



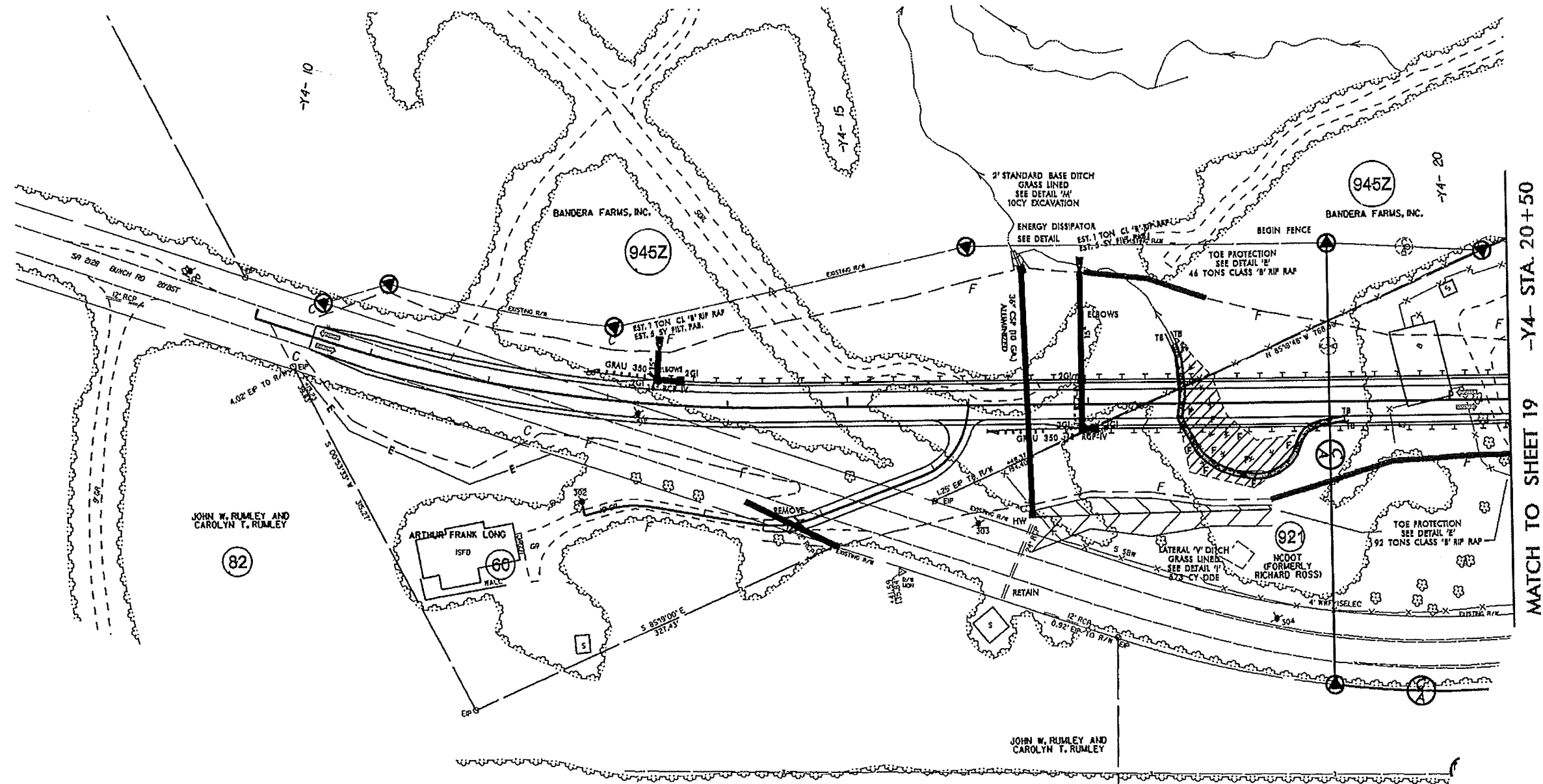
NO. 231533 2007

R-2413A		31
RW SHEET NO.		
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER	
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION		

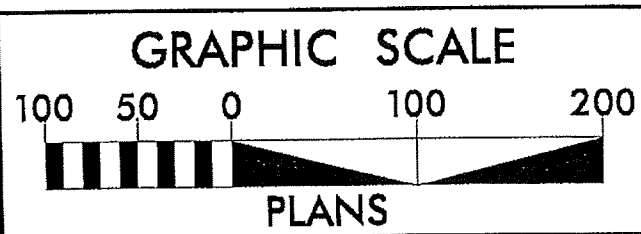
 DENOTES IMPACTS IN SURFACE WATER

 DENOTES FILL IN WETLAND

SITE 20



MATCH TO SHEET 19 -Y4- STA. 20+50



REVISIONS

8/17/99

***** SYSTEMS DESIGN *****

8/17/99

Permit Drawing
Sheet 64 of 81

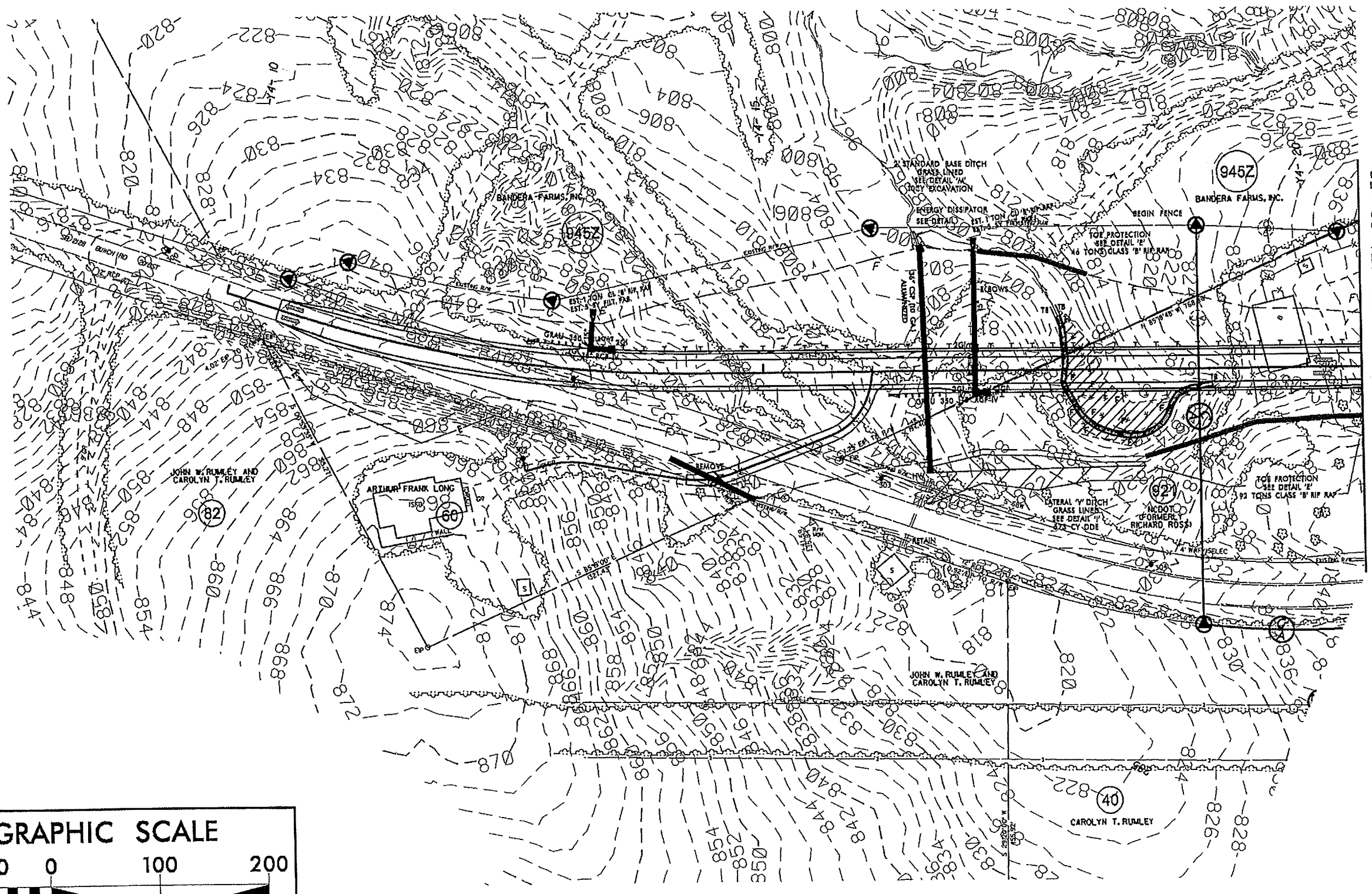
NO. 23153 2001

R-2413A	31
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	

DENOTES IMPACTS IN SURFACE WATER

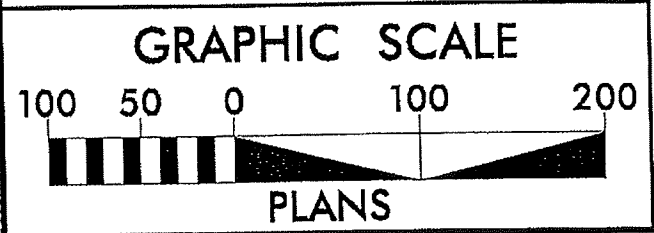
DENOTES FILL IN WETLAND

SITE 20



REVISIONS

MATCH TO SHEET 19 -Y4- STA. 20+50

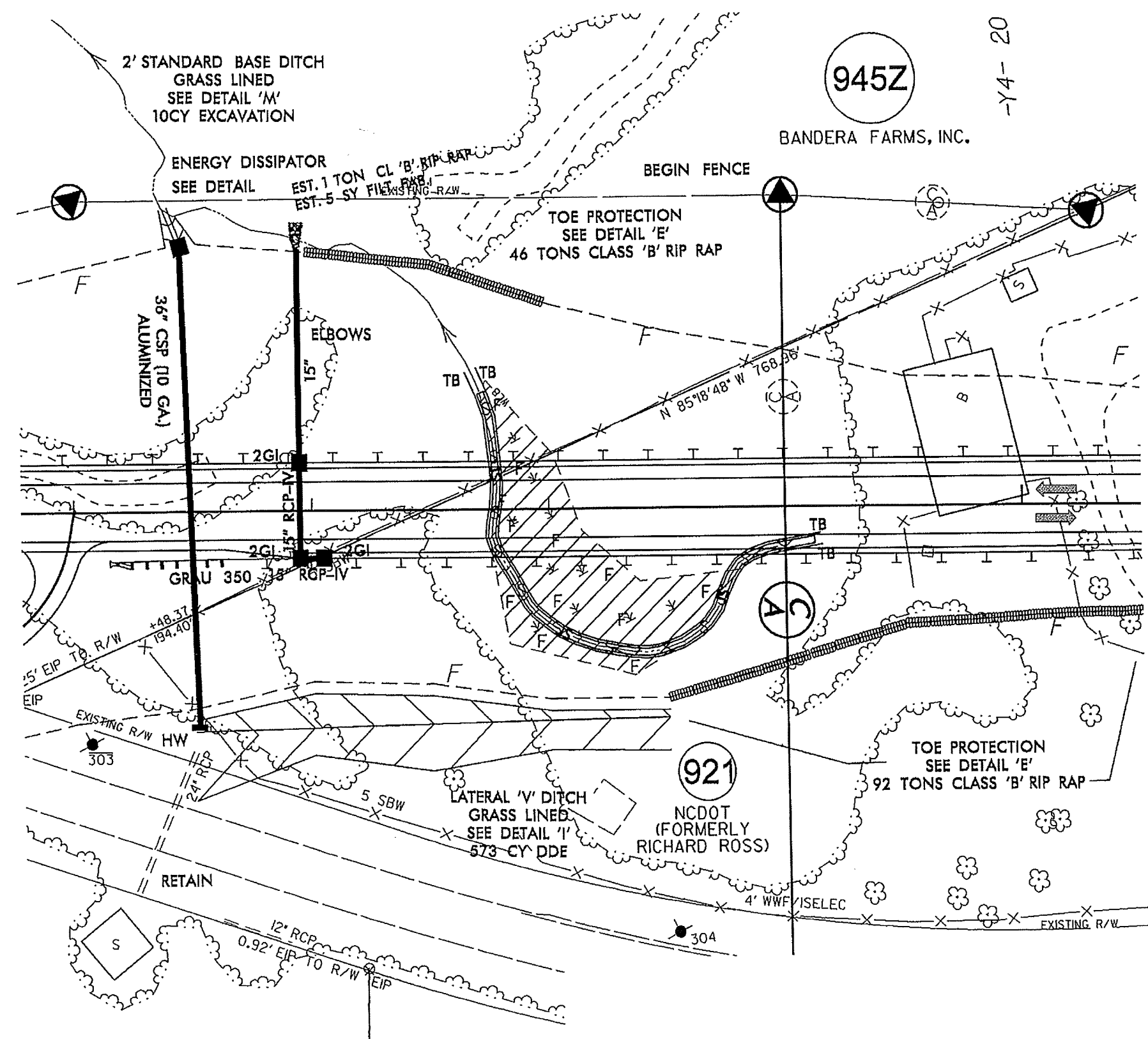
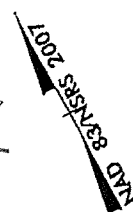


*****SYTIME*****
*****LUN*****

8/17/98

R-2413A		31
RAW SHEET NO.		
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER	
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION		

Permit Drawing
Sheet 65 of 81

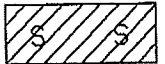



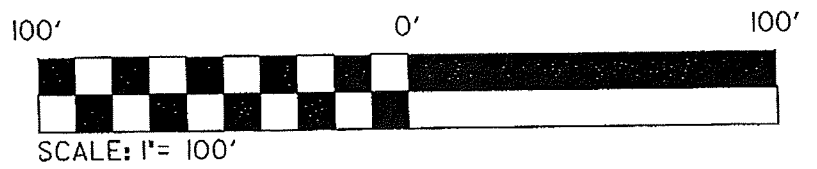
945Z

BANDERA FARMS, INC.

-Y4- 20

SITE 20

-  DENOTES IMPACTS IN SURFACE WATER
-  DENOTES FILL IN WETLAND

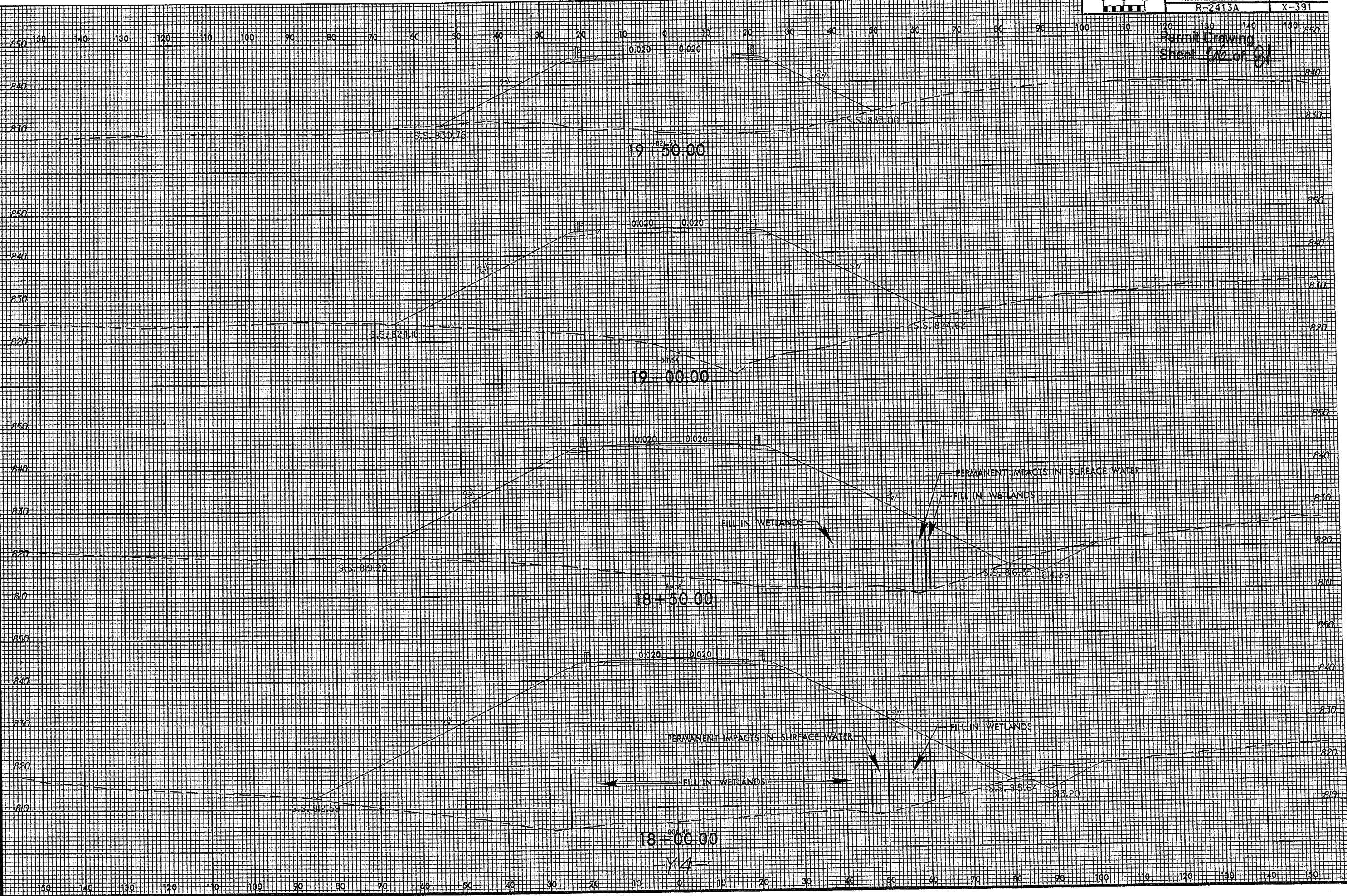


REVISIONS

 SYSTEMS
 DESIGN

8/23/99
*****SYSTEMS*****
*****USE ONLY*****

Permit Drawing
Sheet 10 of 11



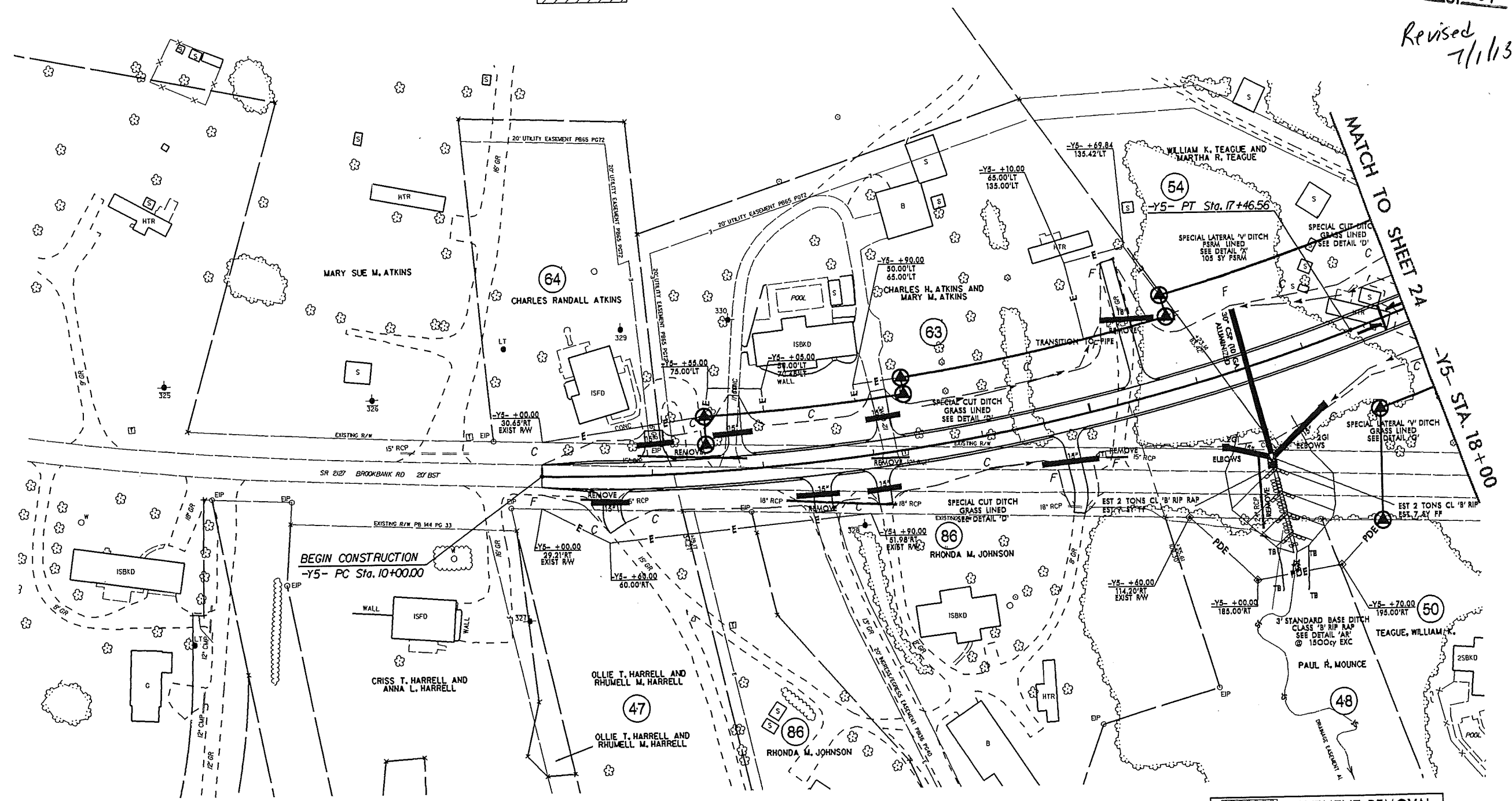
SITE 23

NAD 83/NSRS 2007

Permit Drawing
 Sheet 1 of 91

Revised
 7/11/13

DENOTES TEMPORARY IMPACTS IN SURFACE WATER



PAVEMENT REMOVAL
 FOR -Y5- PROFILE, SEE SHEET NO. 61
 DRIVEWAY RADII ARE 15', UNLESS NOTED
 FOR DITCH DETAILS, SEE SHEET NO. 2-W & 2-X

REVISIONS
 DESIGN REVISION: THE VERTICAL ALIGNMENT FOR -Y5- HAS BEEN REVISED. JLT 1/28/2013
 R/W REVISION: PARCEL NUMBER 87 HAS BEEN CHANGED TO PARCEL 86. PARCEL 87 HAS BEEN COMBINED WITH PARCEL 86. CEH 2/27/13.

B/17/99
 SYSTEMS
 CONSTRUCTION

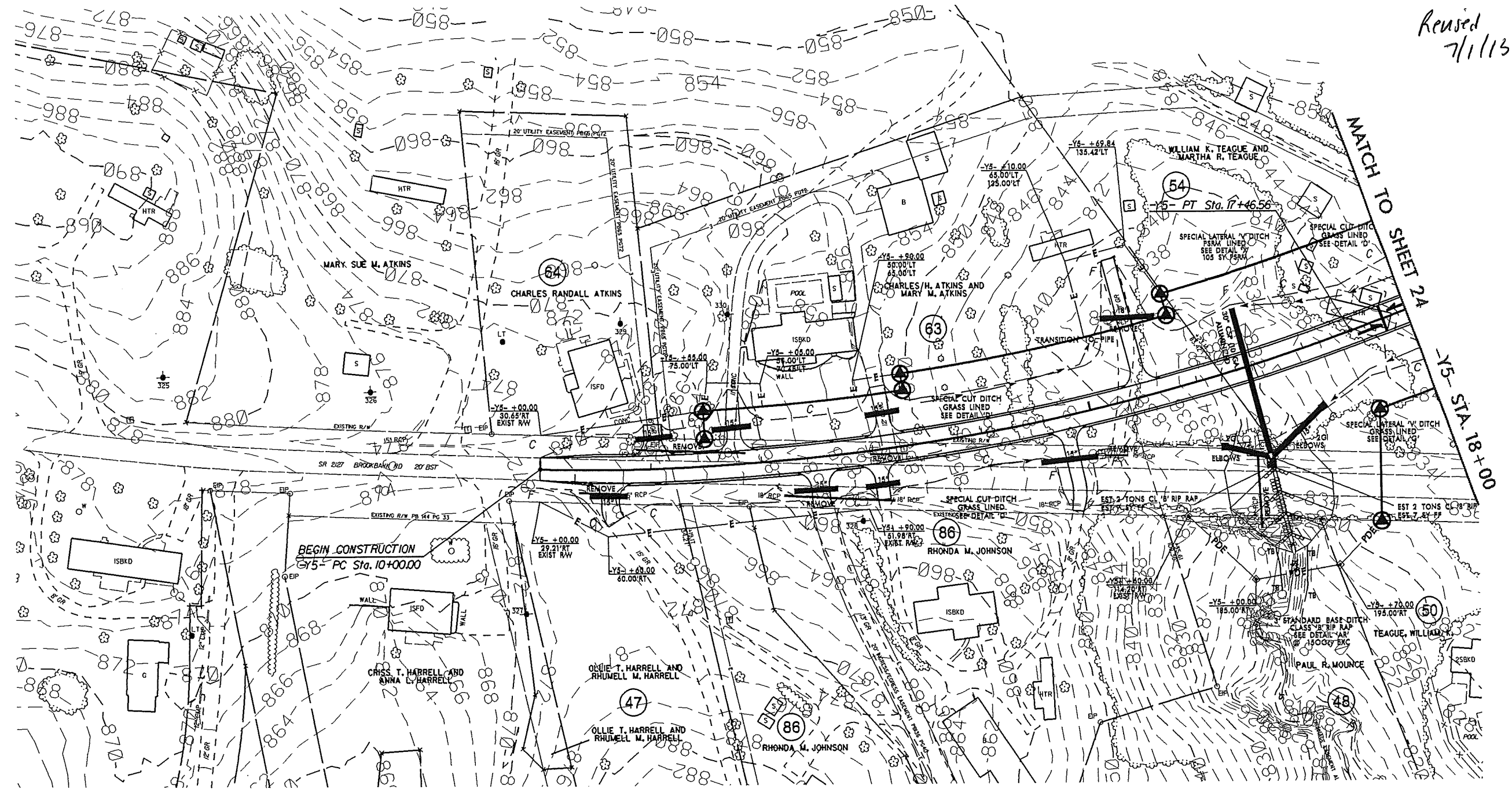
SITE 23

PROJECT REFERENCE NO. R-2413A	SHEET NO. 33
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	


Permit Drawing
Sheet 66 of 91

Revised
7/1/13

 DENOTES TEMPORARY IMPACTS IN SURFACE WATER

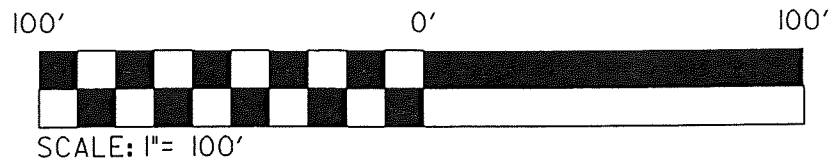


REVISIONS
 DESIGN REVISION: THE VERTICAL ALIGNMENT FOR -Y5- HAS BEEN REVISED. JLT 1/28/2013
 R/W REVISION: PARCEL NUMBER 87 HAS BEEN CHANGED TO PARCEL 86. PARCEL 87 HAS BEEN COMBINED WITH PARCEL 86. CEH 2/27/13.

 PAVEMENT REMOVAL
 FOR -Y5- PROFILE, SEE SHEET NO. 61
 DRIVEWAY RADII ARE 15', UNLESS NOTED
 FOR DITCH DETAILS, SEE SHEET NO. 2-W & 2-X

8/17/99

8/17/99

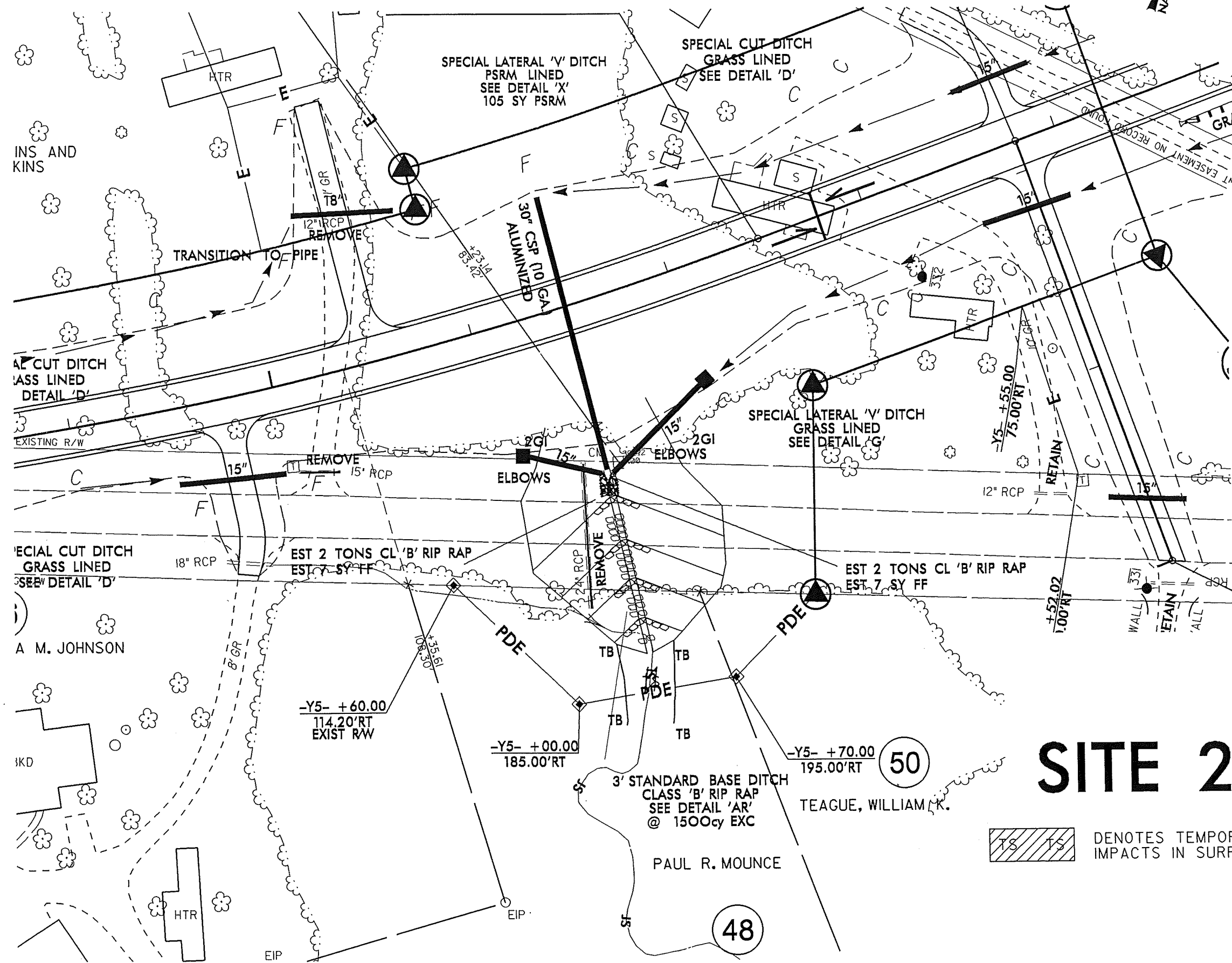


PROJECT REFERENCE NO. R-2413A	SHEET NO. 33
RAW SHEET NO.	HYDRAULICS ENGINEER
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	

NAD 83/NRS 2007

Permit Drawing
Sheet 166C of 81

Revised
7/1/13



SITE 23

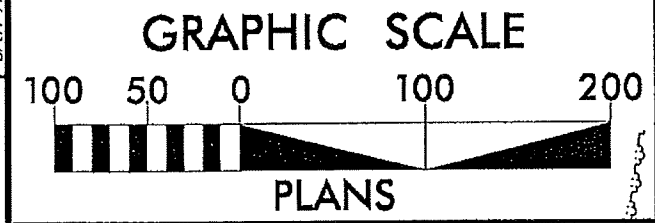
50
TEAGUE, WILLIAM K.

48

DENOTES TEMPORARY IMPACTS IN SURFACE WATER

REVISIONS

EXISTING CONDITIONS

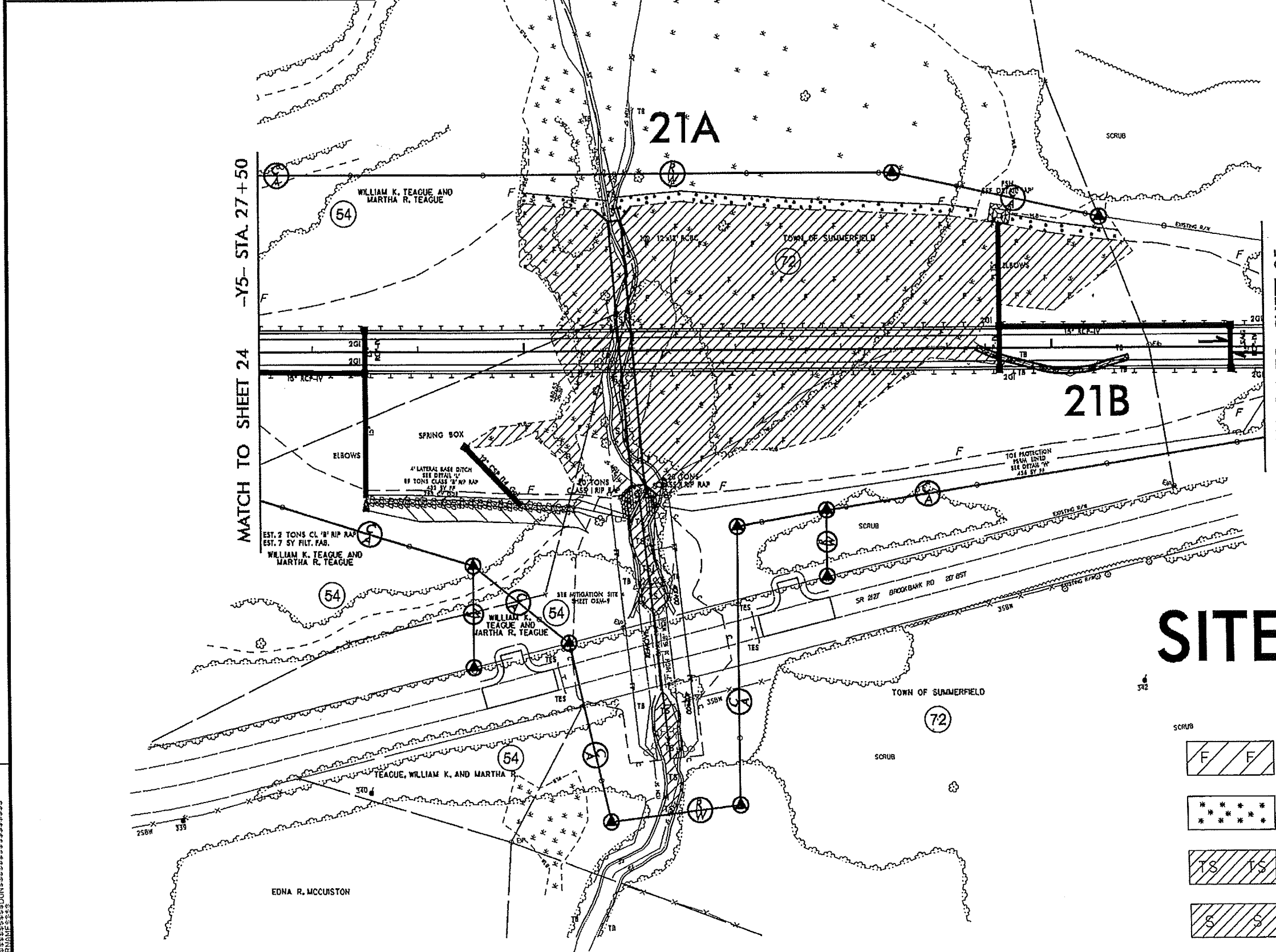


Permit Drawing
Sheet 67 of 81


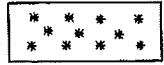
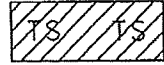

NAD 83/NSRS 2007

PROJECT REFERENCE NO. R-2413A		SHEET NO. 34	
RW SHEET NO.		HYDRAULICS ENGINEER	
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER	
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION			

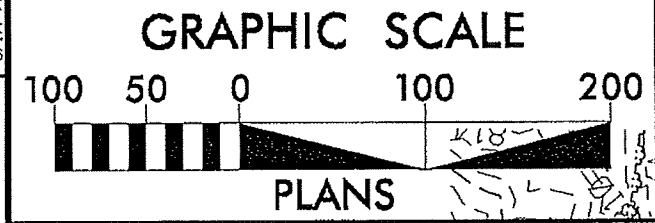
REVISIONS
 R/W REVISION: PARCEL NUMBER 53 HAS BEEN CHANGED TO PARCEL NUMBER 54. CEH 1/23/2013
 DESIGN REVISION: THE VERTICAL ALIGNMENT FOR -Y5- HAS BEEN REVISED. JLT 1/28/2013



SITE 21

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

SYSTEMS
 DESIGN

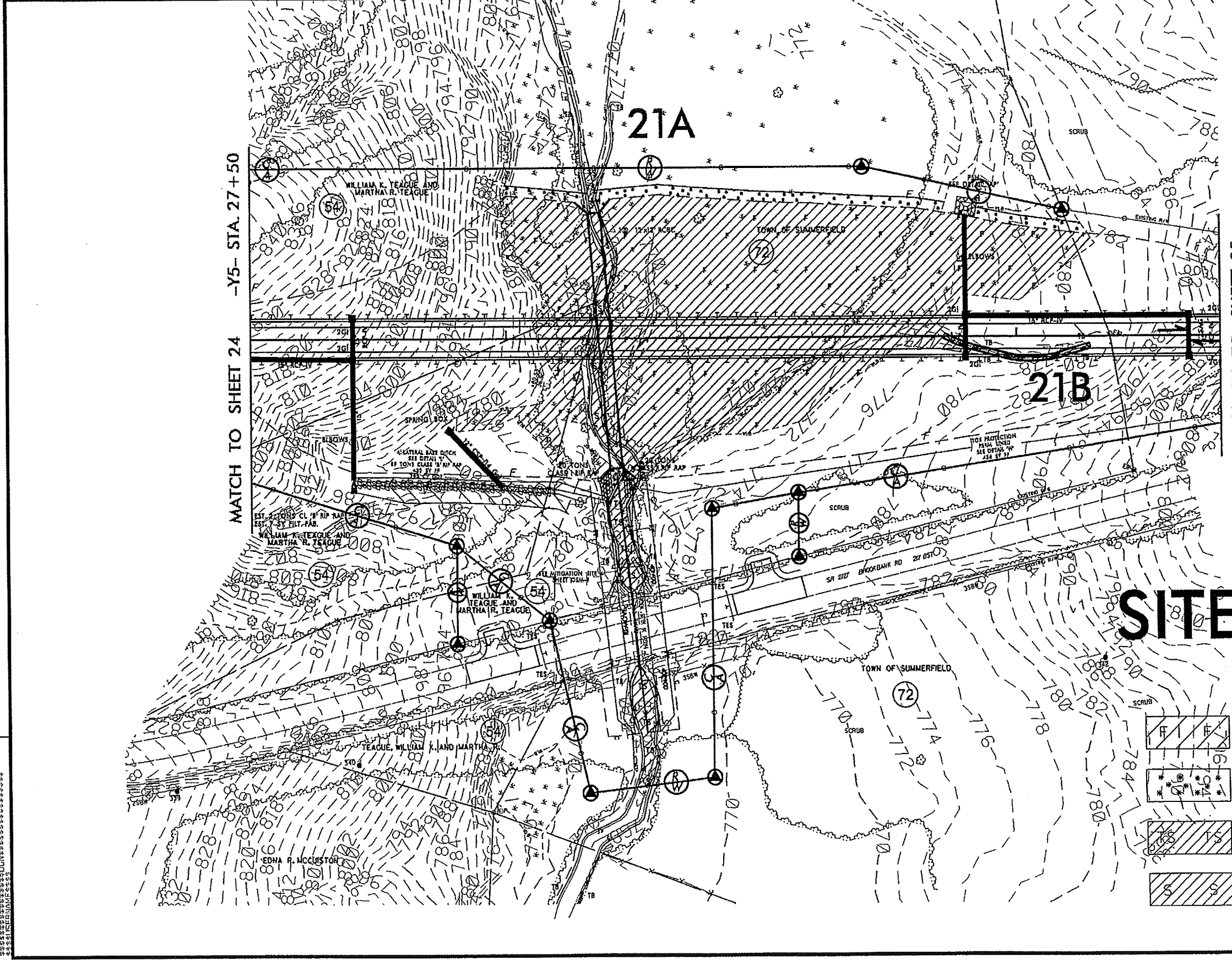


Permit Drawing
Sheet 08 of 01

PROJECT REFERENCE NO. R-2413A	SHEET NO. 34
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	

NAD 83/NSRS 2007

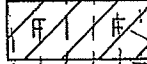

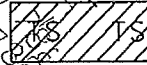
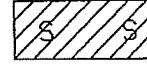
REVISIONS
 R/W REVISION: PARCEL NUMBER 53 HAS BEEN CHANGED TO PARCEL NUMBER 54. CEH 1/23/2013
 DESIGN REVISION: THE VERTICAL ALIGNMENT FOR -Y5- HAS BEEN REVISED. JLT 1/28/2013



MATCH TO SHEET 24 -Y5- STA. 27+50

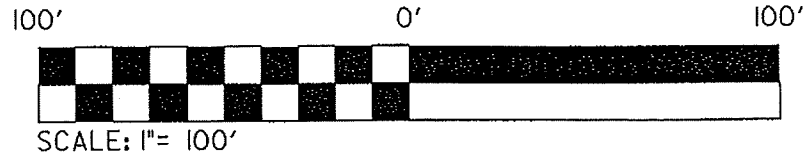
MATCH TO SHEET 35
-Y5- STA. 37+00

SITE 21

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

*****SYTIME*****

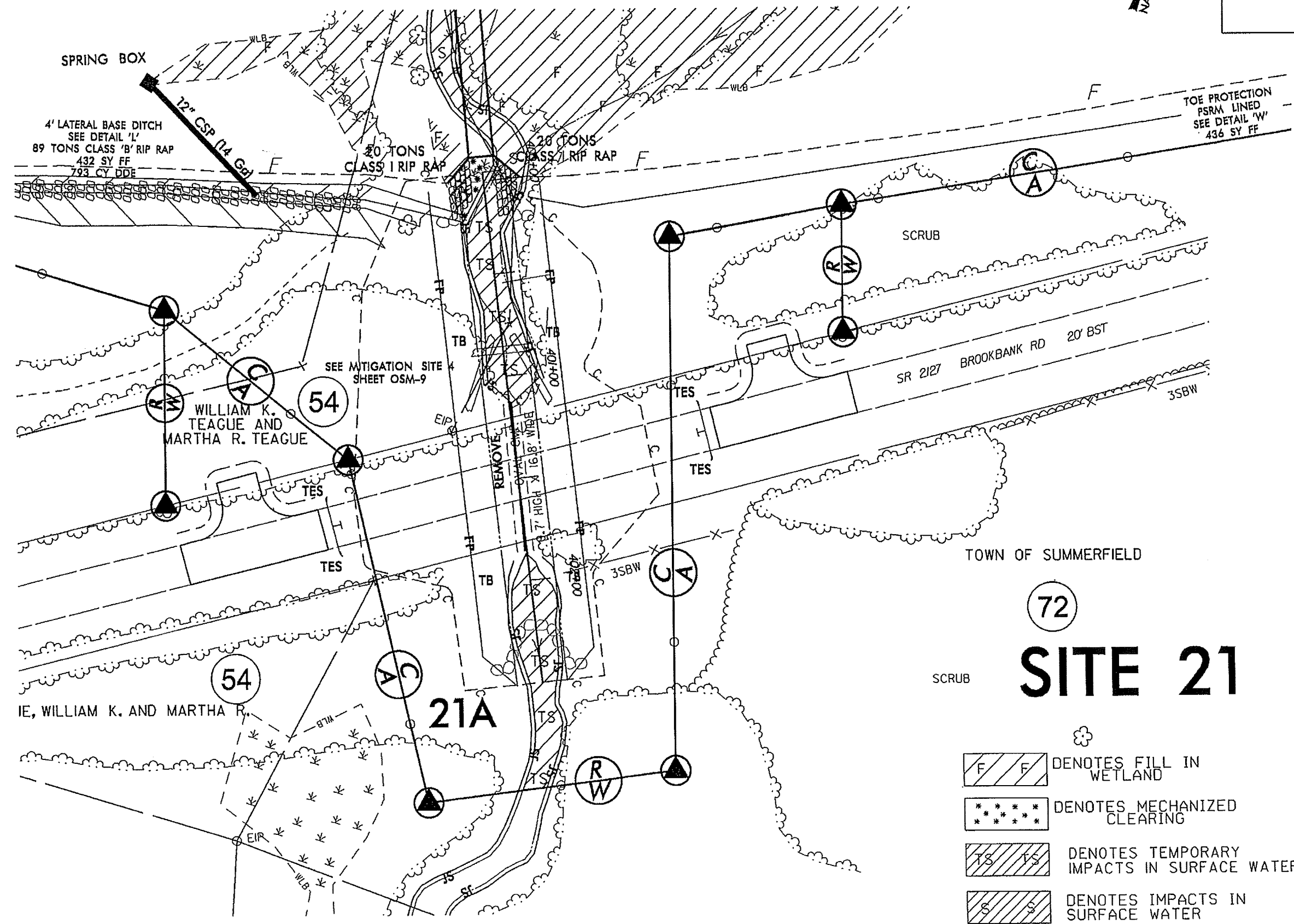
8/17/99



Permit Drawing
Sheet 109 of 81


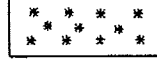
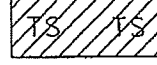



PROJECT REFERENCE NO. R-2413A		SHEET NO. 34	
RDW SHEET NO.		HYDRAULICS ENGINEER	
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER	
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION			

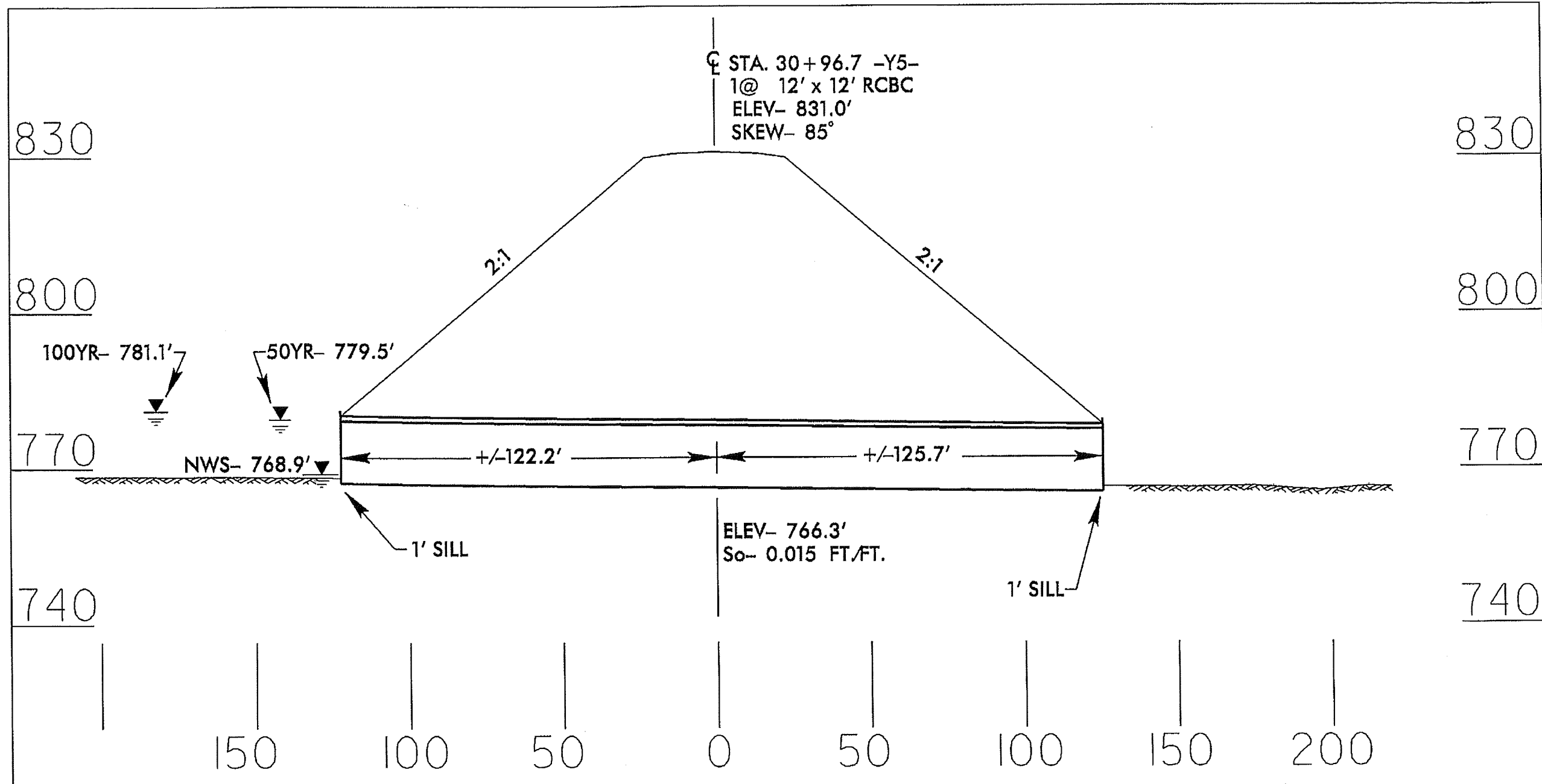


REVISIONS

 SYSTEMS

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

(72)
SITE 21



STA. 30+96.7 -Y5-
 1@ 12' x 12' RCBC
 ELEV- 831.0'
 SKEW- 85°

830

830

800

800

770

770

740

740

150

100

50

0

50

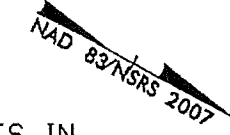
100

150

200

PROFILE

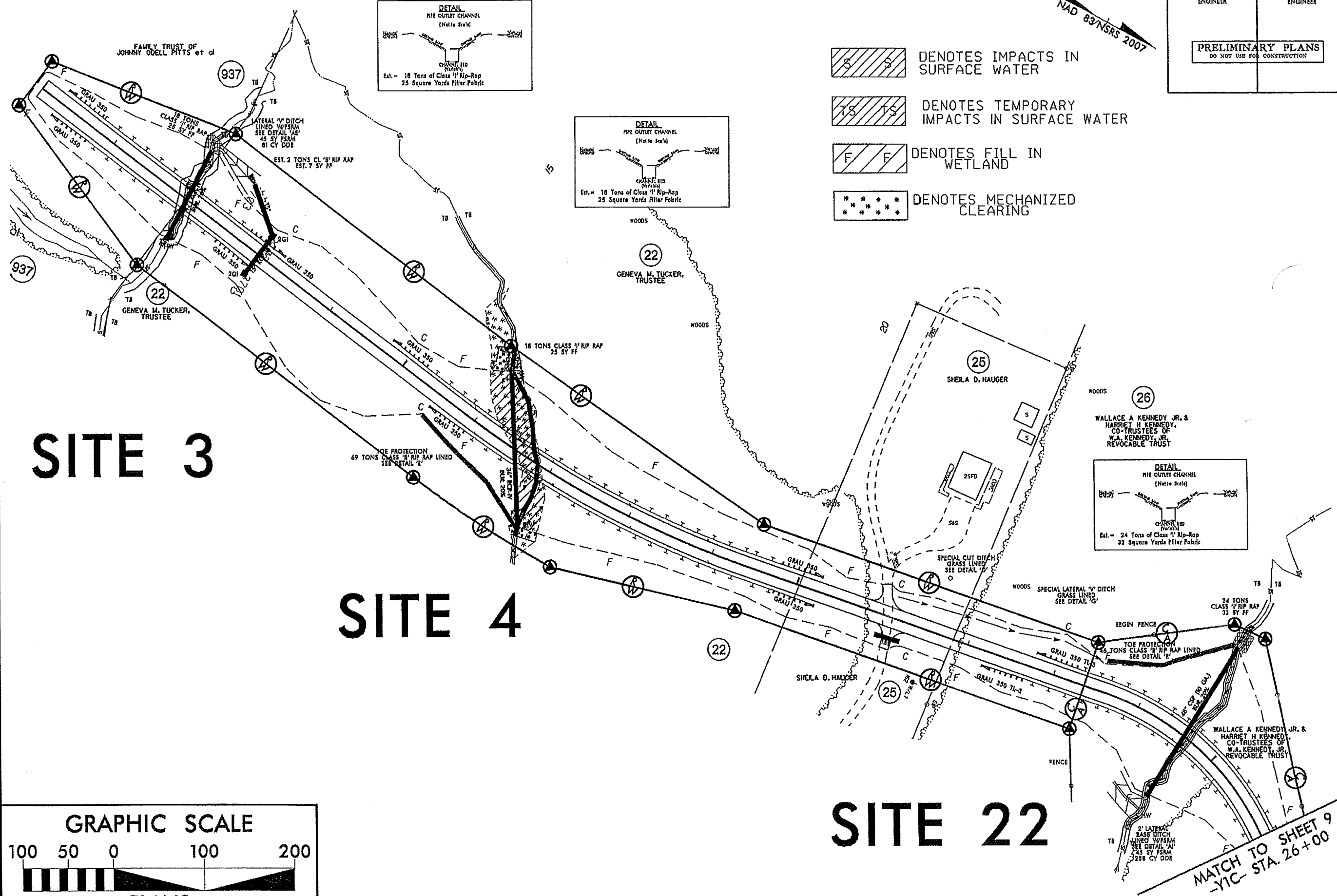
NCDOT
 DIVISION OF HIGHWAYS
 GUILFORD COUNTY
 PROJECT: 34429.1.1 (R-2413A)
 NC 68 CONNECTOR
 FROM FOUR LANES AT
 SR 2011 TO SR 2127
 SHEET 70 OF 81
 2 / 13 / 13



PROJECT REFERENCE NO. R-2413A	SHEET NO. 37
RAW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	

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

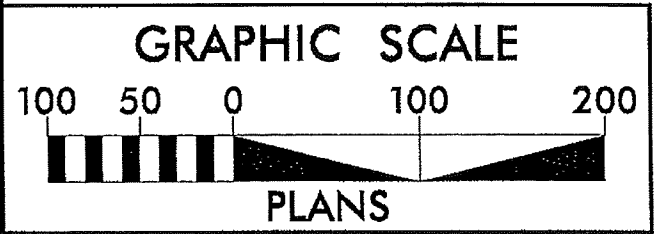
REVISIONS
 DESIGN REVISION: THE HORIZONTAL DESIGN FOR -YIC- HAS BEEN REVISED. THE LEFT TURN LANE ON -YIC- HAS BEEN REMOVED AND THE CONCRETE ISLAND HAS BEEN REVISED TO RESTRICT LEFT TURNS OUT OF -YIC-. IJT 1/28/2013
 R/W REVISION: THE RIGHT OF WAY LABELS ON -YIC- LOCATED ON PARCEL 25 AND 26. CEH 2/27/13.
 R/W REVISION: PROPERTY OWNER NAME AND DEED BOOK INFORMATION HAS BEEN CHANGED ON PARCELS 25 AND 26. CEH 2/27/13.



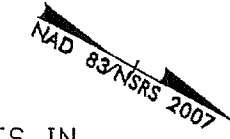
SITE 3

SITE 4

SITE 22

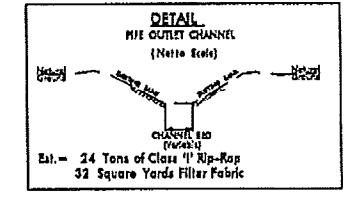
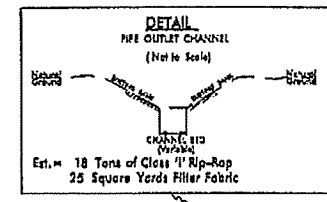
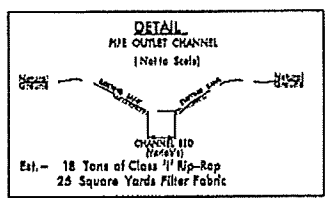
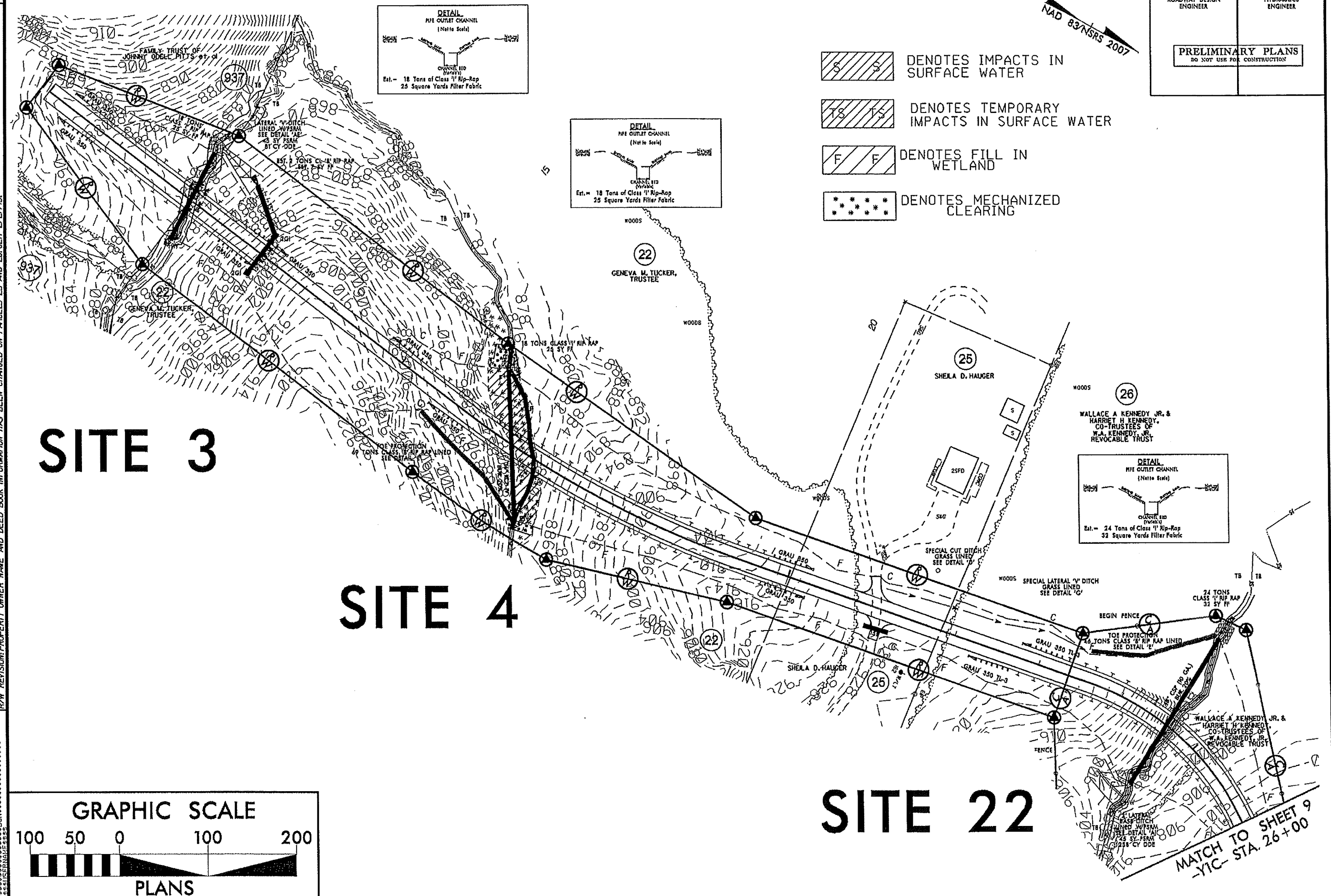


MATCH TO SHEET 9
-YIC- STA. 26+00



PROJECT REFERENCE NO. R-2413A		SHEET NO. 37	
RAW SHEET NO.			
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER	
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION			

REVISIONS
 DESIGN REVISION: THE HORIZONTAL DESIGN FOR -YIC- HAS BEEN REVISED. THE LEFT TURN LANE ON -YIC- HAS BEEN REMOVED AND THE CONCRETE ISLAND HAS BEEN REVISED TO RESTRICT LEFT TURNS OUT OF -YIC-. IUT 1/28/2013
 R/W REVISION: THE RIGHT OF WAY LABELS ON -YIC- LOCATED ON PARCEL 26 HAVE BEEN REVISED BUT THE RIGHT OF WAY AREA HAS NOT CHANGED. CEH 2/7/13
 R/W REVISION: PROPERTY OWNER NAME AND DEED BOOK INFORMATION HAS BEEN CHANGED ON PARCELS 23 AND 26. CEH 2/27/13.

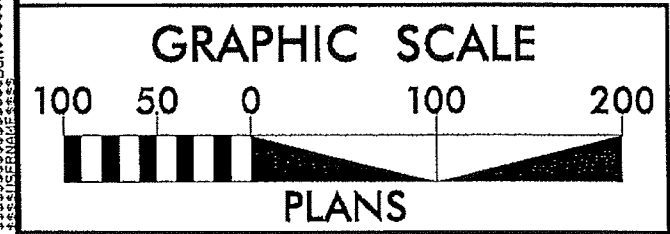


- DENOTES IMPACTS IN SURFACE WATER
- DENOTES TEMPORARY IMPACTS IN SURFACE WATER
- DENOTES FILL IN WETLAND
- DENOTES MECHANIZED CLEARING

SITE 3

SITE 4

SITE 22



MATCH TO SHEET 9
-YIC- STA. 26+00

REVISIONS

***** SYSTEMS *****
***** DGN *****
***** *****

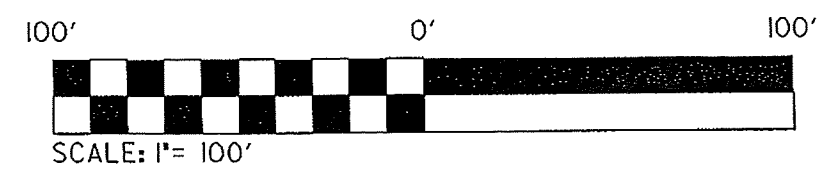
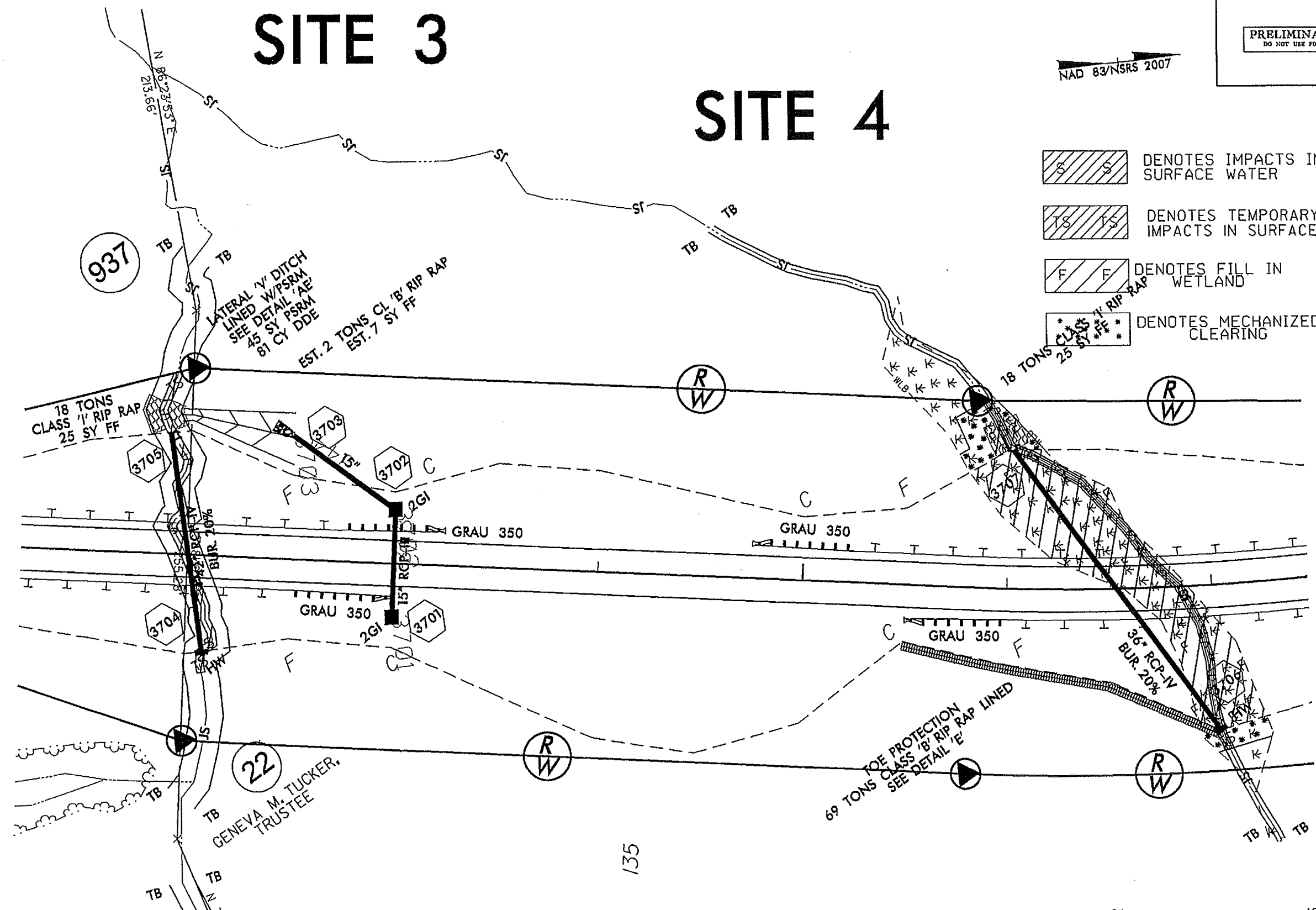
SITE 3

SITE 4

Permit Drawing
Sheet 74 of 81

PROJECT REFERENCE NO.	SHEET NO.
R-2413A	37
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	

NAD 83/NSRS 2007



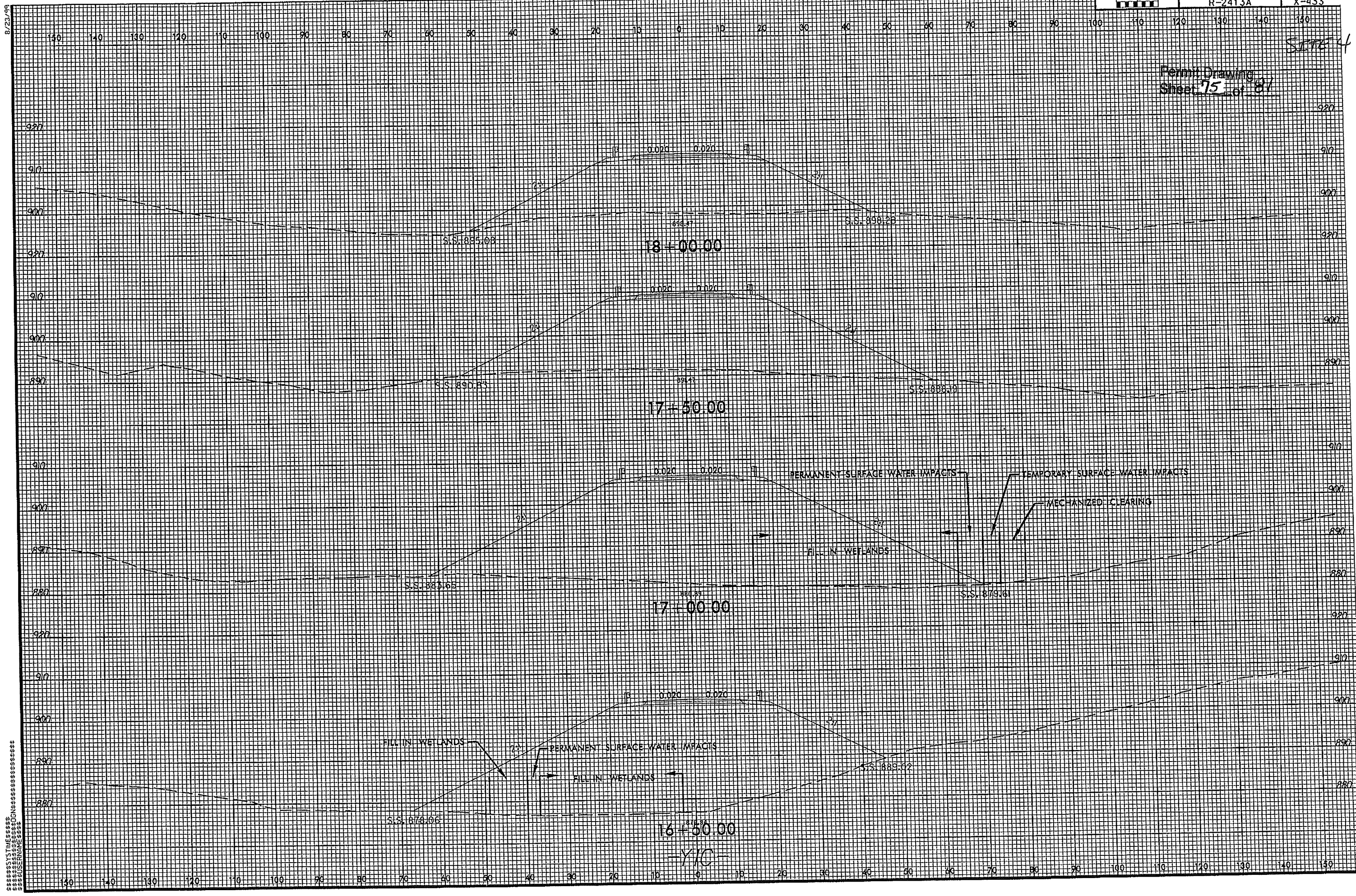
135

8/23/99

R-2413A X-433

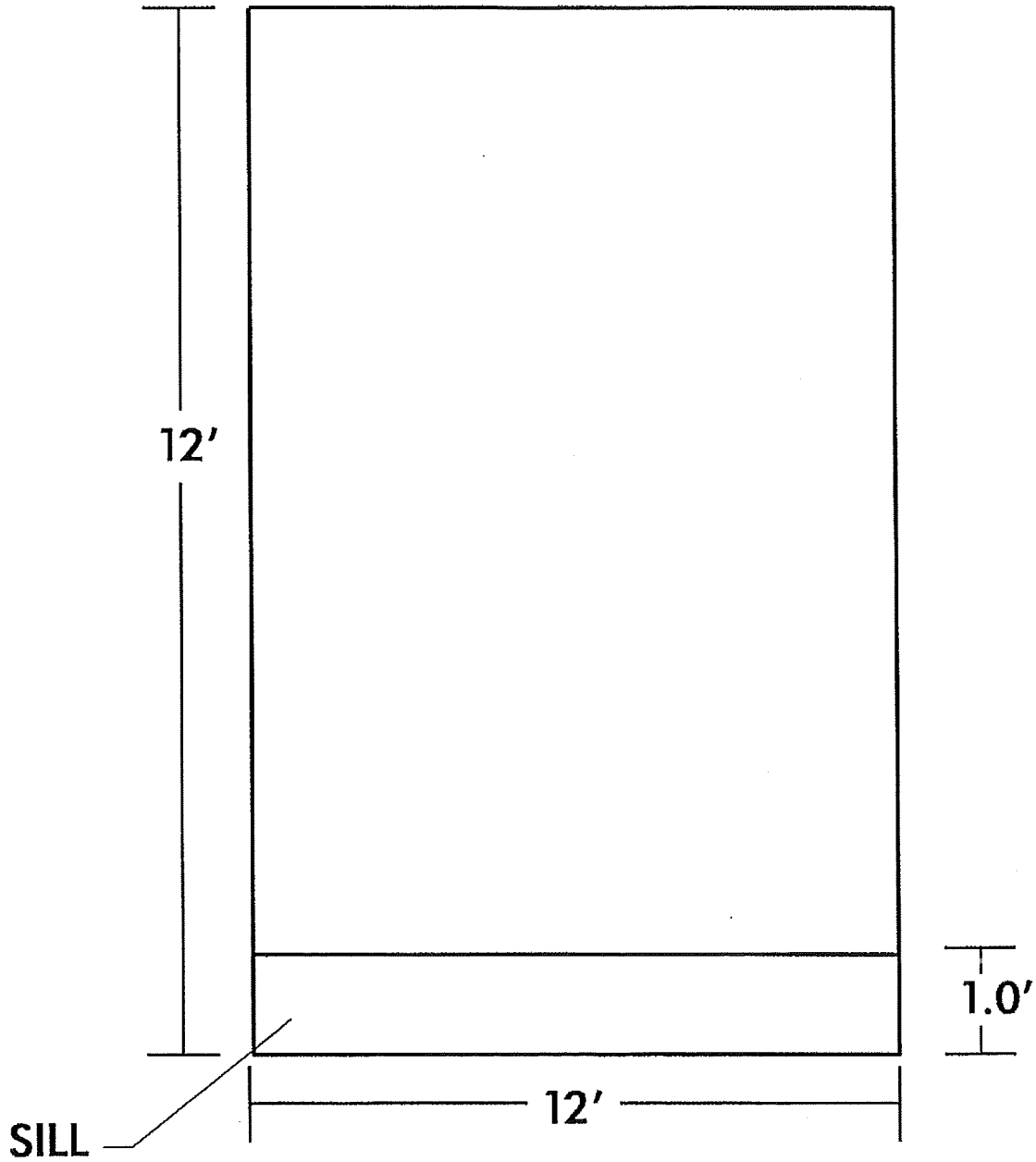
SITE 4

Permit Drawing
Sheet 75 of 81



SYSTEMS ENGINEERING
CONSULTING SERVICES

SILL DETAIL



(PLACE SILL AT INLET AND OUTLET)

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)	Natural Stream Design (ft)	
1	26+50 to 32+50 -RP1B-	42" RCP Bank Stabilization	0.01						0.13	<0.01	699	22	
2	117+00 -L-	66" CSP											
2a.		Road Fill							<0.01	<0.01	60	18	
2b.		Road Fill							<0.01	<0.01	44	7	
2c.		Road Fill							0.05	<0.01	366	22	
		Bank Stabilization									20		
3	133+50 -L- & 12+00 -Y1C-	36" CSP & 42" RCP Bank Stabilization							0.02	<0.01	212	36	
											32		
4	138+00 -L- & 16+00 to 17+00 -Y1C-	2 @ 36" CSP Bank Stabilization	0.24			0.02			0.02	<0.01	523	42	
											30		
5	161+00 to 162+00 -L-	66" SPSP Bank Stabilization							0.03	<0.01	408	33	
											20		
6	193+50 to 197+00 -L-	60" RCP & 54" CSP Bank Stabilization	<0.01						0.04	<0.01	409	21	
											23		
SUBTOTALS:			0.26			0.02			0.29	0.08	2,866	201	

NC DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
GUILFORD COUNTY
WBS - 34429.1.1 (R-2413A)

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)	Natural Stream Design (ft)						
7	206+50 to 208+50 -L-	60" CSP & 54" CSP																
7a.		Bank Stabilization																
7b.																		
7c.																		
8	228+00 to 233+50 -L-	66" CSP																
8a.		Bank Stabilization																
8b.																		
8c.																		
9	232+50 to 235+50 -L-	42" CSP																
10	247+50 -L-	72" CSP																
10a.		Bank Stabilization	0.01		<0.01													
10b.																		
10c.			<0.01			0.01												
11	249+50 to 251+50 -L-	48" CSP	0.12															
SUBTOTALS:			0.14		<0.01	0.01					0.81	0.05	1,898	139				

NC DEPARTMENT OF TRANSPORTATION
 DIVISION OF HIGHWAYS
 GUILFORD COUNTY
 WBS - 34429.1.1 (R-2413A)

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)	Natural Stream Design (ft)				
17	334+00 to 336+50 -L-	36" CSP	0.35			0.03										
18	338+00 to 340+50 -L-	Bridge		0.04				0.13							172	
19	348+00 to 353+00 -L-	60" RCP								0.03						34
20	17+50 to 19+00 -Y4-	36" CSP	0.11								0.02					
21	29+00 to 36+00 -Y5-	1 @ 12' X 12' RCBC														
21a.			2.11			0.13					0.06	0.09		288	262	250*
21b.		Road Fill									0.01			149		
22	24+50 -Y1C-	48" CSP Bank Stabilization									0.02	<.01		256	22	
23	16+50-Y1C-	30" CSP/PDE										<.01			12	
SUBTOTALS:			2.57	0.04	<.01	0.13	0.13	0.13	0.14	0.15	1,460	502	250	922	2,390	
TOTALS:			3.13	0.04	<.01	0.19	0.13	1.45	0.31	9,093	922	2,390				

* See Plan for On-Site Mitigation

NC DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
GUILFORD COUNTY
WBS - 34429.1.1 (R-2413A)