



STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION

MICHAEL F. EASLEY
GOVERNOR

LYNDO TIPPETT
SECRETARY

November 4, 2008

US Army Corps of Engineers
Wilmington Regulatory Office
P.O. Box 1890
Wilmington, NC 28402-1890

Attn: Mr. Richard Spencer
NCDOT Coordinator, Division 8

Dear Sir:

Subject: **Application for Modification to Section 404 and Section 401 permits** for the US 421/NC 87 (Sanford Bypass) from east of NC 42 to NC 87 near SR 1138 in Lee County, Division 8. Federal Aid Project No. STPNHF-421(2), State Project No. 8.T540402, WBS Element No. 34431.1.6, TIP No. R-2417C.

Section 404 Individual Permit, issued May 28, 2002, USACE Action ID 2002-2-0899
Section 401 Individual Water Quality Certification, issued April 10, 2002, NCDENR-DWQ
Water Quality Certification Project No. 001432.

\$570.00 Debit from WBS 34431.1.6

The North Carolina Department of Transportation (NCDOT) proposes to construct a four-lane median divided freeway with full control access, on new location to serve as a US 421/NC 87 bypass of Sanford, North Carolina. NCDOT submitted an individual Section 404 Permit Application to the U.S. Army Corps of Engineers (USACE) for R-2417 (final design for R-2417AB, R-2417BA, and R-2417BB; preliminary design for R-2417AA and R-2417C) on June 11, 2001. Additional information was submitted on June 22, 2001, August 31, 2001, and September 28, 2001. On May 28, 2002, the Section 404 Permit was issued by the USACE (Action ID No. 2002-2-0899) and on April 10, 2002, a Section 401 Water Quality Certification was issued by the N.C. Division of Water Quality (DWQ Project 001432). Table 1 below lists the construction schedule for each section.

Table 1. Construction Schedule for R-2417

Section	Project Description	Let Date Schedule
R-2417AB	West of US 1/15/501 to East of US 1/15/501	Completed
R-2417BA	East of US 1/15/501 to East of SR 1521	Completed
R-2417BB	East of SR 1521 to East of NC 42	Completed
R-2417C	East of 42 to NC 87 near SR 1138	June 16, 2009
R-2417AA	West of SR 1400 to West of US 1/15/501	February 16, 2010

MAILING ADDRESS:
NC DEPARTMENT OF TRANSPORTATION
PROJECT DEVELOPMENT AND ENVIRONMENTAL ANALYSIS
NATURAL ENVIRONMENT UNIT
1598 MAIL SERVICE CENTER
RALEIGH NC 27699-1598

TELEPHONE: 919-715-1334 or
919-715-1335
FAX: 919-715-5501

LOCATION:
2728 CAPITAL BLVD. SUITE 240
RALEIGH NC 27604

WEBSITE: WWW.NCDOT.ORG

The purpose of this submittal is to request a modification to the Section 404 permit and Section 401 Water Quality Certification reflecting final design for Section R-2417C. Please see the enclosed copies of the permit drawings, utility impact drawings, and design plans for the above-referenced project.

The revised design does not compromise NCDOT's compliance with the existing permit conditions. The revision has been evaluated for compliance with the avoidance/minimization criteria and is in compliance with all previous issues, including the following:

- Protected Species
- Aquatic Life passage
- FEMA compliance
- Cultural Resources

Summary of Jurisdictional Impacts

After issuance of the original permit (preliminary design for R-2417 C), the fill slopes for Section C changed from 2:1 to 3:1 along jurisdictional areas due to erodible soils in the project area, resulting in an overall increase of impacts to jurisdictional waters and wetlands in the Cape Fear River basin (HUC 03030004). Sites 13 and 14 in this permit modification are new stream sites that were not listed in the original permit. It was determined by the USACE (per discussion with Richard Spencer on March 5, 2008) that no compensatory mitigation will be required for impacts to these sites. Sites 15 and 16 in this permit modification were originally listed as Sites 8 and 9, respectively, in the original permit for Section R-2417BB, but construction was never completed and these sites are now part of Section R-2417C.

Please refer to Table 2 for a summary of impact increases and to the Wetland Permit Impact Summary Table (permit drawings) for detail site comparisons between the original and permit modification. Since the original permit for Section R-2417C was for preliminary design, temporary impacts were not available at that time. Total temporary impacts include 0.02 acre of riparian wetland impact and 595 linear feet of stream impact.

Table 2. Jurisdictional Impacts Comparison Summary Table

Permitted Impact Types	Permanent Impacts
Original Permit Wetland Impacts (OPWI)	3.22 acres
Permit Modification Wetland Impacts (PMWI)	3.94 acres
PMWI – OPWI	0.72 acres increase for Permit Modification
Original Permit Total Stream Impact (OPTSI)	4,732 linear feet
Permit Modification Total Stream Impact (PMTSI)	5,192 linear feet
PMTSI – OPTSI	460 linear feet increase for Permit Modification

Summary of Utility Impacts

Information regarding utility impacts for Section R-2417C was not available during the time of the original permit submittal. Five utility line crossings will occur totaling less than 0.01 acre of riparian wetland and 60 linear feet of stream impacts. These impacts are included in the revised permit impacts in Table 2. Please refer to the Wetland Permit Impact Summary Table in the Utility Drawings for site specific details.

Federally Protected Species

As of January 31, 2008, the US Fish and Wildlife Service (USFWS) lists three federally protected species for Lee County: Cape Fear shiner (*Notropis mekistocholas*), red-cockaded woodpecker (*Picoides borealis*), and harperella (*Ptilimnium nodosum*). While the bald eagle (*Haliaeetus leucocephalus*) is not listed, it remains protected under the Bald and Golden Eagle Protection Act. No suitable habitat is available for the bald eagle within a 1.0 mile radius of the project study area.

The biological conclusion of “No Effect” has been rendered for the three species for Section R-2417C due to no habitat. A biological conclusion of “May Affect – Not Likely to Adversely Affect” for Cape Fear shiner was rendered for the entire R-2417 project in the original permit. However, it was determined that no suitable habitat was available in Section R-2417C during a Cape Fear shiner survey screening on May 22, 2007 by NCDOT biologists. A review of the Natural Heritage Program database in October 2008 revealed no occurrences of these species within 1.0 mile of the project study area.

Mitigation

The remaining mitigation from the original permit for HUC 03030004 includes 3.22 acres of riparian wetland mitigation and 4,417 linear feet of stream mitigation. The final mitigatable riparian wetland (3.94 acres) and stream (4,676 linear feet) impacts for Section R-2417C exceeded the original permit mitigation requirement by 0.72 acre and 259 linear feet, respectively, within HUC 03030004 (Table 3). Streams located at Sites 5, 13, and 14, totaling 516 linear feet, will not require mitigation. The NCDOT is proposing to make payment to the EEP (Ecosystem Enhancement Program) for the increased impacts to wetlands and streams. The acceptance letter from EEP for the wetland mitigation is enclosed with this application.

Table 3. Mitigatable Impacts Comparison Summary Table

Mitigatable Impact Types	Mitigatable Impacts
Original Permit Wetland Impacts (OPWI)	3.22 acres
Permit Modification Wetland Impacts (PMWI)	3.94 acres
PMWI – OPWI	0.72 acres of additional mitigation
Original Permit Mitigatable Stream Impact (OPMSI)	4,417 linear feet
Permit Modification Mitigatable Stream Impact (PMMSI)	4,676 linear feet
PMMSI – OPMSI	259 linear feet of additional mitigation

Regulatory Approvals

Application is hereby made for the modification of the Section 404 Permit from USACE and Section 401 Water Quality Certification from DWQ. In compliance with Section 143-215.3D(e) of the NCAC we have provided a method of debiting \$570, as noted in the subject line of this application, as payment for processing the Section 401 Water Quality Certification modification application. We are providing five copies of this application to DWQ, for their use.

A copy of this permit modification will be posted on the NCDOT website at: <http://www.ncdot.org/doh/preconstruct/pe/>. If you have any questions or need additional information, please call Greg Price at (919) 715-5533.

Sincerely,

for Gregory J. Thorpe, Ph.D.
Environmental Management Director, PDEA

cc: w/attachment

Mr. Brian Wrenn, NCDWQ (5 Copies)
Ms. Kathy Matthews, USEPA

w/o attachment

Dr. David Chang, P.E., Hydraulics
Mr. Mark Staley, Roadside Environmental
Mr. Greg Perfetti, P.E., Structure Design
Mr. Victor Barbour, P.E., Project Services Unit
Mr. Tim Johnson, P.E., Division 8 Engineer
Mr. Art King, Division 8 Environmental Officer
Mr. Jay Bennett, P.E., Roadway Design
Mr. Majed Alghandour, P. E., Programming and TIP
Mr. Art McMillan, P.E., Highway Design
Mr. Scott McLendon, USACE, Wilmington
Mr. Travis Wilson, NCWRC
Mr. Gary Jordan, USFWS
Mr. Jay McInnis, P.E., PDEA Project Planning Engineer
Ms. Beth Harmon, EEP
Mr. Todd Jones, NCDOT External Audit Branch
Mr. Drew Joyner, PE, Human Environment Unit Head
Mr. Clarence W. Coleman, P.E., FHWA



October 22, 2008

Mr. Richard Spencer
U. S. Army Corps of Engineers
Wilmington Regulatory Field Office
Post Office Box 1890
Wilmington, North Carolina 28401-1890

Dear Mr. Spencer:

Subject: EEP Mitigation Acceptance Letter:

R-2417C, US 421/NC 87 (Sanford Bypass) from East of NC 42 to near
SR 1138, Lee County; Cape Fear River Basin (Cataloging Unit
03030004); Southern Piedmont (SP) Eco-Region

The purpose of this letter is to notify you that the Ecosystem Enhancement Program (EEP) will provide the compensatory stream and riparian wetland mitigation for the unavoidable impact associated with the above referenced project. As indicated in the NCDOT's mitigation request dated October 16, 2008, stream and riparian wetland mitigation from EEP is required for approximately 259 feet of warm stream impact and 0.72 acre of riparian wetland impact.

Stream and riparian wetland mitigation associated with this project will be provided in accordance with Section X of the Amendment No. 2 to the Memorandum of Agreement between the N. C. Department of Environment and Natural Resources, the N. C. Department of Transportation, and the U. S. Army Corps of Engineers fully executed on March 8, 2007 (Tri-Party MOA). EEP commits to implement sufficient stream and riparian wetland mitigation up to 518 warm stream credits and 1.44 riparian wetland credits to offset the impacts associated with this project by the end of the MOA year in which this project is permitted. If the above referenced impact amounts are revised, then this mitigation acceptance letter will no longer be valid and a new mitigation acceptance letter will be required from EEP.

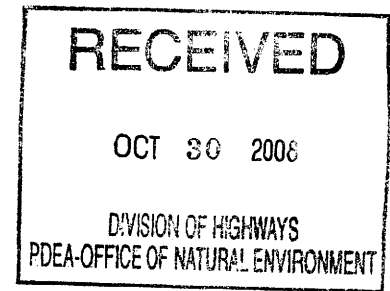
If you have any questions or need additional information, please contact Ms. Beth Harmon at 919-715-1929.

Sincerely,

William D. Gilmore, P.E.
EEP Director

cc: Mr. Gregory J. Thorpe, Ph.D., NCDOT-PDEA
Mr. Brian Wrenn, Division of Water Quality, Wetlands/401 Unit
File: R-2417C





October 22, 2008

Mr. Gregory J. Thorpe, Ph.D.
Environmental Management Director
Project Development and Environmental Analysis Branch
North Carolina Department of Transportation
1548 Mail Service Center
Raleigh, North Carolina 27699-1548

Dear Dr. Thorpe:

Subject: EEP Mitigation Acceptance Letter:

R-2417C, US 421/NC 87 (Sanford Bypass) from East of NC 42 to
near SR 1138, Lee County

The purpose of this letter is to notify you that the Ecosystem Enhancement Program (EEP) will provide the stream and riparian wetland mitigation for the subject project. Based on the information supplied by you on October 16, 2008, the impacts are located in CU 03030004 of the Cape Fear River Basin in the Southern Piedmont (SP) Eco-Region, and are as follows:

Warm Stream: 259 feet

Riparian Wetland: 0.72 acre

During the review of this request, it was noted that this project was not included in the 2008 Impact Projection Database; however, EEP will provide the requested stream and riparian wetland mitigation. Depending on the availability and projected need of stream and riparian wetland mitigation in this cataloging unit, additional stream and/or riparian wetland mitigation may be required that was not included in the biennial budget submitted to NCDOT on April 1, 2008 (revised May 13, 2008).

Restoring... Enhancing... Protecting Our State

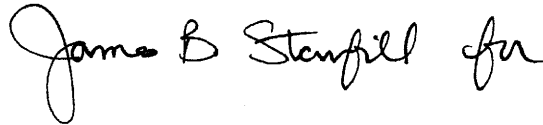
North Carolina Ecosystem Enhancement Program, 1652 Mail Service Center, Raleigh, NC 27699-1652 / 919-715-0476 / www.nceep.net



EEP commits to implementing sufficient compensatory stream and riparian wetland mitigation credits to offset the impacts associated with this project by the end of the MOA Year in which this project is permitted, in accordance with Section X of the Amendment No. 2 to the Memorandum of Agreement between the North Carolina Department of Environment and Natural Resources, the North Carolina Department of Transportation, and the U. S. Army Corps of Engineers, fully executed on March 8, 2007. If the above referenced stream and wetland impact amounts are revised, then this mitigation acceptance letter will no longer be valid and a new mitigation acceptance letter will be required from EEP.

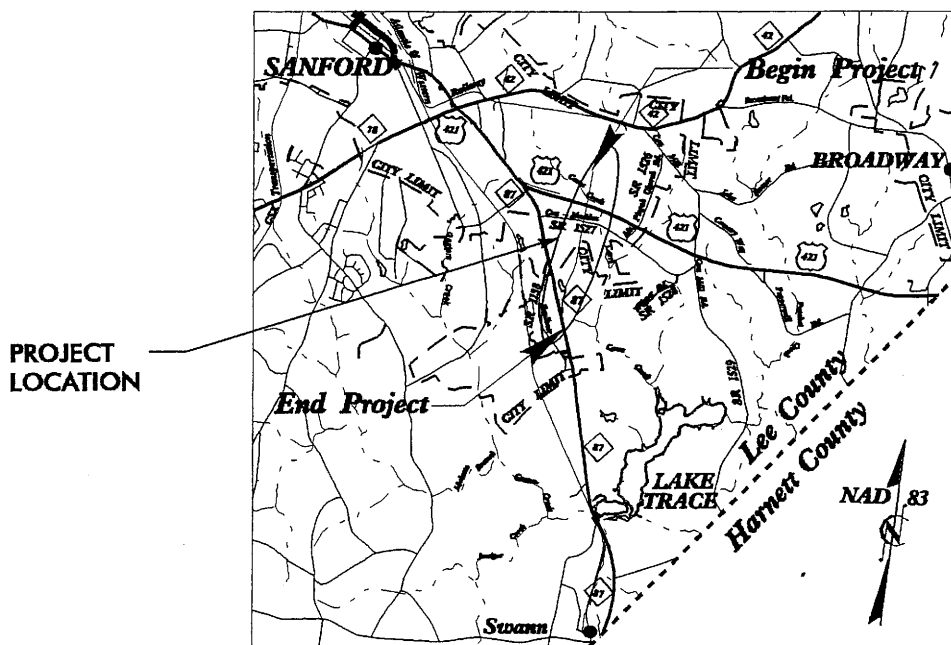
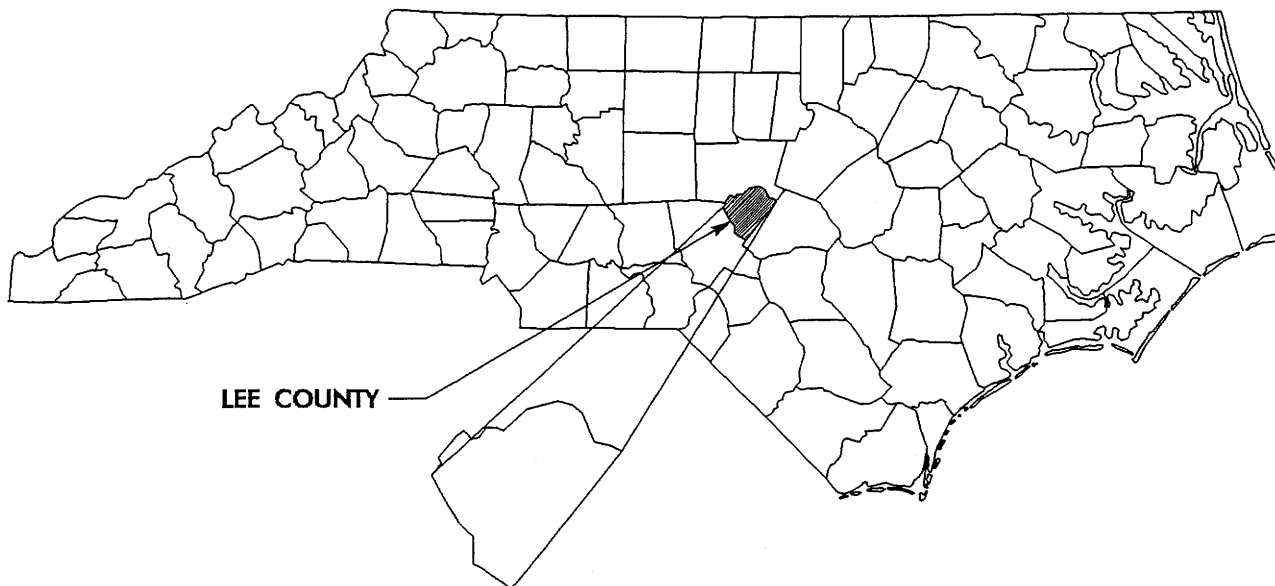
If you have any questions or need additional information, please contact Ms. Beth Harmon at 919-715-1929.

Sincerely,

A handwritten signature in black ink that reads "James B. Stenfill for". The signature is written in a cursive, flowing style.

William D. Gilmore, P.E.
EEP Director

cc: Mr. Richard Spencer, USACE – Wilmington Regulatory Field Office
Mr. Brian Wrenn, Division of Water Quality, Wetlands/401 Unit
File: R-2417C

VICINITY
MAP

NCDOT

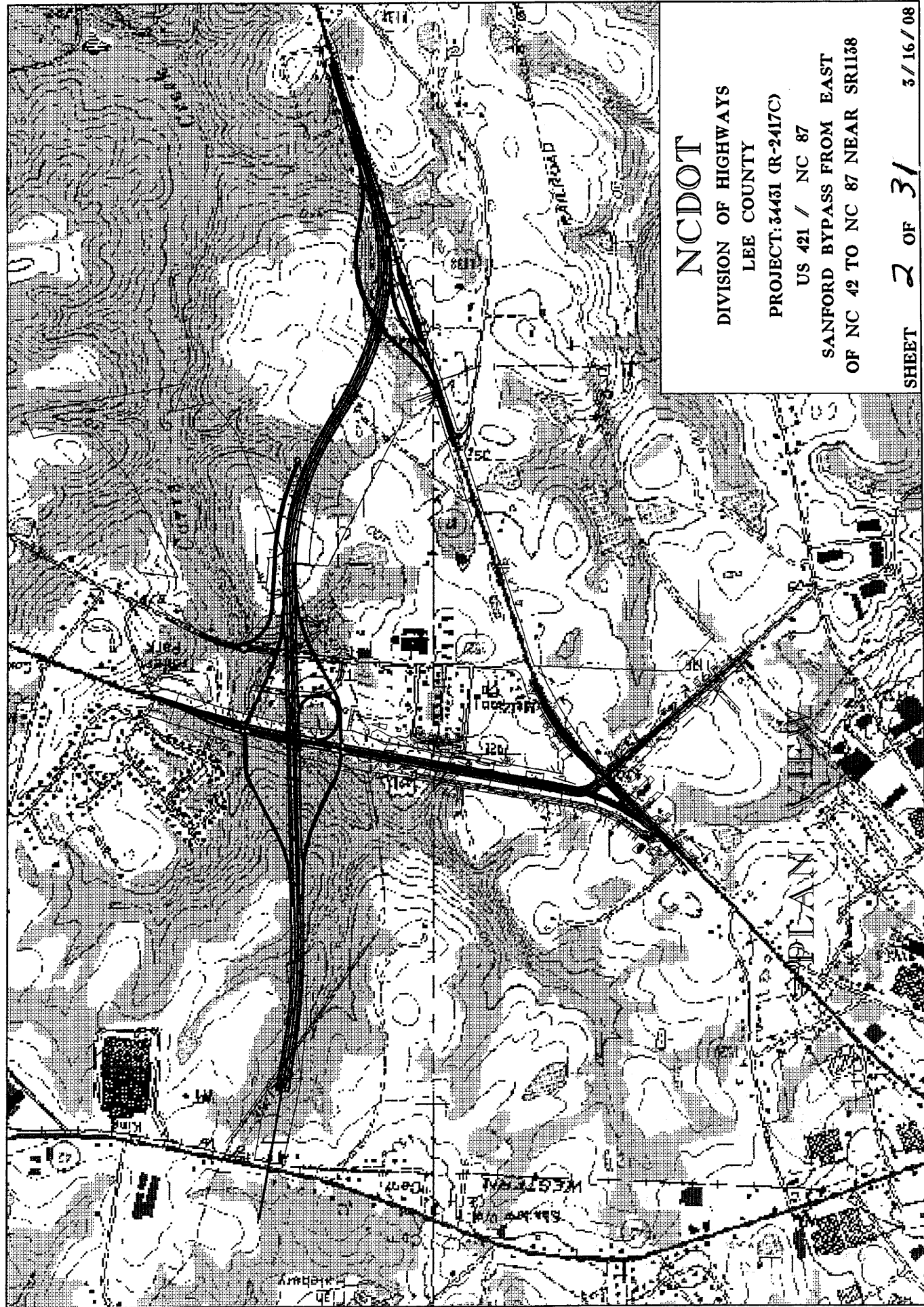
DIVISION OF HIGHWAYS LEE COUNTY

PROJECT: 34431.1.1 (R-2417C)

US 421/NC 87 (SANFORD BYPASS)
FROM EAST OF NC 42 TO NC 87
NEAR SR 1138

SHEET / OF 31

10 // 30 // 07



NCDOT

DIVISION OF HIGHWAYS

LEE COUNTY

PROJECT: 34431 (R-2417C)

US 421 / NC 87

SANFORD BYPASS FROM EAST
OF NC 42 TO NC 87 NEAR SR1138

SHEET 2 OF 31

3/16/08

PROPERTY OWNERS
NAMES AND ADDRESSES

PARCEL NO.	NAMES	ADDRESSES
4	JACK CAPPS	1633 WEBSTER ST. LEAGUE CITY, TX 77573
5	PEGGY GROCE	2509 BUCKINGHAM DR. SANFORD, NC 27330
14	LIZZIE COLE	805 COLLETON RD. RALEIGH, NC 27610
30	HOMESTEAD INC.	P.O. BOX 367 SANFORD, NC 27331
33	W.C. WILSON, JR.	814 CASTLEBERRY CT. VASS, NC 28394
34	ALBERT WOMBLE	P.O. BOX 3609 SEAL BEACH, CA 90740
40	CLINTON BRYAN	256 LAKEVIEW DR. SANFORD, NC 27330
44	DESSIE WILLIAMS	P.O. BOX 2222 SANFORD, NC 27331
63	UNKNOWN	

NCDOT

DIVISION OF HIGHWAYS

LEE COUNTY

PROJECT: 34431.1.1 (R-2417C)

US 421/NC 87 (SANFORD BYPASS)

FROM EAST OF NC 42 TO NC 87

NEAR SR 1138

SHEET

3 OF 31

10 / 30 / 07

WETLAND PERMIT IMPACT SUMMARY

Site No.	Station (From/To)	Structure Size / Type	WETLAND IMPACTS					SURFACE WATER IMPACTS				
			Permanent Fill In Wetlands (ac)	Temp. Fill In Wetlands (ac)	Excavation in Wetlands (ac)	Mechanized Clearing in Wetlands (ac)	Hand Clearing in Wetlands (ac)	Permanent SW impacts (ac)	Temp. SW impacts (ac)	Existing Channel Impacts Permanent (ft)	Existing Channel Impacts Temp. (ft)	Relocated Channel (ft)
1	YRPC 10+97LT To 12+71RT	ROADWAY FILL	0.41			0.02						
2	13+00 +/- YRPC-	2 @ 9'x9' RCBC						0.05	<.01	312		
	613+28 +/- LREV	2 @ 9'x9' RCBC						0.10		540		
3	613+00 +/- LREV-	ROADWAY FILL	0.06									
	26+64 +/- Y- to 22+35 +/- Y- L.T.	ROADWAY FILL	0.43									
4	18+20-YRPB-LT	ROADWAY FILL							0.01		80	
	19+84-YRPB-LT	2@6'x6' RCBC							0.01		42	
5	20+20 +/- Y- RT.	ROADWAY FILL	0.02			0.01						
	19+18 +/- YRPB-	2 @ 9'x9' RCBC						0.04		252		
	19+58-YRPB-	2 @ 9'x9' RCBC						0.01		143		
	19+94 +/-Y-LT	2 @ 6'x6' RCBC						0.04	0.02	175	117	
6	10+50 -YRPD-	ROADWAY FILL & 48"&60" RCP						0.04	<.01	393	33	
	6+25 -YRPA-	ROADWAY FILL & 60" RCP						0.03		305		
SHEET TOTALS:			0.92			0.03		0.31	0.04	2120	272	

NOTES:

NC DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

LEE COUNTY
WBS - 34431.1.1 (R-2417C)

SHEET 4 of 31 10/16/2008

WETLAND PERMIT IMPACT SUMMARY												
				WETLAND IMPACTS			SURFACE WATER IMPACTS					
Site No.	Station (From/To)	Structure Size / Type	Permanent Fill In Wetlands (ac)	Temp. Fill In Wetlands (ac)	Excavation in Wetlands (ac)	Mechanized Clearing in Wetlands (ac)	Hand Clearing in Wetlands (ac)	Permanent SW impacts (ac)	Temp. SW impacts (ac)	Existing Channel Impacts Permanent (ft)	Existing Channel Impacts Temp. (ft)	Relocated Channel (ft)
7	13+62 -FRONT-	2 @ 10'x10' RCBC						0.04	0.01	121	117	
8	643+75 -LREV- RT.	ROADWAY FILL	0.09			<0.01		0.02	<.01	442	32	
9	649+80 -LREV-	ROADWAY FILL	0.11	0.02		<0.01						
10	26+50 -I9FLY-	ROADWAY FILL	0.23					0.01	0.01	120	105	
	665+00 -LREV-	POND						2.83				
	20+00 -I9FLY-	ROADWAY FILL	0.02									
11	19+68 -I9FLY-	ROADWAY FILL						0.06		700		
	678+00 -LREV- LT.	72" RCP & ROADWAY FILL						0.06	<.01	690	15	
12	680+00 -LREV- LT.	POND						0.03				
13	690+00 -LREV- LT.	ROADWAY FILL						0.01		266		
14	45+25-Y-RT	ROADWAY FILL						0.01	<.01	107	43	47
SHEET TOTALS:			0.45	0.02		<0.01		3.07	0.02	2446	312	47

NOTES:

SITE 9 0.003ac OF SW IMPACTS INSIDE THE WETLAND HAVE BEEN SUBTRACTED OUT OF WETLAND IMPACTS.

SITE 12 DOES NOT HAVE A STREAM IMPACT AS ORIGINALLY SHOWN BECAUSE THE STREAM IS NOW FILLED WITH RIP-RAP.

SITES 13 & 14 ARE NEW SITES THAT REQUIRES NO MITIGATION.

NC DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

LEE COUNTY
WBS - 34431.1.1 (R-2417C)

5 of 31

10/16/2008

10/16/2008

NOTES:

SITE 9 0.003ac OF SW IMPACTS INSIDE THE WETLAND HAVE BEEN SUBTRACTED OUT OF WETLAND IMPACTS.

SITE 12 DOES NOT HAVE A STREAM IMPACT AS ORIGINALLY SHOWN BECAUSE THE STREAM IS NOW FILLED WITH RIP-RAP.

SITES 13 & 14 ARE NEW SITES THAT REQUIRES NO MITIGATION.

NC DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

LEE COUNTY
WBS - 34431.1.1 (R-2417C)

SHEET **5 of 31** 10/16/2008

WETLAND PERMIT IMPACT SUMMARY

REVISED IMPACTS												
Site No.	Fill In Wetlands (ac)	Mechanized Clearing (Method III) (ac)	Fill In SW (Natural) (ac)	Fill In SW (Pond) (ac)	Existing Channel Impacted (ft)	ORIGINAL PERMIT IMPACTS						
						Permanent Fill In Wetlands (ac)	Temp Fill In Wetlands (ac)	Mechanized Clearing in Wetlands (ac)	Permanent SW impacts (ac)	Temp. SW impacts (ac)	Existing Channel Impacts Permanent (ft)	Existing Channel Impacts Temp. (ft)
1	0.22					0.41		0.02				
2			0.13		781				0.15		852	
2**			0.01		200							
3	0.48					0.49						
4			0.02		177					0.02		122
5	0.05		0.11		774	0.02		0.01	0.09	0.02	427	117
5**			0.00		115				<.01		143	
6			0.07		394				0.07	<.01	698	33
7			0.01		82				0.04	0.01	121	117
8	0.12		0.02		371	0.09		<.01	0.02	<.01	442	32
9	0.23					0.11	0.02	<.01				
TOTALS:	1.10		0.38		2894	1.12	0.02	0.03	0.37	0.05	2683	421

NOTES:

PROJECT FILL SLOPES CHANGED FROM 2:1 TO 3:1 (ORIGINAL VS REV) DUE TO SOIL INSTABILITY ISSUES.

"2***" IS NO LONGER A STREAM.

"5***" INTERMITTENT STREAM REQUIRING NO MITIGATION

NC DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

LEE COUNTY
WBS - 34431.1.1 (R-2417C)

WETLAND PERMIT IMPACT SUMMARY

REVISED IMPACTS												
ORIGINAL PERMIT IMPACTS												
Site No.	Fill In Wetlands (ac)	Mechanized Clearing (Method III) (ac)	Fill In SW (Natural) (ac)	Fill In SW (Pond) (ac)	Existing Channel Impacted (ft)	Permanent Fill In Wetlands (ac)	Temp Fill In Wetlands (ac)	Mechanized Clearing in Wetlands (ac)	Permanent SW impacts (ac)	Temp. SW impacts (ac)	Existing Channel Impacts Permanent (ft)	Existing Channel Impacts Temp. (ft)
10	0.02			2.84		0.25			2.84	0.01	120	105
11			0.10		1329				0.12	<.01	1390	15
12			0.01		79				0.03			
13									0.01		266	
14									0.01	<.01	107	43
15	1.86	0.17				2.18		0.23				
16	0.06	0.01	0.04		430	0.11		0.01	0.03	<.01	566	11
SHT 1												
TOTALS:	1.10		0.38		2894	1.12	0.02	0.03	0.37	0.05	2683	421
GRAND TOTALS:	3.04	0.18	0.49	2.84	4732	3.66	0.02	0.27	3.41	0.06	5132	595

NOTES:

SITE 12 DOES NOT HAVE A STREAM IMPACT AS ORIGINALLY SHOWN BECAUSE THE STREAM IS NOW FILLED WITH RIP-RAP.

SITE 13 & 14 ARE NEW SITES.

SITES 15 & 16 ARE INCLUDED IN PROJ. R-2417BB BUT ARE NOW A PART OF R-2417C.

NC DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

LEE COUNTY
WBS - 34431.1.1 (R-2417C)

SHEET

8 of 31

10/16/2008

14-OCT-2008 14:13
c:\hydra\quills\permits\2417c-hyd-prm-wet.dgn
bzeiman AL HY239448

TIP PROJECT: R-2417C

CONTRACT:

WETLAND & STREAM IMPACT PERMIT DRAWINGS

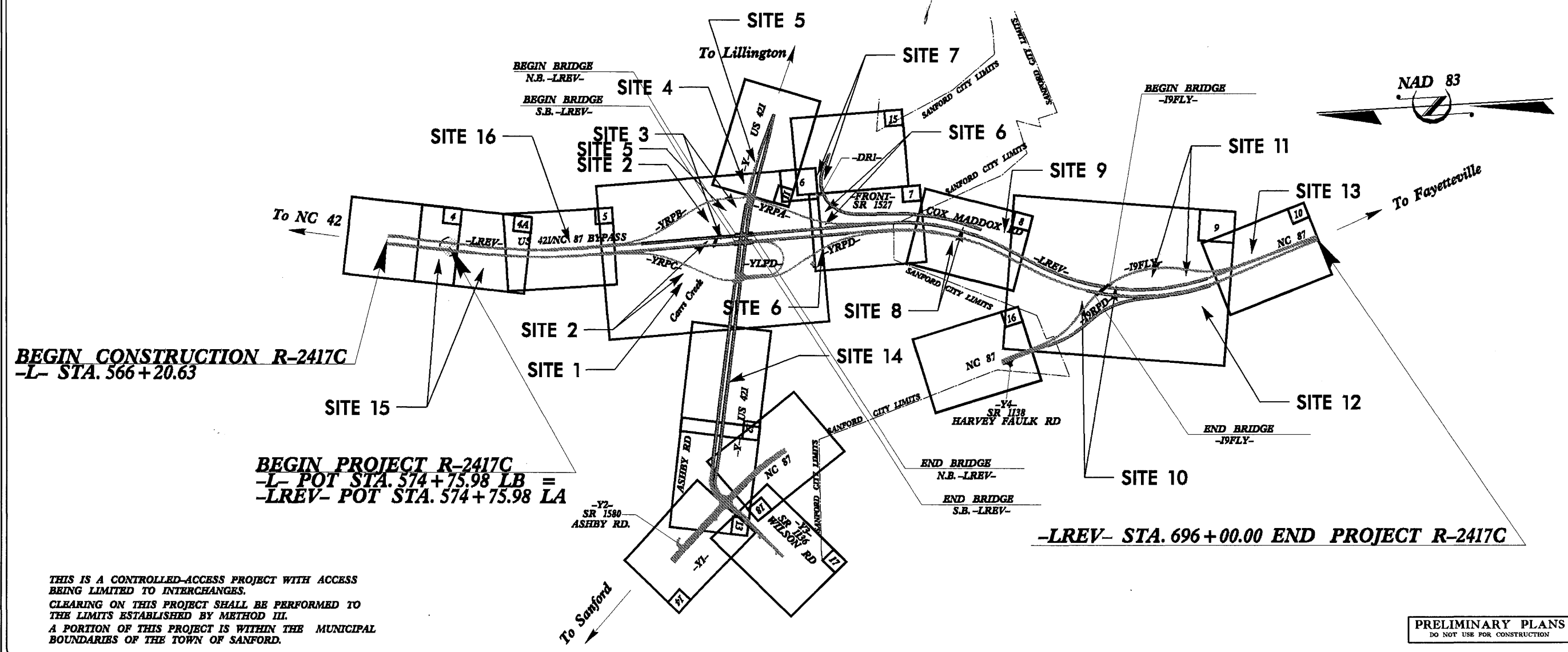
STATE OF NORTH CAROLINA DIVISION OF HIGHWAYS LEE COUNTY

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	R-2417C	1	
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	
34431.1.6	STP-NHF-421(2)	P.E.	
34431.2.6	STP-NHF-421(2)	R/W & UTIL.	

LOCATION: US 421/NC 87 (SANFORD BYPASS) FROM EAST OF NC 42 TO NC 87 NEAR SR 1138.

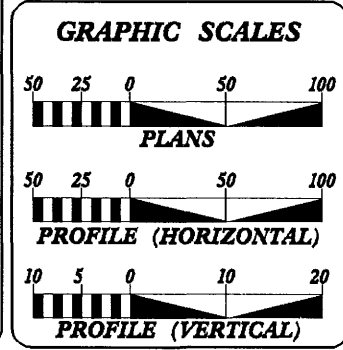
TYPE OF WORK: GRADING, PAVING, DRAINAGE, SIGNING, SIGNALS, STRUCTURES AND CULVERTS.

Permit Drawing
Sheet 9 of 31



THIS IS A CONTROLLED-ACCESS PROJECT WITH ACCESS BEING LIMITED TO INTERCHANGES.
CLEARING ON THIS PROJECT SHALL BE PERFORMED TO THE LIMITS ESTABLISHED BY METHOD III.
A PORTION OF THIS PROJECT IS WITHIN THE MUNICIPAL BOUNDARIES OF THE TOWN OF SANFORD.

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION



DESIGN DATA	
ADT 2009	= 18,600 VPD
ADT 2030	= 30,000 VPD
DHV	= 10 %
D	= 60 %
T	= 8 % *
V	= 70 MPH
FUNC CLASS	=
PRINCIPAL ARTERIAL	
*(TTST 3% & DUAL 5%)	

PROJECT LENGTH	
LENGTH ROADWAY TIP PROJECT R-2417C	=
LENGTH STRUCTURE TIP PROJECT R-2417C	=
TOTAL LENGTH TIP PROJECT R-2417C	= 2.296 mi.

Prepared in the Office of: DIVISION OF HIGHWAYS 1000 Birch Ridge Dr., Raleigh NC, 27610	
2006 STANDARD SPECIFICATIONS	
RIGHT OF WAY DATE: AUGUST 31, 2007	GLENN W. MUMFORD, PE PROJECT ENGINEER
LETTING DATE: APRIL 21, 2009	SUSAN C. LANCASTER, PE PROJECT DESIGN ENGINEER

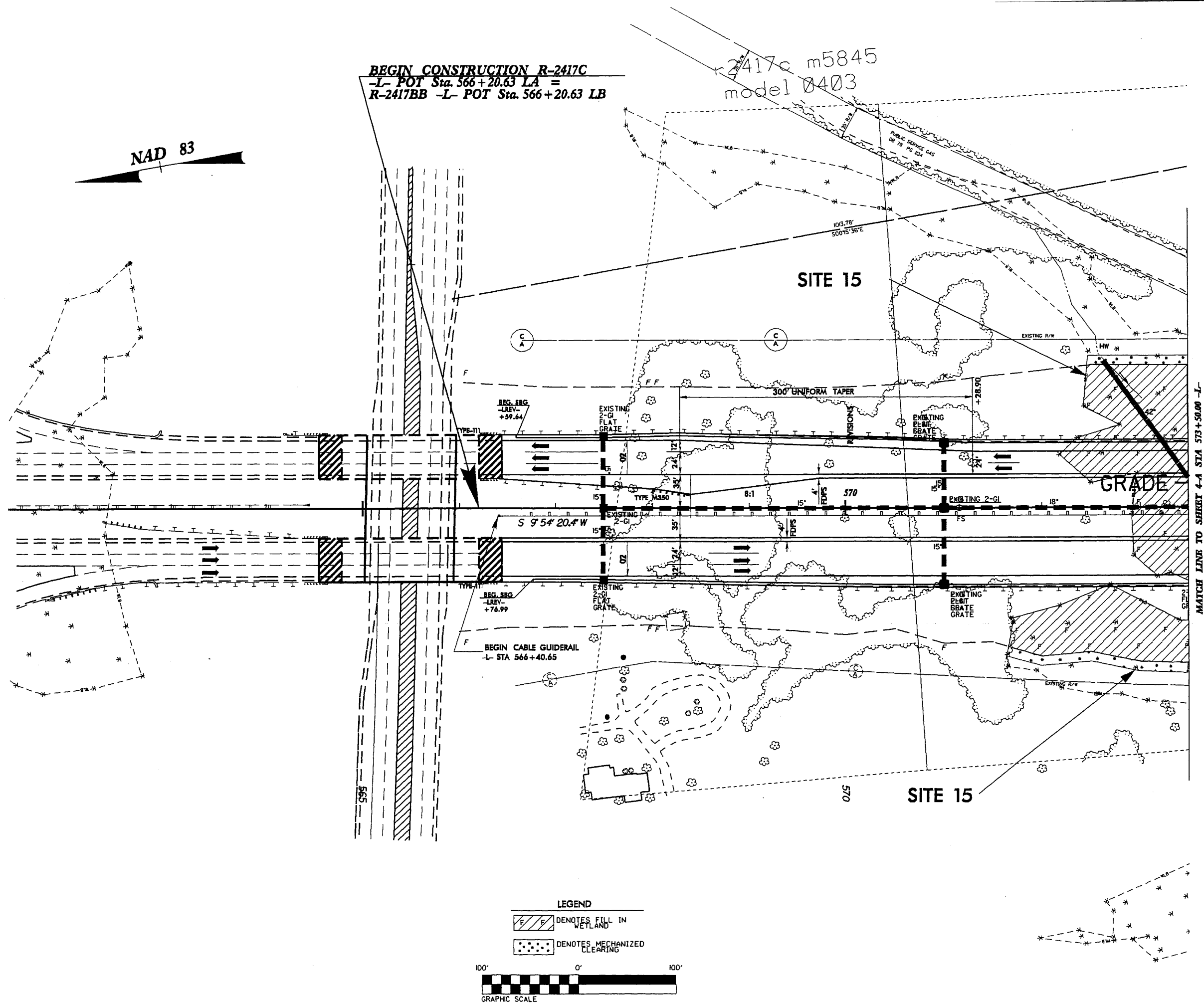
HYDRAULICS ENGINEER	
SIGNATURE: _____	P.E.
ROADWAY DESIGN ENGINEER	
SIGNATURE: _____	P.E.
STATE HIGHWAY DESIGN ENGINEER	

DIVISION OF HIGHWAYS
STATE OF NORTH CAROLINA

STATE HIGHWAY DESIGN ENGINEER

PROJECT REFERENCE NO.	SHEET NO.
R-2417C	4
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

Permit Drawing
Sheet 10 of 31



8/22/08

25 JUL 2008 07:28
h:\projects\2417c-hyd-prm-wet.psd\04.dgn
brazner

~~2417c m5845~~
~~/model 0403~~

NAD 83



SITE 15

 DENOTES FILL IN WETLAND

 DENOTES MECHANIZED CLEARING



PROJECT REFERENCE NO.	SHEET NO.
R-2417C	4A
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	

Permit Drawing
Sheet 12 of 31

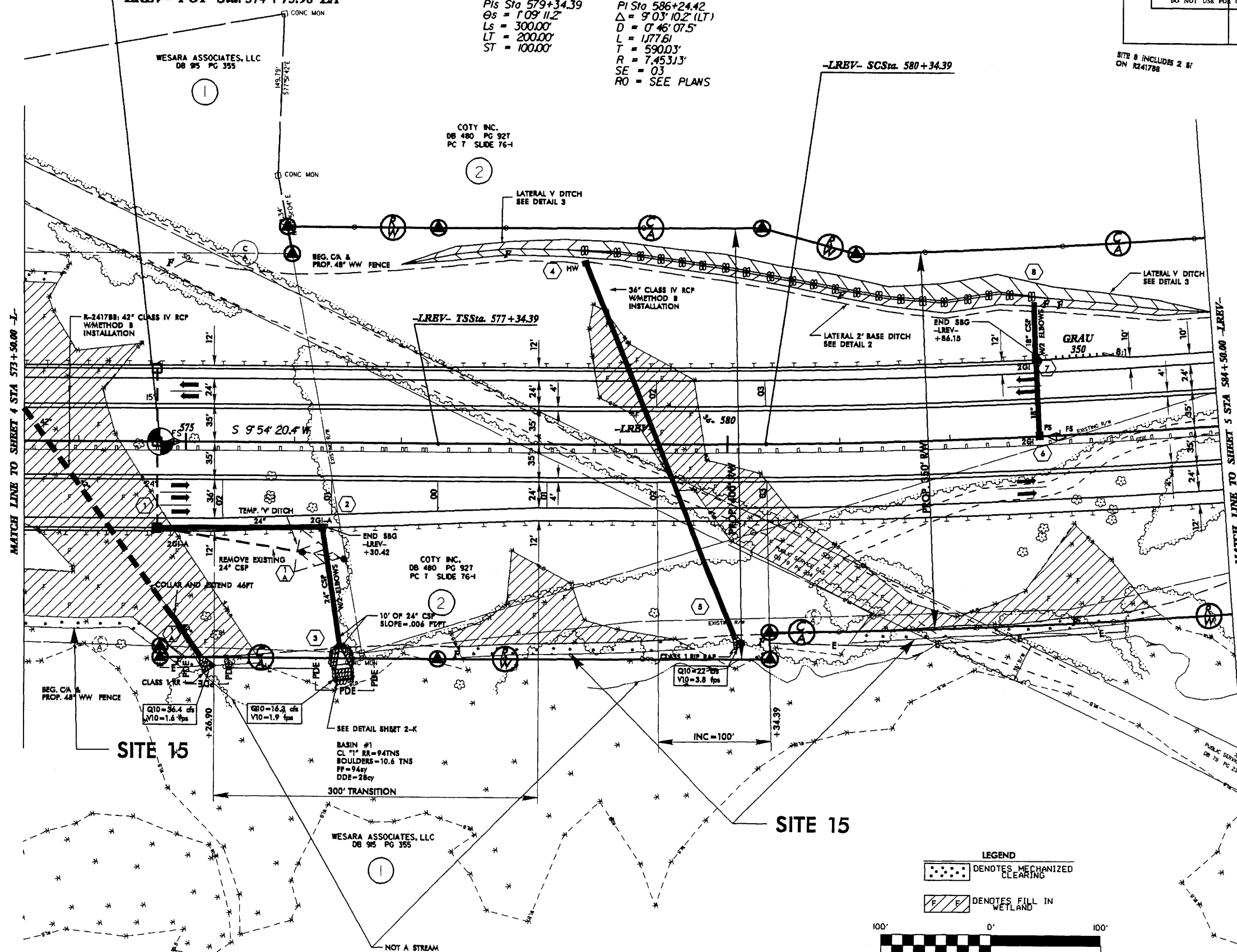
NAD 83

BEGIN PROJECT R-2417C
-L- POT Sta. 574+75.98 LB =
-LREV- POT Sta. 574+75.98 LA

-LREV-
PI Sta 579+34.39
Os = 1'09" 11.2"
Ls = 300.00'
LT = 200.00'
ST = 100.00'
PI Sta 586+24.42
Δ = 9'03" 10.2" (LT)
D = 0'46" 07.5"
L = 177.61'
T = 590.03'
R = 7,453.13'
SE = 03
RO = SEE PLANS

-LREV- SCSta. 580+34.39

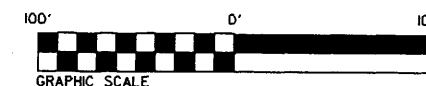
SITE 8 INCLUDES 2 S/
ON R241788



MATCH LINE TO SHEET 4 STA 573+50.00 -L-

MATCH LINE TO SHEET 5 STA 584+50.00 -LREV-

LEGEND
DENOTES MECHANIZED CLEARING
DENOTES FILL IN WETLAND



REVISIONS

28-JUL-2008 14:08
F:\Hydro\autocad\permits\R-2417C_hyd_perm_vet_psh01a.dgn
psh01a

Permit Drawing
Sheet 14 of 31

-LREV-
PI Sta 586+24.42
 $\Delta = 9^{\circ} 03' 10.2" (LT)$
 $D = 0^{\circ} 46' 07.5"$
 $L = 1777.61$
 $T = 590.03'$
 $R = 7,453.13'$
 $SE = 03$
 $RO = SEE PLANS$
Pls Sta 593+12.00
 $\Theta s = 1^{\circ} 09' 11.2"$
 $Ls = 300.00'$
 $LT = 200.00'$
 $ST = 100.00'$

-LREV- POT Sta 596+50.00 =
-YRFB- TS Sta. 0+00.00 59' LT.

COTY INC.
DB 480 PG 927
PC 7 SLIDE 76-1

(2)

-LREV- CSS Sta. 592+11.99

-LREV- STS Sta. 595+11.99

580' FULL LANE

300' TRANSITION

DITCH
Q10=2.4cfs
V10(max)=3.7fps

PIPERDITCH
Q10=6.9cfs
V10=1.6fps

Q10=2.0cfs
V10=2.8fps

LATERAL BASE DITCH
SEE DETAIL 1C

CLASS B RIP RAP

LATERAL V DITCH
SEE DETAIL 3

BL-280 (POINT HAS BEEN DESTROYED)
PINC 114+45.83 R-2417BB LB=
BL-280 (POINT HAS BEEN DESTROYED)
PINC 114+45.83 R-2417C LA

SPECIAL DITCH
SEE DETAIL 7

UT 1 TO CARRS CR

S 3' 27' 09" E

S 1' 27' 12" E

JURISDICTIONAL STREAM

CAT-1

-LREV- POT Sta. 596+75.00
-YRFB- POT Sta. 0+00.00 59' RT.

TOE PROTECTION
SEE DETAIL 31
CL B RA=132 TN
FF=400cy

Q10=74cfs
V10=2.1fps

300' TAPER

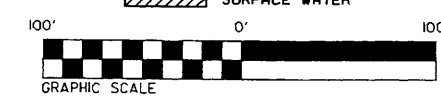
SITE 16

WILL 79-E-182

(3)

SEE DETAIL SHEET 2-J
BASIN #2
CL 1" RA=162 TNS
BOULDERS=5.5 TNS
RIP RAP TO ELEV. 388.3'
FF=1680 cy
DDE=202 cy

- LEGEND
- [Hatched Box] DENOTES FILL IN WETLAND
 - [Dotted Box] DENOTES MECHANIZED CLEARING
 - [Diagonal Lines] DENOTES IMPACTS IN SURFACE WATER
 - [Cross-hatched Box] DENOTES TEMPORARY IMPACTS IN SURFACE WATER



COTY INC.
DB 480 PG 927
PC 7 SLIDE 76-1

(2)

MATCH LINE TO SHEET 4 STA 584+50.00 -LREV-

MATCH LINE TO SHEET 6 STA 597+00.00 -LREV-

NAD 83

REVISIONS

28-JUL-2008 14:33
r:\hyd-eulics\permits\2417c_hyd-pr-m_wet-ps\05.dgn
AT HY235448

PROJECT REFERENCE NO.	SHEET NO.
R-2417C	5
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	

Permit Drawing
Sheet 15 of 31

NAD 83

PI Sta 586+24.42
Δ = 9°03'10.2" (LT)
D = 0'46'07.5"
L = 1177.61
T = 590.13
R = 1453+3
SE = 03
RO = SEE PLANS

PIs Sta 593+1200
Δs = 1°09'11.2"
Ls = 300.00
LT = 200.00
ST = 1000.00

LREV- POT Sta 596+50.00 =
VRPB- TS Sta 0+00.00 59°12'

LREV- CSS Sta 592+11.99

580' PULL LANE

BL-280 (POINT HAS BEEN DESTROYED)
FINC 114+45.83 R-2417B LB=
BL-280 (POINT HAS BEEN DESTROYED)
FINC 114+45.83 R-2417C LA

UT 1 TO CARRS CR

SITE 16

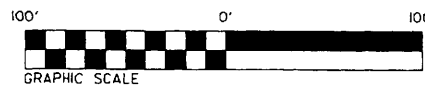
RESARA ASSOCIATES, LLC
DB 90 PC 359

TOE PROTECTION
SEE DETAIL 31
CL B RK=132 TH
PF=4000y

LREV- POT Sta 596+75.00
VRPB- POT Sta 0+00.00 59°12'

SEE DETAIL SHEET 2-J
BASIN #2
CL B RK=162 THS
BOULDERSS=5/8" THS
RIP RAP TO RCV. 388.3'
PF=1680 y
DDE=202 y

- LEGEND
- DENOTES PILL IN
 - DENOTES MECHANIZED CLEARING
 - DENOTES IMPACTS IN SURFACE WATER
 - DENOTES TEMPORARY IMPACTS IN SURFACE WATER



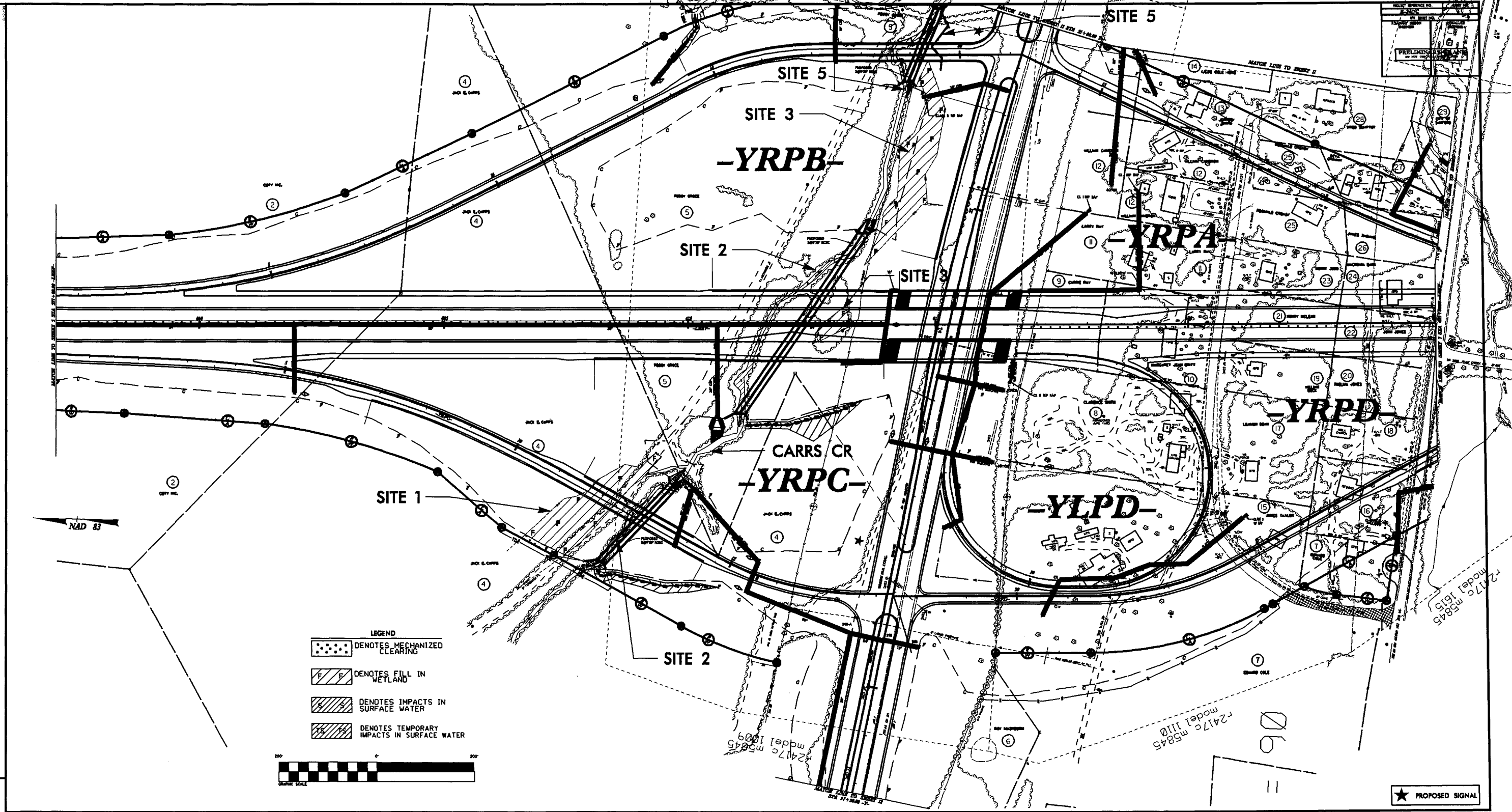
28-JUL-2008 14:34
F:\hyd\adules\permits\2417c-hyd-prm-wet-pah02.dgn
Bzerman AT H243448

7/2/95

Permit Drawing
Sheet 16 of 31

REVISIONS

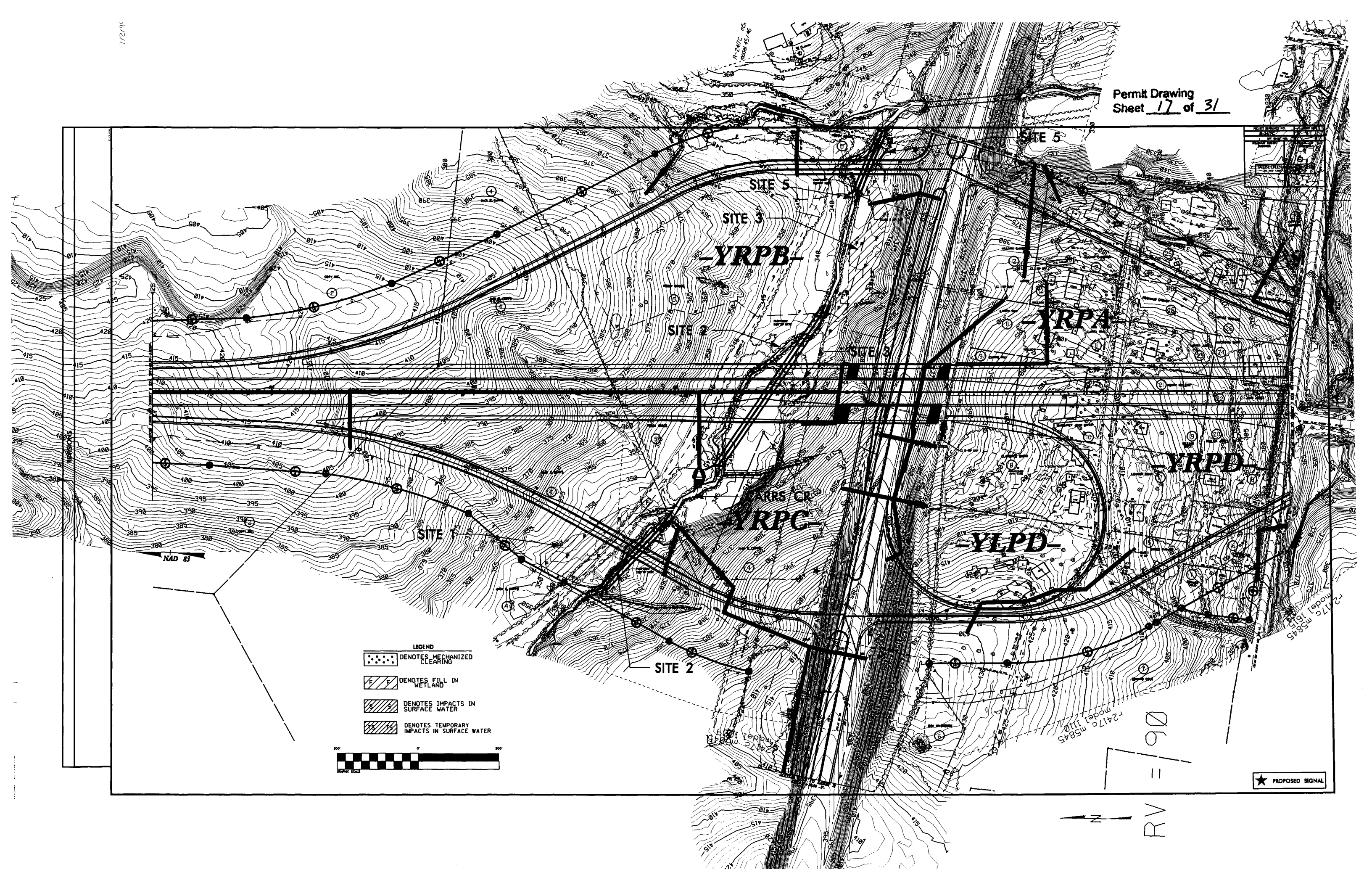
PROJECT NUMBER	2417C
PROJECT NAME	YRPB
PROJECT LOCATION	YRPB
PROJECT DATE	7/2/95
PROJECT DRAWN BY	YRPB
PROJECT CHECKED BY	YRPB
PROJECT APPROVED BY	YRPB
PROJECT SCALE	1" = 100'
PROJECT SHEET	16 of 31



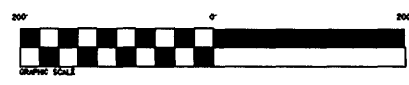
RV = 90

RV = 90

7/2/76



- LEGEND
- DENOTES MECHANIZED CLEARING
 - ▨ DENOTES FILL IN WETLAND
 - ▧ DENOTES IMPACTS IN SURFACE WATER
 - ▩ DENOTES TEMPORARY IMPACTS IN SURFACE WATER



★ PROPOSED SIGNAL

Permitt Drawing
Sheet 18 of 31

NAD 83

30 HOMESTEAD INC.
32 CHARLES STEWAR

MATCH LINE TO SHEET 15
STA 16+50.00 -FRONT-

0.249AC

SITE 6
UT 5

SPECIAL CUT DITCH -
SEE DETAIL 22
-YRPA- TSS Sta. 1+5

SITE 6

HOMESTEAD INC.

HOMESTEAD INC.

W. C. WILSON JR.

(33)

LEGEND

 DENOTES IMPACTS IN SURFACE WATER

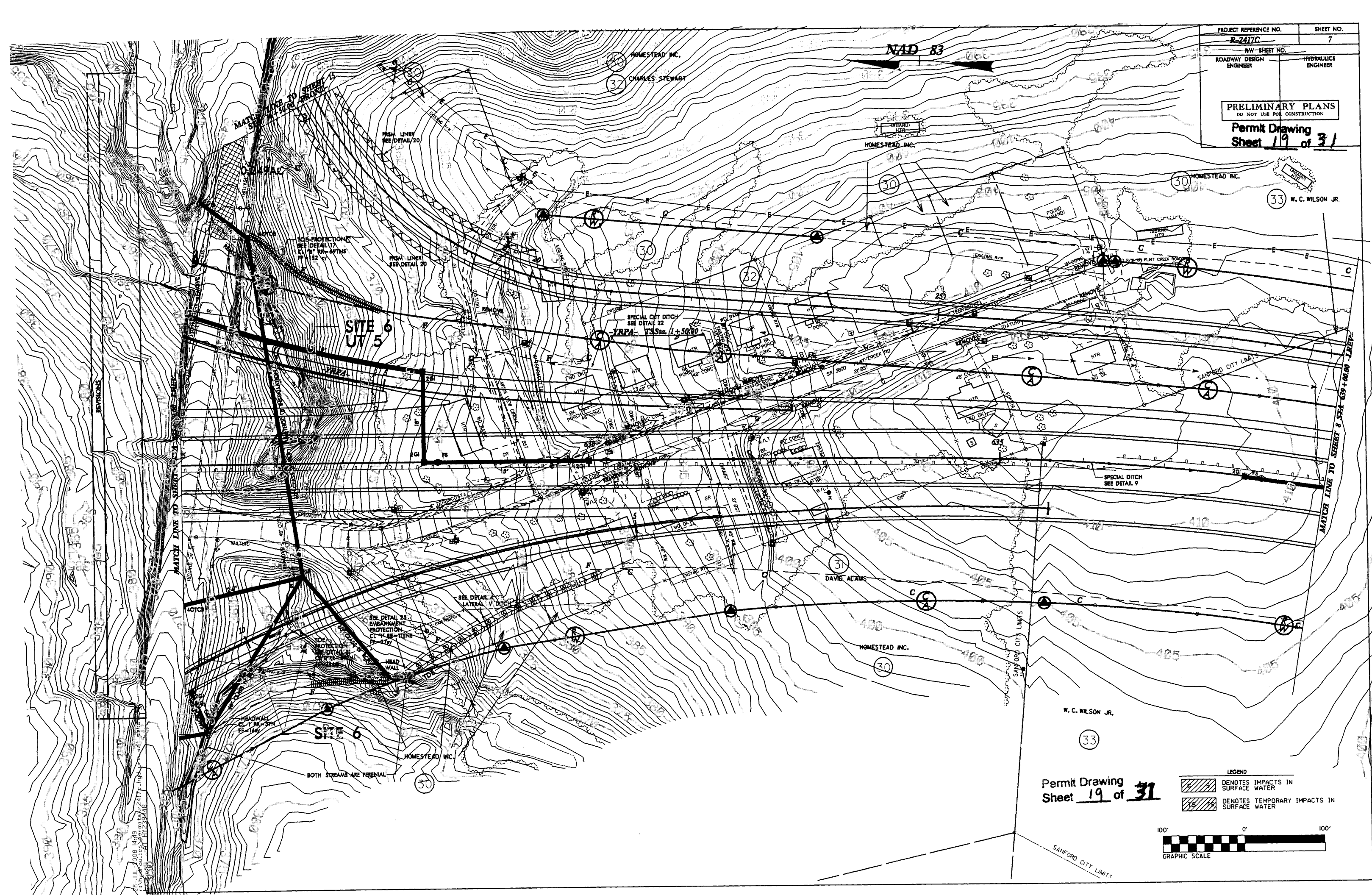
 DENOTES TEMPORARY IMPACTS IN
 SURFACE WATER

100' 0' 100'

GRAPHIC SCALE

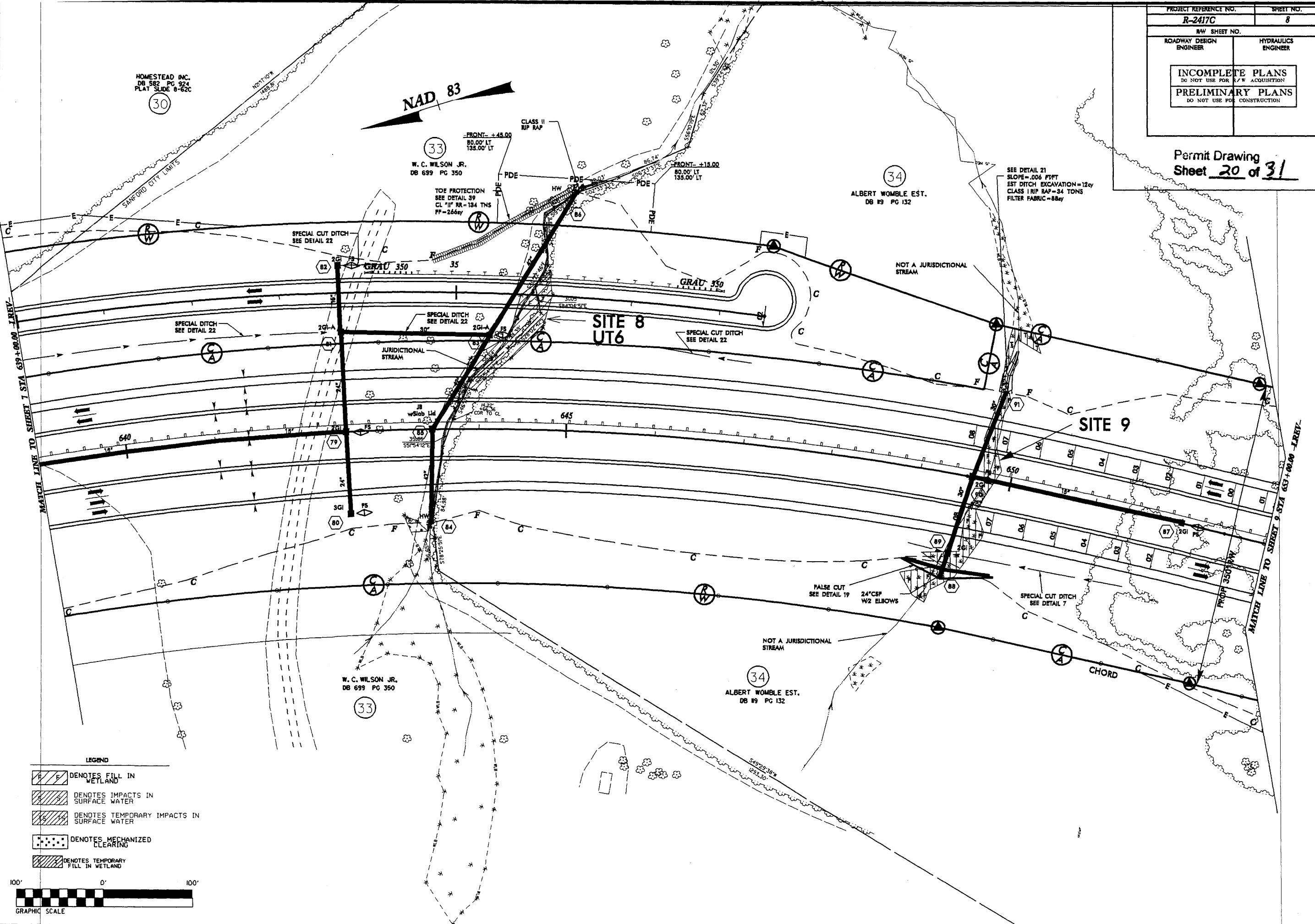
REVISIONS

28-JUL-2008 14:49
c:\hydraulics\permits\2417c-hyd-prm-wet.psh07.dgn
bzarman AT HY239448



PROJECT REFERENCE NO.	SHEET NO.
R-2417C	8
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	

Permit Drawing
Sheet 20 of 31



8/17/99
REVISIONS
29-JUL-2008 13:27
r:\hyd-2008\m\2417c\hyd-pr-m-wet-psd\08.dgn

PROJECT REFERENCE NO.	SHEET NO.
R-2417C	8
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	

Permit Drawing
Sheet 21 of 31

HOMESTEAD INC.
DB 582 PG 324
PLAT SLIDE 8-52C

NAL 83

W. C. WILSON JR.
DB 692 PG 350

TOR PROTECTION
SEE DETAIL 30
CL 11" R/R-134 TNS
PF-18889

CLAS II
RIP RA

W. C. WILSON JR.
DB 692 PG 350

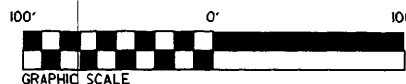
ALBERT WOMBLE EST.
DB 19 PG 132

SEE DETAIL 21
SLOPE 4:1 (H:V) R/R
EST DITCH EXCAVATION-12'x
QUASS I R/R RAY-24 TONS
FILTER FABRIC-WEBB

SITE 8
UT6

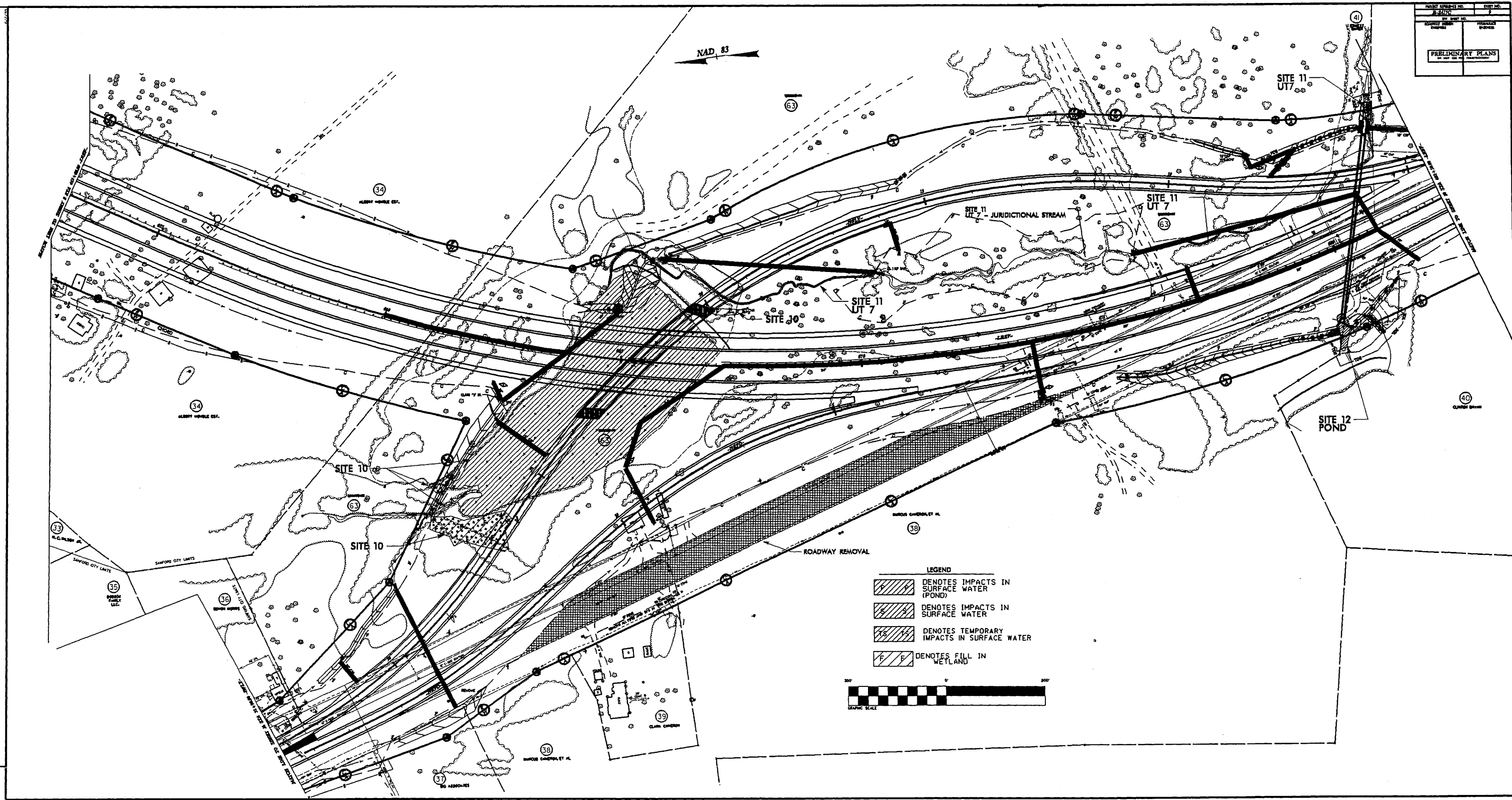
SITE 9

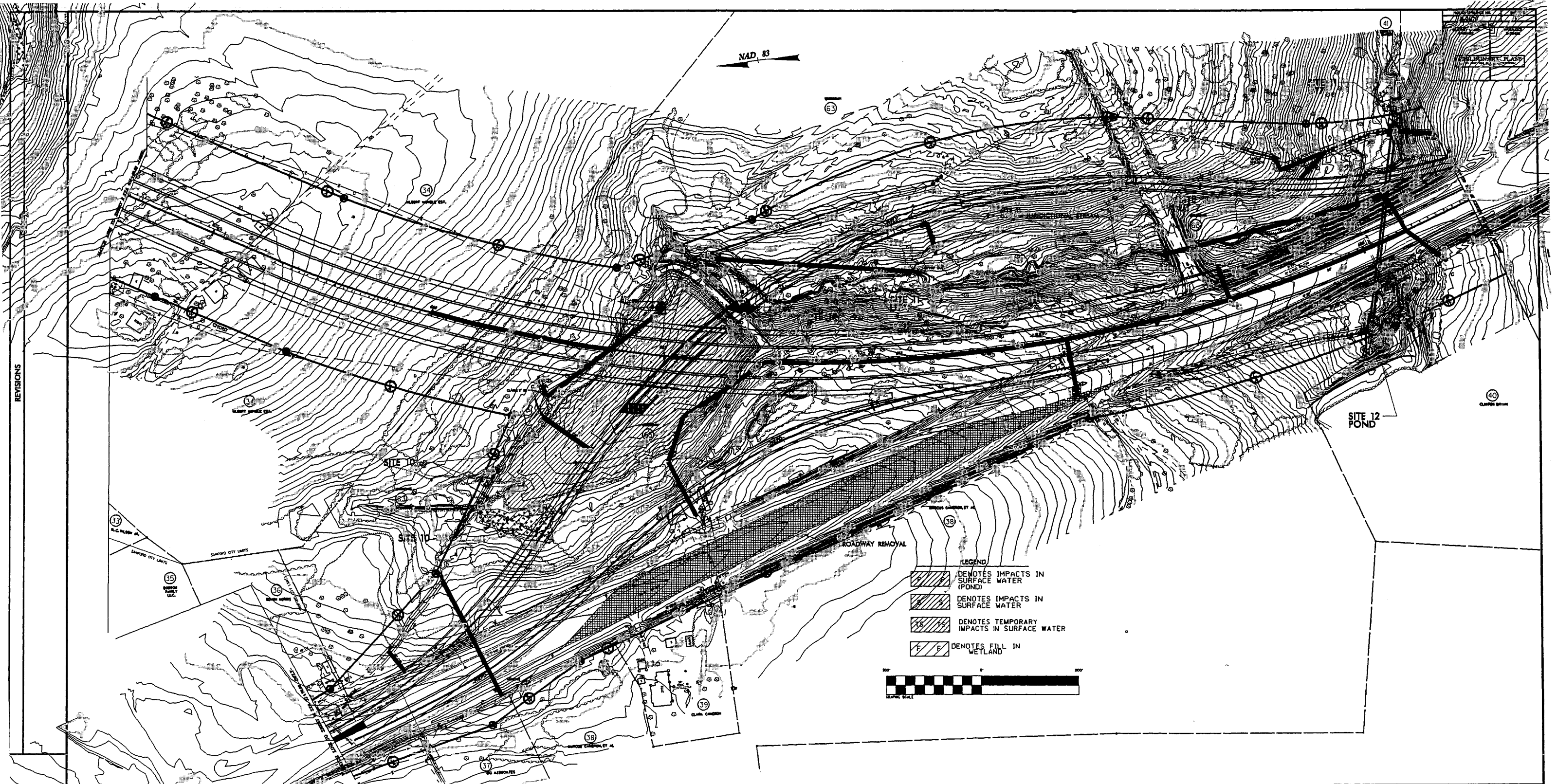
- LEGEND
-  DENOTES FILL IN WETLAND
 -  DENOTES IMPACTS IN SURFACE WATER
 -  DENOTES TEMPORARY IMPACTS IN SURFACE WATER
 -  DENOTES MECHANIZED CLEARING
 -  DENOTES TEMPORARY FILL IN WETLAND



PROJECT REFERENCE NO.	PORT NO.
E-2470	7
DESIGNED BY	DESIGNED BY
ENGINEER	ENGINEER
PRELIMINARY PLANS	
NO COPY FOR CONSTRUCTION	

REVISIONS





PROJECT REFERENCE NO.	SHEET NO.
R-2417C	10
RDW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	

Permit Drawing
Sheet 24 of 31

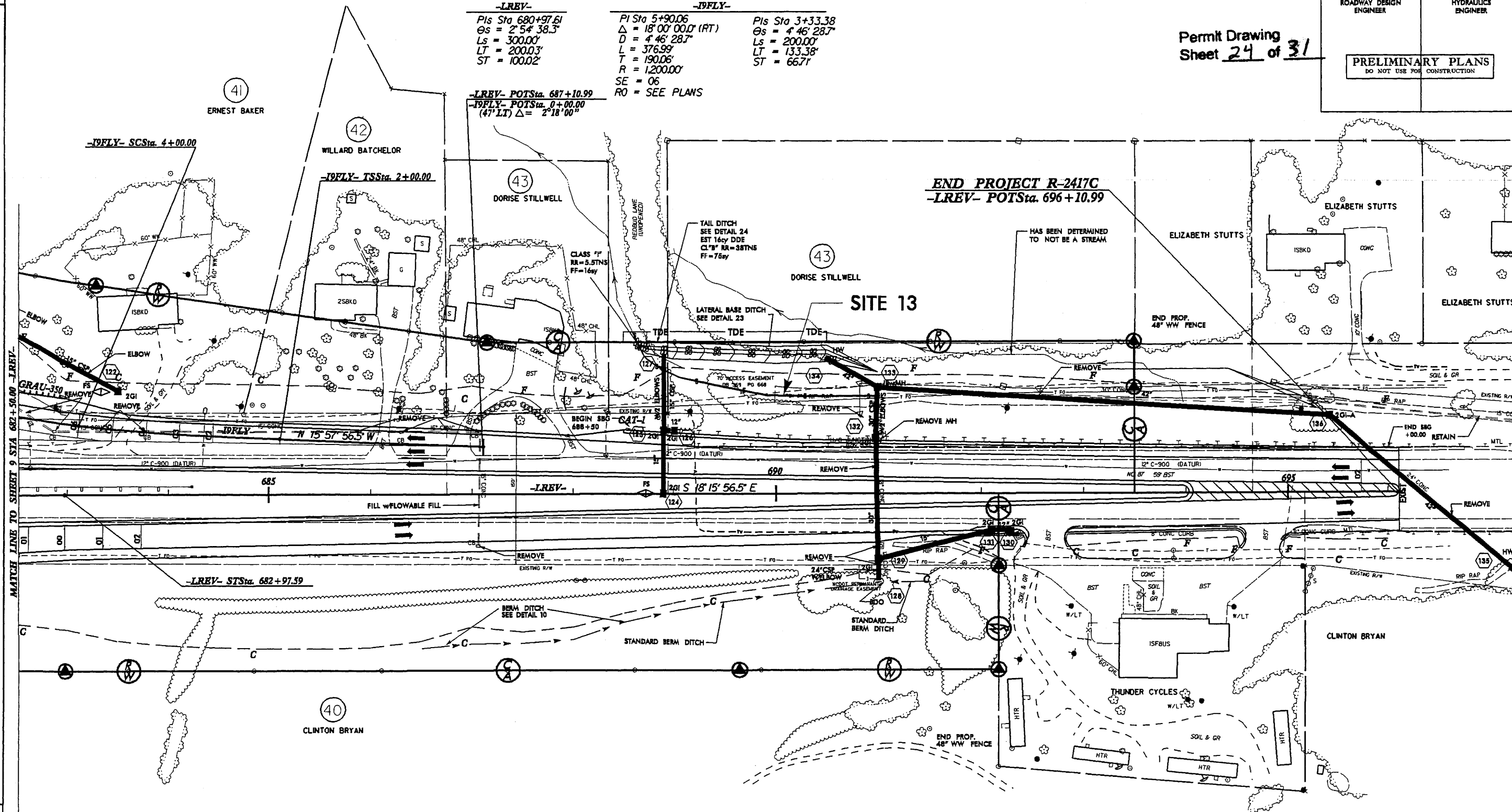
-LREV-
 PIs Sta 680+97.61
 Δs = 2° 54' 38.3"
 Ls = 300.00'
 LT = 200.03'
 ST = 100.02'

-LREV- POTSta. 687+10.99
-IFLY- POTSta. 0+00.00
 (47° LT) Δ = 2° 18' 00"

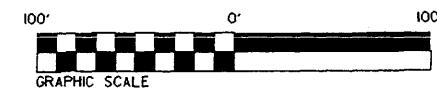
-IFLY-
 PI Sta 5+90.06
 Δ = 18° 00' 00.0" (RT)
 D = 4° 46' 28.7"
 L = 376.99'
 T = 190.06'
 R = 1200.00'
 SE = 06
 RO = SEE PLANS

-IFLY-
 PIs Sta 3+33.38
 Δs = 4° 46' 28.7"
 Ls = 200.00'
 LT = 133.38'
 ST = 66.71'

END PROJECT R-2417C
-LREV- POTSta. 696+10.99



LEGEND
 DENOTES IMPACTS IN
 SURFACE WATER



26-MAR-2008 09:35
 r:\hydraulics\permits\2417c_hyd.prm\wet.psh\dgn
 beaman - AL HY241748

PROJECT REFERENCE NO.	SHEET NO.
R-2417C	10
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	

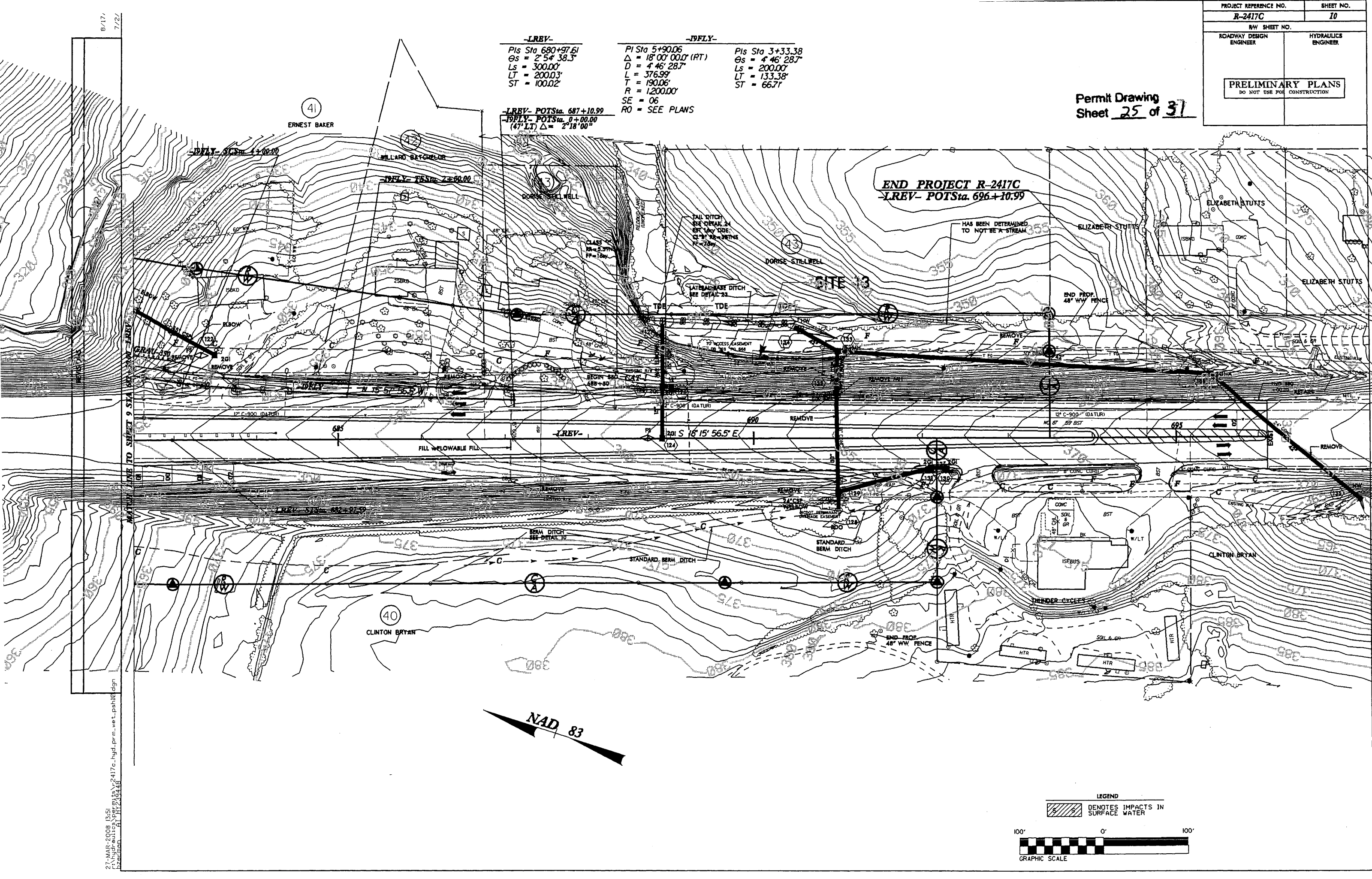
Permit Drawing
Sheet 25 of 31

-LRV-
 PIs Sta 680+97.61
 Δs = 2°54'38.3"
 Ls = 300.00'
 LT = 200.03'
 ST = 100.02'

-IRFLY-
 PI Sta 5+90.06
 Δ = 18°00'00.0" (RT)
 D = 4°46'28.7"
 L = 376.99'
 T = 190.06'
 R = 1,200.00'
 SE = 06
 RO = SEE PLANS

-LRV- POTSta. 687+10.99
-IRFLY- POTSta. 0+00.00
 (47° LT) Δ = 2°18'00"

-LRV- POTSta. 3+33.38
 Δs = 4°46'28.7"
 Ls = 200.00'
 LT = 133.38'
 ST = 66.71'



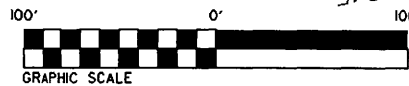
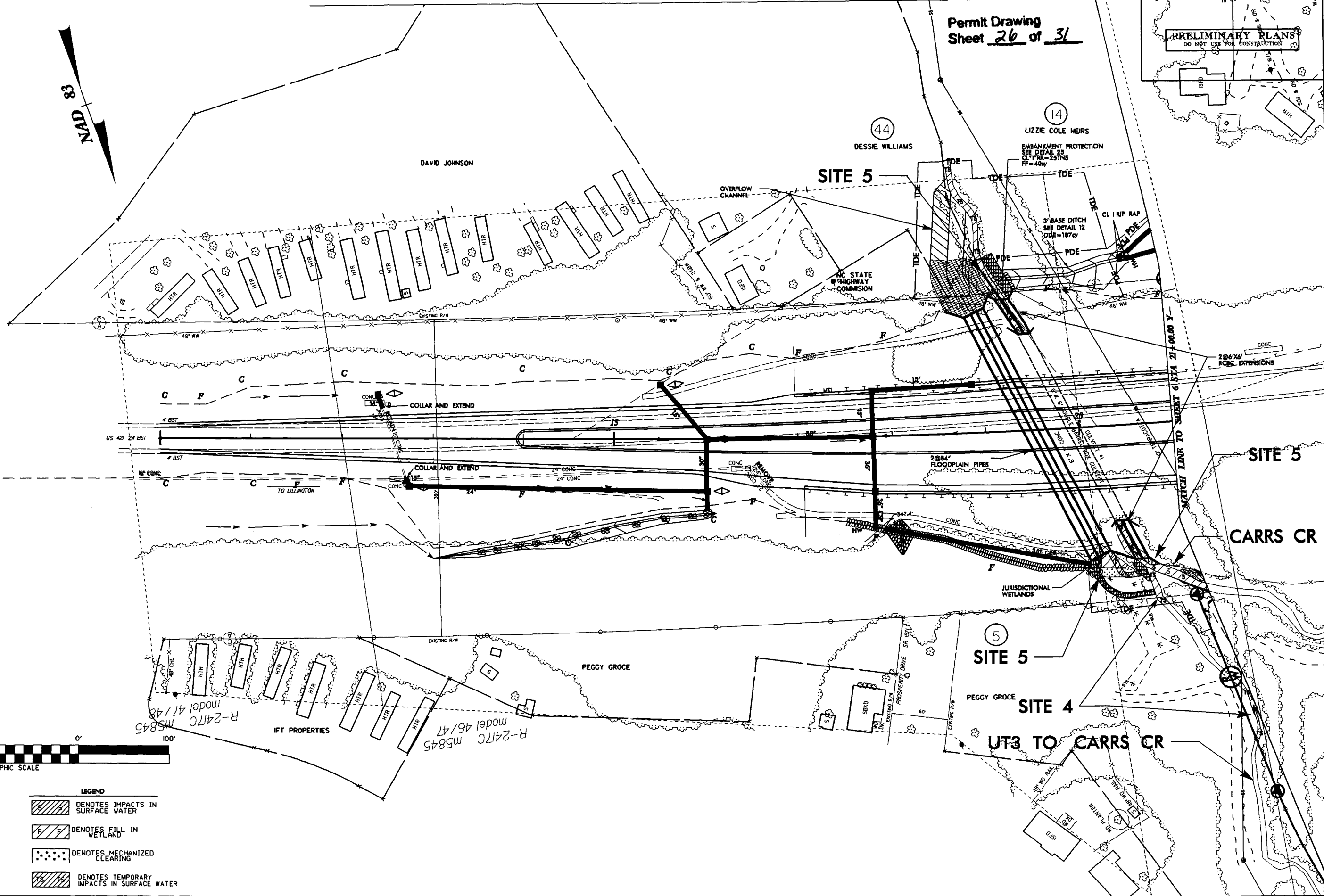
27-MAR-2008 13:51
 F:\hydraulics\permits\2417c_hyd.prm-wet.psh\dgn
 bradon AT HY239448

PROJECT REFERENCE NO.	SHEET NO.
R-2417C	31
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULIC ENGINEER
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	

Permit Drawing
Sheet 26 of 31

NAD 83

MATCH LINE TO SHEET 15



- LEGEND**
- DENOTES IMPACTS IN SURFACE WATER
 - DENOTES FILL IN WETLAND
 - DENOTES MECHANIZED CLEARING
 - DENOTES TEMPORARY IMPACTS IN SURFACE WATER

REVISIONS

14-OCT-2008 14:06
R:\Hydraulics\Permitting\2417c_hyd_prm_wet_psh11.dgn
R-2417C model 46/47
R-2417C model 47/48
MS845

NAD 83

14
LIZZIE COLE HEIRS
EMBANKMENT PROTECTION
SEE DETAIL 25
CL-1 RB-25TNS
EF-405

DAVID JOHNSON

SITE 5

250 300 350

CARRS CR

0 100 200

UT3 TO CARRS CR

LEGEND

	DENOTES IMPACTS IN SURFACE WATER
	DENOTES FILL IN WETLAND
	DENOTES MECHANIZED CLEARING
	DENOTES TEMPORARY IMPACTS IN SURFACE WATER

14-OCT-2008 14:08
r:\hydraulics\permits\r2417c-hyd-prm_wet.psh11.dgn
bberman AI Hy239448

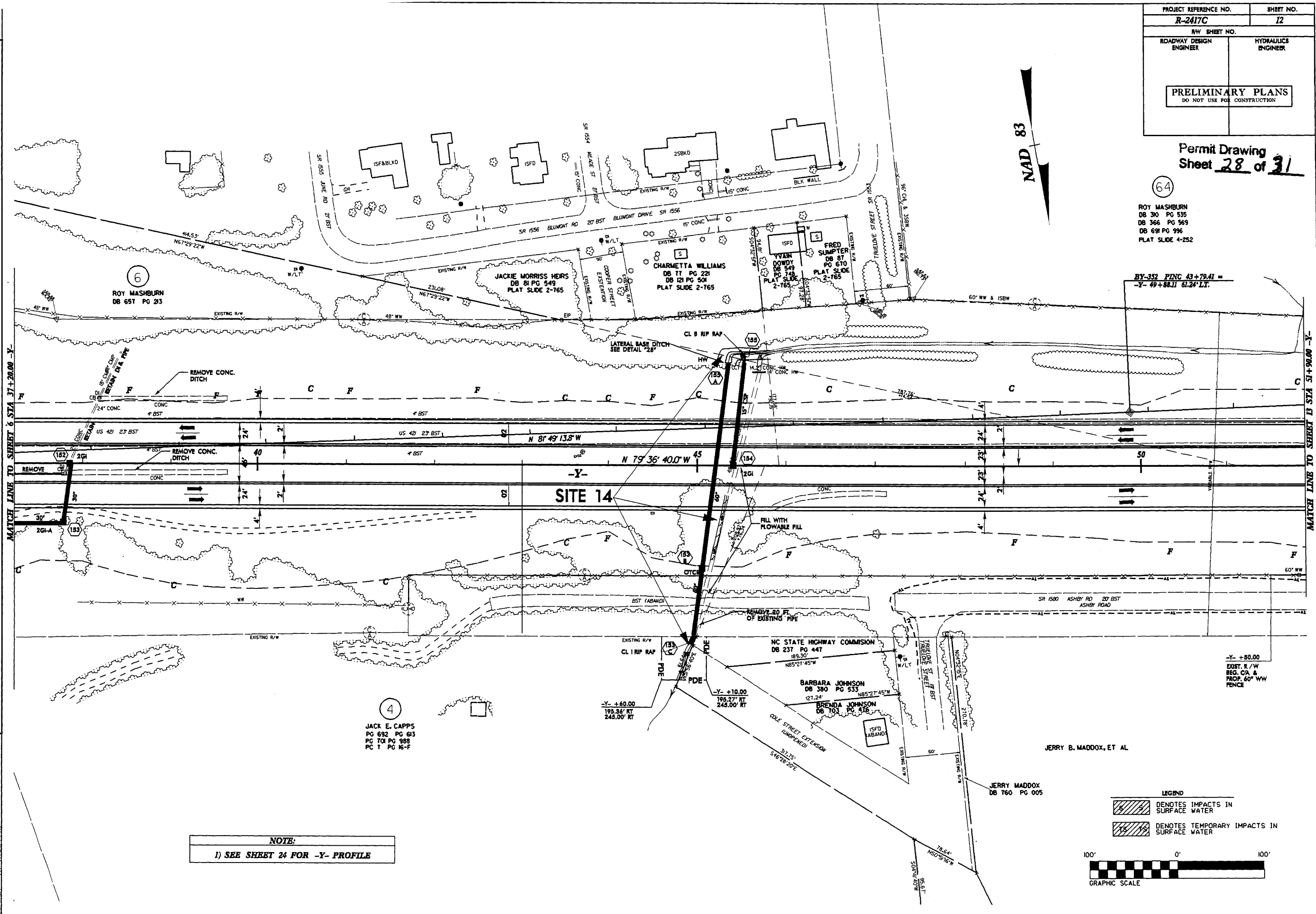
PROJECT REFERENCE NO. R-2417C	SHEET NO. 12
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	

Permit Drawing
Sheet **28** of **31**

(64)

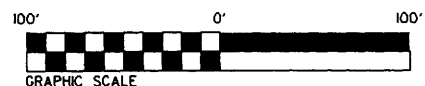
ROY MASHBURN
DB 30 PG 535
DB 366 PG 569
DB 691 PG 996
PLAT SLIDE 4-252

BY-352 PINC 43+79.41 =
-Y- 49+88.11 61.24' LT.



NOTE:
1) SEE SHEET 24 FOR -Y- PROFILE

LEGEND
 DENOTES IMPACTS IN SURFACE WATER
 DENOTES TEMPORARY IMPACTS IN SURFACE WATER



REVISIONS

R-2417C m5845
model 1009

30-JUL-2008 08:00
F:\hydrolincs\permits\2417c_hyd.prm.wet_psh12.dgn
Bzardman

Permit Drawing
Sheet 29 of 31

ROY MASHBURN
DB 30 PG 535
DB 366 PG 569
DB 691 PG 996
PLAT SLIDE 4-252

BY-352 PINE 43+79.
-Y- 49+88.11 61:24' LT.

JERRY B. MADDOX, ET AL

JERRY MADDOX
DB 760 PG 005

LEGEND

	DENOTES IMPACTS IN SURFACE WATER
	DENOTES TEMPORARY IMPACTS IN SURFACE WATER

100' 0' 100'

GRAPHIC SCALE

NOTE:

1) SEE SHEET 24 FOR -Y- PROFILE

JACK E. CAPPS
PG 692 PG 613
PG 701 PG 988
PG 7 PG 16-F

8/17/99

30-JUL-2008 08:01
\\hydraulics\permits\2417c-hyd-prm_wet_psh12\dgn
AT_HV239448
AT_239448

PROJECT REFERENCE NO.	SHEET NO.
R-2417C	15
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	

Permit Drawing
Sheet 30 of 31



LEGEND

	DENOTES IMPACTS IN SURFACE WATER
	DENOTES TEMPORARY IMPACTS IN SURFACE WATER

100' 0' 100'

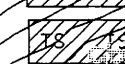
GRAPHIC SCALE

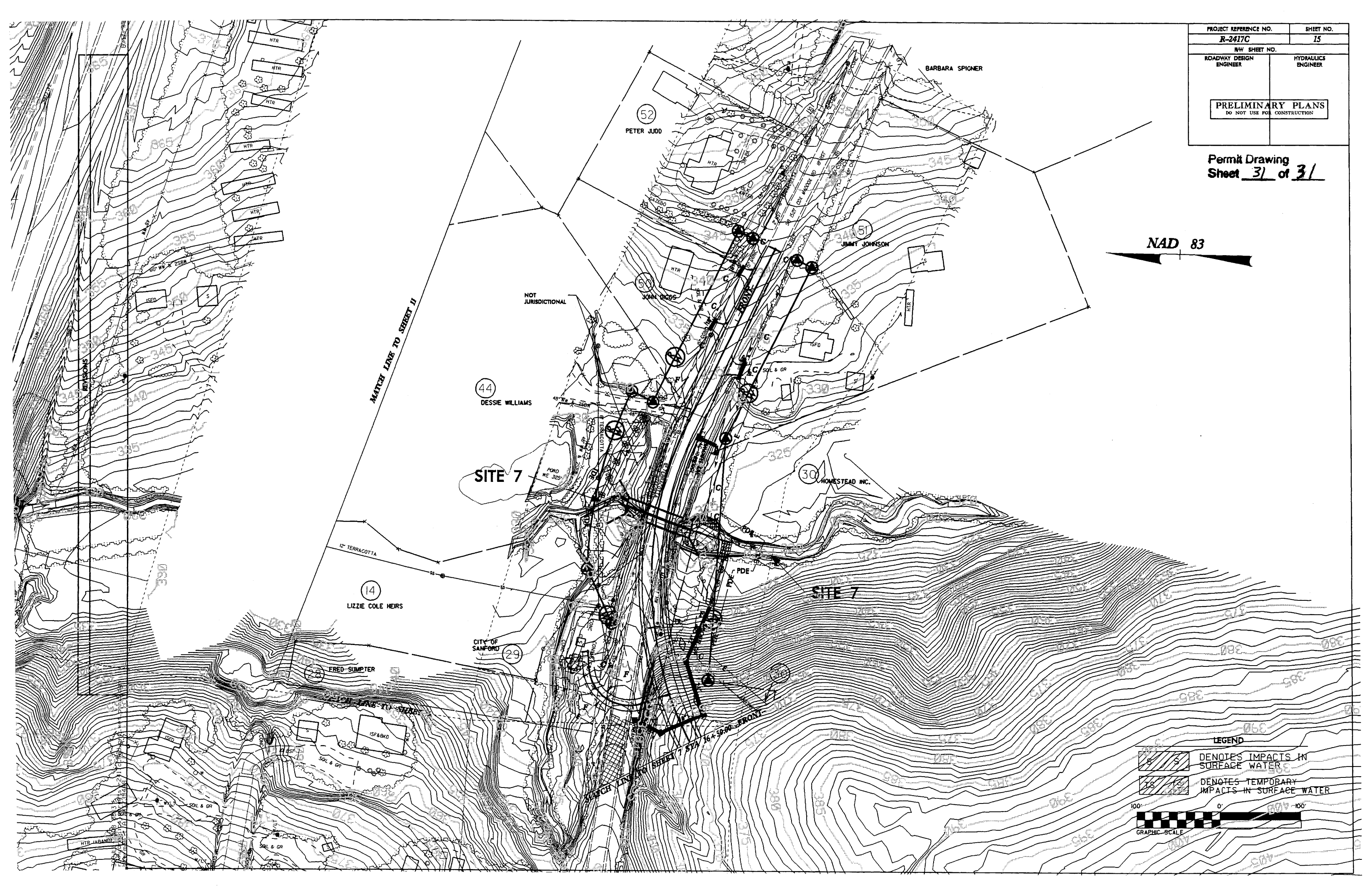
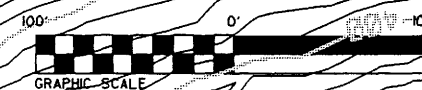
PROJECT REFERENCE NO. R-2417C	SHEET NO. 15
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	

Permit Drawing
Sheet 31 of 31

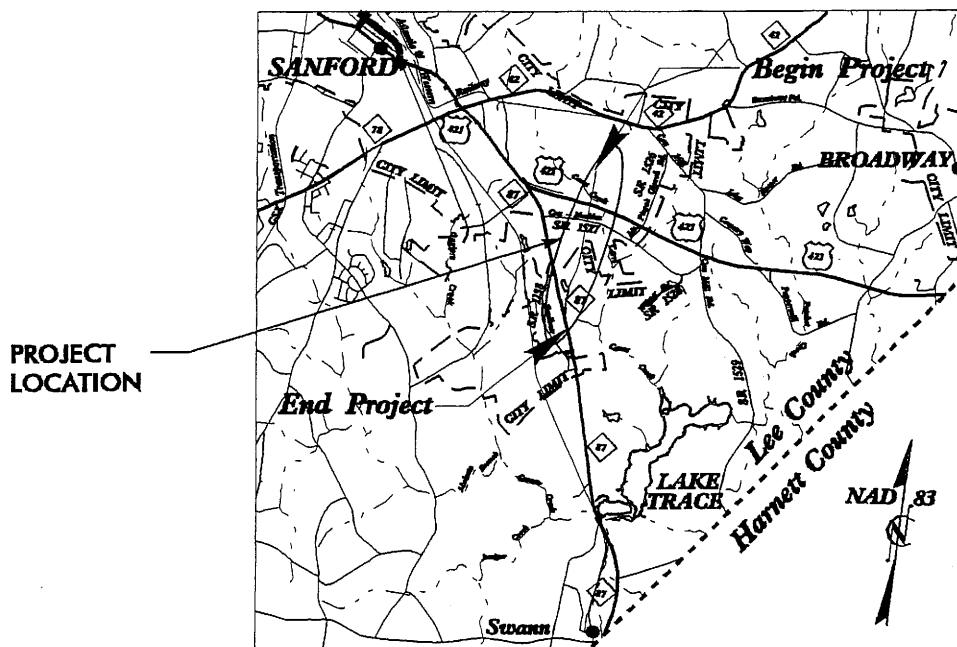
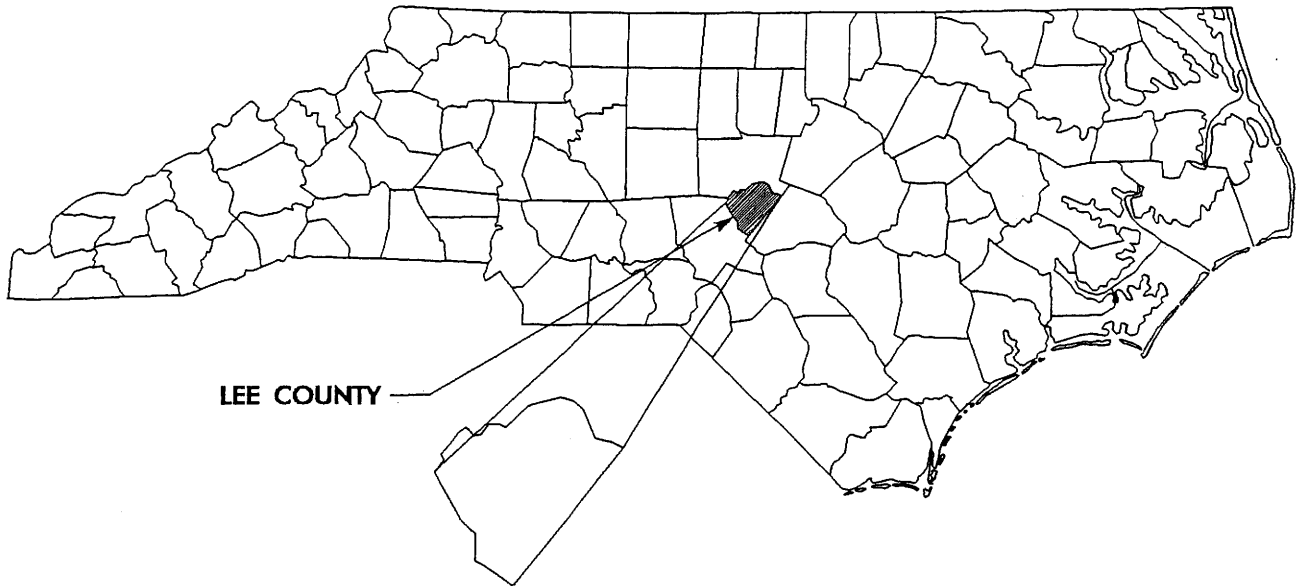
NAD 83

LEGEND

-  DENOTES IMPACTS IN SURFACE WATER
-  DENOTES TEMPORARY IMPACTS IN SURFACE WATER



NORTH CAROLINA



UTILITY PERMIT VICINITY MAP

NCDOT

DIVISION OF HIGHWAYS

LEE COUNTY

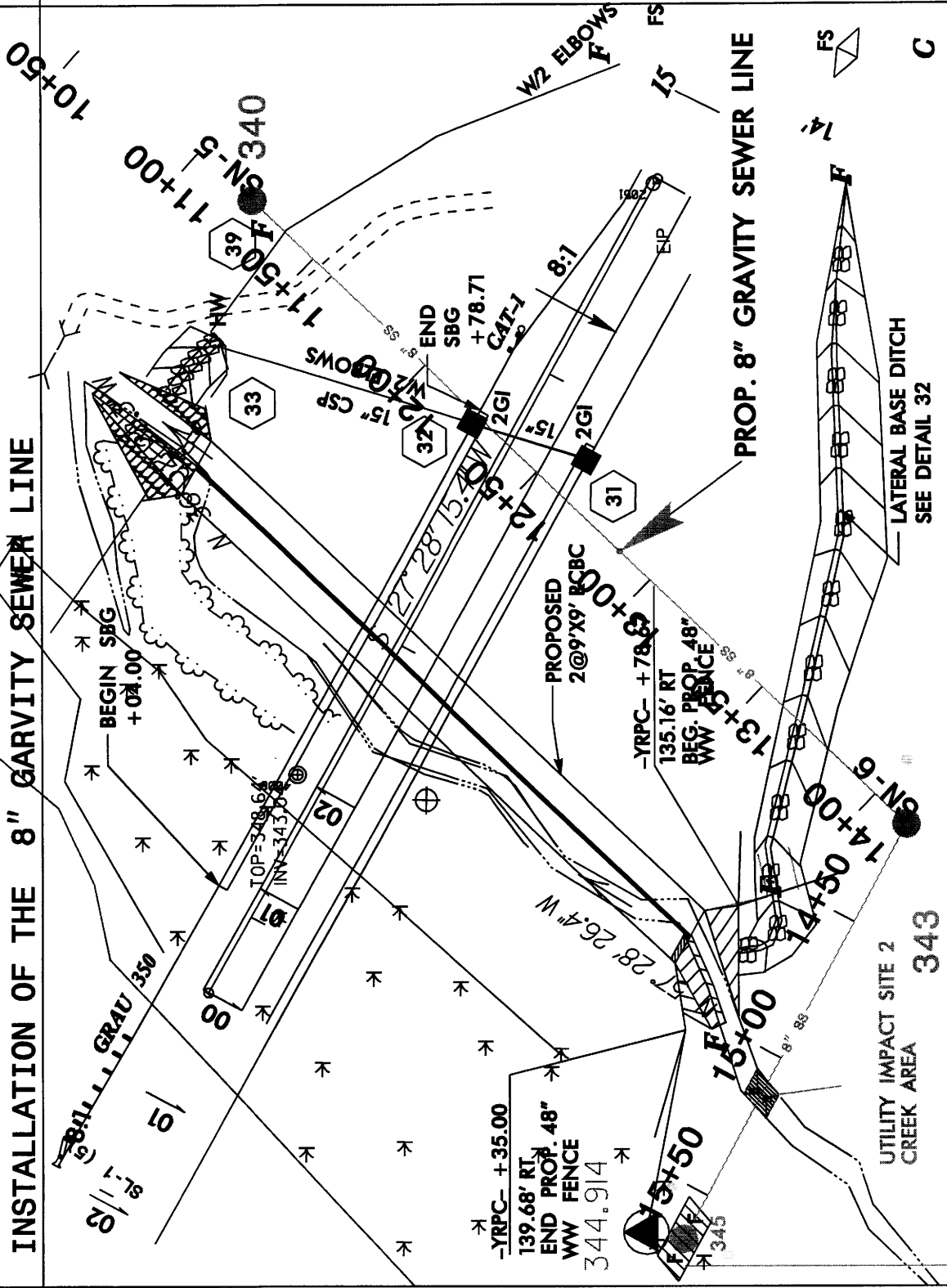
PROJECT: 34431.1.1 (R-2417C)

US 421/ NC 87 (SANFORD BYPASS)
FROM EAST OF NC 42 TO NC 87
NEAR SR 1138

SHEET 1 OF 12

10/30/07

INSTALL IMPERVIOUS DIKE TO DIVERT THE STREAM DURING INSTALLATION OF THE 8" GRAVITY SEWER LINE



Permit Drawing
Sheet 2 of 12

UTILITY IMPACT SITE 1
WETLAND AREA

SITE 1: FILL IN THE WETLAND AREA=250 S.FT=.006 AC

SITE 2: IMPACTS IN SURFACE AREA=88 S.FT=.002 AC

 DENOTES IMPACTS IN SURFACE WATER
 DENOTES FILL IN WETLAND

[illegible]

DENOTES IMPACTS IN SURFACE WATER

Permit Drawing
Sheet 5 of 12

PROP. 8" SEWER LINE

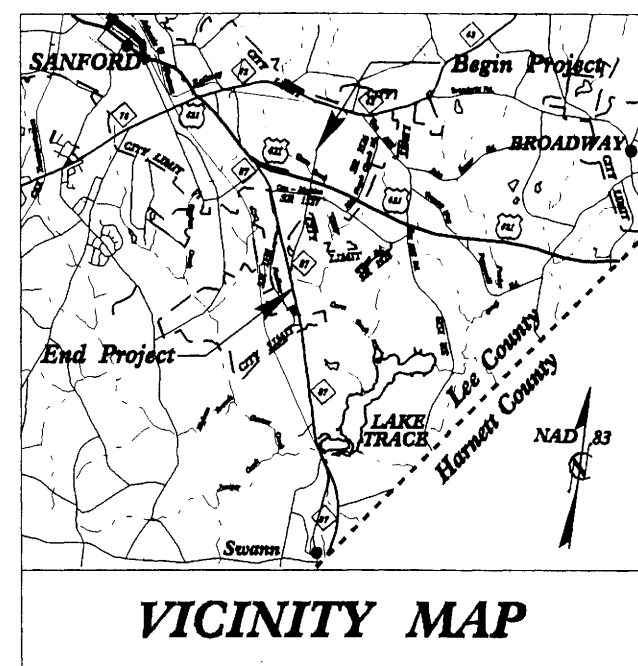
09/08/99

11-SEP-2008 15:48
c:\utiles\vgi\ut\Proj\N-2417c.rdy.tsh.dgn
\$\$\$\$\$USERNAME\$\$\$\$\$

TIP PROJECT: R-2417C

CONTRACT:

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



VICINITY MAP

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

UTILITY PERMIT
DRAWINGS
LEE COUNTY

LOCATION: US 42/NC 87 (SANFORD BYPASS) FROM EAST
OF NC 42 TO NC 87 NEAR SR 1138.

TYPE OF WORK: GRADING, PAVING, DRAINAGE, SIGNING, SIGNALS,
STRUCTURES AND CULVERTS.

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	R-2417C	1	
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	
34431.1.6	STP-NHF-421(2)	P.E.	
34431.2.6	STP-NHF-421(2)	RW & UTIL.	

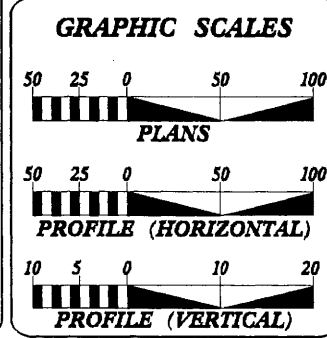
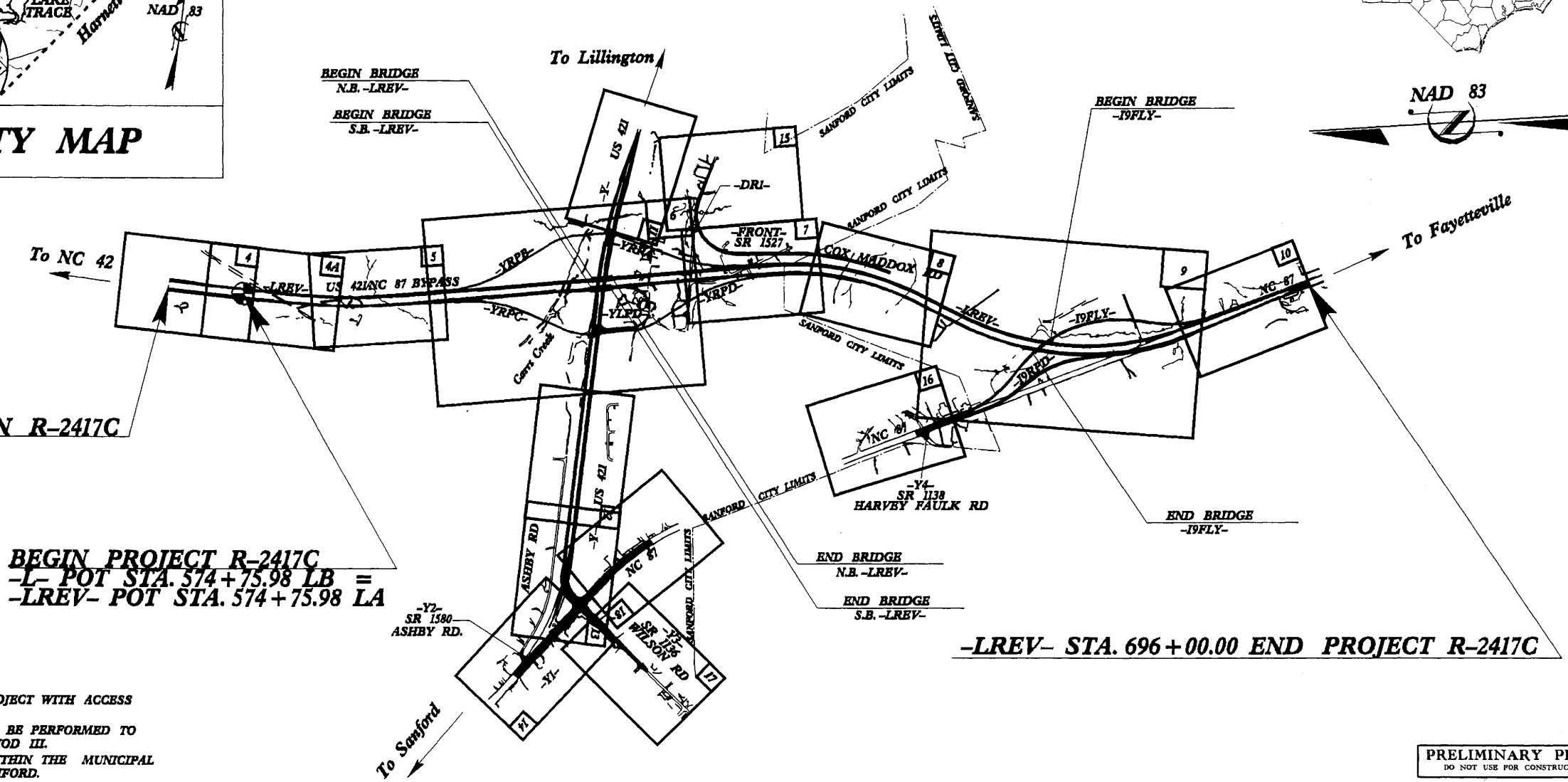
Permit Drawing
Sheet 7 of 12



BEGIN CONSTRUCTION R-2417C
-L- STA. 566+20.63

BEGIN PROJECT R-2417C
-L- POT STA. 574+75.98 LB =
-LREV- POT STA. 574+75.98 LA

THIS IS A CONTROLLED-ACCESS PROJECT WITH ACCESS
BEING LIMITED TO INTERCHANGES.
CLEARING ON THIS PROJECT SHALL BE PERFORMED TO
THE LIMITS ESTABLISHED BY METHOD III.
A PORTION OF THIS PROJECT IS WITHIN THE MUNICIPAL
BOUNDARIES OF THE TOWN OF SANFORD.



DESIGN DATA	
ADT 2009 =	18,600 VPD
ADT 2030 =	30,000 VPD
DHV =	10 %
D =	60 %
T =	8 % *
V =	70 MPH
FUNC CLASS =	PRINCIPAL ARTERIAL
*(TTST 3% & DUAL 5%)	

PROJECT LENGTH	
LENGTH ROADWAY TIP PROJECT R-2417C =	
LENGTH STRUCTURE TIP PROJECT R-2417C =	
TOTAL LENGTH TIP PROJECT R-2417C =	2.296 mi.

Prepared In the Office of: DIVISION OF HIGHWAYS 1000 Birch Ridge Dr., Raleigh NC, 27610	
2006 STANDARD SPECIFICATIONS	
RIGHT OF WAY DATE: GLENN W. MUMFORD, PE AUGUST 31, 2007 PROJECT ENGINEER	
LETTING DATE: SUSAN C. LANCASTER, PE APRIL 21, 2009 PROJECT DESIGN ENGINEER	

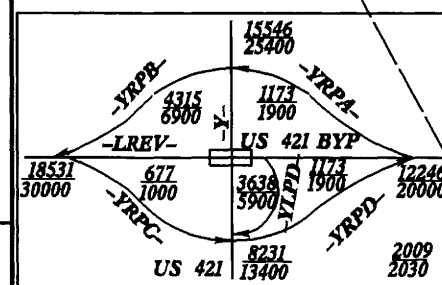
HYDRAULICS ENGINEER	
SIGNATURE: _____	P.E.
ROADWAY DESIGN ENGINEER	
SIGNATURE: _____	P.E.
STATE HIGHWAY DESIGN ENGINEER	

DIVISION OF HIGHWAYS
STATE OF NORTH CAROLINA

P.E.

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

REVISIONS



NOTES:

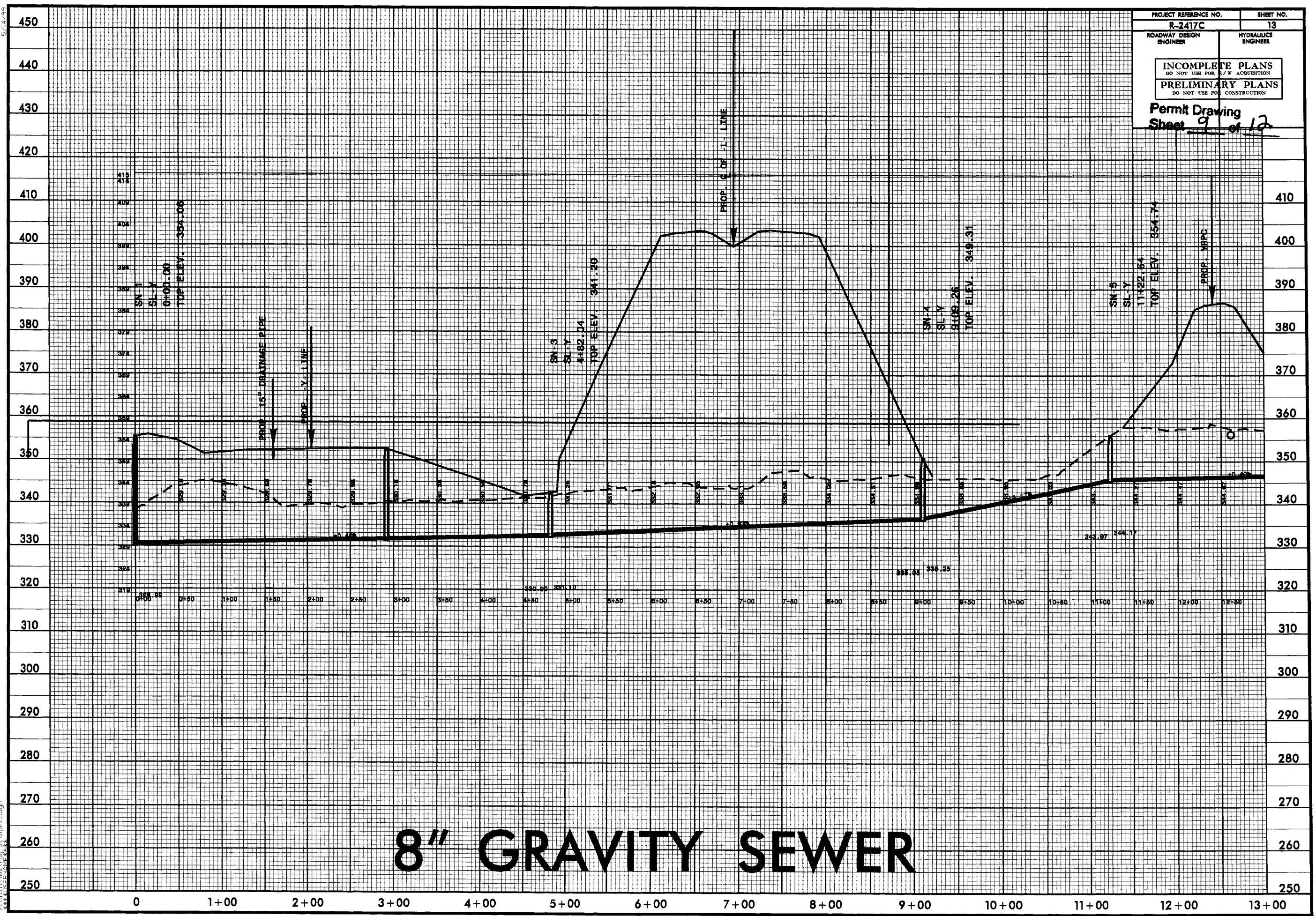
1) SEE SHEETS 19 AND 20 FOR -LREV- PROFILE
2) SEE SHEETS 23 AND 24 FOR -Y- PROFILE
3) SEE SHEET 28 FOR -YRPA- PROFILE
4) SEE SHEETS 28 AND 29 FOR -YRPB- PROFILE
5) SEE SHEETS 29 AND 30 FOR -YRPC- PROFILE
6) SEE SHEET 30 FOR -YRPD- PROFILE
7) SEE SHEET 31 FOR -YRPF- PROFILE

★ PROPOSED SIGNAL

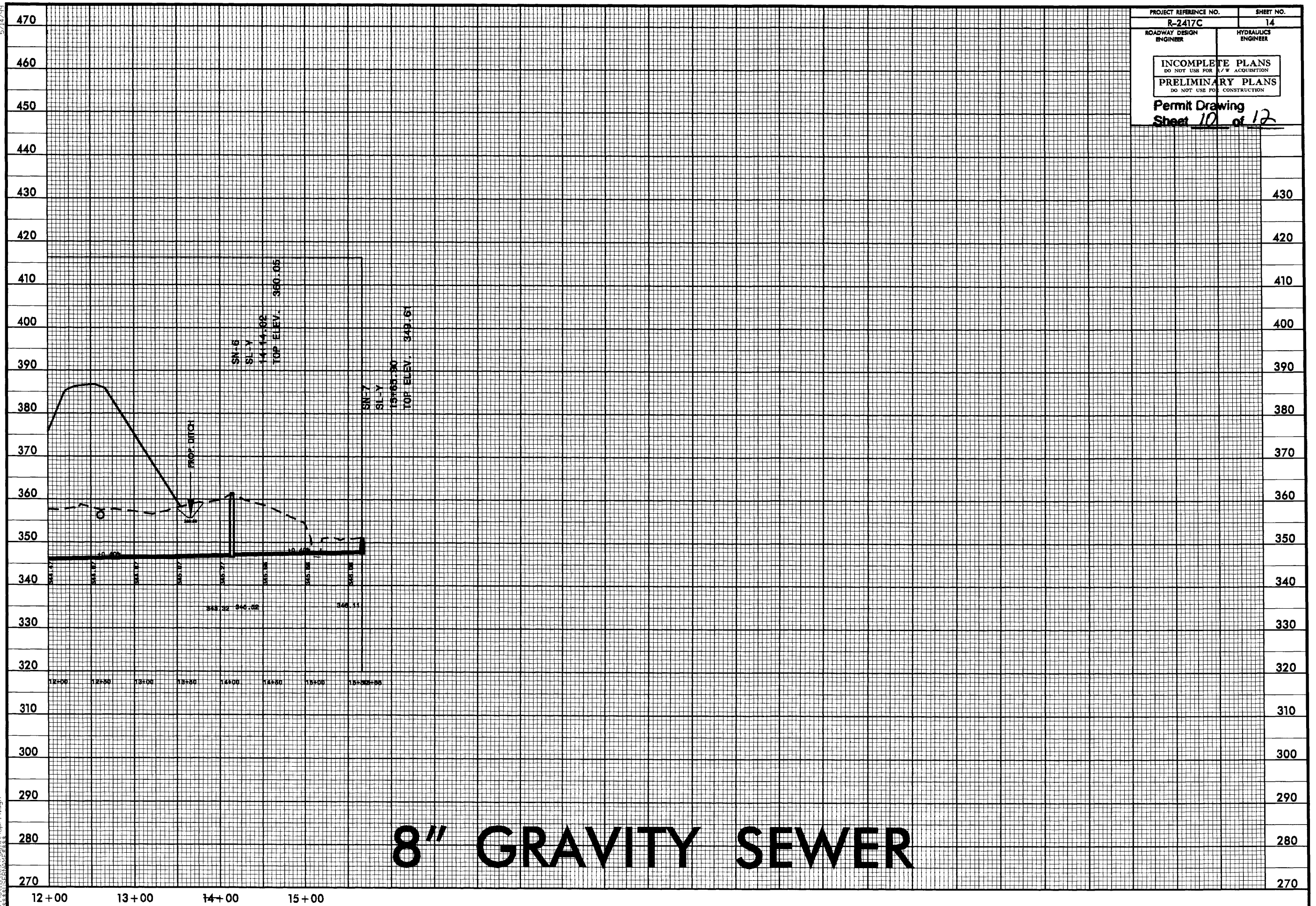


5/14/99

11-SEP-2008 08:42
T:\AutoCAD\Projects\11-SEP-2008\11-SEP-2008.dgn



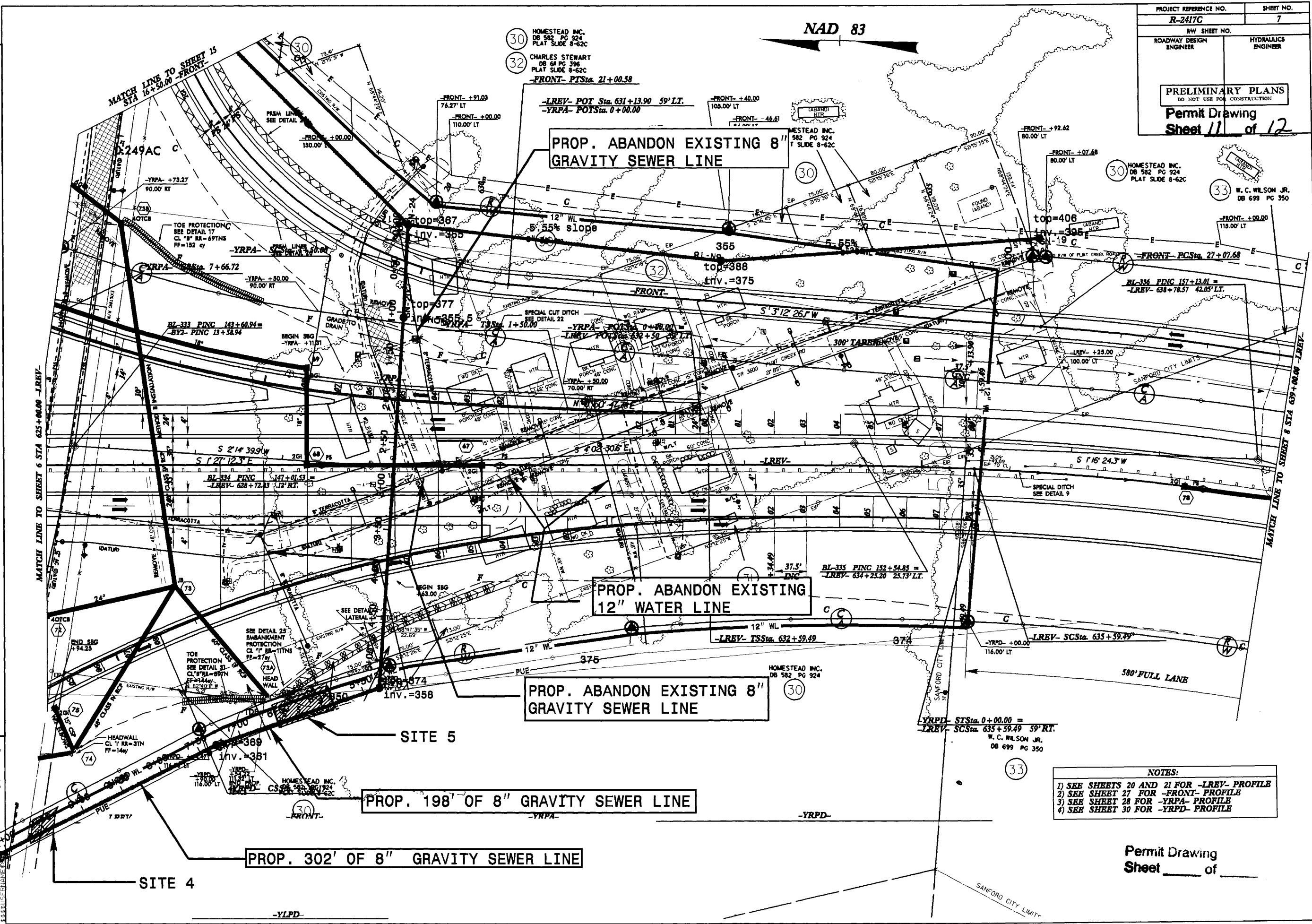
PROJECT REFERENCE NO. R-2417C		SHEET NO. 13	
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER	
INCOMPLETE PLANS DO NOT USE FOR A/C ACQUISITION			
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION			
Permit Drawing Sheet 9 of 12			

11-SEP-2008 08:45
r:\utilities\rdu-ut\upr14.dan

8/17/99

REVISIONS
04/08 - T.W. - RW REVISION: CORRECTED STATION INFORMATION ON TEMPORARY CONSTRUCTION EASEMENT FROM - FRONT- STA. 20+20 TO 20+00 LT. ON PARCELS 30 AND 31.
04/08 - T.W. - RW REVISION: CORRECTED STATION INFORMATION ON RIGHT OF WAY MONUMENTS TO REFLECT FIELD SURVEYS ON PARCELS 27 AND 30.

15-SEP-2008 09:00 AM
C:\PROJECTS\76-r.dwg
pjh07.dgn



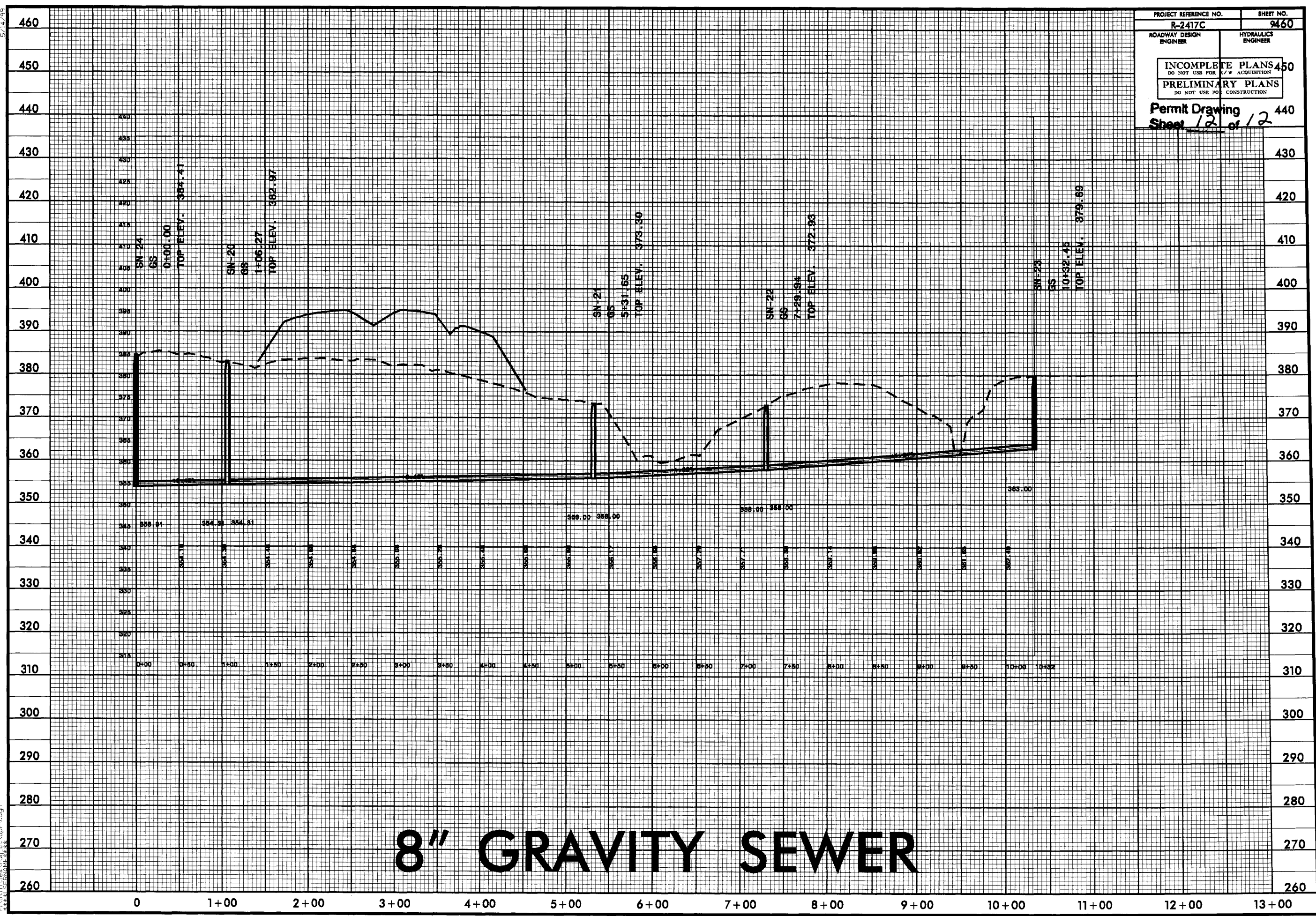
PROJECT REFERENCE NO.	SHEET NO.
R-2417C	7
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	
Permit Drawing Sheet 11 of 12	

- NOTES:
- 1) SEE SHEETS 20 AND 21 FOR -LREV- PROFILE
 - 2) SEE SHEET 27 FOR -FRONT- PROFILE
 - 3) SEE SHEET 28 FOR -YRPA- PROFILE
 - 4) SEE SHEET 30 FOR -YRPD- PROFILE

Permit Drawing
Sheet ____ of ____

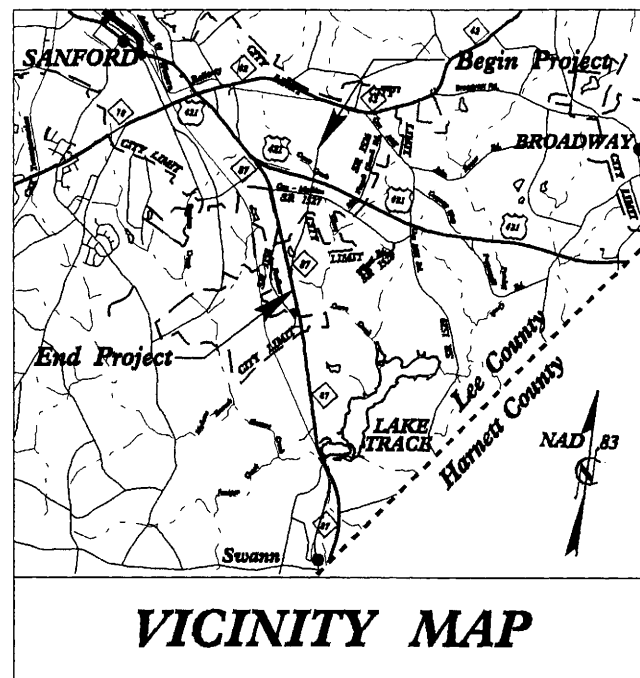
5/14/99

11-SEP-2008 12:42
C:\Users\james\Documents\proj9.dgn



PROJECT REFERENCE NO. R-2417C		SHEET NO. 9460
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER	
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION		
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION		
Permit Drawing Sheet 12 of 12		

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



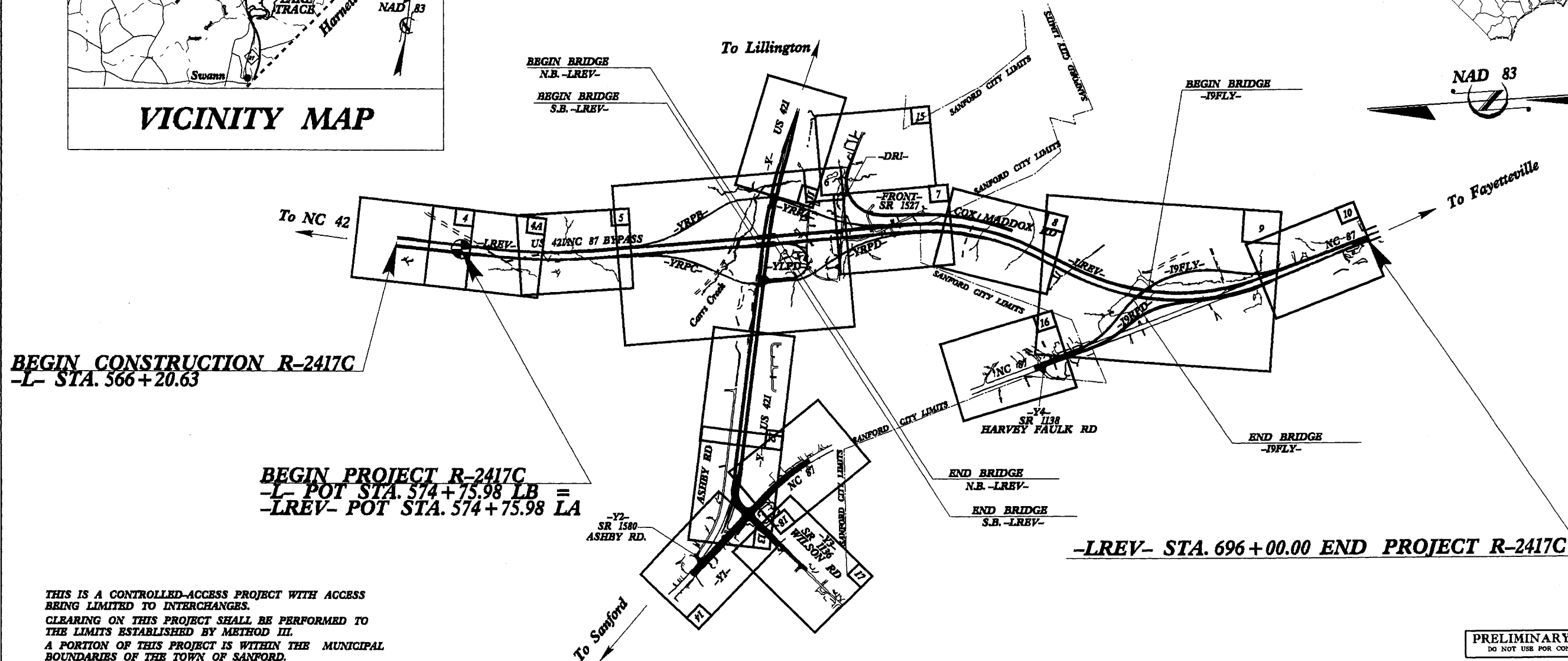
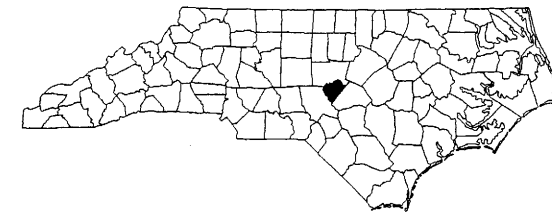
STATE OF NORTH CAROLINA DIVISION OF HIGHWAYS

LEE COUNTY

LOCATION: US 42/NC 87 (SANFORD BYPASS) FROM EAST OF NC 42 TO NC 87 NEAR SR 1138.

TYPE OF WORK: GRADING, PAVING, DRAINAGE, SIGNING, SIGNALS, STRUCTURES AND CULVERTS.

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	R-2417C	1	
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	
34431.1.6	STP-NHF-421(2)	P.E.	
34431.2.6	STP-NHF-421(2)	RAW & UTIL.	



THIS IS A CONTROLLED-ACCESS PROJECT WITH ACCESS BEING LIMITED TO INTERCHANGES.
CLEARING ON THIS PROJECT SHALL BE PERFORMED TO THE LIMITS ESTABLISHED BY METHOD III.
A PORTION OF THIS PROJECT IS WITHIN THE MUNICIPAL BOUNDARIES OF THE TOWN OF SANFORD.

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

CONTRACT:

GRAPHIC SCALES



DESIGN DATA

ADT 2009 = 18,600 VPD
ADT 2030 = 30,000 VPD
DHV = 10 %
D = 60 %
T = 8 %
V = 70 MPH
FUNC CLASS =
PRINCIPAL ARTERIAL
*(TTST 3% & DUAL 5%)

PROJECT LENGTH

LENGTH ROADWAY TIP PROJECT R-2417C =
LENGTH STRUCTURE TIP PROJECT R-2417C =
TOTAL LENGTH TIP PROJECT R-2417C = 2.296 mi.

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

2006 STANDARD SPECIFICATIONS

RIGHT OF WAY DATE: **GLENN W. MUMFORD, PE**
AUGUST 31, 2007
PROJECT ENGINEER

LETTING DATE: **SUSAN C. LANCASTER, PE**
APRIL 21, 2009
PROJECT DESIGN ENGINEER

HYDRAULICS ENGINEER

SIGNATURE: _____
ROADWAY DESIGN ENGINEER

SIGNATURE: _____
STATE HIGHWAY DESIGN ENGINEER

DIVISION OF HIGHWAYS
STATE OF NORTH CAROLINA



STATE HIGHWAY DESIGN ENGINEER

Note: Not to Scale***S.U.E. = Subsurface Utility Engineering**STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYSPROJECT REFERENCE NO.
R-2417G SHEET NO.
1-A**PRELIMINARY PLANS**
DO NOT USE FOR CONSTRUCTION**CONVENTIONAL PLAN SHEET SYMBOLS****BOUNDARIES AND PROPERTY:**

State Line	-----
County Line	-----
Township Line	-----
City Line	-----
Reservation Line	-----
Property Line	-----
Existing Iron Pin	○
Property Corner	-----
Property Monument	□
Parcel/Sequence Number	②③
Existing Fence Line	-----
Proposed Woven Wire Fence	-----
Proposed Chain Link Fence	-----
Proposed Barbed Wire Fence	-----
Existing Wetland Boundary	-----
Proposed Wetland Boundary	-----
Existing Endangered Animal Boundary	-----
Existing Endangered Plant Boundary	-----

BUILDINGS AND OTHER CULTURE:

Gas Pump Vent or U/G Tank Cap	○
Sign	○
Well	○
Small Mine	✕
Foundation	□
Area Outline	□
Cemetery	+
Building	□
School	□
Church	□
Dam	□

HYDROLOGY:

Stream or Body of Water	-----
Hydro, Pool or Reservoir	□
Jurisdictional Stream	JS
Buffer Zone 1	BZ 1
Buffer Zone 2	BZ 2
Flow Arrow	←
Disappearing Stream	-----
Spring	○
Wetland	K
Proposed Lateral, Tail, Head Ditch	-----
False Sump	◇

RAILROADS:

Standard Gauge	-----
RR Signal Milepost	○
Switch	SWITCH
RR Abandoned	-----
RR Dismantled	-----

RIGHT OF WAY:

Baseline Control Point	◆
Existing Right of Way Marker	△
Existing Right of Way Line	-----
Proposed Right of Way Line	-----
Proposed Right of Way Line with Iron Pin and Cap Marker	-----
Proposed Right of Way Line with Concrete or Granite Marker	-----
Existing Control of Access	○
Proposed Control of Access	○
Existing Easement Line	E
Proposed Temporary Construction Easement	E
Proposed Temporary Drainage Easement	TDE
Proposed Permanent Drainage Easement	PDE
Proposed Permanent Utility Easement	PUE

ROADS AND RELATED FEATURES:

Existing Edge of Pavement	-----
Existing Curb	-----
Proposed Slope Stakes Cut	C
Proposed Slope Stakes Fill	F
Proposed Wheel Chair Ramp	WCR
Proposed Wheel Chair Ramp Curb Cut	WCC
Curb Cut for Future Wheel Chair Ramp	CCFR
Existing Metal Guardrail	-----
Proposed Guardrail	-----
Existing Cable Guiderail	-----
Proposed Cable Guiderail	-----
Equality Symbol	⊕
Pavement Removal	-----

VEGETATION:

Single Tree	☆
Single Shrub	⊙
Hedge	-----
Woods Line	-----
Orchard	-----
Vineyard	Vineyard

EXISTING STRUCTURES:

MAJOR:	
Bridge, Tunnel or Box Culvert	CONC
Bridge Wing Wall, Head Wall and End Wall	CONC WW
MINOR:	
Head and End Wall	CONC HW
Pipe Culvert	-----
Footbridge	-----
Drainage Box: Catch Basin, DI or JB	CB
Paved Ditch Gutter	-----
Storm Sewer Manhole	⊕
Storm Sewer	S

UTILITIES:

POWER:	
Existing Power Pole	●
Proposed Power Pole	○
Existing Joint Use Pole	●
Proposed Joint Use Pole	○
Power Manhole	⊕
Power Line Tower	⊗
Power Transformer	⊗
U/G Power Cable Hand Hole	PH
H-Frame Pole	●
Recorded U/G Power Line	P
Designated U/G Power Line (S.U.E.*)	P

TELEPHONE:

Existing Telephone Pole	●
Proposed Telephone Pole	○
Telephone Manhole	⊕
Telephone Booth	⊕
Telephone Pedestal	⊕
Telephone Cell Tower	⊕
U/G Telephone Cable Hand Hole	PH
Recorded U/G Telephone Cable	T
Designated U/G Telephone Cable (S.U.E.*)	T
Recorded U/G Telephone Conduit	TC
Designated U/G Telephone Conduit (S.U.E.*)	TC
Recorded U/G Fiber Optics Cable	T FO
Designated U/G Fiber Optics Cable (S.U.E.*)	T FO

WATER:

Water Manhole	⊕
Water Meter	○
Water Valve	⊗
Water Hydrant	⊕
Recorded U/G Water Line	W
Designated U/G Water Line (S.U.E.*)	W
Above Ground Water Line	A/G Water

TV:

TV Satellite Dish	⊕
TV Pedestal	⊕
TV Tower	⊕
U/G TV Cable Hand Hole	PH
Recorded U/G TV Cable	TV
Designated U/G TV Cable (S.U.E.*)	TV
Recorded U/G Fiber Optic Cable	TV FO
Designated U/G Fiber Optic Cable (S.U.E.*)	TV FO

GAS:

Gas Valve	⊕
Gas Meter	⊕
Recorded U/G Gas Line	G
Designated U/G Gas Line (S.U.E.*)	G
Above Ground Gas Line	A/G Gas

SANITARY SEWER:

Sanitary Sewer Manhole	⊕
Sanitary Sewer Cleanout	⊕
U/G Sanitary Sewer Line	SS
Above Ground Sanitary Sewer	A/G Sanitary Sewer
Recorded SS Forced Main Line	FSS
Designated SS Forced Main Line (S.U.E.*)	FSS

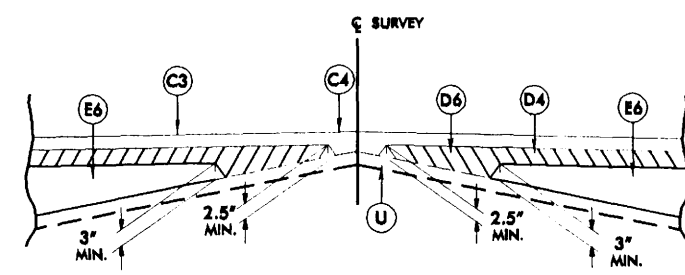
MISCELLANEOUS:

Utility Pole	●
Utility Pole with Base	⊕
Utility Located Object	○
Utility Traffic Signal Box	⊕
Utility Unknown U/G Line	U/L
U/G Tank; Water, Gas, Oil	□
A/G Tank; Water, Gas, Oil	□
U/G Test Hole (S.U.E.*)	⊕
Abandoned According to Utility Records	AATUR
End of Information	E.O.I.

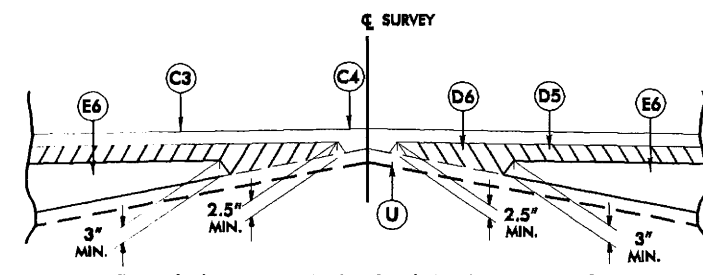
8/17/99

24-MAY-2008 10:05
C:\working\pav\2417c_rdy_vyp.dgn

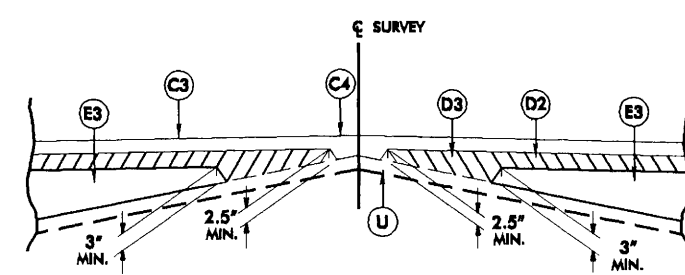
PAVEMENT SCHEDULE	
C1	PROP. APPROX. 3" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B, AT AN AVERAGE RATE OF 168 LBS. PER SQ. YD. IN EACH OF TWO LAYERS.
C2	PROP. VAR. DEPTH ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B, AT AN AVERAGE RATE OF 112 LBS. PER SQ. YD. PER 1" DEPTH, TO BE PLACED IN LAYERS NOT TO EXCEED 3" IN DEPTH.
C3	PROP. APPROX. 3" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5C, AT AN AVERAGE RATE OF 168 LBS. PER SQ. YD. IN EACH OF TWO LAYERS.
C4	PROP. VAR. DEPTH ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5C, AT AN AVERAGE RATE OF 112 LBS. PER SQ. YD. PER 1" DEPTH, TO BE PLACED IN LAYERS NOT TO EXCEED 3" IN DEPTH.
D1	PROP. APPROX. 2.5" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE I19.0B, AT AN AVERAGE RATE OF 285 LBS. PER SQ. YD.
D2	PROP. APPROX. 4" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE I19.0B, AT AN AVERAGE RATE OF 456 LBS. PER SQ. YD.
D3	PROP. VAR. DEPTH ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE I19.0B, AT AN AVERAGE RATE OF 114 LBS. PER SQ. YD. PER 1" DEPTH, TO BE PLACED IN LAYERS NOT LESS THAN 2 1/2" IN DEPTH OR GREATER THAN 4" IN DEPTH.
D4	PROP. APPROX. 2.5" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE I19.0C, AT AN AVERAGE RATE OF 285 LBS. PER SQ. YD.
D5	PROP. APPROX. 4" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE I19.0C, AT AN AVERAGE RATE OF 456 LBS. PER SQ. YD.
D6	PROP. VAR. DEPTH ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE I19.0C, AT AN AVERAGE RATE OF 114 LBS. PER SQ. YD. PER 1" DEPTH, TO BE PLACED IN LAYERS NOT LESS THAN 2 1/2" IN DEPTH OR GREATER THAN 4" IN DEPTH.
E1	PROP. APPROX. 4" ASPHALT CONCRETE BASE COURSE, TYPE B25.0B, AT AN AVERAGE RATE OF 456 LBS. PER SQ. YD.
E2	PROP. APPROX. 5" ASPHALT CONCRETE BASE COURSE, TYPE B25.0B, AT AN AVERAGE RATE OF 570 LBS. PER SQ. YD.
E3	PROP. VAR. DEPTH ASPHALT CONCRETE BASE COURSE, TYPE B25.0B, AT AN AVERAGE RATE OF 114 LBS. PER SQ. YD. PER 1" DEPTH, TO BE PLACED IN LAYERS NOT LESS THAN 3" IN DEPTH OR GREATER THAN 5 1/2" IN DEPTH.
E4	PROP. APPROX. 4" ASPHALT CONCRETE BASE COURSE, TYPE B25.0C, AT AN AVERAGE RATE OF 456 LBS. PER SQ. YD.
E5	PROP. APPROX. 5" ASPHALT CONCRETE BASE COURSE, TYPE B25.0C, AT AN AVERAGE RATE OF 570 LBS. PER SQ. YD.
E6	PROP. VAR. DEPTH ASPHALT CONCRETE BASE COURSE, TYPE B25.0C, AT AN AVERAGE RATE OF 114 LBS. PER SQ. YD. PER 1" DEPTH, TO BE PLACED IN LAYERS NOT LESS THAN 3" IN DEPTH OR GREATER THAN 5 1/2" IN DEPTH.
J1	PROP. 6" AGGREGATE BASE COURSE.
J2	PROP. 8" AGGREGATE BASE COURSE.
K	PROP. " SOIL CEMENT SUBBASE.
R1	2'-6" CONCRETE CURB AND GUTTER.
R2	8"x18" CONCRETE CURB.
R3	5" MONOLITHIC CONCRETE ISLAND.
U	EXISTING PAVEMENT.
T	EARTH MATERIAL.
W1	VARIABLE DEPTH ASPHALT PAVEMENT (SEE STANDARD WEDGING DETAIL SHEET No. 1)
W2	VARIABLE DEPTH ASPHALT PAVEMENT (SEE STANDARD WEDGING DETAIL SHEET No. 2)
W3	VARIABLE DEPTH ASPHALT PAVEMENT (SEE STANDARD WEDGING DETAIL SHEET No. 3)
W4	VARIABLE DEPTH ASPHALT PAVEMENT (SEE STANDARD WEDGING DETAIL SHEET No. 4)
W5	VARIABLE DEPTH ASPHALT PAVEMENT (SEE STANDARD WEDGING DETAIL SHEET No. 5)



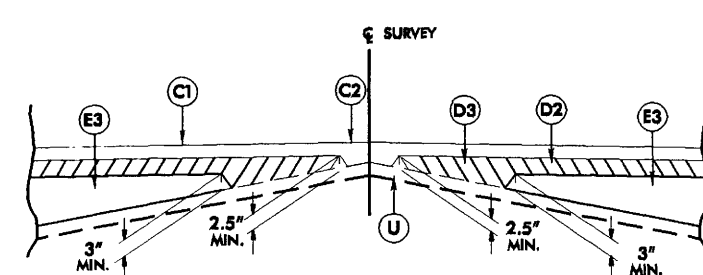
Detail Showing Method of Wedging No. 1



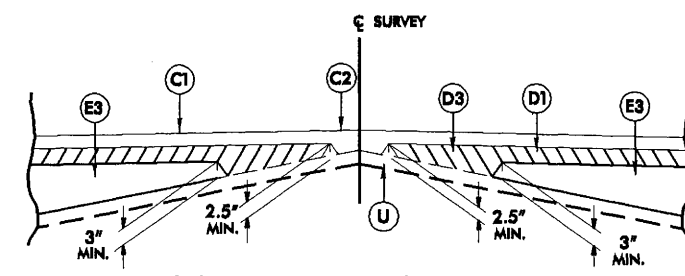
Detail Showing Method of Wedging No. 2



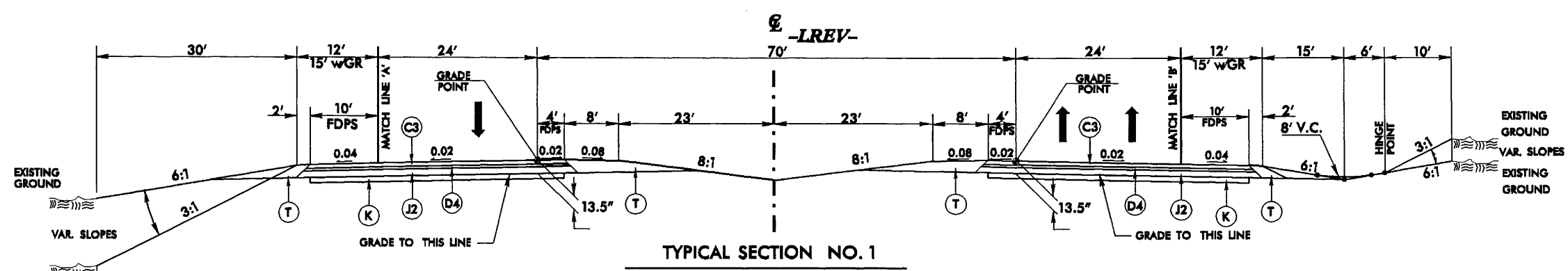
Detail Showing Method of Wedging No. 3



Detail Showing Method of Wedging No. 4



Detail Showing Method of Wedging No. 5



NOTE: PAVE TO FACE OF GUARDRAIL AS SHOWN ON PLANS.

USE TYPICAL SECTION NO. 1 AS FOLLOWS

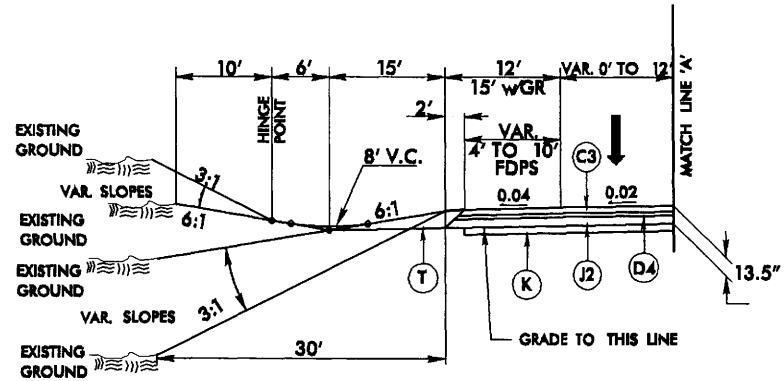
-LREV-	STA. 574+75.98 TO STA. 587+70.00	LT.
-LREV-	STA. 578+26.90 TO STA. 593+75.00	RT.
-LREV-	STA. 596+50.00 TO STA. 614+45.00	+/- (BEGIN BRIDGE) LT.
-LREV-	STA. 596+75.00 TO STA. 610+05.00	RT.
-LREV-	STA. 616+43.00 +/- (END BRIDGE) TO STA. 632+50.00	LT.
-LREV-	STA. 616+60.00 TO STA. 635+59.49	RT.
-LREV-	STA. 640+85.15 TO STA. 674+26.06	RT.
-LREV-	STA. 635+50.00 TO STA. 680+25.00	LT.
-LREV-	STA. 644+39.49 TO STA. 674+26.06	LT.

PROJECT REFERENCE NO.	SHEET NO.
R-2417C	2
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	PAVEMENT DESIGN ENGINEER
PRELIMINARY PLANS	
DO NOT USE FOR CONSTRUCTION	

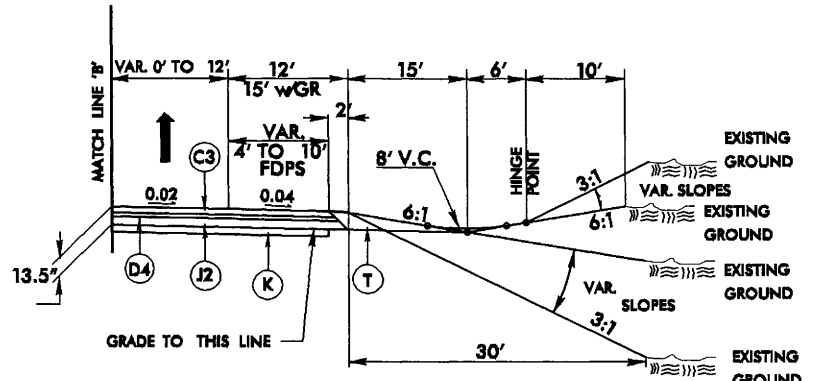
C1	3" 89.5B
C2	VAR. 89.5B
C3	3" 89.6C
C4	VAR. 89.5C
D1	2.5" I19.0B
D2	4" I19.0B
D3	VAR. I19.0B
D4	2.5" I19.0C
D5	4" I19.0C
D6	VAR. I19.0C
E1	4" B25.0B
E2	5" B25.0B
E3	VAR. B25.0B
E4	4" B25.0C
E5	5" B25.0C
E6	VAR. B25.0C
J1	6" ABC
J2	8" ABC
K	SOIL CEMENT SUBBASE
R1	2'-6" C & G
R2	6"x18" CON. CURB.
R3	5" MONOLITHIC CONCRETE ISLAND
U	EXISTING PAVEMENT
T	EARTH MATERIAL
W1	WEDGING DETAIL No. 1
W2	WEDGING DETAIL No. 2
W3	WEDGING DETAIL No. 3
W4	WEDGING DETAIL No. 4
W5	WEDGING DETAIL No. 5

24-MAR-2008 10:05
C:\PROJECTS\24-MAR-2008\24-MAR-2008.dgn

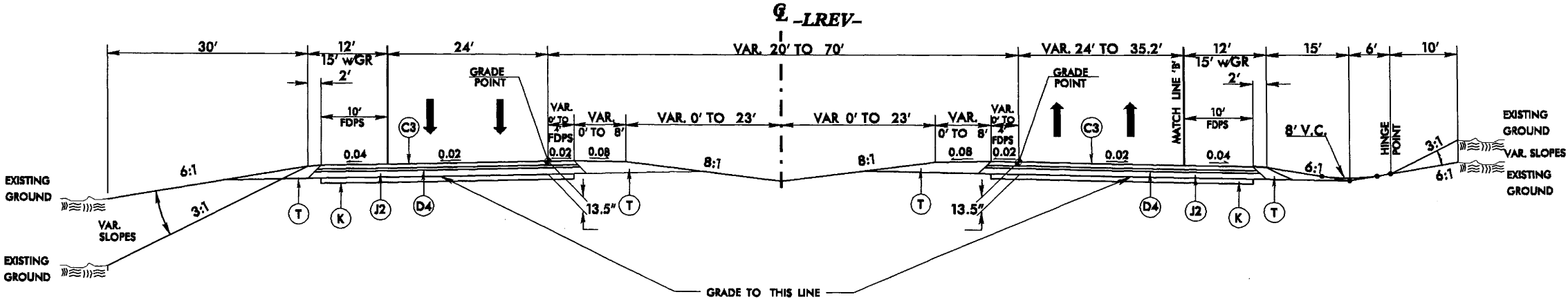
PROJECT REFERENCE NO.	SHEET NO.
R-2417C	2-A
RAW SHEET NO.	
ROADWAY DESIGN ENGINEER	PAVEMENT DESIGN ENGINEER
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	



USE PARTIAL TYPICAL
SECTION NO. 1 AS FOLLOWS
-LREV- STA. 587+70.00 TO STA. 596+50.00 LT.
-LREV- STA. 632+50.00 TO STA. 635+50.00 LT.



USE PARTIAL TYPICAL
SECTION NO. 1 AS FOLLOWS
-LREV- STA. 574+75.98 TO STA. 578+26.90 RT.
-LREV- STA. 593+75.00 TO STA. 596+75.00 RT.
-LREV- STA. 610+05.00 TO STA. 614+20.00 +/- (BEGIN BRIDGE) RT.
-LREV- STA. 616+18.00 +/- (END BRIDGE) TO STA. 616+60.00 RT.
-LREV- STA. 635+59.49 TO STA. 644+39.49 RT.
-LREV- STA. 674+26.06 TO STA. 680+25.00 RT.



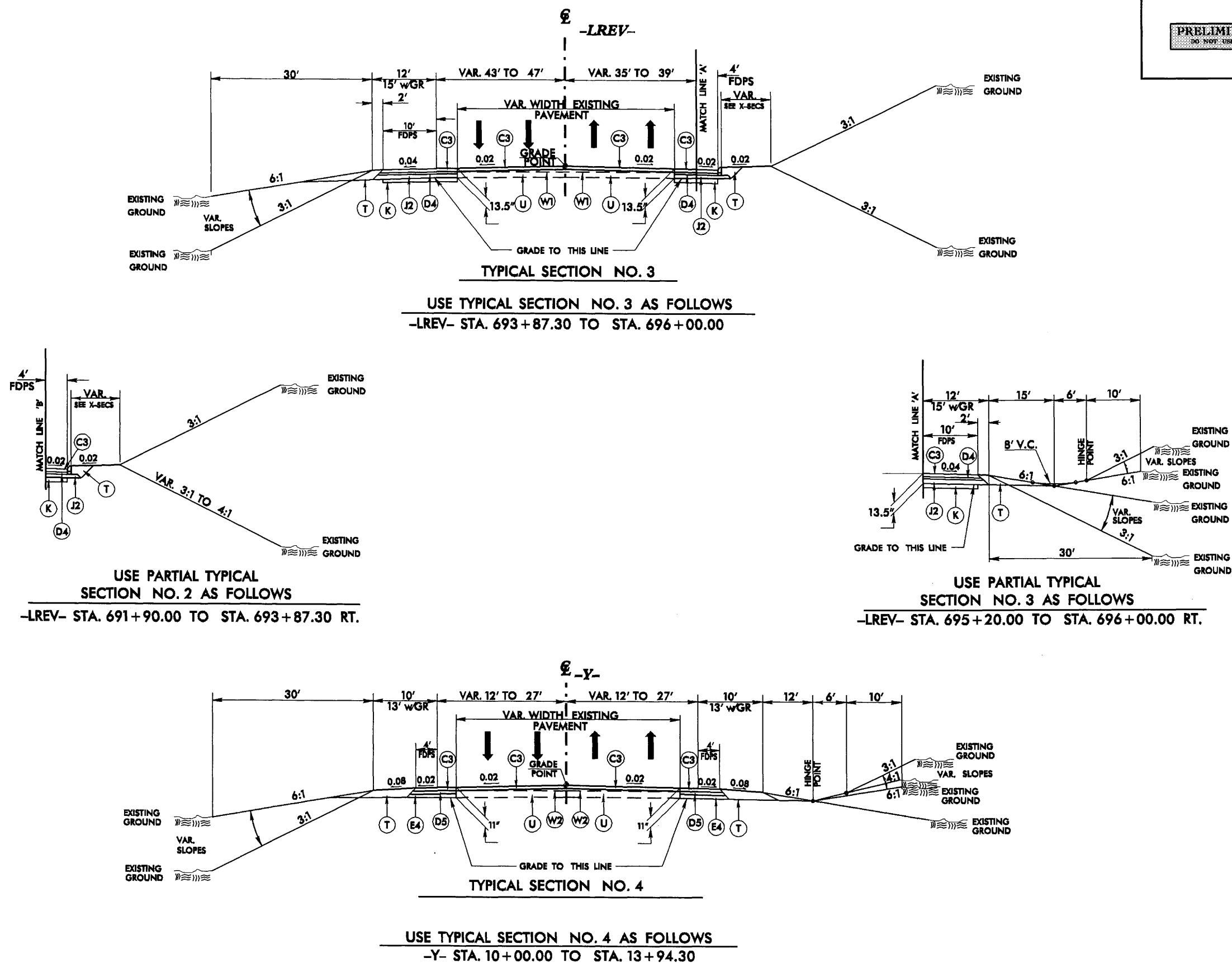
NOTE: PAVE TO FACE OF GUARDRAIL
AS SHOWN ON PLANS.

USE TYPICAL SECTION NO. 2 AS FOLLOWS
-LREV- STA. 680+25.00 TO STA. 693+87.30 LT/RT.

C1	3" 89.5B
C2	VAR. 89.5B
C3	3" 89.5C
C4	VAR. 89.5C
D1	2.5" I19.0B
D2	4" I19.0B
D3	VAR. I19.0B
D4	2.5" I19.0C
D5	4" I19.0C
D6	VAR. I19.0C
E1	4" B25.0B
E2	5" B25.0B
E3	VAR. B25.0B
E4	4" B25.0C
E5	5" B25.0C
E6	VAR. B25.0C
J1	8" ABC
J2	8" ABC
K	SOIL CEMENT SUBBASE
R1	2'-6" C & G
R2	8"X18" CON. CURB.
R3	5" MONOLITHIC CONCRETE ISLAND
U	EXISTING PAVEMENT
T	EARTH MATERIAL
W1	WEDGING DETAIL No. 1
W2	WEDGING DETAIL No. 2
W3	WEDGING DETAIL No. 3
W4	WEDGING DETAIL No. 4
W5	WEDGING DETAIL No. 5

24-MAR-2008 10:05
 C:\msdmsa\proj\2417c_rdy_lyn.dgn
 55515551555555555555

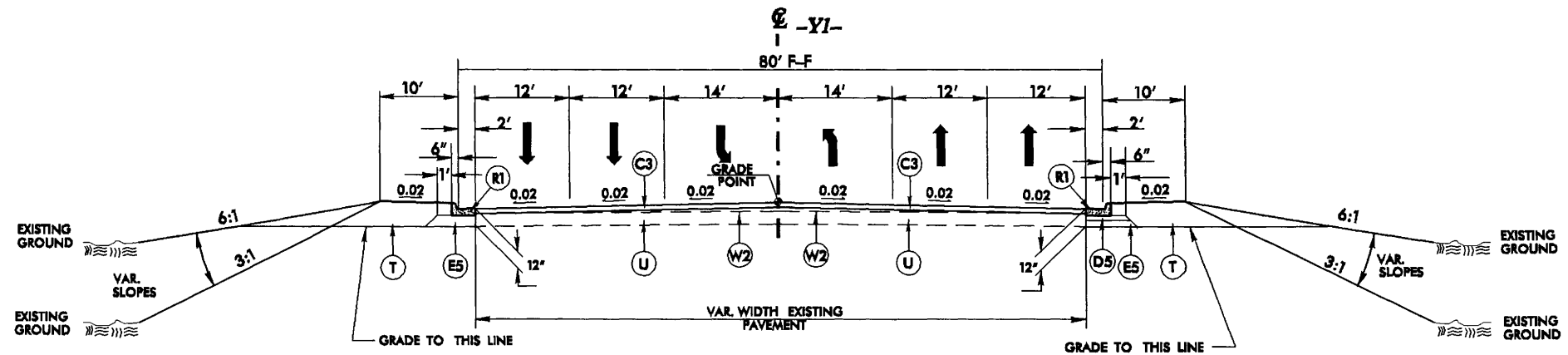
PROJECT REFERENCE NO.		SHEET NO.	
R-2417C		2-B	
RW SHEET NO.			
ROADWAY DESIGN ENGINEER		PAVEMENT DESIGN ENGINEER	
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION			



C1	3" 89.5B
C2	VAR. 89.5B
C3	3" 89.5C
C4	VAR. 89.5C
D1	2.5" 119.0B
D2	4" 119.0B
D3	VAR. 119.0B
D4	2.5" 119.0C
D5	4" 119.0C
D6	VAR. 119.0C
E1	4" B25.0B
E2	5" B25.0B
E3	VAR. B25.0B
E4	4" B25.0C
E5	5" B25.0C
E6	VAR. B25.0C
J1	6" ABC
J2	8" ABC
K	SOIL CEMENT SUBBASE
R1	2'-6" C & G
R2	8"x18" CON. CURB.
R3	5" MONOLITHIC CONCRETE ISLAND
U	EXISTING PAVEMENT
T	EARTH MATERIAL
W1	WEDGING DETAIL No. 1
W2	WEDGING DETAIL No. 2
W3	WEDGING DETAIL No. 3
W4	WEDGING DETAIL No. 4
W5	WEDGING DETAIL No. 5

24-MAR-2008 10:05
 C:\pwworking\pwworking\2417c_rdy_1pp.dgn

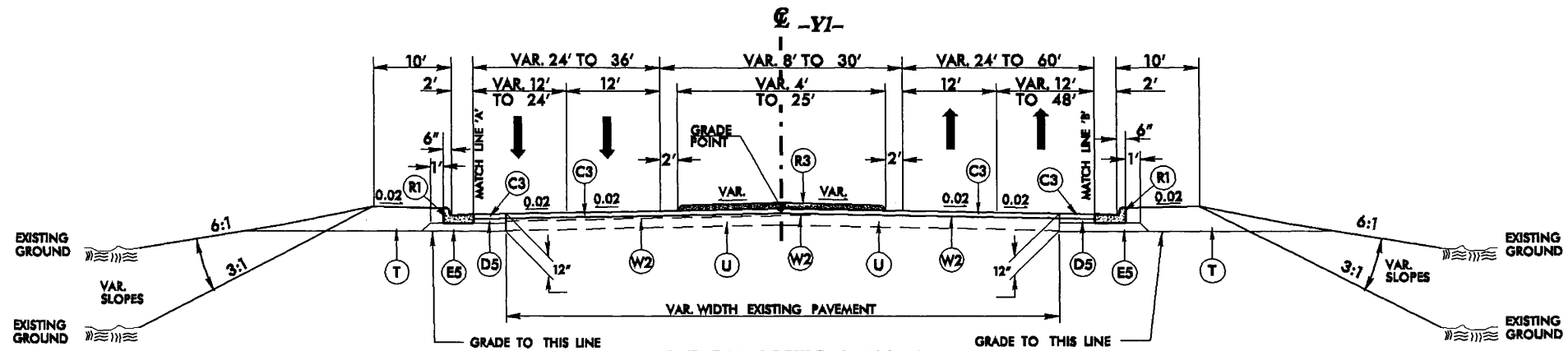
PROJECT REFERENCE NO.	SHEET NO.
R-2417C	2-D
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	PAVEMENT DESIGN ENGINEER
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	



TYPICAL SECTION NO. 7

USE TYPICAL SECTION NO. 7 AS FOLLOWS

-Y1- STA. 13+00.00 TO STA. 13+37.85
 -Y1- STA. 21+36.16 TO STA. 24+00.00



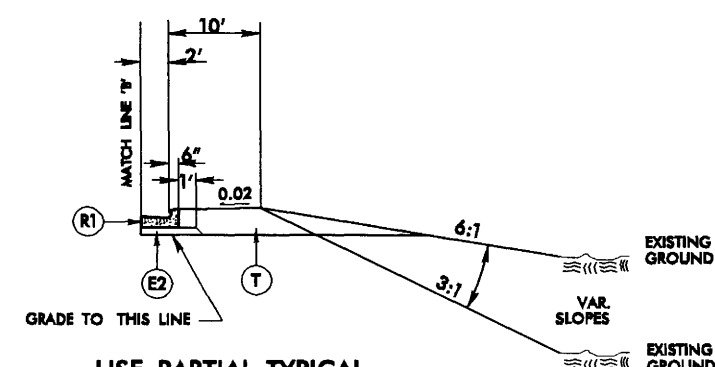
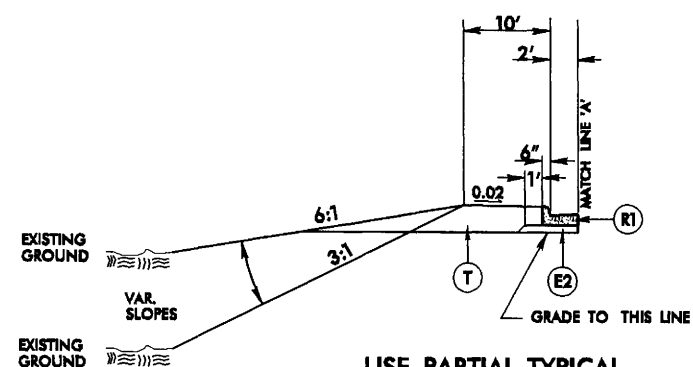
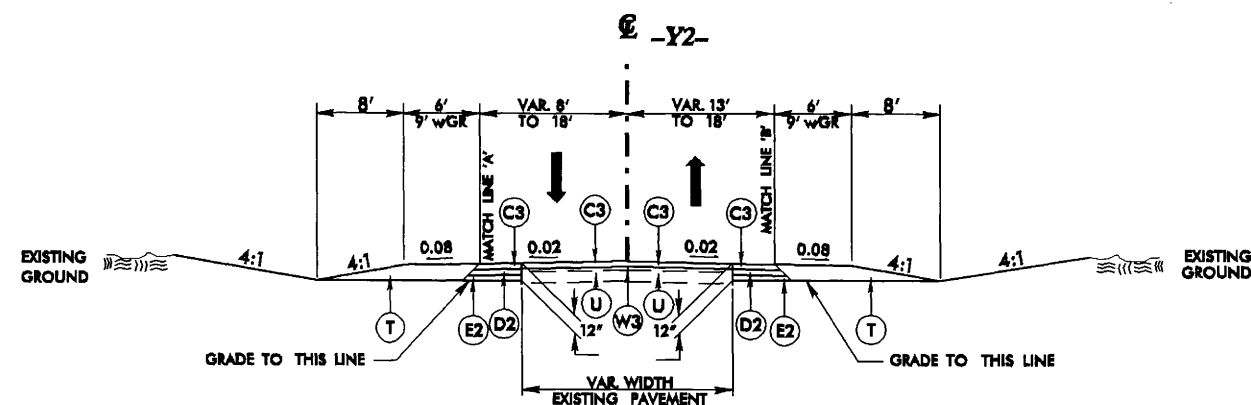
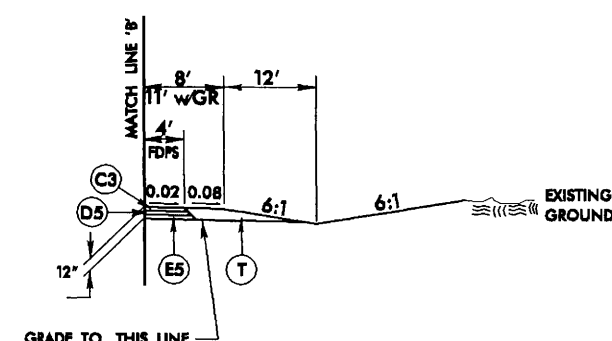
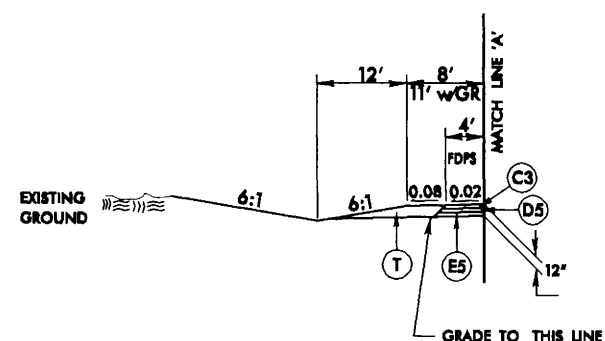
TYPICAL SECTION NO. 8

USE TYPICAL SECTION NO. 8 AS FOLLOWS

-Y1- STA. 13+37.85 TO STA. 35+25.00

8/17/99	C1	3" 89.6B
	C2	VAR. 89.5B
	C3	3" 89.6C
	C4	VAR. 89.5C
	D1	2.5" I19.0B
	D2	4" I19.0B
	D3	VAR. I19.0B
	D4	2.5" I19.0C
	D5	4" I19.0C
	D6	VAR. I19.0C
	E1	4" B25.0B
	E2	5" B25.0B
	E3	VAR. B25.0B
	E4	4" B25.0C
	E5	5" B25.0C
	E6	VAR. B25.0C
	J1	6" ABC
	J2	8" ABC
	K	SOIL CEMENT SUBBASE
	R1	2'-6" C & G
	R2	6"X18" CON. CURB.
	R3	5" MONOLITHIC CONCRETE ISLAND
	U	EXISTING PAVEMENT
	T	EARTH MATERIAL
	W1	WEDGING DETAIL No. 1
	W2	WEDGING DETAIL No. 2
	W3	WEDGING DETAIL No. 3
	W4	WEDGING DETAIL No. 4
	W5	WEDGING DETAIL No. 5

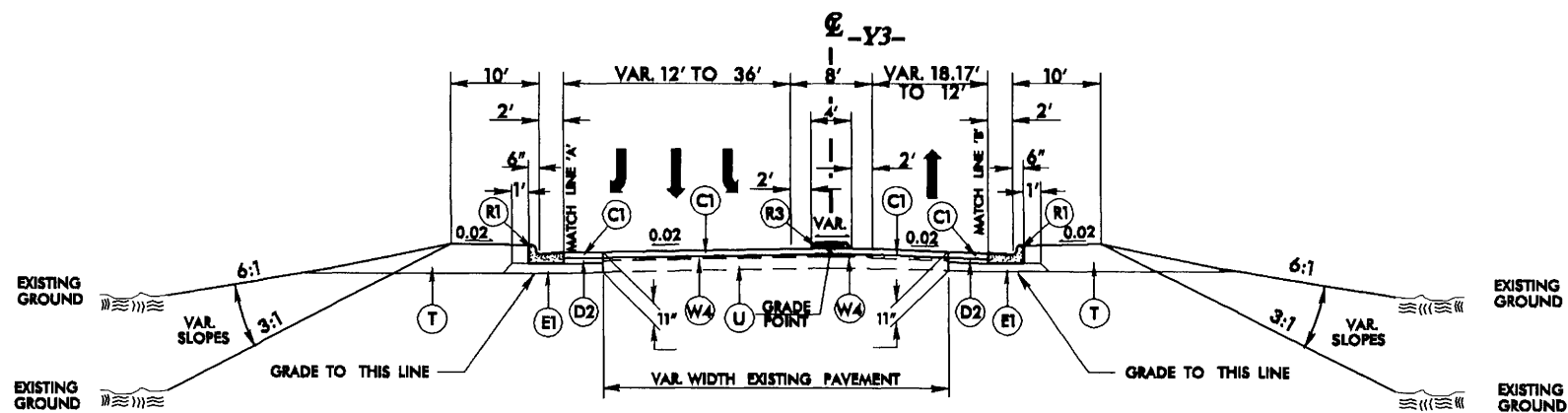
PROJECT REFERENCE NO.	SHEET NO.
R-2417C	2-E
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	PAVEMENT DESIGN ENGINEER
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	



C1	3" 89.5B
C2	VAR. 89.5B
C3	3" 89.5C
C4	VAR. 89.5C
D1	2.5" I19.0B
D2	4" I19.0B
D3	VAR. I19.0B
D4	2.5" I19.0C
D5	4" I19.0C
D6	VAR. I19.0C
E1	4" B25.0B
E2	5" B25.0B
E3	VAR. B25.0B
E4	4" B25.0C
E5	5" B25.0C
E6	VAR. B25.0C
J1	6" ABC
J2	8" ABC
K	SOIL CEMENT SUBBASE
R1	2'-8" C & G
R2	6"x18" CON. CURB.
R3	5" MONOLITHIC CONCRETE ISLAND
U	EXISTING PAVEMENT
T	EARTH MATERIAL
W1	WEDGING DETAIL No. 1
W2	WEDGING DETAIL No. 2
W3	WEDGING DETAIL No. 3
W4	WEDGING DETAIL No. 4
W5	WEDGING DETAIL No. 5

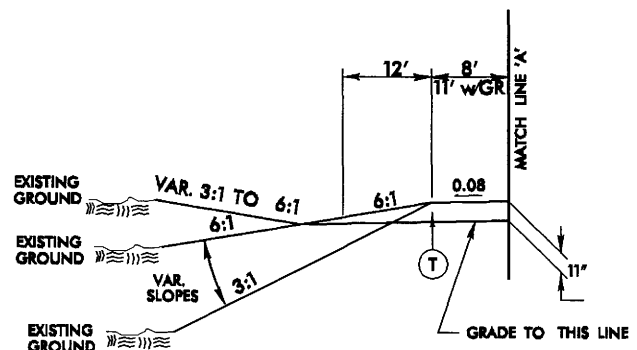
24-MAR-2008 10:05
 C:\working\m01\2417c.mxd
 2417c.dgn

PROJECT REFERENCE NO.	SHEET NO.
R-2417C	2-F
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	PAVEMENT DESIGN ENGINEER
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	

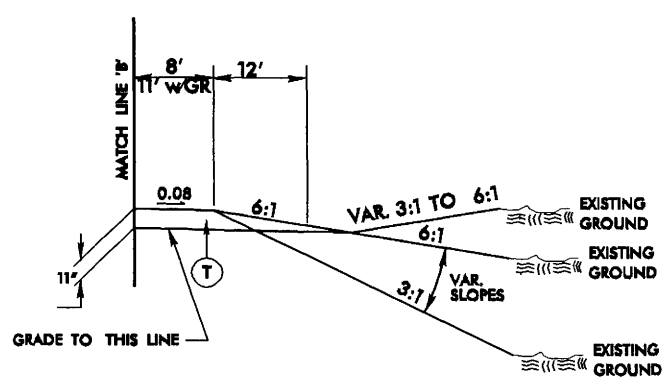


TYPICAL SECTION NO. 10

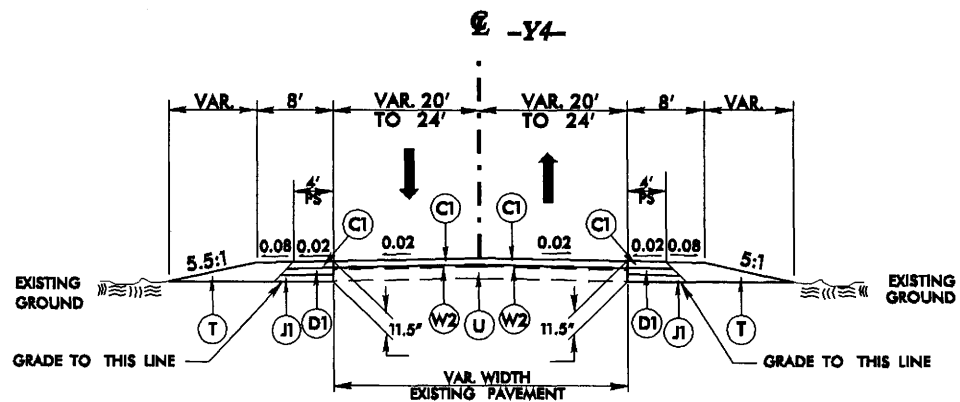
USE TYPICAL SECTION NO. 10 AS FOLLOWS
 -Y3- STA. 10+32.02 TO STA. 20+50.00



USE PARTIAL TYPICAL SECTION NO. 10 AS FOLLOWS
 -Y3- STA. 18+35.97 TO STA. 20+50.00 LT.



USE PARTIAL TYPICAL SECTION NO. 10 AS FOLLOWS
 -Y3- STA. 20+01.08 TO STA. 20+50.00 RT.



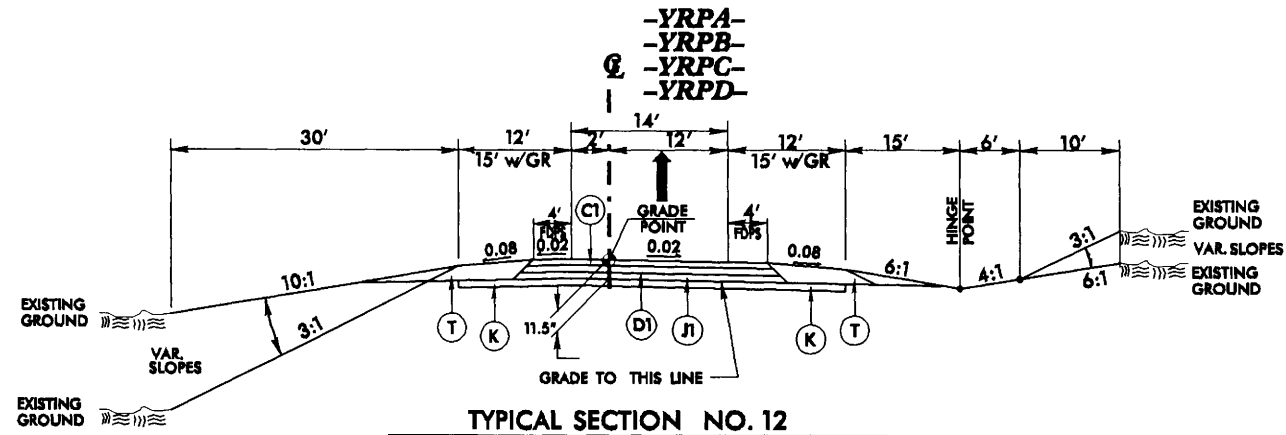
TYPICAL SECTION NO. 11

USE TYPICAL SECTION NO. 11 AS FOLLOWS
 -Y4- STA. 10+48.06 TO STA. 11+25.00

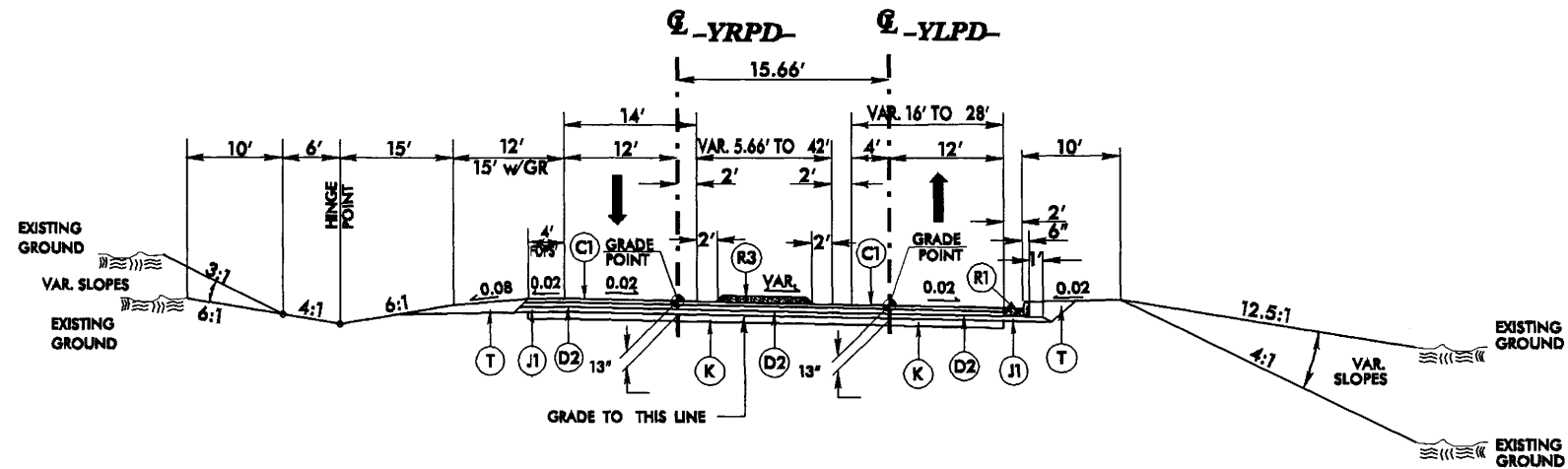
C1	3" 89.5B
C2	VAR. 89.5B
C3	3" 89.8C
C4	VAR. 89.5C
D1	2.5" I19.0B
D2	4" I19.0B
D3	VAR. I19.0B
D4	2.5" I19.0C
D5	4" I19.0C
D6	VAR. I19.0C
E1	4" B25.0B
E2	5" B25.0B
E3	VAR. B25.0B
E4	4" B25.0C
E5	5" B25.0C
E6	VAR. B25.0C
J1	8" ABC
J2	8" ABC
K	SOIL CEMENT SUBBASE
R1	2'-8" C & G
R2	8"x18" CON. CURB.
R3	5" MONOLITHIC CONCRETE ISLAND
U	EXISTING PAVEMENT
T	EARTH MATERIAL
W1	WEDGING DETAIL No. 1
W2	WEDGING DETAIL No. 2
W3	WEDGING DETAIL No. 3
W4	WEDGING DETAIL No. 4
W5	WEDGING DETAIL No. 5

24-MAR-2008 10:05
C:\working\proj\2417c_rdy_yp.dgn
3:14:53 PM

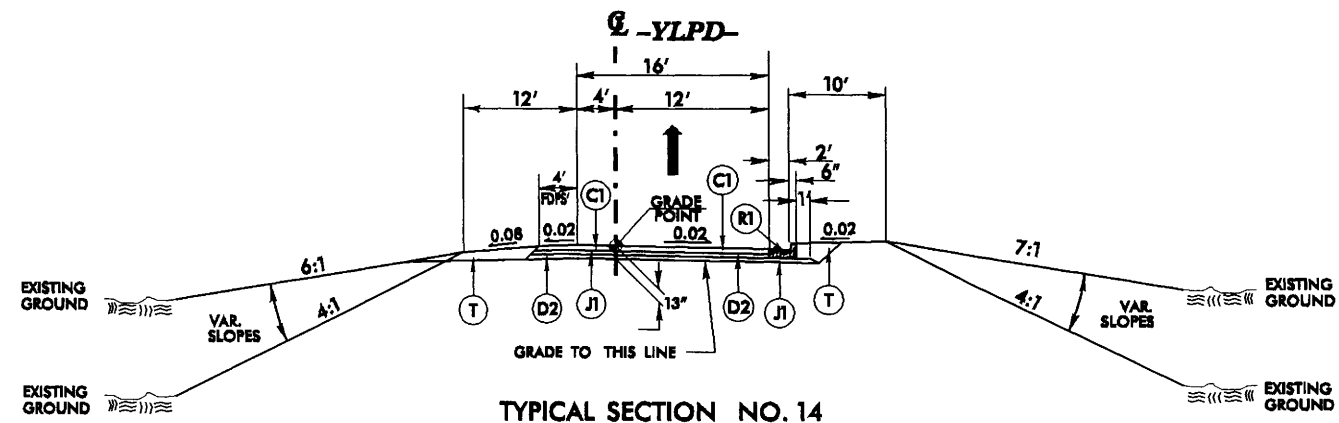
PROJECT REFERENCE NO.	SHEET NO.
R-2417C	2-G
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	PAVEMENT DESIGN ENGINEER
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	



USE TYPICAL SECTION NO. 12 AS FOLLOWS
 -YRPA- STA. 0+00.00 TO STA. 16+26.12
 -YRPB- STA. 0+00.00 TO STA. 20+72.62
 -YRPC- STA. 0+00.00 TO STA. 17+86.24
 -YRPD- STA. 0+00.00 TO STA. 17+85.89



USE TYPICAL SECTION NO. 13 AS FOLLOWS
 -YLPD- STA. 8+13.36 TO STA. 12+19.72
 -YRPD- STA. 17+85.89 TO STA. 21+98.79

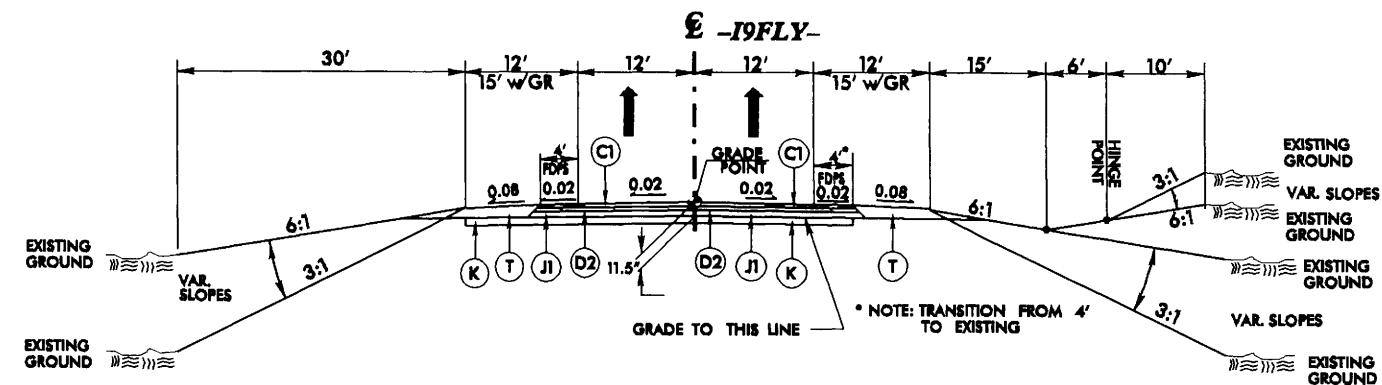


USE TYPICAL SECTION NO. 14 AS FOLLOWS
 -YLPD- STA. 0+00.00 TO STA. 8+13.36

C1	3" 89.5B
C2	VAR. 89.5B
C3	3" 89.5C
C4	VAR. 89.5C
D1	2.5" I19.0B
D2	4" I19.0B
D3	VAR. I19.0B
D4	2.5" I19.0C
D5	4" I19.0C
D6	VAR. I19.0C
E1	4" B25.0B
E2	5" B25.0B
E3	VAR. B25.0B
E4	4" B25.0C
E5	5" B25.0C
E6	VAR. B25.0C
J1	8" ABC
J2	8" ABC
K	SOIL CEMENT SUBBASE
R1	2'-6" C & G
R2	8"X18" CON. CURB.
R3	5" MONOLITHIC CONCRETE ISLAND
U	EXISTING PAVEMENT
T	EARTH MATERIAL
W1	WEDGING DETAIL No. 1
W2	WEDGING DETAIL No. 2
W3	WEDGING DETAIL No. 3
W4	WEDGING DETAIL No. 4
W5	WEDGING DETAIL No. 5

8/17/99

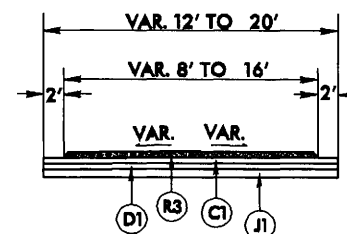
PROJECT REFERENCE NO. R-2417C	SHEET NO. 2-H
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	PAVEMENT DESIGN ENGINEER
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	



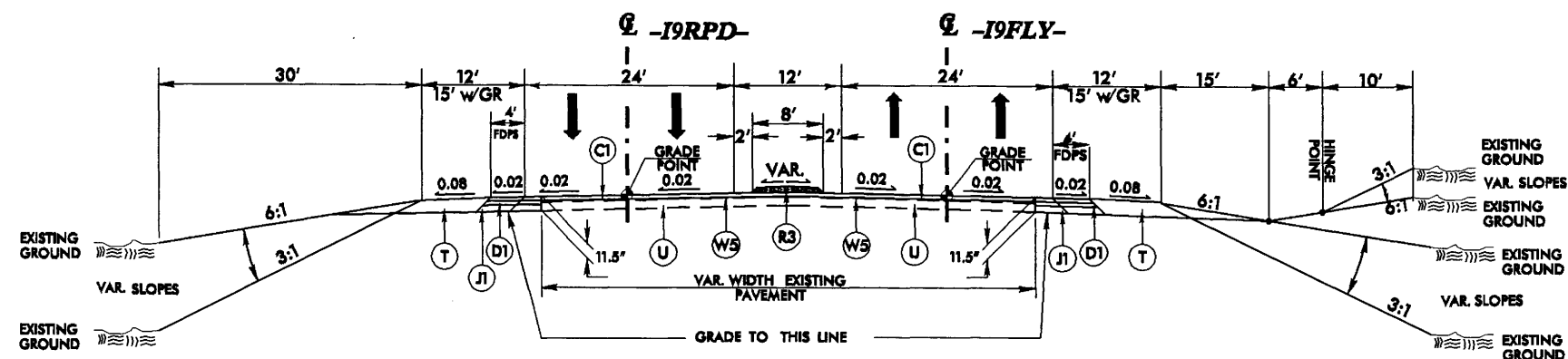
TYPICAL SECTION NO. 15

NOTE: PAVE TO FACE OF GUARDRAIL AS SHOWN ON PLANS.

USE TYPICAL SECTION NO. 15 AS FOLLOWS
 -I9FLY- STA. 10+00.00 TO STA. 25+55.00 +/- (BEGIN BRIDGE)
 -I9FLY- STA. 23+06.00 +/- (END BRIDGE) TO STA. 34+00.00



USE PARTIAL TYPICAL SECTION NO. 15 AS FOLLOWS
 -I9FLY- STA. 32+16.43 TO STA. 34+00.00



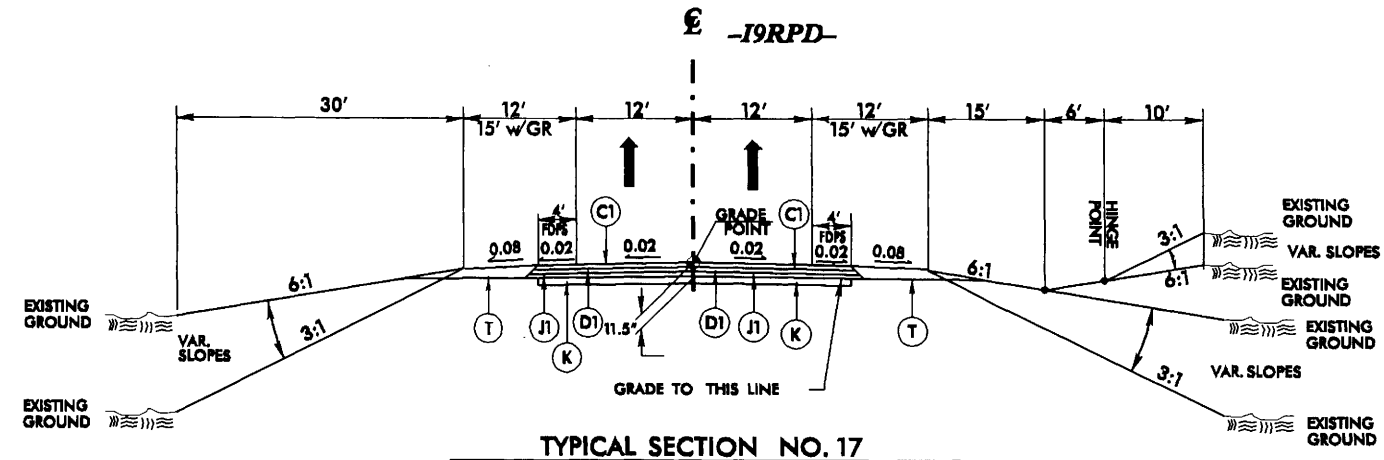
TYPICAL SECTION NO. 16

USE TYPICAL SECTION NO. 16 AS FOLLOWS
 -I9FLY- STA. 34+00.00 TO STA. 38+95.00
 -I9RPD- STA. 17+85.39 TO STA. 18+18.72

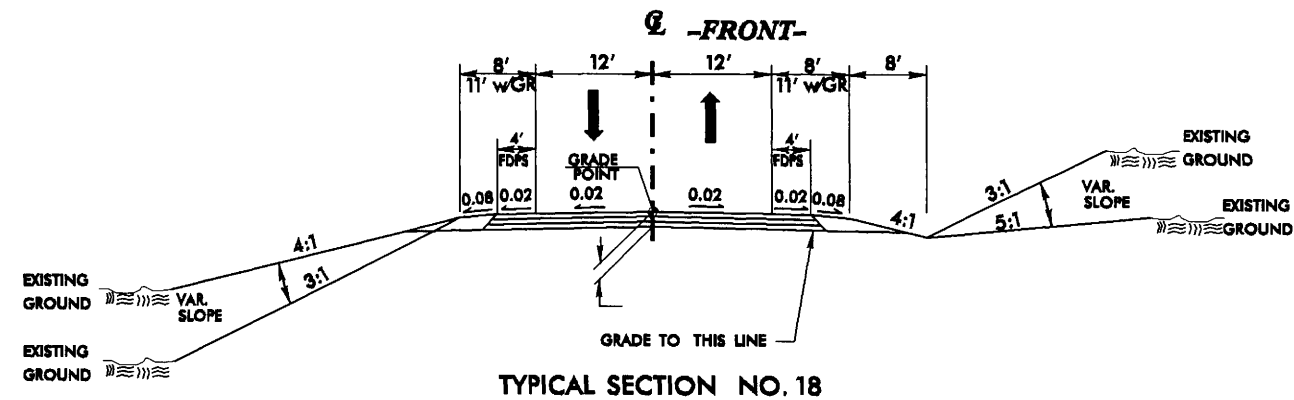
C1	3" 89.5B
C2	VAR. 89.5B
C3	3" 89.5C
C4	VAR. 89.5C
D1	2.5" I19.0B
D2	4" I19.0B
D3	VAR. I19.0B
D4	2.5" I19.0C
D5	4" I19.0C
D6	VAR. I19.0C
E1	4" B25.0B
E2	5" B25.0B
E3	VAR. B25.0B
E4	4" B25.0C
E5	5" B25.0C
E6	VAR. B25.0C
J1	6" ABC
J2	8" ABC
K	SOIL CEMENT SUBBASE
R1	2'-8" C & G
R2	8"X18" CON. CURB.
R3	5" MONOLITHIC CONCRETE ISLAND
U	EXISTING PAVEMENT
T	EARTH MATERIAL
W1	WEDGING DETAIL No. 1
W2	WEDGING DETAIL No. 2
W3	WEDGING DETAIL No. 3
W4	WEDGING DETAIL No. 4
W5	WEDGING DETAIL No. 5

8/17/99

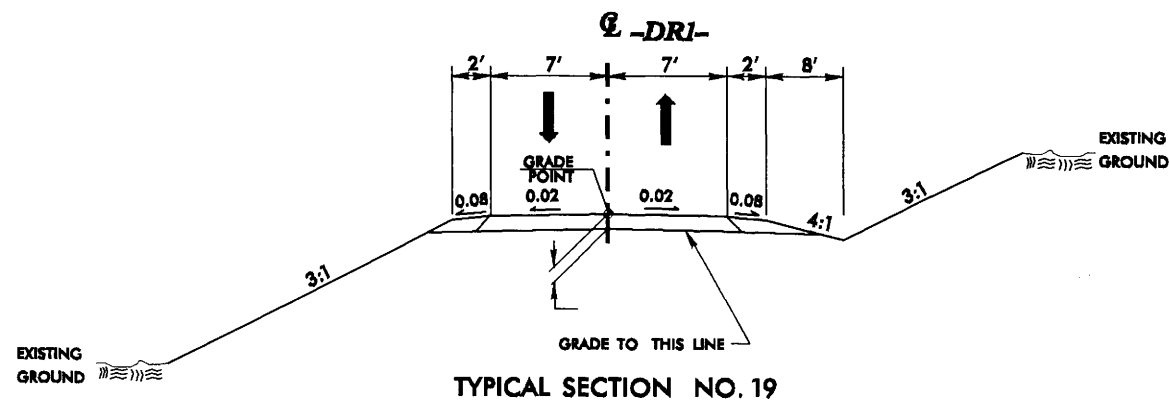
PROJECT REFERENCE NO.	SHEET NO.
R-2417C	2-1
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	PAVEMENT DESIGN ENGINEER
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	



USE TYPICAL SECTION NO. 17 AS FOLLOWS
-19RPD- STA. 0+00.00 TO STA. 17+85.39

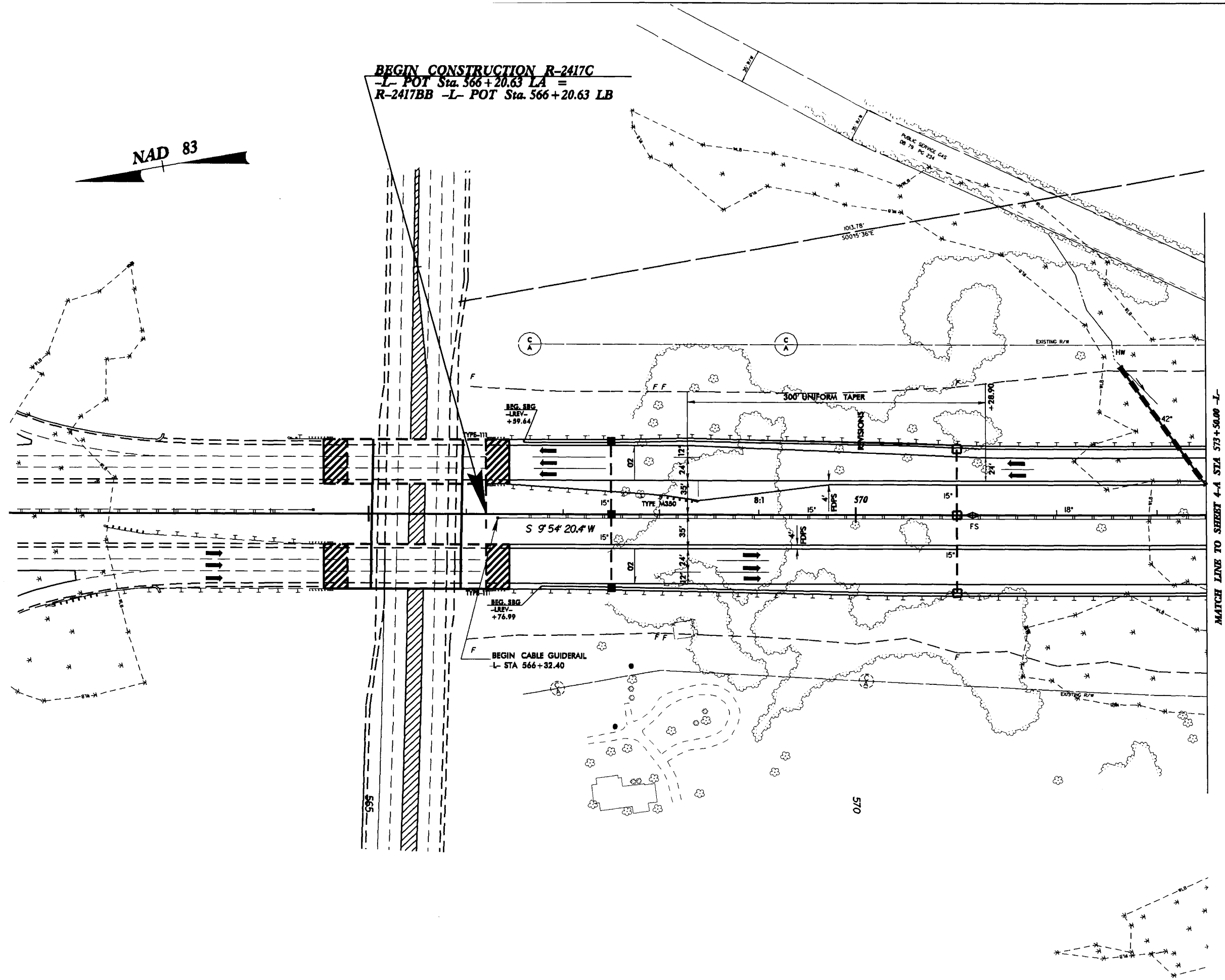


USE TYPICAL SECTION NO. 18 AS FOLLOWS
-FRONT- STA. 10+00.00 TO STA. 38+50.00



USE TYPICAL SECTION NO. 19 AS FOLLOWS
-DRI- STA. 10+20.00 TO STA. 11+36.39

PROJECT REFERENCE NO.	SHEET NO.
R-2417C	4
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	

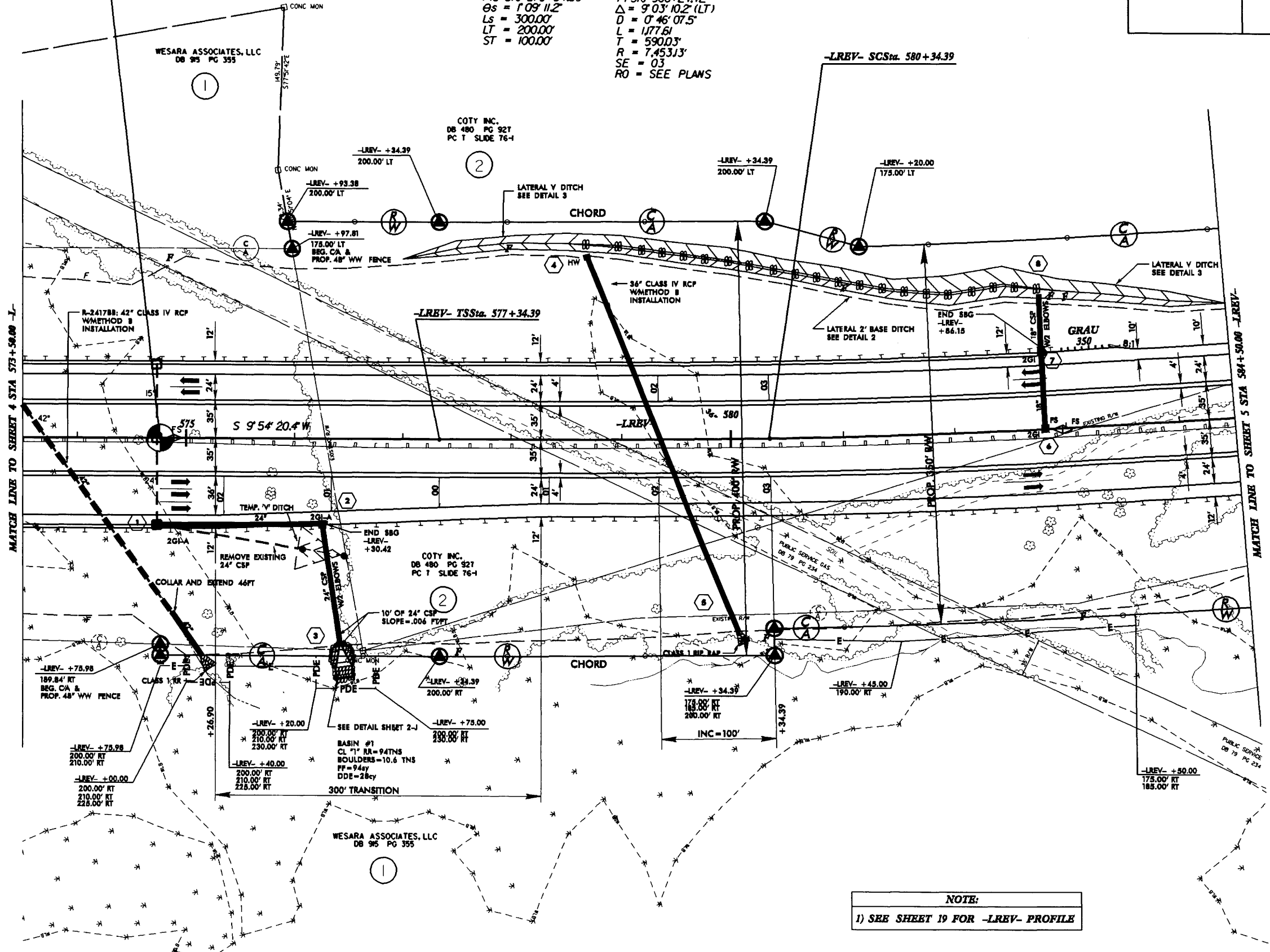


PROJECT REFERENCE NO.	SHEET NO.
R-2417C	4-A
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	

NAD 83

BEGIN PROJECT R-2417C
 -L- POT Sta. 574+75.98 LB =
 -LREV- POT Sta. 574+75.98 LA

-LREV-
 PIs Sta 579+34.39 PI Sta 586+24.42
 Os = 1'09" 11.2" Δ = 9'03" 10.2" (LT)
 Ls = 300.00' D = 0'46" 07.5"
 LT = 200.00' L = 177.61'
 ST = 100.00' T = 590.03'
 R = 7,453.13'
 SE = 03
 RO = SEE PLANS



NOTE:
 1) SEE SHEET 19 FOR -LREV- PROFILE

REVISIONS
 04/10/08 - TLW - RW REVISION: ADDED PERMANENT DRAINAGE EASEMENT AROUND PIPE EXTENSION AT -LREV- STA. 575+14 RT.; CORRECTED STATION INFORMATION ON PERMANENT DRAINAGE EASEMENT FROM -LREV- STA. 576+70 TO 576+75 RT.; REMOVED PERMANENT DRAINAGE EASEMENT FROM -LREV- STA. 580+20 TO 580+75 RT.; ADJUSTED TEMPORARY CONSTRUCTION EASEMENT AT -LREV- STA. 581+45 RT. ON PARCEL 1 AND UPDATED OFFSET INFORMATION ON RIGHT OF WAY MONUMENTS TO REFLECT FIELD SURVEYS ON PARCEL 2.

PROJECT REFERENCE NO.	SHEET NO.
R-2417C	5
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	

NAD 83

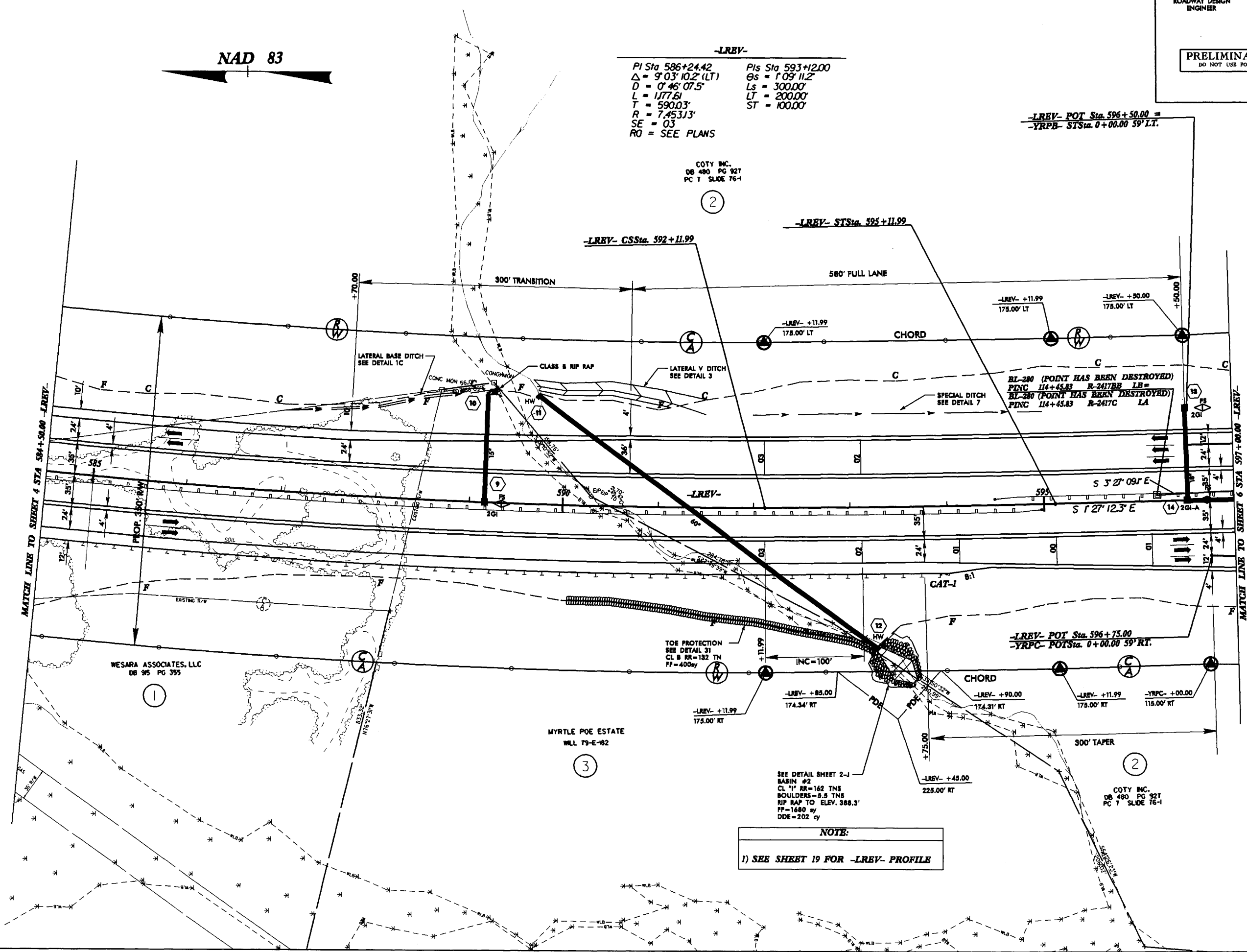
-LREV-
 PI Sta 586+24.42 Pls Sta 593+12.00
 $\Delta = 9^{\circ} 03' 10.2" (LT)$ $\Theta S = 1^{\circ} 09' 11.2"$
 $D = 0^{\circ} 46' 07.5"$ $Ls = 300.00'$
 $L = 1177.61'$ $LT = 200.00'$
 $T = 590.03'$ $ST = 100.00'$
 $R = 745313'$
 $SE = 03$
 $RO = \text{SEE PLANS}$

-LREV- POT Sta 596+50.00 =
 -YRPB- STSta 0+00.00 59' LT.

COTY INC.
 DB 480 PG 927
 PC 1 SLIDE 76-1

-LREV- CSSSta. 592+11.99

-LREV- STSta. 595+11.99



-LREV- POT Sta. 596+75.00
 -YRPC- POTSta. 0+00.00 59' RT.

TOE PROTECTION
 SEE DETAIL 31
 CL B RR=182 TN
 FF=400cy

SEE DETAIL SHEET 2-1
 BASIN #2
 CL 1" RR=162 TNS
 BOULDERS-5.5 TNS
 RIP RAP TO ELEV. 388.3'
 FF=1680 cy
 DDE=202 cy

NOTE:
 1) SEE SHEET 19 FOR -LREV- PROFILE

COTY INC.
 DB 480 PG 927
 PC 1 SLIDE 76-1

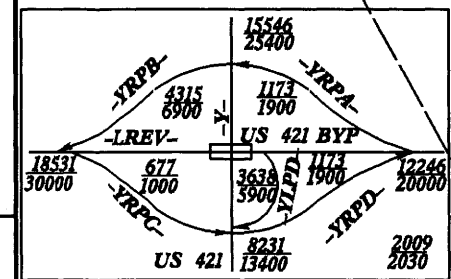
WESARA ASSOCIATES, LLC
 DB 915 PG 355

MYRTLE POE ESTATE
 MLL 79-E-182

REVISIONS

27-MAR-2008 10:40
 F:\cadd\proj\2417c\rdy_pah05.dgn
 8/17/99

REVISIONS

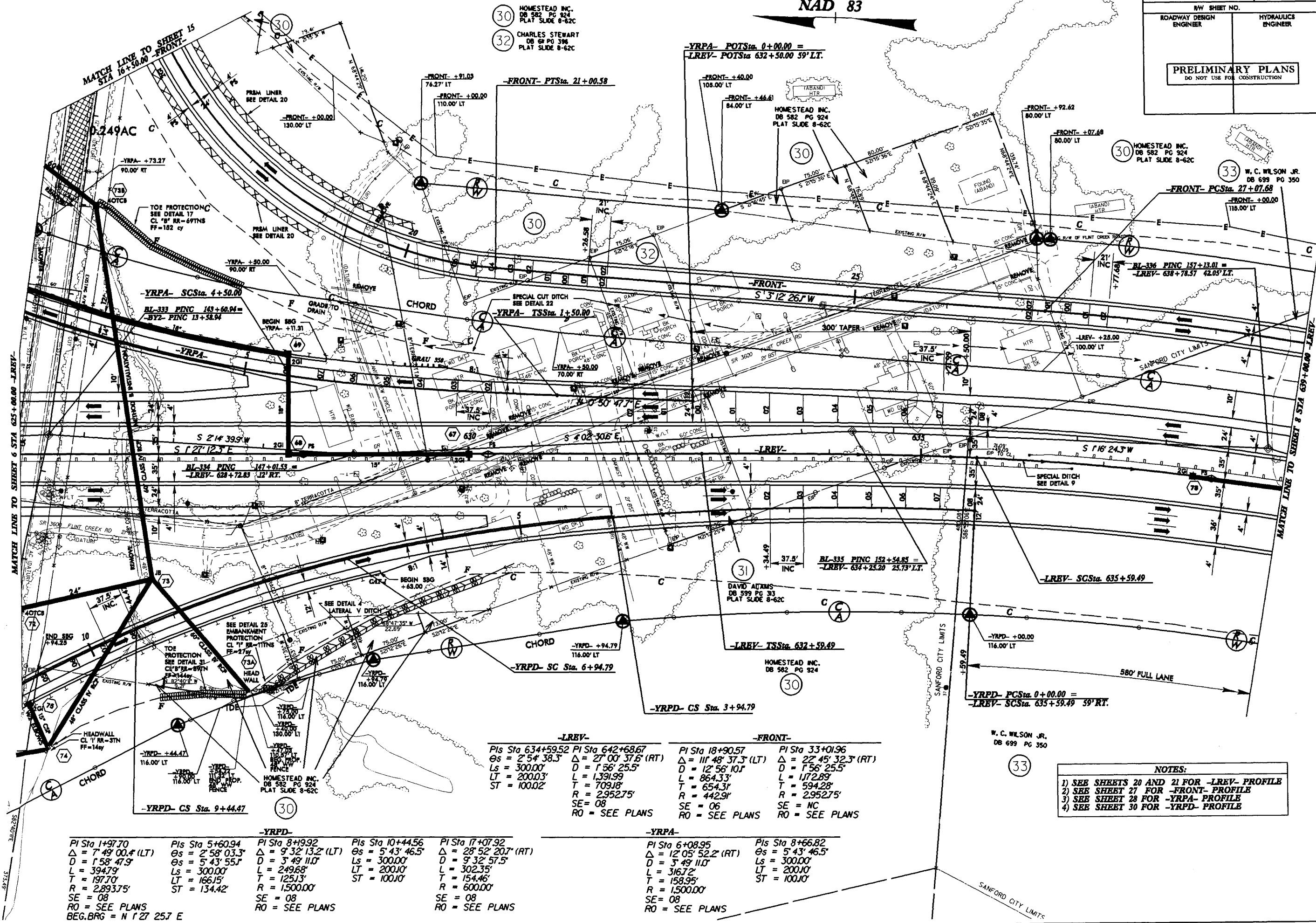


REVISIONS

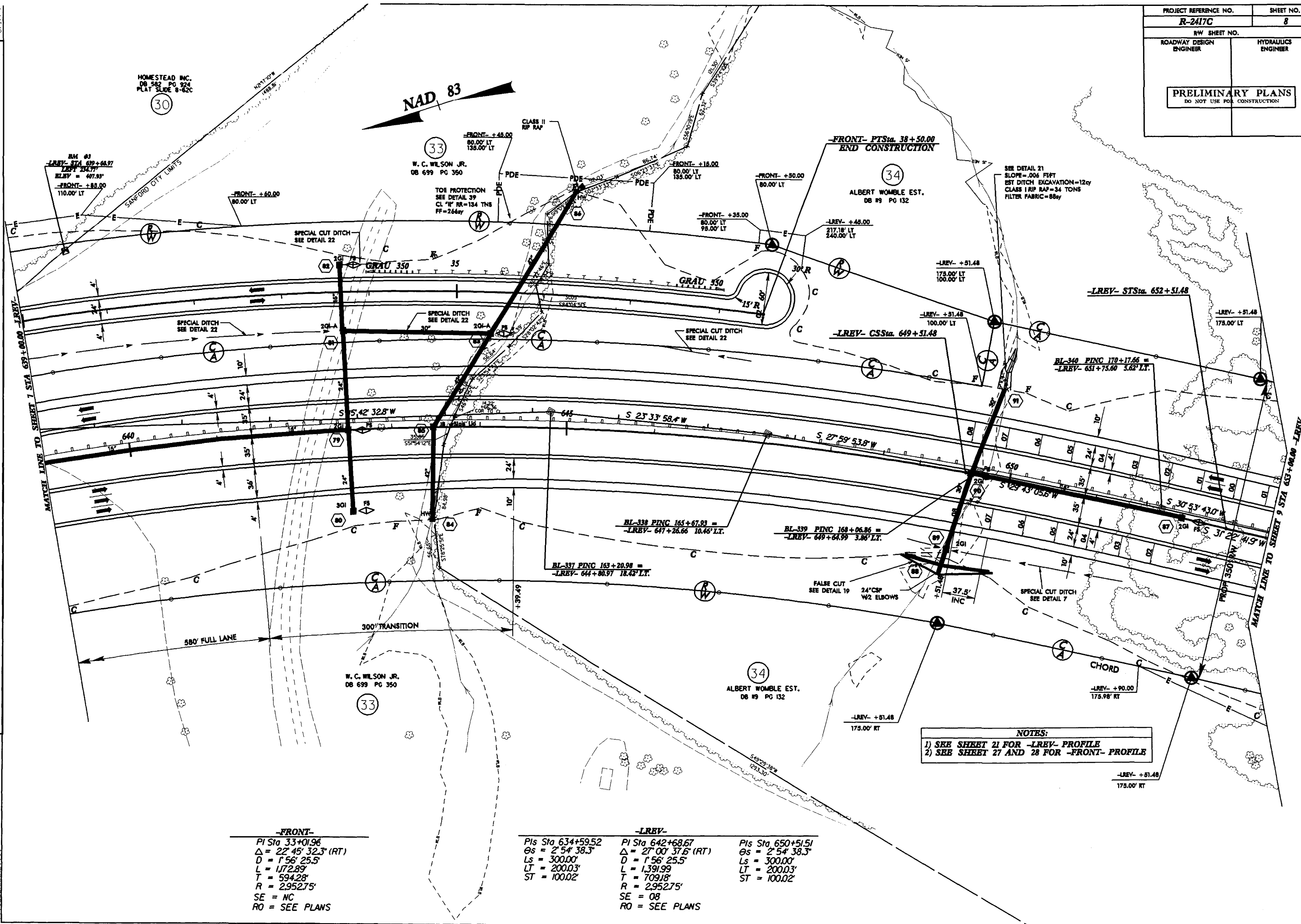
040108 - TLW - RAW REVISION: CORRECTED STATION INFORMATION ON TEMPORARY CONSTRUCTION EASEMENT FROM FRONT- STA. 20+20 TO 20+00 I.T. ON PARCEL 30 AND UPDATED STATION INFORMATION ON RIGHT OF WAY MONUMENTS TO REFLECT FIELD SURVEYS ON PARCELS 27 AND 30.

REVISIONS

8/17/96

27-MAR-2008 10:41
r:\roadway\proj\2417c-rdy-psh\07.dgn

PROJECT REFERENCE NO.	SHEET NO.
R-2417C	8
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	



REVISIONS
04/01/08 - TLW - RW/REVISION: UPDATED OFFSET INFORMATION ON TEMPORARY CONSTRUCTION EASEMENT TO REFLECT FIELD SURVEYS ON PARCELS 27 AND 30.

NOTES:
1) SEE SHEET 21 FOR -LREV- PROFILE
2) SEE SHEET 27 AND 28 FOR -FRONT- PROFILE

-FRONT-
PI Sta 33+01.96
 $\Delta = 22^\circ 45' 32.3" (RT)$
 $D = 1' 56" 25.5"$
 $L = 172.89'$
 $T = 594.28'$
 $R = 2,952.75'$
SE = NC
RO = SEE PLANS

-LREV-
PI Sta 634+59.52
 $\Delta = 27^\circ 00' 37.6" (RT)$
 $D = 1' 56" 25.5"$
 $L = 1,391.99'$
 $T = 709.18'$
 $R = 2,952.75'$
SE = 08
RO = SEE PLANS

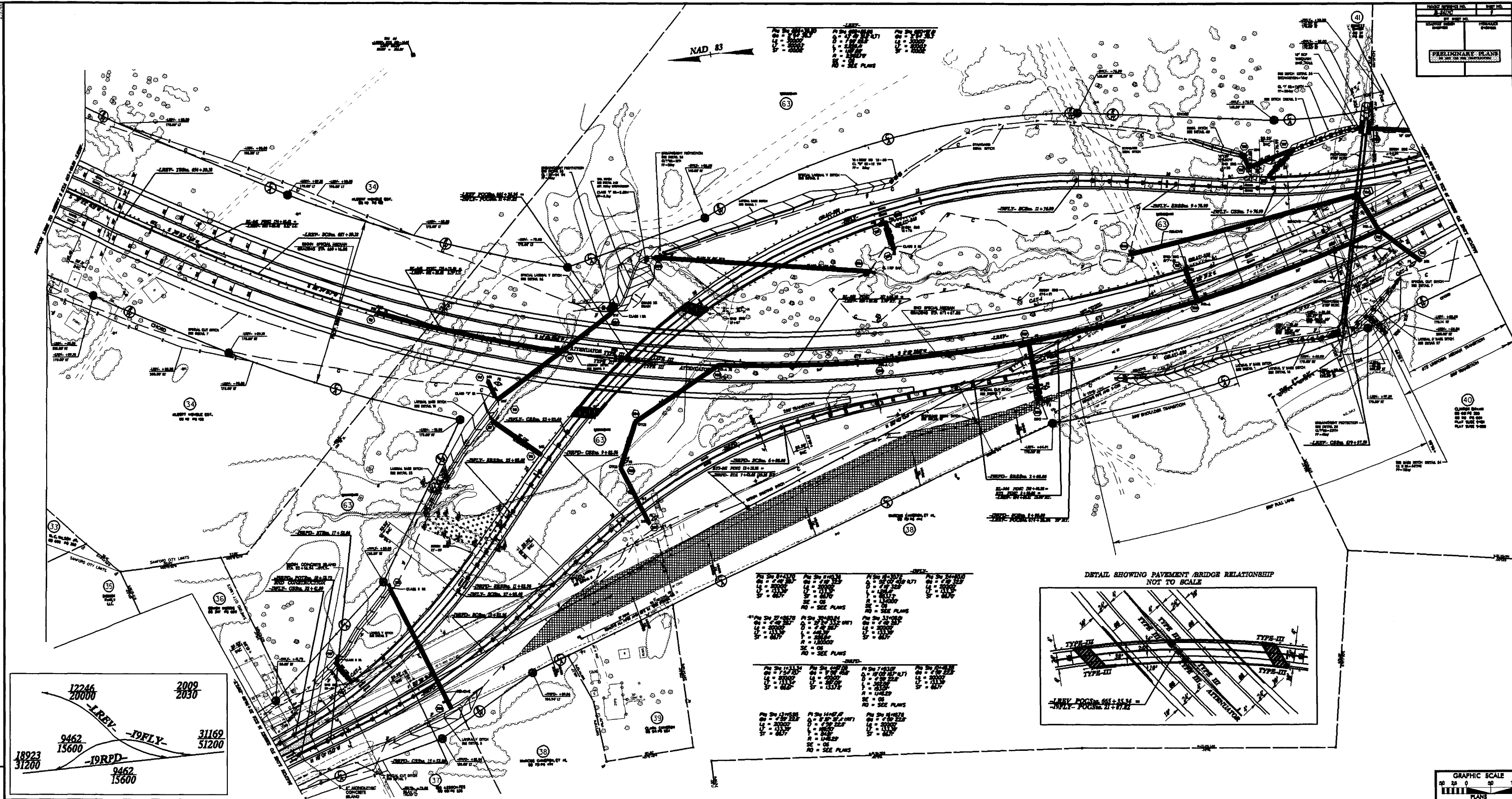
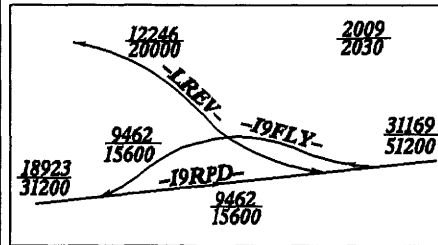
PIs Sta 642+68.67
 $\Delta = 27^\circ 00' 37.6" (RT)$
 $D = 1' 56" 25.5"$
 $L = 1,391.99'$
 $T = 709.18'$
 $R = 2,952.75'$
SE = 08
RO = SEE PLANS

PIs Sta 650+51.51
 $\Delta = 27^\circ 00' 37.6" (RT)$
 $D = 1' 56" 25.5"$
 $L = 1,391.99'$
 $T = 709.18'$
 $R = 2,952.75'$
SE = 08
RO = SEE PLANS

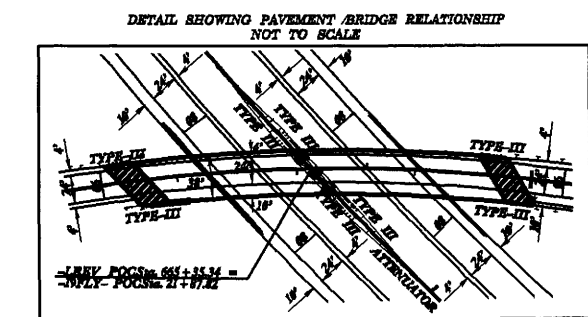
27-MAR-2008 10:41
C:\p04\proj\2417\c-rdy-psh\08.dgn
USER:RDM

REVISIONS

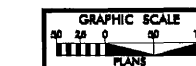
04/08 - TLM - REVISION: CORRECTED STATION INFORMATION ON PERMANENT DRAINAGE EASEMENT FROM -19FLY- STA 4+80 TO 5+20 FT ON PARCEL 41 CORRECTED STATION AND OFFSET INFORMATION ON RW MONUMENT FROM -19FLY- STA 28+90 TO 29+80 FT ON PARCEL 43 AND ON TEMPORARY CONSTRUCTION EASEMENT FROM -19FLY- STA 480+00 TO 480+40 WITH TEMPORARY DRAINAGE EASEMENT FROM -19FLY- STA 16+75 TO 16+75 FT ON PARCEL 37 REPLACED PERMANENT DRAINAGE EASEMENT FROM -19FLY- STA 679+20 TO 680+85 FT AFFECTING PARCELS 38 AND 40 AND UPDATED OFFSET INFORMATION ON A RIGHT OF WAY MONUMENT TO REFLECT FIELD SURVEYS ON PARCEL 38.



PT 34 8+11.5 VC= 100 L= 100 E= 0.0000 SE= 0.00 RD= SEE PLANS	PT 34 8+11.5 VC= 100 L= 100 E= 0.0000 SE= 0.00 RD= SEE PLANS	PT 34 8+11.5 VC= 100 L= 100 E= 0.0000 SE= 0.00 RD= SEE PLANS	PT 34 8+11.5 VC= 100 L= 100 E= 0.0000 SE= 0.00 RD= SEE PLANS
---	---	---	---

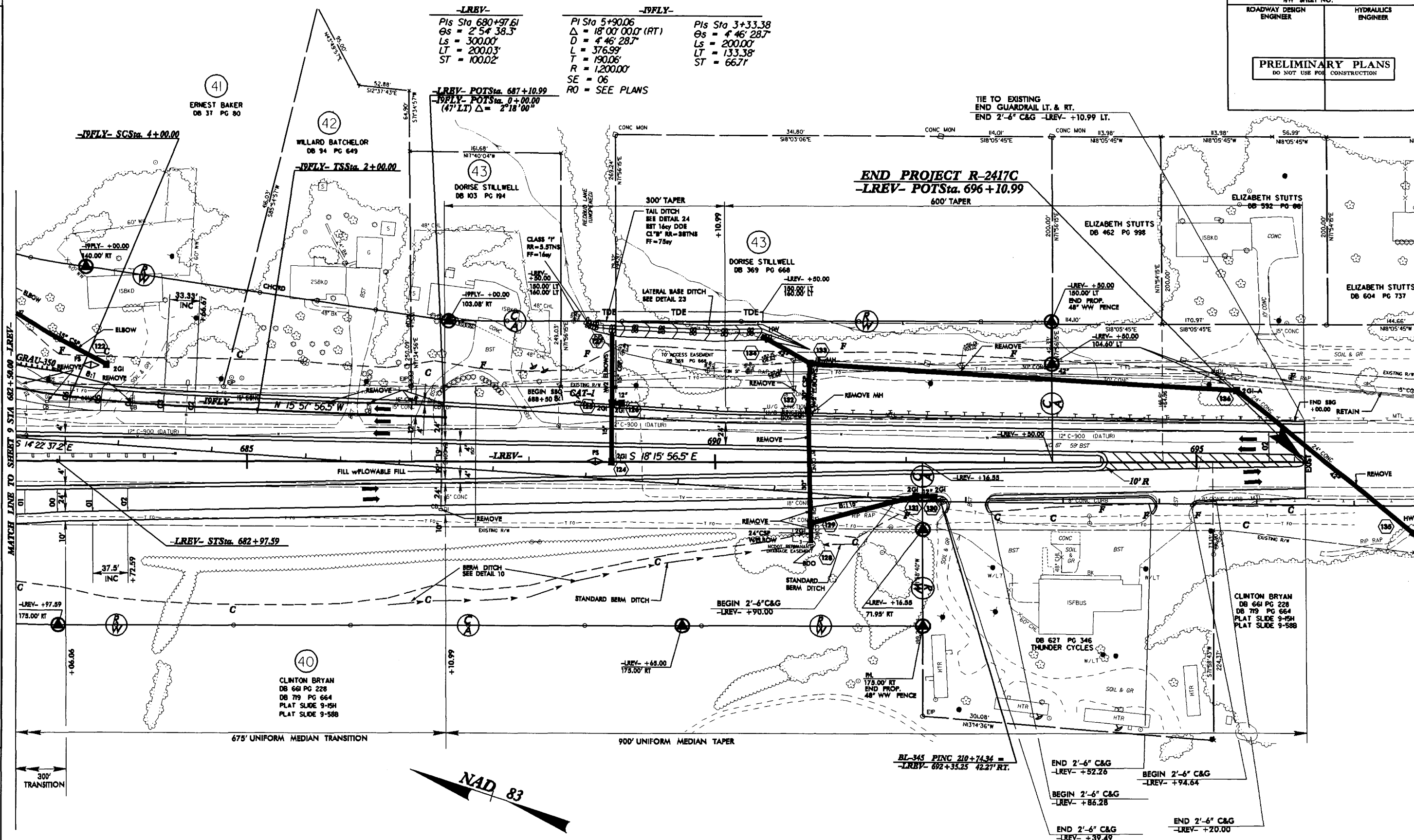


PROJECT NO.	2009
DATE	2009
DESIGNED BY	2009
CHECKED BY	2009
APPROVED BY	2009



04/01/08 - TLW - RAW/REVISION: CORRECTED ALIGNMENT REFERENCE FROM -RPLY- TO -LREY- ON TEMPORARY DRAINAGE EASEMENT AT -LREY- STA. 688+50 LT. ON PARCEL 43 AND UPDATED OFFSET INFORMATION ON TEMPORARY DRAINAGE EASEMENT ON PARCEL 43 AND RIGHT OF WAY MONUMENTS ON PARCEL 40 AND 43 TO REFLECT FIELD SURVEYS.

REVISIONS

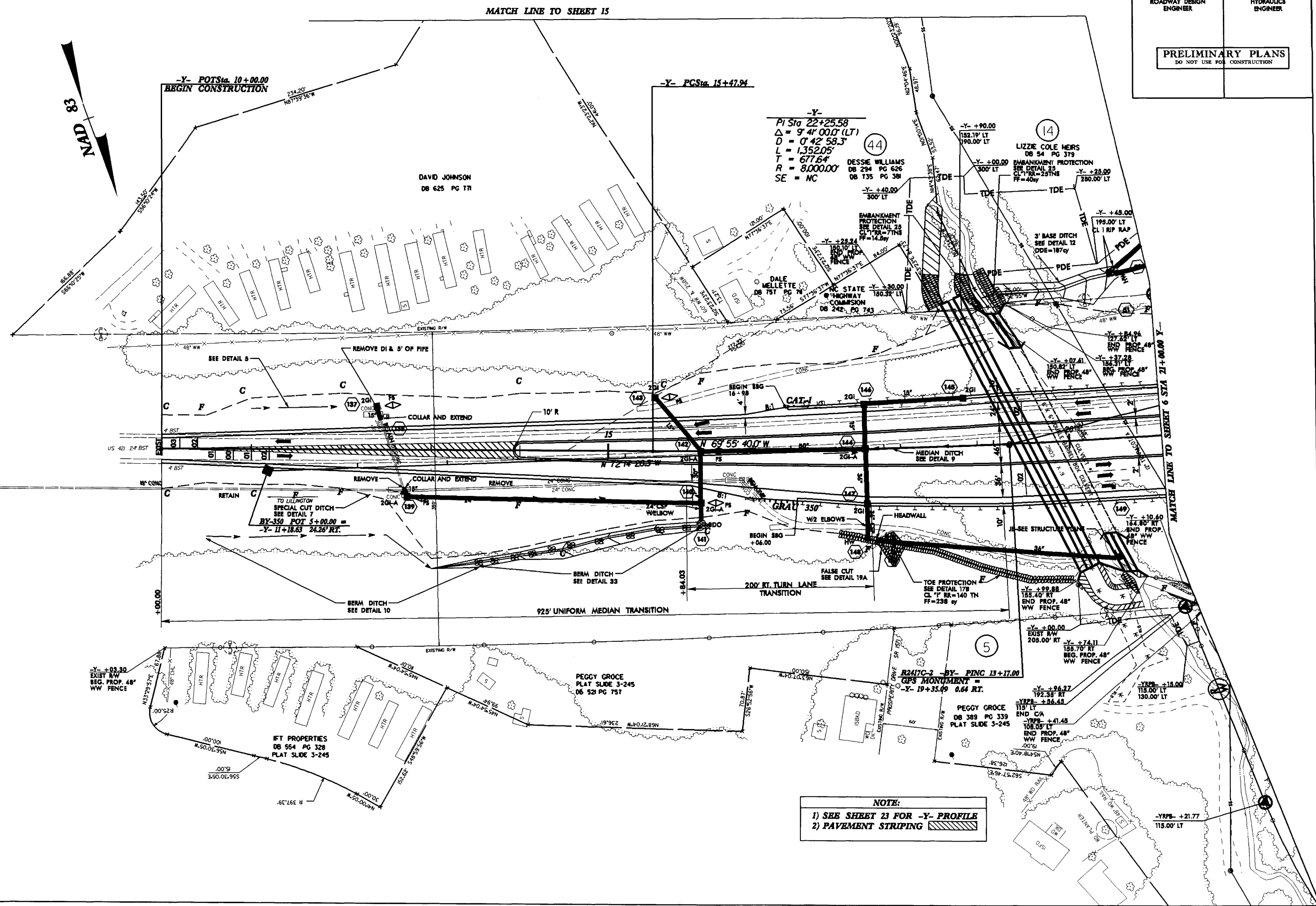
27-MAR-2008 10:41
\\roadway\proj\r2417c-rdy-psh10.dgn
\$\$\$\$\$USER\$NAME\$\$\$

NOTES:

1) SEE SHEET 22 AND 23 FOR -LREV- PROFILE
2) SEE SHEET 31 FOR -J9FLY- PROFILE
3) PAINT STRIPING 

PROJECT REFERENCE NO.	SHEET NO.
R-2417C	II
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	

REVISIONS
04/01/08 - TLW - RW REVISION: ADJUSTED TEMPORARY DRAINAGE EASEMENT ON PARCELS 5 AND 41 AND UPDATED OFFSET INFORMATION ON A RIGHT OF WAY MONUMENT AND TEMPORARY DRAINAGE EASEMENT ON PARCEL 5 AND PERMANENT DRAINAGE EASEMENT ON PARCEL 44 TO REFLECT FIELD SURVEYS.



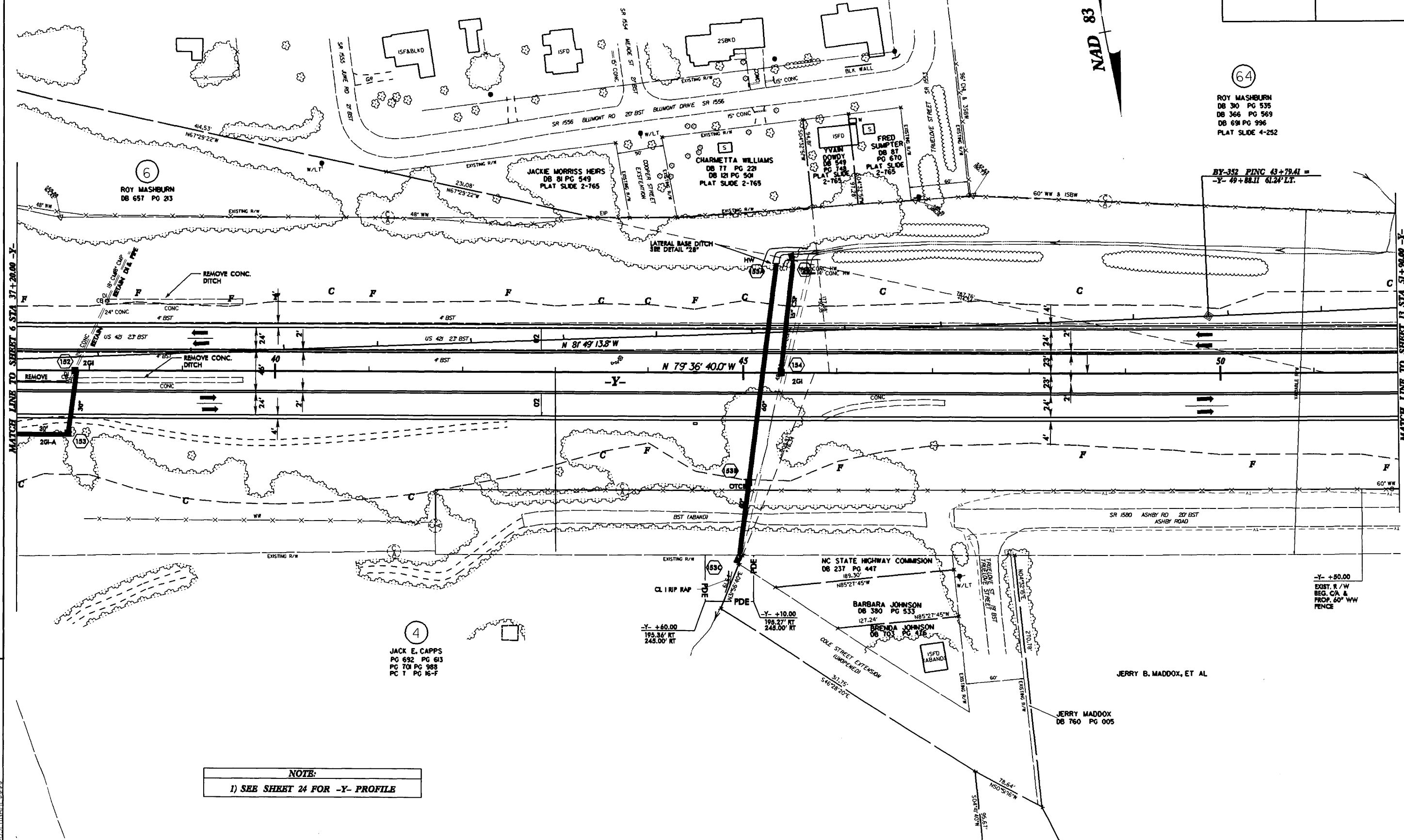
NOTE:
1) SEE SHEET 23 FOR -Y- PROFILE
2) PAVEMENT STRIPING

27-MAR-2008 10:41
F:\roadway\proj\2417c-rd-ps-hill.dgn
\$\$\$\$\$USERNAME\$\$\$\$\$

REVISIONS
04/01/08 - TLW - RW REVISION: UPDATED OFFSET INFORMATION ON THE PERMANENT DRAINAGE EASEMENT ON PARCEL 4 TO REFLECT FIELD SURVEYS.

27-MAR-2008 10:42
J:\PROJECTS\2417C\2417C-RD\psh12.dgn
JERRY MADDOX

PROJECT REFERENCE NO.	SHEET NO.
R-2417C	12
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	



NOTE:
1) SEE SHEET 24 FOR -Y- PROFILE

REVISIONS

040708 - TLW - RW REVISION: CONNECTED THE OFFSET INFORMATION ON TEMPORARY CONSTRUCTION EASEMENT AT -Y- STA. 25+75 FROM LT. TO RT. ON PARCEL 45 AND UPDATED STATION OR OFFSET INFORMATION ON TEMPORARY CONSTRUCTION EASEMENT AND A RIGHT OF WAY MONUMENT ON PARCEL 45 AND TEMPORARY CONSTRUCTION EASEMENT ON PARCEL 46 TO REFLECT FIELD SURVEYS.

REVISIONS

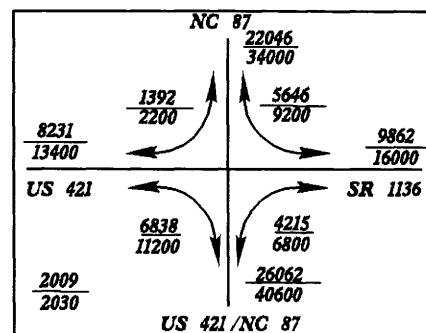
27-MAR-2008 10:42
r:\roadway\proj\2417c_rdy-ps\13.dgn
\$\$\$\$ISERNAMF\$\$\$\$

-Y-

PI Sta 61+86.95
 $\Delta = 52^\circ 23' 31''$ (LT)
 $D = 19^\circ 05' 54.9''$
 $L = 274.32'$
 $T = 147.59'$
 $R = 300.00'$
SE = NC

64
ROY MASBURN
DB 30 PG 535
DB 366 PG 569
DB 691 PG 996
PLAT SLIDE 4-252

JERRY B. MADDOX, ET AL
DB 524 PG 581



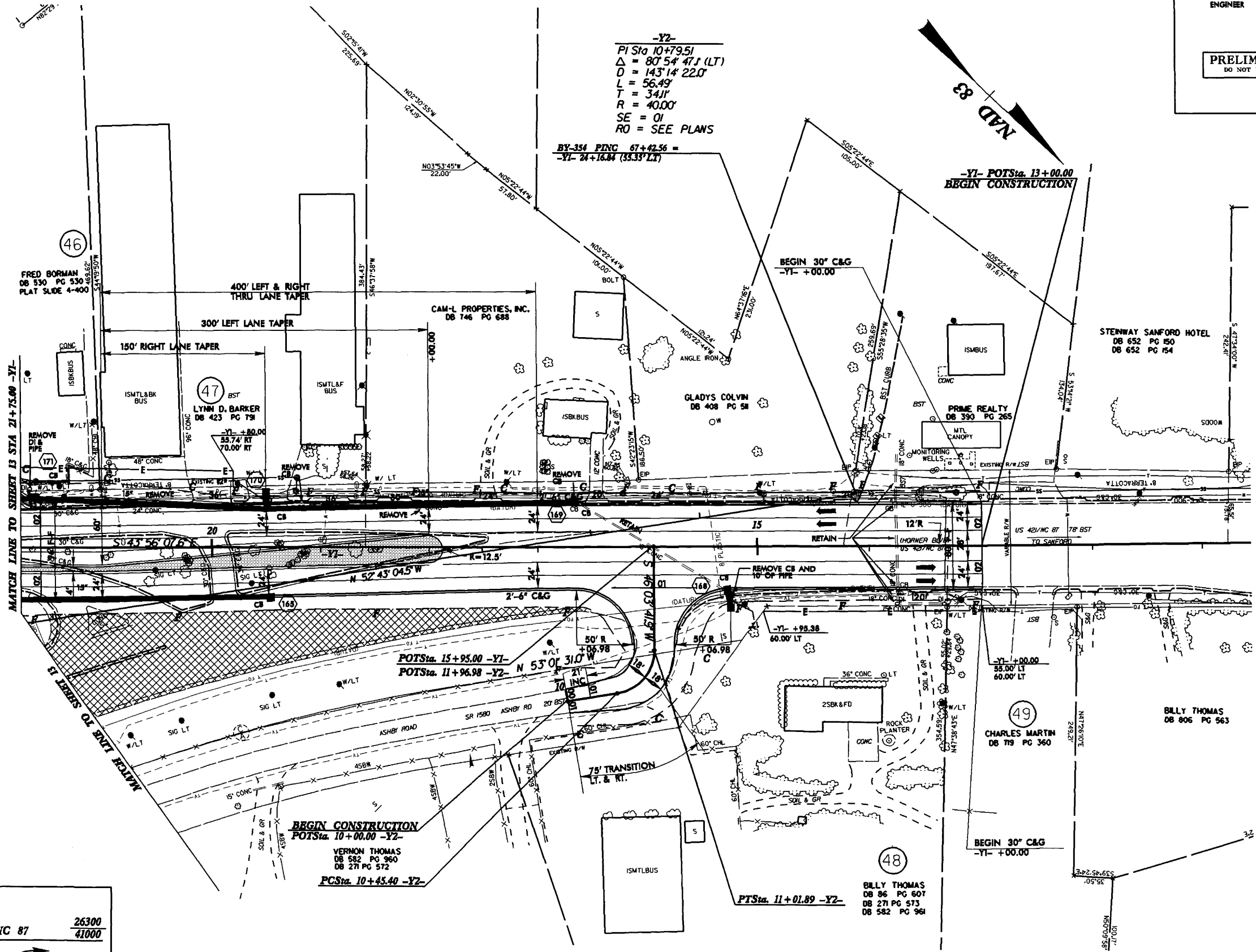
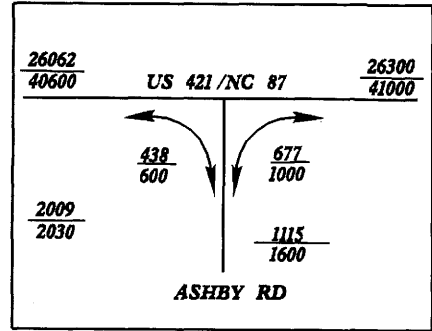
NOTES:

- 1) SEE SHEET 25 AND 26 FOR -Y- PROFILE
2) SEE SHEET 26 AND 27 FOR -YI- PROFILE
3) SEE SHEET 27 FOR -Y3- PROFILE
4) DRIVEWAY RADII ARE 20' UNLESS OTHERWISE NOTED

★ PROPOSED SIGNAL

REVISIONS
04/01/08 - TLW - BAY REVISIONS: CORRECTED THE OFFSET INFORMATION ON TEMPORARY CONSTRUCTION EASEMENT AT -Y1- STA 19+80.00 FROM LT. TO RT. ON PARCEL 47 AND UPDATED STATION OR OFFSET INFORMATION ON TEMPORARY CONSTRUCTION EASEMENTS ON PARCELS 47, 48 AND 49.

8/17/09



- NOTES:
- 1) SEE SHEET 25 FOR -Y1- PROFILE
 - 2) SEE SHEET 33 FOR -Y2- PROFILE
 - 3) DRIVEWAY RADII ARE 20' UNLESS NOTED OTHERWISE

NAD 83

NOTE:

1) SEE SHEET 27 FOR -FRONT- PROFILE

-FRONT-	
PI Sta 18+90.57	PI Sta 33+01.96
$\Delta = 111^{\circ} 48' 37.3" \text{ (LT)}$	$\Delta = 22^{\circ} 45' 32.3" \text{ (RT)}$
D = 12' 56" 10.5	D = 1' 56" 25.5
L = 864.33'	L = 117.289'
T = 654.31'	T = 594.28'
R = 442.91'	R = 2.95275'
SE = 06	SE = NC
RO = SEE PLANS	RO = SEE PLANS

-DRI-

PI Sta 10+85.13
 $\Delta = 105^\circ 25' 49.4''$ (LT)
 $D = 114^\circ 35' 29.6''$
 $L = 92.0'$
 $T = 65.67'$
 $R = 50.00'$

PI Sta 10+85.13
 $\Delta = 105^\circ 25' 49.4''$ (LT)
 $D = 114^\circ 35' 29.6''$
 $L = 92.0'$
 $T = 65.67'$
 $R = 50.00'$

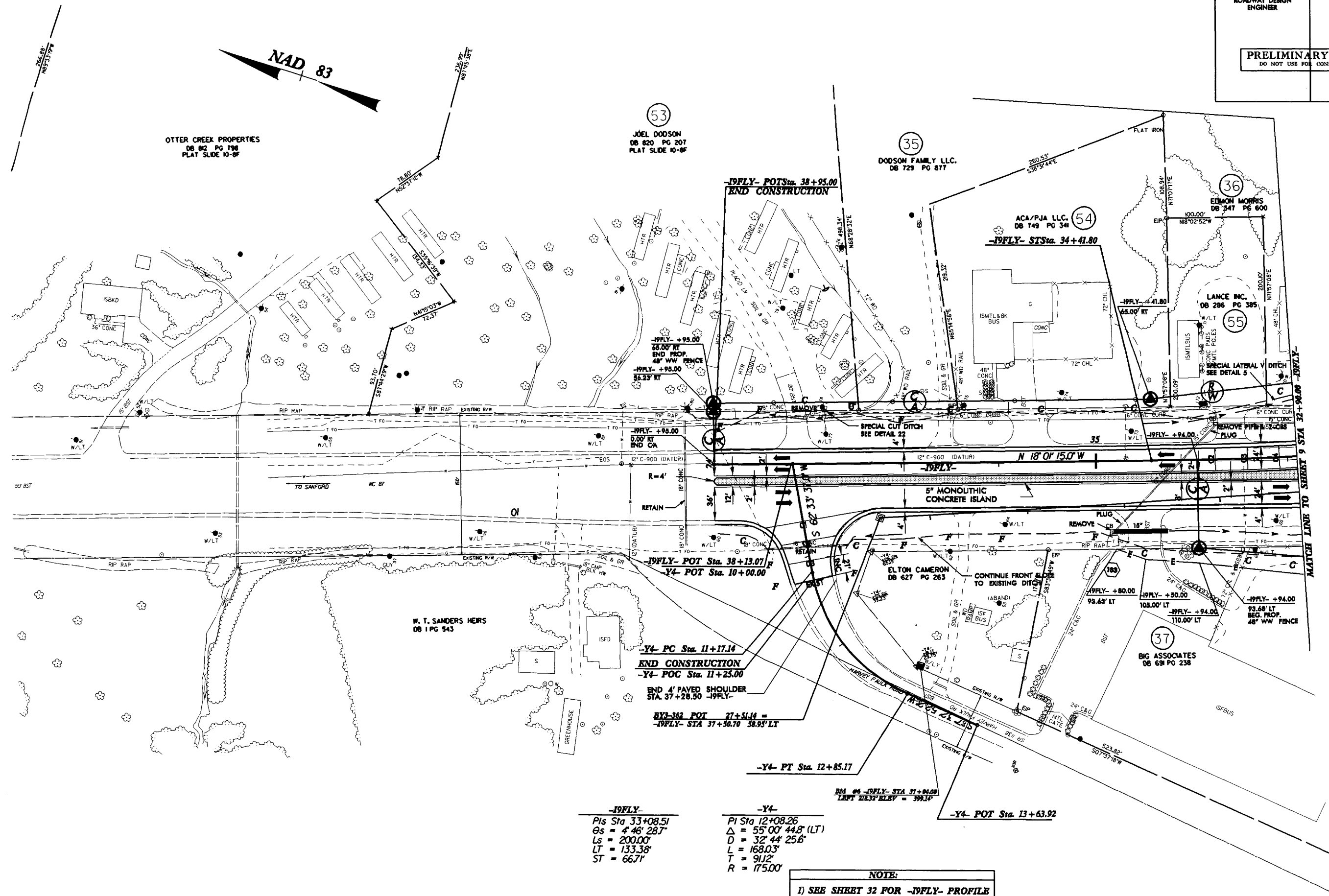
04/01/06 - TLW - RW MONUMENT AT -FRONT- STA 12+34.26 LT ON PARCEL 51 AND ADDED TEMPORARY CONSTRUCTION EASEMENT TO PARCELS 30 AND 51 AND UPDATED STATION OR OFFSET INFORMATION ON EASEMENTS AND RIGHT OF WAY MONUMENTS ON PARCELS 29, 30, 44, 51 AND 52 TO REFLECT FIELD SURVEYS.

REVISIONS

8/17/9c

27-MAR-2008 10:42
C:\roadway\proj\r2417c_rdy-psh15.dgn
\$\$\$\$ISERNAMF\$\$\$\$

REVISIONS	
DATE	REVISION
04/01/08	- TLW - R/W - REVISION: ADJUSTED THE R/W MONUMENTS AT -PRLY- STA. 34+41.80 AND 38+95.00 FROM 70' TO 65' RT. AFFECTING PARCELS 35, 36, 53, 54, AND 55 AND UPDATED STATION AND OFFSET INFORMATION ON TEMPORARY CONSTRUCTION EASEMENTS ON PARCELS 37 AND 53 TO REFLECT FIELD SURVEYS.

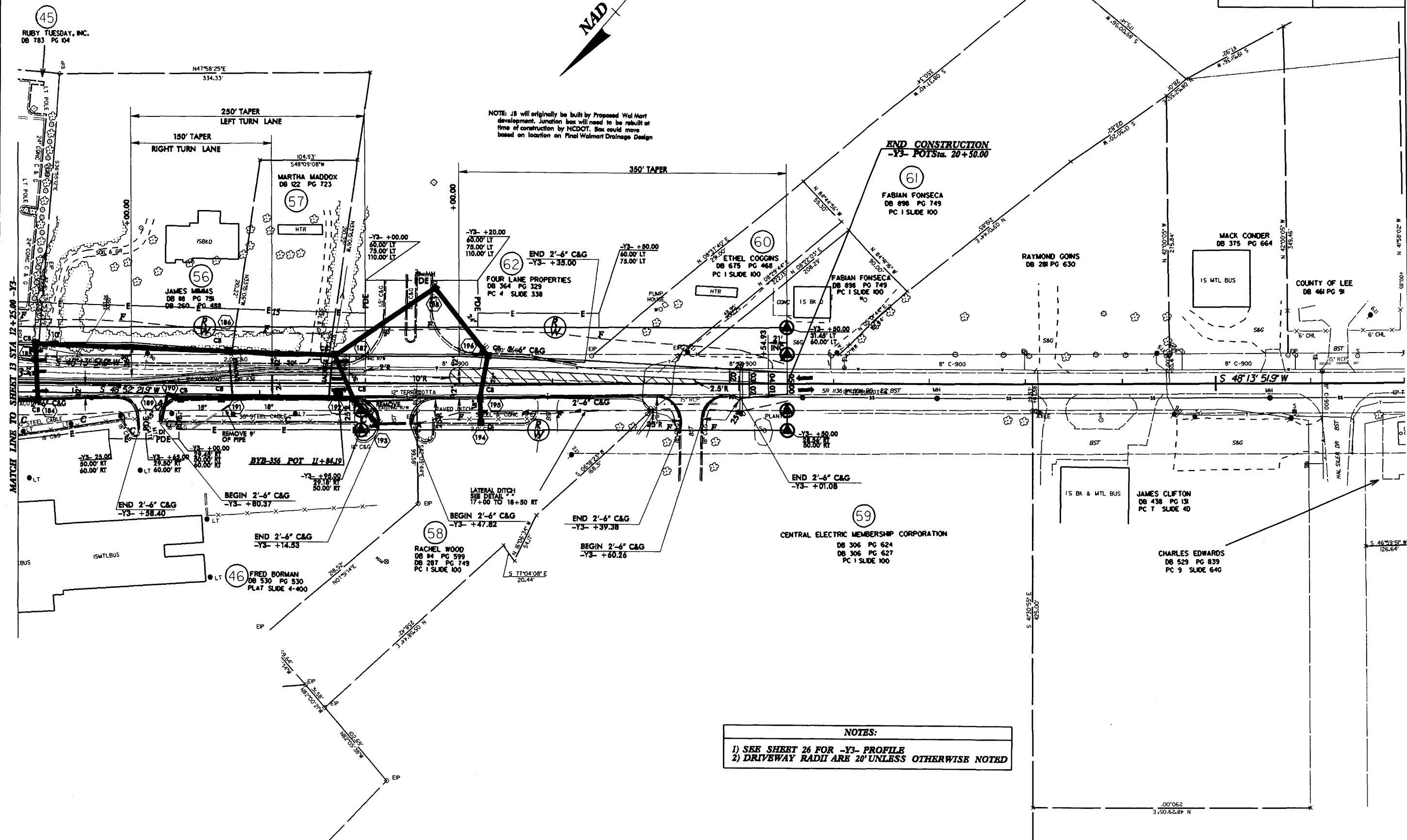


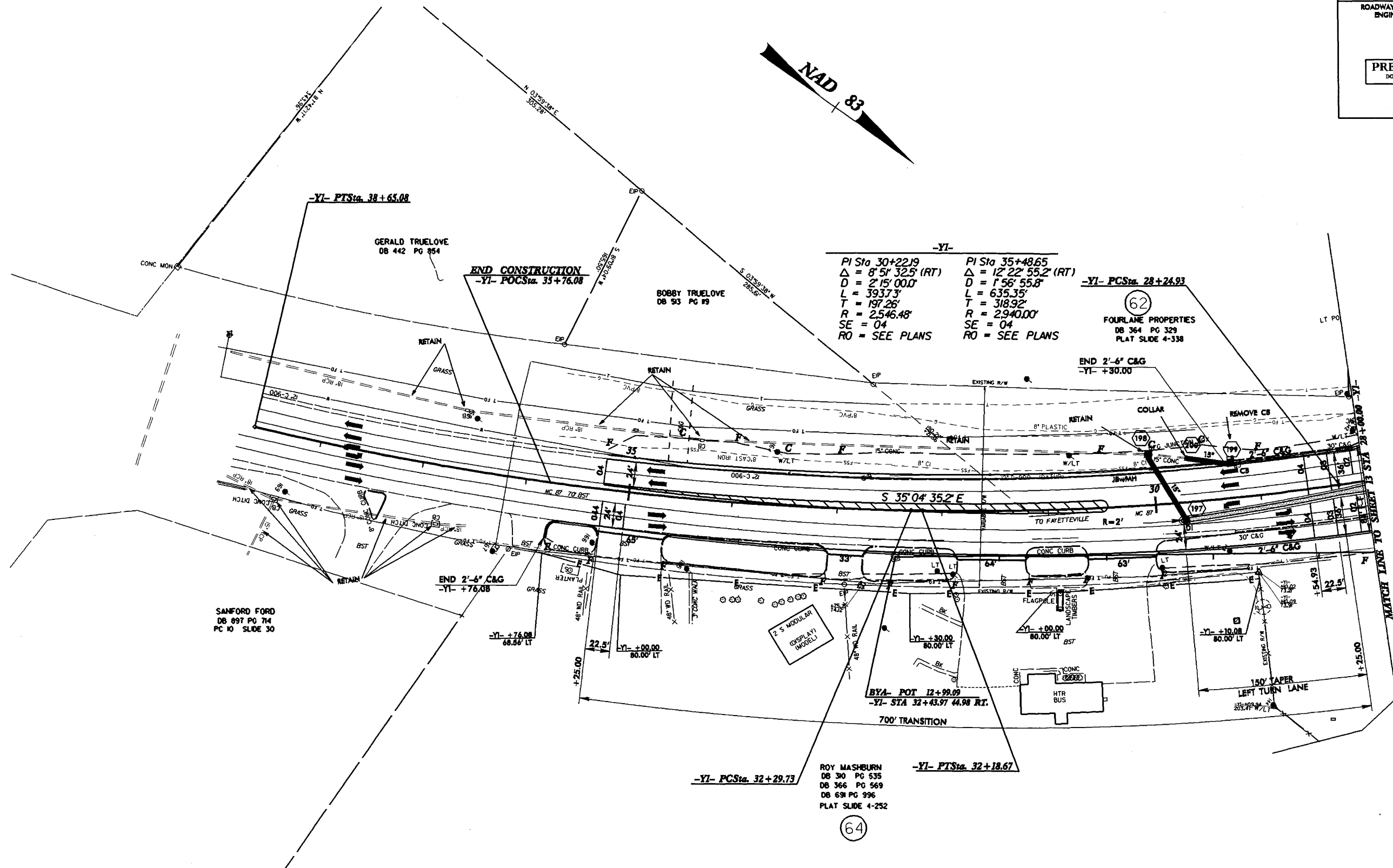
NOTE:

1) SEE SHEET 32 FOR -J9FLY- PROFILE

REVISIONS		REVISIONS
040108	- TLW - RW	ALIGNMENT NAME TO REFLECT -Y1- ON PARCELS 46, 58, 59, AND 61 AND UPDATED STATION OR OFFSET INFORMATION ON TEMPORARY CONSTRUCTION EASEMENTS ON PARCELS 46, 59 AND 61 TO REFLECT FIELD SURVEYS.

27-MAR-2008 10:42
r:\roadway\projr\2417c_rdy_psh17.dgn
\$\$\$\$\$USERNAME\$\$\$\$\$



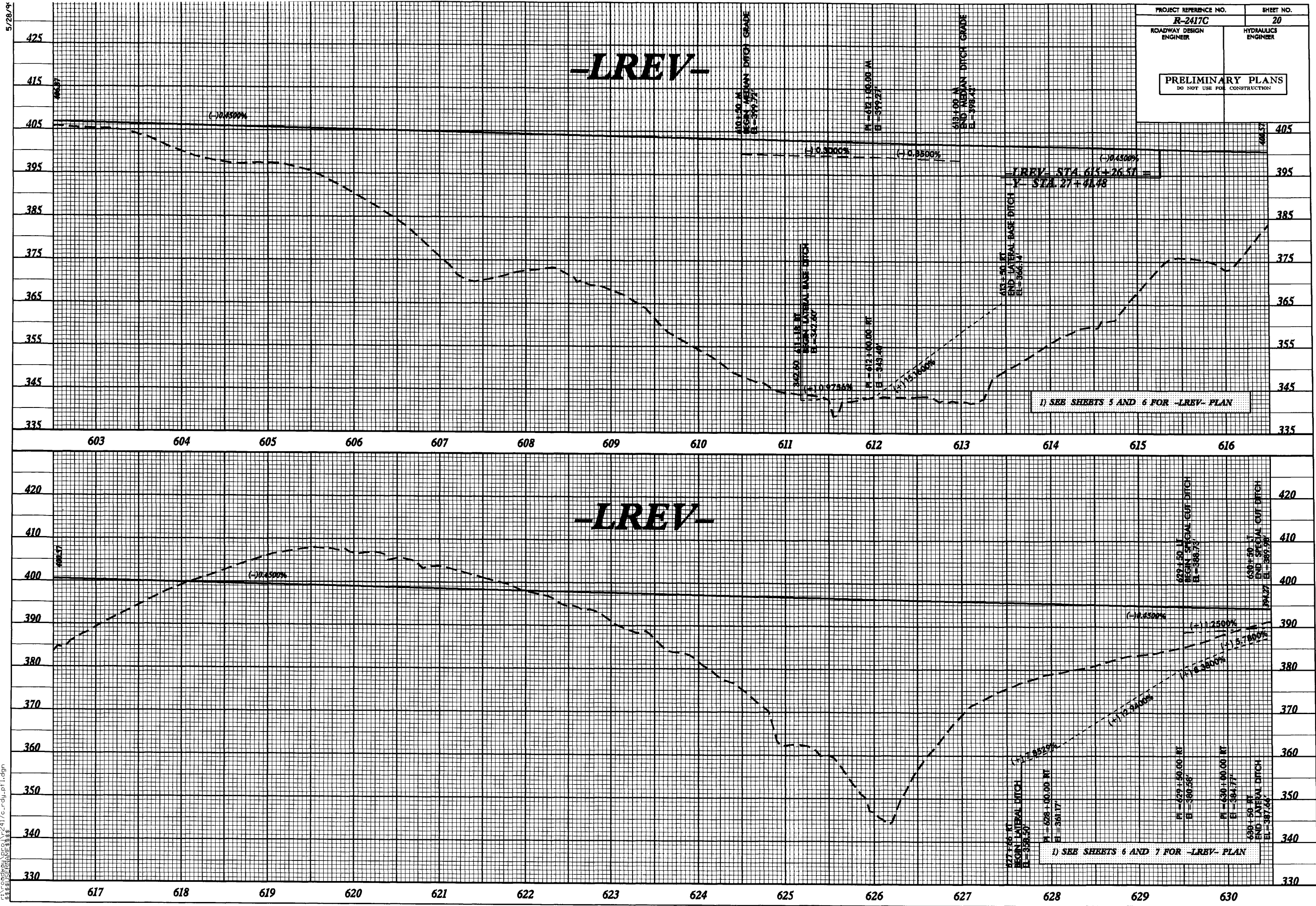


NOTES:

1) SEE SHEET 26 FOR -Y1- PROFILE

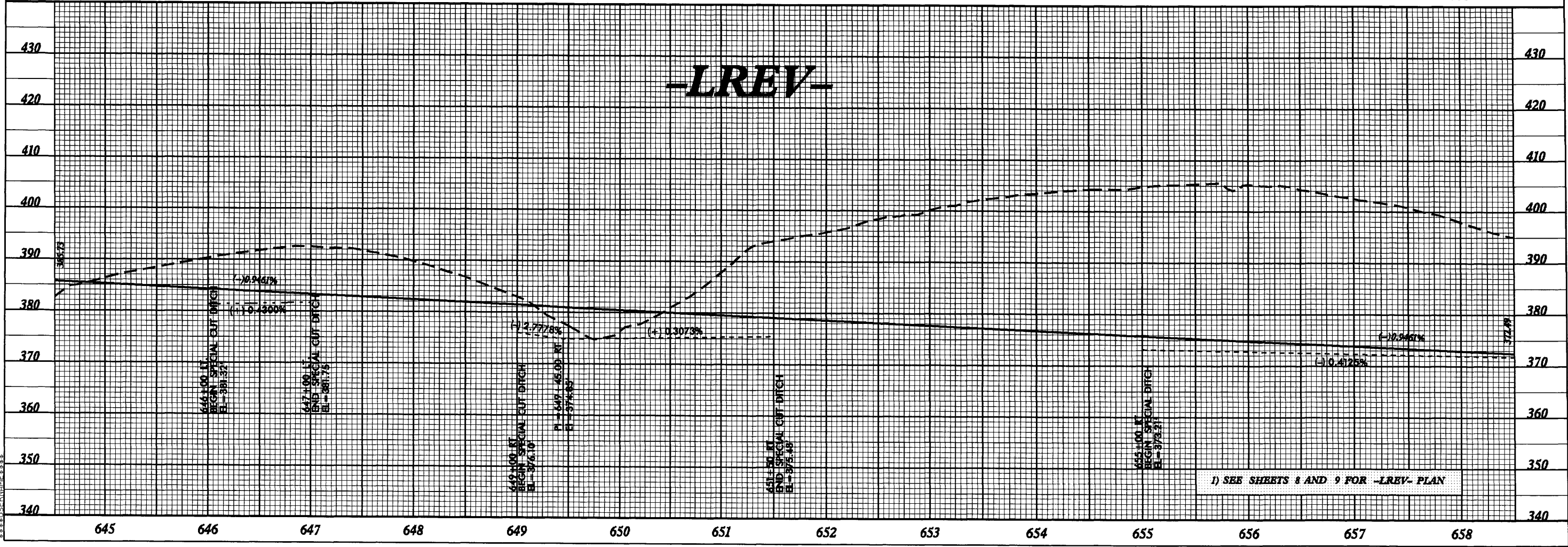
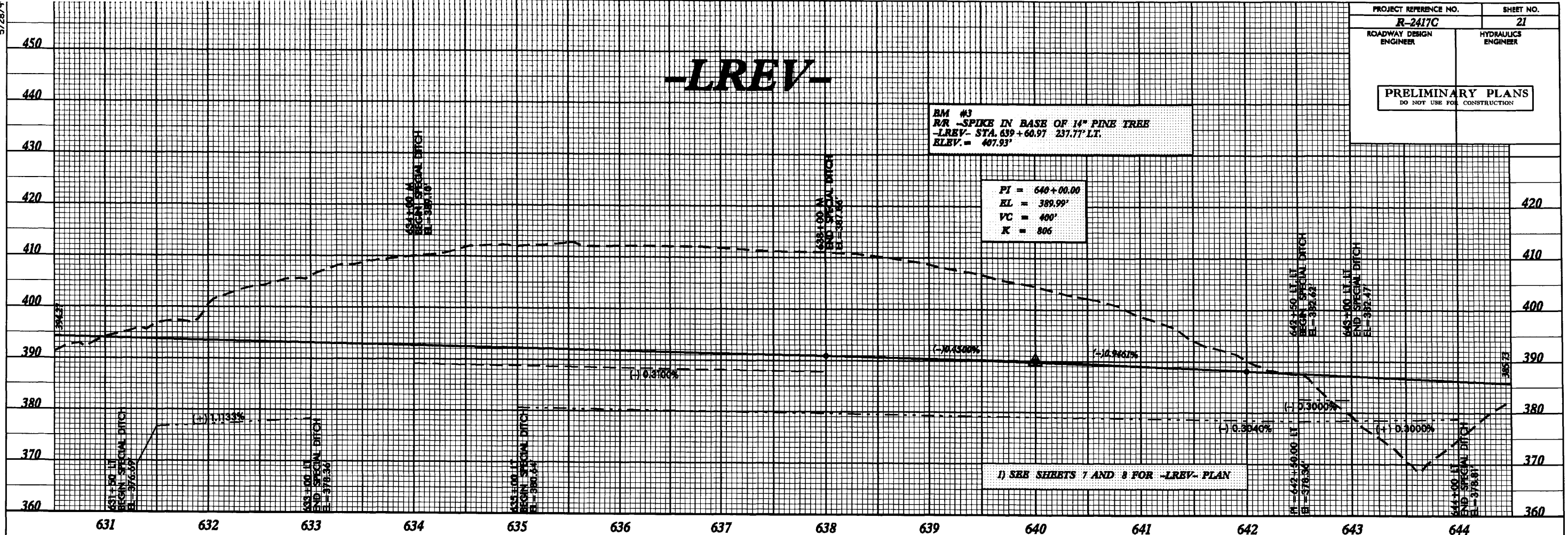
5/28/95

21-MAR-2008 10:43 2417c-rdu.plt.dgn
\$\$\$\$\$CERAMIC\$\$\$\$\$

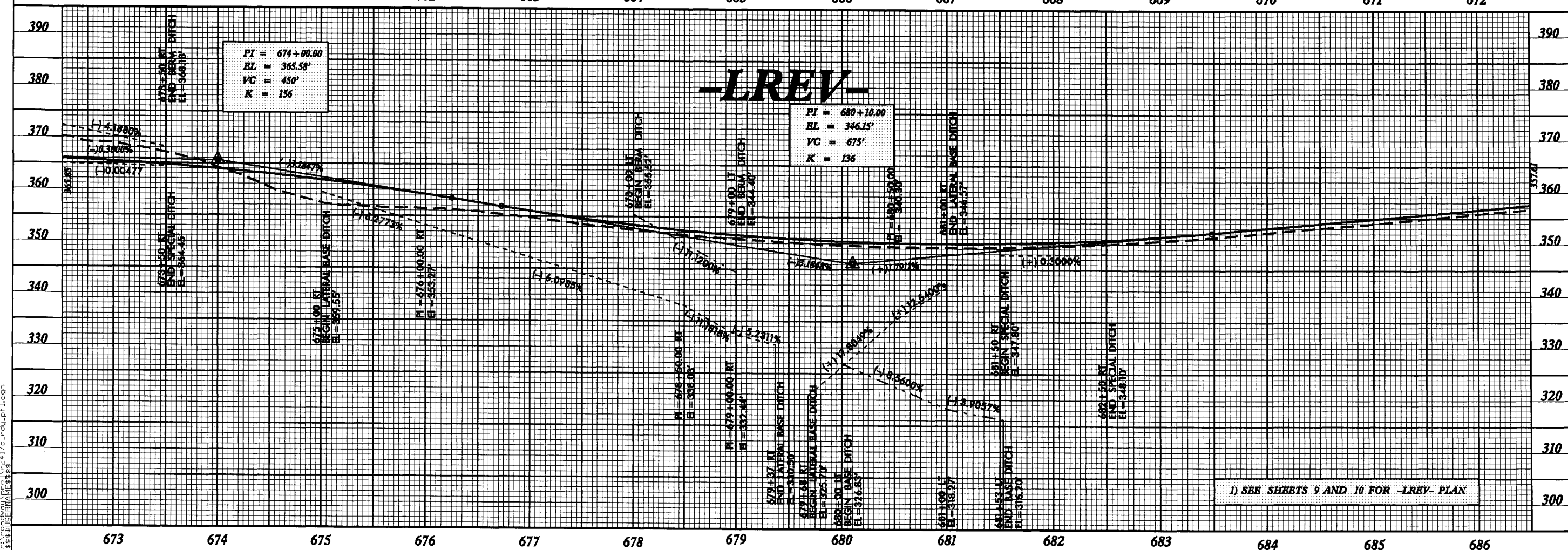
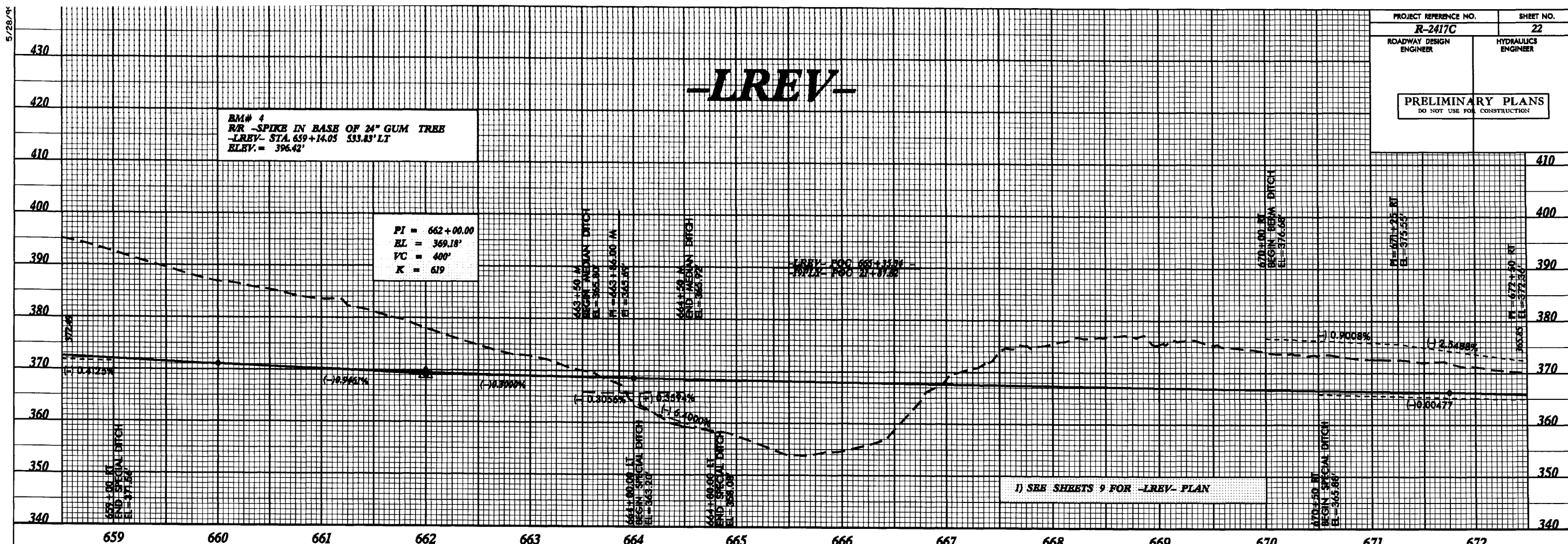


5/28/99

PROJECT REFERENCE NO. R-2417C		SHEET NO. 21
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION		

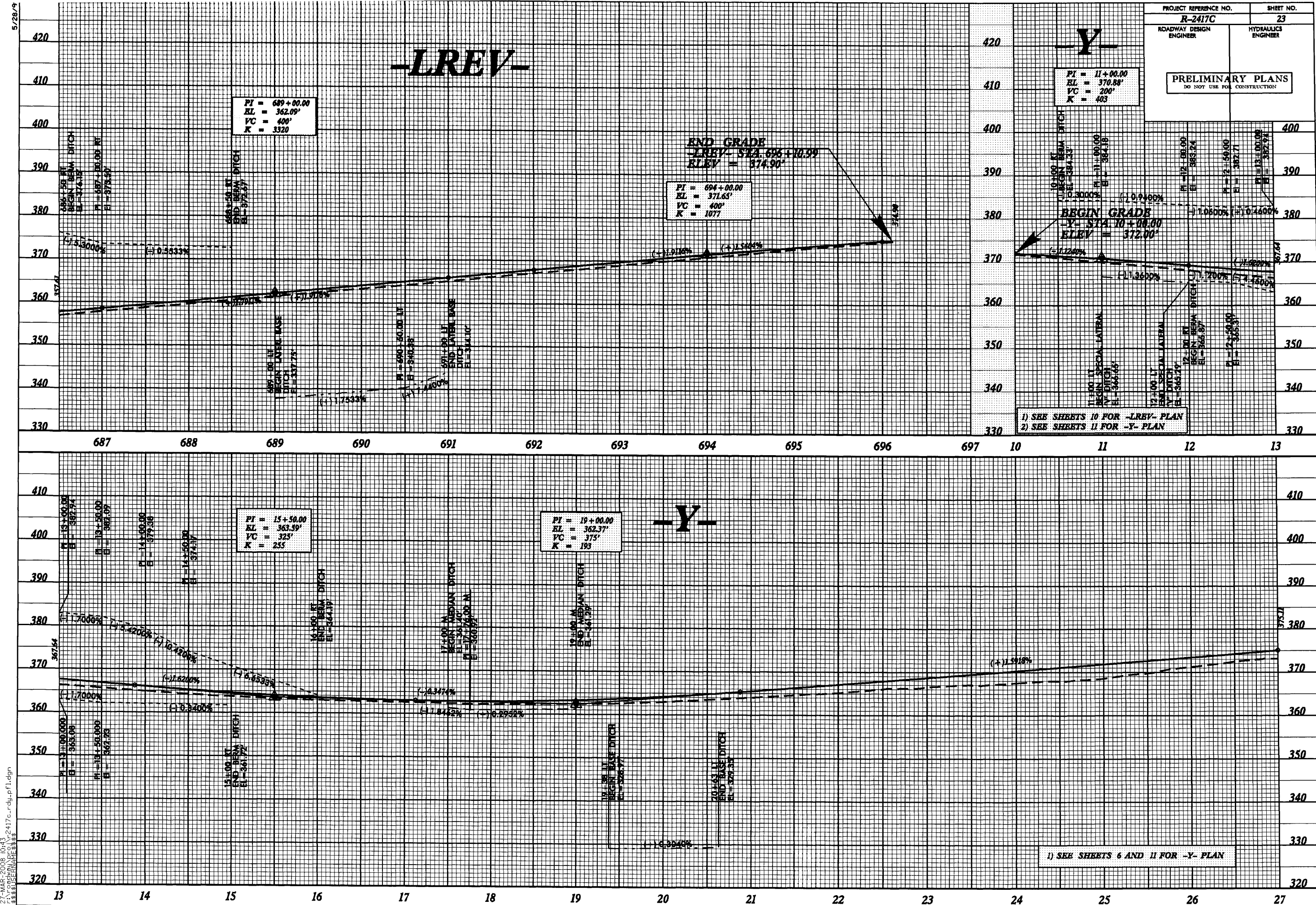


27-MAR-2008 10:43
F:\roadwork\p001\2417c-r-dm-pl.dgn
\$\$\$\$\$USERNAME\$\$\$\$\$

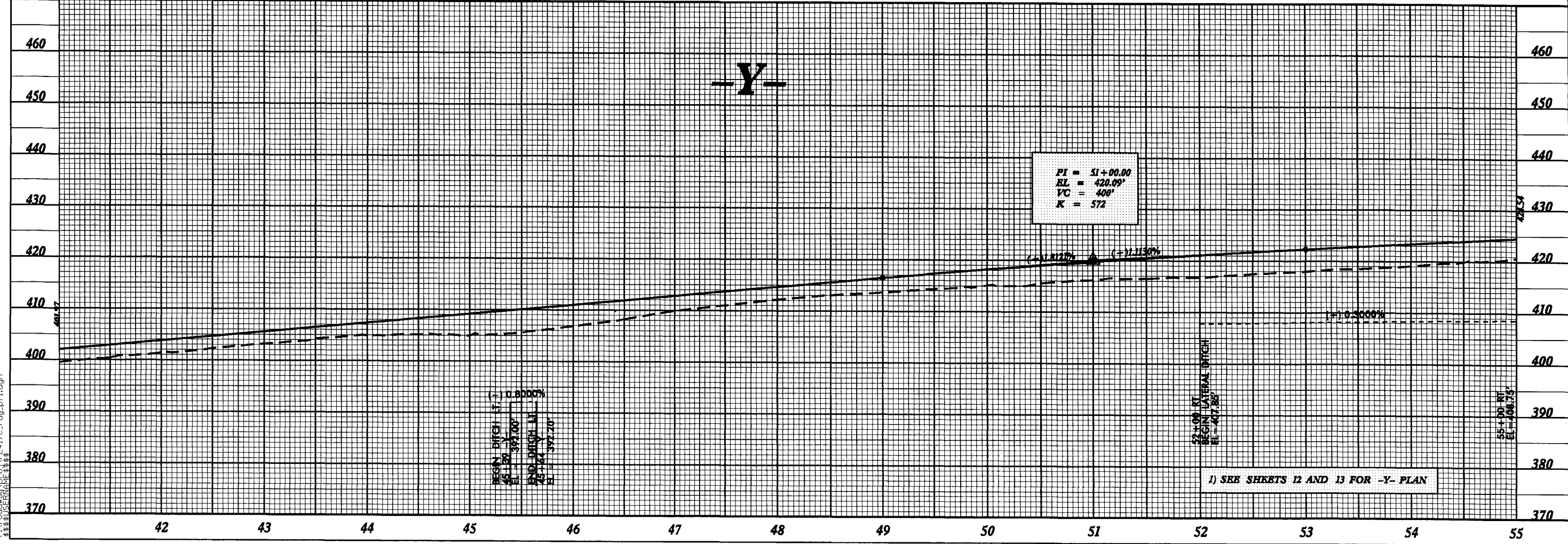
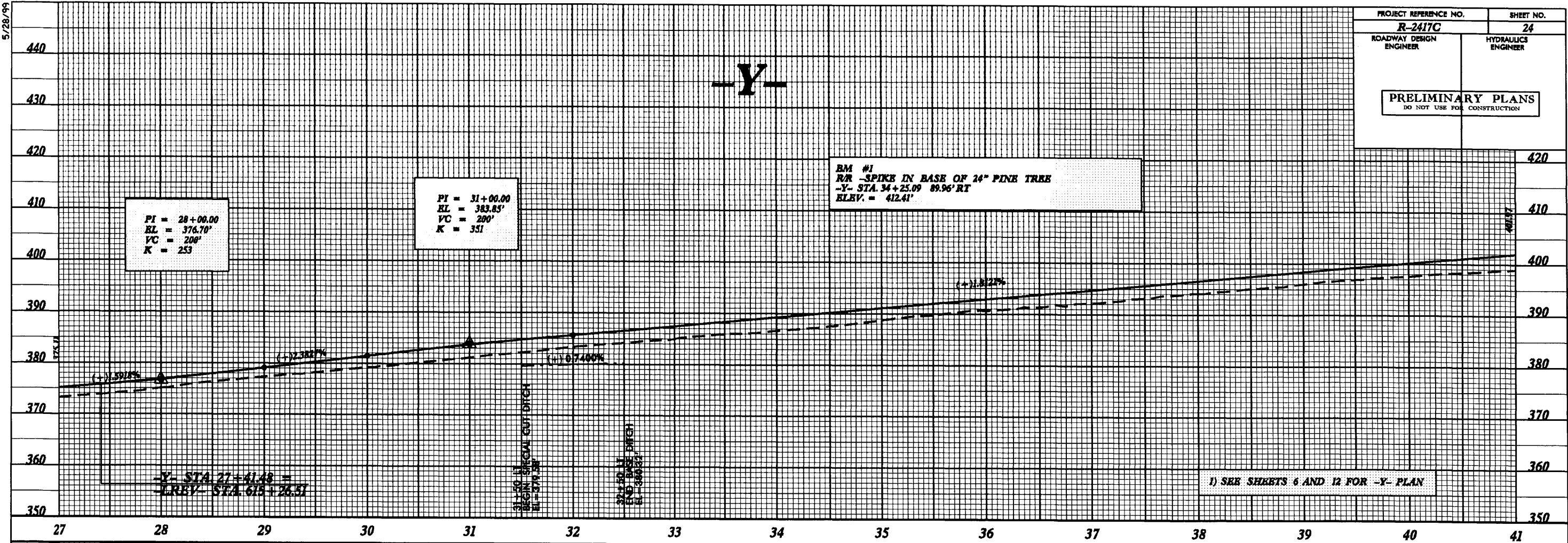


5/28/9

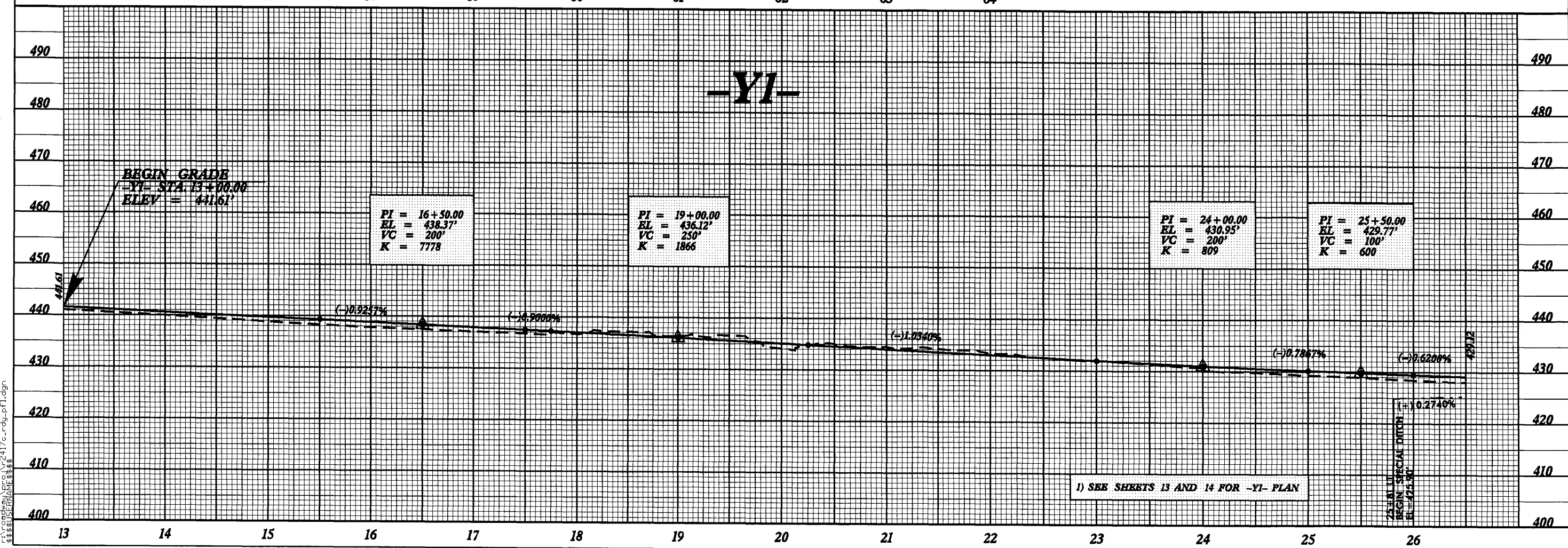
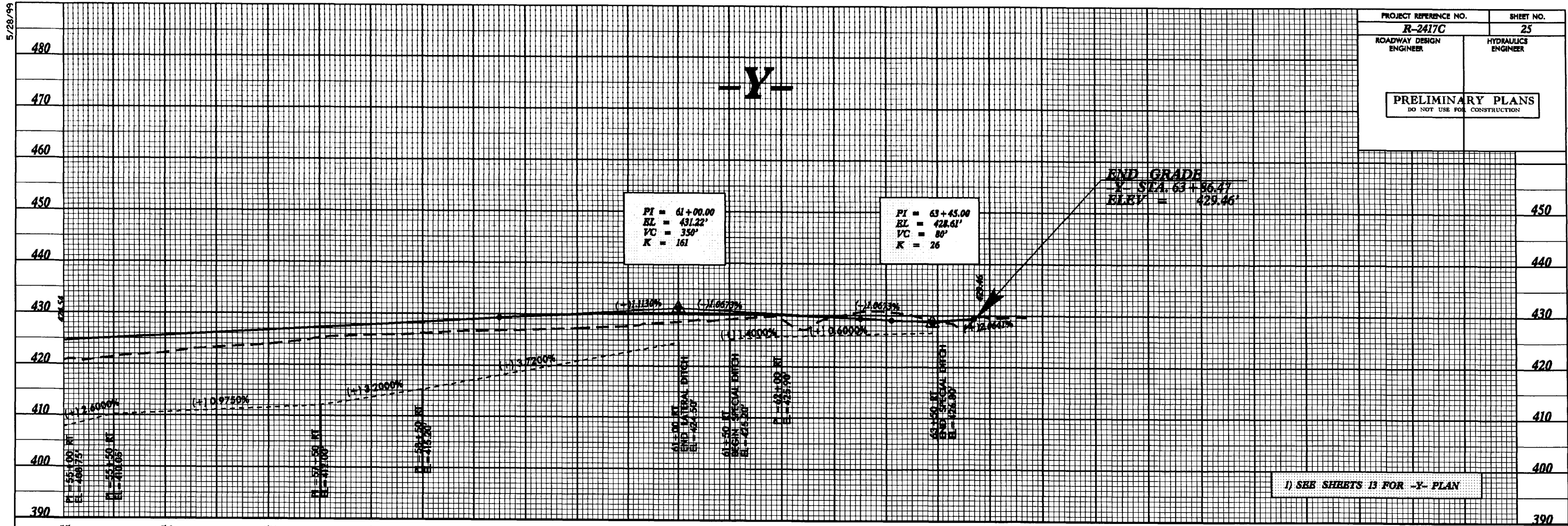
27-MAR-2008 10:43
F:\WORK\2008\2008\2417c-rdy-pl.dgn
\$\$\$\$\$USER\$\$\$\$\$



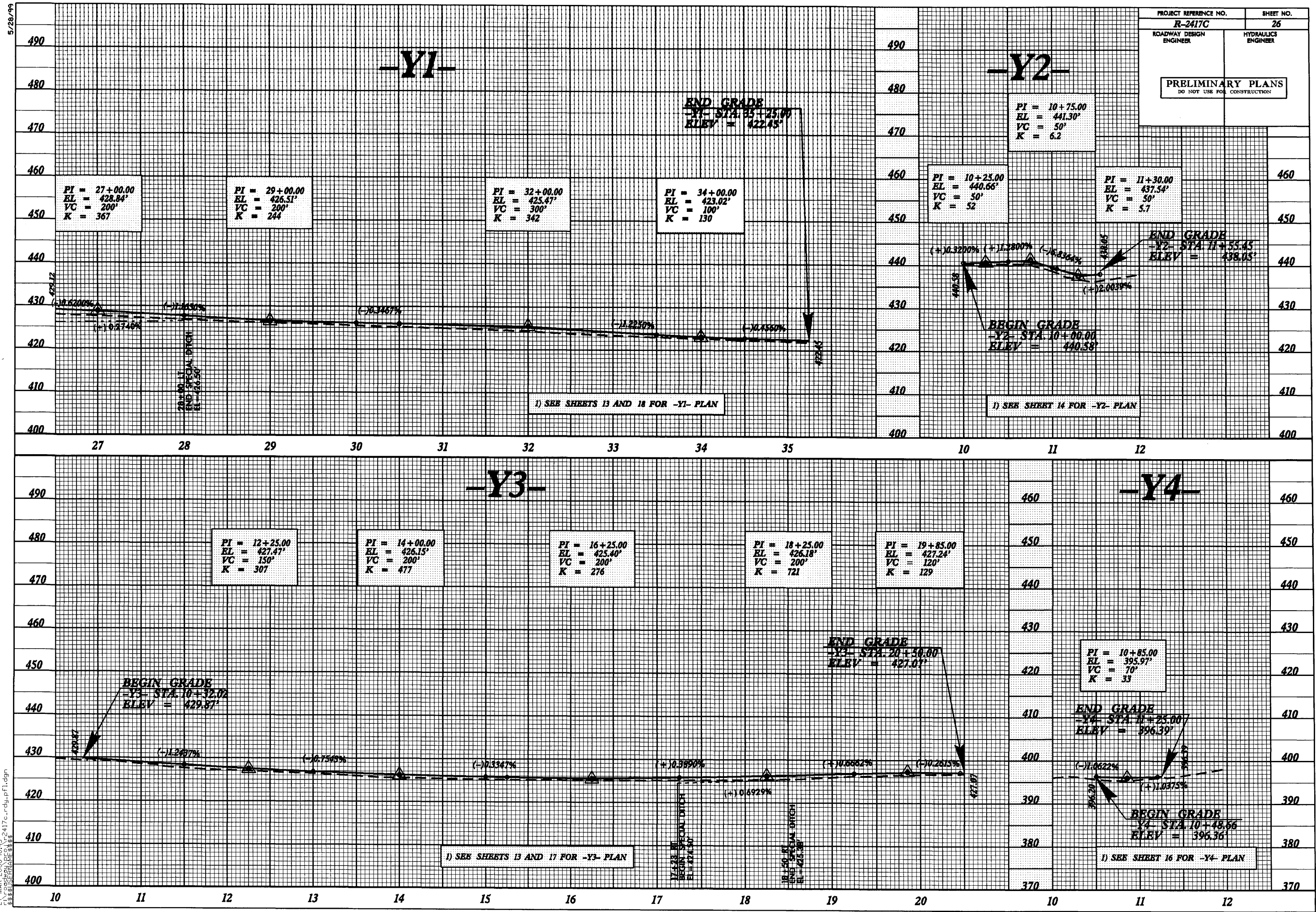
5/28/99



5/28/99

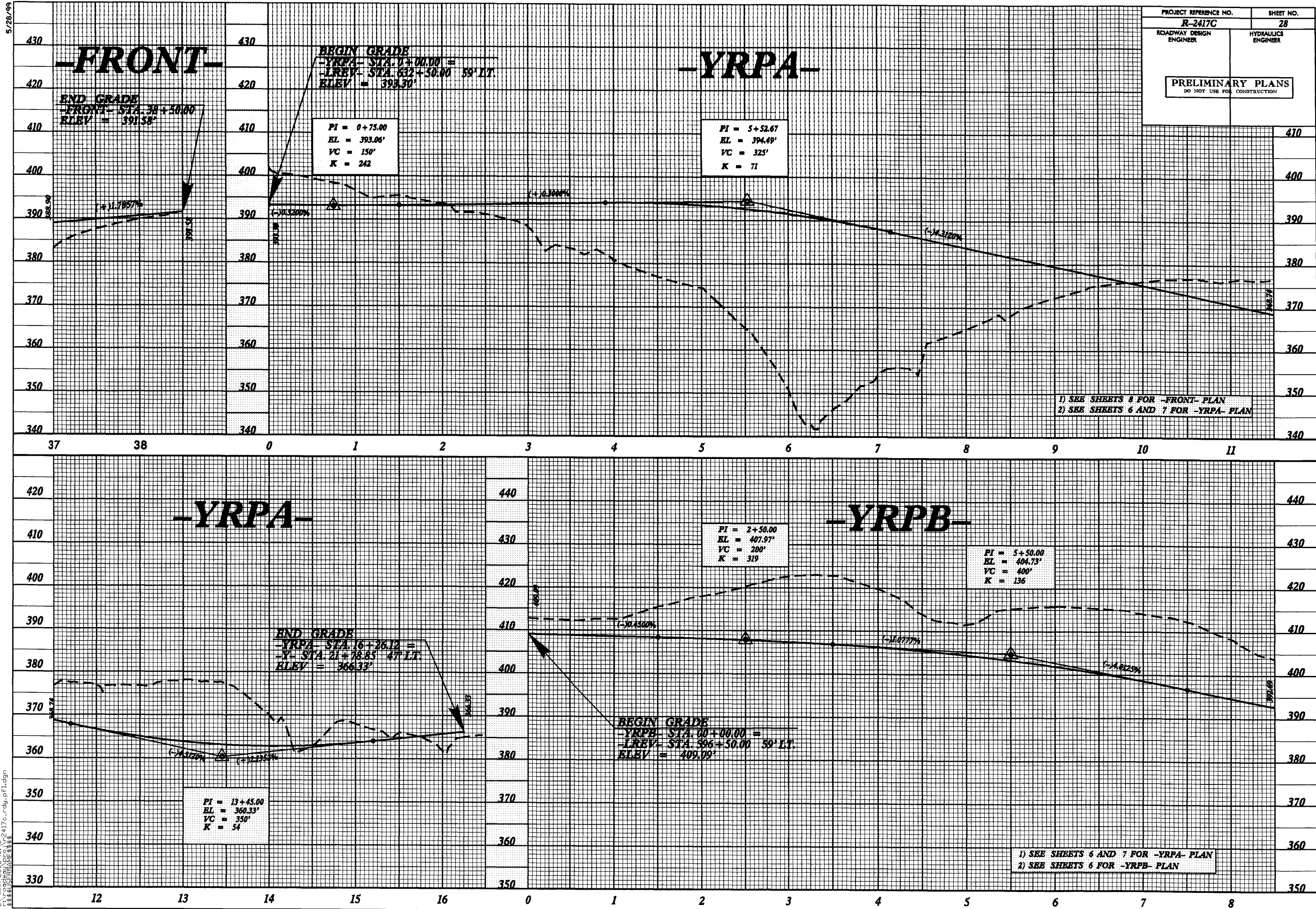


27-MAR-2008 10:43 2417c-rdy.plt.dgn
\$\$\$\$\$USE GRAVE\$\$\$\$\$

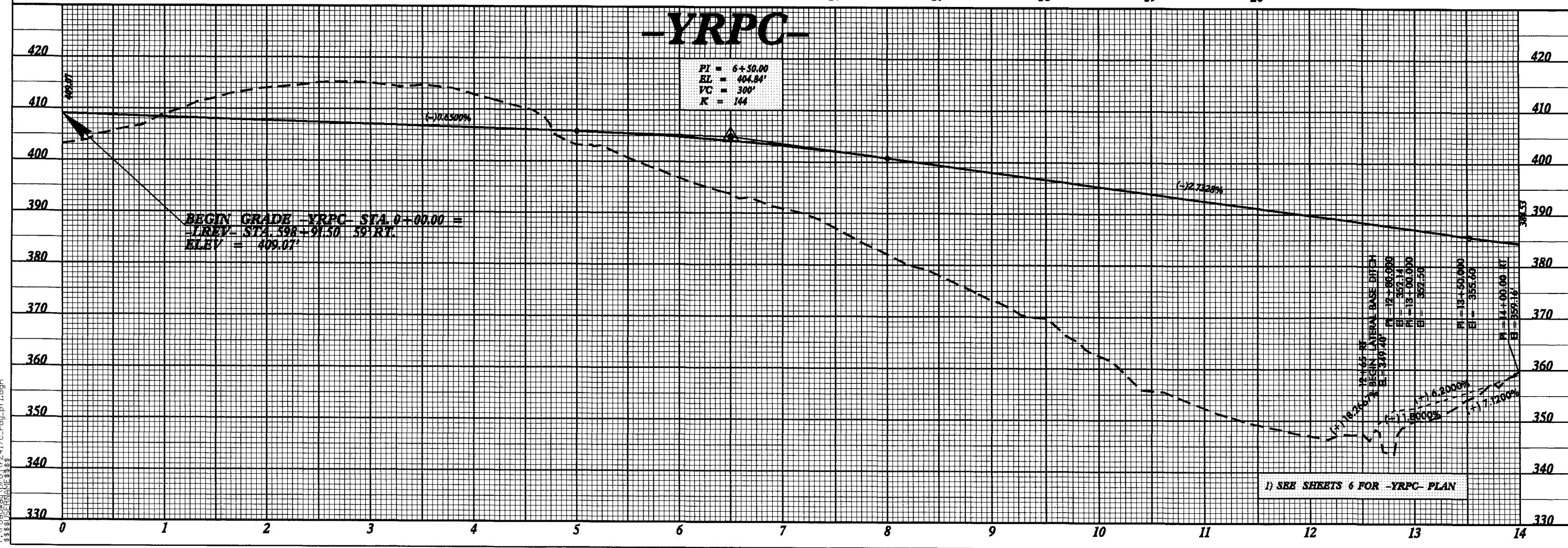
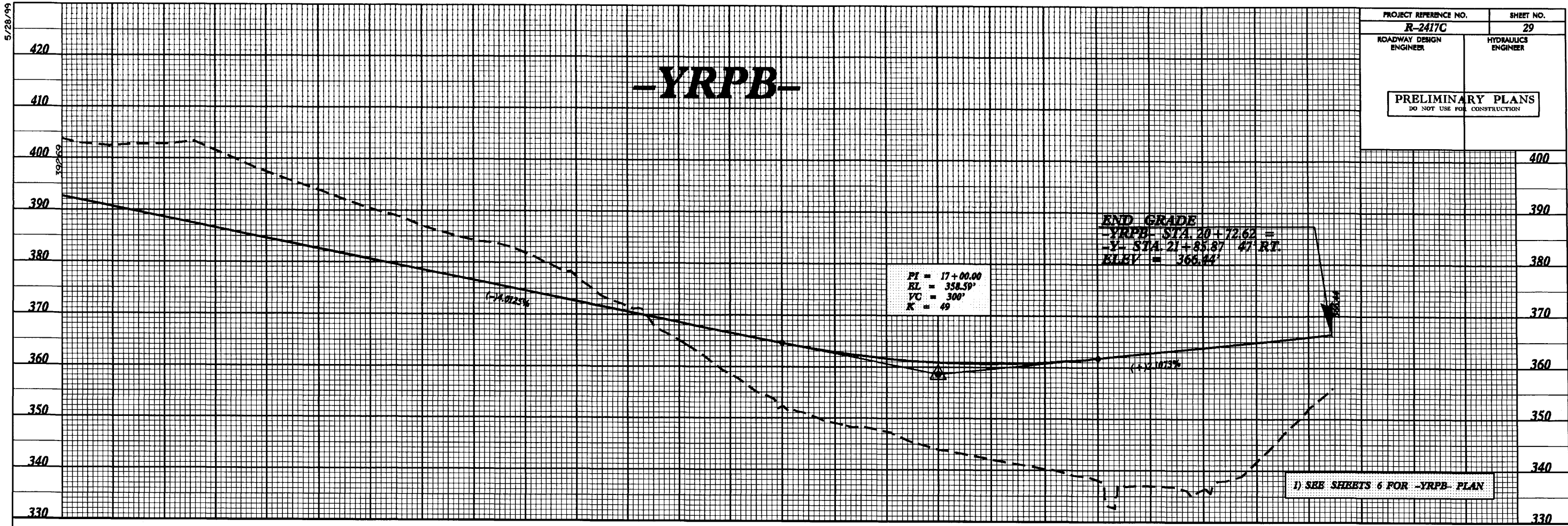


5/28/99

27-MAR-2008 10:43
44667 PCS/SH/ADP/2417c-rdy-pl.dgn

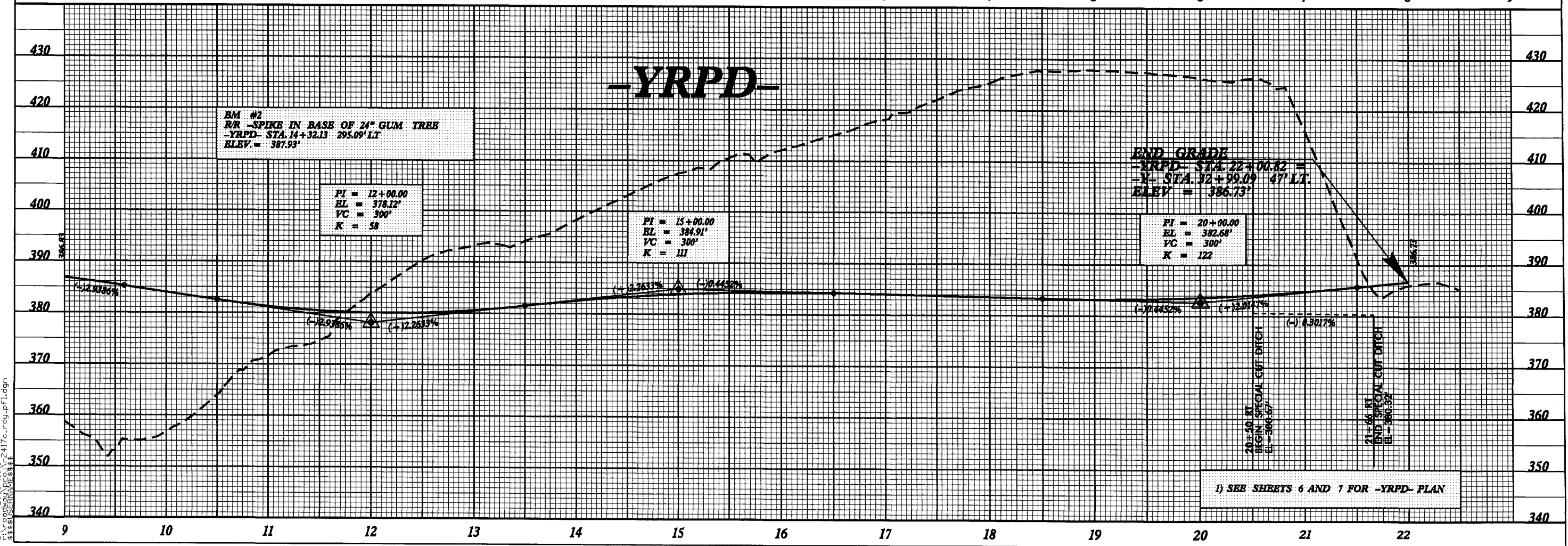
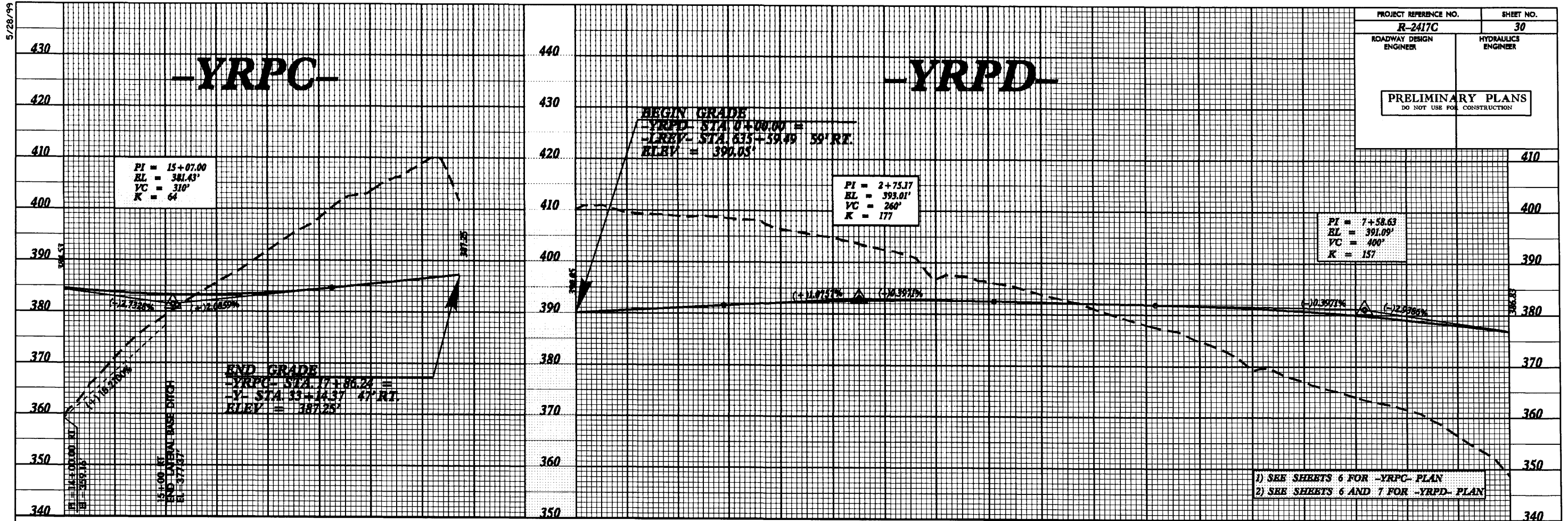


5/28/99



27-MAR-2008 10:43
r:\roadwork\proj\2417\c-rdy-pl.dgn
\$\$\$\$\$SERNAME\$\$\$\$\$

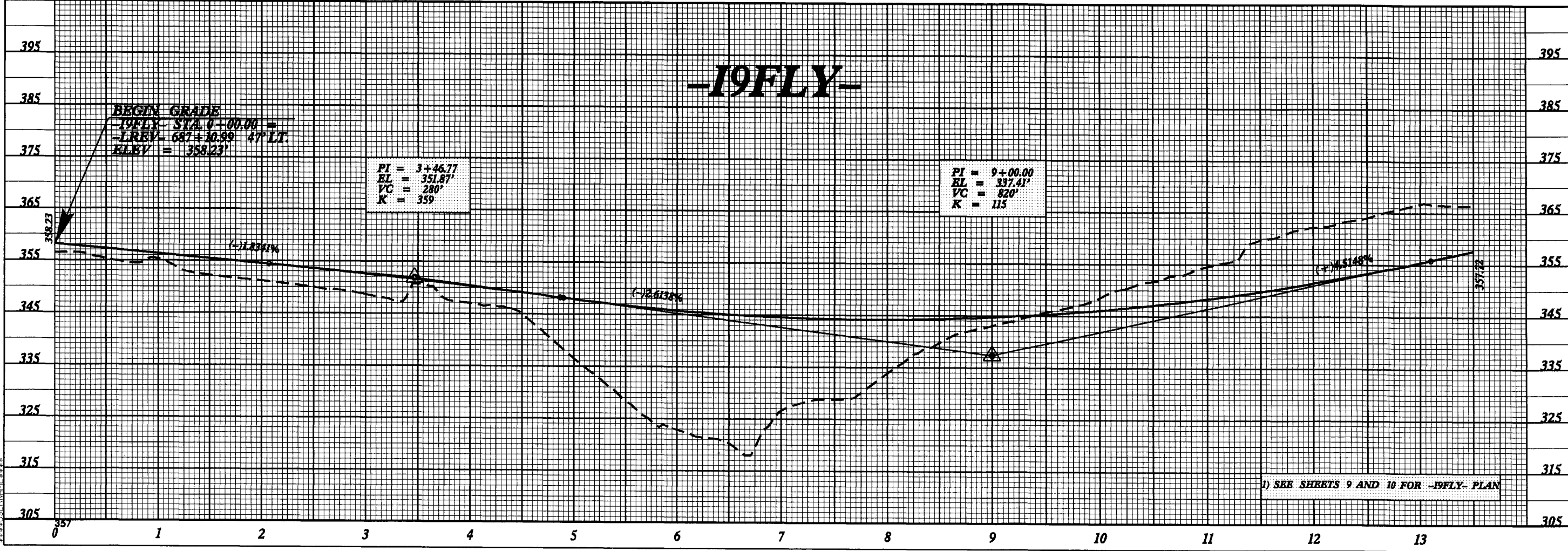
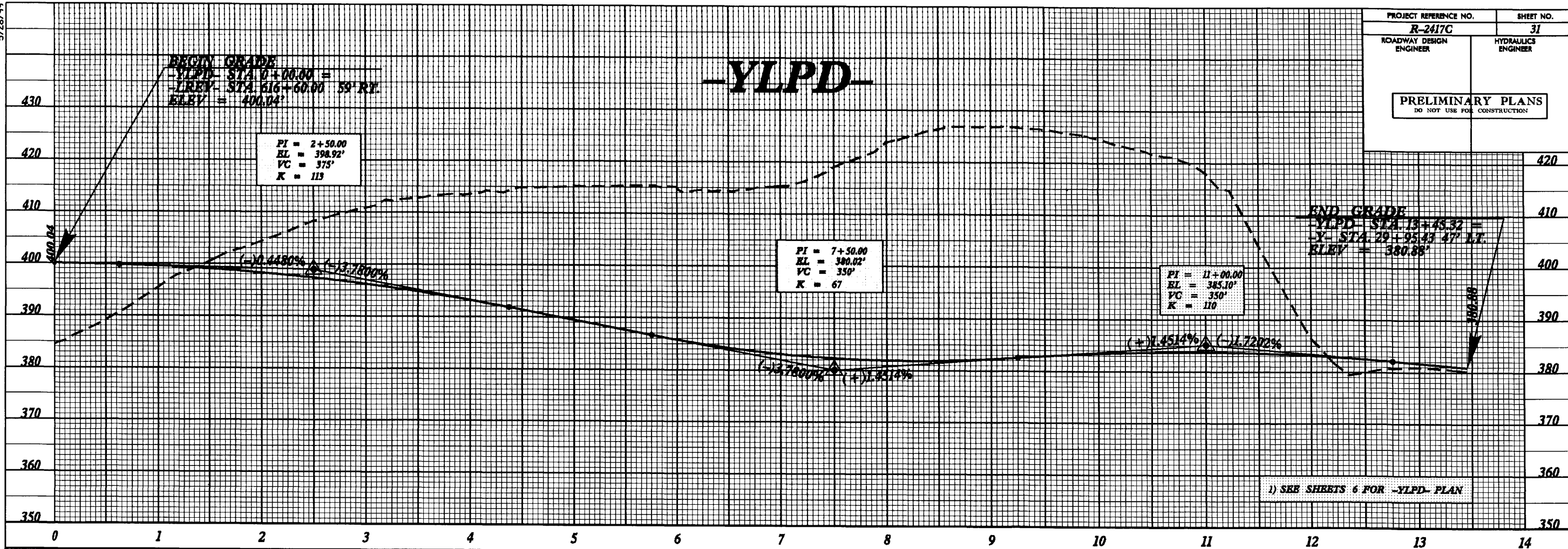
5/28/99



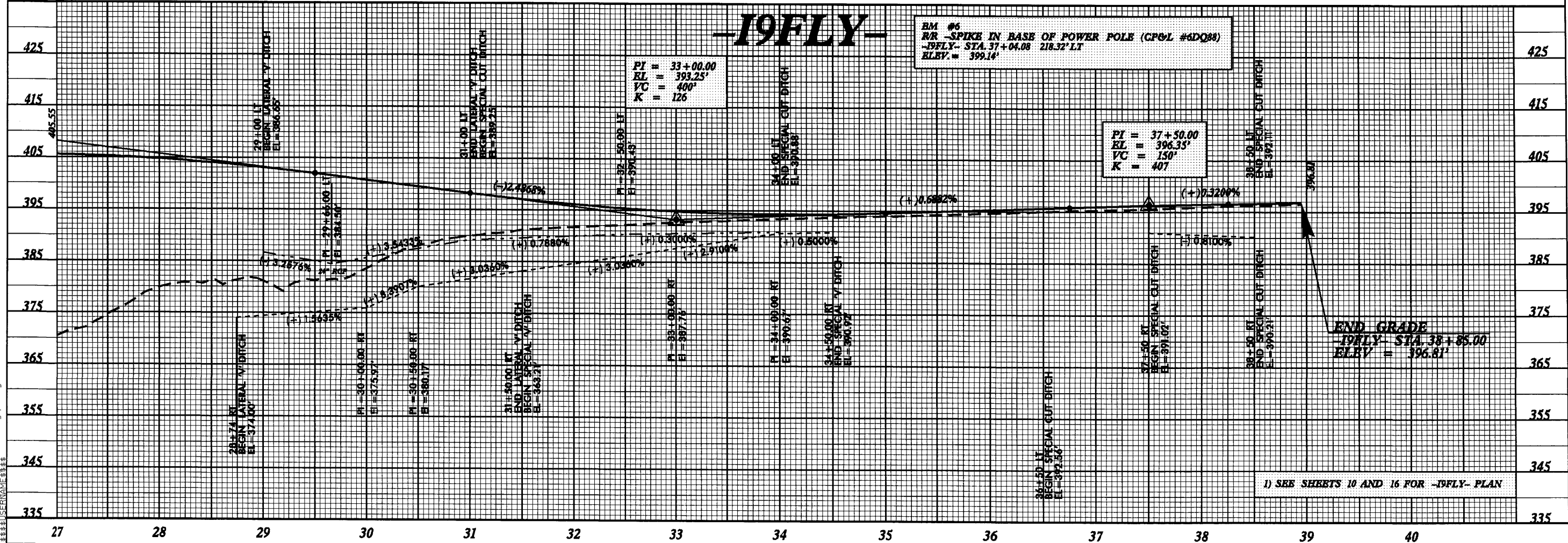
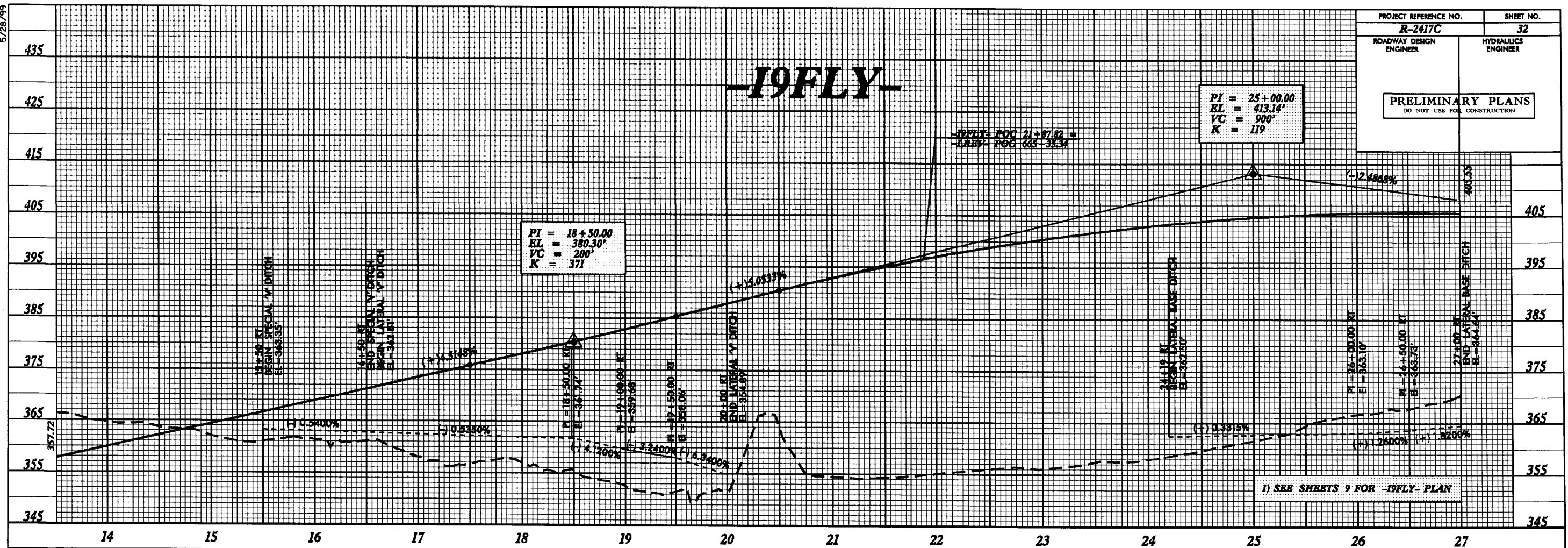
27-MAR-2008 10:43 2417c.rdy.pfl.dgn
S:\PROJECTS\2417C\2417C.DWG

5/28/99

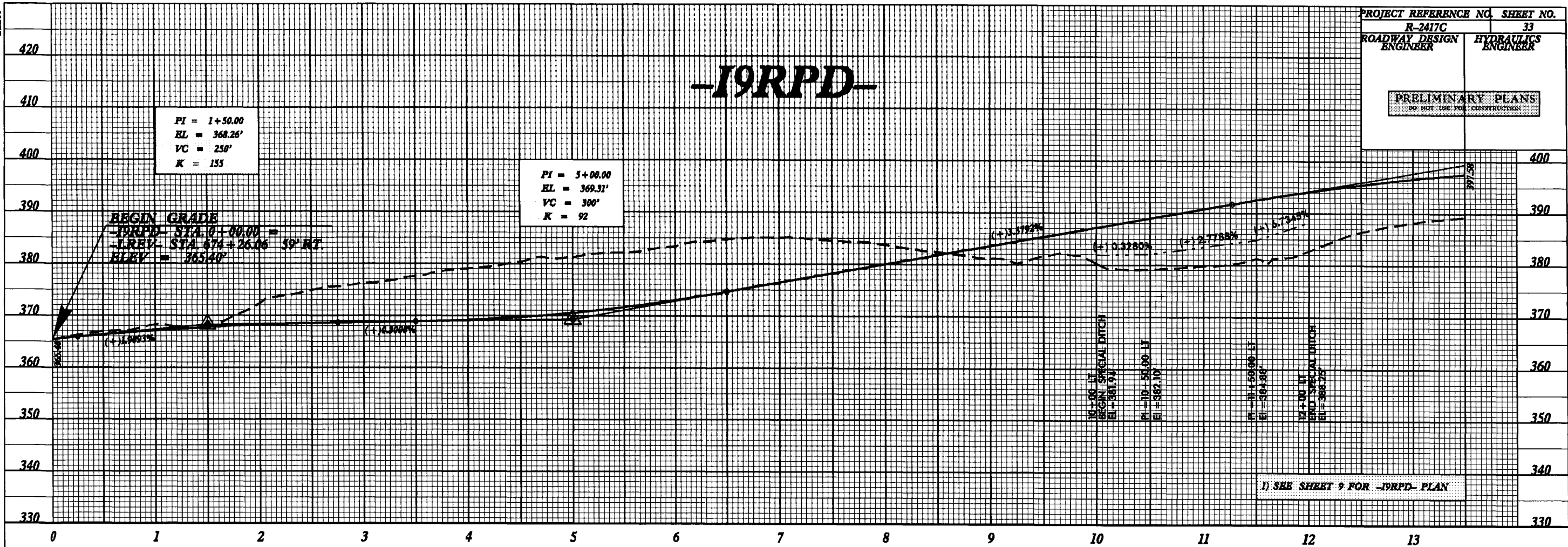
PROJECT REFERENCE NO. R-2417C		SHEET NO. 31	
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER	
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION			



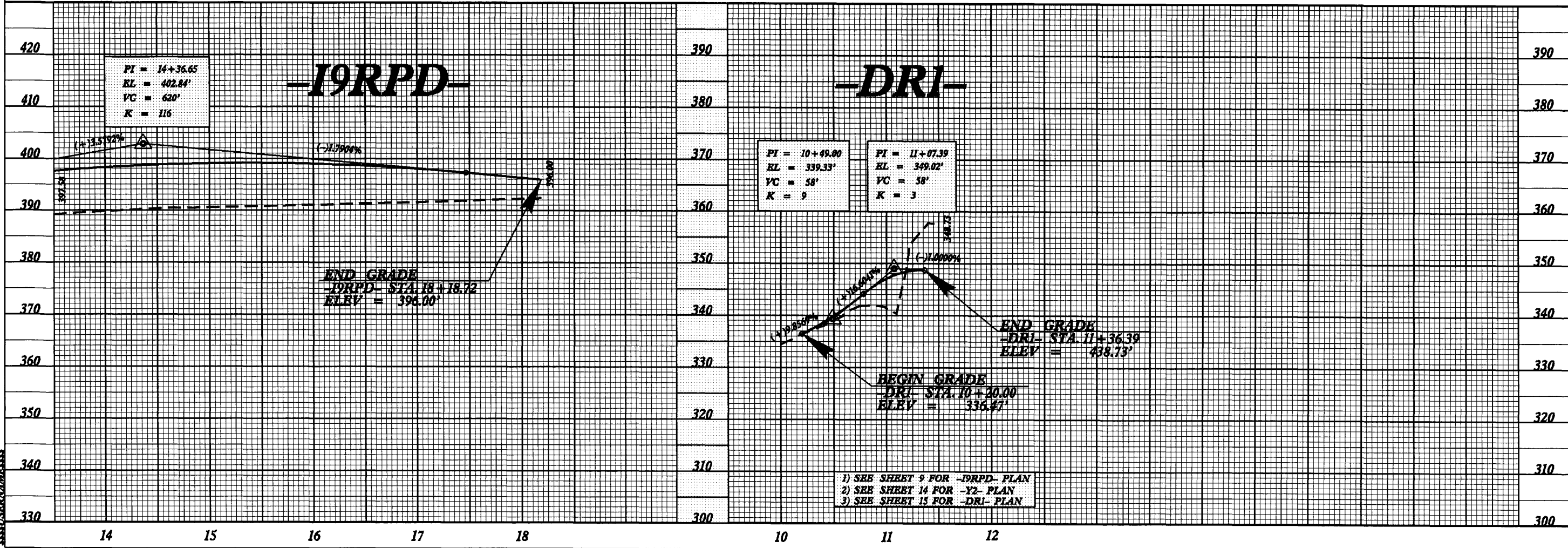
27-MAR-2008 10:43
r:\roadway\p\o\2417c_rdy.pfl.dgn
\$\$\$\$\$USER\$NAME\$\$\$\$\$

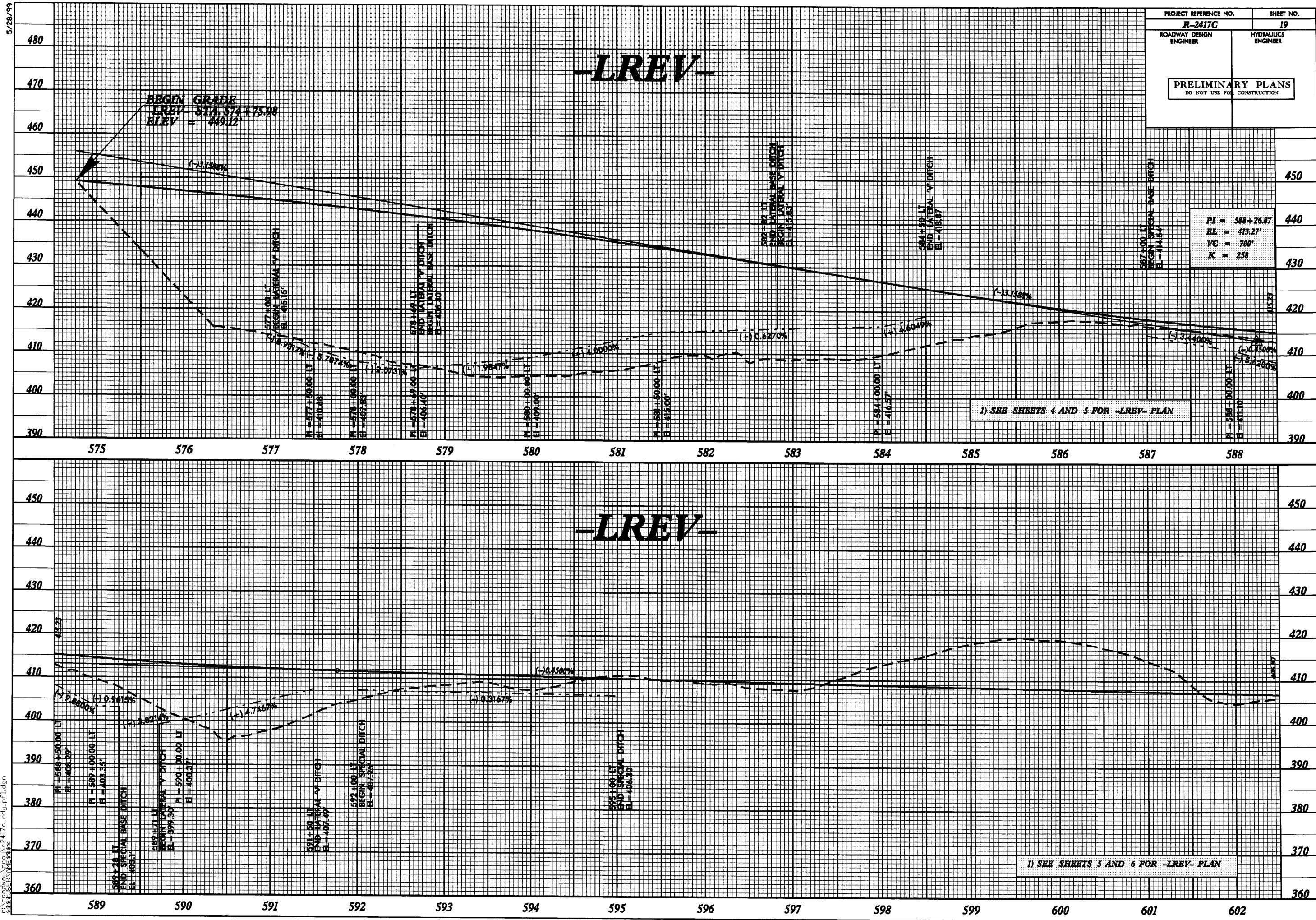


52899

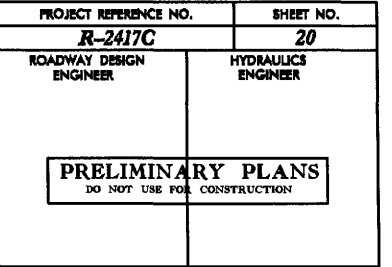


27-MAR-2008 10:43
C:\WORK\2008\10-43\1112-1112.dgn



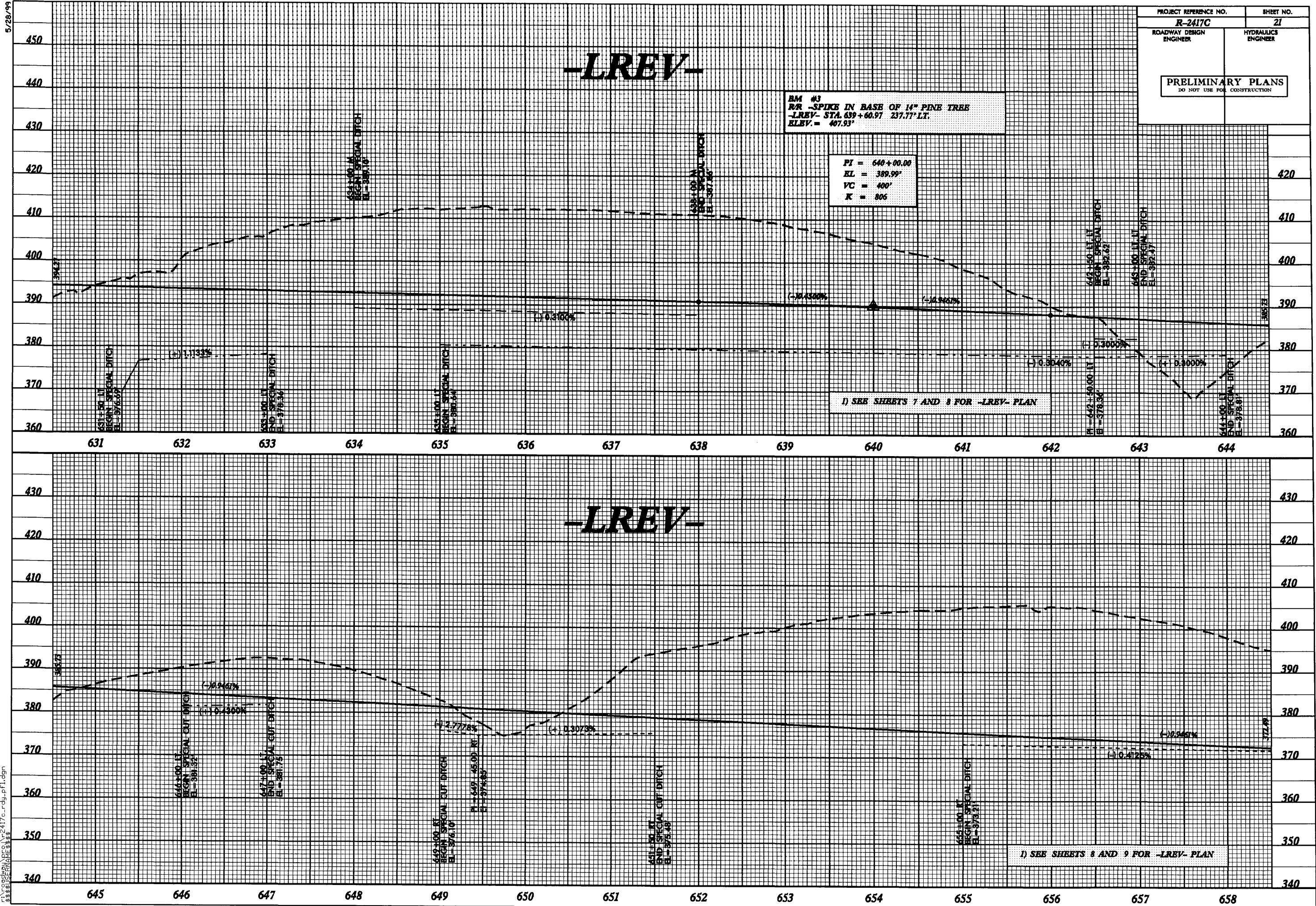


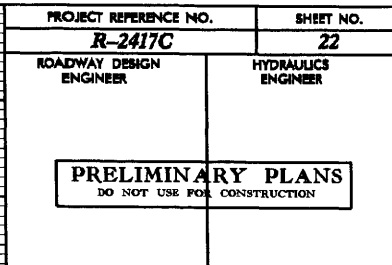

```
r:\roadway\proj\r2417c-rdy-pfl.dgn
$$$$$USERNAME$$$$$
```



5/28/99

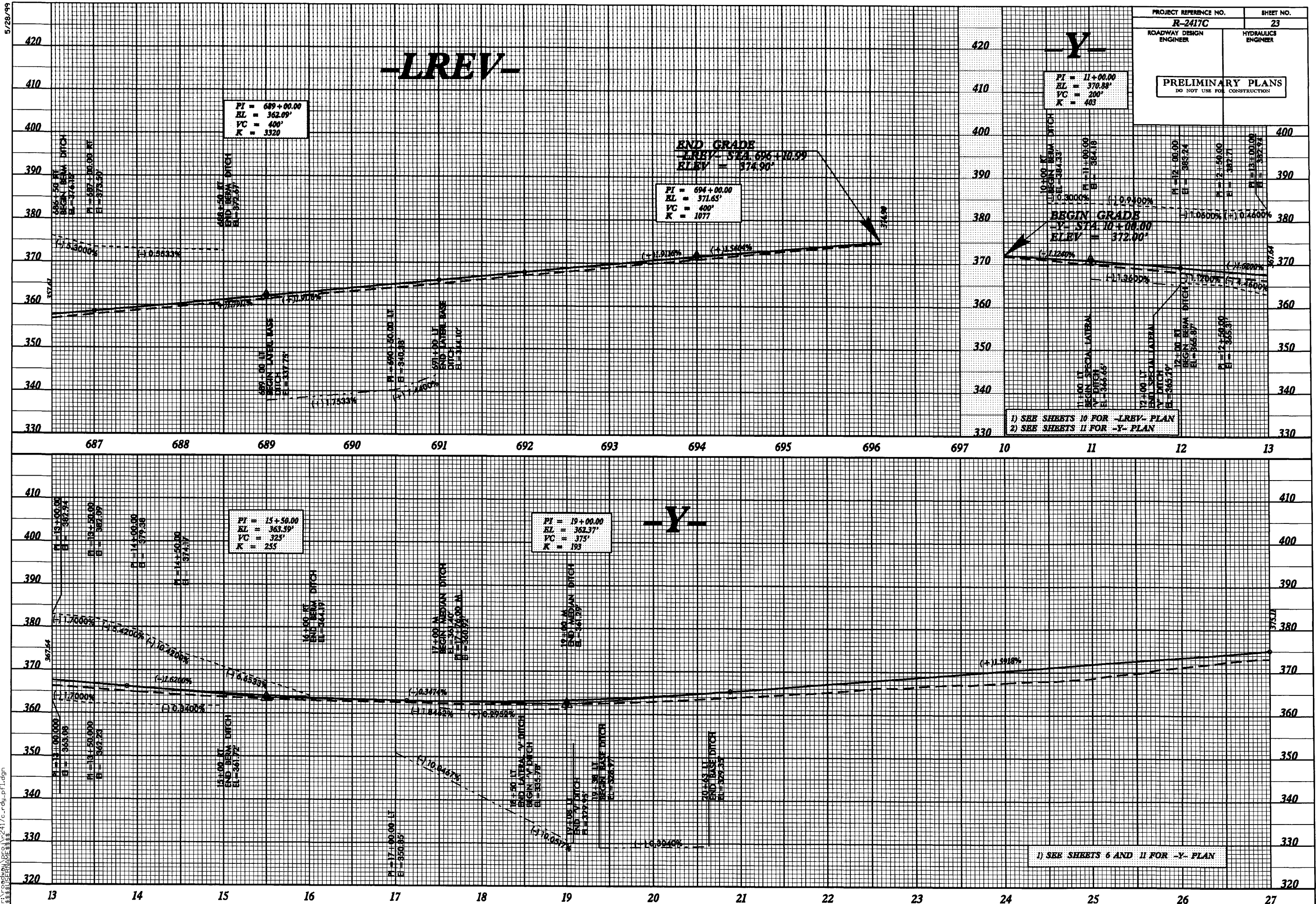
24-MAR-2008 10:08 2417c_rdu.pfl.dgn
\$\$\$\$\$USERNAME\$\$\$\$\$





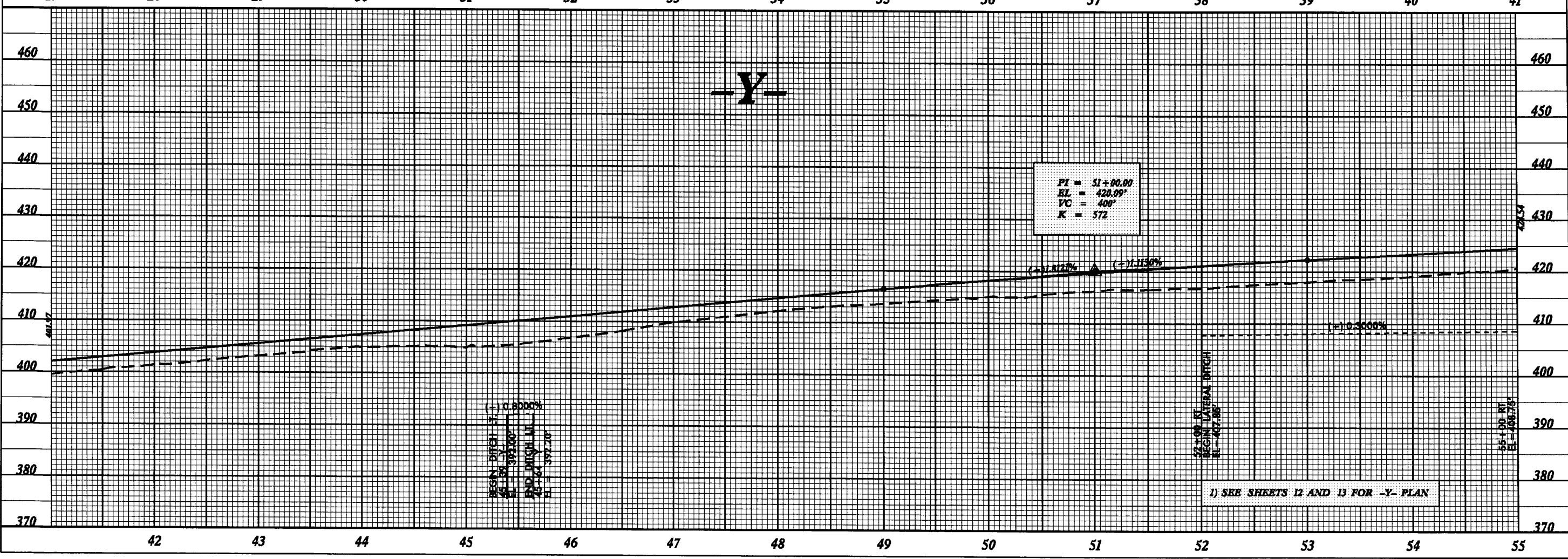
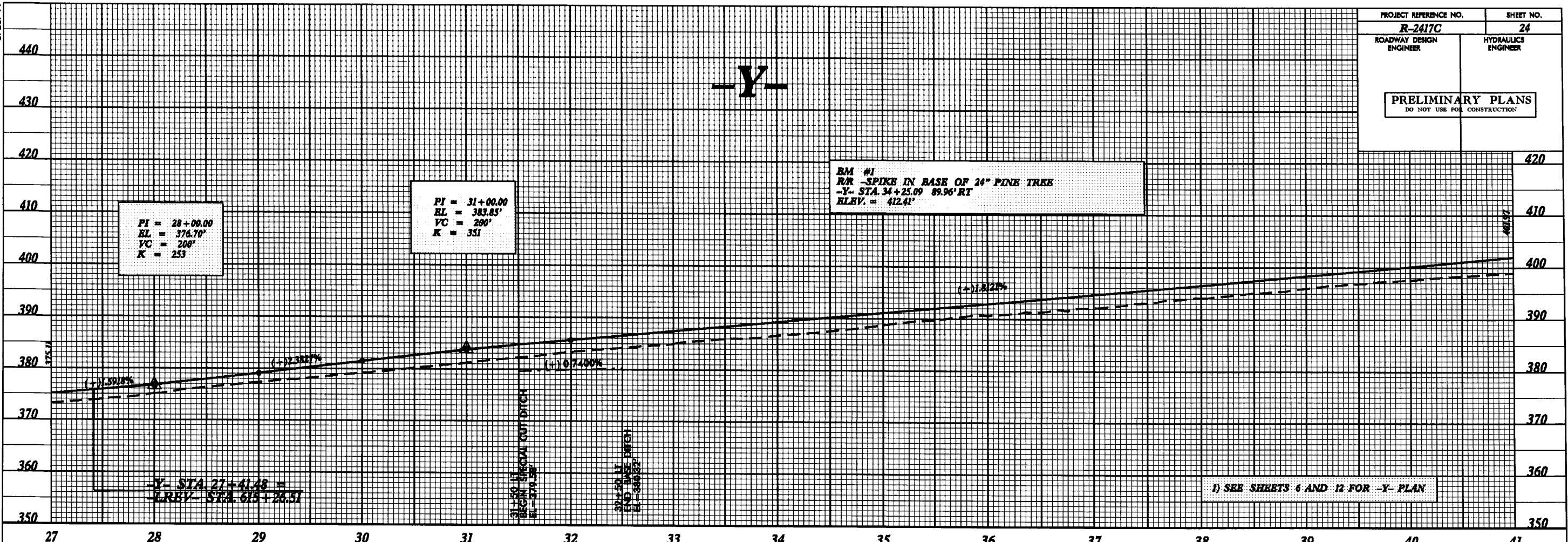
5/28/99

24-MAR-2008 10:08
C:\WORK\2417C\2417C.rdy.pfl.dgn
SS\$USER\$RAC\$3\$3\$



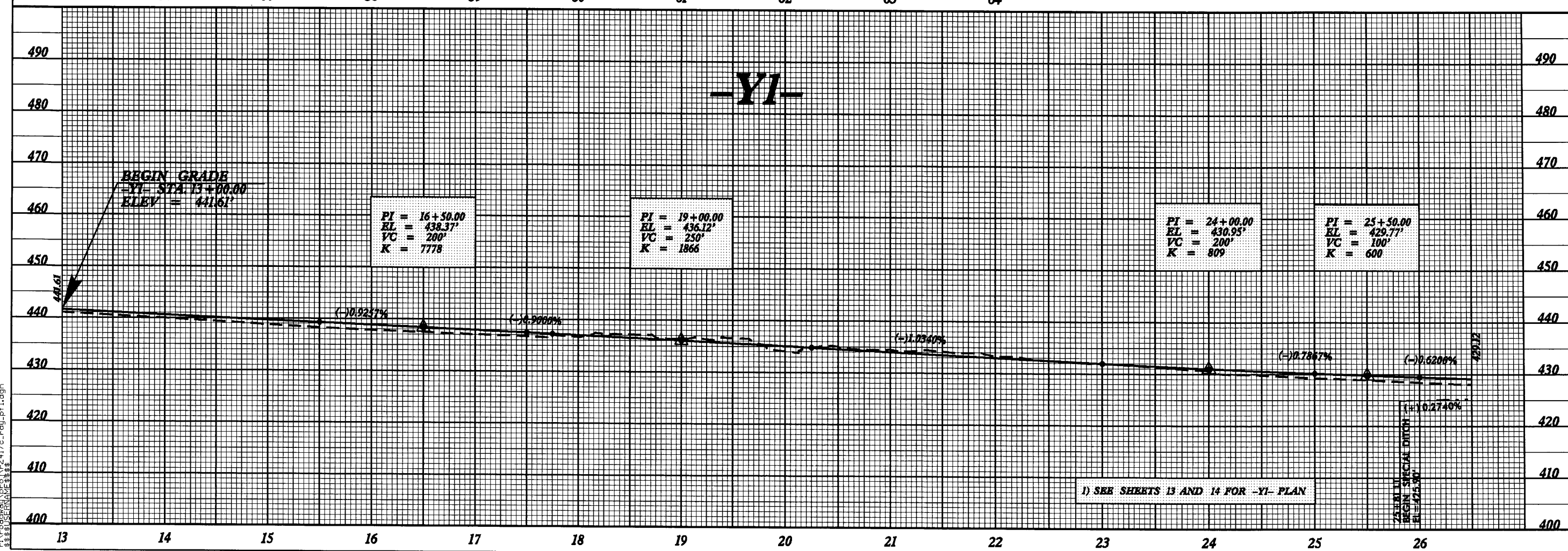
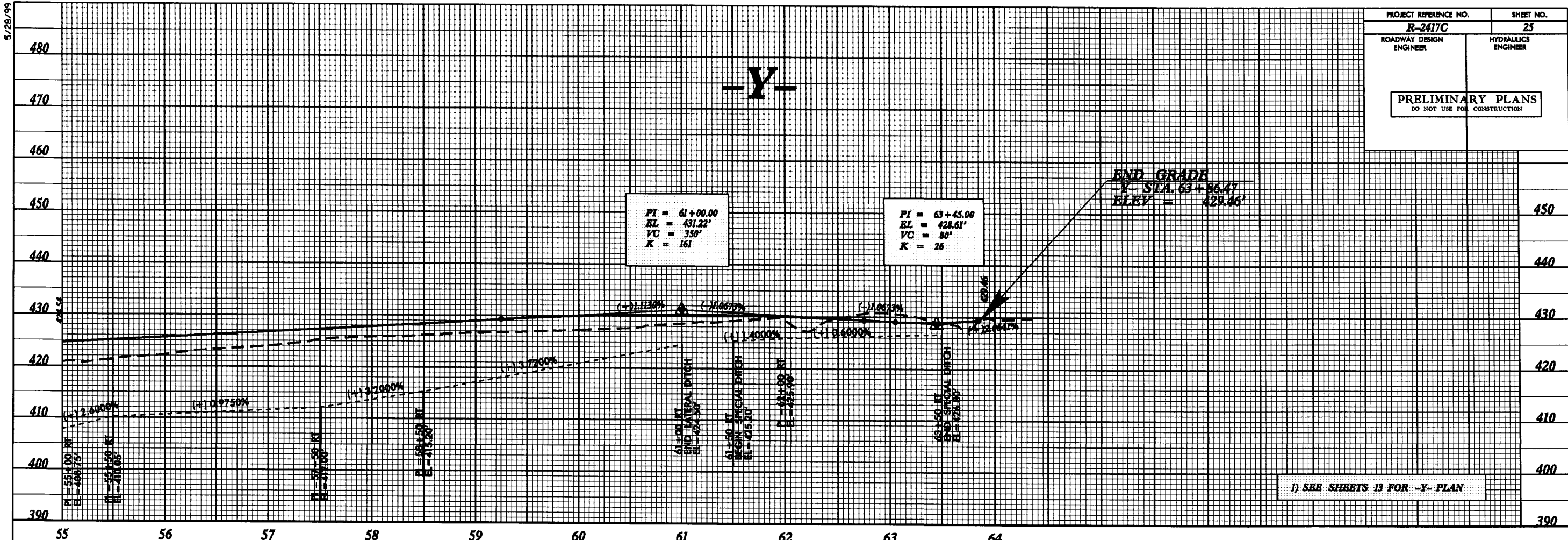
5/28/99

PROJECT REFERENCE NO. R-2417C		SHEET NO. 24
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER	
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION		



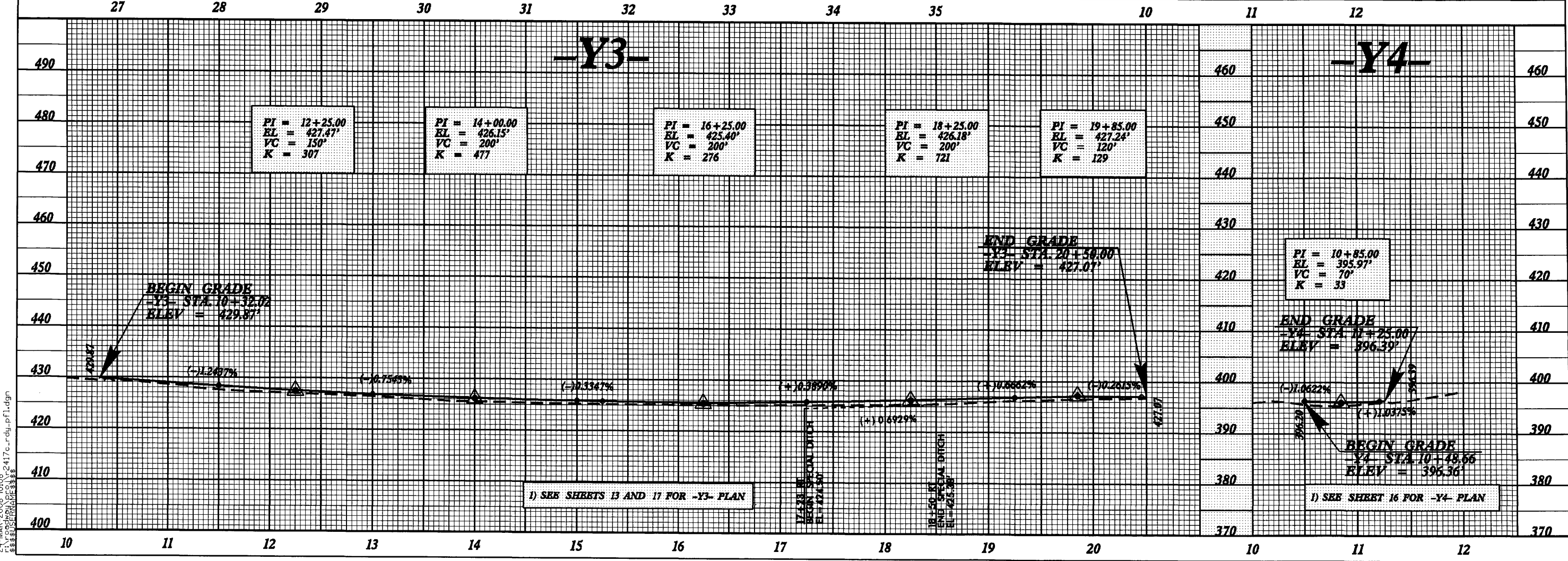
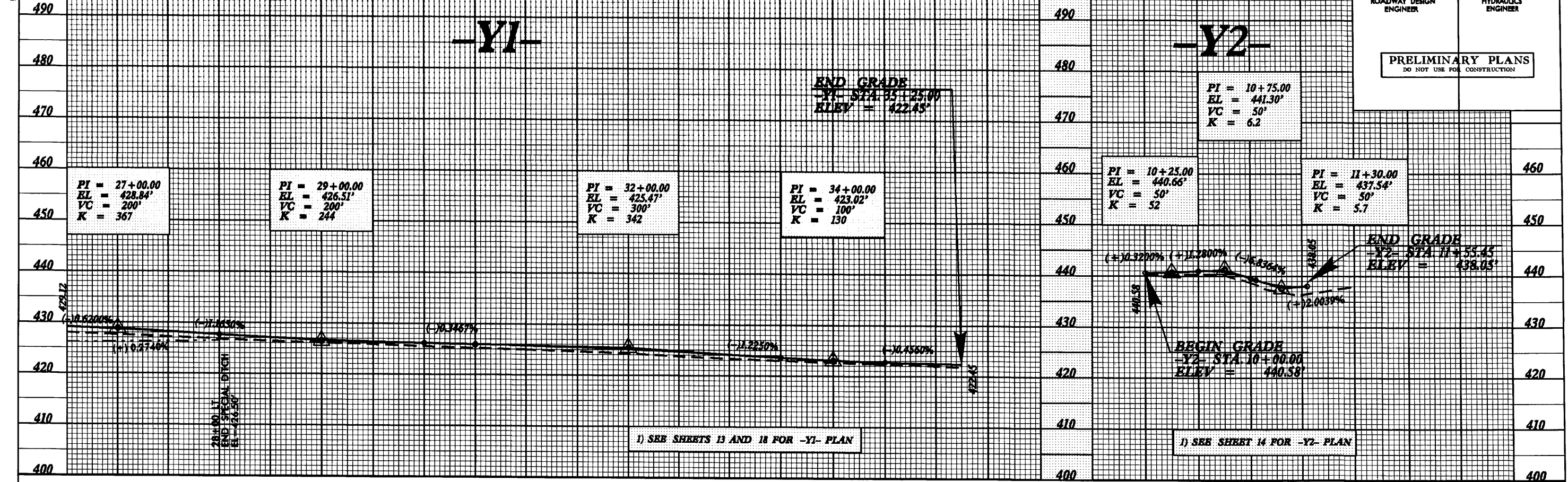
24-MAR-2008 10:08
F:\working\pco\2417c_rdy.pfl.dgn

5/28/99



24-MAR-2008 10:08
F:\road\proj\2417c-rd\p1.dgn
\$\$\$\$\$USERNAME\$\$\$\$\$

5/28/99

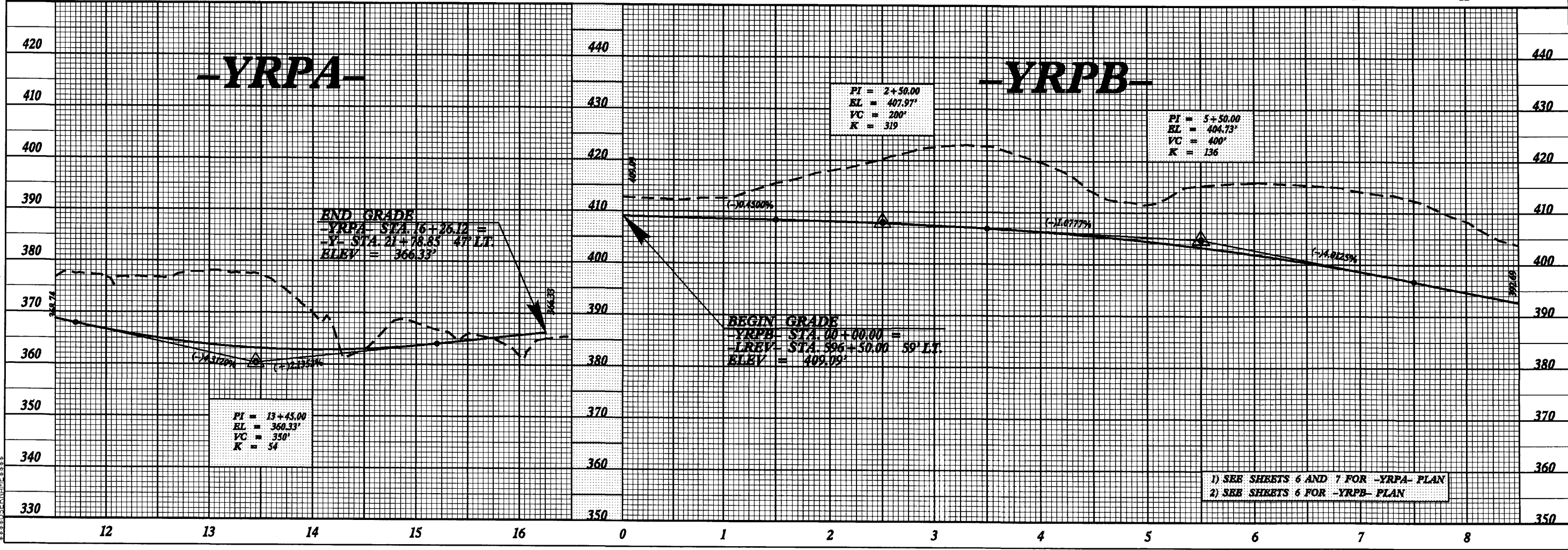
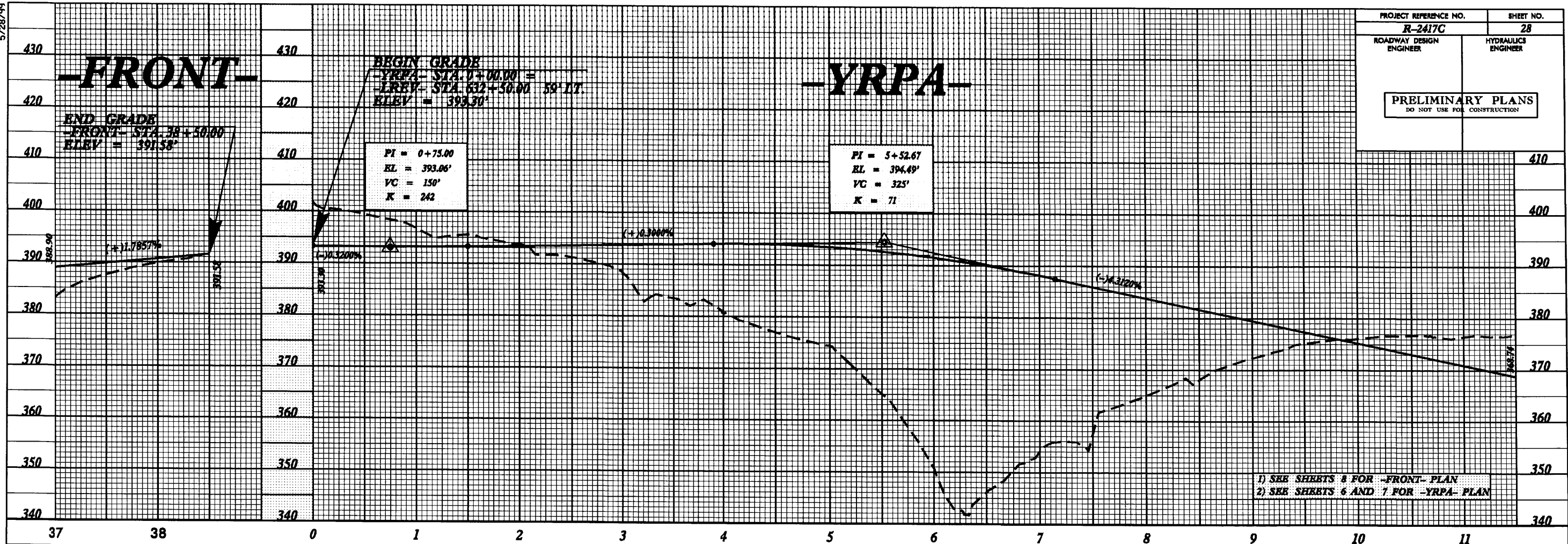


PROJECT REFERENCE NO. R-2417C		SHEET NO. 26
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER	
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION		

24-MAR-2008 10:08 2417c-rdu-pl.dgn
11:03 PM DE 9113

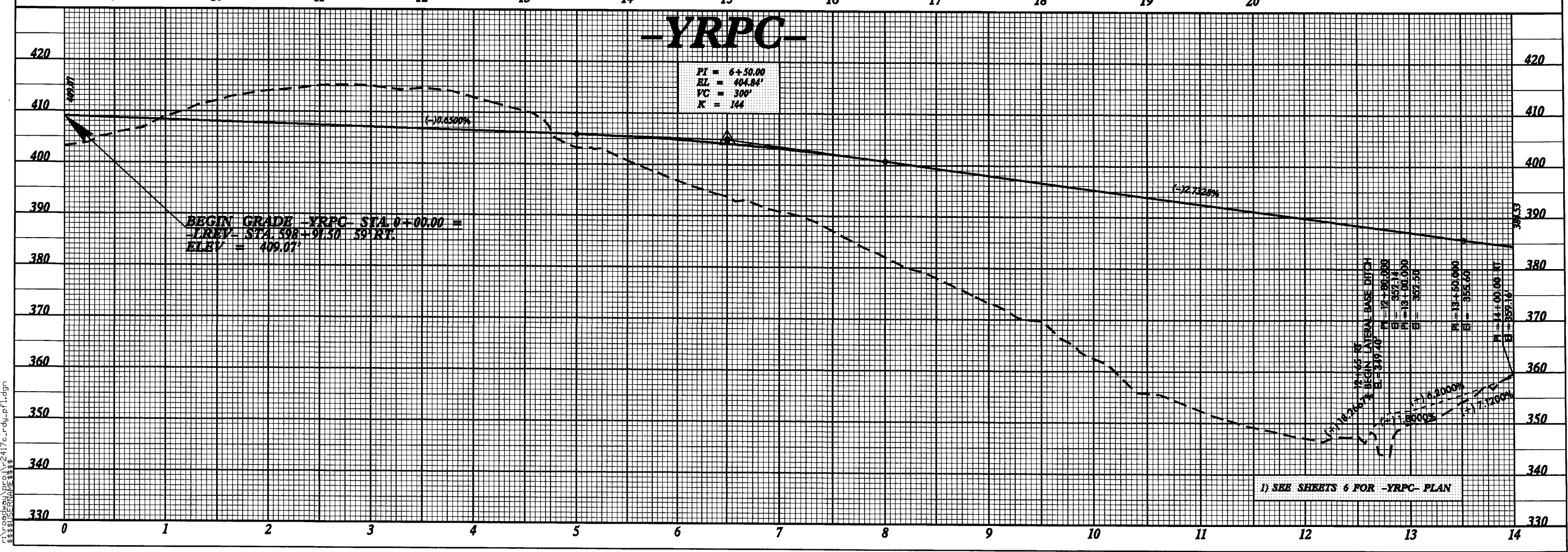
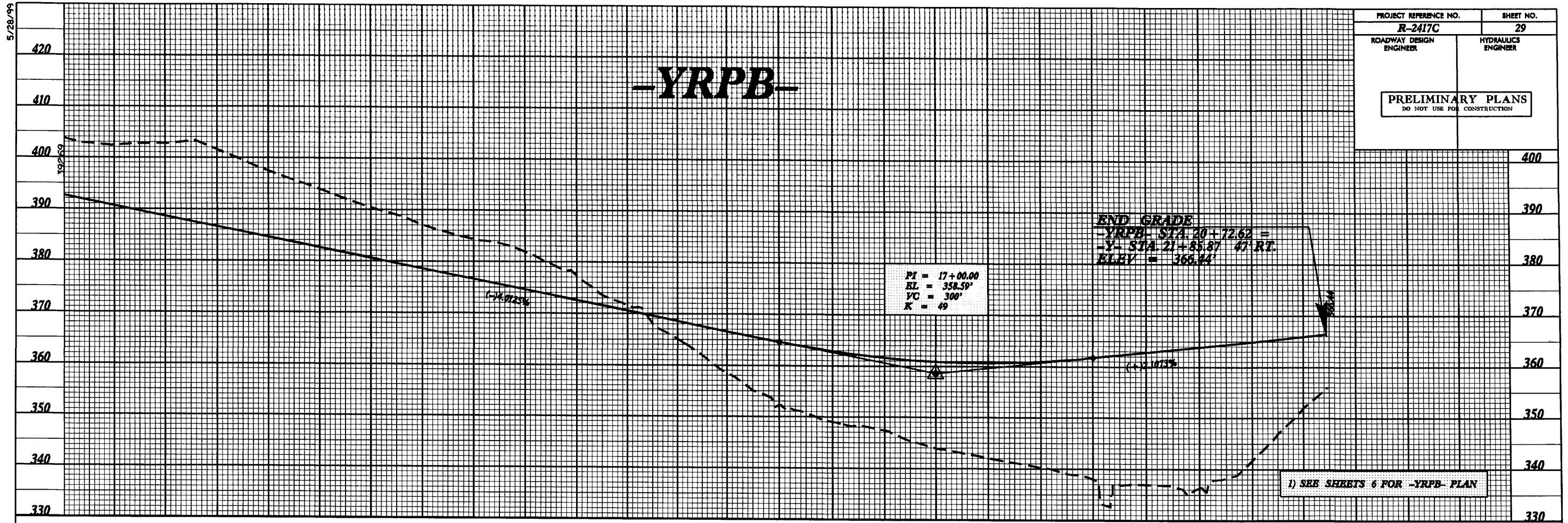
5/28/99

PROJECT REFERENCE NO. R-2417C		SHEET NO. 28
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER	
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION		



24-MAR-2008 10:08
R:\road\2417c-r-dj-pfl.dgn
\$\$\$\$\$USER\$\$\$\$\$

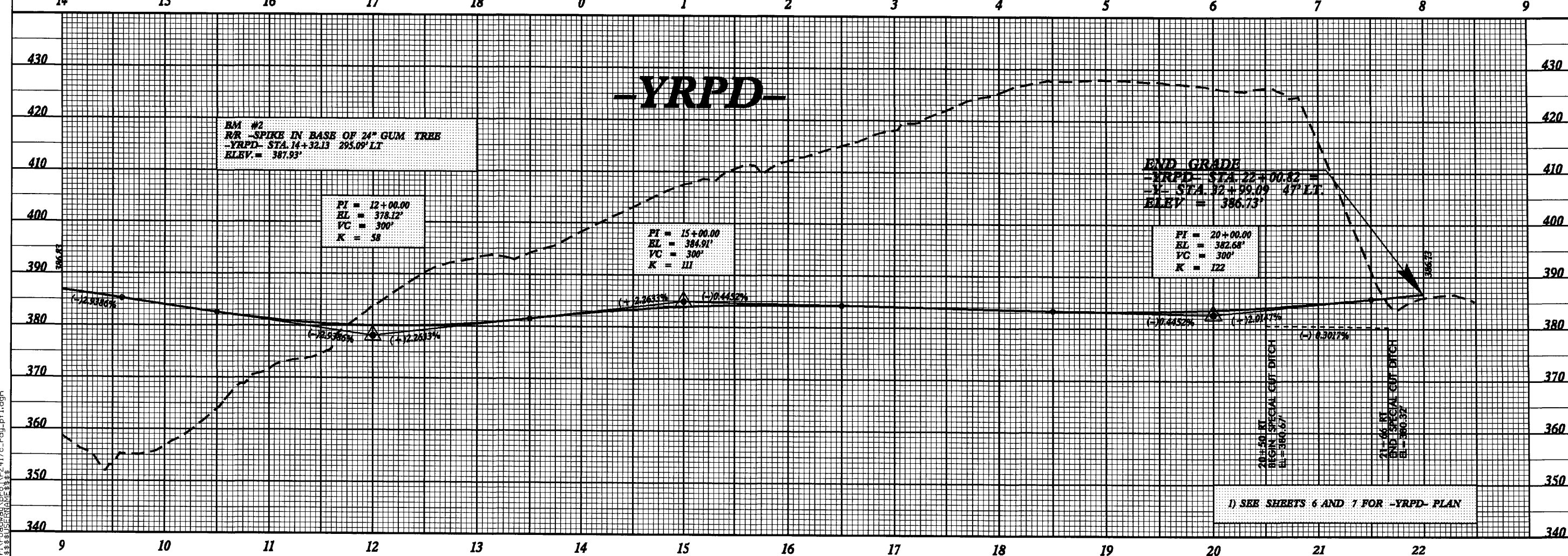
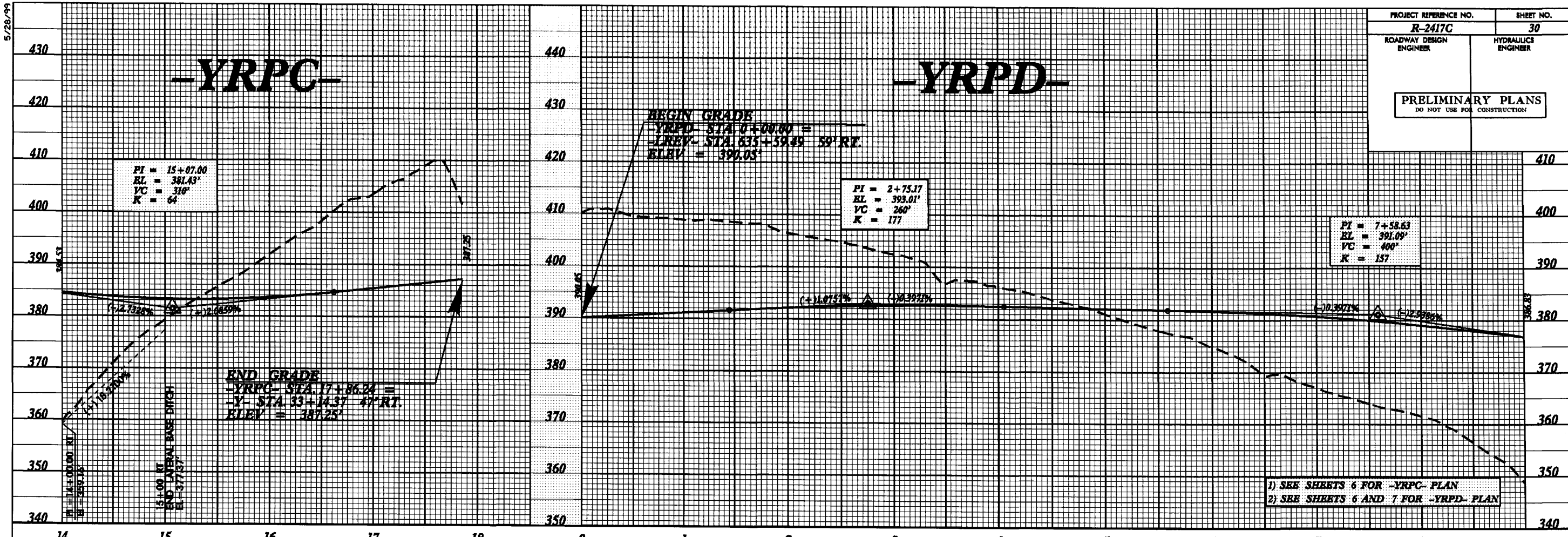
5/28/99



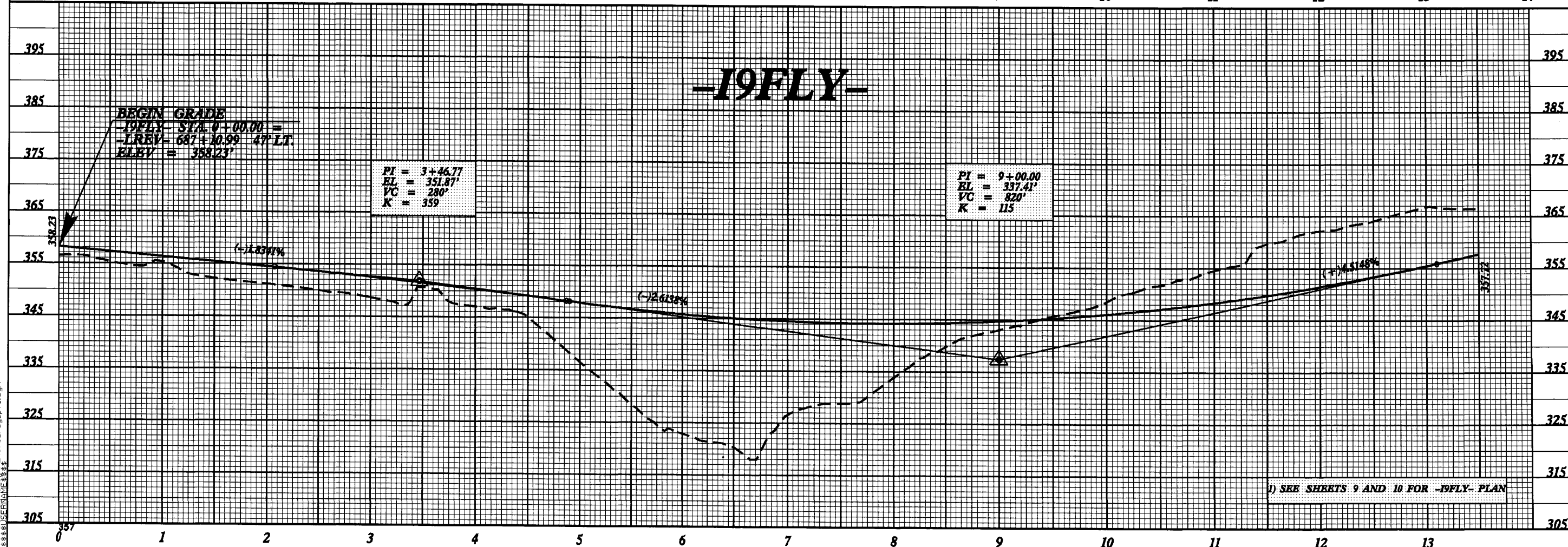
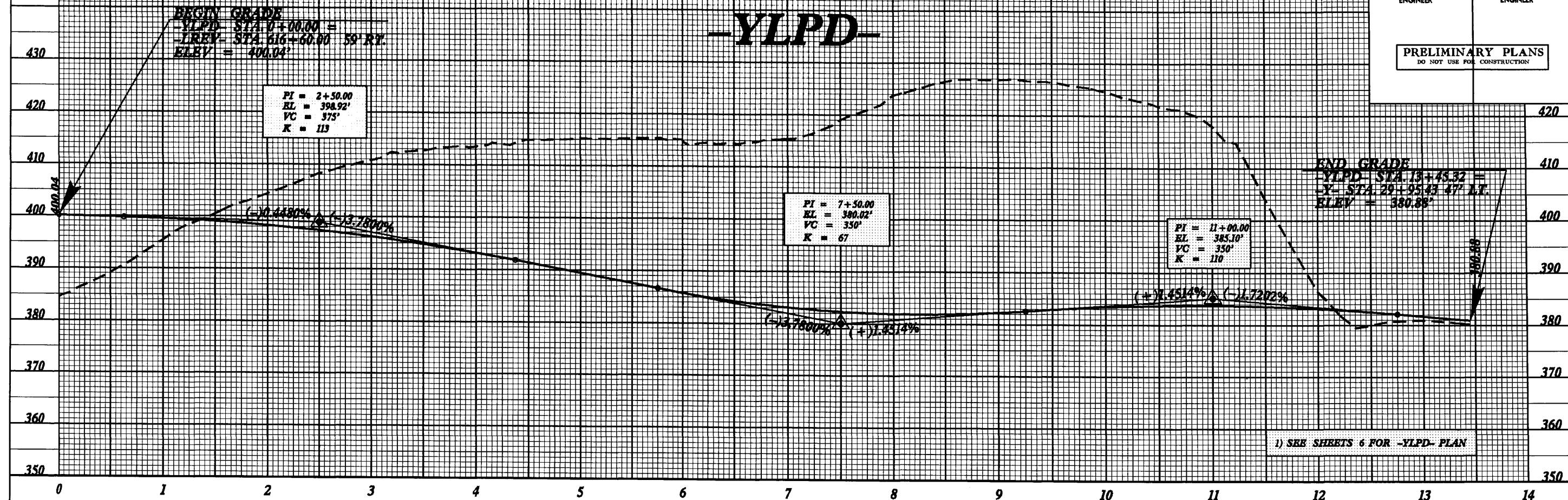
5/28/99

24-MAR-2008 10:08
F:\cadd\work\2417c-rdy-pl1.dgn
33555 USHRNAME

PROJECT REFERENCE NO. R-2417C		SHEET NO. 30
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION		



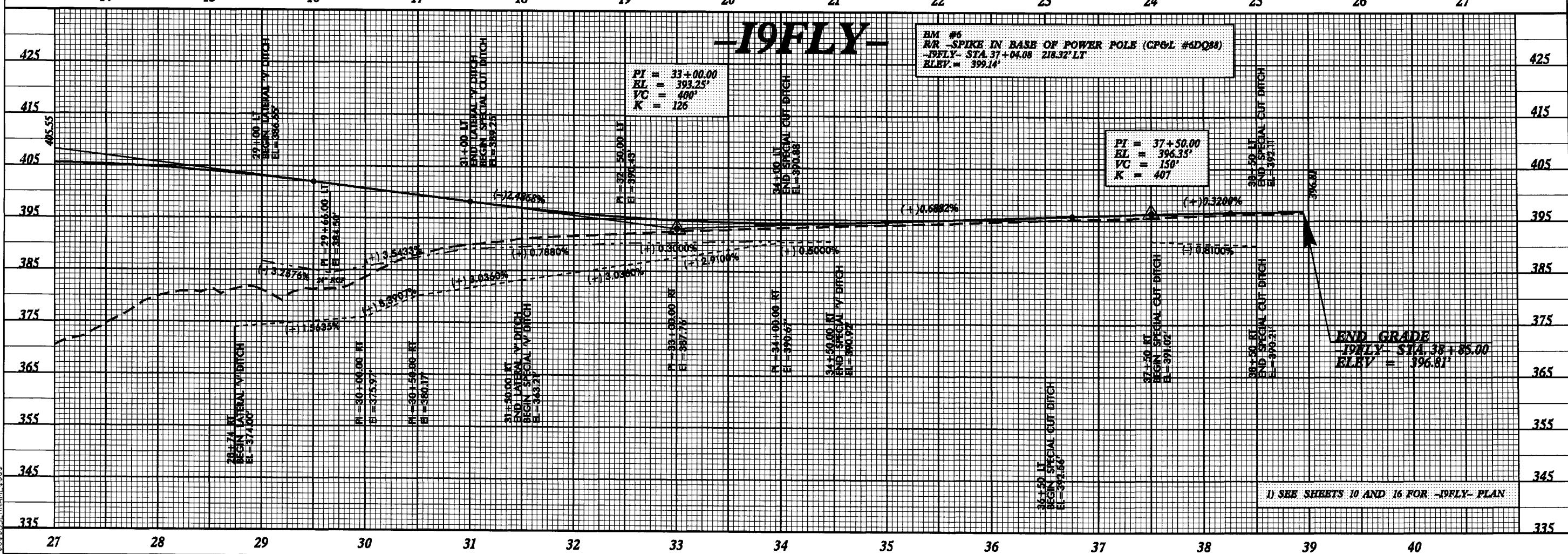
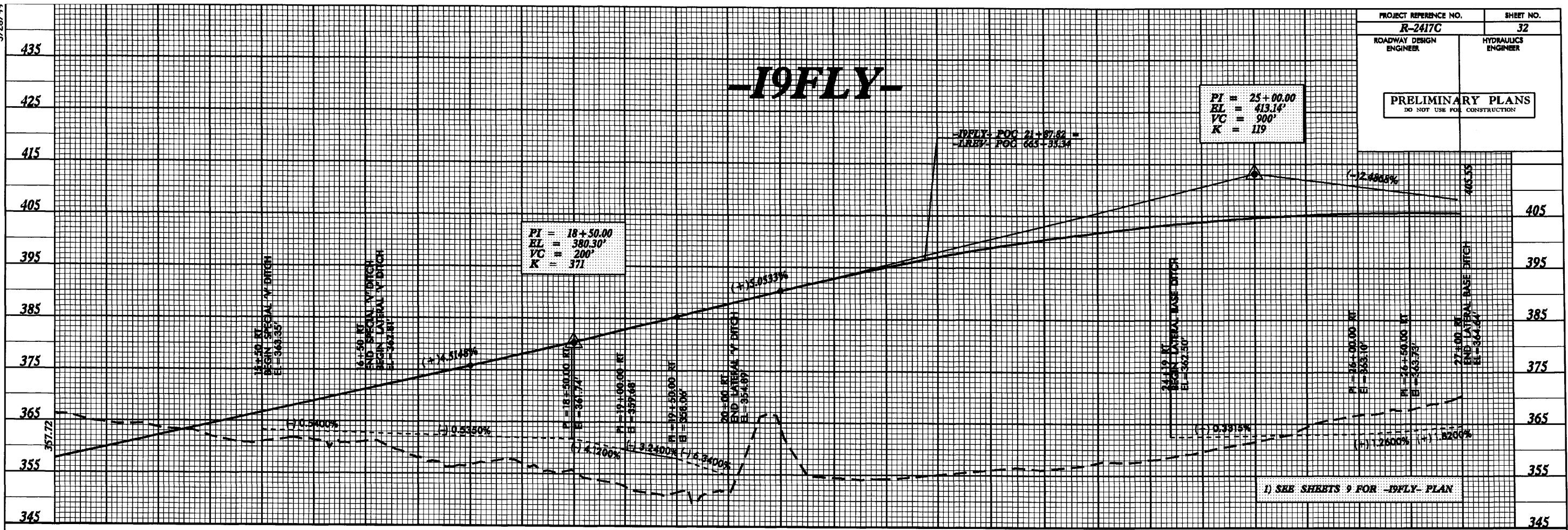
PROJECT REFERENCE NO.	SHEET NO.
<i>R-2417C</i>	<i>31</i>
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	



5/28/99

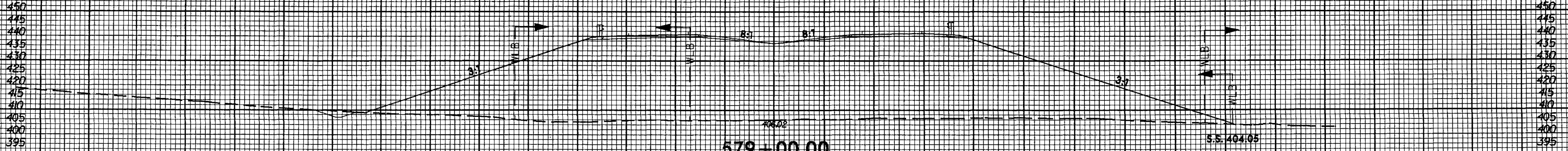
24-MAR-2008 10:08
F:\Roadway\proj\2417c-rd-pl.dgn
\$\$\$\$\$USERNAME\$\$\$\$\$

PROJECT REFERENCE NO.		SHEET NO.
R-2417C		32
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER	
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION		

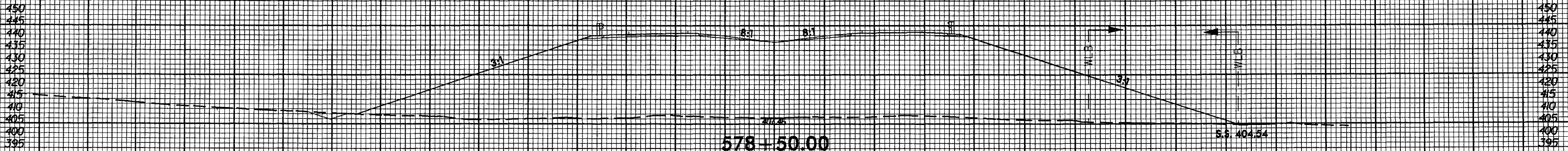




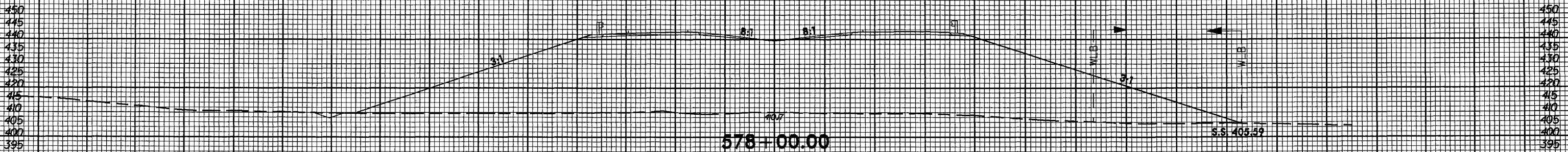
3100500992928280727062625550421032302221015100500959085607570656055504540353025201510 5 0 5 10 15 20 25 30 35 40 45 50 55 60 65 70 75 80 85 90 95 00 05 10 15 20 25 30 35 40 45 50 55 60 65 70 75 80 85 90 95 00 05 10 15 20 25 30 35 40 45 50 55 60 65 70 75 80 85 90 95 00 05 10



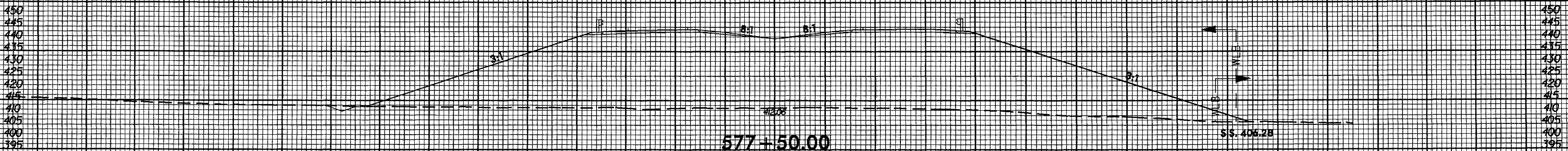
579+00.00



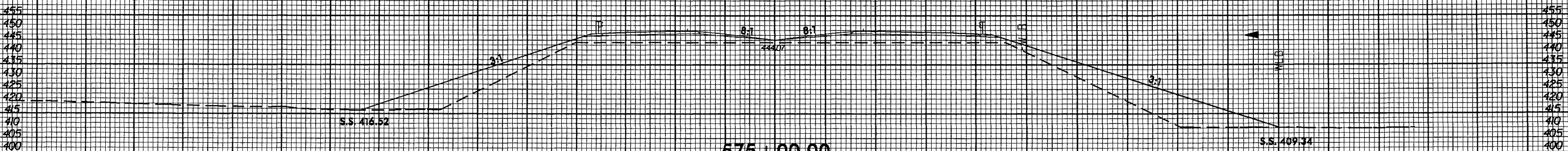
578+50.00



578+00.00



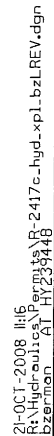
577+50.00

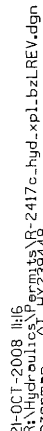


575+00.00

-LREV-

3100500992928280727062625550421032302221015100500959085607570656055504540353025201510 5 0 5 10 15 20 25 30 35 40 45 50 55 60 65 70 75 80 85 90 95 00 05 10 15 20 25 30 35 40 45 50 55 60 65 70 75 80 85 90 95 00 05 10



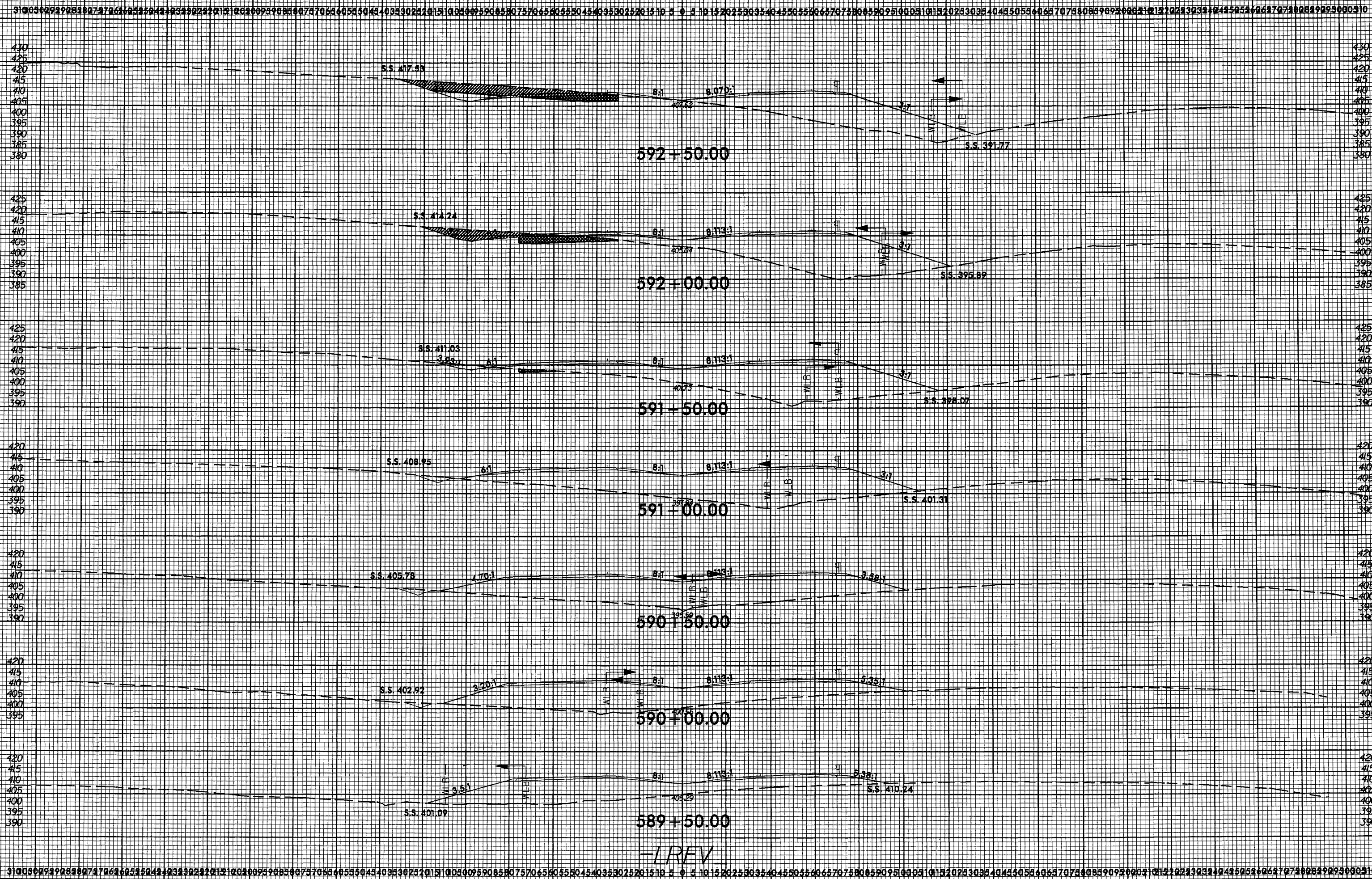


8/23

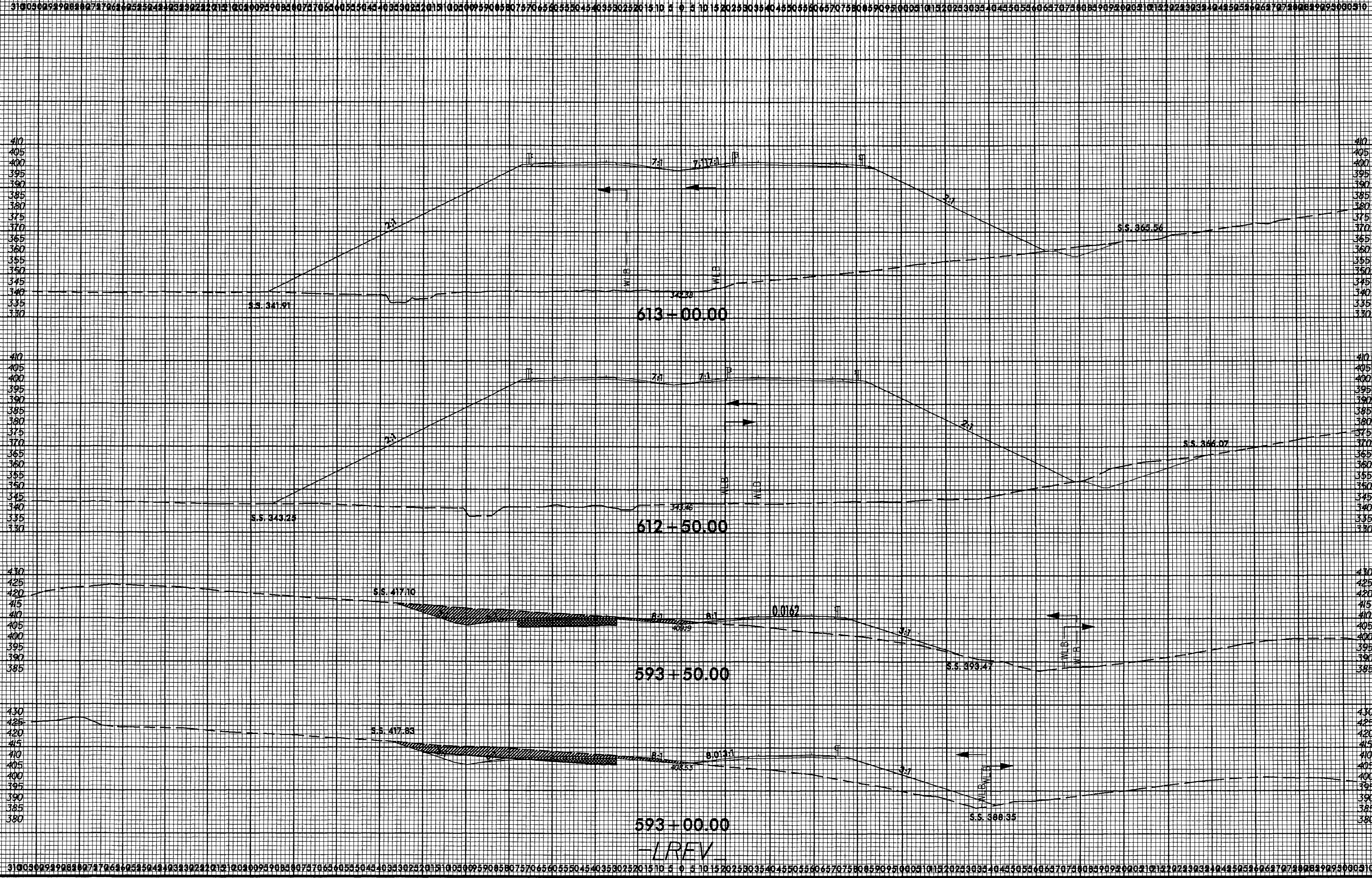


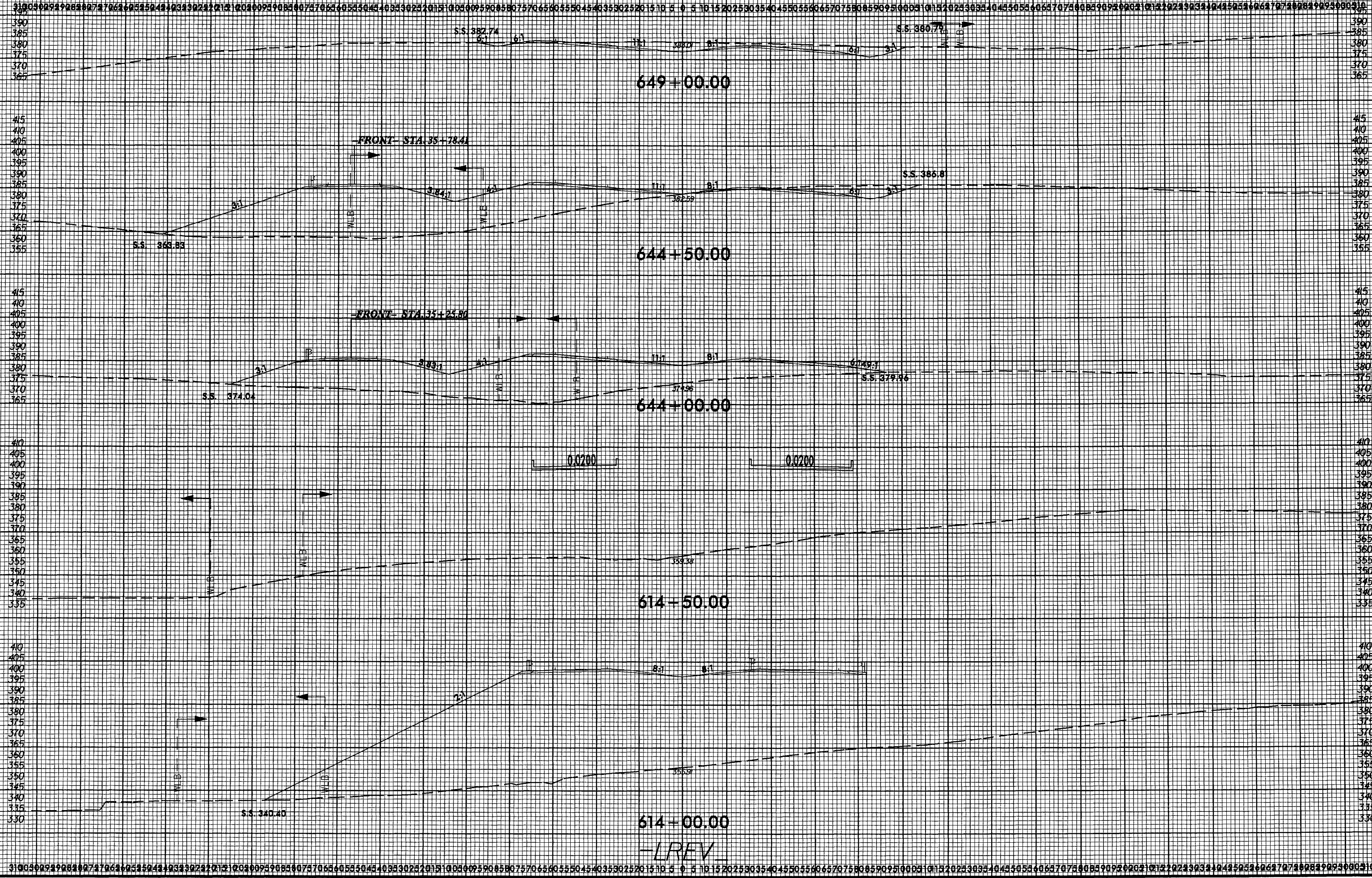
R-2417C

4



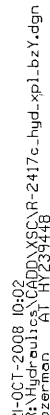
21-OCT-2008 11:20
S:\Hydro\103\Per\0313\18-2417c_hyd.xpl.bzLREV2.dgn
User: 21



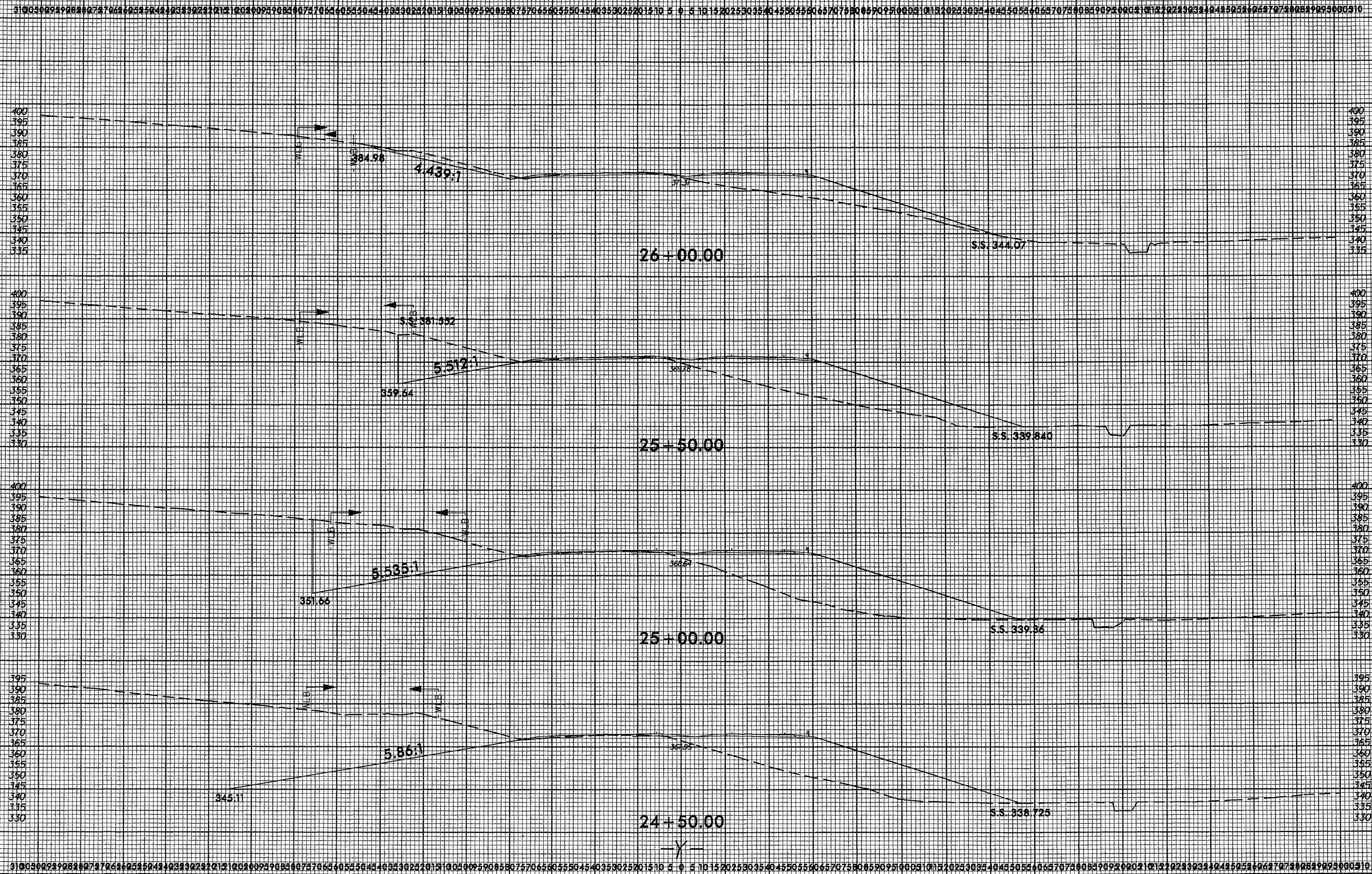




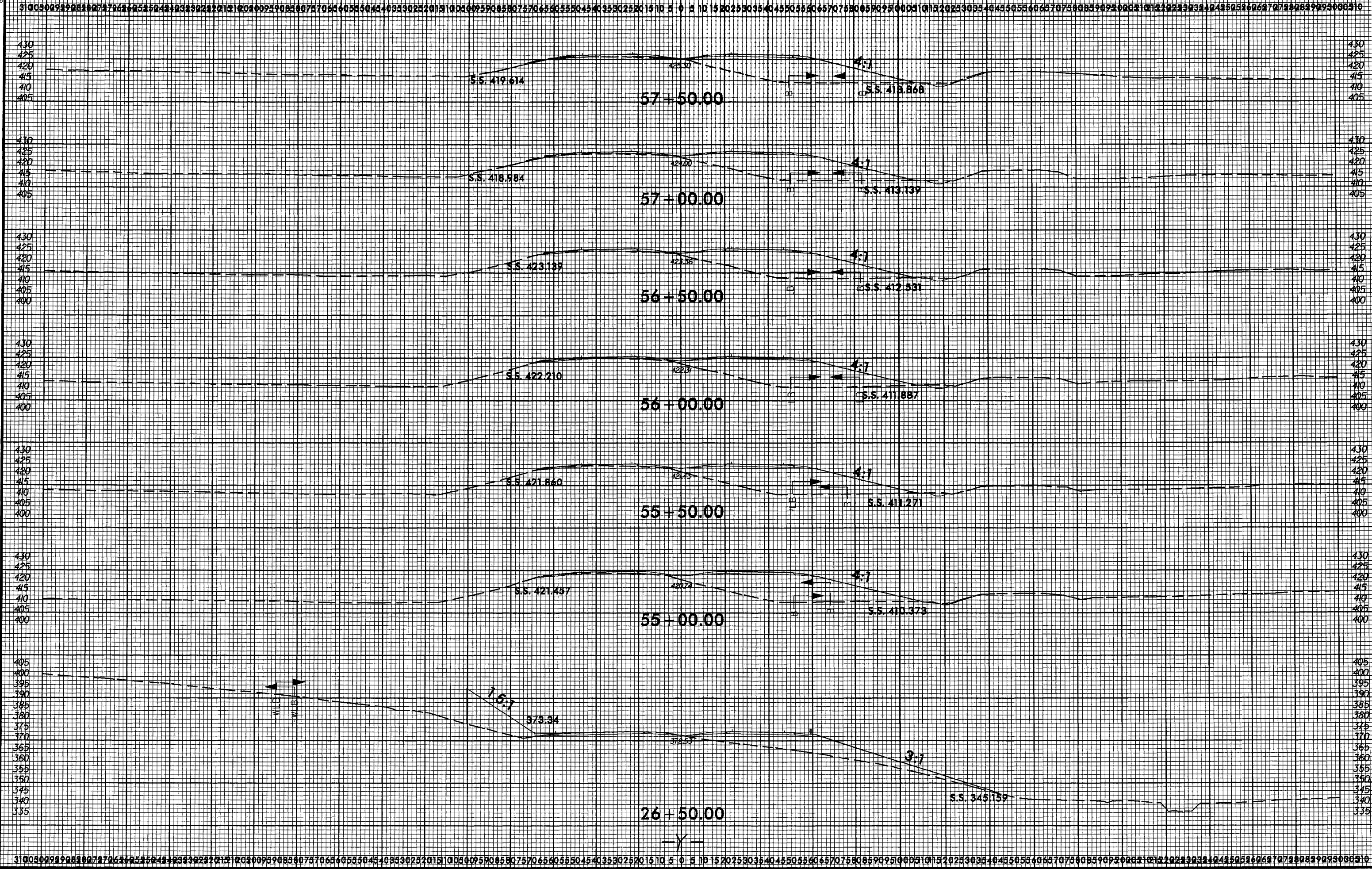
21-OCT-2008 11:20
R:\Hydraulics\Permits\R-2417c_hyd_xpl.bzLREV2.dgn
bzerman AT HY239448



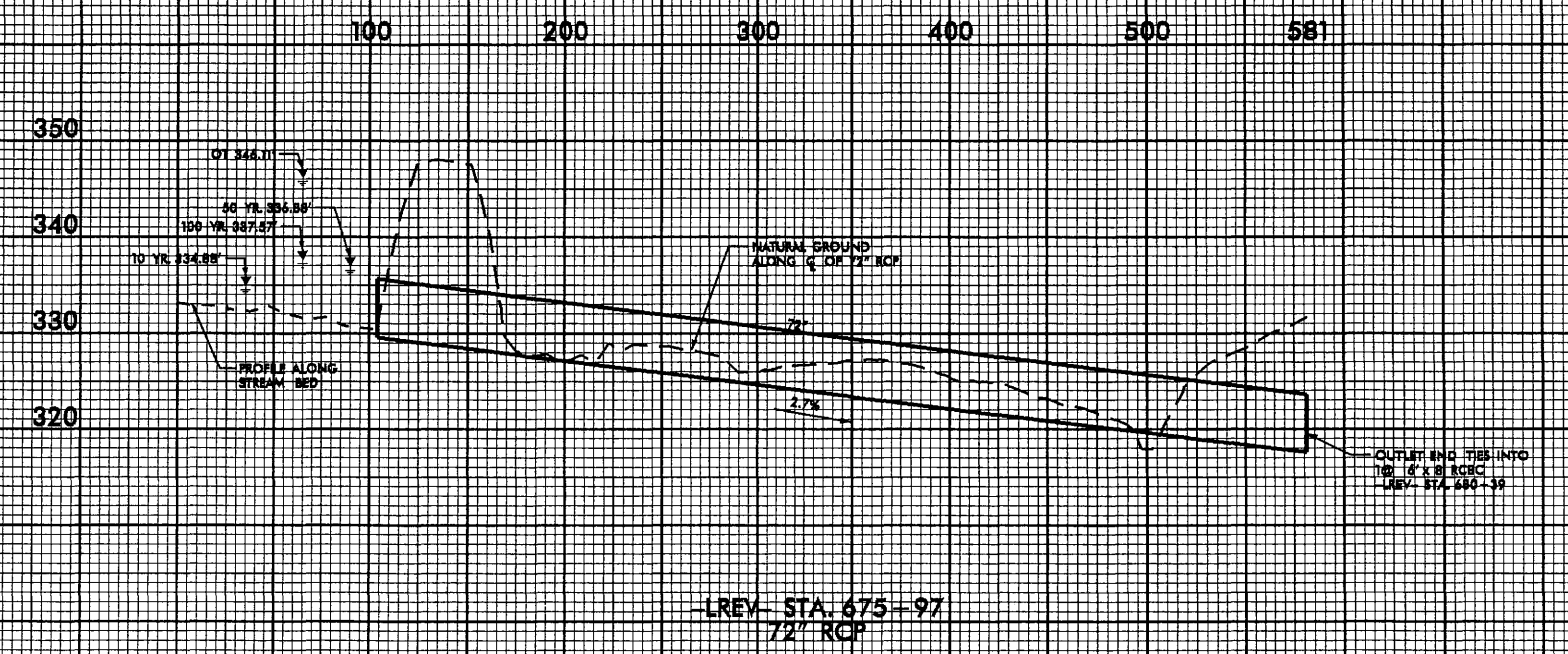
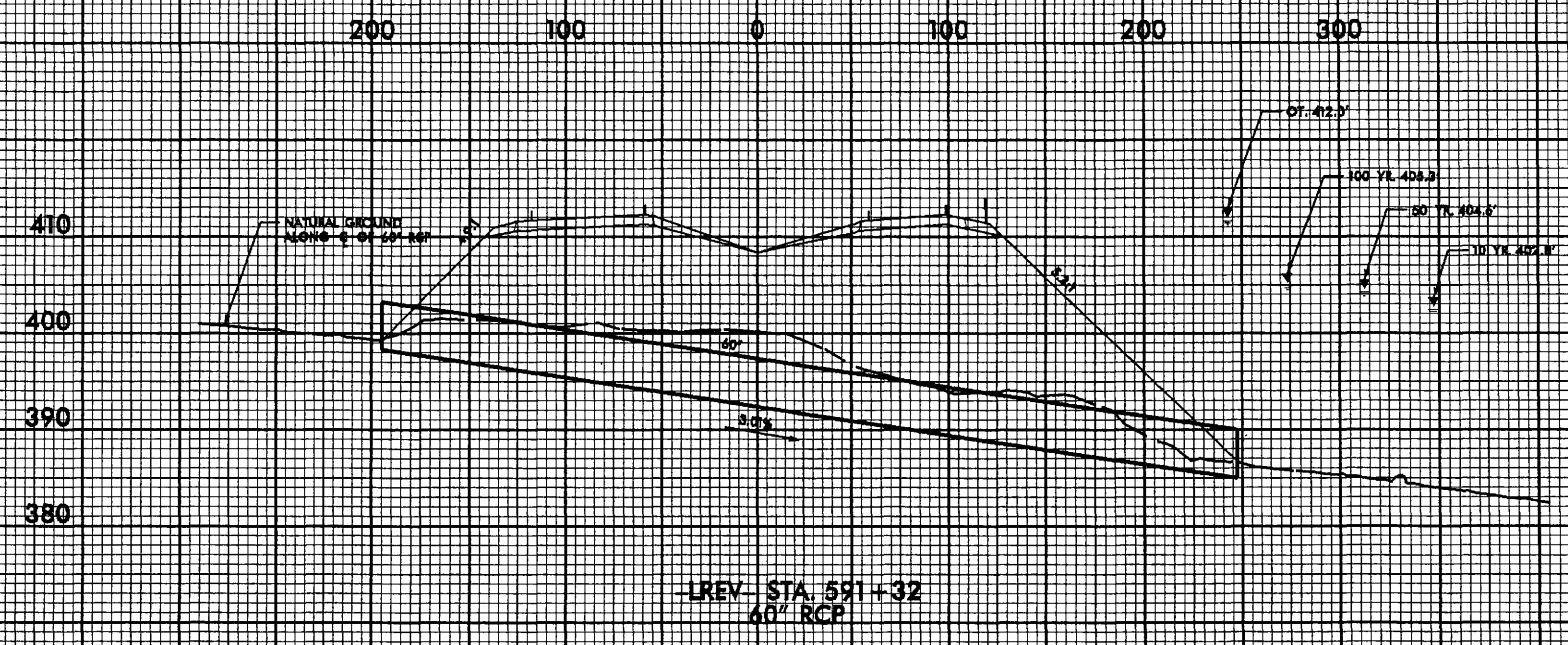
8/23
21-0CT-2008 10:02
R:\Hydraulics\XCAD\R-2417c-hyd.xpl b2Y.dgn
239248
b2Ymon

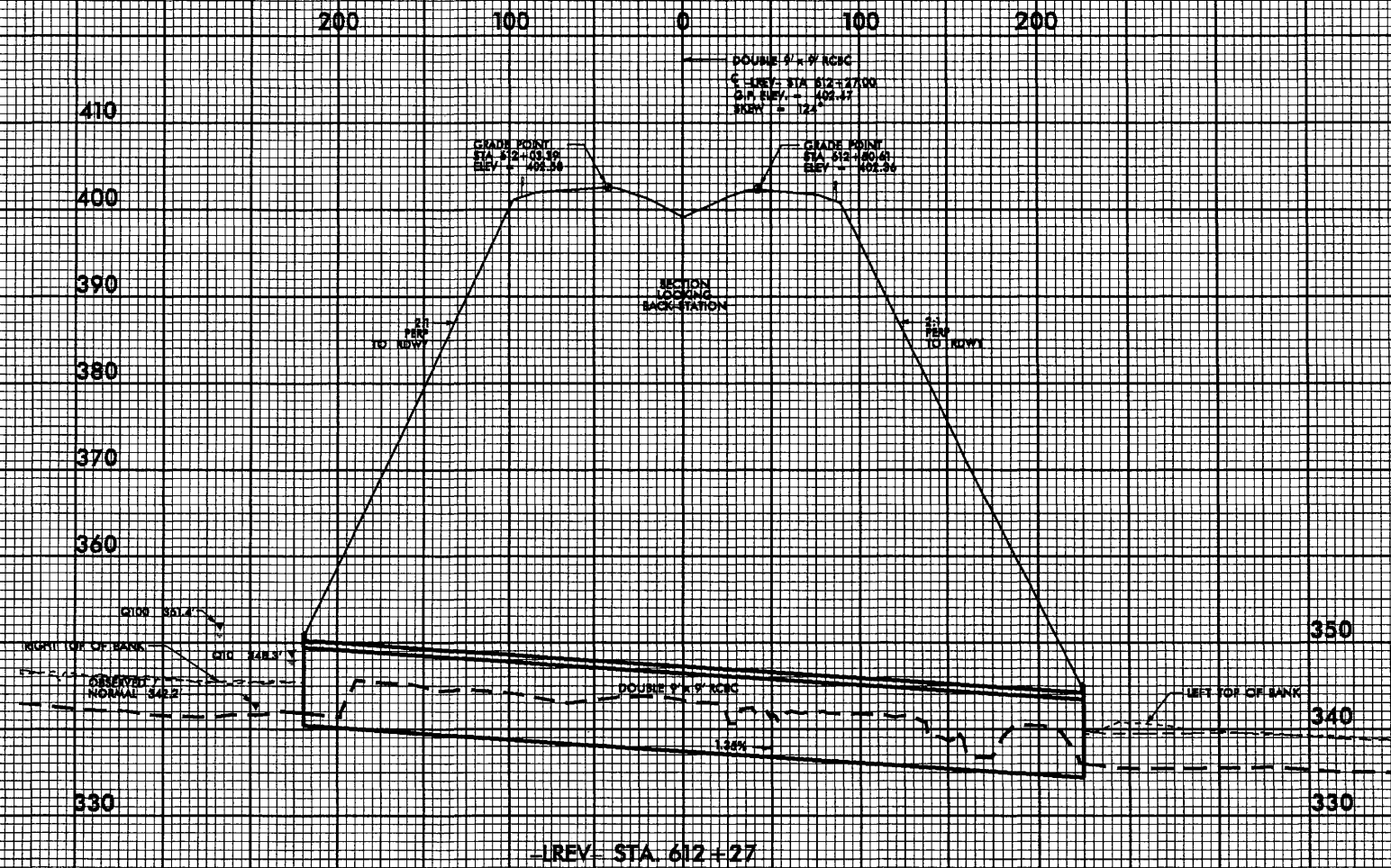


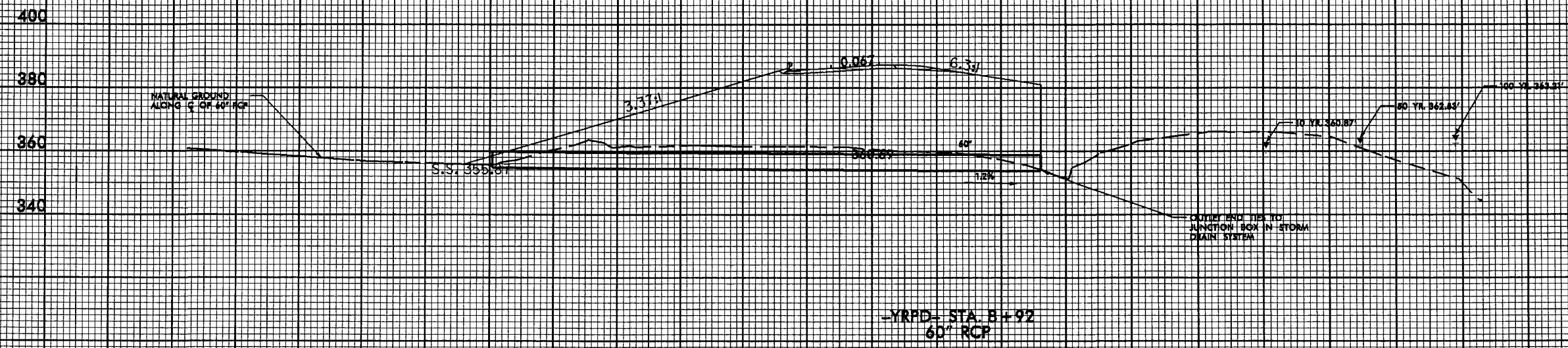
8/23

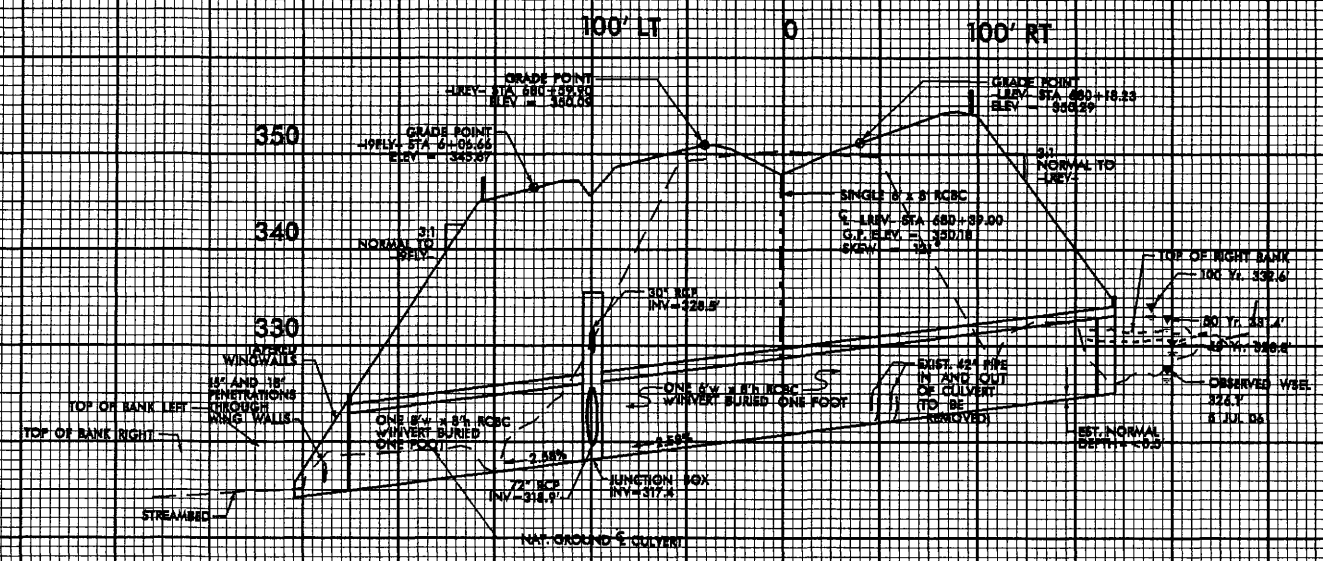




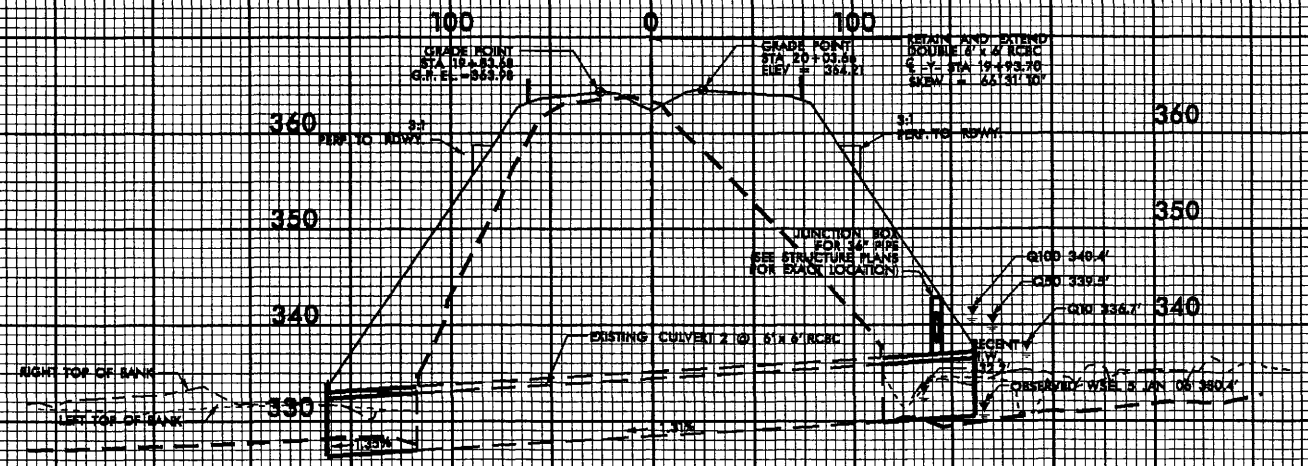








-LEV- STA. 680+39



-Y- STA. 19+93

