


CONTRACT: C201595 ID: U-2408

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

CONTENTS:

LINE	STATION	SHEET NUMBERS		
		PLAN	PROFILE	X-SECTS.
-L-	10+04.00 TO 56+47.00	4-33	34-50	51-59

 ALL DIMENSIONS IN THESE PLANS ARE IN METERS	STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
	N.C.	U-2408	1	34
	STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	
	34799.1.1	STPNHF-274(1)	PE	
34799.2.1	STP-274(1)	RW, UTIL		
34799.3.2		CONSTR.		
C201595		CONTRACT		

CAUTION NOTICE

THE SUBSURFACE INFORMATION AND THE SUBSURFACE INVESTIGATION ON WHICH IT IS BASED WAS MADE FOR THE PURPOSE OF STUDY, PLANNING AND DESIGN, AND NOT FOR CONSTRUCTION OR PAY PURPOSES. THE VARIOUS FIELD BORING LOGS, ROCK CORES, AND SOIL TEST DATA AVAILABLE MAY BE REVIEWED OR INSPECTED IN RALEIGH BY CONTACTING THE N.C. DEPARTMENT OF TRANSPORTATION, GEOTECHNICAL UNIT @ (919) 280-4088. NEITHER THE SUBSURFACE PLANS AND REPORTS, NOR THE FIELD BORING LOGS, ROCK CORES, OR SOIL TEST DATA IS PART OF THE CONTRACT.

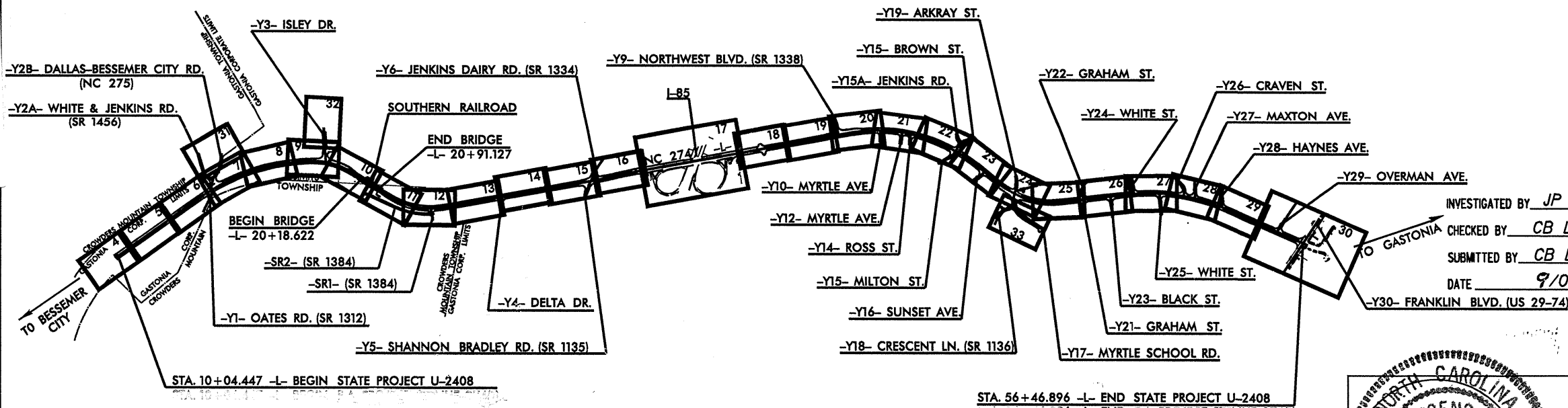
GENERAL SOIL AND ROCK STRATA DESCRIPTIONS AND INDICATED BOUNDARIES ARE BASED ON A GEOTECHNICAL INTERPRETATION OF ALL AVAILABLE SUBSURFACE DATA AND MAY NOT NECESSARILY REFLECT THE ACTUAL SUBSURFACE CONDITIONS BETWEEN BORINGS OR BETWEEN SAMPLED STRATA WITHIN THE BOREHOLE. THE LABORATORY SAMPLE DATA AND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

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

SUBSURFACE INVESTIGATION

STATE PROJECT 34799.3.1 I.D. NO. U-2408
 F.A. PROJECT STPNHF-274(1)
 COUNTY GASTON
 DESCRIPTION NC 274 (BESSEMER CITY ROAD) FROM
NC 275 (DALLAS-BESSEMER CITY ROAD)
TO US 29-74 (FRANKLIN BOULEVARD)

INVENTORY

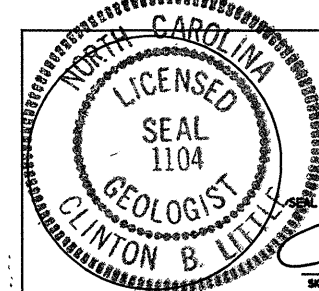


INVESTIGATED BY JP ROGERS PERSONNEL RW TODD
 CHECKED BY CB LITTLE JE ESTEP
 SUBMITTED BY CB LITTLE ML SMITH
 DATE 9/02 JC MONTGOMERY
 TO GASTONIA
 -Y30- FRANKLIN BLVD. (US 29-74)

DRAWN BY: JP ROGERS

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.



[Handwritten Signature]
SIGNATURE

NORTH CAROLINA DEPARTMENT OF TRANSPORTATION

DIVISION OF HIGHWAYS

GEOTECHNICAL UNIT

SUBSURFACE INVESTIGATION

SOIL AND ROCK LEGEND, TERMS, SYMBOLS, AND ABBREVIATIONS

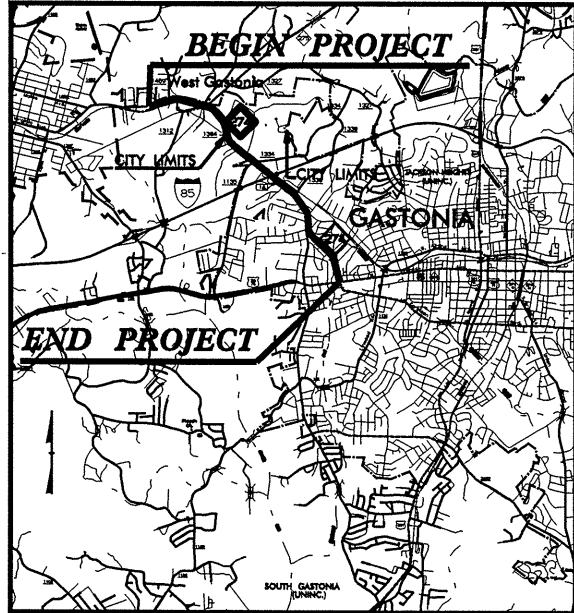
ID	STATE PROJECT NO.	SHEET NO.	TOTAL SHEETS
U-2408	8.1811201	2	34



SOIL DESCRIPTION				GRADATION				ROCK DESCRIPTION				TERMS AND DEFINITIONS																																																																																																																																																																																																	
SOIL IS CONSIDERED TO BE THE UNCONSOLIDATED, SEMI-CONSOLIDATED OR WEATHERED EARTH MATERIALS WHICH CAN BE PENETRATED WITH A CONTINUOUS FLIGHT POWER AUGER, AND WHICH YIELDS LESS THAN 100 BLOWS PER 30 cm ACCORDING TO STANDARD PENETRATION TEST (AASHTO T206, ASTM D-1586). SOIL CLASSIFICATION IS BASED ON THE AASHTO SYSTEM AND BASIC DESCRIPTIONS GENERALLY SHALL INCLUDE: CONSISTENCY, COLOR, TEXTURE, MOISTURE, AASHTO CLASSIFICATION, AND OTHER PERTINENT FACTORS SUCH AS MINERALOGICAL COMPOSITION, ANGULARITY, STRUCTURE, PLASTICITY, ETC. EXAMPLE: VERY STIFF, GRAY SILTY CLAY, MOST WITH INTERBEDDED FINE SAND UNTERS, HIGH PLASTIC, A-7-6				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.				HARD ROCK IS NON-COASTAL PLAIN MATERIAL THAT WHEN TESTED, WOULD YIELD SPT REFUSAL. AN INFERRED ROCK LINE INDICATES THE LEVEL AT WHICH NON-COASTAL PLAIN MATERIAL WOULD YIELD SPT REFUSAL. SPT REFUSAL IS PENETRATION BY A SPLIT SPOON SAMPLER EQUAL TO OR LESS THAN 2.5 cm PER 50 BLOWS. IN NON-COASTAL PLAIN MATERIAL, THE TRANSITION BETWEEN SOIL AND ROCK IS OFTEN REPRESENTED BY A ZONE OF WEATHERED ROCK. ROCK MATERIALS ARE TYPICALLY DIVIDED AS FOLLOWS:				ALLUVIUM (ALLUV.) - SOILS WHICH HAVE BEEN TRANSPORTED BY WATER. AQUIFER - A WATER BEARING FORMATION OR STRATA. ARENACEOUS - APPLIED TO ROCKS THAT HAVE BEEN DERIVED FROM SAND OR THAT CONTAIN SAND. ARGILLACEOUS - APPLIED TO ALL ROCKS OR SUBSTANCES COMPOSED OF CLAY MINERALS, OR HAVING A NOTABLE PROPORTION OF CLAY IN THEIR COMPOSITION, AS SHALE, SLATE, ETC. ARTESIAN - GROUND WATER THAT IS UNDER SUFFICIENT PRESSURE TO RISE ABOVE THE LEVEL AT WHICH IS ENCOUNTERED, BUT WHICH DOES NOT NECESSARILY RISE TO OR ABOVE THE GROUND SURFACE. CALCAREOUS (CALC.) - SOILS WHICH CONTAIN APPRECIABLE AMOUNTS OF CALCIUM CARBONATE. COLLUVIUM - ROCK FRAGMENTS MIXED WITH SOIL DEPOSITED BY GRAVITY ON SLOPE OR AT BOTTOM OF SLOPE. CORE RECOVERY (REC.) - TOTAL LENGTH OF ALL MATERIAL RECOVERED IN THE CORE BARREL DIVIDED BY TOTAL LENGTH OF CORE RUN AND EXPRESSED AS A PERCENTAGE. DIKE - A TABULAR BODY OF IGNEOUS ROCK THAT CUTS ACROSS THE STRUCTURE OF ADJACENT ROCKS OR CUTS MASSIVE ROCK. DIP - THE ANGLE AT WHICH A STRATUM OR ANY PLANAR FEATURE IS INCLINED FROM THE HORIZONTAL. DIP DIRECTION (DIP AZIMUTH) - THE DIRECTION OR BEARING OF THE HORIZONTAL TRACE OF THE LINE OF DIP, MEASURED CLOCKWISE FROM NORTH. FAULT - A FRACTURE OR FRACTURE ZONE ALONG WHICH THERE HAS BEEN DISPLACEMENT OF THE SIDES RELATIVE TO ONE ANOTHER PARALLEL TO THE FRACTURE. FISSILE - A PROPERTY OF SPLITTING ALONG CLOSELY SPACED PARALLEL PLANES. FLOAT - ROCK FRAGMENTS ON SURFACE NEAR THEIR ORIGINAL POSITION AND DISLODGED FROM PARENT MATERIAL. FLOOD PLAIN (F.P.) - LAND BORDERING A STREAM, BUILT OF SEDIMENTS DEPOSITED BY THE STREAM. FORMATION (FM.) - A MAPPABLE GEOLOGIC UNIT THAT CAN BE RECOGNIZED AND TRACED IN THE FIELD. JOINT - FRACTURE IN ROCK ALONG WHICH NO APPRECIABLE MOVEMENT HAS OCCURRED. LEDGE - A SHELF-LIKE RIDGE OR PROJECTION OF ROCK WHOSE THICKNESS IS SMALL COMPARED TO ITS LATERAL EXTENT. LENS - A BODY OF SOIL OR ROCK THAT THINS OUT IN ONE OR MORE DIRECTIONS. MOTTLED (MOT.) - IRREGULARLY MARKED WITH SPOTS OF DIFFERENT COLORS. MOTTLING IN SOILS USUALLY INDICATES POOR AERATION AND LACK OF GOOD DRAINAGE. PERCHED WATER - WATER MAINTAINED ABOVE THE NORMAL GROUND WATER LEVEL BY THE PRESENCE OF AN INTERVENING IMPERVIOUS STRATUM. RESIDUAL SOIL - SOIL FORMED IN PLACE BY THE WEATHERING OF ROCK. ROCK QUALITY DESIGNATION (R.Q.D.) - A MEASURE OF ROCK QUALITY DESCRIBED BY: TOTAL LENGTH OF ROCK SEGMENTS EQUAL TO OR GREATER THAN 10 CENTIMETERS DIVIDED BY THE TOTAL LENGTH OF CORE RUN AND EXPRESSED AS A PERCENTAGE. SAPROLITE (SAP.) - RESIDUAL SOIL WHICH RETAINS THE RELIC STRUCTURE OR FABRIC OF THE PARENT ROCK. SILL - AN INTRUSIVE BODY OF IGNEOUS ROCK OF APPROXIMATELY UNIFORM THICKNESS AND RELATIVELY THIN COMPARED WITH ITS LATERAL EXTENT, WHICH HAS BEEN EMPLACED PARALLEL TO THE BEDDING OR SCHISTOSITY OF THE INTRUDED ROCKS. SLICKENSIDE - POLISHED AND STRIATED SURFACE THAT RESULTS FROM FRICTION ALONG A FAULT OR SLIP PLANE. STANDARD PENETRATION TEST (PENETRATION RESISTANCE) (SPT) - NUMBER OF BLOWS (N) OF A 63.5 kg HAMMER FALLING 0.76 METERS REQUIRED TO PRODUCE A PENETRATION OF 30 cm INTO SOIL WITH A 5 cm OUTSIDE DIAMETER SPLIT SPOON SAMPLER. SPT REFUSAL IS LESS THAN 2.5 cm PENETRATION WITH 50 BLOWS. STRATA CORE RECOVERY (SREC.) - TOTAL LENGTH OF STRATA MATERIAL RECOVERED DIVIDED BY TOTAL LENGTH OF STRATUM AND EXPRESSED AS A PERCENTAGE. STRATA ROCK QUALITY DESIGNATION (S.R.Q.D.) - A MEASURE OF ROCK QUALITY DESCRIBED BY: TOTAL LENGTH OF ROCK SEGMENTS WITHIN A STRATUM EQUAL TO OR GREATER THAN 10 CENTIMETERS DIVIDED BY THE TOTAL LENGTH OF STRATA AND EXPRESSED AS A PERCENTAGE. 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9/28/99

See Sheet 1A For Index of Sheets
See Sheet 1B For Conventional Symbols



VICINITY MAP

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

GASTON COUNTY

LOCATION: NC 274 (BESSEMER CITY ROAD) FROM
NC 275 (DALLAS-BESSEMER CITY ROAD)
TO US 29-74 (FRANKLIN BOULEVARD)

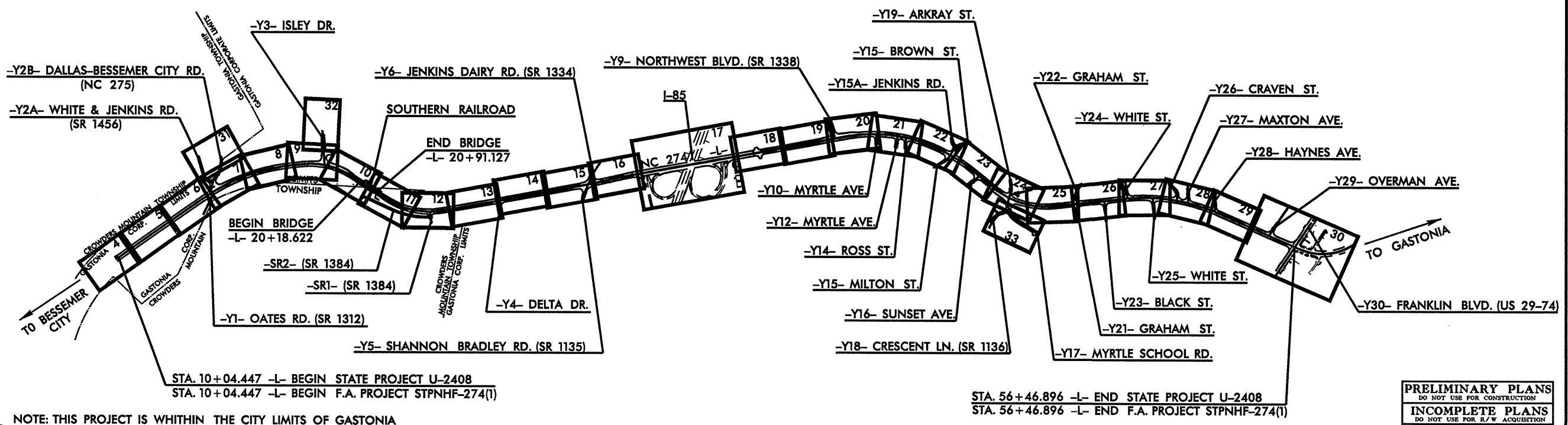
TYPE OF WORK: GRADING, DRAINAGE, PAVING, SIGNALS,
GUARDRAIL, CURB AND GUTTER, SIGNING,
AND STRUCTURES

ALL DIMENSIONS IN
THESE PLANS ARE IN METERS

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	U-2408	3	34
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	
8.1811201	STPNHF-274(1)	PE, UTL	

U-2408

PROJECT: 8.1811201



NOTE: THIS PROJECT IS WITHIN THE CITY LIMITS OF GASTONIA

STA. 10+04.447 -L- BEGIN STATE PROJECT U-2408
STA. 10+04.447 -L- BEGIN F.A. PROJECT STPNHF-274(1)

STA. 56+46.896 -L- END STATE PROJECT U-2408
STA. 56+46.896 -L- END F.A. PROJECT STPNHF-274(1)

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

<p>GRAPHIC SCALES</p> <p>2.5 0 5 PLANS</p> <p>2.5 0 5 PROFILE (HORIZONTAL)</p> <p>0.5 0 1 PROFILE (VERTICAL)</p>	<p>DESIGN DATA</p> <p>ADT 2001 = 20,900 ADT 2030 = 32,400</p> <p>DHV = 8 % D = 55 % T = 7 % * V = 80 km/h</p> <p>* TTST 3 % DUAL 4 %</p>	<p>PROJECT LENGTH</p> <p>LENGTH OF ROADWAY PROJECT F.A. PROJECT STPNHF-274(1) = 4.566 Km LENGTH OF STRUCTURE PROJECT F.A. PROJECT STPNHF-274(1) = 0.076 Km TOTAL LENGTH OF STATE PROJECT 8.1811201 = 4.642 Km</p> <p>NCDOT CONTACT:</p> <p>CATHY HOUSER, PE ENGINEERING COORDINATION SECTION ENGINEER</p>	<p>Prepared In the Office of:</p> <p>THE LPA GROUP TRANSPORTATION CONSULTANTS THE LPA GROUP OF NORTH CAROLINA, P.A. PMA PROFESSIONAL COURT, SUITE 201 RALEIGH, NORTH CAROLINA 27607</p>	<p>HYDRAULICS ENGINEER</p> <p>_____ SIGNATURE: P.E.</p>	<p>DIVISION OF HIGHWAYS STATE OF NORTH CAROLINA</p>
			<p>2002 STANDARD SPECIFICATIONS</p> <p>RIGHT OF WAY DATE: DECEMBER 20, 2002</p> <p>LETTING DATE: AUGUST 17, 2004</p>	<p>SCOTT BOYLES, PE PROJECT ENGINEER</p> <p>_____ PROJECT DESIGN ENGINEER</p>	<p>ROADWAY DESIGN ENGINEER</p> <p>_____ SIGNATURE: P.E.</p>



STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION

MIKE F. EASLEY
GOVERNOR

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

LYNDO TIPPETT
SECRETARY

September 25, 2002

STATE PROJECT: 8.1811201 (U-2408)
FEDERAL PROJECT: STPNHF-274(1)
COUNTY: Gaston
DESCRIPTION: NC 274 (Bessemer City Rd.) from NC 275 to (Dallas-Bessemer City Rd.) to US 29-74 (Franklin Boulevard).
SUBJECT: Geotechnical Report - Inventory

This project is located in western Gaston County near the town of Bessemer City. The project begins at a point approximately 2.30-km west-northwest of the I-85 and existing NC 274 interchange. From there the -L- line proceeds in an eastern-southeastern direction. This project is essentially a widening of an already existing highway. Transcontinental gas lines, high traffic volumes, a wide variety of businesses, and a myriad of other utilities are prevalent throughout the project corridor. Crew safety was as much a consideration as the Roadway Design in selecting our boring locations. Total length of lines investigated is 6.34 km.

The Geotechnical field investigation was conducted primarily in March of 2002. Field data was primarily collected with a CME 550-power auger machine equipped with an automatic hammer for Standard Penetration tests. In addition, we utilized a variety of hand tools (probes, hand augers) combined with visual reconnaissance to aid in developing our soil profiles. The attached plans show only areas of special interest or borings and are not complete roadway plans.

Geologically, the project corridor is mapped as being underlain predominantly by sericite schist and sericite quartzite of the Kings Mountain Geological Belt. Topography consists of gently rolling hills with relief of about 35.00 meters between the upland and lowland portions of the project.

The following baselines were investigated either by actual soil testing or visual reconnaissance:

Line	Stations
-L-	10+00 to 290+00
-Y1-	10+00.00 to 10+11.00
-Y2A-	10+00.00 to 11+04.00
-Y2B-	10+24.00 to 11+35.00
-Y3-	10+30.00 to 11+15.00
-Y4-	10+00.00 to 10+09.00
-Y5-	10+00.00 to 10+63.00

Line	Stations
-Y9-	10+00.00 to 10+60.00
-Y10-	10+09.00 to 10+43.00
-Y12-	10+09.00 to 10+44.00
-Y14-	10+09.00 to 10+41.00
-Y15-	10+00.00 to 11+47.00
-Y15A-	10+20.00 to 10+48.00
-Y16-	10+00.00 to 10+38.00
-Y17-	10+00.00 to 11+88.00
-Y18-	10+07.00 to 10+72.00
-Y19-	10+08.00 to 10+53.00
-Y21-	10+00.00 to 10+50.00
-Y23-	10+09.00 to 10+60.00
-Y24-	10+32.00 to 10+67.00
-Y25-	10+09.00 to 10+65.00
-Y26-	10+27.00 to 10+82.00
-Y27-	10+32.00 to 10+61.00
-Y28-	10+36.00 to 10+68.00
-Y29-	10+93.00 to 11+21.00
-SR1-	10+09.00 to 10+35.00
-SR2-	10+00.00 to 12+75.00

2
3A/34

Items of Special Geotechnical Interest

- Groundwater
Groundwater was not encountered within 1.83 meters of proposed grade within the project corridor.
- Hard Rock
Hard rock was not encountered above or within 3.00 meters of proposed grade within the project corridor.
- Water Wells
While there are no water wells that fall within the construction limits, there is one well that falls within 3.0 meters of the proposed construction limits. Its location is as follows:

Station	Offset
11+83 -L-	18.50m Left

4. UST's

There are several areas (gas stations) within the project corridor where Underground Storage Tanks (UST's) will be encountered. Two of these gas stations have monitoring wells either on or adjacent to their property.

Their locations are as follows:

<u>-Station-</u>	<u>-Offset-</u>
14+74.0 -L-	12.0m Rt.
14+97.0 -L-	9.5m Rt.
15+25.0 -L-	8.5m Rt.
15+47.0 -L-	5.0m Rt.
29+82.5 -L-	15.0m – 30.0m Rt.

Please refer to the GeoEnvironmental report for a more detailed discussion of these issues. In addition, three transcontinental gas lines cross the project corridor between Stas. 22+00 and 23+00 -L-.

5. Alluvial Deposits

Alluvial soils within the project corridor are one to two meters thick and consist primarily of medium dense silty sand (A-2-4) and medium stiff sandy silt (A-4). These soils were encountered in the boring right of Sta. 52+00 -L- and between Stas. 54+50 and 54+90 -L-.

6. Artificial Fills / Retaining Wall

Artificial fill was encountered in three areas within the project corridor. These areas are as follows:

<u>Line</u>	<u>Station(s)</u>
-L-	10+04.00 to 11+53.00
"	51+59.00 to 53+05.00
"	53+90.00 to 55+10.00

A retaining wall has been proposed for the interval from 51+82 to 52+60 -L-, 13.80 meters right. A 1.75-meter layer of organic matter (wood) and soil was encountered in the borings performed at 51+85 -L-, 6.0m right and 52+20 -L-, 9.0m right. Hydrocarbon contamination was not encountered in any of the above listed locations. Glass and metal, combined with soil material, were also encountered at the last two sites. The first site encountered clean soil only. Please refer to the cross sections of the attached plans (pgs. 25 – 33).

Soils Properties

Residual soils, derived from the weathering of parent rock materials, occur in the uplands as cut materials, in the flanks of hillsides as foundation soils for proposed fills, and underneath alluvial deposits in floodplains. Red and brown clays (A-7-5, A-7-6) cap most of the hills and are two to three meters in thickness. In addition to these clays, a variety of saprolite soils are present. These include sandy clays (A-6), sandy silts (A-5), clayey sands (A-2-6), and micaceous silty sands (A-2-4, A-2-5).

If we can furnish any further information on this project please advise.

Respectfully submitted,

J.P. Rogers
J. P. Rogers

cc: Div. 12 Engineer



EARTHWORK SUMMARY

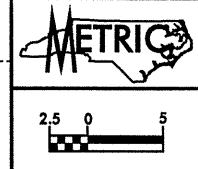
IN CUBIC METERS

LOCATION	UNCLASSIFIED EXCAVATION	UNDERCUT EXCAVATION	EMBANKMENT + %	BORROW	WASTE
-L- 10+04.447 TO 20+18.622 (BEG. BR.)	870		21,236	20,366	
-Y2A- 10+20.000 TO 10+80.000	81		152	71	
-Y2B- 10+40.000 TO 11+20.000	250		288	38	
-Y3- 10+40.000 TO 11+00.000	49		1,512	1,463	
SUBTOTAL	1,250		23,188	21,938	0
-L- 20+91.127(END BR.) TO 32+49.068 (BEG. BR.)	1,027		12,657	11,630	
-SR1- 10+20.000 TO 10+40.000	1		43	42	
-SR2- 10+20.000 TO 10+40.000	23		45	22	
-Y5- 10+20.000 TO 10+60.000	152		42	0	110
-Y6- 10+60.000 TO 10+80.000	2		58	56	
SUBTOTAL	1,205		12,845	11,750	110
-L- 33+37.765 (END BR.) TO 45+80.000	1,752		22,387	20,635	
-Y9- 10+00.000 TO 10+20.000	16		42	26	
-Y10- 10+20.000 TO 10+40.000	116		0		116
-Y12- 10+20.000 TO 10+40.000	44		100	56	
-Y14- 10+20.000 TO 10+40.000	46		26		20
-Y15- 10+00.000 TO 10+62.000	52		101	49	
-Y15A- 10+20.000 TO 10+40.000	0		76	76	
-Y15B- 11+11.000 TO 11+47.000	19		110	91	
-Y16- 10+20.000 TO 10+40.000	45		4		41
-Y17- 10+20.000 TO 11+80.000	529		1587	1,058	
-Y18- 10+20.000 TO 10+60.000	7		232	225	
-Y19- 10+20.000 TO 10+40.000	48		34		14
SUBTOTAL	2,674		24,699	22,216	191
-L- 45+80.000 TO 56+46.896	5,842	4,000	22,758	16,916	4,000
-Y21- 10+20.000 TO 10+40.000	0		100	100	
-Y22- 10+03.917 TO 10+47.000	7		55	48	
-Y23- 10+20.000 TO 10+40.000	234		0		234
-Y24- 10+20.000 TO 10+40.000	132		0		132
-Y25- 10+20.000 TO 10+60.000	925		0		925
-Y26- 10+40.000 TO 10+60.000	105		25		80
-Y27- 10+20.000 TO 10+40.000	56		0		56
-Y28- 10+20.000 TO 10+40.000	34		6		28
-Y29- 10+80.000 TO 11+00.000	141		0		141
SUBTOTAL	7,476	4,000	22,944	17,064	5,596
PROJECT TOTAL	12,605	4,000	83,676	72,968	5,897
WASTE IN LIEU OF BORROW				-1,897	-1,897
ADDITIONAL UNDERCUT PER GEOTECH (CONTINGENCY)		1,000	1,200	1,200	1,000
ESTIMATED UNDERCUT FOR GRADE POINT SELECT GRANULAR MATERIAL IN LIEU OF BORROW		1,000	1,200	1,200	1,000
			-6,400	-6,400	
ESTIMATE LOSS DUE TO CLEARING AND GRUBBING	-1,000			1,000	
ESTIMATE 5% FOR REPLACING TOPSOIL ON BORROW PIT				3,404	
GRAND TOTAL	11,605	6,000	79,676	71,475	6,000
SAY	12,000	6,000	80,000	72,000	6,000

-L-, -Y2A-, -Y2B-, -Y3-, -SR1-, -SR2-, -Y5-, -Y9-, -Y10-, -Y12-, -Y14-, -Y15-, -Y15A-, -Y16-, -Y17-, -Y18-, -Y19-, -Y21-,
-Y22-, -Y23-, -Y24-, -Y25-, -Y26-, -Y27-, -Y28-, & -Y29- PAVEMENT STRUCTURE VOLUME = 8100 CUBIC METERS

REVISIONS

24 APR 2006 09:54
U:\2408\2408.dwg - dpl, sum, dgp



PROJECT REFERENCE NO. U-2408	SHEET NO. 4
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.	

CROWDERS MOUNTAIN TOWNSHIP
GASTONIA CORPORATE LIMITS (PB 39 PG 6)
(70.104 (230') OFFSET FROM CENTERLINE NC-274)

JAMES W. KIRK
DB 2234 PG 321

JAMES W. KIRK
DB 1466 PG 190
PB 6 PG 53

GELSINGER BARKER HOMES, INC.
DB 3140 PG 673



POT -L- STA.10+04.447 BEGIN STATE PROJECT U-2408
TIE TO FUTURE PROJECT U-3405

-LBL- 53 Sta. 5+00.000

ARTIFICIAL FILL

ARTIFICIAL FILL

GELSINGER BARKER HOMES, INC.
DB 3140 PG 673

GAS REGULATOR

0.046 R/W-EIP



-L- S 75° 57' 01.5" E

-LBL-
S 75° 01' 06.3" E

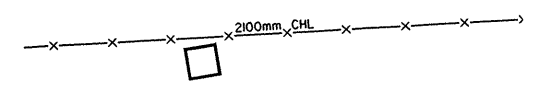
NC 274 BESSEMER CITY RD BST

MATCHLINE -L- STA 10+60 SHEET 5


DATUM DESCRIPTION

THE LOCALIZED COORDINATE SYSTEM DEVELOPED FOR THIS PROJECT IS BASED ON THE STATE PLANE COORDINATES ESTABLISHED BY NCDOT FOR MONUMENT "U2408-4" WITH NAD 83 STATE PLANE GRID COORDINATES OF NORTHING: 1716607981m EASTING: 4067392401m THE AVERAGE COMBINED GRID FACTOR USED ON THIS PROJECT (GROUND TO GRID) IS: 0.999838033 THE N.C. LAMBERT GRID BEARING AND LOCALIZED HORIZONTAL GROUND DISTANCE FROM "U2408-4" TO -L- STATION 10+04.447 IS **2,117.706m BEARING N 50° 28' 54.3" W** ALL LINEAR DIMENSIONS ARE LOCALIZED HORIZONTAL DISTANCES VERTICAL DATUM USED IS NGVD 29

GASTONIA CORPORATE LIMITS (PB 39 PG 6)
(LIMITS = CENTERLINE OF EXISTING TRACK)
CROWDERS MOUNTAIN TOWNSHIP



CROWDERS MOUNTAIN TOWNSHIP
GASTONIA CORPORATE LIMITS (PB 39 PG 6)
(70.104 (230') OFFSET FROM CENTERLINE NC-274)

 2.5 0 5 CONST.REV. R/W REV.	PROJECT REFERENCE NO. U-2408	SHEET NO. 5
	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		



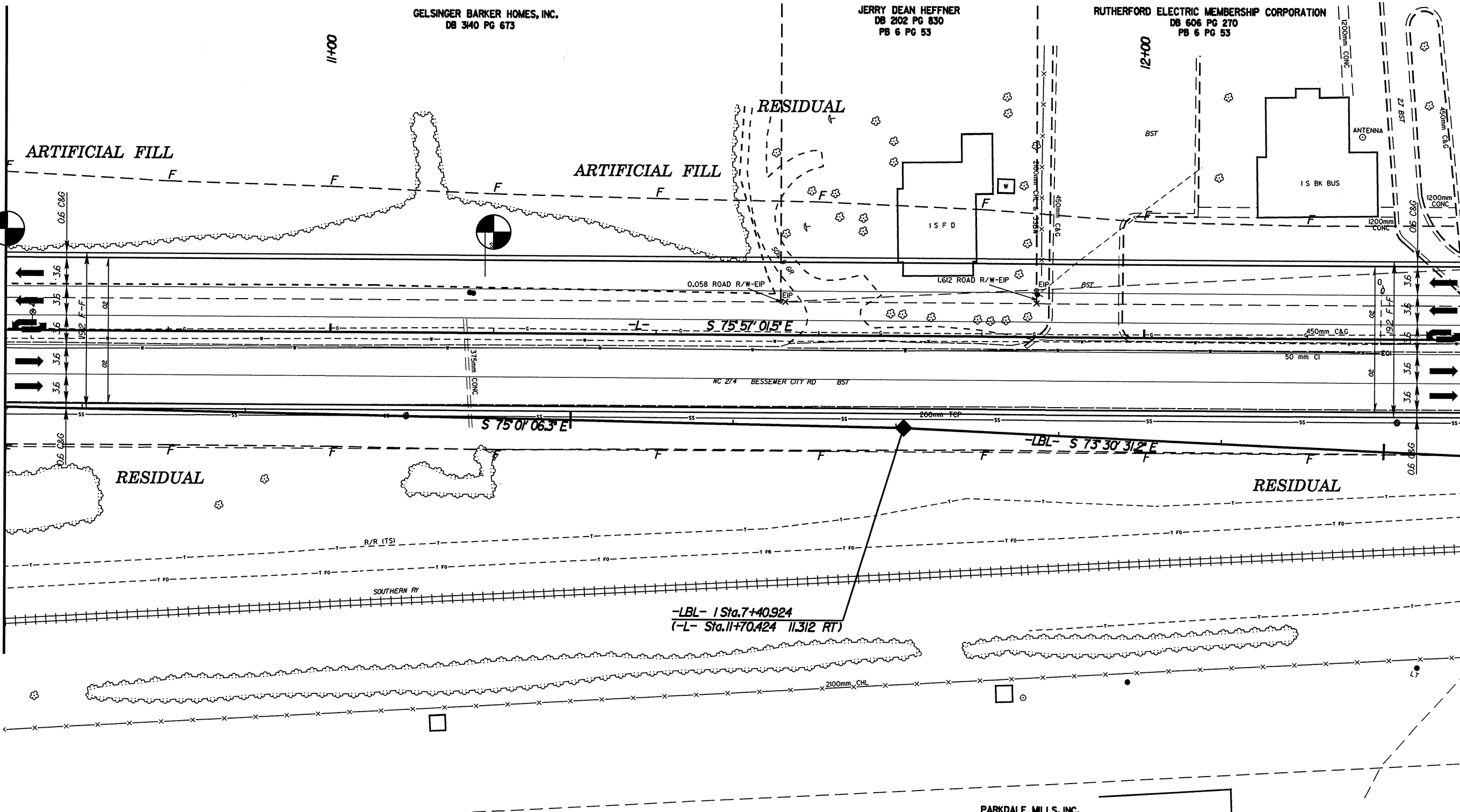
GELSINGER BARKER HOMES, INC.
DB 340 PG 673

JERRY DEAN HEFFNER
DB 202 PG 830
PB 6 PG 53

RUTHERFORD ELECTRIC MEMBERSHIP CORPORATION
DB 606 PG 270
PB 6 PG 53

MATCHLINE -L- STA 10+60 SHEET 4

MATCHLINE -L- STA 12+40 SHEET 6



-LBL- 1 Sta. 7+40.924
(-L- Sta. 11+70.424 11.312 RT)

PARKDALE MILLS, INC.
D.B. 2265 PG. 761

FOR -L- PROFILE SEE SHEET 35

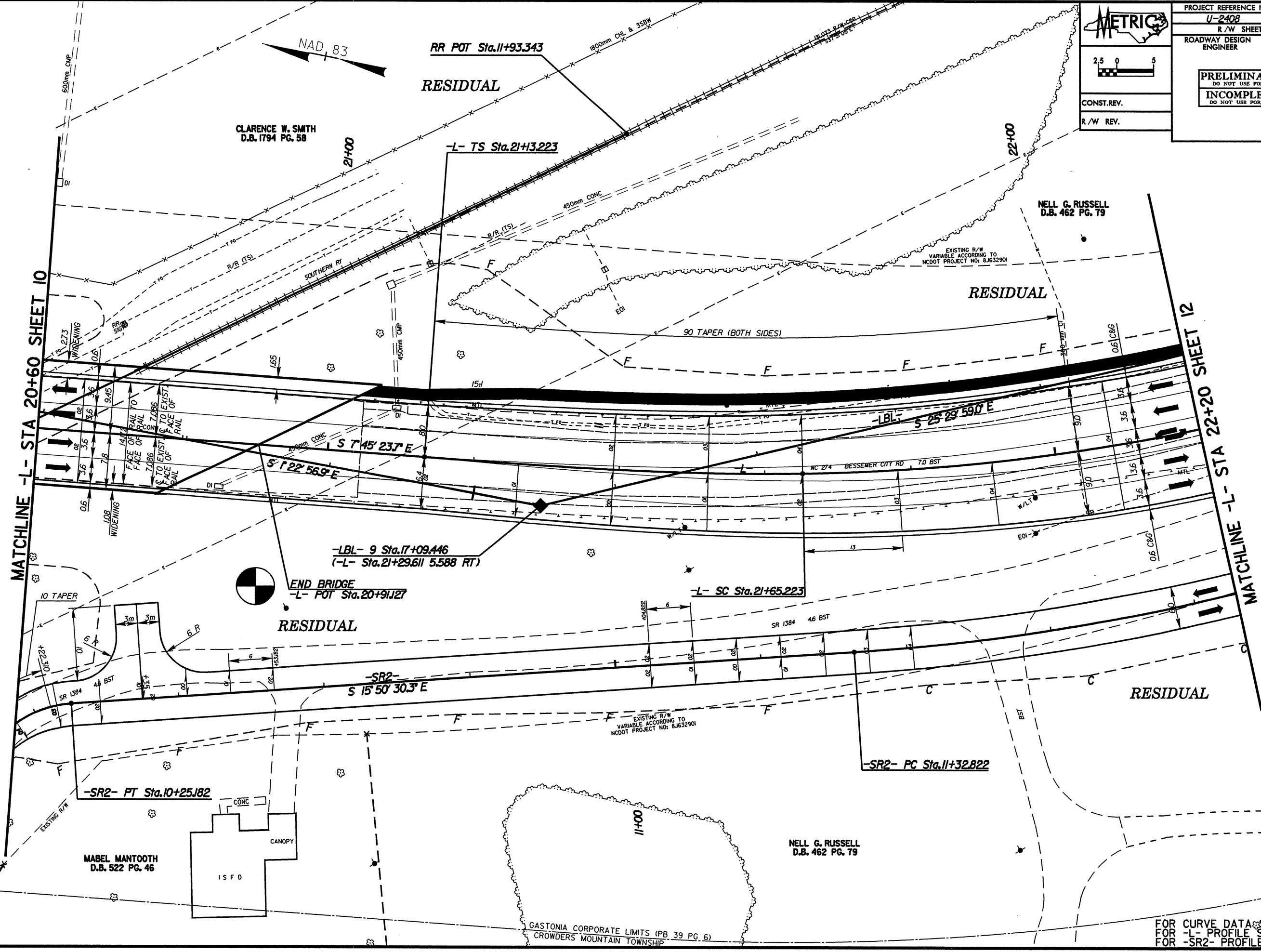
REVISIONS

*****SYTIME*****
*****DORNE*****
*****BUSSEMAN*****

METRIC

CONST. REV.
R/W REV.

PROJECT REFERENCE NO. U-2408	SHEET NO. 11
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	



REVISIONS

MATCHLINE -L- STA 20+60 SHEET 10

MATCHLINE -L- STA 22+20 SHEET 12

CLARENCE W. SMITH
D.B. 1794 PG. 58

NELL G. RUSSELL
D.B. 462 PG. 79

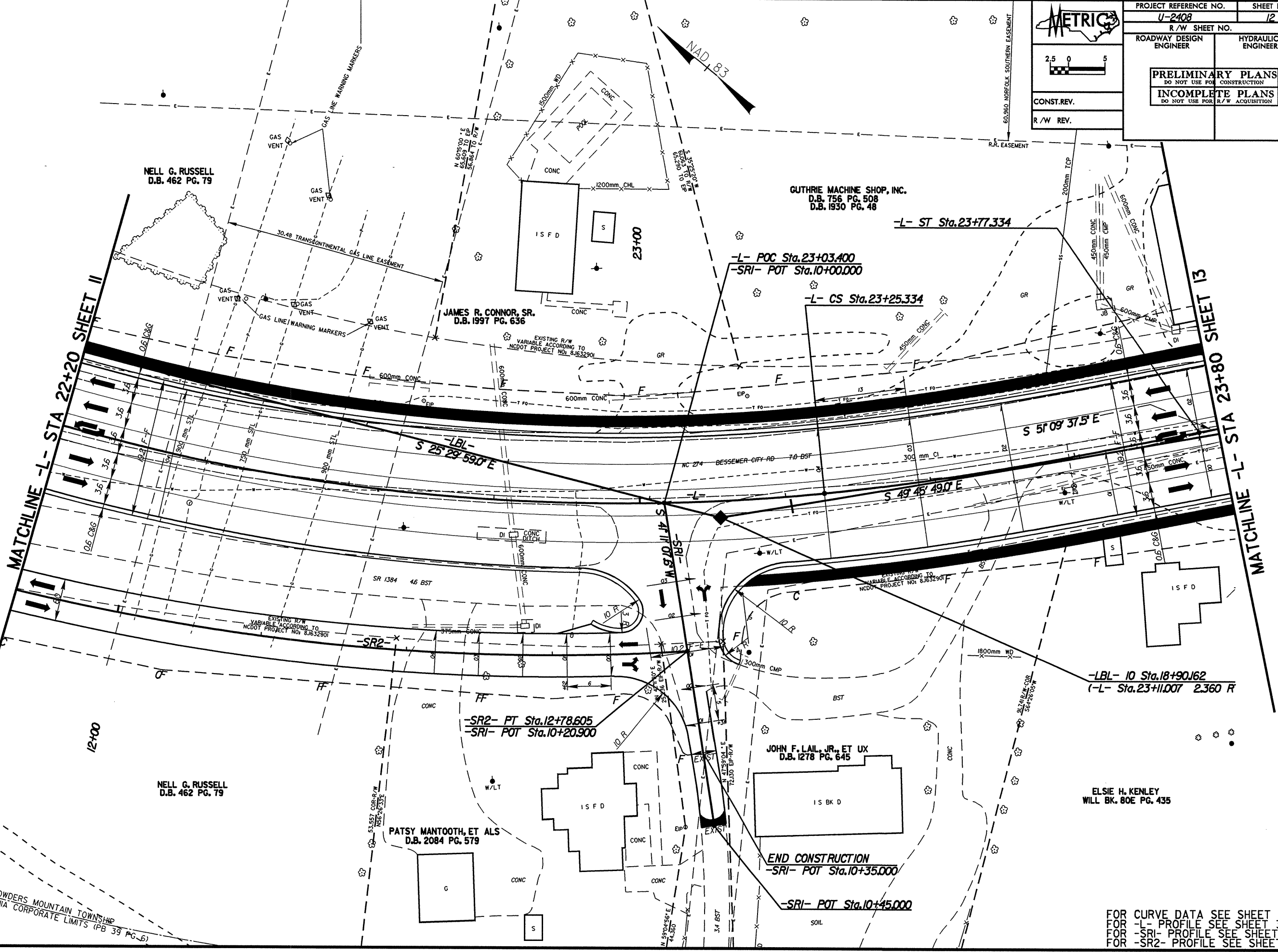
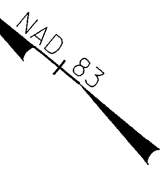
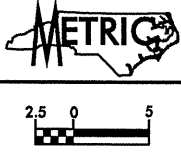
MABEL MANTOOTH
D.B. 522 PG. 46

NELL G. RUSSELL
D.B. 462 PG. 79

GASTONIA CORPORATE LIMITS (PB 39 PG. 6)
CROWDERS MOUNTAIN TOWNSHIP

FOR CURVE DATA SEE SHEET 26
FOR -L- PROFILE SEE SHEET 38
FOR -SR2- PROFILE SEE SHEET 59

PROJECT REFERENCE NO.	SHEET NO.
U-2408	12
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.	



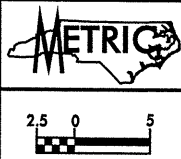
REVISIONS

 SYSTEMS
 DESIGN

FOR CURVE DATA SEE SHEET 20
 FOR -L- PROFILE SEE SHEET 38
 FOR -SR1- PROFILE SEE SHEET 58
 FOR -SR2- PROFILE SEE SHEET 59

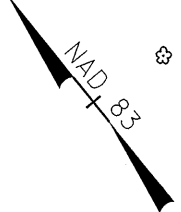
SOUTHERN BELL TELEPHONE AND TELEGRAPH CO.
D.B. 1306 PG. 482

R.R. EASEMENT



PROJECT REFERENCE NO. U-2408	SHEET NO. 16
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.	

BEATY ENTERPRISES, LTD.
D.B. 1270 PG. 347



-Y6- PC Sta.10+23721

-Y6- POT Sta.10+00.000

BEGIN CONSTRUCTION
-Y6- POC Sta.10+55.000

-L- PT Sta.30+67.238

END 750 mm CURB AND GUTTER
BEGIN 150 mm CONC.CURB TRANSITION

END GRADE
BEGIN MINIMUM OVERLAY
-L- POT Sta.30+70.000

END 150 mm CONC.CURB
TRANSITION AT EXISTING
150 mm CONC.CURB

-L- PRC Sta.29+79.088

30 m TAPER

S 51°08'14.4" E

S 50°37'54.3" E

END 150 mm CONC.CURB
TRANSITION AT EXISTING
150 mm CONC.CURB

END 750 mm CURB AND GUTTER
BEGIN 150 mm CONC.CURB TRANSITION

MATCHLINE -L- STA 29+20 SHEET 15

MATCHLINE -L- STA 31+00 SHEET 17

FFCA/IP11984 PROPERTY CO.
D.B. 1824 PG. 758

GASTONIA UNITED OIL CO.
D.B. 2404 PG. 813

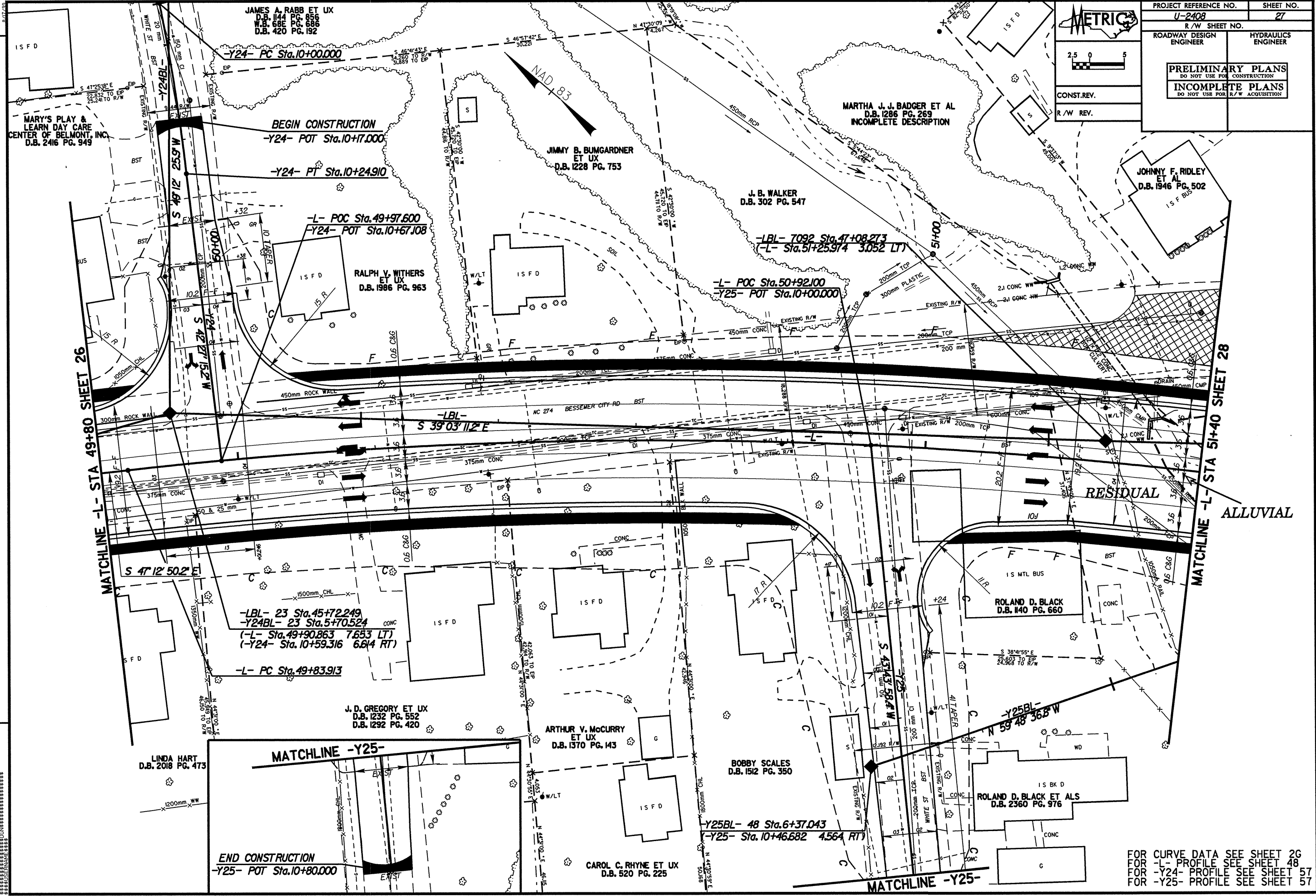
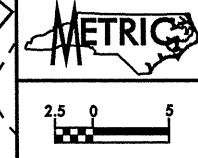
KANTIL A. PATEL & WF
SHANTABEN PATEL
DB 2897 PG 933

FOR INTERSECTION DETAIL SEE SHEET 2J
FOR CURVE DATA SEE SHEET 2G
FOR -L- PROFILE SEE SHEET 40
FOR -Y5- PROFILE SEE SHEET 52
FOR -Y6- PROFILE SEE SHEET 52

REVISIONS

*****SYSTEMS*****
*****CADD*****
*****PLANNING*****
*****DESIGN*****
*****CONSTRUCTION*****
*****OPERATIONS*****

PROJECT REFERENCE NO.		SHEET NO.	
U-2408		27	
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

MATCHLINE -L- STA 49+80 SHEET 26

MATCHLINE -L- STA 51+40 SHEET 28

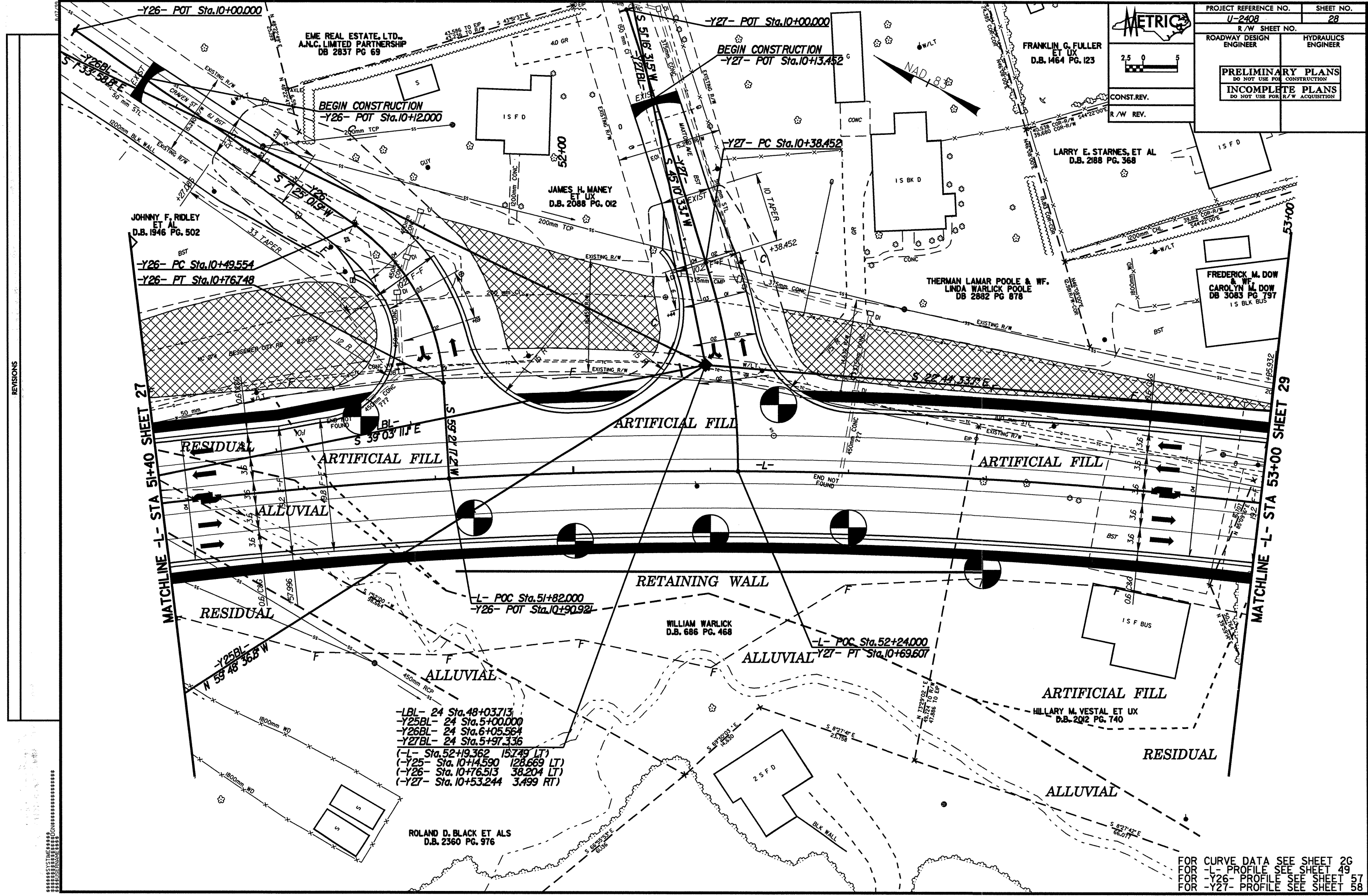
END CONSTRUCTION
-Y25- POT Sta.10+80.000

FOR CURVE DATA SEE SHEET 26
 FOR -L- PROFILE SEE SHEET 48
 FOR -Y24- PROFILE SEE SHEET 57
 FOR -Y25- PROFILE SEE SHEET 57

PROJECT REFERENCE NO. U-2408	SHEET NO. 28
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION	

METRIC

CONST. REV.
R/W REV.



REVISIONS

MATCHLINE -L- STA 51+40 SHEET 27

MATCHLINE -L- STA 53+00 SHEET 29

- LBL- 24 Sta. 48+03.713
- Y25BL- 24 Sta. 5+00.000
- Y26BL- 24 Sta. 6+05.564
- Y27BL- 24 Sta. 5+97.336
- (-L- Sta. 52+19.362 15.749 LT)
- (-Y25- Sta. 10+14.590 128.669 LT)
- (-Y26- Sta. 10+76.513 38.204 LT)
- (-Y27- Sta. 10+53.244 3.499 RT)

FOR CURVE DATA SEE SHEET 26
 FOR -L- PROFILE SEE SHEET 49
 FOR -Y26- PROFILE SEE SHEET 57
 FOR -Y27- PROFILE SEE SHEET 58

METRIC

PROJECT REFERENCE NO. U-2408 SHEET NO. 29

R/W SHEET NO.

ROADWAY DESIGN ENGINEER HYDRAULICS ENGINEER

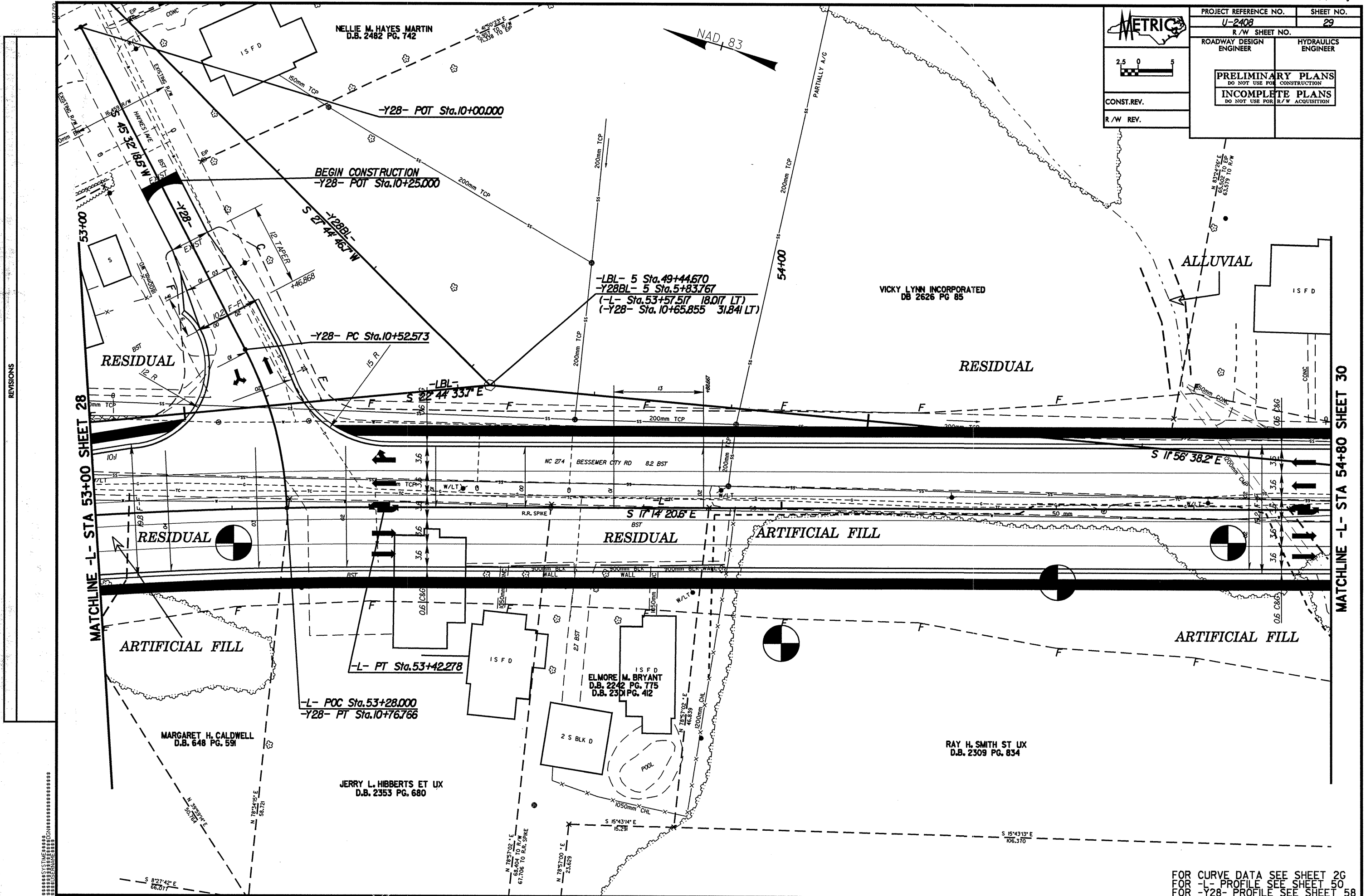
PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

CONST. REV.

R/W REV.

2.5 0 5

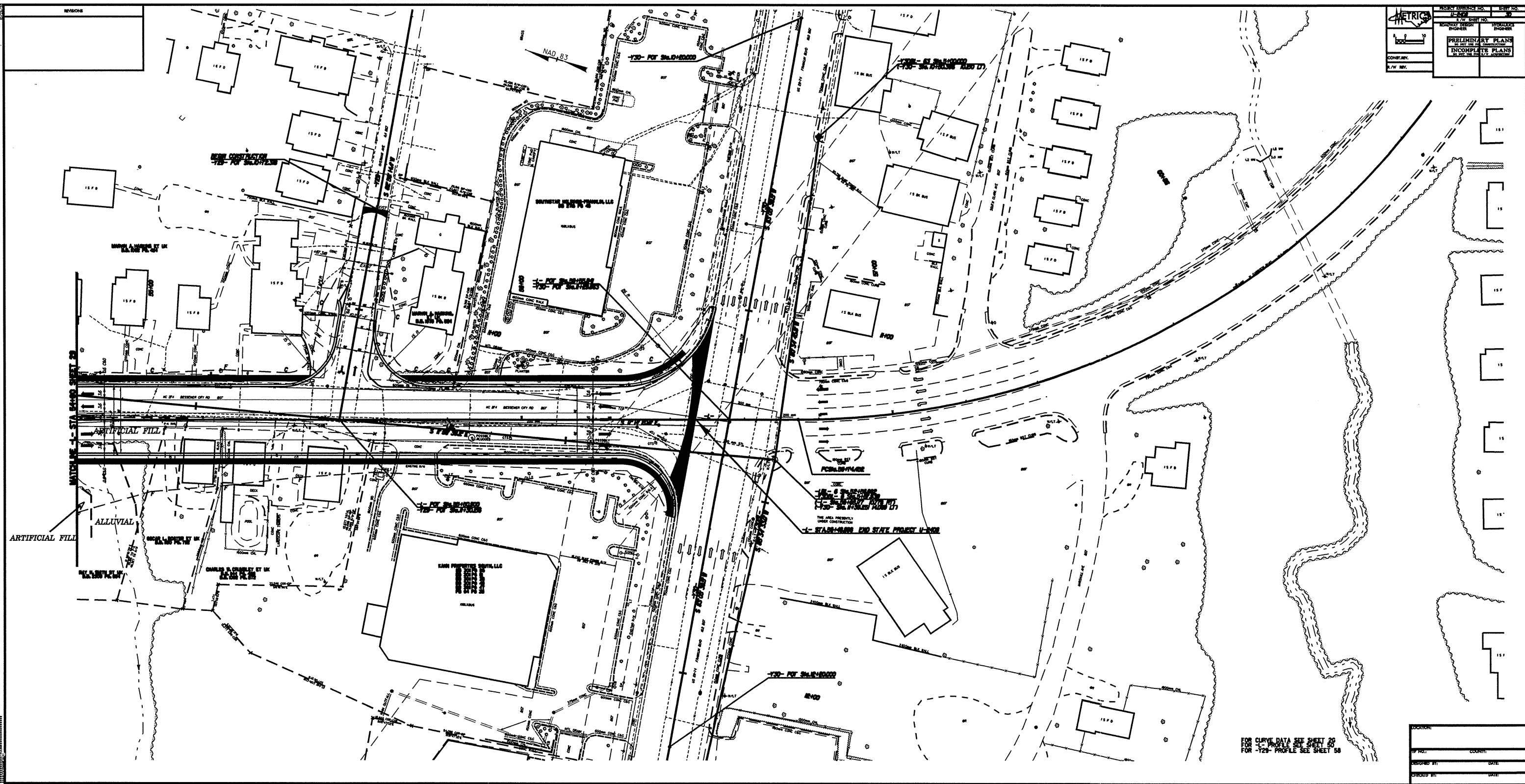


REVISIONS

MATCHLINE -L- STA 53+00 SHEET 28

MATCHLINE -L- STA 54+80 SHEET 30

FOR CURVE DATA SEE SHEET 26
 FOR -L- PROFILE SEE SHEET 50
 FOR -Y28- PROFILE SEE SHEET 58



NO.	DESCRIPTION

METRICS

PROJECT REFERENCE NO. 15-0000
SHEET NO. 34

DATEWAY DESIGN ENGINEER
PROJECT ENGINEER

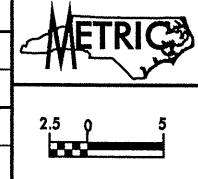
PRELIMINARY PLANS
NOT TO BE CONSIDERED
INCOMPLETE PLANS
EXCEPT AS NOTED

CONTRACT NO. 15-0000
S/W REV.

FOR CURVE DATA SEE SHEET 26
FOR 1" PROFILE SEE SHEET 28
FOR 1/2" PROFILE SEE SHEET 28

LOCATION:	COUNTY:
DRAWN BY:	DATE:
CHECKED BY:	DATE:

16/34



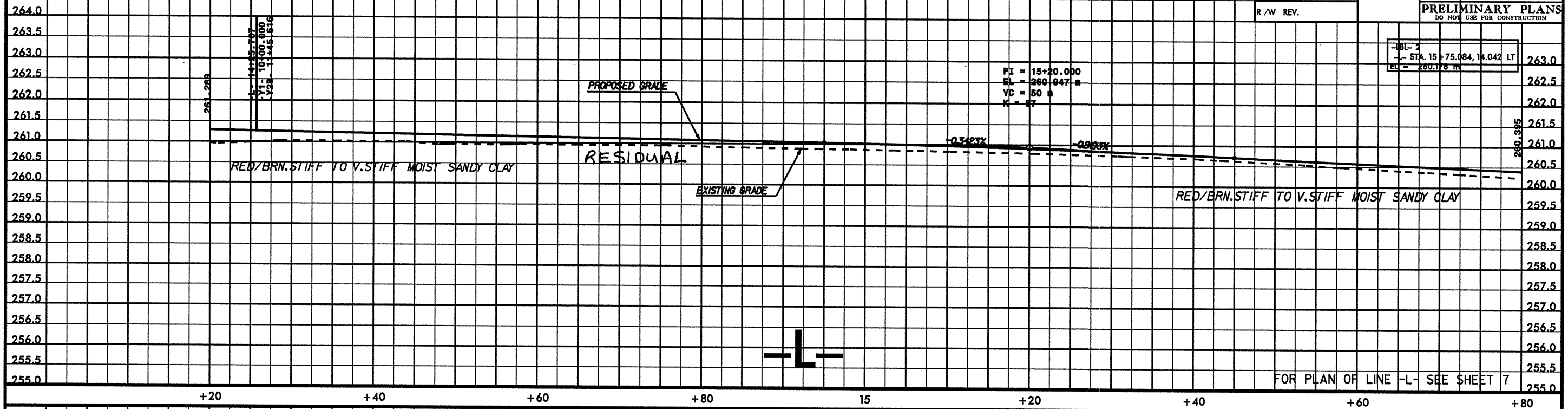
PROJECT REFERENCE NO. U-2408
 ROADWAY DESIGN ENGINEER
 SHEET NO. 36
 HYDRAULICS ENGINEER

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

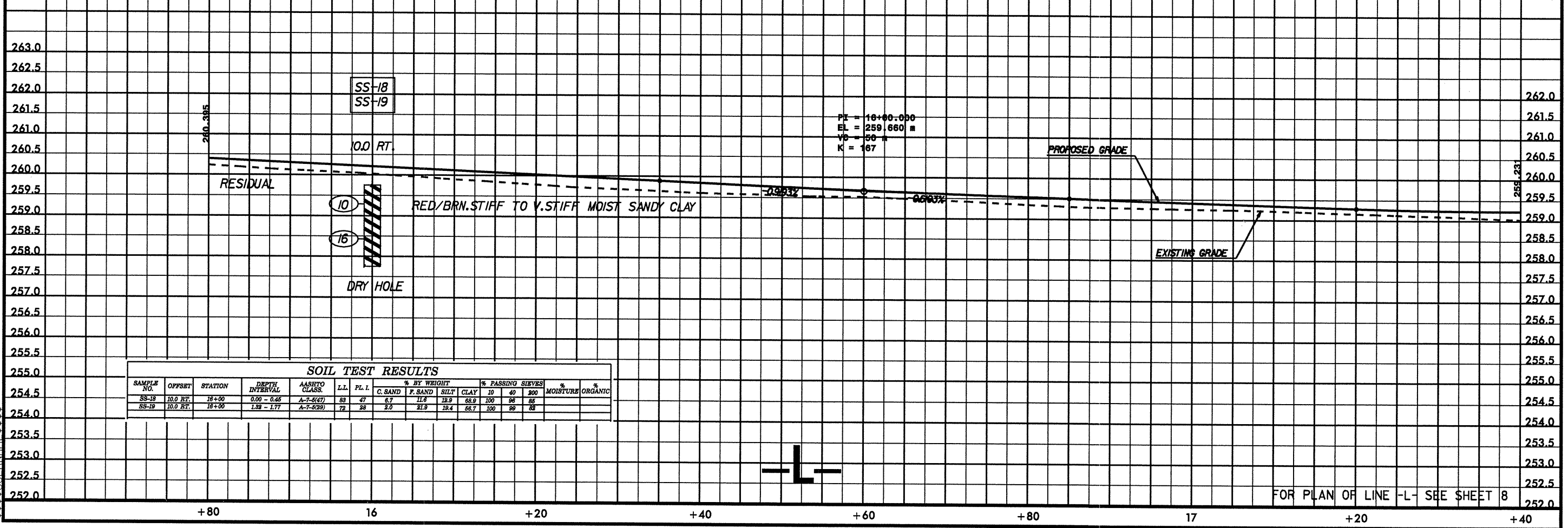
CONST. REV.
 R/W REV.

-BL-2
 -L- STA. 15+75.084, 14.042 LT
 EL = 260.178 m

PI = 15+20.000
 EL = 260.047 m
 VC = 50 m
 K = 67



FOR PLAN OF LINE -L- SEE SHEET 7



PI = 16+00.000
 EL = 259.660 m
 VC = 50 m
 K = 167

SOIL TEST RESULTS

SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.L.	% BY WEIGHT				% PASSING SIEVES			% MOISTURE	% ORGANIC
							C. SAND	F. SAND	SILT	CLAY	10	40	200		
SS-18	10.0 RT.	16+00	0.00 - 0.45	A-7-5(47)	83	47	6.7	11.8	18.9	68.9	100	96	85		
SS-19	10.0 RT.	16+00	1.81 - 1.77	A-7-5(29)	72	28	2.0	21.9	18.4	68.7	100	99	83		

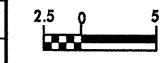
\$\$\$SYTIME\$\$\$
 \$\$\$DGN\$\$\$
 \$\$\$SERV\$\$\$

FOR PLAN OF LINE -L- SEE SHEET 8

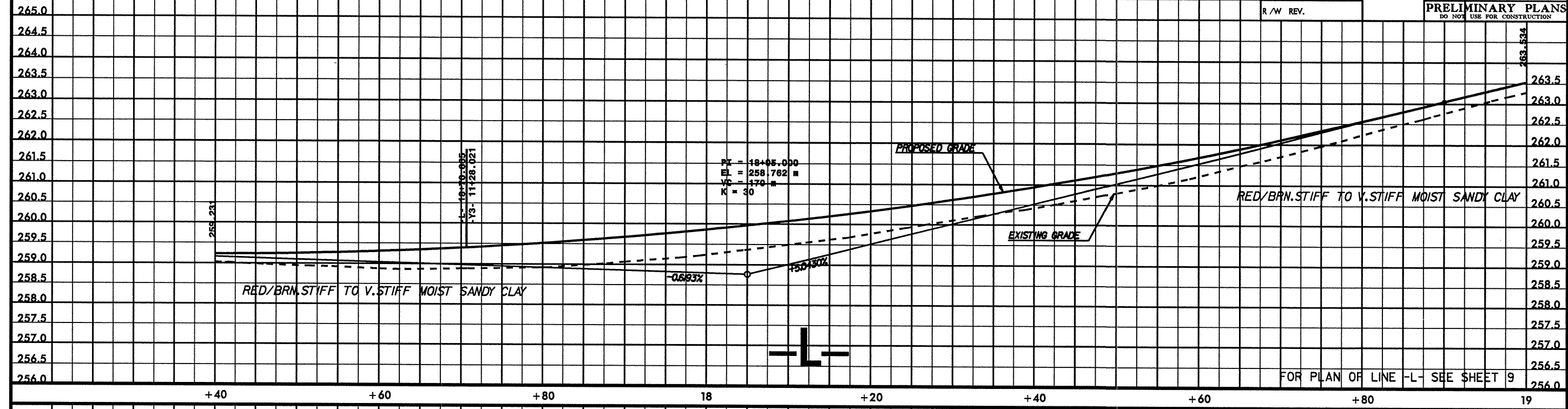
-LB- 7
-L- STA. 18+45.708, 10.728 LT
EL = 260.522 m



PROJECT REFERENCE NO. U-2408 ROADWAY DESIGN ENGINEER	SHEET NO. 37 HYDRAULICS ENGINEER
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	

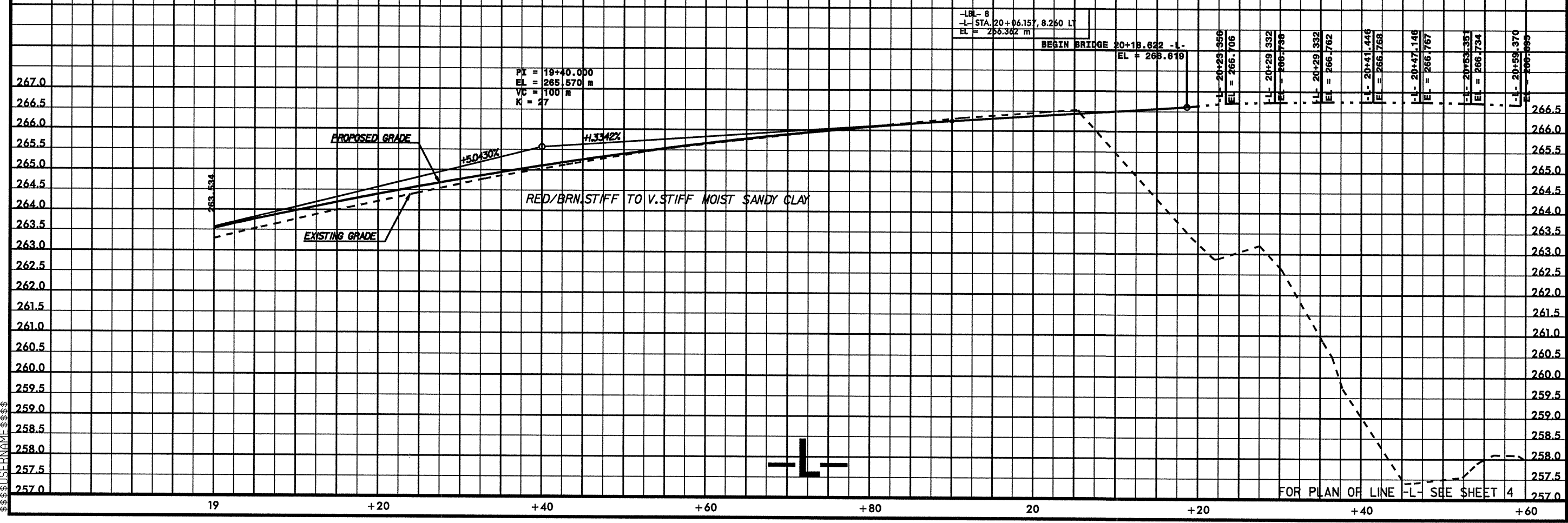


CONST. REV.
R/W REV.

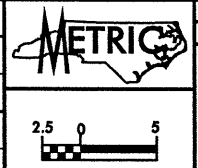


-LB- 8
-L- STA. 20+06.157, 8.260 LT
EL = 266.362 m

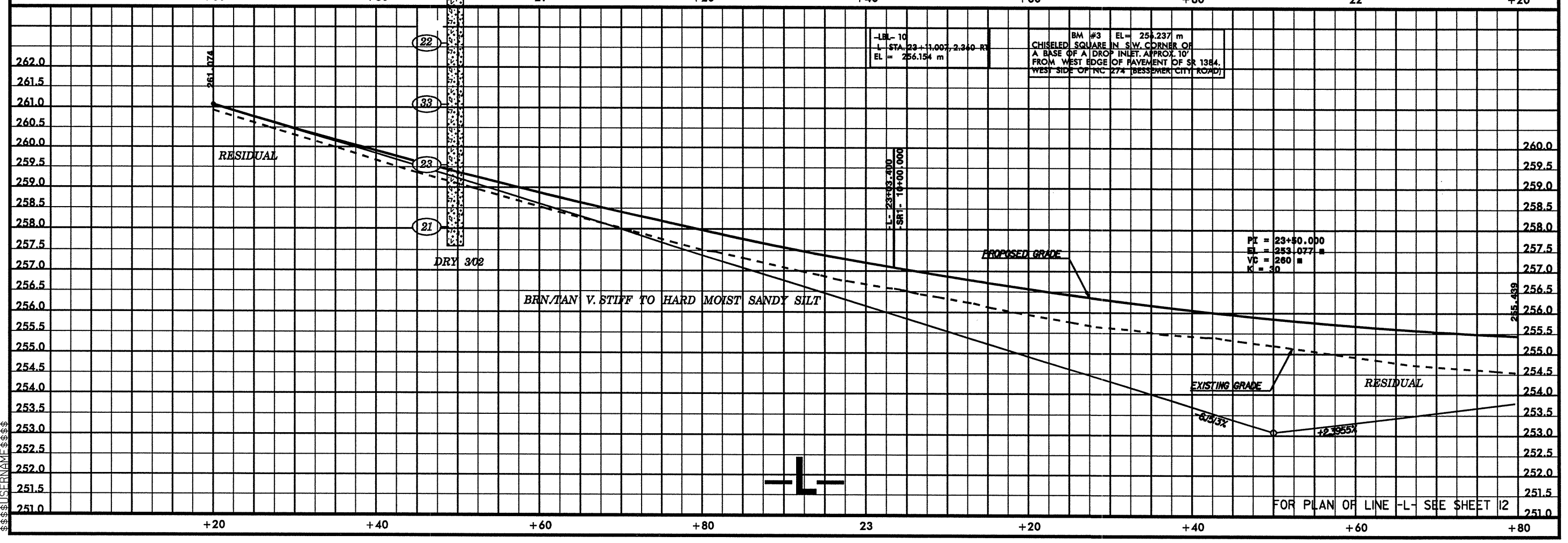
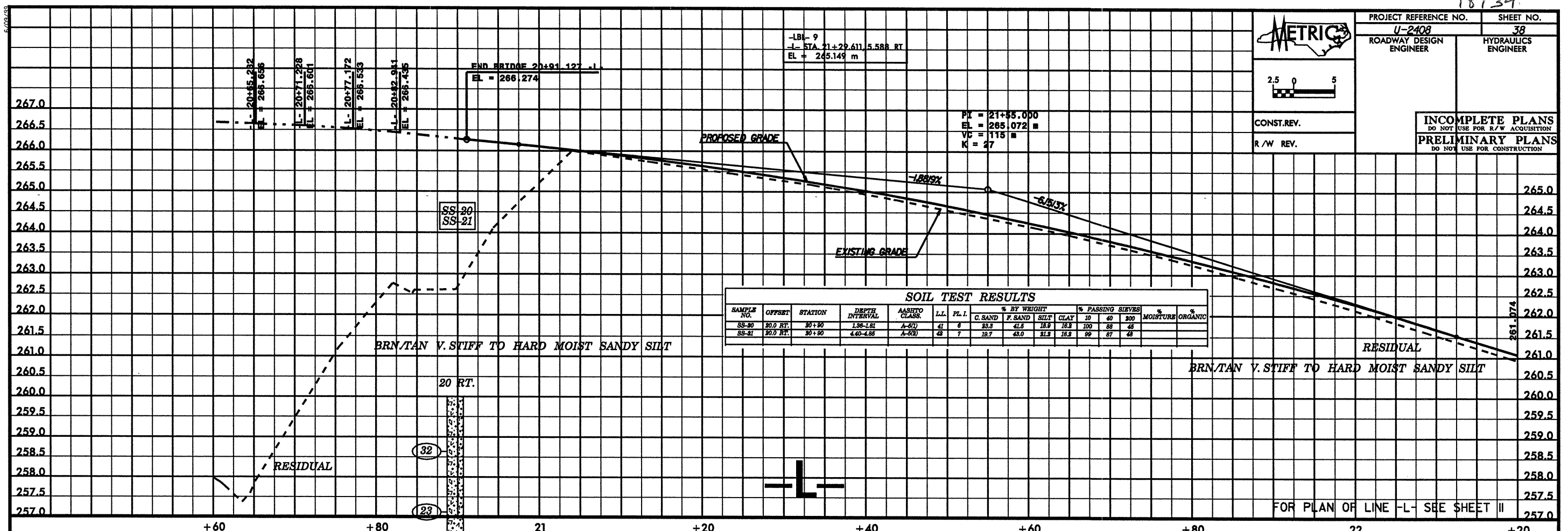
PI = 19+40.000
EL = 265.570 m
VC = 100 m
K = 27



\$\$\$\$\$SYTIME\$\$\$\$\$
\$\$\$\$\$CDN\$\$\$\$\$
\$\$\$\$\$FROM\$\$\$\$\$



PROJECT REFERENCE NO. U-2408	SHEET NO. 38
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION	
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	



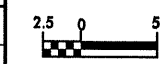
\$\$\$\$\$ SYSTEM TIME\$\$\$\$\$ DGN\$\$\$\$\$ NAME\$\$\$\$\$



PROJECT REFERENCE NO. U-2408 SHEET NO. 39

ROADWAY DESIGN ENGINEER HYDRAULICS ENGINEER

BM #4 EL = 258.690 m
 60 PENNY NAIL SET N 10" PINE 1.5' ABOVE GROUND, 18" FROM EC OF WEST SIDE OF NG-1274 APPROX. 20' EAST FIRE HYDRANT APPROX. 250' EAST ENTRANCE OF DELTA IND. PARK.



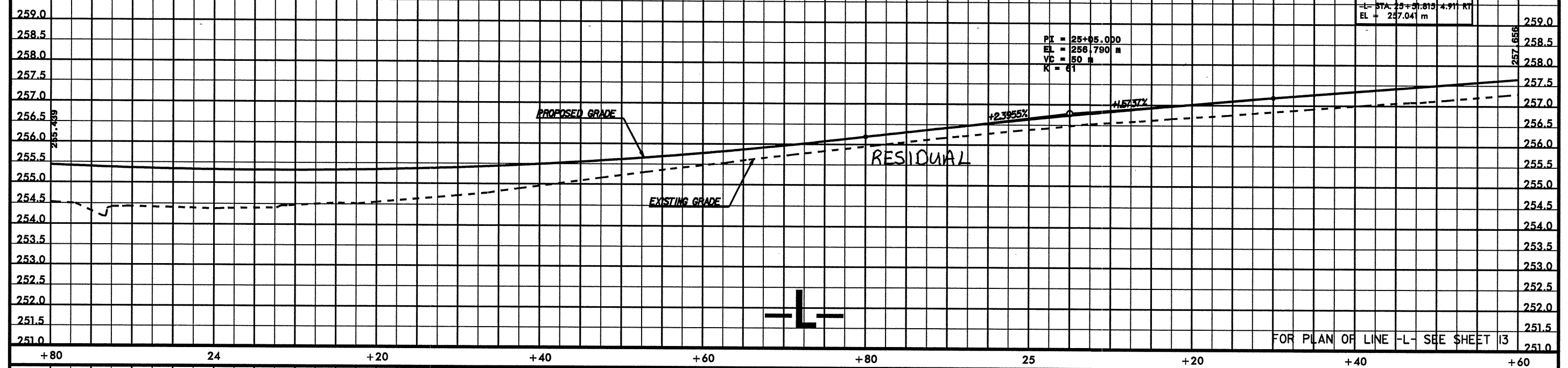
CONST. REV.

R/W REV.

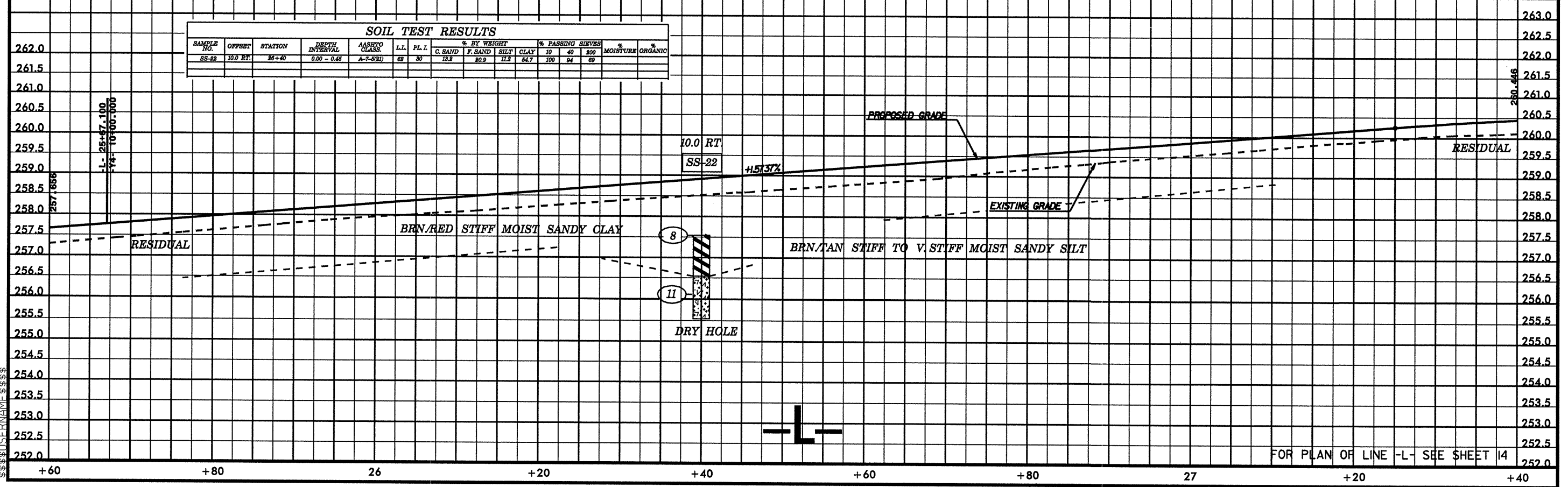
INCOMPLETE PLANS
 DO NOT USE FOR R/W ACQUISITION
 PRELIMINARY PLANS
 DO NOT USE FOR CONSTRUCTION

-LB- 11
 -L- STA. 25+51.813 +4.911 RT
 EL = 257.041 m

PI = 25+05.000
 EL = 256.790 m
 VC = 50 m
 K = 61



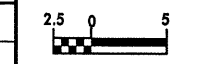
SOIL TEST RESULTS															
SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	ASBESTO CLASS.	L.L.	P.L.I.	% BY WEIGHT				% PASSING SIEVES			MOISTURE	ORGANIC
							C. SAND	F. SAND	SILT	CLAY	10	40	200		
SS-22	10.0 RT	36+40	0.00 - 0.45	A-7-5(2U)	68	30	15.2	20.9	11.2	54.7	100	94	69		



\$\$\$\$\$SYTIME\$\$\$\$\$
 \$\$\$\$\$\$DGN\$\$\$\$\$
 \$\$\$\$\$\$NAME\$\$\$\$\$
 \$\$\$\$\$\$USER\$\$\$\$\$

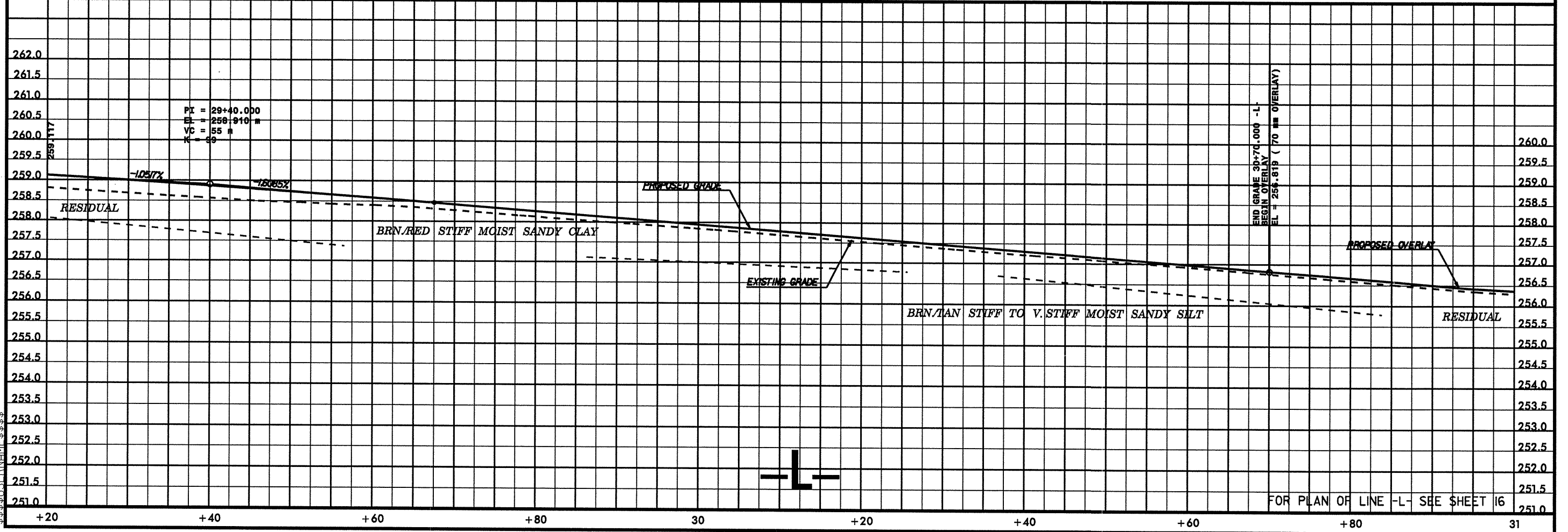
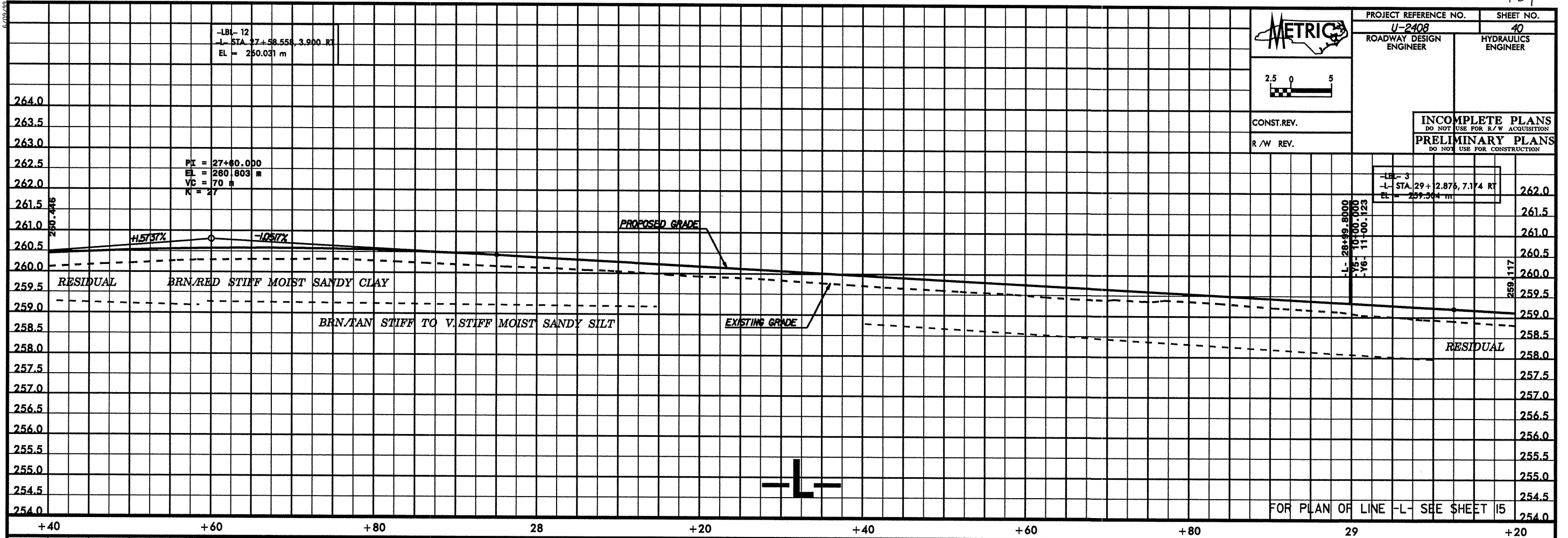


PROJECT REFERENCE NO. U-2408	SHEET NO. 40
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER



CONST. REV.
R/W REV.

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



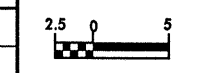
\$\$\$\$\$SYTIME\$\$\$\$\$
\$\$\$\$\$DGN\$\$\$\$\$
\$\$\$\$\$USERNAME\$\$\$\$\$



BM #7 EL=255.648 m
 CHISEL SQUARE ON N.W. SIDE OF CONC. SLAB
 AT TELEPHONE BOOTH, 16' FROM EP OF BESSEMER
 CITY ROAD, (INC 274) ON THE EAST SIDE OF ROAD
 ACROSS FROM BB&T BANK.

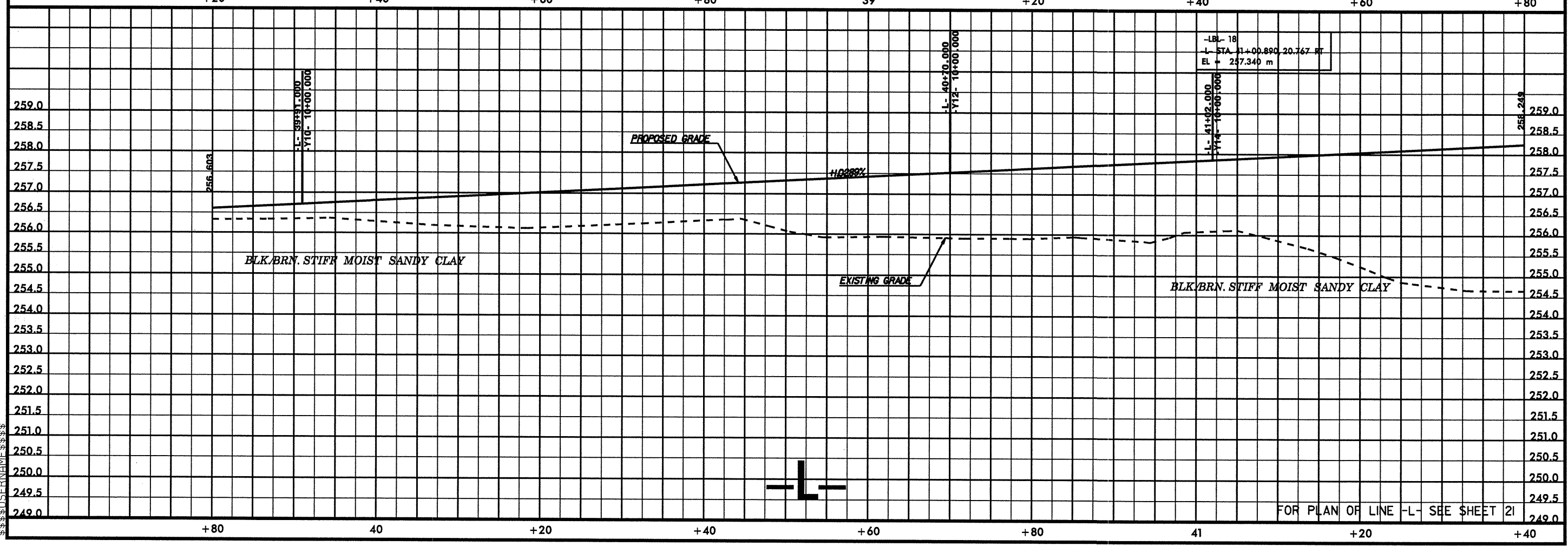
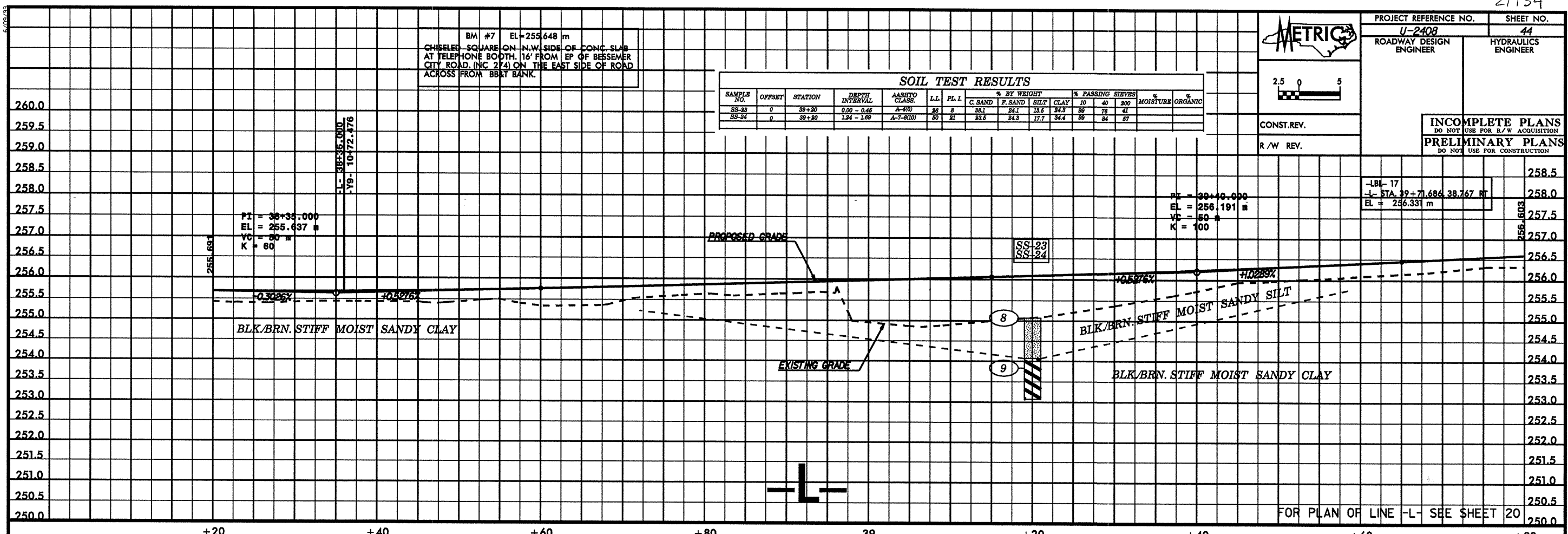
SOIL TEST RESULTS

SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	ASHTO CLASS	L.L.	P.L.	% BY WEIGHT				% PASSING SIEVES		% MOISTURE	% ORGANIC
							C. SAND	F. SAND	SILT	CLAY	#10	#40		
SS-23	0	39+20	0.00 - 0.45	A-2(0)	28	8	38.1	24.1	13.5	24.3	80	75	41	
SS-24	0	39+20	1.24 - 1.69	A-2-5(10)	62	21	23.5	24.3	17.7	34.4	99	84	87	



CONST. REV.
 R/W REV.

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



\$\$\$\$\$SYTIME\$\$\$\$\$
 \$\$\$DGN\$\$\$\$\$
 \$\$\$USERNAME\$\$\$\$\$

-LBL- 23
- STA 49+90.863, 7.653 IT
EL = 244.099 m

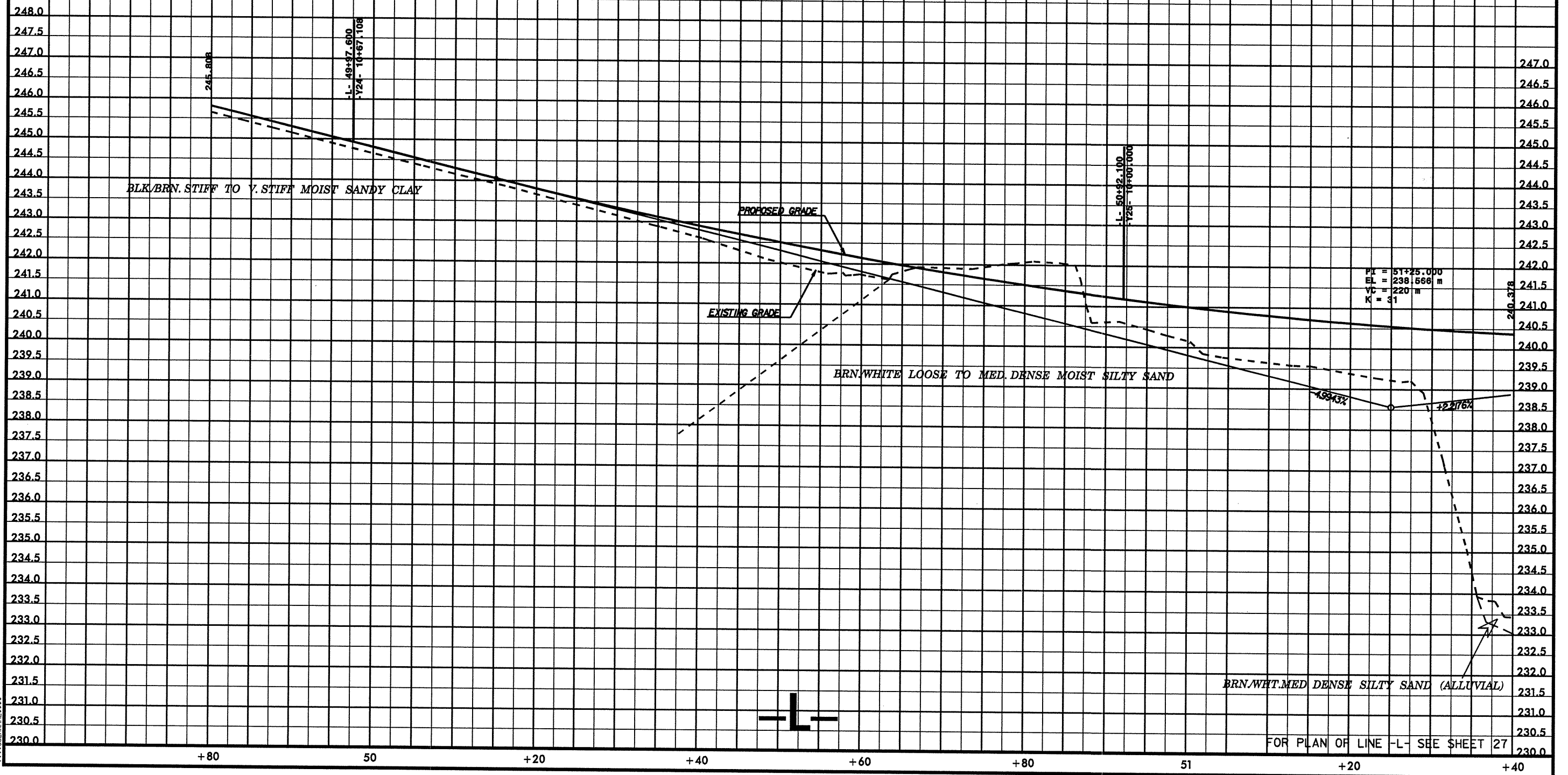


PROJECT REFERENCE NO. U-2408
ROADWAY DESIGN ENGINEER
SHEET NO. 48
HYDRAULICS ENGINEER



CONST. REV.
R / W REV.

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



BM #10 EL = 240.905 m
CHISELED SQUARE ON EAST CORNER OF CONC SLAB AT
TELEPHONE BOOTH, 11' FROM EP OF EAST SIDE OF BESSEMER
CITY ROAD 100 YARD EAST KELLY DINER 200 YARD BACK FROM
INTERSECTION OF BESSEMER CITY ROAD AND MILTON AVE.

-L- 24
-L- STA 52+19.362, 15.749 T
EL = 241.957 m

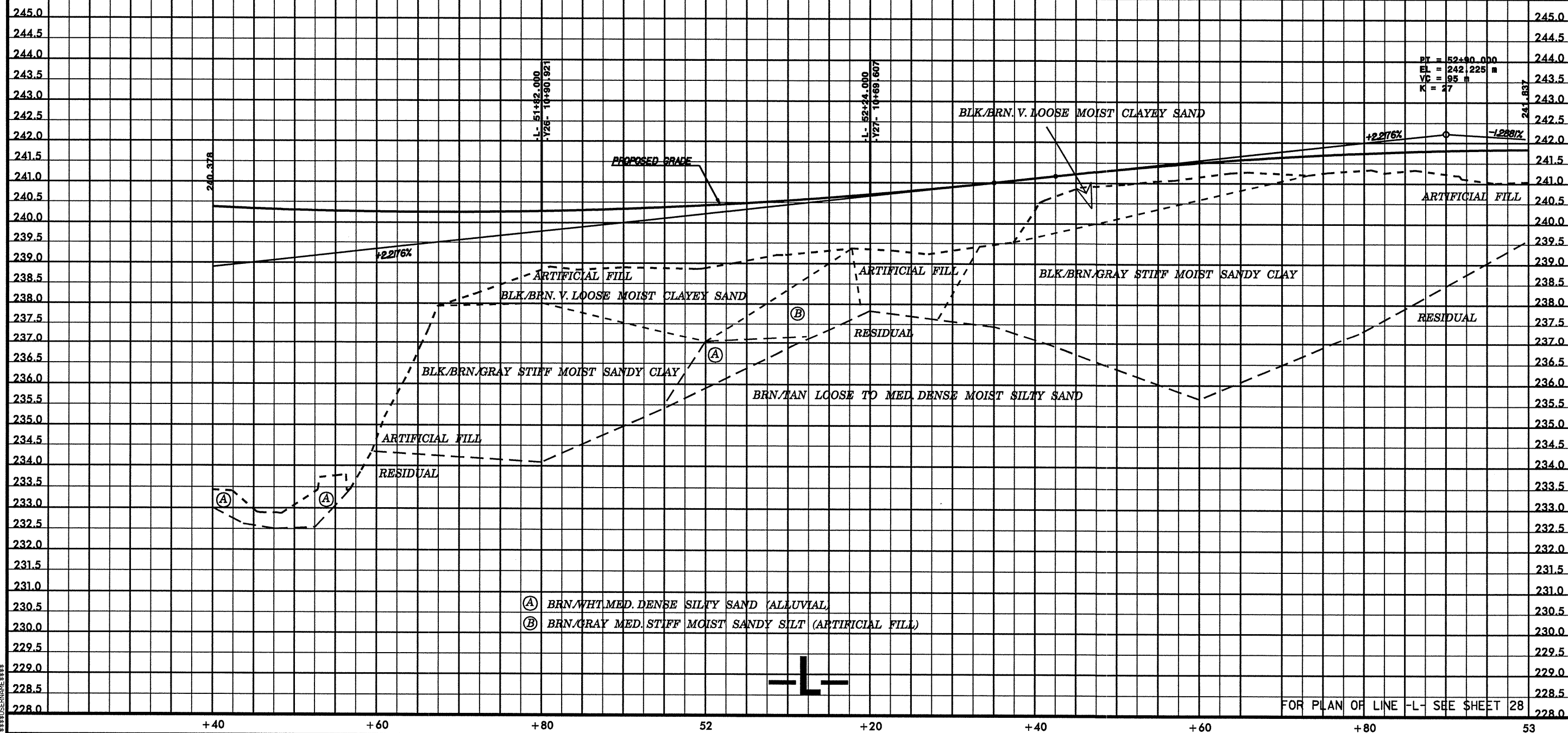


PROJECT REFERENCE NO. U-2408
ROADWAY DESIGN ENGINEER
SHEET NO. 49
HYDRAULICS ENGINEER



CONST. REV.
R/W REV.

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





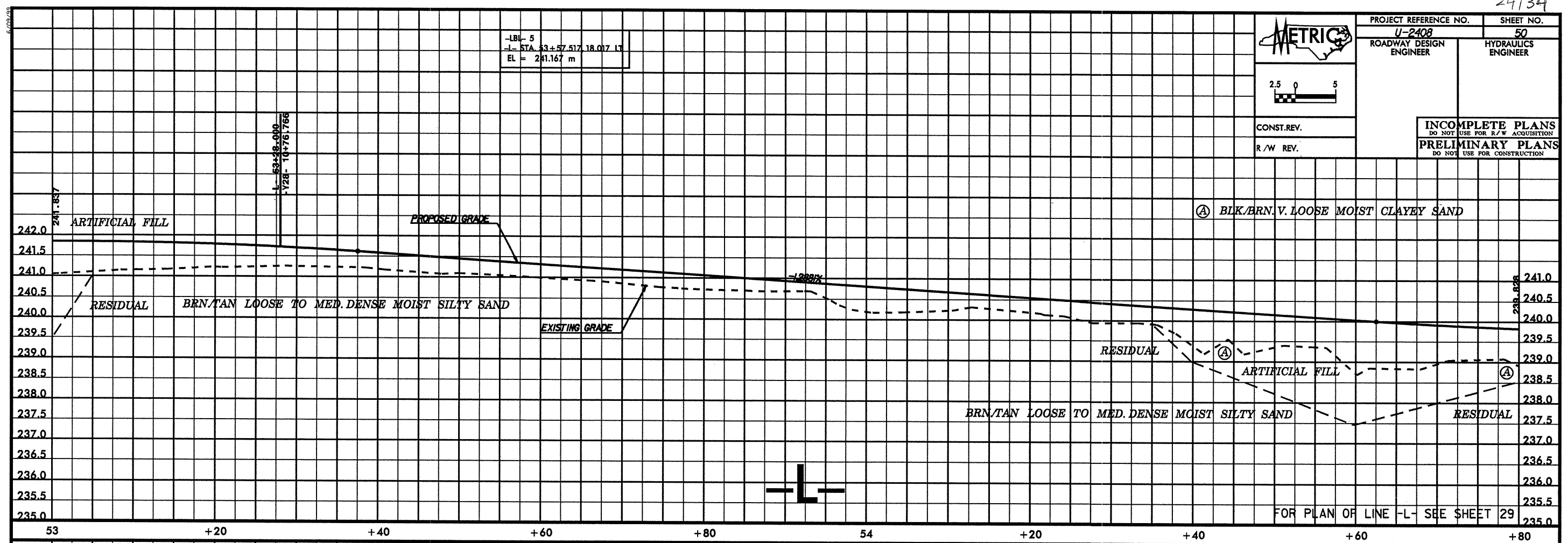
PROJECT REFERENCE NO. U-2408	SHEET NO. 50
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER



CONST. REV.
R/W REV.

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

-L- 5
-L- STA 53+57.517 18.017 LT
EL = 241.167 m



FOR PLAN OF LINE -L- SEE SHEET 29

BM # "103" EL = 239.470 m
CITY OF GASTONIA - CONTROL ALIGNMENT SET
IN SIDEWALK AT THE S.W. QUADRANT OF
INTERSECTION OF FRANKLIN BLVD AND NC 274.
THE SIDEWALK FACES THE EAST BOUND LANE OF
FRANKLIN BLVD.

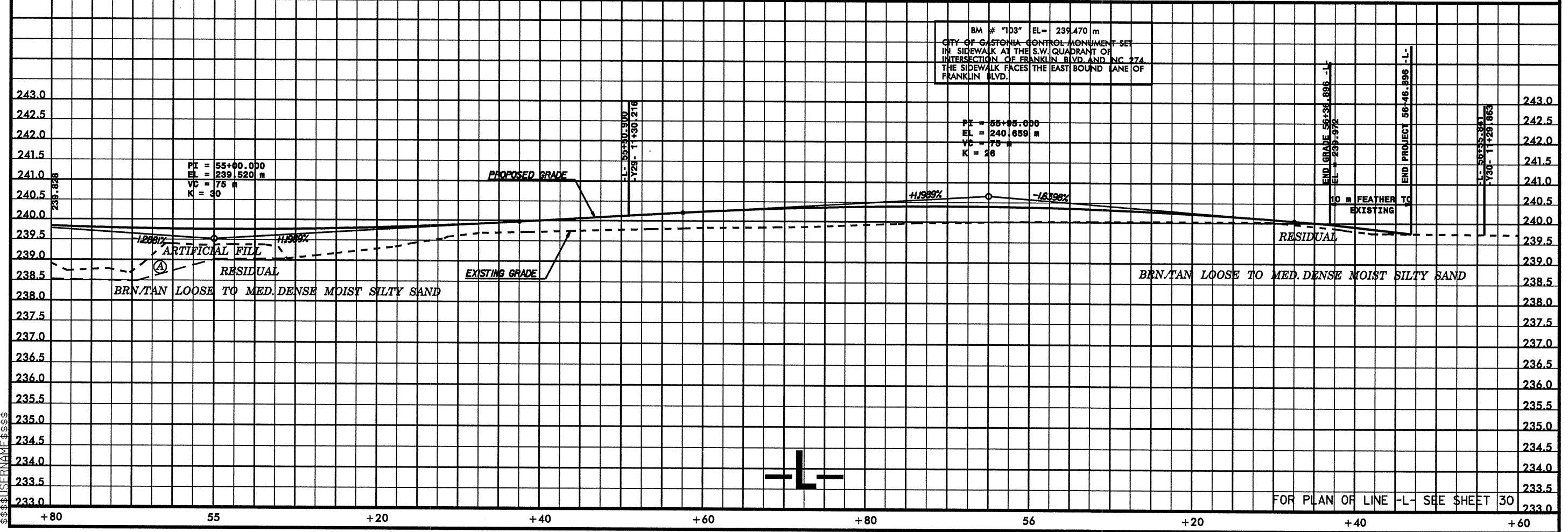
PI = 55+05.000
EL = 240.859 m
VC = 75 m
K = 26

PI = 55+00.000
EL = 239.520 m
VC = 75 m
K = 30

END GRADE 56+38.896 -L-
EL = 239.972

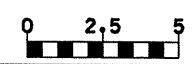
END PROJECT 56+46.896 -L-

EL = 55+32.881
-L- 11+29.863



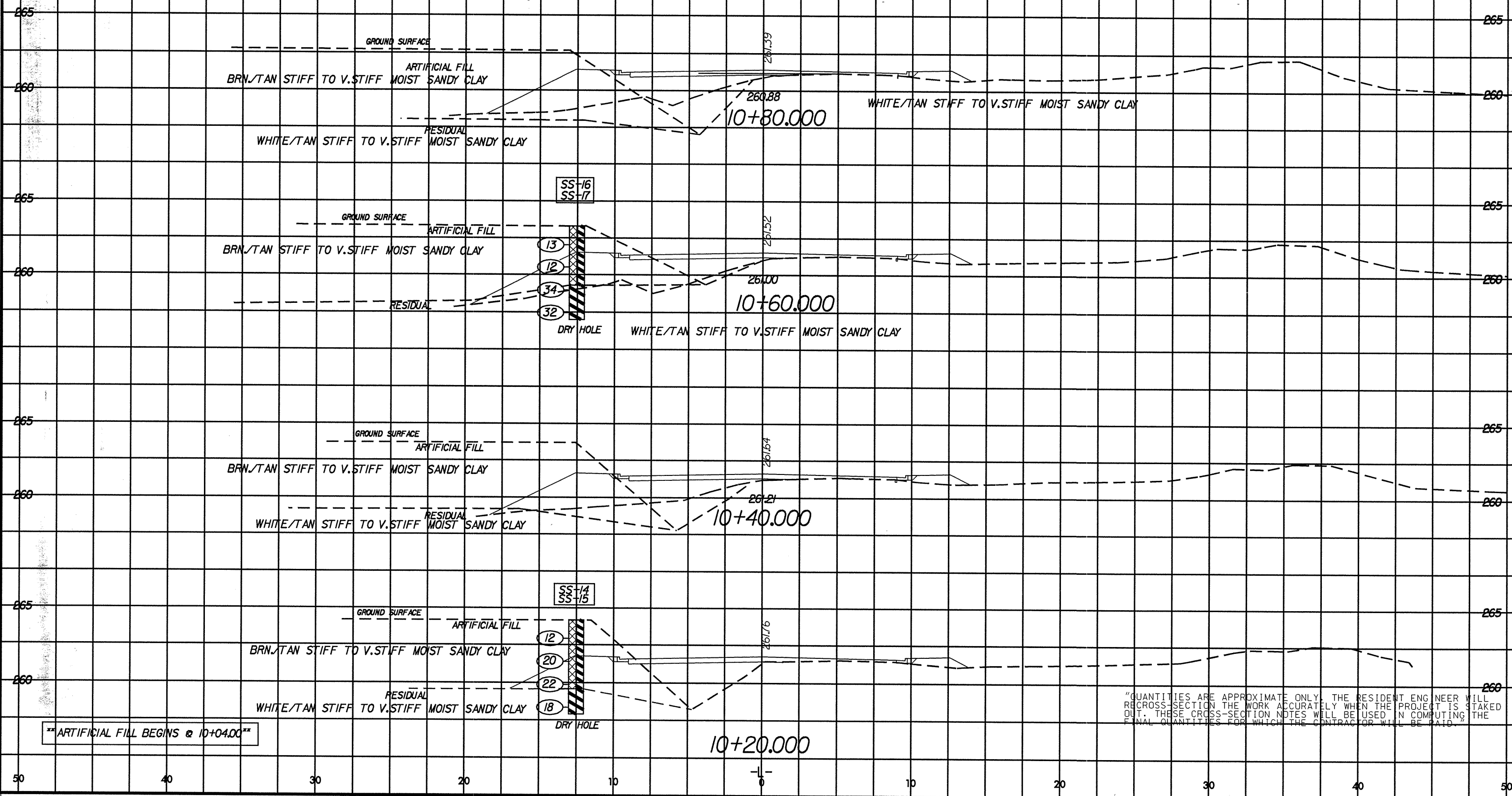
FOR PLAN OF LINE -L- SEE SHEET 30

\$\$\$\$\$SYTIME\$\$\$\$\$
\$\$\$\$\$DGN\$\$\$\$\$
\$\$\$\$\$NAME\$\$\$\$\$



SOIL TEST RESULTS

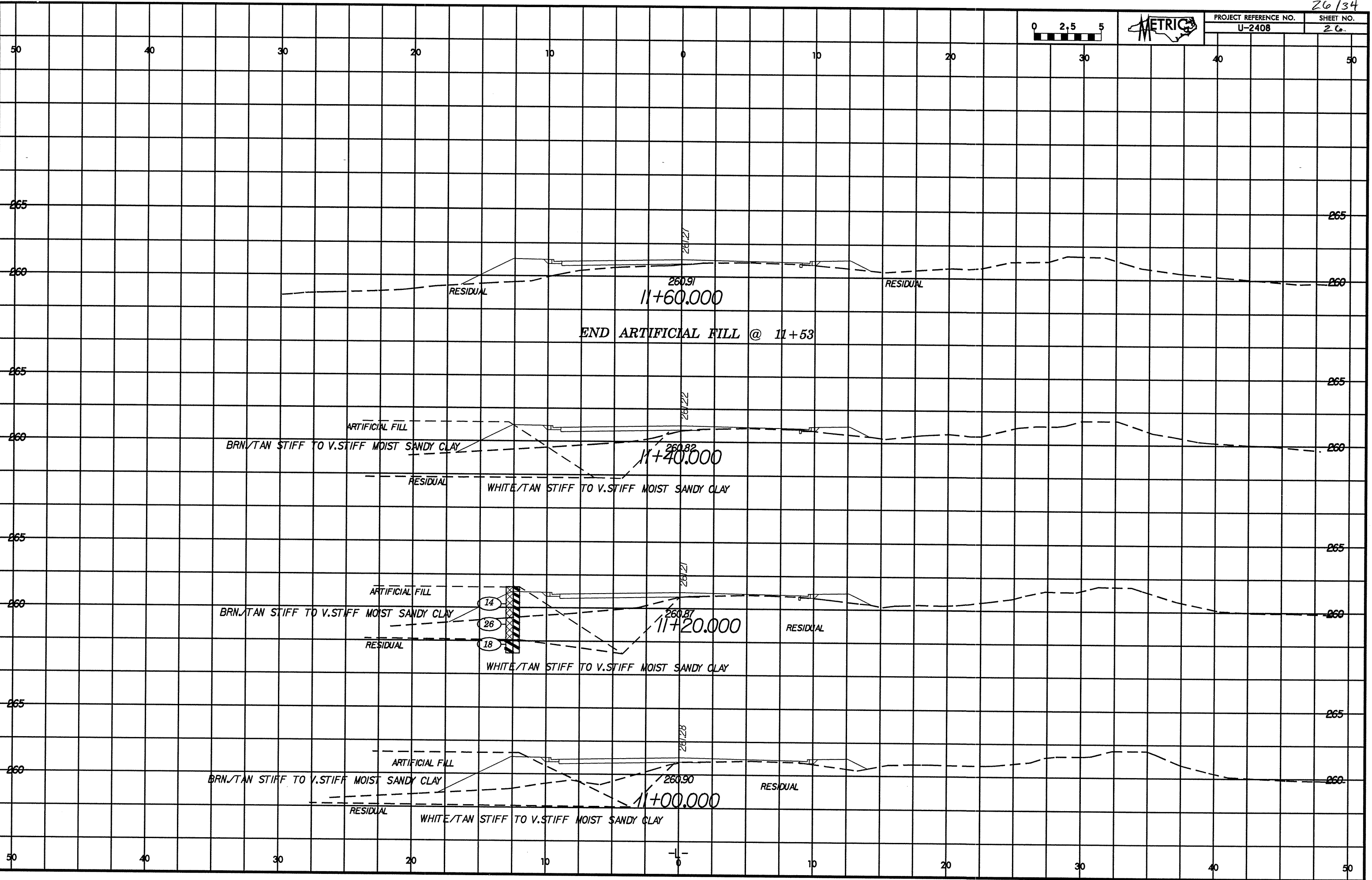
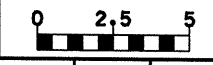
SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.L. I.	% BY WEIGHT				% PASSING SIEVES			% MOISTURE	% ORGANIC
							C. SAND	F. SAND	SILT	CLAY	10	40	200		
SS-14	12.50 LT	10+20	1.27 - 1.72	A-7-6(6)	49	12	21.9	31.0	18.7	28.4	100	87	55		
SS-15	12.50 LT	10+20	5.83 - 6.28	A-7-6(4)	51	11	25.7	32.0	28.1	14.2	99	84	49		
SS-16	12.50 LT	10+60	2.80 - 3.25	A-7-5(17)	54	24	13.4	22.1	15.9	48.6	100	92	70		
SS-17	12.50 LT	10+60	4.32 - 4.77	A-7-6(17)	56	25	18.6	17.0	13.7	60.7	99	88	67		



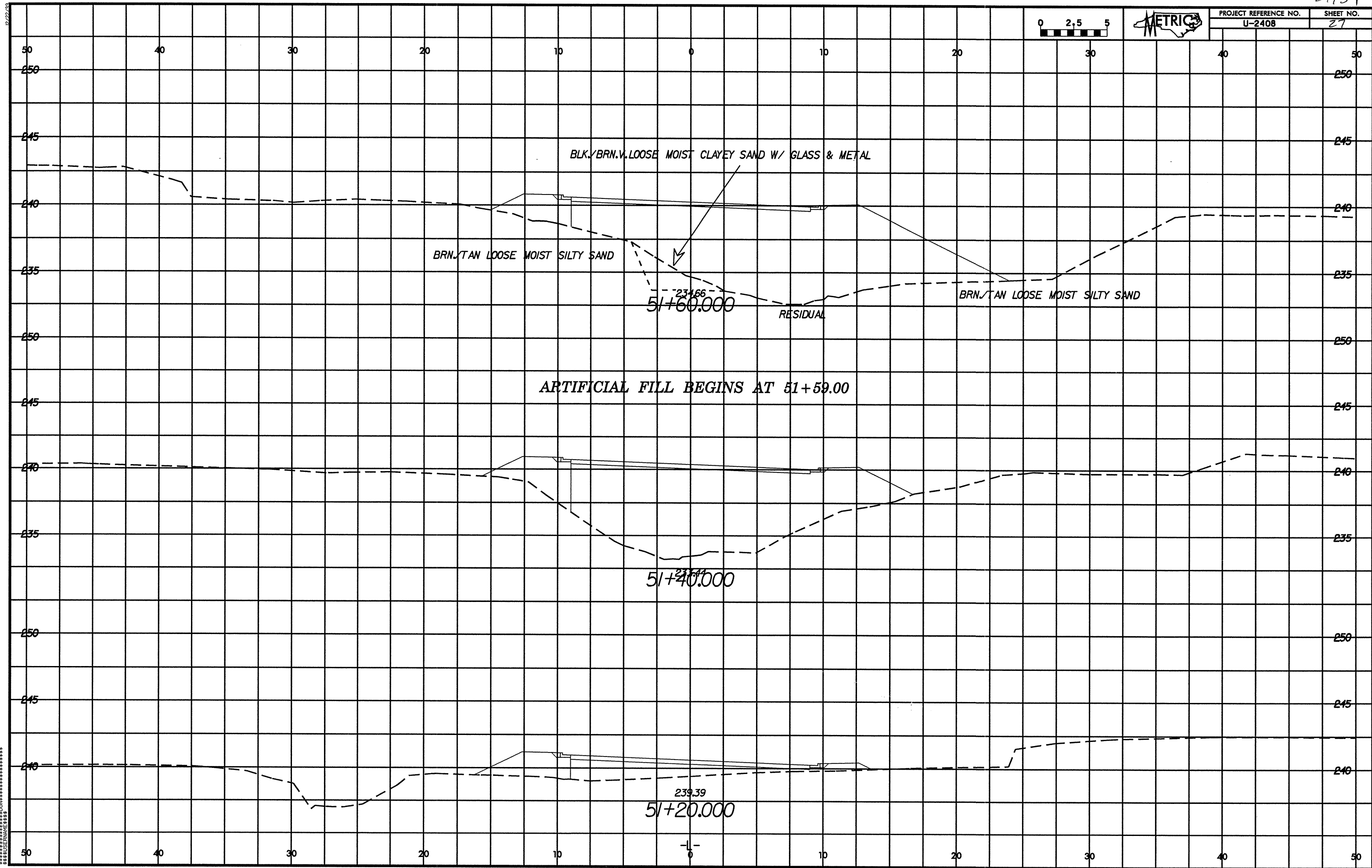
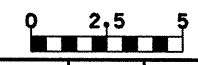
ARTIFICIAL FILL BEGINS @ 10+04.00

"QUANTITIES ARE APPROXIMATE ONLY. THE RESIDENT ENGINEER WILL RE-CROSS-SECTION THE WORK ACCURATELY WHEN THE PROJECT IS STAKED OUT. THESE CROSS-SECTION NOTES WILL BE USED IN COMPUTING THE FINAL QUANTITIES FOR WHICH THE CONTRACTOR WILL BE PAID."

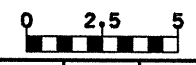
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 DATE: *****
 TIME: *****

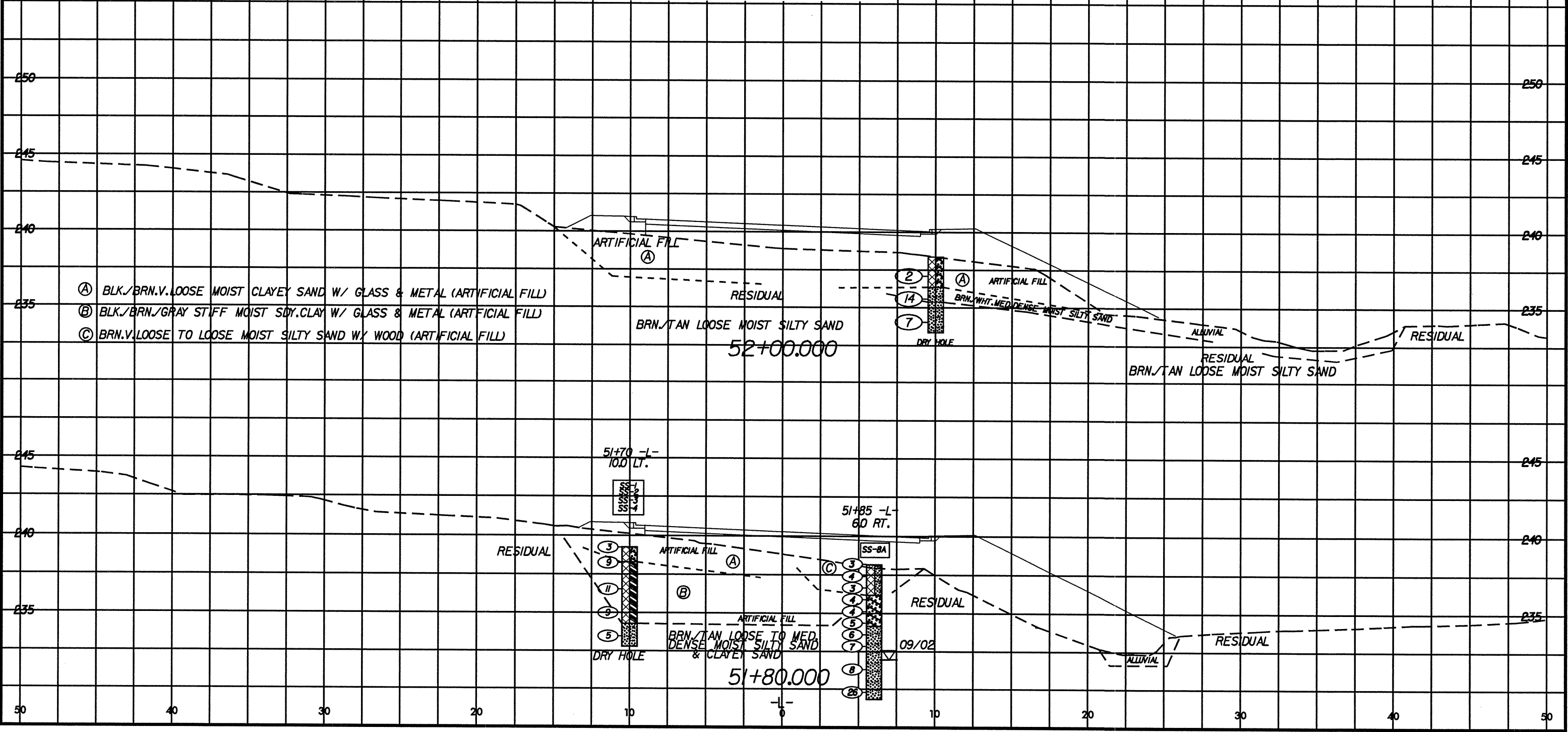


12/22/99
*****DWG. CONTROL*****
*****USER NAME*****

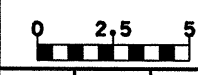


SOIL TEST RESULTS

SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.L. I.	% BY WEIGHT				% PASSING SIEVES			% MOISTURE	% ORGANIC
							C. SAND	F. SAND	SILT	CLAY	10	40	200		
SS-1	10.0 LT.	51+70	0.00 - 0.45	A-2-6(1)	32	15	49.0	27.8	15.1	14.2	78	56	26		
SS-2	10.0 LT.	51+70	1.02 - 1.47	A-6(7)	40	19	28.0	18.4	13.1	40.5	95	78	54		
SS-3	10.0 LT.	51+70	4.28 - 4.73	A-6(1)	38	11	38.7	24.1	23.0	14.2	92	67	39		
SS-4	10.0 LT.	51+70	5.80 - 6.25	A-2-4(0)	40	NP	49.6	24.5	19.8	6.1	85	52	26		
SS-8A	6.0 RT.	51+85	2.28 - 2.73	A-2-6(0)	27	11	50.5	24.2	5.1	20.2	87	56	24		

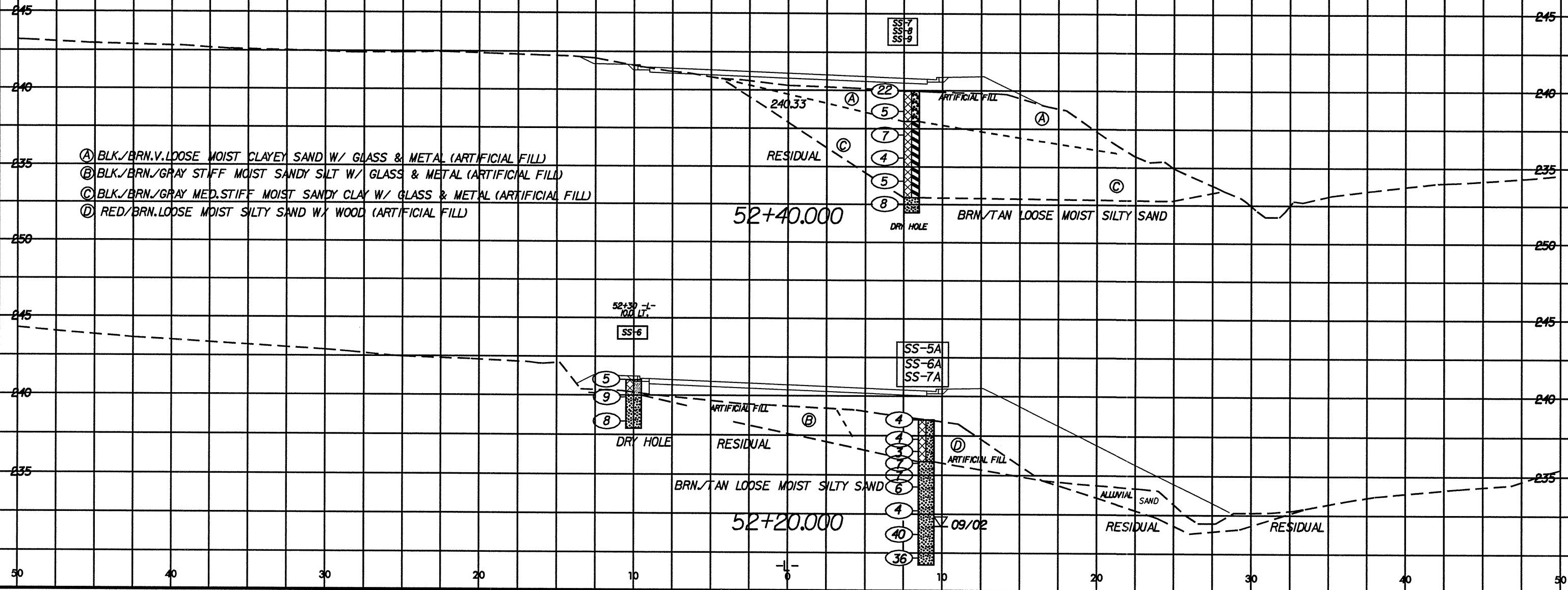


SYSTEMS

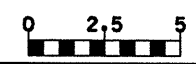


SOIL TEST RESULTS

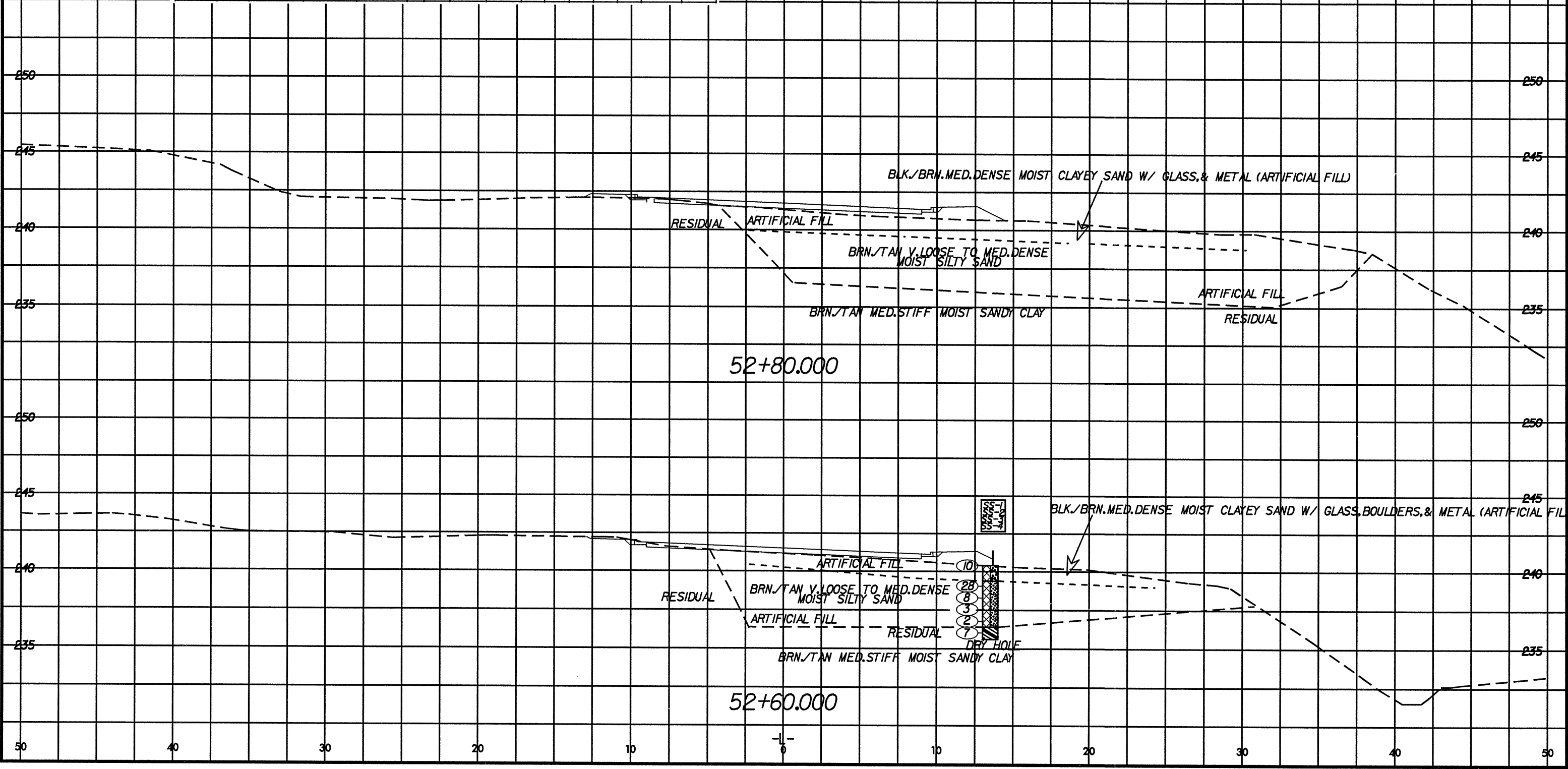
SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	PL. I.	% BY WEIGHT				% PASSING SIEVES			% MOISTURE	% ORGANIC
							C. SAND	F. SAND	SILT	CLAY	10	40	200		
SS-6	10.0 LT.	52+30	0.00 - 0.45	A-4(0)	31	7	34.4	27.8	17.5	20.3	92	73	40		
SS-7	8.0 RT.	52+40	0.00 - 0.45	A-2-6(1)	35	14	40.7	22.5	14.5	22.3	78	57	32		
SS-8	8.0 RT.	52+40	2.86 - 3.31	A-7-5(3)	42	12	27.8	30.8	13.1	28.4	100	83	48		
SS-9	8.0 RT.	52+40	7.42 - 7.87	A-2-5(0)	47	NP	44.2	34.7	15.1	6.1	91	61	26		
SS-5A	9.0 RT.	52+20	0.00 - 0.45	A-2-4(0)	32	8	42.8	28.1	12.9	16.2	80	58	27		
SS-6A	9.0 RT.	52+20	1.24 - 1.71	A-2-4(0)	35	10	46.9	20.4	16.6	16.2	85	55	30		
SS-7A	9.0 RT.	52+20	3.52 - 3.97	A-2-5(0)	42	NP	46.3	33.5	12.1	8.1	93	61	25		



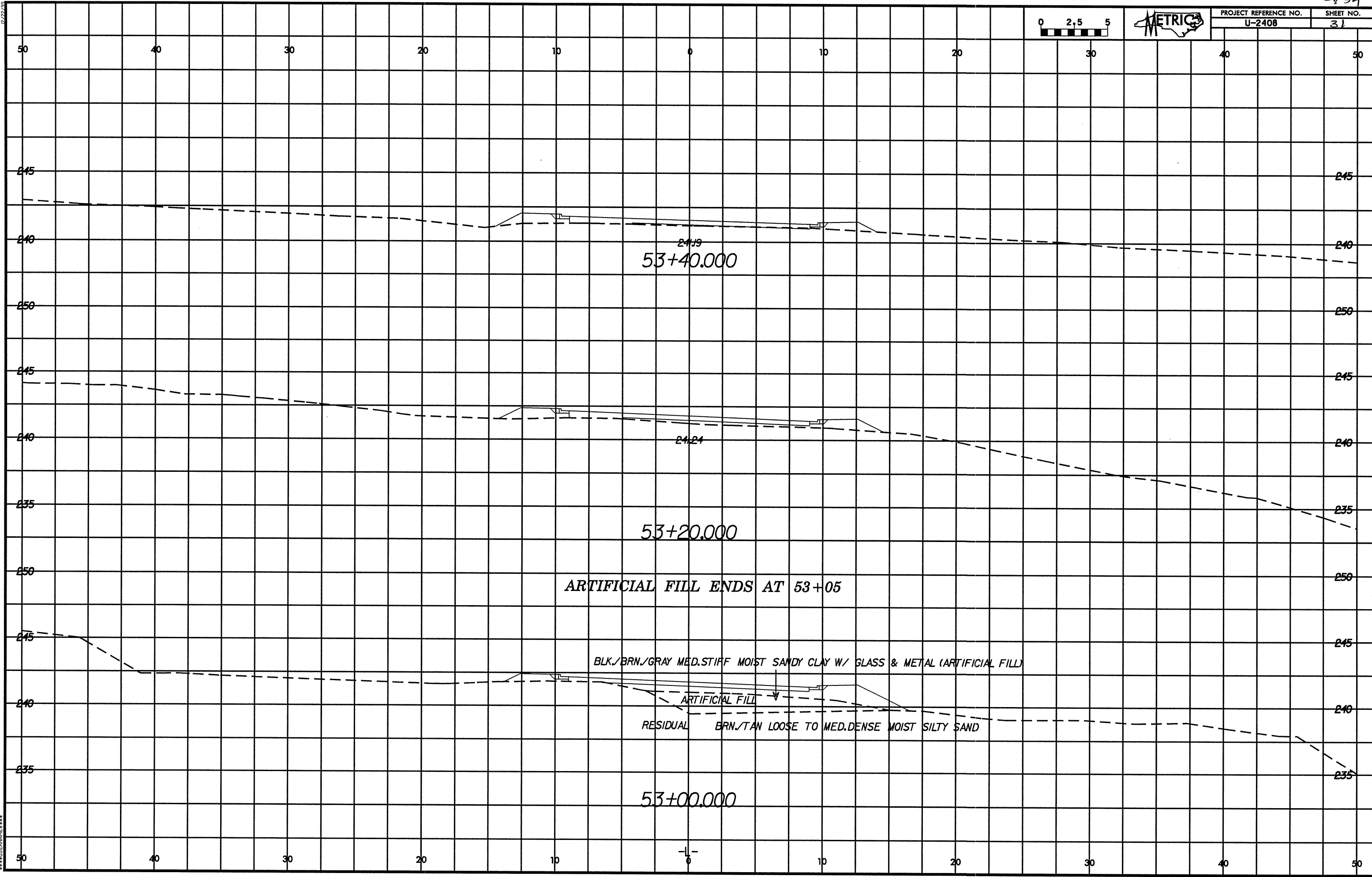
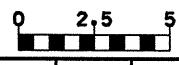
*****SYSTEMS TIME*****
 *****COURTESY*****
 *****MUSGRAVE*****



SOIL TEST RESULTS															
SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.L.I.	% BY WEIGHT				% PASSING SIEVES			% MOISTURE	% ORGANIC
							C. SAND	F. SAND	SILT	CLAY	10	40	200		
SS-1	13.5	52+60	0.00 - 0.45	A-2-6(0)	38	13	38.6	25.9	13.3	22.2	72	54	29		
SS-2	13.5	52+60	1.31 - 1.76	A-2-4(0)	36	6	63.9	16.4	12.5	16.2	73	49	23		
SS-3	13.5	52+60	2.83 - 3.28	A-2-4(0)	39	4	41.2	31.7	14.9	12.1	90	65	29		
SS-4	13.5	52+60	4.65 - 4.80	A-6(0)	38	11	41.8	24.2	13.7	20.2	95	65	36		



CUSTOMER USE ONLY



24.19
53+40.000

24.21

53+20.000

ARTIFICIAL FILL ENDS AT 53+05

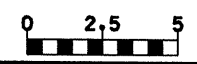
BLK./BRN./GRAY MED. STIFF MOIST SANDY CLAY W/ GLASS & METAL (ARTIFICIAL FILL)

ARTIFICIAL FILL

RESIDUAL BRN./TAN LOOSE TO MED. DENSE MOIST SILTY SAND

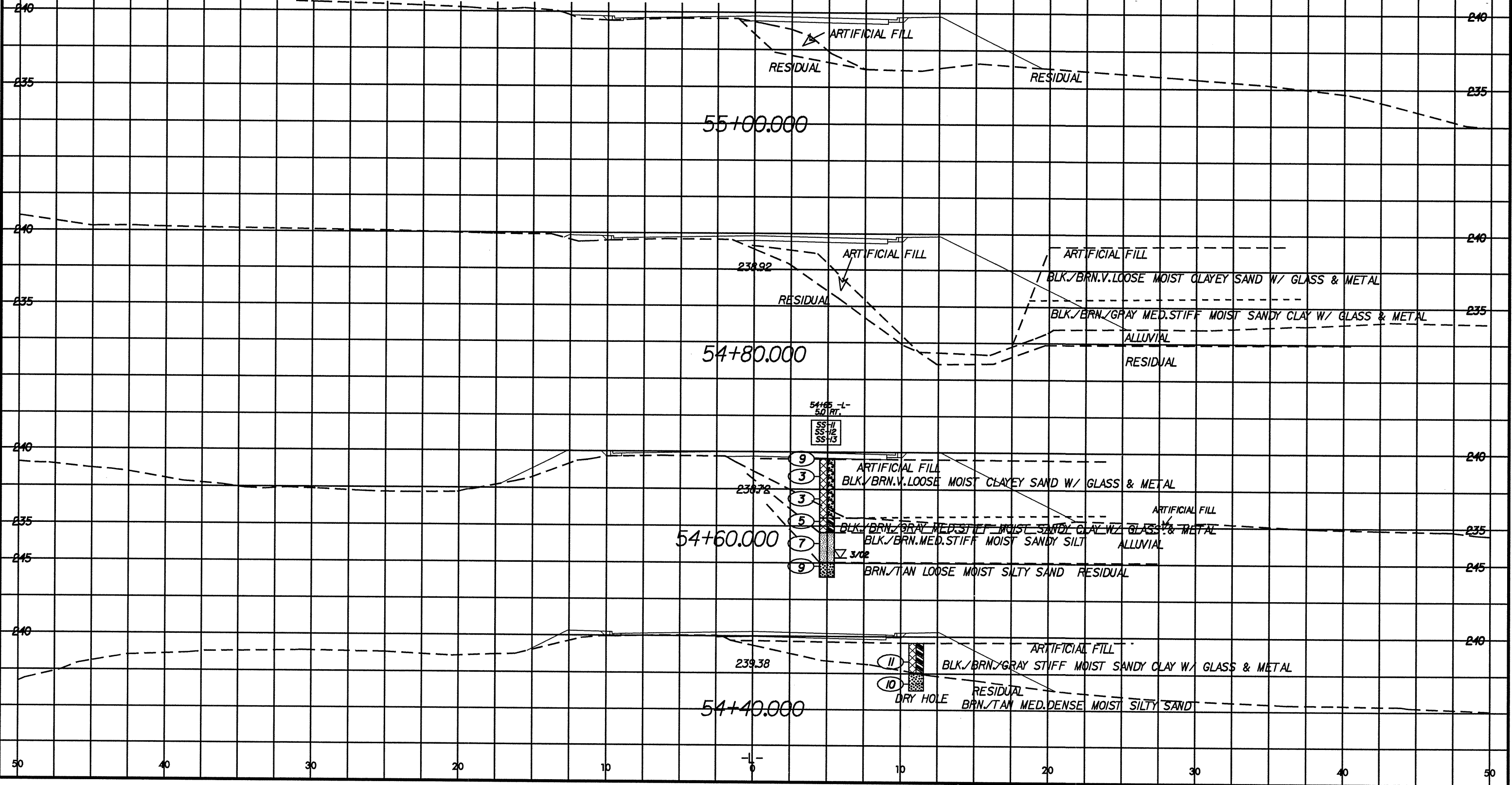
53+00.000

*****SYTIME*****
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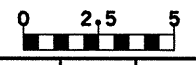
SOIL TEST RESULTS

SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.L.I.	% BY WEIGHT				% PASSING SIEVES			% MOISTURE	% ORGANIC
							C. SAND	F. SAND	SILT	CLAY	10	40	200		
SS-11	5.0	54+65	4.23 - 4.68	A-6(4)	39	13	29.4	22.7	17.5	30.4	95	77	50		
SS-12	5.0	54+65	5.75 - 6.21	A-4(0)	24	7	37.1	26.1	16.5	20.3	100	76	41		
SS-13	5.0	54+65	7.27 - 7.72	A-2-4(0)	32	NP	36.1	34.7	17.1	12.2	98	78	35		



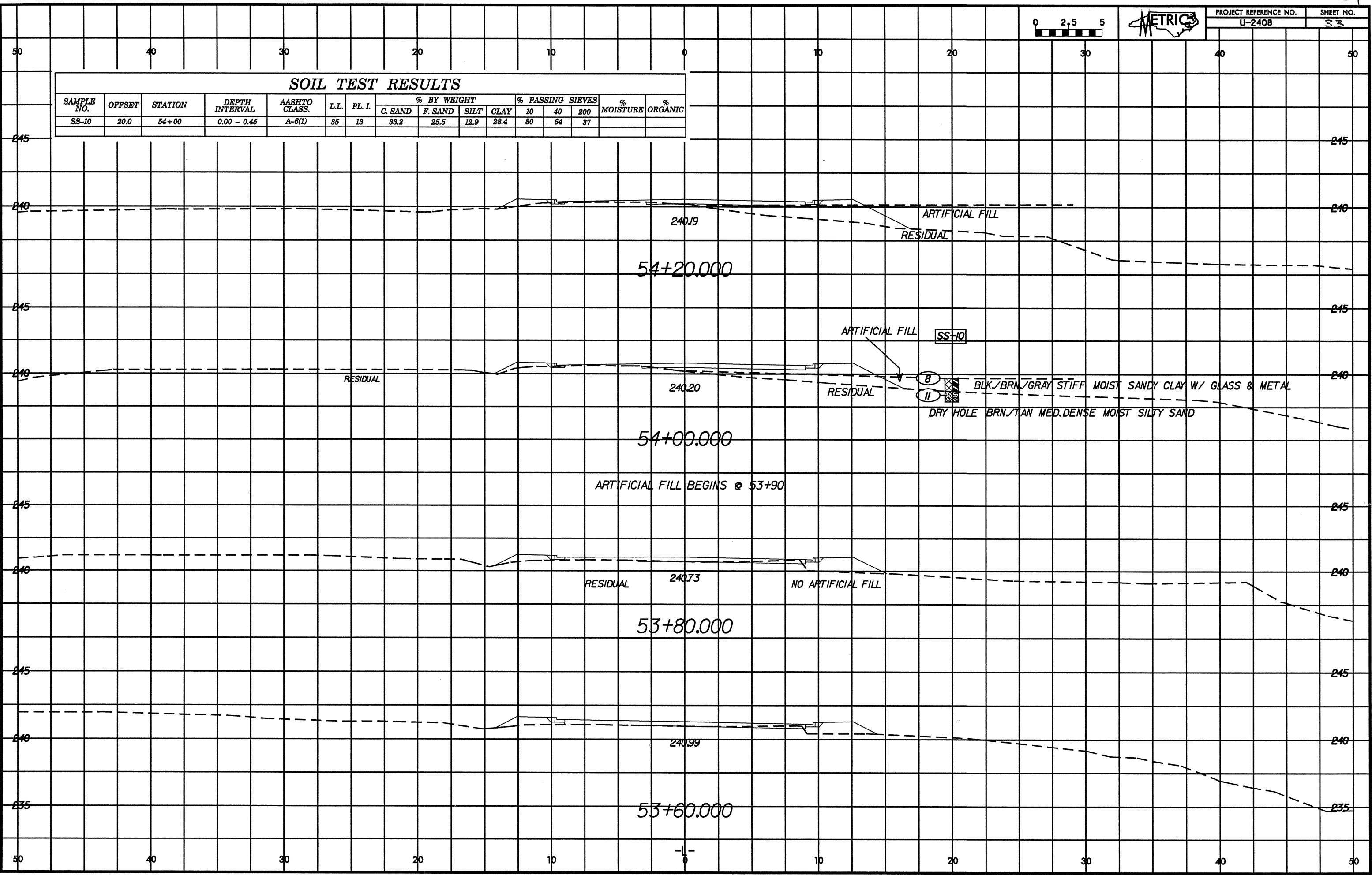
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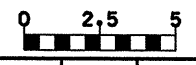


SOIL TEST RESULTS

SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.L. I.	% BY WEIGHT				% PASSING SIEVES			% MOISTURE	% ORGANIC
							C. SAND	F. SAND	SILT	CLAY	10	40	200		
SS-10	20.0	54+00	0.00 - 0.45	A-6(1)	85	13	33.2	25.5	12.9	28.4	80	64	37		



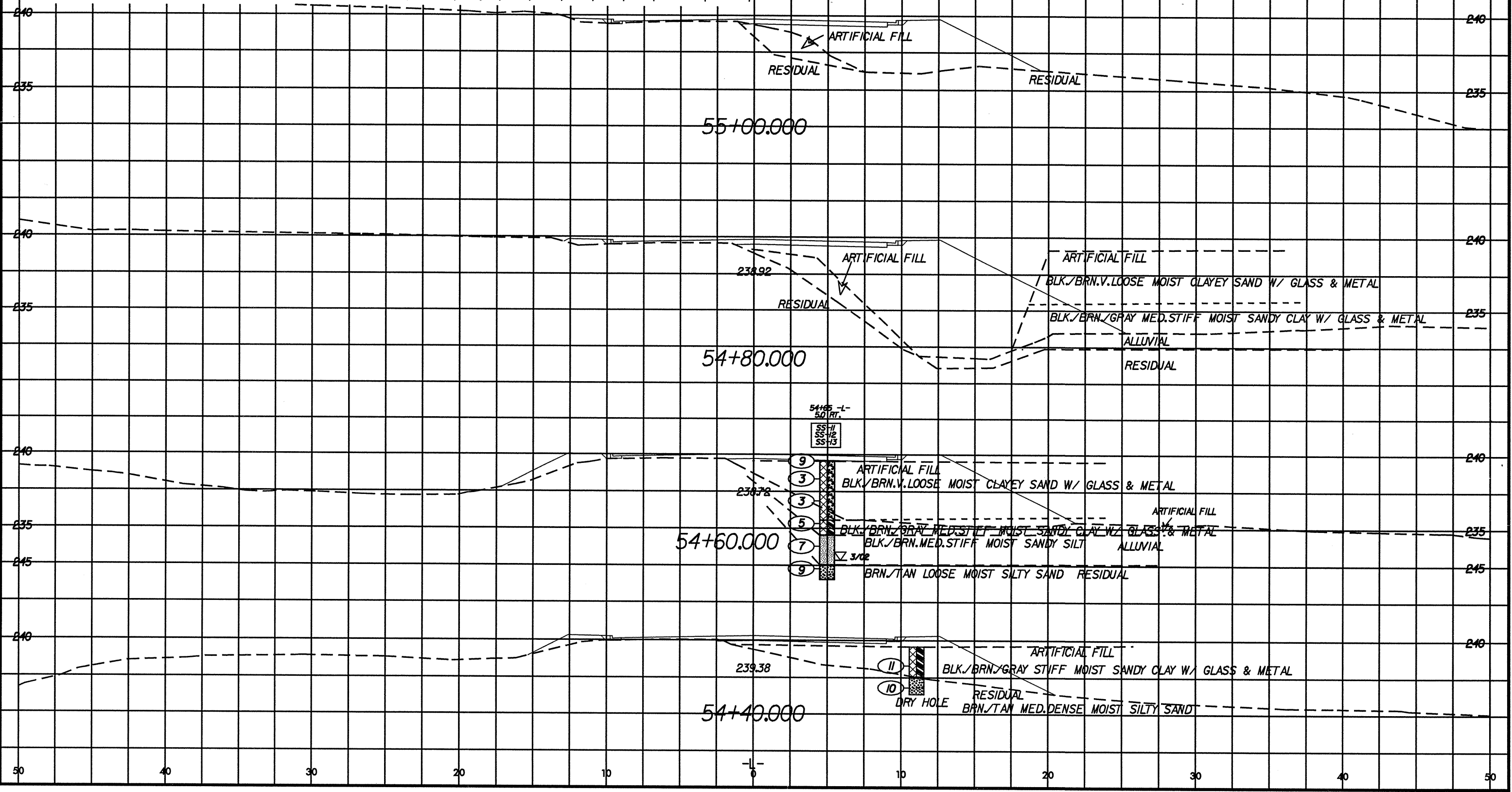
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SOIL TEST RESULTS

SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.L. I.	% BY WEIGHT				% PASSING SIEVES			% MOISTURE	% ORGANIC
							C. SAND	F. SAND	SILT	CLAY	10	40	200		
SS-11	5.0	54+65	4.23 - 4.68	A-6(4)	39	13	29.4	22.7	17.5	30.4	95	77	50		
SS-12	5.0	54+65	5.75 - 6.21	A-4(0)	24	7	37.1	26.1	16.5	20.3	100	76	41		
SS-13	5.0	54+65	7.27 - 7.72	A-2-4(0)	32	NP	36.1	34.7	17.1	12.2	98	78	35		

END FILL @ 55+10.0000



*****SYSTEMS*****
*****CUSTOMER*****