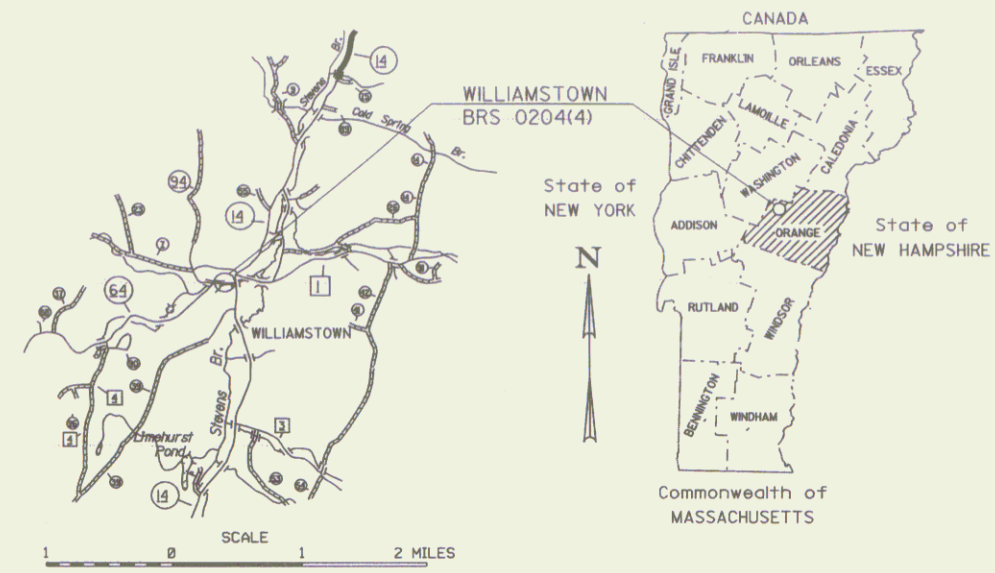


STATE OF VERMONT  
AGENCY OF TRANSPORTATION



PROPOSED IMPROVEMENT  
BRIDGE PROJECT

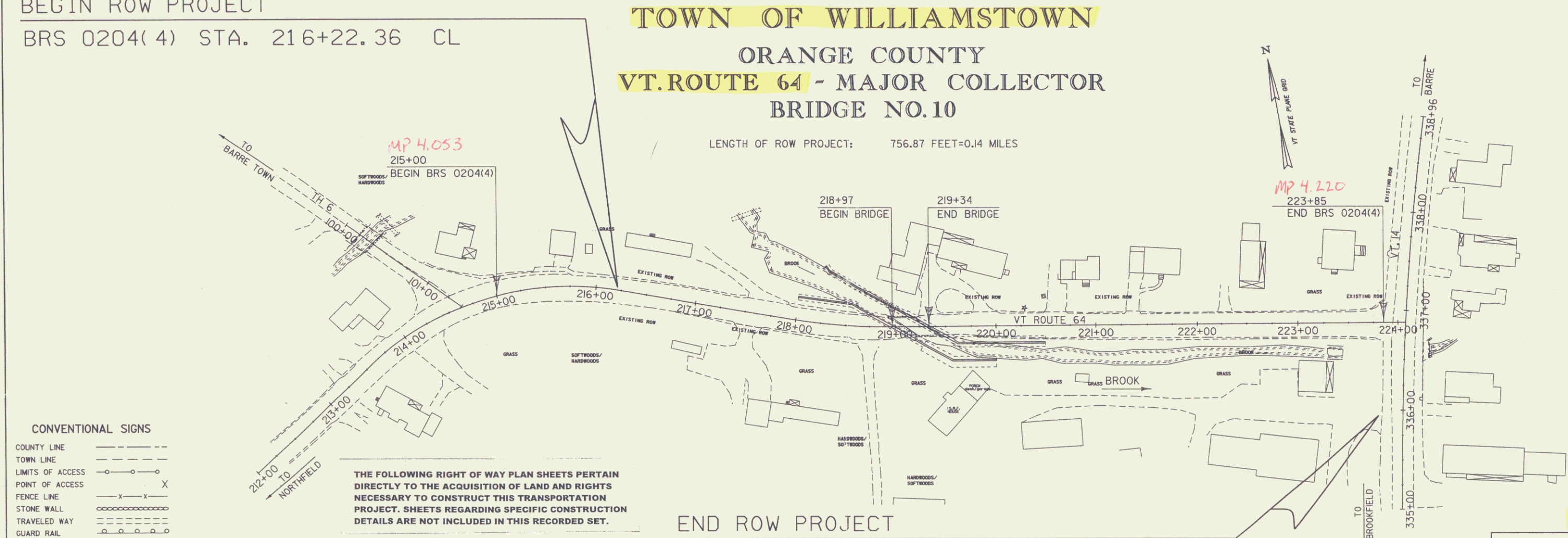
R.O.W. PLANS



BEGIN ROW PROJECT  
BRS 0204(4) STA. 216+22.36 CL

TOWN OF WILLIAMSTOWN  
ORANGE COUNTY  
VT. ROUTE 64 - MAJOR COLLECTOR  
BRIDGE NO. 10

LENGTH OF ROW PROJECT: 756.87 FEET=0.14 MILES



CONVENTIONAL SIGNS

COUNTY LINE	---
TOWN LINE	---
LIMITS OF ACCESS	---X---
POINT OF ACCESS	X
FENCE LINE	---X---
STONE WALL	---X---
TRAVELED WAY	---
RAILROAD	---X---
SURVEY LINE	---
CULVERT	---
POWER POLE	⊕
TELEPHONE POLE	⊕
TREES	⊕
CONTROL OF ACCESS	---
PROPERTY LINE	---
R.O.W. TAKING LINE	---
SLOPE RIGHTS	SR
TOP OF CUT	---
TOE OF SLOPE	---

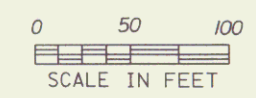
THE FOLLOWING RIGHT OF WAY PLAN SHEETS PERTAIN DIRECTLY TO THE ACQUISITION OF LAND AND RIGHTS NECESSARY TO CONSTRUCT THIS TRANSPORTATION PROJECT. SHEETS REGARDING SPECIFIC CONSTRUCTION DETAILS ARE NOT INCLUDED IN THIS RECORDED SET.

ROW AGENT  
F. MALNATI

DATUM  
VERTICAL NGVD 1929  
HORIZONTAL NAD 1927

LINES SHOWN ON THIS PLAN AS EXISTING PROPERTY LINES P/L ARE BELIEVED TO BE ACCURATE BUT SHOULD NOT BE RELIED UPON FOR PURPOSES UNRELATED TO THE STATE OF VERMONT'S ACQUISITION OF LAND AND RIGHTS FOR THIS PROJECT.

ALL DRIVES AS INDICATED ON PLANS ARE SUBJECT TO PERMITS PURSUANT TO TITLE 19 SECTION III. V.S.A.



END ROW PROJECT  
BRS 0204(4) STA. 223+79.23 91.87' RT.

THESE PLANS ARE SUBJECT TO SUCH ENGINEERING CHANGES AS MAY BE REQUIRED BY THE FEDERAL HIGHWAY ADMINISTRATION OR THE DIRECTOR OF CONSTRUCTION AND MAINTENANCE.  
CONSTRUCTION IS TO BE CARRIED ON IN ACCORDANCE WITH THESE PLANS AND THE STANDARD SPECIFICATIONS FOR CONSTRUCTION DATED 1990, AS APPROVED BY THE FEDERAL HIGHWAY ADMINISTRATION ON MARCH 15, 1990 FOR USE ON THIS PROJECT, INCLUDING ALL SUBSEQUENT REVISIONS AND SUCH REVISED SPECIFICATIONS AND SPECIAL PROVISIONS AS ARE INCORPORATED IN THESE PLANS.

APPROVED Richard Tetraault DATE 6/30/2006  
Director of Project Development

APPROVED William J. Morse DATE 6/30/2006  
Chief, Right of Way

**WILLIAMSTOWN**  
**BRS\_0204(4)**  
R.O.W. SHEET 1 OF 20 SHEETS

Pin # 83E111

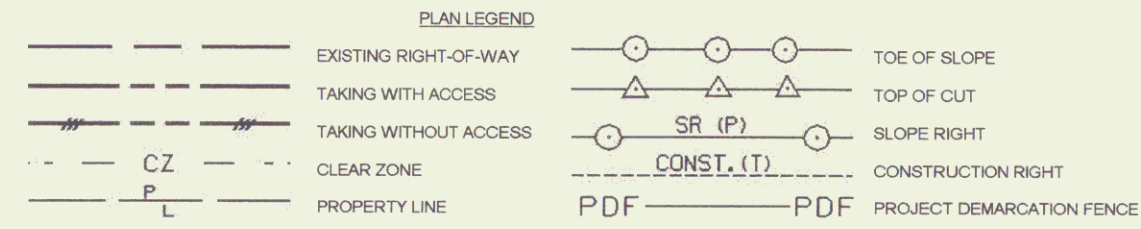
# RIGHT - OF - WAY DETAIL SHEET

TABLE OF PROPERTY ACQUISITION

PARCEL NO.	PROPERTY OWNER	SHEET NO.	BEGINNING STATION	ENDING STATION	TAKE AREA±	REMAINDER AREA±	RIGHT			RECORDING DATA				REMARKS			
							TYPE	(T)(P)	AREA±	TITLE	DATE	TOWN / CITY	BOOK		PAGE		
1	BEATTIE, CONRAD A. & DONAH H.	18, 19	217+59.00 LT.				DRIVE	(T)		WD	01/04/06	WILLIAMSTOWN	136	273-	13' GRAVEL MM 0410		
			217+55.46 LT.	217+76.42 LT.			SLOPE	(T)	54.0 SF						275	EROSION CONTROL	
			217+61.94 LT.	217+88.20 LT.			INSTALL	(T)									
			217+76.46 LT.	218+36.75 LT.			CHANNEL	(P)	360.0 SF								COFFER DAM
			217+93.97 LT.	218+63.85 LT.			INSTALL	(T)									EROSION CONTROL
			218+02.63 LT.	218+42.75 LT.			INSTALL	(T)									
			218+10.45 LT.	218+26.96 LT.			CHANNEL	(P)	84.3 SF								COFFER DAM
			218+21.39 LT.	218+94.46 LT.			INSTALL & MAINTAIN	(P)	420.7 SF								EROSION CONTROL
			218+26.96 LT.	219+26.81 LT.			SLOPE	(T)	1117.6 SF								FOOTING & WINGWALL
			218+18.12 LT.	219+26.81 LT.			INSTALL	(T)									COFFER DAM
			219+34.00 LT.	218+75.62 LT.			DRIVE	(T)									13' GRAVEL MM 0413
			219+81.00 LT.				DRIVE	(T)									14' GRAVEL MM 0414
			220+21.44 LT.	220+40.70 LT.			INSTALL	(T)									EROSION CONTROL
			220+25.20 LT.	220+41.72 LT.			SLOPE	(T)	173.8 SF								EROSION CONTROL
219+72.02 LT.														MONITOR WELL W-1			
220+38.57 LT.							REMOVE & RESET	(T)						PROPERTY PIN			
1B		18, 19	218+22.36 LT.	220+38.57 LT.	0.24 A		ALL R.T. & I.								HWY. EASE. VT. RTE. 64		
2A	YOUNG, ROSALIE A.	19	218+37.54 RT.	218+60.91 RT.	39.8 SF				WD	01/23/08	WILLIAMSTOWN	136	329-				
			217+46.69 RT.	217+98.15 RT.			SLOPE	(T)	61.3 SF						INCLUDES EROSION CONTROL		
			217+98.51 RT.	218+57.71 RT.			INSTALL	(T)							EROSION CONTROL		
			217+46.02 RT.	218+57.71 RT.			UTILITY	(T)							INCLUDE POLE & ANCHOR		
			218+24.91 RT.	218+60.91 RT.			SLOPE	(T)	217.2 SF						INCLUDES EROSION CONTROL		
			218+52.16 RT.				REMOVE	(T)							CULVERT		
			217+55.00 RT.												DRIVE 13' PAVED MM 0410		
															INCLUDES RIGHT OF WAY IN COMMON / PARCEL # 9		
			218+50.00 RT.	218+62.04 RT.			DETOUR	(T)	8.0 SF								
2B		19	217+40.49 RT.	218+60.91 RT.	3006.0 SF		ALL R.T. & I.								HWY. EASE. VT. RTE. 64		
3A	FORD, PATRICIA R.	19	218+60.91 RT.	220+01.04 RT.	1322.0 SF				WD	04/14/08	WILLIAMSTOWN	137	68-				
			218+74.00 RT.				DRIVE	(T)							12' GRAVEL MM 0412; ALSO ROW FOR PARCEL # 6 & # 7		
			218+57.71 RT.	DETOUR 303+31.42 RT			UTILITY	(T)							PROPERTY PIN		
			218+60.91 RT.				REMOVE & RESET	(T)							EROSION CONTROL		
			218+57.71 RT.	218+62.77 RT.			INSTALL	(T)							15' ALSO ACCESS FOR PARCEL #6&7		
			DETOUR 301+00.00 RT.				ACCESS	(T)							GUARD RAIL		
			218+80.32 RT.				INSTALL & MAINTAIN	(P)							INCLUDES EROSION CONTROL		
			218+79.76 RT.	220+15.33 RT.			SLOPE	(T)	1423 SF						SHRUBS AND TREES		
			218+79.76 RT.	220+01.04 RT.			LANDSCAPE	(T)							GUY WIRE & ANCHOR		
			218+95.93 RT.	219+00.00 RT.			INSTALL	(T)									
			219+11.25 RT.	220+08.54 RT.			CONST.	(T)	0.06 A								
			219+31.66 RT.	219+62.88 RT.			ALL R.T. & I.								HOUSE AND APPURTENANCES		
			218+31.66 RT.	219+62.88 RT.			REMOVE	(T)	1580 SF						HOUSE AND APPURTENANCES		
			218+60.91 RT.	DETOUR 303+34.25 LT			DETOUR	(T)	0.18 A						2-WAY VEHICULAR		
			220+37.94 RT.	220+66.59 RT.			INSTALL	(T)							COFFER DAM		
			220+53.82 RT.	220+66.74 RT.			CULVERT	(P)									
			220+40.24 RT.	220+61.34 RT.			SLOPE	(P)	45.1 SF								
			220+76.65 RT.	DETOUR 303+34.55 LT			UTILITY	(T)							13' WIDE ACCESS FROM DETOUR		
			DETOUR 302+11.97 RT.				ACCESS	(T)							COFFER DAM		
			220+01.04 RT.	220+04.84 RT.			INSTALL	(T)							FENCE		
			DETOUR 303+29.00 RT.				REMOVE & RESET	(T)							EROSION CONTROL		
			DETOUR 302+41.02 LT.	DETOUR 303+31.07 LT.			INSTALL	(T)									
3B		19	218+60.91 RT.	221+13.55 RT.	0.14 A		ALL R.T. & I.								HWY. EASE. VT. RTE. 64		

TABLE OF REVISIONS

REVISION NO.	SHEET NO.	DESCRIPTION	DATE
1	16	PARCEL NO. 2 YOUNG. CHANGE ENDING STATION OF INSTALL (T) FROM 218+66.96 RT. TO 218+57.71 RT. CHANGE TAKE AREA OF PARCEL 2B FROM 2435 SF± TO 3006.0 SF± PER C.O. 9601 MADE BY MR APPROVED BY HP	11/06/07
2	16, 17, 18, 20	PARCEL NO. 14 TRUSTEES OF CENTENARY METHODIST CHURCH LESSOR. RANDOLPH NATIONAL BANK LESSEE. ADD SHEET 19 TO SHEET NUMBER ON DETAIL SHEET. ADD ADDITIONAL LEASE AREA TO SHEET 19. CHANGE DETOUR BEGINNING STA. TO +00.79 AND INCREASED AREA TO 0.11A±. CHANGE BEGINNING STA. FOR PAVED AREA TO +00.79 AND INCREASED AREA TO 3167.8F±. CHANGE BEGINNING STA FOR UTILITY(T) TO +10.03RT. PER C.O. 9403 MADE BY JAB APPROVED BY HP	12/13/07
3	16, 17, 19, 20	PARCEL NO. 5 TRUSTEES OF CENTENARY METHODIST CHURCH. CHANGE AREA OF DETOUR FROM 2960.2 SF TO 2534.2 SF. CHANGE ENDING STA. OF UTILITY (T) FROM 26.73LT TO 10.03RT. CHANGE ENDING STA. INSTALL (T) FROM +25.00LT TO +00.79LT. PER C.O. 9604 MADE BY JAB APPROVED BY HP	12/13/07
4	16	PARCEL NO. 1 BEATTIE. CREATED TWO PARCELS ON THE DETAIL SHEET. PARCEL 1 AND 1B. PARCEL 1 WILL SHOW ALL THE (T) AND (P) RIGHTS. PARCEL 1B WILL SHOW ALL R.T. & I. IN HWY EASE VT RTE 64. RIGHT OF WAY SHEETS 18 AND 19 WILL SHOW THE EXISTING RIGHT OF WAY AS PARCEL 1B. PER C.O. 9506 MADE BY JAB APPROVED BY HP	12/28/07



- EC - EROSION CONTROL
- (P) - PERMANENT
- (T) - TEMPORARY
- DR. - DRAINAGE RIGHT
- DIT. - DITCHING RIGHT
- CH - CHANNEL RIGHT
- DRIVE - DRIVE RIGHT
- CUL - CULVERT RIGHT
- C&T - CLEARING & TRIMMING RIGHT
- SR - SLOPE RIGHT
- UE - UTILITY EASEMENT

APPROVED: ROGER P. DUMAS DATE: 06-30-2006  
CHIEF, PLANS & TITLES

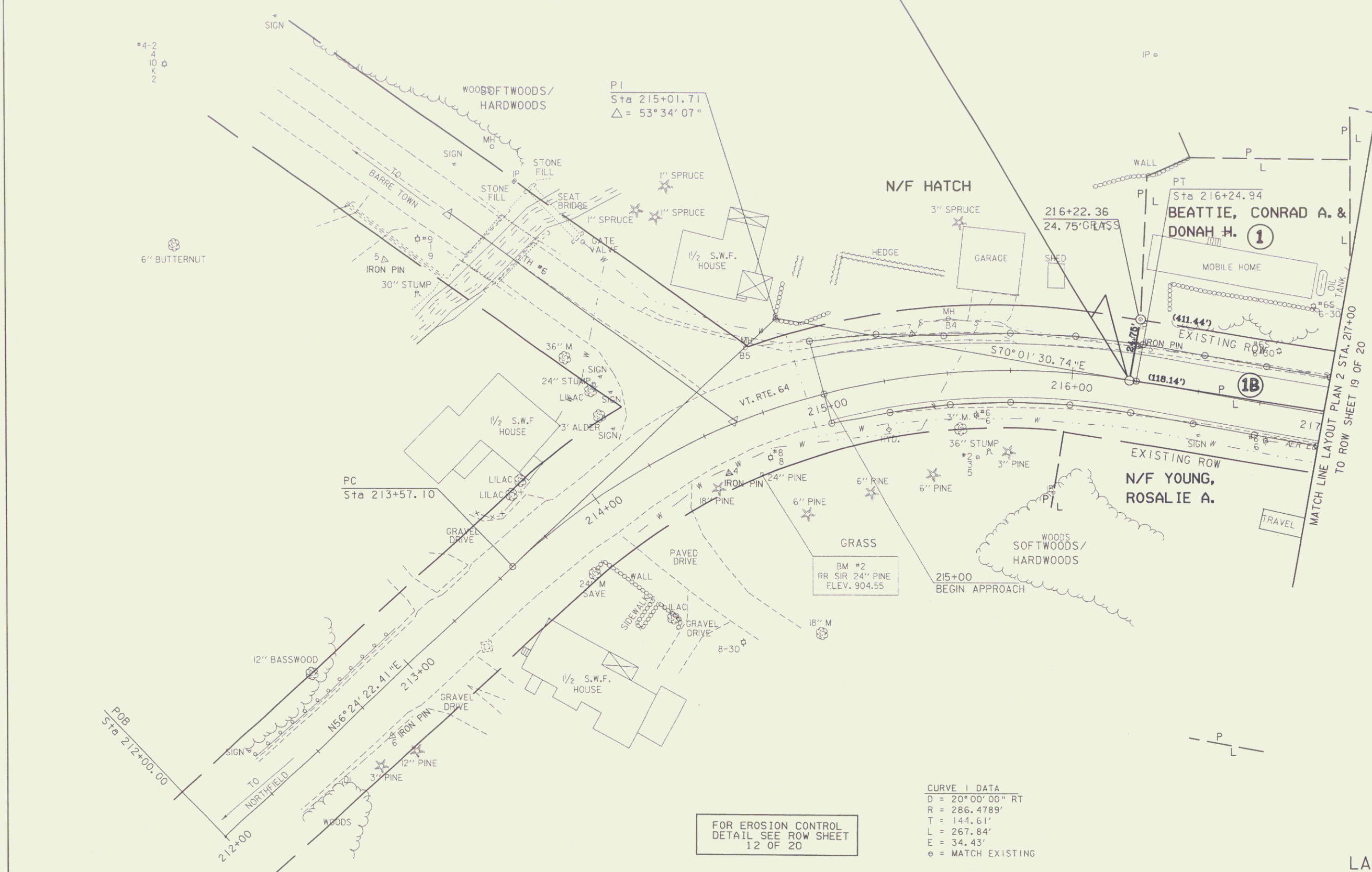
PROJECT NAME: WILLIAMSTOWN  
PROJECT NUMBER: BRS 0204(4)  
FILE NAME: BSE111DET.XLS  
PROJECT LEADER: EVANS-MONGEON  
DESIGNED BY: LACKEY  
R.O.W. SHEET 16 of 20

PLOT DATE: 04/28/08  
DRAWN BY: MR  
CHECKED BY: FM  
SHEET 11 OF 108



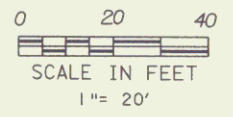


**BEGIN ROW PROJECT**  
**BRS 0204(4) Sta. 216+22.36 CL**



FOR EROSION CONTROL  
 DETAIL SEE ROW SHEET  
 12 OF 20

CURVE 1 DATA  
 D = 20° 00' 00" RT  
 R = 286.4789'  
 T = 144.61'  
 L = 267.84'  
 E = 34.43'  
 e = MATCH EXISTING



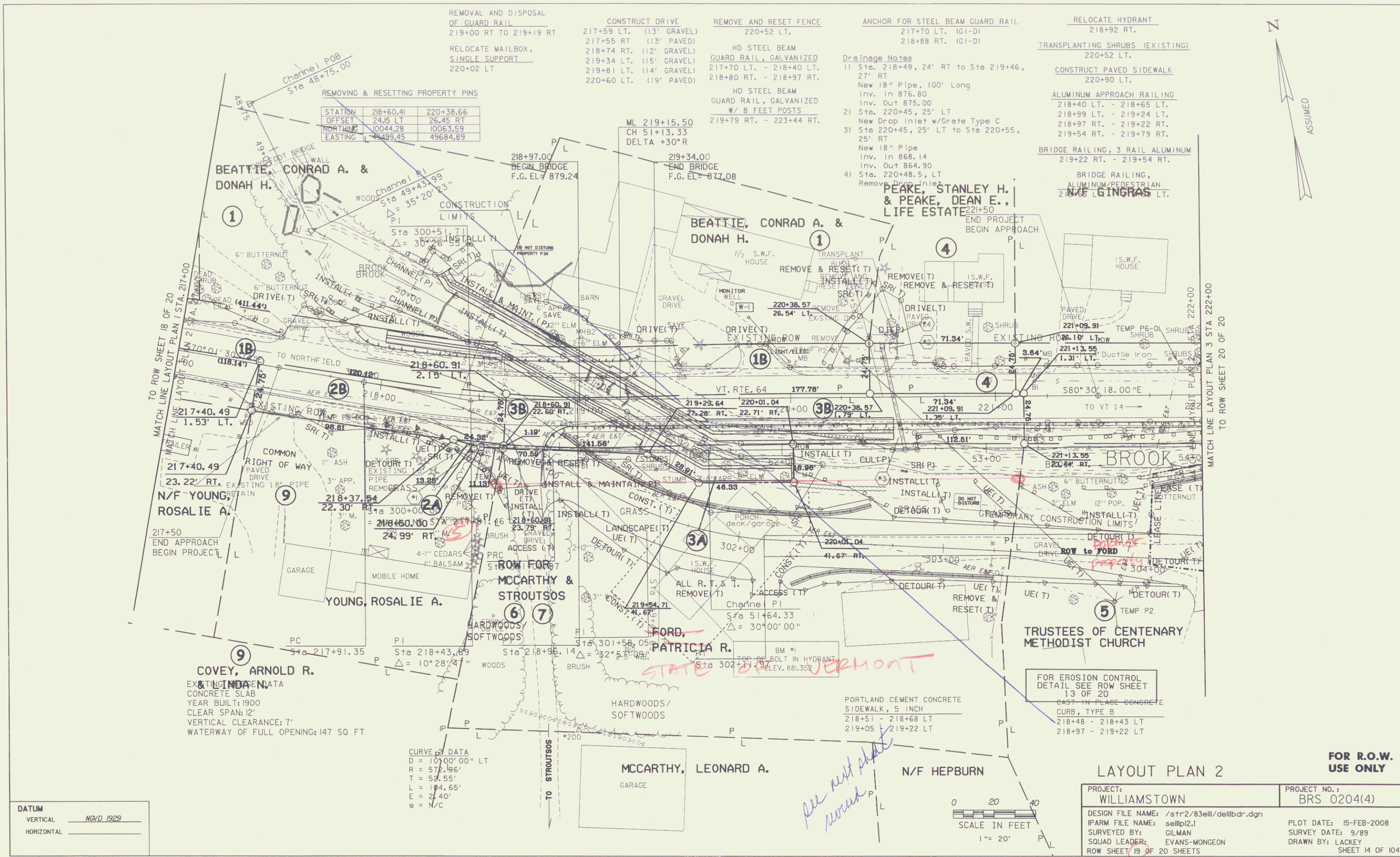
DATUM  
 VERTICAL NGVD 1929  
 HORIZONTAL \_\_\_\_\_

**LAYOUT PLAN I**

**FOR R.O.W.  
 USE ONLY**

PROJECT: <b>WILLIAMSTOWN</b>	PROJECT NO.: <b>BRS 0204(4)</b>
DESIGN FILE NAME: /str2/83ell/dellldr.dgn	PLOT DATE: 15-FEB-2008
IPARM FILE NAME: dellpl1	SURVEY DATE: 3/89
SURVEYED BY: GILMAN	DRAWN BY: LACKEY
SQUAD LEADER: EVANS-MONGEON	SHEET 13 OF 104
ROW SHEET 18 OF 20 SHEETS	

5



REMOVAL AND DISPOSAL  
OF GUARD RAIL  
219+00 RT TO 219+19 RT

RELOCATE MAILBOX,  
SINGLE SUPPORT  
220+02 LT

CONSTRUCT DRIVE  
217+59 LT. (13' GRAVEL)  
217+55 RT. (13' GRAVEL)  
218+74 RT. (12' GRAVEL)  
219+34 LT. (15' GRAVEL)  
219+81 LT. (14' GRAVEL)  
220+60 LT. (19' PAVED)

REMOVE AND RESET FENCE  
220+52 LT.

HD STEEL BEAM  
GUARD RAIL, GALVANIZED  
217+70 LT. - 218+40 LT.  
218+80 RT. - 218+97 RT.

HD STEEL BEAM  
GUARD RAIL, GALVANIZED  
W/ 8 FEET POSTS  
219+79 RT. - 223+44 RT.

ANCHOR FOR STEEL BEAM GUARD RAIL  
217+70 LT. (G1-D)  
218+88 RT. (G1-D)

RELOCATE HYDRANT  
218+92 RT.

TRANSPLANTING SHRUBS (EXISTING)  
220+52 LT.

CONSTRUCT PAVED SIDEWALK  
220+90 LT.

ALUMINUM APPROACH RAILING  
218+40 LT. - 218+65 LT.  
218+99 LT. - 219+24 LT.  
218+97 RT. - 219+22 RT.  
219+54 RT. - 219+79 RT.

BRIDGE RAILING, 3 RAIL ALUMINUM  
219+22 RT. - 219+54 RT.

BRIDGE RAILING,  
ALUMINUM/PEDESTRIAN  
218+92 RT. - 219+54 RT.

REMOVING & RESETTING PROPERTY PINS

STATION	218+60.41	220+38.66
OFFSET	24.15 LT	26.45 RT
NORTHING	10044.28	10063.59
EASTING	49499.45	49684.89

Drainage Notes  
1) Sta. 218+49, 24' RT to Sta 219+46, 27' RT  
New 18" Pipe, 100' Long  
Inv. In 876.80  
Inv. Out 875.00  
2) Sta. 220+45, 25' LT  
New Drop Inlet w/Grate Type C  
3) Sta 220+45, 25' LT to Sta 220+55, 25' RT  
New 18" Pipe  
Inv. In 868.14  
Inv. Out 864.90  
4) Sta. 220+48.5, LT  
Remove drop inlet

TO ROW SHEET 18 OF 20  
MATCH LINE LAYOUT PLAN 1 STA. 217+00

TO ROW SHEET 20 OF 20  
MATCH LINE LAYOUT PLAN 3 STA. 222+00

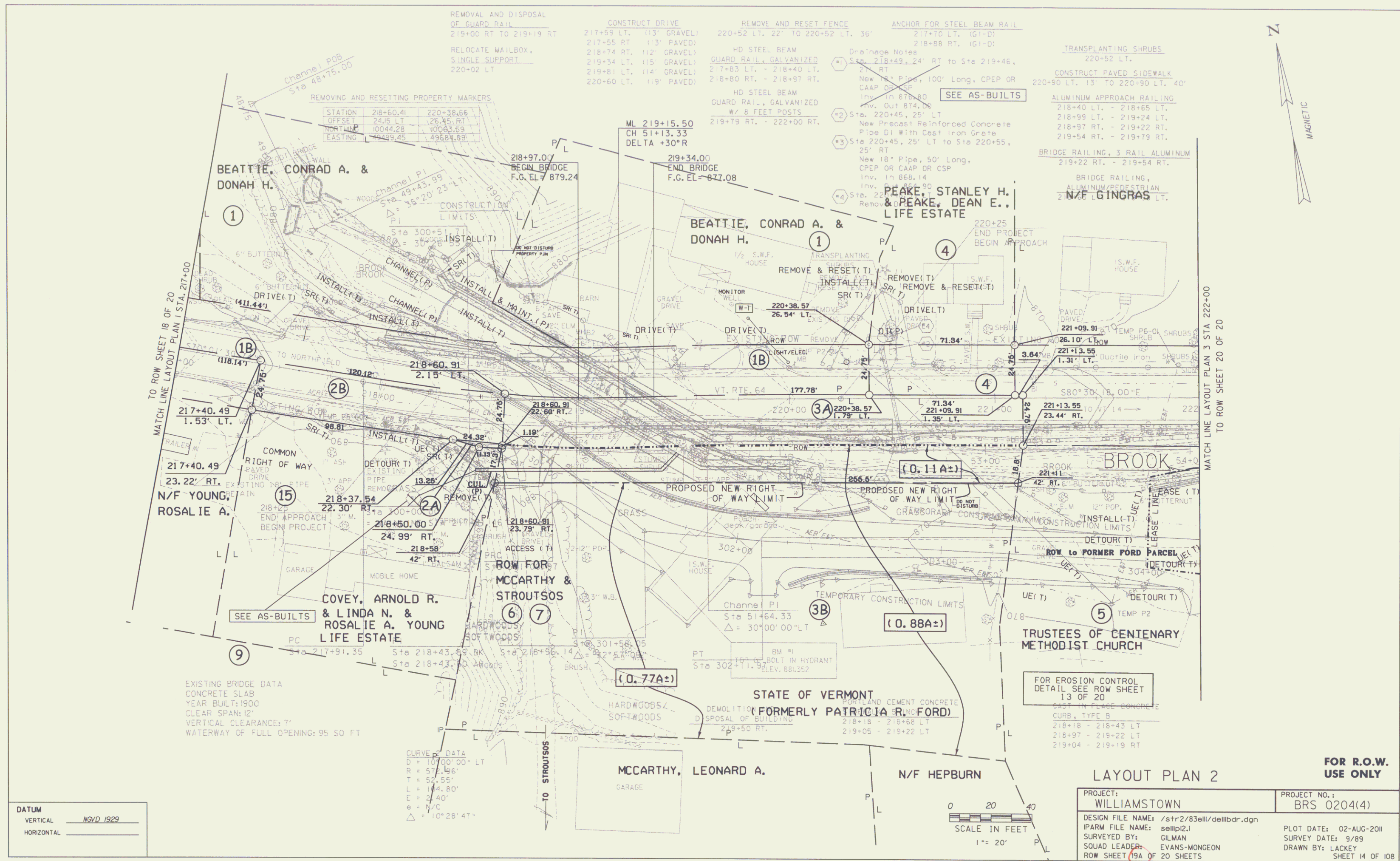
DATUM  
VERTICAL NGVD 1929  
HORIZONTAL

CURVE DATA  
D = 107'00" 00" LT  
R = 572.96'  
T = 52.55'  
L = 184.65'  
E = 21.40'  
e = N/C

0 20 40  
SCALE IN FEET  
1" = 20'

PROJECT: WILLIAMSTOWN	PROJECT NO.: BRS 0204(4)
DESIGN FILE NAME: /s1r2/83ell/dellbdr.dgn	PLOT DATE: 15-FEB-2008
IPARM FILE NAME: sellp2.i	SURVEY DATE: 9/89
SURVEYED BY: GILMAN	DRAWN BY: LACEY
SQUAD LEADER: EVANS-MONGEON	SHEET 14 OF 104
ROW SHEET 19 OF 20 SHEETS	

*see next sheet  
around*



DATUM  
 VERTICAL NGVD 1929  
 HORIZONTAL \_\_\_\_\_

CURVE DATA  
 D = 10' 00" 00" LT  
 R = 57' 19" 66"  
 T = 52' 55"  
 L = 144' 80"  
 E = 2' 40"  
 θ = N/C  
 Δ = 10° 28' 47"

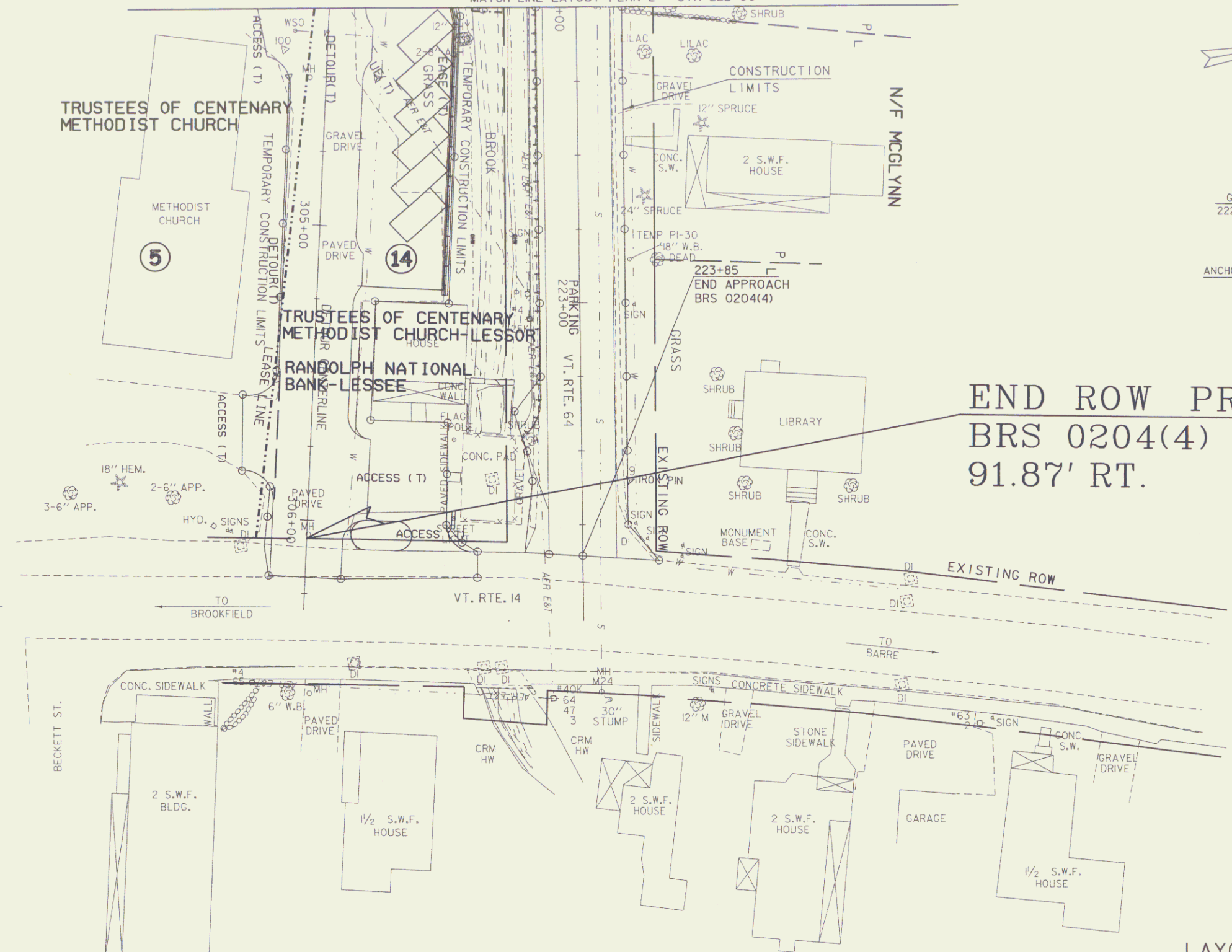
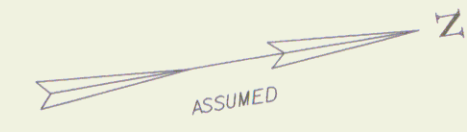
0 20 40  
 SCALE IN FEET  
 1" = 20'

<b>LAYOUT PLAN 2</b>		<b>FOR R.O.W. USE ONLY</b>	
PROJECT: <b>WILLIAMSTOWN</b>	PROJECT NO. 1: <b>BRS 0204(4)</b>		
DESIGN FILE NAME: /s1r2/83ell/dellbr.dgn	PLOT DATE: 02-AUG-2011		
IPARM FILE NAME: sellp2.i	SURVEY DATE: 9/89		
SURVEYED BY: GILMAN	DRAWN BY: LACKEY		
SQUAD LEADER: EVANS-MONGEON	SHEET 14 OF 108		
ROW SHEET 19A OF 20 SHEETS			

AUG 02 2011

7

TO ROW SHEET 19 OF 20  
MATCH LINE LAYOUT PLAN 2 STA 222+00



HD STEEL BEAM  
GUARD RAIL, GALVANIZED  
222+00 RT. - 223+45.5 RT.

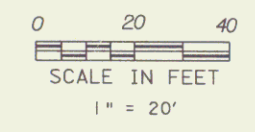
ANCHOR FOR STEEL BEAM GUARD RAIL  
223+45.5 RT. (GI-D)

**END ROW PROJECT**  
BRS 0204(4) Sta.223+79.23  
91.87' RT.

FOR EROSION CONTROL  
DETAIL SEE ROW SHEET  
14 OF 20

BM S-15  
DISK ON GRANITE STEP  
ELEV. 872.22

**DATUM**  
VERTICAL NGVD 1929  
HORIZONTAL \_\_\_\_\_



LAYOUT PLAN 3

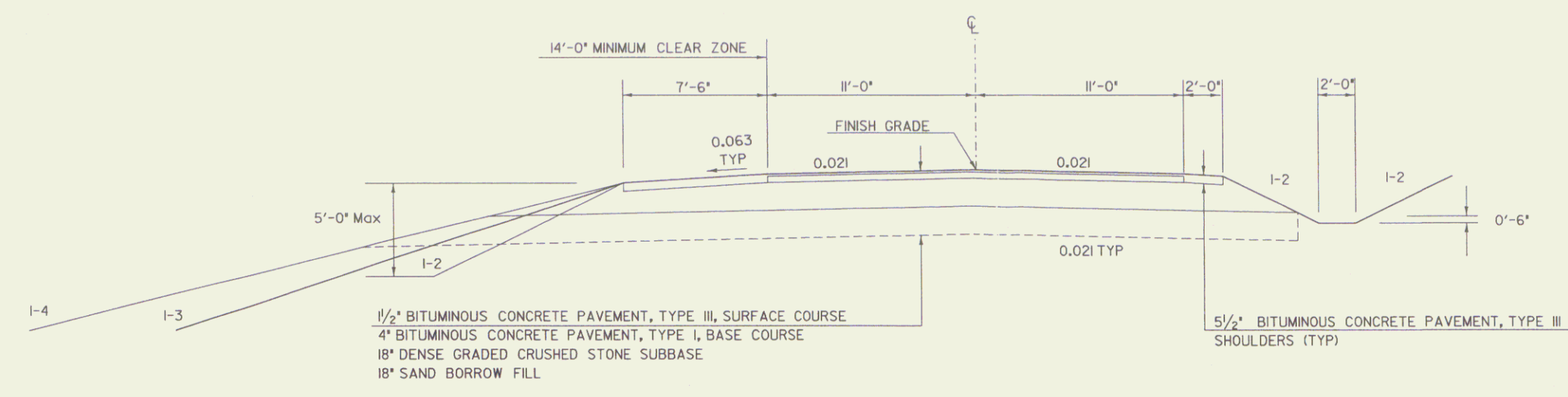
**FOR R.O.W.  
USE ONLY**

PROJECT: WILLIAMSTOWN	PROJECT NO. : BRS 0204(4)
DESIGN FILE NAME: s1r2/83ell/dellbdr.dgn	PLOT DATE: 15-FEB-2008
IPARM FILE NAME: dellip13.1	SURVEY DATE: 9/89
SURVEYED BY: GILMAN	DRAWN BY: LACKEY
SQUAD LEADER: EVANS-MONGEON	SHEET 15 OF 104
ROW SHEET 20 OF 20 SHEETS	

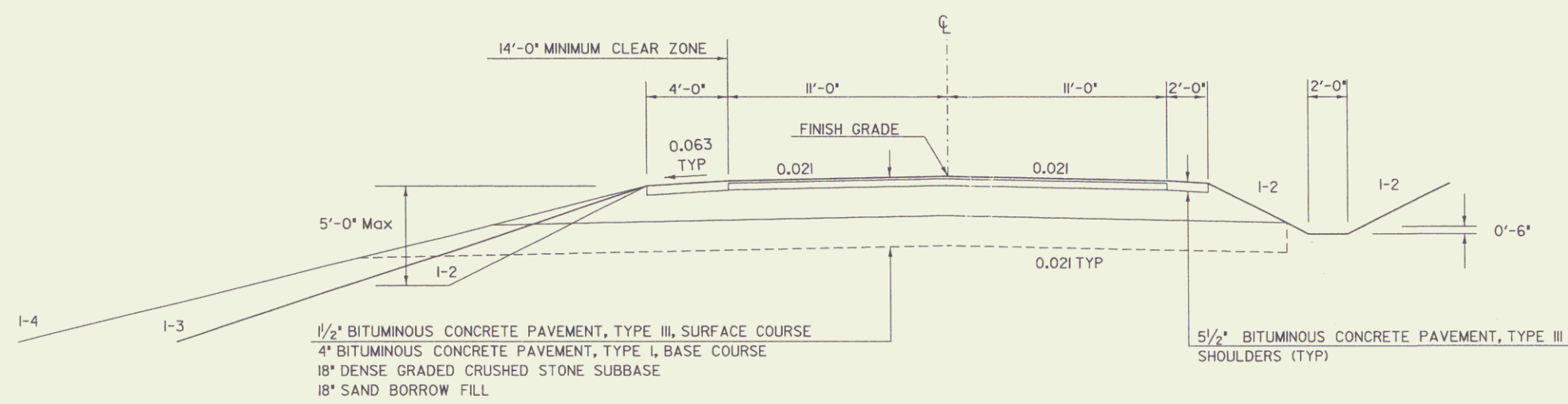
8

MATERIAL ITEM	THICKNESS TOLERANCE
PAVEMENT	± 1/4"
SUBBASE	± 1"
SAND BORROW	± 1"

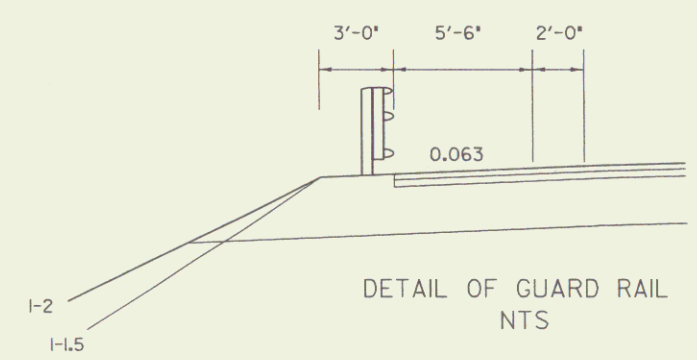
1/2" BITUMINOUS CONCRETE PAVEMENT, TYPE III  
 4" BITUMINOUS CONCRETE PAVEMENT, TYPE I  
 18" SUBBASE OF DENSE GRADED CRUSHED STONE  
 18" SAND BORROW  
 SHOULDERS 5 1/2" BITUMINOUS CONCRETE PAVEMENT, TYPE III



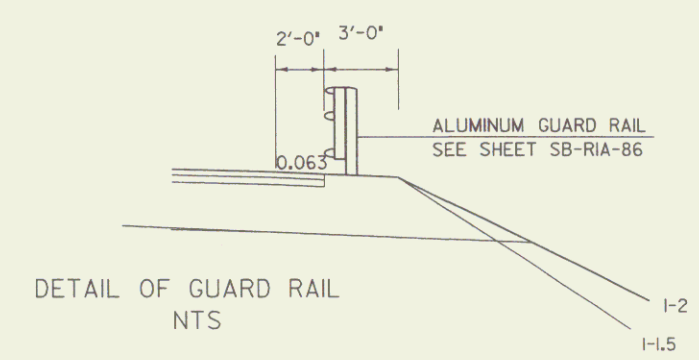
NORMAL SECTION  
 NTS  
 STA. 217+50 TO 219+30



NORMAL SECTION  
 NTS  
 STA. 219+30 TO 221+00



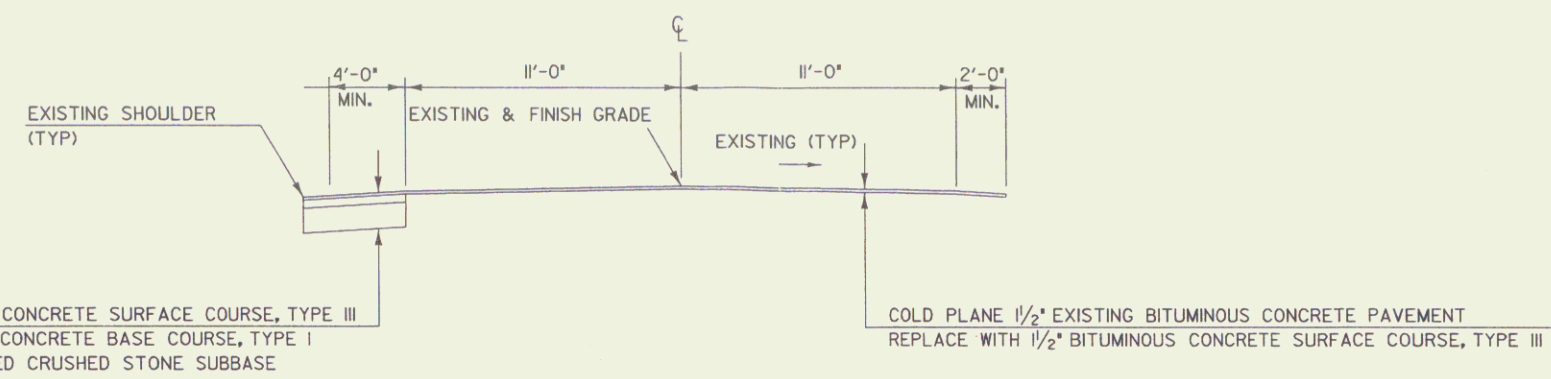
DETAIL OF GUARD RAIL  
 NTS



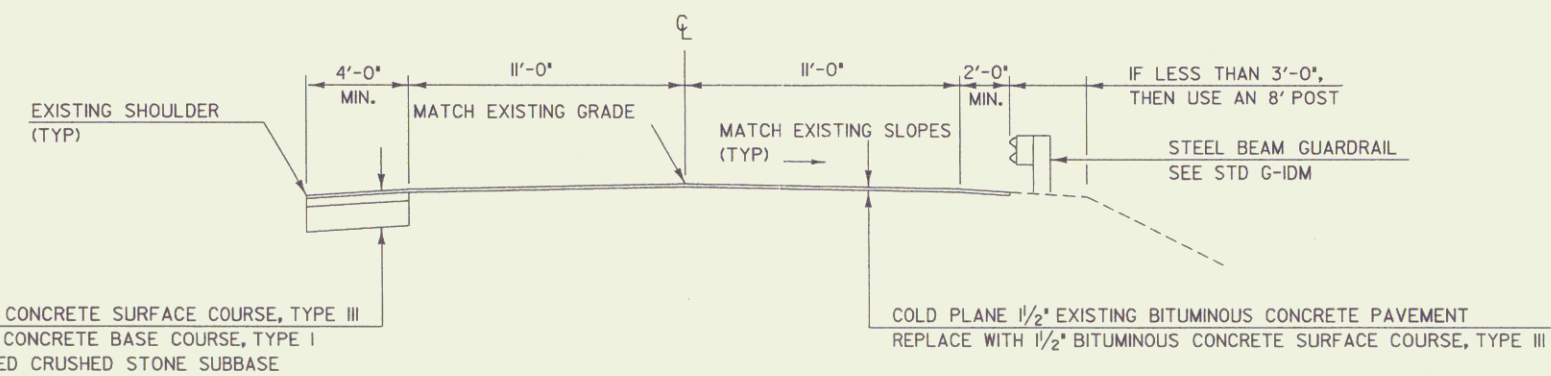
DETAIL OF GUARD RAIL  
 NTS

PROJECT NAME:	WILLIAMSTOWN	PLOT DATE:	06-JUN-2005
PROJECT NUMBER:	BRS 0204 (4)	DRAWN BY:	LACKEY
FILE NAME:	str2/83ell/dellfrm.dgn	DESIGNED BY:	EVANS-MONGEON
PROJECT LEADER:	EVANS-MONGEON	CHECKED BY:	STANLEY
sellbtyp3.1		ROW SHEET	2 OF 20 SHEETS

MATERIAL ITEM	THICKNESS TOLERANCE
PAVEMENT SURFACE COURSE	± 1/4"
BASE COURSE	± 1/2"
SUBBASE	± 1"
SAND BORROW	± 1"



NORMAL SECTIONS  
NTS  
STA 215+00 TO 217+50



NORMAL SECTIONS  
NTS  
STA 221+00 TO 223+85

**SEEDING FORMULA  
URBAN AREAS**

% WT.	LBS./A.	NAME	PLR %	GERM %
42.5	34.0	CREeping RED FESCUE	98	85
10.0	8.0	PERENNIAL RYE GRASS	95	90
42.5	34.0	KENTUCKY BLUE GRASS	85	85
5.0	4.0	ANNUAL RYE GRASS	95	85
100.00	80.0			

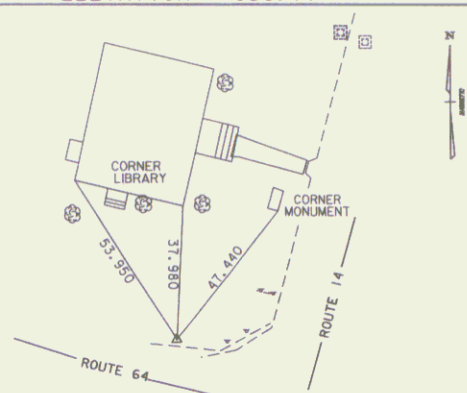
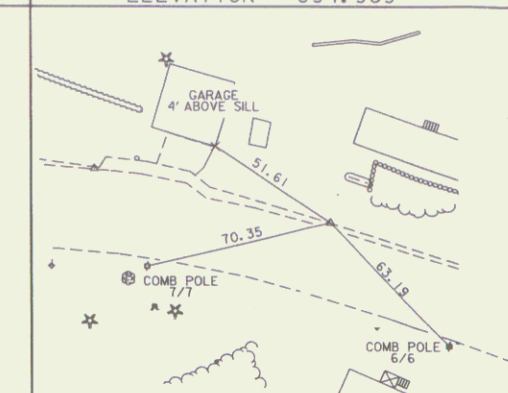
**GENERAL NOTES**

SEED MIXTURE SHALL NOT HAVE A WEED CONTENT EXCEEDING 0.40% BY WEIGHT AND SHALL BE FREE OF ALL NOXIOUS SEED.  
SEEDS TO BE APPLIED PER SEEDING FORMULAS OR AS DIRECTED BY THE ENGINEER.  
FERTILIZER, FORMULA 10-20-10, TO BE USED WITH SEED, APPLIED AT THE RATE OF 500 LBS./ACRE. HYPOD SEEDERS MAY USE 10-10-10 FORMULA.  
AGRICULTURAL LIMESTONE, TO BE APPLIED AT THE RATE OF 2 TONS/ACRE, OR AS DIRECTED BY THE ENGINEER.  
HAY MULCH TO BE PLACED ON EARTH SLOPES AT THE RATE OF 2 TONS/ACRE, OR AS DIRECTED BY THE ENGINEER.  
TOPSOIL TO BE USED WITH SEED AS INDICATED ON THE PLANS, OR AS DIRECTED BY THE ENGINEER.  
MARKER POSTS: TO BE PLACED AS INDICATED OR AS DIRECTED BY THE ENGINEER.  
SLOPE ROUNDING: ALL CUT SLOPES TO BE ROUNDED IN ACCORDANCE WITH STANDARD SHEET B-5.  
PAY LIMITS OF SAND BORROW, WHEN USED IN CONJUNCTION WITH UNDERDRAIN - SEE STANDARD SHEET D - 2.  
TACK COAT, EMULSIFIED ASPHALT IS TO BE APPLIED AT THE RATE OF 0.05 GAL./SY BETWEEN SUCCESSIVE COURSES OF PAVEMENT AS DIRECTED BY THE ENGINEER.

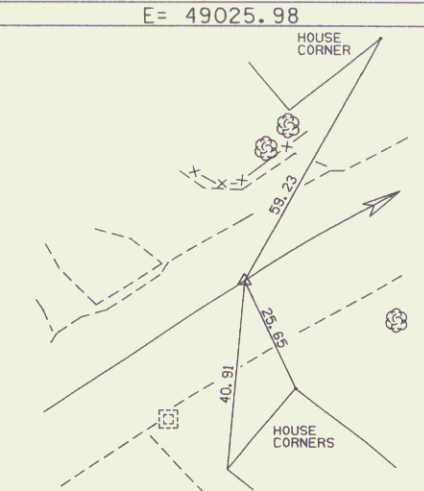
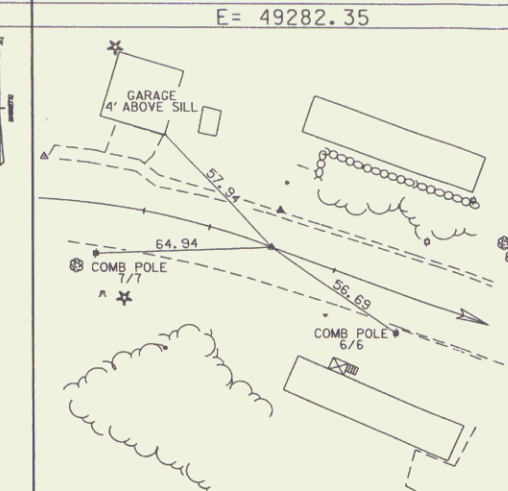
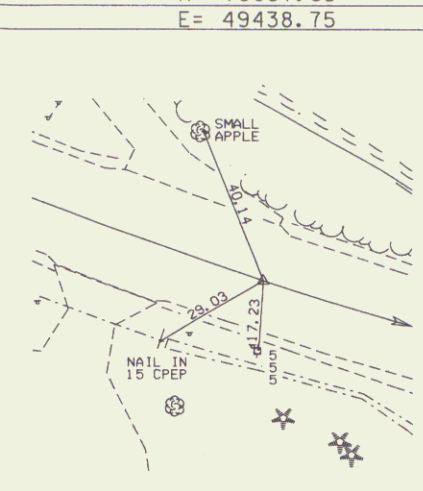
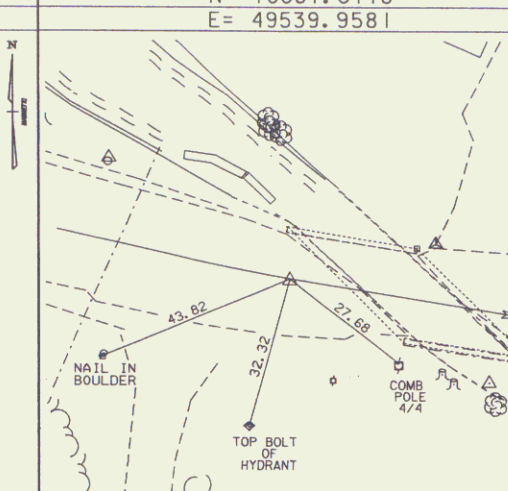
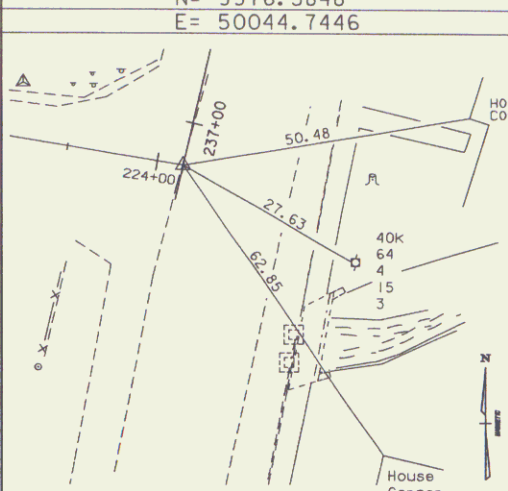
**TYPICAL ROADWAY SECTIONS**

PROJECT NAME:	WILLIAMSTOWN
PROJECT NUMBER:	BRS 0204 (4)
FILE NAME:	str2/83ell/dellfrm.dgn
PROJECT LEADER:	EVANS-MONGEON
DESIGNED BY:	EVANS-MONGEON
PLOT DATE:	06-JUN-2005
DRAWN BY:	BULLOCK
CHECKED BY:	STANLEY
ROW SHEET:	3 OF 20 SHEETS

TRAVERSE TIES

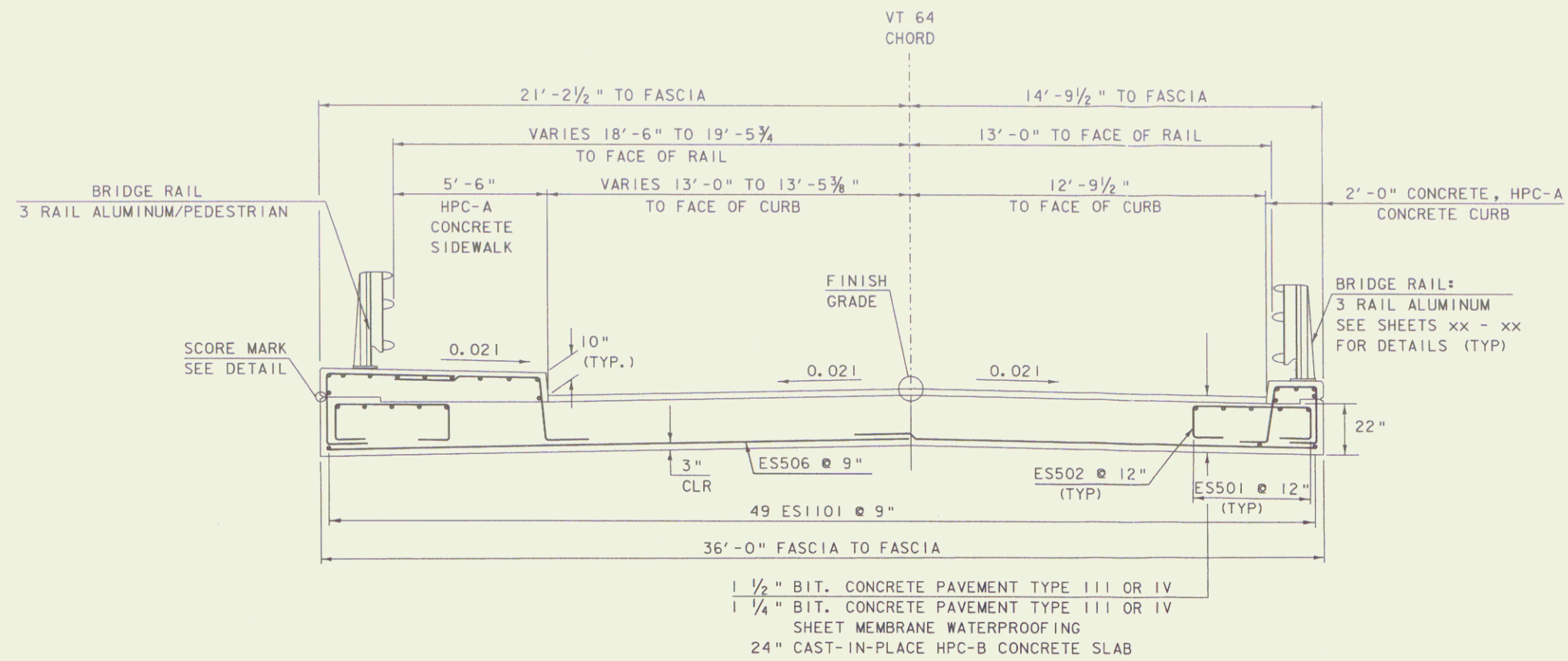
TRAV. 1	TRAV. 2	TRAV. 3	TRAV. 4	TRAV. 5	TRAV. 6
N= 10000.0000 E= 50000.0000 ELEVATION= 856.77	N= 10044.4635 E= 49561.8718 ELEVATION= 877.52	N= 10158.4277 E= 49285.8653 ELEVATION= 894.969	N= 10135.8907 E= 49117.2523 ELEVATION= 904.047	N= 10243.4898 E= 48998.1938 ELEVATION= 910.310	N= 10055.4995 E= 48967.1954 ELEVATION= 919.929
	Point was DESTROYED		Point was DESTROYED	Point was DESTROYED	Point was DESTROYED

ALIGNMENT TIES

POB 212+00.00	P.C. 213+57.10	P.T. 216+24.94	P.C. 217+91.35	PT 218+96.14	POT 224+07.94
N= 10026.94 E= 48895.12	N= 10113.86 E= 49025.98	N= 10144.47 E= 49282.35	N= 10087.63 E= 49438.75	N= 10061.0118 E= 49539.9581	N= 9976.5848 E= 50044.7446
POINT WAS NOT TIED					

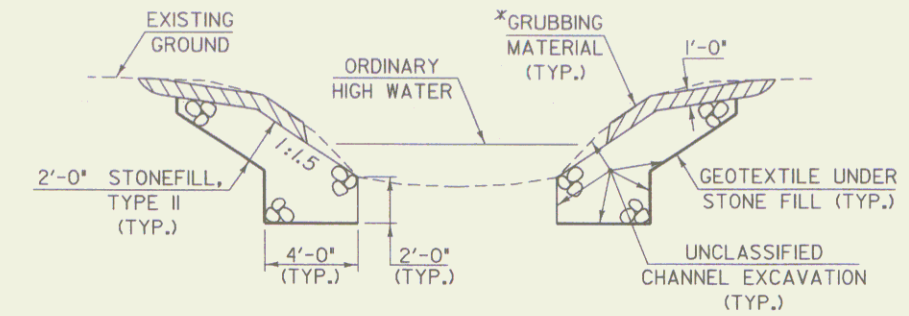
DATUM	
VERTICAL	NGVD 1929
HORIZONTAL	NAD 1927
ADJUSTMENT	

TIE SHEET	
PROJECT NAME:	WILLIAMSTOWN
PROJECT NUMBER:	BRS 0204(4)
FILE NAME:	83elll/survey/xelll1.dgn
PROJECT LEADER:	EVANS-MONGEON
DESIGNED BY:	EVANS-MONGEON
PLOT DATE:	06-JUN-2005
DRAWN BY:	R. Bullock
CHECKED BY:	
ROW SHEET 4 OF 20	



BRIDGE TYPICAL SECTION

SCALE 3/8" = 1'-0"  
 1 0 1 2 3 4

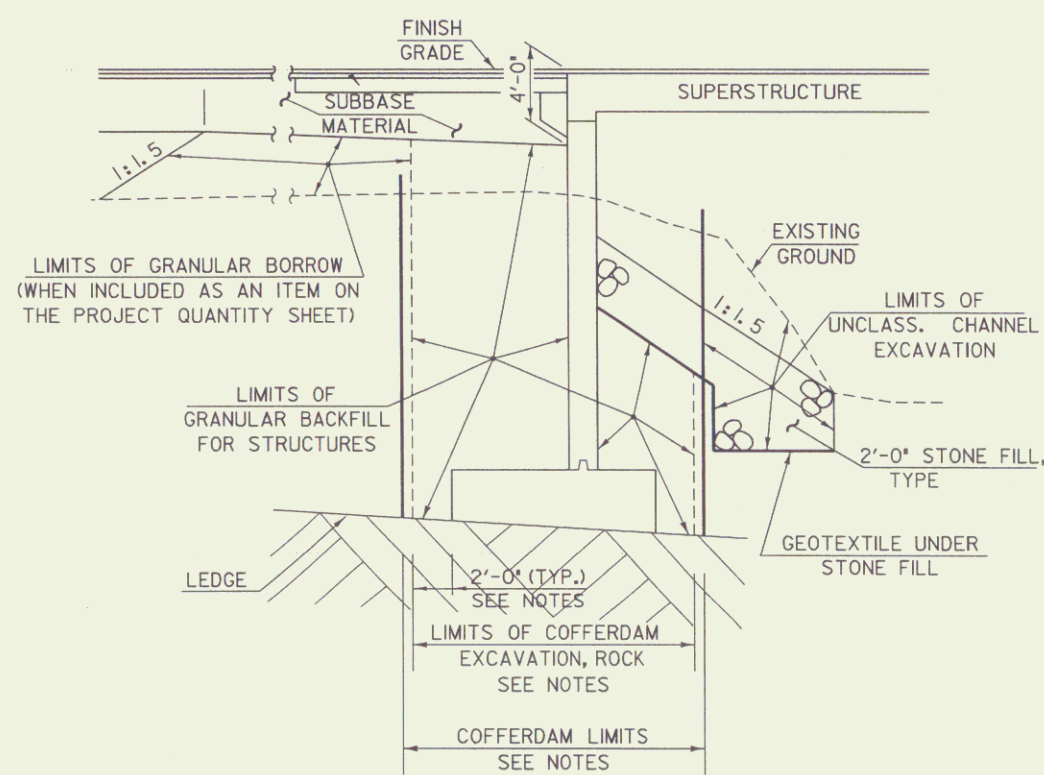


TYPICAL CHANNEL SECTION  
(NOT TO SCALE)

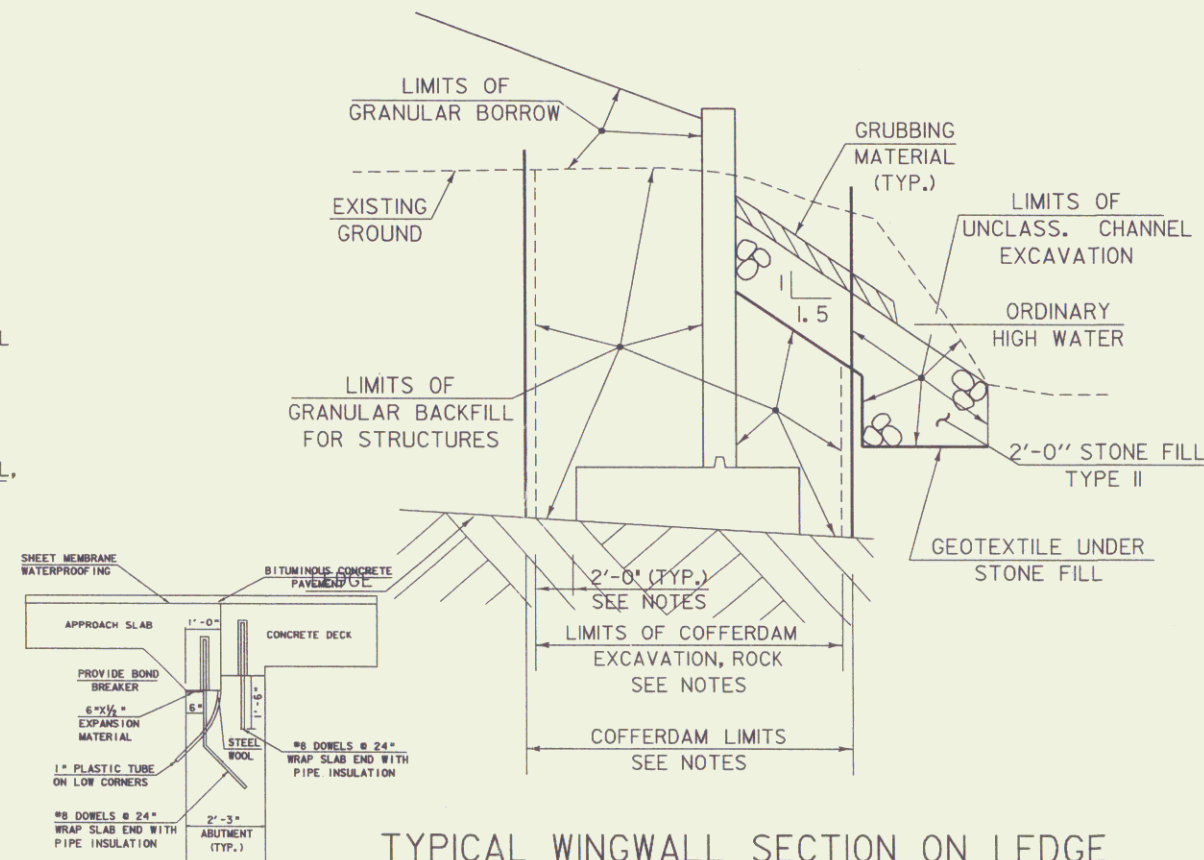
\* GRUBBING MATERIAL SHALL NOT BE PLACED ON THE STONE FILL IN THE AREA UNDER THE BRIDGE. WHENEVER CHANNEL SLOPE INTERSECTS ROADWAY SUBBASE, GRUBBING MATERIAL SHALL BEGIN AT THE BOTTOM OF SUBBASE.

NOTES

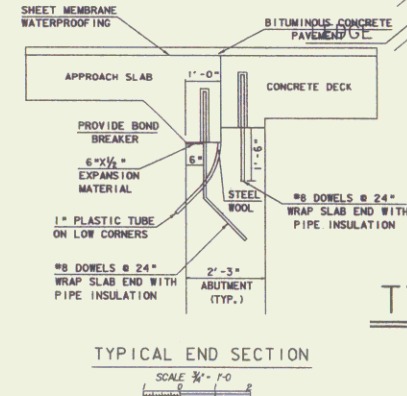
1. COFFERDAM SIZE TO BE DETERMINED BY THE CONTRACTOR.
2. THE PAY LIMITS OF "COFFERDAM EXCAVATION, EARTH" AND "COFFERDAM EXCAVATION, ROCK" SHALL BE 2'-0" OUTSIDE THE PERIMETER OF THE FOOTING, UP TO EXISTING GROUND OR BOTTOM OF SUBBASE, WHICHEVER IS LOWER.
3. 1'-0" UNDERCUT AS DETERMINED NECESSARY BY THE RESIDENT ENGINEER.
4. IF A COFFERDAM IS CONSTRUCTED WHICH IS LARGER THAN THE INDICATED COFFERDAM EXCAVATION PAY LIMITS, PAYMENT FOR ALL UNCLASSIFIED CHANNEL EXCAVATION, INCLUDING THAT PORTION WHICH IS INSIDE THE COFFERDAM BUT OUTSIDE THE COFFERDAM EXCAVATION PAY LIMITS, WILL BE MADE AT THE CONTRACT UNIT PRICE FOR UNCLASSIFIED CHANNEL EXCAVATION.



TYPICAL ABUTMENT SECTION ON LEDGE  
(NOT TO SCALE)



TYPICAL WINGWALL SECTION ON LEDGE  
(NOT TO SCALE)



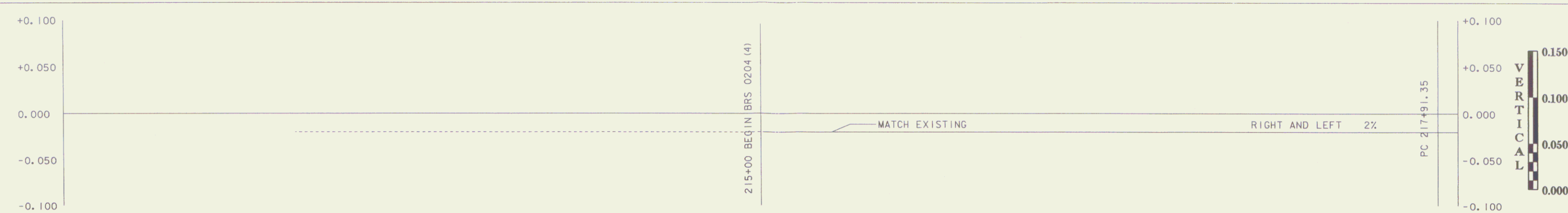
TYPICAL END SECTION  
SCALE 3/8" = 1'-0"

BRIDGE TYPICAL SECTIONS

PROJECT NAME:	WILLIAMSTOWN	PLOT DATE:	16-APR-2007
PROJECT NUMBER:	BRS 0204(4)	DRAWN BY:	EVANS-MONGEON
FILE NAME:	83ell\str\selltyp.dgn	CHECKED BY:	---
PROJECT LEADER:	M.EVANS-MONGEON	ROW SHEET:	5 OF 20
DESIGNED BY:	M.EVANS-MONGEON		

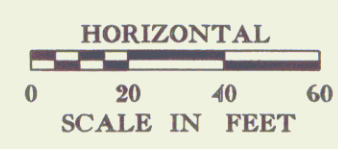
# PRELIMINARY INFORMATION SHEET

INDEX OF SHEETS	FINAL HYDRAULIC REPORT																																																																																																								
<p>1. TITLE SHEET 2. PRELIMINARY INFORMATION SHEET 3. BRIDGE TYPICAL SHEET 4-5. TYPICAL ROADWAY SHEETS 6-7. QUANTITY SHEETS 8-9. ROW DETAIL SHEETS 10-12. ROW LAYOUT SHEETS 13. BLANK 14. TIE SHEET 15-17. PLAN SHEETS 18-19. PROFILE SHEETS 20. MATERIAL TRANSITION SHEET 21. EROSION CONTROL NARRATIVE 22-24. EXISTING CONDITIONS SITE PLANS 25-27. EROSION &amp; SEDIMENT CONTROL SITE PLAN 28-30. FINAL CONDITIONS SITE PLAN 31-33. EROSION CONTROL DETAIL SHEETS 34-35. DETOUR PLAN SHEETS 36. BLANK 37-38. TRAFFIC CONTROL SHEET 39. TRAFFIC SIGN SUMMARY SHEETS 40. BORING PLAN SHEET 41-42. BORING LOG SHEET 43. PLAN AND ELEVATION SHEET 44. GENERAL NOTES 45. APPROACH SLAB DETAILS 46-48. SLAB DETAILS 49. BLANK 50-51. ABUTMENT NO. 1 &amp; WINGWALL NO. 1 &amp; 2 LAYOUT 52-53. ABUTMENT NO. 2 &amp; WINGWALL NO. 3 &amp; 4 LAYOUT 54. ABUTMENT TYPICALS SHEET 55. ABUTMENT NO. 1 REINFORCING 56. WINGWALL NO. 1 REINFORCING 57-58. WINGWALL NO. 2 REINFORCING 59. ABUTMENT NO. 3 REINFORCING 60. WINGWALL NO. 3 REINFORCING 61. WINGWALL NO. 4 REINFORCING 62. CORNER DETAILS 63-65. BRIDGE RAIL DETAILS 66. PEDESTRIAN RAIL DETAILS 67-68. REINFORCING SCHEDULE 69. BLANK 70-84. ROADWAY SECTIONS 85-96. CHANNEL LINE SECTIONS 97-106. DETOUR SECTIONS</p>	<div style="text-align: right;">Date: March 2000</div> <p><b>HYDROLOGIC DATA</b></p> <p>DRAINAGE AREA: 3.8 sq. mi. CHARACTER OF TERRAIN: Hilly with a mixture of open and forested cover. STREAM CHARACTERISTICS: Small, perennial but flashy, probably incised and not braided NATURE OF STREAMBED: Ledge and cobbles upstream, cobbles and gravel downstream</p> <p><b>PEAK FLOW DATA</b></p> <table border="1"> <tr><td>Q 2.33 =</td><td>230 cfs</td><td>Q 50 =</td><td>915 cfs</td></tr> <tr><td>Q 10 =</td><td>520 cfs</td><td>Q 100 =</td><td>1100 cfs</td></tr> <tr><td>Q 25 =</td><td>730 cfs</td><td>Q 500 =</td><td>1700 cfs</td></tr> </table> <p>DATE OF FLOOD RECORD: November 1927 (Based on 1978 Flood Insurance Study) ESTIMATED DISCHARGE: Unknown WATER SURFACE ELEV.: Unknown NATURAL STREAM VELOCITY: @ Q50 = 8.9 fps downstream ICE CONDITIONS: Moderate DEBRIS: Moderate DOES THE STREAM REACH MAXIMUM HIGHWATER ELEV. RAPIDLY? Yes IS ORDINARY RISE RAPID? Yes IS STAGE AFFECTED BY UPSTREAM OR DOWNSTREAM CONDITIONS? No IF YES, DESCRIBE:</p> <p>WATERSHED STORAGE: 1% HEADWATERS: UNIFORM: X IMMEDIATELY ABOVE SITE:</p> <p><b>EXISTING STRUCTURE INFORMATION</b></p> <p>STRUCTURE TYPE: Concrete slab bridge YEAR BUILT: 1900 CLEAR SPAN(NORMAL TO STREAM): 12.0 ft. VERTICAL CLEARANCE ABOVE STREAMBED: 7.0 ft. average at inlet WATERWAY OF FULL OPENING: 85 sq. ft. at inlet, 105 sq. ft. at outlet DISPOSITION OF STRUCTURE: Remove and replace with a new structure TYPE OF MATERIAL UNDER SUBSTRUCTURE: At least partly on ledge</p> <p>WATER SURFACE ELEVATIONS AT:</p> <table border="1"> <tr><td>Q2.33 =</td><td>869.9</td><td>VELOCITY =</td><td>9.0 fps</td></tr> <tr><td>Q10 =</td><td>874.7</td><td></td><td>11.2 fps</td></tr> <tr><td>Q25 =</td><td>876.3</td><td></td><td>12.5 fps</td></tr> <tr><td>Q50 =</td><td>877.3</td><td></td><td>12.8 fps**</td></tr> <tr><td>Q100 =</td><td>878.0</td><td></td><td>12.0 fps**</td></tr> </table> <p>LONG TERM STREAMBED CHANGES: None noted at this time. However, a reference was found indicating there has been 3 ft. of channel degradation in the last 100 years.</p> <p>IS THE ROADWAY OVERTOPPED BELOW Q100: Yes FREQUENCY: Q25 ← RELIEF ELEVATION: 876.3 DISCHARGE OVER ROAD @Q100: 220 cfs</p> <p><b>UPSTREAM STRUCTURE</b></p> <p>TOWN: Williamstown DISTANCE: 600 ft. HIGHWAY #: T.H. 6 STRUCTURE #: 21 CLEAR SPAN: 15 ft. CLEAR HEIGHT: 7 ft. YEAR BUILT: Unknown FULL WATERWAY: 105 sq. ft. STRUCTURE TYPE: Single span steel beam bridge</p> <p><b>DOWNSTREAM STRUCTURE</b></p> <p>TOWN: Williamstown DISTANCE: 400 ft. HIGHWAY #: VT 14 STRUCTURE #: 59 CLEAR SPAN: 16 ft. CLEAR HEIGHT: 7 ft. YEAR BUILT: 1958 FULL WATERWAY: 110 sq. ft. STRUCTURE TYPE: Concrete slab bridge</p> <p><b>LOAD FACTOR- LOAD RATING (TONS)</b></p> <table border="1"> <thead> <tr> <th rowspan="2">LOADING LEVELS</th> <th colspan="6">TRUCK</th> </tr> <tr> <th>H</th> <th>HS</th> <th>SS2</th> <th>6 AXLE</th> <th>3A. STR.</th> <th>4A. STR.</th> </tr> </thead> <tbody> <tr> <td>INVENTORY</td> <td>33.5</td> <td>50.3</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>POSTED</td> <td>46.8</td> <td>70.5</td> <td>91.5</td> <td></td> <td>54</td> <td>56.6</td> </tr> <tr> <td>OPERATING</td> <td></td> <td>84</td> <td>109.</td> <td>102.</td> <td>64.4</td> <td>67.5</td> </tr> </tbody> </table> <p>COMMENTS:</p> <p><b>TRAFFIC DATA</b></p> <table border="1"> <thead> <tr> <th>YEAR</th> <th>ADT</th> <th>DHV</th> <th>% D</th> <th>% T</th> <th>ADTT</th> </tr> </thead> <tbody> <tr> <td>2004</td> <td>3000</td> <td></td> <td>0</td> <td>7</td> <td>210</td> </tr> <tr> <td>2024</td> <td>4000</td> <td>550</td> <td>51</td> <td>0</td> <td>0</td> </tr> </tbody> </table> <p>20 year ESAL for flexible pavement from 2004 to 2024 : 1,285,000 40 year ESAL for flexible pavement from 2004 to 2044 : 3,044,000 Design Speed: 25 mph</p> <p><b>PROPOSED STRUCTURE</b></p> <p>STRUCTURE TYPE: Concrete slab bridge CLEAR SPAN(NORMAL TO STREAM): 16.0 ft. VERTICAL CLEARANCE ABOVE STREAMBED: 8.0 ft. average WATERWAY OF FULL OPENING: 137 sq. ft.</p> <p>WATER SURFACE ELEVATIONS AT:</p> <table border="1"> <tr><td>Q2.33 =</td><td>871.8</td><td>VELOCITY=</td><td>8.3 fps</td></tr> <tr><td>Q10 =</td><td>873.6</td><td></td><td>10.7 fps</td></tr> <tr><td>Q25 =</td><td>875.1</td><td></td><td>11.9 fps</td></tr> <tr><td>Q50 =</td><td>876.2</td><td></td><td>12.8 fps</td></tr> <tr><td>Q100 =</td><td>877.3</td><td></td><td>13.5 fps**</td></tr> </table> <p>IS THE ROADWAY OVERTOPPED BELOW Q100: Yes FREQUENCY: Q65 RELIEF ELEVATION: 876.3 DISCHARGE OVER ROAD @Q100: 25 cfs</p> <p>AVERAGE LOW ELEVATION OF SUPERSTRUCTURE: 877.6 (876.5 minimum) at inlet VERTICAL CLEARANCE: @ Q50 = 1.4 ft., average 0.3 ft. minimum at inlet</p> <p>SCOUR: Estimated to be 6.0 ft. at Q100, or to ledge. Scour will be less with the proposed bridge than with the existing bridge. REQUIRED CHANNEL PROTECTION: Stone Fill, Type II, as needed</p> <p><b>PERMIT INFORMATION</b></p> <p>AVERAGE DAILY FLOW: 8 cfs DEPTH OR ELEVATION: ORDINARY LOW WATER: 4 cfs 0.5 ft. ORDINARY HIGH WATER: 100 cfs 1.5 ft.</p> <p><b>TEMPORARY BRIDGE REQUIREMENTS</b></p> <p>STRUCTURE TYPE: N/A CLEAR SPAN (NORMAL TO STREAM): N/A VERTICAL CLEARANCE ABOVE STREAMBED: N/A WATERWAY AREA OF FULL OPENING: N/A</p> <p><b>ADDITIONAL INFORMATION</b></p> <p>* This stream does not have an official name. It was referred to as Brook 2 in the 1978 F.I.S. ** Velocities listed are an average for the total flow (flow through the bridge and over the road) at the outlet. The Q100 velocity is higher for the proposed bridge than the existing bridge, because there is less roadway overflow with the proposed bridge.</p> <p><b>DESIGN CRITERIA</b></p> <ol style="list-style-type: none"> <li>DESIGN LIVE LOAD AASHTO: HS 25</li> <li>DESIGN SPAN: 38 Feet centerline to centerline of bearing</li> <li>ALLOWABLE LOAD FOR SPREAD FOOTINGS ON SOIL ON LEDGE</li> <li>ALLOWABLE LOAD FOR PILING TYPE</li> <li>ESTIMATED LENGTH</li> <li>STRUCTURAL STEEL AASHTO GRADE: N/A</li> <li>REINFORCING STEEL GRADE: 60</li> <li>CONCRETE CLASS A (HPC-A) f'c: 4000 psi</li> <li>CONCRETE CLASS B (HPC-B) f'c: 3500 psi</li> <li>CONCRETE CLASS AA: 4000 psi</li> <li>SOIL UNIT WEIGHT: 140 pcf</li> <li>DESIGN LOAD FOR SPREAD FOOTINGS ON SOIL</li> </ol> <p><b>TRAFFIC MAINTENANCE</b></p> <ol style="list-style-type: none"> <li>IS TRAFFIC TO BE MAINTAINED? no - detour to be used IF YES, ON EXISTING STRUCTURE? N/A OR ON TEMPORARY BRIDGE? N/A ONE OR TWO-WAY TRAVEL? N/A</li> <li>TRAFFIC CONTROL SIGNALS REQUIRED? N/A</li> <li>ARE SIDEWALKS REQUIRED? no IF SO, ON WHAT SIDE? N/A</li> </ol> <p>PROJECT NAME: Williamstown PROJECT NUMBER: BRS 0204 (4)</p> <p>FILE NAME: W3e111se111excel.dgn PLOT DATE: 4/10/2007 PROJECT MANAGER: Evans-Mongeon DRAWN BY: MEM DESIGNED BY: Evans-Mongeon CHECKED BY: MEM PRELIMINARY INFORMATION SHEET SHEET 6 OF 20</p>	Q 2.33 =	230 cfs	Q 50 =	915 cfs	Q 10 =	520 cfs	Q 100 =	1100 cfs	Q 25 =	730 cfs	Q 500 =	1700 cfs	Q2.33 =	869.9	VELOCITY =	9.0 fps	Q10 =	874.7		11.2 fps	Q25 =	876.3		12.5 fps	Q50 =	877.3		12.8 fps**	Q100 =	878.0		12.0 fps**	LOADING LEVELS	TRUCK						H	HS	SS2	6 AXLE	3A. STR.	4A. STR.	INVENTORY	33.5	50.3					POSTED	46.8	70.5	91.5		54	56.6	OPERATING		84	109.	102.	64.4	67.5	YEAR	ADT	DHV	% D	% T	ADTT	2004	3000		0	7	210	2024	4000	550	51	0	0	Q2.33 =	871.8	VELOCITY=	8.3 fps	Q10 =	873.6		10.7 fps	Q25 =	875.1		11.9 fps	Q50 =	876.2		12.8 fps	Q100 =	877.3		13.5 fps**
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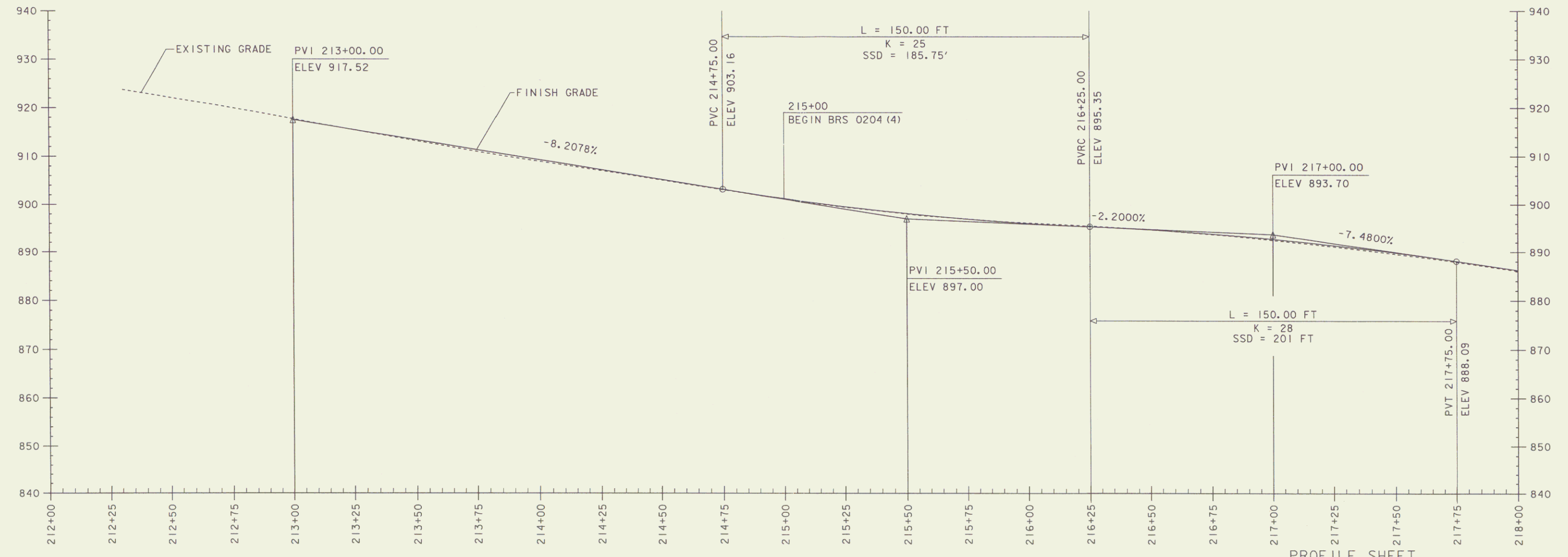


# Superelevation 1

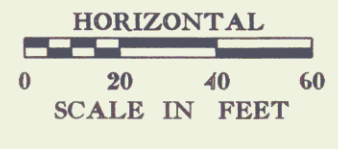
1" = 0.050' // VERT  
1" = 20' HORZ



# Profile



1" = 10' VERT  
1" = 20' HORZ

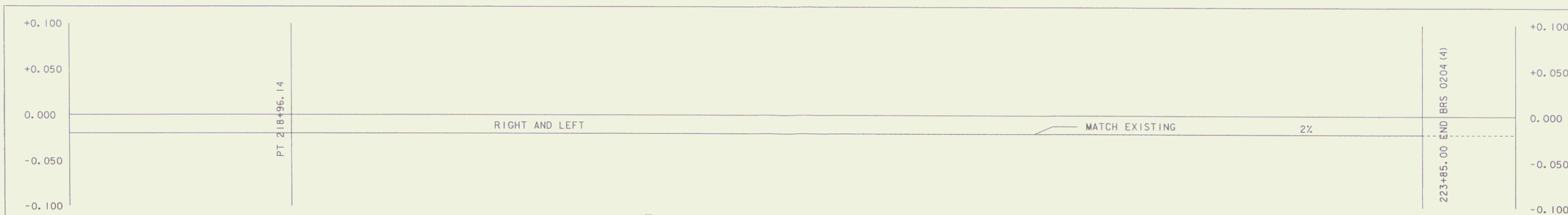


### PROFILE SHEET

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PROJECT NUMBER: BRS 0204(4)

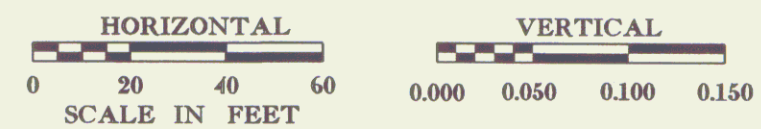
FILE NAME: 83ell/etr/dellxs.dgn  
PROJECT LEADER: EVANS-MONGEON  
DESIGNED BY: PATTERSON  
dellpflj

PLOT DATE: 07-JUN-2005  
DRAWN BY: PATTERSON  
CHECKED BY: LACKEY  
ROW SHEET 7 OF 20

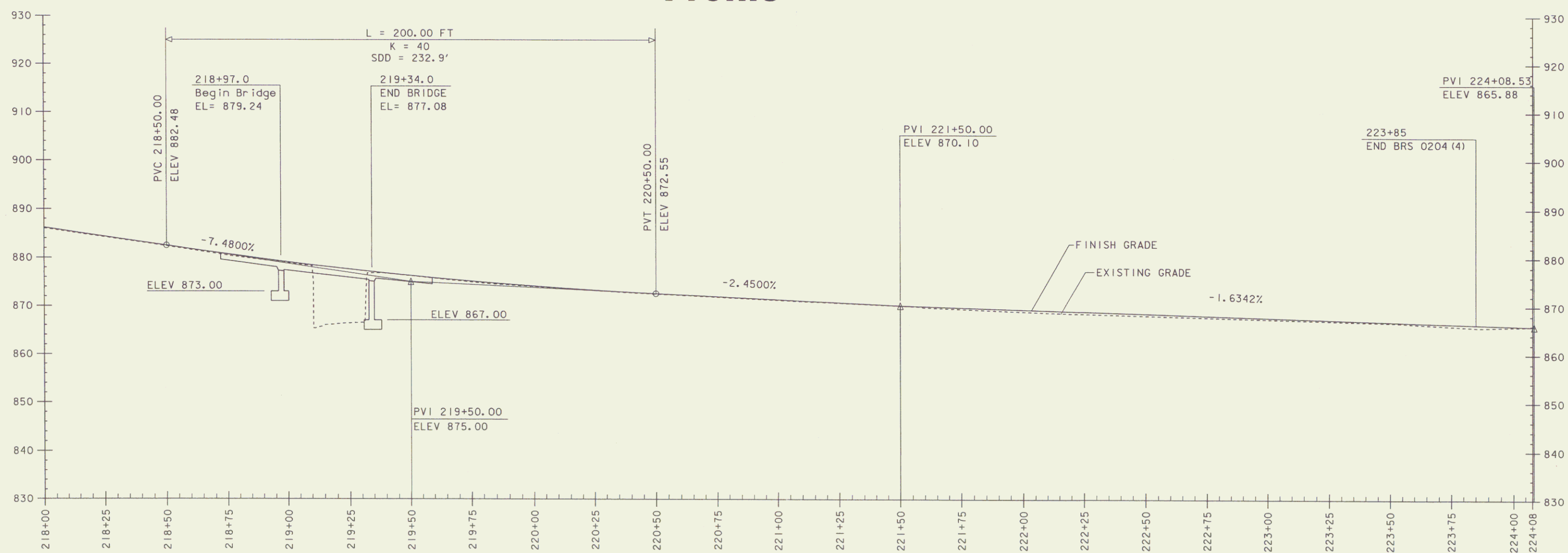


# Superelevation 2

1" = 0.050' VERT  
1" = 20' HORZ



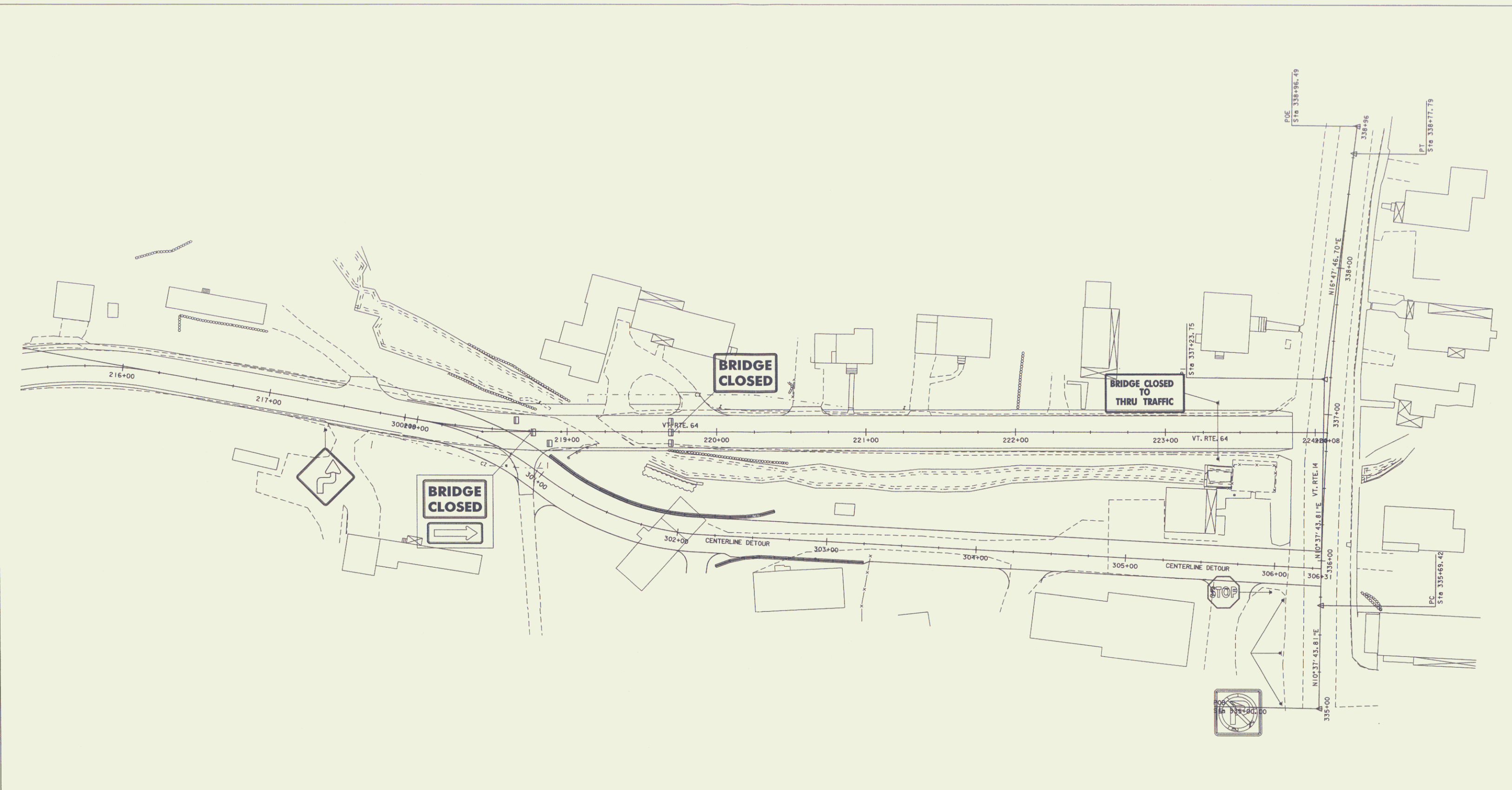
# Profile





1" = 10' VERT  
1" = 20' HORZ



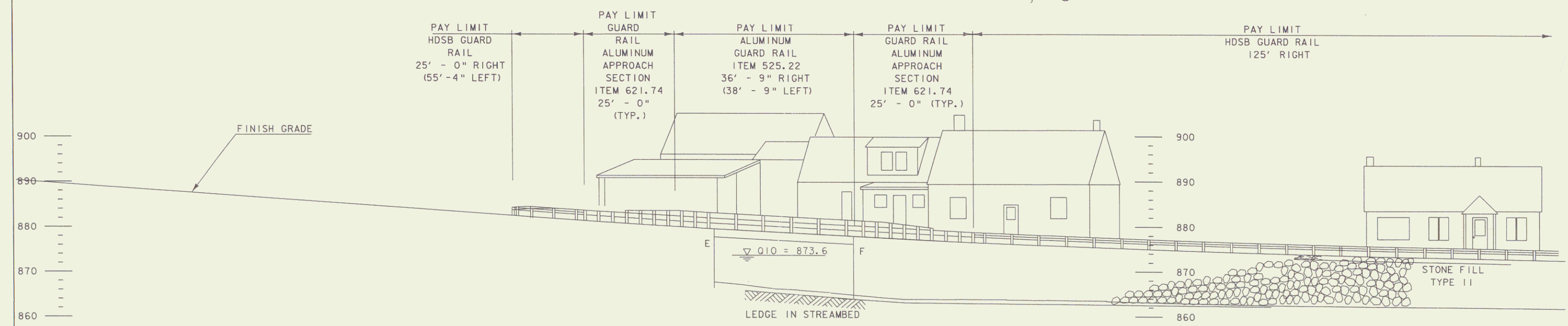
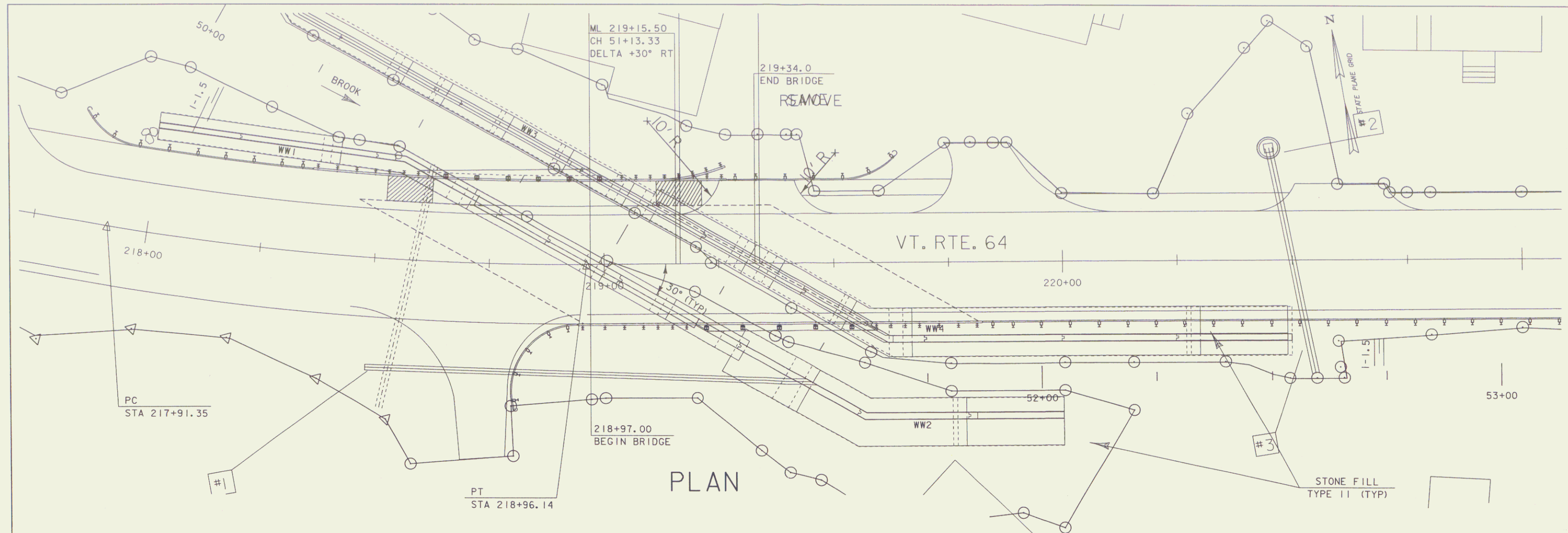
PROFILE SHEET	
PROJECT NAME:	WILLIAMSTOWN
PROJECT NUMBER:	BRS 0204(4)
FILE NAME:	83ell/str/dellxs.dgn
PROJECT LEADER:	EVANS-MONGEON
DESIGNED BY:	PATTERSON
dellp2.1	
PLOT DATE:	06-JUN-2005
DRAWN BY:	PATTERSON
CHECKED BY:	LACKEY
	ROW SHEET 8 OF 20



 TYPE III BARRICADE  
 TEMP. TRAFFIC BARRIER

TRAFFIC CONTROL SHEET

PROJECT NAME:	WILLIAMSTOWN	PLOT DATE:	26-APR-2007
PROJECT NUMBER:	BRS 0204(4)	DRAWN BY:	U. STANLEY
FILE NAME:	/83ell/str/s83ell1tcs.dgn	CHECKED BY:	
PROJECT LEADER:	EVANS-MONGEON	DESIGNED BY:	U. STANLEY
DESIGNED BY:	U. STANLEY	ROW SHEET	9 of 20



PROJECT NAME: WILLIAMSTOWN  
 PROJECT NUMBER: BRS 0204(4)  
 FILE NAME: /str2/83ell/sellpe.dgn  
 PROJECT LEADER: EVANS-MONGEON  
 DESIGNED BY: PATTERSON  
 sellpe.l  
 PLOT DATE: 26-APR-2007  
 DRAWN BY: PATTERSON  
 CHECKED BY: LACKEY  
 ROW SHEET 10 OF 20

## EROSION CONTROL NARRATIVE

### 1.1 PROJECT DESCRIPTION

THIS PROJECT INVOLVES THE REPLACEMENT OF A BRIDGE OVER AN UNNAMED BROOK. THE PROJECT IS ON VT ROUTE 64, A PAVED, STATE NUMBERED ROUTE, IN THE TOWN OF WILLIAMSTOWN. A NEW, TWO-LANE, CAST-IN-PLACE, CONCRETE SLAB, BRIDGE WILL BE CONSTRUCTED ON THE EXISTING ALIGNMENT. TRAFFIC WILL BE MAINTAINED ON A TEMPORARY DETOUR DURING CONSTRUCTION. FOLLOWING COMPLETION OF THE NEW BRIDGE, THE TEMPORARY DETOUR WILL BE REMOVED. TOTAL ROADWAY APPROACH WORK, INCLUDING BOTH APPROACHES, IS APPROXIMATELY 313 FEET.

NOTE: AREA OF DISTURBANCE SHALL INCLUDE LIMITS OF EARTH DISTURBANCE WITHIN THE PROJECT AREA, INCLUDING ANY WASTE, STAGING AND BORROW AREAS WITHIN OR DIRECTLY ADJACENT TO THE PROJECT LIMITS.

TOTAL AREA OF DISTURBANCE IS APPROXIMATELY 0.95 ACRES.

IT IS ANTICIPATED THAT THIS PROJECT WILL LAST ONE CONSTRUCTION SEASON.

### 1.2 SITE INVENTORY

#### 1.2.1 OFF SITE DRAINAGE CHARACTERISTICS (UP AND DOWN-GRADIENT)

THE PROPERTY SURROUNDING THE PROJECT SITE CONSISTS OF WELL ESTABLISHED VEGETATION, MODERATE TO STEEPLY SLOPING, MIXED SOFTWOOD AND HARDWOOD FOREST WITH WELL DEFINED DRAINAGE WAYS. DUE TO THE NATURE OF THE SURROUNDING TERRAIN, RUNOFF WATER ENTERING THE PROJECT SITE WILL BE PRIMARILY LIMITED TO THAT WHICH IS CONVEYED ALONG ROADWAY DITCHES, AND THAT WHICH FOLLOWS ROUTE 64 ALONG THE 14% GRADE AT THE END OF THE PROJECT LIMITS. THE CURRENT ROADWAY DITCHES ARE NOT WELL DEFINED AND ARE NOT LINED WITH STONE.

#### 1.2.2 DRAINAGE, WATERWAYS, BODIES OF WATER, AND PROXIMITY TO NATURAL OR MAN-MADE WATER FEATURES

UNNAMED BROOK IS LOCATED IN THE PROJECT AREA. THERE ARE NO OTHER WATER BODIES OR WETLANDS WITHIN THE PROJECT AREA. THE UNNAMED BROOK IS CLASSIFIED AS HILLY WITH A MIXTURE OF OPEN AND FORESTED COVER CONTAINING A STREAMBED OF MOSTLY LEDGE WITH COBBLE UPSTREAM, COBBLES AND GRAVEL DOWNSTREAM. THE CONTRIBUTING DRAINAGE AREA AT THE BRIDGE CROSSING IS 3.8 SQ. MI. DISTURBANCE OF SOILS NEAR NATURAL OR MAN-MADE WATERWAYS CONSISTS OF THAT WHICH IS NECESSARY TO CONSTRUCT TWO NEW CONCRETE BRIDGE ABUTMENTS AND APPLICABLE ROADWAY APPROACHES AS WELL AS THE REMOVAL OF THE EXISTING CROSSING. STABILIZATION OF DISTURBANCES TO STREAM BANKS WILL BE ACCOMPLISHED WITH STONE FILL, TYPE II.

#### 1.2.3 TOPOGRAPHY, EXISTING ROADS, BUILDINGS, UTILITIES

THE TOPOGRAPHY OF THE PROJECT SITE IS HILLY AND WOODED WITH ROUTE 64 FOLLOWING PARALLEL TO UNNAMED BROOK WHICH IS CONTAINED BY STEEP STREAM BANKS ALONG EACH SIDE. DEVELOPMENT ALONG ROUTE 64 CONSISTS OF PERMANENT RESIDENCES, TWO OF WHICH EXIST NEAR THE PROJECT LIMITS. OVERHEAD UTILITY SERVICE FOLLOWS ALONG ROUTE 64 WITH THE NEED FOR TEMPORARY RELOCATION DURING CONSTRUCTION.

#### 1.2.4 VEGETATION

A MIX OF HARDWOOD AND SOFTWOOD TREES OF ALL SIZES EXIST ALONG ROUTE 64 THE TWO RESIDENCES NEAR THE BRIDGE SITE HAVE SMALL AREAS OF LAWN AND LANDSCAPE PLANTINGS. NO FIELDS OR OTHER AGRICULTURAL CROPS EXIST NEAR THE PROJECT. IMPACTS TO VEGETATION WILL BE LIMITED TO THAT WHICH ARE EFFECTED BY THE CONSTRUCTION OF THE NEW BRIDGE ALONG A NEW ALIGNMENT. SOME TREES WILL BE REMOVED.

FOLLOWING CONSTRUCTION OF THE NEW BRIDGE, THE STREAM BANKS WILL BE STABILIZED WITH STONE FILL AND VEGETATION REESTABLISHED WITH STANDARD SEED & MULCH PRACTICES.

#### 1.2.5 SOILS

THE SOIL CONSERVATION SERVICE HAS MAPPED THE SOILS THROUGHOUT ORANGE COUNTY. THE SOIL TYPE IDENTIFIED FOR THIS PROJECT SITE IS MEC (MERRIMAC FINE SANDY LOAM). THIS SOIL TYPE IS DESCRIBED AS "...LEVEL TO STEEP, DEEP, SOMEWHAT EXCESSIVELY DRAINED SOILS ON TERRACES. IN REPRESENTATIVE PROFILE IN A HAYFIELD...THEY HAVE SURFACE LAYER OF VERY DARK GRAYISH BROWN FINE SANDY LOAM 6 INCHES THICK. THE UPPER 10 INCHES OF SUBSOIL IS BROWN TO DARK BROWN GRADING TO YELLOWISH BROWN FINE SANDY LOAM. THE LOWER 7 INCHES IS BROWN SANDY LOAM. THE UNDERLYING MATERIAL TO A DEPTH OF 60 INCHES IS OLIVE GRAY GRAVELLY SAND...PERMEABILITY IS RAPID...THE HAZARD OF EROSION IS MODERATE. RUNOFF IS MEDIUM.

THE LISTED SOIL ERODIBILITY COEFFICIENT (K-VALUE) FOR THIS SOIL TYPE IS 0.17. GENERALLY, K-VALUES INDICATE THE FOLLOWING: 0.0 - 0.23 = LOW ERODIBILITY; 0.24 - 0.36 = MODERATE ERODIBILITY; 0.37 AND HIGHER = HIGHER ERODIBILITY.

#### 1.2.6 SENSITIVE RESOURCE AREAS

CRITICAL HABITATS: NO  
HISTORICAL OR ARCHEOLOGICAL AREAS: NO  
PRIME AGRICULTURAL LAND: NO  
THREATENED AND ENDANGERED SPECIES: NO  
WATER RESOURCE: UNNAMED BROOK  
WETLANDS: NO

#### 1.3 RISK EVALUATION

THIS PROJECT DOES NOT FALL UNDER THE JURISDICTION OF CONSTRUCTION GENERAL PERMIT 3-9020 BASED ON THE PROJECT IMPACT AREA. SHOULD CHANGES PRIOR TO OR DURING CONSTRUCTION RESULT IN ONE OR MORE ACRES OF EARTH DISTURBANCE OR SHOULD THE PROJECT BECOME PART OF A LARGER PLAN OF DEVELOPMENT, THEN THE SELECTED CONTRACTOR WILL BE RESPONSIBLE FOR ADDITIONAL PERMITTING WITH VAMR VIA FILING OF THE APPROPRIATE NOTICE OF INTENT UNDER THE CONSTRUCTION GENERAL PERMIT PROCESS.

#### 1.4 EROSION PREVENTION AND SEDIMENT CONTROL

THE EROSION CONTROL PLANS ARE MEANT AS A GUIDELINE FOR PREVENTING EROSION AND CONTROLLING SEDIMENT TRANSPORT. THE WORK OUTLINED IN THIS NARRATIVE CONSISTS OF APPLYING MEASURES THROUGHOUT THE LIFE OF THE PROJECT MINIMIZING SEDIMENT TRANSPORT TO THE RECEIVING WATERS. THE MEASURES INCLUDE STABILIZATION AND STRUCTURAL PRACTICES, STORM WATER CONTROLS AND OTHER POLLUTION PREVENTION CONTROLS.

EMPLOY TEMPORARY STABILIZATION PRACTICES IN INCREMENTAL STAGES (PHASING) AS CONSTRUCTION PROCEEDS. ADDITIONAL MEASURES MAY BE NEEDED DUE TO THE PHASING OF THE PROJECT AND AS DIRECTED BY THE ENGINEER.

PREVENTING INITIAL SOIL EROSION IS MUCH MORE EFFECTIVE THAN TREATING ERODED SEDIMENT. THEREFORE, STABILIZE ALL DISTURBED AREAS PROMPTLY AFTER CONSTRUCTION ACTIVITY HAS TEMPORARILY OR PERMANENTLY CEASED. MAINTAINING VEGETATED BUFFERS ALONG STREAM BANKS, WETLANDS OR OTHER SENSITIVE AREAS IS A CRUCIAL EROSION AND SEDIMENT CONTROL MEASURE THAT SHOULD BE ESTABLISHED WHEREVER POSSIBLE.

(REFER TO THE LOW RISK SITE HANDBOOK AND APPROPRIATE DETAIL SHEETS FOR EACH PRACTICE REQUIRED ON THE PROJECT TO INCLUDE BUT NOT LIMITED TO THE FOLLOWING.)

1.4.1 MARK SITE BOUNDARIES  
PROJECT DEMARCATION FENCE IS NOT BEING USED BECAUSE OF THE RESIDENTIAL NATURE OF THE PROJECT SITE.

1.4.2 LIMIT DISTURBANCE AREA  
SMALL CONSTRUCTION SITE

1.4.3 STABILIZE CONSTRUCTION EXIT  
STABILIZED CONSTRUCTION ENTRANCE

1.4.4 INSTALL SILT FENCE  
SILT FENCE

1.4.5 DIVERT UPLAND RUNOFF  
MINIMAL AMOUNT OF OFF-SITE RUNOFF ANTICIPATED

1.4.6 SLOW DOWN CHANNELIZED RUNOFF  
CHECK DAM

1.4.7 CONSTRUCT PERMANENT CONTROLS  
TYPE II STONE FOR CHANNEL PROTECTION  
SEED AND MULCH  
DRAINAGE INLETS AND PIPING  
SOIL RETENTION WALLS

1.4.8 STABILIZE EXPOSED SOILS  
SEED AND MULCH  
EROSION MATTING

1.4.9 WINTER STABILIZATION  
VARIOUS MEASURES SPECIFIC TO WINTER (SEE LOW RISK HANDBOOK), NOT NECESSARY ON A ONE-CONSTRUCTION SEASON PROJECT

1.4.10 STABILIZE SOIL AT FINAL GRADE  
SEED AND MULCH  
EROSION MATTING

1.4.11 DE-WATERING ACTIVITIES  
SEDIMENT BASINS FOR ABUTMENT WORK

1.4.12 INSPECT YOUR SITE  
INSPECT SITE BASED ON PERMIT AUTHORIZATION REQUIREMENTS

TEMPORARY EROSION PREVENTION MEASURES TO BE UTILIZED INCLUDE:

TRACKING OF ALL EXPOSED SLOPES, COMBINED WITH TEMPORARY MULCHING, WILL ALSO BE UTILIZED ON A REGULAR BASIS. ANY SLOPES TO BE EXPOSED FOR SEVERAL DAYS PRIOR TO FINAL GRADING SHALL BE TRACKED AND MULCHED. SLOPES SHALL BE STABILIZED WITHIN 48 HOURS OF FORECASTED RAIN.

SEEDING, MULCHING AND BIODEGRADABLE EROSION CONTROL MATTING OR AN EQUIVALENT SHALL BE USED TO STABILIZE ALL SLOPES STEEPER THAN 1:3. THESE SLOPES SHALL BE STABILIZED WITHIN 48 HOURS OF REACHING FINAL GRADE OR DURING INTERMITTENT PHASES OF CONSTRUCTION.

SILT FENCE SHALL BE INSTALLED PRIOR TO ANY UP SLOPE WORK. INSTALLATION SHALL BE PERFORMED PER INCLUDED DETAIL SHEET.

MEASURES SUCH AS SILT FENCE SHALL BE REGULARLY MAINTAINED AND SHALL BE CHECKED FOR SEDIMENT BUILD-UP. SEDIMENT BUILD-UP SHALL BE REMOVED WHEN THE LEVEL OF SEDIMENT REACHES ONE-HALF THE HEIGHT OF THE CONTROL MEASURE. SEDIMENT SHALL BE DISPOSED AT AN APPROVED SITE WHERE IT WILL NOT BE SUBJECT TO EROSION.

PERMANENT EROSION CONTROL

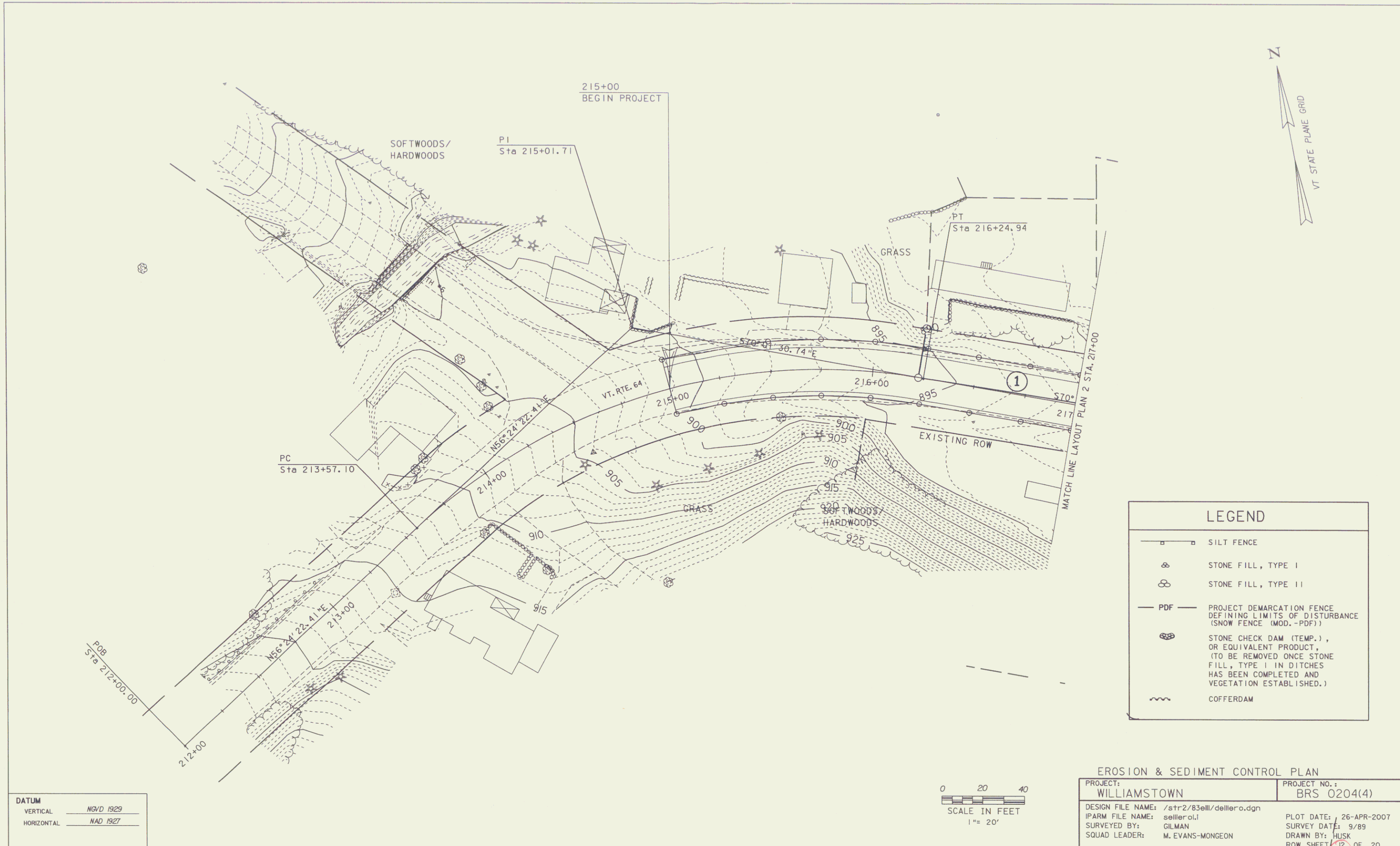
SEVERAL PERMANENT EROSION CONTROL MEASURES WILL BE UTILIZED

STREAM BANKS WILL BE ARMORED WITH STONE FILL TYPE II AS SPECIFIED BY VTRANS ON THE PROJECT PLANS. THE STONE FILL WILL STABILIZE THE EXISTING BANK IN ORDER TO PROTECT FROM EROSION DURING STORM AND HIGH WATER EVENTS.

ALL DISTURBED AREAS WILL BE SEEDED AND MULCHED. AREAS WITH SLOPES STEEPER THAN 1:3 SHALL UTILIZE BIODEGRADABLE EROSION CONTROL MATTING.

STREAM BANK VEGETATION WILL BE INTRODUCED IN THE GRUBBING MATERIAL THAT IS TO BE PLACED OVER THE STREAM BANK STONE FILL.

PROJECT NAME:	WILLIAMSTOWN	PLOT DATE:	15-MAY-2007
PROJECT NUMBER:	BRS 0204 (4)	DRAWN BY:	U. STANLEY
FILE NAME:	S83E11ERONARR.DGN	CHECKED BY:	E-MONGEON
PROJECT LEADER:	M.EVANS-MONGEON	DESIGNED BY:	E-MONGEON
			ROW SHEET 11 OF 20



DATUM	
VERTICAL	NGVD 1929
HORIZONTAL	NAD 1927

0 20 40  
SCALE IN FEET  
1" = 20'

LEGEND	
	SILT FENCE
	STONE FILL, TYPE I
	STONE FILL, TYPE II
	PROJECT DEMARCATION FENCE DEFINING LIMITS OF DISTURBANCE (SNOW FENCE (MOD.-PDF))
	STONE CHECK DAM (TEMP.), OR EQUIVALENT PRODUCT, (TO BE REMOVED ONCE STONE FILL, TYPE I IN DITCHES HAS BEEN COMPLETED AND VEGETATION ESTABLISHED.)
	COFFERDAM

EROSION & SEDIMENT CONTROL PLAN	
PROJECT: <b>WILLIAMSTOWN</b>	PROJECT NO.: <b>BRS 0204(4)</b>
DESIGN FILE NAME: /s+r2/83e//del/ero.dgn	PLOT DATE: 26-APR-2007
IPARM FILE NAME: siller.ol1	SURVEY DATE: 3/89
SURVEYED BY: GILMAN	DRAWN BY: HUSK
SQUAD LEADER: M. EVANS-MONGEON	ROW SHEET 12 OF 20

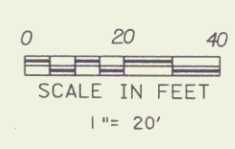


**NOTES**

1. AN ALTERNATE TEMPORARY EROSION CONTROL PLAN MAY BE SUBMITTED BY THE CONTRACTOR FOR APPROVAL BY THE RESIDENT ENGINEER.
2. a) IN LIEU OF THE USE OF COFFERDAMS, THE CONTRACTOR MAY ELECT TO USE A PIPE TO MAINTAIN THE FLOW OF WATER DURING CONSTRUCTION. THE RECOMMENDED HYDRAULIC OPENING MUST BE AT LEAST 50 sq. feet.  
b) ALL THE WORK ASSOCIATED WITH THIS WORK WILL BE PAID UNDER THE ITEMS, "COFFERDAM (STA. 219+00.000)", "COFFERDAM (STA. 219+25.00)", "COFFERDAM EXCAVATION, EARTH" AND "COFFERDAM EXCAVATION, ROCK".
3. THE CONTRACTOR WILL USE OTHER TEMPORARY OR PERMANENT EROSION CONTROL MEASURES AS NECESSITATED BY THE SEQUENCE OF CONSTRUCTION AND AS DIRECTED BY THE RESIDENT ENGINEER. SEE SECTION 105.23 OF THE VERMONT AOT STANDARD SPECIFICATIONS FOR CONSTRUCTION DATED 2006.
4. USE THE EROSION CONTROL PLAN SHEET IN CONJUNCTION WITH STANDARD SHEETS TIM & T2M.
5. SPECIAL CONSIDERATION MUST BE GIVEN TO THE FIRST PUMP-DOWN OF THE COFFERDAMS. THIS WILL CONTAIN THE GREATEST VOLUME OF WATER WITH A HIGH SEDIMENT LOAD. THE CONTRACTOR MAY PROVIDE ADDITIONAL SEDIMENT TRAPS WITHIN THE RIGHT OF WAY IF REQUIRED OR CONTROL THE RATE OF DRAW-DOWN. ADDITIONAL SEDIMENT TRAPS MUST BE APPROVED BY THE RESIDENT ENGINEER.
6. AFTER COMPLETION OF THE SUBSTRUCTURE, THE SEDIMENT IN THE TRAP SHALL BE REMOVED AND THE GROUND RESTORED TO ITS ORIGINAL SLOPES OR GRADED AS SHOWN ON THE CONSTRUCTION DRAWINGS.

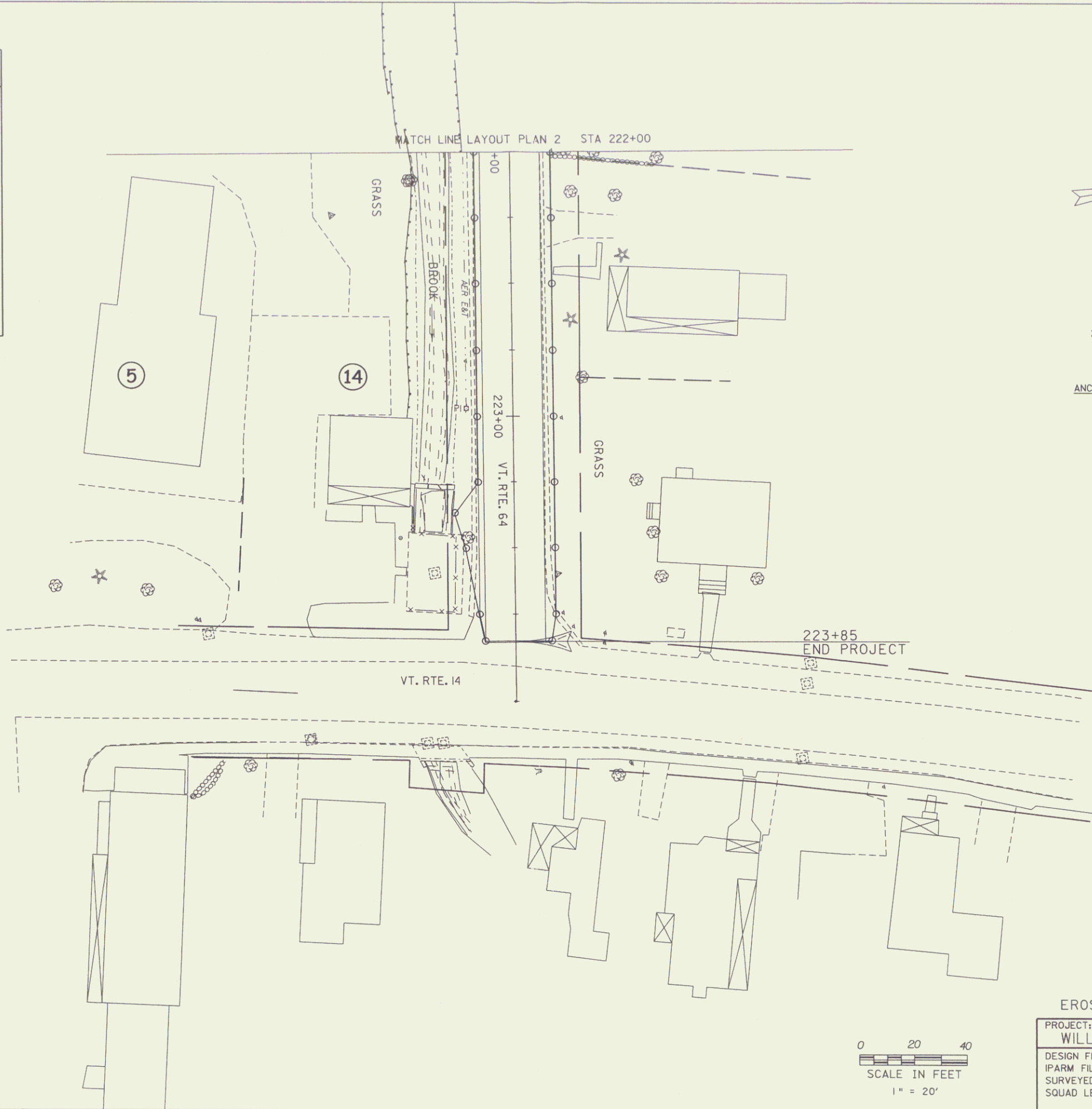
LEGEND	
	SILT FENCE
	STONE FILL, TYPE I
	STONE FILL, TYPE II
	PROJECT DEMARCATION FENCE DEFINING LIMITS OF DISTURBANCE (SNOW FENCE (MOD.-PDF))
	STONE CHECK DAM (TEMP.), OR EQUIVALENT PRODUCT, (TO BE REMOVED ONCE STONE FILL, TYPE I IN DITCHES HAS BEEN COMPLETED AND VEGETATION ESTABLISHED.)
	COFFERDAM
	DI PROTECTION

**DATUM**  
 VERTICAL: NAD 1929  
 HORIZONTAL: NAD 1927



EROSION & SEDIMENT CONTROL SITE PLAN	
PROJECT: <b>WILLIAMSTOWN</b>	PROJECT NO.: <b>BRS 0204(4)</b>
DESIGN FILE NAME: /str2/83ell/dellero.dgn	PLOT DATE: 26-APR-2007
IPARM FILE NAME: sellero2	SURVEY DATE: 9/89
SURVEYED BY: GILMAN	DRAWN BY: HUSK
SQUAD LEADER: M. EVANS-MONGEON	ROW SHEET: 15 OF 20

LEGEND	
	SILT FENCE
	STONE FILL, TYPE
	STONE FILL, TYPE
	PROJECT DEMARCATI DEFINING LIMITS O (SNOW FENCE (MOD. DF))
	STONE CHECK DAM (MP.), OR EQUIVALENT PRO (TO BE REMOVED ON FILL, TYPE I IN D HAS BEEN COMPLETE VEGETATION ESTABL HED.)
	EROSION CONTROL MATTING

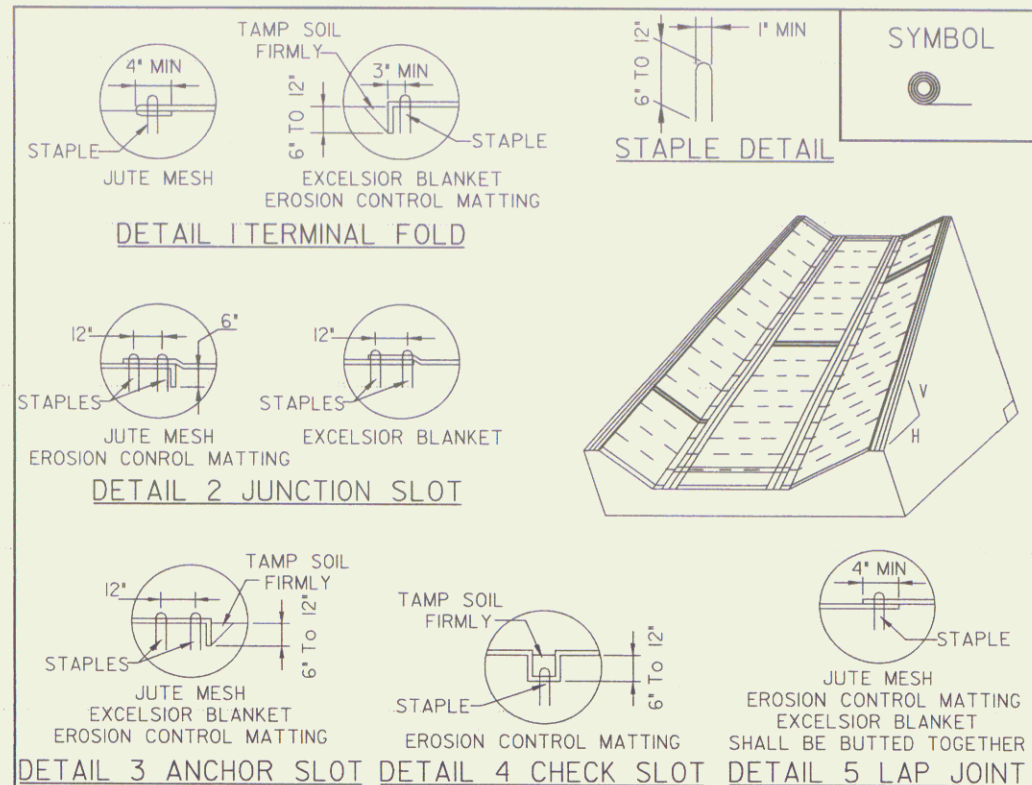


DATUM  
VERTICAL NGVD 1929  
HORIZONTAL NAD 1927

0 20 40  
SCALE IN FEET  
1" = 20'

EROSION & SEDIMENT CONTROL PLAN

PROJECT: <b>WILLIAMSTOWN</b>	PROJECT NO.: <b>BRS 0204(4)</b>
DESIGN FILE NAME: str2/B3elli/dellero.dgn	PLOT DATE: 26-APR-2007
IFARM FILE NAME: s01ler-o3	SURVEY DATE: 9/89
SURVEYED BY: GILMAN	DRAWN BY: HUSK
SQUAD LEADER: M. EVANS-MONGEON	ROW SHEET <b>14</b> OF 20



CONSTRUCTION SPECIFICATIONS

ADAPTED FROM DETAILS PROVIDED BY: ILLINOIS USDA-NRCS  
ORIGINALLY DEVELOPED BY USDA-NRCS  
VERMONT DEPARTMENT OF ENVIRONMENTAL CONSERVATION

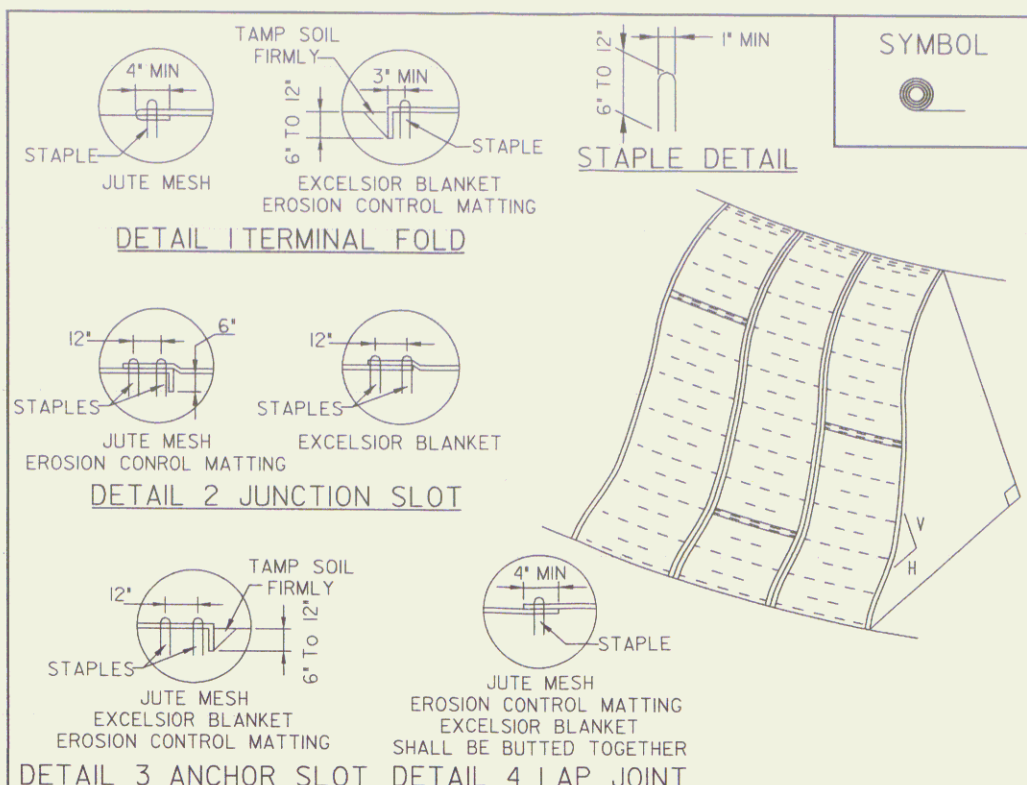
ROLLED EROSION CONTROL PRODUCT (RECP) DITCH

NOTES:  
REFER TO THE VERMONT STANDARDS & SPECIFICATIONS FOR EROSION PREVENTION & SEDIMENT CONTROL -2006- FROM THE VT AGENCY OF NATURAL RESOURCES FOR ADDITIONAL GUIDANCE.

THIS ITEM SHALL BE PAID FOR UNDER ITEM  
653.20 TEMPORARY EROSION MATTING OR  
653.21 PERMANENT EROSION MATTING

REVISIONS	DATE	BY
MARCH 8, 2007	JMF	
APRIL 16, 2007	WHF	

SEEDING FORMULA RURAL AREAS				
% MASS	kg/ha	NAME	PUR %	GERM %
37.5	26.0	CREeping RED FESCUE	98	85
37.5	26.0	TALL FESCUE	95	90
5.0	4.0	RED TOP	95	90
15.0	10.0	BIRDSFOOT TREFOLI	98	85
5.0	4.0	ANNUAL RYE GRASS	95	85
100.0	70.0			



CONSTRUCTION SPECIFICATIONS

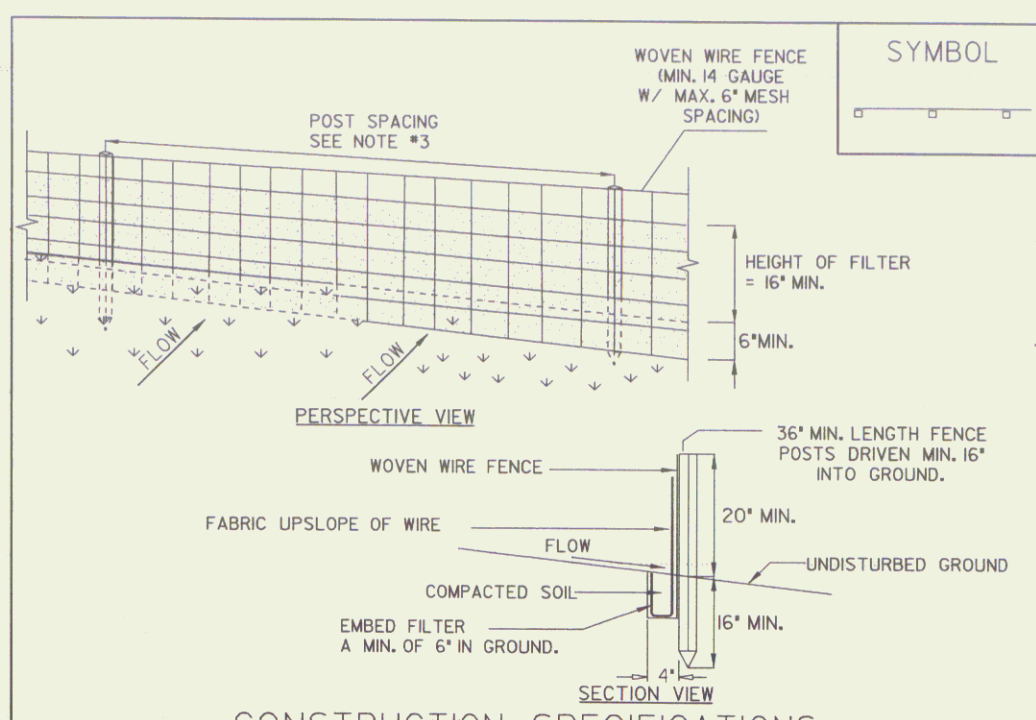
ADAPTED FROM DETAILS PROVIDED BY: ILLINOIS USDA-NRCS  
ORIGINALLY DEVELOPED BY USDA-NRCS  
VERMONT DEPARTMENT OF ENVIRONMENTAL CONSERVATION

ROLLED EROSION CONTROL PRODUCT (RECP) SIDE SLOPE

NOTES:  
REFER TO THE VERMONT STANDARDS & SPECIFICATIONS FOR EROSION PREVENTION & SEDIMENT CONTROL -2006- FROM THE VT AGENCY OF NATURAL RESOURCES FOR ADDITIONAL GUIDANCE.

THIS ITEM SHALL BE PAID FOR UNDER ITEM  
653.20 TEMPORARY EROSION MATTING OR  
653.21 PERMANENT EROSION MATTING

REVISIONS	DATE	BY
NEW	APRIL 16, 2007	WHF



CONSTRUCTION SPECIFICATIONS

- WOVEN WIRE FENCE REINFORCEMENT IS ONLY REQUIRED WITHIN 100 FT UPSLOPE OF RECEIVING WATERS.
- WHERE REQUIRED FENCE SHALL BE WOVEN WIRE, MIN. 14 GAUGE WITH A 6" MAXIMUM MESH OPENING. FILTER CLOTH SHALL BE EITHER FILTER X, MIRAFI00X, STABILINKA T140N OR APPROVED EQUIVALENT.
- POST SPACING FOR WIRE-BACKED FENCE SHALL BE 10' MAXIMUM. FOR FILTER-CLOTH FENCE, WHEN ELONGATION IS >50%, POST SPACING SHALL NOT EXCEED 4'. FOR FILTER-CLOTH FENCE, WHEN ELONGATION IS <50%, POST SPACING SHALL NOT EXCEED 6'.
- WOVEN WIRE FENCE IS TO BE FASTENED SECURELY TO FENCE POSTS WITH WIRE TIES. FILTER CLOTH IS TO BE FASTENED SECURELY TO WOVEN WIRE FENCE WITH TIES SPACED EVERY 24" AT TOP AND MID SECTION.
- WHEN TWO SECTIONS OF FILTER CLOTH ADJOIN EACH OTHER THEY SHALL BE OVER-LAPPED BY SIX INCHES AND FOLDED.
- PREFABRICATED UNITS SHALL BE GEOFAB, ENVIROFENCE, OR APPROVED EQUIVALENT.
- MAINTENANCE SHALL BE PERFORMED AS NEEDED AND MATERIAL REMOVED WHEN SEDIMENT REACHES HALF OF FABRIC HEIGHT.

ADAPTED FROM DETAILS PROVIDED BY: NEW YORK STATE DEC  
ORIGINALLY DEVELOPED BY USDA-NRCS  
VERMONT DEPARTMENT OF ENVIRONMENTAL CONSERVATION

SILT FENCE

NOTES:  
REFER TO THE VERMONT STANDARDS & SPECIFICATIONS FOR EROSION PREVENTION & SEDIMENT CONTROL -2006- FROM THE VT AGENCY OF NATURAL RESOURCES FOR ADDITIONAL GUIDANCE.

THIS ITEM SHALL BE PAID FOR UNDER ITEM  
649.51 GEOTEXTILE FOR SILT FENCE (FILTER FABRIC ONLY FENCE)  
900 SERIES SPECIAL PROVISION (WOVEN WIRE REINFORCED FENCE)

EROSION & SEDIMENT CONTROL DETAILS	
PROJECT NAME:	WILLIAMSTOWN
PROJECT NUMBER:	BRS 0204(4)
FILE NAME:	/83ell/str/s83eller.dgn
PROJECT LEADER:	EVANS-MONGEON
DESIGNED BY:	U. STANLEY
PLOT DATE:	16-MAY-2007
DRAWN BY:	U. STANLEY
CHECKED BY:	
ROW SHEET	15 OF 20