

CONTRACT: C201188 ID. R-3415

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

N.C.	R-3415	1	39
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	
34541.1.1		P.E.	
34541.2.1		RW & UTILITIES	
34541.3.2		CONSTR.	

CAUTION NOTICE

THE SUBSURFACE INFORMATION AND THE SUBSURFACE INVESTIGATION ON WHICH IT IS BASED WAS MADE FOR THE PURPOSE OF STUDY, PLANNING AND DESIGN AND NOT FOR CONSTRUCTION OR PAY PURPOSES. THE VARIOUS FIELD BORING LOGS, ROCK CORES, AND SOIL TEST DATA AVAILABLE MAY BE REVIEWED OR INSPECTED IN RALEIGH BY CONTACTING THE N.C. DEPARTMENT OF TRANSPORTATION, GEOTECHNICAL UNIT @ (919) 250-4088. NEITHER THE SUBSURFACE PLANS AND REPORTS, NOR THE FIELD BORING LOGS, ROCK CORES, OR SOIL TEST DATA IS PART OF THE CONTRACT.

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 ON-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 WIND, AS WELL AS OTHER NON-CLIMATIC FACTORS.

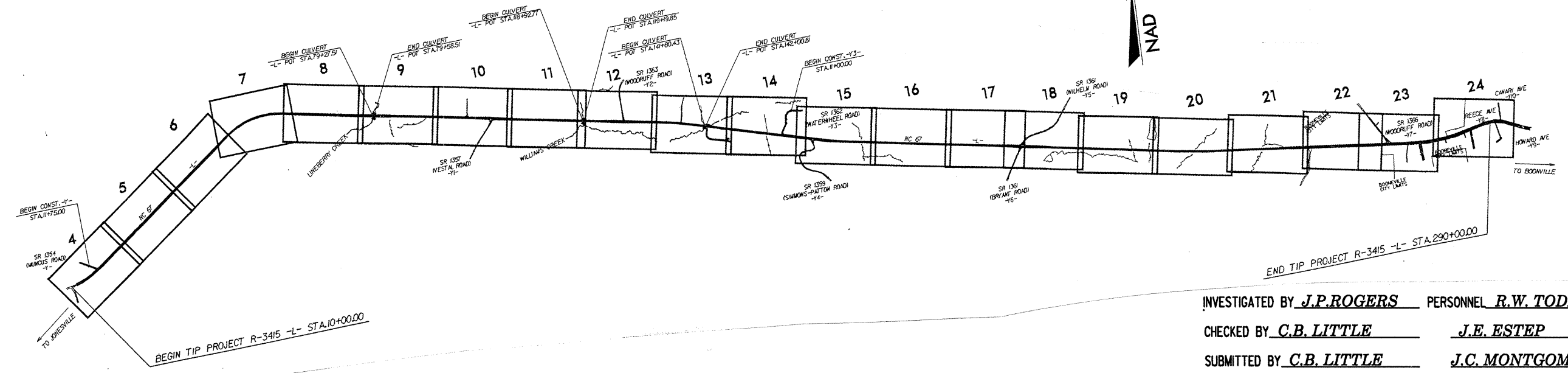
THE BIDDER OR CONTRACTOR IS CAUTIONED THAT DETAILS SHOWN ON THE SUBSURFACE PLANS ARE PRELIMINARY ONLY AND IN MANY CASES THE FINAL DESIGN DETAILS ARE DIFFERENT. FOR BIDDING AND CONSTRUCTION PURPOSES, REFER TO THE CONSTRUCTION PLANS AND DOCUMENTS FOR FINAL DESIGN INFORMATION ON THIS PROJECT. THE DEPARTMENT 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 INVENTORY

CONTENTS:

LINE	STATION	SHEET NUMBERS		
		PLAN	PROFILE	X-SECTS.
-L-	10+00 TO 290+00	4-24	25-35	36-38
	INVENTORY REPORT	3A		

STATE PROJECT 34541.3.2 I.D. NO. R-3415
 F.A. PROJECT _____
 COUNTY YADKIN
 DESCRIPTION NC 67 FROM SR 1355
(MESSICK RD.) TO US 601 IN
BOONVILLE

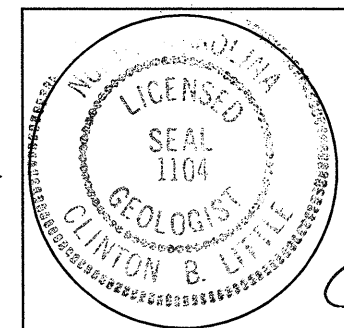


INVESTIGATED BY J.P. ROGERS PERSONNEL R.W. TODD
 CHECKED BY C.B. LITTLE J.E. ESTEP
 SUBMITTED BY C.B. LITTLE J.C. MONTGOMERY
 DATE JANUARY 2002

DRAWN BY: T.A. MECHUM

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

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



SEAL
 SIGNATURE C.B. Little

09/08/99

R-3415

PROJECT: 6.771008

PROJECT: 6.771008

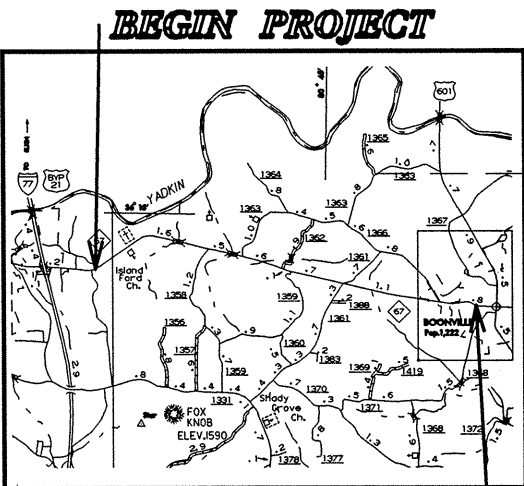
See Sheet 1-A For Index of Sheets

STATE OF NORTH CAROLINA DIVISION OF HIGHWAYS

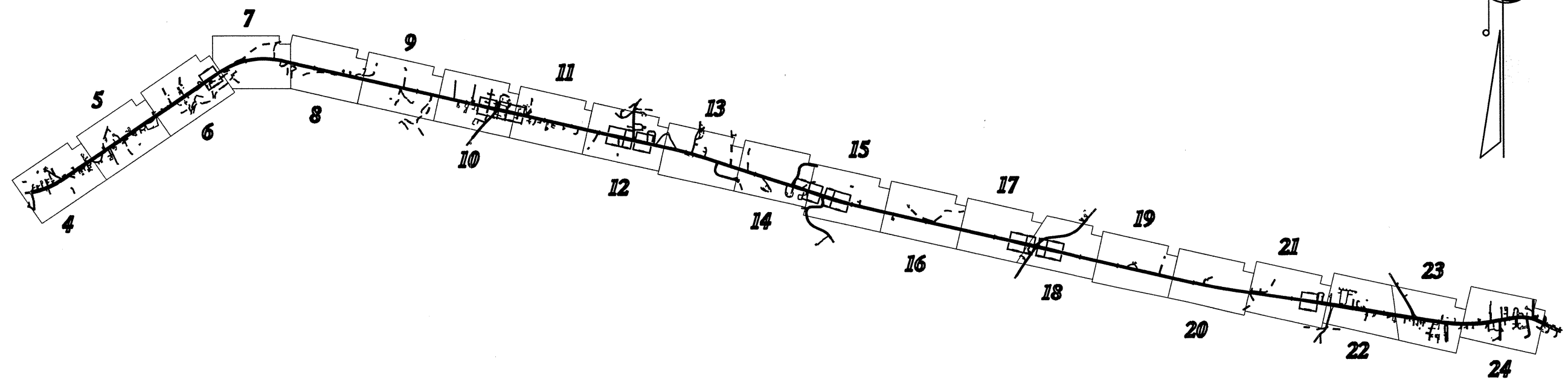
YADKIN

LOCATION: NC 67 FROM SR 1356 (MESSICK RD) TO
JUST WEST OF BOONVILLE

TYPE OF WORK: WIDENING, RESURFACING, DRAINAGE
AND PAVMENT MARKINGS

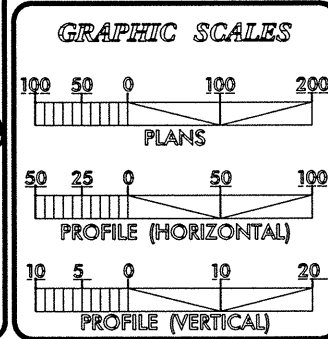


BEGIN PROJECT
VICINITY MAP
END PROJECT



STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	R-3415	2A39	
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	

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



DESIGN DATA

ADT 2000 = 7600
ADT 2025 = 13800

DHV = 10 %
D = 60 %
T = 5 % *
V = 50 MPH

* TTST 2 % DUAL 3 %

PROJECT LENGTH

LENGTH ROADWAY PROJECT = 6.2 MILES

TOTAL LENGTH PROJECT = 6.2 MILES

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

1995 STANDARD SPECIFICATIONS

RIGHT OF WAY DATE: _____

LETTING DATE: _____

SIGNATURE: _____ P.E.
DATE: _____

DIVISION OPERATION ENGINEER
W.O. ATKINS, PE

SIGNATURE: _____ P.E.
DATE: _____

DIVISION DESIGN ENGINEER
N.K. TURNER, PE

SIGNATURE: _____ P.E.
DATE: _____



STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION

MIKE F. EASLEY
GOVERNOR

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

LYNDO TIPPETT
SECRETARY

February 27, 2002

STATE PROJECT: 6.771008 (R-3415)
COUNTY: Yadkin
DESCRIPTION: NC 67 from SR 1356 (Messick Rd.) to Just West of Boonville
SUBJECT: Geotechnical Report - Inventory

This project is located in western Yadkin County west of the city of Boonville. The project begins at a point approximately 0.75 miles east of I-77 and proceeds due east. Total length of lines investigated is 5.30 miles. Typical sections call for a two-lane non-divided facility with paved shoulders.

The Geotechnical field investigation was conducted in November of 2001. Field data was primarily collected with a CME 550-power auger machine equipped with an automatic hammer for Standard Penetration tests. Our borings were concentrated primarily in the cut sections and lowland areas of the project. Also, we utilized a variety of hand tools (probes, hand augers) combined with visual reconnaissance to aid in developing our soil profiles.

Geologically, the project corridor is underlain predominantly by metagraywacke and amphibolite of the Sauratown Mountain Anticlinorium. Topography consists of gently rolling hills with relief of about 190' - 200' between the upland and lowland portions of the project.

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

<u>Line</u>	<u>Stations</u>
-L-	10+00 to 290+00

Items of Special Geotechnical Interest

- Groundwater
Groundwater was not encountered within six feet of proposed grade within the project corridor.

- Hard Rock
Hard rock was encountered above or within 10' of proposed grade at the following location:

<u>Line</u>	<u>Station</u>
-L-	162+50 to 164+50 (right)

The cross-sections for these areas can be found at the back of the attached inventory plans and profiles.

- Water Wells
While there are no water wells that fall within the construction limits, there are two wells that fall within 100' of the proposed construction. Their locations are as follows:

<u>Station</u>	<u>Offset</u>
43+90 -L-	155.0' Left
145+10 -L-	55.0' Right

- UST's
There is one area within the project corridor (right of Sta. 201+00 -L-) where Underground Storage Tanks (UST's) could be encountered. An abandoned one-story business is also located on the property.

- Alluvial Deposits
Alluvial soils were encountered throughout the project corridor. These soils consist primarily of very loose to loose silty/clayey sand (A-2-4, A-2-6, A-1-b), soft to medium stiff sandy silt (A-4), and very soft to stiff sandy clay (A-6). Where encountered, these soils range in thickness from approximately three to 18.0'.

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-6, A-7-5, and A-7-6) cap most of the hills and are approximately five to 25 feet in thickness. In addition to these clays, a variety of saprolite soils are present. These include sandy silts (A-4, A-5) and silty sands (A-2-4, A-2-5) plus some weathered rock and hard rock.

Alluvial soils on the project are discussed in the above section.

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

Respectfully submitted,
J. P. Rogers
J. P. Rogers

cc: Div. 11 Engineer

EARTHWORK SUMMARIES

Volumes in Cubic Yards

PROJECT R-3415

COUNTY Yadkin

DATE 12/07/04

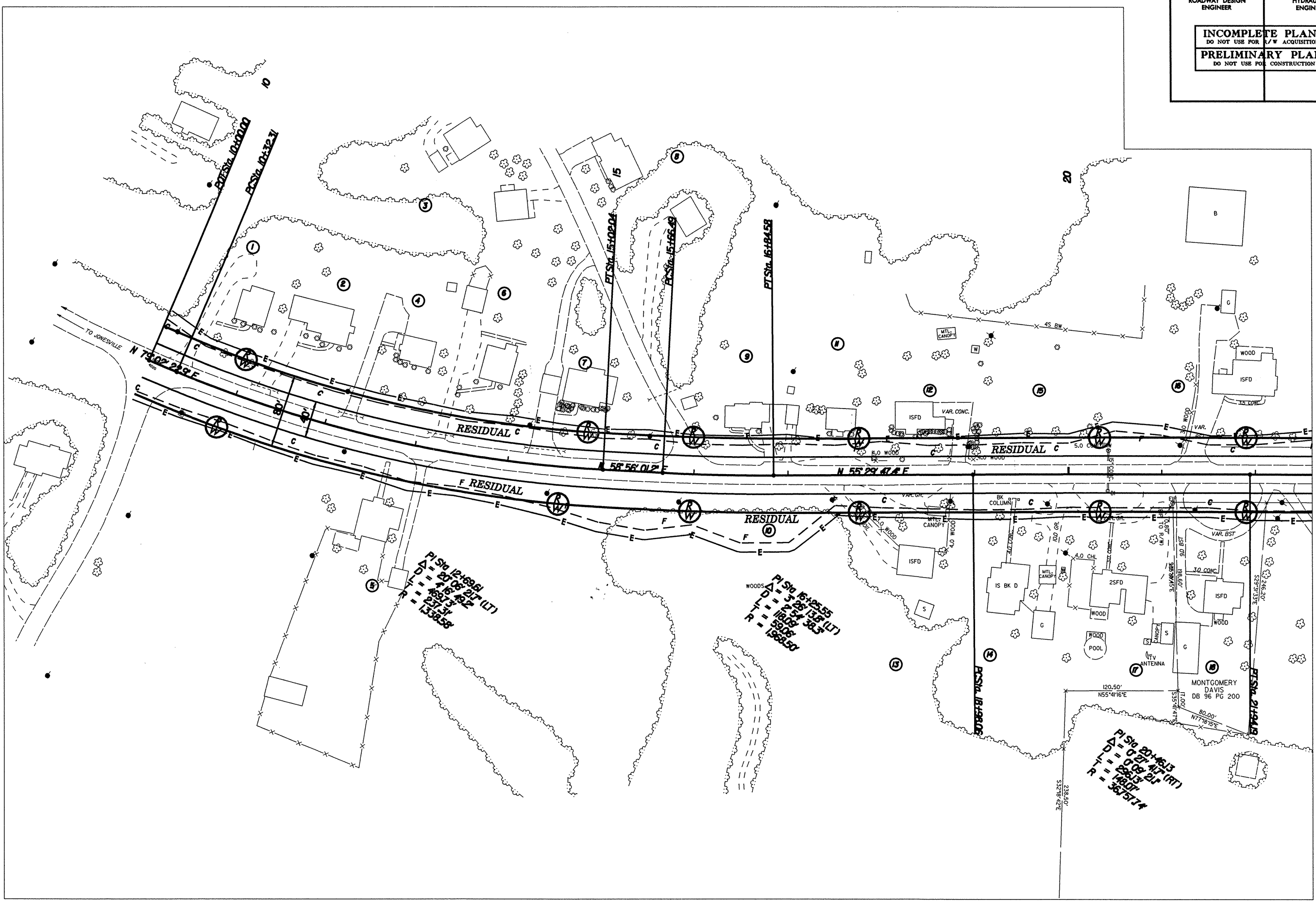
SHEET 1 OF 2 SHEETS

LINE	STATION	STATION	TOTAL EXCAV. (UNCL.)	ROCK EXCAV.	UNDERCUT	UNSUIT. EXCAV.	SUITABLE EXCAV.	TOTAL EMB.	ROCK EMB.	EARTH EMB.	EMBANK. +15%	BORROW	SUITABLE WASTE	UNSUIT. WASTE	TOTAL WASTE
-L-	14+50.00	47+00.00	6797				6797	9482		9482	10904	4107			
-Y-	11+75.00	13+33.00	23				23	33		33	38	15			
-D1-	10+00.00	11+70.00	416				416						416		416
	SUBTOTAL		7236				7236	9515		9515	10942	4122	416		416
-L-	47+50.00	79+00.00	11318				11318	8476		8476	9747		1571		1571
	SUBTOTAL		11318				11318	8476		8476	9747		1571		1571
-L-	79+50.00	101+50.00	12312				12312	7125		7125	8194		4118		4118
	SUBTOTAL		12312				12312	7125		7125	8194		4118		4118
-L-	102+00.00	119+00.00	1727				1727	2197		2197	2527	800			
	SUBTOTAL		1727				1727	2197		2197	2527	800			
-L-	119+50.00	141+50.00	3971				3971	4026		4026	4630	659			
-D2-	10+00.00	11+54.00	861				861						861		861
-D3-	10+00.00	11+55.00	417				417						417		417
-D4-	10+00.00	11+69.00	264				264						264		264
-D5-	10+00.00	12+88.00	1182				1182						1182		1182
	SUBTOTAL		6695				6695	4026		4026	4630	659	2724		2724
-L-	142+00.00	171+00.00	18842	1536			17306	8986	1536	7450	10104		5666		5666
-Y3-	11+00.00	17+00.00	1591				1591	2873		2873	3304	1713			
	SUBTOTAL		20433	1536			18897	11859	1536	10323	13408	1713	5666		5666
-L-	171+50.00	201+00.00	4572				4572	5582		5582	6419	1847			
	SUBTOTAL		4572				4572	5582		5582	6419	1847			
-L-	201+50.00	233+50.00	7107				7107	6144		6144	7066		41		41
	SUBTOTAL		7107				7107	6144		6144	7066		41		41
-L-	234+00.00	246+50.00	3747				3747	4380		4380	5037	1290			
	SUBTOTAL		3747				3747	4380		4380	5037	1290			
SHEET TOTALS:			75147	1536			73611	59304	1536	57768	67970	10431	14536		14536

RD10S01C

8/17/99

REVISIONS



P1 Stn 12+88.81
 T-DA = 20.08 217 (LT)
 R = 133.42
 R = 133.42

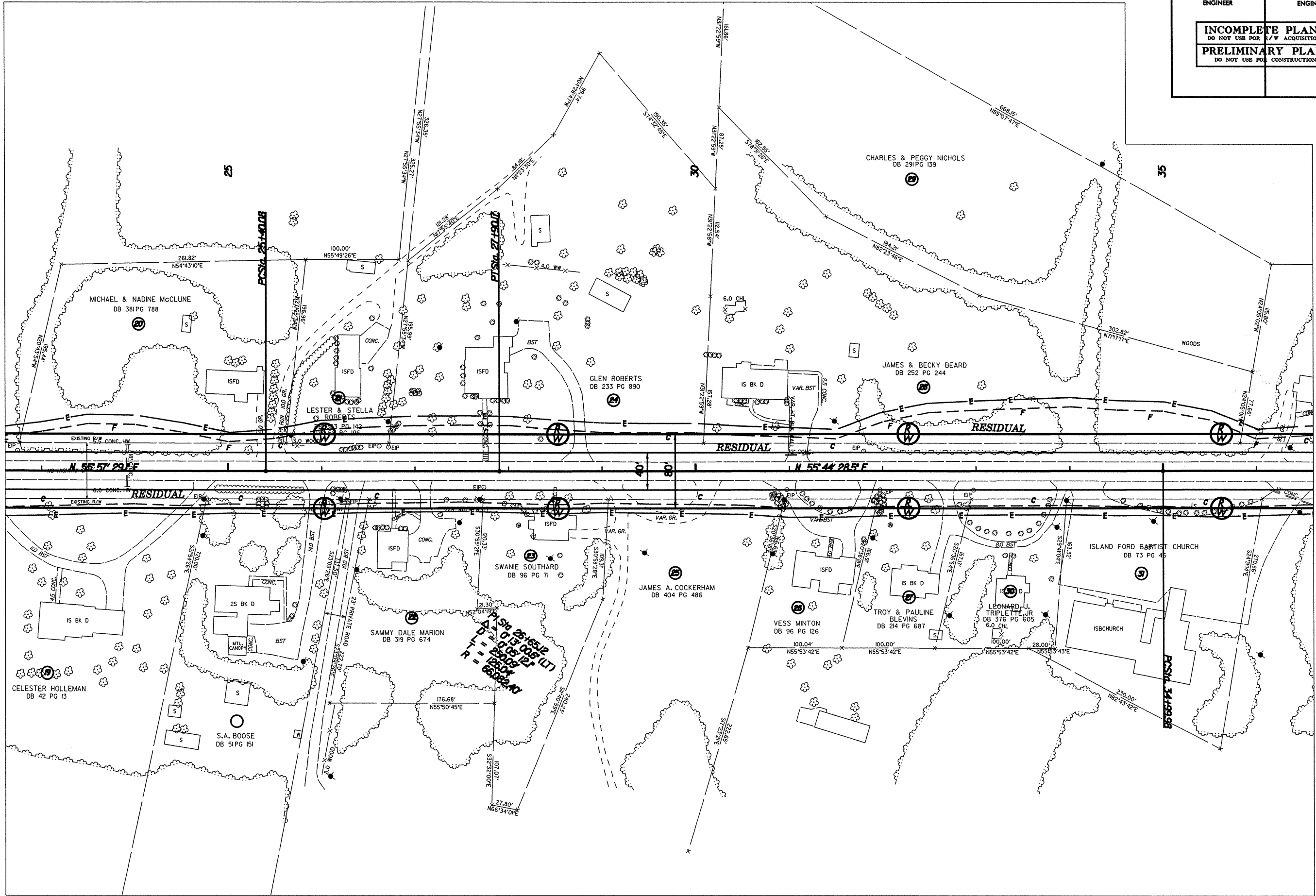
P1 Stn 16+25.55
 T-DA = 5.16 138 (LT)
 R = 7.94 38.3
 R = 59.08
 R = 158.50

P1 Stn 80+46.13
 T-DA = 0.21 117 (RT)
 R = 285.23 21
 R = 180.01
 R = 361.514

MATCH LINE SHEET 5

 DATE PLOTTED: 8/17/99
 PLOT BY: J.W. MCGEE
 CHECKED BY: J.W. MCGEE
 DATE CHECKED: 8/17/99
 PLOT SCALE: 1"=40'-0"
 PLOT BY: J.W. MCGEE
 CHECKED BY: J.W. MCGEE
 DATE CHECKED: 8/17/99
 PLOT SCALE: 1"=40'-0"

PROJECT REFERENCE NO. R-3415	SHEET NO. 5
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION	
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	



REVISIONS

MATCH LINE SHEET 4

MATCH LINE SHEET 6

8/17/95

 SYSTEMS
 10/1/95
 10/1/95
 10/1/95

AS BUILT
 D = 12.00 (LT)
 T = 22.00 (LT)
 R = 65.00 (AD)

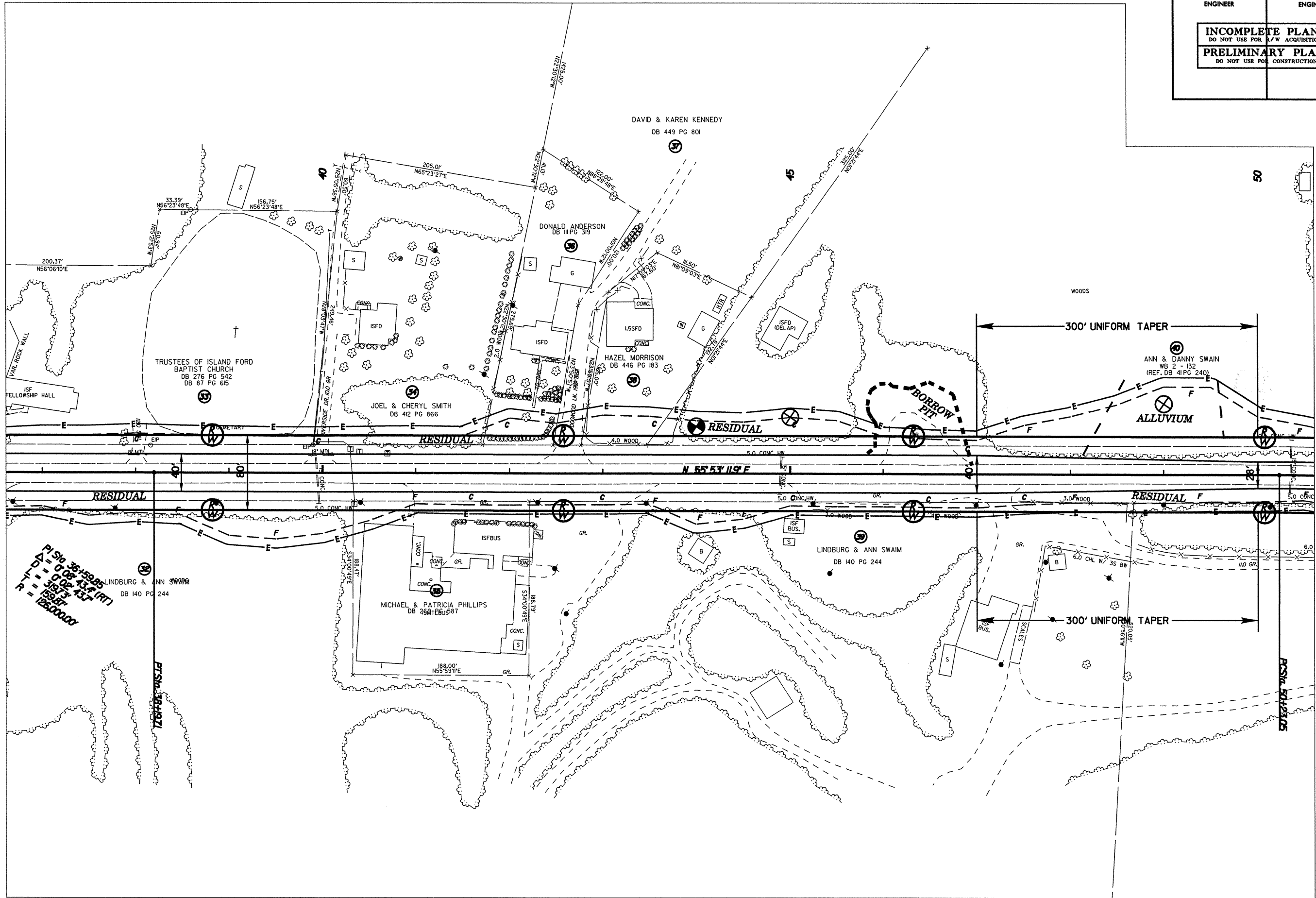
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RW SHEET NO. ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
INCOMPLETE PLANS DO NOT USE FOR A/W ACQUISITION	
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	

8/17/99

REVISIONS

MATCH LINE SHEET 5

MATCH LINE SHEET 7

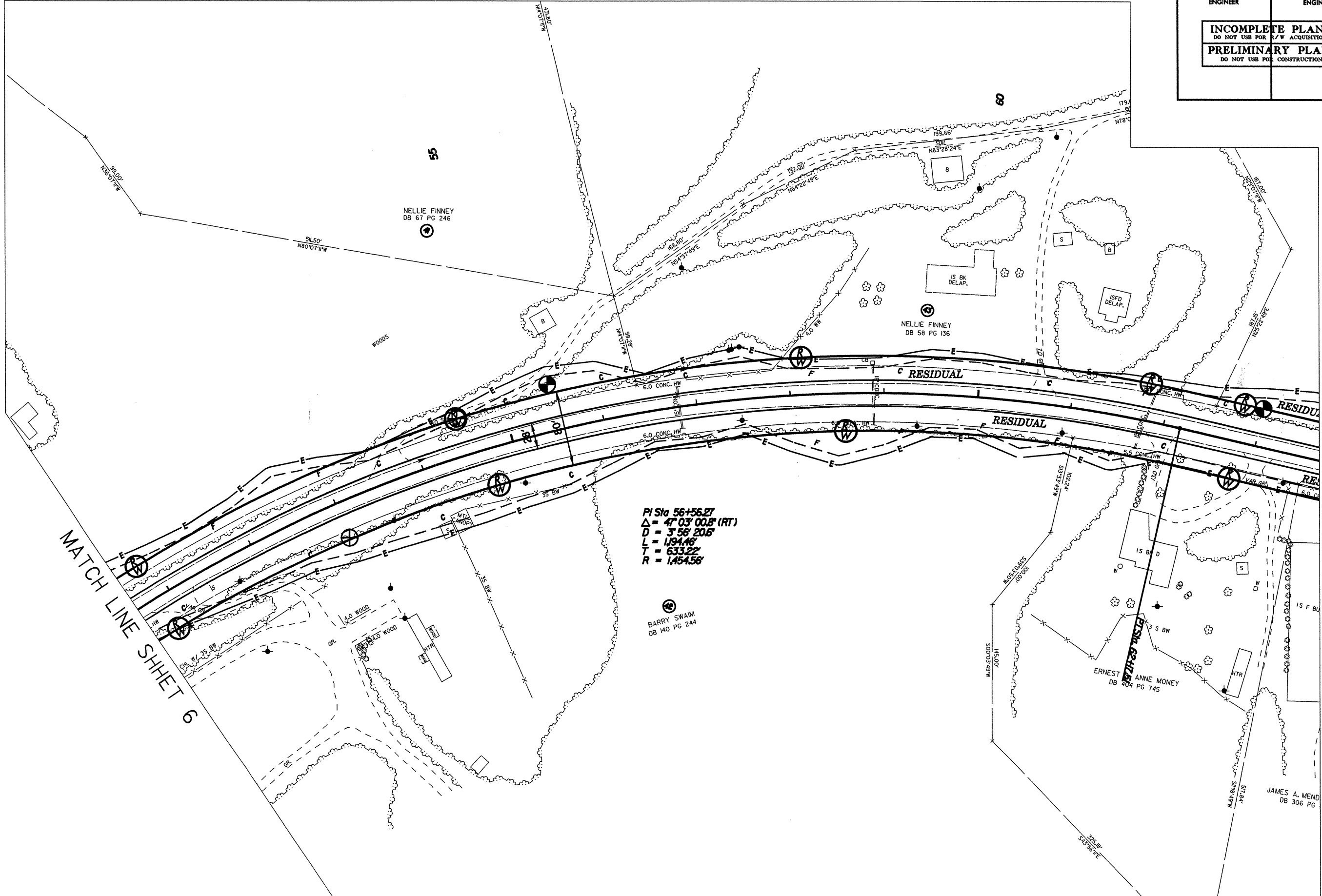


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 TIME: 10:00 AM
 DRAWN BY: [illegible]
 CHECKED BY: [illegible]
 APPROVED BY: [illegible]

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

8/17/99

REVISIONS



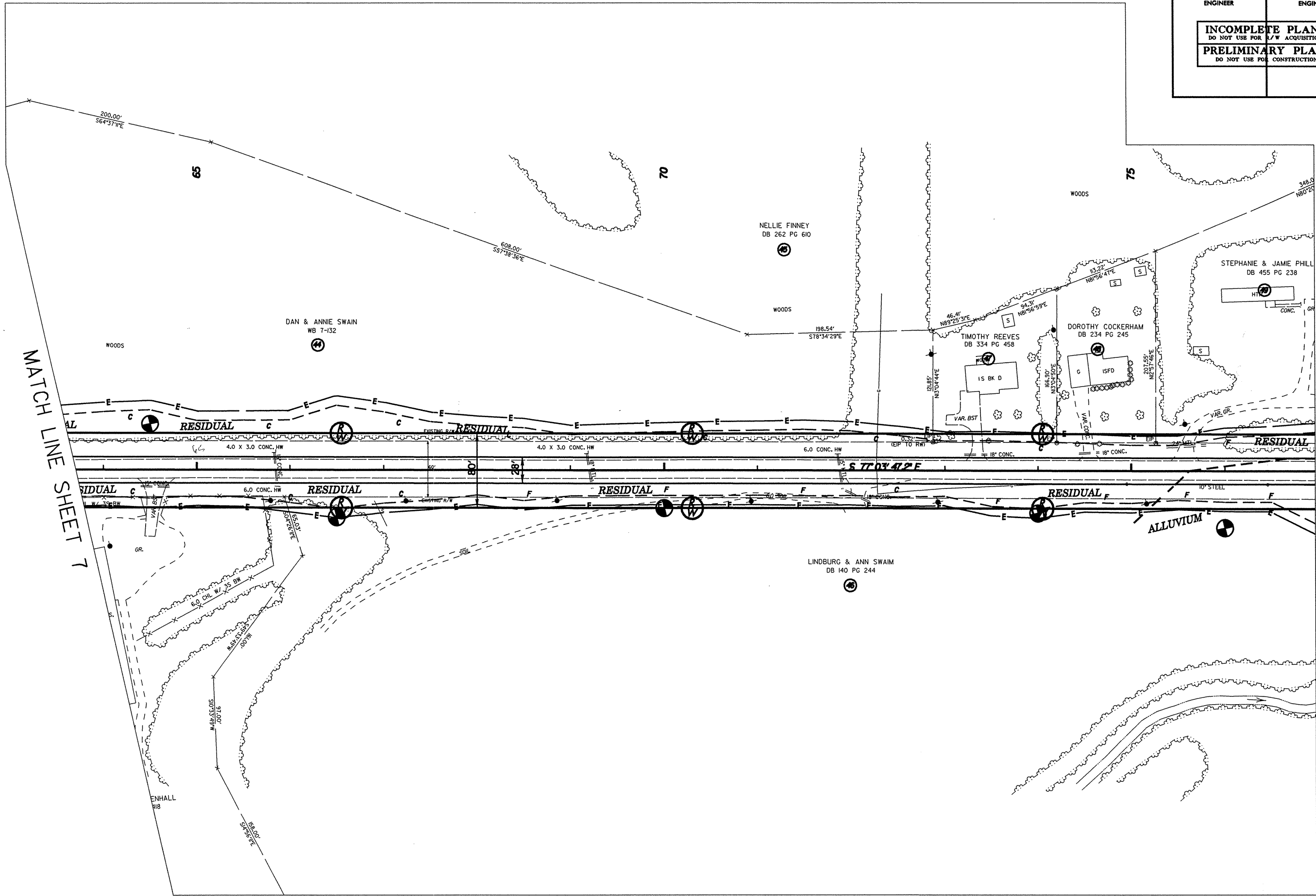
 SYSTEMS

MATCH LINE SHHET 8

PROJECT REFERENCE NO. R-3415	SHEET NO. 8
Roadway Design Engineer	Hydraulics Engineer
INCOMPLETE PLANS DO NOT USE FOR A/W ACQUISITION	
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	

8/17/99

REVISIONS

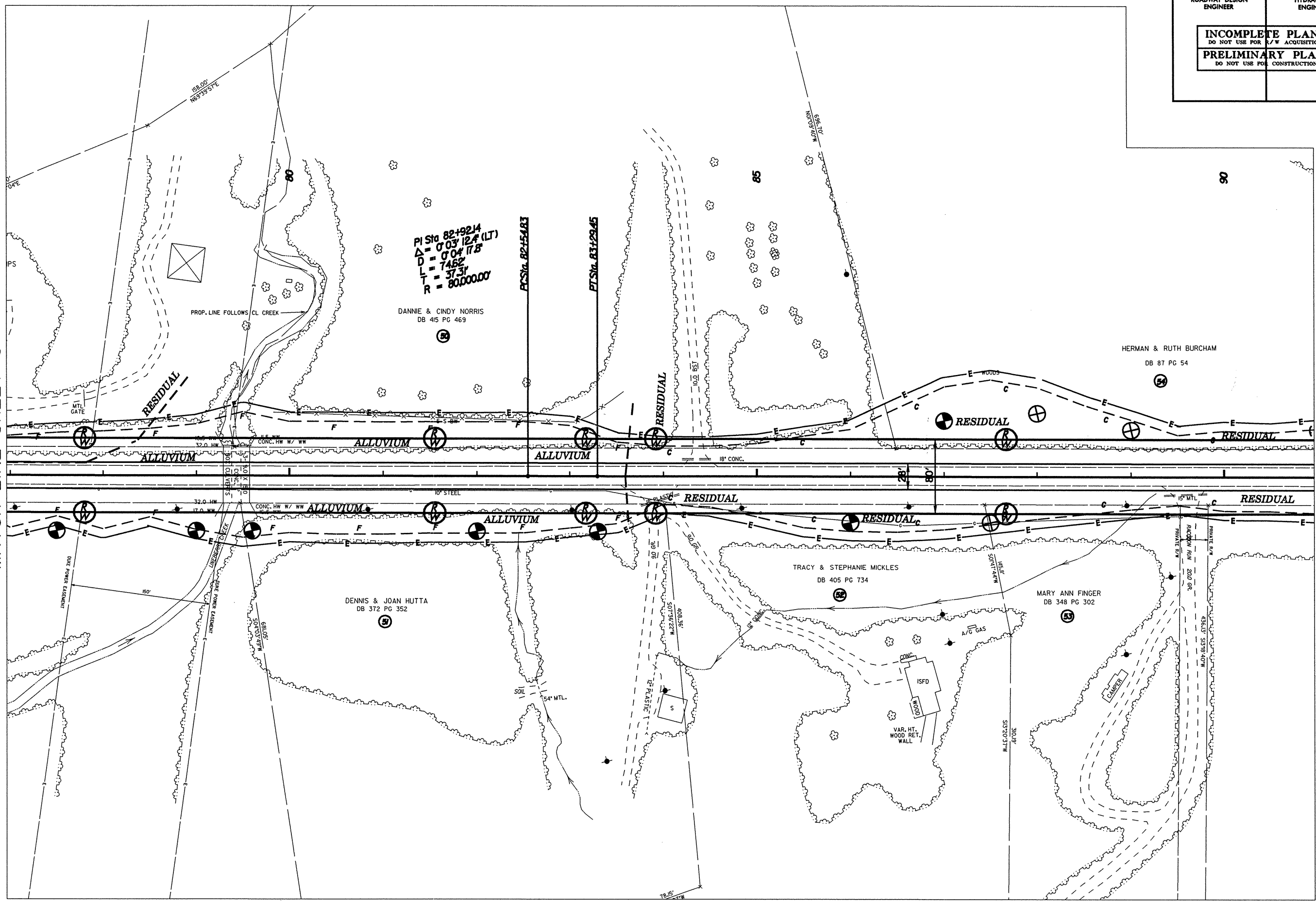


MATCH LINE SHEET 7

MATCH LINE SHEET 9

*****SYTIME*****

PROJECT REFERENCE NO.	SHEET NO.
R-3415	9
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
INCOMPLETE PLANS DO NOT USE FOR ACQUISITION	
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	



MATCH LINE SHEET 8

MATCH LINE SHEET 10

REVISIONS

8/17/99

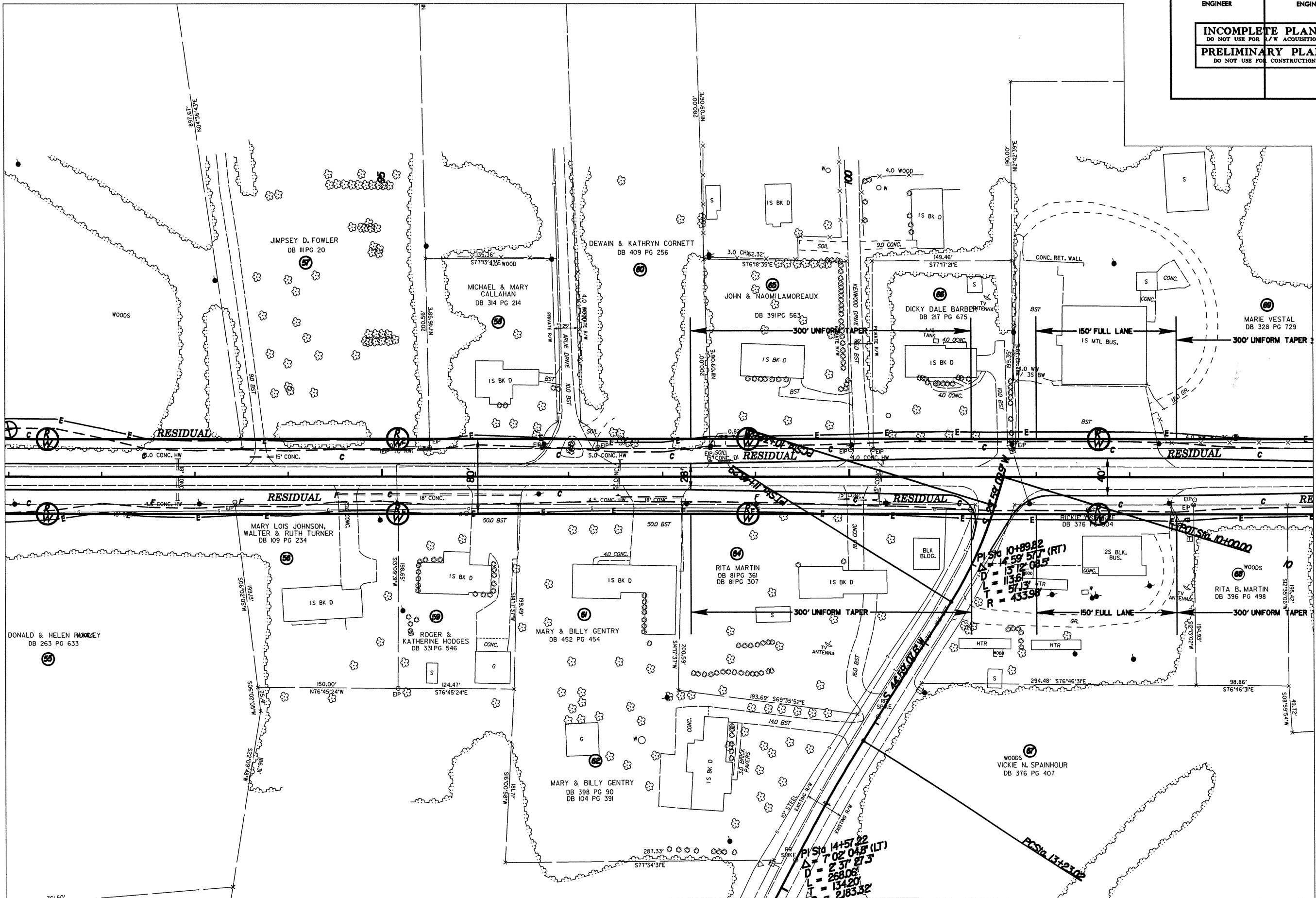
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 \$\$\$\$CADD\$\$\$\$
 \$\$\$\$ADW\$\$\$\$
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RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	

8/17/99

REVISIONS

MATCH LINE SHEET 9



MATCH LINE SHEET 11

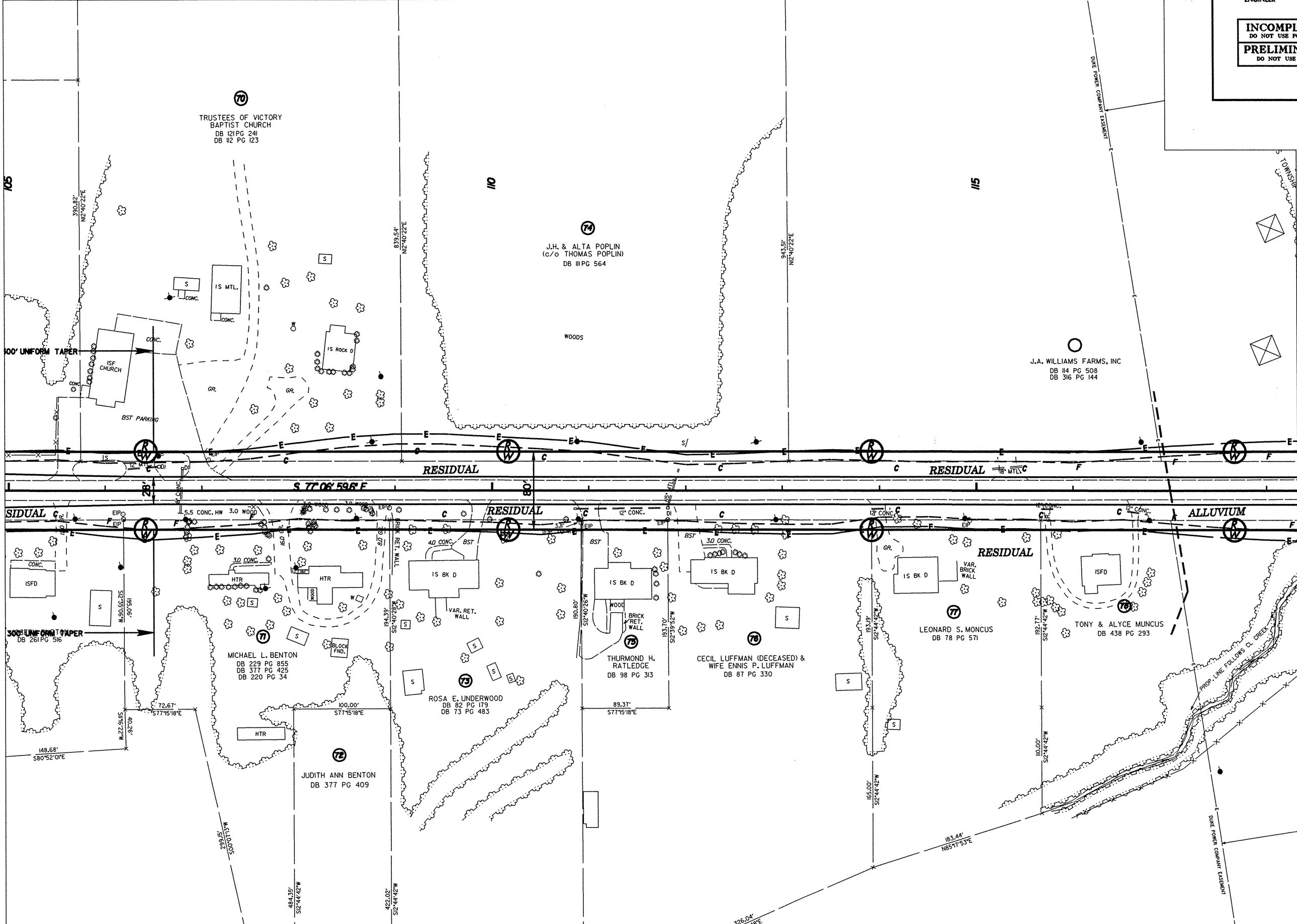
 SYSTEMS

PROJECT REFERENCE NO. R-3415	SHEET NO. 11
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION	
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	

8/17/95

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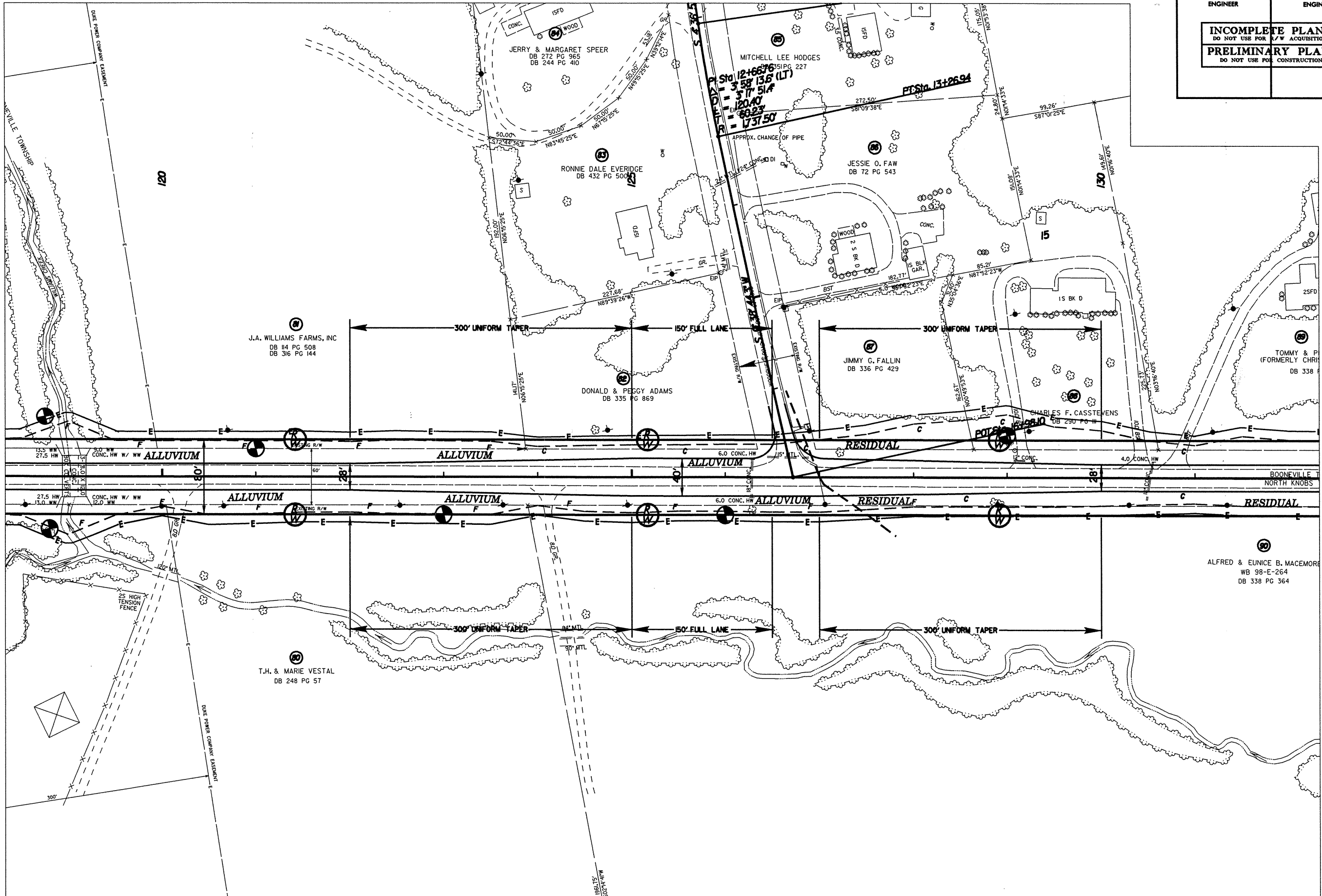
MATCH LINE SHEET 12



REVISIONS

 1. SEE SHEET 10 FOR 100' UNIFORM TAPER
 2. SEE SHEET 12 FOR 300' UNIFORM TAPER

PROJECT REFERENCE NO. R-3415	SHEET NO. 12
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
INCOMPLETE PLANS DO NOT USE FOR A/W ACQUISITION	
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	



MATCH LINE SHEET II

MATCH LINE SHEET 13

REVISIONS

8/17/99

 SYSTEMS

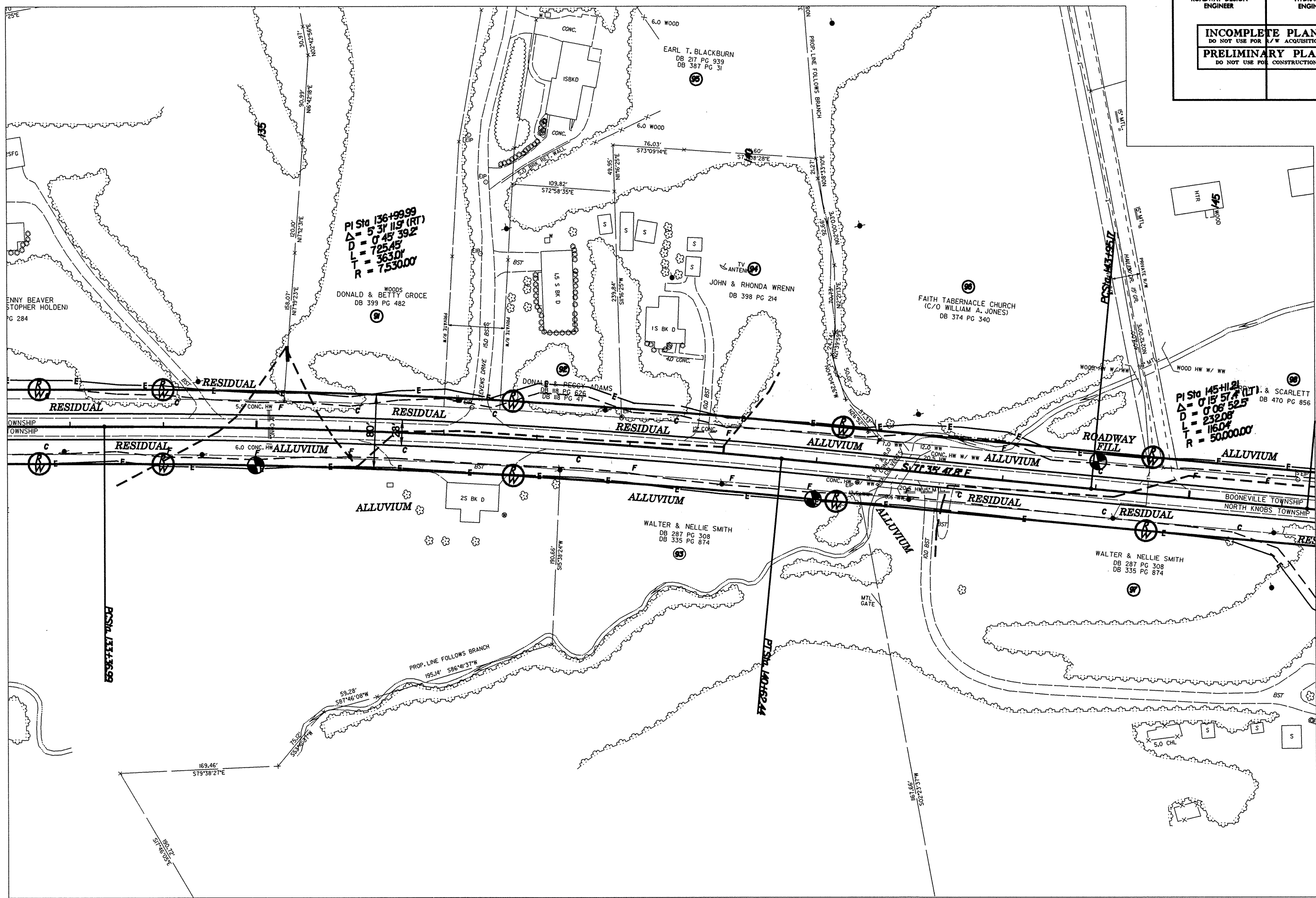
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RW SHEET NO.			
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER	
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION			
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION			

8/17/99

REVISIONS

MATCH LINE SHEET 12

MATCH LINE SHEET 14



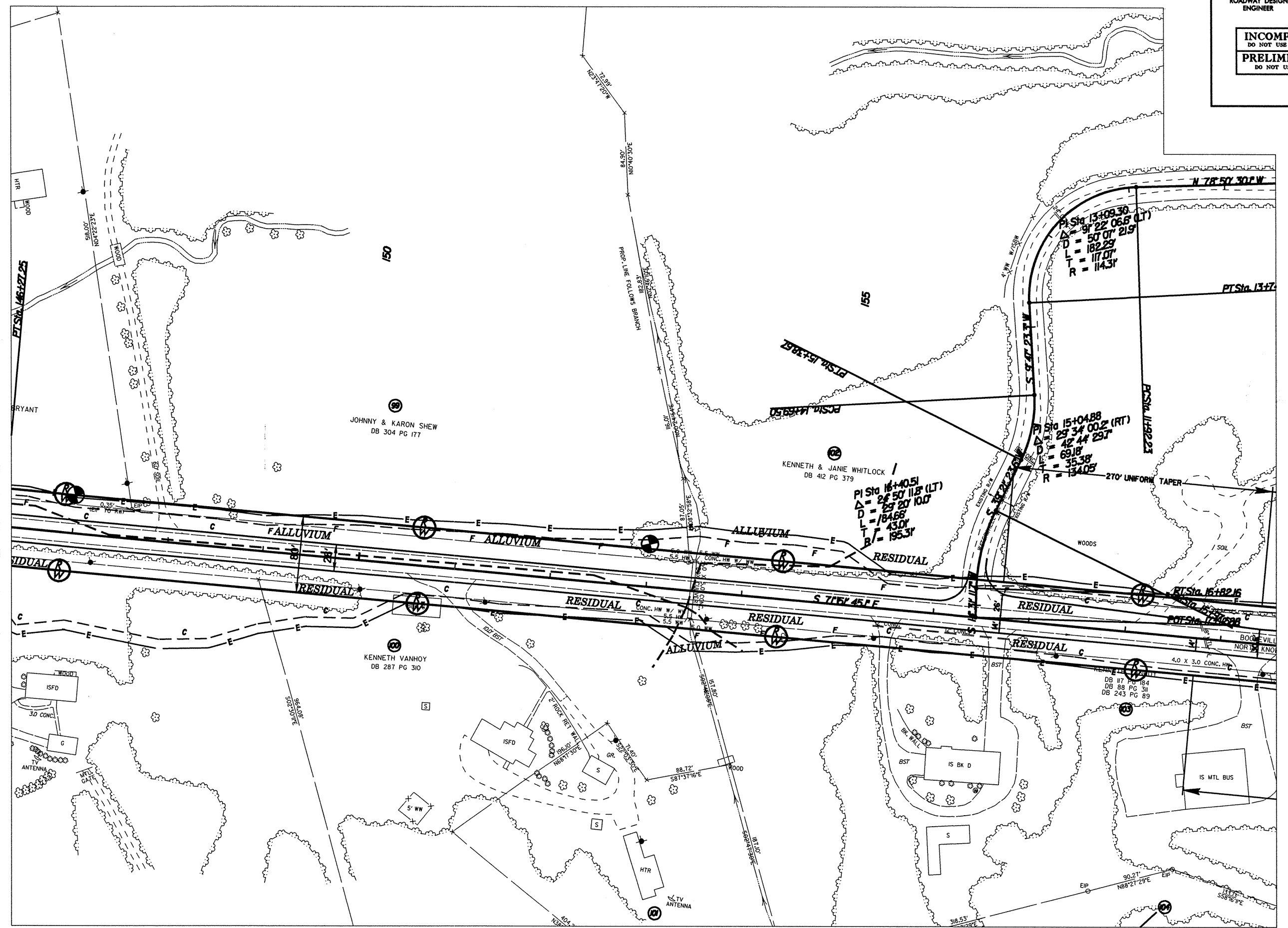
 SYSTEMS

INCOMPLETE PLANS
DO NOT USE FOR A/W ACQUISITION

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

REVISIONS

MATCH LINE SHEET 13



MATCH LINE SHEET 15

SYTIME

SDGN

USERSNAME

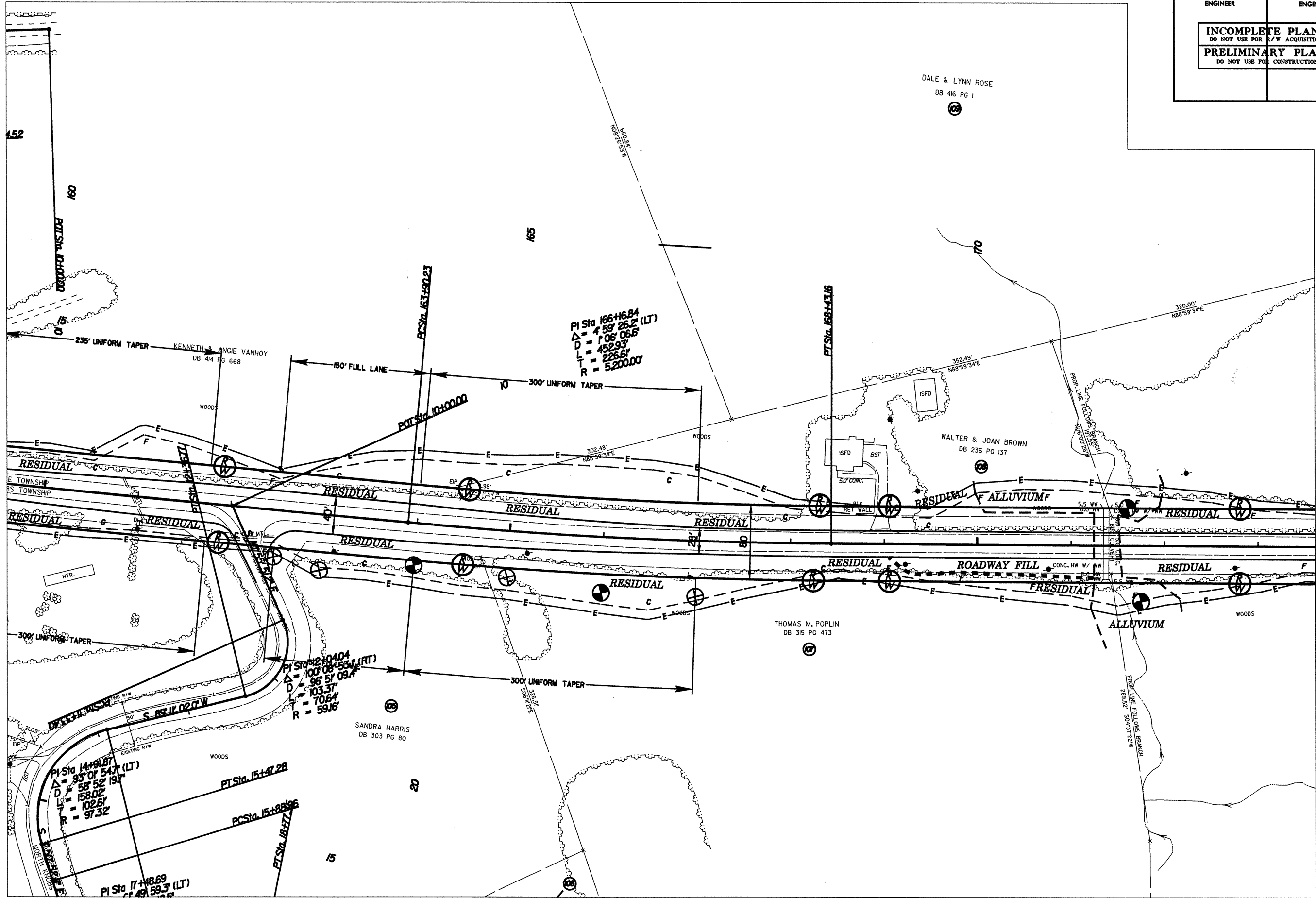
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R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	

8/17/99

REVISIONS

MATCH LINE SHEET 14

MATCH LINE SHEET 16



SYTIME
DESIGN

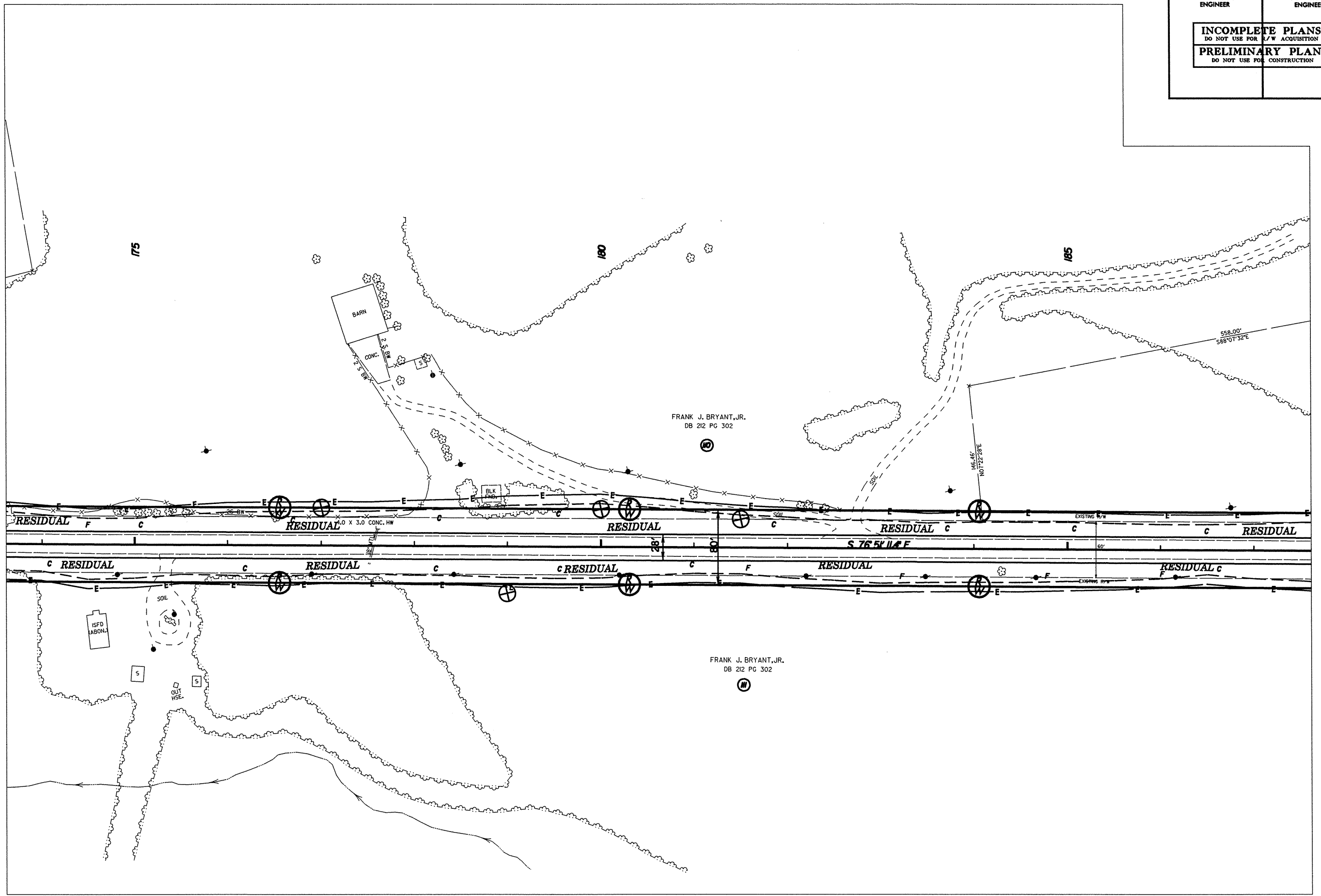
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RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION	
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	

8/17/99

REVISIONS

MATCH LINE SHEET 15

MATCH LINE SHEET 17



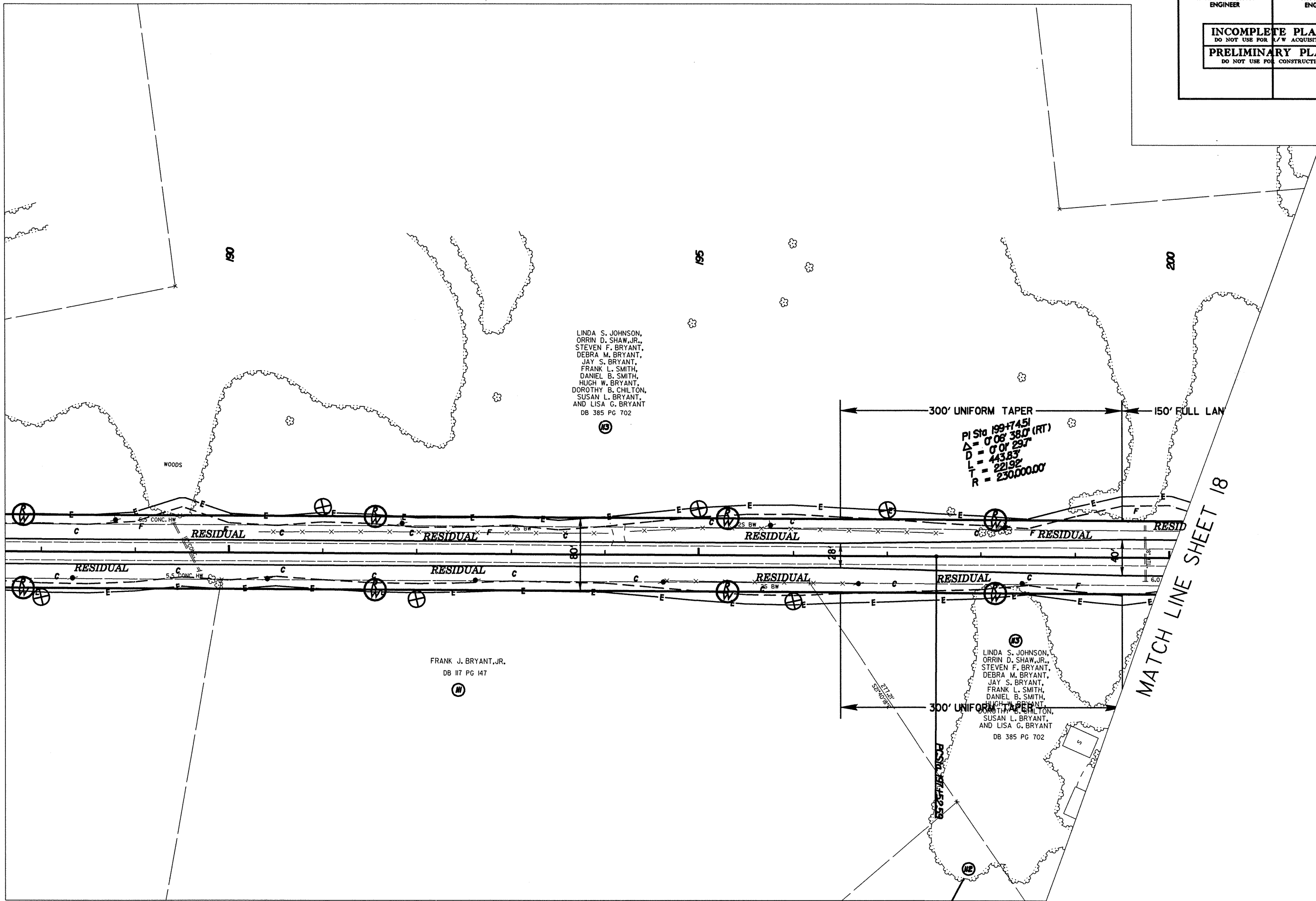
SYTIME
CONC
DESIGN
DATE

PROJECT REFERENCE NO. R-3415	SHEET NO. 17
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	

8/17/99

REVISIONS

MATCH LINE SHEET 16



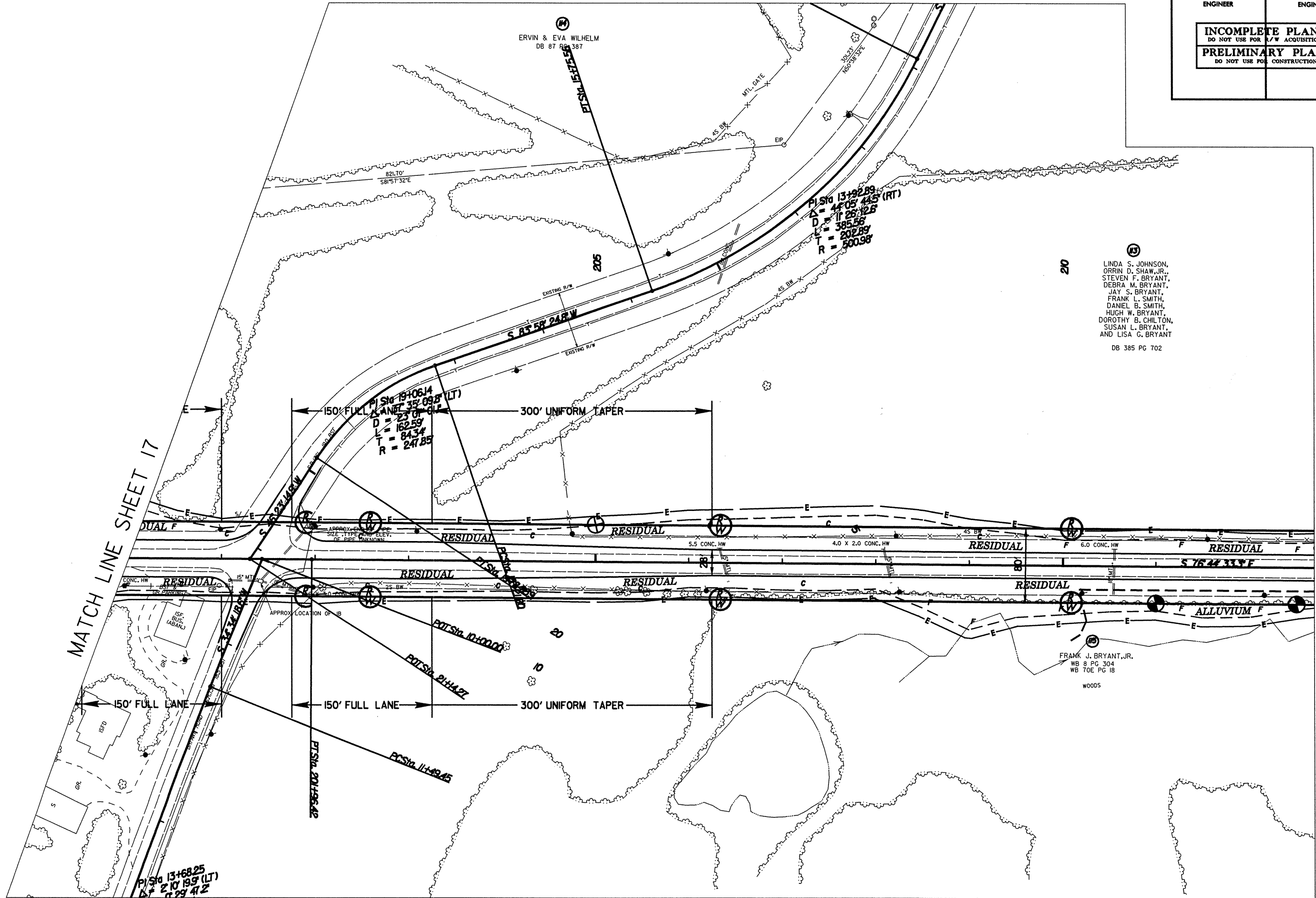
MATCH LINE SHEET 18

 SYSTEMS
 8/17/99

PROJECT REFERENCE NO. R-3415	SHEET NO. 18
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	

8/17/99

REVISIONS



MATCH LINE SHEET 17

MATCH LINE SHEET 19

*****SYTIMESS*****
 *****DONSON*****

PI Sta 13+168.25
 L = 210' 19" (LT)
 T = 29' 41"

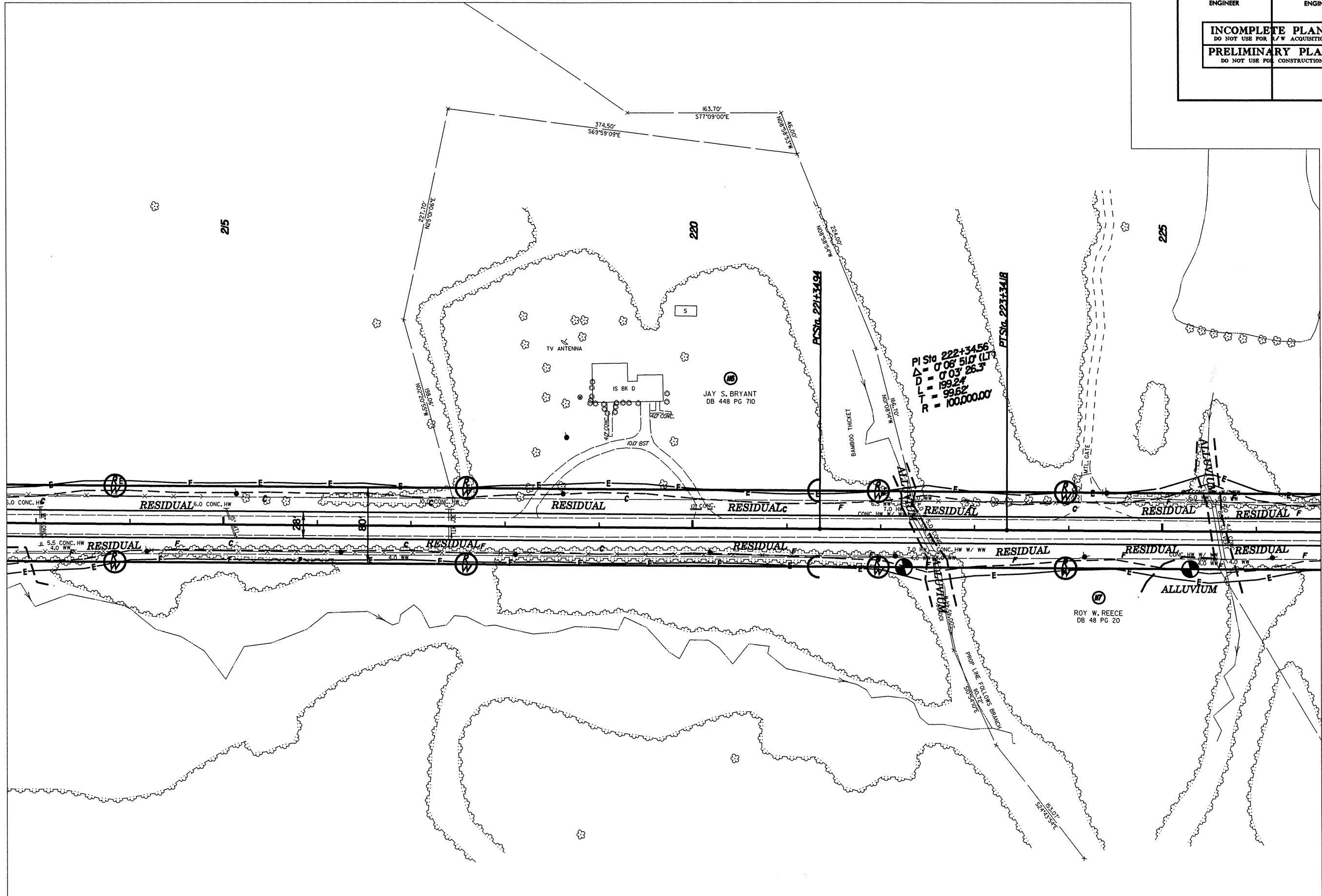
LINDA S. JOHNSON,
 ORRIN D. SHAW, JR.,
 STEVEN F. BRYANT,
 DEBRA M. BRYANT,
 JAY S. BRYANT,
 FRANK L. SMITH,
 DANIEL B. SMITH,
 HUGH W. BRYANT,
 DOROTHY B. CHILTON,
 SUSAN L. BRYANT,
 AND LISA G. BRYANT
 DB 385 PG 702

PROJECT REFERENCE NO. R-3415	SHEET NO. 19
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
INCOMPLETE PLANS DO NOT USE FOR A/W ACQUISITION	
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	

8/17/99

REVISIONS

MATCH LINE SHEET 18



MATCH LINE SHEET 20

SYSTIME *****

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

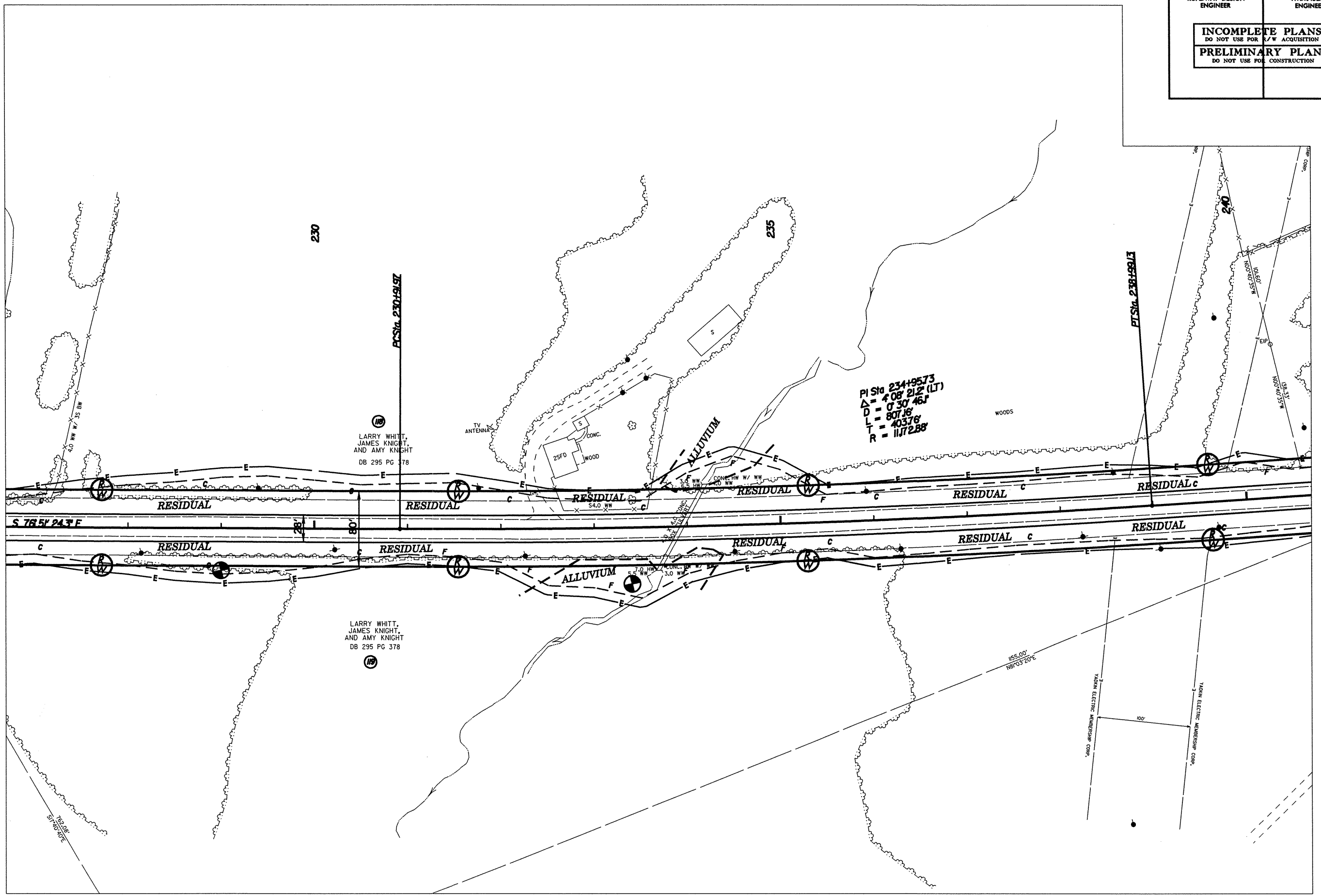
PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

8/17/99

REVISIONS

MATCH LINE SHEET 19

MATCH LINE SHEET 21



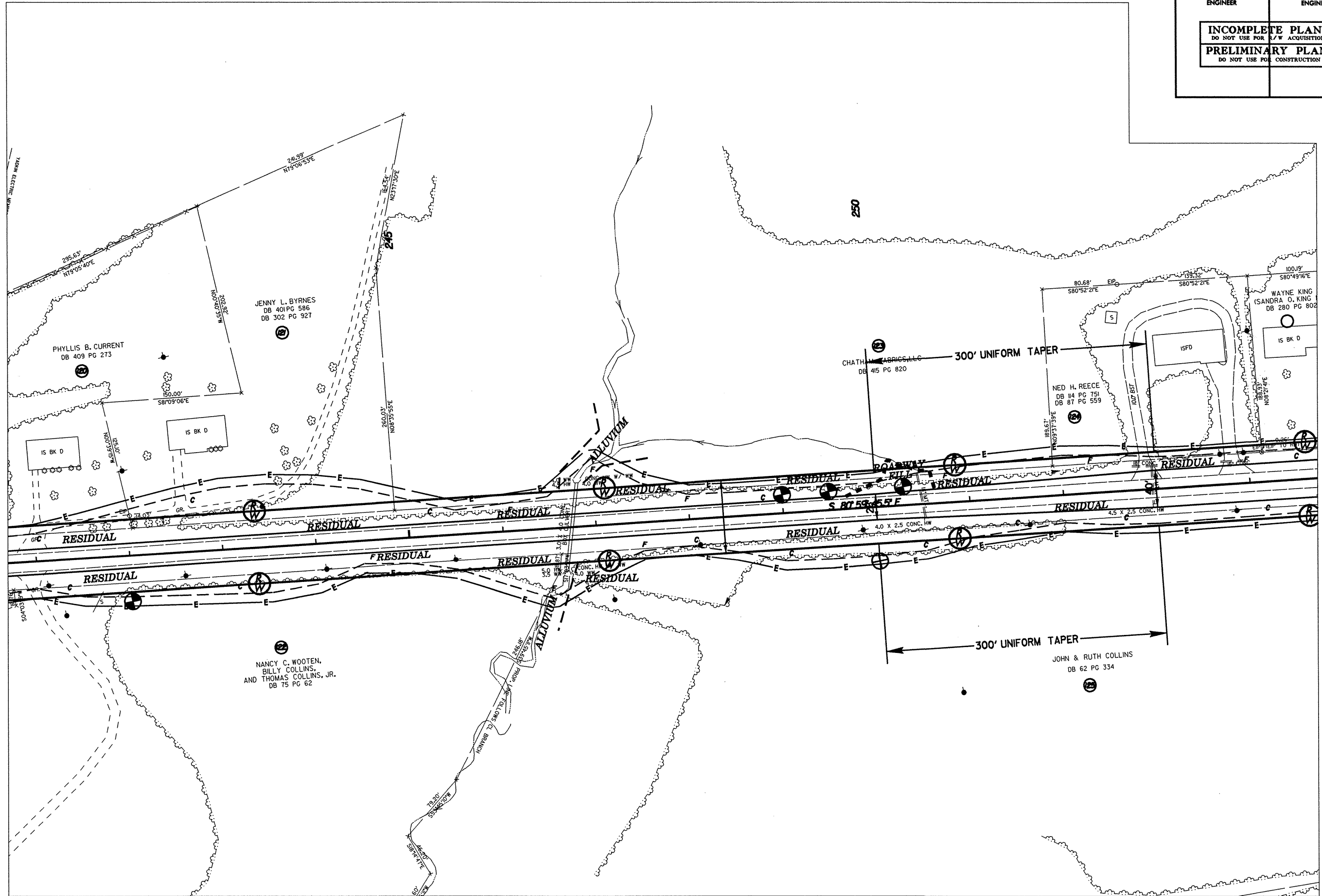
SYSTEMS

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

REVISIONS

MATCH LINE SHEET 20

MATCH LINE SHEET 22



SYDNEY

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

8/17/99

REVISIONS

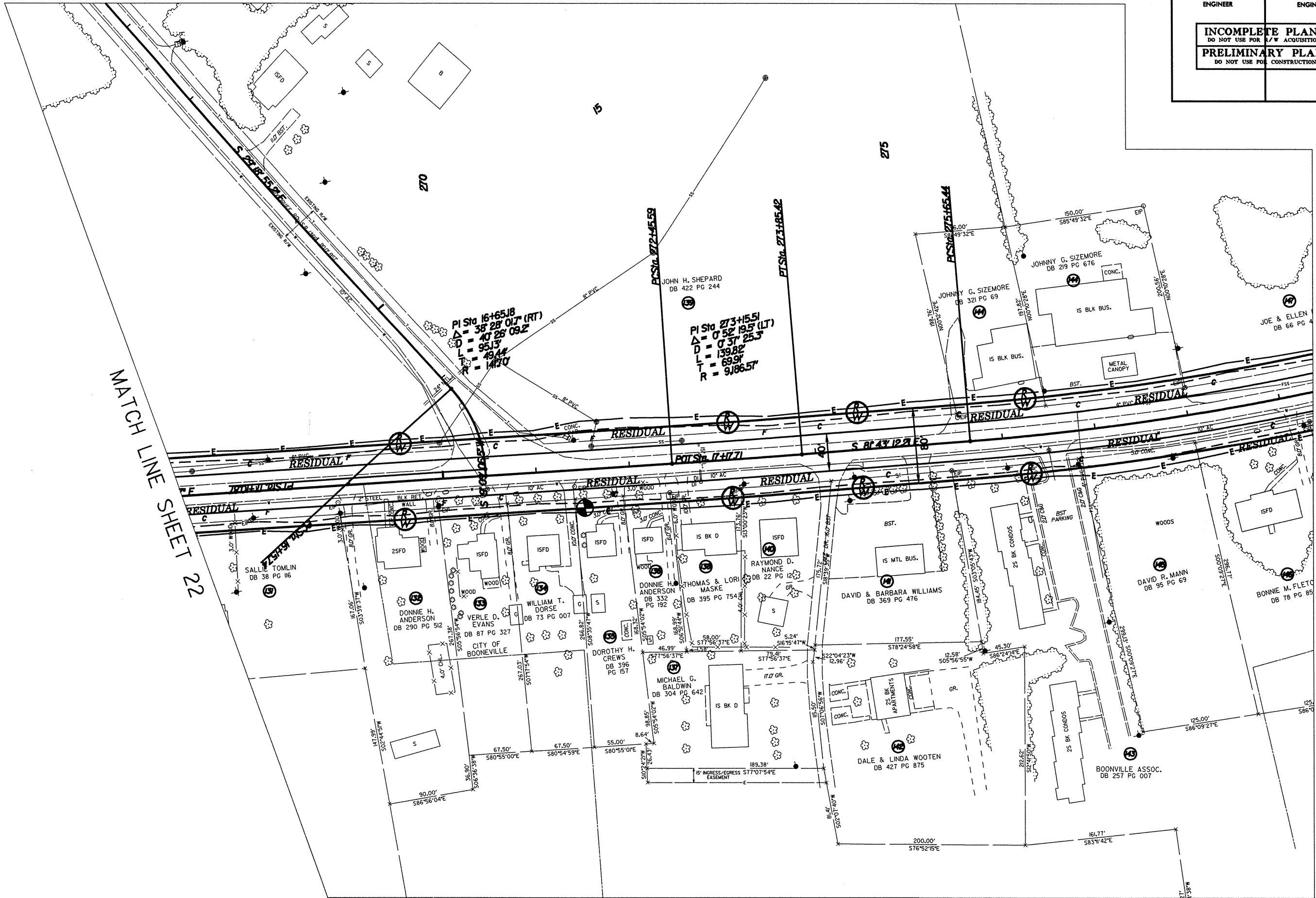
MATCH LINE SHEET 21

MATCH LINE SHEET 22



 SYSTEMS

PROJECT REFERENCE NO. R-3415	SHEET NO. 23
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
INCOMPLETE PLANS DO NOT USE FOR A/W ACQUISITION	
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	



REVISIONS

MATCH LINE SHEET 22

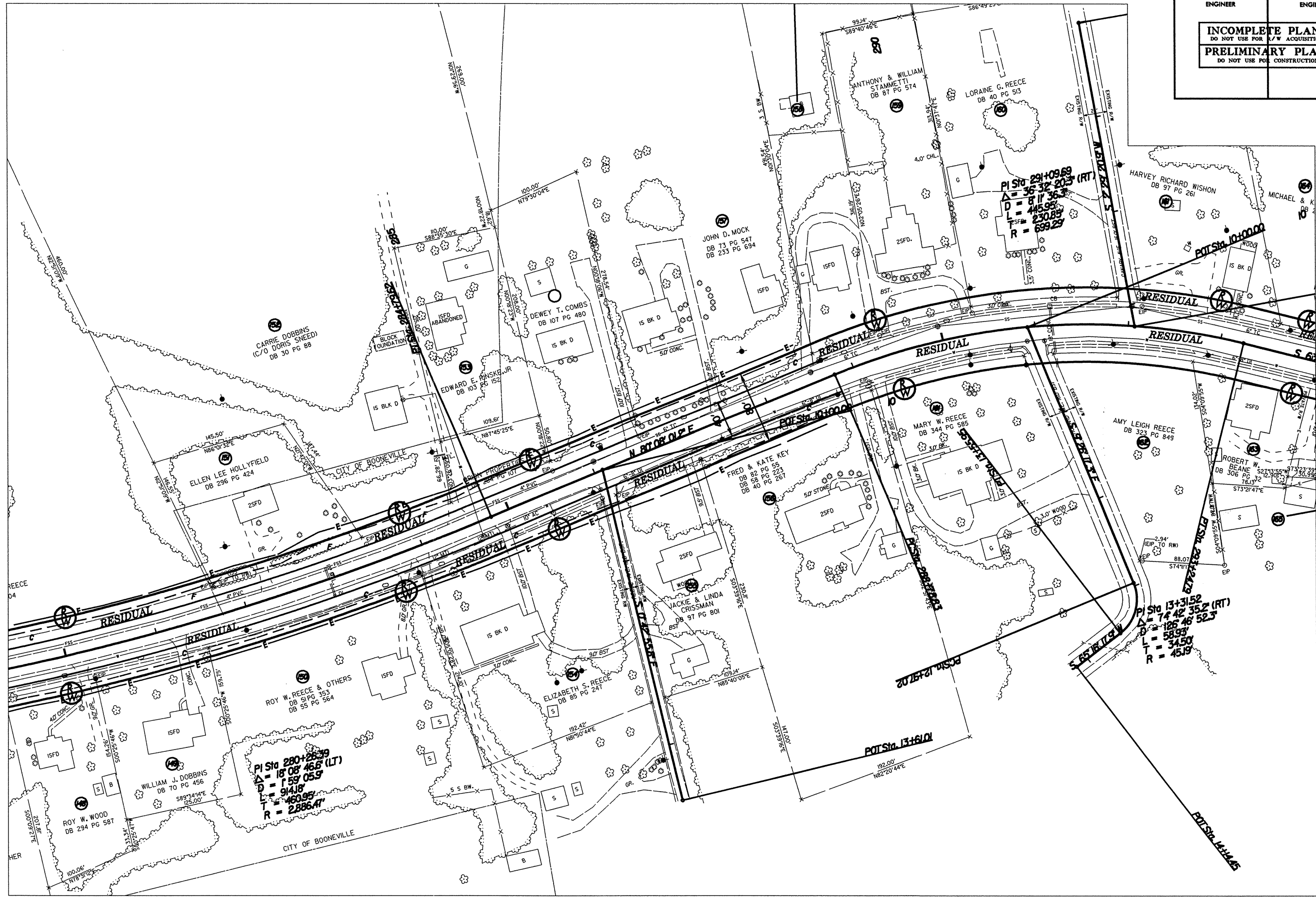
MATCH LINE SHEET 24

8/17/99

 C:\TIME*****
 S:*****

PROJECT REFERENCE NO.		SHEET NO.	
R-3415		24	
RW SHEET NO.			
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER	
INCOMPLETE PLANS DO NOT USE FOR P/W ACQUISITION PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION			

MATCH LINE SHEET 23



PI Sta 280+28.39
 $\Delta = 18^{\circ} 08' 46.6"$ (LT)
 $D = 159.059'$
 $L = 94.18'$
 $T = 460.95'$
 $R = 2,886.41'$

PI Sta 291+09.69
 $\Delta = 36^{\circ} 32' 20.3"$ (RT)
 $D = 811.363'$
 $L = 445.95'$
 $T = 230.85'$
 $R = 699.29'$

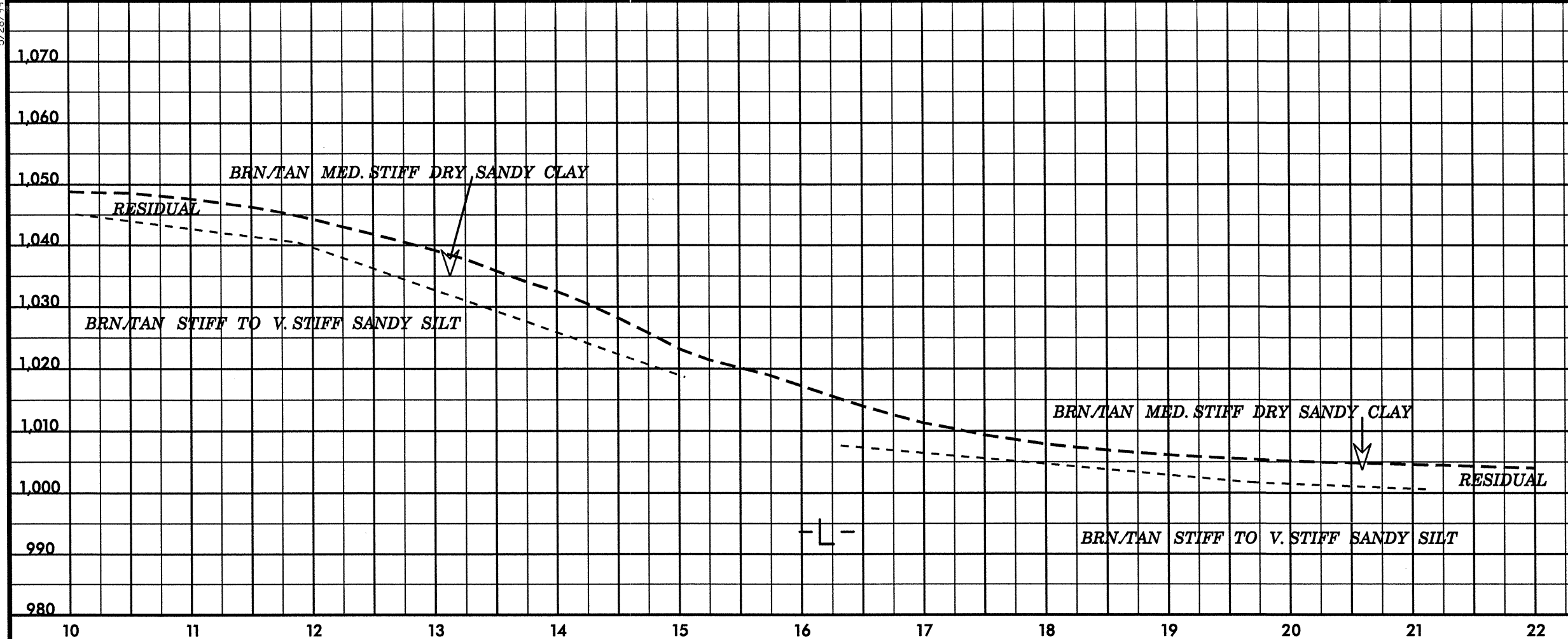
PI Sta 13+31.52
 $\Delta = 74^{\circ} 42' 35.2"$ (RT)
 $D = 126.461523'$
 $L = 58.93'$
 $T = 34.50'$
 $R = 45.19'$

REVISIONS

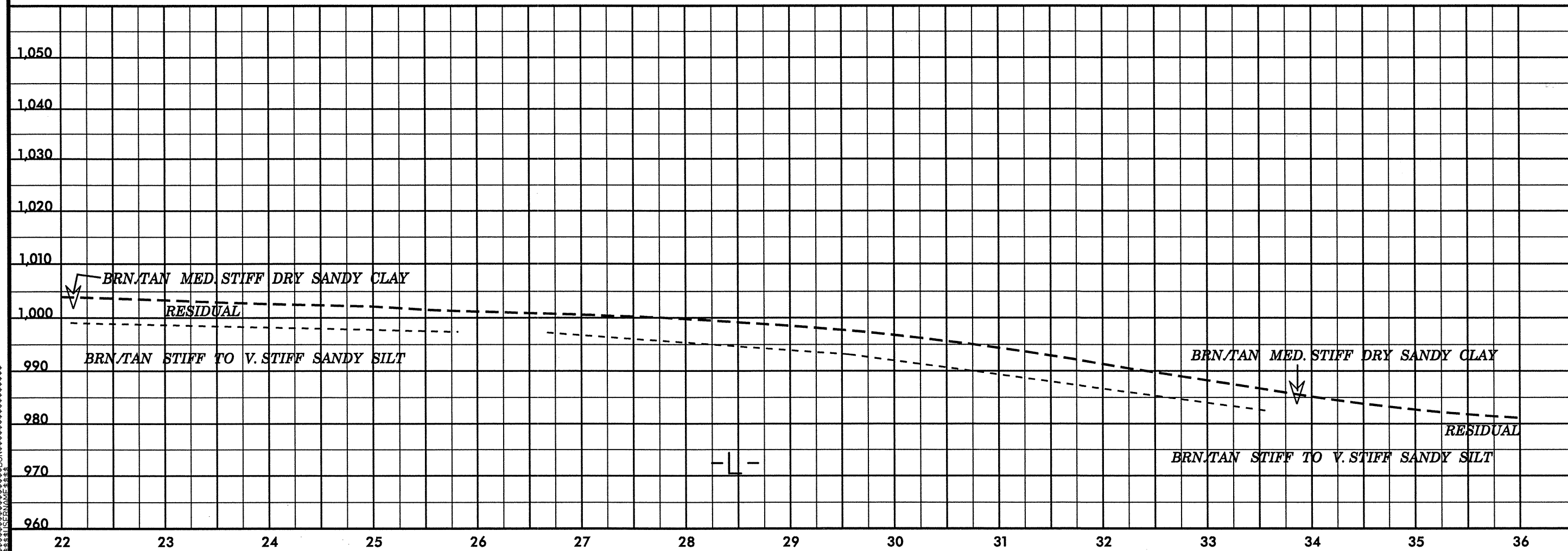
8/17/99

 SYSTEMS

5/28/99



SYTIME SIGNS

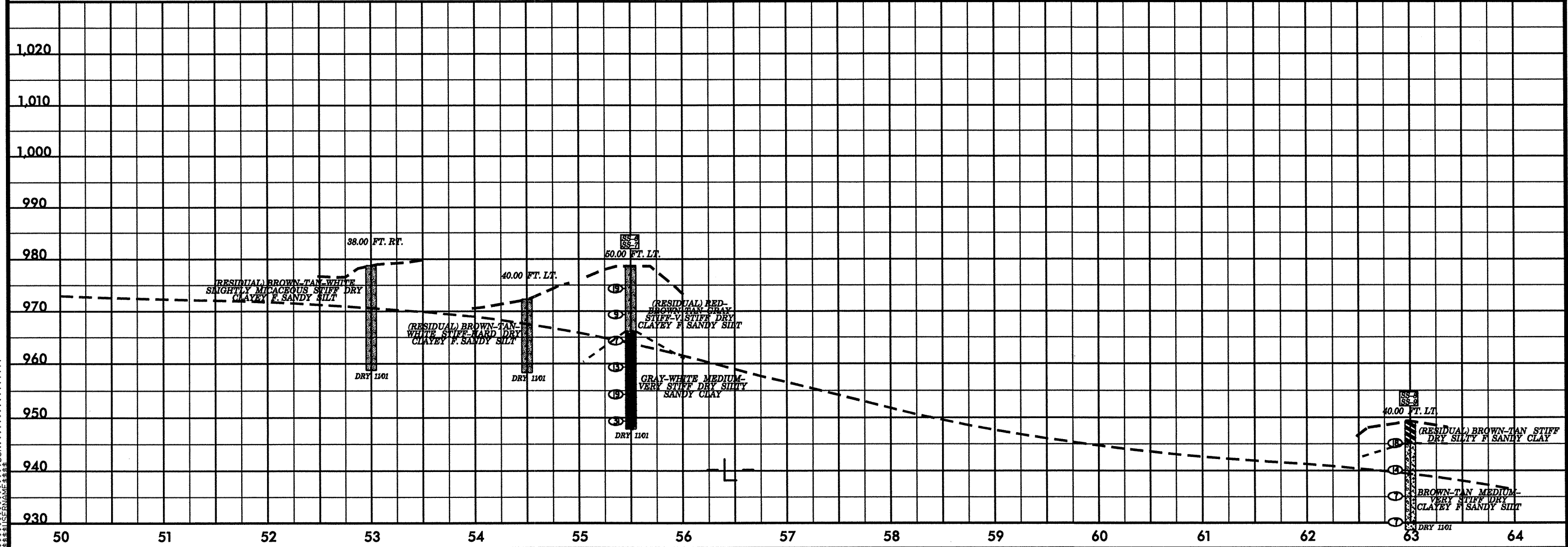
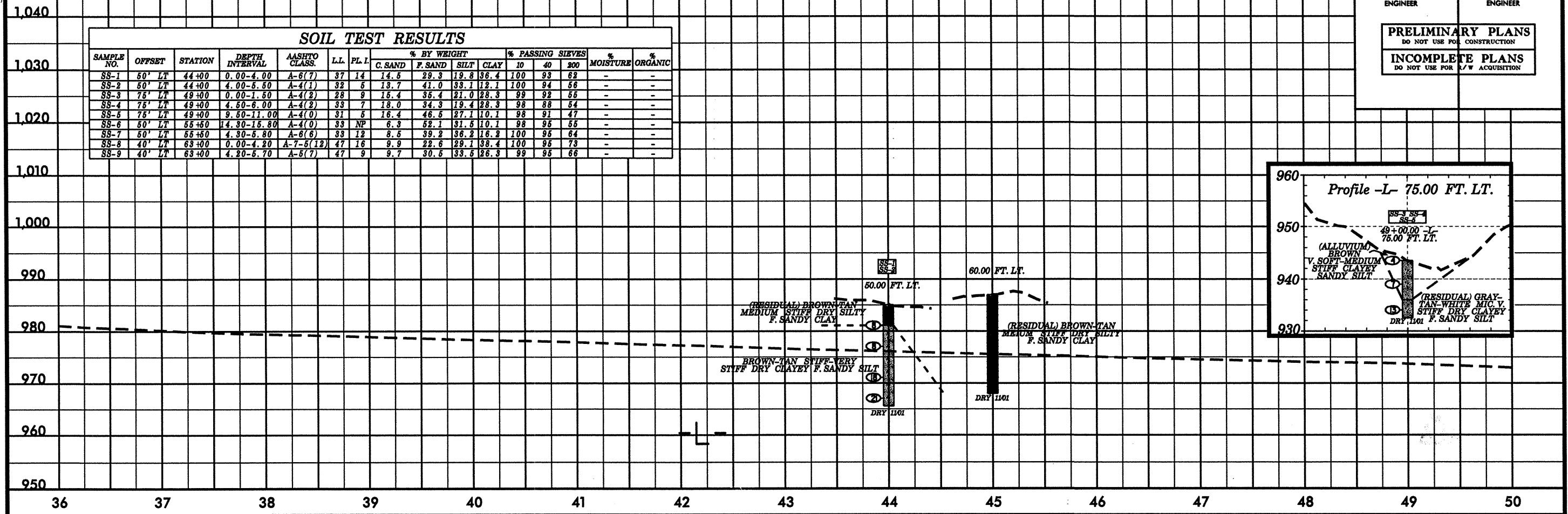
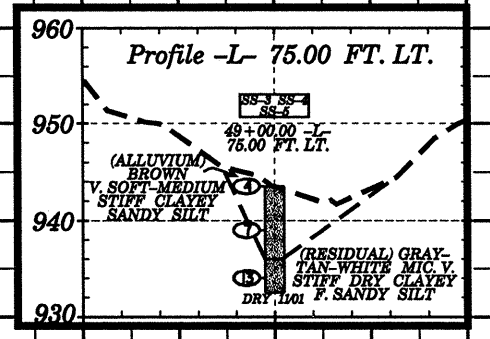


5/28/99

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

SOIL TEST RESULTS

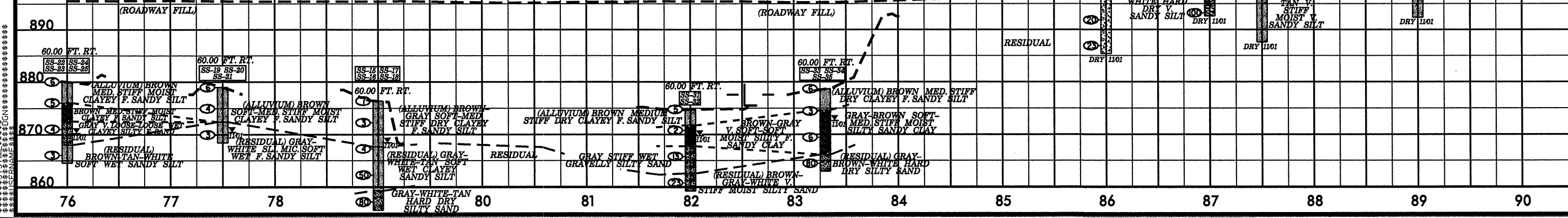
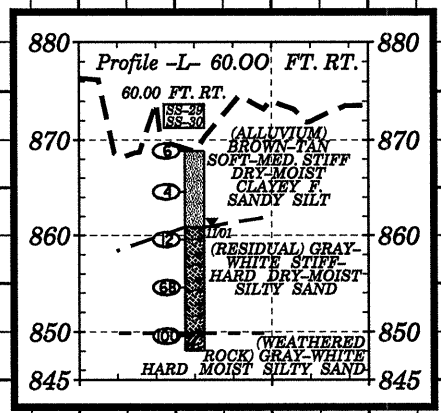
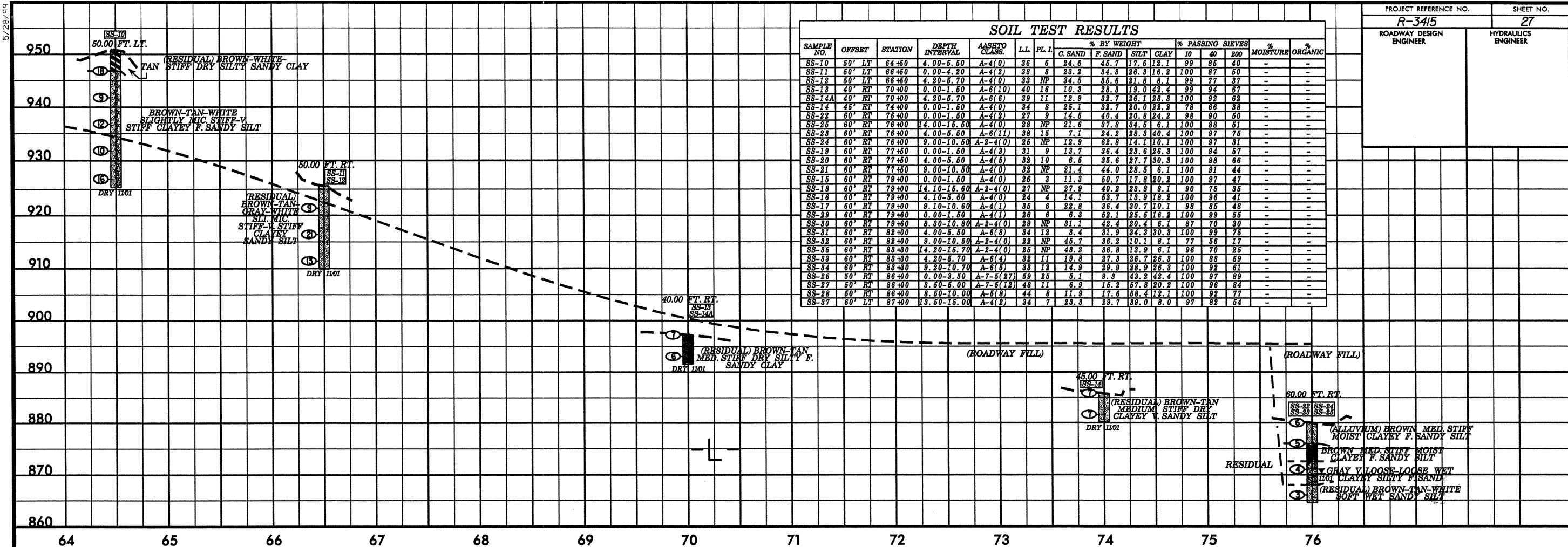
SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	ASTM CLASS	LL	PL. I.	% BY WEIGHT				% PASSING SIEVES			% MOISTURE	% ORGANIC
							C. SAND	F. SAND	SILT	CLAY	10	40	200		
SS-1	50' LT	44+00	0.00-4.00	A-6(7)	37	14	14.5	29.3	19.8	36.4	100	93	62	-	-
SS-2	50' LT	44+00	4.00-5.50	A-4(1)	32	5	13.7	41.0	33.1	12.1	100	94	56	-	-
SS-3	75' LT	49+00	0.00-1.50	A-4(2)	28	9	15.4	35.4	21.0	28.3	99	92	55	-	-
SS-4	75' LT	49+00	4.50-6.00	A-4(2)	33	7	18.0	34.3	19.4	28.3	98	88	54	-	-
SS-5	75' LT	49+00	9.50-11.00	A-4(0)	31	5	16.4	46.5	27.1	10.1	98	91	47	-	-
SS-6	50' LT	55+50	14.30-15.80	A-4(0)	33	NP	6.3	52.1	31.5	10.1	98	95	55	-	-
SS-7	50' LT	55+50	4.30-5.80	A-6(6)	33	12	8.5	39.2	36.2	18.2	100	95	64	-	-
SS-8	40' LT	63+00	0.00-4.20	A-7-5(12)	47	16	9.9	22.6	29.1	38.4	100	95	73	-	-
SS-9	40' LT	63+00	4.20-5.70	A-5(7)	47	9	9.7	30.5	33.5	26.3	99	95	66	-	-



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

SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASSO CLASS.	LL	PL I.	% BY WEIGHT				% PASSING SIEVES		% MOISTURE	% ORGANIC
							C. SAND	F. SAND	SILT	CLAY	10	40		
SS-10	50' LT	64+50	4.00-5.50	A-4(0)	36	6	24.6	45.7	17.6	12.1	99	85	40	--
SS-11	50' LT	66+50	0.00-4.20	A-4(2)	38	8	23.2	34.3	36.3	16.2	100	87	50	--
SS-12	50' LT	66+50	4.20-5.70	A-4(0)	33	NP	34.5	35.6	31.8	8.1	99	77	37	--
SS-13	40' RT	70+00	0.00-1.50	A-6(10)	40	16	10.3	28.3	19.0	42.4	99	94	67	--
SS-14A	40' RT	70+00	4.20-5.70	A-6(6)	39	11	12.9	32.7	36.1	28.3	100	92	69	--
SS-14	45' RT	74+00	0.00-1.50	A-4(0)	34	8	25.1	32.7	30.0	22.2	78	66	38	--
SS-22	60' RT	76+00	0.00-1.50	A-4(2)	27	9	14.6	40.4	20.8	24.2	98	90	50	--
SS-25	60' RT	76+00	14.00-15.50	A-4(0)	28	NP	21.6	37.8	34.5	6.1	100	88	51	--
SS-23	60' RT	76+00	4.00-5.50	A-6(11)	38	15	7.1	24.2	28.3	40.4	100	97	75	--
SS-24	60' RT	76+00	9.00-10.50	A-2-4(0)	25	NP	12.9	62.8	14.1	10.1	100	97	81	--
SS-19	60' RT	77+50	0.00-1.50	A-4(3)	31	9	13.7	36.4	23.6	26.3	100	94	57	--
SS-20	60' RT	77+50	4.00-5.50	A-4(5)	32	10	6.5	35.6	27.7	30.3	100	98	86	--
SS-31	60' RT	77+50	9.00-10.50	A-4(0)	32	NP	21.4	44.0	28.5	6.1	100	91	44	--
SS-15	60' RT	79+00	0.00-1.50	A-4(0)	26	3	11.3	50.7	17.8	20.2	100	97	47	--
SS-18	60' RT	79+00	14.10-15.60	A-2-4(0)	27	NP	27.9	40.2	33.8	8.1	90	76	35	--
SS-16	60' RT	79+00	4.10-5.60	A-4(0)	24	4	14.1	53.7	13.9	12.2	100	96	41	--
SS-17	60' RT	79+00	9.10-10.60	A-4(1)	35	6	22.8	36.4	30.7	10.1	93	85	48	--
SS-39	60' RT	79+60	0.00-1.50	A-4(1)	26	6	6.3	52.1	25.5	16.2	100	99	55	--
SS-30	60' RT	79+60	8.30-10.80	A-2-4(0)	29	NP	31.1	42.4	30.4	6.1	87	70	30	--
SS-31	60' RT	82+00	4.00-5.50	A-6(8)	34	12	3.4	31.9	34.3	30.3	100	99	75	--
SS-32	60' RT	82+00	9.00-10.50	A-2-4(0)	22	NP	46.7	36.2	10.1	8.1	77	56	17	--
SS-35	60' RT	83+30	14.20-15.70	A-2-4(0)	25	NP	43.2	36.8	13.9	6.1	96	70	25	--
SS-33	60' RT	83+30	4.20-5.70	A-6(4)	32	11	19.8	27.3	26.7	26.3	100	88	59	--
SS-34	60' RT	83+30	9.20-10.70	A-6(5)	33	12	14.9	29.9	28.9	26.3	100	92	61	--
SS-26	50' RT	86+00	0.00-3.50	A-7-5(27)	59	25	5.1	9.3	43.2	42.4	100	97	89	--
SS-27	50' RT	86+00	3.50-5.00	A-7-5(12)	48	11	6.9	15.2	67.8	20.2	100	96	84	--
SS-28	50' RT	86+00	8.50-10.00	A-5(8)	44	8	11.9	17.6	68.4	12.1	100	92	77	--
SS-37	60' LT	87+00	13.50-15.00	A-4(2)	34	7	23.3	29.7	39.0	8.0	97	82	54	--

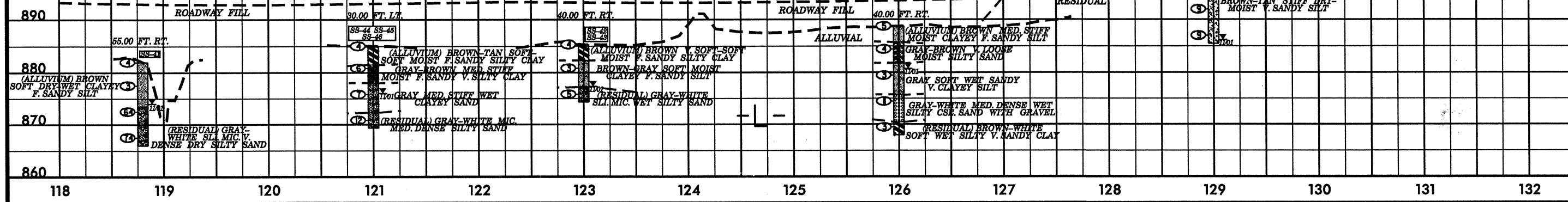
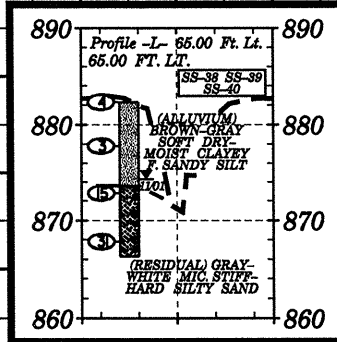


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PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION
INCOMPLETE PLANS
DO NOT USE FOR A/W ACQUISITION

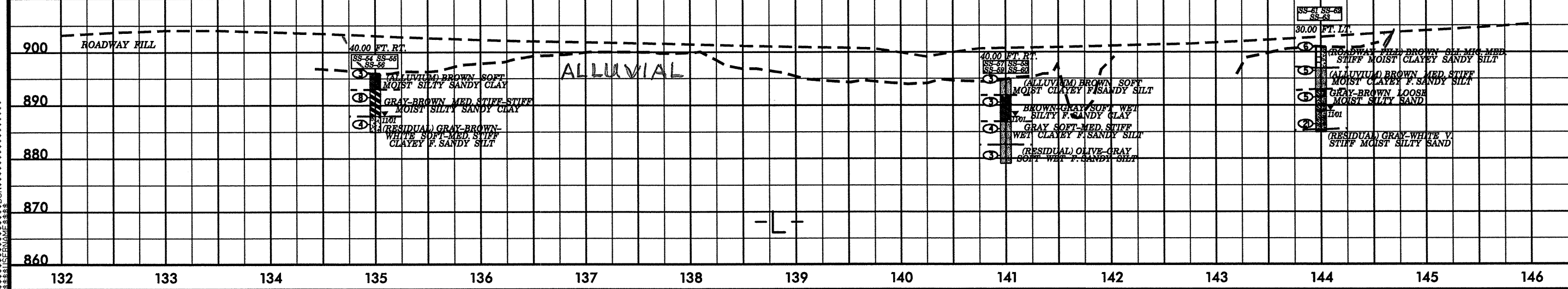
SOIL TEST RESULTS

SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	LL	PL. I.	% BY WEIGHT				% PASSING SIEVES			% MOISTURE	% ORGANIC
							C. SAND	F. SAND	SILT	CLAY	10	40	200		
SS-38	66' LT	118+75	0.00-1.50	A-4(0)	25	8	23.5	41.8	20.7	14.1	98	89	41	-	-
SS-39	66' LT	118+75	4.50-6.00	A-4(0)	24	3	17.7	54.0	18.3	10.0	100	95	37	-	-
SS-40	66' LT	118+75	9.50-11.00	A-2-4(0)	31	NP	32.9	42.8	16.3	8.0	94	77	31	-	-
SS-41	65' RT	118+80	4.50-6.00	A-4(0)	26	5	6.0	52.8	23.1	18.1	100	99	52	-	-
SS-44	30' LT	121+00	0.00-1.50	A-7-6(19)	45	21	1.4	21.3	37.1	40.2	100	99	85	-	-
SS-45	30' LT	121+00	4.20-5.70	A-6(13)	40	14	1.0	24.5	42.4	32.1	100	100	84	-	-
SS-46	30' LT	121+00	9.20-10.70	A-2-4(0)	24	NP	39.2	43.4	13.5	4.0	84	68	19	-	-
SS-47	30' LT	121+00	14.20-15.70	A-4(0)	28	NP	7.0	57.8	23.1	12.0	97	96	45	-	-
SS-42	40' RT	123+00	0.00-1.50	A-7-5(22)	53	23	3.6	20.5	31.7	44.2	100	98	83	-	-
SS-43	40' RT	123+00	4.50-6.00	A-4(2)	40	1	2.6	38.8	30.5	28.1	100	99	70	-	-
SS-47A	40' RT	126+00	0.00-1.50	A-6(7)	33	12	13.3	22.6	36.1	28.1	100	94	69	-	-
SS-48	40' RT	126+00	4.30-5.80	A-2-7(2)	52	24	32.6	47.0	18.6	2.0	100	83	28	-	-
SS-49	40' RT	126+00	9.30-10.80	A-4(4)	27	7	7.6	14.5	29.7	48.2	100	95	82	-	-
SS-50	40' RT	126+00	14.30-15.80	A-1-6(0)	19	NP	65.6	31.3	11.0	2.0	60	39	10	-	-
SS-51	40' RT	126+00	19.30-20.80	A-7-6(3)	42	17	36.7	22.7	28.5	12.0	90	66	41	-	-
SS-52	45' LT	129+00	4.20-5.70	A-4(0)	41	9	19.5	35.1	35.3	10.0	100	90	54	-	-
SS-53	45' LT	129+00	14.20-15.70	A-6(2)	43	9	23.1	38.2	30.7	8.0	99	87	46	-	-



SOIL TEST RESULTS

SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	LL	PL. I.	% BY WEIGHT				% PASSING SIEVES			% MOISTURE	% ORGANIC
							C. SAND	F. SAND	SILT	CLAY	10	40	200		
SS-54	40' RT	135+00	0.00-1.50	A-6(8)	39	15	14.3	25.3	28.3	32.1	100	94	65	-	-
SS-55	40' RT	135+00	4.50-6.00	A-7-5(16)	53	23	11.9	22.4	23.2	42.4	100	95	70	-	-
SS-56	40' RT	135+00	9.50-11.00	A-5(3)	42	6	9.7	41.4	38.8	10.1	100	98	60	-	-
SS-57	40' RT	141+00	0.00-1.50	A-4(2)	28	9	10.5	44.6	22.6	22.2	100	96	54	-	-
SS-58	40' RT	141+00	4.30-5.80	A-6(4)	32	11	9.1	43.0	25.7	22.2	100	96	58	-	-
SS-59	40' RT	141+00	9.30-10.80	A-4(0)	28	7	17.8	50.9	19.2	12.1	100	94	40	-	-
SS-60	40' RT	141+00	14.30-15.80	A-4(2)	37	7	12.1	46.6	33.3	8.1	100	97	51	-	-
SS-61	30' LT	144+00	0.00-1.50	A-5(1)	41	7	23.4	37.4	25.1	14.1	95	84	45	-	-
SS-62	30' LT	144+00	4.50-6.00	A-4(4)	32	9	10.9	37.0	25.9	26.3	100	96	60	-	-
SS-63	30' LT	144+00	9.50-11.00	A-2-4(0)	24	NP	33.5	46.5	11.9	8.1	100	90	25	-	-

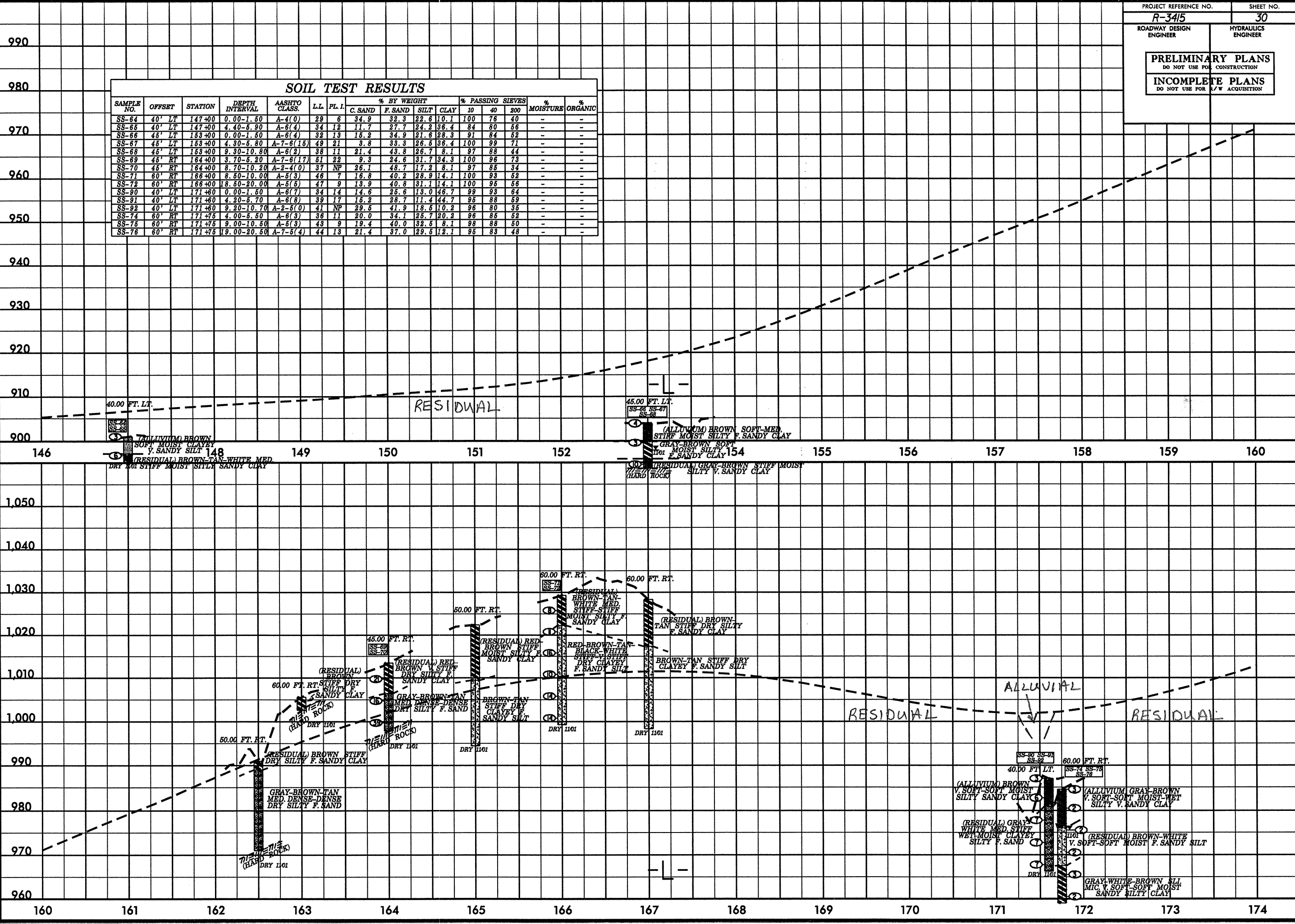


PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

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-64	40' LT	147+00	0.00-1.50	A-4(0)	28	6	34.9	32.3	22.8	10.1	100	76	40	-	-
SS-65	40' LT	147+00	4.40-5.90	A-6(4)	34	12	11.7	27.7	24.2	36.4	84	80	56	-	-
SS-66	45' LT	153+00	0.00-1.50	A-6(4)	32	13	15.2	34.9	21.6	28.3	91	84	52	-	-
SS-67	45' LT	153+00	4.30-5.80	A-7-6(15)	49	21	3.8	33.3	26.5	36.4	100	99	71	-	-
SS-68	45' LT	153+00	9.30-10.80	A-6(2)	38	11	21.4	43.8	28.7	8.1	97	88	44	-	-
SS-69	45' RT	164+00	3.70-5.20	A-7-6(17)	61	22	9.3	24.6	31.7	34.3	100	96	73	-	-
SS-70	45' RT	164+00	8.70-10.20	A-2-4(0)	37	NP	26.1	48.7	17.2	8.1	97	85	34	-	-
SS-71	60' RT	166+00	8.50-10.00	A-5(3)	46	7	16.8	40.2	28.9	14.1	100	93	52	-	-
SS-72	60' RT	166+00	18.50-20.00	A-5(5)	47	9	13.9	40.8	31.1	14.1	100	95	56	-	-
SS-90	40' LT	171+60	0.00-1.50	A-6(7)	34	14	14.6	25.6	13.0	46.7	99	93	64	-	-
SS-91	40' LT	171+60	4.20-5.70	A-6(8)	39	17	15.2	28.7	11.4	44.7	95	88	59	-	-
SS-92	40' LT	171+60	9.20-10.70	A-2-5(0)	41	NP	29.5	41.9	18.5	10.2	96	80	35	-	-
SS-74	60' RT	171+75	4.00-5.50	A-6(3)	36	11	20.0	34.1	25.7	20.2	96	85	52	-	-
SS-75	60' RT	171+75	9.00-10.50	A-5(3)	43	9	19.4	40.0	32.5	8.1	98	88	50	-	-
SS-76	60' RT	171+75	19.00-20.50	A-7-5(4)	44	13	21.4	37.0	29.5	12.1	95	83	48	-	-



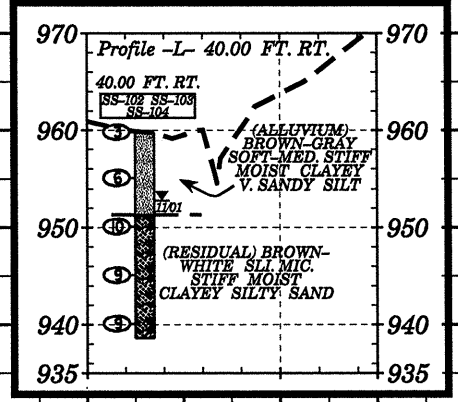
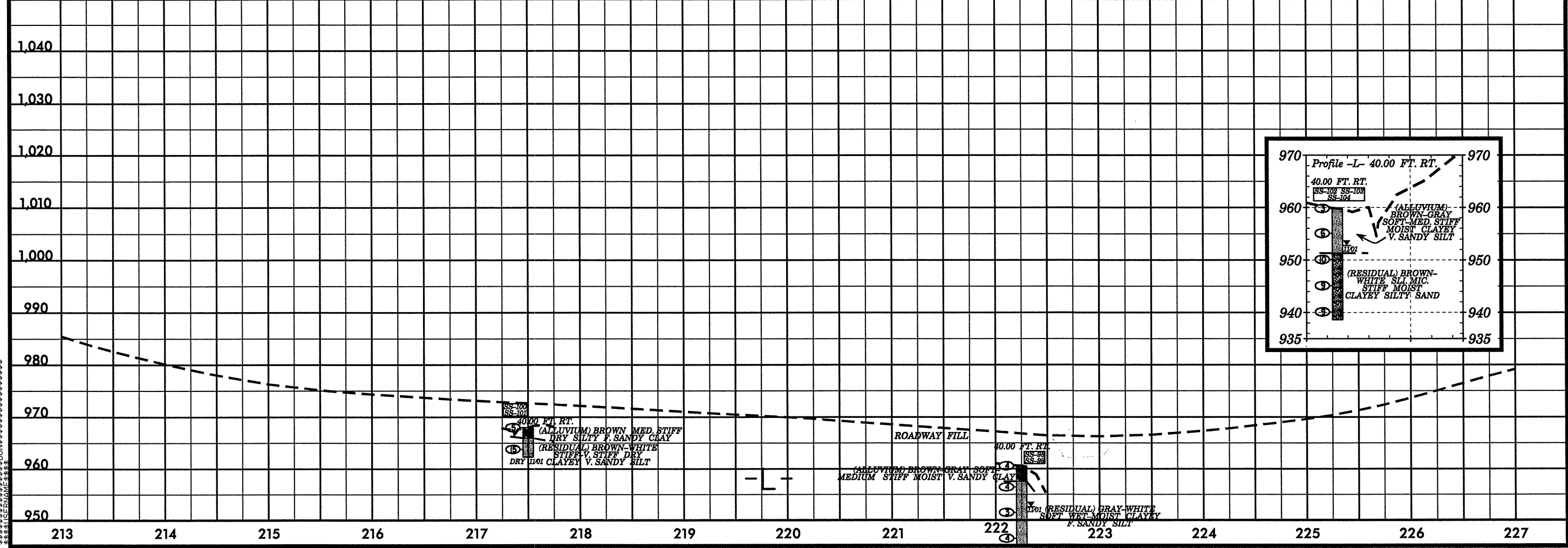
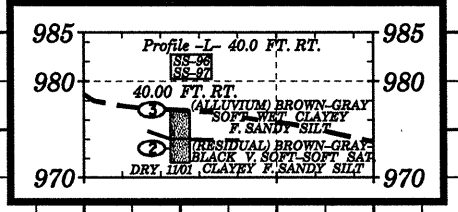
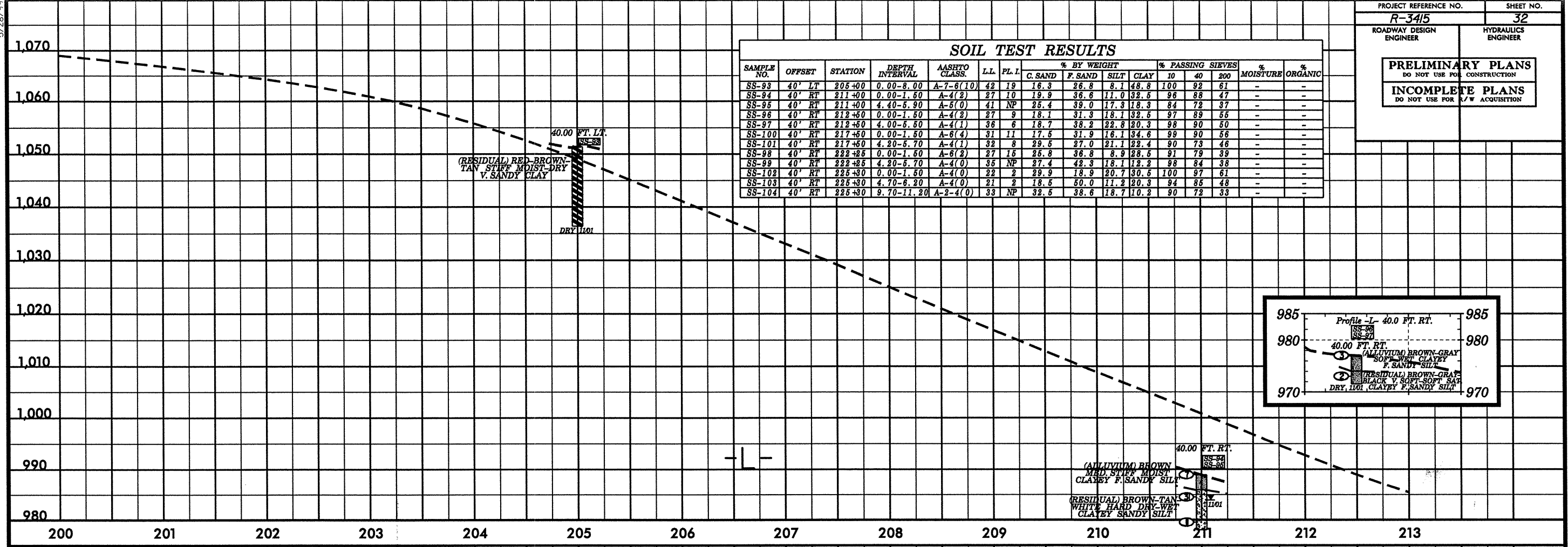
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PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

INCOMPLETE PLANS
DO NOT USE FOR A/W ACQUISITION

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-93	40' LT	205+00	0.00-8.00	A-7-6(10)	42	19	16.3	26.8	8.1	48.8	100	92	61	-	-
SS-94	40' RT	211+00	0.00-1.60	A-4(2)	27	10	19.9	36.6	11.0	32.5	96	88	47	-	-
SS-95	40' RT	211+00	4.40-5.90	A-6(0)	41	NP	25.4	39.0	17.3	18.3	84	72	37	-	-
SS-96	40' RT	212+50	0.00-1.60	A-4(2)	27	9	18.1	31.3	18.1	32.5	97	89	56	-	-
SS-97	40' RT	212+50	4.00-6.60	A-4(1)	36	6	18.7	38.2	22.8	20.3	98	90	50	-	-
SS-100	40' RT	217+50	0.00-1.60	A-6(4)	31	11	17.5	31.9	16.1	34.6	99	90	56	-	-
SS-101	40' RT	217+50	4.20-5.70	A-4(1)	32	8	29.5	27.0	21.1	22.4	90	73	46	-	-
SS-98	40' RT	222+55	0.00-1.60	A-6(2)	27	16	25.8	36.8	8.9	28.5	91	79	39	-	-
SS-99	40' RT	222+55	4.20-5.70	A-4(0)	35	NP	27.4	42.3	18.1	12.2	88	84	38	-	-
SS-102	40' RT	225+30	0.00-1.60	A-4(0)	22	2	29.9	18.9	20.7	30.6	100	97	61	-	-
SS-103	40' RT	225+30	4.70-6.20	A-4(0)	21	2	15.6	50.0	11.2	20.3	94	85	48	-	-
SS-104	40' RT	225+30	9.70-11.20	A-2-4(0)	33	NP	32.6	38.6	18.7	10.2	90	72	33	-	-

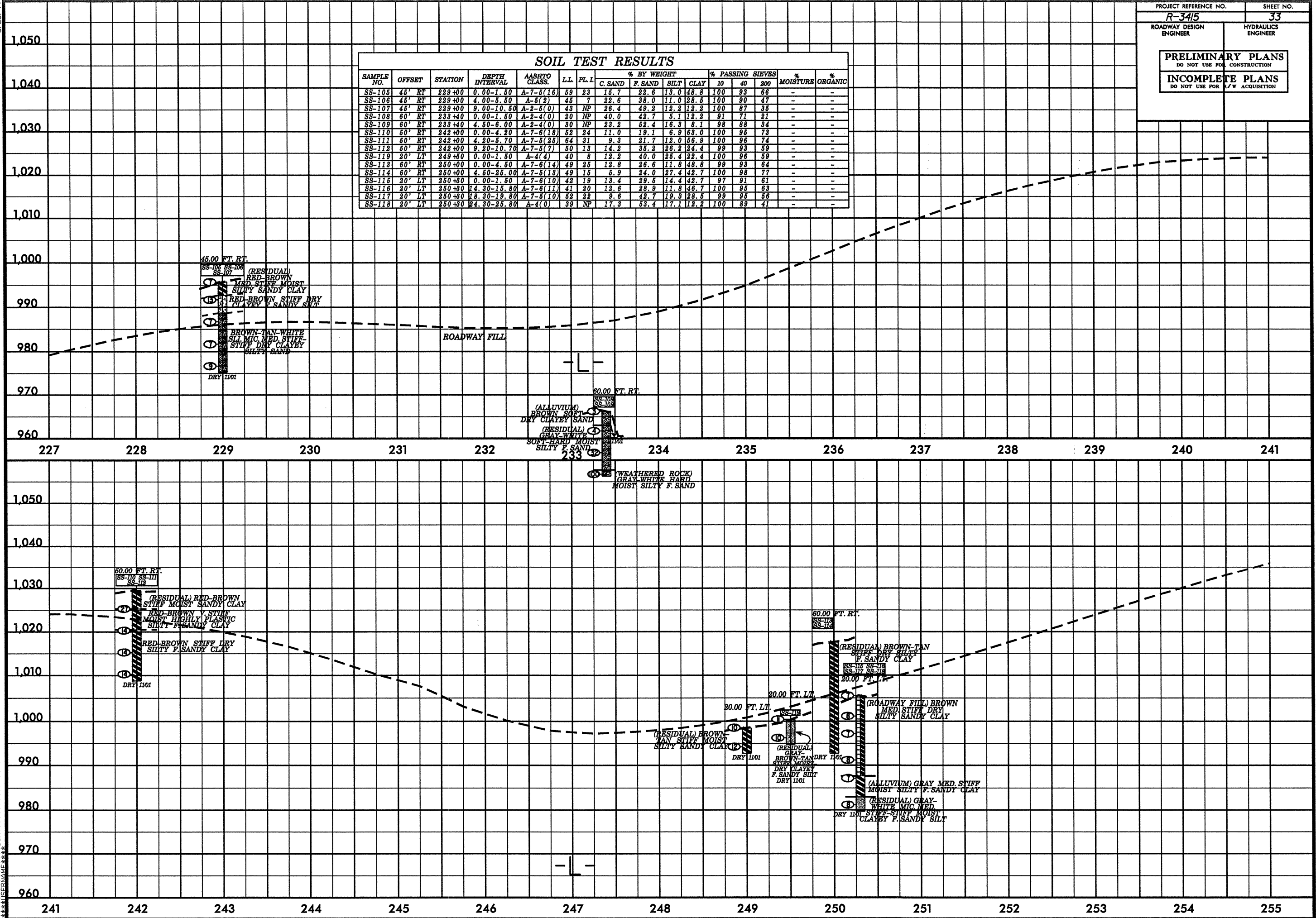


5/28/99

SYTIME

SOIL TEST RESULTS

SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	LL	PL I.	% BY WEIGHT				% PASSING SIEVES			% MOISTURE	% ORGANIC
							C. SAND	F. SAND	SILT	CLAY	10	40	200		
SS-105	45' RT	229+00	0.00-1.50	A-7-5(16)	59	23	15.7	22.6	13.0	48.8	100	93	66	-	-
SS-106	45' RT	229+00	4.00-5.50	A-5(2)	45	7	22.6	38.0	11.0	28.5	100	90	47	-	-
SS-107	45' RT	229+00	9.00-10.50	A-2-5(0)	43	NP	26.4	49.2	12.2	12.2	100	87	35	-	-
SS-108	60' RT	233+40	0.00-1.50	A-2-4(0)	20	NP	40.0	42.7	5.1	12.2	91	71	21	-	-
SS-109	60' RT	233+40	4.50-6.00	A-2-4(0)	30	NP	23.2	52.4	16.3	8.1	98	88	34	-	-
SS-110	60' RT	242+00	0.00-4.20	A-7-6(18)	52	24	11.0	19.1	6.9	63.0	100	96	73	-	-
SS-111	60' RT	242+00	4.20-5.70	A-7-5(25)	64	31	9.3	21.7	12.0	56.9	100	96	74	-	-
SS-112	60' RT	242+00	9.20-10.70	A-7-5(7)	50	13	14.2	35.2	26.2	24.4	99	93	59	-	-
SS-119	20' LT	249+50	0.00-1.50	A-4(4)	40	8	12.2	40.0	25.4	22.4	100	96	59	-	-
SS-113	60' RT	250+00	0.00-4.50	A-7-6(14)	49	25	12.8	26.6	11.8	48.8	99	93	64	-	-
SS-114	60' RT	250+00	4.50-25.00	A-7-5(13)	49	15	5.9	24.0	27.4	42.7	100	98	77	-	-
SS-115	20' LT	250+30	0.00-1.50	A-7-6(10)	42	19	13.4	29.5	14.4	42.7	97	91	61	-	-
SS-116	20' LT	250+30	14.30-15.80	A-7-6(11)	41	20	12.6	28.9	11.8	46.7	100	95	63	-	-
SS-117	20' LT	250+30	18.30-19.80	A-7-5(10)	52	22	9.6	42.7	19.3	28.5	99	95	56	-	-
SS-118	20' LT	250+30	24.30-25.80	A-4(0)	39	NP	17.3	53.4	17.1	12.2	100	89	41	-	-



5/28/93

DATE PLOTTED: 06/11/93

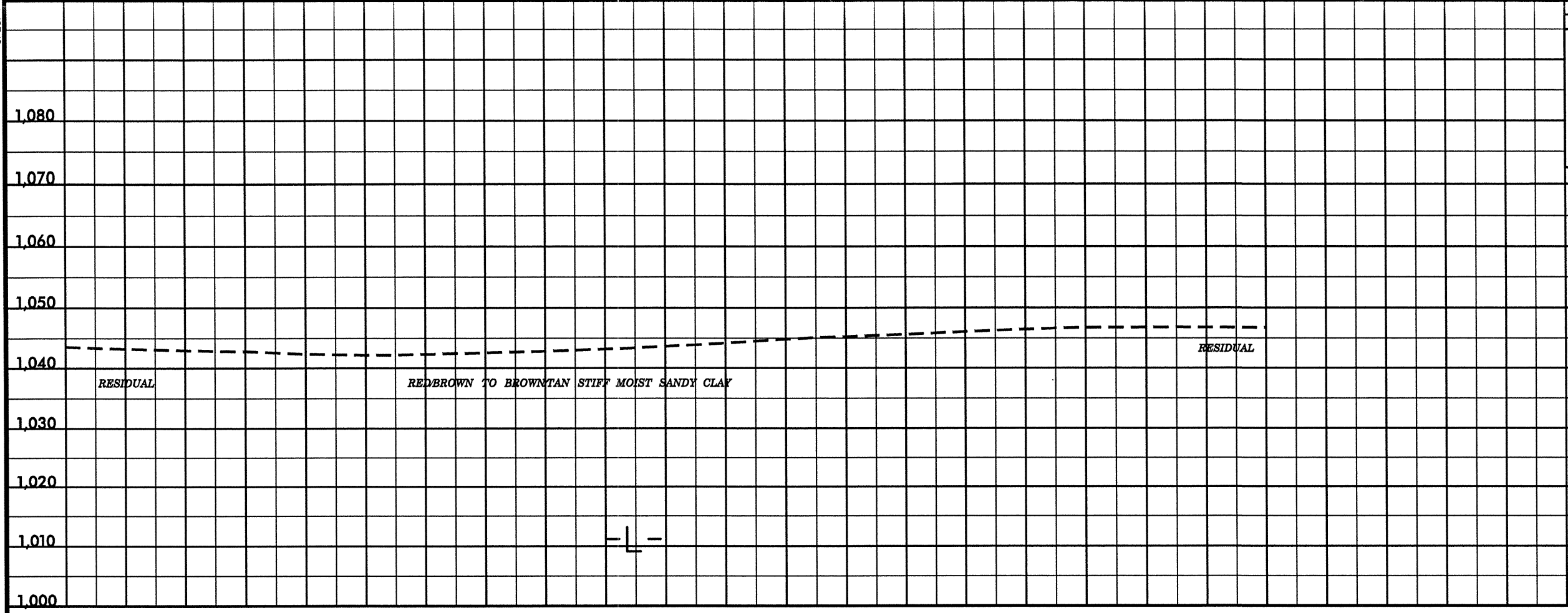
DRAWN BY: J. W. BROWN

CHECKED BY: J. W. BROWN

SCALE: AS SHOWN

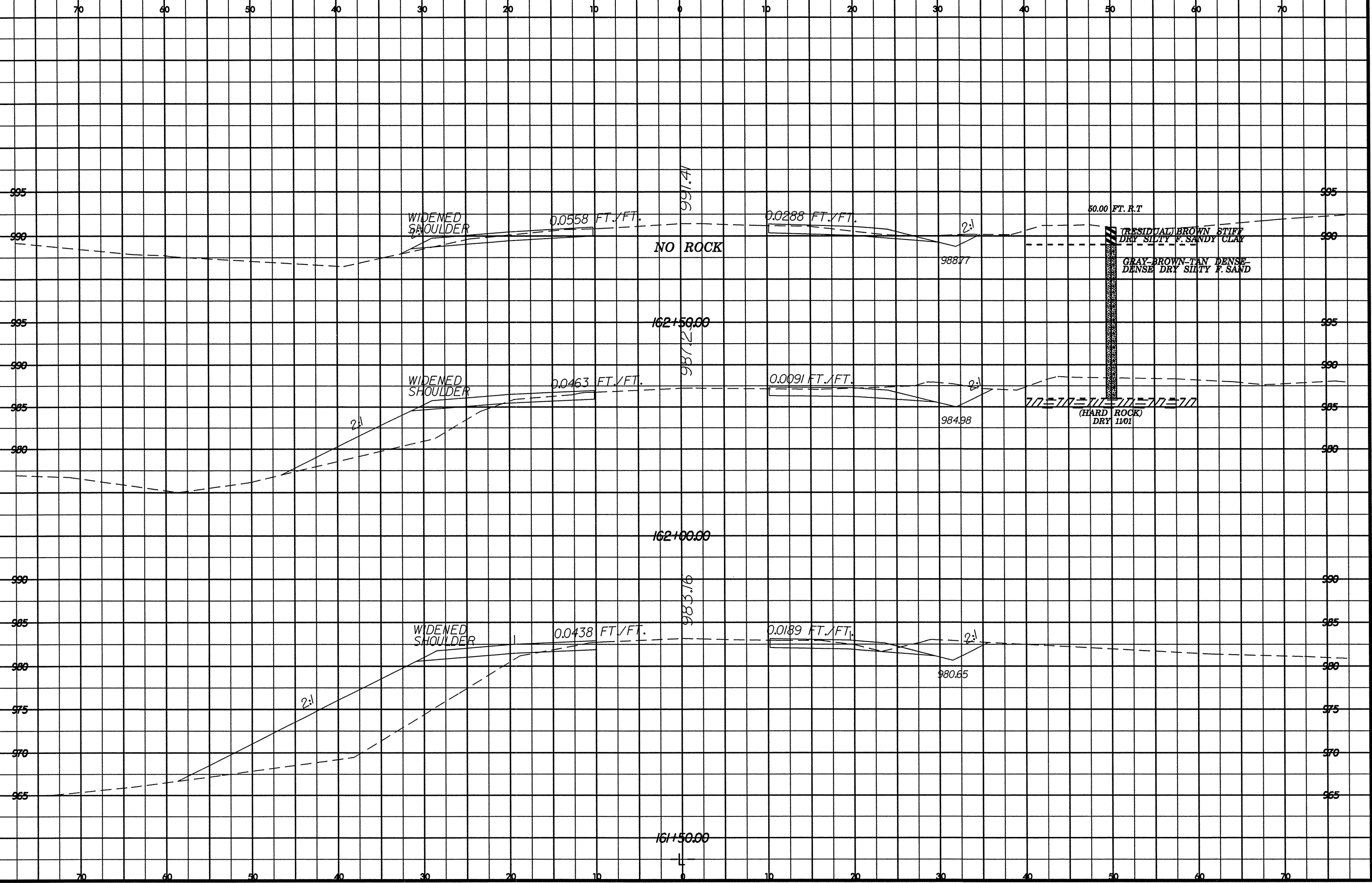
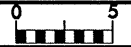
5/28/99

PROJECT REFERENCE NO. R-3415	SHEET NO. 35
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION	



SYSTEMS DESIGN

Rev. 3/6/01
SYTIME
CIGN
USERNAME



70 60 50 40 30 20 10 0 10 20 30 40 50 60 70

SOIL TEST RESULTS															
SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	ASHTO CLASS.	L.L.	P.L.I.	% BY WEIGHT				% PASSING SIEVES			% MOISTURE	% ORGANIC
							C. SAND	F. SAND	SILT	CLAY	10	40	200		
SS-69	45.00' RT.	164+00.00	3.70-5.20	A-7-6(17)	61	22	9.3	24.6	31.7	34.3	100	96	73		
SS-70	45.00' RT.	164+00.00	8.70-10.20	A-2-4(0)	37	NP	26.1	48.7	17.2	8.1	97	85	34		

