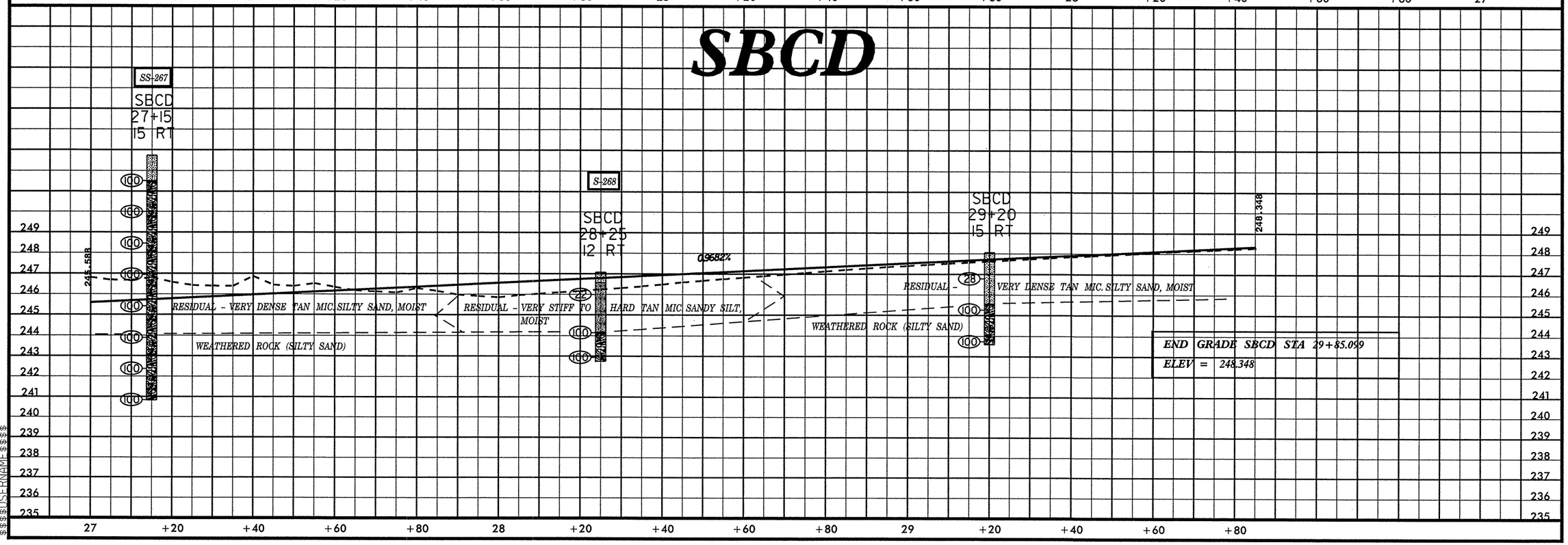
INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION
PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

SBCD

SOIL TEST RESULTS

SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	PL. I.	% BY WEIGHT C. SAND	F. SAND	SILT	CLAY	% PASSING SIEVES 10	40	200	% MOISTURE	% ORGANIC
S-264	CL	24+00	0.00-0.50	A-7-6(9)	43	16	23.4	14.4	10.9	51.3	98	83	63		
SS-265	CL	24+00	1.19-1.64	A-6(2)	31	12	32.6	19.9	14.6	32.9	91	70	46		
SS-267	20 RT	27+15	8.83-8.94	A-6(5)	30	13	22.6	19.9	24.6	32.9	95	79	58		
S-268	12 RT	28+25	1.09-1.54	A-4(3)	39	7	15.2	31.4	32.9	20.5	100	92	59		





6/03/98

METRIC

5 0 10

PROJECT REFERENCE NO.	SHEET NO.
R-0609IA	53
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

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

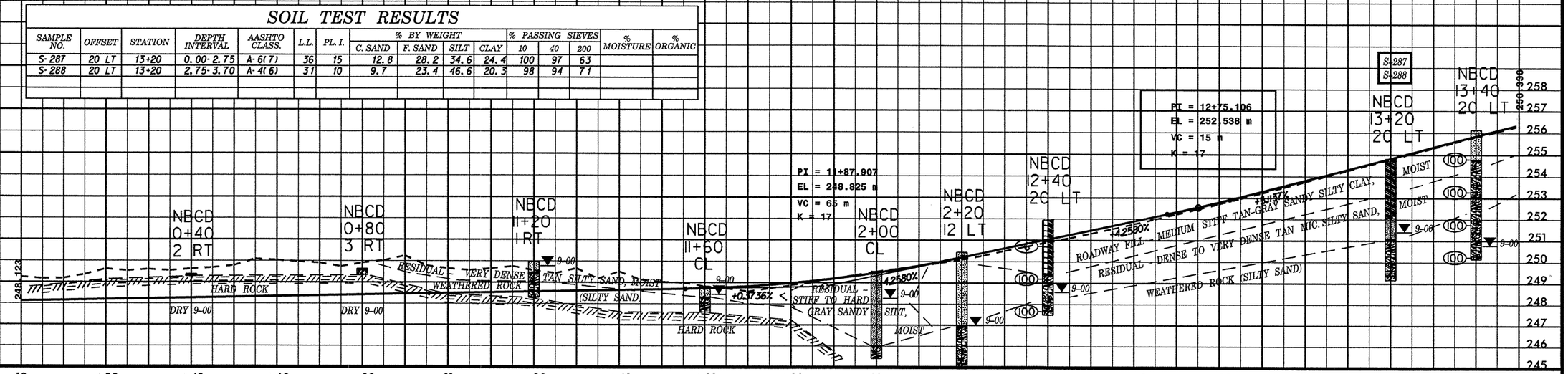
CONST.REV. _____

R/W REV. _____

NBCD RAMP

SOIL TEST RESULTS

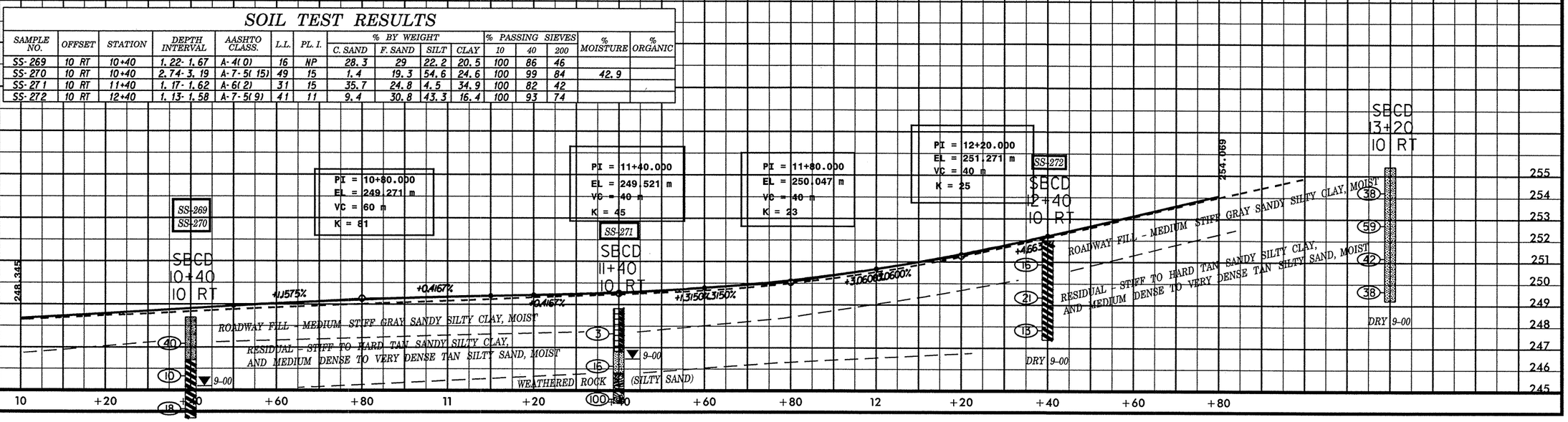
SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	PL. I.	% BY WEIGHT C. SAND	F. SAND	SILT	CLAY	% PASSING SIEVES 10	40	200	% MOISTURE	% ORGANIC
S-287	20 LT	13+20	0.00-2.75	A-6(7)	36	15	12.8	28.2	34.6	24.4	100	97	63		
S-288	20 LT	13+20	2.75-3.70	A-4(6)	31	10	9.7	23.4	46.6	20.3	98	94	71		



SBCD RAMP

SOIL TEST RESULTS

SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	PL. I.	% BY WEIGHT C. SAND	F. SAND	SILT	CLAY	% PASSING SIEVES 10	40	200	% MOISTURE	% ORGANIC
SS-269	10 RT	10+40	1.22-1.67	A-4(0)	16	NP	28.3	29	22.2	20.5	100	86	46		
SS-270	10 RT	10+40	2.74-3.19	A-7-5(15)	49	15	1.4	19.3	54.6	24.6	100	99	84	42.9	
SS-271	10 RT	11+40	1.17-1.62	A-6(2)	31	15	35.7	24.8	4.5	34.9	100	82	42		
SS-272	10 RT	12+40	1.13-1.58	A-7-5(9)	41	11	9.4	30.8	43.3	16.4	100	93	74		



SYSTIME=$$$$$$$$ USERNAME=$$$$$$$$ DGN=$$$$$$$$

PROJECT REFERENCE NO.	SHEET NO.
R-0609IA	54
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

METRIC

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

CONST.REV. ________

R/W REV. ________

LOOP 'A'

SOIL TEST RESULTS

SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	PL. 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-304	CL	11+00	0.00-0.45	A-2-4(0)	17	NP	66.3	22.3	3.4	8	93	53	12		
SS-305	CL	11+00	1.05-1.50	A-4(0)	19	3	31.9	30.5	19.5	18.1	99	83	41		

LOOP 'B'

SOIL TEST RESULTS

SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	PL. 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-246	CL	10+60	0.00-1.00	A-6(4)	35	17	29.2	24.1	12.1	34.7	95	81	47		
SS-247	CL	10+60	1.15-1.60	A-6(4)	40	17	28.3	30.4	16.8	24.5	100	86	46		

$$$$SYSTIME$$$$ $$$$DGN$$$$ $$$$USERNAME$$$$

6/09/23

LOOP 'C'

PI = 10+68.720
EL = 241.000 m
VC = 46 m
K = 5

PI = 11+95.010
EL = 229.880 m
VC = 76 m
K = 7

BEGIN GRADE LOOP-C STA 10+00.000
ELEV. = 240.370

END GRADE LOOP-C STA. 12+69.612
ELEV. = 231.470

240.370

+0.92%

-8.81%

+2.09%

231.470

SS-234
SS-235
11+40
10 LT

11+60
CL

11+80
8 RT

S-233
12+00
CL

SS-243
11+00
15 LT

25
41
33

TO HARD TAN AND GRAY MIC. SANDY SILT, MOIST

RESIDUAL - VERY STIFF TO HARD TAN SILTY SAND, MOIST

WEATHERED ROCK

3
70
4
8-00

DRY 8-00

DRY 8-00

DRY 8-00

HARD ROCK

HARD ROCK

DRY 8-00

(A) ALLUVIUM - VERY LOOSE TO LOOSE TAN SILTY SAND, MOIST

243 242 241 240 239 238 237 236 235 234 233 232 231 230 229 228 227 226 225

10 +20 +40 +60 +80 11 +20 +40 +60 +80 12 +20 +40 +60

METRIC

5 0 10

PROJECT REFERENCE NO. R-0609IA | SHEET NO. 55

ROADWAY DESIGN ENGINEER | HYDRAULICS ENGINEER

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

CONST.REV. _____

R/W REV. _____

SOIL TEST RESULTS

SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	PL. I.	% BY WEIGHT				% PASSING SIEVES			% MOISTURE	% ORGANIC
							C. SAND	F. SAND	SILT	CLAY	10	40	200		
SS-243	15 LT	11+00	1.10-1.55	A-4(0)	30	4	20.8	31.4	41.7	6.1	85	72	49		
SS-234	10 LT	11+40	1.16-1.61	A-4(0)	31	5	33.4	33	19.3	14.3	100	80	39		
SS-235	10 LT	11+40	2.68-3.13	A-4(1)	32	3	11.8	39.8	40.3	8.2	96	90	57		
S-233	CL	12+00	0.00-3.50	A-4(3)	27	7	18.3	16.7	44.5	20.4	98	85	68		

$$$$SYSTIME$$$$SDGN$$$$
$$$$USERNAME$$$$
$$$$

RAMP 'A'

PROJECT REFERENCE NO.	SHEET NO.
R-0609IA	56

ROADWAY DESIGN ENGINEER

HYDRAULICS ENGINEER

METRIC

5 0 10

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

CONST.REV. _____

R /W REV. _____

SOIL TEST RESULTS

SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	PL. I.	% BY WEIGHT C. SAND	F. SAND	SILT	CLAY	% PASSING SIEVES 10	40	200	% MOISTURE	% ORGANIC
S-321	CL	12+60	0.00-1.00	A-6(9)	37	14	10.9	19.4	35.5	34.3	96	90	71		
SS-322	CL	12+60	1.18-1.63	A-4(10)	40	9	1.8	19.2	60.9	18.1	100	99	87		
SS-323	CL	13+19	0.00-0.45	A-2-4(0)	19	NP	39.5	32.3	16.1	12.1	96	76	30		2.2
SS-317	16 RT	11+10	0.00-0.45	A-4(0)	22	NP	33.5	30	22.4	14.1	97	79	40		
SS-318	16 RT	11+10	1.18-1.63	A-4(0)	22	4	19.4	31	33.5	16.1	100	92	54		

+0.3126% -0.5798%

241.877

PI = 12+35.313
EL = 246.921 m
VC = 60 m
K = 67

246.603

RPA 0+40 CL

RESIDUAL - VERY DENSE TAN MIC. SILTY SAND, MOIST

WEATHERED ROCK (SILTY SAND)

DRY 10-00

SS-317
SS-318

RPA 11+20 16 RT

RESIDUAL - VERY DENSE TAN MIC. SILTY SAND, MOIST

10-00

RPA 11+80 CL

RESIDUAL - STIFF TO HARD TAN SANDY CLAY, MOIST

MOIST

WEATHERED ROCK (SILTY SAND)

DRY 10-00

S-321
S-322

RPA 12+60 CL

VERY STIFF TO HARD TAN SANDY SILT, MOIST

10-00

S-323

RPA 13+19 CL

10-00

RESIDUAL - DENSE TO VERY DENSE TAN MIC. SILTY SAND, MOIST

Ⓑ ALLUVIUM - MEDIUM STIFF BROWN CLAYEY SANDY SILT, MOIST

Ⓐ ALLUVIUM - LOOSE GRAY SLIGHTLY ORGANIC SILTY SAND, MOIST TO WET

10 +20 +40 +60 +80 11 +20 +40 +60 +80 12 +20 +40 +60 +80 13 +20 +40

RAMP 'A'

END GRADE RAMP-A STA 15+91.594
ELEV. = 248.807

PI = 14+06.209
EL = 246.220 m
VC = 70 m
K = 35

246.603

-0.5798%

+1.3957%

248.807

RPA 4+00 CL

RESIDUAL - HARD TAN MIC. SANDY SILT, MOIST

10-00

RESIDUAL - DENSE TO VERY DENSE TAN MIC. SILTY SAND, MOIST

WEATHERED ROCK (SILTY SAND)

RPA 14+75 31 RT

DRY 10-00

RPA 15+35 11 RT

DRY 10-00

WEATHERED ROCK (SILTY SAND)

+40 +60 +80 14 +20 +40 +60 +80 15 +20 +40 +60 +80

$$$$SYSTIME$$$$
$$$$USERNAME$$$$
$$$$DGN$$$$

PROJECT REFERENCE NO.	SHEET NO.
R-06091A	57
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

METRIC

5 0 10

CONST.REV. _____

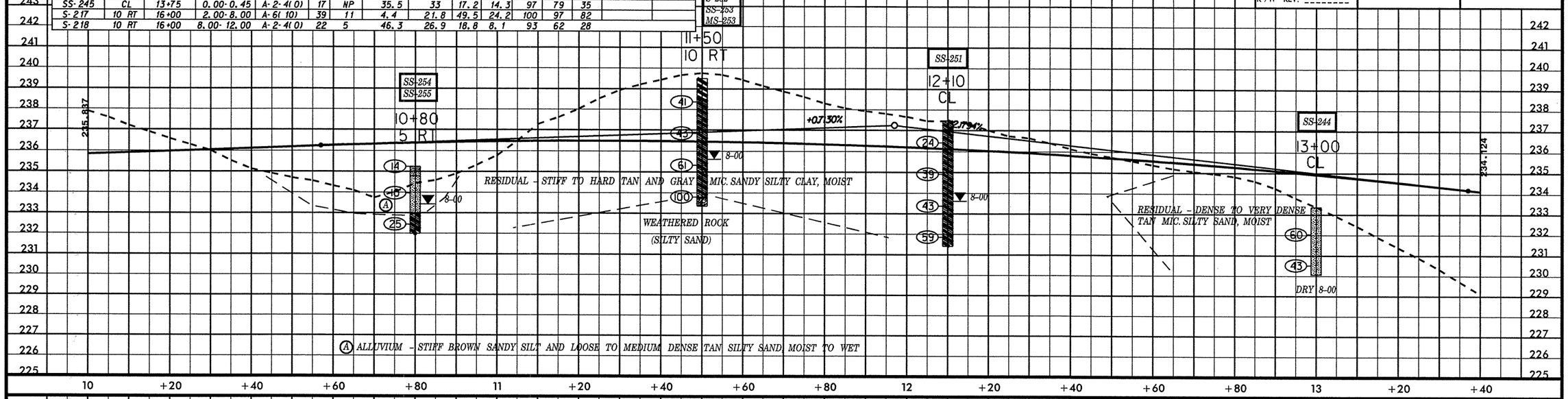
R/W REV. _____

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

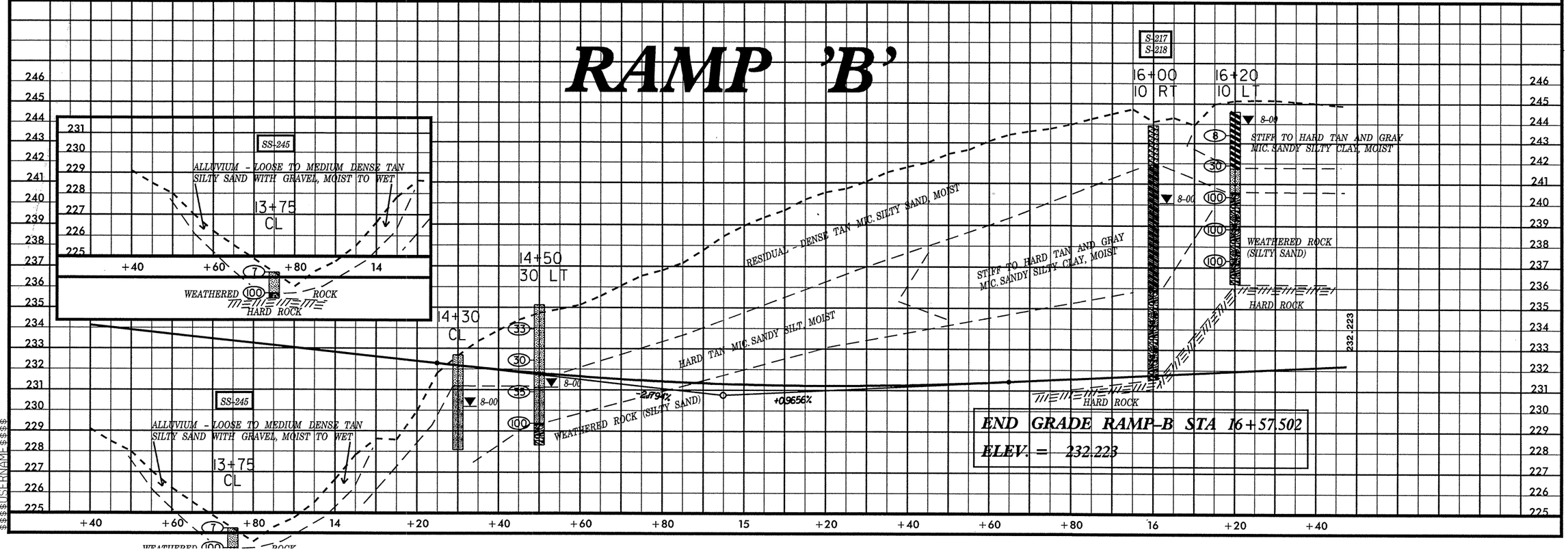
SOIL TEST RESULTS

SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	PL. 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-254	5 RT	10+80	0.00-0.45	A-4(2)	30	9	37.3	15.1	27.2	20.4	98	72	49		
SS-255	5 RT	10+80	1.27-1.72	A-2-4(0)	18	3	43.2	28.7	13.8	14.3	100	73	31		
S-252	10 RT	11+50	0.00-0.75	A-7-6(26)	53	28	4.3	14.9	36	44.9	100	98	85		
SS-253	10 RT	11+50	1.14-1.49	A-6(11)	39	14	4.3	23.2	52.1	20.4	100	98	80	14.5	
SS-251	CL	12+10	1.04-1.49	A-6(3)	38	15	35.1	21.4	31.3	12.2	92	68	44		
SS-244	CL	13+00	1.32-1.77	A-2-4(0)	29	5	42.4	31.6	13.8	12.2	100	75	30		
SS-245	CL	13+75	0.00-0.45	A-2-4(0)	17	NP	35.5	33	17.2	14.3	97	79	35		
S-217	10 RT	16+00	2.00-8.00	A-6(10)	39	11	4.4	21.8	49.5	24.2	100	97	82		
S-218	10 RT	16+00	8.00-12.00	A-2-4(0)	22	5	46.3	26.9	18.8	8.1	93	62	28		

RAMP 'B'



RAMP 'B'



$$$$$SYSTIME$$$$$
$$$$$USERNAME$$$$$

PROJECT REFERENCE NO. R-0609IA | SHEET NO. 58

ROADWAY DESIGN ENGINEER | HYDRAULICS ENGINEER

METRIC

CONST.REV. ________
R/W REV. ________

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

RAMP 'C'

RAMP 'C'

SOIL TEST RESULTS

SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	PL. I.	% BY WEIGHT C. SAND	F. SAND	SILT	CLAY	% PASSING SIEVES 10	40	200	% MOISTURE	% ORGANIC
SS-207	7 LT	10+35	1.16-1.61	A-2-4(0)	22	NP	56.1	27.2	8.6	8.1	97	64	64		
SS-236	CL	12+60	1.13-1.58	A-2-6(1)	28	13	41.4	25.3	6.8	26.5	94	72	34		
SS-237	CL	12+60	2.65-3.00	A-2-4(0)	27	7	56.3	25.9	7.6	10.2	72	42	15		
SS-238	10 RT	13+40	1.21-1.66	A-5(9)	41	10	3.9	27.9	58	10.2	100	98	79		
SS-239	10 RT	13+40	4.25-4.70	A-4(0)	30	6	34.3	29.6	30.1	6.1	97	74	42		
SS-240	CL	14+23	0.30-0.45	A-4(0)	20	NP	31	37.7	19.1	12.2	100	86	36		
SS-241	CL	14+23	1.16-1.61	A-2-4(0)	31	9	65	18.3	6.4	10.2	84	42	16		

$$$$SYSTIME$$$$ $$$$DGN$$$$ $$$$USERNAME$$$$

PROJECT REFERENCE NO.	SHEET NO.
R-0609IA	59
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

METRIC

5 0 10

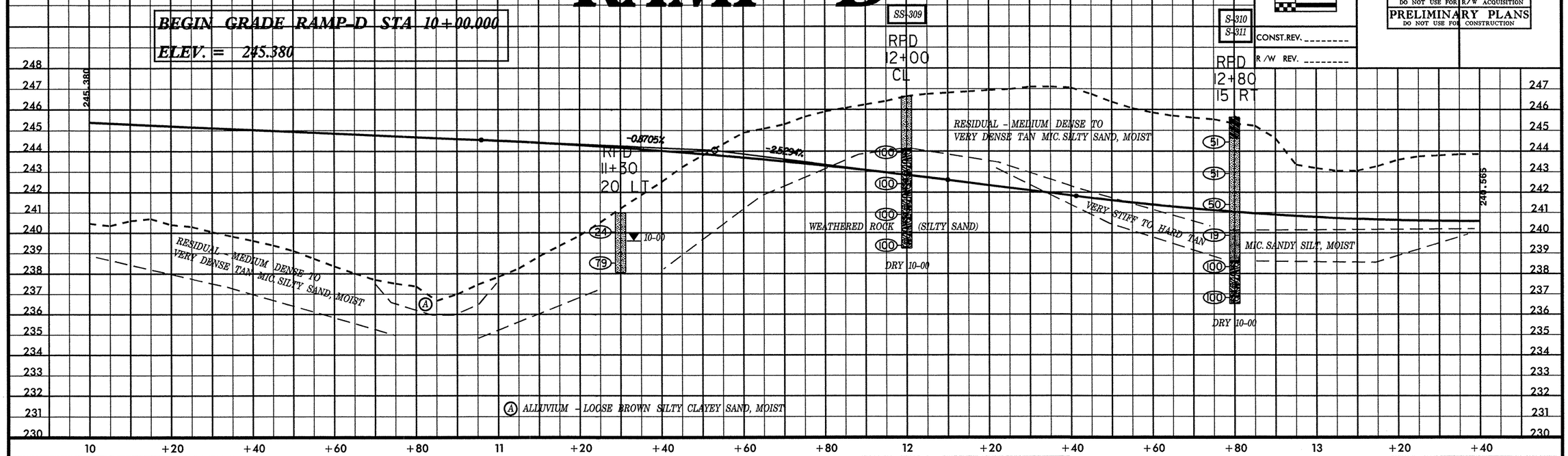
CONST.REV. _____

R/W REV. _____

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

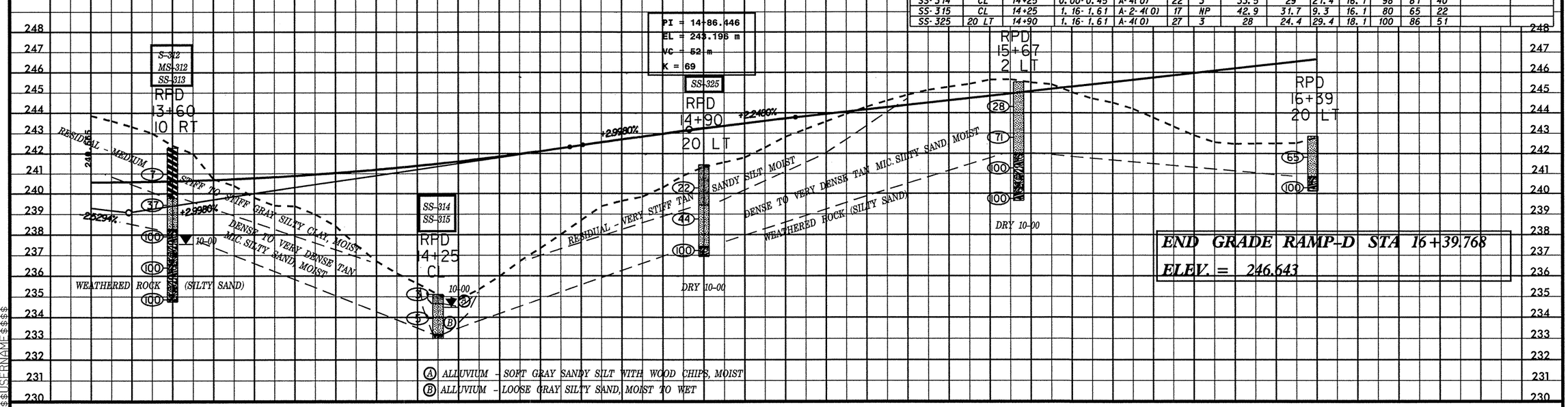
RAMP 'D'



RAMP 'D'

SOIL TEST RESULTS

SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	PL. I.	% BY WEIGHT C. SAND	F. SAND	SILT	CLAY	% PASSING SIEVES 10	40	200	% MOISTURE	% ORGANIC
SS-309	CL	12+00	1.33-1.63	A-2-4(0)	23	NP	55.8	26.5	9.6	8	92	57	19		
SS-310	15 RT	12+80	0.00-1.00	A-6(6)	34	17	26.5	20.1	21.3	32.1	97	83	54		
SS-311	15 RT	12+80	5.15-6.20	A-4(7)	40	9	13.3	20.1	48.6	18.1	100	90	72		
S-312	10 RT	13+60	0.00-1.00	A-7-5(22)	52	19	3.8	6	48	42.2	100	98	92	37.7	
SS-313	10 RT	13+60	1.31-1.76	A-7-5(16)	49	12	3	9.4	67.5	20.1	100	98	93		
SS-314	CL	14+25	0.00-0.45	A-4(0)	22	3	33.5	29	21.4	16.1	98	81	40		
SS-315	CL	14+25	1.16-1.61	A-2-4(0)	17	NP	42.9	31.7	9.3	16.1	80	65	22		
SS-325	20 LT	14+90	1.16-1.61	A-4(0)	27	3	28	24.4	29.4	18.1	100	86	51		



$$$$$SYSTIME$$$$$DGN$$$$$USERNAME$$$$

FLYOVER

SOIL TEST RESULTS

SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	PL. I.	% BY WEIGHT C. SAND	F. SAND	SILT	CLAY	% PASSING SIEVES 10	40	200	% MOISTURE	% ORGANIC
SS-165	CL	10+30	1.27-1.72	A-4(5)	31	5	2.8	13.9	59	24.2	100	98	89		
S-154	15 RT	11+00	0.00-1.00	A-6(7)	39	22	37	23.4	11.3	28.3	97	73	49		
SS-155	15 RT	11+00	1.13-1.58	A-6(2)	35	12	33.9	28.1	17.8	20.2	98	78	41		
SS-156	15 RT	11+00	7.21-7.53	A-2-4(0)	26	NP	36.4	38.8	20.8	4	98	79	30		
S-157	22 LT	11+93	0.00-1.00	A-6(3)	27	11	21.6	31.1	23	24.2	100	89	52		
SS-158	22 LT	11+93	5.77-6.07	A-4(2)	33	4	8.9	33.1	47.9	10.1	100	95	68		
SS-200	18 RT	13+37	0.00-0.45	A-7-6(17)	55	30	23.8	15.3	14.4	46.4	99	83	63		
SS-201	18 RT	13+37	0.90-1.35	A-6(2)	29	14	31.7	25.8	12.2	30.3	96	78	44		
SS-202	18 RT	13+37	2.42-2.87	A-2-4(0)	23	NP	45.6	33.1	9.2	12.1	100	75	25		

METRIC

5 0 10

CONST.REV. _____

R/W REV. _____

PROJECT REFERENCE NO.	SHEET NO.
R-0609IA	60
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

SS-165
10+30
CL
HARD WHITE SANDY SILT, MOIST
43
22
31
100
100
100
100
8-00
236.289
-0.5468%
WEATHERED ROCK (SILTY SAND)

S-154
SS-155
SS-156
11+00
15 RT
RESIDUAL - VERY STIFF TO HARD TAN SILTY CLAY, MOIST
42
MEDIUM DENSE TO VERY DENSE TAN SILTY SAND, MOIST
30
27
34
100
100
100
100
100
8-00
-0.5410%
WEATHERED ROCK (SILTY SAND)

11+60
15 RT
100
100
100
100
100
100
8-00
HARD ROCK

S-157
SS-158
11+93
22 L
80
100
100
100
100
100
100
100
8-00
WEATHERED ROCK (SILTY SAND)

SS-200
SS-201
SS-202
13+37
18 RT
245.700
POND
PROBE
PROBE
PROBE
PROBE
+3.4258%
RESIDUAL - STIFF TO HARD TAN SILTY SANDY CLAY, MOIST
WATER
11
23
59
100
8-00
Ⓐ ALLUVIUM - VEY SOFT TO SOFT TAN-BROWN SILTY SANDY CLAY, WET
WEATHERED ROCK (SILTY SAND)

10 +20 +40 +60 +80 11 +20 +40 +60 +80 12 +20 +40 +60 +80 13 +20 +40

247 246 245 244 243 242 241 240 239 238 237 236 235 234 233 232 231 230

FLYOVER

SOIL TEST RESULTS

SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	PL. I.	% BY WEIGHT C. SAND	F. SAND	SILT	CLAY	% PASSING SIEVES 10	40	200	% MOISTURE	% ORGANIC
S-186	20 RT	14+00	0.00-1.00	A-7-6(31)	60	35	4.4	17.4	23.7	54.5	100	98	83		
SS-187	20 RT	14+00	1.24-1.69	A-4(1)	29	6	16.8	36.5	30.6	16.1	100	92	55		
SS-205	20 RT	14+80	1.31-1.76	A-2-6(1)	39	14	42.8	28.9	12.2	16.1	100	74	32		
SS-206	20 RT	14+80	4.35-4.80	A-2-4(0)	30	NP	44.2	35.3	12.4	8.1	99	73	73		
SS-207	CL	15+40	1.16-1.61	A-2-4(0)	22	NP	56.1	27.2	8.6	8.1	97	64	64		
SS-228	10 RT	16+00	1.04-1.49	A-7-6(11)	41	17	16.7	14.5	28	40.8	98	88	70		
SS-229	10 RT	16+00	2.56-3.00	A-2-4(0)	23	NP	60.6	26.1	7.2	6.1	98	57	16		

S-186
SS-187
14+00
20 RT
13+60
20 RT
235.720
VERY STIFF TO HARD TAN SANDY SILTY CLAY, MOIST
52
HIGH PI - CLAYEY SILT TO SANDY
34
-0.4288%
RESIDUAL - MEDIUM DENSE TO VERY DENSE TAN MIC. SILTY SAND, MOIST
HARD TAN MIC. SANDY
HARD ROCK
DRY 8-00
DRY 8-00

SS-205
SS-206
14+20
CL
14+80
20 RT
17
23
39
77
100
100
8-00
8-00
WEATHERED ROCK (SILTY SAND)

SS-207
15+40
CL
82
74
100
100
100
100
8-00

SS-228
SS-229
6+00
10 RT
37
100
100
+3.4258%
WEATHERED ROCK (SILTY SAND)

6+80
10 LT
247.152
100
100

+40 +60 +80 14 +20 +40 +60 +80 15 +20 +40 +60 +80 16 +20 +40 +60 +80

247 246 245 244 243 242 241 240 239 238 237 236 235 234 233 232 231 230

$$$$SYSTIME$$$$
$$$$DGN$$$$
$$$$USERNAME$$$$

METRIC	PROJECT REFERENCE NO.	SHEET NO.
5 0 10	R-0609IA	6I
	ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
CONST.REV. _____	PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	
R/W REV. _____	INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION	

FLYOVER

SOIL TEST RESULTS

SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	PL. I.	% BY WEIGHT				% PASSING SIEVES			% MOISTURE	% ORGANIC
							C. SAND	F. SAND	SILT	CLAY	10	40	200		
S-230	CL	17+40	0.00-1.00	A-6(4)	30	13	23.6	25.1	16.6	34.7	100	86	55		
SS-231	CL	17+40	1.14-1.59	A-4(0)	27	5	39.1	26.9	15.6	18.3	98	73	37		
SS-242	10 LT	18+00	0.00-0.45	A-2-4(0)	17	1	41.8	30.8	15.2	12.2	98	74	30		

PI = 19+23.074
EL = 255.566 m
VC = 570 m
K = 101

+3.4258%
-2.2354%
251.643
247.152

S-230
SS-231
SS-242

16+80
10 L

17+40
CL

18+00
10 LT

20+02
6 RT

RESIDUAL - DENSE TO VERY DENSE TAN MIC. SILTY SAND, MOIST

WEATHERED ROCK (SILTY SAND)

RESIDUAL - HARD SILTY CLAY, MOIST

RESIDUAL - HARD TAN MIC. SANDY SILT, MOIST

RESIDUAL - DENSE TO VERY DENSE TAN MIC. SILTY SAND, MOIST

WEATHERED ROCK (SILTY SAND)

DENSE SAND

RESIDUAL - HARD TAN MIC. SANDY SILT MOIST

WEATHERED ROCK (SILTY SAND)

HARD ROCK

Ⓐ ALLUVIUM - LOOSE TAN CLAYEY SILTY SAND, MOIST

255 254 253 252 251 250 249 248 247 246 245 244 243 242 241 240 239 238 237 236 235 234 233 232 231 230 229 228 227 226 225

+80 17 +20 +40 +60 +80 18 +20 +40 +60 +80 19 +20 +40 +60 +80 20 +20

6/19/23

PROJECT REFERENCE NO.	SHEET NO.
R-0609IA	62
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

METRIC

5 0 10

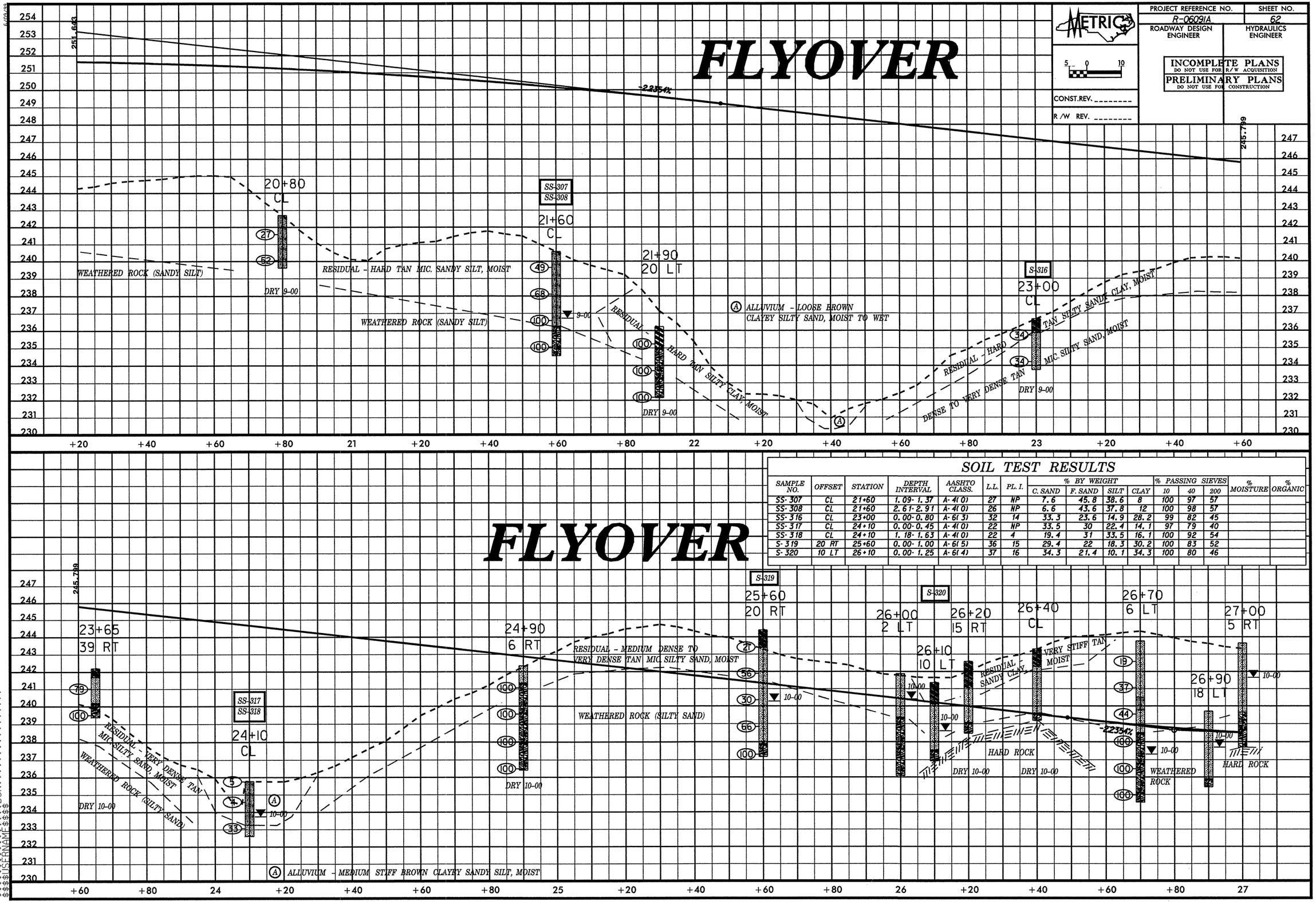
CONST.REV. _____

R /W REV. _____

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

FLYOVER



FLYOVER

SOIL TEST RESULTS

SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	PL. I.	% BY WEIGHT C. SAND	F. SAND	SILT	CLAY	% PASSING SIEVES 10	40	200	% MOISTURE	% ORGANIC
SS-307	CL	21+60	1.09-1.37	A-4(0)	27	NP	7.6	45.8	38.6	8	100	97	57		
SS-308	CL	21+60	2.61-2.91	A-4(0)	26	NP	6.6	43.6	37.8	12	100	98	57		
SS-316	CL	23+00	0.00-0.80	A-6(3)	32	14	33.3	23.6	14.9	28.2	99	82	45		
SS-317	CL	24+10	0.00-0.45	A-4(0)	22	NP	33.5	30	22.4	14.1	97	79	40		
SS-318	CL	24+10	1.18-1.63	A-4(0)	22	4	19.4	31	33.5	16.1	100	92	54		
S-319	20 RT	25+60	0.00-1.00	A-6(5)	36	15	29.4	22	18.3	30.2	100	83	52		
S-320	10 LT	26+10	0.00-1.25	A-6(4)	37	16	34.3	21.4	10.1	34.3	100	80	46		

$SYSTIME$ $USERNAME$ DGN

FLYOVER

SOIL TEST RESULTS

SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	PL. I.	% BY WEIGHT				% PASSING SIEVES			% MOISTURE	% ORGANIC
							C. SAND	F. SAND	SILT	CLAY	10	40	200		
SS-301	8 RT	27+50	2.72-3.17	A-6(10)	37	13	8.4	22.3	43.2	26.1	100	95	79	22.7	
SS-302	8 RT	27+50	4.24-4.69	A-4(4)	38	4	6.2	30.9	48.8	14.1	100	98	73		

6/09/99

$$$$$$SYSTIME$$$$
$$$$$$$$DGN$$$$$$$$$$$$$$$$$$$$$$$$$
$$$$$USERNAME$$$$$

PROJECT REFERENCE NO.	SHEET NO.
R-06091A	64
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

METRIC

5 0 10

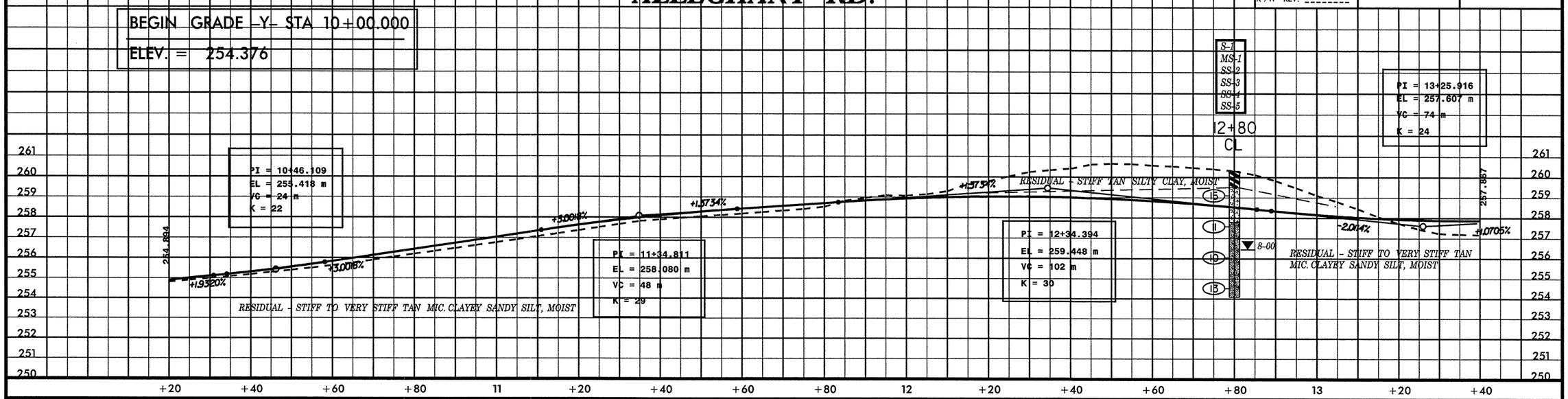
CONST.REV. _____

R/W REV. _____

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

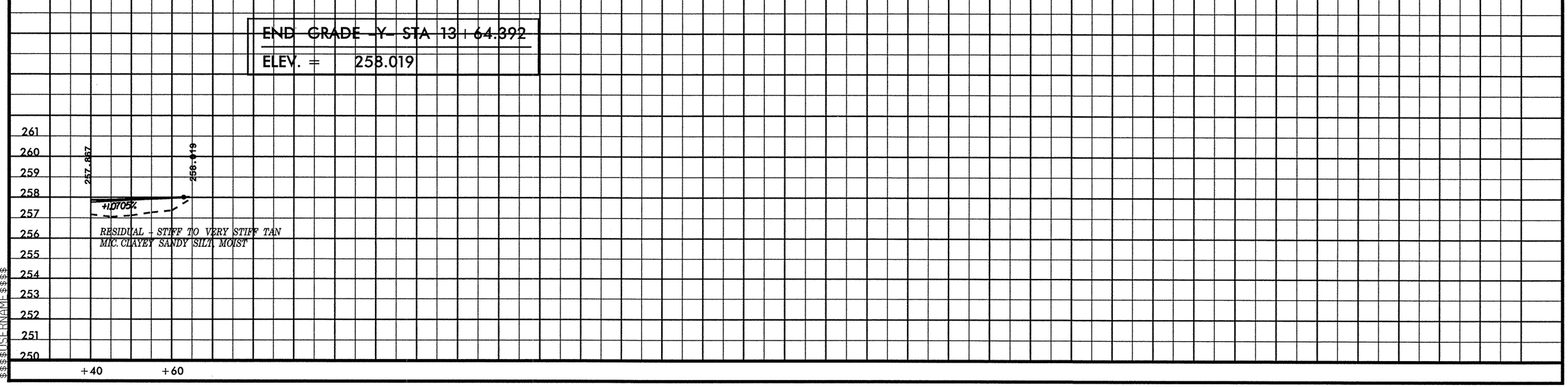
-Y- ALLEGHANY RD.



SOIL TEST RESULTS

SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	PL. 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-1	CL	12+80	0.00-0.80	A-7-6(15)	44	23	14.5	18.8	22.3	44.4	98	89	70	21.2	
SS-2	CL	12+80	1.20-1.65	A-5(4)	42	9	11.5	41.8	32.6	14.1	100	96	58		
SS-3	CL	12+80	2.72-3.17	A-4(3)	38	7	13.7	34.1	38	14.1	91	83	57		
SS-4	CL	12+80	4.24-4.69	A-4(0)	29	5	18	43.2	26.7	12.1	99	92	48		
SS-5	CL	12+80	5.76-6.21	A-4(0)	34	NP	12.5	47.8	29.6	10.1	100	95	52		

-Y- ALLEGHANY RD.



$$$$SYSTIME$$$$
$$$$USERNAME$$$$
$$$$DGN$$$$

PROJECT REFERENCE NO.	SHEET NO.
R-0609IA	65
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

METRIC

5 0 10

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

CONST.REV. _____

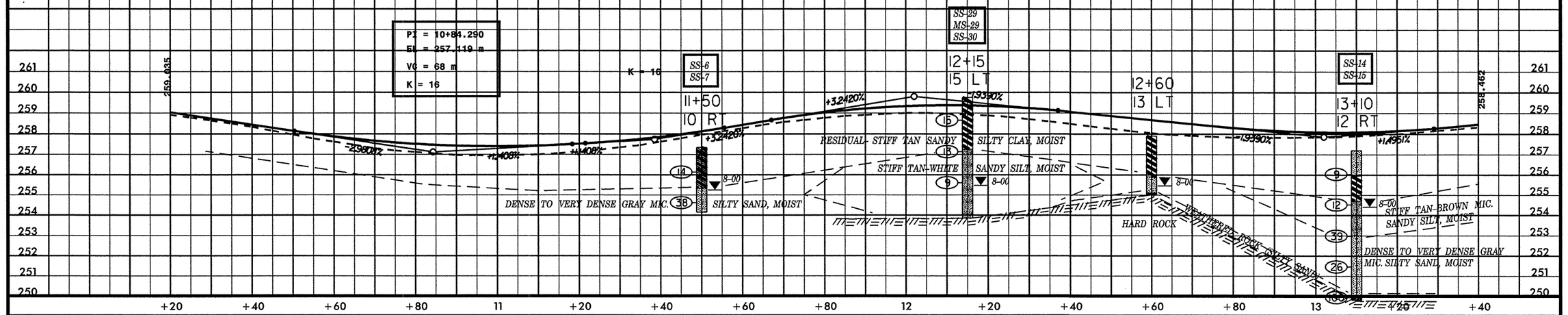
R/W REV. _____

-Y1-

BAKER (SR 1193)

BEGIN GRADE -Y1- STA 10+20.000

ELEV. = 259.035

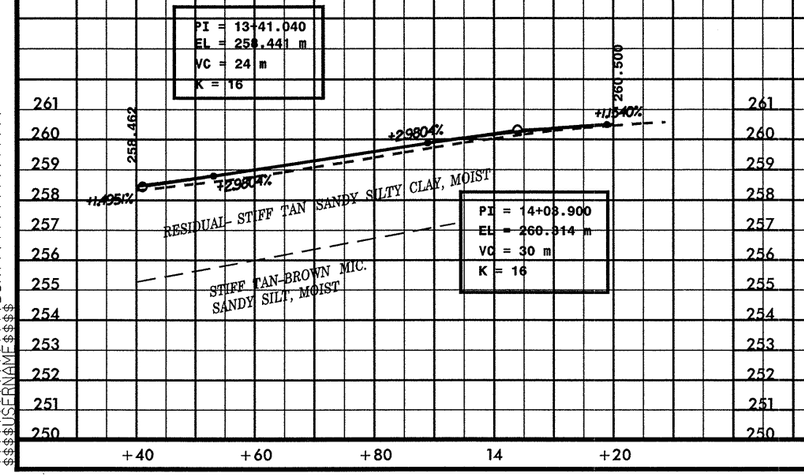


-Y1-

BAKER (SR 1193)

END GRADE -Y1- STA 14+20.00

ELEV. = 260.500



SOIL TEST RESULTS

SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	PL. I.	% BY WEIGHT				% PASSING SIEVES			% MOISTURE	% ORGANIC
							C. SAND	F. SAND	SILT	CLAY	10	40	200		
SS-6	10 RT	11+50	1.21-1.66	A-6(5)	40	15	16.5	40.8	20.5	22.2	100	94	50		
SS-7	10 RT	11+50	2.73-3.18	A-2-4(0)	28	NP	35.1	37.5	19.3	8.1	98	82	34		
SS-29	15 LT	12+15	1.10-1.55	A-7-5(19)	56	24	12.1	20.3	25.4	42.2	100	94	73	28	
SS-30	15 LT	12+15	2.62-3.07	A-4(0)	29	5	30.4	36.6	21	12.1	94	80	37		
SS-14	12 RT	13+10	1.25-1.62	A-7-5(23)	58	25	5.2	21.6	28.8	44.4	100	98	80		
SS-15	12 RT	13+10	2.69-3.14	A-4(1)	34	4	17.8	39.6	26.5	16.1	100	94	54		

SYSTIME=$$$$ DGN=$$$$ USERNAME=$$$$

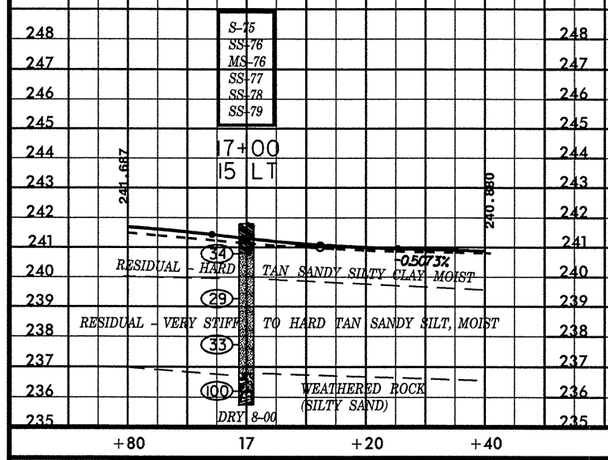
SOIL TEST RESULTS

SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	PL. I.	% BY WEIGHT C. SAND	F. SAND	SILT	CLAY	% PASSING SIEVES 10	40	200	% MOISTURE	% ORGANIC
S-80	CL	12+00	0.00-1.00	A-2-4(0)	23	3	44.6	25.1	16.1	14.2	84	56	29		
SS-81	CL	12+00	1.20-1.65	A-1-b(0)	20	NP	51.1	25.5	13.3	10.1	75	47	21		
SS-82	10 LT	13+00	1.28-1.53	A-2-4(0)	23	NP	52.1	30.2	7.6	10.1	97	65	22		
S-98	26 RT	14+07	0.76-1.72	A-7-6(25)	49	22	0.8	4.1	16.1	79	100	100	96	49	

6/09/98

-Y2-

JACKSON LAKE RD. (SR 1158)



END GRADE -Y2- STA 17+40.000

ELEV. = 240.880

SOIL TEST RESULTS

SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	PL. I.	% BY WEIGHT				% PASSING SIEVES			% MOISTURE	% ORGANIC
							C. SAND	F. SAND	SILT	CLAY	10	40	200		
S-75	15 LT	16+95	0.00-0.50	A-6(1)	27	11	30.4	27	14.3	28.4	92	77	43		
SS-76	15 LT	16+95	1.02-1.47	A-4(0)	24	3	25.1	33.6	23	18.2	96	83	45	12.6	
SS-77	15 LT	16+95	2.54-2.99	A-4(0)	27	3	25.3	33.2	25.2	16.2	97	84	46		
SS-78	15 LT	16+95	4.06-4.51	A-4(0)	29	4	29	30.6	24.2	16.2	94	78	43		
SS-79	15 LT	16+95	5.58-6.03	A-5(3)	42	10	38.1	16.4	25.2	20.3	95	67	47		

METRIC

5 0 10

CONST.REV. _____

R/W REV. _____

PROJECT REFERENCE NO.	SHEET NO.
R-0609IA	67
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

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

$$$$SYSTIME $$$$
$$$$USERNAME $$$$
$$$$ $$$$

6/09/98

-Y3-

KERSEY VALLEY RD. (SR 1154)

PROJECT REFERENCE NO.	SHEET NO.
R-0609IA	68
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

METRIC

5 0 10

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

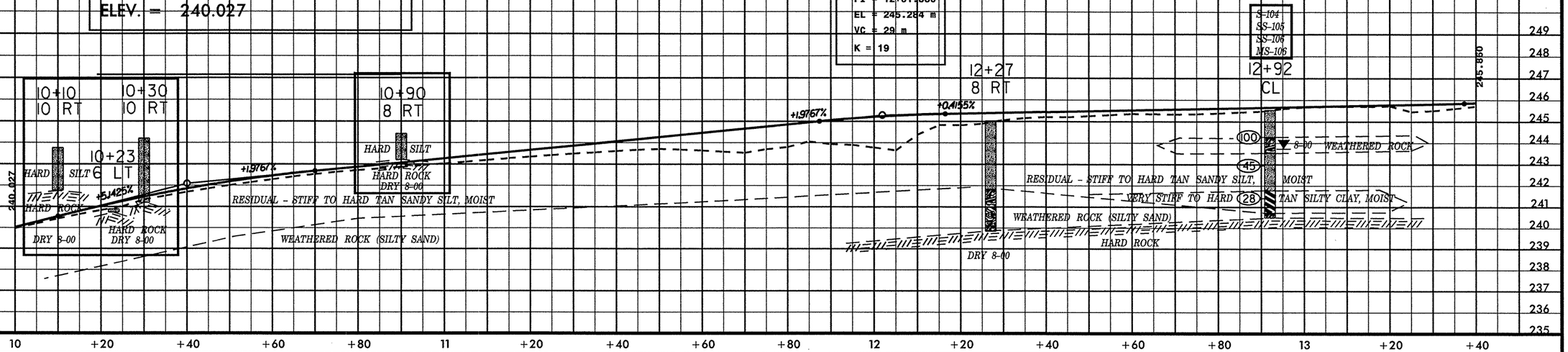
PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

CONST.REV. _____

R /W REV. _____

BEGIN GRADE -Y3- STA 10+00.000
ELEV. = 240.027

PI = 12+01.880
EL = 245.284 m
VC = 29 m
K = 19



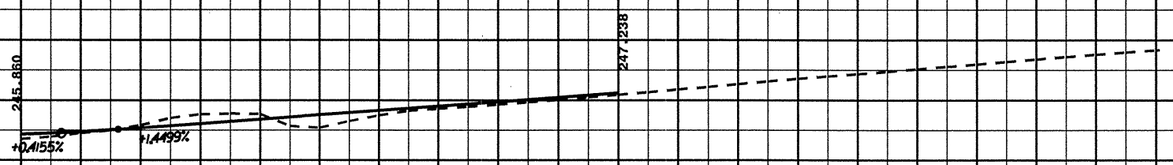
SOIL TEST RESULTS

SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	PL. I.	% BY WEIGHT				% PASSING SIEVES			% MOISTURE	% ORGANIC
							C. SAND	F. SAND	SILT	CLAY	10	40	200		
S-104	CL	12+92	0.00-1.25	A-4(1)	25	7	19.7	27.3	30.9	22.1	99	88	57		
SS-105	CL	12+92	1.06-1.51	A-4(0)	23	NP	38.6	29.3	26	6	98	73	37		
SS-106	CL	12+92	4.12-4.55	A-7-6(5)	41	12	31	18.9	32.1	18.1	100	76	54	19.6	

-Y3-

KERSEY VALLEY RD. (SR 1154)

PI = 13+46.740
EL = 245.886 m
VC = 19 m
K = 18



END GRADE -Y3- STA 14+40.000
ELEV. = 247.238

SYSTIME=$$$$$$$$ DGN=$$$$$$$$ DSET=$$$$$$$$ USERNAME=$$$$$$$$

6/03/98

PROJECT REFERENCE NO.	SHEET NO.
R-0609IA	69
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

METRIC

5 0 10

CONST.REV. _____

R /W REV. _____

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

-Y4-

DRESDEN RD. (SR 1156)

BEGIN GRADE -Y4- STA 10+00.000
ELEV. = 244.173

PI = 11+00.782
EL = 245.202 m
VC = 210 m
K = 48

S-132
SS-133
MS-133
SS-134
SS-135

S-139
SS-140
SS-141

SS-130
SS-131

S-128
SS-129

244.173

11+60 CL

12+20 10 LT

12+80 CL

13+40 CL

+0.52%

RESIDUAL - VERY STIFF TAN-WHITE MOTTLED SANDY SILTY CLAY, MOIST

RESIDUAL - VERY STIFF TAN SANDY CLAY, HIGH PI, MOIST

RESIDUAL - STIFF TO VERY STIFF TAN-WHITE MOTTLED SILTY SANDY CLAY, MOIST

VERY STIFF TAN MIC. SANDY SILT, MOIST

MEDIUM DENSE TO VERY DENSE BROWN SILTY SAND, MOIST

WEATHERED ROCK (SILTY SAND)

DRY 8-00

243.642

246 245 244 243 242 241 240 239 238 237 236 235

10 +20 +40 +60 +80 11 +20 +40 +60 +80 12 +20 +40 +60 +80 13 +20 +40

SOIL TEST RESULTS

SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	PL. I.	% BY WEIGHT C. SAND	F. SAND	SILT	CLAY	% PASSING SIEVES 10	40	200	% MOISTURE	% ORGANIC
S- 139	CL	11+60	0.00- 0.75	A-7-5(18)	57	27	20.8	12.7	5.9	60.6	96	82	66		
SS- 141	CL	11+60	1.12- 1.57	A-7-6(15)	56	27	20	17	14.5	48.5	92	80	61		
SS- 142	CL	11+60	2.64- 3.09	A-6(5)	40	12	19.6	30.3	25.9	24.2	100	88	57		
S- 132	10 LT	12+20	0.00- 1.00	A-7-6(39)	76	47	16.2	8.3	6.9	68.7	100	91	77		
SS- 133	10 LT	12+20	1.07- 1.52	A-7-5(18)	56	25	20.4	12.5	12.5	54.5	99	86	69	16.9	
SS- 134	10 LT	12+20	2.59- 3.06	A-7-6(14)	52	25	19	23.6	19	38.4	100	91	62		
SS- 135	10 LT	12+20	4.11- 4.56	A-5(0)	43	9	32.1	36	11.7	20.2	98	81	38		
SS- 130	CL	12+80	1.17- 1.62	A-7-5(15)	60	29	25.9	20.2	13.5	40.4	98	81	57		
SS- 131	CL	12+80	2.69- 3.14	A-7-6(2)	41	12	32.1	29.9	11.7	26.3	96	78	42		
S- 128	CL	13+40	0.00- 0.80	A-6(6)	40	22	30.5	22	7.1	40.4	94	78	47		
SS- 129	CL	13+40	1.04- 1.49	A-7-5(16)	53	22	15.8	16	15.8	52.5	98	88	70	13.6	
SS- 127	CL	14+00	1.03- 1.48	A-2-4(0)	21	3	39.4	31.1	9.3	20.2	99	75	35		
SS- 125	CL	15+30	1.09- 1.54	A-4(9)	36	9	4	15.1	46.6	34.2	100	98	87		
SS- 126	CL	15+30	2.61- 2.72	A-2-4(0)	23	NP	49.5	24.4	12	14.1	89	57	27		
SS- 123	10 RT	16+42	1.16- 1.61	A-2-4(0)	25	NP	45.3	28.2	12.4	14.1	100	72	31		
SS- 124	10 RT	16+42	2.68- 3.01	A-4(3)	30	7	11.9	17.5	46.4	24.2	84	77	65		

-Y4-

DRESDEN RD. (SR 1156)

END GRADE -Y4- STA 16+52.483
ELEV. = 243.828

PI = 15+65.689
EL = 239.657 m
VC = 118 m
K = 31

SS-123
SS-124

16+42 10 RT

243.828

S-128
SS-129
MS-129

13+40 CL

SS-127

14+00 CL

14+60 10 RT

SS-125
SS-126

15+30 CL

16+00 5 RT

+1.05%

+1.80%

RESIDUAL - VERY STIFF SILTY SANDY CLAY, MOIST

MEDIUM DENSE TO VERY DENSE TAN SILTY SAND, MOIST

WEATHERED ROCK (SILTY SAND)

RESIDUAL - MEDIUM DENSE TO VERY DENSE TAN SILTY SAND, MOIST

HARD TAN SANDY SILT, MOIST

DRY 8-00

246 245 244 243 242 241 240 239 238 237 236 235 234 233 232 231 230

+40 +60 +80 14 +20 +40 +60 +80 15 +20 +40 +60 +80 16 +20 +40

$$$$SYSTIME$$$$DGN$$$$USERNAME$$$$

PROJECT REFERENCE NO.	SHEET NO.
R-0609IA	70
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

METRIC

5 0 10

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

CONST.REV. _____

R/W REV. _____

-Y5-

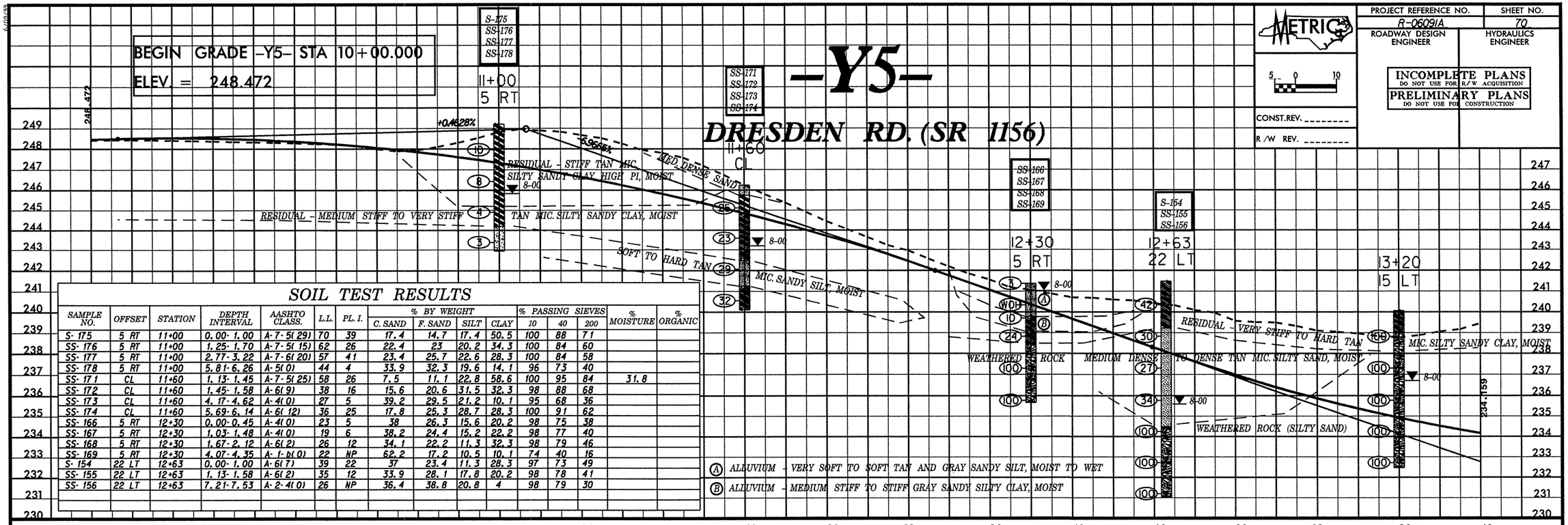
DRESDEN RD. (SR 1156)

BEGIN GRADE -Y5- STA 10+00.000

ELEV. = 248.472

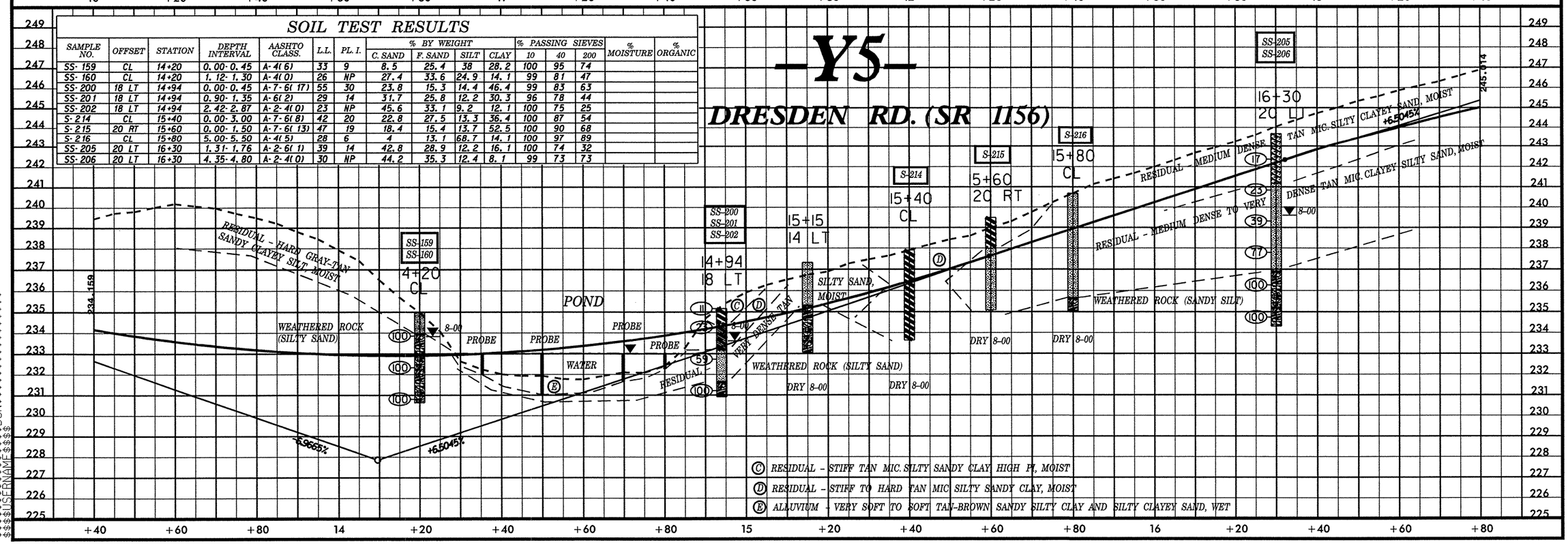
SOIL TEST RESULTS

SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	PL. I.	% BY WEIGHT C. SAND	F. SAND	SILT	CLAY	% PASSING SIEVES 10	40	200	% MOISTURE	% ORGANIC
S-175	5 RT	11+00	0.00-1.00	A-7-5(29)	70	39	17.4	14.7	17.4	50.5	100	88	71		
SS-176	5 RT	11+00	1.25-1.70	A-7-5(15)	62	26	22.4	23	20.2	34.3	100	84	60		
SS-177	5 RT	11+00	2.77-3.22	A-7-6(20)	57	41	23.4	25.7	22.6	28.3	100	84	58		
SS-178	5 RT	11+00	5.81-6.26	A-5(0)	44	4	33.9	32.3	19.6	14.1	96	73	40		
SS-171	CL	11+60	1.13-1.45	A-7-5(25)	58	26	7.5	11.1	22.8	58.6	100	95	84	31.8	
SS-172	CL	11+60	1.45-1.58	A-6(9)	38	16	15.6	20.6	31.5	32.3	98	88	68		
SS-173	CL	11+60	4.17-4.62	A-4(0)	27	5	39.2	29.5	21.2	10.1	95	68	36		
SS-174	CL	11+60	5.69-6.14	A-6(12)	36	25	17.8	25.3	28.7	28.3	100	91	62		
SS-166	5 RT	12+30	0.00-0.45	A-4(0)	23	5	38	26.3	15.6	20.2	98	75	38		
SS-167	5 RT	12+30	1.03-1.48	A-4(0)	19	6	38.2	24.4	15.2	22.2	98	77	40		
SS-168	5 RT	12+30	1.67-2.12	A-6(2)	26	12	34.1	22.2	11.3	32.3	98	79	46		
SS-169	5 RT	12+30	4.07-4.35	A-1-b(0)	22	NP	62.2	17.2	10.5	10.1	74	40	16		
S-154	22 LT	12+63	0.00-1.00	A-6(7)	39	22	37	23.4	11.3	28.3	97	73	49		
SS-155	22 LT	12+63	1.13-1.58	A-6(2)	35	12	33.9	28.1	17.8	20.2	98	78	41		
SS-156	22 LT	12+63	7.21-7.53	A-2-4(0)	26	NP	36.4	38.8	20.8	4	98	79	30		



SOIL TEST RESULTS

SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	PL. I.	% BY WEIGHT C. SAND	F. SAND	SILT	CLAY	% PASSING SIEVES 10	40	200	% MOISTURE	% ORGANIC
SS-159	CL	14+20	0.00-0.45	A-4(6)	33	9	8.5	25.4	38	28.2	100	95	74		
SS-160	CL	14+20	1.12-1.30	A-4(0)	26	NP	27.4	33.6	24.9	14.1	99	81	47		
SS-200	18 LT	14+94	0.00-0.45	A-7-6(17)	55	30	23.8	15.3	14.4	46.4	99	83	63		
SS-201	18 LT	14+94	0.90-1.35	A-6(2)	29	14	31.7	25.8	12.2	30.3	96	78	44		
SS-202	18 LT	14+94	2.42-2.87	A-2-4(0)	23	NP	45.6	33.1	9.2	12.1	100	75	25		
S-214	CL	15+40	0.00-3.00	A-7-6(8)	42	20	22.8	27.5	13.3	36.4	100	87	54		
S-215	20 RT	15+60	0.00-1.50	A-7-6(13)	47	19	18.4	15.4	13.7	52.5	100	90	68		
S-216	CL	15+80	5.00-5.50	A-4(5)	28	6	4	13.1	68.7	14.1	100	97	89		
SS-205	20 LT	16+30	1.31-1.76	A-2-6(1)	39	14	42.8	28.9	12.2	16.1	100	74	32		
SS-206	20 LT	16+30	4.35-4.80	A-2-4(0)	30	NP	44.2	35.3	12.4	8.1	99	73	73		

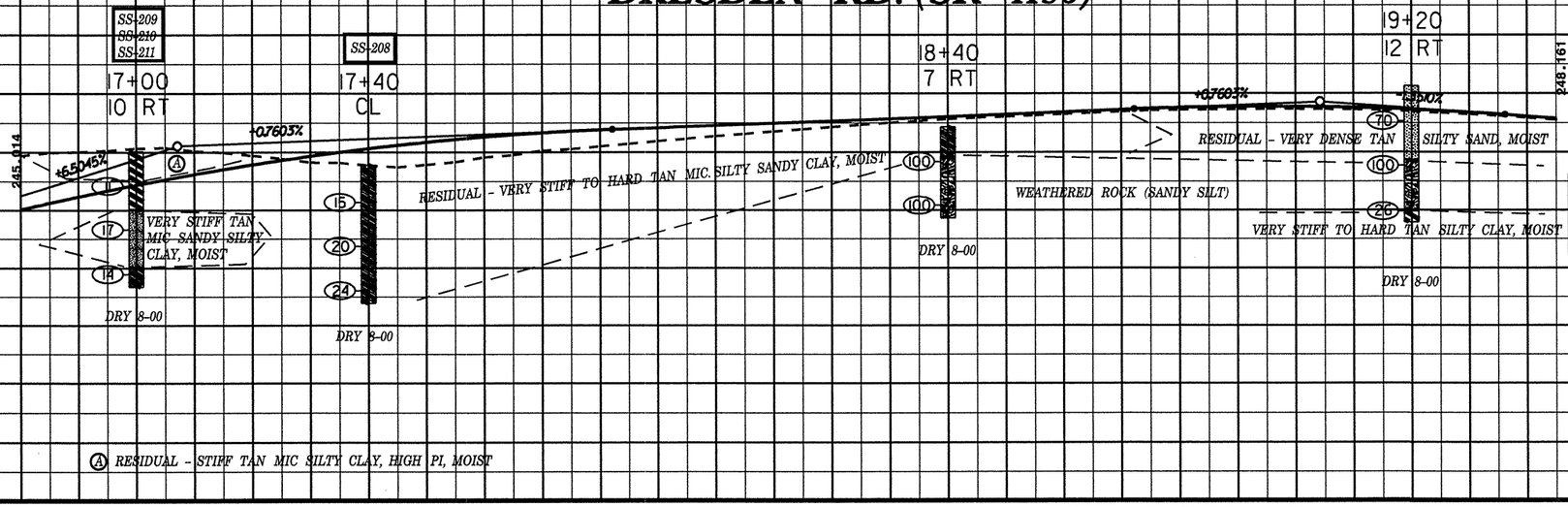


$$SYSTIME$$
$$USERNAME$$
$$DGN$$

6/20/96

-Y5-

DRESDEN RD. (SR 1156)



END GRADE -Y5- STA 18+97.158
ELEV. = 248.161

METRIC

5 0 10

CONST.REV. _____

R /W REV. _____

PROJECT REFERENCE NO.	SHEET NO.
R-0609IA	7I

ROADWAY DESIGN ENGINEER

HYDRAULICS ENGINEER

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

SOIL TEST RESULTS

SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	PL. I.	% BY WEIGHT				% PASSING SIEVES			% MOISTURE	% ORGANIC
							C. SAND	F. SAND	SILT	CLAY	10	40	200		
S-209	20 RT	17+00	0.00-0.75	A-7-5(31)	73	37	17.2	9.1	7.2	66.6	100	89	89		
SS-210	20 RT	17+00	1.20-1.65	A-7-6(12)	50	21	20.2	23	20.5	36.3	99	87	87		
SS-211	20 RT	17+00	2.72-3.17	A-4(1)	34	10	32.3	32.3	19.3	16.1	100	84	84		
SS-208	CL	17+40	1.30-1.75	A-6(3)	40	12	28.3	31.3	22.3	18.2	98	81	81		
SS-212	12 RT	19+20	1.19-1.64	A-2-4(0)	25	4	45.8	28.1	14	12.1	94	65	28		
SS-213	12 RT	19+20	4.23-4.68	A-7-6(9)	42	15	8.7	31.5	39.7	20.2	100	96	66		

$$SYSTIME$$ $$DGN$$
$$USERNAME$$

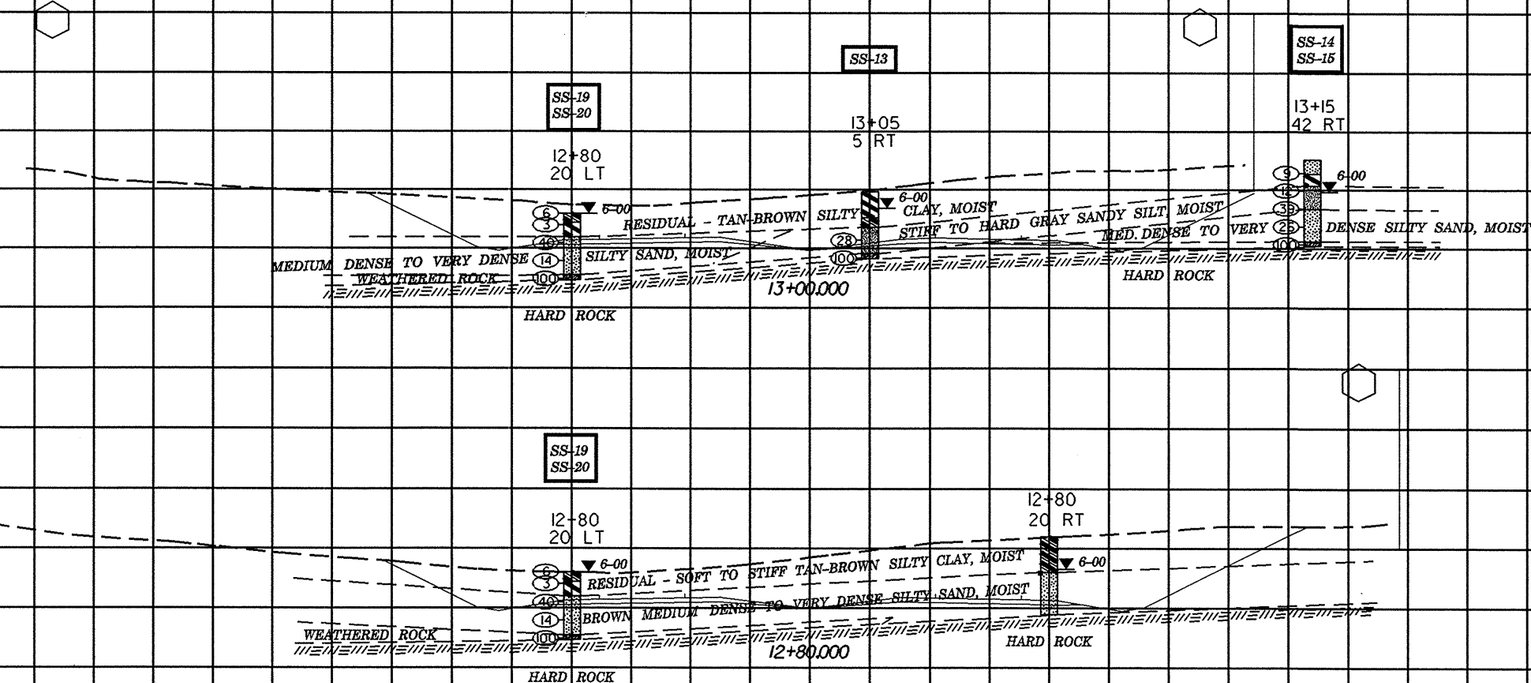
5 0 5 10

METRIC

PROJECT REFERENCE NO.	SHEET NO.
R-0609IA	X-5

SOIL TEST RESULTS

SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	PL. I.	% BY WEIGHT				% PASSING SIEVES			% MOISTURE	% ORGANIC
							C. SAND	F. SAND	SILT	CLAY	10	40	200		
SS-13	5 RT	13+05	4.13-4.58	A-4(0)	25	NP	29.1	41.6	17.3	12.1	100	86	37		
SS-14	42 RT	13+15	1.25-1.62	A-7-5(23)	58	25	5.2	21.6	28.8	44.4	100	98	80		
SS-15	42 RT	13+15	2.69-3.14	A-4(1)	34	4	17.8	39.6	26.5	16.1	100	94	54		
SS-19	20 LT	12+80	1.00-1.45	A-7-6(13)	43	27	17.2	25.8	16.6	40.4	98	90	61	25	
SS-20	20 LT	12+80	2.52-2.97	A-2-4(0)	21	NP	27.9	49.4	16.6	6.1	98	86	29		



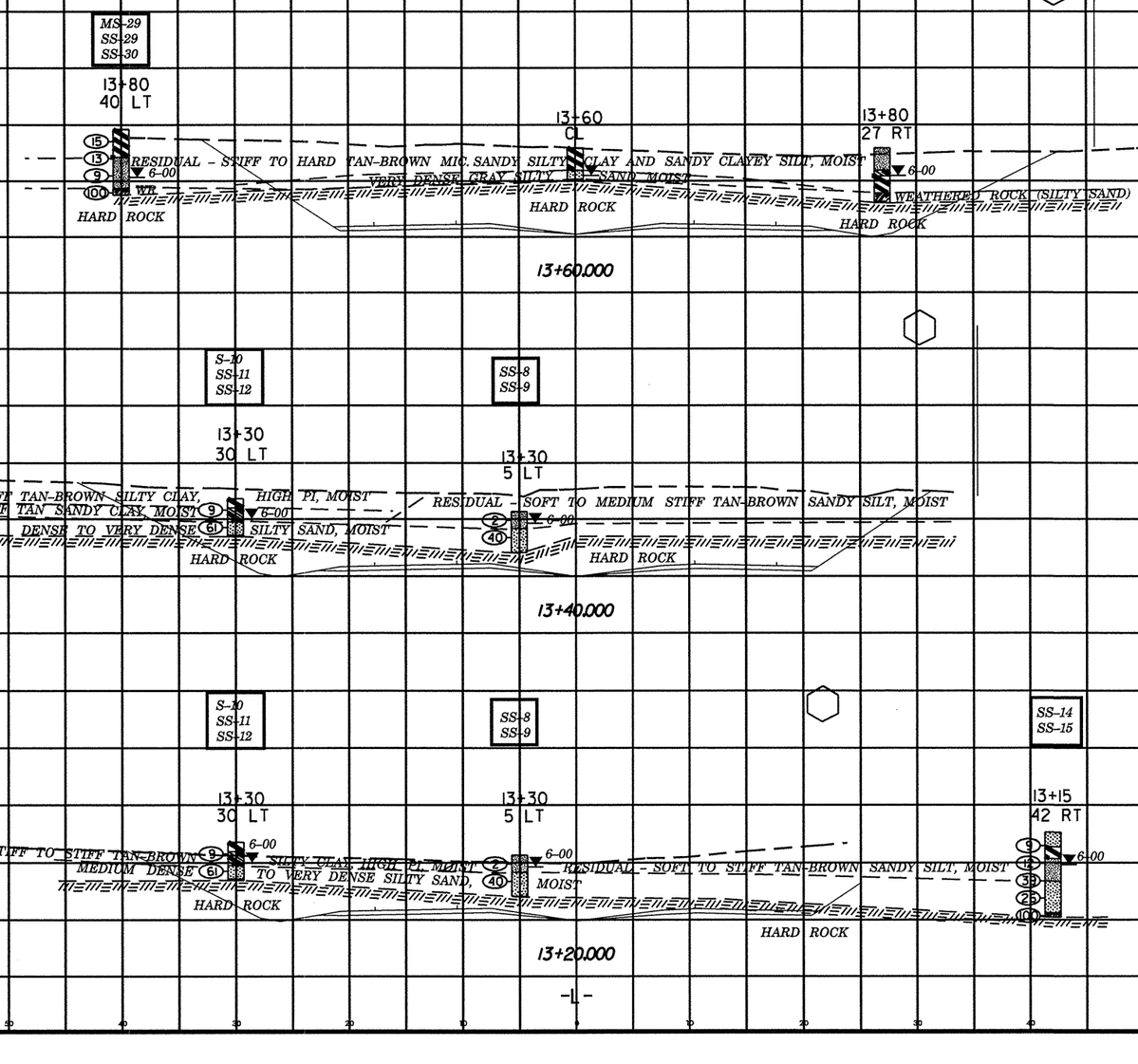
PROJECT REFERENCE NO.	SHEET NO.
R-06091A	X-6

5 0 5 10

METRIC

SOIL TEST RESULTS

SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	PL. I.	% BY WEIGHT				% PASSING SIEVES			% MOISTURE	% ORGANIC
							C. SAND	F. SAND	SILT	CLAY	10	40	200		
S-10	30 LT	13+30	0.00-0.80	A-7-6(26)	60	32	11.7	15.7	16	56.5	100	94	76		
SS-11	30 LT	13+30	1.00-1.45	A-6(6)	36	13	13.1	30.7	17.9	38.3	100	96	62		
SS-12	30 LT	13+30	2.52-2.97	A-2-4(0)	23	NP	44.8	28.6	11.5	15.1	92	64	29		
SS-8	5 LT	13+30	0.78-1.23	A-4(0)	18	4	30.5	35.7	15.6	18.2	97	83	38		
SS-9	5 LT	13+30	2.30-2.75	A-2-4(0)	26	NP	39.6	37.1	9.2	14.1	98	78	28		
SS-29	40 LT	13+80	1.10-1.55	A-7-5(19)	56	24	12.1	20.3	25.4	42.2	100	94	73	28	
SS-30	40 LT	13+80	2.62-3.07	A-4(0)	29	5	30.4	36.6	21	12.1	94	80	37		



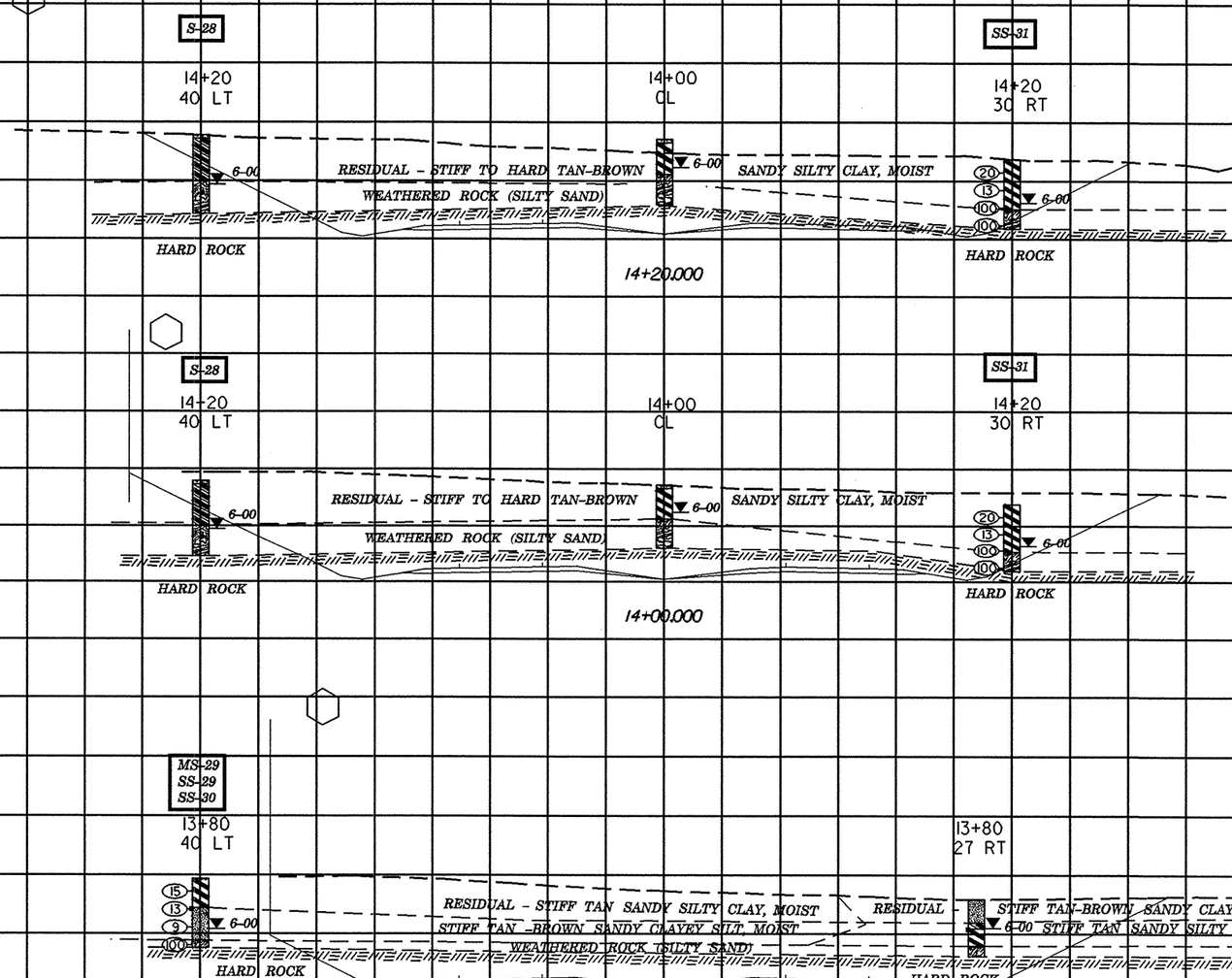
-L-

PROJECT REFERENCE NO.	SHEET NO.
R-0609 1A	X-7

5 0 5 10 METRIC

SOIL TEST RESULTS

SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	PL. I.	% BY WEIGHT				% PASSING SIEVES			% MOISTURE	% ORGANIC
							C. SAND	F. SAND	SILT	CLAY	10	40	200		
SS-29	40 LT	13+80	1. 10- 1. 55	A-7-5(19)	56	24	12. 1	20. 3	25. 4	42. 2	100	94	73	28	
SS-30	40 LT	13+80	2. 62- 3. 07	A-4(0)	29	5	30. 4	36. 6	21	12. 1	94	80	37		
S-28	40 RT	14+20	4. 50- 6. 00	A-7-6(7)	41	14	9. 6	42. 2	30. 1	18. 1	100	97	61		
SS-31	30 RT	14+20	1. 15- 1. 60	A-7-6(6)	41	16	25. 3	27. 3	21. 2	26. 1	100	85	53		

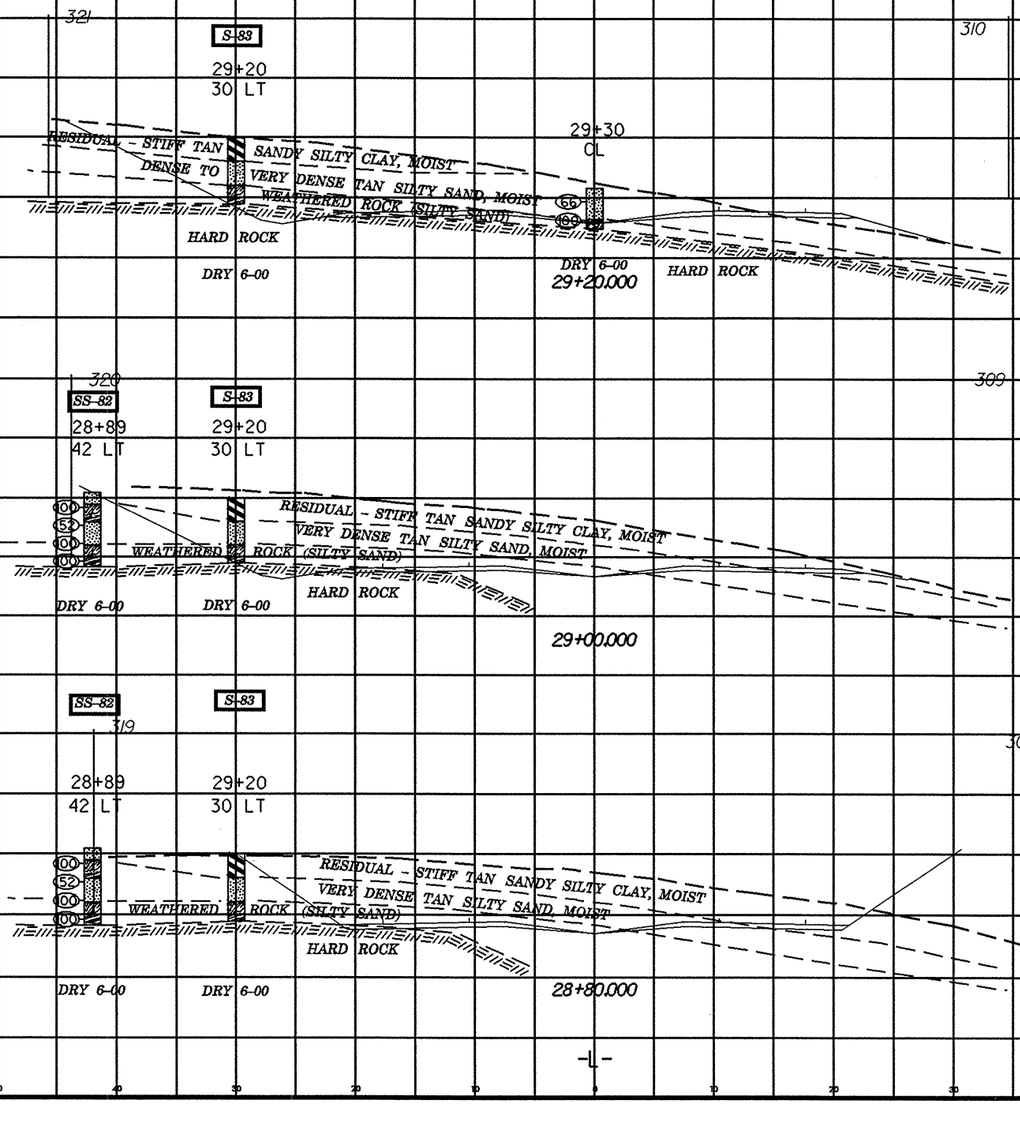


5 0 5 10

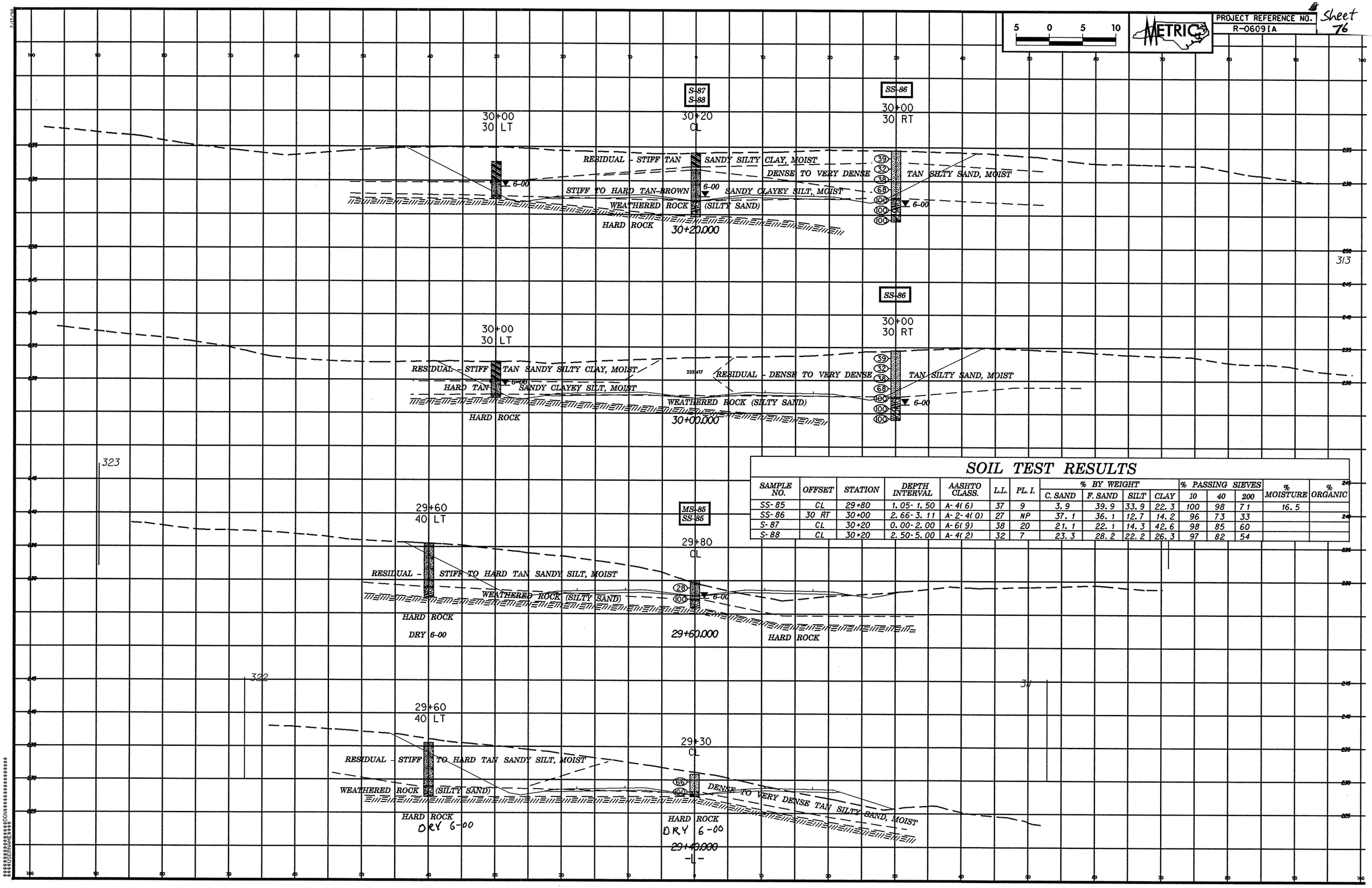
METRIC

SOIL TEST RESULTS

SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	PL. I.	% BY WEIGHT				% PASSING SIEVES			% MOISTURE	% ORGANIC
							C. SAND	F. SAND	SILT	CLAY	10	40	200		
SS-82	42 LT	28+89	1.28-1.53	A-2-4(0)	23	NP	52.1	30.2	7.6	10.1	97	65	22		
S-83	30 LT	29+20	0.00-2.00	A-7-6(10)	43	19	22.5	17	9.8	50.7	97	83	61		



5 0 5 10 METRIC



SOIL TEST RESULTS

SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	PL. I.	% BY WEIGHT				% PASSING SIEVES			% MOISTURE	% ORGANIC
							C. SAND	F. SAND	SILT	CLAY	10	40	200		
SS-85	CL	29+80	1.05-1.50	A-4(6)	37	9	3.9	39.9	33.9	22.3	100	98	71	16.5	
SS-86	30 RT	30+00	2.66-3.11	A-2-4(0)	27	NP	37.1	36.1	12.7	14.2	96	73	33		
S-87	CL	30+20	0.00-2.00	A-6(9)	38	20	21.1	22.1	14.3	42.6	98	85	60		
S-88	CL	30+20	2.50-5.00	A-4(2)	32	7	23.3	28.2	22.2	26.3	97	82	54		

PROJECT REFERENCE NO. R-0609 1A

5 0 5 10

METRIC

SOIL TEST RESULTS

SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	PL. I.	% BY WEIGHT				% PASSING SIEVES			% MOISTURE	% ORGANIC
							C. SAND	F. SAND	SILT	CLAY	10	40	200		
S-87	CL	30+20	0.00-2.00	A-6(9)	38	20	21.1	22.1	14.3	42.6	98	85	60		
S-88	CL	30+20	2.50-5.00	A-4(2)	32	7	23.3	28.2	22.2	26.3	97	82	54		
SS-90	50 LT	31+00	0.95-1.40	A-4(0)	23	7	29.2	28.2	20.4	22.3	98	83	47		

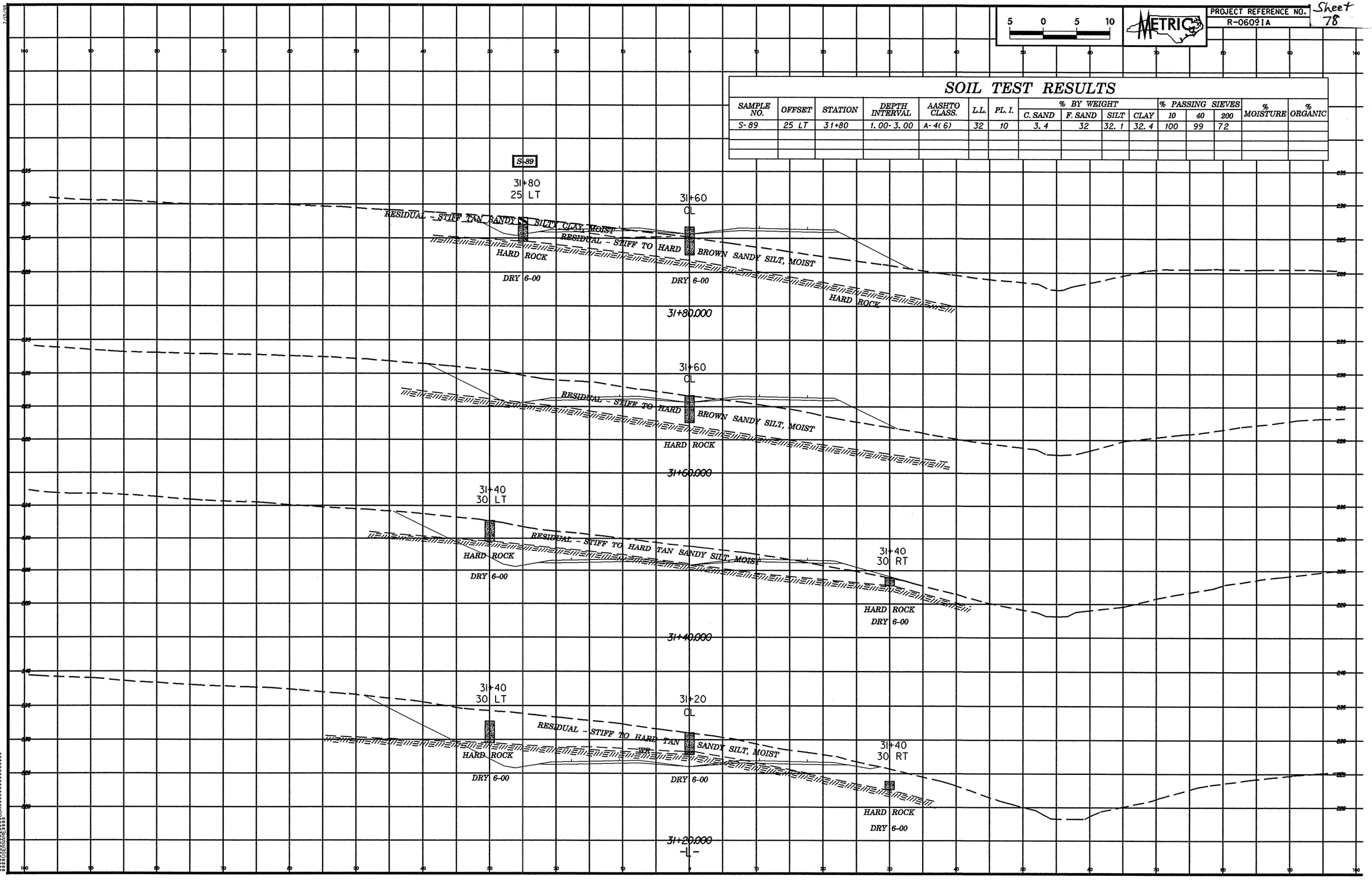
SS-90
31+00
50 LT
52
100
100
100
100
WEATHERED ROCK (SILTY SAND)
HARD ROCK
RESIDUAL - STIFF TO HARD TAN-BROWN SANDY CLAYEY SILT, MOIST
31+20
CL
31+00
25 RT
HARD ROCK
31+00.000
SS-90
31+00
50 LT
RESIDUAL - STIFF TO HARD
52
100
100
100
100
TAN-BROWN SANDY CLAYEY SILT, MOIST
WEATHERED ROCK (SILTY SAND)
HARD ROCK
DRY 6-00
RESIDUAL - STIFF TO HARD TAN-BROWN SANDY SILTY CLAY, MOIST
30+75
CL
31+00
25 RT
DRY 6-00
RESIDUAL - STIFF TO HARD TAN-BROWN SANDY CLAYEY SILT, MOIST
HARD ROCK
DRY 6-00
30+80.000
30+75
CL
RESIDUAL - STIFF TO HARD TAN-BROWN SANDY SILTY CLAY, MOIST
WEATHERED ROCK (SILTY SAND)
HARD ROCK
DRY 6-00
30+60.000
S-87
S-88
30+40
40 LT
30+20
CL
30+40
25 RT
RESIDUAL - STIFF TAN SANDY SILTY CLAY, MOIST
STIFF TO HARD TAN-BROWN SANDY CLAYEY SILT, MOIST
DENSE TO VERY DENSE TAN-BROWN SILTY SAND, MOIST
WEATHERED ROCK (SILTY SAND)
6-00
HARD ROCK
DRY 6-00
30+40.000
HARD ROCK
DRY 6-00
-L-

5 0 5 10

METRIC

SOIL TEST RESULTS

SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	PL. I.	% BY WEIGHT				% PASSING SIEVES			% MOISTURE	% ORGANIC
							C. SAND	F. SAND	SILT	CLAY	10	40	200		
S-89	25 LT	31+80	1.00-3.00	A-4(6)	32	10	3.4	32	32.1	32.4	100	99	72		



SOIL TEST RESULTS

SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	PL. I.	% BY WEIGHT				% PASSING SIEVES			% MOISTURE	% ORGANIC
							C. SAND	F. SAND	SILT	CLAY	10	40	200		
SS-96	25 RT	35+00	2.58-2.94	A-2-4(0)	23	NP	42.8	37.7	9.4	10.1	95	65	23		

SS-96

35+00
25 RT

RESIDUAL - STIFF TO HARD TAN SANDY SILT, MOIST

WEATHERED ROCK (SILTY SAND)

HARD ROCK

DRY 6-00

34+80.000

231309

34+60.000

228973

34+40.000

226822

34+20.000

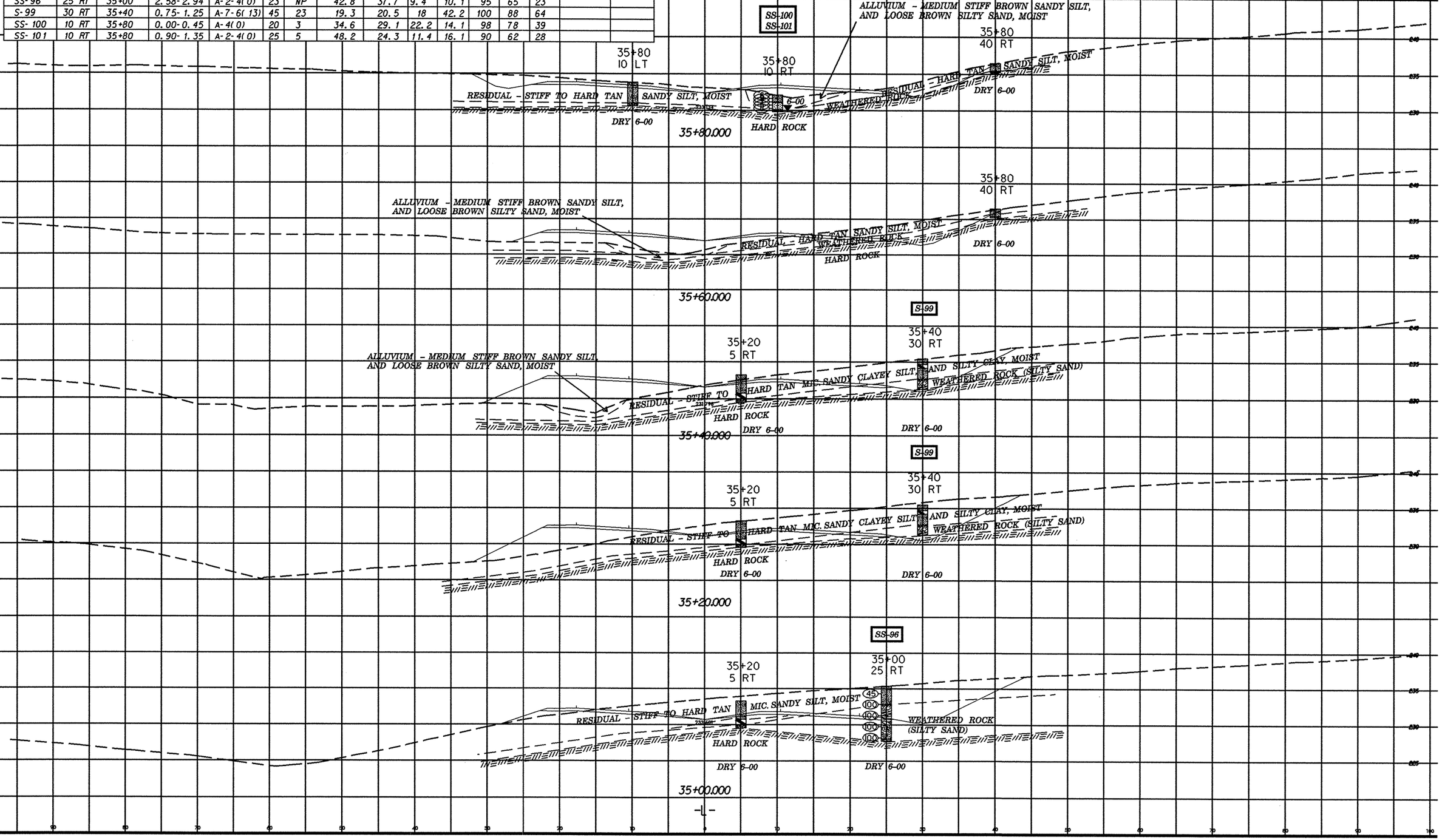
-L-

5 0 5 10

METRIC

SOIL TEST RESULTS

SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	PL. I.	% BY WEIGHT				% PASSING SIEVES			% MOISTURE	% ORGANIC
							C. SAND	F. SAND	SILT	CLAY	10	40	200		
SS-96	25 RT	35+00	2.58-2.94	A-2-4(0)	23	NP	42.8	37.7	9.4	10.1	95	65	23		
S-99	30 RT	35+40	0.75-1.25	A-7-6(13)	45	23	19.3	20.5	18	42.2	100	88	64		
SS-100	10 RT	35+80	0.00-0.45	A-4(0)	20	3	34.6	29.1	22.2	14.1	98	78	39		
SS-101	10 RT	35+80	0.90-1.35	A-2-4(0)	25	5	48.2	24.3	11.4	16.1	90	62	28		



5 0 5 10

METRIC

S-115
MS-115

37+00
10 LT

37+00
25 RT

RESIDUAL - VERY STIFF TO HARD TAN SANDY SILT, MOIST

6-00

DRY 6-00

HARD ROCK

37+00.000

36+80
CL

RESIDUAL - HARD TAN SANDY SILT, MOIST

WEATHERED ROCK (SILTY SAND)

6-00

HARD ROCK

36+80.000

SS-103

36+60
30 LT

36+60
20 RT

RESIDUAL - DENSE TO VERY DENSE TAN SILTY SAND, MOIST

WEATHERED ROCK (SILTY SAND)

100
100
100

DRY 6-00

6-00

HARD ROCK

36+60.000

36+40
CL

RESIDUAL - HARD TAN SANDY SILT, MOIST

HARD ROCK

DRY 6-00

36+40.000

36+20
20 LT

36+20
10 RT

RESIDUAL - STIFF TO HARD TAN SANDY CLAYEY SILT, MOIST

HARD TAN SILTY CLAY, MOIST

ALLUVIUM - MEDIUM STIFF BROWN SANDY SILT, AND LOOSE BROWN SILTY SAND, MOIST

DRY 6-00

DRY 6-00

36+20.000

S-102

36+00
CL

RESIDUAL - STIFF TO HARD TAN MICACEOUS SANDY SILTY CLAY, MOIST

WEATHERED ROCK

ALLUVIUM - MEDIUM STIFF BROWN SANDY SILT, AND LOOSE BROWN SILTY SAND, MOIST

HARD ROCK

36+00.000

DRY 6-00

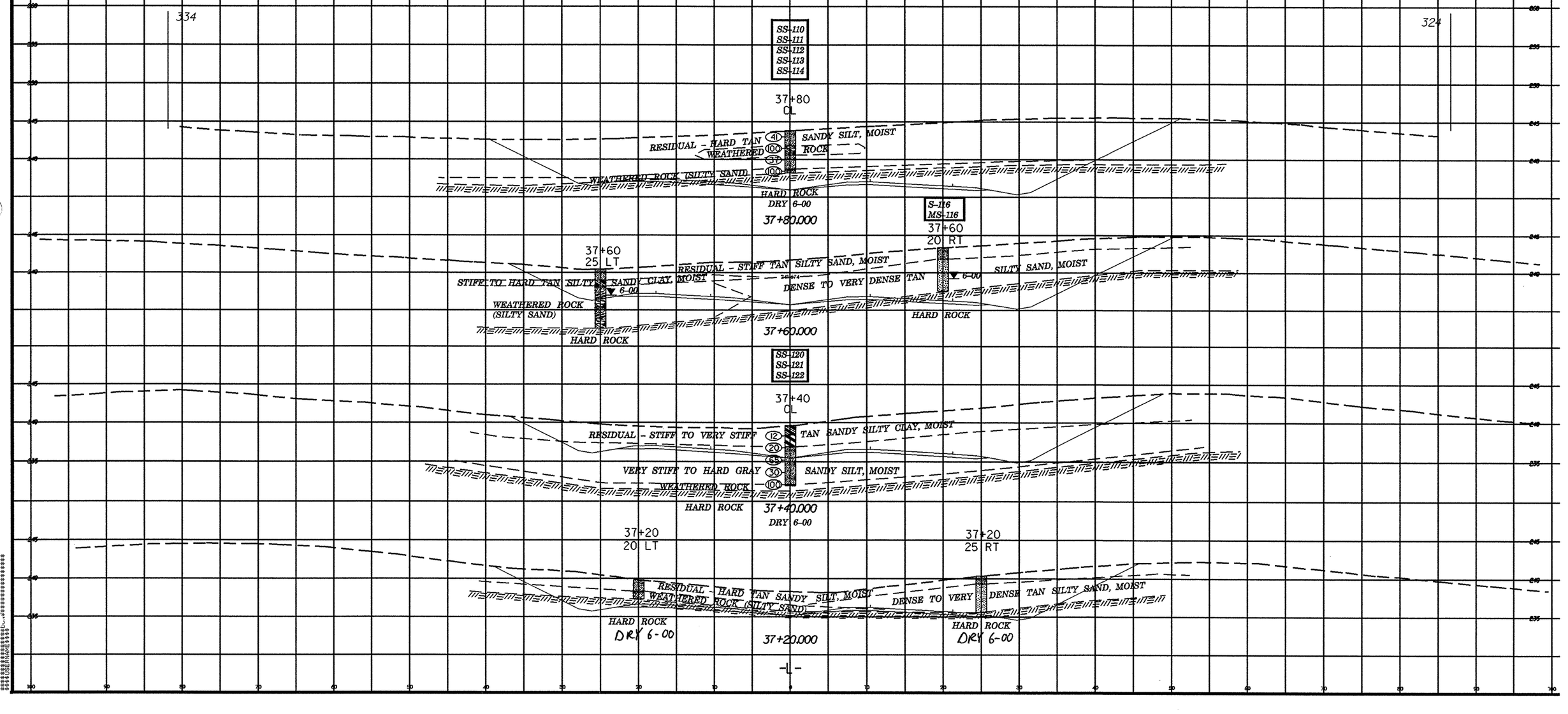
-L-

SOIL TEST RESULTS

SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	PL. I.	% BY WEIGHT				% PASSING SIEVES			% MOISTURE	% ORGANIC
							C. SAND	F. SAND	SILT	CLAY	10	40	200		
S-102	CL	36+00	0.00-1.00	A-6(4)	34	13	27.3	24.5	18	30.2	100	85	52		
S-103	30 LT	36+60	1.18-1.63	A-2-4(0)	20	NP	52.9	26.3	14.8	6	93	58	23		
S-115	25 RT	37+00	2.00-3.35	A-4(2)	28	4	3	33.9	54.9	8.1	97	96	73	9.1	

SOIL TEST RESULTS

SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	PL. I.	% BY WEIGHT				% PASSING SIEVES			% MOISTURE	% ORGANIC
							C. SAND	F. SAND	SILT	CLAY	10	40	200		
S-120	CL	37+40	0.00-1.00	A-6(2)	28	12	22.5	31	20.3	26.2	89	80	45		
SS-121	CL	37+40	1.36-1.81	A-7-6(13)	43	17	7.4	13.7	50.7	28.2	88	83	75		
SS-122	CL	37+40	2.88-3.33	A-4(0)	30	5	19.1	34.8	34	12.1	88	78	48		
S-116	20 RT	37+60	1.50-2.25	A-6(4)	28	13	18.8	28.3	26.7	26.3	98	89	57	17.8	
SS-110	CL	37+80	0.85-1.30	A-4(0)	23	6	25.7	26.7	29.4	18.1	99	84	51		
SS-111	CL	37+80	2.37-2.82	A-2-4(0)	27	5	41.8	26.9	21.2	10.1	97	69	35		
SS-112	CL	37+80	3.89-4.34	A-4(3)	36	9	30.8	18.5	36.7	14.1	95	71	53		
SS-113	CL	37+80	5.41-5.49	A-2-4(0)	29	10	41.2	16.5	22.2	20.1	65	42	30		
SS-114	CL	37+80	0.00-0.45	A-4(0)	23	6	20.8	33.3	23.6	22.2	97	89	49		



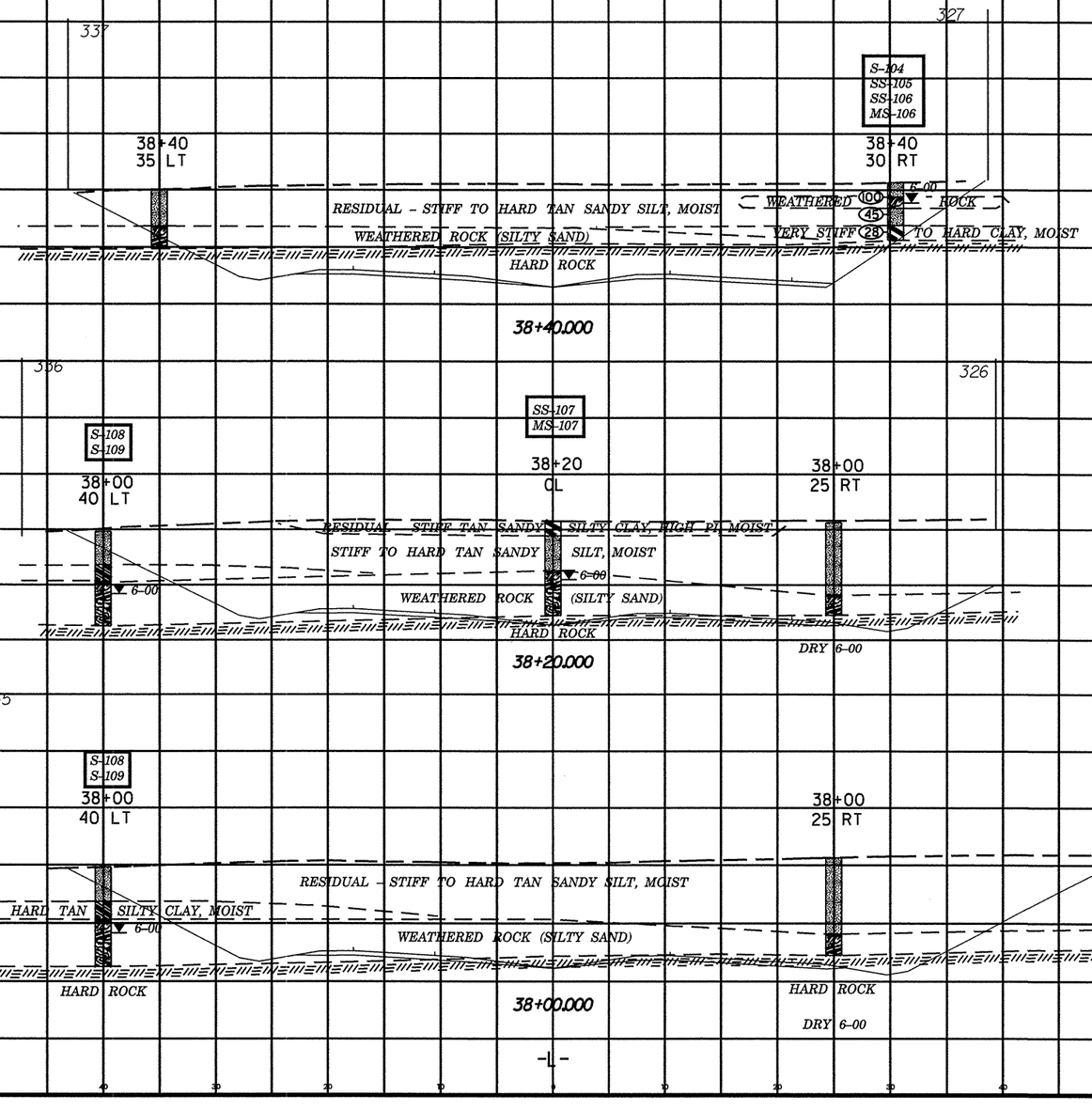
PROJECT REFERENCE NO. R-0609 1A

5 0 5 10

METRIC

SOIL TEST RESULTS

SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	PL. I.	% BY WEIGHT				% PASSING SIEVES			% MOISTURE	% ORGANIC
							C. SAND	F. SAND	SILT	CLAY	10	40	200		
S-108	40 LT	38+00	3.00-4.50	A-6(7)	37	15	13.5	28.3	32.1	26.1	98	92	62		
S-109	40 LT	38+00	4.50-5.50	A-4(0)	26	5	28.3	23.1	34.5	14.1	83	65	45		
S-107	CL	38+20	0.00-1.35	A-7-6(31)	61	40	12.5	14.1	15.2	58.3	100	94	76	26.7	
S-104	30.5 LT	38+40	0.00-1.25	A-4(1)	25	7	19.7	27.3	30.9	22.1	99	88	57		
SS-105	30.5 LT	38+40	1.06-1.51	A-4(0)	23	NP	38.6	29.3	26	6	98	73	37		
SS-106	30.5 LT	38+40	4.12-4.55	A-7-6(5)	41	12	31	18.9	32.1	18.1	100	76	54	19.6	

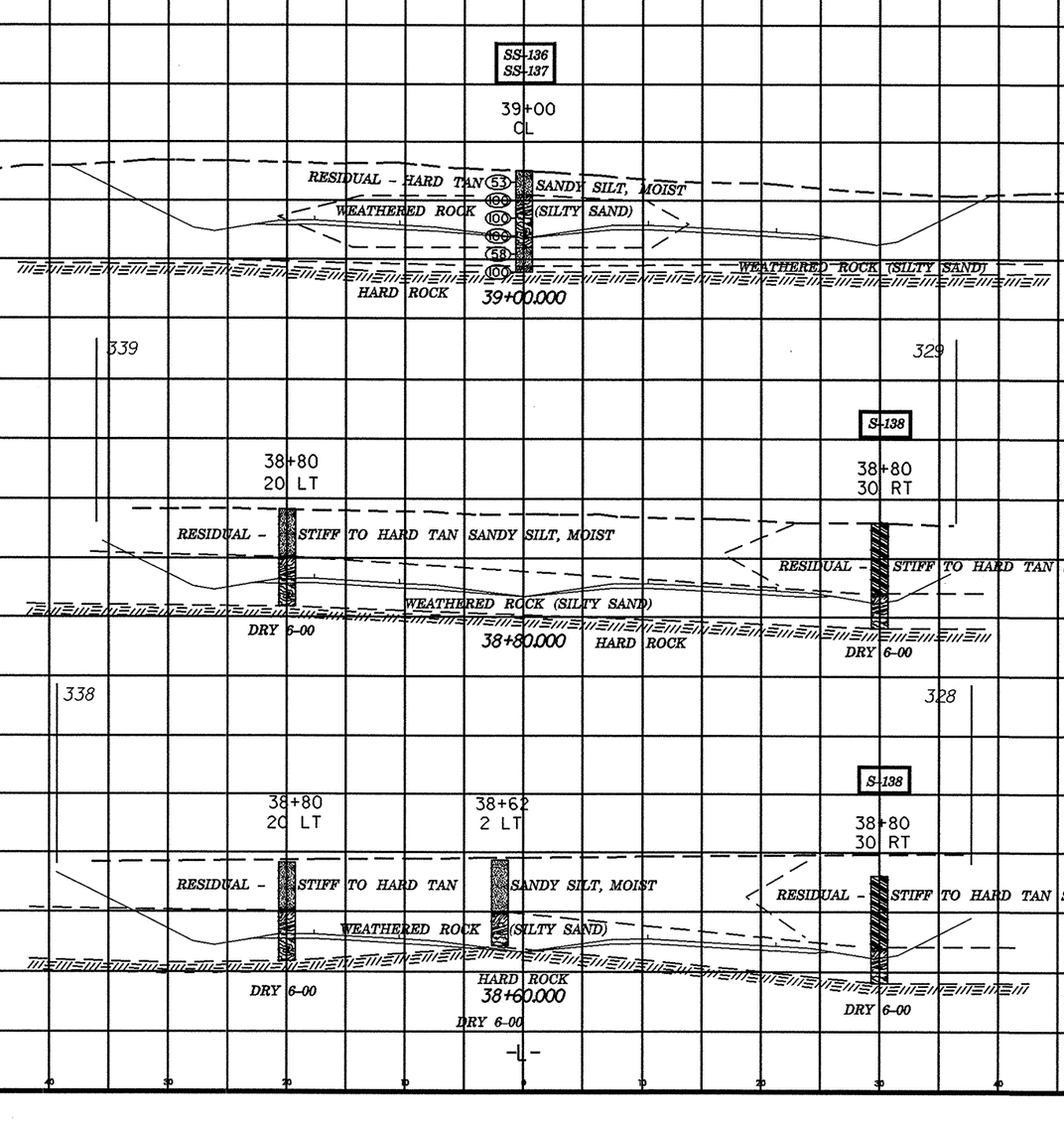


5 0 5 10

METRIC

SOIL TEST RESULTS

SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	PL. I.	% BY WEIGHT				% PASSING SIEVES			% MOISTURE	% ORGANIC
							C. SAND	F. SAND	SILT	CLAY	10	40	200		
S-138	30 RT	38+80	0.00-3.00	A-6(3)	29	11	26.3	25.5	20	28.3	95	81	50		
SS-136	CL	39+00	0.97-1.42	A-4(26)	23	5	30.9	28.7	16.2	24.2	98	82	44		
SS-137	CL	39+00	7.05-7.50	A-4(2)	29	7	12.7	32.1	37	18.2	96	90	61	19.1	



5 0 5 10

METRIC

347

39+80.000

346

333

39+60
CL

6-00

RESIDUAL - HARD TAN SANDY SILT, MOIST
WEATHERED ROCK (SILTY SAND)
HARD ROCK

39+60.000

345

332

39+30
20 LT

39+60
CL

39+30
20 RT

6-00

RESIDUAL - HARD TAN SANDY SILT, MOIST
WEATHERED ROCK
HARD ROCK

39+40.000

HARD ROCK
DRY 6-00

HARD ROCK
DRY 6-00

344

331

39+30
20 LT

39+30
20 RT

RESIDUAL - HARD TAN-BROWN SANDY SILT, MOIST
WEATHERED ROCK

HARD ROCK
DRY 6-00

39+20.000

HARD ROCK
DRY 6-00

-L-

PROJECT REFERENCE NO. R-0609IA

5 0 5 10

METRIC

SOIL TEST RESULTS

SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	PL. I.	% BY WEIGHT C. SAND	F. SAND	SILT	CLAY	% PASSING SIEVES 10	40	200	% MOISTURE	% ORGANIC
SS-179	25 RT	40+80	2.72-3.17	A-4(0)	30	2	37	30.9	11.9	20.2	97	73	37		
S-181	20 LT	41+20	2.75-3.50	A-4(0)	23	3	39.2	21.4	23.2	16.2	83	58	37		

41+40
CL

RESIDUAL - DENSE TO VERY DENSE TAN MIC. SILTY SAND, MOIST

7-00

WEATHERED ROCK (SILTY SAND)

HARD ROCK

41+40.000

S-181

41+20
20 LT

41+20
20 RT

RESIDUAL - STIFF TO HARD TAN-WHITE MIC. SANDY SILTY CLAY, MOIST

HARD SANDY SILT, MOIST

WEATHERED ROCK (SILTY SAND)

HARD ROCK

DRY 7-00

DRY 7-00

41+20.000

41+00
CL

RESIDUAL - STIFF TO HARD TAN-WHITE MIC. SANDY SILTY CLAY, MOIST

7-00

WEATHERED ROCK (SILTY SAND)

HARD ROCK

41+00.000

SS-179

40+80
15 LT

40+80
25 RT

RESIDUAL - STIFF TO HARD TAN-WHITE MIC. SANDY SILTY CLAY, MOIST

7-00

WEATHERED ROCK (SILTY SAND)

16 18 36 100

7-00

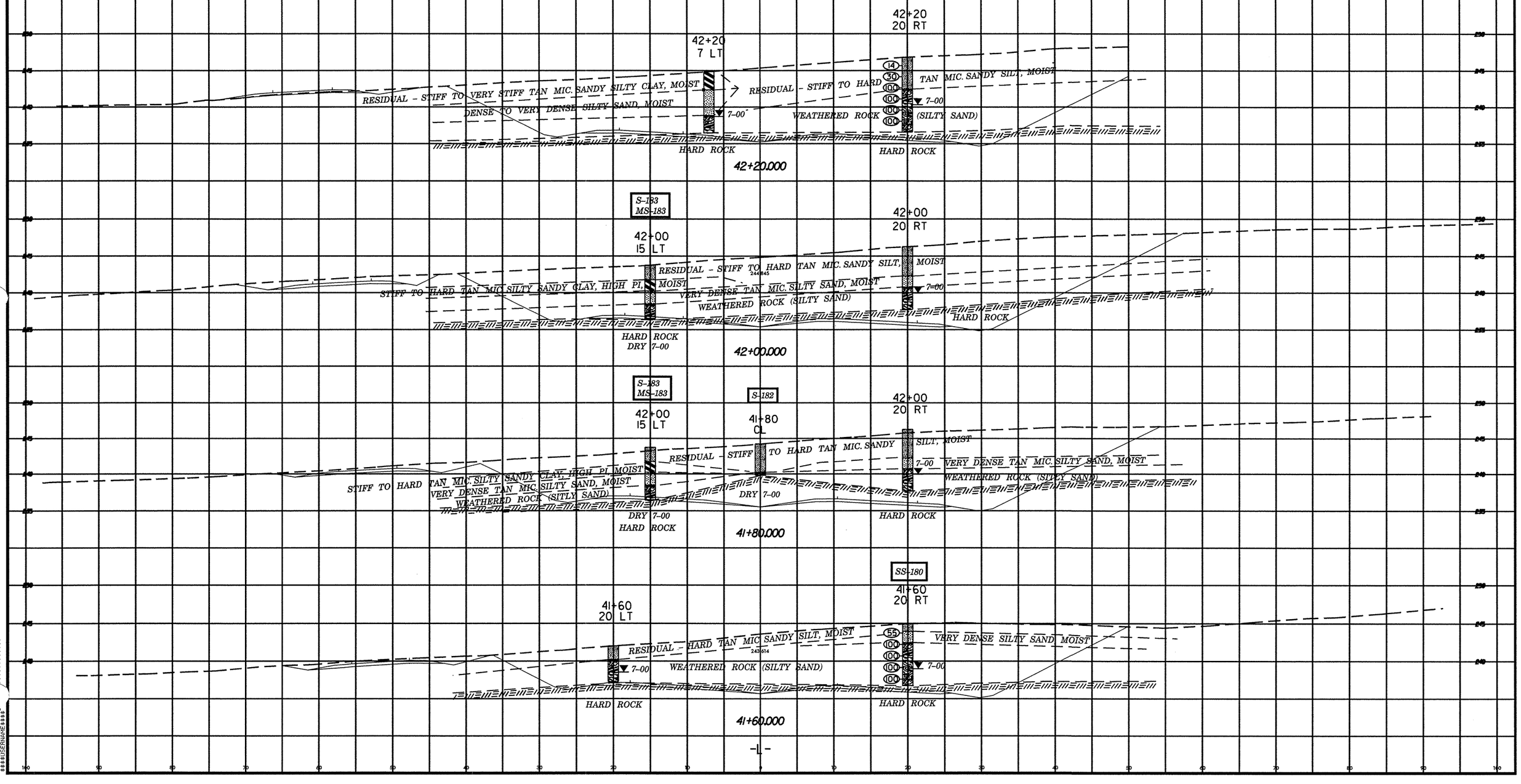
VERY STIFF TO HARD SANDY SILT MOIST

40+80.000

-L-

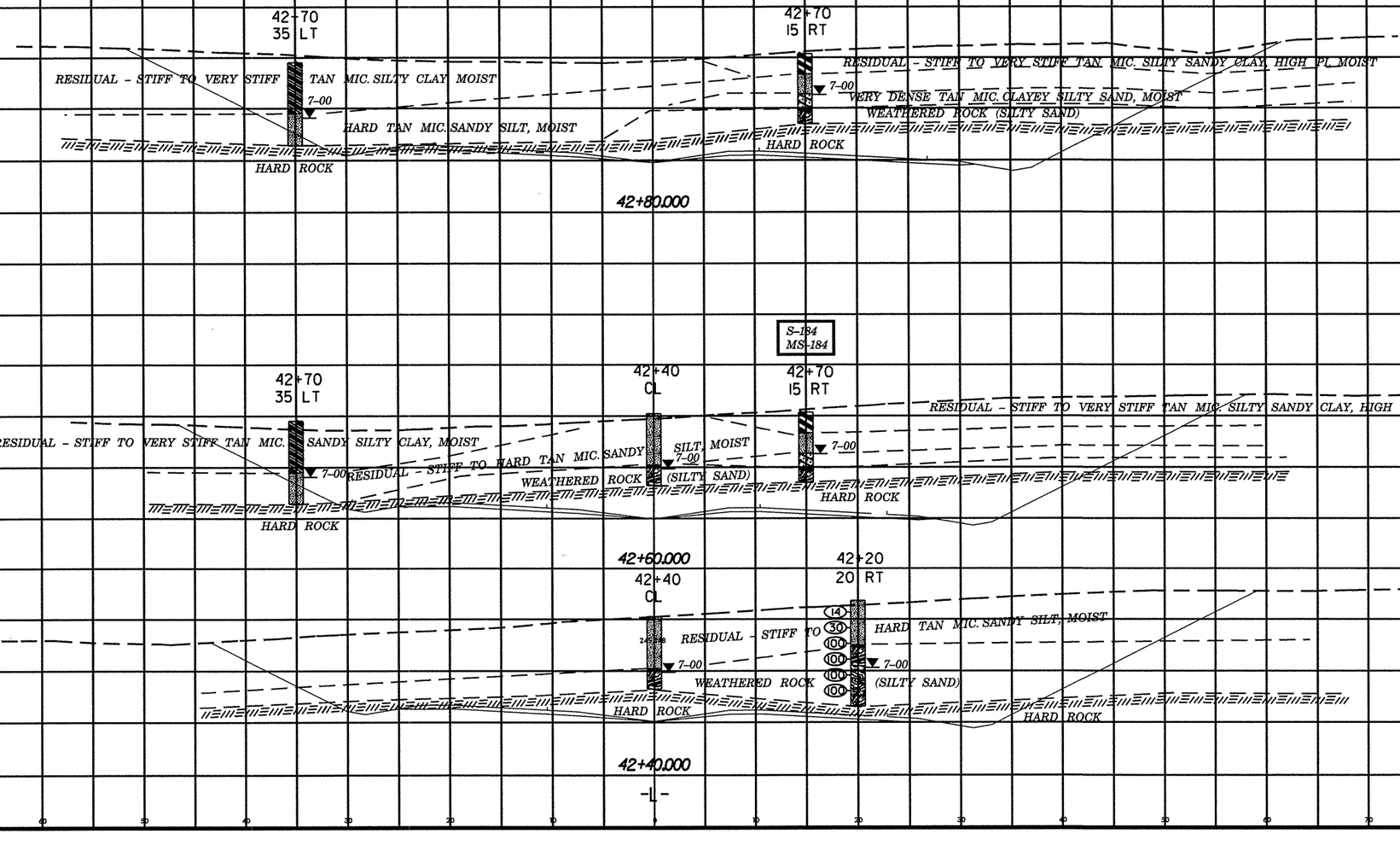
SOIL TEST RESULTS

SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	PL. I.	% BY WEIGHT				% PASSING SIEVES			% MOISTURE	% ORGANIC
							C. SAND	F. SAND	SILT	CLAY	10	40	200		
S-181	20 LT	41+20	2.75-3.50	A-4(0)	23	3	39.2	21.4	23.2	16.2	83	58	37		
SS-180	20 RT	41+60	1.23-1.68	A-2-4(0)	25	NP	48.7	28.5	6.7	16.2	90	61	24		
S-182	CL	41+80	1.00-3.00	A-4(3)	30	10	17.8	30.7	25.3	26.3	100	93	57		
S-183	15 LT	42+00	2.00-3.50	A-7-6(21)	57	30	19.2	12.3	22	46.5	99	86	70	28.6	



SOIL TEST RESULTS

SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	PL. I.	% BY WEIGHT				% PASSING SIEVES			% MOISTURE	% ORGANIC
							C. SAND	F. SAND	SILT	CLAY	10	40	200		
S- 184	15 RT	42+70	1. 00- 2. 00	A- 7- 6(23)	60	33	17	16. 2	14. 3	52. 5	100	91	69	33. 1	

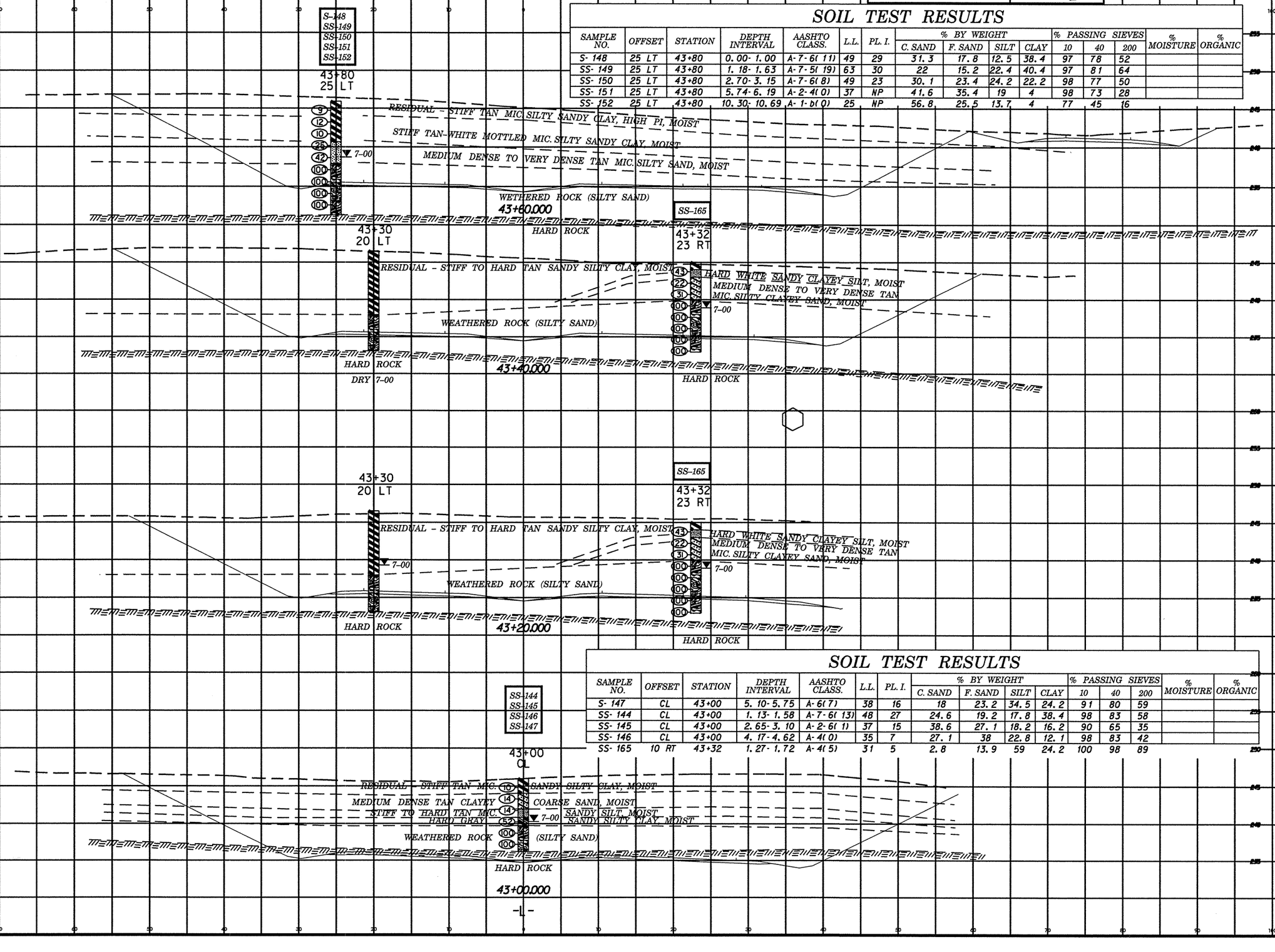


5 0 5 10

METRIC

SOIL TEST RESULTS

SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	PL. I.	% BY WEIGHT				% PASSING SIEVES			% MOISTURE	% ORGANIC
							C. SAND	F. SAND	SILT	CLAY	10	40	200		
S- 148	25 LT	43+80	0. 00- 1. 00	A- 7- 6(11)	49	29	31. 3	17. 8	12. 5	38. 4	97	78	52		
SS- 149	25 LT	43+80	1. 18- 1. 63	A- 7- 5(19)	63	30	22	15. 2	22. 4	40. 4	97	81	64		
SS- 150	25 LT	43+80	2. 70- 3. 15	A- 7- 6(8)	49	23	30. 1	23. 4	24. 2	22. 2	98	77	50		
SS- 151	25 LT	43+80	5. 74- 6. 19	A- 2- 4(0)	37	NP	41. 6	35. 4	19	4	98	73	28		
SS- 152	25 LT	43+80	10. 30- 10. 69	A- 1- b(0)	25	NP	56. 8	25. 5	13. 7	4	77	45	16		



SOIL TEST RESULTS

SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	PL. I.	% BY WEIGHT				% PASSING SIEVES			% MOISTURE	% ORGANIC
							C. SAND	F. SAND	SILT	CLAY	10	40	200		
S- 147	CL	43+00	5. 10- 5. 75	A- 6(7)	38	16	18	23. 2	34. 5	24. 2	91	80	59		
SS- 144	CL	43+00	1. 13- 1. 58	A- 7- 6(13)	48	27	24. 6	19. 2	17. 8	38. 4	98	83	58		
SS- 145	CL	43+00	2. 65- 3. 10	A- 2- 6(1)	37	15	38. 6	27. 1	18. 2	16. 2	90	65	35		
SS- 146	CL	43+00	4. 17- 4. 62	A- 4(0)	35	7	27. 1	38	22. 8	12. 1	98	83	42		
SS- 165	10 RT	43+32	1. 27- 1. 72	A- 4(5)	31	5	2. 8	13. 9	59	24. 2	100	98	89		

PROJECT REFERENCE NO.
R-0609 I A

SOIL TEST RESULTS

SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	PL. I.	% BY WEIGHT				% PASSING SIEVES			% MOISTURE	% ORGANIC
							C. SAND	F. SAND	SILT	CLAY	10	40	200		
S- 148	25 LT	43+80	0. 00- 1. 00	A- 7- 6(11)	49	29	31. 3	17. 8	12. 5	38. 4	97	78	52		
SS- 149	25 LT	43+80	1. 18- 1. 63	A- 7- 5(19)	63	30	22	15. 2	22. 4	40. 4	97	81	64		
SS- 150	25 LT	43+80	2. 70- 3. 15	A- 7- 6(8)	49	23	30. 1	23. 4	24. 2	22. 2	98	77	50		
SS- 151	25 LT	43+80	5. 74- 6. 19	A- 2- 4(0)	37	NP	41. 6	35. 4	19	4	98	73	28		
SS- 152	25 LT	43+80	10. 30- 10. 69	A- 1- b(0)	25	NP	56. 8	25. 5	13. 7	4	77	45	16		
SS- 153	20 LT	44+40	8. 91- 9. 33	A- 2- 4(0)	25	NP	49. 1	32. 9	16	2	99	69	22		

5 0 5 10

METRIC

241.420

44+80.000

242.486

44+60.000

SS-153

44+40
20 LT

RESIDUAL - HARD TAN SANDY SILTY CLAY, MOIST

99
74
69
53
80
100
100
100

243.043

7-00

RESIDUAL - VERY DENSE TAN MIC. SILTY SANL, MOIST

WEATHERED ROCK (SILTY SAND)

44+40.000

S-148
SS-149
SS-150
SS-151
SS-152

43+80
25 LT

9
12
10
25
42
100
100
100
100

7-00

RESIDUAL - STIFF TAN MIC. SILTY SANDY CLAY, HIGH PI, MOIST

STIFF TAN-WHITE MOTTLED MIC. SILTY SANDY CLAY, MOIST

MEDIUM DENSE TO VERY DENSE TAN MIC. SILTY SAND, MOIST

WEATHERED ROCK (SILTY SAND)

44+00.000 HARD ROCK

S-148
SS-149
SS-150
SS-151
SS-152

43+80
25 LT

9
12
10
25
42
100
100
100
100

7-00

RESIDUAL - STIFF TAN MIC. SILTY SANDY CLAY, HIGH PI, MOIST

STIFF TAN-WHITE MOTTLED MIC. SILTY SANDY CLAY, MOIST

MEDIUM DENSE TO VERY DENSE TAN MIC. SILTY SAND, MOIST

WEATHERED ROCK (SILTY SAND)

43+80.000 -L- HARD ROCK

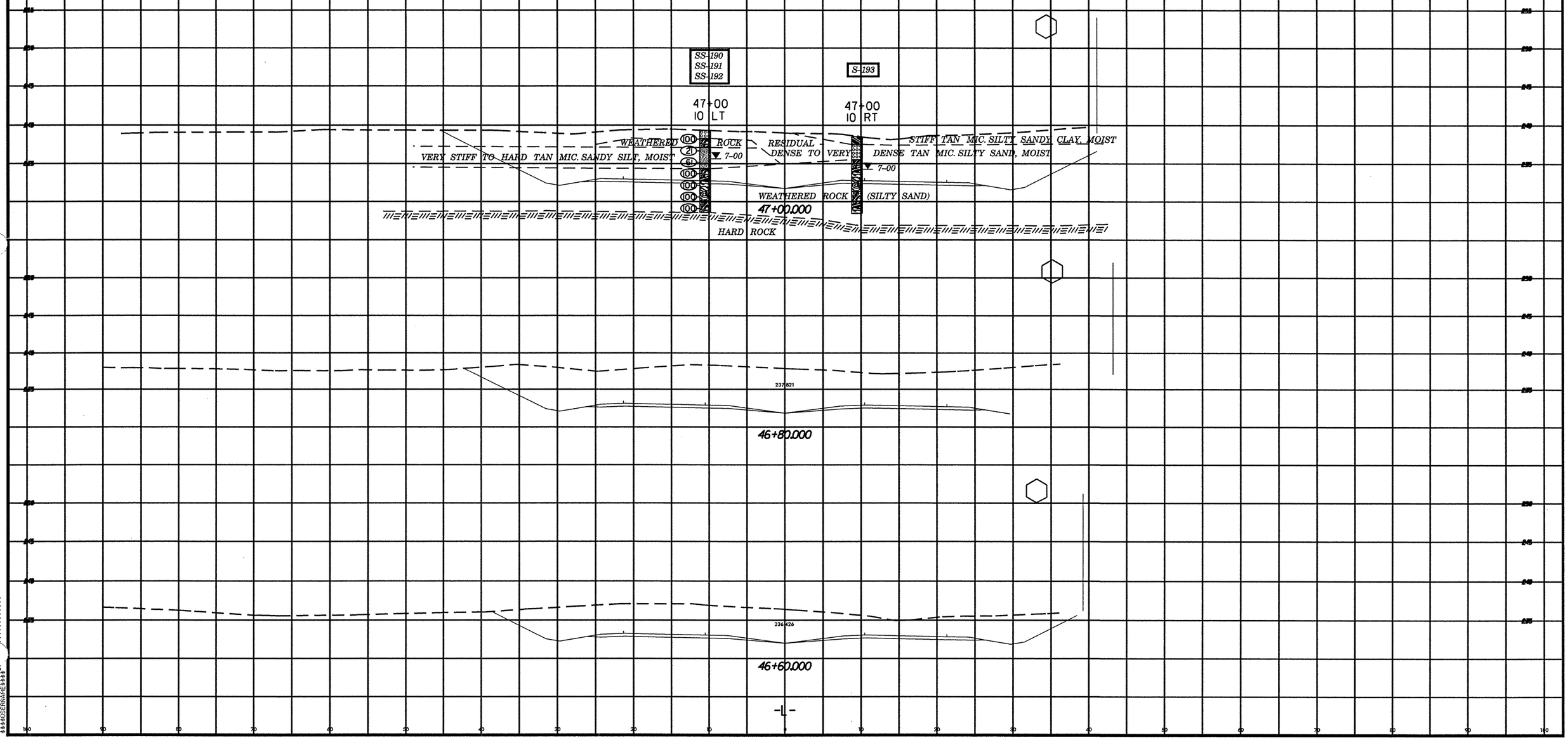
PROJECT REFERENCE NO.
R-06091A
Sheet 91

5 0 5 10

METRIC

SOIL TEST RESULTS

SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	PL. I.	% BY WEIGHT C. SAND	F. SAND	SILT	CLAY	% PASSING SIEVES 10	40	200	% MOISTURE	% ORGANIC
S- 193	10 RT	47+00	0.00- 1.00	A- 6(5)	35	18	29.1	22	14.6	34.3	90	73	47		
SS- 190	10 LT	47+00	1.12- 1.47	A- 1- b(0)	24	4	59.1	23.8	8	9.1	88	49	18		
SS- 191	10 LT	47+00	2.64- 3.09	A- 4(5)	36	7	6.3	25.8	51.8	16.1	99	96	75		
SS- 192	10 LT	47+00	10.24- 10.56	A- 4(0)	24	NP	31.5	30.3	30.2	8.1	88	70	39		



-L-

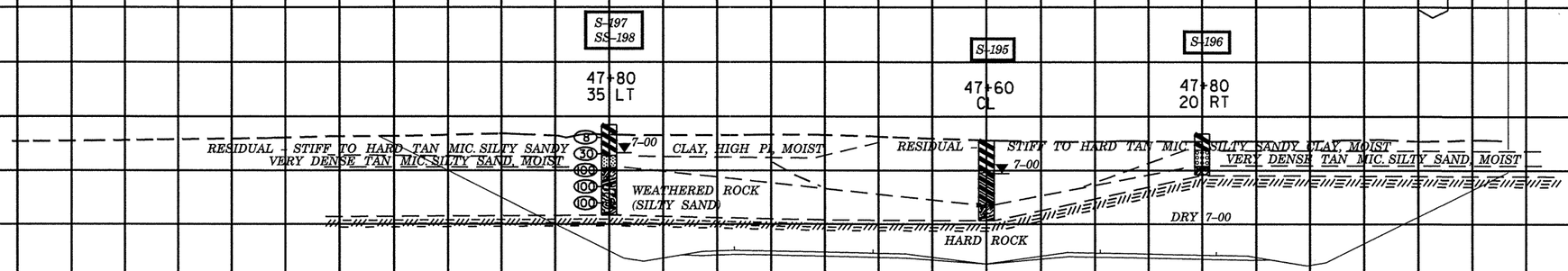
PROJECT REFERENCE NO. R-0609IA

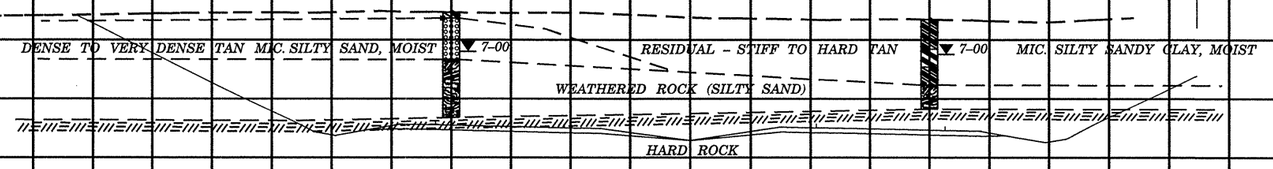
5 0 5 10

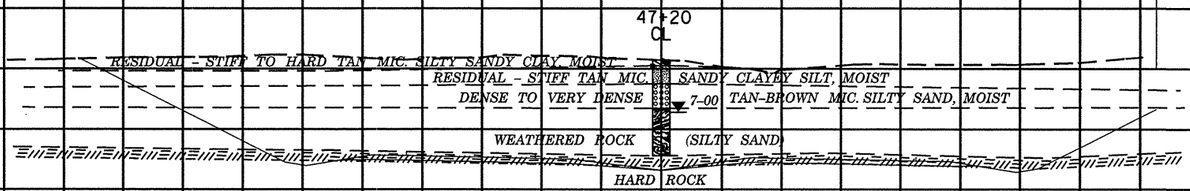
METRIC

SOIL TEST RESULTS

SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	PL. I.	% BY WEIGHT C. SAND	F. SAND	SILT	CLAY	% PASSING SIEVES 10	40	200	% MOISTURE	% ORGANIC
S-194	20 RT	47+40	2.50-4.00	A-7-6(11)	48	26	27.9	20.2	15.6	36.3	98	80	55		
S-195	CL	47+60	0.00-3.00	A-7-6(14)	52	25	22.8	17.4	15.4	44.4	100	87	63		
S-196	20 RT	47+80	0.00-1.50	A-7-6(11)	47	22	24.8	19	9.8	46.4	100	86	58		
S-197	35 LT	47+80	1.18-1.63	A-7-6(35)	60	31	0.6	7.9	47.1	44.4	100	100	95		
SS-198	35 LT	47+80	2.85-3.15	A-2-4(0)	27	5	51.5	27.4	11	10.1	100	65	25		







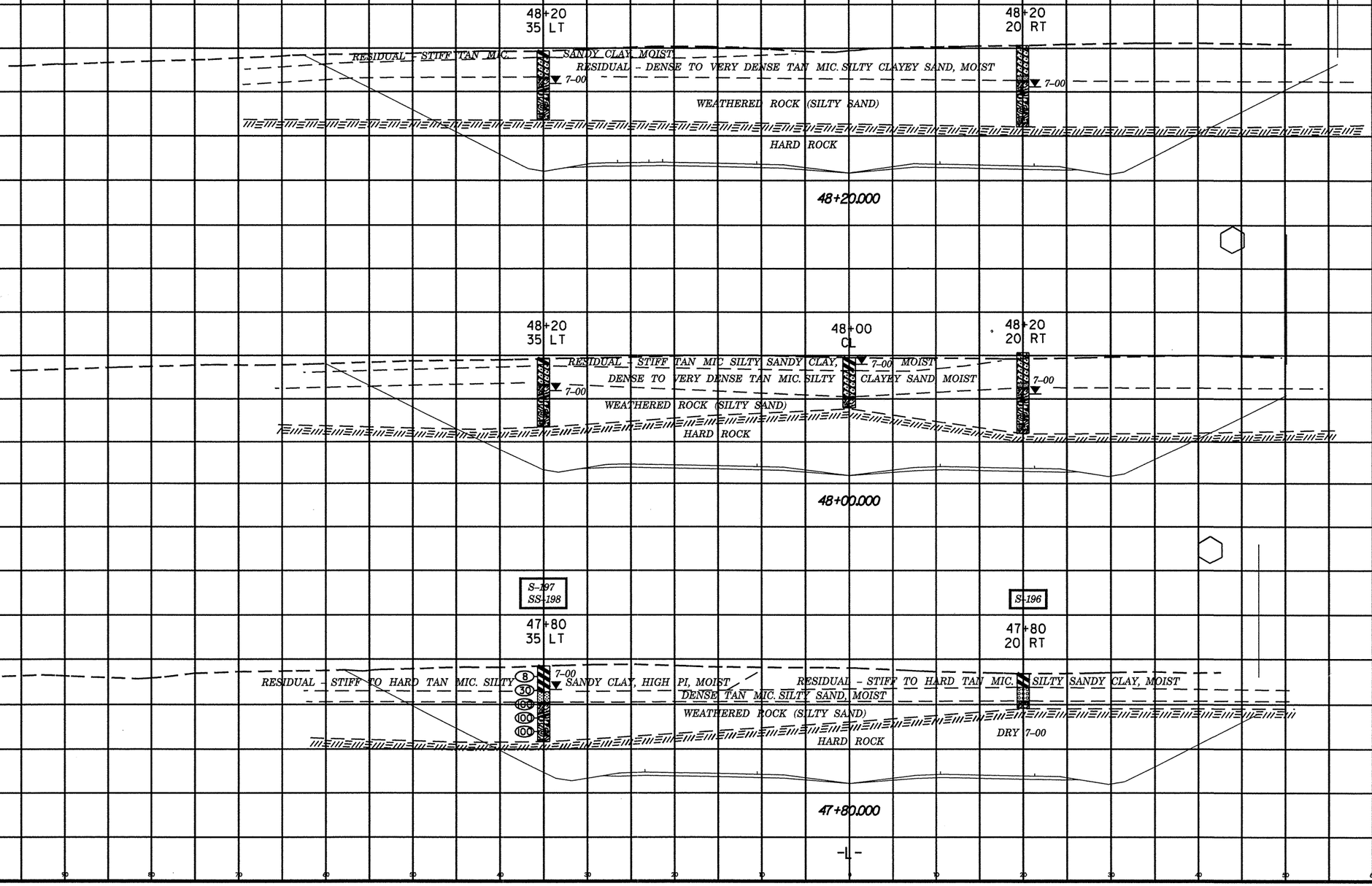
-L-

5 0 5 10

METRIC

SOIL TEST RESULTS

SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	PL. I.	% BY WEIGHT				% PASSING SIEVES			% MOISTURE	% ORGANIC
							C. SAND	F. SAND	SILT	CLAY	10	40	200		
S- 196	20 RT	47+80	0. 00- 1. 50	A-7-6(11)	47	22	24. 8	19	9. 8	46. 4	100	86	58		
S- 197	35 LT	47+80	1. 18- 1. 63	A-7-6(35)	60	31	0. 6	7. 9	47. 1	44. 4	100	100	95		
SS- 198	35 LT	47+80	2. 85- 3. 15	A-2-4(0)	27	5	51. 5	27. 4	11	10. 1	100	65	25		



5 0 5 10

METRIC

SOIL TEST RESULTS

SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	PL. I.	% BY WEIGHT				% PASSING SIEVES			% MOISTURE	% ORGANIC
							C. SAND	F. SAND	SILT	CLAY	10	40	200		
SS-199	CL	48+40	1.15-1.60	A-2-6(0)	37	11	38.3	31.5	14	16.1	100	78	35		

243086

RESIDUAL - MEDIUM DENSE TO VERY DENSE TAN MIC. SILTY CLAYEY SAND, MOIST

WEATHERED ROCK (SILTY SAND)

HARD ROCK

48+80.000

SS-199

48+40
CL

48+60
20 RT

RESIDUAL - MEDIUM DENSE TO VERY DENSE TAN MIC. SILTY CLAYEY SAND, MOIST

17
14
18
9
51
55
100
100

7-00

7-00

WEATHERED ROCK (SILTY SAND)

HARD ROCK

48+60.000

SS-199

48+40
CL

17
14
18
9
51
55
100
100

7-00

RESIDUAL - MEDIUM DENSE TO VERY DENSE TAN MIC. SILTY CLAYEY SAND, MOIST

WEATHERED ROCK (SILTY SAND)

HARD ROCK

48+40.000

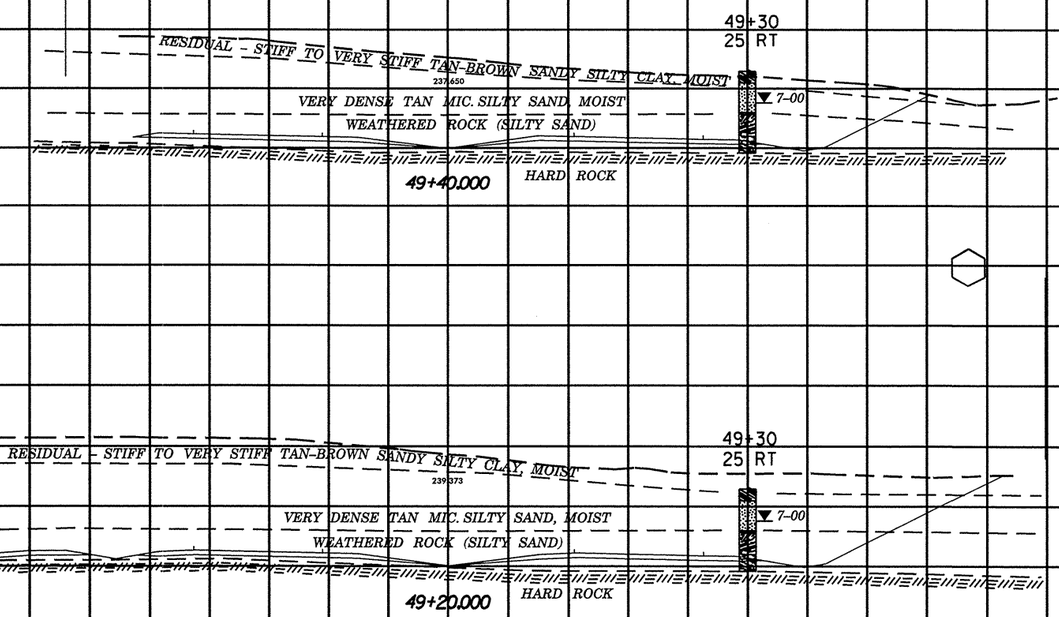
-L-

5 0 5 10

METRIC

SOIL TEST RESULTS

SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	PL. I.	% BY WEIGHT				% PASSING SIEVES			% MOISTURE	% ORGANIC
							C. SAND	F. SAND	SILT	CLAY	10	40	200		
S-219	25 RT	49+00	0.00-1.00	A-7-6(31)	63	39	13.9	11.3	16.2	58.6	100	92	77		
SS-220	25 RT	49+00	1.12-1.57	A-2-4(0)	27	5	49.3	24.2	16.4	10.1	97	63	29		

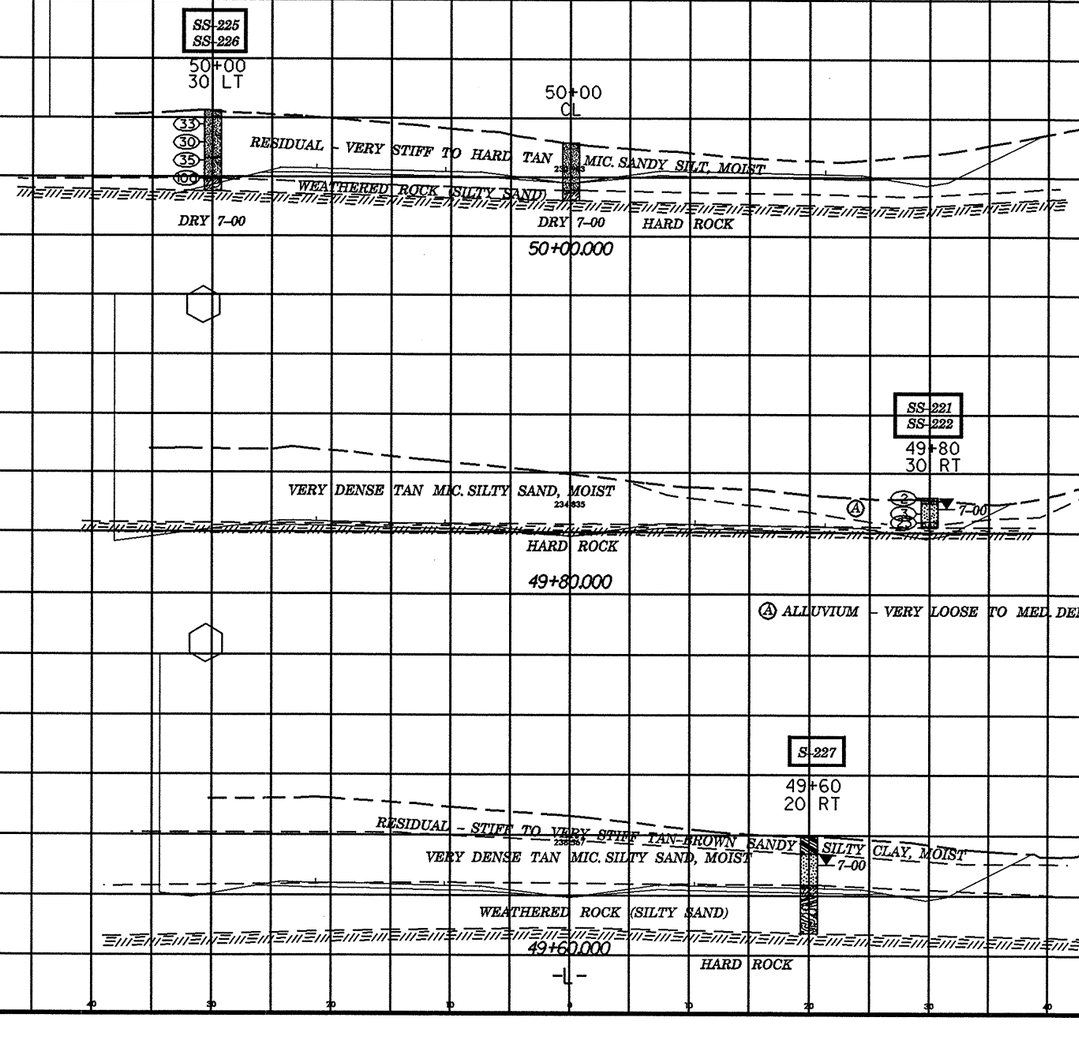


5 0 5 10

METRIC

SOIL TEST RESULTS

SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	PL. I.	% BY WEIGHT				% PASSING SIEVES			% MOISTURE	% ORGANIC
							C. SAND	F. SAND	SILT	CLAY	10	40	200		
SS-221	30 RT	49+80	0.25-0.45	A-4(1)	32	4	28.3	19.8	29.7	22.2	98	81	55		
SS-222	30 RT	49+80	1.28-1.73	A-2-4(0)	28	NP	43.8	35.6	12.6	8	100	76	24		3.3
SS-225	30 LT	50+00	1.18-1.63	A-2-4(0)	24	2	51.9	22.7	13.3	12	95	59	27		
SS-226	30 LT	50+00	4.22-4.67	A-4(2)	32	3	5.8	32.1	50.1	12	100	96	70		
S-227	20 RT	49+60	0.00-1.40	A-6(4)	33	15	32.1	22.4	11.4	34.1	99	78	49		



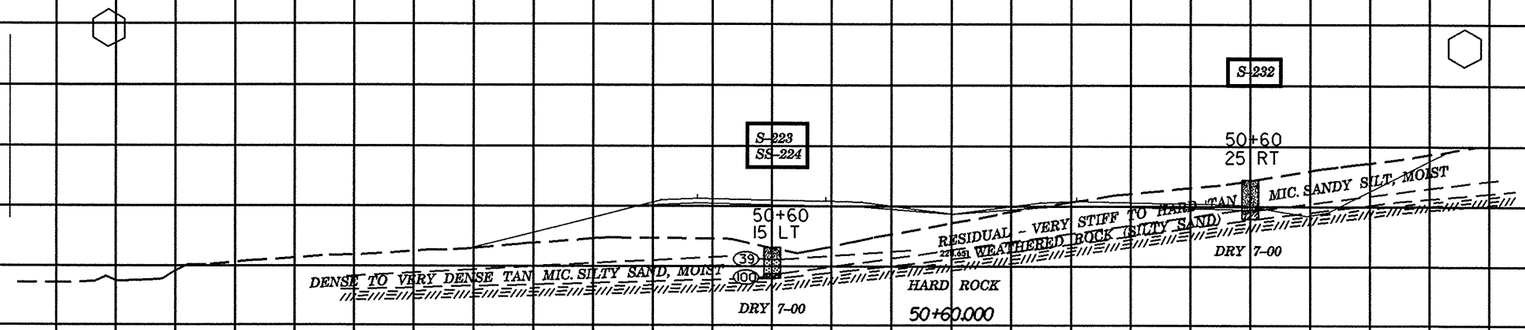
PROJECT REFERENCE NO. R-0609IA

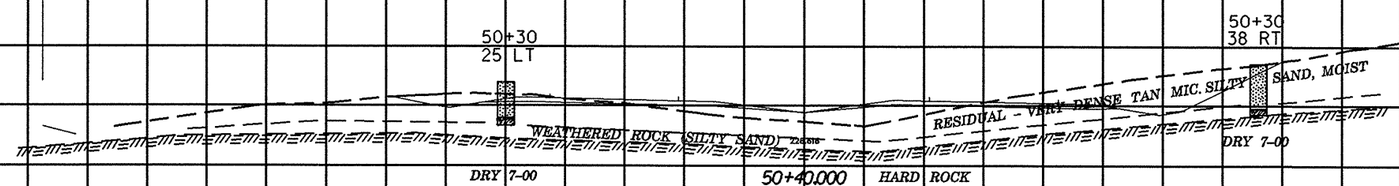
5 0 5 10

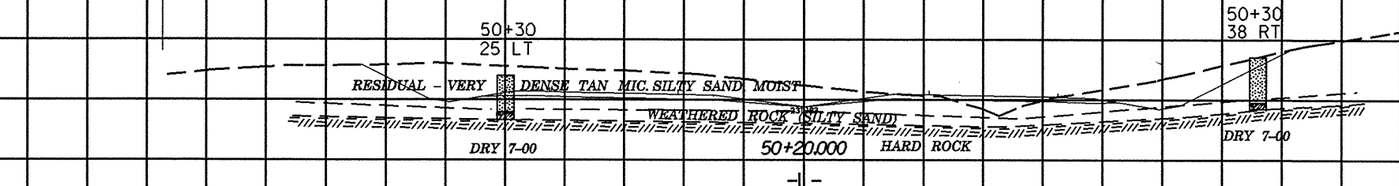
METRIC

SOIL TEST RESULTS

SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	PL. I.	% BY WEIGHT				% PASSING SIEVES			% MOISTURE	% ORGANIC
							C. SAND	F. SAND	SILT	CLAY	10	40	200		
S-223	15 LT	50+60	0.00-0.80	A-4(0)	21	4	31.1	31.3	17.6	20	94	76	40		
SS-224	15 LT	50+60	0.98-1.43	A-2-4(0)	27	4	42.3	29.1	12.6	16	100	71	33		
S-232	25 RT	50+60	1.00-2.50	A-4(6)	28	9	6.9	19.2	45.4	28.5	100	96	80		







PROJECT REFERENCE NO. R-0609 1A

5 0 5 10 METRIC

190

26+40
CL

RESIDUAL - HARD TAN SANDY CLAY, MOIST
VERY DENSE TAN MIC. SILTY SAND, MOIST
238.417
WEATHERED ROCK
HARD ROCK
DRY 9-00
26+46.369

191

26+40
CL

26+20
15 RT

RESIDUAL - HARD TAN SANDY CLAY, MOIST
VERY DENSE TAN MIC. SILTY SAND, MOIST
238.851
238.771
WEATHERED ROCK
HARD ROCK
HARD ROCK
DRY 9-00
26+25.823
DRY 9-00

192

S-320

26+10
10 LT

RESIDUAL - HARD TAN SANDY CLAY, MOIST
9-00 VERY DENSE TAN MIC SILTY SAND, MOIST
WEATHERED ROCK (SILTY SAND)
HARD ROCK
HARD ROCK
26+08.759

193

239.526
.00655 m/m
239.139
241.950
25+92.060
-FLY-

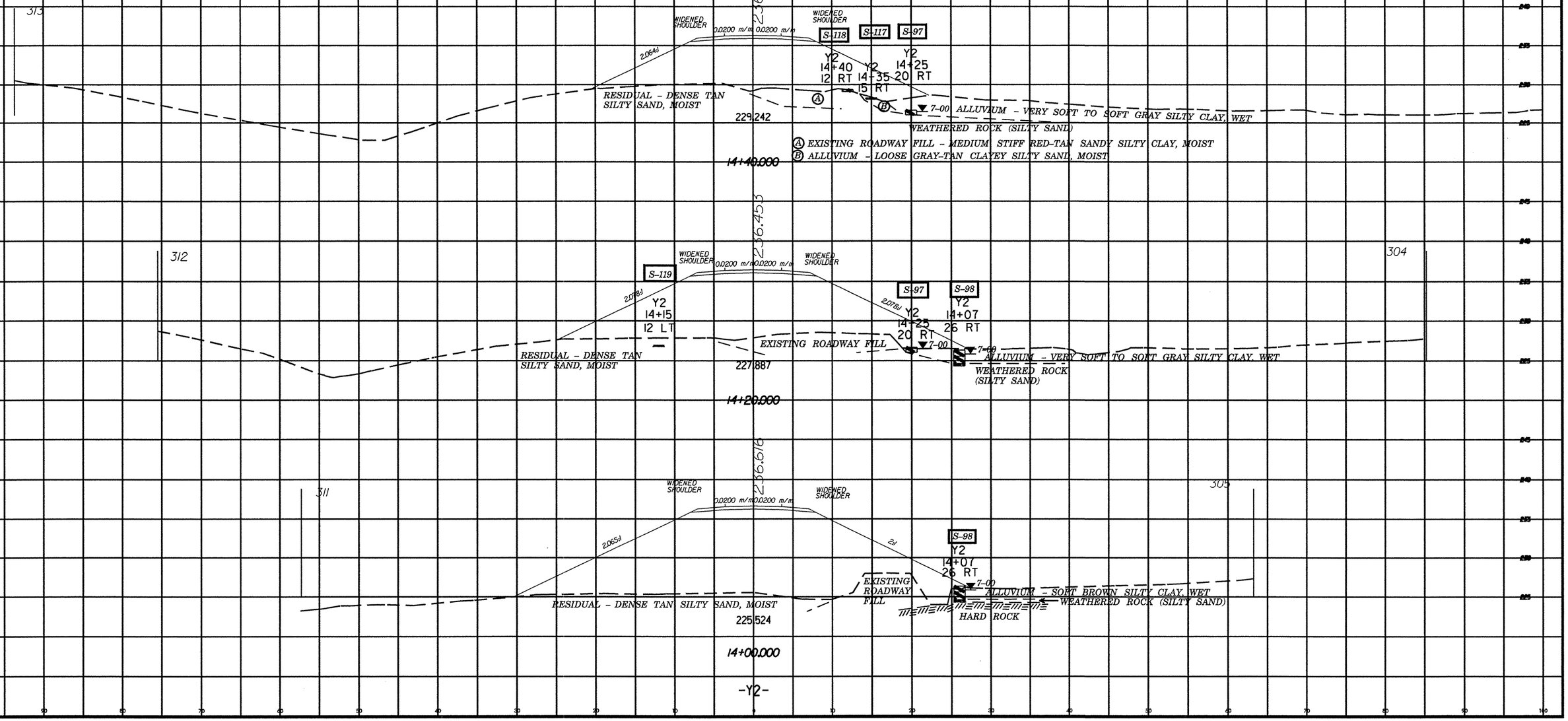
PROJECT REFERENCE NO. R-06091A

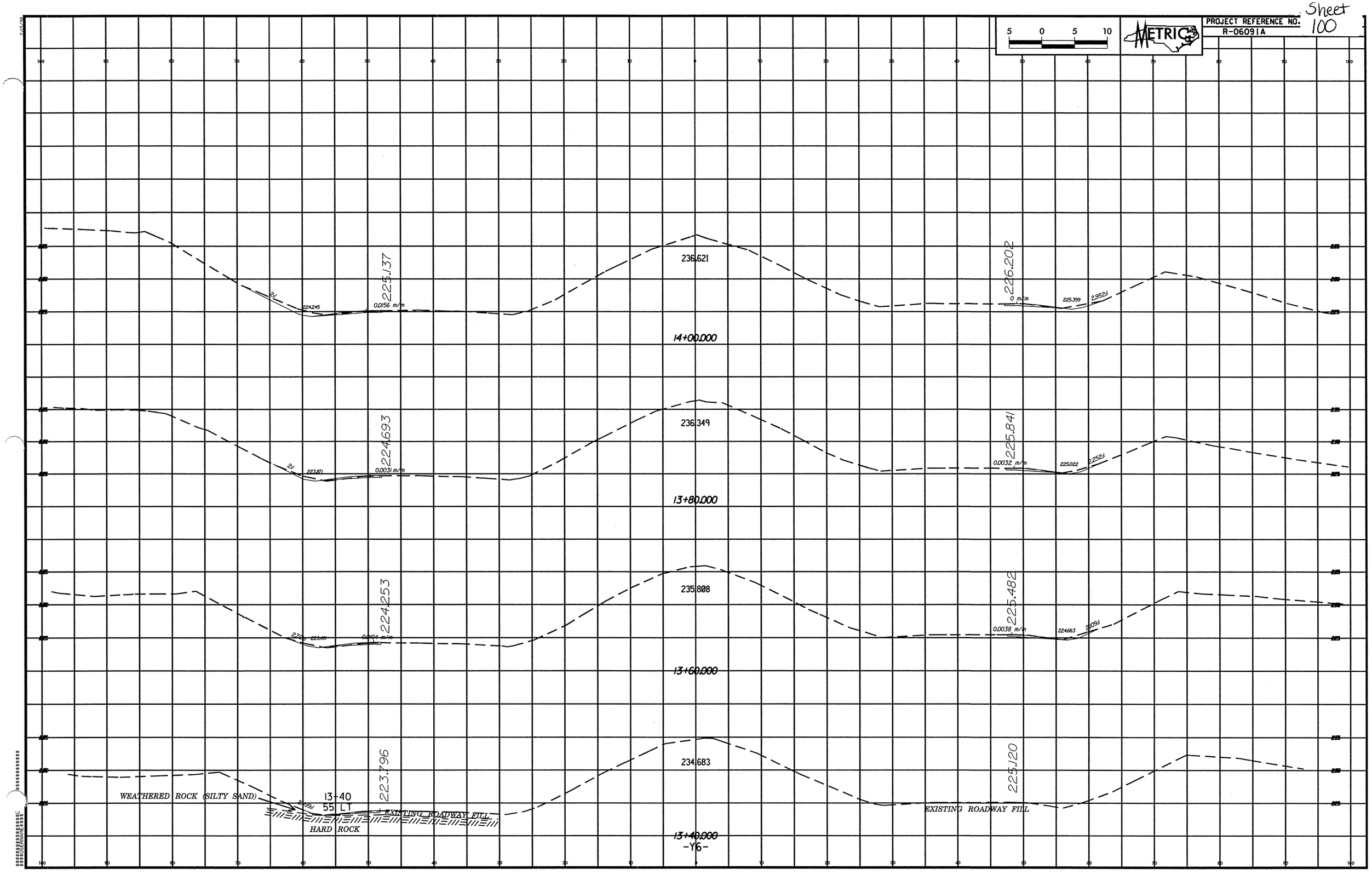
5 0 5 10

METRIC

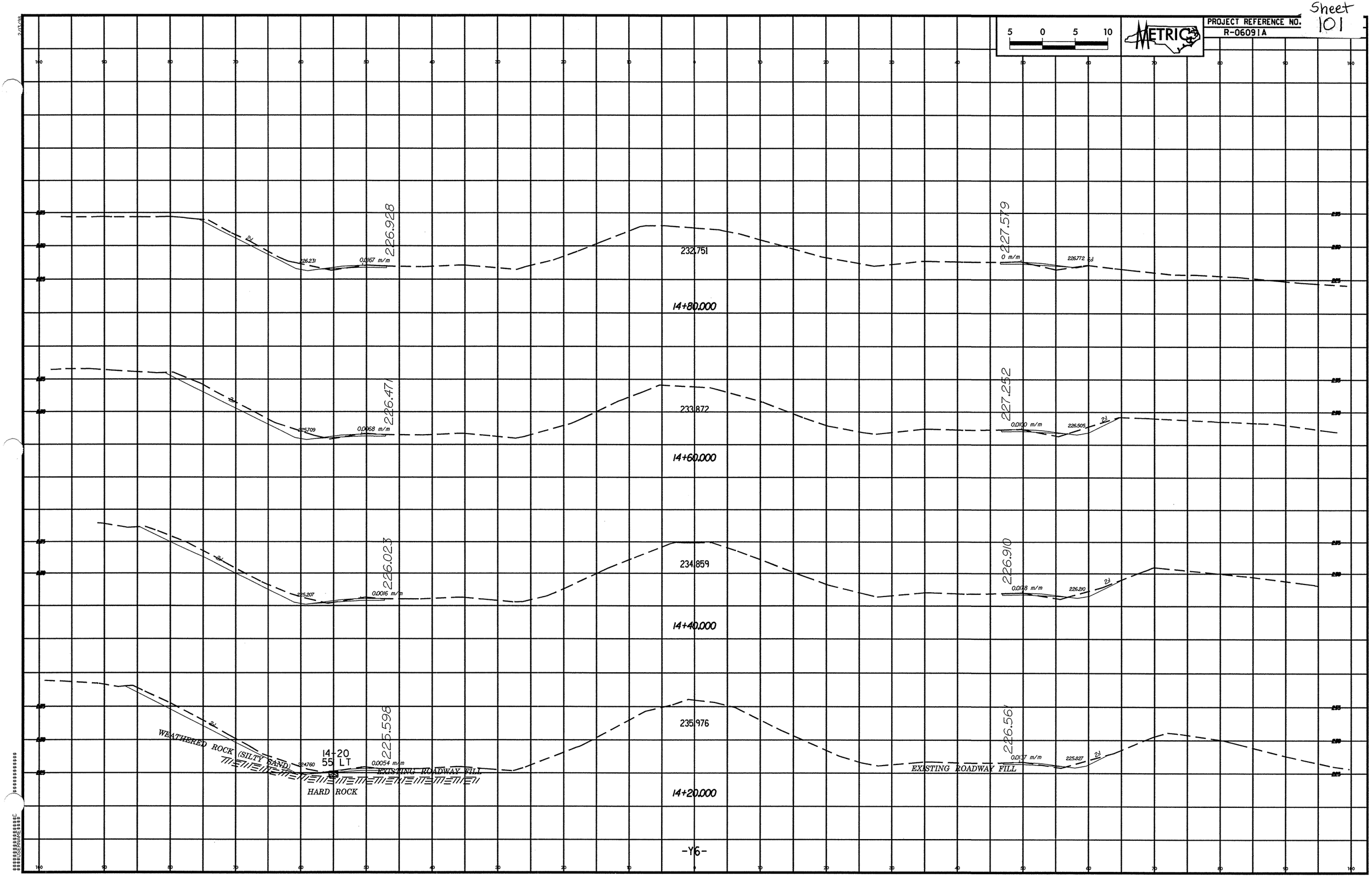
SOIL TEST RESULTS

SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	PL. I.	% BY WEIGHT C. SAND	F. SAND	SILT	CLAY	% PASSING SIEVES 10	40	200	% MOISTURE	% ORGANIC
S-98	25 RT	14+07	0.76-1.72	A-7-6(25)	49	22	0.8	4.1	16.1	79	100	100	96	49	
S-119	12 LT	14+15	0.00-0.15	A-2-4(0)	28	NP	35	35.6	19.3	10.1	91	75	31		
S-97	20 RT	14+25	0.00-0.60	A-7-6(31)	54	29	2.2	4.9	17.9	75	100	99	95		
S-117	15 RT	14+35	0.00-0.15	A-2-4(0)	35	NP	35.6	35.6	18.7	10.1	92	73	30		
S-118	12 RT	14+40	0.00-0.25	A-7-6(9)	46	18	25.4	19.1	23.3	32.2	98	81	59		

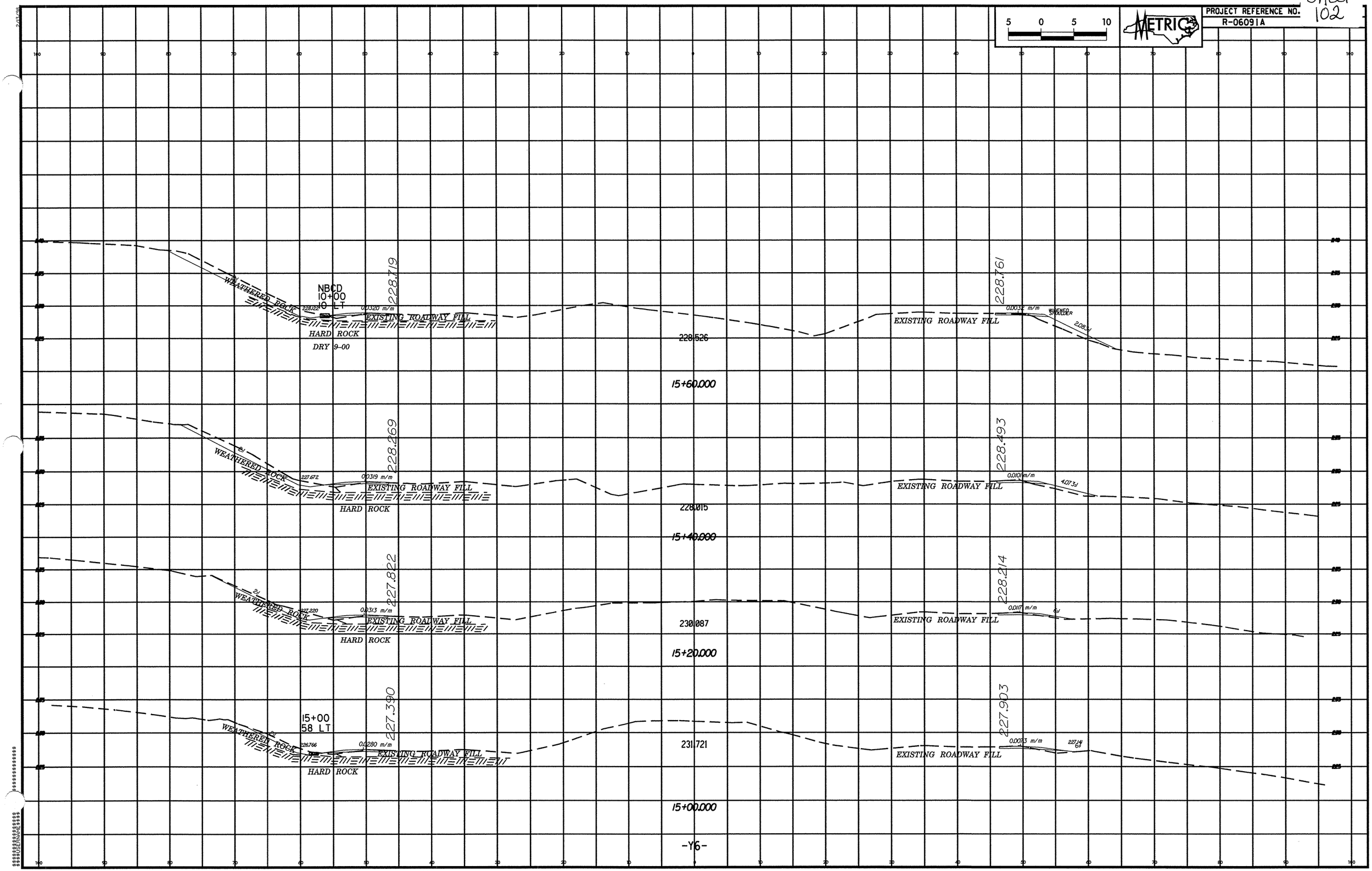




5 0 5 10
METRIC
PROJECT REFERENCE NO.
R-06091A
Sheet 100
236.621
225.137
226.202
2:1
224.245
0.0156 m/m
0 m/m
225.399
2.952:1
14+00.000
236.349
224.693
225.841
2:1
223.871
0.0031 m/m
0.0032 m/m
225.022
2.252:1
13+80.000
235.808
224.253
225.482
0.0038 m/m
224.663
2.109:1
13+60.000
234.683
223.796
225.120
WEATHERED ROCK (SILTY SAND)
13+40
55 LT
EXISTING ROADWAY FILL
HARD ROCK
EXISTING ROADWAY FILL
13+40.000
-Y6-



Sheet 101
PROJECT REFERENCE NO.
R-06091A
METRIC
5 0 5 10
226.928
226.231
0.0167 m/m
232.751
227.579
0 m/m
226.772
14+80.000
226.471
225.709
0.0068 m/m
233.872
227.252
0.0100 m/m
226.505
14+60.000
226.023
225.207
0.0016 m/m
234.859
226.910
0.0178 m/m
226.210
14+40.000
225.598
224.760
0.0054 m/m
235.976
226.561
0.0137 m/m
225.827
WEATHERED ROCK (SILTY SAND)
14-20
55 LT
EXISTING ROADWAY FILL
HARD ROCK
EXISTING ROADWAY FILL
14+20.000
-Y6-



PROJECT REFERENCE NO.
R-06091A
Sheet 102
METRIC
5 0 5 10
NBCD
10+00
10 LT
228.719
228.761
WEATHERED ROCK
EXISTING ROADWAY FILL
HARD ROCK
DRY 9-00
228.526
15+60.000
228.269
228.493
228.015
15+40.000
227.822
228.214
230.087
15+20.000
15+00
58 LT
227.390
227.903
231.721
15+00.000
-Y6-

PROJECT REFERENCE NO. R-0609 1A

5 0 5 10 METRIC

2/13/98

16+40.000

RESIDUAL - VERY DENSE TAN MIC. SILTY SAND, MOIST

230.418

0.0241 m/m

EXISTING ROADWAY FILL

HARD ROCK

229.627

0.0349 m/m

WIDENED SHOULDER

EXISTING ROADWAY FILL

2H

2V

16+20.000

RESIDUAL - VERY DENSE TAN MIC. SILTY SAND, MOIST

NBCD 10+60 10 LT

230.002

0.0248 m/m

EXISTING ROADWAY FILL

HARD ROCK

DRY 9-00

229.433

0.0350 m/m

WIDENED SHOULDER

EXISTING ROADWAY FILL

2H

2V

16+00.000

RESIDUAL - VERY DENSE TAN MIC. SILTY SAND, MOIST

229.586

0.0250 m/m

EXISTING ROADWAY FILL

HARD ROCK

229.459

0.0085 m/m

WIDENED SHOULDER

EXISTING ROADWAY FILL

2H

2V

SBCD 10+20 30 RT

9-00

HARD ROCK

Ⓐ ALLUVIUM - MEDIUM STIFF GRAY SANDY SILT, MOIST TO WET

RESIDUAL - VERY DENSE TAN MIC. SILTY SAND, MOIST

NBCD 10+00 10 LT

229.380

0.0320 m/m

EXISTING ROADWAY FILL

HARD ROCK

DRY 9-00

229.019

0.0085 m/m

WIDENED SHOULDER

EXISTING ROADWAY FILL

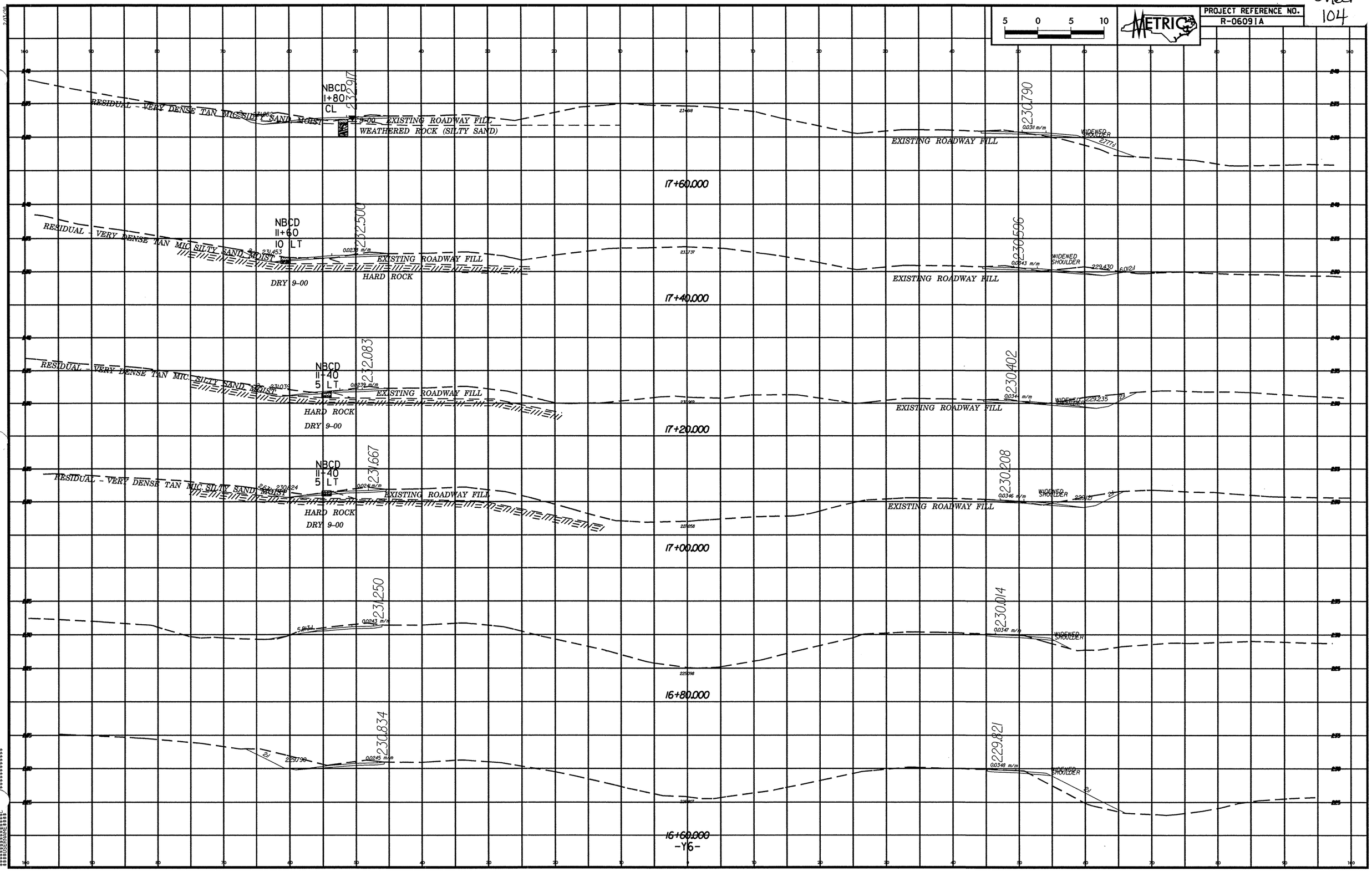
2H

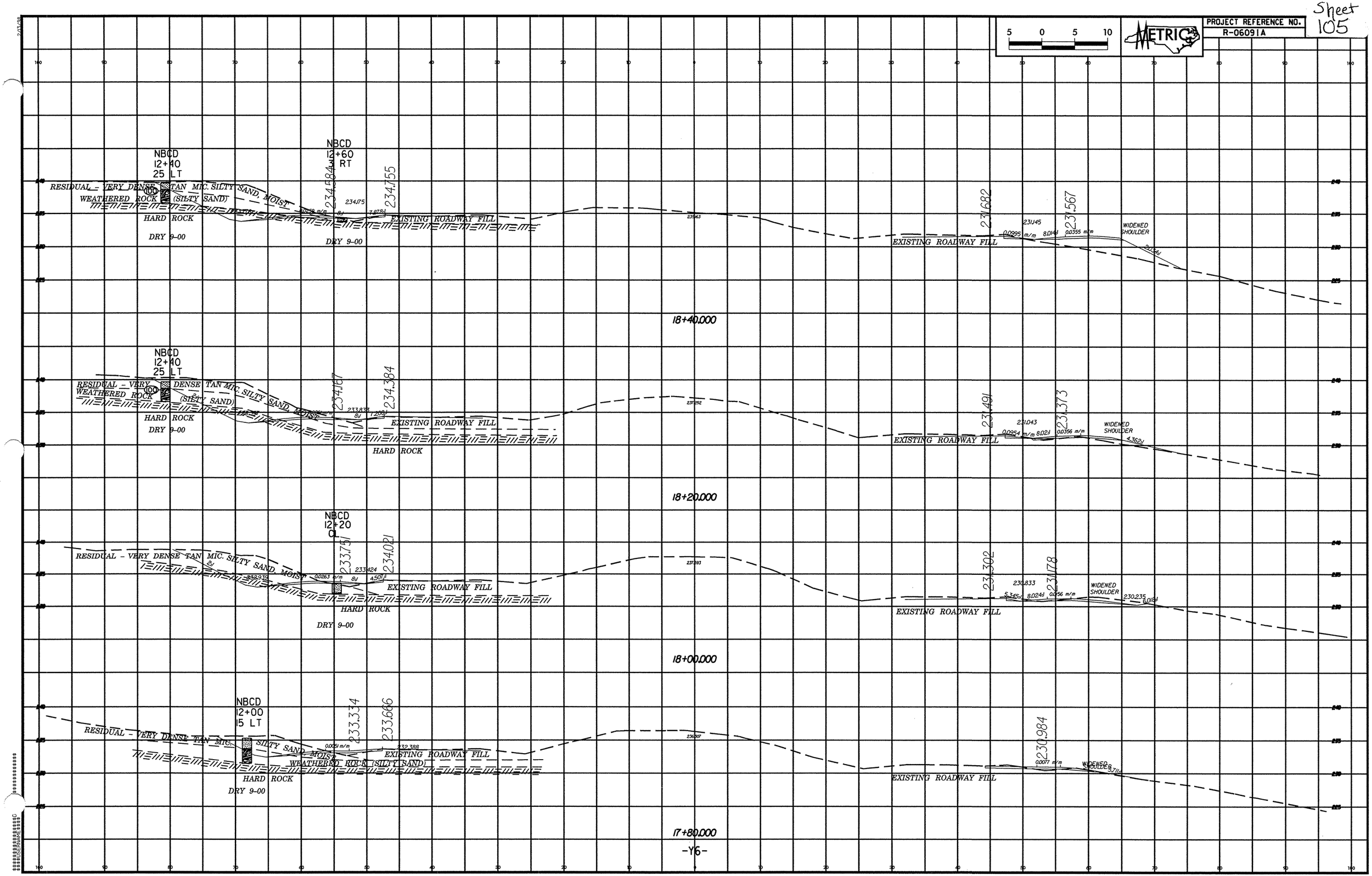
2V

230.582

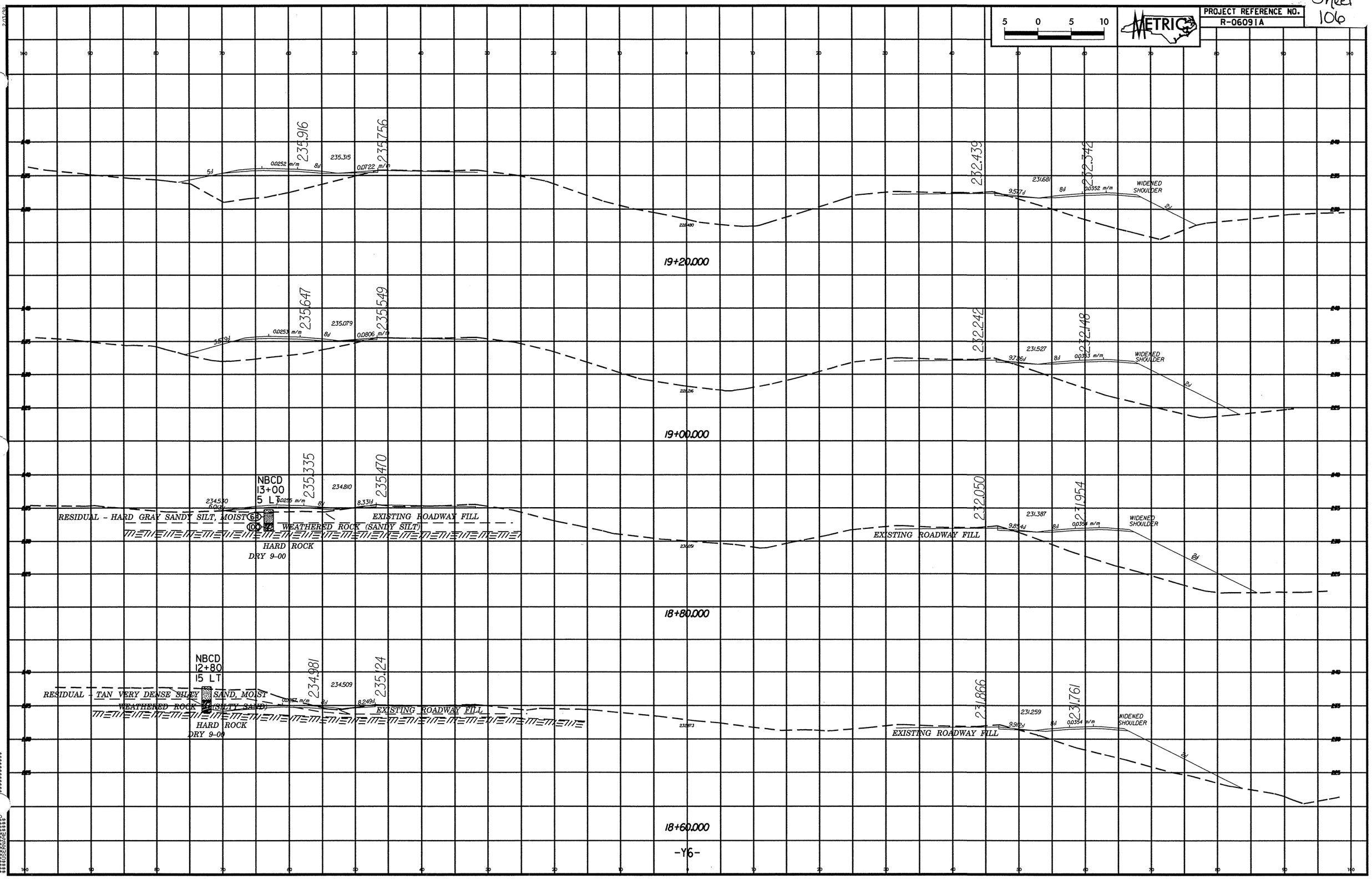
15+80.000

-Y6-

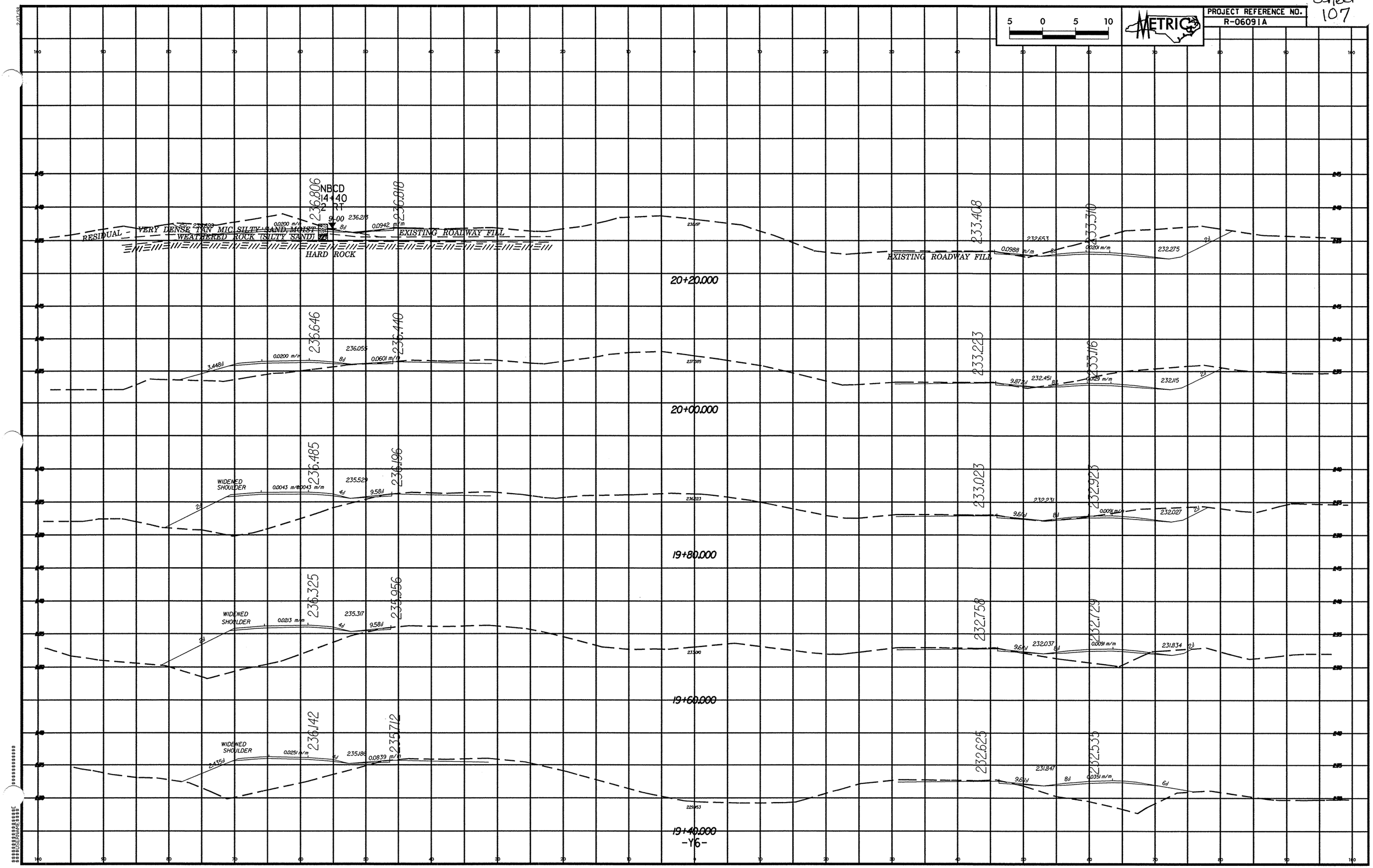

PROJECT REFERENCE NO.
R-06091A
METRIC
5 0 5 10
NBCD
11+80
CL
232.917
RESIDUAL - VERY DENSE TAN MIC SILTY SAND MOIST
EXISTING ROADWAY FILL
WEATHERED ROCK (SILTY SAND)
230.790
WIDENED SHOULDER
17+60.000
NBCD
11+60
10 LT
232.500
RESIDUAL - VERY DENSE TAN MIC SILTY SAND MOIST
EXISTING ROADWAY FILL
HARD ROCK
DRY 9-00
230.596
WIDENED SHOULDER
17+40.000
NBCD
11+40
5 LT
232.083
RESIDUAL - VERY DENSE TAN MIC SILTY SAND MOIST
EXISTING ROADWAY FILL
HARD ROCK
DRY 9-00
230.402
WIDENED SHOULDER
17+20.000
NBCD
11+40
5 LT
231.667
RESIDUAL - VERY DENSE TAN MIC SILTY SAND MOIST
EXISTING ROADWAY FILL
HARD ROCK
DRY 9-00
230.208
WIDENED SHOULDER
17+00.000
231.250
230.014
WIDENED SHOULDER
16+80.000
230.834
229.821
WIDENED SHOULDER
16+60.000
-Y6-



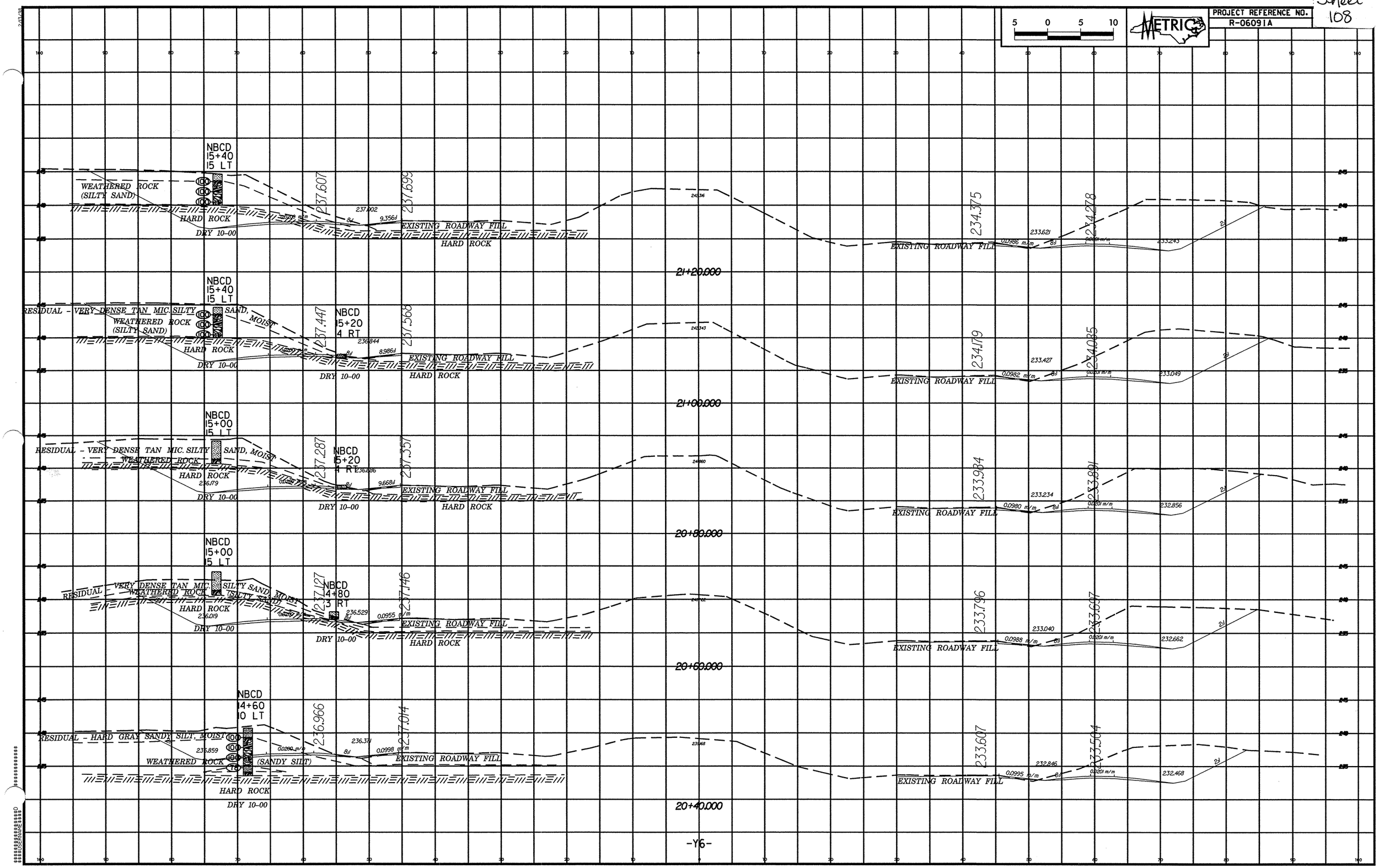
PROJECT REFERENCE NO.
R-06091A
Sheet 105
METRIC
5 0 5 10
NBCD 12+40 25 LT
NBCD 12+60 3 RT
234.584
234.755
RESIDUAL - VERY DENSE TAN MIC. SILTY SAND, MOIST
WEATHERED ROCK (SILTY SAND)
HARD ROCK
DRY 9-00
EXISTING ROADWAY FILL
231.682
231.567
WIDENED SHOULDER
18+40.000
NBCD 12+40 25 LT
234.167
234.384
RESIDUAL - VERY DENSE TAN MIC. SILTY SAND, MOIST
WEATHERED ROCK (SILTY SAND)
HARD ROCK
DRY 9-00
EXISTING ROADWAY FILL
231.491
231.373
WIDENED SHOULDER
18+20.000
NBCD 12+20 CL
233.751
234.021
RESIDUAL - VERY DENSE TAN MIC. SILTY SAND, MOIST
EXISTING ROADWAY FILL
HARD ROCK
DRY 9-00
231.302
231.178
WIDENED SHOULDER
18+00.000
NBCD 12+00 15 LT
233.334
233.666
RESIDUAL - VERY DENSE TAN MIC. SILTY SAND, MOIST
WEATHERED ROCK (SILTY SAND)
EXISTING ROADWAY FILL
HARD ROCK
DRY 9-00
230.984
WIDENED SHOULDER
17+80.000
-Y6-



PROJECT REFERENCE NO.
R-06091A
Sheet 106
METRIC
5 0 5 10
235.916
235.756
235.315
0.0252 m/m
0.0722 m/m
232.439
232.342
231.681
0.0352 m/m
WIDENED SHOULDER
19+20.000
235.647
235.549
235.079
0.0253 m/m
0.0806 m/m
232.242
232.148
231.527
0.0353 m/m
WIDENED SHOULDER
19+00.000
NBCD
13+00
5 LT
235.335
235.470
234.810
234.530
RESIDUAL - HARD GRAY SANDY SILT, MOIST
EXISTING ROADWAY FILL
WEATHERED ROCK (SANDY SILT)
HARD ROCK
DRY 9-00
232.050
231.954
231.387
0.0354 m/m
WIDENED SHOULDER
EXISTING ROADWAY FILL
18+80.000
NBCD
12+80
15 LT
234.981
235.124
234.509
RESIDUAL - TAN VERY DENSE SILTY SAND, MOIST
WEATHERED ROCK (SILTY SAND)
EXISTING ROADWAY FILL
HARD ROCK
DRY 9-00
231.866
231.761
231.259
0.0354 m/m
WIDENED SHOULDER
EXISTING ROADWAY FILL
18+60.000
-Y6-



PROJECT REFERENCE NO.
R-06091A
Sheet 107
METRIC
5 0 5 10
NBCD
14+40
2 RT
9-00
236.806
236.818
RESIDUAL - VERY DENSE TAN MIC SILTY SAND, MOIST
WEATHERED ROCK (SILTY SAND)
HARD ROCK
EXISTING ROADWAY FILL
0.0200 m/m
0.0942 m/m
233.408
233.310
232.653
0.0988 m/m
0.0201 m/m
232.275
20+20.000
236.646
236.440
236.055
0.0200 m/m
0.0601 m/m
233.223
233.116
232.451
0.0129 m/m
232.115
20+00.000
236.485
236.196
WIDENED SHOULDER
0.0043 m/m
235.529
233.023
232.923
232.231
0.0091 m/m
232.027
19+80.000
236.325
235.956
WIDENED SHOULDER
0.0213 m/m
235.317
232.758
232.729
232.037
0.0091 m/m
231.834
19+60.000
236.142
235.712
WIDENED SHOULDER
0.0251 m/m
235.186
0.0839 m/m
232.625
232.535
231.847
0.0351 m/m
19+40.000
-Y6-



PROJECT REFERENCE NO.
R-06091A
Sheet 108
METRIC
5 0 5 10
NBCD 15+40 15 LT
WEATHERED ROCK (SILTY SAND)
HARD ROCK
DRY 10-00
237.607
237.699
EXISTING ROADWAY FILL
HARD ROCK
234.375
234.278
233.621
233.243
21+20.000
NBCD 15+40 15 LT
RESIDUAL - VERY DENSE TAN MIC. SILTY SAND, MOIST
WEATHERED ROCK (SILTY SAND)
HARD ROCK
DRY 10-00
237.447
NBCD 15+20 4 RT
236.844
237.568
EXISTING ROADWAY FILL
HARD ROCK
DRY 10-00
234.179
234.085
233.427
233.049
21+00.000
NBCD 15+00 15 LT
RESIDUAL - VERY DENSE TAN MIC. SILTY SAND, MOIST
WEATHERED ROCK
HARD ROCK
236.179
DRY 10-00
237.287
NBCD 15+20 4 RT
236.886
237.357
EXISTING ROADWAY FILL
HARD ROCK
DRY 10-00
233.984
233.891
233.234
232.856
20+80.000
NBCD 15+00 15 LT
RESIDUAL - VERY DENSE TAN MIC. SILTY SAND, MOIST
WEATHERED ROCK (SILTY SAND)
HARD ROCK
236.019
DRY 10-00
237.127
NBCD 14+80 3 RT
236.529
237.146
EXISTING ROADWAY FILL
HARD ROCK
DRY 10-00
233.796
233.697
233.040
232.662
20+60.000
NBCD 14+60 10 LT
RESIDUAL - HARD GRAY SANDY SILT, MOIST
WEATHERED ROCK (SANDY SILT)
HARD ROCK
DRY 10-00
236.966
237.014
236.371
EXISTING ROADWAY FILL
233.607
233.504
232.846
232.468
20+40.000
-Y6-

PROJECT REFERENCE NO.
R-0609 1A

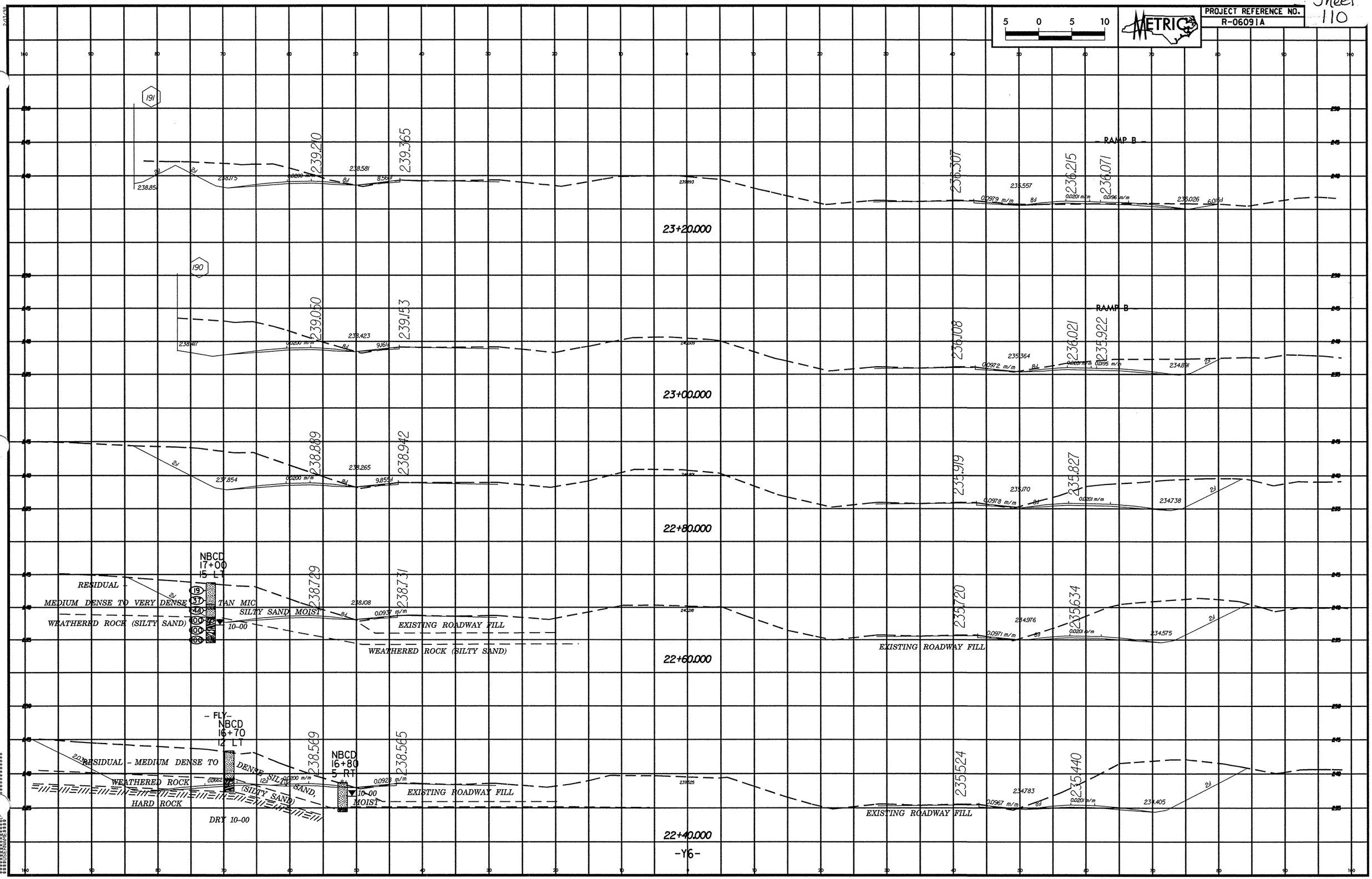
5 0 5 10

METRIC

SOIL TEST RESULTS

SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	PL. I.	% BY WEIGHT				% PASSING SIEVES			% MOISTURE	% ORGANIC
							C. SAND	F. SAND	SILT	CLAY	10	40	200		
SS-301	15 LT	16+20	2.72-3.17	A-6(10)	37	13	8.4	22.3	43.2	26.1	100	95	79	22.7	
SS-302	15 LT	16+20	4.24-4.69	A-4(4)	38	4	6.2	30.9	48.8	14.1	100	98	73		

NBCD 16+70 12 LT – FLY–
NBCD 16+50 17 LT
NBCD 16+40 5 RT 237.792
238.409
238.421
RESIDUAL – WEATHERED ROCK
MEDIUM DENSE TO
237.088
10-00
0.0952 m/m
EXISTING ROADWAY FILL
DENSE TAN MIC. SILTY SAND, MOIST
WEATHERED ROCK (SILTY SAND)
HARD ROCK
SS-301
MS-301
SS-302
235.331
235.246
234.589
0.0968 m/m
8d
0.020 m/m
234.211
22+20.000
NBCD 16+20 15 LT – FLY–
NBCD 16+40 5 RT 237.634
238.277
RESIDUAL
MEDIUM DENSE TO VERY DENSE TAN-GRAY SILTY SAND, MOIST
STIFF TAN-GRAY SILTY CLAY, MOIST
STIFF TO HARD TAN-GRAY CLAYEY SILT
WEATHERED ROCK
HARD ROCK
DRY 10-00
0.0975 m/m
10-00
EXISTING ROADWAY FILL
WEATHERED ROCK
HARD ROCK
235.42
235.053
234.396
0.0974 m/m
8d
0.020 m/m
234.017
EXISTING ROADWAY FILL
22+00.000
NBCD 16+20 15 LT – FLY–
NBCD 16+00 5 RT 237.476
237.994
238.088
238.121
RESIDUAL
MEDIUM DENSE TAN-GRAY SILTY SAND, MOIST
STIFF TAN-GRAY SILTY CLAY, MOIST
STIFF TO HARD TAN-GRAY CLAYEY SILT
WEATHERED ROCK
HARD ROCK
DRY 10-00
0.0981 m/m
EXISTING ROADWAY FILL
WEATHERED ROCK
HARD ROCK
234.959
234.859
234.202
0.0989 m/m
8d
0.020 m/m
233.824
EXISTING ROADWAY FILL
21+80.000
NBCD 15+80 15 LT – FLY–
NBCD 16+00 5 RT 237.318
237.842
237.928
237.958
RESIDUAL – VERY DENSE SILTY SAND, MOIST
WEATHERED ROCK (SILTY SAND)
HARD ROCK
DRY 10-00
EXISTING ROADWAY FILL
HARD ROCK
234.759
234.665
234.008
0.0991 m/m
8d
0.020 m/m
233.630
EXISTING ROADWAY FILL
Ⓐ RESIDUAL – HARD GRAY SANDY SILT, MOIST
21+60.000
– FLY–
NBCD 15+60 5 RT
237.695
237.768
237.797
RESIDUAL – VERY DENSE SILTY SAND, MOIST
WEATHERED ROCK (SILTY SAND)
HARD ROCK
10-00
0.0976 m/m
EXISTING ROADWAY FILL
HARD ROCK
234.472
233.815
0.0986 m/m
8d
233.436
EXISTING ROADWAY FILL
21+40.000
-Y6-



PROJECT REFERENCE NO.
R-06091A
Sheet 110
METRIC
5 0 5 10
191
190
RAMP B
239.210
239.365
236.307
236.215
236.071
238.851
238.175
238.581
235.557
0.0979 m/m
0.0201 m/m
0.0196 m/m
236.026
23+20.000
239.050
239.153
236.108
236.021
235.922
238.417
238.423
235.364
0.0972 m/m
0.0195 m/m
234.891
23+00.000
238.889
238.942
235.919
235.827
237.854
238.265
235.170
0.0978 m/m
0.0201 m/m
234.738
22+80.000
NBCD
17+00
15 LT
RESIDUAL -
MEDIUM DENSE TO VERY DENSE
TAN MIC
SILTY SAND MOIST
WEATHERED ROCK (SILTY SAND)
10-00
238.729
238.731
238.108
0.0937 m/m
EXISTING ROADWAY FILL
WEATHERED ROCK (SILTY SAND)
235.720
235.634
234.976
0.0971 m/m
0.0201 m/m
234.575
EXISTING ROADWAY FILL
22+60.000
- FLY-
NBCD
16+70
12 LT
RESIDUAL - MEDIUM DENSE TO
DENSE SILTY SAND,
(SILTY SAND)
WEATHERED ROCK
HARD ROCK
DRY 10-00
238.569
NBCD
16+80
5 RT
238.565
0.0928 m/m
10-00
MOIST
EXISTING ROADWAY FILL
235.524
235.440
234.783
0.0967 m/m
0.0201 m/m
234.405
EXISTING ROADWAY FILL
22+40.000
-Y6-

PROJECT REFERENCE NO. R-0609 IA

5 0 5 10 METRIC

SOIL TEST RESULTS

SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	PL. I.	% BY WEIGHT				% PASSING SIEVES			% MOISTURE	% ORGANIC
							C. SAND	F. SAND	SILT	CLAY	10	40	200		
S-298	20 LT	18+40	0.00-1.00	A-7-6(11)	44	19	18.8	17.4	35.6	28.3	96	86	64	25.5	

196

S-298
MS-298

NBCD
18+40
20 LT

RESIDUAL - HARD TAN SILTY CLAY, MOIST

HARD ROCK

NBCD
18+60
CL

EXISTING ROADWAY FILL

WEATHERED ROCK (SANDY SILT)

HARD ROCK

Ⓑ RESIDUAL - STIFF TO HARD GRAY SANDY SILT, MOIST

24+20.000

- RAMP B -

EXISTING ROADWAY FILL

S-298
MS-298

NBCD
18+40
20 LT

HARD ROCK

NBCD
18+20
CL

EXISTING ROADWAY FILL

WEATHERED ROCK (SILTY SAND)

24+00.000

Ⓐ RESIDUAL - MEDIUM DENSE TO VERY DENSE TAN MIC. SILTY SAND, MOIST

193

- RAMP B -

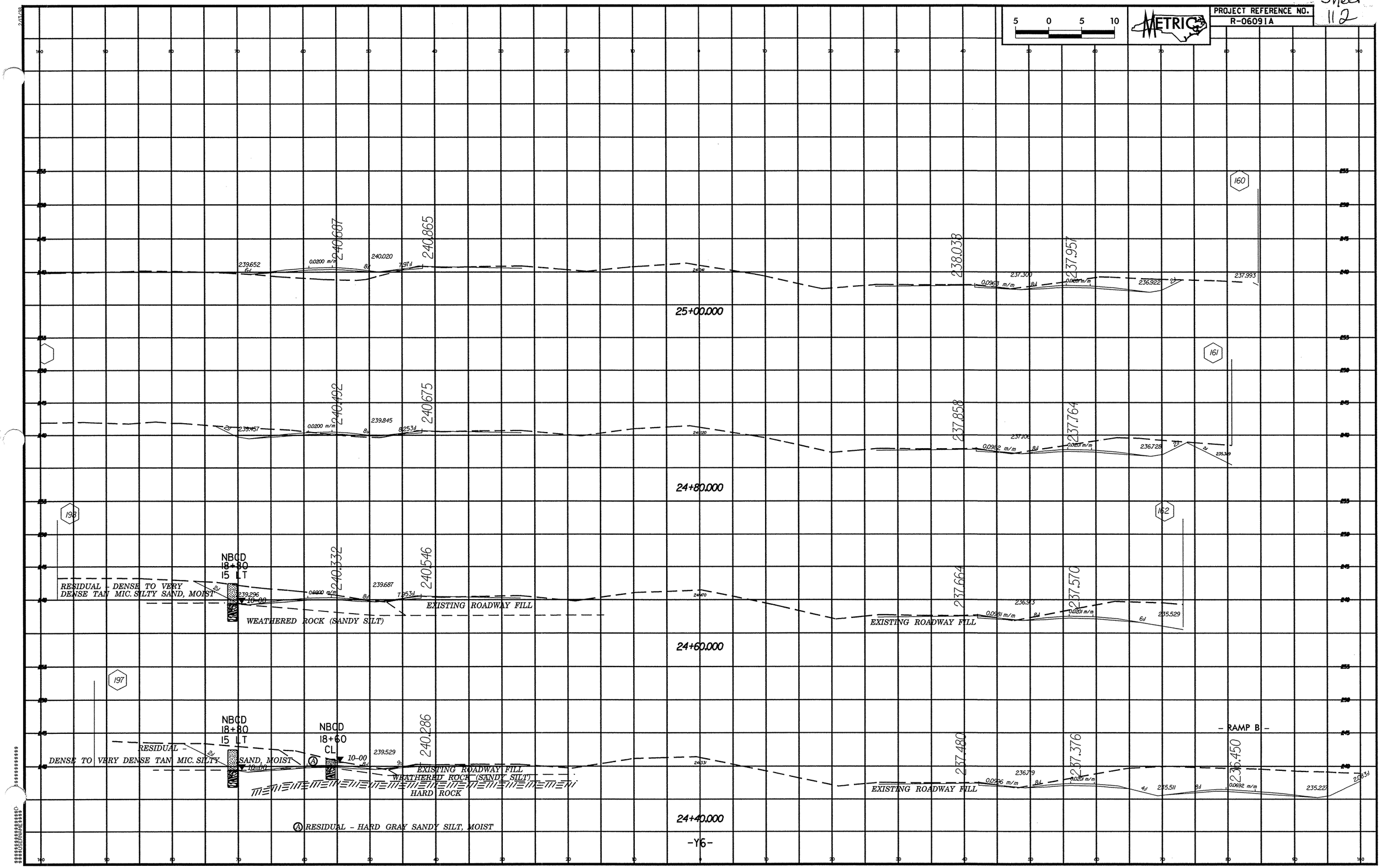
192

- RAMP B -

23+60.000

23+40.000

-Y6-



PROJECT REFERENCE NO.
R-06091A
Sheet 112
METRIC
5 0 5 10
160
161
162
197
198
25+00.000
24+80.000
24+60.000
24+40.000
240.687
240.865
238.038
237.957
240.492
240.675
237.858
237.764
240.332
240.546
237.664
237.570
240.286
237.480
237.376
236.450
NBCD 18+80 15 LT
NBCD 18+60 CL
RESIDUAL - DENSE TO VERY DENSE TAN MIC. SILTY SAND, MOIST
WEATHERED ROCK (SANDY SILT)
EXISTING ROADWAY FILL
HARD ROCK
RAMP B
Ⓐ RESIDUAL - HARD GRAY SANDY SILT, MOIST
-Y6-

5 0 5 10 METRIC

SOIL TEST RESULTS

SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	PL. I.	% BY WEIGHT				% PASSING SIEVES			% MOISTURE	% ORGANIC
							C. SAND	F. SAND	SILT	CLAY	10	40	200		
SS-292	17 LT	26+00	1.16-1.61	A-4(4)	25	10	8.9	27.4	29.4	34.3	96	91	66		

NBCD 27+20 20 LT
NBCD 27+40 2 RT
NBCD 27+20 20 LT
NBCD 27+00 2 RT
NBCD 26+80 20 LT
NBCD 26+60 1 RT
NBCD 26+80 20 LT
NBCD 26+40 10 LT
NBCD 26+00 17 LT
NBCD 26+20 CL
NBCD 26+00 17 LT

RESIDUAL - DENSE TO VERY DENSE TAN MIC. SILTY SAND, MOIST
WEATHERED ROCK (SILTY SAND)
HARD ROCK
RESIDUAL - DENSE TO VERY DENSE TAN MIC. SILTY SAND, MOIST
WEATHERED ROCK (SANDY SILT)
HARD ROCK DRY 10-00
RESIDUAL - DENSE TO VERY DENSE TAN MIC. SILTY SAND, MOIST
WEATHERED ROCK (SANDY SILT)
HARD ROCK DRY 10-00
RESIDUAL - VERY DENSE TAN MIC. SILTY SAND, MOIST
WEATHERED ROCK (SANDY SILT)
HARD ROCK DRY 10-00
RESIDUAL - DENSE TO VERY DENSE TAN MIC. SILTY SAND, MOIST
WEATHERED ROCK
HARD ROCK DRY 10-00
SS-292
RESIDUAL - MEDIUM DENSE TO DENSE BROWN SILTY SAND, MOIST
HARD TAN SANDY CLAYEY SILT, MOIST
WEATHERED ROCK (SILTY SAND)
HARD ROCK DRY 10-00
SS-292
RESIDUAL - MEDIUM DENSE BROWN SILTY SAND, MOIST
WEATHERED ROCK HARD TAN SANDY CLAYEY SILT, MOIST
HARD ROCK DRY 10-00

EXISTING ROADWAY FILL
WEATHERED ROCK (SANDY SILT)
WEATHERED ROCK (SANDY SILT)
EXISTING ROADWAY FILL
WEATHERED ROCK
HARD ROCK
EXISTING ROADWAY FILL

33+00.000
32+80.000
32+60.000
32+40.000
32+20.000
32+00.000
31+80.000 -Y6-

- RAMP C -

Sheet 114

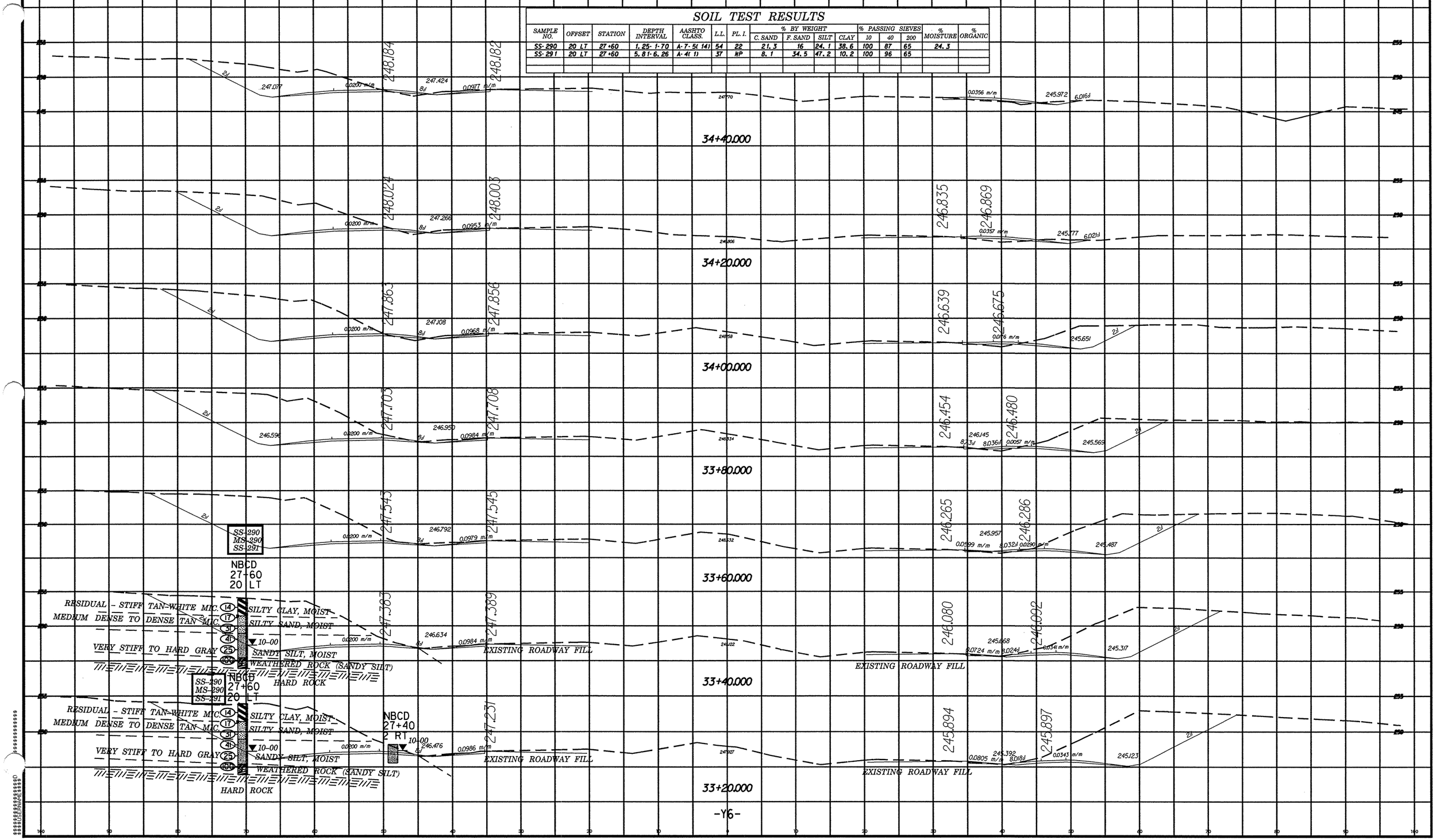
PROJECT REFERENCE NO. R-06091A

METRIC

5 0 5 10

SOIL TEST RESULTS

SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	PL. I.	% BY WEIGHT C. SAND	F. SAND	SILT	CLAY	% PASSING SIEVES 10	40	200	% MOISTURE	% ORGANIC
SS-290	20 LT	27+60	1.25-1.70	A-7-5(14)	54	22	21.3	16	24.1	38.6	100	87	65	24.3	
SS-291	20 LT	27+60	5.81-6.26	A-4(1)	37	NP	8.1	34.5	47.2	10.2	100	96	65		



-Y6-

PROJECT REFERENCE NO. R-0609IA

5 0 5 10 METRIC

NBCD 29+65 21 LT

NBCD RAMP

RESIDUAL - VERY DENSE TAN MIC SILTY SAND, MOIST

WEATHERED ROCK (SILTY SAND)

HARD ROCK

DRY 10-00

NBCD 29+45 2 LT

248.975

248.033

EXISTING ROADWAY FILL

35+40.000

NBCD RAMP

RESIDUAL - VERY DENSE TAN MIC. SILTY SAND, MOIST

WEATHERED ROCK (SILTY SAND)

HARD ROCK

DRY 10-00

NBCD 29+45 2 LT

248.816

247.839

EXISTING ROADWAY FILL

35+20.000

NBCD 29+25 20 LT

NBCD RAMP

RESIDUAL - VERY DENSE TAN MIC. SILTY SAND, MOIST

10-00

WEATHERED ROCK (SILTY SAND)

HARD ROCK

248.665

248.665

247.645

EXISTING ROADWAY FILL

WEATHERED ROCK (SILTY SAND)

HARD ROCK

35+00.000

NBCD RAMP

WEATHERED ROCK (SILTY SAND)

HARD ROCK

NBCD 29+05 4 LT

248.504

248.515

247.451

EXISTING ROADWAY FILL

DRY 10-00

HARD ROCK

34+80.000

NBCD 28+85 19 LT

NBCD RAMP

RESIDUAL - DENSE TAN MIC. SILTY SAND, MOIST

HARD GRAY SANDY SILT

10-00 MOIST

WEATHERED ROCK (SANDY SILT)

248.266

248.338

247.952

EXISTING ROADWAY FILL

34+60.000

-Y6-

PROJECT REFERENCE NO. R-0609 1A

5 0 5 10

METRIC

NBCD RAMP

NBCD 30+65 14 LT

249.789

249.657

248.977

RESIDUAL - STIFF TO HARD GRAY SANDY SILT, MOIST

WEATHERED ROCK (SANDY SILT)

10-00

EXISTING ROADWAY FILL

6J .080 m/m 0.0091 m/m 8J 0.0511 m/m

249.495

248.346

0.0544 m/m

247.820 6J

36+40.000

NBCD RAMP

NBCD 30+45 27 LT

NBCD 30+25 10 LT

249.628

249.515

248.805

RESIDUAL - VERY STIFF TO HARD TAN SANDY SILTY CLAY, MOIST

30-00

10-00

HARD ROCK

EXISTING ROADWAY FILL

HARD ROCK

0.0341 m/m 0J 0.0614 m/m

249.248

248.988

0.0468 m/m

247.673 6J

36+20.000

NBCD RAMP

NBCD 30+05 28 LT

NBCD 30+25 10 LT

249.467

249.454

248.634

RESIDUAL - VERY DENSE TAN MIC. SILTY SAND, MOIST

WEATHERED ROCK (SILTY SAND)

HARD ROCK

DRY 10-00

10-00

EXISTING ROADWAY FILL

HARD ROCK

0.0345 m/m 8J 0.0504 m/m

248.741

248.501

0.0356 m/m

247.542 6J

36+00.000

NBCD RAMP

NBCD 30+05 28 LT

249.404

249.307

249.312

248.462

RESIDUAL - VERY DENSE TAN MIC. SILTY SAND, MOIST

WEATHERED ROCK (SILTY SAND)

HARD ROCK

DRY 10-00

EXISTING ROADWAY FILL

HARD ROCK

0.0343 m/m 8J

248.369

248.314

248.933

0.0243 m/m

5.396J

35+80.000

NBCD RAMP

NBCD 29+65 21 LT

NBCD 29+85 6 LT

249.146

249.131

248.226

RESIDUAL - VERY DENSE TAN MIC. SILTY SAND, MOIST

2J

WEATHERED ROCK (SILTY SAND)

HARD ROCK

DRY 10-00

10-00

EXISTING ROADWAY FILL

HARD ROCK

0.0328 m/m 8J 0.0243 m/m

248.212

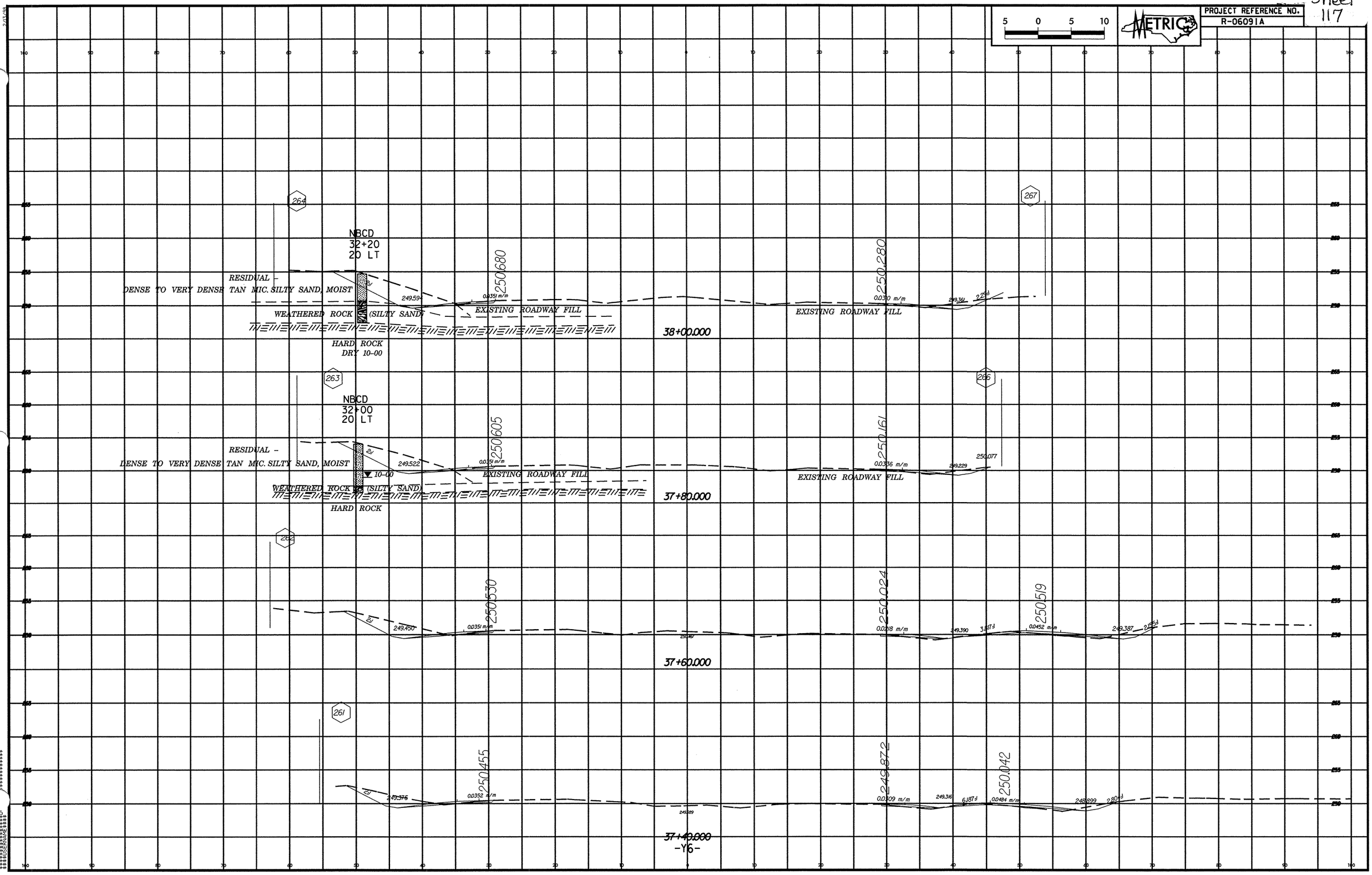
248.507

248.457

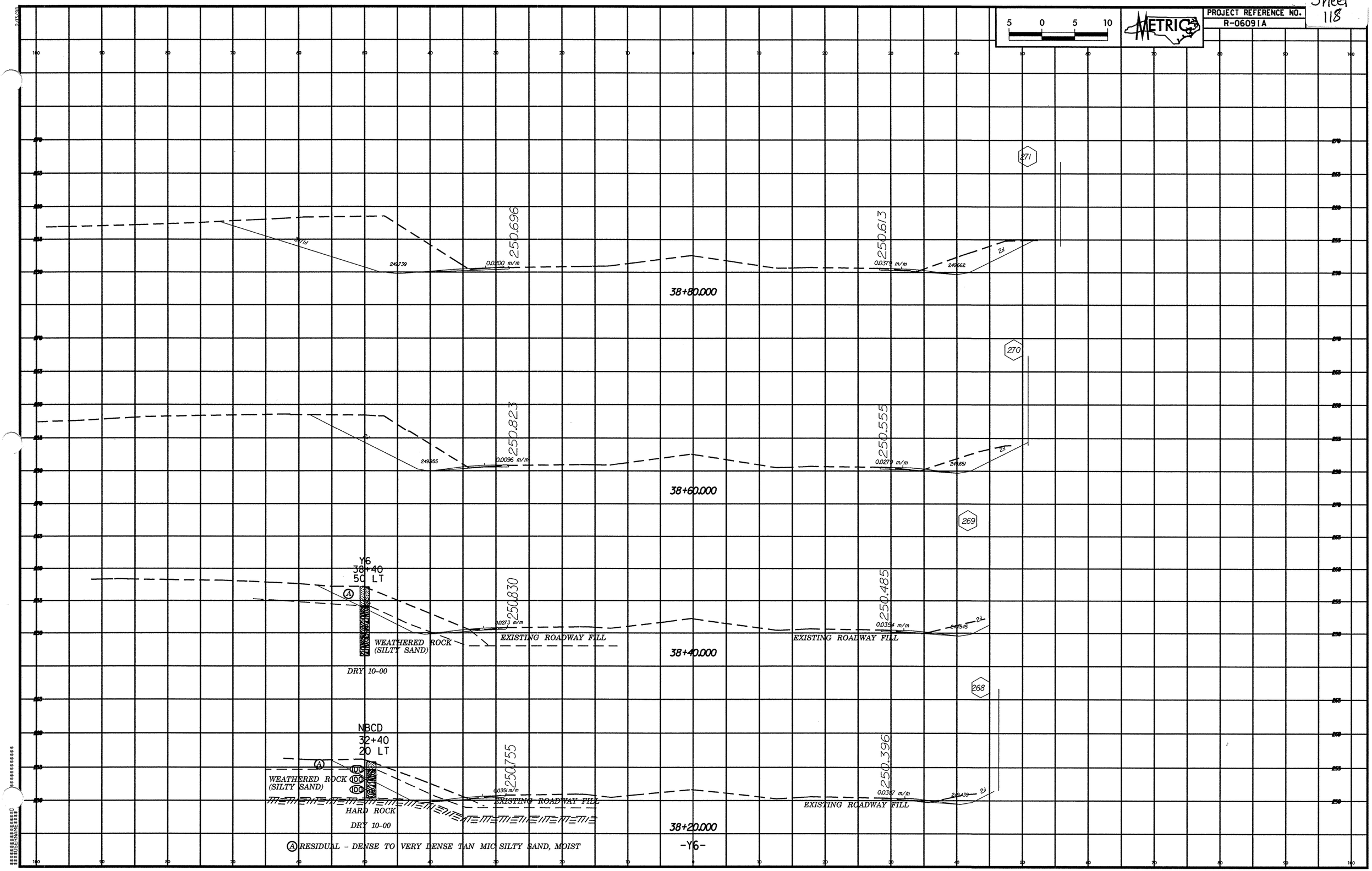
0.0264 m/m

35+60.000

-Y6-



Sheet 117
PROJECT REFERENCE NO.
R-06091A
METRIC
5 0 5 10
264
267
NBCD
32+20
20 LT
RESIDUAL -
DENSE TO VERY DENSE TAN MIC. SILTY SAND, MOIST
WEATHERED ROCK (SILTY SAND)
HARD ROCK
DRY 10-00
249.594
0.0351 m/m
250.680
EXISTING ROADWAY FILL
38+00.000
250.280
0.0310 m/m
249.361
2.29:1
263
266
NBCD
32+00
20 LT
RESIDUAL -
DENSE TO VERY DENSE TAN MIC. SILTY SAND, MOIST
10-00
WEATHERED ROCK (SILTY SAND)
HARD ROCK
249.522
0.0351 m/m
250.605
EXISTING ROADWAY FILL
37+80.000
250.161
0.0336 m/m
249.229
250.077
EXISTING ROADWAY FILL
262
249.450
0.0351 m/m
250.530
37+60.000
250.024
0.0218 m/m
249.390
3.817:1
250.519
0.0452 m/m
249.387
2.155:1
261
249.375
0.0352 m/m
250.455
37+40.000
-Y6-
249.872
0.0309 m/m
249.316
6.187:1
250.042
0.0484 m/m
248.899
2.80:1



Sheet 118
PROJECT REFERENCE NO.
R-06091A
METRIC
5 0 5 10
271
270
269
268
250.696
250.613
0.0200 m/m
0.0379 m/m
249.739
249.662
38+80.000
250.823
250.555
0.0096 m/m
0.0279 m/m
249.955
249.651
38+60.000
Y6
38+40
50 LT
250.830
250.485
0.0273 m/m
0.0354 m/m
WEATHERED ROCK
(SILTY SAND)
EXISTING ROADWAY FILL
EXISTING ROADWAY FILL
DRY 10-00
38+40.000
NBCD
32+40
20 LT
250.755
250.396
0.0351 m/m
0.0387 m/m
WEATHERED ROCK
(SILTY SAND)
EXISTING ROADWAY FILL
EXISTING ROADWAY FILL
HARD ROCK
DRY 10-00
38+20.000
-Y6-
A RESIDUAL - DENSE TO VERY DENSE TAN MIC SILTY SAND, MOIST

PROJECT REFERENCE NO. R-0609 1A

5 0 5 10 METRIC

SOIL TEST RESULTS

SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	PL. I.	% BY WEIGHT C. SAND	F. SAND	SILT	CLAY	% PASSING SIEVES 10	40	200	% MOISTURE	% ORGANIC
SS-285	45 LT	39+80	1.22-1.67	A-6(3)	33	12	26.6	27.8	25.3	20.3	100	87	50		
SS-286	45 LT	39+80	2.74-3.19	A-6(8)	38	12	10.6	27	38.1	24.4	100	94	70	10.9	

SS-285
SS-286
MS-286

Y6
39+80
45 LT

16
44
9-00

RESIDUAL - VERY STIFF TO HARD TAN MIC. SANDY CLAY, MOIST

WEATHERED ROCK (SILTY SAND)

HARD ROCK

249.932

250.634

0.0147 m/m

EXISTING ROADWAY FILL (SILTY SAND)

251.993

39+80.000

250.664

0 m/m

249.880

EXISTING ROADWAY FILL

Y6
39+60
45 LT

RESIDUAL - VERY DENSE TAN MIC. SILTY SAND, MOIST

9-00

249.839

250.703

0.0094 m/m

EXISTING ROADWAY FILL

WEATHERED ROCK (SILTY SAND)

252.382

39+60.000

250.692

0.0270 m/m

249.744

EXISTING ROADWAY FILL

RESIDUAL - VERY DENSE TAN MIC. SILTY SAND, MOIST

249.996

250.755

0.0052 m/m

EXISTING ROADWAY FILL

WEATHERED ROCK (SILTY SAND)

252.433

39+40.000

250.688

0.0370 m/m

249.816

EXISTING ROADWAY FILL

SS-273

Y6
39+46
63 RT

28
13
10
97
100
100
100
84
55
9-00

ROADWAY FILL - MEDIUM DENSE TAN MIC CLAYEY SILTY SAND, WITH CHUNKS OF ASPHALT, MOIST

ROADWAY FILL - STIFF GRAY-TAN SANDY SILTY CLAY, MOIST

RESIDUAL - VERY DENSE TAN MIC. SILTY SAND, MOIST

WEATHERED ROCK (SILTY SAND)

VERY DENSE TAN MIC. SILTY SAND, MOIST

249.566

250.790

0.0030 m/m

252.473

39+20.000

250.673

249.713

272

249.782

250.687

0.0150 m/m

252.506

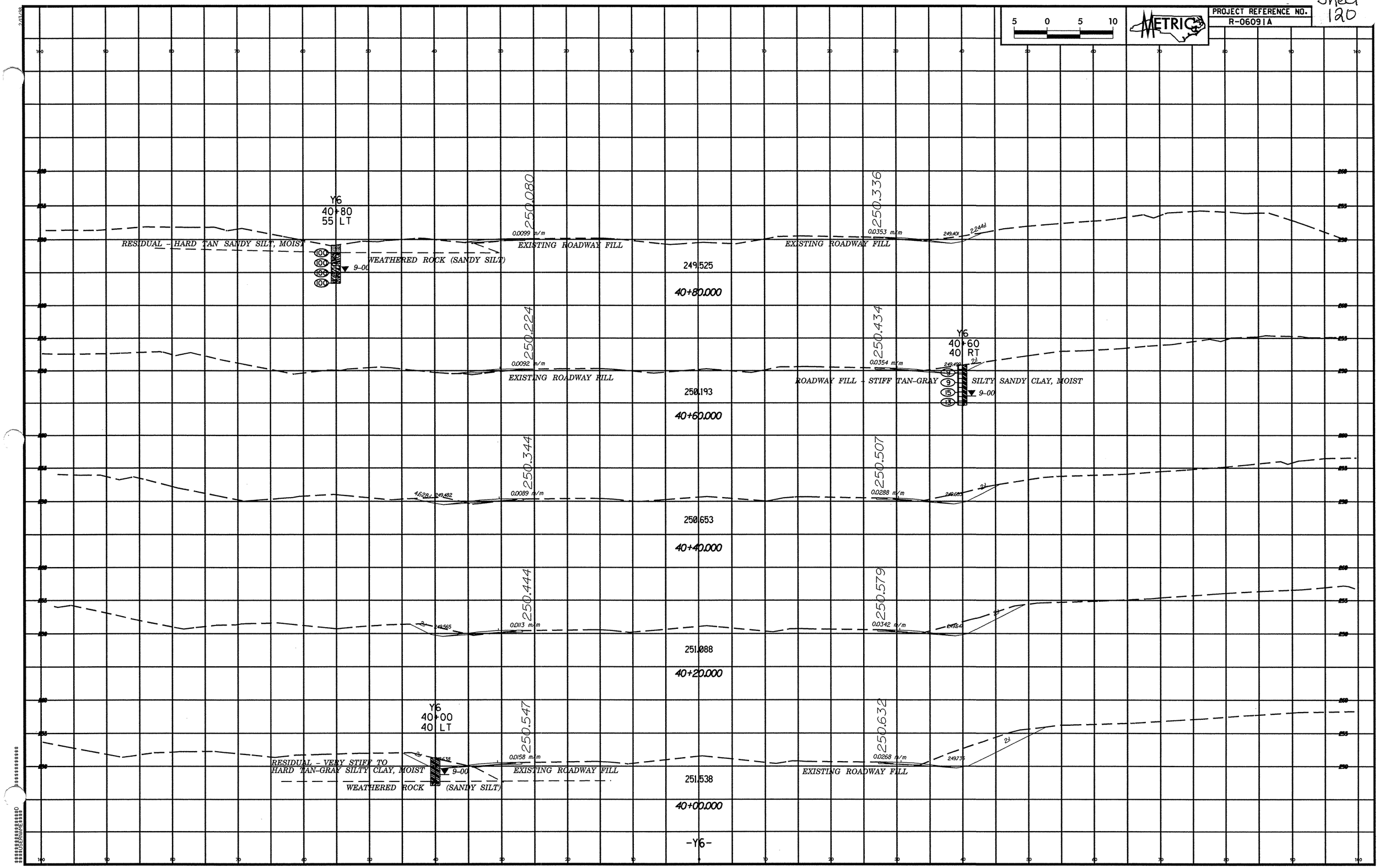
39+00.000

-Y6-

250.655

0.0395 m/m

249.695



Sheet 120
PROJECT REFERENCE NO.
R-06091A
METRIC
5 0 5 10
Y6
40+80
55 LT
RESIDUAL - HARD TAN SANDY SILT, MOIST
WEATHERED ROCK (SANDY SILT)
9-00
250.080
0.0099 m/m
EXISTING ROADWAY FILL
250.336
0.0353 m/m
EXISTING ROADWAY FILL
249.525
40+80.000
250.224
0.0092 m/m
EXISTING ROADWAY FILL
250.434
0.0354 m/m
Y6
40+60
40 RT
ROADWAY FILL - STIFF TAN-GRAY SILTY SANDY CLAY, MOIST
9-00
250.193
40+60.000
250.344
0.0089 m/m
250.507
0.0288 m/m
250.653
40+40.000
250.444
0.0113 m/m
250.579
0.0342 m/m
251.088
40+20.000
Y6
40+00
40 LT
RESIDUAL - VERY STIFF TO HARD TAN-GRAY SILTY CLAY, MOIST
WEATHERED ROCK (SANDY SILT)
9-00
250.547
0.0158 m/m
EXISTING ROADWAY FILL
250.632
0.0268 m/m
EXISTING ROADWAY FILL
251.538
40+00.000
-Y6-

PROJECT REFERENCE NO.
R-0609 1A

5 0 5 10

METRIC

SOIL TEST RESULTS

SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	PL. I.	% BY WEIGHT				% PASSING SIEVES			% MOISTURE	% ORGANIC
							C. SAND	F. SAND	SILT	CLAY	10	40	200		
SS-284	40 LT	41+80	2.63-3.08	A-4(1)	26	9	33.3	24.8	17.6	24.4	97	78	44		

SS-284
Y6
41+80
40 LT
-RAMP-
249.153
0.0099 m/m
248.238
4.566d
7 6 6
MEDIUM STIFF GRAY SILTY SANDY CLAY, MOIST
MEDIUM STIFF TAN SANDY CLAYEY SILT MOIST
9-00
WEATHERED ROCK (SILTY SAND)
ROADWAY FILL
ROADWAY FILL
HARD ROCK
248.351
41+80.000
-RAMP-
249.370
0.0099 m/m
248.324
EXISTING ROADWAY FILL
248.273
41+60.000
-RAMP-
249.569
0.0099 m/m
248.196
41+40.000
-RAMP-
249.756
0.0099 m/m
248.632
248.483
41+20.000
249.923
0.0099 m/m
248.873
41+00.000
-Y6-

249.616
0.0249 m/m
EXISTING ROADWAY FILL
249.748
0.0288 m/m
Y6
41+60
40 RT
248.846
2.245d
9 9 20 12 25
9-00
ROADWAY FILL - STIFF TO VERY STIFF TAN-GRAY SILTY SANDY CLAY, MOIST
RESIDUAL - MEDIUM DENSE TO VERY DENSE TAN MIC. SILTY SAND, MOIST
249.911
0.0293 m/m
249.006
2.181d
250.081
0.0327 m/m
249.160
2.177d
250.216
0.0377 m/m
249.270
2.415d

PROJECT REFERENCE NO.
R-0609 1A

5 0 5 10

METRIC

SOIL TEST RESULTS

SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	PL. I.	% BY WEIGHT				% PASSING SIEVES			% MOISTURE	% ORGANIC
							C. SAND	F. SAND	SILT	CLAY	10	40	200		
SS-274	40 RT	42+60	2.70-3.15	A-7-6(16)	54	32	24.6	18.7	9.4	47.2	99	88	58		5.3
SS-275	40 RT	42+60	4.37-4.67	A-4(7)	36	8	6.6	17	57.9	18.5	100	96	82		

SS-274
SS-275
Y6
42+60
40 RT

-RAMP-

248.174

0.0159 m/m

3.473

EXISTING ROADWAY FILL

247.801

42+60.000

248.435

0.0177 m/m

3.1

247.950

42+40.000

248.681

0.0099 m/m

3.1

248.116

42+20.000

248.916

0.0099 m/m

3.534

248.216

42+00.000

-Y6-

248.139

0.0180 m/m

9-00

5 ROADWAY FILL - MEDIUM STIFF TO HARD TAN MIC. SILTY
24 SANDY CLAY WITH WOOD DEBRIS, HIGH PI, MOIST
35 RESIDUAL - HARD TAN SANDY SILT, MOIST

-RAMP-

248.985

0.0180 m/m

247.837

RAMP

0.0 m/m

0.065

249.431

0.0180 m/m

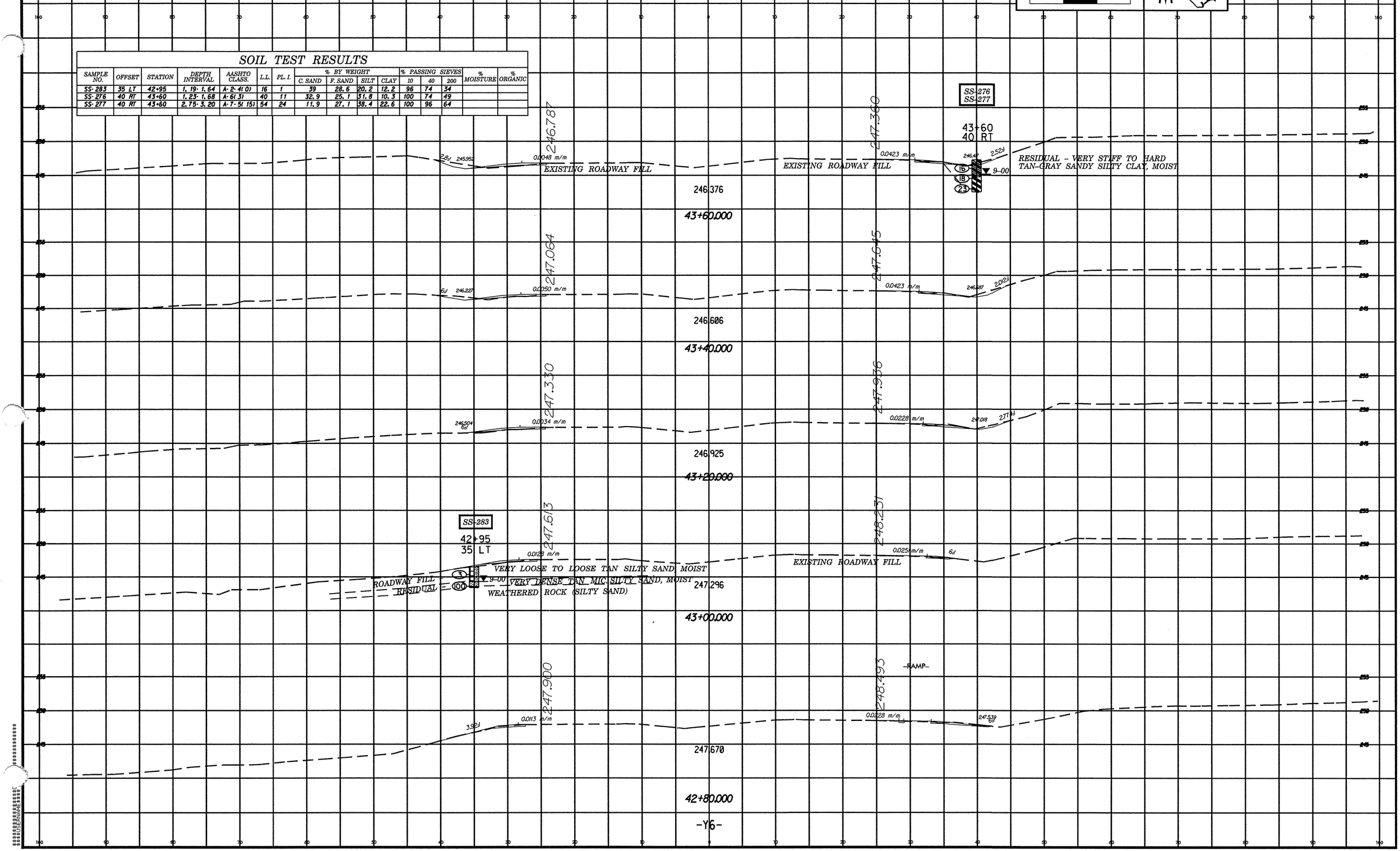
Sheet 123

PROJECT REFERENCE NO. R-06091A

METRIC

SOIL TEST RESULTS

SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	PL. 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-283	35 LT	42+95	1.19-1.64	A-2-4(0)	16	1	39	28.6	20.2	12.2	96	74	34		
SS-276	40 RT	43+60	1.23-1.68	A-6(3)	40	11	32.9	25.1	31.8	10.3	100	74	49		
SS-277	40 RT	43+60	2.75-3.20	A-7-5(15)	54	24	11.9	27.1	38.4	22.6	100	96	64		



Sheet 124

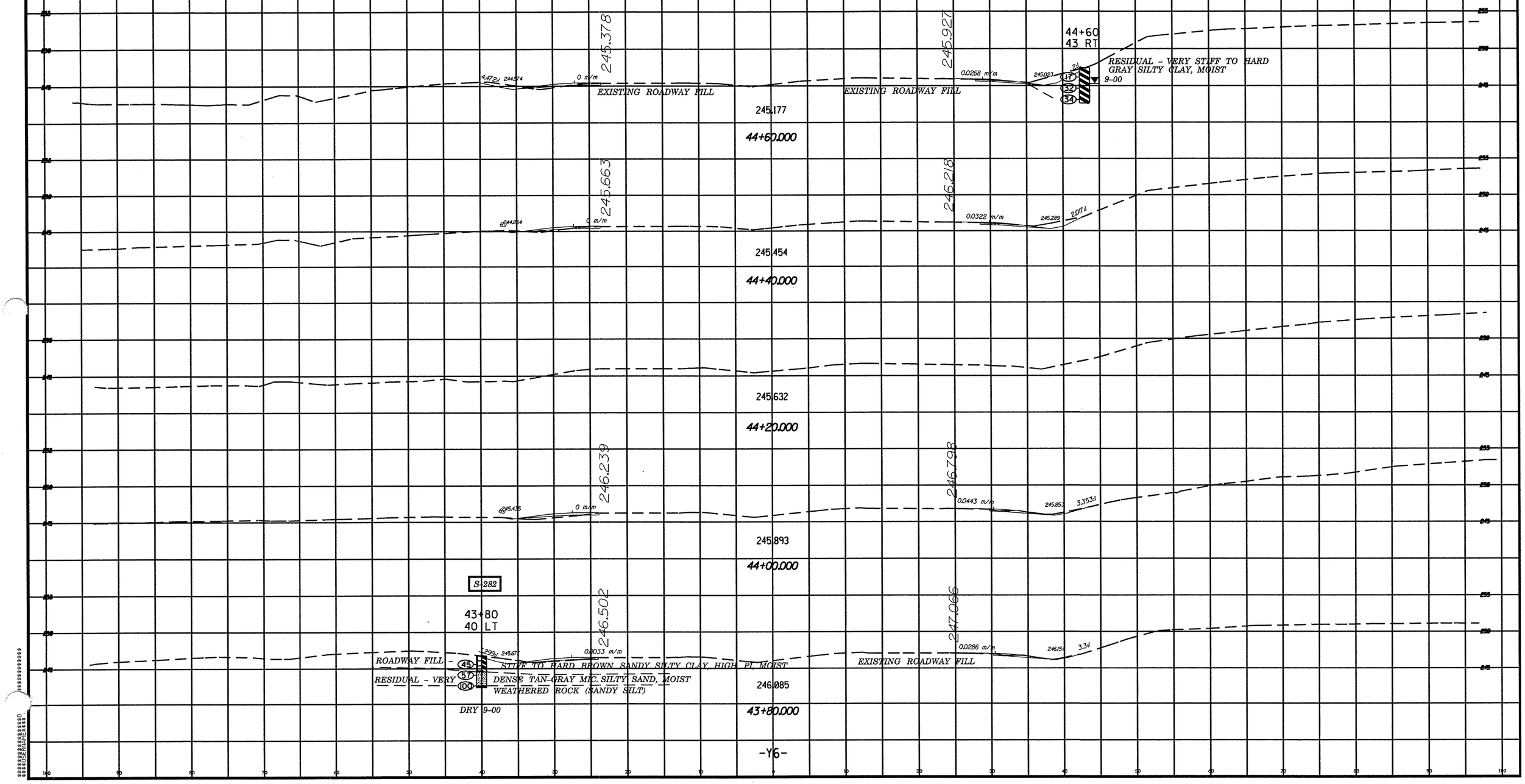
PROJECT REFERENCE NO. R-06091A

METRIC

5 0 5 10

SOIL TEST RESULTS

SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	PL. I.	% BY WEIGHT C. SAND	F. SAND	SILT	CLAY	% PASSING SIEVES 10	40	200	% MOISTURE	% ORGANIC
S-282	40 LT	43+80	0.00-1.00	A-7-6(26)	63	40	17.9	14	19.4	48.7	97	86	68		



Sheet 125

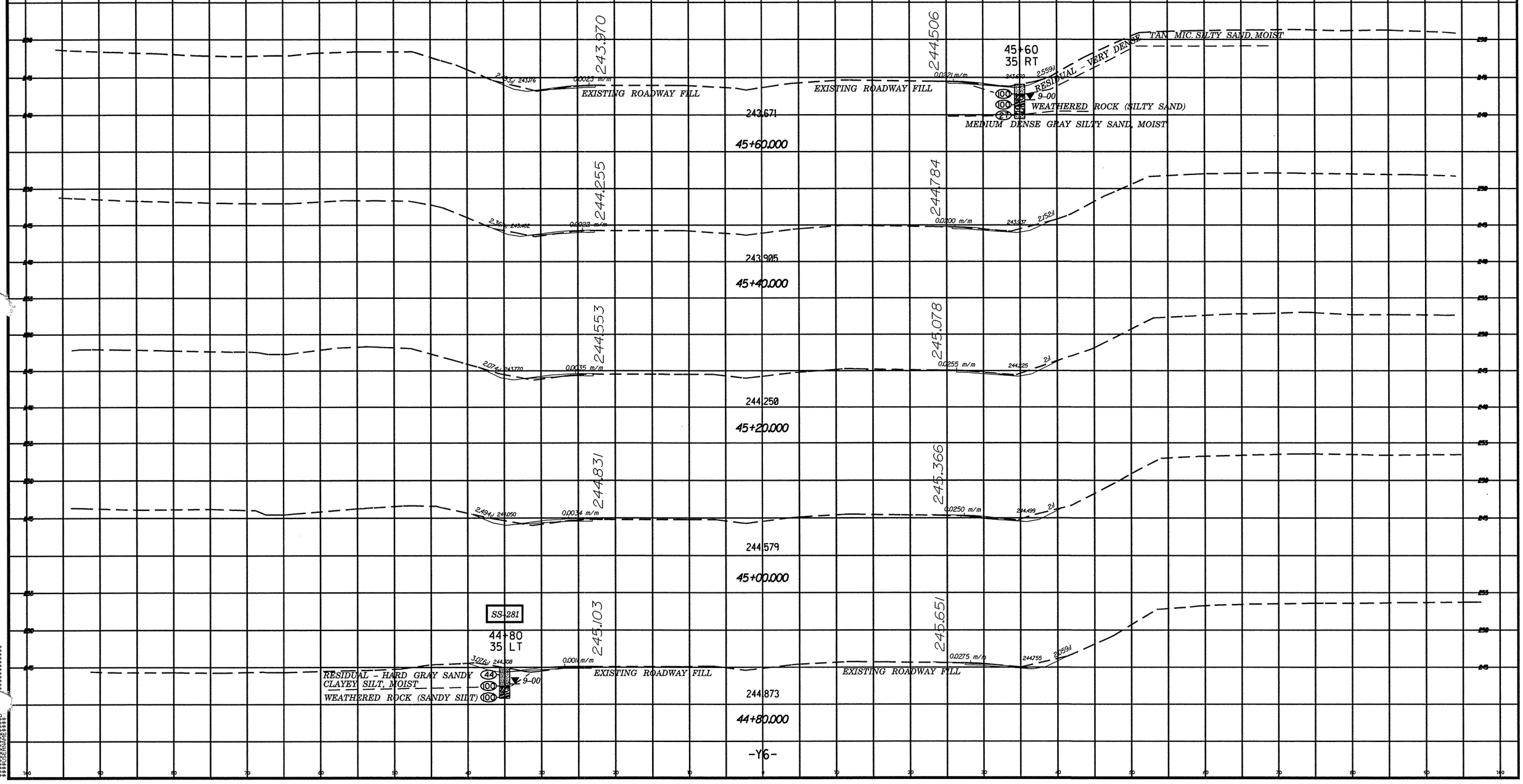
PROJECT REFERENCE NO. R-06091A

METRIC

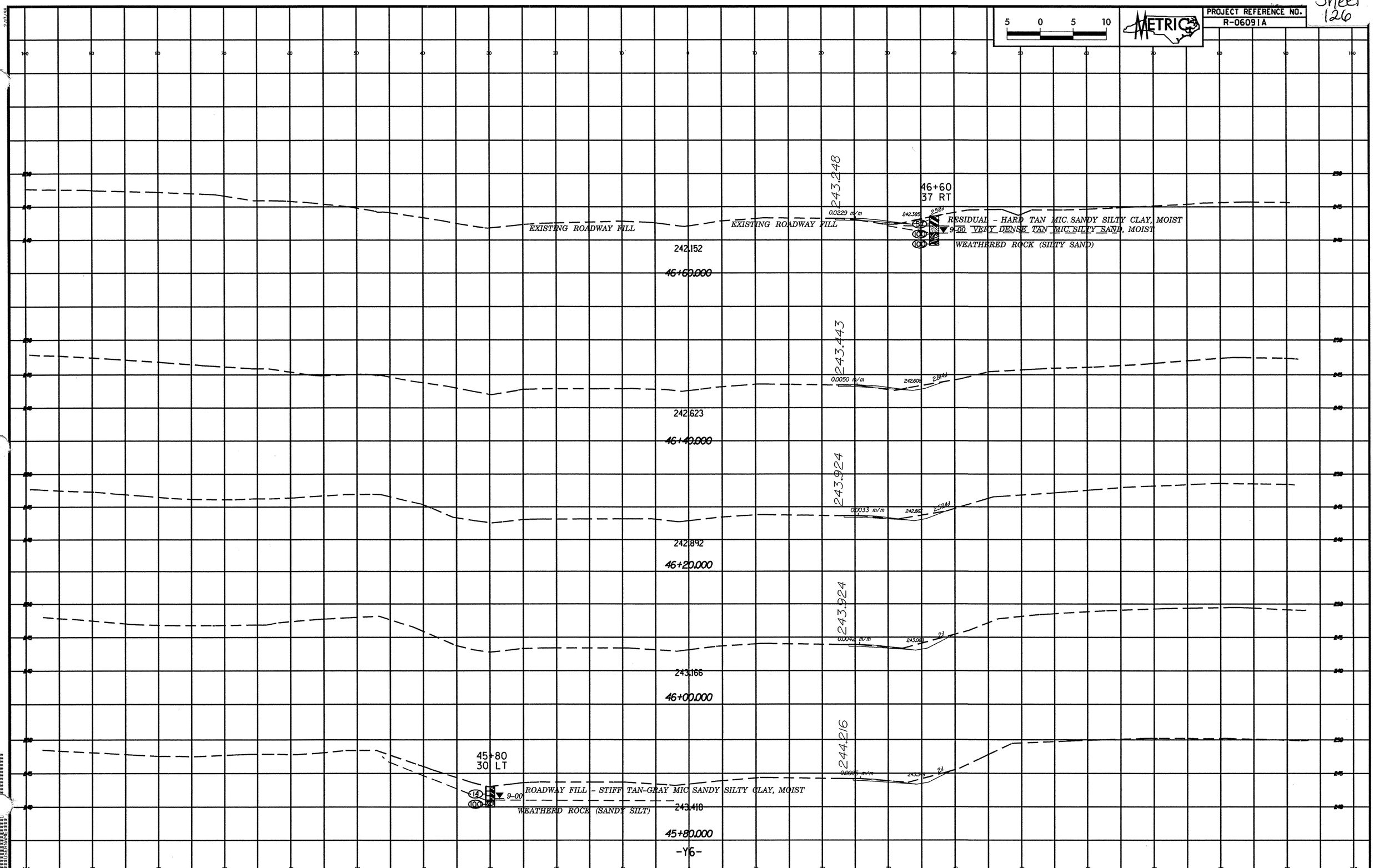
5 0 5 10

SOIL TEST RESULTS

SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	PL. 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-281	35 LT	44+80	1.00-1.45	A-4(2)	33	9	24	32.5	33.4	10.2	100	90	50		



-Y6-



PROJECT REFERENCE NO.
R-06091A
Sheet 126
METRIC
5 0 5 10
243.248
46+60
37 RT
0.0229 m/m
242.385
RESIDUAL - HARD TAN MIC. SANDY SILTY CLAY, MOIST
9-00 VERY DENSE TAN MIC. SILTY SAND, MOIST
WEATHERED ROCK (SILTY SAND)
EXISTING ROADWAY FILL
EXISTING ROADWAY FILL
242.152
46+60.000
243.443
0.0050 m/m
242.608
242.623
46+40.000
243.924
0.0033 m/m
242.862
242.892
46+20.000
243.924
0.0042 m/m
243.088
243.166
46+00.000
244.216
45+80
30 LT
ROADWAY FILL - STIFF TAN-GRAY MIC SANDY SILTY CLAY, MOIST
9-00
WEATHERD ROCK (SANDY SILT)
243.418
45+80.000
-Y6-

PROJECT REFERENCE NO.
R-0609 1A

5 0 5 10 METRIC

SOIL TEST RESULTS

SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	PL. I.	% BY WEIGHT C. SAND	F. SAND	SILT	CLAY	% PASSING SIEVES 10	40	200	% MOISTURE	% ORGANIC
SS-278	30 RT	48+60	2.63-3.18	A-6(5)	36	20	34.1	22.4	2.5	41.1	100	85	45		

SS-278
48+60
30 RT

240.920
0.0258 m/m
240.233
3.674d

EXISTING ROADWAY FILL

ROADWAY FILL - STIFF TO VERY STIFF TAN-GRAY SILTY SANDY CLAY MOIST
9
7
78

239.756

RESIDUAL - VERY DENSE TAN MIC. SILTY SAND, MOIST

48+60.018

241.157
0.0326 m/m
6d

240.059

48+40.089

241.434
0.0364 m/m
3.349d

240.359

48+20.064

241.924
0.0296 m/m
3.932d

240.657

48+00.044

242.050
47+85
30 RT
0.0236 m/m
3.202d

EXISTING ROADWAY FILL

ROADWAY FILL - VERY STIFF GRAY SILTY SANDY CLAY, MOIST
16
100
WEATHERED ROCK (SANDY SILT)

240.820

DRY 9-00

47+80.027

-Y6-

PROJECT REFERENCE NO.	SHEET NO.
R-0609IA	X-189

5 0 5 10 METRIC

SOIL TEST RESULTS

SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	PI.	% BY WEIGHT C. SAND	F. SAND	SILT	CLAY	% PASSING SIEVES 10	40	200	% MOISTURE	% ORGANIC
SS-279	45 RT	49+60	1.28-1.72	A-7-5(22)	64	32	21.1	14.2	24.1	40.6	99	86	67	29.7	

SS-279
MS-279

49+60
45 RT

RESILUAL - STIFF TAN MIC. SANDY SILTY CLAY, HIGH PI, MOIST
STIFF TO HARD TAN VERY MIC. SANDY SILTY CLAY MOIST
MEDIUM DENSE TO VERY LENSE TAN MIC. SILTY SAND, MOIST
9-00
WEATHERED ROCK (SILTY SAND)

12
10
19
16
24
28
100
100

239.422
0.0224 m/m
238.700
2:1
EXISTING ROADWAY FILL
EXISTING ROADWAY FILL
238.448
49+60.331

239.702
0.0322 m/m
239.043
2:1

239.986
0.0340 m/m
239.364
2:1
238.949
49+20.231

240.264
0.0342 m/m
239.670
2:1
239.367
49+00.189

240.556
0.0395 m/m
240.024
2:1
239.566
48+80.151

-Y6-