SEE SHEET 2 FOR INDEX OF SHEETS AND LIST OF STANDARDS

RECORD PLANS	
CONTRACTOR:	MILLER CONSTRUCTION, INC. – WINDSOR, VT
RESIDENT ENGINEER:	JACQUES COUTURE
CONSTRUCTION BEGAN:	MAY 30, 2006
CONSTRUCTION COMPLETE:	SEPTEMBER 28, 2007
RECORD PLANS BY:	JACQUES COUTURE & M. BIRCHARD

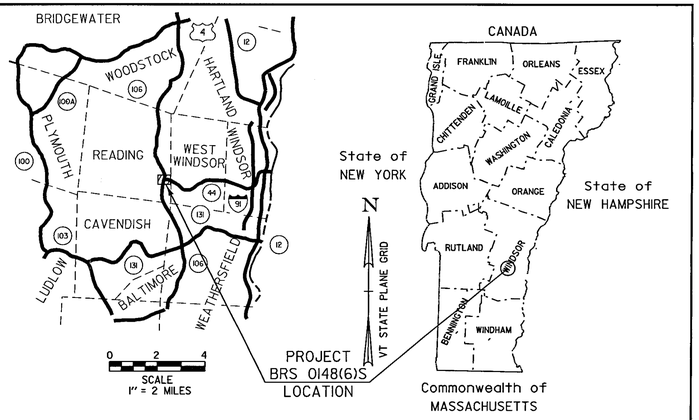
I HEREBY CERTIFY THAT ALL THE CONSTUCTION REQUIRED BY THIS SET OF DRAWINGS HAS BEEN ACCOMPLISHED AS INDICATED HEREIN.

BY Jacques D Couture RESIDENT ENGINEER

DATE JAN 6, 2011

NOTE: Any further information concerning final quantities, amounts or other details relative to this project may be found at Central Files in the electronic archives.

STATE OF VERMONT
AGENCY OF TRANSPORTATION



PROPOSED IMPROVEMENT
BRIDGE PROJECT

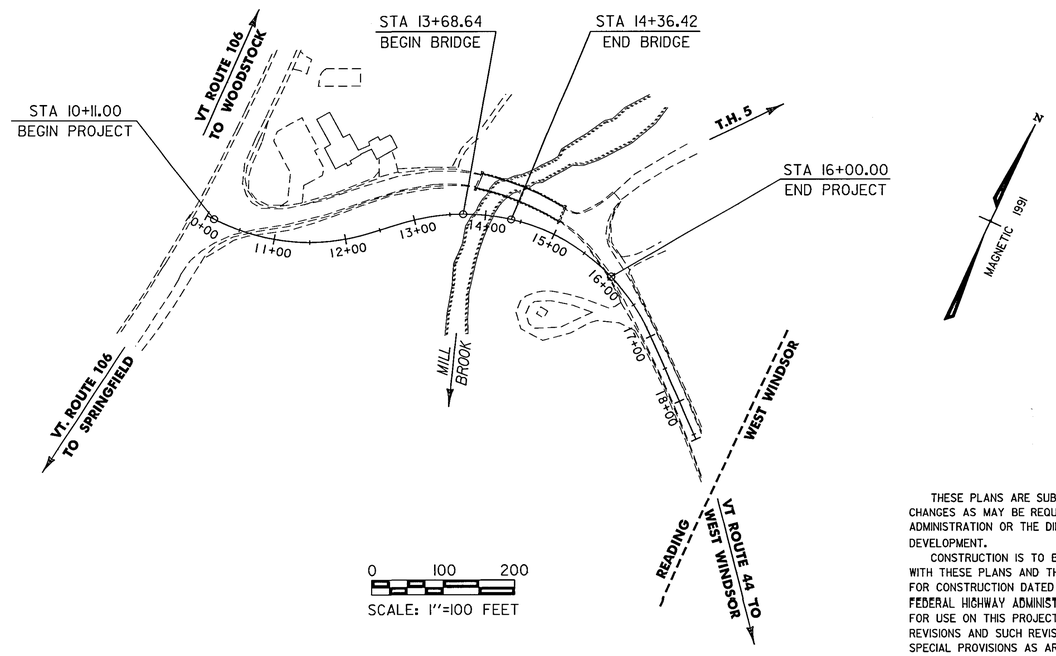
TOWN OF READING COUNTY OF WINDSOR

ROUTE NO.: VT 44 MAJOR COLLECTOR BRIDGE NO.: 1

PROJECT LOCATION: BEGINNING AT A POINT AT THE INTERSECTION OF VT 106 AND VT 44 AND EXTENDING EASTERLY 0.112 MILES ALONG VT 44.

PROJECT DESCRIPTION: REPLACEMENT OF THE EXISTING BRIDGE INCLUDING RELATED APPROACH ROADWAY ON MINOR RELOCATION AND CHANNEL WORK.

LENGTH OF STRUCTURE :	67.78 FEET
LENGTH OF ROADWAY :	521.22 FEET
LENGTH OF PROJECT :	589.00 FEET



CONVENTIONAL SYMBOLS

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

SR SR SR

SURVEYED BY : C. REED
SURVEYED DATE : FEBRUARY 1991

DATUM
VERTICAL NGVD 1929
HORIZONTAL NA

THESE PLANS ARE SUBJECT TO SUCH ENGINEERING CHANGES AS MAY BE REQUIRED BY THE FEDERAL HIGHWAY ADMINISTRATION OR THE DIRECTOR OF PROGRAM DEVELOPMENT.

CONSTRUCTION IS TO BE CARRIED ON IN ACCORDANCE WITH THESE PLANS AND THE STANDARD SPECIFICATIONS FOR CONSTRUCTION DATED 2001, AS APPROVED BY THE FEDERAL HIGHWAY ADMINISTRATION ON JANUARY 4, 2001 FOR USE ON THIS PROJECT, INCLUDING ALL SUBSEQUENT REVISIONS AND SUCH REVISED SPECIFICATIONS AND SPECIAL PROVISIONS AS ARE INCORPORATED IN THESE PLANS.

se034ti.i
PW/85e034/Structures/se034bdr.dgn 03-FEB-2006

DIRECTOR OF PROGRAM DEVELOPMENT
APPROVED Richard Tetreau DATE 2-6-06

PROJECT MANAGER : ROGER WHITCOMB

PROJECT NAME : READING
PROJECT NUMBER : BRS 0148(6)S

SHEET 1 OF 83 SHEETS

STATE OF VERMONT
AGENCY OF TRANSPORTATION

PRELIMINARY INFORMATION SHEET

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FINAL HYDRAULIC REPORT

HYDROLOGIC DATA

Date: 6/9/99

DRAINAGE AREA: 15.8 sq mi
CHARACTER OF TERRAIN: Mountainous, Rolling Hills to Open Fields
STREAM CHARACTERISTICS: Perennial, Sinuous and Non Braided
NATURE OF STREAMBED: Gravel to Cobble

PEAK FLOW DATA

Q 2.33 =	775 cfs	Q 50 =	3000 cfs
Q 10 =	1700 cfs	Q 100 =	3600 cfs
Q 25 =	2400 cfs	Q 500 =	4900 cfs

DATE OF FLOOD RECORD: Unknown
ESTIMATED DISCHARGE: N/A
WATER SURFACE ELEV.: N/A
NATURAL STREAM VELOCITY: @ Q50 = 4.5 fps
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:

WATERSHED STORAGE: 1% HEADWATERS:
UNIFORM: X
IMMEDIATELY ABOVE SITE:

EXISTING STRUCTURE INFORMATION

STRUCTURE TYPE: Two Span Steel Beam Bridge with Concrete Deck
YEAR BUILT: 1934
CLEAR SPAN(NORMAL TO STREAM): 118 ft (Two Span)
VERTICAL CLEARANCE ABOVE STREAMBED: 10 ft (Under Open Span)
WATERWAY OF FULL OPENING: 690 sf
DISPOSITION OF STRUCTURE: Remove
TYPE OF MATERIAL UNDER SUBSTRUCTURE: Unknown

WATER SURFACE ELEVATIONS AT:

Q2.33 =	844.7 ft	VELOCITY =	6.1 fps
Q10 =	846.5 ft	"	7.3 fps
Q25 =	847.4 ft	"	8.1 fps
Q50 =	848.0 ft	"	8.8 fps
Q100 =	848.3 ft	"	9.6 fps

LONG TERM STREAMBED CHANGES: Unknown

IS THE ROADWAY OVERTOPPED BELOW Q100: No
FREQUENCY: Above Q100
RELIEF ELEVATION: 851.5 ft
DISCHARGE OVER ROAD @Q100: None

UPSTREAM STRUCTURE

TOWN: Reading — DISTANCE: 0.5 mi
HIGHWAY #: VT 106 — STRUCTURE #: Bridge 13
CLEAR SPAN: 84 ft — CLEAR HEIGHT: 10 ft
YEAR BUILT: 1949 — FULL WATERWAY: Unknown
STRUCTURE TYPE: Single Span Steel Beam with Concrete Deck

DOWNSTREAM STRUCTURE

TOWN: West Windsor — DISTANCE: 1.3 mi
HIGHWAY #: TH-37 — STRUCTURE #: Bridge 34
CLEAR SPAN: 32 ft — CLEAR HEIGHT: 9 ft
YEAR BUILT: 1890 — FULL WATERWAY: Unknown
STRUCTURE TYPE: Single Span Wooden Covered Bridge

LOAD FACTOR LOAD RATING (TONS)

LOADING LEVELS (LOAD FACTOR)	TRUCK H	HS	3S2	6 AXLE	3A STR.	4A STR.	5A SEMI
INVENTORY A=2.17 B=1.00	39	49					
POSTED A=1.55 B=1.40	54	69	87		62	63	77
OPERATING A=1.30 B=1.67		82	104	126	73	76	

STRENGTH RF = $\frac{\phi M_n - 1.3\, M_{DL}}{A \times M_{LL+I}}$ SERVICEABILITY RF = $\frac{.95\, F_y S_{LL+I} - M_{DL}\frac{S_{DW}}{S_{DL}} - M_{PBL}\frac{S_{DW}}{S_{PBL}}}{1.67\, M_{LL+I}}$

TRAFFIC DATA

YEAR	ADT	DHV	% D	% T	ADTT
1999	1480	-	56	3	90
2019	2000	280	56	2	110

20 year ESAL for flexible pavement from 967,000 to : 967,000
40 year ESAL for flexible pavement from 3,192,0(to : 3,192,000
Design Speed: 50 mph

PROPOSED STRUCTURE

STRUCTURE TYPE: Single Span Steel Beam with Concrete Deck

CLEAR SPAN(NORMAL TO STREAM): 60.8 ft
VERTICAL CLEARANCE ABOVE STREAMBED: 12.0 ft
WATERWAY OF FULL OPENING: 620 sq ft

WATER SURFACE ELEVATIONS AT:

Q2.33 =	844.7 ft	VELOCITY=	6.2 fps
Q10 =	846.4 ft	"	7.2 fps
Q25 =	847.4 ft	"	7.2 fps
Q50 =	848.1 ft	"	8.0 fps
Q100 =	848.8 ft	"	8.4 fps

IS THE ROADWAY OVERTOPPED BELOW Q100: No
FREQUENCY: Above Q100
RELIEF ELEVATION: 852.1 ft
DISCHARGE OVER ROAD @Q100: None

AVERAGE LOW ELEVATION OF SUPERSTRUCTURE: 852.0 ft
VERTICAL CLEARANCE: @ Q100 3.2 ft

SCOUR: Contraction Scour @ Q100 = 0.0 ft and @ Q500 = 2.2 ft

REQUIRED CHANNEL PROTECTION: Type III

PERMIT INFORMATION

AVERAGE DAILY FLOW:	30 cfs	DEPTH OR ELEVATION:	
ORDINARY LOW WATER:	15 cfs		0.3 ft
ORDINARY HIGH WATER:	330 cfs		1.5 ft

TEMPORARY BRIDGE REQUIREMENTS

STRUCTURE TYPE: N/A
CLEAR SPAN (NORMAL TO STREAM): N/A
VERTICAL CLEARANCE ABOVE STREAMBED: N/A
WATERWAY AREA OF FULL OPENING: N/A

ADDITIONAL INFORMATION

DESIGN CRITERIA

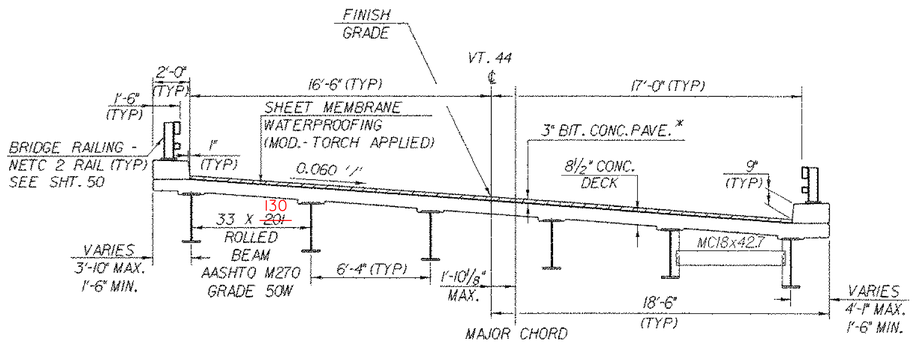
1. DESIGN LIVE LOAD AASHTO HS-25-44
2. DESIGN SPAN 65'-0"
3. ALLOWABLE LOAD FOR SPREAD FOOTINGS ON SOIL 8.4 ksf
   ON LEDGE N/A
4. ALLOWABLE LOAD FOR PILING N/A
   TYPE N/A
   ESTIMATED LENGTH N/A
5. STRUCTURAL STEEL AASHTO GRADE M270 GRADE 50W
6. REINFORCING STEEL GRADE 60 ksi
7. CONCRETE CLASS A (HPC-A) f'c : 4000 psi
   CONCRETE CLASS B (HPC-B) f'c : 3500 psi
8. SOIL UNIT WEIGHT 140 pcf
9. DESIGN LOAD FOR SPREAD FOOTINGS ON SOIL 5 ksf (Abut. 1), 7 ksf (Abut. 2)

TRAFFIC MAINTENANCE

1. IS TRAFFIC TO BE MAINTAINED? YES
   IF YES, ON EXISTING STRUCTURE? YES
   OR ON TEMPORARY BRIDGE? NO
   ONE OR TWO-WAY TRAVEL?
2. TRAFFIC CONTROL SIGNALS REQUIRED? NO
3. ARE SIDEWALKS REQUIRED? NO
   IF SO, ON WHAT SIDE?

PROJECT NAME: READING
PROJECT NUMBER: BRS 0148(6)S

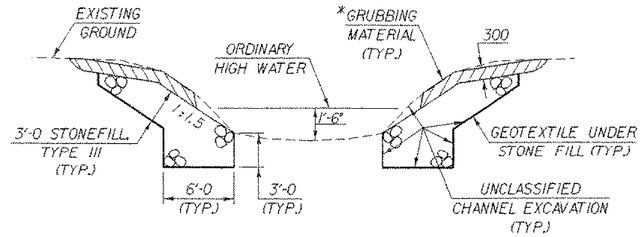
FILE NAME: PW/85e034/Structures/se034pi.xls — PLOT DATE: 10/13/2005
PROJECT MANAGER: R. WHITCOMB — DRAWN BY: J. GILMORE
DESIGNED BY: C. CARLSON — CHECKED BY: C. CARLSON
PRELIMINARY INFORMATION SHEET #1 — SHEET 2 OF 83



* FIRST LIFT: 1½" BIT. CONC. PAVEMENT TYPE III
SECOND LIFT: 1½" BIT. CONC. PAVEMENT TYPE III

TYPICAL BRIDGE SECTION

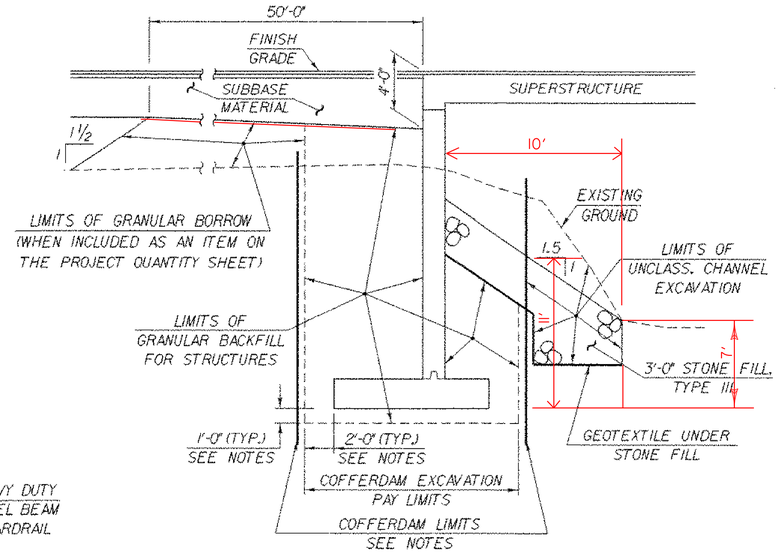
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TYPICAL CHANNEL SECTION

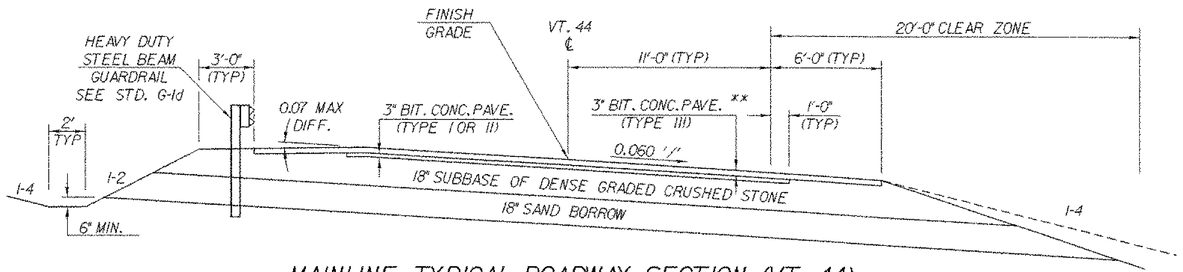
(NOT TO SCALE)

* 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.



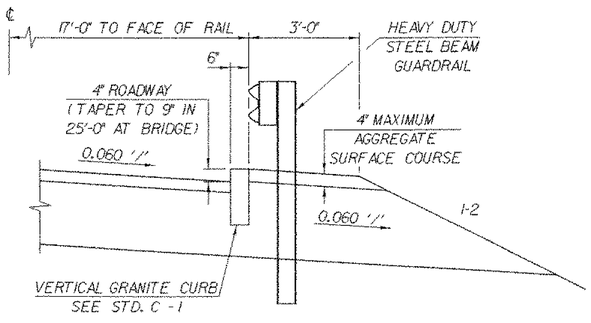
TYPICAL ABUTMENT SECTION

(NOT TO SCALE)



MAINLINE TYPICAL ROADWAY SECTION (VT 44)

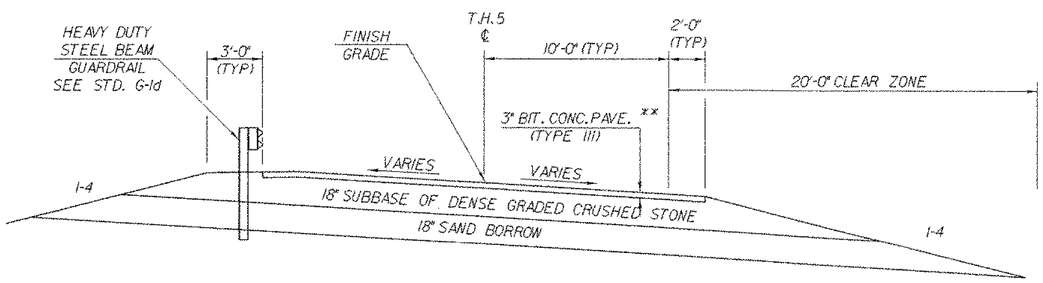
(NOT TO SCALE)



GRANITE CURB DETAIL

(NOT TO SCALE)

** SECOND LIFT: 1½" TYPE III OVER FIRST LIFT: 1½" TYPE III



SIDELINE TYPICAL ROADWAY SECTION (FLAT IRON ROAD)

(NOT TO SCALE)

COFFERDAM NOTES

1. COFFERDAM LIMITS 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. ONE FOOT 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.

MATERIAL TOLERANCES

PAVEMENT	+/- ¼" (TOTAL THICKNESS)
BASE COURSE	+/- ½"
SUBBASE	+/- 1"
SAND BORROW	+/- 1"
GRANULAR BORROW	+/- 1"

SHEET NAME: TYPICAL SECTION SHEET

PROJECT NAME: READING
PROJECT NUMBER: BRS 0148(6)S
HIGHWAY NO.: VT 44
BRIDGE NO.: 1
OVER: THE MILL BROOK

FILE NAME: /PW/85e034/se034typ.dgn
PROJECT MANAGER: R. WHITCOMB
DESIGNED BY: C. CARLSON
BRIDGE SHEET NUMBER:
PLOT DATE: 17-FEB-2006
DRAWN BY: J. GILMORE
IPARM NAME: se034typ.i
SHEET 3 OF 83

STATE OF VERMONT
AGENCY OF TRANSPORTATION

QUANTITY SHEET

SUMMARY OF ESTIMATED QUANTITIES

ROADWAY		CHANNEL		SUPER STRUCTURE		ABUT 1		ABUT 2		APPR SLAB 1		APPR SLAB 2	TRAINING	EROSION CONTROL	FULL E&C	BRIDGE QUANTITY
1																
1860																
		450														450
35																
4080																
2160																
660																
1350																
220														10		
10																
40																
170						260		190								450
						400		300								700
						20		20								40
						1										1
								1								1
225																
3000														10		
150																
11				0.5						0.25		0.25				1
1047				42						13		13				68
				94				2								96
31						176		162		31		31				400
				59630												59630
3230						16940		15820								32760
18																
				31880				290		3800		3710				39660
				1												1
2				6		3		2								11
						36		34								70
				250												250
				193												193
1																
280																
				1												1
				12												12
262																
262																
262																
140																

TOTALS

ROUND	GRAND TOTAL	FINAL
	1	
	1860	
	450	
	35	
	4080	
	2160	
	660	
	1350	
	230	
	10	
	40	
	620	
	700	
	40	
	1	
	1	
	225	
	3010	
	150	
	12	
	1115	
	96	
	431	
	59630	
	35990	
	18	
	39660	
	1	
	13	
	70	
	250	
	193	
	1	
	280	
	1	
	12	
	262	
	262	
	262	
	140	

DESCRIPTIONS

UNIT	ITEMS	ITEM NUMBER
LS	CLEARING AND GRUBBING (INCL. INDV. TREES & STUMPS)	201.10
CY	COMMON EXCAVATION	203.15
CY	UNCLASSIFIED CHANNEL EXCAVATION	203.27
CY	EXCAVATION OF SURFACES AND PAVEMENTS	203.28
CY	EARTH BORROW	203.30
CY	SAND BORROW	203.31
CY	GRANULAR BORROW	203.32
SY	FINE GRADING-SUBGRADE	203.40
CY	TRENCH EXCAVATION OF EARTH	204.20
CY	TRENCH EXCAVATION OF ROCK	204.21
CY	STRUCTURE EXCAVATION	204.25
CY	GRANULAR BACKFILL FOR STRUCTURES	204.30
CY	COFFERDAM EXCAVATION,EARTH	208.30
CY	COFFERDAM EXCAVATION,ROCK	208.35
LS	COFFERDAM (ABUTMENT NO. 1)	208.40
LS	COFFERDAM (ABUTMENT NO. 2)	208.40
SY	COLD PLANING-BIT.PAVEMENT	210.10
CY	SUBBASE OF DENSE GRADED CRUSHED STONE	301.35
CY	AGGREGATE SURFACE COURSE	401.10
CWT	EMULSIFIED ASPHALT	404.65
TON	BITUMINOUS CONCRETE PAVEMENT (PG 58-28)	406.25
CY	CONCRETE, HIGH PERFORMANCE CLASS A	501.33
CY	CONCRETE, HIGH PERFORMANCE CLASS B	501.34
LB	STRUCTURAL STEEL (ROLLED BEAM)	506.50
LB	REINFORCING STEEL	507.15
LF	DRILLING AND GROUTING DOWELS	507.16
LB	EPOXY COATED REINFORCING STEEL	507.17
LS	SHEAR CONNECTORS (1044 - 7/8" x 7")	508.15
GAL	WATER REPELLENT (MOD.-SILANE)	514.10
LF	BRIDGE EXPANSION JOINT (ASPHALTIC PLUG)	516.10
SY	SHEET MEMBRANE WATERPROOFING (MOD. - TORCH APPLIED)	519.20
LF	BRIDGE RAILING - NETC 2 RAIL	525.33
LS	MAINTENANCE OF TRAFFIC FOR BRIDGE PROJECTS (MOD.)	527.10
SY	REMOVAL OF BRIDGE PAVEMENT	529.10
EACH	PARTIAL REMOVAL OF STRUCTURE	529.20
EACH	BEARING DEVICE ASSEMBLY (FABRIC)	531.10
	BEGIN PIPE OPTIONS	
LF	18" CAAP .060 (2-2/3 X 1/2)	601.0215
LF	18" PCCSP .064 (2-2/3 X 1/2)	601.0415
LF	18" CPEP(SL)	601.2615
	END PIPE OPTIONS	
LF	18" CPEP(SL)	601.2615

DETAILED SUMMARY OF QUANTITIES

QUANTITIES	UNIT	ITEMS
		COMMON EXCAVATION
		ROADWAY:
1273	CY	MAINLINE
315	CY	T.H. 5
264	CY	DRIVES
9	CY	ROUNDING
1860	CY	TOTAL
		SAND BORROW
		ROADWAY:
1732	CY	MAINLINE
336	CY	T.H. 5
91	CY	DRIVES
1	CY	ROUNDING
2160	CY	TOTAL
		SUBBASE OF DENSE GRADED CRUSHED STONE
		ROADWAY:
2231	CY	MAINLINE
372	CY	T.H. 5
393	CY	DRIVES
4	CY	ROUNDING
3000	CY	**TOTAL**
		EMULSIFIED ASPHALT
		ROADWAY:
9.50	CWT	MAINLINE
1.00	CWT	T.H. 5
0.50	CWT	DRIVES
11	CWT	TOTAL
0.50	CWT	**SUPERSTRUCTURE**
0.25	CWT	**APPROACH SLAB NO.1**
0.25	CWT	**APPROACH SLAB NO.2**
		BITUMINOUS CONCRETE PAVEMENT
		ROADWAY:
830	TON	MAINLINE
94	TON	T.H. 5
123	TON	DRIVES
1047	TON	TOTAL
42	TON	**SUPERSTRUCTURE**
13	TON	**APPROACH SLAB NO.1**
13	TON	**APPROACH SLAB NO.2**
		TEMPORARY EROSION CONTROL ITEMS
		(INCLUDED UNDER EROSION CONTROL ITEMS)
10	CY	204.20 TRENCH EXCAVATION OF EARTH
10	CY	301.35 SUBBASE OF DENSE GRADED CRUSHED STONE
10	CY	613.10 STONE FILL, TYPE I
30	CY	613.10 STONE FILL, TYPE I (MOD.-CONSTRUCTION ENTRANCE)
20	CY	613.10 STONE FILL, TYPE I (MOD. - CHECK DAM)
10	CY	613.10 STONE FILL, TYPE I (MOD. - INLET PROTECTION)
450	SY	649.51 GEOTEXTILE FOR SILT FENCE
115	SY	649.61 GEOTEXTILE FOR FILTER CURTAIN
10	KG	651.17 SEED - WINTER RYE
700	SY	654.10 EROSION MATTING
		EARTHWORKS SUMMARY
370	CY	COMMON EXCAVATION (1852*.20)
134	CY	UNCLASSIFIED CHANNEL EXCAVATION. (448*0.3)
84	CY	TRENCH EXCAVATION OF EARTH (280*0.3)
209	CY	COFFERDAM EXCAVATION, EARTH (696*0.3)
10	CY	STRUCTURE EXCAVATION (33 X . 3)
807	CY	TOTAL FILL AVAILABLE
4883	CY	FILL REQUIRED (4246 * 1.15)
807	CY	- FILL AVAILABLE
4076	CY	BORROW
4	CY	ROUNDING
4080	CY	TOTAL EARTH BORROW

PROJECT NAME: **READING**
PROJECT NUMBER: **BRS 0148(6)S**

FILE NAME: **PW/85e034/Structures/s85e034qs.xls** PLOT DATE: **11/30/2005**
PROJECT MANAGER: **R. WHITCOMB** DRAWN BY: **L. BULLOCK**
DESIGNED BY: **C. CARLSON** CHECKED BY: **C. CARLSON**
QUANTITY SHEET #1 SHEET **4** OF **83**

STATE OF VERMONT
AGENCY OF TRANSPORTATION

QUANTITY SHEET

SUMMARY OF ESTIMATED QUANTITIES												TOTALS			DESCRIPTIONS			
ROADWAY		CHANNEL		SUPER STRUCTURE		ABUT 1		ABUT 2		APPR SLAB 1		APPR SLAB 2	TRAINING	EROSION CONTROL	FULL E&C	BRIDGE QUANTITY	ROUND	GRAND TOTAL	FINAL	UNIT	ITEMS	ITEM NUMBER
3																		3		EACH	CAST IRON GRATE WITH FRAME, TYPE D	604.47
2																		2		EACH	CAST IRON COVER WITH FRAME	604.55
5																		5		HR	ALL PURPOSE EXCAVATOR RENTAL, TYPE I	608.25
100																		100		MGAL	DUST CONTROL WITH WATER	609.10
3																		3		TON	DUST AND ICE CONTROL WITH CALCIUM CHLORIDE	609.15
20														10				30		CY	STONE FILL, TYPE I	613.10
														20				20		CY	STONE FILL, TYPE I (MOD. - CHECK DAM)	613.10
														30				30		CY	STONE FILL, TYPE I (MOD.- CONSTRUCTION ENTRANCE)	613.10
														10				10		CY	STONE FILL, TYPE I (MOD. - INLET PROTECTION)	613.10
		550														550		550		CY	STONE FILL, TYPE III	613.12
285																		285		LF	VERTICAL GRANITE CURB	616.21
19																		19		SY	PORTLAND CEMENT CONCRETE SIDEWALK, 5 INCH (MOD.)	616.10
3																		3		EACH	YIELDING MARKER POSTS	619.17
42																		42		LF	GATE FOR CHAIN-LINK FENCE, 6 FEET	620.16
4																		4		EACH	BRACING ASSEMBLY FOR CHAIN-LINK FENCE, 6 FEET	620.21
690																		690		LF	REMOVAL OF EXISTING FENCE	620.55
														1670				1670		LF	SNOW FENCE (MOD.- PDF)	620.70
50																		50		LF	SNOW BARRIER - GALVANIZED	620.75
450																		450		LF	MISCELLANEOUS FENCE (WOOD SPLIT RAIL)	620.80
471																		471		LF	HEAVY DUTY STEEL BEAM GUARD RAIL (GALVANIZED)	621.21
4																		4		EACH	ANCHOR FOR STEEL BEAM RAIL	621.60
4																		4		EACH	GUARD RAIL APPR. SECTION,NETC 2 RAIL	621.72
100																		100		HR	FLAGGERS	630.15
															1			1		LS	FIELD OFFICE-ENGINEERS	631.10
															1			1		LS	TESTING EQUIPMENT - CONCRETE	631.16
															1			1		LS	TESTING EQUIPMENT - BITUMINOUS	631.17
															1			1		LU	FIELD OFFICE - TELEPHONE (N. A. B. I.)	631.25
													520					520		HR	EMPLOYEE TRAINEESHIP	634.10
1																		1		LS	MOBILIZATION / DEMOBILIZATION	635.11
1																		1		LS	TRAFFIC CONTROL	641.10
1730																		1730		LF	DURABLE 4" WHITE LINE (THERMOPLASTIC)	646.40
1630																		1630		LF	DURABLE 4" YELLOW LINE (THERMOPLASTIC)	646.41
39																		39		LF	DURABLE 24" STOP BAR (THERMOPLASTIC)	646.46
17																		17		EACH	DURABLE LETTER OR SYMBOL (THERMOPLASTIC)	646.50
40																		40		SY	GEOTEXTILE FOR ROADBED SUBGRADE SEPARATOR (MOD.)	649.11
						290		220								510		510		SY	GEOTEXTILE UNDER STONE FILL	649.31
22																		22		SY	GEOTEXTILE FOR UNDERDRAIN TRENCH LINING	649.41
														450				450		SY	GEOTEXTILE FOR SILT FENCE	649.51
						57		58								115		115		SY	GEOTEXTILE FOR FILTER CURTAIN	649.61
														100				100		LB	SEED	651.15

DETAILED SUMMARY OF QUANTITIES		
QUANTITIES	UNIT	ITEMS
		N. A. B. I. = NOT A BID ITEM

PROJECT NAME: **READING**
PROJECT NUMBER: **BRS 0148(6)S**

FILE NAME: **PW/85e034/Structures/s85e034qs.xls** PLOT DATE: **11/30/2005**
PROJECT MANAGER: **R. WHITCOMB** DRAWN BY: **L. BULLOCK**
DESIGNED BY: **C. CARLSON** CHECKED BY: **C. CARLSON**
QUANTITY SHEET #2 SHEET **5** OF **83**

STATE OF VERMONT
AGENCY OF TRANSPORTATION

QUANTITY SHEET

SUMMARY OF ESTIMATED QUANTITIES

ROADWAY		CHANNEL		SUPER STRUCTURE		ABUT 1		ABUT 2		APPR SLAB 1		APPR SLAB 2	TRAINING	EROSION CONTROL	FULL E&C	BRIDGE QUANTITY
														10		
														800		
														4		
														4		
420														10		
20																
		410														410
														1		
														50		
														1		
670														700		
4																
11																
2																
47																
84																
109																
240																
240																
23																

TOTALS

ROUND	GRAND TOTAL	FINAL
	10	
	800	
	4	
	4	
	430	
	20	
	410	
	1	
	50	
	1	
	1370	
	4	
	11	
	2	
	47	
	84	
	109	
	240	
	240	
	23	

DESCRIPTIONS

UNIT	ITEMS	ITEM NUMBER
LB	SEED-WINTER RYE	651.17
LB	FERTILIZER	651.18
TON	AGRICULTURAL LIMESTONE	651.20
TON	HAY MULCH	651.25
CY	TOPSOIL	651.35
CY	TOPSOIL (MOD. - COMPOST)	651.35
SY	GRUBBING MATERIAL	651.40
LS	EROSION PREVENTION & SEDIMENT CONTROL PLAN	652.10
HR	MONITORING EROSION PREVENTION & SEDIMENT CONTROL PLAN	652.20
LU	MAINTENANCE OF EROSION PREVENTION & SEDIMENT CONTROL PLAN (N. A. B. I.)	652.30
SY	EROSION MATTING	654.10
EACH	EVERGREEN TREES (WHITE PINE - PINUS STROBUS, B & B, 6 FT)	656.20
EACH	EVERGREEN TREES (WHITE CEDAR - THUJA OCCIDENTALIS, B & B, 6 FT)	656.20
EACH	DECIDUOUS TREES (SUGAR MAPLE - ACER SACCHARUM, B & B, 4" CAL)	656.30
EACH	DECIDUOUS SHRUBS (RED STEM DOGWOOD - CORNUS SERICEA, CONTAINER, 18"-24" HT.)	656.35
EACH	DECIDUOUS SHRUBS (SAND BAR WILLOW - SALIX EXIGUA, CONTAINER, 18"-24" HT.)	656.35
SF	TRAFFIC SIGNS, TYPE A	675.20
	BEGIN SIGN POST OPTIONS	
LF	FLANGED CHANNEL SIGN POST	675.301
LF	SQUARE TUBE SIGN POSTS AND ANCHOR	675.341
	END SIGN POST OPTIONS	
EACH	REMOVING SIGNS	675.50

DETAILED SUMMARY OF QUANTITIES

QUANTITIES	UNIT	ITEMS
		N. A. B. I. = NOT A BID ITEM

PROJECT NAME: READING
PROJECT NUMBER: BRS 0148(6)S

FILE NAME: PW/85e034/Structures/s85e034qs.xls
PROJECT MANAGER: R. WHITCOMB
DESIGNED BY: C. CARLSON
QUANTITY SHEET #3

PLOT DATE: 11/30/2005
DRAWN BY: L. BULLOCK
CHECKED BY: C. CARLSON
SHEET 6 OF 83

STATE OF VERMONT
AGENCY OF TRANSPORTATION
RIGHT OF WAY PLANS
DETAIL SHEET

TABLE OF PROJECT PROPERTY ACQUISITION

PARCEL NO.	GRANTOR	SHEET NO.	BEGINNING STATION	ENDING STATION	TAKING	REM.	RIGHTS	TITLE TAKEN	DATE	TOWN OR CITY RECORDED	BK.	PG.	REMARKS
1A	BENNETT, PETER D.	16	11+12.969 RT.	13+85.686 LT.	0.28A±			WD	03-07-05	READING	71	387-	
			10+79.759 RT.	12+79.695 RT.			CONST. (T) 0.08A±					389	INCLUDES EROSION CONTROL
													& PDF
													3,576 S.F.±
			10+94.795 RT.	12+00.000 RT.			SLOPE (T) 0.06A±						2,490 S.F.±
			12+00.000 RT.	12+86.463 RT.			SLOPE (P) 467 S.F.±						
			10+90.568 RT.	10+97.821 RT.			CUL., DIT. & DR. (P)						
			11+58.968 RT.	12+24.066 RT.			REMOVE (T)						FENCE
			12+80.171 RT.	12+86.463 RT.			ALL R.T. & I.						STONE WALL
1B		16	10+61.704 LT.				REMOVE (T)						SIGN & APPURTENANCES
													(PERSONAL PROPERTY)
			11+04.910 LT.	11+41.055 LT.			REMOVE & RESET (T)						2 LAMP POSTS
			11+75.000 LT.				DRIVE (T)						25' PAVED MM 0004
			11+97.821 LT.	12+76.617 LT.			SLOPE (T) 796 S.F.±						
			11+98.039 LT.										WELL MONITOR W-1
			12+31.938 LT.	12+75.000 LT.			INSTALL (T) 310 S.F.±						WALKWAY
			DRIVE STA.										
			50+21.100 LT.	50+64.000 LT.			LANDSCAPE (T)						PLANT CEDAR HEDGES
			DRIVE STA.										
			50+69.700 LT.				LANDSCAPE (T)						PLANT MAPLE TREE
			DRIVE STA.										
			50+77.300 LT.				LANDSCAPE (T)						PLANT MAPLE TREE
			DRIVE STA.										
			51+12.000 LT.				DRIVE (T)						32' GRAVEL OLD RTE 44 MM0005
			12+99.701 LT.	13+22.510 LT.			CUL., DIT. (T)						
			13+00.000 LT.	13+40.785 LT.			CONST. (T) 408 S.F.±						INCLUDES EROSION CONTROL
													& PDF
			13+00.000 LT.	13+36.000 LT.			SLOPE (T) 348 S.F.±						
1C		16	10+50.000 CL.	14+15.573 LT.	0.55A±		ALL R.T. & I.						HWY. EASE.
													VT. RTE. 44 & 106
2A	WILLIAMS & CO. MINING, INC.	16,17	13+76.050 RT.	16+26.540 RT.	0.17A±			WD	03-22-05	READING	71	429-431	
			13+94.826 RT.	15+27.586 RT.			CONST. (T) 1406 S.F.±						INCLUDES EROSION CONTROL
													& PDF
			14+83.236 RT.	17+57.000 RT.			INSTALL (T) 1883 S.F.±						EROSION CONTROL & PDF
			15+22.108 RT.	17+13.449 RT.			REMOVE (T)						7 TREES
			16+16.000 RT.	16+75.000 RT.			LANDSCAPE (T)						PLANT 4 TREES 'SEE NOTE' ON
													LAYOUT #17
			16+50.000 RT.				REMOVE (T)						GATE
			17+04.000 RT.				DRIVE (T)						18' PAVED MM 0018
													CIRCLE DRIVE, INCLUDES
													EROSION CONTROL & PDF
			15+53.566 RT.	16+93.845 RT.			REMOVE (T) 0.14A±						EXISTING DRIVE
			17+04.000 RT.				RESET (T)						GATE
2B		16,17	14+05.980 LT.	18+57.000 RT.	0.26A±		ALL R.T. & I.						HWY. EASE. VT. RTE. 44

REVISION NO.	SHEET	DESCRIPTION OF REVISION	DATE	MADE BY	APPROVED BY
1	14,16	PARCEL NO. 1 BENNETT. ADDED 2 CE(T) TO COVER PDF'S ON BOTH SIDES OF DRIVE. REMOVED SLOPE FOR DRIVE GRASSING. ADDED SLOPE(T) WHERE NEW TREES & HEDGES ARE GOING. CHANGED WALK ENDING STATION. ADDED 2 INSTALL(T) FOR MAPLE TREES. ADDED 1 LANDSCAPE(T) FOR HEDGES. CHANGED DRIVE STA. & WIDTH. PER C.O. #9330.	01-12-04	P. J. H.	R. P. D.
2	14,16	PARCEL NO. 1 BENNETT. DELETE CONST.(T) AT STA. 11+97.106 LT. ~12+22.496 LT. REDUCE AREA OF WALKWAY AT STA. 12+31.938 LT. ~ 12+75.000 LT. TO 310 S.F.±. DELETE INSTALL (T) AT STA. 13+90.010 LT. ~14+07.576. CHANGE AREA OF CONST(T) AT STA. 13+00.000 LT. ~13+40.785 LT. FROM 153 S.F.± TO 408 S.F.±. ADD PDF TO RIGHTS AS NOTED IN REMARKS COLUMN. REMOVE CONST. (T) AT STA. 10+97.263 LT. ~ 11+36.284 LT. ADD NEWLY DESIGNED DRIVE. PER C.O. #9331.	05-25-04	M. J. R.	R. P. D.
3	10,11	CHECK EROSION CONTROL SHEET TO MAKE SURE PDF IS DEFINED ON SHEET AND ALSO EROSION CONTROL LINE WORK HAS BEEN CHANGED TO AGREE WITH LAYOUTS. PER C.O. #9332.	01-26-04	M. J. R.	R. P. D.
4	14	PARCEL NO. 2 WINDSOR MINERALS. ADD PDF IN REMARKS COLUMN, FOR A CONST(T), INSTALL(T), AND DRIVE(T). PER C.O. 9333.	01-26-04	M. J. R.	R. P. D
5	15	PARCEL NO. 3 KAIJA. ADD PDF IN REMARKS COLUMN FOR A CONST(T). PER C.O. #9334	01-26-04	M. J. R.	R. P. D.
6	15	PARCEL NO. 4 TOWN OF READING. ADD PDF IN REMARKS COLUMN FOR TWO RIGHTS TO INSTALL AND ONE RIGHT REGARDING EROSION CONTROL BASIN. PER C.O. #9335	01-26-04	M. J. R.	R. P. D.
7	16,17	PARCEL NO. 2 WINDSOR MINERALS. CHANGE IN OWNERSHIP OF PARCELS 2A & 2B FROM WINDSOR MINERALS, INC. (D/B/A LUZENAC AMERICA, INC.) TO WILLIAMS & CO. MINING, INC. PER C.O. #9387	10-12-04	G. J. F.	R. P. D.

ELECTRONIC FILES TO STRUCTURE XX-XX-06

DR. (P)- DRAINAGE RIGHT
DIT. (P)- DITCHING RIGHT
CH. (P)- CHANNEL RT.
DRIVE (T)- DRIVE RIGHT
CUL. (P)- CULVERT RIGHT
[W]- WATER SOURCES

PRESENT R.O.W.
TAKING WITHOUT ACCESS
TAKING WITHOUT ACCESS ALONG PROPERTY LINE
TAKING WITH ACCESS
(P) PERMANENT EASEMENT
(T) TEMPORARY EASEMENT

LEGEND
C&T (P) CLEARING & TRIMMING
CZ (P) CLEAR ZONE
CONST. (T) CONSTRUCTION EASEMENT
SR SR SLOPE RIGHTS
PROPERTY LINE
TOP OF CUT
TOE OF SLOPE
UE (P) PERMANENT UTILITY EASEMENT

APPROVED: ROGER P. DUMAS DATE: 05-13-03
CHIEF, PLANS & TITLES

R. O. W. PLANS
READING
BRS 0148(6)S
14 17
SHEET 7 OF 83

ACCT. hlawrence
IP_PWP:dms02502\r6034d.dgn
DATE PLOTTED 17-FEB-2006

STATE OF VERMONT
AGENCY OF TRANSPORTATION
RIGHT OF WAY PLANS
DETAIL SHEET

TABLE OF PROJECT PROPERTY ACQUISITION

PARCEL NO.	GRANTOR	SHEET NO.	BEGINNING STATION	ENDING STATION	TAKING	REM.	RIGHTS	TITLE TAKEN	DATE	TOWN OR CITY RECORDED	BK.	PG.	REMARKS
3A	KAIJA, KEVIN J. & LISA O.	16,17	15+14.829 LT.	TH 5 101+69.737 LT.	323 S.F.±			WD	03-22-05	READING	71	433-	
			14+58.282 LT.	TH 5 102+03.825 LT.			CONST. (T) 0.07A±					434	INCLUDES EROSION CONTROL
													& PDF
													2,915 S.F.±
			14+58.282 LT.	15+14.829 LT.			CUL., DIT. & DR. (P)						
			14+86.923 LT.	TH 5 101+54.979 LT.			SLOPE (T) 613 S.F.±						
3B		16,17	14+02.093 LT.	15+58.110 LT.	0.10A±		ALL R.T. & I.						HWY. EASE.
													VT. RTE. 44 & TH 5
4	TOWN OF READING	17	15+13.194 LT.	18+57.000 LT.	0.20A±		ALL R.T. & I.	QCD	12-20-04	READING	71	208-	HWY. EASE.
	JOINED BY WINDSOR MINERALS, INC.											211	VT. RTE. 44 & TH 5
	(D/B/A LUZENAC AMERICA, INC.)		TH 5 102+50.000 RT.	18+57.000 LT.			REMOVE & RESET (T)						FENCE
			TH 5 100+96.506 RT.	16+02.464 LT.			INSTALL (T) 294 S.F.±						EROSION CONTROL & PDF
			15+58.179 LT.	15+90.000 LT.			CUL., DIT. & DR. (P)						
			15+59.836 LT.	16+02.464 LT.			SLOPE (P) 522 S.F.±						
			15+88.253 LT.	16+20.261 LT.			CULVERT (T)						
			15+93.000 LT.				DRIVE (T)						12' GRAVEL MM 0012
			16+00.000 LT.				REMOVE & RESET (T)						GATE
			16+12.418 LT.	17+28.212 LT.			DITCH (P) 607 S.F.±						
			16+12.418 LT.	18+03.339 LT.			INSTALL (T) 934 S.F.±						EROSION CONTROL & PDF
5A	TOWN OF READING	16	12+86.463 RT.	14+05.980 LT.	2941 S.F.±			QCD	12-20-04	READING	71	206-	
			12+25.980 RT.	13+65.192 RT.			CONST. (T) 0.06A±					207	INCLUDES EROSION CONTROL -
													SEDIMENT SETTLING BASIN,
			12+79.064 RT.	13+25.000 RT.			SLOPE (P) 105 S.F.±						& PDF 2,678 S.F.±
			12+80.171 RT.	12+86.463 RT.			ALL R.T. & I.						STONE WALL
5B		16	13+85.686 LT.	14+18.500 LT.	508 S.F.±		ALL R.T. & I.						HIGHWAY EASE. VT. RTE. 44
5C		17	15+13.194 LT.	15+58.110 LT.	1176 S.F.±		ALL R.T. & I.						HWY. EASE. TH 5 & VT. RTE.44
			TH 5 100+48.000 CL	TH 5 102+15.00 CL			APPROACH (T)						TH 5 INCLUDES EROSION CONTROL
			15+14.829 LT.	15+58.179 LT.			CUL. (P)						& PDF
6	VERIZON NEW ENGLAND, INC.												UTILITY
7	CENTRAL VERMONT PUBLIC SERVICE CORP.												UTILITY
8	VERMONT TELEPHONE COMPANY, INC.												UTILITY
	MAINTENANCE AGREEMENT ZONE #1	17	TH 5 100+11.000 CL	TH 5 100+48.000 CL									TH 5 LENGTH 37.00'
	RELINQUISHMENT NO. 1	17	15+14.829 LT.	TH 5 101+69.737 LT.						READING			323 S.F.±

REVISION NO.	SHEET	DESCRIPTION OF REVISION	DATE	MADE BY	APPROVED BY

DR. (P)- DRAINAGE RIGHT
DIT. (P)- DITCHING RIGHT
CH. (P)- CHANNEL RT.
DRIVE (T)- DRIVE RIGHT
CUL. (P)- CULVERT RIGHT
[W]- WATER SOURCES

PRESENT R.O.W.
TAKING WITHOUT ACCESS
TAKING WITHOUT ACCESS ALONG PROPERTY LINE (P L)
TAKING WITH ACCESS
(P) PERMANENT EASEMENT
(T) TEMPORARY EASEMENT

LEGEND
C&T (P) CLEARING & TRIMMING
CZ (P) CLEAR ZONE
CONST. (T) CONSTRUCTION EASEMENT
SR SR SLOPE RIGHTS
P L PROPERTY LINE
TOP OF CUT
TOE OF SLOPE
UE (P) PERMANENT UTILITY EASEMENT

APPROVED: ROGER P. DUMAS DATE: 05-13-03
CHIEF, PLANS & TITLES

R. O. W. PLANS

READING
BRS 0148(6)S
15 17
SHEET 8 OF 83

ACCT. hlawrence
IP_PWP:dms02502\re034d.dgn
DATE PLOTTED 17-FEB-2006

CONSTRUCT DRIVES
STA 11+75 LT (PAVED) (DRIVE 1)
DR 1 STA 60+53 RT (DRIVE 2:
SEE SECTIONS ON SHEETS 74 & 75)
DR 2 STA 51+12 LT (AGGREGATE SURFACE COURSE)

ANCHOR FOR STEEL BEAM RAIL
STA 11+68.4 RT
STA 13+13.8 LT

HEAVY DUTY STEEL BEAM GUARD RAIL
STA 11+63.0 RT - 13+22.8 RT
STA 13+08.3 LT - 13+43.0 LT
STA 14+70.3 RT - 14+75 RT

GUARD RAIL - APPROACH SECTION NETC TWO RAIL
STA 13+22.8 RT - 13+49.3 RT
STA 13+43.0 LT - 13+66.6 LT
STA 14+43.5 RT - 14+70.3 RT
STA 14+64.8 LT - 14+75 LT

CONSTRUCT SPECIAL WALKWAY
DR 2 STA 50+48 LT - DR 2 STA 50+91 LT

BRIDGE RAILING NETC 2 RAIL
STA 13+49.3 RT - 14+43.5 RT
STA 13+66.6 LT - 14+64.8 LT

VERTICAL GRANITE CURB
STA 12+60.0 RT - 13+60.9 RT
STA 14+33.3 RT - 14+75 RT

REMOVE EXISTING TREE
STA 50+54.8 LT (MAPLE)

REMOVE EXISTING HEDGES
STA 40+90 LT - STA 50+61 LT (EVERGREENS)

REMOVAL OF EXISTING FENCE
STA 11+50 RT - STA 12+25 RT.

CURVE #1 DATA
Δ = 43°41'42" LT.
D = 20°02'01"
R = 286.00'
T = 114.67'
L = 218.11'
E = 22.13'
e max = 0.06 '/'

NEW CEDAR HEDGES
11 - 6 FT WHITE CEDAR @ 4 FT SPACING
STA 50+21 LT - STA 50+64 LT

NEW DECIDUOUS TREES (MAPLE)
STA 50+69.7 LT (O/S 26 FT)
STA 50+77.3 LT (O/S 25.8 FT)

BEGIN R.O.W. PROJECT
BRS 0148(6)S
STA. 10+50.000 CL.

BND

PC
Sta 10+13.78

BEGIN PROJECT
STA 10+11.00

POB
Sta 10+00.00

CU #1
40 Δ
A2

APPROXIMATE RELOCATION OF UTILITIES
RIGHTS ACQUIRED BY OTHERS

REMOVE EXISTING PAVEMENT UNDER ITEM 203.28, "EXCAVATION OF SURFACES AND PAVEMENTS" AND REPLACE WITH 6" TOPSOIL.

#2 Δ=34°
45cL3
23' ℄ EXISTING
34-A4A-IT

MAINLINE 14+50.00=
CHANNEL LINE 201+00.00
Δ = 82° 37' 40" LT
FROM TANGENT

POE
Sta 202+00.00
KAJA, KEVIN J.
LISA Q.

END BRIDGE
STA 14+36.475
F.G. = 856.29' LT.

BEGIN BRIDGE
STA 13+68.64
F.G. = 857.20

℄ DRIVE 1 STA 60+51.93=
℄ DRIVE 2 STA 49+89.98
Δ = 99°51'13" RT

POE
Sta 51+56.32

POE
Sta 61+10.00

POB
Sta 200+00.00
WILLIAMS & CO. MINING, INC.

TOWN OF READING

BENNETT, PETER D.

VT. ROUTE 106 TO WOODSTOCK

VT ROUTE 106 TO WESTON WINDSOR INDOOR

VT ROUTE 106 TO SPRINGFIELD

S66°E 215'

S87°51'03"E

N46°23'25"E

N48°21'16"E

N48°21'16"E

N1°27'07"W

CURVE #1 DATA
Δ = 43°41'42" LT.
D = 20°02'01"
R = 286.00'
T = 114.67'
L = 218.11'
E = 22.13'
e max = 0.06 '/'

DRIVE 1 AT STA 11+75 LT CURVE DATA
Δ = 23°19'58" LT.
D = 71°37'11"
R = 80.00'
T = 16.52'
L = 32.58'
E = 1.69'

CURVE #2 DATA
Δ = 82°28'22" RT.
D = 20°02'01"
R = 286.00'
T = 250.70'
L = 411.67'
E = 94.32'
e max = 0.06 '/'

EXISTING BRIDGE DATA
BUILT IN 1934 - TWO SPAN BRIDGE
8" CONCRETE DECK W/ STEEL BEAM
SKELETAL ABUTMENTS
TOTAL SPAN=118 FEET.
CURB TO CURB=20.2 FEET
FASCIA TO FASCIA=23.4 FEET

FOR DRAINAGE DETAILS SEE ROW SHEET 12 OF 17 SHEETS

FOR EROSION CONTROL DETAIL SEE ROW SHEET 10 OF 17

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.

SCALE 1" = 20'-0
20 0 20

N
MAGNETIC 1991

MATCH TO ROW SHEET 17 OF 17

FOR R.O.W. USE ONLY

SHEET NAME: LAYOUT SHEET #1
PROJECT NAME: READING
PROJECT NUMBER: BRS 0148(6)S
HIGHWAY NO.: VT 44
BRIDGE NO.: 1
OVER: THE MILL BROOK
FILE NAME: PW/85e034/Structures/se034bdr.dgn
PROJECT MANAGER: R. WHITCOMB
DESIGNED BY: C. CARLSON
PLOT DATE: 17-FEB-2006
DRAWN BY: J. GILMORE
IPARM NAME: se034id1
R.O.W. SHEET 16 OF 17
SHEET 9 OF 83

END RELINQUISHMENT NO. I
TH#5 STA. 101+69.737
24.75' LT.

TOWN OF READING

BM
STA.102+37.07 LT.
51.18' LT
TOP NE BOLT
OLD FNDTN.
ELEV.= 852.77'

POE
Sta 102+18.00
KAIJA, KEVIN J.
& LISA Q.

END SIDELINE APPROACH
AND PAVEMENT
STA 102+15.00

LIMITS OF CEMETERY BURIAL PLOTS

TH 5 CURVE DATA
REMOVE & RESET (T)
Δ = 29°30'09" RT
D = 22°02'13"
R = 260'
L = 133.88'
e max = 0.040 '/'

END MAINTANANCE AGREEMENT NO. 1
TH 5 STA 100+48.000 CL LENGTH 37.00'

BEGIN RELINQUISHMENT NO.
STA. 15+14.829 51.86 LT.

PT
Sta 101+60
TOWN OF READING JOINED BY WINDSOR MINERALS ,INC. CU #1 d/b/a LUZENAC AMERICA INC.
40cL4 (96)
20 ℄
DITO 12-D6-ITSLACK

BEGIN SIDELINE APPROACH STA 100+17.00
EDGE OF SHOULDER VT. ROUTE 44

MAINLINE POC STA 15+35.00 =
SIDELINE POB STA 100+00.00
Δ = 90° LT

CU #4 Δ=30°
40
A4
TO-12-A4A

CLASS III WETLANDS

MILL BROOK

RIPARIAN BUFFER

PI
Sta 100+94.88

PC
Sta 100+26.43

TOWN OF READING CEMETERY

APPROXIMATE LOCATION OF UTILITY POLES

BEGIN MAINTANANCE AGREEMENT NO.1
TH 5 STA 100+11.000 CL

PI
Sta 15+37.85
#3 Δ=32°
50cL3
34' ℄ TH5
45' ℄
EXISTING
34-A4
IT SLACK

DRIVE GATE
15+51.45
44.10' LT.

END PROJECT
BEGIN APPROACH
STA 16+00.00

TOWN OF READING JOINED BY WINDSOR MINERALS ,INC. d/b/a LUZENAC AMERICA INC.
PT
Sta 16+98.83

END APPROACH
STA 18+50.00

EVERGREEN TREES

POE
Sta 18+57.43
18+57.00
24.75' LT.

℄ STA 17+04 =
℄ DRIVE 3 STA 1+00.00
PDF Δ = 90° RT

IRON PIN
*5/2-1/5
BOUND FOR TOWN LINE READING/W.WINDSOR

VT. ROUTE 44
TO WEST WINDSOR

WILLIAMS & CO. MINING, INC.

END R.O.W. PROJECT
BRS 0148(6)S
STA. 18+57.000 24.75' RT.

REMOVAL OF EXISTING GATES
STA 16+00 LT
STA 16+50 RT

CONSTRUCT DRIVE
STA 15+99 LT (PAVED APRON)
STA 17+04 RT (PAVED)
(DRIVES 3 & 4)

DRIVE GATE (ALUMINUM)
STA 15+90 LT - 16+15 LT
STA 16+80 RT - 17+25 RT

CONSTRUCT GRAVEL TURNOUT
STA 100+58.6 LT - 101+00 LT (12' WIDE)

MISCELLANEOUS FENCE (WOOD SPLIT RAIL)
℄ STA 102+50 RT - ℳ STA 18+57 LT

GUARDRAIL APPROACH SECTION NETC TWO RAIL
STA 14+75 LT - 14+88.2 LT

ANCHOR FOR STEEL BEAM RAIL
℄ STA 100+58 LT
STA 16+62.9 RT

HEAVY DUTY STEEL BEAM GUARD RAIL
STA 14+75 RT - 16+69.8 RT
ℳ STA 14+88.2 LT - ℄ STA 100+62.3 LT

CONSTRUCT WELL BARRIER
(SEE SHEET 59 FOR DETAILS)
STA 15+43.4 RT

SNOW BARRIER - GALVANIZED
STA 15+10.2 RT - 15+63.4 RT

NEW EVERGREEN TREES *
STA 16+16 - 40' RT
STA 16+36 - 40' RT
STA 16+60 - 40' RT
STA 16+75 - 40' RT

*(NOTE: APPROXIMATE LOCATION OF NEW TREES TO BE APPROVED BY THE PROPERTY OWNER)

VERTICAL GRANITE CURB
STA 14+75 RT - 16+32.4 RT

CONSTRUCT SPECIAL DITCH
STA 15+63 LT TO STA 15+90 LT
STA 16+20 LT TO STA 18+50 LT
DRIVE 3 STA 1+75 RT TO DRIVE 3 STA 2+25 RT

CONSTRUCT NEW WELL HEAD
℄ STA 15+42 RT

REMOVAL OF EXISTING FENCE
℄ STA 102+50 RT - ℳ STA 18+57 LT

MAGNETIC 1991

MATCH TO ROW SHEET 16 OF 17

SEE INSERT "A"

NEW EVERGREEN TREES

NEW 24' DRIVE GATE

INSERT "A"

REMOVE 7 CONIFEROUS TREES

WILLIAMS & CO. MINING, INC.
℄ DRIVE 3 STA 2+39.33 =
℄ DRIVE 4 STA 3+00.00
Δ = 42° LT

WELL HEAD

PUMP HOUSE

WATER & ELECTRIC LINES APPROX. 5' DEPTH

ASSUMED LOCATION OF WATER AND ELECTRIC LINE
RESIDENT ENGINEER TO LOCATE PRIOR TO WORKING IN THIS AREA.

FOR DRAINAGE DETAILS SEE ROW SHEET 13 OF 17 SHEETS

FOR EROSION CONTROL DETAIL SEE ROW SHEET 11 OF 17

SCALE 1" = 20'-0
20 0 20

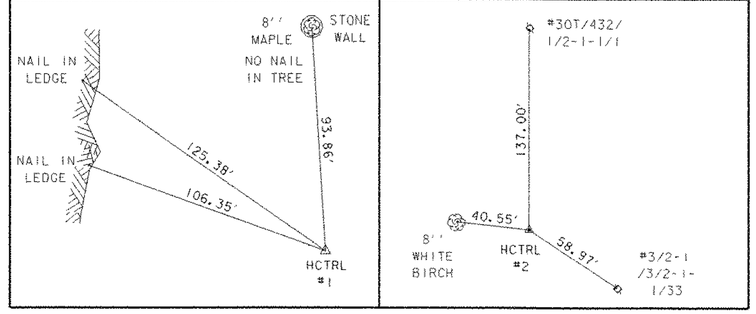
FOR R.O.W. USE ONLY

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.

SHEET NAME: LAYOUT SHEET #2
PROJECT NAME: READING
PROJECT NUMBER: BRS 0148(6)S
HIGHWAY NO.: VT 44
BRIDGE NO.: 1
OVER: THE MILL BROOK
FILE NAME: PW/85e034/Structures/se034bdr.dgn
PROJECT MANAGER: R. WHITCOMB
DESIGNED BY: C. CARLSON
PLOT DATE: 17-FEB-2006
DRAWN BY: J. GILMORE
IPARM NAME: se0341a2.i
R.O.W. SHEET 17 OF 17
SHEET 10 OF 83

TRAVERSE TIES

HCTRL #1	HCTRL #2
N = 9999.9800	N = 10228.1006
E = 49999.9000	E = 50407.7767
Z = 857.478	Z = 851.766



ALIGNMENT COORDINATES

MAINLINE POB
STA. 10+00.00
N = 9996.0982
E = 49933.9249

MAINLINE PC NO. 1
STA. 10+13.78
N = 9995.5815
E = 49947.6932

MAINLINE PT NO. 1
STA. 12+31.89
N = 10067.3301
E = 50148.0988

MAINLINE PC NO. 2
STA. 12+87.16
N = 10103.9872
E = 50189.4655

MAINLINE PT NO. 2
STA. 16+98.83
N = 10106.0225
E = 50566.5038

MAINLINE POE
STA. 18+57.43
N = 10002.1278
E = 50686.3285

SIDELINE POB
STA. 100+00.00
N = 10173.0799
E = 50419.4708

SIDELINE PC
STA. 100+26.43
N = 10199.2415
E = 50423.1968

SIDELINE PT
STA. 101+60.30
N = 10321.2487
E = 50474.6262

SIDELINE POE
STA. 102+18.00
N = 10366.9563
E = 50509.8359

CHANNEL LINE POB
STA. 200+00.00
N = 10072.5083
E = 50337.3183

CHANNEL LINE POE
STA. 202+00.00
N = 10272.4429
E = 50332.2504

DRIVE NO. 1 POB
STA. 60+00.00
N = 10034.0879
E = 50102.0280

DRIVE NO. 1 PC
STA. 60+09.38
N = 10042.1957
E = 50097.3187

DRIVE NO. 1 PT
STA. 60+41.95
N = 10066.3089
E = 50075.7471

DRIVE NO. 1 POE
STA. 61+10.00
N = 10106.7996
E = 50021.0630

DRIVE NO. 2 POB
STA. 49+89.98
N = 10072.2483
E = 50067.7258

DRIVE NO. 2 POE
STA. 51+56.40
N = 10187.0357
E = 50188.2236

DRIVE NO. 3 POB
STA. 1+00.00
N = 10102.6373
E = 50570.4081

DRIVE NO. 3 PC
STA. 1+42.58
N = 10070.4687
E = 50542.5155

DRIVE NO. 3 PT
STA. 2+09.39
N = 10051.7467
E = 50481.9288

DRIVE NO. 3 POE
STA. 2+59.37
N = 10064.5055
E = 50433.3942

DRIVE NO. 4 POB
STA. 3+00.00
N = 10059.3600
E = 50452.9677

DRIVE NO. 4 PC
STA. 3+27.00
N = 10046.9431
E = 50428.9922

DRIVE NO. 4 PCC NO. 1
STA. 3+69.41
N = 10058.5018
E = 50392.5999

DRIVE NO. 4 PCC NO. 2
STA. 4+11.82
N = 10094.8940
E = 50404.1586

DRIVE NO. 4 PT
STA. 4+54.23
N = 10083.3354
E = 50440.5509

DRIVE NO. 4 POE
STA. 4+81.23
N = 10059.3600
E = 50452.9677

DATUM
VERTICAL NGVD 1929
HORIZONTAL NA

SHEET NAME: TIE SHEET

PROJECT NAME: READING
PROJECT NUMBER: BRS 0148(6)S

HIGHWAY NO.: VT 44
BRIDGE NO.: 1
OVER: THE MILL BROOK

FILE NAME: PW/85e034/Structures/se034tie.dgn
PROJECT MANAGER: R. WHITCOMB
DESIGNED BY: C. CARLSON
BRIDGE SHEET NUMBER:

PLOT DATE: 17-FEB-2006
DRAWN BY: J. GILMORE
IPARM NAME: se034tie.i
SHEET 11 OF 83

CONSTRUCT DRIVES
STA 11+75 LT (PAVED) (DRIVE 1)
DR 1 STA 60+53 RT (DRIVE 2:
SEE SECTIONS ON SHEETS 74 & 75)
DR 2 STA 51+12 LT (AGGREGATE SURFACE COURSE)

ANCHOR FOR STEEL BEAM RAIL
STA 11+68.4 RT
STA 13+13.8 LT

HEAVY DUTY STEEL BEAM GUARD RAIL
STA 11+63.0 RT - 13+22.8 RT
STA 13+08.3 LT - 13+43.0 LT
STA 14+70.3 RT - 14+75 RT

GUARD RAIL - APPROACH SECTION NETC TWO RAIL
STA 13+22.8 RT - 13+49.3 RT
STA 13+43.0 LT - 13+66.6 LT
STA 14+43.5 RT - 14+70.3 RT
STA 14+64.8 LT - 14+75 LT

CONSTRUCT SPECIAL WALKWAY
DR 2 STA ~~50+48~~ LT - DR 2 STA ~~50+91~~ LT
50+35 50+70

BRIDGE RAILING
NETC 2 RAIL
STA 13+49.3 RT - 14+43.5 RT
STA 13+66.6 LT - 14+64.8 LT

℄ BND

VERTICAL GRANITE CURB
STA 12+60.0 RT - 13+60.9 RT
STA 14+33.3 RT - 14+75 RT

REMOVE EXISTING TREE
STA 50+54.8 LT (MAPLE)

REMOVE EXISTING HEDGES
STA 40+90 LT - STA 50+61 LT (EVERGREENS)

~~REMOVAL OF EXISTING FENCE~~
~~STA 11+50 RT - STA 12+25 RT.~~ NO FENCE

CURVE #1 DATA
Δ = 43° 41' 42" LT.
D = 20° 02' 01"
R = 286.00'
T = 114.67'
L = 218.11'
E = 22.13'
e max = 0.06 '/'

NEW CEDAR HEDGES
11-6 FT WHITE CEDAR @ 4 FT SPACING
STA 50+21 LT - STA 50+64 LT

NEW DECIDUOUS TREES (MAPLE)
STA 50+69.7 LT (O/S 26 FT)
STA 50+77.3 LT (O/S 25.8 FT)

APPROXIMATE RELOCATION OF UTILITIES

REMOVE EXISTING PAVEMENT UNDER ITEM 203.28, "EXCAVATION OF SURFACES AND PAVEMENTS" AND REPLACE WITH 6" TOPSOIL.

MAINLINE 14+50.00=
CHANNEL LINE 201+00.00
Δ = 82° 31' 40" LT
FROM TANGENT

POE
Sta 202+00.00

END BRIDGE
STA 14+36.42
F.G. = 856.~~23~~ .14

BEGIN BRIDGE
STA 13+68.64
F.G. = 857.~~20~~ .11

℄ DRIVE 1 STA 60+51.93=
℄ DRIVE 2 STA 49+89.98
Δ = 99° 51' 13" RT

POE
Sta 51+56.32

DETAILS ON SHEET 60A (GEOTEXTILE FOR UNDERDRAIN

NEW TREES

NEW HEDGES

REMOVE

POE
Sta 61+10.00

PT
Sta 60+41.95

PC
Sta 60+09.38

PC
Sta 10+13.78

BEGIN PROJECT
STA 10+11.00

POB
Sta 10+00.00

VT ROUTE 44
TO WEST WINDSOR

VT. ROUTE 106
TO WOODSTOCK

VT ROUTE 106
TO SPRINGFIELD

REMOVE FENCE

M STA 11+75 =
℄ DRIVE 1 STA 60+00
Δ = 90° LT TO TAN
PI
Sta 11+28.44

PC
Sta 12+87.16

PT
Sta 12+31.89

DRIVE 1 AT STA 11+75 LT
CURVE DATA
Δ = 23° 19' 58" LT.
D = 71° 37' 11"
R = 80.00'
T = 16.52'
L = 32.58'
E = 1.69'

CURVE #2 DATA
Δ = 82° 28' 22" RT.
D = 20° 02' 01"
R = 286.00'
T = 250.70'
L = 411.67'
E = 94.32'
e max = 0.06 '/'

EXISTING BRIDGE DATA
BUILT IN 1934 - TWO SPAN BRIDGE
8" CONCRETE DECK W/ STEEL BEAM
SKELETAL ABUTMENTS
TOTAL SPAN=118 FEET.
CURB TO CURB=20.2 FEET
FASCIA TO FASCIA=23.4 FEET

NOTE:
1. SEE SHEETS 18-19 FOR DRAINAGE AND UTILITY DETAILS.
2. SEE SHEETS 37-38 FOR SIGN & PAVEMENT MARKINGS.

SCALE 1" = 20'-0
20 0 20

SHEET NAME:	LAYOUT SHEET #1
PROJECT NAME:	READING
PROJECT NUMBER:	BRS 0148(6)S
HIGHWAY NO.:	VT 44
BRIDGE NO.:	1
OVER:	THE MILL BROOK
FILE NAME:	PW/85e034/structures/se034bdr.dgn
PROJECT MANAGER:	R. WHITCOMB
DESIGNED BY:	C. CARLSON
BRIDGE SHEET NUMBER:	
PLOT DATE:	17-FEB-2006
DRAWN BY:	J. GILMORE
IPARM NAME:	se034dd.i
SHEET	12 OF 83

FENCE EXTENDED

BM
STA.102+37.07 LT.
51.18' LT
TOP NE BOLT
OLD FNDTN.
ELEV.= 852.77'

POE
Sta 102+18.00

END SIDELINE APPROACH
AND PAVEMENT
STA 102+15.00

LIMITS OF CEMETERY BURIAL PLOTS

T.H. 5
GRAVEL

102+00 102+18

EXISTING R.O.W.

N37° 36' 29"E

*TOT/432/
7/2-1-1/1

PT
Sta 101+60.30

TH 5 CURVE DATA
Δ = 29° 30' 09" RT
D = 22° 02' 13"
R = 260'
T = 68.46'
L = 133.88'
E = 8.86'
e max = 0.040 ' /'

REMOVAL OF EXISTING GATES
STA 16+00 LT
STA 16+50 RT

CONSTRUCT DRIVE
STA 15+99 LT (PAVED APRON)
STA 17+04 RT (PAVED)
(DRIVES 3 & 4)

DRIVE GATE (ALUMINUM)
STA 15+90 LT - 16+15 LT
STA 16+80 RT - 17+25 RT

CONSTRUCT GRAVEL TURNOUT
STA 100+58.6 LT - 101+00 LT (12' WIDE)

MISCELLANEOUS FENCE (WOOD SPLIT RAIL)
℄ STA ~~102+50~~ RT - ℳ STA ~~18+57~~ LT
103+78 RT 19+00

GUARDRAIL APPROACH SECTION NETC TWO RAIL
STA 14+75 LT - 14+88.2 LT

ANCHOR FOR STEEL BEAM RAIL
℄ STA 100+58 LT
STA 16+62.9 RT

HEAVY DUTY STEEL BEAM GUARD RAIL
STA 14+75 RT - 16+69.8 RT
ℳ STA 14+88.2 LT - ℄ STA 100+62.3 LT

~~CONSTRUCT WELL BARRIER~~
~~(SEE SHEET 53 FOR DETAILS)~~
~~STA 15+43.4 RT~~ ELIMINATED

~~SNOW BARRIER - GALVANIZED~~
~~STA 15+10.2 RT - 15+63.4 RT~~ ELIMINATED

~~NEW EVERGREEN TREES~~ *
~~STA 16+16 - 40' RT~~
~~STA 16+36 - 40' RT~~
~~STA 16+60 - 40' RT~~
~~STA 16+75 - 40' RT~~

*(NOTE: APPROXIMATE LOCATION OF NEW TREES TO BE APPROVED BY THE PROPERTY OWNER)

VERTICAL GRANITE CURB
STA 14+75 RT - 16+32.4 RT

CONSTRUCT SPECIAL DITCH
STA 15+63 LT TO STA 15+90 LT
STA 16+20 LT TO STA 18+50 LT
~~DRIVE 3 STA 1+75 RT TO DRIVE 3 STA 2+25 RT~~

CONSTRUCT NEW WELL HEAD
ℳ STA 15+42 RT

REMOVAL OF EXISTING FENCE
℄ STA 102+50 RT - ℳ STA 18+57 LT

N
MAGNETIC 1991

BEGIN SIDELINE APPROACH STA 100+17.00
EDGE OF SHOULDER VT. ROUTE 44

MAINLINE POC STA 15+35.00 =
SIDELINE POB STA 100+00.00
Δ = 90° LT

APPROXIMATE
RELOCATION OF
UTILITIES

TOWN OF
READING CEMETERY

PC
Sta 100+26.43

PI
Sta 100+94.88

PI
Sta 15+37.85

MILL BROOK

EXISTING R.O.W.

NEW 18'
DRIVE GATE

END PROJECT
BEGIN APPROACH
STA 16+00.00

PT
Sta 16+98.83

END APPROACH
STA 18+50.00

ℳ STA 17+04 =
℄ DRIVE 3 STA 1+00.00
Δ = 90° RT

POE
Sta 18+57.43

IRON PIN

*5/2-1/5

FENCE EXTENDED

BOUND FOR TOWN LINE
READING/W.WINDSOR

S49° 04' 22"E

17+00 18+00 18+57

VT. ROUTE 44
TO WEST WINDSOR

HCTRL
*2

8" WHITE BIRCH

MATCH LINE

STATION 14+75

MATCH LINE

EXIST. 12" RCP

SIGN
STUMP
SIGNS

35' R

32' R

16+00

15+00

3/2-1
3/2-1
L/33

GUY

WELL HEAD

WELL BARRIER ELIMINATED

ELIMINATED

20'R (TYP)

SAVE

3" PINES

PAVED DRIVE

30'R

54'R

18'

EXISTING R.O.W.

NEW EVERGREEN TREES

NEW 24'
DRIVE GATE

2+00

3+00

4+00

4+8

36'R

18'R

2+60

PUMP HOUSE

℄ DRIVE 3 STA 2+39.33 =
℄ DRIVE 4 STA 3+00.00
Δ = 42° LT

WATER & ELECTRIC LINES APPROX. 5' DEPTH

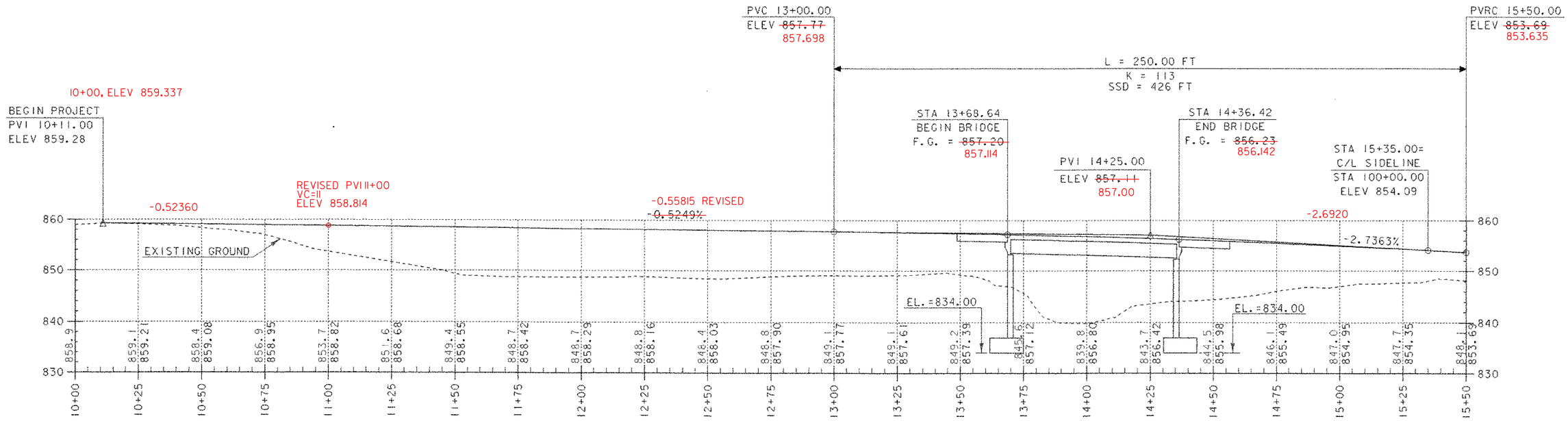
WELL HEAD

ASSUMED LOCATION OF WATER AND ELECTRIC LINE
RESIDENT ENGINEER TO LOCATE PRIOR TO WORKING IN THIS AREA.

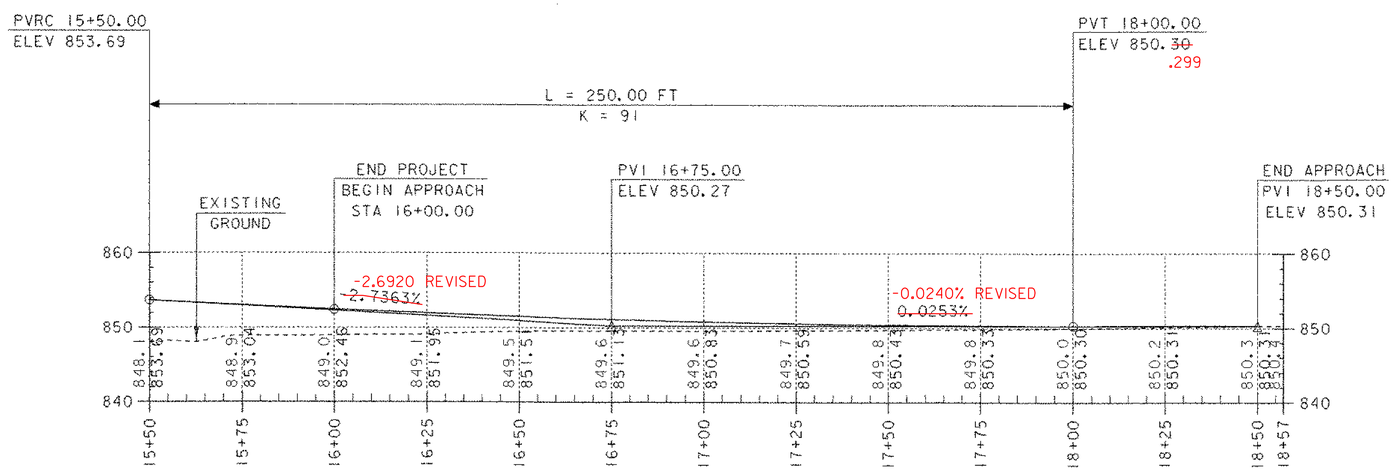
SCALE 1" = 20'-0
20 0 20

SHEET NAME: LAYOUT SHEET #2		
PROJECT NAME: READING	HIGHWAY NO.:	VT 44
PROJECT NUMBER: BRS 0148(6)S	BRIDGE NO.:	1
	OVER:	THE MILL BROOK
FILE NAME: PW/85e034/Structures/se034bdr.dgn	PLOT DATE:	17-FEB-2006
PROJECT MANAGER: R. WHITCOMB	DRAWN BY:	J. GILMORE
DESIGNED BY: C. CARLSON	IPARM NAME:	se034lg2.1
BRIDGE SHEET NUMBER:	SHEET	13 OF 83

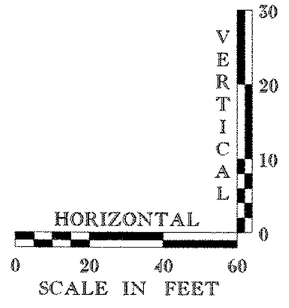
GRADE REVISED



MAINLINE PROFILE - VT. ROUTE 44

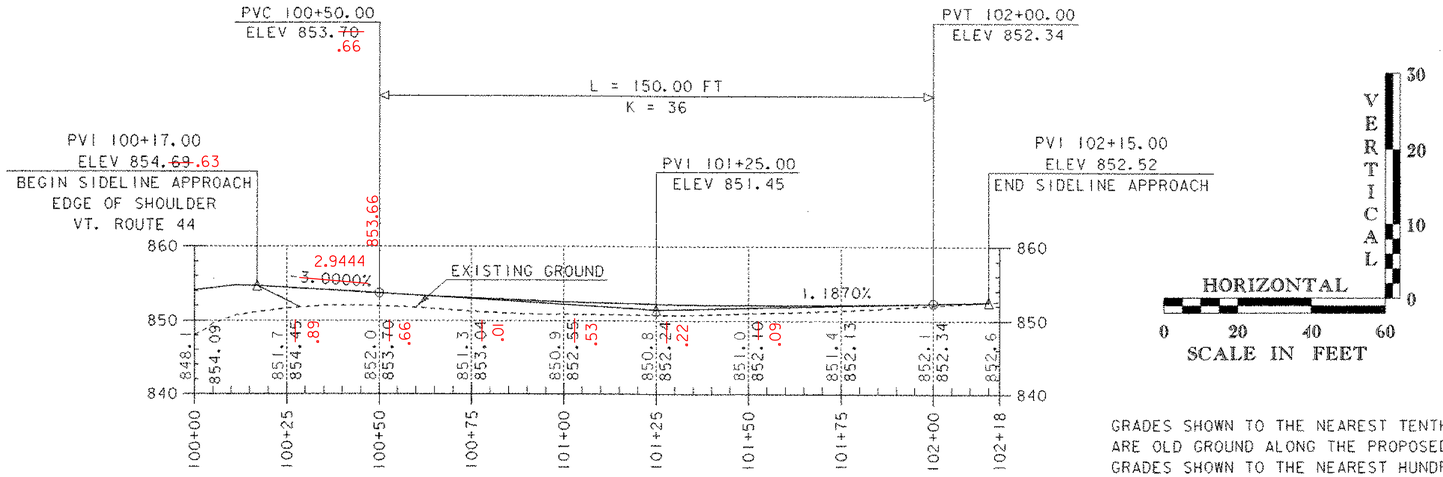


MAINLINE PROFILE (CONT'D) - VT. ROUTE 44



GRADES SHOWN TO THE NEAREST TENTH
ARE OLD GROUND ALONG THE PROPOSED ALIGNMENT.
GRADES SHOWN TO THE NEAREST HUNDREDTH ARE FINISHED
GRADES ALONG THE PROPOSED ALIGNMENT.

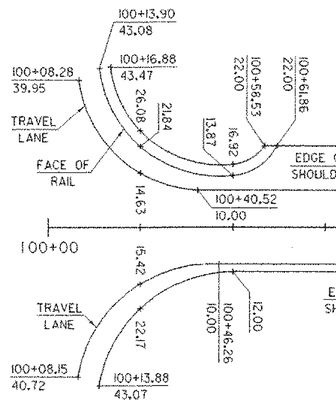
SHEET NAME: MAILINE PROFILE SHEET	
PROJECT NAME: READING	HIGHWAY NO.: VT 44
PROJECT NUMBER: BRS 0148(6)S	BRIDGE NO.: 1
	OVER: THE MILL BROOK
FILE NAME: PW/85e034/Structures/se034xsl.dgn	PLOT DATE: 17-FEB-2006
PROJECT MANAGER: R. WHITCOMB	DRAWN BY: J. GILMORE
DESIGNED BY: C. CARLSON	IPARM NAME: se034mpl1
BRIDGE SHEET NUMBER:	SHEET 14 OF 83



SIDELINE PROFILE - T.H. 5 (FLAT IRON RD.)

GRADES SHOWN TO THE NEAREST TENTH ARE OLD GROUND ALONG THE PROPOSED ALIGNMENT. GRADES SHOWN TO THE NEAREST HUNDREDTH ARE FINISHED GRADES ALONG THE PROPOSED ALIGNMENT.

SIDELINE BANKING DIAGRAM - T.H. 5 (FLAT IRON RD.)

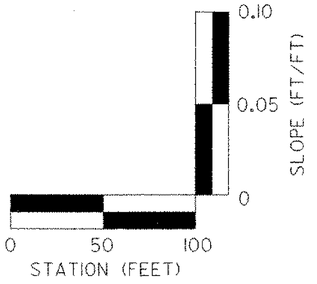


LANE OFFSETS - T.H. 5 (FLAT IRON RD.)

UNLESS OTHERWISE NOTED, OFFSETS ARE FROM CENTERLINE AT 25' STATIONS.

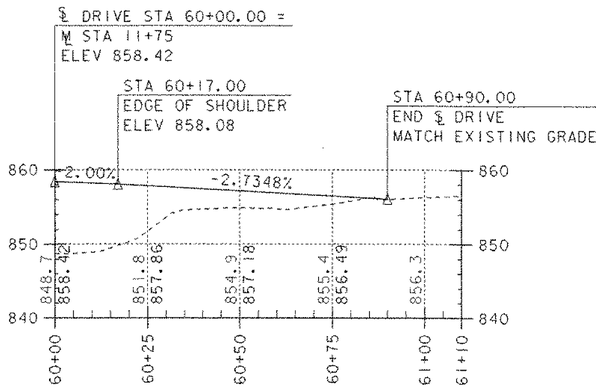
20 0 20

SCALE: 1" = 20'-0"



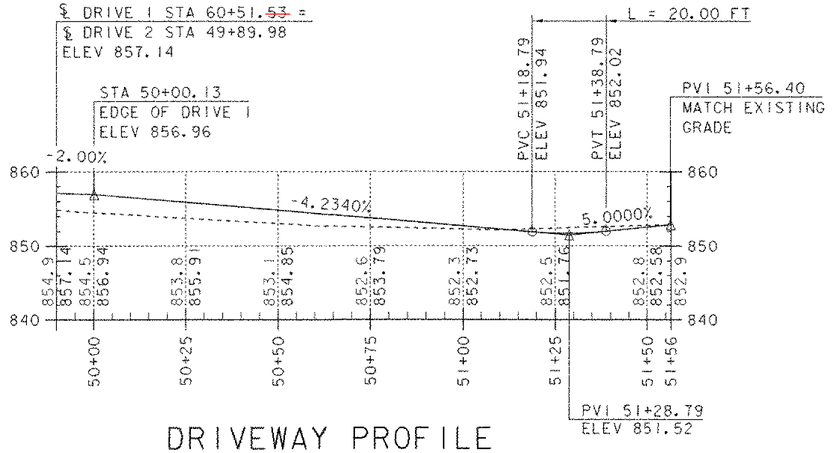
FLAT IRON ROAD

SHEET NAME: SIDELINE ROADWAY DETAILS	
PROJECT NAME: READING	HIGHWAY NO.: VT 44
PROJECT NUMBER: BRS 0148(6)S	BRIDGE NO.: 1
	OVER: THE MILL BROOK
FILE NAME: PW/85e034/Structures/se034xsl.dgn	PLOT DATE: 17-FEB-2006
PROJECT MANAGER: R. WHITCOMB	DRAWN BY: J. GILMORE
DESIGNED BY: C. CARLSON	IPARM NAME: se034spl1
BRIDGE SHEET NUMBER:	SHEET 15 OF 83



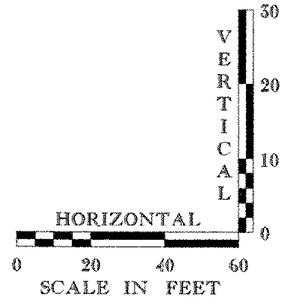
PARKING PROFILE

(DRIVE 1)



DRIVEWAY PROFILE

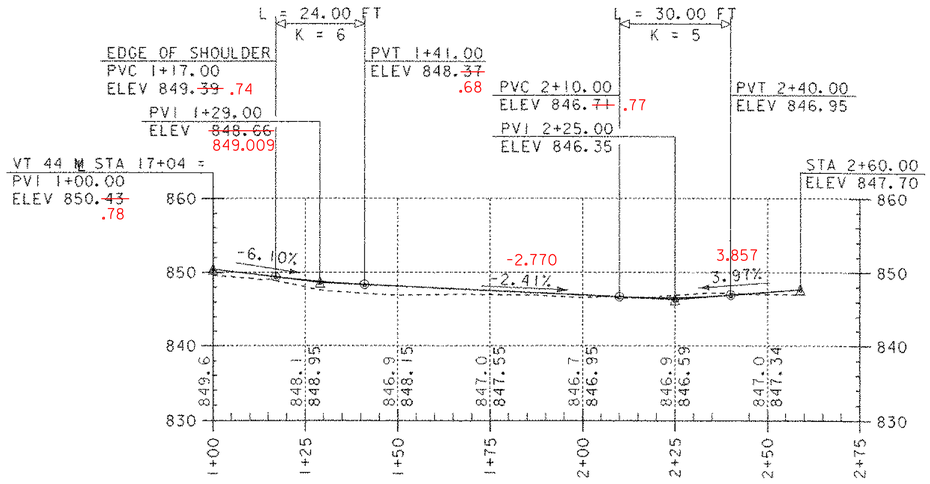
(DRIVE 2)



GRADES SHOWN TO THE NEAREST TENTH
ARE OLD GROUND ALONG THE PROPOSED ALIGNMENT.
GRADES SHOWN TO THE NEAREST HUNDREDTH ARE FINISHED
GRADES ALONG THE PROPOSED ALIGNMENT.

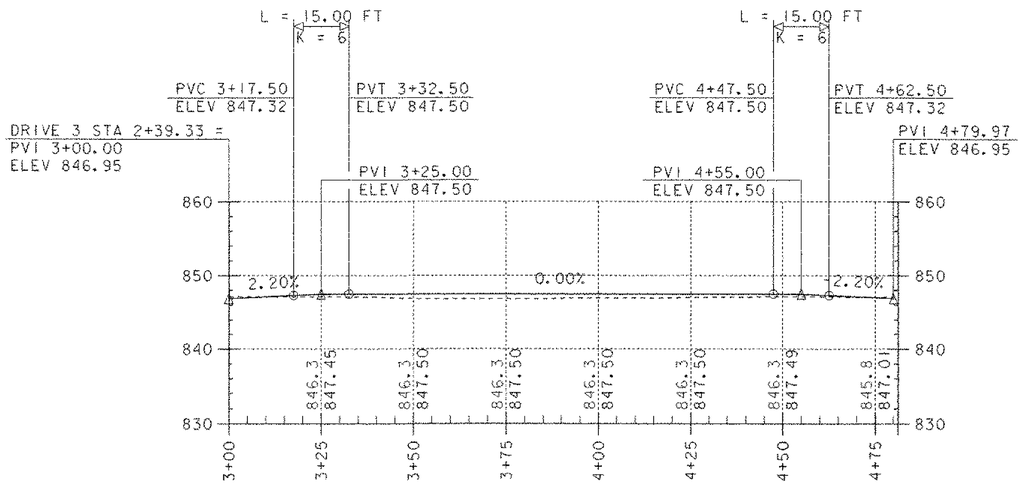
SHEET NAME: **PARKING LOT DRIVE & DRIVEWAY PROFILE SHEET**

PROJECT NAME: READING	HIGHWAY NO.: VT 44
PROJECT NUMBER: BRS 0148(6)S	BRIDGE NO.: 1
	OVER: THE MILL BROOK
FILE NAME: PW/85e034/Structures/se034xsl.dgn	PLOT DATE: 17-FEB-2006
PROJECT MANAGER: R. WHITCOMB	DRAWN BY: G. ROY
DESIGNED BY: C. CARLSON	IPARM NAME: se034dpl.i
BRIDGE SHEET NUMBER:	SHEET 16 OF 83



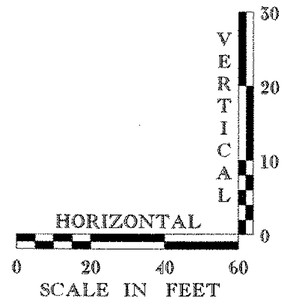
WELL DRIVE PROFILE

(DRIVE 3)



WELL CIRCLE PROFILE

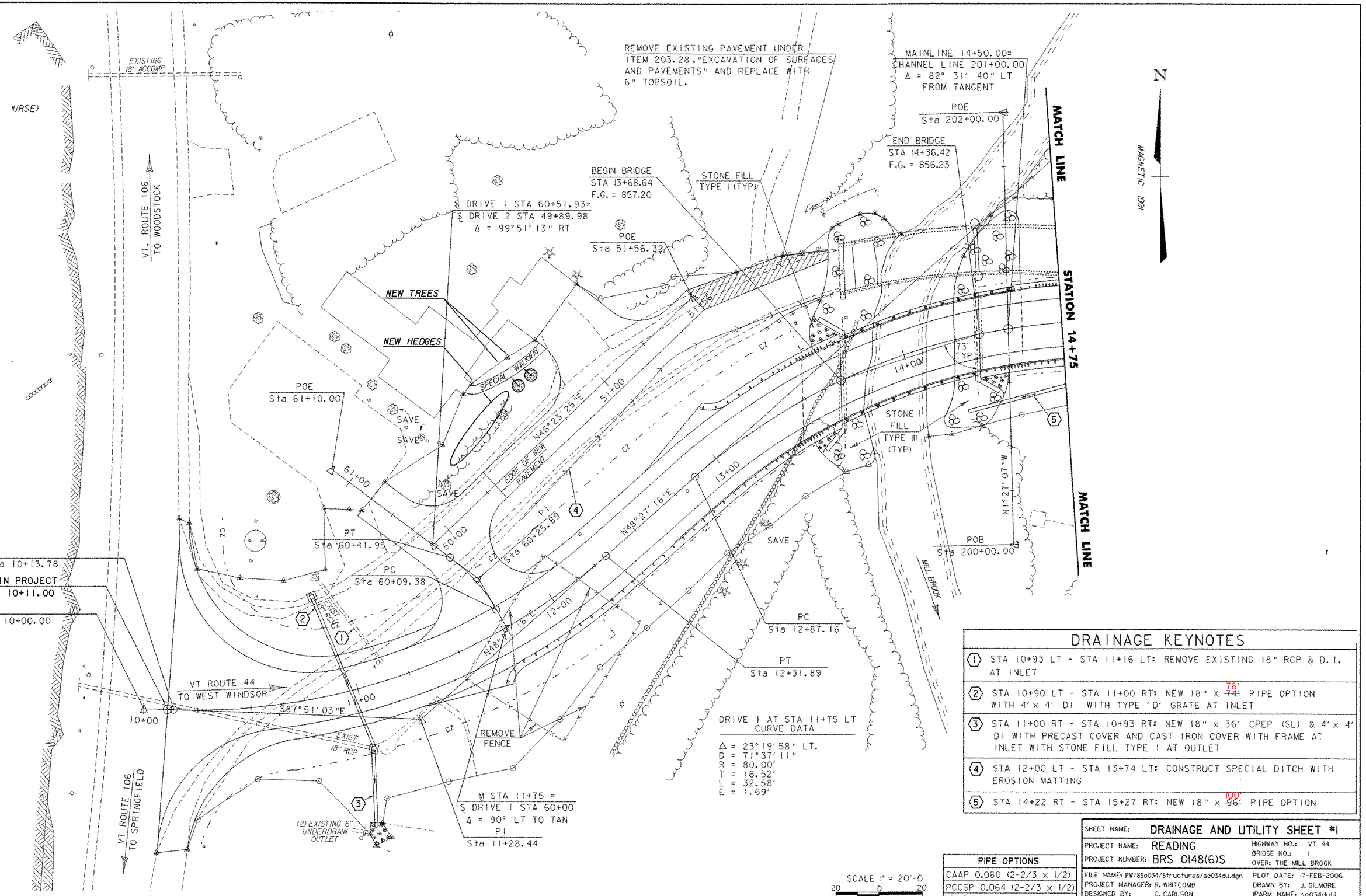
(DRIVE 4)



GRADES SHOWN TO THE NEAREST TENTH
ARE OLD GROUND ALONG THE PROPOSED ALIGNMENT.
GRADES SHOWN TO THE NEAREST HUNDREDTH ARE FINISHED
GRADES ALONG THE PROPOSED ALIGNMENT.

SHEET NAME: **WELL DRIVE & WELL CIRCLE DRIVE PROFILE SHEET**

PROJECT NAME: READING	HIGHWAY NO.: VT 44
PROJECT NUMBER: BRS 0148(6)S	BRIDGE NO.: 1
	OVER: THE MILL BROOK
FILE NAME: PW/85e034/Structures/se034xsl.dgn	PLOT DATE: 17-FEB-2006
PROJECT MANAGER: R. WHITCOMB	DRAWN BY: J. GILMORE
DESIGNED BY: C. CARLSON	IPARM NAME: se034wpf.i
BRIDGE SHEET NUMBER:	SHEET 17 OF 83



DRAINAGE KEYNOTES

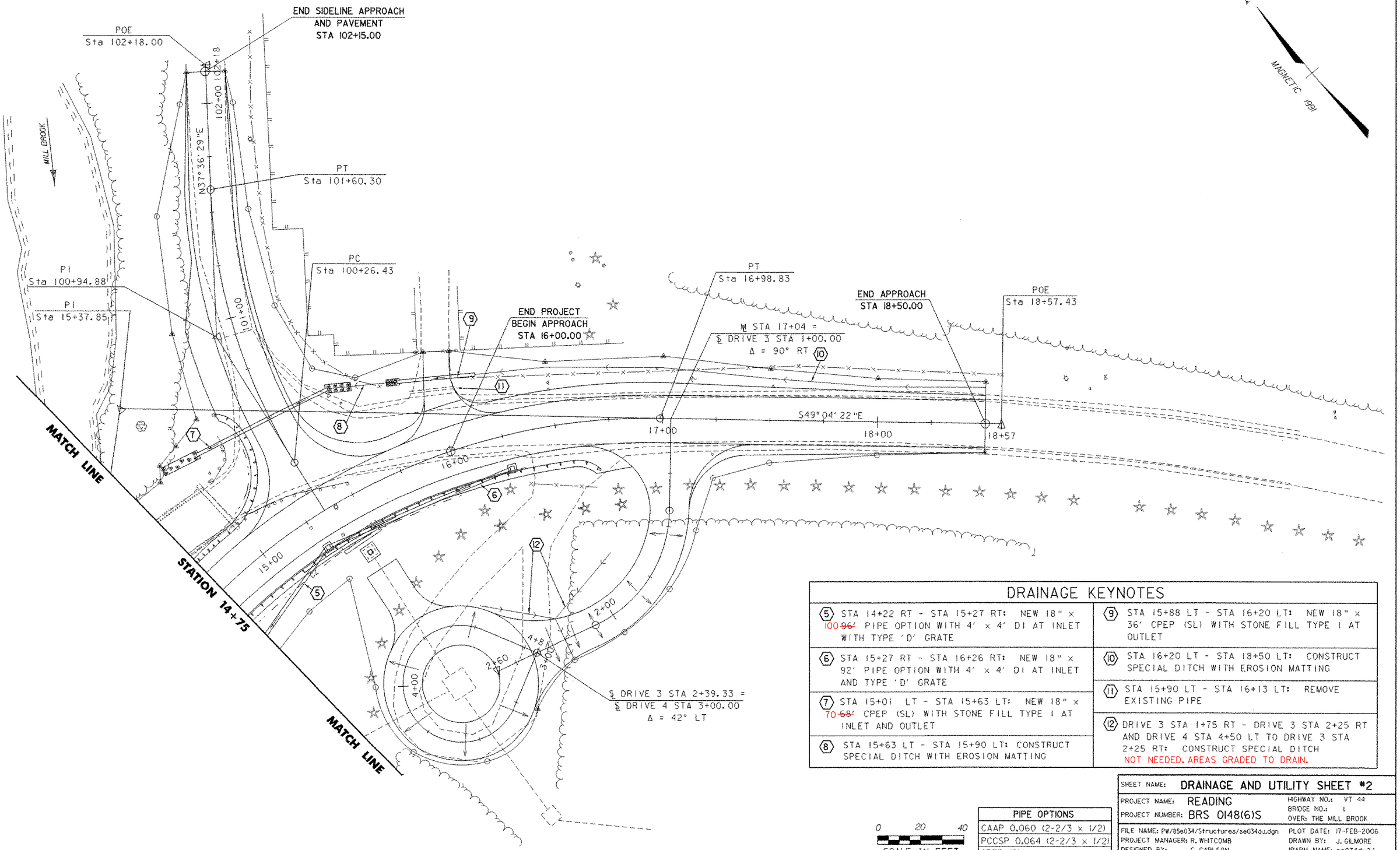
(1)	STA 10+93 LT - STA 11+16 LT: REMOVE EXISTING 18" RCP & D. I. AT INLET
(2)	STA 10+90 LT - STA 11+00 RT: NEW 18" X ~~74'~~ 76' PIPE OPTION WITH 4' x 4' DI WITH TYPE 'D' GRATE AT INLET
(3)	STA 11+00 RT - STA 10+93 RT: NEW 18" x 36' CPEP (SL) & 4' x 4' DI WITH PRECAST COVER AND CAST IRON COVER WITH FRAME AT INLET WITH STONE FILL TYPE I AT OUTLET
(4)	STA 12+00 LT - STA 13+74 LT: CONSTRUCT SPECIAL DITCH WITH EROSION MATTING
(5)	STA 14+22 RT - STA 15+27 RT: NEW 18" x ~~96'~~ 100' PIPE OPTION

PIPE OPTIONS
CAAP 0.060 (2-2/3 x 1/2)
PCCSP 0.064 (2-2/3 x 1/2)
CPEP (SL)

SHEET NAME: DRAINAGE AND UTILITY SHEET #1

PROJECT NAME: READING
PROJECT NUMBER: BRS 0148(6)S
HIGHWAY NO.: VT 44
BRIDGE NO.: 1
OVER: THE MILL BROOK

FILE NAME: PW/85e034/Structures/se034du.dgn
PROJECT MANAGER: R. WHITCOMB
DESIGNED BY: C. CARLSON
BRIDGE SHEET NUMBER:
PLOT DATE: 17-FEB-2006
DRAWN BY: J. GILMORE
IPARM NAME: se034du1
SHEET 18 OF 83



DRAINAGE KEYNOTES

(5) STA 14+22 RT - STA 15+27 RT: NEW 18" × 100 ~~96'~~ PIPE OPTION WITH 4' × 4' DI AT INLET WITH TYPE 'D' GRATE

(6) STA 15+27 RT - STA 16+26 RT: NEW 18" × 92' PIPE OPTION WITH 4' × 4' DI AT INLET AND TYPE 'D' GRATE

(7) STA 15+01 LT - STA 15+63 LT: NEW 18" × 70 ~~68'~~ CPEP (SL) WITH STONE FILL TYPE I AT INLET AND OUTLET

(8) STA 15+63 LT - STA 15+90 LT: CONSTRUCT SPECIAL DITCH WITH EROSION MATTING

(9) STA 15+88 LT - STA 16+20 LT: NEW 18" × 36' CPEP (SL) WITH STONE FILL TYPE I AT OUTLET

(10) STA 16+20 LT - STA 18+50 LT: CONSTRUCT SPECIAL DITCH WITH EROSION MATTING

(11) STA 15+90 LT - STA 16+13 LT: REMOVE EXISTING PIPE

(12) DRIVE 3 STA 1+75 RT - DRIVE 3 STA 2+25 RT AND DRIVE 4 STA 4+50 LT TO DRIVE 3 STA 2+25 RT: CONSTRUCT SPECIAL DITCH
NOT NEEDED. AREAS GRADED TO DRAIN.

0 20 40
SCALE IN FEET

PIPE OPTIONS
CAAP 0.060 (2-2/3 x 1/2)
PCCSP 0.064 (2-2/3 x 1/2)
CPEP (SL)

SHEET NAME: DRAINAGE AND UTILITY SHEET #2

PROJECT NAME: READING
PROJECT NUMBER: BRS 0148(6)S
HIGHWAY NO.: VT 44
BRIDGE NO.: 1
OVER: THE MILL BROOK

FILE NAME: PW/85e034/Structures/se034du.dgn
PROJECT MANAGER: R. WHITCOMB
DESIGNED BY: C. CARLSON
BRIDGE SHEET NUMBER:
PLOT DATE: 17-FEB-2006
DRAWN BY: J. GILMORE
IPARM NAME: se034du2.1
SHEET 19 OF 83

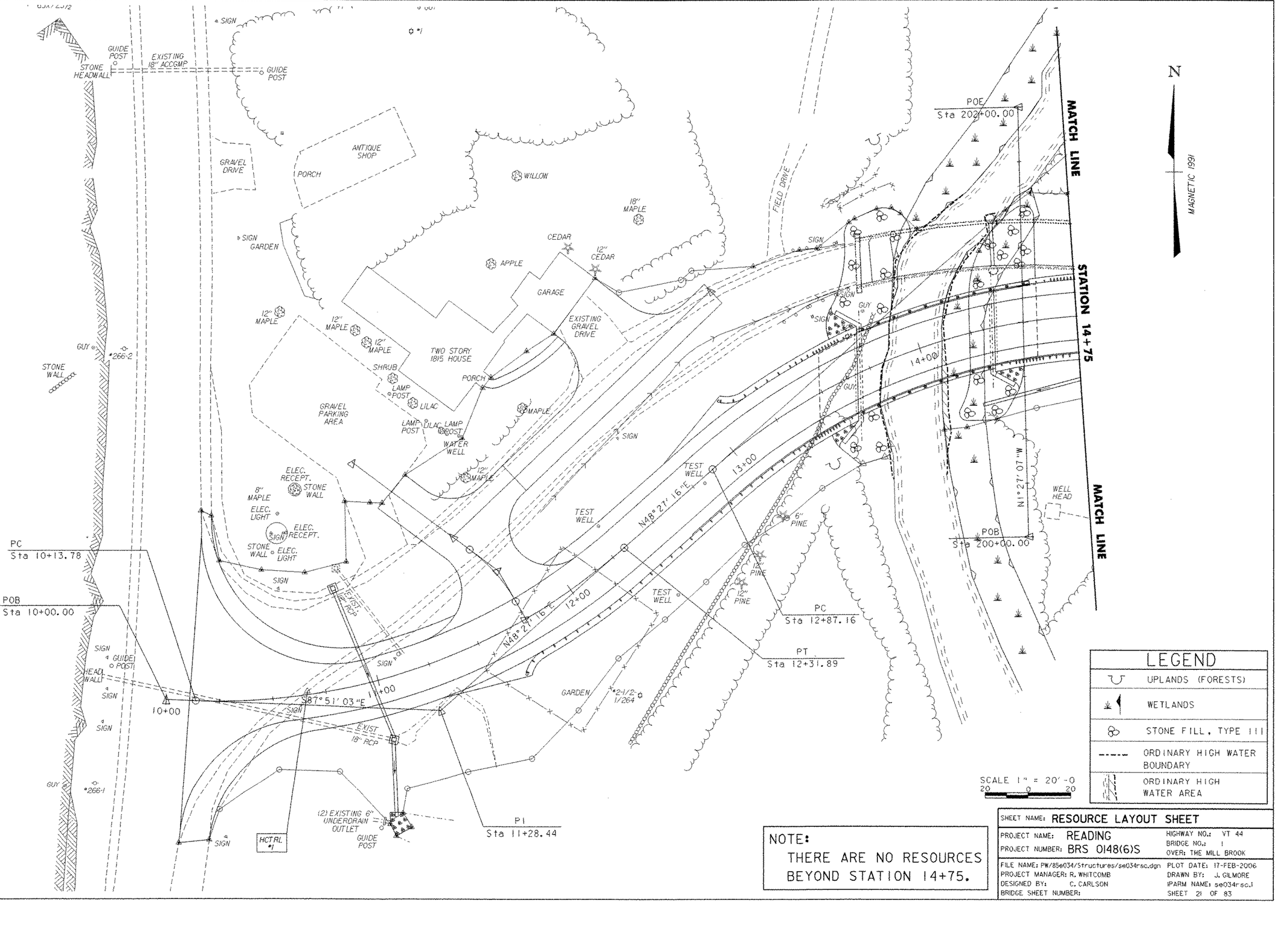
STATE OF VERMONT
AGENCY OF TRANSPORTATION

DRAINAGE DETAIL SHEET

KEY	STATION	STATION	POS.	ASKEW	INLET/OUTLET TYPE		DITCH		PIPE ARCH			PIPE		ALLOWABLE OPTIONS						PIPE ELBOW	ES	CB	PROTECT	DEPTH DI	HPC CLASS B	REINF STEEL	DI GRATE	CHAN ELEV	CRM	TRENCH EXCAVATION		COMM EXC	UNC CHAN EXC	STRUCT EXCAV	GRAN BKFILL STRUCT	GRAN BORR	EROS MATT	STONE FILL		MARKER POSTS		REMARKS
				NO. DEG	INLET	OUTLET	IN	OUT	SPAN IN	RISE IN	L FT	D IN	L FT	PCCSP TH	CAAP TH	RCP CL	CSP TH	CPEP CL	PCCSP PI TH	NO. DEG	EA	EA		FT	CY	LBS	TYPE	EA	CY	EARTH CY	ROCK CY	CY	CY	CY	CY	CY	CY	SY	CY	TYPE	LT EA	RT EA	
1	10+93	11+16	LT/LT																											2											REMOVE EXISTING PIPE AND DI
2	10+90	11+00	LT/RT		DI	DI						18	~~74~~ 76	0.064	0.060	USED CPEP		X						3'-0"	1.7	150	D			37					36							NEW 4' X 4' DI AT INLET
3	11+00	10+93	RT/RT		DI	DITCH						18	36					X						8'-0"	3.9	347				13					8			4	I		X	NEW 4' X 4' DI WITH PRECAST COVER AND CAST IRON COVER WITH FRAME AND STONE FILL, TYPE I AT OUTLET
4	12+00	13+75	LT/LT		DITCH	DITCH																								20							425					CONSTRUCT SPECIAL DITCH WITH EROSION MATTING
5	14+22	15+27	RT/RT		DI	DITCH						18	~~96~~ 100	0.064	0.060			X					8"	6'-6"	3.5	288	D			14					34						X	NEW 4' X 4' DI AT INLET
6	15+27	16+26	RT/RT		DI	DI						18	92	0.064	0.060			X						3'-0"	2.0	173	D			5					9							NEW 4' X 4' DI AT INLET
7	15+01	15+63	LT/LT		DITCH	DITCH						18	~~68~~ 70					X												58					19			5	I		X	STONE FILL, TYPE I AT INLET AND OUTLET
8	15+63	15+90	LT/LT		DITCH	DITCH																								2							40					CONSTRUCT SPECIAL DITCH WITH EROSION MATTING
9	15+88	16+20	LT/LT		DITCH	DITCH						18	36					X												9					6			1	I			STONE FILL, TYPE I AT OUTLET
10	16+20	18+50	LT/LT		DITCH	DITCH																								57							200					CONSTRUCT SPECIAL DITCH WITH EROSION MATTING
11	15+90	16+13	LT/LT																											2												REMOVE EXISTING PIPE
12	DRIVE 3 1+75	DRIVE 3 2+25	RT/RT		DITCH	DITCH																																				CONSTRUCT SPECIAL DITCH
12	DRIVE 4 4+50	DRIVE 3 2+25	LT/RT		DITCH	DITCH																																				CONSTRUCT SPECIAL DITCH
	SUBTOTALS											18	262	0.064	0.060			X						11.1	958	3-D			217	2				112		665	10		1	2	
	ROUNDING TOTALS											18	140					X						0.9 12 CY	2 960#	3 EA			3 220 CY	8 10 CY				8 120 CY		5 670 SY	0 10 CY			3	EA	

PROJECT NAME: **READING**
PROJECT NUMBER: **BRS 0148(6)S**

FILE NAME: **PW/85e034/Structures/s85e034dr.xls** PLOT DATE: **1/30/2006**
PROJECT MANAGER: **R. WHITCOMB** DRAWN BY: **L. BULLOCK**
DESIGNED BY: **C. CARLSON** CHECKED BY: **C. CARLSON**
DRAINAGE DETAIL SHEET #1 SHEET **20** OF **83**



LEGEND

- UPLANDS (FORESTS)
- WETLANDS
- STONE FILL, TYPE III
- ORDINARY HIGH WATER BOUNDARY
- ORDINARY HIGH WATER AREA

SCALE 1" = 20'-0
20 0 20

NOTE:
THERE ARE NO RESOURCES BEYOND STATION 14+75.

SHEET NAME: RESOURCE LAYOUT SHEET

PROJECT NAME: READING	HIGHWAY NO.: VT 44
PROJECT NUMBER: BRS 0148(6)S	BRIDGE NO.: 1
	OVER: THE MILL BROOK
FILE NAME: PW/85e034/Structures/se034rsc.dgn	PLOT DATE: 17-FEB-2006
PROJECT MANAGER: R. WHITCOMB	DRAWN BY: J. GILMORE
DESIGNED BY: C. CARLSON	PARM NAME: se034rsc.i
BRIDGE SHEET NUMBER:	SHEET 21 OF 83

PROJECT DESCRIPTION

THIS PROJECT "READING BRS 0148(6)S" WILL REPLACE BRIDGE NO. 1 ON VT 44 OVER THE MILL BROOK IN THE TOWN OF READING ON A NEW ALIGNMENT. THE NEW ALIGNMENT WILL SHIFT THE BRIDGE APPROXIMATELY 50 FEET DOWNSTREAM. THE NEW BRIDGE WILL BE A TWO LANE, SINGLE SPAN, STEEL BEAM WITH CONCRETE DECK BRIDGE. THE PROJECT WILL MAINTAIN TRAFFIC ON THE EXISTING BRIDGE DURING CONSTRUCTION. THE EXISTING BRIDGE AND APPROACHES WILL BE REMOVED UPON COMPLETION OF THE NEW STRUCTURE.

THE PROJECT BEGINS ON VT 44 AT THE INTERSECTION OF VT 106 AND CONTINUES EASTERLY ALONG VT 44 FOR 0.112 MILES. THE LOCATION OF THE CROSSING IS N43°28' 13", W72° 31' 55".

THE TOTAL DISTURBED AREA (EXCLUDING WASTE, BORROW AND STAGING AREAS) IS APPROXIMATELY 2.3 ACRES.

SITE INVENTORY & ANALYSIS

OFF SITE DRAINAGE CHARACTERISTICS.
THE LAND SURROUNDING THE PROJECT AREA IS MOUNTAINOUS, ROLLING HILLS AND OPEN FIELDS WITH LAWNS. A FEW AREAS ARE GROWING IN WITH BRUSH AND SOFTWOOD AND HARDWOOD TREES IN THE IMMEDIATE PROJECT VICINITY. OFF SITE DRAINAGE IS PRIMARILY CONVEYED ALONG ROADWAY DITCHES.

DRAINAGE, WATERWAYS, BODIES OF WATER.
THIS BRIDGE CROSSES MILL BROOK. THE BROOK IS PERENNIAL, SINUOUS AND UNBRAIDED. THE WATERWAY OF FULL OPENING AT THE EXISTING BRIDGE IS 680 SQUARE FEET. THE WATERSHED AREA IS 10,112 ACRES.

TOPOGRAPHY, EXISTING ROADS, BUILDINGS, UTILITIES.
THE PROJECT SITE IS RELATIVELY FLAT BUT CHANGES TO HILLY AND MOUNTAINOUS OUTSIDE OF THE PROJECT LIMITS. VT 44 IS A PAVED ROUTE. THERE IS A TWO STORY BRICK HOME NEAR THE PROJECT. POWER AND UTILITY POLES RUN ALONG THE SOUTHERN SIDE OF ROUTE 44 BUT WILL BE RELOCATED BY CENTRAL VERMONT PUBLIC SERVICE CORP. TO ELIMINATE INTERFERENCE WITH THE CONSTRUCTION SITE.

VEGETATION.
THERE ARE STRIPS OF TREES ON EITHER SIDE OF THE BROOK, AS WELL AS SOME OVERGROWN BRUSH. THERE ARE MAINTAINED LAWNS ON EITHER SIDE OF ROUTE 44, AS WELL AS SOME FIELD AREAS. STONE FILL STEEPER THAN 1V:3H WILL BE CAPPED WITH GRUBBING MATERIAL. ROADWAY SLOPES GREATER THAN 1V:3H WILL BE SEEDED AND EROSION MATTING PLACED AS SHOWN ON SHEET 33. SLOPES FLATTER THAN 1V:3H WILL BE SEEDED AND MULCHED.

SOILS.
THE SOIL CONSERVATION SERVICE "SOIL SURVEY OF WINDSOR COUNTY" IDENTIFIES THE PRIMARY SOIL TYPE IN THE PROJECT SITE AS PODUNK FINE SANDY LOAM. THESE SOILS FORMED IN LOAMY ALLUVIUM UNDERLAIN BY SANDY ALLUVIUM. SLOPE RANGES FROM 0 TO 3 PERCENT. WITH OCCASIONAL FLOODING. THE LISTED SOIL ERODIBILITY COEFFICIENT (K-FACTOR) IS 0.24, WHICH IS CLASSIFIED AS NOT HIGHLY ERODIBLE.

SENSITIVE RESOURCE AREAS.
A 50' RIPARIAN BUFFER HAS BEEN DEMARCATED ON THE PLANS ALONG MILL BROOK AND TWO AREAS OF WETLANDS IMMEDIATELY ALONG THE BROOK HAVE BEEN IDENTIFIED. IMPACTS TO THE WETLANDS WILL BE LIMITED TO PERMANENT STONE FILL AND ABUTMENTS. NO STAGING OR STOCK PILING OF MATERIALS IS TO EFFECT THE WETLANDS. NO "THREATENED & ENDANGERED" SPECIES, HISTORIC OR ARCHEOLOGICAL RESOURCES HAVE BEEN IDENTIFIED WITHIN THE PROJECT LIMITS.

TEMPORARY EROSION PREVENTION & SEDIMENT CONTROL

PROJECT DEMARCATION FENCING DELINEATES THE CONSTRUCTION AREA FOR CONSTRUCTION EQUIPMENT. THIS MEASURE LIMITS THE AREA THAT CAN BE DISTURBED AND EXPOSED TO EROSION.

TRACKING OF ALL EXPOSED SLOPES, COMBINED WITH TEMPORARY MULCHING, WILL BE UTILIZED ON A REGULAR BASIS TO STABILIZE SLOPES THAT WILL BE EXPOSED FOR SEVERAL DAYS OR THAT MAY BE SUBJECT TO FORECASTED RAIN EVENTS.

FOLLOWING FINAL GRADING, SEEDING & MULCHING STABILIZES SLOPES UP TO 1V:3H. USE BIODEGRADABLE "EROSION CONTROL MATTING" (OR EQUIVALENT) AS DETAILED ON SHEET 33 IN PLACE OF MULCH ON STEEPER SLOPES.

STONE CHECK DAMS PLACED IN DITCHES REDUCE FLOW VELOCITIES AND HELP PREVENT EROSION. PLACE DAMS IN DITCHES SO THAT THE ELEVATION OF THE TOP OF A CHECK DAM IS LEVEL WITH THE TOE OF THE NEXT UPSLOPE CHECK DAM. THE CHECK DAMS MAY BE REMOVED ONCE THE STONE LINING OF THE DITCHES IS COMPLETE OR VIGOROUS VEGETATION HAS BEEN ESTABLISHED AND THE SURROUNDING AREA STABILIZED. SEE SHEET 30 FOR DETAILS AND ADDITIONAL NOTES REGARDING STONE CHECK DAMS.

SILT FENCE PLACED LEVEL ON SLOPES CONTROL SHEET FLOW SEDIMENT TRANSPORT. PLACE SILT FENCE BEFORE BEGINNING UPSLOPE EARTHWORK. PLACE SILT FENCE 5 TO 10 FEET FROM THE TOE OF SLOPES. TURN THE ENDS OF SILT FENCE SLIGHTLY UPHILL TO STOP CONCENTRATED WATER FROM FLOWING AROUND THE ENDS. THE MAXIMUM SLOPE LENGTH BETWEEN SEPARATE RUNS OF SILT FENCE IS 100 FEET. SEE SHEET 29 FOR DETAILS AND ADDITIONAL NOTES REGARDING SILT FENCE.

INLET CONTROL MEASURES AROUND CULVERTS AND DROP INLETS CONTROL CONCENTRATED FLOW SEDIMENT TRANSPORT. GRAVEL BAGS CREATE A TEMPORARY PUDDLE FOR PARTICLES TO SETTLE OUT AS WATER DRAINS THROUGH THE BARRIER. INSTALL INLET PROTECTION BEFORE WATER FLOWS THROUGH THE STRUCTURE. LIMIT THE HEIGHT OF THE BARRIER SO AS NOT TO CREATE A HAZARD WITH THE CONTROL ITSELF OR THE PONDING OF WATER. GET THE ENGINEER'S APPROVAL BEFORE USING ALTERNATIVE INLET CONTROL MEASURES. SEE SHEET 31 FOR DETAILS AND ADDITIONAL NOTES REGARDING INLET PROTECTION.

STABILIZED CONSTRUCTION ENTRANCES CONTROL TRACKING OF SEDIMENT ONTO PUBLIC ROADS. A STABILIZED ENTRANCE SHALL BE UTILIZED WHERE APPLICABLE INCLUDING THE PROJECT SITE, STAGING AREAS, AS WELL AS BORROW AND WASTE SITES. PIPE ALL SURFACE WATER FLOWING TO OR DIVERTED TOWARDS A CONSTRUCTION ENTRANCE UNDER THE STONE. SEE SHEET 32 FOR DETAILS AND ADDITIONAL NOTES REGARDING STABILIZED CONSTRUCTION ENTRANCES.

TEMPORARY SEDIMENT SETTLING BASINS CONTROL CONCENTRATED FLOW SEDIMENT TRANSPORT FROM DEWATERING OF COFFERDAMS. THE CONTRACTOR SHALL SIZE THE BASIN ACCORDING TO THE SIZE OF THE SEDIMENT PARTICLES BEING SETTLED AND THEIR ANTICIPATED PUMPING RATE.

COFFERDAMS WILL BE UTILIZED TO HELP PREVENT SEDIMENT TRANSPORT DURING THE ABUTMENT EXCAVATION.

CHECK MEASURES (E.G. STONE CHECK DAMS, SILT FENCE, AND SAND BAGS) REGULARLY FOR ACCUMULATION OF SEDIMENT. REMOVE SEDIMENT BUILD-UP WHEN THE LEVEL OF SEDIMENT REACHES ONE-HALF THE HEIGHT OF THE CONTROL MEASURE. DISPOSE OF SEDIMENTS IN AN APPROVED AREA WHERE THEY WILL NOT BE SUBJECT TO EROSION.

CHECK ALL SEEDING AND GRUBBING AREAS FOR ADEQUATE MULCHING AND SEEDING ETC.

SEDIMENT SETTLING BASIN SIZING CRITERIA

PUMP FLOW RATE		REQUIRED SURFACE AREA		LENGTH / WIDTH = 2:1			
Q(gpm)	Q(m^3/s)	(ft^2)	(m^2)	L (ft)	W (ft)	L (m)	W (m)
50	0.0032	595	55	35.0	17.0	10.6	5.3
100	0.0063	1200	111	49.0	24.5	15.0	7.5
150	0.0095	1776	165	59.6	29.8	18.2	9.1
200	0.0126	2368	220	68.8	34.4	21.0	10.5
250	0.0158	2970	276	77.0	38.5	23.4	11.7
300	0.0189	3560	330	84.4	42.2	25.8	12.9
350	0.0221	4155	386	91.2	45.6	27.8	13.9

PERMANENT EROSION CONTROL MEASURES

SEEDING & MULCHING WILL ESTABLISH VEGETATION IN DISTURBED AREAS INCLUDING SLOPES UP TO 1V:3H. SUBSTITUTE BIODEGRADABLE "EROSION CONTROL MATTING" (OR EQUIVALENT) FOR MULCHING ON STEEPER SLOPES.

ESTABLISHING VEGETATION IN THE ROADWAY DITCHES WILL HELP PREVENT EROSION AND CONTROL SEDIMENT TRANSPORT. SEE 'EROSION CONTROL DETAILS' SHEET 33 FOR TYPICAL DITCH SECTION.

STONE FILL, TYPE I AT CULVERT OUTLETS WILL DISSIPATE WATER VELOCITIES AND HELP PREVENT EROSION.

STONE FILL, TYPE I WILL BE PLACED AROUND THE ENDS OF THE WINGWALLS TO HELP PREVENT EROSION FROM ROADWAY RUNOFF.

STONE FILL, TYPE III IN THE DISTURBED AREAS ALONG THE STREAM BANKS CREATED DURING THE ABUTMENT EXCAVATIONS WILL HELP PREVENT EROSION. STONE FILL WILL BE CAPPED WITH GRUBBING MATERIAL ABOVE ORDINARY HIGH WATER WHICH WILL STABILIZE SLOPES STEEPER THAN 1V:3H.

GEOTEXTILE UNDER THE STONE FILL WILL ALSO BE USED AS A PERMANENT EROSION CONTROL MEASURE TO HELP PREVENT EROSION.

GENERAL EROSION & SEDIMENT CONTROL GUIDELINES

THE EROSION CONTROL PLANS ARE GUIDELINES FOR PREVENTING EROSION AND CONTROLLING SEDIMENT TRANSPORT THROUGHOUT THE LIFE OF THE PROJECT. THE PURPOSE OF THE PLAN IS TO MINIMIZE SOIL LOSS AND THE POLLUTION AND SEDIMENTATION OF RECEIVING WATERS.

COORDINATE THE INSTALLATION, USE, AND REMOVAL OF EROSION AND SEDIMENT CONTROL MEASURES WITH CONSTRUCTION ACTIVITIES TO ENSURE ECONOMICAL, EFFECTIVE AND CONTINUOUS EROSION AND SEDIMENT CONTROL. EMPLOY TEMPORARY STABILIZATION PRACTICES IN INCREMENTAL STAGES AS CONSTRUCTION PROCEEDS. USE ADDITIONAL EROSION CONTROL MEASURES AS NECESSARY DURING THE SEQUENCE OF CONSTRUCTION AND AS DIRECTED BY THE ENGINEER OR ON-SITE COORDINATOR. SEE SECTION 105.23 OF THE VERMONT AOT STANDARD SPECIFICATIONS FOR CONSTRUCTION, DATED 2001.

MAINTAIN EXISTING AND PLANTED VEGETATED BUFFERS ALONG STREAM BANKS, WETLANDS OR OTHER SENSITIVE AREAS WHEREVER POSSIBLE.

COLLECT AND ROUTE CLEAN OFFSITE RUNOFF AROUND OR THROUGH THE PROJECT SITE USING DIVERSION BERMS, DIVERSION CHANNELS, CULVERTS AND/OR TEMPORARY PIPES. CONTROL ONLY SEDIMENT-LADEN RUNOFF FROM THE PROJECT SITE.

INSTALL EROSION AND SEDIMENT CONTROL MEASURES AS SHOWN IN THE EROSION CONTROL PLAN OR AS DIRECTED BY THE ENGINEER OR ON-SITE COORDINATOR. DO NOT MODIFY THE TYPE, SIZE OR LOCATION OF ANY CONTROL OR PRACTICE WITHOUT APPROVAL OF THE ENGINEER. NOTE ANY CHANGES ON THE PLANS, IN THE WEEKLY INSPECTION REPORT, AND REPORT THEM TO THE APPROPRIATE AUTHORITY IN A TIMELY MANNER. INSPECT ALL CONTROL MEASURES WEEKLY AND AFTER EACH RAINFALL EVENT. REPAIR MEASURES PROMPTLY ONCE DAMAGE IS DISCOVERED.

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. ESTABLISH TEMPORARY VEGETATION IF THE DISTURBED AREA IS TO BE WITHOUT CONSTRUCTION ACTIVITY FOR A PERIOD OF 14 DAYS. INSTALL PERIMETER CONTROL MEASURES FOLLOWING CLEARING AND BEFORE THE START OF ANY GRUBBING OR GRADING ACTIVITY. INSTALL OTHER TEMPORARY CONTROLS IN INCREMENTAL STAGES AS CONSTRUCTION PROCEEDS.

OPERATE CONSTRUCTION EQUIPMENT ONLY WITHIN PERIMETER CONTROL MEASURES.

SHEET NAME: EROSION CONTROL NARRATIVE		
PROJECT NAME: READING		HIGHWAY NO.: VT 44
PROJECT NUMBER: BRS 0148(6)S		BRIDGE NO.: 1
		OVER: THE MILL BROOK
FILE NAME:PW/85e034/Structures/se034ecbdr.dgn		PLOT DATE: 17-FEB-2006
PROJECT MANAGER: R. WHITCOMB		DRAWN BY: M. HALE
DESIGNED BY: C. CARLSON		IPARM NAME: se034ecn.i
BRIDGE SHEET NUMBER:		SHEET 22 OF 83

N

MAGNETIC 1991

MATCH LINE

STATION 14+75

KAIJA, KEVIN J. & LISA Q.

RIPARIAN BUFFER

CLASS III WETLANDS

EXISTING 18" ACCGMP

BENNETT, PETER D.

LAWN

FIELD

EXIST. 18" RCP

(2) EXISTING 6" UNDERDRAIN OUTLET

VT ROUTE 44
TO WEST WINDSOR

VT ROUTE 106
TO SPRINGFIELD

MILL BROOK

CLASS III WETLANDS

WILLIAMS & CO. MINING, INC.

TOWN OF READING

MATCH LINE

BENNETT, PETER D.

0 20 40
SCALE IN FEET

LEGEND

EXISTING DRAINAGE

SHEET NAME:	EXISTING CONDITIONS SITE PLAN #1		
PROJECT NAME:	READING	HIGHWAY NO.:	VT 44
PROJECT NUMBER:	BRS 0148(6)S	BRIDGE NO.:	1
		OVER:	THE MILL BROOK
FILE NAME:	PW/85e034/Structures/se034ecbdr.dgn	PLOT DATE:	17-FEB-2006
PROJECT MANAGER:	R. WHITCOMB	DRAWN BY:	M. HALE
DESIGNED BY:	C. CARLSON	IPARM NAME:	se034ecl.i
BRIDGE SHEET NUMBER:		SHEET	23 OF 83

TOWN OF READING

KAIJA, KEVIN J. & LISA Q.

LIMITS OF CEMETERY BURIAL PLOTS

CLASS III WETLANDS

MILL BROOK

RIPARIAN BUFFER

TOWN OF READING JOINED BY WINDSOR MINERALS, INC. d/b/a LUZENAC AMERICA, INC.

EVERGREEN TREES

LAWN

VT. ROUTE 44 TO WEST WINDSOR

MATCH LINE

STATION 14+75

MATCH LINE

LAWN

LAWN

WILLIAMS & CO. MINING, INC.

N

MAGNETIC 1991

LEGEND

EXISTING DRAINAGE

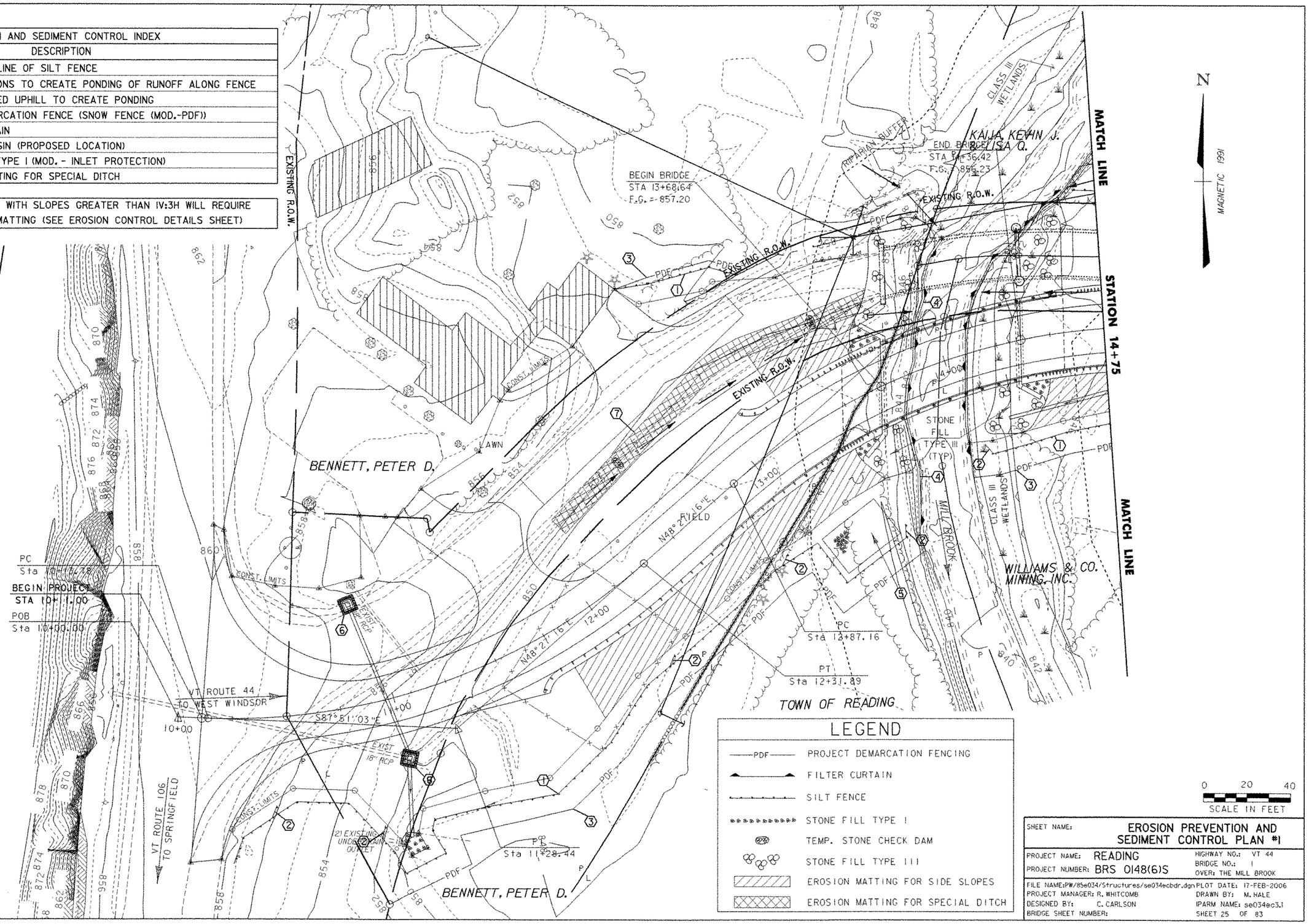
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SCALE IN FEET

SHEET NAME:	EXISTING CONDITIONS SITE PLAN #2
PROJECT NAME: READING	HIGHWAY NO.: VT 44
PROJECT NUMBER: BRS 0148(6)S	BRIDGE NO.: 1
	OVER: THE MILL BROOK
FILE NAME: PW/85e034/Structures/se034ecbdr.dgn	PLOT DATE: 17-FEB-2006
PROJECT MANAGER: R. WHITCOMB	DRAWN BY: M. HALE
DESIGNED BY: C. CARLSON	IPARM NAME: se034ec2.i
BRIDGE SHEET NUMBER:	SHEET 24 OF 83

EROSION AND SEDIMENT CONTROL INDEX	
NO.	DESCRIPTION
①	INSTALL CONTINUOUS LINE OF SILT FENCE
②	INSTALL SHORT SECTIONS TO CREATE PONDING OF RUNOFF ALONG FENCE
	ENDS OF FENCE TURNED UPHILL TO CREATE PONDING
③	PROJECT LIMITS DEMARCATION FENCE (SNOW FENCE (MOD.-PDF))
④	INSTALL FILTER CURTAIN
⑤	INSTALL SEDIMENT BASIN (PROPOSED LOCATION)
⑥	INSTALL STONE FILL, TYPE I (MOD. - INLET PROTECTION)
⑦	INSTALL EROSION MATTING FOR SPECIAL DITCH

NOTE: ALL DISTURBED AREAS WITH SLOPES GREATER THAN IV:3H WILL REQUIRE TEMPORARY EROSION MATTING (SEE EROSION CONTROL DETAILS SHEET)



SHEET NAME:	EROSION PREVENTION AND SEDIMENT CONTROL PLAN #1
PROJECT NAME: READING	HIGHWAY NO.: VT 44
PROJECT NUMBER: BRS 0148(6)S	BRIDGE NO.: 1
	OVER: THE MILL BROOK
FILE NAME: PW/85e034/Structures/se034ecbdr.dgn	PLOT DATE: 17-FEB-2006
PROJECT MANAGER: R. WHITCOMB	DRAWN BY: M. HALE
DESIGNED BY: C. CARLSON	IPARM NAME: se034ec3.i
BRIDGE SHEET NUMBER:	SHEET 25 OF 83

EROSION AND SEDIMENT CONTROL INDEX	
NO.	DESCRIPTION
①	INSTALL CONTINUOUS LINE OF SILT FENCE
②	INSTALL SHORT SECTIONS TO CREATE PONDING OF RUNOFF ALONG FENCE*
	ENDS OF FENCE TURNED UPHILL TO CREATE PONDING
③	PROJECT LIMITS DEMARCATION FENCE (SNOW FENCE (MOD.-PDF))
⑥	INSTALL STONE FILL, TYPE I (MOD. - INLET PROTECTION)
⑦	INSTALL EROSION MATTING FOR SPECIAL DITCH
	* SPECIFIC LOCATIONS DETERMINED IN THE FIELD

NOTE: ALL DISTURBED AREAS WITH SLOPES GREATER THAN IV:3H WILL REQUIRE TEMPORARY EROSION MATTING (SEE EROSION CONTROL DETAILS SHEET)

TOWN OF READING

END SIDELINE APPROACH AND PAVEMENT STA 102+15.00

LIMITS OF CEMETERY BURIAL PLOTS

KAIJA, KEVIN J. & LISA Q.

EXISTING R.O.W.

CONST. LIMITS

RIPARIAN BUFFER

MILL BROOK

CLASS III WETLANDS

PI Sta 15+37.85

LAWN

END PROJECT BEGIN APPROACH STA 16+00.00

TOWN OF READING JOINED BY WINDSOR MINERALS, INC. d/b/a LUZENAC AMERICA, INC.

PT Sta 16+98.83

END APPROACH STA 18+50.00

EVERGREEN TREES

POE Sta 18+57.43

℄ STA 17+04 = ℄ DRIVE 3 STA 1+00.00

PDF Δ = 90° RT

S49°04'22"E

VT. ROUTE 44 TO WEST WINDSOR

MAGNETIC 1991

MATCH LINE

STATION 14+75

MATCH LINE

SAVE

SAVE

SAVE

WILLIAMS & CO. MINING, INC.

℄ DRIVE 3 STA 2+39.33 = ℄ DRIVE 4 STA 3+00.00

Δ = 42° LT

LEGEND

- PDF — PROJECT DEMARCATION FENCING
- FILTER CURTAIN
- SILT FENCE
- STONE FILL TYPE I
- TEMP. STONE CHECK DAM
- STONE FILL TYPE III
- EROSION MATTING FOR SIDE SLOPES
- EROSION MATTING FOR SPECIAL DITCH

0 20 40

SCALE IN FEET

SHEET NAME: EROSION PREVENTION AND SEDIMENT CONTROL PLAN #2

PROJECT NAME: READING
PROJECT NUMBER: BRS 0148(6)S
HIGHWAY NO.: VT 44
BRIDGE NO.: 1
OVER: THE MILL BROOK

FILE NAME: PW/85e034/Structures/se034ecbdr.dgn PLOT DATE: 17-FEB-2006
PROJECT MANAGER: R. WHITCOMB
DESIGNED BY: C. CARLSON
DRAWN BY: M. HALE
PARM NAME: se034ec4.1
BRIDGE SHEET NUMBER:
SHEET 26 OF 83

N

MAGNETIC 1991

MATCH LINE

STATION 14+75

KAIJA, KEVIN J.
&
ISA Q.

END BRIDGE
STA 14+36.42
F.G. = 856.23

BEGIN BRIDGE
STA 13+68.64
F.G. = 857.20

EXISTING R.O.W.

EXISTING 18" ACCGMP

RIPARIAN BUFFER

CLASS III WETLANDS

STONE FILL TYPE III (TYP)

CONST. LIMITS

LAWN

BENNETT, PETER D.

N48° 27' 16"E

13+00

12+00

11+00

10+00

FIELD

MILL BROOK

WILLIAMS & CO. MINING, INC.

PC
Sta 12+87.16

PT
Sta 12+31.89

TOWN OF READING

PC
Sta 10+17.78

BEGIN PROJECT
STA 10+11.00

POB
Sta 10+00.00

VT ROUTE 44
TO WEST WINDSOR

S87° 51' 03"E

EXIST 18" RCP

(2) EXISTING 6" UNDERDRAIN OUTLET

PT
Sta 11+28.44

VT ROUTE 106
TO SPRINGFIELD

BENNETT, PETER D.

0 20 40
SCALE IN FEET

SHEET NAME:	FINAL CONDITIONS SITE PLAN #1
PROJECT NAME: READING	HIGHWAY NO.: VT 44
PROJECT NUMBER: BRS 0148(6)S	BRIDGE NO.: 1
	OVER: THE MILL BROOK
FILE NAME: PW/85e034/Structures/se034ecbdr.dgn	PLOT DATE: 17-FEB-2006
PROJECT MANAGER: R. WHITCOMB	DRAWN BY: M. HALE
DESIGNED BY: C. CARLSON	IPARM NAME: se034ec5.i
BRIDGE SHEET NUMBER:	SHEET 27 OF 83

TOWN OF READING

END SIDELINE APPROACH AND PAVEMENT STA 102+15.00

LIMITS OF CEMETERY BURIAL PLOTS

KAIJA, KEVIN J. & LISA Q.

EXISTING R.O.W.

CONST. LIMITS

RIPARIAN BUFFER

EXISTING R.O.W.

MILL BROOK

CLASS III WETLANDS

P1 Sta 15+37.85

LAWN

END PROJECT
BEGIN APPROACH STA 16+00.00

CONST. LIMITS

TOWN OF READING JOINED BY WINDSOR MINERALS, INC. d/b/a LUZENAC AMERICA, INC.

PT Sta 16+98.83

℄ STA 17+04 = ℄ DRIVE 3 STA 1+00.00
Δ = 90° RT

END APPROACH STA 18+50.00

EVERGREEN TREES POE Sta 18+57.43

S49° 04' 22"E

VT. ROUTE 44 TO WEST WINDSOR

EXISTING R.O.W.

WILLIAMS & CO. MINING, INC.

MATCH LINE

STATION 14+75

MATCH LINE

LAWN

CONST. LIMITS

WILLIAMS & CO. MINING, INC.

℄ DRIVE 3 STA 2+39.33 = ℄ DRIVE 4 STA 3+00.00
Δ = 42° LT

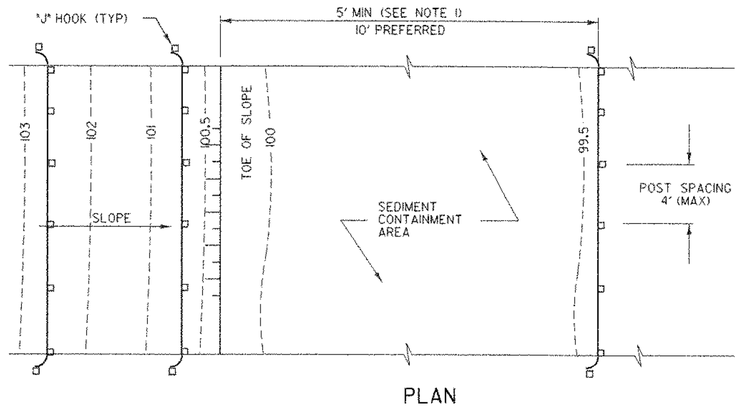
LAWN

CONST. LIMITS

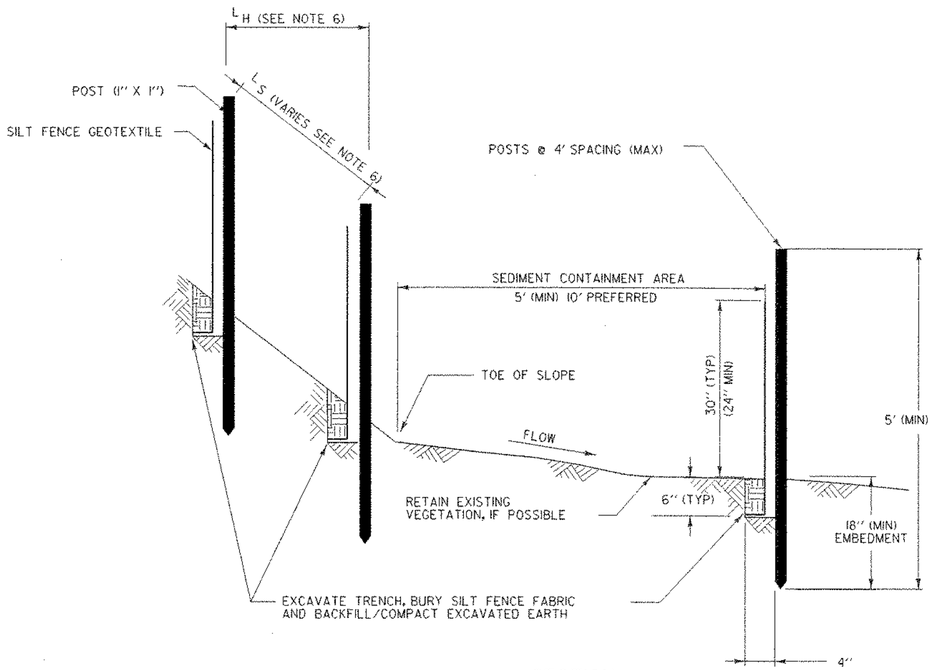
NORTH MAGNETIC 1991

0 20 40
SCALE IN FEET

SHEET NAME:	FINAL CONDITIONS SITE PLAN #2
PROJECT NAME: READING	HIGHWAY NO.: VT 44
PROJECT NUMBER: BRS 0148(6)S	BRIDGE NO.: 1
	OVER: THE MILL BROOK
FILE NAME: PW/85e034/Structures/se034ecbdr.dgn	PLOT DATE: 17-FEB-2006
PROJECT MANAGER: R. WHITCOMB	DRAWN BY: M. HALE
DESIGNED BY: C. CARLSON	IPARM NAME: se034ec6.i
BRIDGE SHEET NUMBER:	SHEET 28 OF 83



PLAN



SECTION
SILT FENCE - TEMPORARY

SILT FENCE

APPLICATION NOTES:

A. THE PRIMARY PURPOSE OF SILT FENCE IS TO REDUCE RUNOFF VELOCITY AND TRAP SEDIMENT. VELOCITY IS REDUCED, WATER IS IMPOUNDED BEHIND THE MEASURE, AND SEDIMENT FALLS OUT OF SUSPENSION.

B. SILT FENCE SHALL BE INSTALLED ON A LINE OF EQUAL ELEVATION (CONTOUR). IT MAY BE INSTALLED AT INTERMEDIATE POINTS UP SLOPES AS WELL AS AT THE BOTTOM, AS SHOWN IN THE DETAIL.

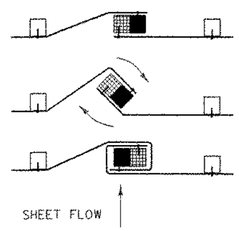
C. SILT FENCE SHALL NOT BE USED ACROSS CONCENTRATED FLOW.

GENERAL NOTES:

1. SILT FENCE SHALL GENERALLY BE PLACED A MINIMUM OF 5 FEET BEYOND TOE OF SLOPE. 10 FEET PREFERRED, TO PROVIDE ADEQUATE AREA FOR SEDIMENT STORAGE AND FACILITATE MAINTENANCE OF SEDIMENT CONTAINMENT AREA.
2. ALL ENDS SHALL BE "J" HOOKED TO TRAP SEDIMENT.
3. IN AREAS WITH TWO SLOPES, SILT FENCE SHALL BE USED TO ERECT A DAM AND TRAP SEDIMENT AT THE BASE OF THE STEEPER SLOPE.
4. THE BOTTOM EDGE OF SILT FENCE SHALL BE BURIED A MINIMUM OF 6 INCHES BELOW GROUND, AND KEYED IN 4 INCHES. THE FENCE SHALL BE INSTALLED WITH THE POSTS ON THE DOWNSTREAM SIDE OF THE FABRIC.
5. MAXIMUM DRAINAGE AREA TRIBUTARY TO 100 FEET OF SILT FENCE SHALL BE 0.25 ACRES.
6. THE FOLLOWING ARE MAXIMUM SLOPE LENGTHS FOR THESE MEASURES:

CONSTRUCTED SLOPE	SLOPE LENGTH (LS) FT	HORIZONTAL LENGTH (LH) FT
3H : 1V	80	75
4H : 1V	130	125
5H : 1V	200	200
> 5H : 1V	250	250

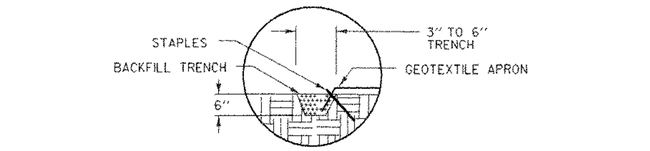
7. MEASURES SHALL BE INSPECTED EVERY SEVEN (7) CALENDAR DAYS AND WITHIN 24 HOURS OF A STORM EVENT GREAT ENOUGH TO CAUSE WATER TO LEAVE THE CONSTRUCTION SITE.
8. MEASURES SHALL BE CLEANED AND REPAIRED AS NEEDED. SEDIMENT SHALL BE REMOVED WHEN ACCUMULATION REACHES ONE-HALF OF THE MEASURE HEIGHT. SEDIMENT SHALL BE DISPOSED OF AS UNSUITABLE MATERIAL.
9. SILT FENCE SHALL BE REMOVED WHEN THE AREA HAS BEEN STABILIZED. AT TIME OF REMOVAL OF THE SILT FENCE, THE DISTURBED AREA SHALL BE REPAIRED AND STABILIZED.
10. PAYMENT FOR INSTALLATION AND REMOVAL OF SILT FENCE SHALL BE MADE UNDER THE GEOTEXTILE FOR SILT FENCE ITEM.
11. PAYMENT FOR MONITORING SILT FENCE SHALL BE MADE UNDER THE MONITORING EROSION & SEDIMENT CONTROL PLAN ITEM.
12. PAYMENT FOR MAINTAINING SILT FENCE SHALL BE MADE UNDER THE FIELD MAINTENANCE OF EROSION & SEDIMENT CONTROL PLAN ITEM, UNLESS MAINTENANCE IS REQUIRED DUE TO POOR INSTALLATION PRACTICES.



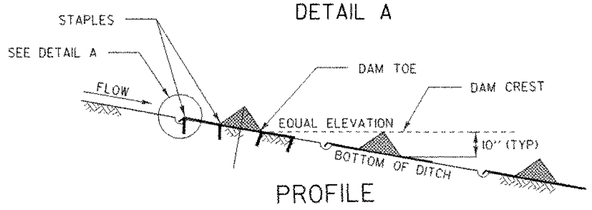
1. PLACE THE END POST OF ONE FENCE INSIDE THE END POST OF THE OTHER FENCE.
2. ROTATE BOTH POSTS AT LEAST 180 DEGREES IN A CLOCKWISE DIRECTION TO CREATE A TIGHT SEAL WITH THE FABRIC MATERIAL
3. DRIVE BOTH POSTS 18 INCHES INTO THE GROUND AND BURY THE FLAP IN THE TRENCH.

SPLICING DETAIL

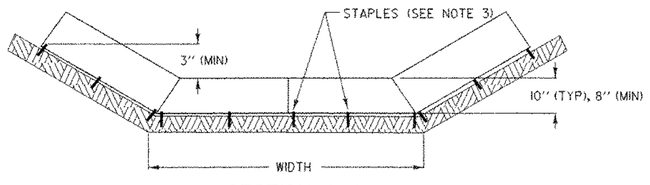
SHEET NAME:	EROSION CONTROL DETAILS SILT FENCE	
PROJECT NAME: READING		HIGHWAY NO.: VT 44
PROJECT NUMBER: BRS 0148(6)S		BRIDGE NO.: 1 OVER: THE MILL BROOK
FILE NAME:PW/85e034/Structures/se034ecd.dgn		PLOT DATE: 17-FEB-2006
PROJECT MANAGER: R. WHITCOMB		DRAWN BY: M. HALE
DESIGNED BY: C. CARLSON		IPARM NAME: se034ecd1.i
BRIDGE SHEET NUMBER:		SHEET 29 OF 83



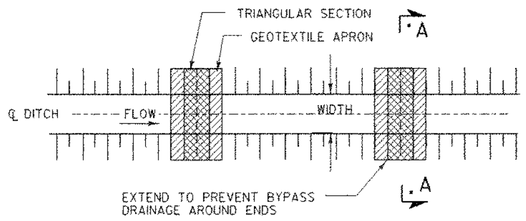
DETAIL A



PROFILE



SECTION A-A

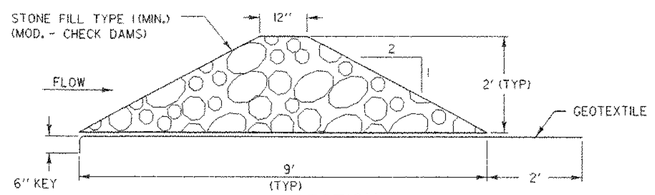


PLAN

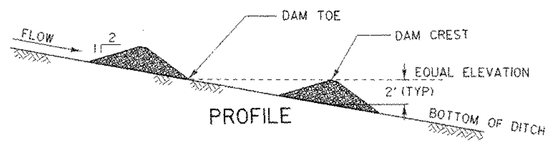
CHECK DAM - TEMPORARY (PREFABRICATED)

PREFABRICATED CHECK DAM PLACEMENT INTERVAL	
DITCH SLOPE	PLACEMENT INTERVAL **
1%	50 FT
2 %	40 FT
3 %	25 FT
4 %	20 FT
5 %	15 FT

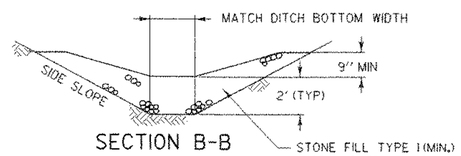
** BASED ON 10" TYPICAL HEIGHT



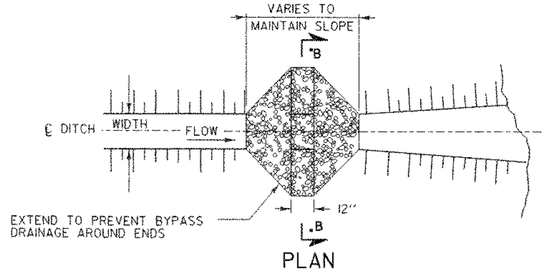
CROSS SECTION



PROFILE



SECTION B-B



PLAN

CHECK DAM - TEMPORARY (STONE)

STONE CHECK DAM PLACEMENT INTERVAL	
DITCH SLOPE	PLACEMENT INTERVAL **
1%	200 FT
2 %	100 FT
3 %	65 FT
4 %	50 FT
5 %	40 FT
6 %	30 FT
8 %	25 FT
10 %	20 FT

** BASED ON 2' TYPICAL HEIGHT

CHECK DAMS

APPLICATION NOTES:

A. THE PRIMARY PURPOSE OF A CHECK DAM IS TO REDUCE EROSION IN A CHANNEL BY REDUCING FLOW VELOCITY.

B. CHECK DAMS WILL CAPTURE SEDIMENT THAT FALLS OUT OF SUSPENSION BEHIND THE CHECK DAM DUE TO DECREASED VELOCITY.

C. CHECK DAMS ARE NOT INTENDED TO FILTER SEDIMENT FROM TURBID WATER.

D. DETAILS SHOWN SHALL BE USED FOR TEMPORARY INSTALLATION ONLY.

E. PREFABRICATED DAMS ARE NOT TO BE USED ON SLOPES GREATER THAN 5% OR PER MANUFACTURER'S SPECIFICATIONS.

F. PREFABRICATED DAM SPECIFICATIONS SHALL BE PROVIDED TO THE ENGINEER FOR APPROVAL PRIOR TO USE.

GENERAL NOTES:

1. GEOTEXTILE SHALL BE INSTALLED UNDER STONE FILL. IT SHALL BE KEYED IN ON THE UP HILL END AND SHALL EXTEND 2 FEET BEYOND THE STONE ON THE DOWN HILL END.

2. CORE MATERIAL FOR THE STONE CHECK DAM SHALL MEET THE GRADATION REQUIREMENTS OF STONE FILL TYPE I (MIN.). STONE SIZE SHOULD BE INCREASED WITH INCREASED SLOPE AND VELOCITY.

3. THE UPHILL END OF THE APRON FOR THE PREFABRICATED CHECK DAM SHALL BE STAPLED AND BURIED AS SHOWN IN DETAIL "A" OR AS RECOMMENDED BY THE MANUFACTURERS LITERATURE.

4. MEASURES SHALL BE INSPECTED EVERY SEVEN (7) CALENDAR DAYS AND WITHIN 24 HOURS OF A STORM EVENT GREAT ENOUGH TO CAUSE WATER TO LEAVE THE CONSTRUCTION SITE.

5. MEASURES SHALL BE CLEANED AND REPAIRED AS NEEDED. SEDIMENT SHALL BE REMOVED WHEN ACCUMULATION REACHES ONE-HALF OF THE MEASURE HEIGHT. SEDIMENT SHALL BE DISPOSED OF AS UNSUITABLE MATERIAL.

6. AT TIME OF REMOVAL OF THE CHECK DAMS, THE DISTURBED AREA SHALL BE REPAIRED AND STABILIZED.

7. PAYMENT FOR INSTALLATION AND REMOVAL OF CHECK DAMS SHALL BE MADE UNDER ITEM 613.10, "STONE FILL, TYPE I (MOD. - CHECK DAM)".

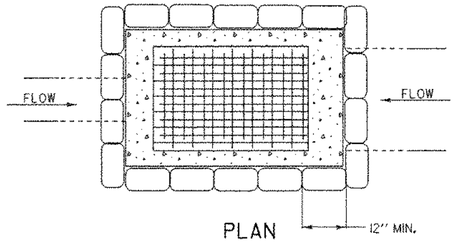
8. PAYMENT FOR MONITORING CHECK DAMS SHALL BE MADE UNDER THE MONITORING EROSION & SEDIMENT CONTROL PLAN ITEM.

9. PAYMENT FOR MAINTAINING CHECK DAMS SHALL BE MADE UNDER THE FIELD MAINTENANCE OF EROSION & SEDIMENT CONTROL PLAN ITEM, UNLESS MAINTENANCE IS REQUIRED DUE TO POOR INSTALLATION PRACTICES.

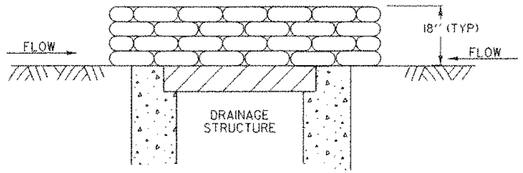
SHEET NAME: EROSION CONTROL DETAILS
CHECK DAMS

PROJECT NAME: READING
PROJECT NUMBER: BRS 0148(6)S
HIGHWAY NO.: VT 44
BRIDGE NO.: 1
OVER: THE MILL BROOK

FILE NAME:PW/85e034/Structures/se034ecd.dgn
PROJECT MANAGER: R. WHITCOMB
DESIGNED BY: C. CARLSON
BRIDGE SHEET NUMBER:
PLOT DATE: 17-FEB-2006
DRAWN BY: M. HALE
IPARM NAME: se034ecd2.I
SHEET 30 OF 83

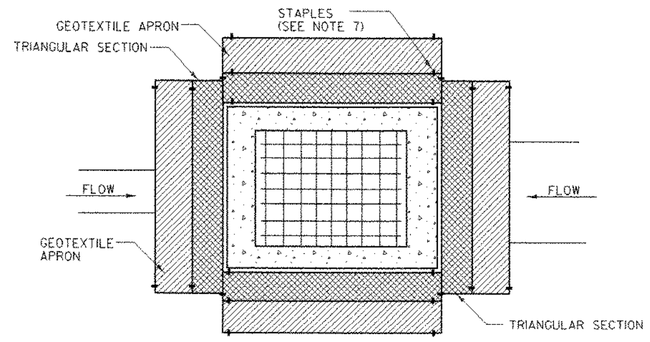


PLAN

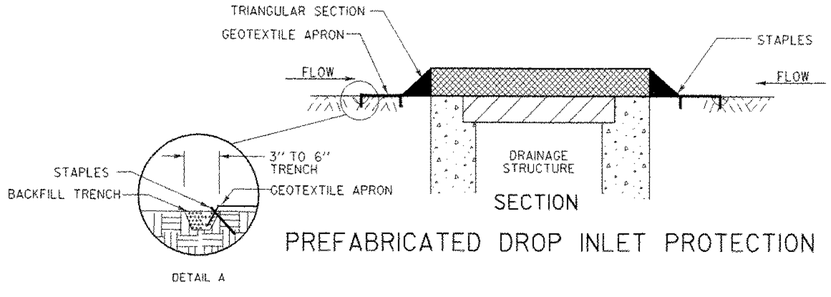


SECTION

GRAVEL BAG DROP INLET PROTECTION

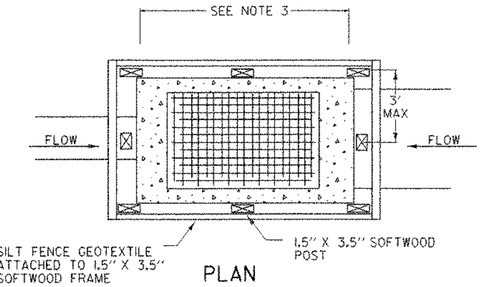


PLAN

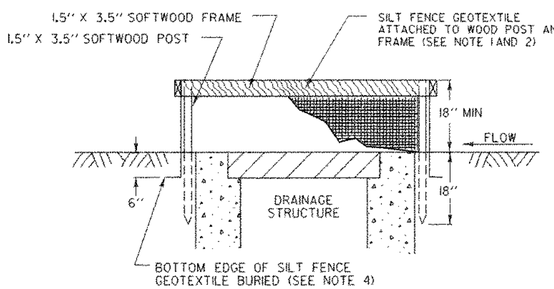


SECTION

PREFABRICATED DROP INLET PROTECTION

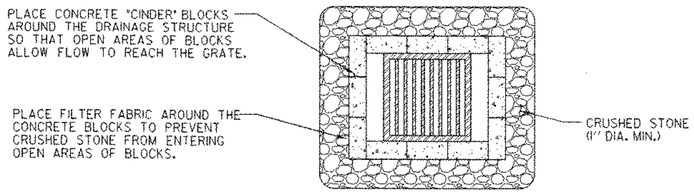


PLAN

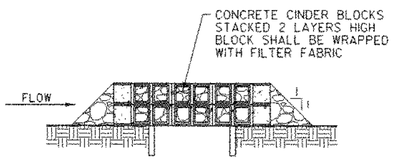


SECTION

SILT FENCE DROP INLET PROTECTION



PLAN



SECTION

ROCK BARRIER DROP INLET PROTECTION TEMPORARY PAVED AREAS

DROP INLET PROTECTION

APPLICATION NOTES:

A. THE PRIMARY PURPOSE OF DRAINAGE STRUCTURE INLET PROTECTION IS TO PREVENT SEDIMENT FROM ENTERING A DRAINAGE SYSTEM BY PONDING WATER WHICH ALLOWS SEDIMENT TO FALL OUT OF SUSPENSION.

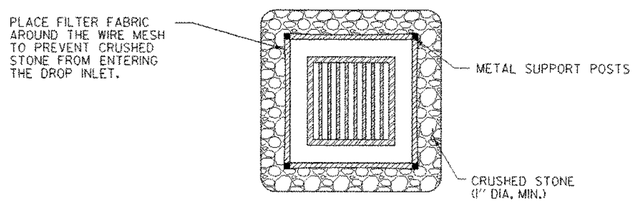
B. THESE EXAMPLES OF DROP INLET PROTECTION ARE NOT INTENDED FOR USE ON GRADES. ON GRADE THEY MAY CAUSE WATER TO BYPASS THE STRUCTURE, CREATING ADDITIONAL EROSION OR FLOODING.

C. POSSIBLE MODIFICATIONS FOR USE ON GRADE INCLUDE ADDING A BERM DOWNSTREAM OF THE INLET TO CREATE PONDING. CHECK DAMS MAY ALSO BE USED UPSTREAM OF THE INLET TO SLOW VELOCITIES.

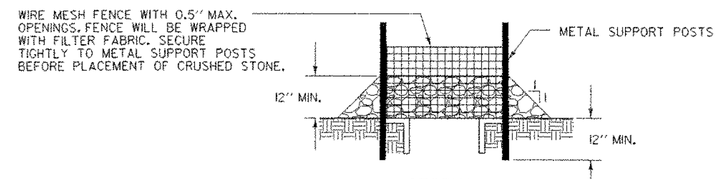
D. PREFABRICATED DROP INLET PROTECTION SPECIFICATIONS SHALL BE PROVIDED TO THE ENGINEER FOR APPROVAL PRIOR TO USE.

GENERAL NOTES:

1. THE TOP OF THE INLET PROTECTION SHALL BE SET AT THE MAXIMUM DESIRED WATER LEVEL, BASED ON FIELD LOCATION AND CONDITIONS.
2. SILT FENCE GEOTEXTILE SHALL BE A SINGLE CONTINUOUS PIECE TO ELIMINATE JOINTS.
3. SPACE SILT FENCE POSTS EVENLY AROUND INLET WITH A MAXIMUM SPACING OF 3 FEET. DRIVE POSTS A MINIMUM OF 18 INCHES INTO GROUND. WIRE MESH MAY BE REQUIRED BEHIND GEOTEXTILE TO PROVIDE SUPPORT.
4. SILT FENCE GEOTEXTILE SHALL BE EMBEDDED A MINIMUM OF 6 INCHES AND BACKFILLED. GEOTEXTILE SHALL BE SECURELY FASTENED TO POSTS AND FRAME.
5. GRAVEL BAGS SHALL BE FILLED WITH CLEAN STONE, RATHER THAN SAND, TO PREVENT SEDIMENT FROM ENTERING A DRAINAGE SYSTEM IF BAGS ARE DAMAGED DURING USE.
6. GRAVEL BAGS SHALL BE INDIVIDUALLY TIED, DOUBLE BAGGED AND INVERSELY INSERTED. GRAVEL BAGS SHALL LAP THE JOINTS BETWEEN THE BAGS IN THE LAYER BELOW.
7. SECURE THE ENDS OF THE APRON FOR THE PREFABRICATED DRAINAGE STRUCTURE INLET PROTECTION WITH STAPLES AS DETAILED IN THE PLAN VIEW OR AS RECOMMENDED BY THE MANUFACTURERS LITERATURE.
8. MEASURES SHALL BE INSPECTED EVERY SEVEN (7) CALENDAR DAYS AND WITHIN 24 HOURS OF A STORM EVENT GREAT ENOUGH TO CAUSE WATER TO LEAVE THE CONSTRUCTION SITE.
9. MEASURES SHALL BE CLEANED AND REPAIRED AS NEEDED. SEDIMENT SHALL BE REMOVED WHEN ACCUMULATION REACHES ONE-HALF OF THE MEASURE HEIGHT. SEDIMENT SHALL BE DISPOSED OF AS UNSUITABLE MATERIAL.
10. PAYMENT OF INLET PROTECTION SHALL BE MADE UNDER ITEM 613.10, "STONE FILL, TYPE I (MOD. - INLET PROTECTION)".
11. PAYMENT FOR MONITORING INLET PROTECTION SHALL BE MADE UNDER THE MONITORING EROSION & SEDIMENT CONTROL PLAN ITEM.
12. PAYMENT FOR MAINTAINING INLET PROTECTION SHALL BE MADE UNDER THE FIELD MAINTENANCE OF EROSION & SEDIMENT CONTROL PLAN ITEM, UNLESS MAINTENANCE IS REQUIRED DUE TO POOR INSTALLATION PRACTICES.



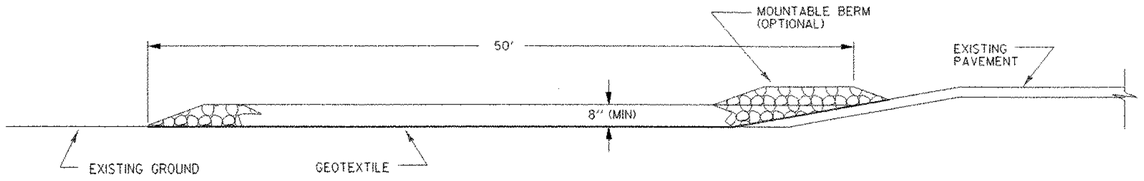
PLAN



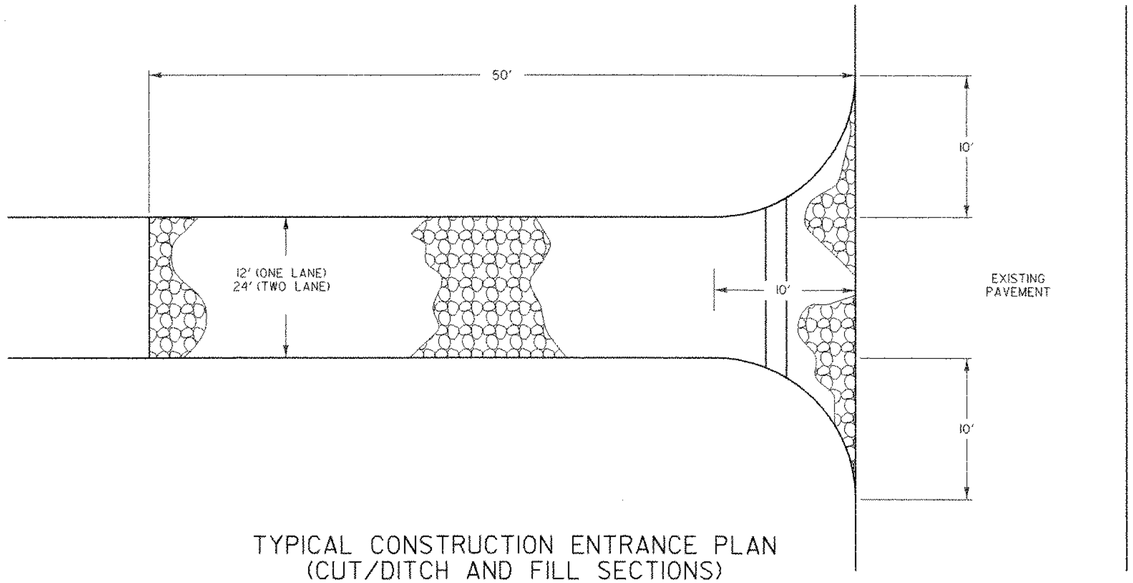
SECTION

ROCK BARRIER INLET PROTECTION TEMPORARY UNPAVED AREAS

SHEET NAME:	EROSION CONTROL DETAILS DROP INLET		
PROJECT NAME:	READING	HIGHWAY NO.:	VT 44
PROJECT NUMBER:	BRS 0148(6)S	BRIDGE NO.:	1
		OVER:	THE MILL BROOK
FILE NAME:	PW/85e034/Structures/se034ecd.dgn	PLOT DATE:	17-FEB-2006
PROJECT MANAGER:	R. WHITCOMB	DRAWN BY:	M. HALE
DESIGNED BY:	C. CARLSON	IPARM NAME:	se034ecd3.1
BRIDGE SHEET NUMBER:		SHEET	31 OF 83



TYPICAL CONSTRUCTION ENTRANCE PROFILE
(CUT AND DITCH SECTIONS)



TYPICAL CONSTRUCTION ENTRANCE PLAN
(CUT/DITCH AND FILL SECTIONS)

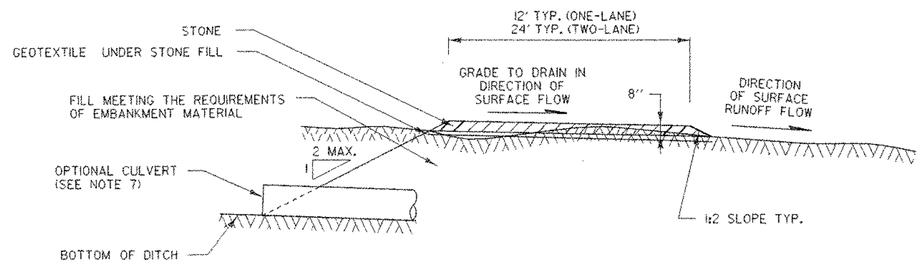
STABILIZED CONSTRUCTION ENTRANCE

APPLICATION NOTES:

A. THE PURPOSE OF A STABILIZED CONSTRUCTION ENTRANCE IS TO REDUCE OR ELIMINATE THE TRACKING OF SEDIMENT ONTO PUBLIC RIGHTS OF WAY OR STREETS.

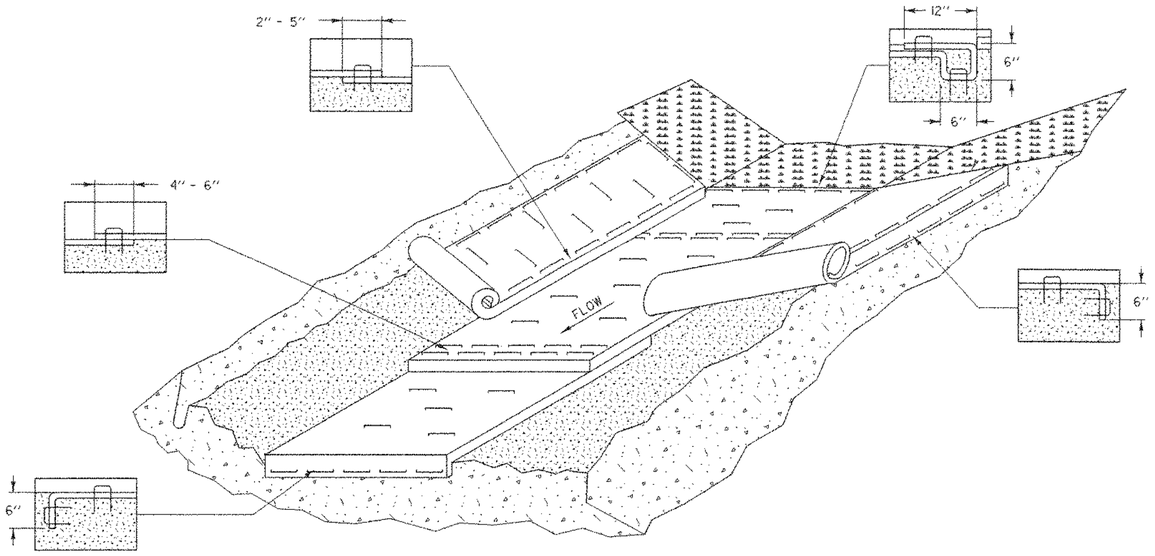
GENERAL NOTES:

1. STONE SIZE - USE CLEAN STONE WITH GRADATION BETWEEN 2 INCHES AND 4 INCHES.
2. LENGTH - 50 FEET (MIN)
3. THICKNESS - 18 INCHES (MIN)
4. WIDTH - 12 FEET (MIN)
5. GEOTEXTILE UNDER STONE WILL BE PLACED OVER THE ENTIRE AREA PRIOR TO PLACING OF STONE.
6. SURFACE WATER - ALL SURFACE WATER FLOWING OR DIVERTED TOWARD CONSTRUCTION ENTRANCES SHALL BE PIPED ACROSS THE ENTRANCE AS DIRECTED BY THE ENGINEER. IF PIPING IS IMPRACTICAL, A MOUNTABLE BERM WITH 5H:1V SLOPES WILL BE PERMITTED.
7. PROPOSED DRAINAGE PIPES SHALL BE SIZED WITH SUFFICIENT CAPACITY TO CARRY DITCH FLOWS. ALTERNATIVE WAYS OF TRANSPORTING DITCH DRAINAGE ACROSS CONSTRUCTION ENTRANCES MAY BE PROPOSED BY THE CONTRACTOR FOR APPROVAL BY THE ENGINEER.
8. WHEN WASHING OF VEHICLE IS NECESSARY, IT SHALL BE DONE ON AN AREA STABILIZED WITH STONE WHICH DRAINS INTO AN APPROVED SEDIMENT TRAPPING DEVICE.
9. MEASURES SHALL BE INSPECTED EVERY SEVEN (7) CALENDAR DAYS AND WITHIN 24 HOURS OF A STORM EVENT GREAT ENOUGH TO CAUSE WATER TO LEAVE THE CONSTRUCTION SITE.
10. MAINTENANCE- THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHTS-OF-WAY. ALL SEDIMENT SPILLED, DROPPED, WASHED, OR TRACKED ONTO PUBLIC RIGHTS-OF-WAY MUST BE REMOVED IMMEDIATELY.
11. AT THE TIME OF REMOVAL OF THE STABILIZED CONSTRUCTION ENTRANCE THE DISTURBED AREA SHALL BE REPAIRED AND STABILIZED.
12. PAYMENT OF THE STABILIZED CONSTRUCTION ENTRANCE SHALL BE MADE UNDER ITEM 613.10, "STONE FILL, TYPE I (MOD. - CONSTRUCTION ENTRANCE)".
13. PAYMENT FOR MONITORING STABILIZED CONSTRUCTION ENTRANCES SHALL BE MADE UNDER THE MONITORING EROSION & SEDIMENT CONTROL PLAN ITEM.
14. PAYMENT FOR MAINTAINING THE CONSTRUCTION ENTRANCE SHALL BE MADE UNDER THE FIELD MAINTENANCE OF EROSION & SEDIMENT CONTROL PLAN ITEM, UNLESS MAINTENANCE IS REQUIRED DUE TO POOR INSTALLATION PRACTICES.
15. STONE FOR CONSTRUCTING STABILIZED ENTRANCE SHALL BE PAID FOR AS ITEM 613.10, 'STONE FILL, TYPE I (MOD. - CONSTRUCTION ENTRANCE).



TYPICAL CONSTRUCTION ENTRANCE SECTION

SHEET NAME: EROSION CONTROL DETAILS STABILIZED CONSTRUCTION ENTRANCE	
PROJECT NAME: READING PROJECT NUMBER: BRS 0148(6)S	HIGHWAY NO.: VT 44 BRIDGE NO.: 1 OVER: THE MILL BROOK
FILE NAME:PW/85e034/Structures/se034ecd.dgn PROJECT MANAGER: R. WHITCOMB DESIGNED BY: C. CARLSON BRIDGE SHEET NUMBER:	PLOT DATE: 17-FEB-2006 DRAWN BY: M. HALE IPARM NAME: se034ecd4.i SHEET 32 OF 83



EROSION PROTECTION FOR DITCHES

APPLICATION NOTES:

A. THE PURPOSE OF LINING THE DITCH WITH EROSION MATTING IS TO REDUCE EROSION AND AID THE ESTABLISHMENT OF VEGETATION AT LOW VELOCITIES.

B. THE FOLLOWING CHARTS SHALL BE USED TO DETERMINE THE APPROPRIATE EROSION CONTROL MEASURE:

DITCH AND CHANNEL PROTECTION	
SLOPE	LINING
< 1%	GRASS
1% TO 4 %	EROSION MATTING
4 % TO 10 %	STONE FILL, TYPE I
> 10 %	STONE FILL, TYPE II

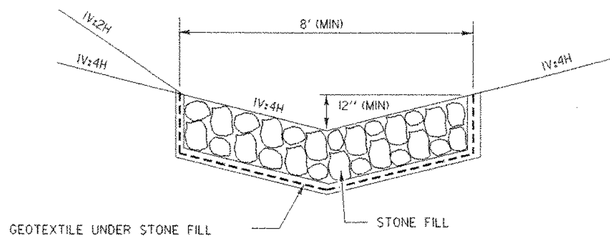
STONE FILL THICKNESS	
STONE FILL TYPE	THICKNESS
TYPE I	1 FT
TYPE II	2 FT

GENERAL NOTES:

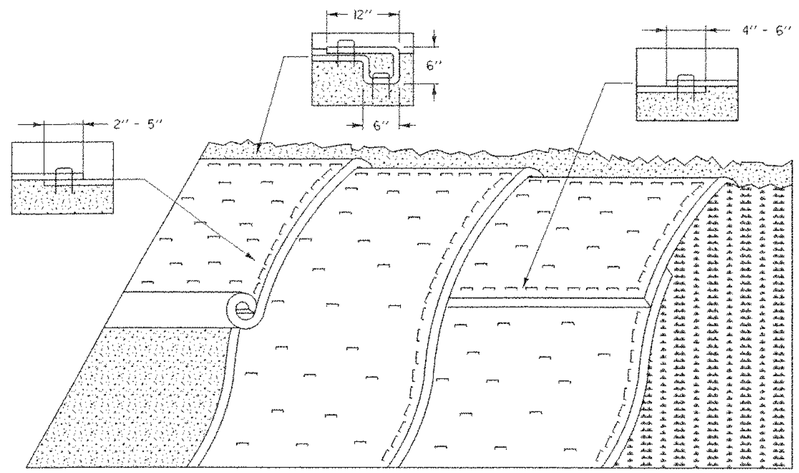
1. WATER MAY NEED TO BE DIVERTED TO ALLOW PROPER MATTING INSTALLATION.
2. GRADE AND SMOOTH CHANNEL TO PROVIDE GOOD MATTING TO SOIL SURFACE CONTACT.
3. APPLY FERTILIZER, LIME, AND SEED PRIOR TO PLACING MATTING.
4. INSTALL MATTING IN THE CENTER OF THE CHANNEL, IN THE DIRECTION OF THE WATER FLOW.
5. INSTALL MATTING ON THE SIDE SLOPES OF THE CHANNEL, OVERLAPPING THE CENTER MAT.
6. ANCHOR MATTING AS SHOWN, UTILIZING ANCHOR STAPLES. STAPLE PLACEMENT SHALL BE DETERMINED BY THE MANUFACTURER'S INTALLATION INSTRUCTIONS.
7. MEASURES SHALL BE INSPECTED EVERY SEVEN (7) CALENDAR DAYS AND WITHIN 24 HOURS OF A STORM EVENT GREAT ENOUGH TO CAUSE WATER TO LEAVE THE CONSTRUCTION SITE.
8. MEASURES SHALL BE REPAIRED AND RESTAPLED AS NECESSARY TO ENSURE PROPER FUNCTION.
9. PAYMENT FOR INSTALLATION OF MATTING SHALL BE MADE UNDER THE EROSION CONTROL WITH MATTING ITEM.
10. PAYMENT FOR MONITORING EROSION CONTROL MATTING SHALL BE MADE UNDER THE MONITORING EROSION & SEDIMENT CONTROL PLAN ITEM.
11. PAYMENT FOR MAINTAINING DITCH PROTECTION SHALL BE MADE UNDER THE FIELD MAINTENANCE OF EROSION & SEDIMENT CONTROL PLAN ITEM, UNLESS MAINTENANCE IS REQUIRED DUE TO POOR INSTALLATION PRACTICES.

REVISIONS AND CORRECTIONS

MAY 18, 2004 N. GARBACIK



TEMPORARY
STONE LINED
DITCH



EROSION PREVENTION FOR SIDE SLOPES

APPLICATION NOTES:

A. THE PURPOSE OF MATTING ON SIDE SLOPES IS TO REDUCE EROSION AND AID THE STABLISHMENT OF VEGETATION

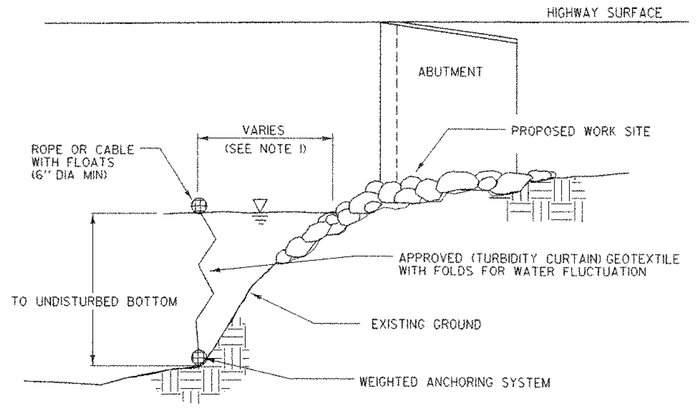
B. EROSION CONTROL MATTING SHALL BE USED FOR THE FOLLOWING REASONS:

- SIDE SLOPES > 3:1 (H:V)
- AREAS WHERE SEED AND MULCH WILL NOT STAY IN PLACE ALONE
- WHERE SEEDING IS OUTSIDE THE GROWING SEASON.

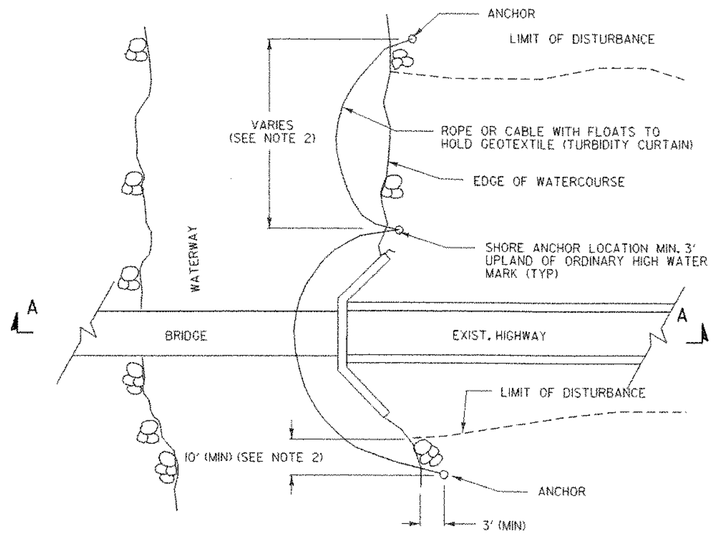
GENERAL NOTES:

1. GRADE AND SMOOTH THE SLOPE TO PROVIDE GOOD MATTING TO SOIL SURFACE CONTACT.
2. APPLY FERTILIZER, LIME, AND SEED PRIOR TO PLACING MATTING.
3. ANCHOR MATTING AS SHOWN, UTILIZING ANCHOR STAPLES. STAPLE PLACEMENT SHALL BE DETERMINED BY THE MANUFACTURER'S INTALLATION INSTRUCTIONS.
4. UNROLL MATTING VERTICALLY DOWN SLOPE IN THE DIRECTION OF WATER FLOW.
5. OVERLAP UPPER MATTING OVER LOWER MATTING AS SHOWN.
6. OVERLAP ADJACENT MATTING AS SHOWN.
7. CUT EXCESS MATTING AT END OF SLOPE AND ANCHOR THE END.
8. MEASURES SHALL BE INSPECTED EVERY SEVEN (7) CALENDAR DAYS AND WITHIN 24 HOURS OF A STORM EVENT GREAT ENOUGH TO CAUSE WATER TO LEAVE THE CONSTRUCTION SITE.
9. MATTING SHALL BE REPAIRED AND RESTAPLED AS NECESSARY TO ENSURE PROPER FUNCTION.
10. PAYMENT FOR INSTALLATION OF MATTING SHALL BE MADE UNDER THE ITEM EROSION MATTING.
11. PAYMENT FOR MONITORING EROSION CONTROL MATTING SHALL BE MADE UNDER THE MONITORING EROSION & SEDIMENT CONTROL PLAN ITEM.
12. PAYMENT FOR MAINTAINING SLOPE PROTECTION SHALL BE MADE UNDER THE FIELD MAINTENANCE OF EROSION & SEDIMENT CONTROL PLAN ITEM, UNLESS MAINTENANCE IS REQUIRED DUE TO POOR INSTALLATION PRACTICES.

SHEET NAME:	EROSION CONTROL DETAILS DITCHES & SIDE SLOPES
PROJECT NAME: READING	HIGHWAY NO.: VT 44
PROJECT NUMBER: BRS 0148(6)S	BRIDGE NO.: 1 OVER: THE MILL BROOK
FILE NAME: PW/85e034/Structures/se034ecd.dgn	PLOT DATE: 17-FEB-2006
PROJECT MANAGER: R. WHITCOMB	DRAWN BY: M. HALE
DESIGNED BY: C. CARLSON	IPARM NAME: se034ecd5.i
BRIDGE SHEET NUMBER:	SHEET 33 OF 83



SECTION A-A



PLAN

TURBIDITY CURTAIN - TEMPORARY

TURBIDITY CURTAIN

APPLICATION NOTES:

A. THE PURPOSE OF A TURBIDITY CURTAIN IS TO SEPARATE WORK AREAS IN OR ADJACENT TO WATERS, TO PREVENT SEDIMENT FROM ENTERING THE WATERS.

B. TURBIDITY CURTAIN SHALL NOT BE PLACED ACROSS A FLOWING WATERWAY, OR IN A WATERWAY WITH STREAM VELOCITIES GREATER THAN 1.5 FT/SEC.

C. TURBIDITY CURTAIN SHALL NOT BE PLACED AT THE OUTLET OF A CULVERT OR DITCH UNLESS THE VELOCITY DOES NOT EXCEED 1.5 FT/SEC.

D. THE DETAIL DEPICTS WORK AT A BRIDGE LOCATION, BUT TURBIDITY CURTAIN MAY BE APPLIED AT OTHER LOCATIONS.

GENERAL NOTES:

1. THE TURBIDITY CURTAIN SHALL BE PLACED AS CLOSE TO THE WORK AS POSSIBLE WITHOUT INTERFERING WITH CONSTRUCTION OPERATIONS.

2. THE TURBIDITY CURTAIN SHALL BE A MAXIMUM OF 100 FEET LONG BETWEEN ANCHORS. LAST SECTION SHALL TERMINATE A MINIMUM OF 10 FEET BEYOND THE LIMIT OF DISTURBANCE.

3. THE CONTRACTOR SHALL MONITOR THE TURBIDITY CURTAIN, TAKING INTO ACCOUNT WEATHER PATTERNS AND PREVAILING WIND DIRECTIONS THAT MAY AFFECT WATER LEVELS, VELOCITY AND MOVEMENT OF THE TURBIDITY CURTAIN.

4. THE TURBIDITY CURTAIN SHALL BE REMOVED BY SLOWLY PULLING TOWARD THE SHORE TO MINIMIZE ESCAPE OF SEDIMENTS INTO THE WATERWAY.

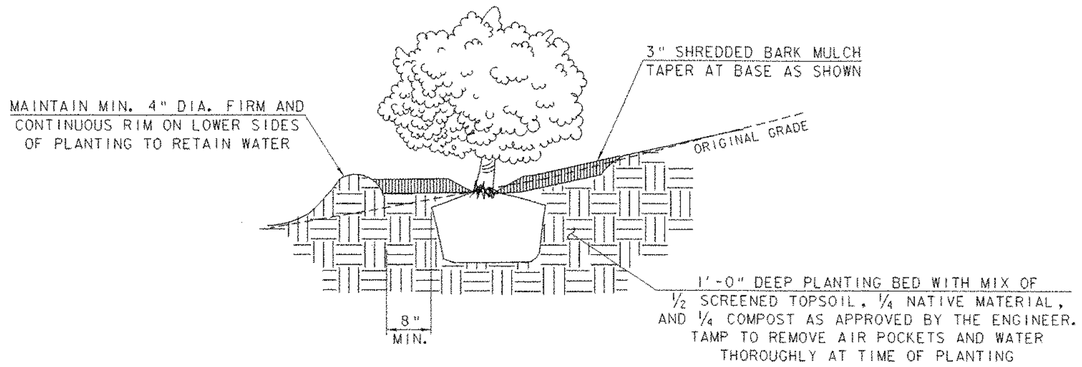
5. THE WEIGHTED ANCHOR SYSTEM SHALL BE A TYPE THAT ALLOWS THE CURTAIN TO CONFORM TO THE CONTOUR ON THE BOTTOM OF THE WATERWAY.

6. PAYMENT FOR INSTALLATION AND REMOVAL OF THE TURBIDITY CURTAIN SHALL BE MADE UNDER THE GEOTEXTILE FOR FILTER CURTAIN ITEM.

7. PAYMENT FOR MONITORING TURBIDITY CURTAIN SHALL BE MADE UNDER THE MONITORING EROSION & SEDIMENT CONTROL PLAN ITEM.

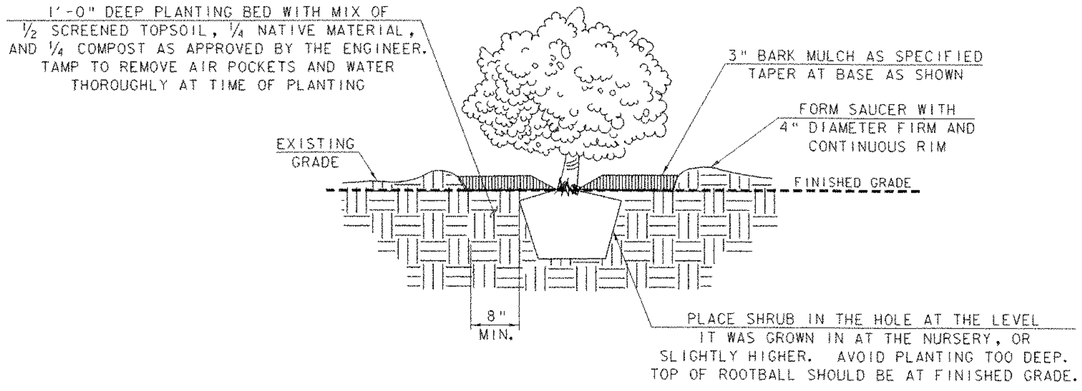
8. PAYMENT FOR MAINTAINING TURBIDITY CURTAIN SHALL BE MADE UNDER THE FIELD MAINTENANCE OF EROSION & SEDIMENT CONTROL PLAN ITEM, UNLESS MINTENANCE IS REQUIRED DUE TO POOR INSTALLATION PRACTICES.

SHEET NAME:	EROSION CONTROL DETAILS TURBIDITY CURTAIN		
PROJECT NAME:	READING	HIGHWAY NO.:	VT 44
PROJECT NUMBER:	BRS 0148(6)S	BRIDGE NO.:	1
		OVER:	THE MILL BROOK
FILE NAME:	PW/85e034/Structures/se034ecd.dgn	PLOT DATE:	17-FEB-2006
PROJECT MANAGER:	R. WHITCOMB	DRAWN BY:	M. HALE
DESIGNED BY:	C. CARLSON	IPARM NAME:	se034ecd6.i
BRIDGE SHEET NUMBER:		SHEET	34 OF 83



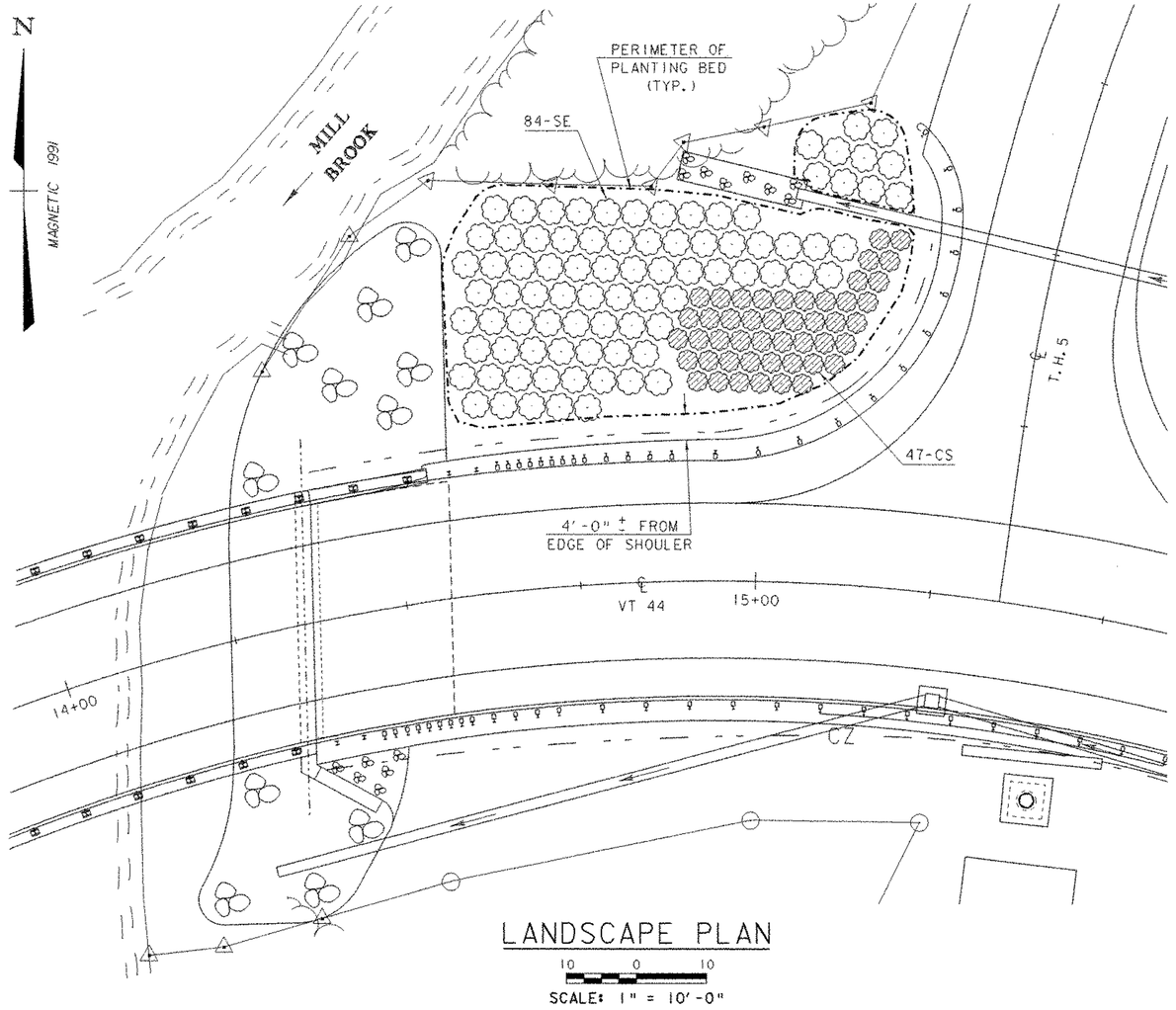
SHRUB PLANTING ON SLOPES DETAIL

NOT TO SCALE



SHRUB PLANTING DETAIL

NOT TO SCALE



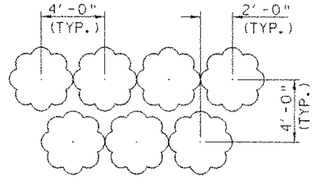
LANDSCAPE PLAN

10 0 10

SCALE: 1" = 10'-0"

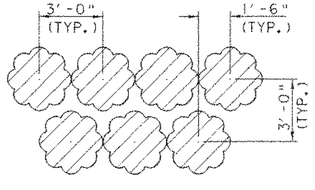
NOTES

1. LOCATIONS AND BED SHAPES ARE APPROXIMATE AND MAY VARY DUE TO SLOPE. FINAL LOCATION AND ELEVATIONS TO BE DETERMINED BY THE ENGINEER BASED ON ESTIMATED HIGH WATER FLODD LEVELS AND ACTUAL SLOPE CONDITIONS.
2. BED SHAPES ARE TO BE STAKED AND LAID OUT TO GIVE A NATURAL APPEARANCE.
3. PLANT SHRUBS IN A PREPARED BED OF 1'-0" APPROVED TOP SOIL MIX.
4. WATER ALL SHRUBS AT TIME OF PLANTING. EACH SHRUB SHALL RECEIVE A MINIMUM OF FIVE GALLONS OF WATER TWICE A WEEK.
5. SEE LAYOUT SHEETS 12 & 13 AND GENERAL NOTES 35 & 36 ON SHEET 44 FOR ADDITIONAL LANDSCAPING INFORMATION.



SE SHRUB LAYOUT

NOT TO SCALE



CS SHRUB LAYOUT

NOT TO SCALE

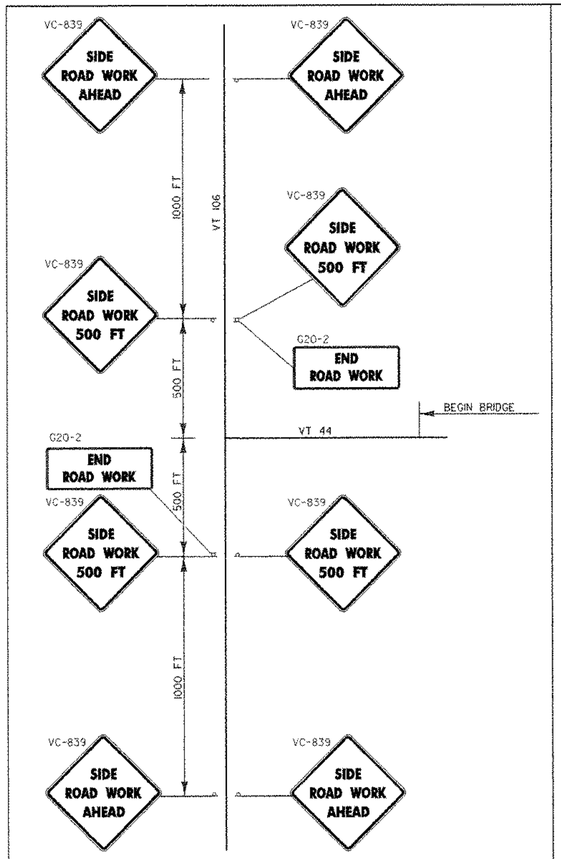
SHRUB INFORMATION

QTY	KEY	COMMON NAME	BOTANICAL NAME	SIZE	DELIVERY	SPACING
47	CS	RED STEM DOGWOOD	CORNUS SERICEA	18"-24" HT.	CONTAINER	3' O.C.
84	SE	SAND BAR WILLOW	SALIX EXIGUA	18"-24" HT.	CONTAINER	4' O.C.

SHEET NAME: LANDSCAPE DETAILS

PROJECT NAME: READING
PROJECT NUMBER: BRS 0148(6)S
HIGHWAY NO.: VT 44
BRIDGE NO.: 1
OVER: THE MILL BROOK

FILE NAME: PW/85e034/Structures/se034shrub.dgn PLOT DATE: 17-FEB-2006
PROJECT MANAGER: R. WHITCOMB
DESIGNED BY: C. CARLSON
DRAWN BY: G. ROY
IPARM NAME: se034shrub.i
BRIDGE SHEET NUMBER:
SHEET 34A OF 83



CONSTRUCTION APPROACH SIGNING
(NOT TO SCALE)

VT. ROUTE 106
TO WOODSTOCK

BEGIN BRIDGE
STA 13+68.64
F.G. = 857.20

END BRIDGE
STA 14+36.42
F.G. = 856.23

MATCH LINE
STATION 14+75

N

MAGNETIC 1991

61+00
50+00
51+00
13+00
14+00
12+00
11+00
10+00

MILL BROOK

BEGIN PROJECT
STA 10+11.00

VT ROUTE 44
TO WEST WINDSOR

VT ROUTE 106
TO SPRINGFIELD

W1-8

R11-2
ROAD CLOSED

DRUMS SPACED AT
15'-0" AT PHASE I

LEGEND

- TYPE III BARRICADE (SEE STD. E-107A)
- TYPE III BARRICADE WITH SIGN (SEE STD. E-107A)
- ⊗ REFLECTORIZED PLASTIC DRUM (SEE STD. E-106)

NOTE: FOR TRAFFIC CONTROL SEQUENCE AND NOTES SEE SHEET 36 OF 83.

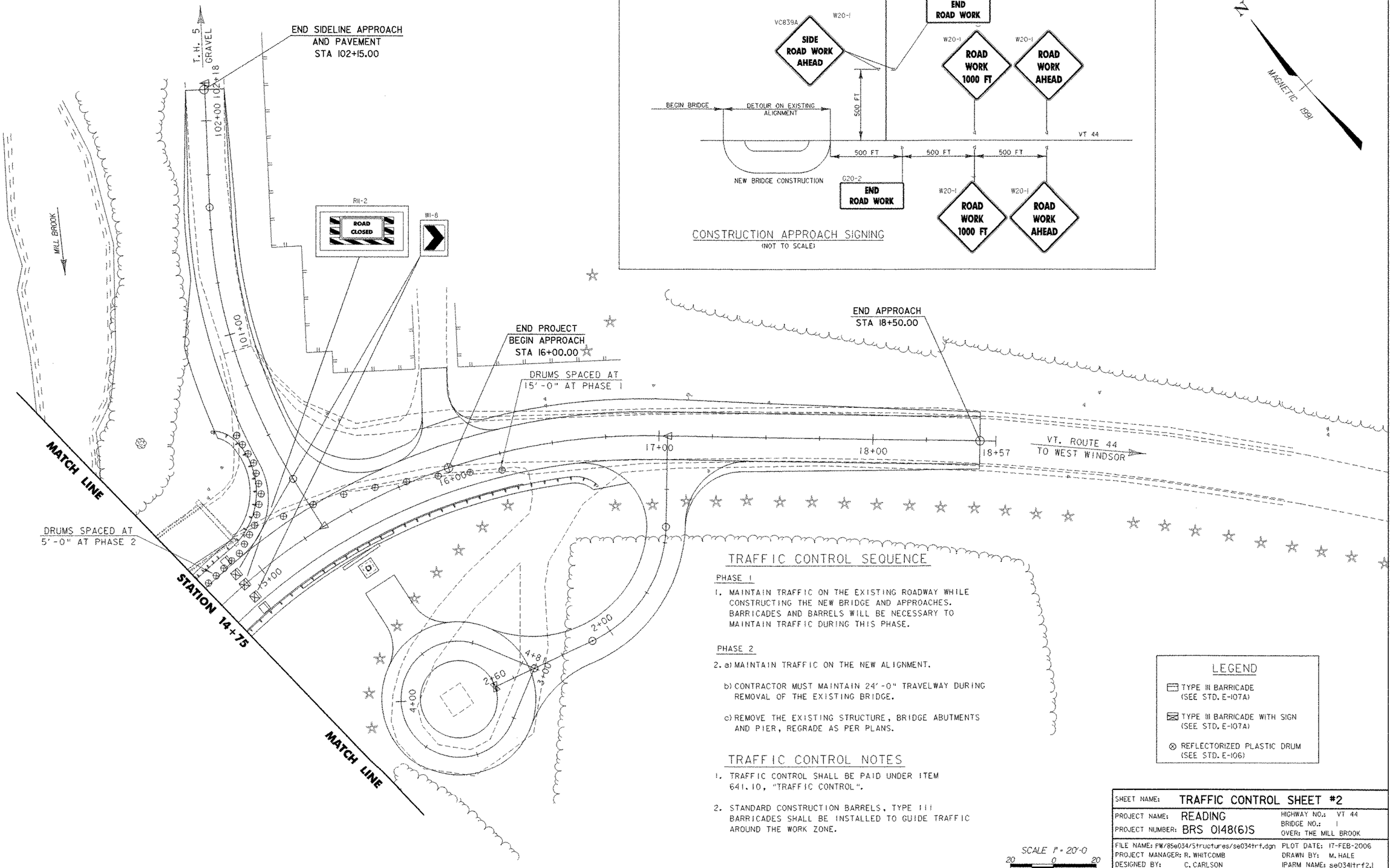
SCALE 1" = 20'-0
20 0 20

SHEET NAME: TRAFFIC CONTROL SHEET #1

PROJECT NAME: READING
PROJECT NUMBER: BRS 0148(6)S
HIGHWAY NO.: VT 44
BRIDGE NO.: 1
OVER: THE MILL BROOK

FILE NAME: PW/85e034/Structures/se034trf.dgn
PROJECT MANAGER: R. WHITCOMB
DESIGNED BY: C. CARLSON
BRIDGE SHEET NUMBER:
PLOT DATE: 17-FEB-2006
DRAWN BY: M. HALE
IPARM NAME: se034trf1.i
SHEET 35 OF 83

CONSTRUCTION APPROACH SIGNING
(NOT TO SCALE)



TRAFFIC CONTROL SEQUENCE

PHASE 1

1. MAINTAIN TRAFFIC ON THE EXISTING ROADWAY WHILE CONSTRUCTING THE NEW BRIDGE AND APPROACHES. BARRICADES AND BARRELS WILL BE NECESSARY TO MAINTAIN TRAFFIC DURING THIS PHASE.

PHASE 2

2. a) MAINTAIN TRAFFIC ON THE NEW ALIGNMENT.

   b) CONTRACTOR MUST MAINTAIN 24'-0" TRAVELWAY DURING REMOVAL OF THE EXISTING BRIDGE.

   c) REMOVE THE EXISTING STRUCTURE, BRIDGE ABUTMENTS AND PIER, REGRADE AS PER PLANS.

TRAFFIC CONTROL NOTES

1. TRAFFIC CONTROL SHALL BE PAID UNDER ITEM 641.10, "TRAFFIC CONTROL".

2. STANDARD CONSTRUCTION BARRELS, TYPE III BARRICADES SHALL BE INSTALLED TO GUIDE TRAFFIC AROUND THE WORK ZONE.

LEGEND

- TYPE III BARRICADE (SEE STD. E-107A)
- TYPE III BARRICADE WITH SIGN (SEE STD. E-107A)
- ⊗ REFLECTORIZED PLASTIC DRUM (SEE STD. E-106)

SCALE 1" = 20'-0
20 0 20

SHEET NAME:	TRAFFIC CONTROL SHEET #2		
PROJECT NAME:	READING	HIGHWAY NO.:	VT 44
PROJECT NUMBER:	BRS 0148(6)S	BRIDGE NO.:	1
		OVER:	THE MILL BROOK
FILE NAME:	PW/85e034/Structures/se034trf.dgn	PLOT DATE:	17-FEB-2006
PROJECT MANAGER:	R. WHITCOMB	DRAWN BY:	M. HALE
DESIGNED BY:	C. CARLSON	IPARM NAME:	se034trf2.i
BRIDGE SHEET NUMBER:		SHEET 36	OF 83

LEGEND

	EXISTING
	NEW
R	REMOVE
N	NEW

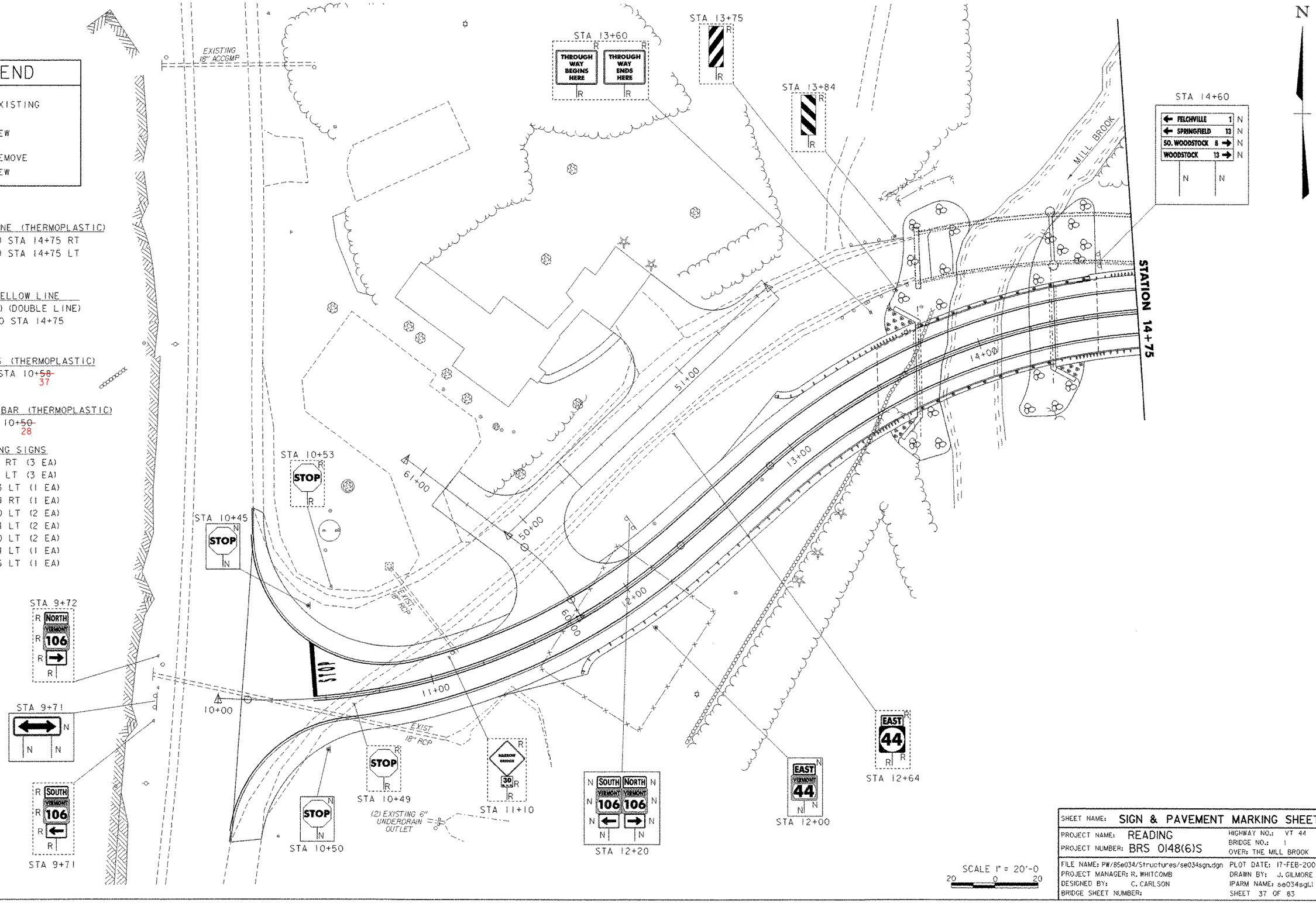
DURABLE 4" WHITE LINE (THERMOPLASTIC)
STA 10+~~06~~ 10 RT TO STA 14+75 RT
STA 10+11 LT TO STA 14+75 LT

DURABLE 4" YELLOW LINE
(THERMOPLASTIC) (DOUBLE LINE)
STA 10+~~50~~ 27 TO STA 14+75

DURABLE LETTERS (THERMOPLASTIC)
(STOP) STA 10+~~58~~ 37

DURABLE 24" STOP BAR (THERMOPLASTIC)
STA 10+~~50~~ 28

REMOVING SIGNS
STA 9+71 RT (3 EA)
STA 9+72 LT (3 EA)
STA 10+53 LT (1 EA)
STA 10+49 RT (1 EA)
STA 11+10 LT (2 EA)
STA 12+64 LT (2 EA)
STA 13+60 LT (2 EA)
STA 13+84 LT (1 EA)
STA 13+75 LT (1 EA)



SCALE 1" = 20'-0"
20 0 20

SHEET NAME:	SIGN & PAVEMENT MARKING SHEET 1		
PROJECT NAME:	READING	HIGHWAY NO.:	VT 44
PROJECT NUMBER:	BRS 0148(6)S	BRIDGE NO.:	1
		OVER:	THE MILL BROOK
FILE NAME:	PW/85e034/Structures/se034sgn.dgn	PLOT DATE:	17-FEB-2006
PROJECT MANAGER:	R. WHITCOMB	DRAWN BY:	J. GILMORE
DESIGNED BY:	C. CARLSON	IPARM NAME:	se034sgl1
BRIDGE SHEET NUMBER:		SHEET	37 OF 83

DURABLE LETTERS (THERMOPLASTIC)
(STOP) ℄ STA 100+~~25~~ 35
(AHEAD) STA 15+~~58~~ 57
(STOP) STA 15+~~89~~ 97

DURABLE 4" WHITE LINE (THERMOPLASTIC)
STA 14+75 LT TO ℄ STA 100+25 LT
℄ STA 100+25 RT TO STA 18+50 LT
STA 14+75 RT TO STA 18+50 RT

REMOVING SIGNS
STA 15+02 LT (1 EA)
STA 15+04 LT (1 EA)
STA 15+04 LT (1 EA)
STA 15+16 LT (2 EA)
STA 15+55 LT (1 EA)
STA 15+62 LT (1 EA)
STA 16+50 LT (2 EA)
STA 16+50 LT (2 EA)
STA 17+25 RT (1 EA)
STA 17+50 LT (1 EA)

LEGEND
EXISTING
NEW
R REMOVE
N NEW

DURABLE 24" STOP BAR (THERMOPLASTIC)
℄ STA 100+25

DURABLE 4" YELLOW LINE
(THERMOPLASTIC) (DOUBLE)
STA 14+75 TO STA 15+~~18~~ 15
℄STA 15+~~57~~ 55 TO ℄STA 18+50 ℄
S STA 100+25 - 100+75

MILL BROOK

STATION 14+75

STA 15+16 R STOP R R
STA 15+04 R R R
STA 15+04 R
STA 15+02 R
STA 15+55 R
STA 15+62 R
STA 15+75 N N N
STA 16+50 R END 44 R R
STA 16+50 R JCT 106 R R
STA 17+50 N JCT VERMONT 106 END VERMONT 44 N N N N
STA 17+50 R
STA 17+25 R SPEED LIMIT 50 R
STA 17+50 N SPEED LIMIT 50 N
℄ STA 100+50 N
STA 15+61 N
℄ STA 100+34 N STOP N N

102+00
101+00
100+00
15+00
16+00
17+00
18+00
2+00
3+00
4+00
2+60

MAGNETIC NORTH

SCALE 1" = 20'-0
20 0 20

SHEET NAME: SIGN & PAVEMENT MARKING SHEET 2	
PROJECT NAME: READING	HIGHWAY NO.: VT 44
PROJECT NUMBER: BRS 0148(6)S	BRIDGE NO.: 1
	OVER: THE MILL BROOK
FILE NAME: P:\85e034\Structures\se034sgn.dgn	PLOT DATE: 17-FEB-2006
PROJECT MANAGER: R. WHITCOMB	DRAWN BY: J. GILMORE
DESIGNED BY: C. CARLSON	XPARM NAME: se034sg2.l
BRIDGE SHEET NUMBER:	SHEET 38 OF 83

STATE OF VERMONT
AGENCY OF TRANSPORTATION

TRAFFIC SIGN SUMMARY SHEET

MILEMARKER, STATION, OR SIGN NUMBER	SIGN LEGEND	SIGN DIMENSIONS EA	WIDTH (in)	HEIGHT (in)	NEW & SALVAGED SIGNS "A"	"B"	SALV SIGN	SALV TIS	EXIST POST RETAIN	EXIST POST SALVAGE	NEW SIGN POSTS NO. OF POSTS	FLANGED CHANNEL lb/ft 1.12	2.0	3.0	SQUARE STEEL (in) lb/ft 1.75 1.88	2.0 2.16	2.5 3.35	ANCHOR	SLEEVE	TUBULAR ALUMINUM Ø (in) lb/ft 3.0 1.3	4.0 1.7	4.0 MOD 1.7	TUBULAR STEEL Ø (in) FOUNDATION	lb/ft 3.0 7.6	3.5 9.0	4.0 10.8	5.0 14.6	W-SHAPE STEEL FTG. SIZE 24"	30"	WEIGHT	POST SIZE	SIGN FRAME REQUIRED	REMARKS	SIGN DETAIL DETAIL ON SHEET NUMBER	STD. SHEET NUMBER
OPTION ITEMS																																			
9+71 CL	⟷	1	48	24	8.00						2			28			28	2																W1-7		E-152
10+45 LT	STOP	1	30	30	~~5.18~~ 6.25						1			14			14	1																R1-1		E-143
10+50 RT	STOP	1	30	30	~~5.18~~ 6.25						1			14			14	1																R1-1		E-143
12+00 RT	EAST	1	24	12	2.00						1			14			14	1																M3-2		E-136B
	VERMONT 44	1	24	24	4.00																														E-136B
12+20 LT	SOUTH	1	24	12	2.00						2			28			28	2															X	M3-3		E-136B
	VERMONT 106	1	30	24	5.00																														E-136B
	←	1	21	15	2.19																													M6-1		E-136B
	NORTH	1	24	12	2.00																													M3-1		E-136B
	VERMONT 106	1	30	24	5.00																														E-136B
	→	1	21	15	2.19																													M6-1		E-136B
												FT	FT	FT	FT	FT	FT		EA	LB	LB	LB		LB	LB	LB	LB								
SUBTOTAL SIGN SHEET 1					SF 42.74	SF	EA.	SF				FT 98			FT 98					LB			EA.	LB				EA.	EA.	LB					

FINAL POST LENGTHS ARE TO BE DETERMINED IN THE FIELD. POST SIZES ARE COMPUTED BASED ON INFORMATION FURNISHED ON THE STANDARD SHEETS AND THE TRAFFIC & SAFETY DIVISION'S "SIGN POST DESIGN GUIDELINE."

SHEET NAME: SIGN SUMMARY SHEET #1
PROJECT NAME: READING
PROJECT NUMBER: BRS 0148(6)S
HIGHWAY NO.: VT 44
BRIDGE NO.: 1
OVER: THE MILL BROOK
FILE NAME: PW/85e034/Structures/se034sgn.dgn
PROJECT MANAGER: R. WHITCOMB
DESIGNED BY: C. CARLSON
DRAWN BY: J. GILMORE
XPARM NAME: se034sg3.i
BRIDGE SHEET NUMBER:
PLOT DATE: 17-FEB-2006
SHEET 39 OF 83

STATE OF VERMONT
AGENCY OF TRANSPORTATION

TRAFFIC SIGN SUMMARY SHEET

MILEMARKER, STATION, OR SIGN NUMBER	SIGN LEGEND	SIGN DIMENSIONS			NEW & SALVAGED SIGNS				EXIST POST		NEW SIGN POSTS																				REMARKS	SIGN DETAIL	
		EA	WIDTH (in)	HEIGHT (in)	"A"	"B"	SALV SIGN	SALV TIS	RETAIN	SALVAGE	NO. OF POSTS	FLANGED CHANNEL lb/ft			SQUARE STEEL (in) lb/ft			ANCHOR	SLEEVE	TUBULAR ALUMINUM Ø (in) lb/ft			TUBULAR STEEL Ø (in)					W-SHAPE STEEL				SIGN REQUIRED		DETAIL ON SHEET NUMBER	STD. SHEET NUMBER
																						FOUND-ATION	lb/ft				FTG. SIZE		WEIGHT	POST SIZE				
												1.12	2.0	3.0	1.75 1.88	2.0 2.16	2.5 3.35			3.0 1.3	4.0 1.7	4.0 MOD 1.7		3.0 7.6	3.5 9.0	4.0 10.8	5.0 14.6	24"	30"					
OPTION ITEMS																																
14+60 LT	← FELCHVILLE 1	1	72	12	6.00						2			28			28	2														D1-1		E-123
	← SPRINGFIELD 13	1	72	12	6.00																											D1-1		E-123
	SO. WOODSTOCK 8 →	1	72	12	6.00																											D1-1		E-123
	WOODSTOCK 13 →	1	72	12	6.00																											D1-1		E-123
15+61 LT	FLAT IRON ROAD TH 5	2	30	9	3.75						1			14			14	1																E-123
15+75 LT		1	36	36	9.00						2			28			28	2														W3-1A		E-150
17+50 LT	JCT	1	15	21	2.19						2			28			28	2													X	M2-1		E-136B
	VERMONT 106	1	30	24	5.00																													E-136B
	END	1	24	12	2.00																											M4-6		E-140
	VERMONT 44	1	24	24	4.00																													E-136B
17+50 RT	SPEED LIMIT 50	1	24	30	5.00						1			14			14	1														R2-1		E-142
℄ 100+34 LT	STOP	1	30	30	~~5.18~~ 6.25						1			14			14	1														R1-1		E-143
	0440 1414 0010	1	6	10	0.42																													E-138
℄ 100+50 RT	LEGAL LOAD LIMIT 24,000 POUNDS	1	24	30	5.00						1			14			14	1														VR-017		E-141
					SF	SF	EA.	SF			FT	FT	FT	FT	FT	FT		EA	LB	LB	LB		LB	LB	LB	LB	EA.	EA.	LB				

FINAL POST LENGTHS ARE TO BE DETERMINED IN THE FIELD. POST SIZES ARE COMPUTED BASED ON INFORMATION FURNISHED ON THE STANDARD SHEETS AND THE TRAFFIC & SAFETY DIVISION'S "SIGN POST DESIGN GUIDELINE."

SUBTOTAL	SF	FT	FT
SIGN SHEET 2	65.54	140	140
SIGN SHEET 1	42.74	98	98
SUBTOTAL	108.28	238	238
ROUNDING	0.72	2	2
TOTAL	109.00	240	240

SHEET NAME: SIGN SUMMARY SHEET #2
PROJECT NAME: READING
PROJECT NUMBER: BRS 0148(6)S
HIGHWAY NO.: VT 44
BRIDGE NO.: 1
OVER: THE MILL BROOK
FILE NAME: PW/85e034/Structures/se034sgn.dgn
PROJECT MANAGER: R. WHITCOMB
DESIGNED BY: C. CARLSON
BRIDGE SHEET NUMBER:
PLOT DATE: 17-FEB-2006
DRAWN BY: J. GILMORE
IPARM NAME: se034sg4.i
SHEET 39A OF 83

SOIL CLASSIFICATION

AASHTO

A1	Gravel and Sand
A3	Fine Sand
A2	Silty or Clayey Gravel and Sand
A4	Silty Soil - Low Compressibility
A5	Silty Soil - Highly Compressible
A6	Clayey Soil - Low Compressibility
A7	Clayey Soil - Highly Compressible

ROCK QUALITY DESIGNATION

R.Q.D. (%)	ROCK DESCRIPTION
<25	Very Poor
25 to 50	Poor
51 to 75	Fair
76 to 90	Good
>90	Excellent

SHEAR STRENGTH

UNDRAINED SHEAR STRENGTH IN P.S.F.	CONSISTENCY
<250	Very Soft
250-500	Soft
500-1000	Med. Stiff
1000-2000	Stiff
2000-4000	Very Stiff
>4000	Hard

CORRELATION GUIDE OF "N" TO DENSITY/CONSISTENCY

DENSITY (GRANULAR SOILS) N	DENSITY (GRANULAR SOILS) DESCRIPTIVE TERM	CONSISTENCY (COHESIVE SOILS) N	CONSISTENCY (COHESIVE SOILS) DESCRIPTIVE TERM
<5	Very Loose	<2	Very Soft
5-10	Loose	2-4	Soft
11-24	Med. Dense	5-8	Med. Stiff
25-50	Dense	9-15	Stiff
>50	Very Dense	16-30	Very Stiff
		31-60	Hard
		>60	Very Hard

COMMONLY USED SYMBOLS

▼	Water Elevation
	Standard Penetration Boring
⊕	Auger Boring
⊙	Rod Sounding
S	Sample
N	Standard Penetration Test Blow Count Per Foot For: 2" O.D. Sampler 1 3/8" I.D. Sampler Hammer Weight Of 140 Lbs. Hammer Fall Of 30"
VS	Field Vane Shear Test
US	Undisturbed Soil Sample
B	Blast
DC	Diamond Core
MD	Mud Drill
WA	Wash Ahead
HSA	Hollow Stem Auger
AX	Core Size 1 1/8"
BX	Core Size 1 5/8"
NX	Core Size 2 1/8"
M	Double Tube Core Barrel Used
LL	Liquid Limit
PL	Plastic Limit
PI	Plasticity Index
NP	Non Plastic
w	Moisture Content (Dry Wgt. Basis)
D	Dry
M	Moist
MTW	Moist To Wet
W	Wet
Sat	Saturated
Bo	Boulder
Gr	Gravel
Sa	Sand
Si	Silt
Cl	Clay
HP	Hardpan
Le	Ledge
NLTD	No Ledge To Depth
CNPF	Can Not Penetrate Further
TLOB	To Ledge Or Boulder
NR	No Recovery
Rec.	Recovery
%Rec.	Percent Recovery
RQD	Rock Quality Designation
CBR	California Bearing Ratio
<	Less Than
>	Greater Than
R	Refusal (N > 100)

COLOR

blk	Black	pnk	Pink
bl	Blue	pu	Purple
brn	Brown	rd	Red
dk	Dark	tn	Tan
gry	Gray	wh	White
gn	Green	yel	Yellow
lt	Light	mlto	Multicolored
or	Orange		

DEFINITIONS (AASHTO)

BEDROCK (LEDGE) - Rock in its native location of indefinite thickness.

BOULDER - A rock fragment with an average dimension > 12 inches.

COBBLE - Rock fragments with an average dimension between 3 and 12 inches.

GRAVEL - Rounded particles of rock < 3" and > 0.0787" (#10 sieve).

SAND - Particles of rock < 0.0787" (#10 sieve) and > 0.0029" (#200 sieve).

SILT - Soil < 0.0029" (#200 sieve), non or slightly plastic and exhibits no strength when air-dried.

CLAY - Fine grained soil, exhibits plasticity when moist and considerable strength when air-dried.

VARVED - Alternate layers of silt and clay.

HARDPAN - Extremely dense soil, cemented layer, not softened when wet.

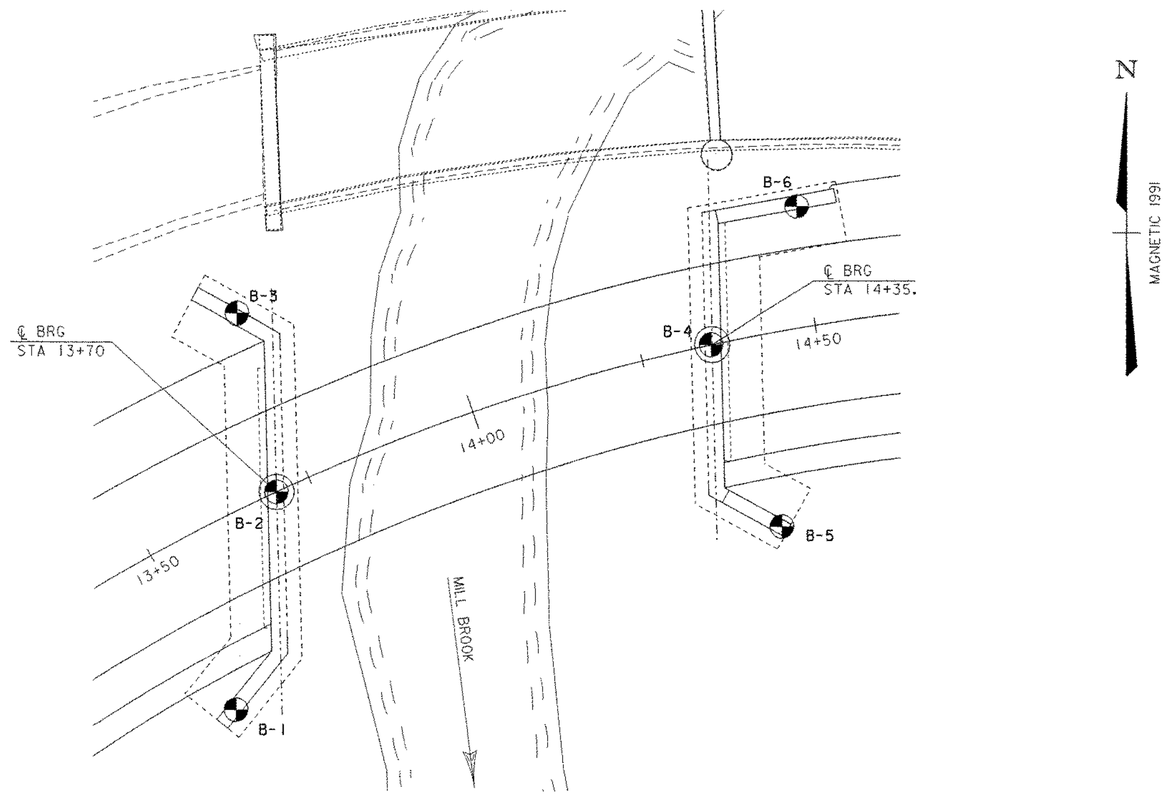
MUCK - Soft organic soil (containing > 10% organic material.

MOISTURE CONTENT - Weight of water divided by dry weight of soil.

FLOWING SAND - Granular soil so saturated (loose) that it flows into drill casing during extraction of wash rod.

STRIKE - Angle from magnetic north to line of intersection of bed with a horizontal plane.

DIP - Inclination of bed with a horizontal plane.



STANDARD PENETRATION BORINGS

SCALE 1" = 10'-0

10 0 10

BORING CHART

HOLE NO.	STATION	OFFSET	GROUND ELEV.
B-1	13+50.00	25' RT	847.97
B-2	13+70.00	0	846.39
B-3	13+75.00	25' LT	847.70
B-4	14+35.00	0	844.33
B-5	14+40.00	27' RT	845.17
B-6	14+50.00	17' LT	845.18

GENERAL NOTES

1. The subsurface explorations shown herein were made between 8-26-96 and 9-18-96 by the Agency.
2. Soil and rock classifications, properties and descriptions are based on engineering interpretation from available subsurface information by the Agency and may not necessarily reflect actual variation in subsurface conditions that may be encountered between individual boring or sample locations.
3. Observed water levels and/or conditions indicated are as recorded at the time of exploration and may vary according to the prevailing rainfall, methos of exploration and other factors.
4. Engineering judgement was exercised in preparing the subsurface information presented herein. Analysis and interpretation of subsurface data was preformed and interpreted for Agency design and estimating purposes. Presentation of the information in the Contract is intended to provide the Contractor access to the same data available to the Agency. The subsurface information is presented in good faith and is not intended as a substitute for personal investigation, independent interpretation, independent analysis or judgement by the Contractor.
5. Pictorial structure details shown on the boring plan layout or soils profile are for illustrative purposes only and may not accurately portray final contract details.
6. Terminology used on boring logs to describe the hardness, degree of weathering, and spacing of fractures, joints and other discontinuities in the bedrock is defined in the AASHTO Manual on Subsurface Investigations, 1988.

SHEET NAME: BORING INFORMATION SHEET

PROJECT NAME: READING
PROJECT NUMBER: BRS 0148(6)S
HIGHWAY NO.: VT 44
BRIDGE NO.: 1
OVER: THE MILL BROOK

FILE NAME: PW/85e034/Structures/se034bor.dgn
PROJECT MANAGER: R. WHITCOMB
DESIGNED BY: C. CARLSON
BRIDGE SHEET NUMBER:
PLOT DATE: 17-FEB-2006
DRAWN BY: J. GILMORE
IPARM NAME: se034brl.i
SHEET 40 OF 83

STATE OF VERMONT
AGENCY OF TRANSPORTATION
MATERIALS & RESEARCH DIVISION
SUBSURFACE INFORMATION

HOLE NO.: B-1
SHEET 1 OF 1
DATE STARTED: 9/4/96
DATE COMPLETED: 9/9/96

PROJECT NAME: READING
SITE NAME: VT 44
STATION: 13+50.00
GROUND EL.: 847.97

PROJECT NUMBER: BRS 0148(6)S
SITE NO.: BRIDGE #1
OFFSET: 25.00
G.W. DEPTH:

BORING CREW
CREW CHIEF: MCGLYNN
DRILLER: CHABOT
LOGGER: WILLIS

BORING RIG: TRUCK
BORING TYPE: WASH BORE
SAMPLE TYPE: SPLIT BARREL

BOTTOM OF FOOTING ELEV 834.00

DEPTH	CLASSIFICATION OF MATERIALS (Description)	BLOWS PER FOOT	M.C. %	GRAVEL %	SAND %	FINES %	LL	PI
5	A-2-4, GrSa, Moist, br, Rec. = 1.0'	28	17.8	32.8	55.8	11.4		
10	A-1-a, SaGr, Moist, br, Rec. = 1.2'	44	21.6	49.8	41.3	8.9		
15	A-2-4, SiSa, Wet, br, Rec. = 1.1'	17	27.3	2.2	76.6	21.2		
20	A-2-4, Sa, Moist, br, Rec. = 1.2'	15	22.4	11.3	83.4	5.3		
25	A-2-4, Sa, Wet, br, Rec. = 1.1'	9	28.7	0.1	94.4	5.5		
30	A-1-b, GrSa, Wet, br, Rec. = 1.1'	24	23.4	34.6	55.4	10		
35	A-1-b, GrSa, Moist, br, Rec. = 1.8'	21	22.5	32.8	55.2	12		
40	A-1-b, SaGr, Moist, br, Rec. = 1.0'	55	16.3	47	42.8	10.2		
			Top of rock @ 43.5'					
45	Run #1: BXMDC 43.5' - 48.5', Rec. = 3.5' Seam 47.5' - 48.3' See Geologist's Report		Dip	Rec%	RQD%			
		Run#1	0	70	0			
50	Run #2: BXMDC 48.5' - 53.5', Rec. = 4.4' See Geologist's Report.	Run#2	0	88	13			
55		Hole stopped @ 53.5'						

Geologist's Report

Run #1: Lt. gray, plagioclase-rich granodiorite gneiss. Moderately hard. Unweathered.

Low RQD due to mechanical breakage. Competent

Run #2: Same as Run #1

STATE OF VERMONT
AGENCY OF TRANSPORTATION
MATERIALS & RESEARCH DIVISION
SUBSURFACE INFORMATION

HOLE NO.: B-2
SHEET 1 OF 1
DATE STARTED: 8/26/96
DATE COMPLETED: 8/30/96

PROJECT NAME: READING
SITE NAME: VT 44
STATION: 13+70.00
GROUND EL.: 846.39

PROJECT NUMBER: BRS 0148(6)S
SITE NO.: BRIDGE #1
OFFSET: 0.00
G.W. DEPTH:

BORING CREW
CREW CHIEF: HOLT
DRILLER: CHABOT .
LOGGER: HOLT

BORING RIG: TRUCK
BORING TYPE: WASH BORE
SAMPLE TYPE: SPLIT BARREL

BOTTOM OF FOOTING ELEV 834.00

DEPTH	CLASSIFICATION OF MATERIALS (Description)	BLOWS PER FOOT	M.C. %	GRAVEL %	SAND %	FINES %	LL	PI
5	A-1-b, SaGr, Moist, brn, rec. = 1.0'	19	13.1	44.2	43.8	12		
	A-1-a, Gr, Wet, brn, rec. = 0.4'	71	11.2	82.9	13.9	3.2		
10	A-1-b, GrSa, Sat., brn, rec. = 0.1'	13	17.2	33.1	64	2.9		
	A-2-4, SiSa, Sat., brn, rec. = 0.8'	11	23.4	1.1	77	21.9		
15	A-2-4, Sa, Sat., rd. brn, rec. = 0.8'	9	27.5	6.4	78.2	14.4		
	A-2-4, Sa, Sat., brn, rec. = 1.3'	9	23.9	9.5	77.8	12.7		
20	A-2-4, SiSa, Sat., brn, rec. = 1.2'	6	26.5	0.7	65.6	33.6		
	A-3, Sa, Sat., brn, rec. = 0.1'	6	21.7	3.2	90.1	6.7		
25	A-2-4, Sa, Sat., red brn, rec. = 1.2'	11	17	16.9	76.8	6.3		
	A-3, Sa, Sat., red brn, rec. = 1.1'	6	29.1	18.2	73.9	7.8		
30	A-1-b, GrSa, Sat., red brn, rec. = 0.7'	15	26.7	33.6	58.1	8.3		
	A-1-a, SaGr, Sat., red brn, rec. = 0.1'	13	20.1	53.3	41.8	4.9		
35	A-1-a, SaGr, Sat., brn, rec. = 0.2'	14	18.1	59.7	34.2	6.1		
	A-1-b, Sa, Sat., brn, rec. = 0.4'	16	21.5	18.7	68.7	12.6		
40	A-1-a, SaGr, Wet, brn, rec. = 0.3'	20	23.3	55.4	35.4	9.2		
	A-2-4, GrSa, Wet, brn, rec. = 0.7'	22	19.4	25.5	62.6	11.9		
45	A-1-b, GrSa, Wet, brn, rec. = 1.3'	92	13	40.5	46.4	13.1		
	No recovery.							
50	BXDC, 36.2' - 38.6', boulders, no recovery.		Top of rock @ 40.2'					
	RUN#1: BXDC 40.2' - 42.2', rec. = 1.6' See Geologist's Report.		Dip	Rec%	RQD%			
55	RUN#2: BXMDC 42.2' - 47.2', rec. = 5.0' See Geologist's Report.	Run#1	0	32	0			
	RUN#2: BXMDC 47.2' - 50.2', rec. = 2.9' See Geologist's Report.	Run#2	0	100	92			
60		Run#3	0	58	33			
65		Hole stopped @ 50.2'						
70								
75								
80								
85								
90								
95								

Geolgist's Report

Run #1: Lt. gray plagioclase-rich granodiorite gneiss. Moderately hard. Weathered.

Low RQD due to mechanical breakage. Competent.

Run #2: same as Run #1.

Run #3: same as Run #1.

STATE OF VERMONT
AGENCY OF TRANSPORTATION
MATERIALS & RESEARCH DIVISION
SUBSURFACE INFORMATION

HOLE NO.: B-3
SHEET 1 OF 1
DATE STARTED: 9/10/96
DATE COMPLETED: 9/11/96

PROJECT NAME: READING
SITE NAME: VT 44
STATION: 13+75.00
GROUND EL.: 847.70

PROJECT NUMBER: BRS 0148(6)S
SITE NO.: BRIDGE #1
OFFSET: -25.00
G.W. DEPTH:

BORING CREW
CREW CHIEF: WILLIS
DRILLER: CHABOT .
LOGGER: CHABOT .

BORING RIG: TRUCK
BORING TYPE: WASH BORE
SAMPLE TYPE: SPLIT BARREL

BOTTOM OF FOOTING ELEV 834.00

DEPTH	CLASSIFICATION OF MATERIALS (Description)	BLOWS PER FOOT	M.C. %	GRAVEL %	SAND %	FINES %	LL	PI
5	No recovery, sampler plugged with stone.	50						
10	A-1-a, SaGr, Sat., brn, rec. = 0.4'	14	10.1	63.4	33.5	3.1		
15	A-2-4, Sa, Wet., brn, rec. = 1.0'	10	21	6.3	88.2	5.4		
20	A-1-b, Sa, Wet., brn, rec. = 0.8'	15	18.2	45.2	46.3	8.5		
25	No recovery.	27						
30	No recovery.	27						
35	A-1-b, SaGr, hd. pkd., Moist, brn, rec. = 0.5'	R	14.6	57	31.4	11.6		
40	RUN#1: BXDC 37.5' - 38.5', rec. = 0.7' See Geologist's Report.	Top of rock @ 37.5'						
45	RUN#2: BXMDC 38.5' - 43.5', rec. = 3.9' See Geologist's Report.		Dip	Rec%	RQD%			
50	RUN#3: BXMDC 43.5' - 48.5', rec. = 5.0' See Geologist's Report.	Run#1	0	14	0			
55		Run#2	0	78	8			
60		Run#3	20	100	53			
65		Hole stopped @ 48.5'						
70								
75								
80								
85								
90								
95								

Geologist's Report

Run #1: Gray plagioclase-rich granodiorite gneiss. Moderately hard. Unweathered.

Poor recovery.

Run #2: Same as Run #1.

Low RQD due to mechanical breakage. Core contains vertical fractures. Competent.

Run #3: Same as Run #1.

Competent.

SHEET NAME: BORING LOG SHEET #1

PROJECT NAME: READING
PROJECT NUMBER: BRS 0148(6)S

HIGHWAY NO.: VT 44
BRIDGE NO.: 1
OVER: THE MILL BROOK

FILE NAME: PW/85e034/Structures/se034bor.dgn
PROJECT MANAGER: R. WHITCOMB
DESIGNED BY: C. CARLSON
BRIDGE SHEET NUMBER:

PLOT DATE: 17-FEB-2006
DRAWN BY: MATERIALS
IPARM NAME: se034br2.i
SHEET 41 OF 83

STATE OF VERMONT
AGENCY OF TRANSPORTATION
MATERIALS & RESEARCH DIVISION
SUBSURFACE INFORMATION

HOLE NO.: B-4
SHEET 1 OF 1
DATE STARTED: 9/12/96
DATE COMPLETED: 9/13/96

PROJECT NAME: READING
SITE NAME: VT 44
STATION: 14+35.00
GROUND EL.: 844.33

PROJECT NUMBER: BRS 0148(6)S
SITE NO.: BRIDGE #1
OFFSET: 0.00
G.W. DEPTH:

BORING CREW
CREW CHIEF: WILLIS
DRILLER: WILLIS
LOGGER: WILLIS

BORING RIG: TRUCK
BORING TYPE: WASH BORE
SAMPLE TYPE: SPLIT BARREL

BOTTOM OF FOOTING ELEV 834.00

DEPTH	SYMBOL	CLASSIFICATION OF MATERIALS (Description)	BLOWS PER FOOT	M.C. %	GRAVEL %	SAND %	FINES %	LL	PI
5		A-1-b, GrSa, Moist, brn, rec. = 1.0'	13	27.6	37.9	51.7	10.4		
		A-1-a, SaGr, Moist, brn, rec. = 0.8'	41	15.1	57.3	33.6	9.1		
		A-1-b, SaGr, Moist, brn, rec. = 0.9'	27	10	48.1	44.7	7.2		
10		A-1-a, SaGr, Moist, brn, rec. = 1.2'	23	13.7	50.6	41.8	7.6		
		A-2-4, SiSa, Moist, brn, rec. = 1.0'	6	25.2	9.3	64.3	26.4		
15		A-1-b, GrSa, Moist, brn, rec. = 1.2'	8	18.6	27.4	63.1	9.5		
		A-1-b, GrSa, Wet, brn, rec. = 0.2'	12	21.9	42.3	49.7	8		
20		A-1-b, GrSa, Moist, brn, rec. = 0.8'	12	19	38.8	51.4	9.8		
		A-1-a, SaGr, Moist, brn, rec. = 0.2'	8	0	53.4	36.2	10.4		
25		No recovery, stone in sampler.	10						
		No recovery.	8						
		Insufficient sample for testing. Field Classification: moist, brn, SaGr.	19						
30		Insufficient sample for testing. Field classification: moist, brn, Sa w/ stones, rec. = 0.1'	7	18.8	29.6	62.5	7.9		
		A-1-b, GrSa, Moist, brn, rec. = 0.8'	17	17.1	62.1	32	5.9		
35		A-1-a, SaGr, Wet, brn, rec. = 0.5'	23	13.1	42.2	45.7	12.1		
		A-1-b, GrSa, Moist, brn, rec. = 0.7'	51	12.9	48.1	39.6	12.3		
		A-1-b, SaGr, Moist, brn, rec. = 0.6'	Top of rock @ 33.9'						
40		RUN#1: BXMDC 33.9'-38.9', rec. = 4.9' See Geologist's Report.	Run#1:	Dip 20	Rec% 98	ROD% 40			
		RUN#2: BXMDC 38.9'-43.9', rec. = 5.0' See Geologist's Report.	Run#2:	20	100	52			
45			Hole stopped @ 43.9'						
50									
55									
60									
65									
70									
75									
80									
85									
90									
95									

Geologist's Report

Run #1: Gray plagioclase-rich granodiorite gneiss. Moderately hard. Unweathered.

Competent.

Run #2: Same as Run #1.

Competent

STATE OF VERMONT
AGENCY OF TRANSPORTATION
MATERIALS & RESEARCH DIVISION
SUBSURFACE INFORMATION

HOLE NO.: B-5
SHEET 1 OF 1
DATE STARTED: 9/17/96
DATE COMPLETED: 9/17/96

PROJECT NAME: READING
SITE NAME: VT 44
STATION: 14+40.00
GROUND EL.: 845.17

PROJECT NUMBER: BRS 0148(6)S
SITE NO.: BRIDGE #1
OFFSET: 27.00
G.W. DEPTH:

BORING CREW
CREW CHIEF: WILLIS
DRILLER: CHABOT .
LOGGER: CHABOT .

BORING RIG: TRUCK
BORING TYPE: WASH BORE
SAMPLE TYPE: SPLIT BARREL

BOTTOM OF FOOTING ELEV 834.00

DEPTH	SYMBOL	CLASSIFICATION OF MATERIALS (Description)	BLOWS PER FOOT	M.C. %	GRAVEL %	SAND %	FINES %	LL	PI
5		A-1-b, GrSa, Moist, brn, rec. = 1.5'	48	15.9	45.6	45.9	8.5		
10		No recovery.	14						
15		A-2-4, Sa, Moist, brn, rec. = 1.0'	11	27.2	0.9	83.5	15.6		
20		A-4, SiSa, Wet, brn, rec. = 1.2'	6	28.4	1.1	56.1	42.8		
25		A-1-b, GrSa, Wet, brn, rec. = 0.7'	8	22.9	43.9	49.5	6.6		
30		A-1-a, SaGr, Wet, brn, rec. = 0.4'	4	21.7	54.6	40.1	5.3		
35		A-1-b, GrSa, Moist to Wet, brn, rec. = 0.4'	66	14.7	34.7	52.8	12.5		
40		boulders, seam with sand 41.0'-43.0', no recovery	Top of rock @ 43.0'						
45		RUN#1: BXMDC 43.0'-48.0', rec. = 4.0' See Geologist's Report	Run#1:	Dip 10	Rec% 80	ROD% 0			
50			Hole stopped @ 48.0'						
55									
60									
65									
70									
75									
80									
85									
90									
95									

Geologist's Report

Run #1: Alternating Gray plagioclase-rich granodiorite gneiss and gray to black biotite plagioclase-rich granodiorite gneiss.. Moderately hard. Unweathered.

Low ROD due to mechanical breakage. Competent.

STATE OF VERMONT
AGENCY OF TRANSPORTATION
MATERIALS & RESEARCH DIVISION
SUBSURFACE INFORMATION

HOLE NO.: B-6
SHEET 1 OF 1
DATE STARTED: 9/18/96
DATE COMPLETED: 9/18/96

PROJECT NAME: READING
SITE NAME: VT 44
STATION: 14+50.00
GROUND EL.: 845.18

PROJECT NUMBER: BRS 0148(6)S
SITE NO.: BRIDGE #1
OFFSET: -17.00
G.W. DEPTH:

BORING CREW
CREW CHIEF: WILLIS
DRILLER: CHABOT .
LOGGER: CHABOT .

BORING RIG: TRUCK
BORING TYPE: WASH BORE
SAMPLE TYPE: SPLIT BARREL

BOTTOM OF FOOTING ELEV 834.00

DEPTH	SYMBOL	CLASSIFICATION OF MATERIALS (Description)	BLOWS PER FOOT	M.C. %	GRAVEL %	SAND %	FINES %	LL	PI
5		A-1-a, SaGr, Wet, gry, rec. = 0.5'	27	19.2	65.7	29.9	4.4		
10		No recovery.	8						
15		No recovery.	10						
20		A-1-b, GrSa, Wet, brn, rec. = 0.7'	19	14	41.8	52.1	6.1		
25		A-1-b, GrSa, Wet, brn, rec. = 0.5'	39	16.1	38.5	52.4	9.1		
30		boulders and gravel, no recovery	Top of rock @ 35.0'						
35		RUN#1: BXMDC 35.0'-40.0', rec. = 3.3' See Geologist's Report	Run#1:	Dip 0	Rec% 66	ROD% 0			
40		RUN#2: BXMDC 40.0'-45.0', rec. = 4.6' See Geologist's Report	Run#2:	0	92	7			
45			Hole stopped @ 45.0'						
50									
55									
60									
65									
70									
75									
80									
85									
90									
95									

Geologist's Report

Run #1: Gray plagioclase-rich granodiorite gneiss. Moderately hard. Unweathered.

Low ROD due to mechanical breakage. Competent

Run #2: Same as Run #1.

Competent

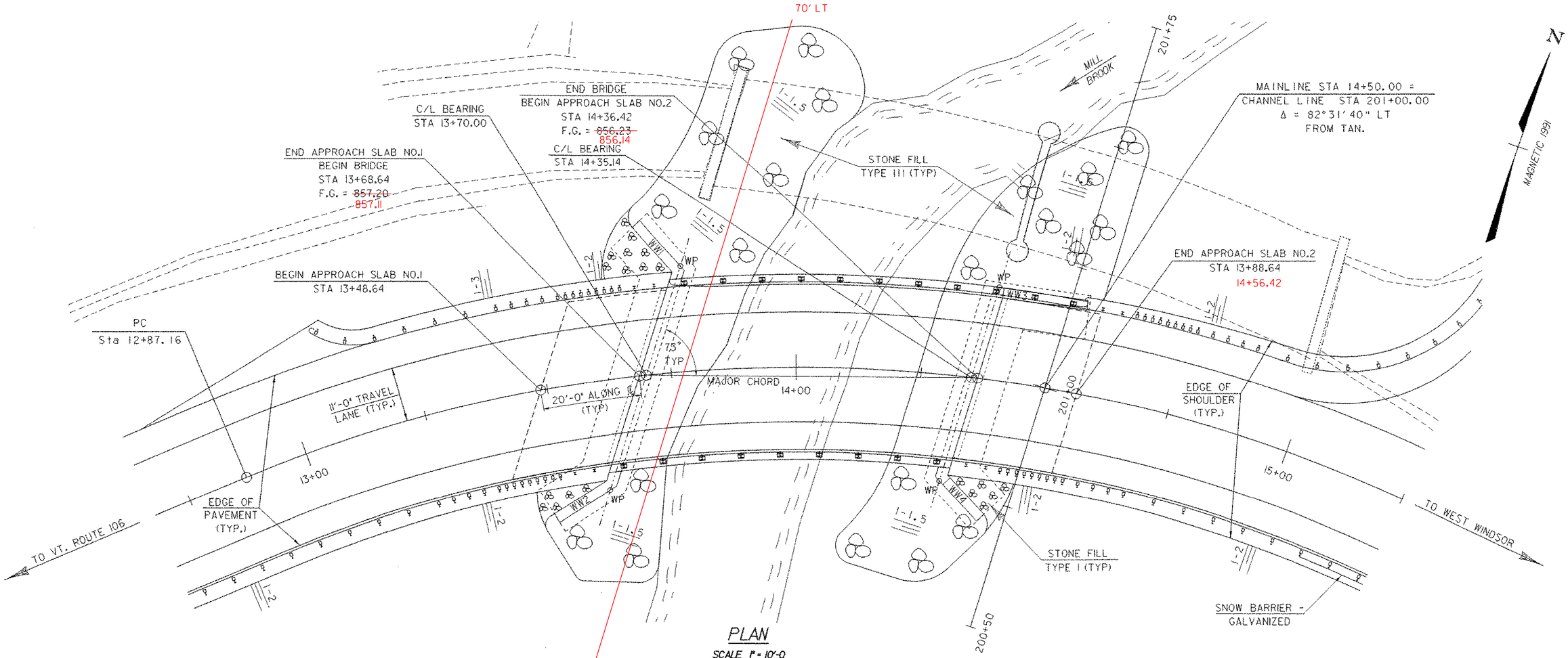
SHEET NAME: BORING LOG SHEET #2

PROJECT NAME: READING
PROJECT NUMBER: BRS 0148(6)S

HIGHWAY NO.: VT 44
BRIDGE NO.: 1
OVER: THE MILL BROOK

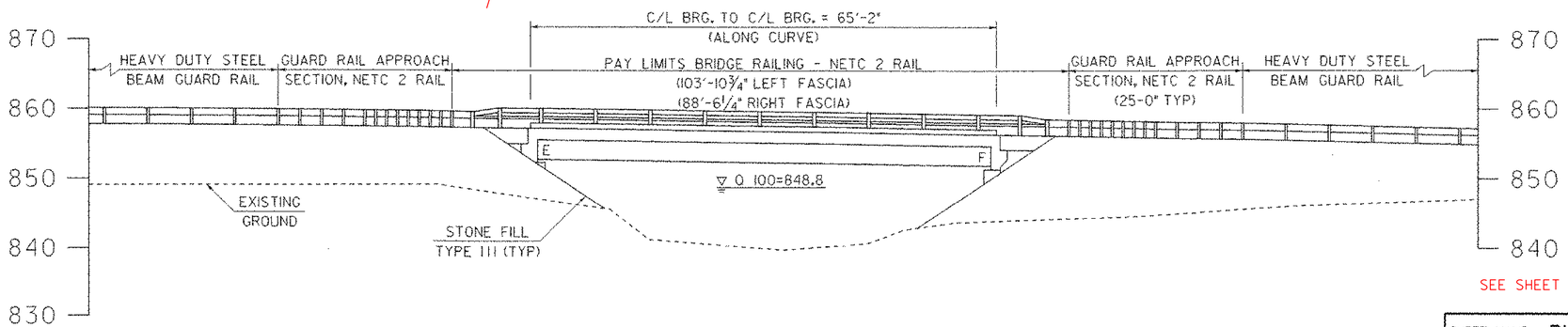
FILE NAME: PW/85e034/Structures/se034bor.dgn
PROJECT MANAGER: R. WHITCOMB
DESIGNED BY: C. CARLSON
BRIDGE SHEET NUMBER:

PLOT DATE: 17-FEB-2006
DRAWN BY: MATERIALS
IPARM NAME: se034br2.i
SHEET 42 OF 83



PLAN

SCALE 1" = 10'-0



PROFILE ALONG DOWNSTREAM GUARDRAIL FASCIA

SCALE 1" = 10'-0

SEE SHEET 62 FOR SUBBASE TRANSITION

SHEET NAME: PLAN AND ELEVATION SHEET		
PROJECT NAME: READING		HIGHWAY NO.: VT 44
PROJECT NUMBER: BRS 0148(6)S		BRIDGE NO.: 1
		OVER: THE MILL BROOK
FILE NAME: PW/85e034/Structures/se034pe.dgn		PLOT DATE: 17-FEB-2006
PROJECT MANAGER: R. WHITCOMB		DRAWN BY: J. GILMORE
DESIGNED BY: C. CARLSON		IPARM NAME: se034pe.i
BRIDGE SHEET NUMBER:		SHEET 43 OF 83

STATE OF VERMONT
AGENCY OF TRANSPORTATION

GENERAL NOTES

GENERAL

1. ALL MATERIALS AND CONSTRUCTION SHALL CONFORM TO THE AGENCY OF TRANSPORTATION'S STANDARD SPECIFICATIONS FOR CONSTRUCTION, DATED 2001, AND ITS LATEST REVISIONS, AND THE AASHTO STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES, SEVENTEENTH EDITION, AND ITS LATEST REVISIONS.

2. BRIDGE IS DESIGNED FOR HS 25 LIVE LOAD WITH NO ALLOWANCE FOR FUTURE PAVEMENT.

3. A) IN-STREAM CONSTRUCTION SHALL BE RESTRICTED TO JUNE 1 TO OCTOBER 1, UNLESS THE CONTRACTOR OBTAINS WRITTEN PERMISSION FROM THE AGENCY OF NATURAL RESOURCES TO DO WORK OUTSIDE OF THAT TIME FRAME.

   B) THE CONTRACTOR SHALL REVIEW AND UNDERSTAND ALL APPLICABLE ENVIRONMENTAL PERMITS AND ENSURE THAT ALL CONDITIONS ARE MET.

4. THE CONTRACTOR SHALL TAKE ALL PRECAUTIONS NECESSARY TO PREVENT SILTATION OR POLLUTION, ESPECIALLY THE DISCHARGE OF RAW CONCRETE, INTO ANY BROOK, STREAM OR RIVER.

5. ALL DIMENSIONS ARE HORIZONTAL OR VERTICAL AND ARE GIVEN AT 68 DEGREES FAHRENHEIT UNLESS OTHERWISE NOTED.

6. THE EXISTING STRUCTURAL STEEL ON THIS PROJECT WAS PAINTED WITH A MATERIAL WHICH MAY CONTAIN LEAD. THE REMOVED STRUCTURAL STEEL IS THE PROPERTY OF THE CONTRACTOR. THE CONTRACTOR SHALL INDEMNIFY AND HOLD THE STATE, ITS OFFICERS, AND EMPLOYEES HARMLESS CONCERNING THE CONTRACTOR'S USE OR DISPOSITION OF THE STRUCTURAL STEEL.

7. THE EXISTING SUPERSTRUCTURE INCLUDING THE BEAMS, DECK AND RAILING SHALL BE REMOVED DOWN TO THE EXISTING BRIDGE SEATS. THE EXISTING CONCRETE ABUTMENTS AND PIER SHALL BE REMOVED TO THE EXISTING GROUND LEVEL AS SHOWN ON THE CROSS SECTION SHEETS. THIS WORK WILL BE PAID FOR UNDER ITEM 529.20, "PARTIAL REMOVAL OF STRUCTURE".

8. IN AREAS OF STONE FILL PLACEMENT, PORTIONS OF THE EXISTING ABUTMENTS THAT ARE BELOW GROUND LEVEL SHALL BE REMOVED AS PART OF ITEM 203.27, "UNCLASSIFIED CHANNEL EXCAVATION".

9. PAYMENT FOR REMOVAL OF EXISTING BITUMINOUS PAVEMENT ON THE BRIDGE SHALL BE MADE UNDER THE ITEM 529.10, "REMOVAL OF BRIDGE PAVEMENT". THE MATERIAL SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND SHALL BE DISPOSED OF PROPERLY AT AN OFFSITE LOCATION.

10. REMOVAL OF EXISTING D.I. (STA. 10+93 LT.) SHALL BE PAID FOR UNDER ITEM 204.21, "TRENCH EXCAVATION OF ROCK". REMOVAL OF EXISTING 18" RCP (STA. 10+93 LT. - STA. 11+16 LT.) SHALL BE PAID FOR UNDER ITEM 204.20, "TRENCH EXCAVATION OF EARTH".

STRUCTURAL STEEL

11. NOT USED.

12. ANY CONNECTIONS THAT ARE NOT DETAILED ON THE PLANS SHALL BE DETAILED BY THE FABRICATOR AND SUBMITTED TO THE STRUCTURES ENGINEER FOR APPROVAL.

13. ALL WELDING SHALL CONFORM TO THE PROVISIONS OF VERMONT SPECIFICATION 506.10.

14. ALL MEMBERS MARKED (CVN) MUST MEET THE CHARPY V-NOTCH TESTING REQUIREMENTS AS INDICATED IN SECTION 714 OF THE VERMONT AGENCY OF TRANSPORTATION SPECIFICATIONS FOR CONSTRUCTION.

15. ANY HOLES IN THE WEBS OF THE FASCIA BEAMS THAT ARE NOT OTHERWISE FILLED, SHALL BE FILLED WITH EITHER BUTTON HEAD OR HEX HEAD BOLTS MEETING ASTM SPECIFICATION A325, TYPE 3.

16. ALL FIELD CONNECTIONS SHALL BE MADE WITH 7/8" DIAMETER AASHTO DESIGNATION M 164 TYPE 3 BOLTS IN 15/16" DIAMETER HOLES.

17. THE DESIGN OF THE FLEMING BRACKETS SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR AND SHALL BE LIMITED TO A MAXIMUM OF FOUR FT. SPACING. THE CONTRACTOR SHALL SUBMIT THE DESIGN FOR REVIEW AND APPROVAL IN ACCORDANCE WITH SUPPLEMENTAL SPECIFICATION SUBSECTION 501.09A.

18. END OF BEAMS ARE TO BE VERTICAL IN FINAL POSITION.

CONCRETE

19. THE KEY IN CONCRETE CONSTRUCTION JOINTS SHALL BE MONOLITHIC AND CONTINUOUS INTEGRALLY WITH THE CONCRETE BELOW THE JOINT.

20. ALL EXPOSED EDGES OF CONCRETE SHALL BE CHAMFERED 1" BY 1".

21. JOINTS AND SCORE MARKS IN CONCRETE SHALL BE CONSTRUCTED AS INDICATED ON THE PLANS OR AS DIRECTED BY THE ENGINEER.

22. ALL REINFORCING STEEL SHALL BE DETAILED AND FABRICATED USING PROCEDURES AND TOLERANCES IN ACCORDANCE WITH APPLICABLE PUBLICATIONS OF THE CONCRETE REINFORCING STEEL INSTITUTE (CRSI).

23. REINFORCING PLACEMENT TOLERANCES SHALL BE:
SPACING +/- 1 INCH
CLEARANCE +/- 1/4 INCH

24. MINIMUM COVER FOR REINFORCING STEEL SHALL BE AS DETAILED IN THE PROJECT PLANS.

25. SURFACES OF BRIDGE SEATS UNDER BEARING DEVICES SHALL BE LEVEL, OTHER BRIDGE SEAT AREAS SHALL BE SLOPED 1/2 INCH/FT. ABUTMENT SEATS SHALL BE SLOPED FULL WIDTH TOWARD THE CENTER SPAN. THE ENTIRE BRIDGE SEAT SURFACE SHALL BE SMOOTHED WITH A MAGNESIUM FLOAT FINISH.

26. DECK POUR IS TO BE DONE IN ONE POUR WITHIN A MAXIMUM OF EIGHT HOURS. IF CIRCUMSTANCES BEYOND THE CONTRACTOR'S CONTROL PREVENT THIS FROM BEING ACCOMPLISHED, A MINIMUM DELAY OF NINETY-SIX HOURS BETWEEN THE COMPLETION OF ONE DAY'S POUR AND THE BEGINNING OF ANY OTHER POUR WILL BE ADHERED TO. SEE SHEET 48 FOR DETAIL OF TRANSVERSE BRIDGE SLAB CONSTRUCTION JOINT.

27. WATER REPELLENT (MOD.-SILANE) SHALL BE APPLIED TO ALL EXPOSED CONCRETE SURFACES EXCEPT THE UNDERSIDE OF THE DECK BETWEEN THE DRIP BEADS.

28. NO CONCRETE IN THE ABUTMENTS OR WINGWALLS SHALL BE PLACED ABOVE THE BRIDGE SEAT ELEVATIONS UNTIL THE BEAMS HAVE BEEN PROFILED AND THE FINISHED GRADE OF THE DECK HAS BEEN DETERMINED.

29. AFTER THE SUPERSTRUCTURE HAS BEEN ERECTED, ELEVATIONS SHALL BE TAKEN ALONG THE TOP OF THE BEAMS, AS DIRECTED BY THE RESIDENT ENGINEER, FOR USE IN DETERMINING THE FINISHED GRADE.

30. ALL SUBSTRUCTURE CONCRETE, APPROACH SLABS, WELL BARRIER WALL, WELL HEAD AND D. I.'S SHALL BE CONCRETE, HIGH PERFORMANCE CLASS B, UNLESS OTHERWISE NOTED.

31. THE DECK AND CURBS SHALL BE CONCRETE, HIGH PERFORMANCE CLASS A.

TEMPORARY DETOUR

32. TRAFFIC WILL BE MAINTAINED ON THE EXISTING BRIDGE.

33. ACCESS TO DRIVES SHALL BE MAINTAINED. WHEN THE CONTRACTOR MUST TEMPORARILY RESTRICT ACCESS TO THE DRIVES, THE CONTRACTOR SHALL NOTIFY THE PROPERTY OWNERS IN ADVANCE. THIS WORK WILL BE PAID FOR UNDER THE ITEM 641.10, "TRAFFIC CONTROL".

MISCELLANEOUS

34. THE EXISTING WALKWAY LOCATED BETWEEN STA. 50+48 LT. - STA. 50+91 LT. SHALL BE REMOVED. A NEW WALKWAY WILL BE INSTALLED AT APPROXIMATELY THE SAME LOCATION AND AS DIRECTED BY THE RESIDENT ENGINEER, WHO SHALL CONSULT WITH THE PROPERTY OWNER. THIS WORK WILL BE PAID FOR UNDER ITEM 618.10, "PORTLAND CEMENT CONCRETE SIDEWALK, 5 INCH (MOD.)". SEE SHEET 75 FOR ADDITIONAL DETAILS.

35. THERE WILL BE TWO 4 INCH DIAMETER MAPLE TREES PLANTED AT APPROXIMATE DRIVE STATIONS 50+70 LT 50+77 LT. THE RESIDENT ENGINEER SHALL CONSULT WITH THE PROPERTY OWNER REGARDING THE EXACT LOCATION OF THE TREES. (SEE SHEET 12 FOR APPROXIMATE LOCATION.) THE TREES WILL BE PAID FOR UNDER ITEM 656.30, "DECIDUOUS TREES (SUGAR MAPLE, ACER SACCHARUM, B&B, 4" CAL.)".

36. THE CEDAR HEDGES LOCATED BETWEEN APPROXIMATE DRIVE STATIONS 50+00 LT AND 50+61 LT SHALL BE REMOVED. THE HEDGES SHALL BE REPLACED WITH NEW 6 FT. CEDAR TREES. THE NEW TREES WILL BE PAID FOR UNDER THE ITEM 656.20, "EVERGREEN TREES (WHITE CEDAR-THUJA OCCIDENTALIS, B&B, 6 FT.)".

37. A) SPLIT RAIL FENCING LOCATED ON THE READING CEMETERY PROPERTY SHALL BE REMOVED AND WILL REMAIN THE PROPERTY OF THE CEMETERY COMMISSION. THE CONTRACTOR SHALL STOCKPILE THE FENCE MATERIALS ON THE CEMETERY LAND FOR USE BY THE CEMETERY AT A LATER DATE. CONTACT BETTY SWEET, CEMETERY COMMISSION, AT (802) 484-3397 AT LEAST ONE WEEK IN ADVANCE OF ANY WORK COMMENCING ON THE CEMETERY PROPERTY. THE REMOVAL OF THE FENCE WILL BE PAID FOR AS ITEM 620.55, "REMOVAL OF EXISTING FENCE".

   B) THE FENCING WILL BE REPLACED WITH A SPLIT RAIL FENCE SIMILAR TO THE EXISTING. THE FENCING SHALL BE LOCATED OUTSIDE THE TOWN'S AND STATE'S RIGHT OF WAY. THE RESIDENT ENGINEER SHALL CONSULT WITH BETTY SWEET, CEMETERY COMMISSION TO DETERMINE THE EXACT LOCATION OF THE FENCING. THIS WORK SHALL BE PAID FOR AS ITEM 620.90, "MISCELLANEOUS FENCE (WOOD SPLIT RAIL)".

38. A) THE CONTRACTOR SHALL REPLACE THE GATE LOCATED AT STATION 16+05 LT (+/-) WITH A NEW GATE AS DETAILED ON VAOT STANDARD F4. THE CONTRACTOR SHALL CONSULT WITH BETTY SWEET OF THE CEMETERY COMMISSION AS TO THE LOCATION OF THE GATE. THE RESIDENT ENGINEER SHALL DETERMINE THE FINAL LOCATION OF THE GATE. PAYMENT FOR THE GATE AND ITS INSTALLATION SHALL BE MADE UNDER ITEMS 620.16, "GATE FOR CHAIN-LINK FENCE, 6 FEET" AND 620.21, "BRACING ASSEMBLY FOR CHAIN-LINK FENCE, 6 FEET."

   B) THE EXISTING GATE SHALL BE REMOVED AND STOCKPILED AT A LOCATION DETERMINED BY THE RESIDENT ENGINEER IN CONJUNCTION WITH BETTY SWEET OF THE CEMETERY COMMISSION. THIS WORK WILL BE INCIDENTAL TO PAY ITEM 620.16, "GATE FOR CHAIN-LINK FENCE, 6 FT".

39. A WATER QUALITY AND QUANTITY TEST WILL BE PERFORMED FOR THE WELLS LOCATED AT STA. 11+97.9 LT. & STA. 15+42.0 RT. THIS WORK WILL BE PERFORMED BY AGENCY STAFF AND/OR DESIGNEES.

40. ANY STONE REMOVED FROM THE EXISTING STONEWALL LOCATED AT APPROXIMATELY STATION 12+25 RT TO STATION 13+85 RT WILL BE SAVED AND WILL REMAIN THE PROPERTY OF MR. PETER BENNETT (PROPERTY OWNER). THE CONTRACTOR SHALL REMOVE AND STOCKPILE THE STONE AT A LOCATION ON MR. BENNETT'S PROPERTY AGREED UPON BY MR. BENNETT AND THE RESIDENT ENGINEER. THIS WORK WILL BE PAID FOR WITH ITEM 608.25, "ALL PURPOSE EXCAVATOR RENTAL, TYPE I".

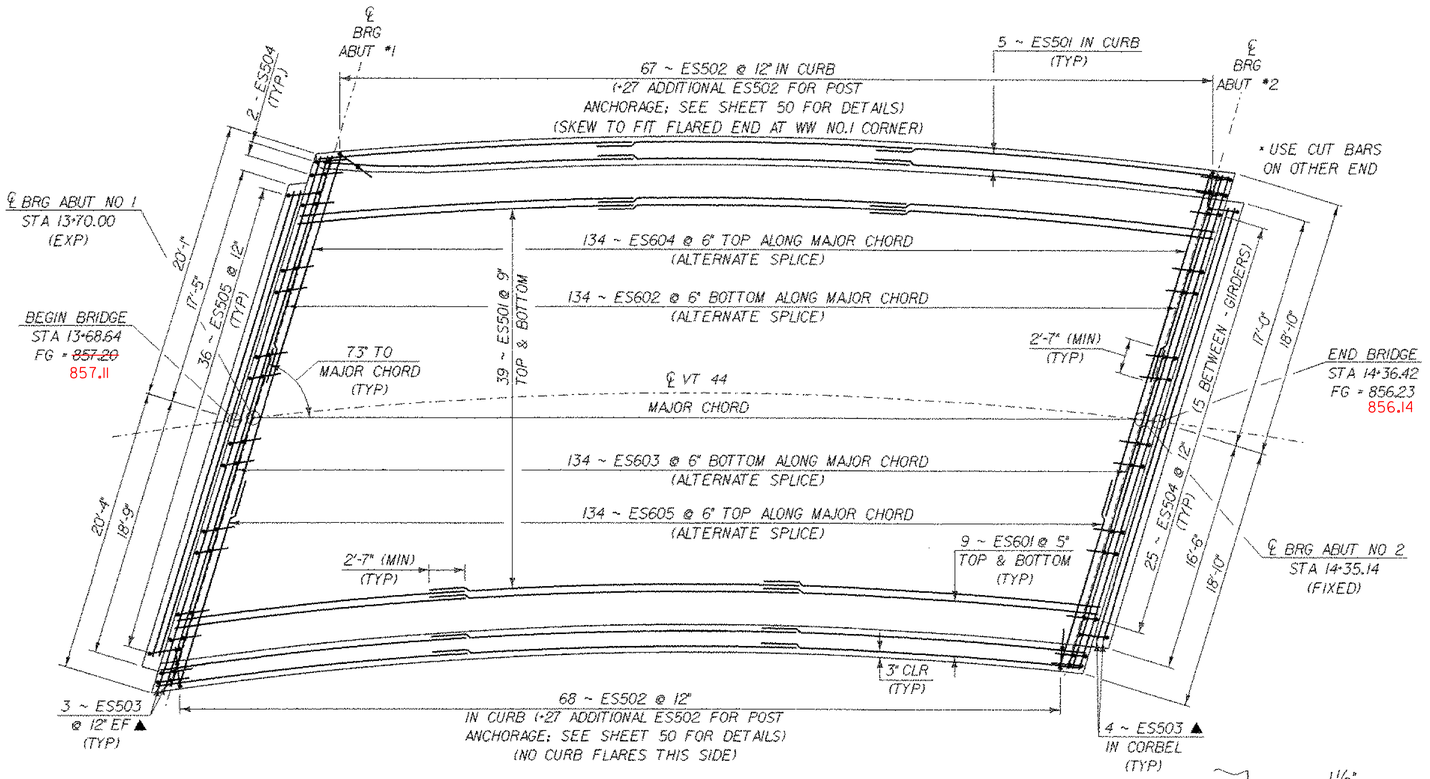
WELL AT STATION 15+42 RT.

41. A) CONSTRUCTION OF THE NEW WELL HEAD BOX AND CAP LOCATED AT STA. 15+42 RT. SHALL BE AS DETAILED ON SHEET 59. THE CONTRACTOR SHALL KEEP CONTAMINANTS FROM ENTERING THE WELL HEAD DURING CONSTRUCTION.

   B) THE RETAINING WALL LOCATED AT STA. 15+43.4 RT. SHALL BE BUILT AS DETAILED ON SHEET 59. THE CONTRACTOR SHALL USE EXTREME CARE AROUND THE WELL HEAD DURING CONSTRUCTION.

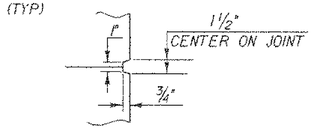
   C) THE CONTRACTOR SHALL USE ONLY A NON-VIBRATORY ROLLER WHEN COMPACTING ANY MATERIALS WITHIN 100 FEET OF THE WELL AT STA 15+42 RT.

PROJECT NAME:	READING
PROJECT NUMBER:	BRS 0148(6)S
FILE NAME: PW/85e034/Structures/se034gen.xls	PLOT DATE: 11/29/2005
PROJECT LEADER: R. R. WHITCOMB	DRAWN BY: G. ROY
DESIGNED BY: C. CARLSON	CHECKED BY: C. CARLSON
GENERAL NOTES SHEET	SHEET 44 OF 83



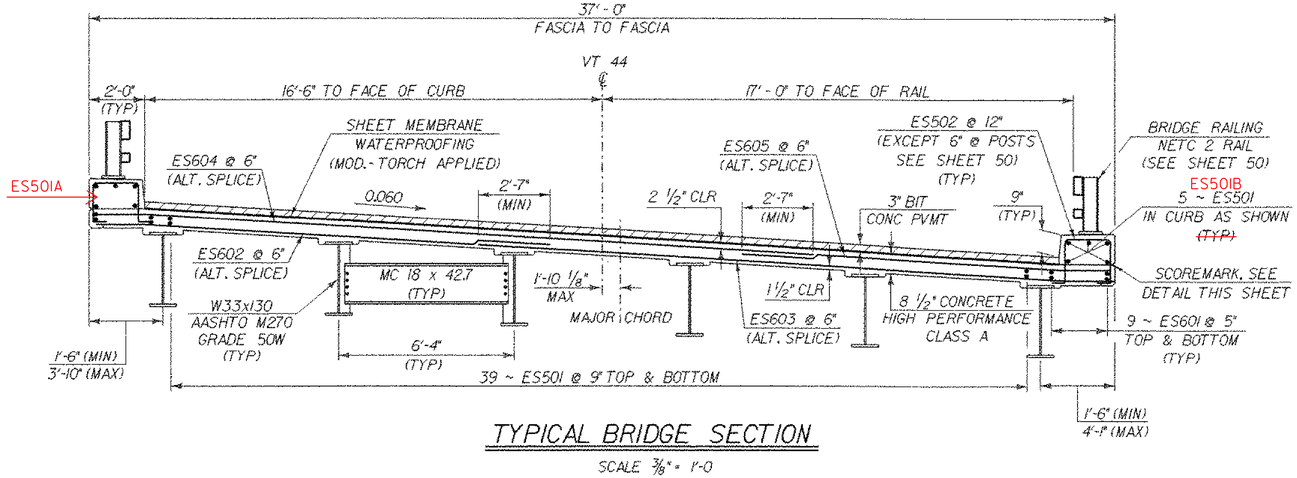
DECKING REINFORCING PLAN

SCALE: 3/16" = 1'-0"



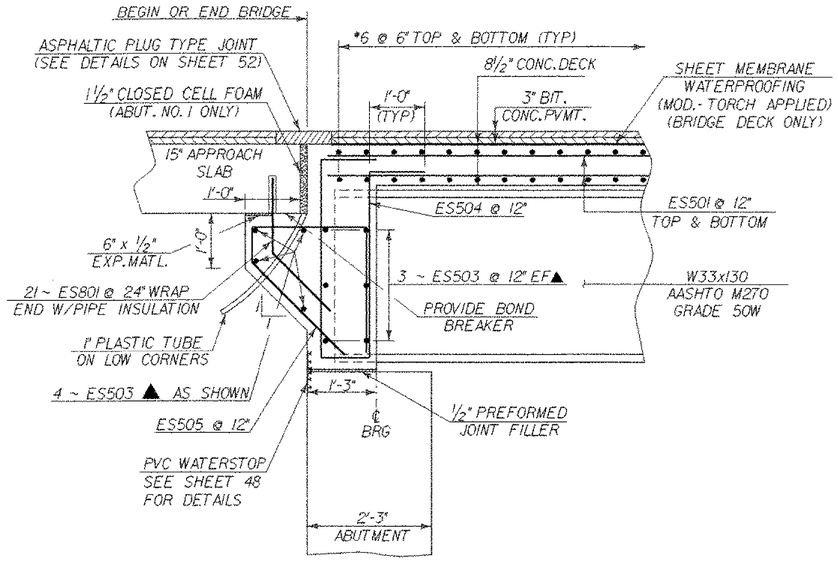
SCORE MARK DETAIL

3" CLEAR



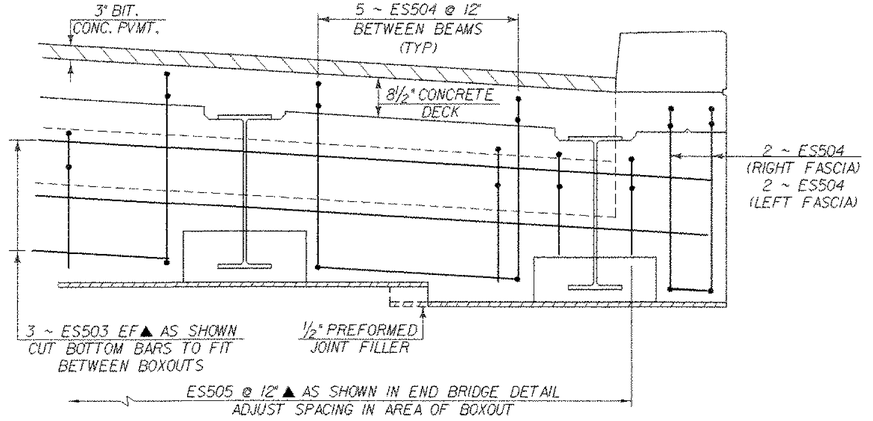
TYPICAL BRIDGE SECTION

SCALE 3/8" = 1'-0



BEGIN & END BRIDGE DETAIL (NORMAL TO ℄ BEARING

SCALE: 3/4" = 1'-0"



CURTAIN WALL ELEVATION @ ABUT. NO.1

SCALE: 3/4" = 1'-0"

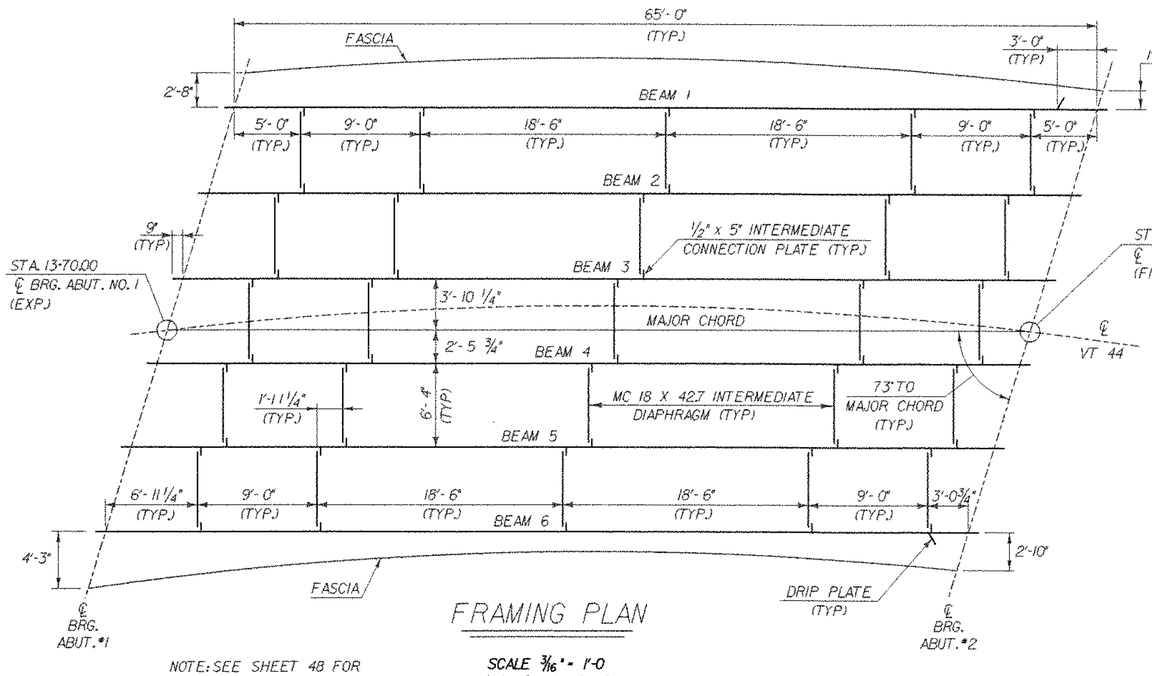
NOTES:

1. ALL REINFORCING STEEL SHALL BE EPOXY COATED
2. ALL EPOXY COATED STEEL TO BE CUT IN FIELD IS TO BE SAW CUT AND THE EXPOSED END IS TO BE TREATED AS PER SECTION 507.04
3. ▲- DENOTES BARS TO BE CUT IN THE FIELD
4. EF = EACH FACE
5. SEE SHEET 48 FOR TRANSVERSE SLAB CONSTRUCTION JOINT DETAIL.

SHEET NAME: DECK REINFORCING PLAN

PROJECT NAME: READING
PROJECT NUMBER: BRS 0148(6)S
HIGHWAY NO.: VT 44
BRIDGE NO.: 1
OVER: THE MILL BROOK

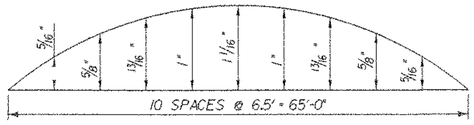
FILE NAME: PW/85e034/Structures/se034sup.dgn
PROJECT MANAGER: R. WHITCOMB
DESIGNED BY: C. CARLSON
BRIDGE SHEET NUMBER:
PLOT DATE: 17-FEB-2006
DRAWN BY: T. FILLBACH
IPARM NAME: se034drp.i
SHEET 45 OF 83



FRAMING PLAN

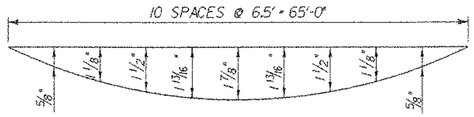
NOTE: SEE SHEET 48 FOR DIAPHRAGM AND CONNECTION DETAILS

SCALE 3/16" = 1'-0"



CAMBER DIAGRAM

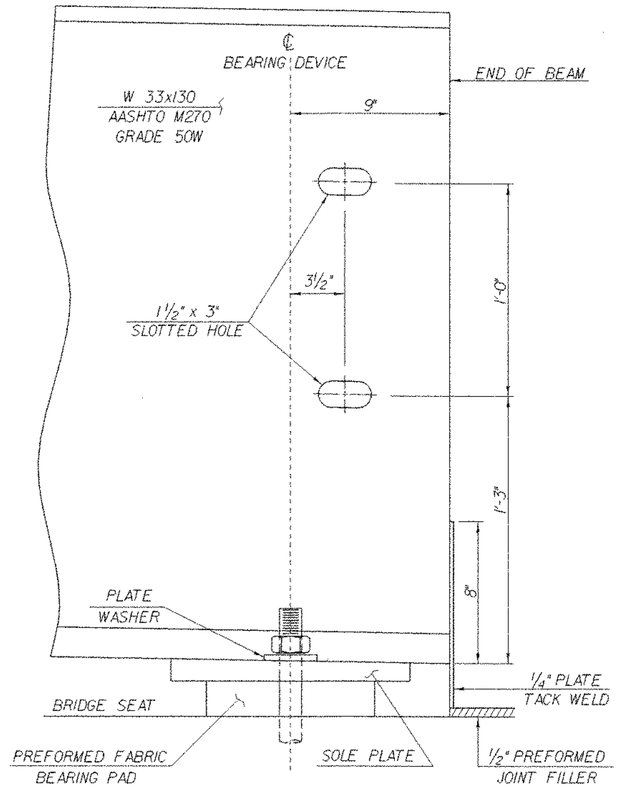
NTS



DEAD LOAD DEFLECTION

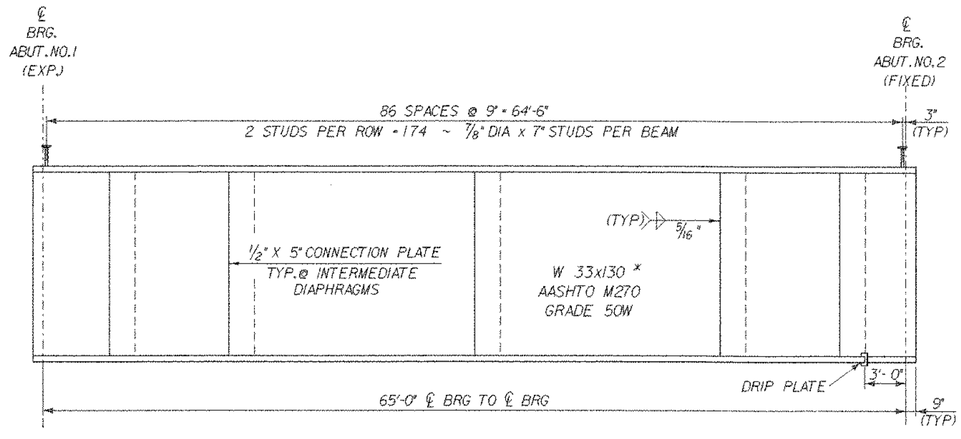
NTS

NOTE: DEAD LOAD DEFLECTION IS DUE TO BEAM, DIAPHRAGMS, DECK, CURBS, PAVEMENT AND RAILING.



END BEAM DETAIL

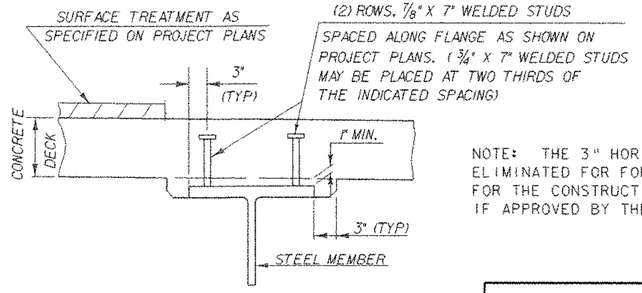
SCALE: 3" = 1'-0"



TYPICAL BEAM ELEVATION

* CVN ~ CHARPY V NOTCH TESTING

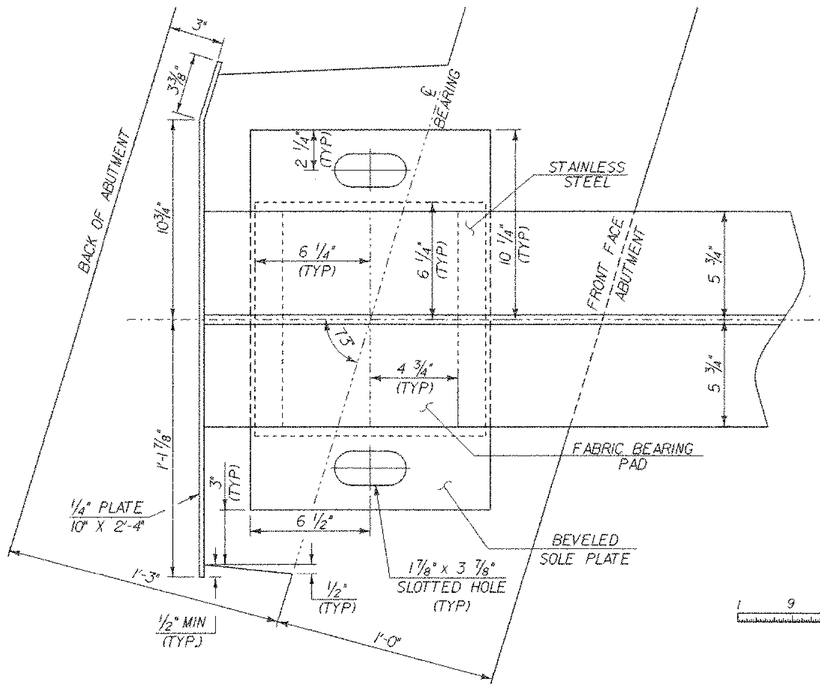
SCALE: HORZ.: 3/16" = 1'-0"
VERT.: 1" = 1'-0"



HAUNCH AND SHEAR CONNECTOR DETAILS

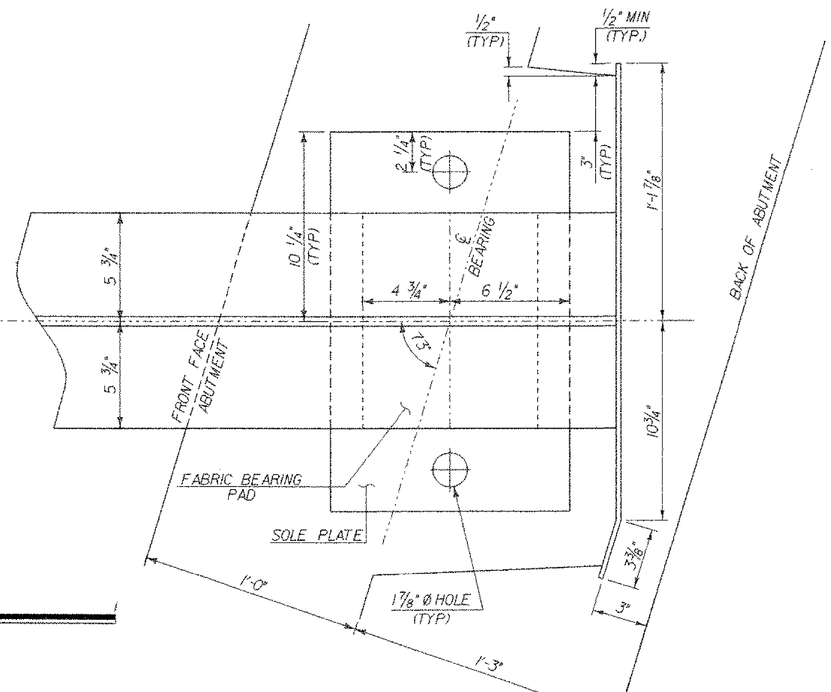
NOTE: THE 3" HORIZONTAL SECTION MAY BE ELIMINATED FOR FORMING SYSTEMS DESIGNED FOR THE CONSTRUCTION OF VERTICAL HAUNCHES IF APPROVED BY THE STRUCTURES ENGINEER

SHEET NAME: FRAMING DETAILS			
PROJECT NAME: READING		HIGHWAY NO.: VT 44	
PROJECT NUMBER: BRS 0148(6)S		BRIDGE NO.: 1	
		OVER: THE MILL BROOK	
FILE NAME: PW/85e034/Structures/se034sup.dgn		PLOT DATE: 17-FEB-2006	
PROJECT MANAGER: R. WHITCOMB		DRAWN BY: T. FILLBACH	
DESIGNED BY: C. CARLSON		IPARM NAME: se034fp.i	
BRIDGE SHEET NUMBER:		SHEET 46 OF 83	



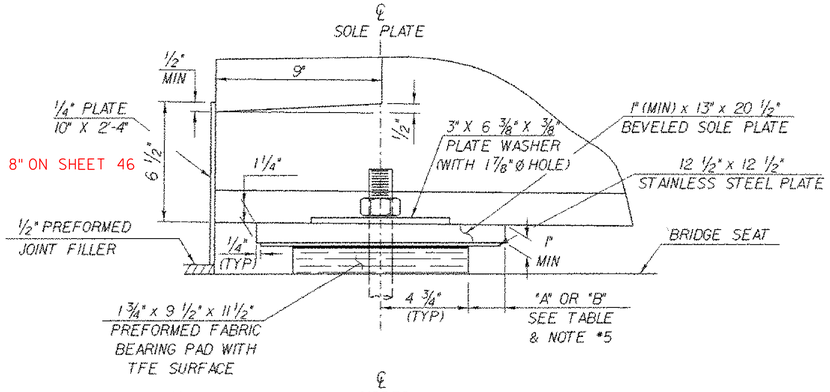
PLAN

SCALE 3" = 1'-0



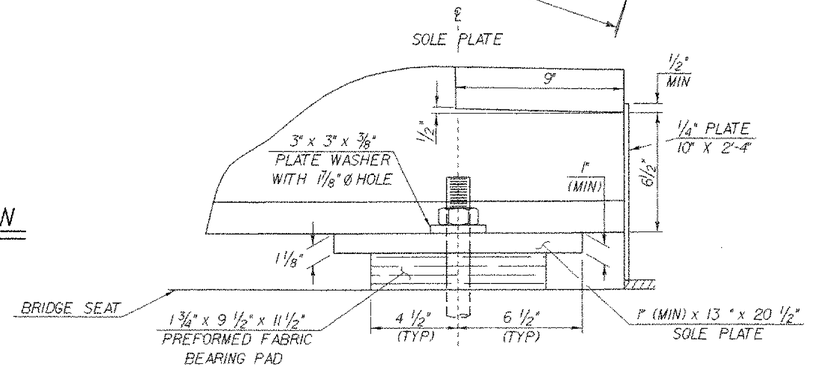
BEARING NOTES

1. Bearings shall conform to applicable subsections of section 531 & 731.
2. Bearings shall be paid for under the item 531.10 "BEARING DEVICE ASSEMBLY (FABRIC)".
3. Fabrication drawings conforming to subsection 531.03 shall be submitted to include welding and bonding procedures.
4. The concrete surface under the bearing device shall be level.
5. "A" distance is the final setting for the bearing pad after the concrete slab, curb, pavement and bridge rail are placed. "B" distance is listed for setting the bearing after the structural steel is erected and before the concrete deck and curbs have been placed. The difference is the theoretical elongation of the bottom flange due to dead load deflection. The final "A" distance, as shown in the table, must be attained within 1/16 of an inch.
6. Design criteria:
   A. Base plate to concrete design pressure = 1000 P.S.I. maximum
   B. Minimum allowable design rotation = 0.015 radians
   C. Horizontal capacity shall be a minimum of 10% of the vertical load
   D. Design load per bearing = 106 Kips.
      LL = 63 Kips
      DL = 32 Kips
      SDL = 11 Kips
7. All steel in bearing devices (except stainless) shall be AASHTO M-270, Grade 36.
8. Anchor bolts shall have a minimum of 15" embedment into the concrete and shall conform to subsection 714.08 in the "Vermont Specifications".
9. All bearing devices shall be galvanized or metalized as per subsection 531.04(b) and 506.15 of the Standard Specifications for Construction. Areas of galvanizing or metalizing damaged by field welding or handling shall be painted with a zinc rich paint in accordance with Supplemental Specification 513.
10. All the anchor bolts, nuts and washers shall be galvanized. All washers shall be 3/8" plate (minimum). Payment for anchor bolts, nuts and washers shall be included in the unit bid price for "BEARING DEVICE ASSEMBLY (FABRIC)".



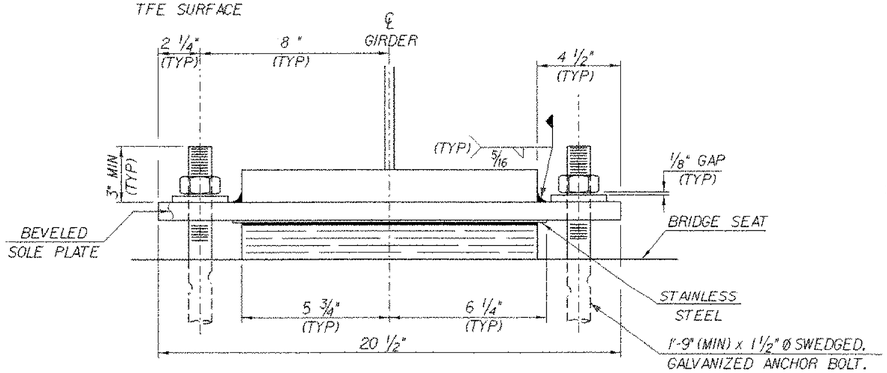
SIDE ELEVATION

SCALE 3" = 1'-0



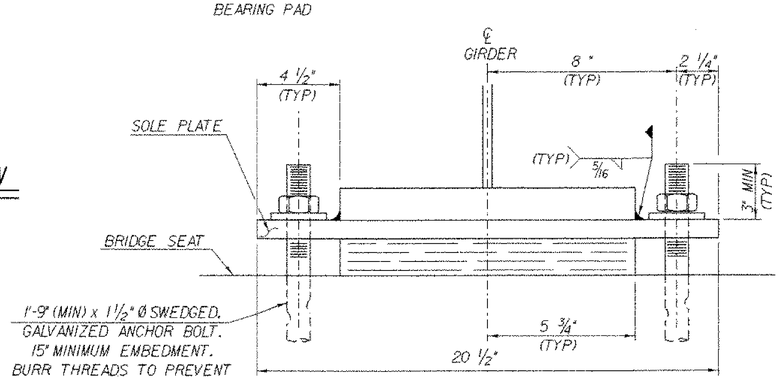
FINAL

TEMP	"A" DIST	"B" DIST
-30°F	2 3/8"	2 11/16"
-15°F	2 5/16"	2 5/8"
0°F	2 1/4"	2 9/16"
15°F	2 1/8"	2 7/16"
30°F	2 1/16"	2 3/8"
45°F	2"	2 5/16"
60°F	1 15/16"	2 1/4"
75°F	1 7/8"	2 3/16"
90°F	1 3/4"	2 1/16"
105°F	1 11/16"	2"
120°F	1 5/8"	1 15/16"



FRONT VIEW

SCALE 3" = 1'-0



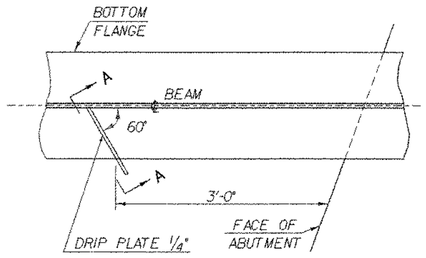
EXPANSION BEARING @ ABUT #1

FIXED BEARING @ ABUT #2

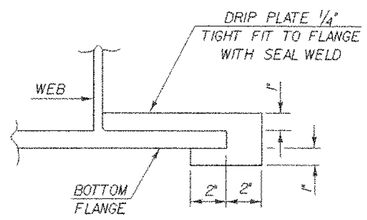
SHEET NAME: BEARING DEVICE DETAILS

PROJECT NAME: READING
PROJECT NUMBER: BRS 0148(6)S
HIGHWAY NO.: VT 44
BRIDGE NO.: 1
OVER: THE MILL BROOK

FILE NAME: PW/85e034/Structures/se034sup.dgn
PROJECT MANAGER: R. WHITCOMB
DESIGNED BY: C. CARLSON
BRIDGE SHEET NUMBER:
PLOT DATE: 17-FEB-2006
DRAWN BY: T. FILLBACH
IPARM NAME: se034bdd.1
SHEET 47 OF 83

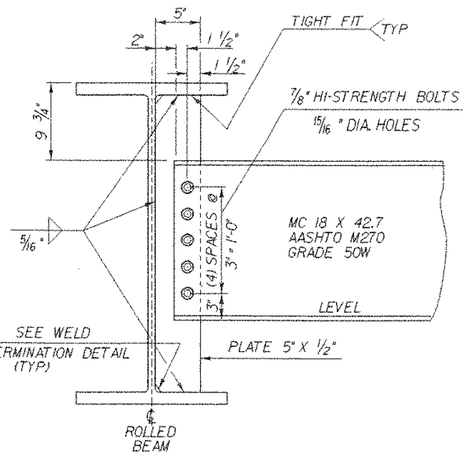


PLAN DRIP PLATE



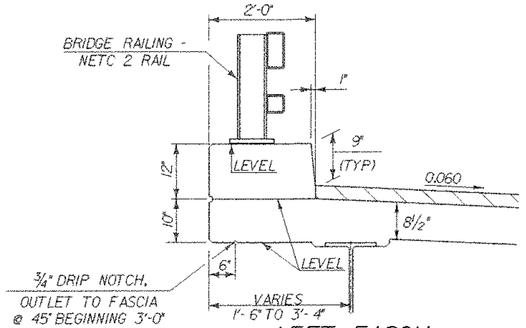
SECTION A - A

NOTE: DRIP PLATES SHALL BE PLACED ON OUTSIDE EDGE OF FASCIA GIRDERS ON THE HIGH SIDE OF ABUTMENTS OR AS INDICATED ON PROJECT PLANS.



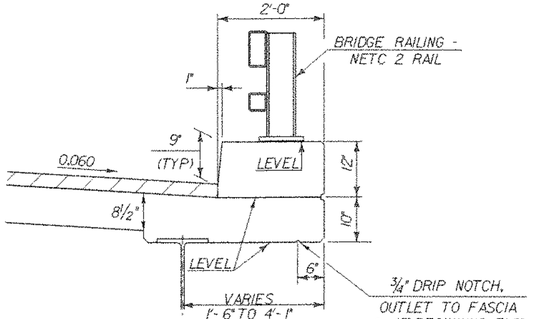
NOTE: HI-STRENGTH BOLTS, NUTS AND WASHERS SHALL CONFORM TO AASHTO DESIGNATION M164.

INTERMEDIATE DIAPHRAGMS



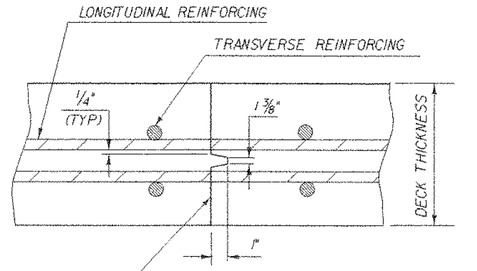
LEFT FASCIA CURB AND RAIL DETAIL

SCALE: 3/4" = 1'-0"



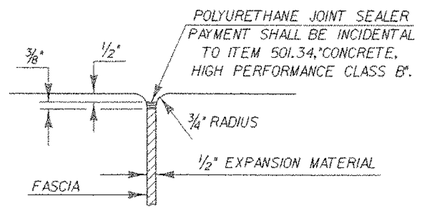
RIGHT FASCIA CURB AND RAIL DETAIL

SCALE: 3/4" = 1'-0"

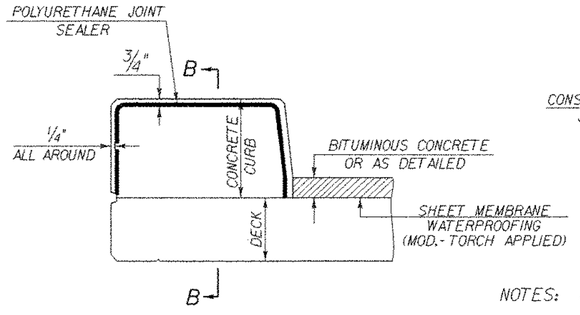


APPLY EPOXY BONDING COMPOUND BEFORE PLACING NEW CONCRETE. PAYMENT SHALL BE INCIDENTAL TO ITEM 501.33, "CONCRETE, HIGH PERFORMANCE CLASS A".

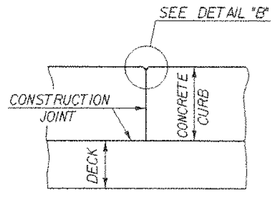
TRANSVERSE BRIDGE SLAB CONSTRUCTION JOINT DETAILS



JOINT BETWEEN FASCIA AND WINGWALL

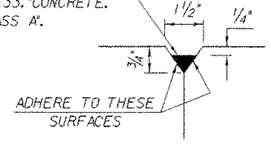


TYPICAL SECTION THROUGH CONCRETE CURB CONSTRUCTION JOINT



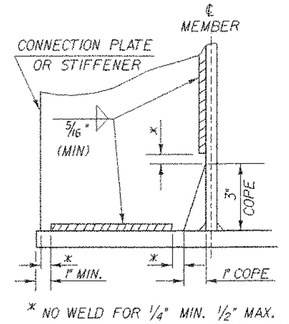
SECTION B - B

POLYURETHANE JOINT SEALER PER SUBSECTION 524.06C COLOR TO MATCH CONCRETE. PAYMENT SHALL BE INCIDENTAL TO ITEM 501.33, "CONCRETE, HIGH PERFORMANCE CLASS A".



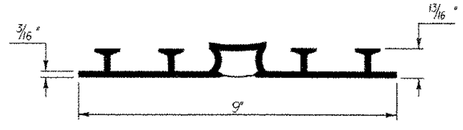
DETAIL "B"

NOTES:
1. CONSTRUCTION JOINTS THROUGH CONCRETE CURBS SHALL BE SPACED MAXIMUM 15'-0" CENTER TO CENTER AND SHALL BE 1'-6" MINIMUM FROM THE CENTER OF THE NEAREST BRIDGE RAIL POST. CONCRETE SHALL BE PLACED IN ALTERNATING SECTIONS WITH A MINIMUM OF 48 HOURS DELAY BETWEEN ADJACENT POURS.
2. LONGITUDINAL REINFORCING SHALL PASS THROUGH CONCRETE CURB CONSTRUCTION JOINTS.
3. POLYURETHANE MEMBRANE AND BLAST CLEANING SHALL BE INCLUDED IN THE UNIT PRICE BID FOR SHEET MEMBRANE WATERPROOFING.



* NO WELD FOR 1/4" MIN. 1/2" MAX. (EXCEPT MUST MAINTAIN 1" MINIMUM FROM EDGE OF FLANGE)

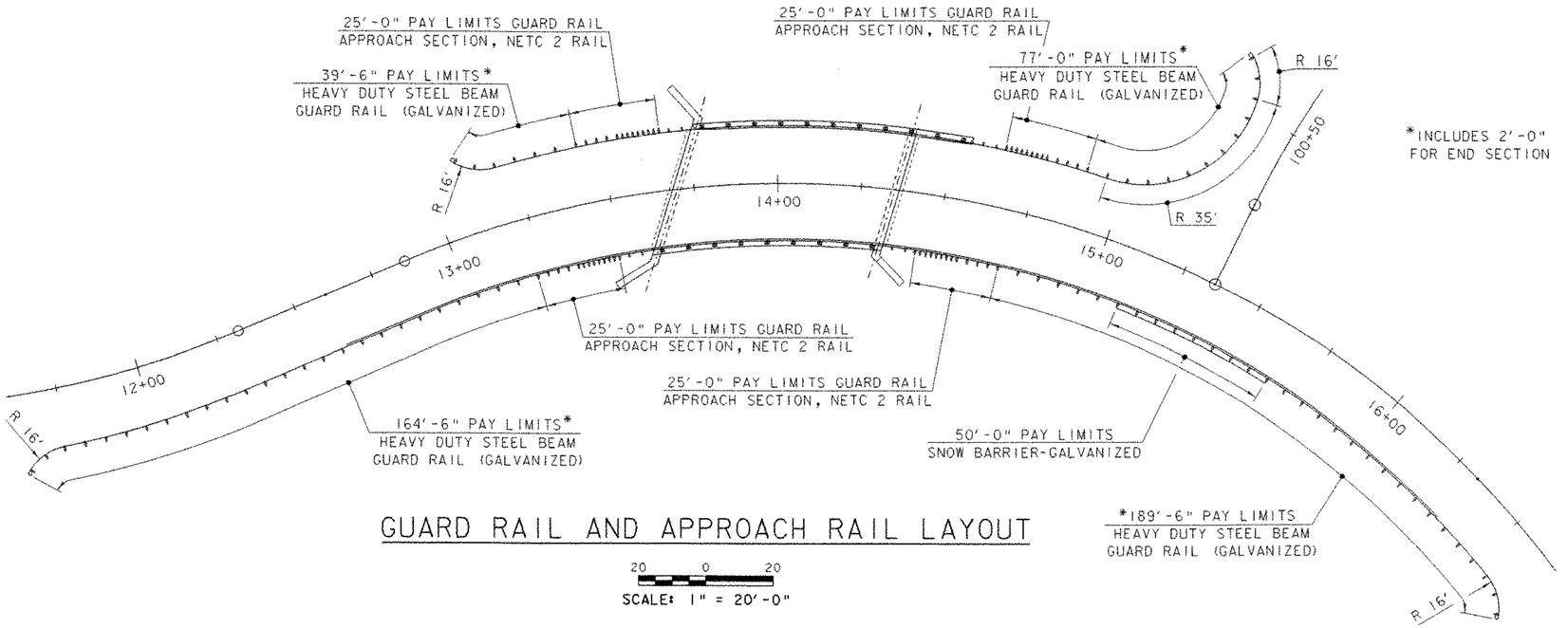
WELD TERMINATION AND COPING DETAILS FOR STEEL MEMBERS



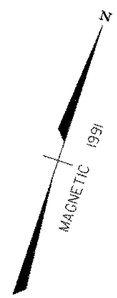
P.V.C. WATERSTOP FOR EXPANSION JOINTS

THE COST FOR P.V.C. WATERSTOP SHALL BE INCIDENTAL TO ITEM 501.34, "CONCRETE, HIGH PERFORMANCE CLASS B". OTHER CONFIGURATIONS MAY BE USED UPON APPROVAL OF THE STRUCTURES ENGINEER.

SHEET NAME: SUPERSTRUCTURE DETAILS	
PROJECT NAME: READING	HIGHWAY NO.: VT 44
PROJECT NUMBER: BRS 0148(6)S	BRIDGE NO.: 1
	OVER: THE MILL BROOK
FILE NAME: PW/85e034/Structures/se034sup.dgn	PLOT DATE: 17-FEB-2006
PROJECT MANAGER: R. WHITCOMB	DRAWN BY: T. FILLBACH
DESIGNED BY: C. CARLSON	IPARM NAME: se034sd.i
BRIDGE SHEET NUMBER:	SHEET 48 OF 83

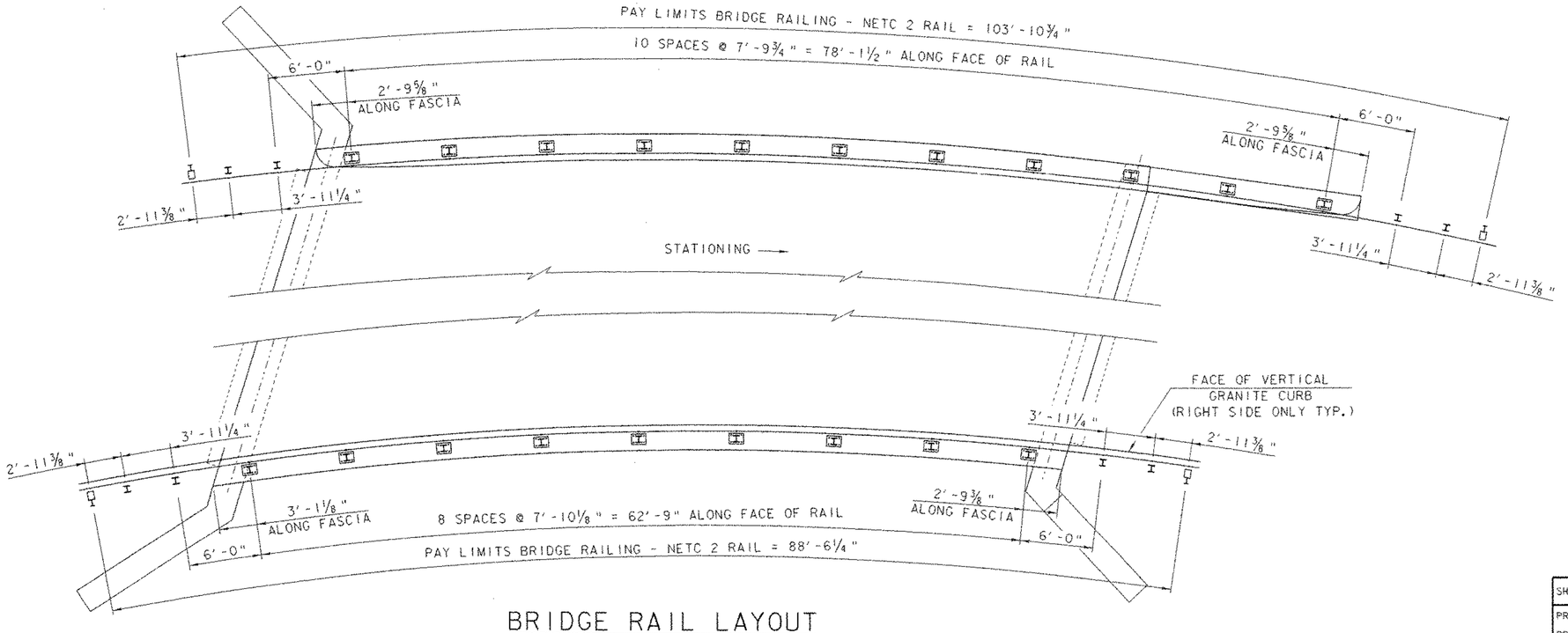


*INCLUDES 2'-0"
FOR END SECTION



GUARD RAIL AND APPROACH RAIL LAYOUT

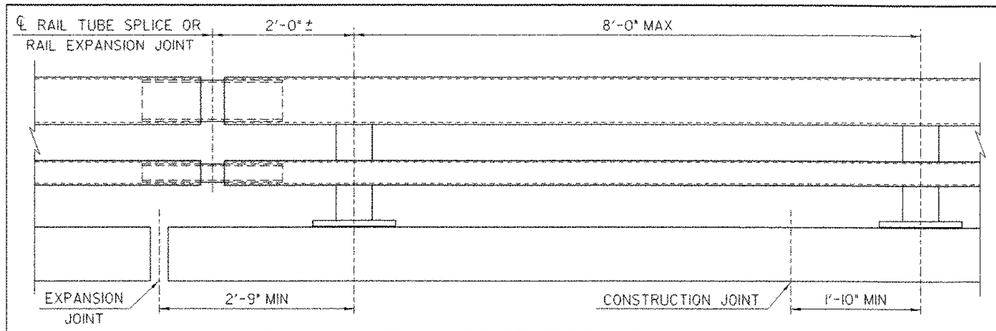
20 0 20
SCALE: 1" = 20'-0"



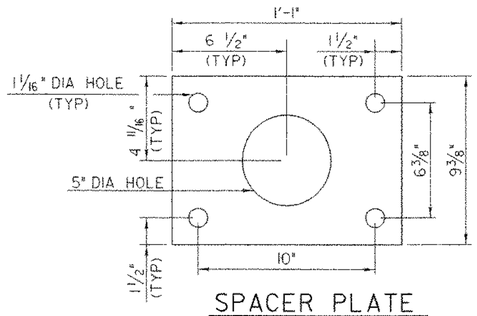
BRIDGE RAIL LAYOUT

5 0 5
SCALE: 1" = 5'-0"

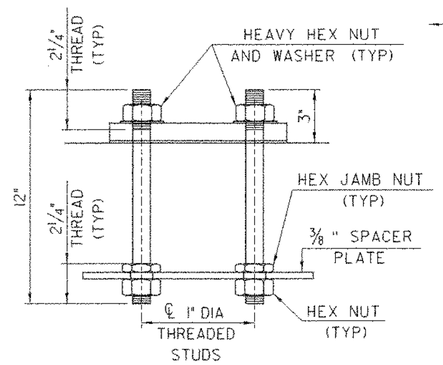
SHEET NAME:	RAILING LAYOUT SHEET		
PROJECT NAME:	READING	HIGHWAY NO.:	VT 44
		BRIDGE NO.:	1
PROJECT NUMBER:	BRS 0148(6)S	OVER:	THE MILL BROOK
FILE NAME:	PW/85e034/Structures/se034ral.dgn	PLOT DATE:	17-FEB-2006
PROJECT MANAGER:	R. WHITCOMB	DRAWN BY:	G. ROY
DESIGNED BY:	C. CARLSON	IPARM NAME:	se034ral1
BRIDGE SHEET NUMBER:		SHEET	49 OF 83



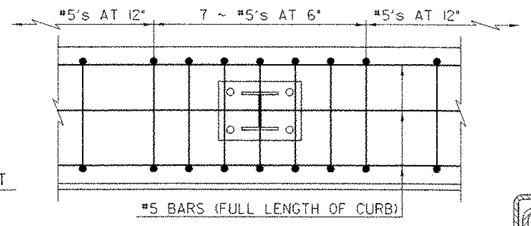
BRIDGE RAILING ELEVATION



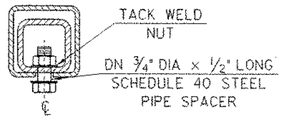
SPACER PLATE

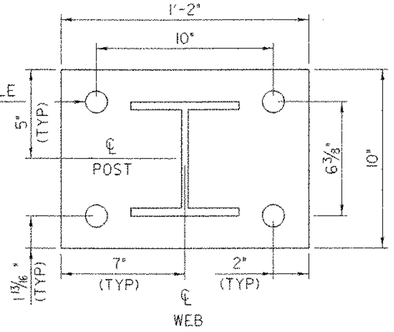


RAIL POST ANCHORAGE

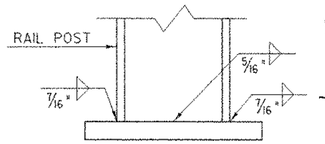


CURB REINFORCING PLAN





POST AND BASE PLATE



BASE WELD DETAIL

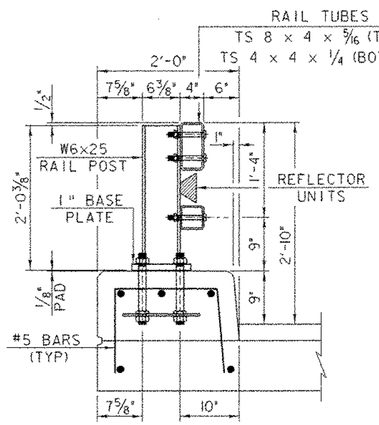
⅝" DIA TAPPED HOLE IN SPLICE TUBE AND 1⅛" x 'C' SLOT IN RAIL TUBE FOR BOLT AND PLAIN HARDENED WASHER

EXPANSION JOINT SECTION

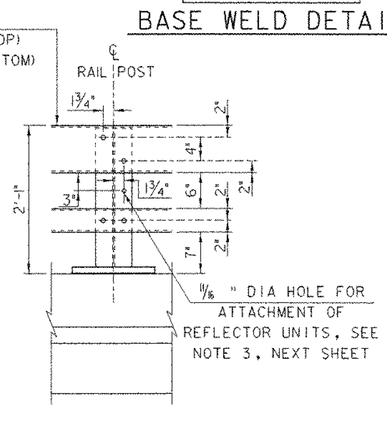
FOR DETAILS NOT SHOWN, SEE "RAIL TUBE SPLICE SECTION."

SPLICE TABLE					
T	A	B	C	L	X
N/A	4"	2"	--	20"	¾"
EXPANSION JOINT TABLE					
<4"	4"	2"	2½"	20"	2½"
>4" <6½"	5½"	2⅜"	3½"	23¾"	4"
>6½" <9"	6½"	3⅜"	9"*	27¾"	5"
>9" <13"	8½"	4⅜"	11"*	33¾"	7"

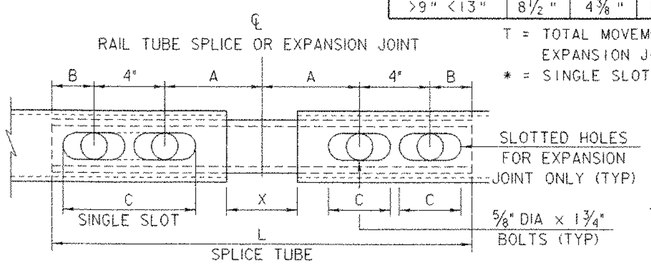
T = TOTAL MOVEMENT BETWEEN BRIDGE EXPANSION JOINTS. SEE NOTE 6.
* = SINGLE SLOT



TYPICAL SECTION

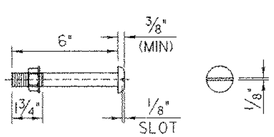


ELEVATION



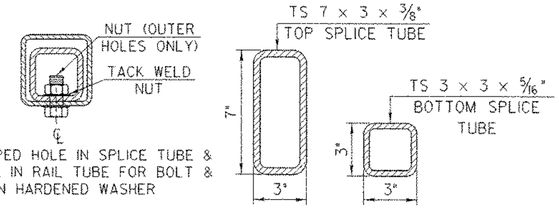
RAIL TUBE SPLICE AND RAIL EXPANSION JOINT DETAIL

(BOTTOM VIEW)



¾" DIA M164 (TYPE I) ROUND HEAD BOLT

(WITH WASHER AND PREVAILING TORQUE TYPE LOCK NUT)
(SEE NOTE #9)
ONLY FULL DIAMETER BODY BOLTS WILL BE ALLOWED.



RAIL TUBE SPLICE SECTION

NOTES

1. ALL WORK AND MATERIALS SHALL CONFORM TO THE PROVISIONS OF SECTION 525 - "RAILINGS" OF THE STANDARD SPECIFICATION FOR CONSTRUCTION.
2. TUBING AND POSTS SHALL MEET THE REQUIREMENTS OF SECTION 732 - "RAILING MATERIALS" OF THE STANDARD SPECIFICATIONS FOR CONSTRUCTION EXCEPT THE DROP-WEIGHT TEAR TEST IN SECTION 732 SHALL NOT APPLY TO THE STRUCTURAL TUBING SHOWN ON THIS SHEET.
3. ALL EXPOSED CUT OR SHEARED EDGES SHALL BE ROUNDED TO A 1/16" RADIUS AND BE FREE OF BURRS.
4. RAIL POSTS SHALL BE SET NORMAL TO GRADE.
5. SECTIONS OF RAIL TUBE SHALL BE ATTACHED TO A MINIMUM OF TWO (2) RAIL POSTS AND PREFERABLY TO AT LEAST FOUR (4) POSTS.
6. RAIL TUBE EXPANSION JOINTS SHALL BE PROVIDED IN ANY RAIL BAY SPANNING A SUPERSTRUCTURE EXPANSION JOINT. EXPANSION JOINT WIDTH SHALL BE "X" AT 45°F AND WILL BE ADJUSTED IN THE FIELD BY THE ENGINEER FOR OTHER TEMPERATURES.
7. ALL PARTS SHALL BE GALVANIZED AFTER FABRICATION IN ACCORDANCE WITH AASHTO M111, EXCEPT HARDWARE, WHICH SHALL MEET THE REQUIREMENTS OF AASHTO M232.
8. RAIL POST ANCHORING NUTS SHALL BE TIGHTENED TO A SNUG FIT AND GIVEN AN ADDITIONAL ONE-EIGHTH TURN.
9. RAIL TUBES SHALL BE ATTACHED USING ¾" FULL DIAMETER BODY AASHTO M164 (TYPE I) ROUND HEAD BOLTS INSERTED THROUGH THE FACE OF THE TUBE. HOLES IN POSTS SHALL BE 1/16" LARGER THAN THE BOLT SIZE.
10. HOLES IN RAILS FOR RAIL TUBE ATTACHMENT MAY BE FIELD-DRILLED. HOLES SHALL BE COATED WITH AN APPROVED SEALER PRIOR TO ERECTION.
11. IF THERE IS A CONFLICT BETWEEN THE DETAILS SHOWN ON THIS SHEET AND THE DESIGN, THE REQUIREMENTS OF THE DESIGN DRAWINGS SHALL BE FOLLOWED.
12. ANY BENDING OF RAIL SHALL BE BY SHOP PROCEDURE ONLY.
13. THE FABRICATOR SHALL SUBMIT FABRICATION DRAWINGS, INCLUDING WELDING PROCEDURES TO THE STRUCTURES SECTION FOR APPROVAL IN ACCORDANCE WITH SUBSECTION 506.04 OF THE STANDARD SPECIFICATIONS. ALL WELDING SHALL CONFORM WITH SUBSECTION 506.10.
14. RAIL POSTS AND BASE PLATES SHALL BE TESTED FOR IMPACT PROPERTIES IN ACCORDANCE WITH ASTM A-370 CHARPY IMPACT TESTING USING TYPE A SPECIMEN.

MATERIALS

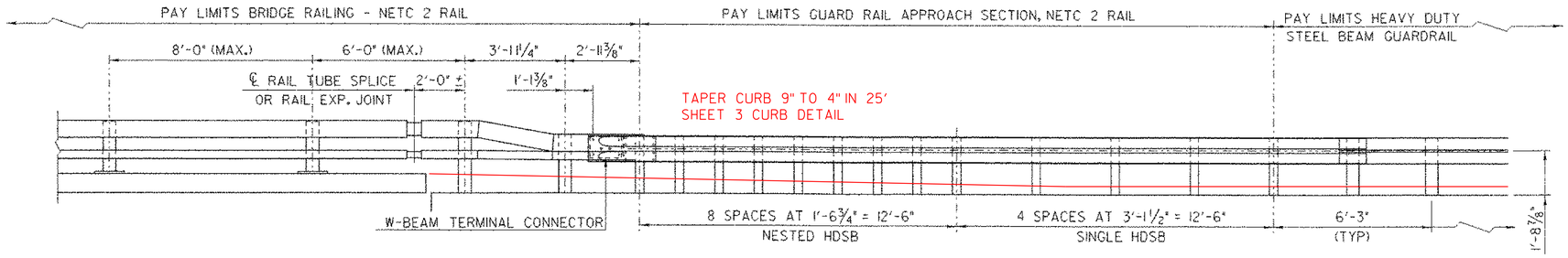
RAIL TUBES.....ASTM A500, GRADE B OR ASTM A501
RAIL POSTS AND BASE PLATES.....ASTM A709A709M, GRADE 50
ALL OTHER SHAPES AND PLATES.....ASTM A709/A709M, GRADE 36
ANCHOR STUDS.....ASTM A449
ALL OTHER BOLTS (UNLESS NOTED).....AASHTO M164, TYPE 1

NUTS FOR AASHTO M164 BOLTS AND FOR ANCHOR STUDS SHALL COMPLY WITH AASHTO M291 (ASTM A563).

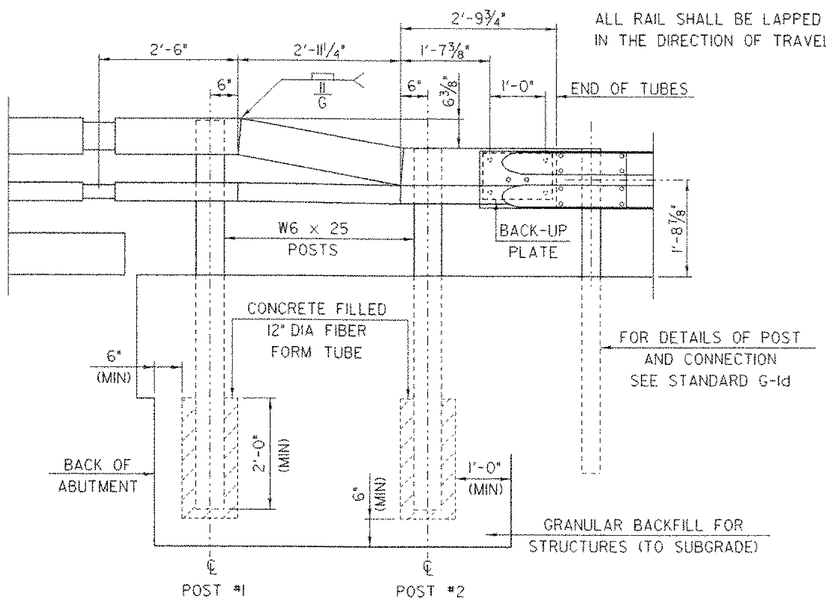
WASHERS SHALL COMPLY WITH AASHTO M293 (ASTM F436) SPECIFICATIONS.

⅛" PAD SHALL COMPLY WITH STANDARD SPECIFICATION SUBSECTION 731.01 OR 731.02.

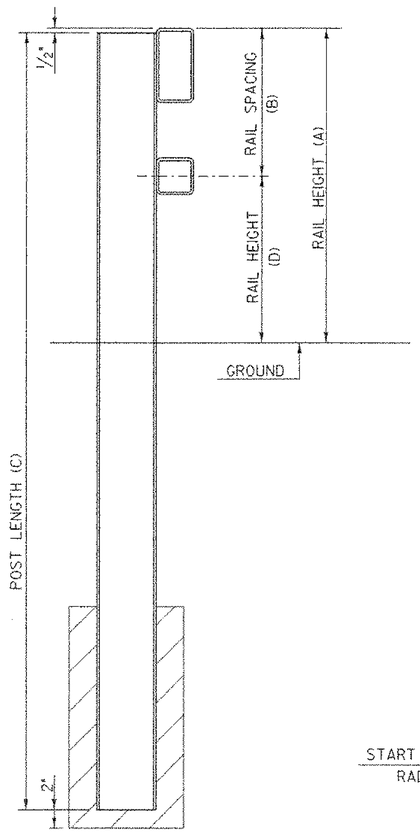
SHEET NAME:	NETC BRIDGE RAIL DETAILS (1)
PROJECT NAME:	READING
PROJECT NUMBER:	BRS 0148(6)S
HIGHWAY NO.:	VT 44
BRIDGE NO.:	1
OVER:	THE MILL BROOK
FILE NAME:	PW/85e034/Structures/se034rail.dgn
PLOT DATE:	17-FEB-2006
PROJECT MANAGER:	R. WHITCOMB
DRAWN BY:	G. ROY
DESIGNED BY:	C. CARLSON
IPARM NAME:	se034rail
BRIDGE SHEET NUMBER:	
SHEET	50 OF 83



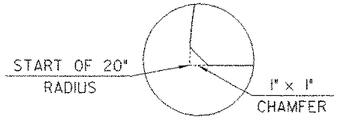
RAILING TRANSITION ELEVATION



ELEVATION

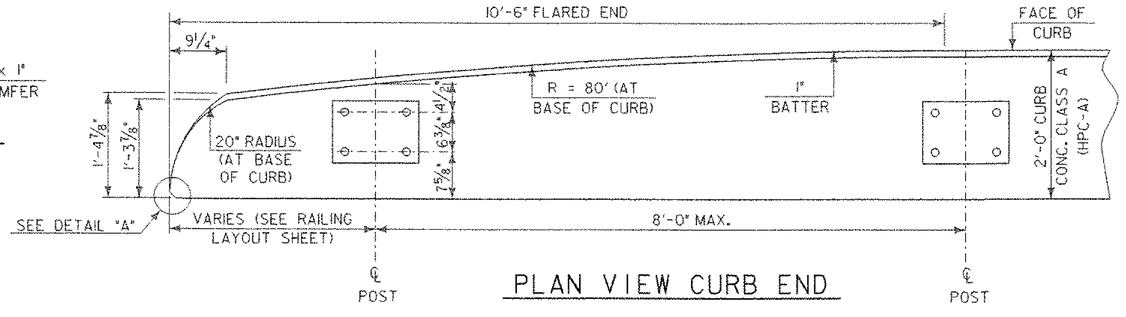


TYPICAL SECTION

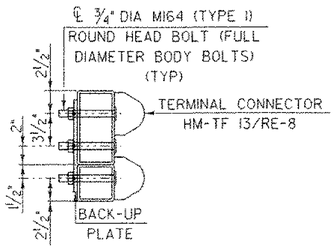


DETAIL "A"

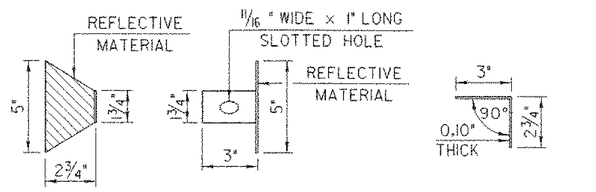
POST NUMBER	RAIL HEIGHT (A)	RAIL SPACING (B)	POST LENGTH (C)	RAIL HEIGHT (D)
1	2'-10"	1'-4"	7'-0"	1'-6"
2	2'-3⅝"	10"	6'-5"	1'-5⅝"



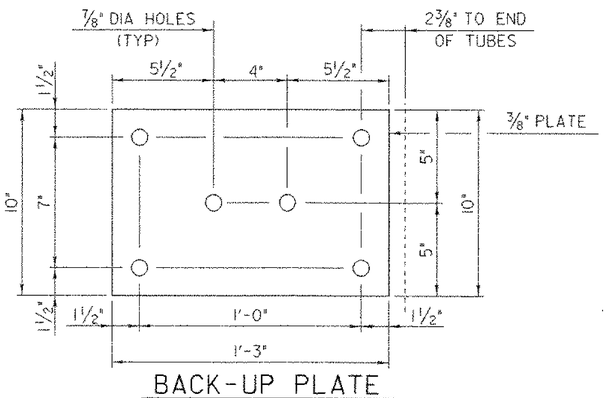
PLAN VIEW CURB END



SECTION THROUGH GUARD RAIL CONNECTION AT TERMINAL CONNECTOR



DELINEATION DEVICE DETAILS



BACK-UP PLATE

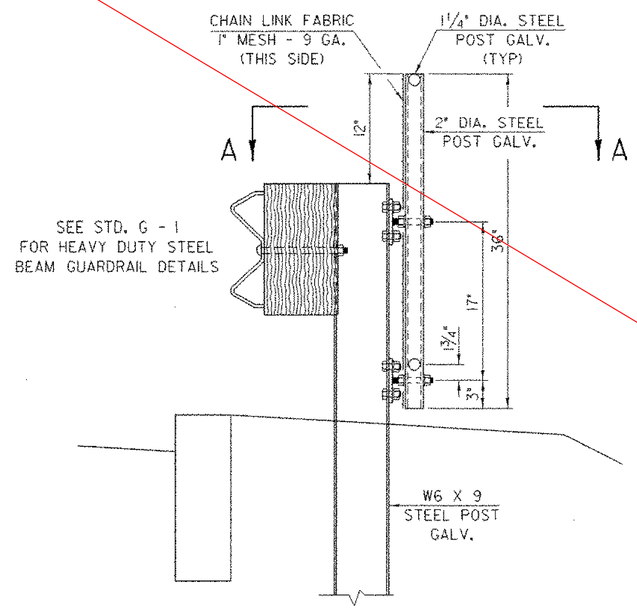
NOTES

1. REFER TO PREVIOUS SHEET FOR ADDITIONAL DETAILS, NOTES AND MATERIAL SPECIFICATIONS.
2. TO FACILITATE FIELD FIT - UP OF THE TRANSITION RAILING, POSTS SHALL BE SET LOOSELY INTO FIBER FORM TUBES WHILE TRANSITION PARTS ARE BEING ASSEMBLED. POST HOLES SHALL BE BACKFILLED WITH A CONCRETE MIX APPROVED BY THE ENGINEER. PAYMENT FOR COMPONENTS, INCLUDING BACKUP PLATE AND END TERMINAL CONNECTOR FOR GUARD RAIL, AUGERING, FIBER FORM TUBES AND CONCRETE, AND INSTALLATION SHALL BE CONSIDERED INCIDENTAL TO ITEM 525.33, "BRIDGE RAILING - NETC 2 RAIL".
3. THE REFLECTORIZED ALUMINUM DELINEATION IS TO BE ERECTED EVERY 30' (OR CLOSEST POST) WITH A ⅝" DIAMETER BOLT. DELINEATORS SHALL MEET SPECIFICATION REQUIREMENTS FOR ASTM B209 ALLOY 5052-H32.
4. REFLECTIVE MATERIAL SHALL MEET REQUIREMENTS OF SUBSECTION 750.08 OF THE STANDARD SPECIFICATIONS AND SHALL BE OF ENCAPSULATED LENS SILVER OR AMBER. AMBER IS TO BE INSTALLED ON THE DRIVER'S LEFT AND SILVER ON THEIR RIGHT.
5. ON BRIDGES WITH A SIDEWALK, DELINEATORS ARE NOT TO BE INSTALLED ON THE SIDEWALK SIDE OF THE BRIDGE (I.E. DELINEATORS INSTALLED ONLY ON THE CURB SIDE AND ON THE APPROACH ON THE CURB SIDE). PAYMENT SHALL BE SUBSIDIARY TO ALL OTHER ITEMS.
6. ALL APPROACH RAIL SPLICES SHALL BE LAPPED IN THE DIRECTION OF TRAFFIC FLOW.
7. SEE STANDARDS G-1 AND G-1d FOR ADDITIONAL INFORMATION.

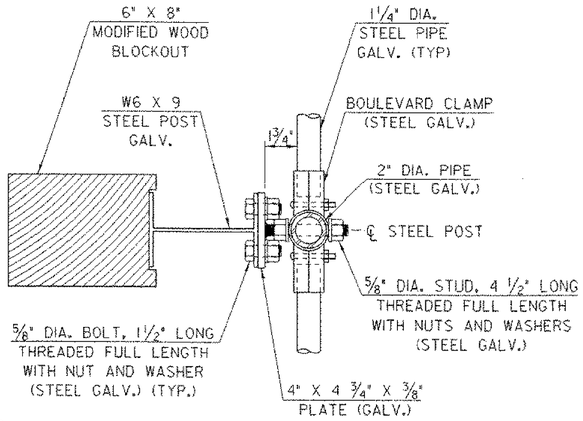
SHEET NAME: NETC BRIDGE RAIL DETAILS (2)

PROJECT NAME: READING
PROJECT NUMBER: BRS 0148(6)S
HIGHWAY NO.: VT 44
BRIDGE NO.: 1
OVER: THE MILL BROOK

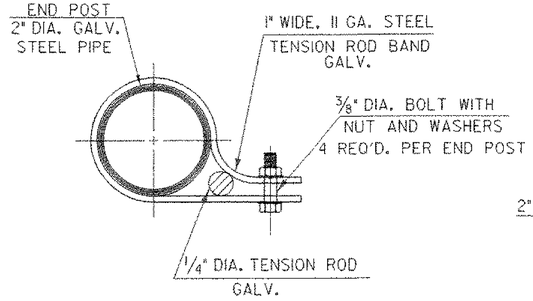
FILE NAME: PW/85e034/Structures/se034rail.dgn
PROJECT MANAGER: R. WHITCOMB
DESIGNED BY: C. CARLSON
BRIDGE SHEET NUMBER:
PLOT DATE: 17-FEB-2006
DRAWN BY: G. ROY
IPARM NAME: se034rd2.1
SHEET 51 OF 83



SNOW BARRIER TYPICAL SECTION

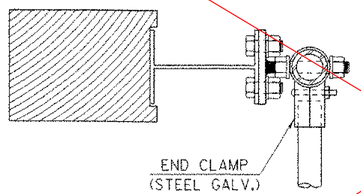


SECTION A-A

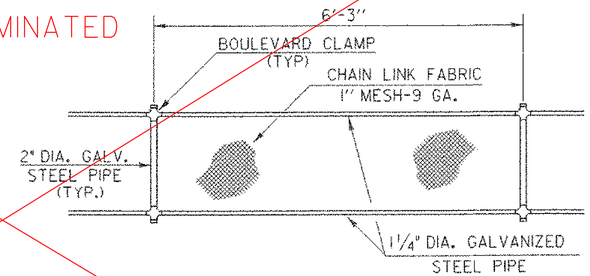


TENSION ROD BAND

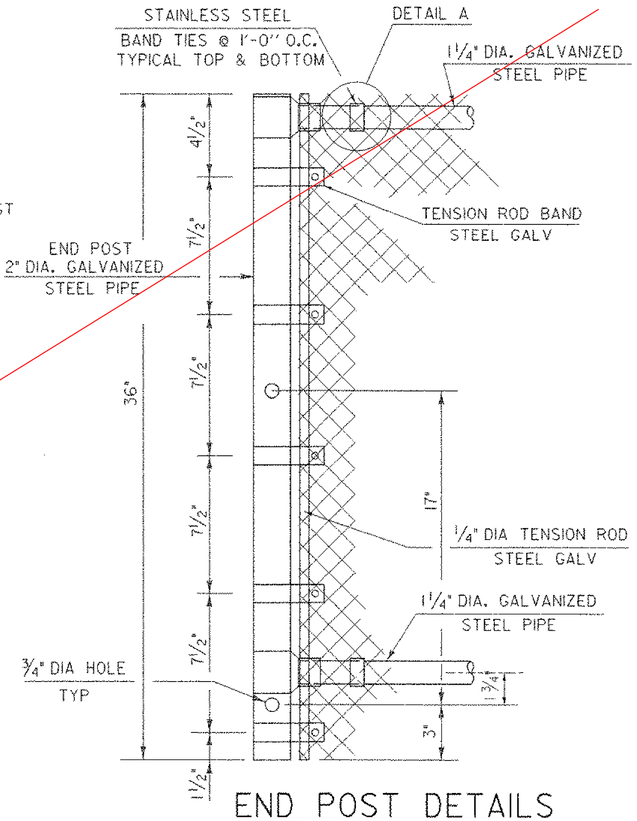
THIS SHEET ELIMINATED



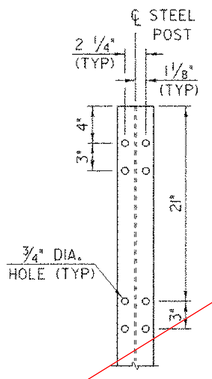
PLAN VIEW AT END OF SNOW BARRIER



ELEVATION SNOW BARRIER



END POST DETAILS



W6 X 9 STEEL POST ELEVATION (BACK SIDE)

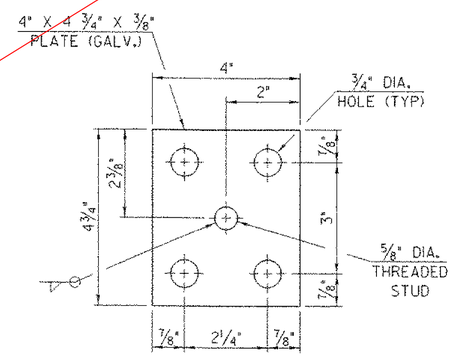
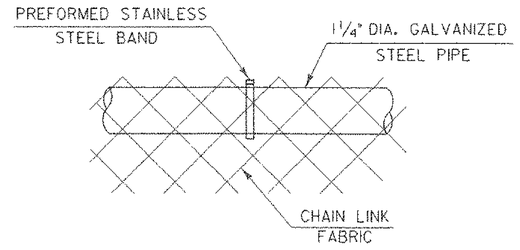


PLATE DETAIL

GENERAL NOTES

1. THREADS OF STUDS AND U-BOLTS TO BE 5/8-11 UNC.
2. ALL CONNECTION PLATES TO BE GALVANIZED AFTER FABRICATION.
3. 1¼" PIPE LENGTH SHALL BE FIELD CUT TO FIT POST SPACING.
4. CHAIN LINK FABRIC TO BE KNUCKLED TOP AND BOTTOM.
5. ALL BOLTS, NUTS AND WASHERS SHALL CONFORM TO THE SPECIFICATIONS FOR ASTM A307.
6. ALL STEEL PLATES SHALL CONFORM TO THE SPECIFICATION FOR AASHTO M270 GRADE 36.
7. ALL GALVANIZING SHALL CONFORM TO THE REQUIREMENTS OF AASHTO M-181 WITH HARDWARE AND FITTINGS CONFORMING TO THE REQUIREMENTS OF AASHTO M-111 OR AASHTO M-232 WHICHEVER IS APPLICABLE. ALL BOLTS, NUTS AND WASHERS SHALL BE EITHER HOT-DIP GALVANIZED IN ACCORDANCE WITH THE ABOVE AASHTO REQUIREMENTS OR MECHANICALLY GALVANIZED USING A MECHANICALLY DEPOSITED PROCESS CONFORMING TO THE REQUIREMENTS OF AASHTO M-298, CLASS 10.
8. GALVANIZED CHAIN-LINK FABRIC SHALL BE TYPE 1 (ZINC) CLASS D AS SPECIFIED IN AASHTO M-181.
9. ALL REFERENCES TO THE DIAMETERS OF GALVANIZED STEEL PIPE SHALL REFER TO THE OUTSIDE DIAMETER (O. D.).

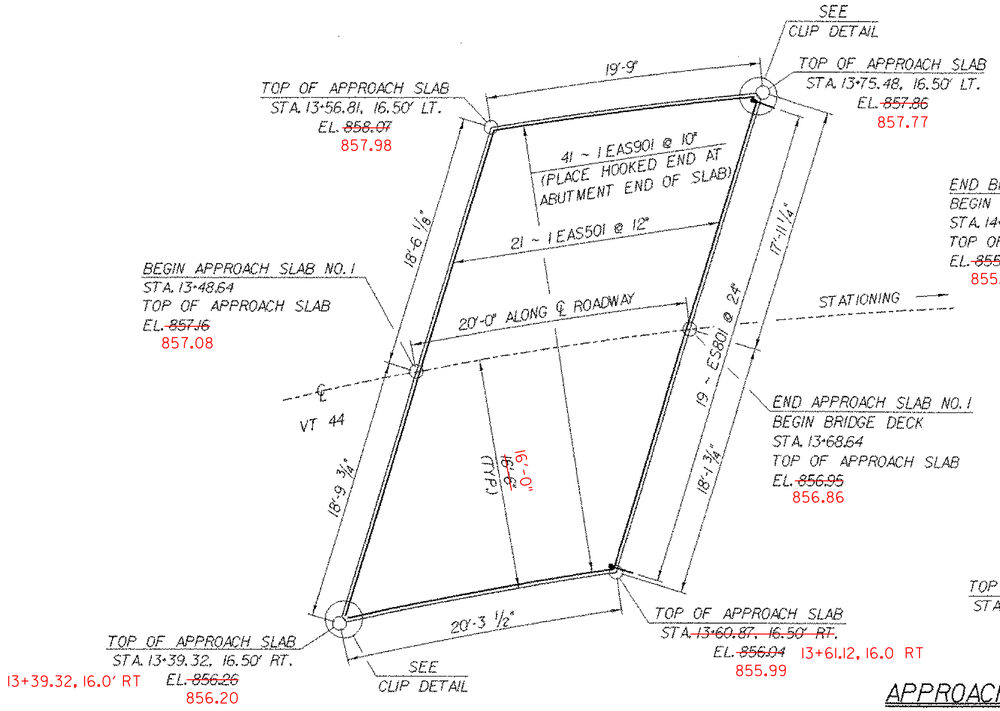


DETAIL A

DETAILS ON THIS SHEET NOT TO SCALE

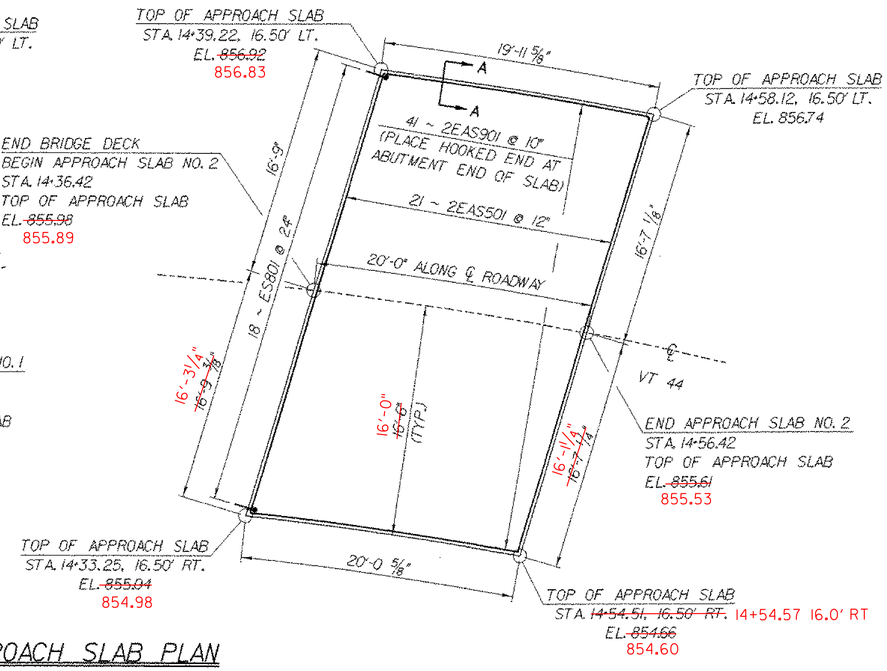
ALL DIMENSIONS IN INCHES
UNLESS OTHERWISE NOTED

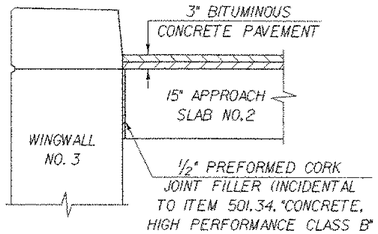
SHEET NAME: SNOW BARRIER DETAILS	
PROJECT NAME: READING	HIGHWAY NO.: VT 44
PROJECT NUMBER: BRS 0148(6)S	BRIDGE NO.: 1
	OVER: THE MILL BROOK
FILE NAME: PW/85e034/Structures/se034rd1.dgn	PLOT DATE: 17-FEB-2006
PROJECT MANAGER: R. WHITCOMB	DRAWN BY: G. ROY
DESIGNED BY: C. CARLSON	IPARM NAME: se034rd3.i
BRIDGE SHEET NUMBER:	SHEET 51A OF 83



APPROACH SLAB PLAN

SCALE 3/16" = 1'-0

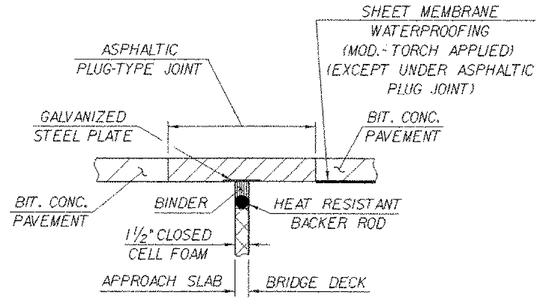




SECTION A - A

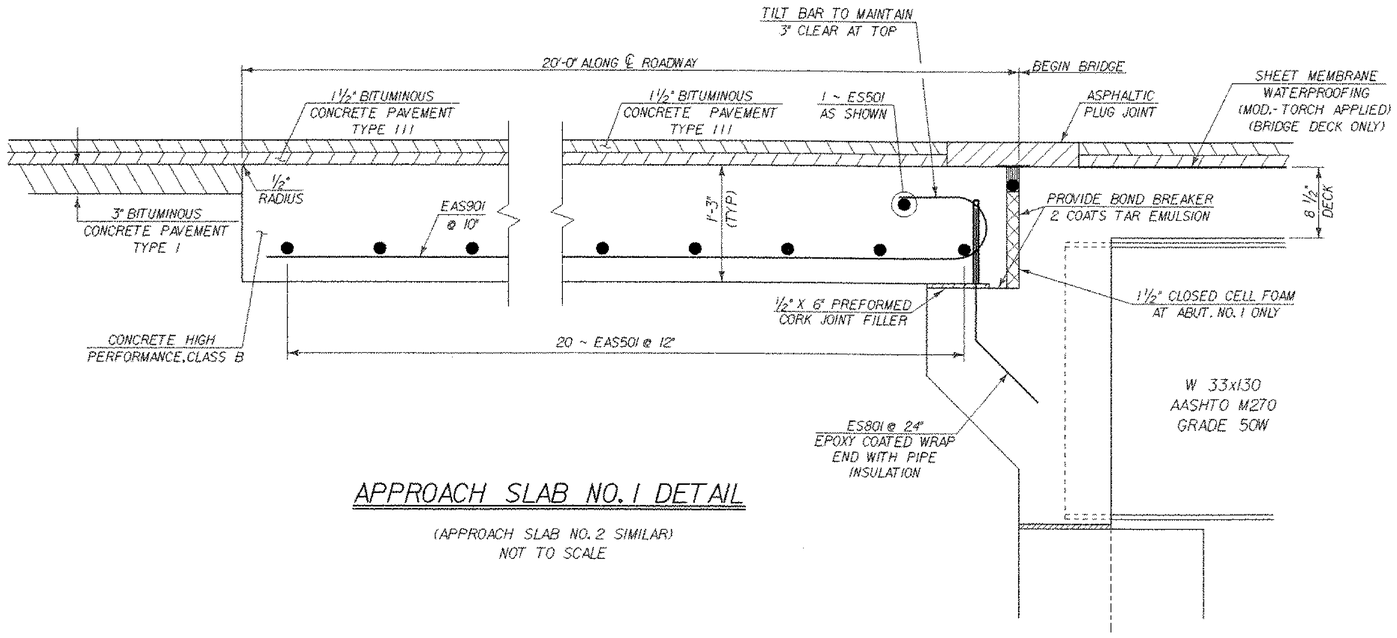
SCALE 3/4" = 1'-0

(USE SIMILAR DETAIL FOR APPROACH SLAB NEXT TO VERTICAL GRANITE CURB.)



ASPHALTIC PLUG-TYPE JOINT DETAIL @ ABUT. NO. 1

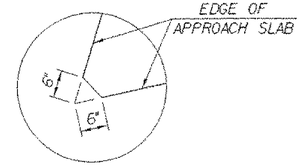
NTS



APPROACH SLAB NO. 1 DETAIL

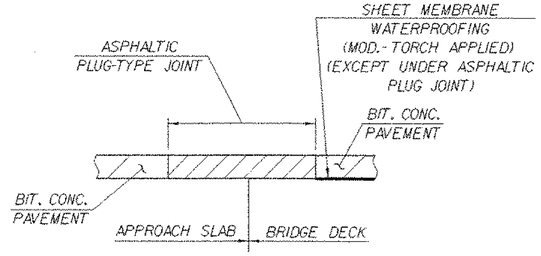
(APPROACH SLAB NO. 2 SIMILAR)
NOT TO SCALE

FINISH GRADE CHANGED
WIDTH OF APPROACH SLAB
CHANGED TO 16.0' ON RT SIDE



CLIP DETAIL

SCALE 3/4" = 1'-0

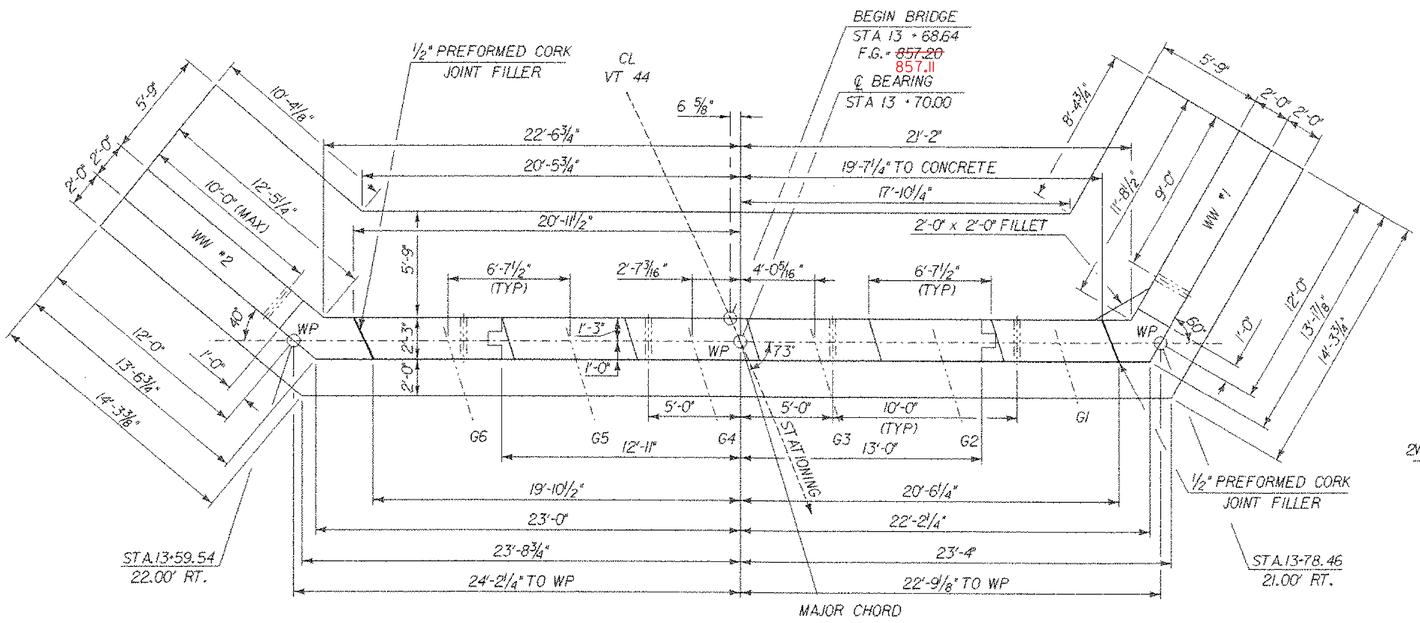


ASPHALTIC PLUG-TYPE JOINT DETAIL @ ABUT. NO. 2

NTS

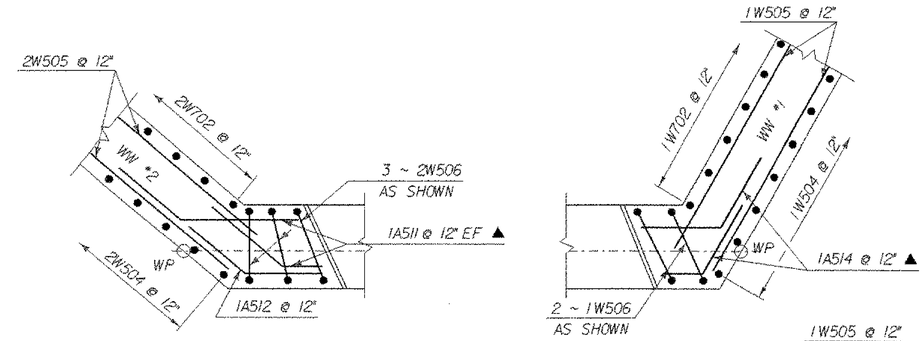
NOTE:
3" CLEAR UNLESS
OTHERWISE STATED.

SHEET NAME: APPROACH SLAB DETAILS	
PROJECT NAME: READING	HIGHWAY NO.: VT 44
PROJECT NUMBER: BRS 0148(6)S	BRIDGE NO.: 1
	OVER: THE MILL BROOK
FILE NAME: PW/85e034/Structures/se034sup.dgn	PLOT DATE: 17-FEB-2006
PROJECT MANAGER: R. WHITCOMB	DRAWN BY: T. FILLBACH
DESIGNED BY: C. CARLSON	IPARM NAME: se034asd.1
BRIDGE SHEET NUMBER:	SHEET 52 OF 83



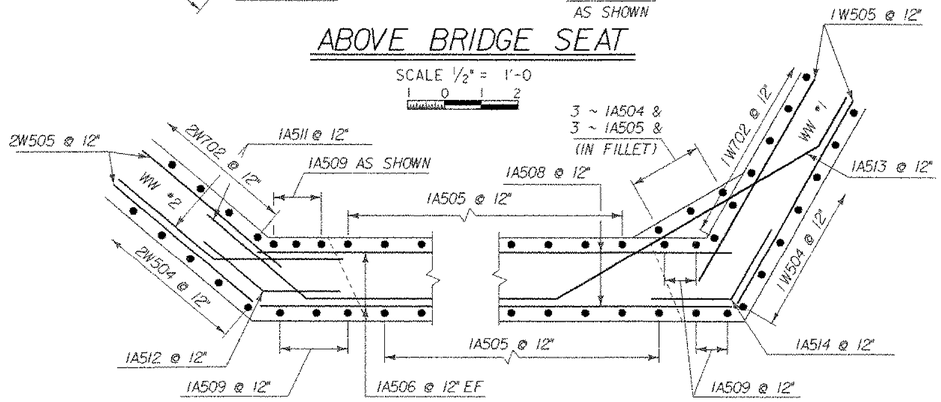
ABUTMENT #1 PLAN

SCALE ¼" = 1'-0



ABOVE BRIDGE SEAT

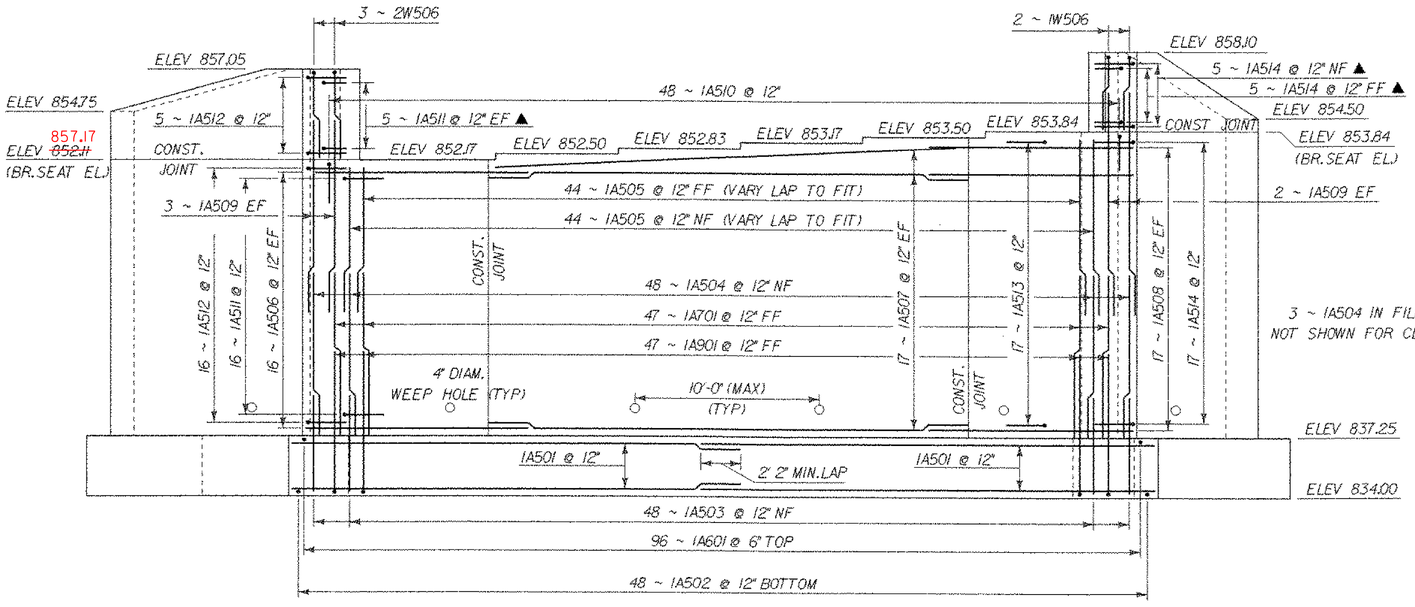
SCALE ½" = 1'-0



ABUTMENT #1 CORNER DETAILS BELOW BRIDGE SEAT

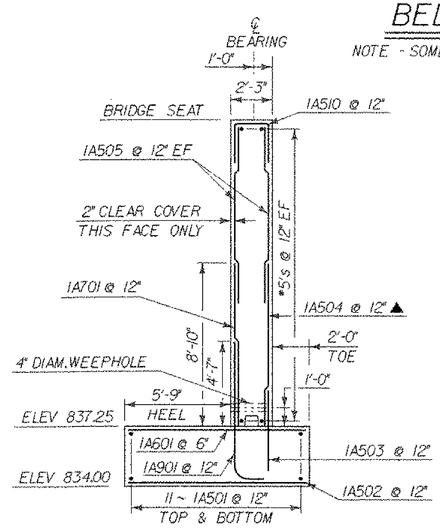
NOTE - SOME STIRRUP BARS OMITTED FOR CLARITY

SCALE ½" = 1'-0



ABUTMENT #1 ELEVATION

SCALE ¼" = 1'-0



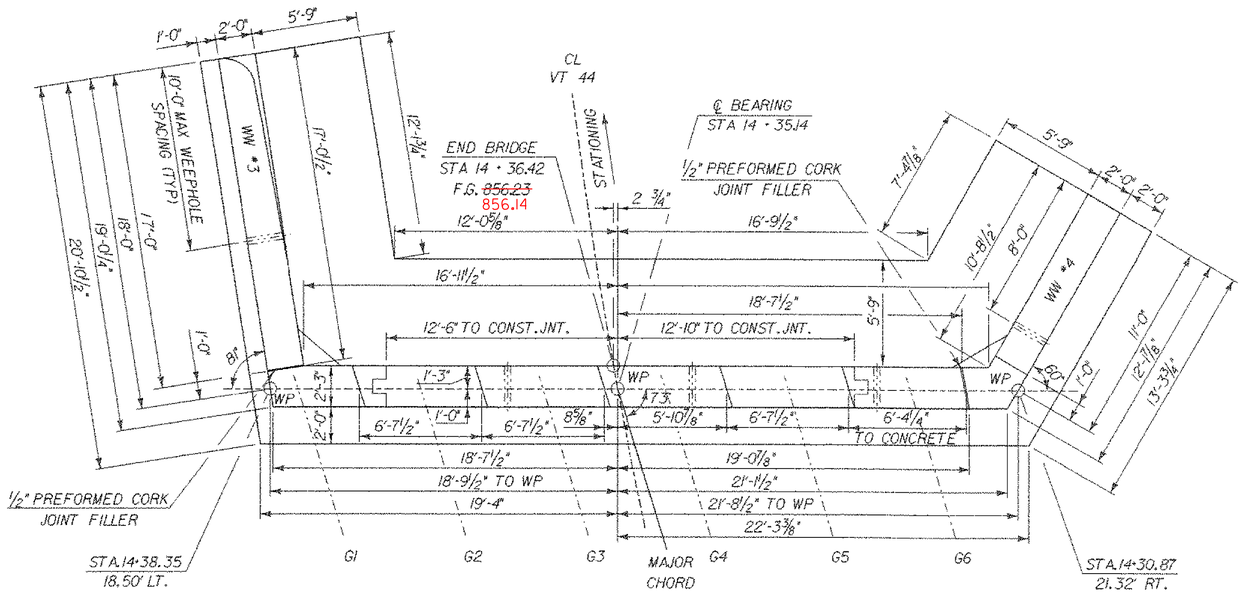
ABUTMENT #1 SECTION

SCALE ¼" = 1'-0

NOTES:

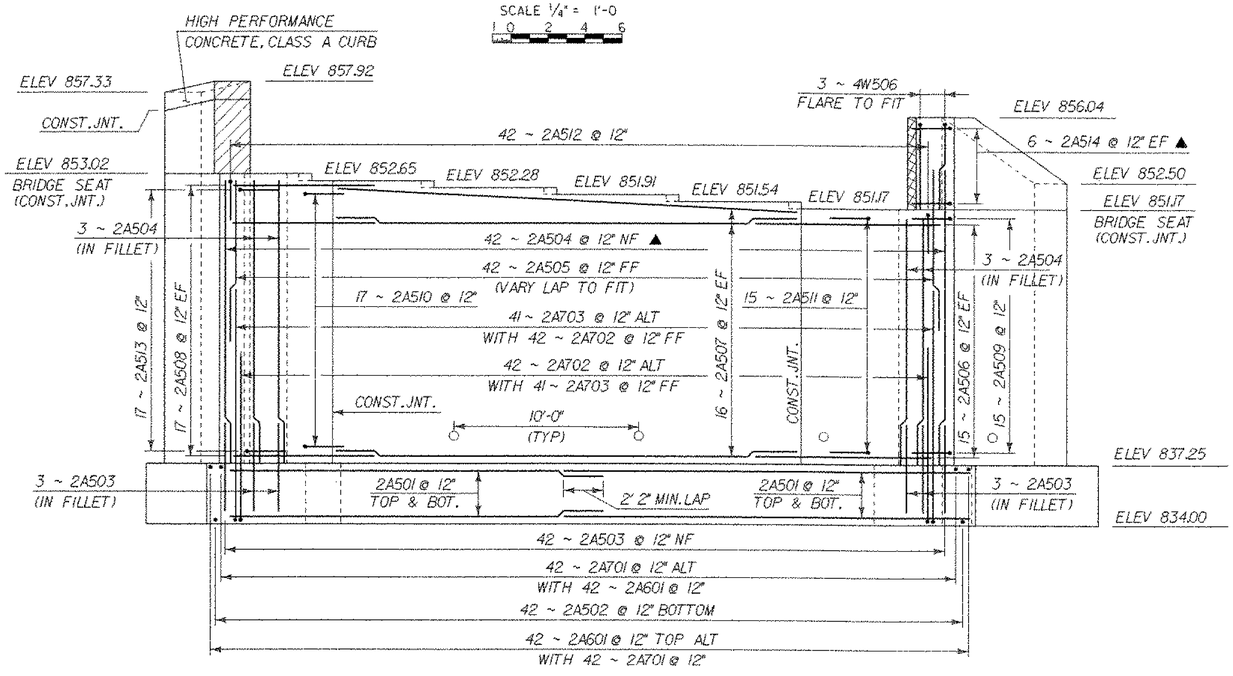
1. NF = NEAR FACE
2. FF = FAR FACE
3. EF = EACH FACE
4. ▲ = CUT TO FIT IN FIELD
5. 3" CLR. UNLESS OTHERWISE SPECIFIED ON THE PLANS.
6. LAP SPLICES ARE 2'-2" UNLESS OTHERWISE NOTED.
7. SEE SHT. 56 FOR SCORE MARK DETAILS

SHEET NAME:	ABUTMENT #1 DETAILS		
PROJECT NAME:	READING	HIGHWAY NO.:	VT 44
PROJECT NUMBER:	BRS 0148(6)S	BRIDGE NO.:	1
		OVER:	THE MILL BROOK
FILE NAME:	PW/85e034/Structures/se034sub.dgn	PLOT DATE:	17-FEB-2006
PROJECT MANAGER:	R. WHITCOMB	DRAWN BY:	T. FILLBACH
DESIGNED BY:	C. CARLSON	IPARM NAME:	se034abl.i
BRIDGE SHEET NUMBER:		SHEET	53 OF 83



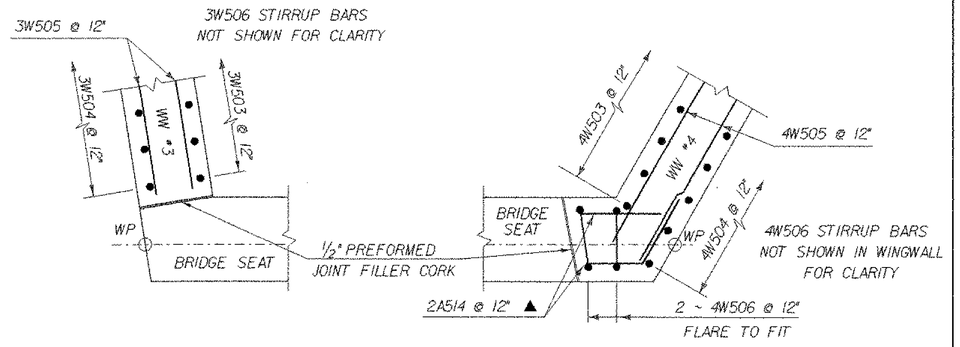
ABUTMENT #2 PLAN

SCALE 1/4" = 1'-0

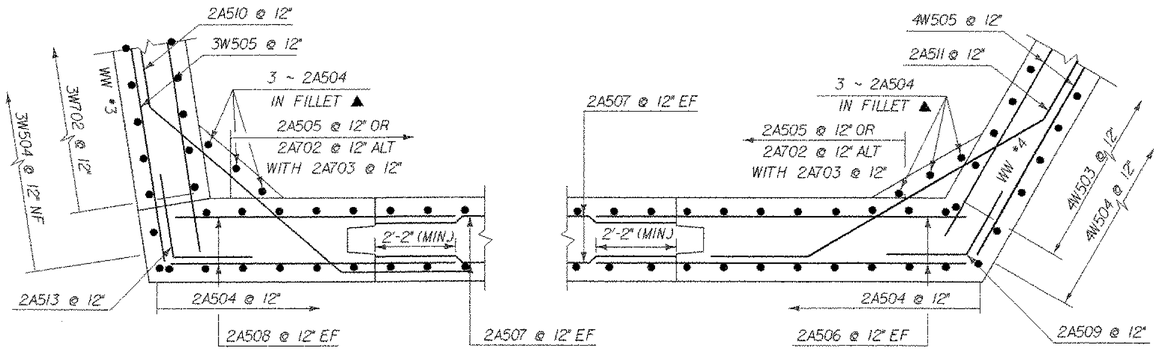


ABUTMENT #2 ELEVATION

SCALE 1/4" = 1'-0



ABOVE BRIDGE SEAT

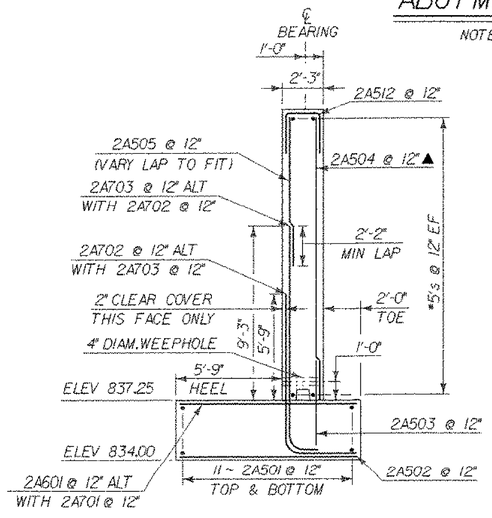


BELOW BRIDGE SEAT

ABUTMENT #2 CORNER DETAILS

NOTE - STIRRUP BARS OMITTED FOR CLARITY

SCALE 1/2" = 1'-0



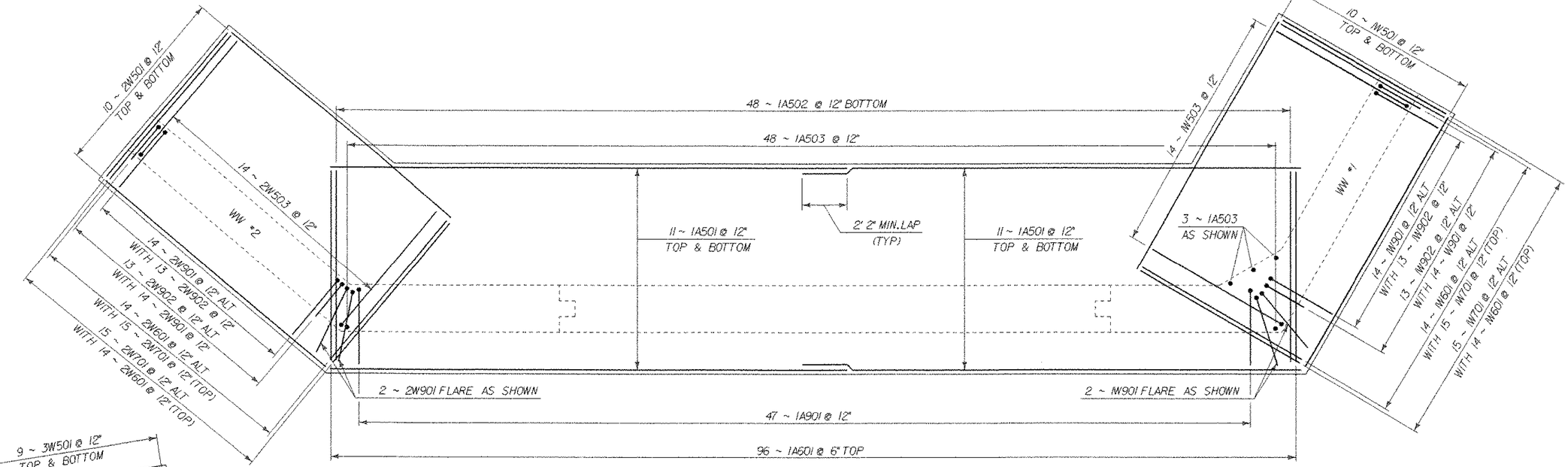
ABUTMENT #2 TYPICAL SECTION

SCALE 1/4" = 1'-0

NOTES:

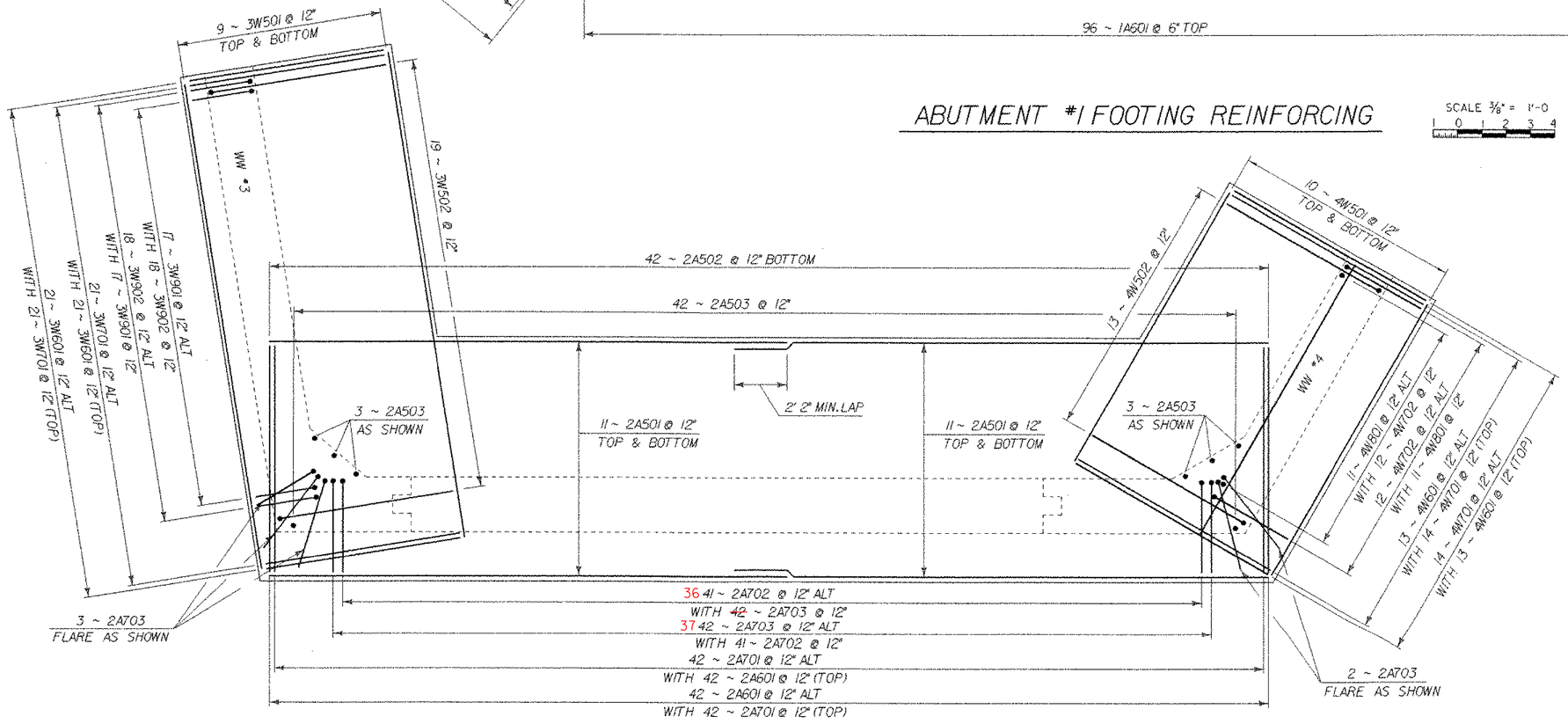
1. NF = NEAR FACE
2. FF = FAR FACE
3. EF = EACH FACE
4. ▲ = CUT TO FIT IN FIELD
5. 3" CLR. UNLESS OTHERWISE SPECIFIED ON THE PLANS.
6. LAP SPLICES ARE 2'-2" UNLESS OTHERWISE NOTED.
7. SEE SHT. 56 FOR SCORE MARK DETAILS

SHEET NAME:	ABUTMENT #2 DETAILS		
PROJECT NAME:	READING	HIGHWAY NO.:	VT 44
PROJECT NUMBER:	BRS 0148(6)S	BRIDGE NO.:	1
		OVER:	THE MILL BROOK
FILE NAME:	PW/85e034/Structures/se034sub.dgn	PLOT DATE:	17-FEB-2006
PROJECT MANAGER:	R. WHITCOMB	DRAWN BY:	T. FILLBACH
DESIGNED BY:	C. CARLSON	IPARM NAME:	se034ab2.i
BRIDGE SHEET NUMBER:		SHEET 54	OF 83



ABUTMENT #1 FOOTING REINFORCING

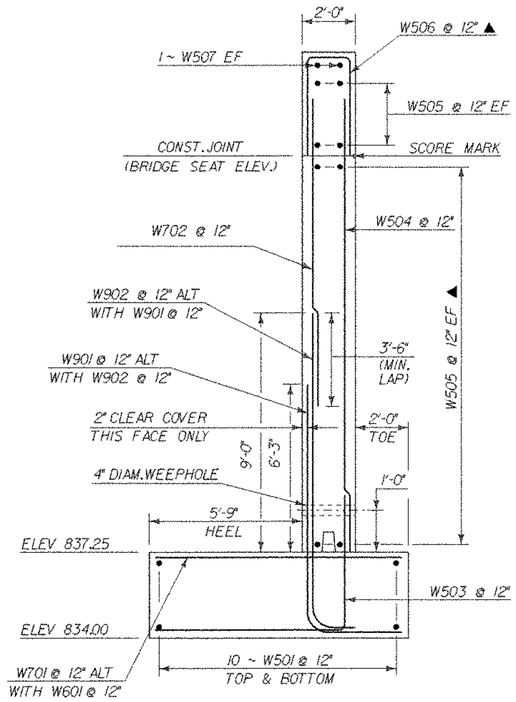
SCALE 3/8" = 1'-0
1 0 1 2 3 4



ABUTMENT #2 FOOTING REINFORCING

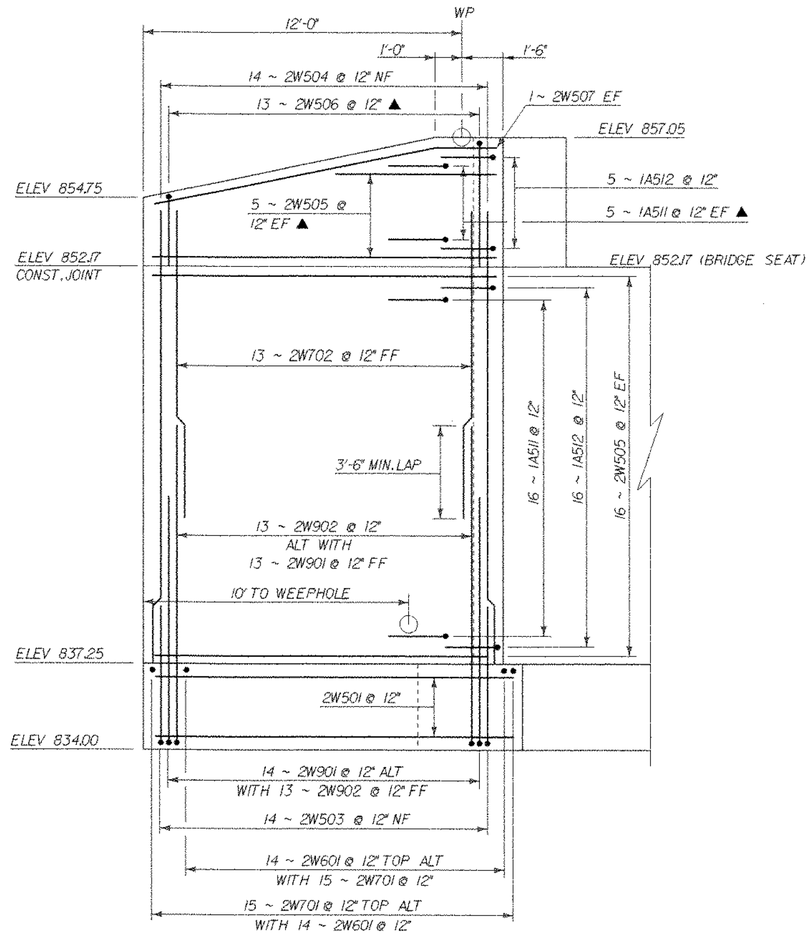
SCALE 3/8" = 1'-0
1 0 1 2 3 4

SHEET NAME:	FOOTING REINFORCING		
PROJECT NAME:	READING	HIGHWAY NO.:	VT 44
PROJECT NUMBER:	BRS 0148(6)S	BRIDGE NO.:	1
		OVER:	THE MILL BROOK
FILE NAME:	PW/85e034/Structures/se034sub.dgn	PLOT DATE:	17-FEB-2006
PROJECT MANAGER:	R. WHITCOMB	DRAWN BY:	T. FILLBACH
DESIGNED BY:	C. CARLSON	IPARM NAME:	se034ftr.i
BRIDGE SHEET NUMBER:		SHEET	55 OF 83



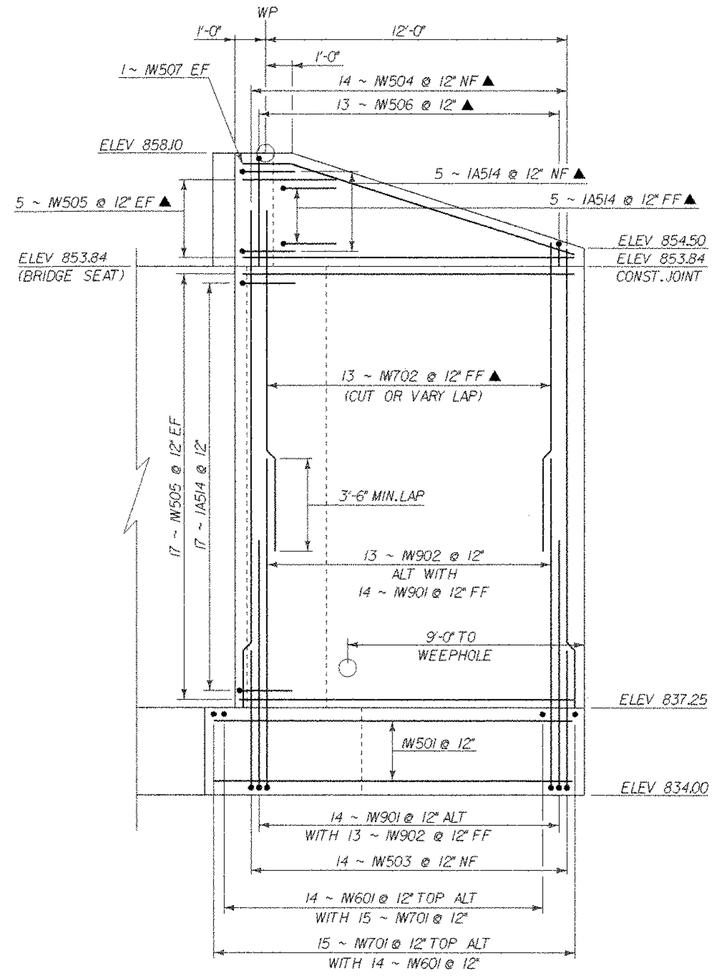
WINGWALLS #1&2 TYPICAL SECTION

SCALE 3/8" = 1'-0



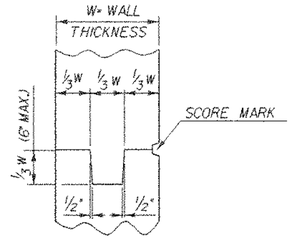
WINGWALL #2 ELEVATION

SCALE 3/8" = 1'-0

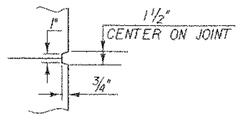


WINGWALL #1 ELEVATION

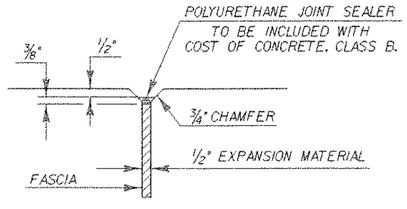
SCALE 3/8" = 1'-0



TYPICAL CONCRETE CONSTRUCTION JOINT



SCORE MARK DETAIL



JOINT BETWEEN FASCIA AND WINGWALL

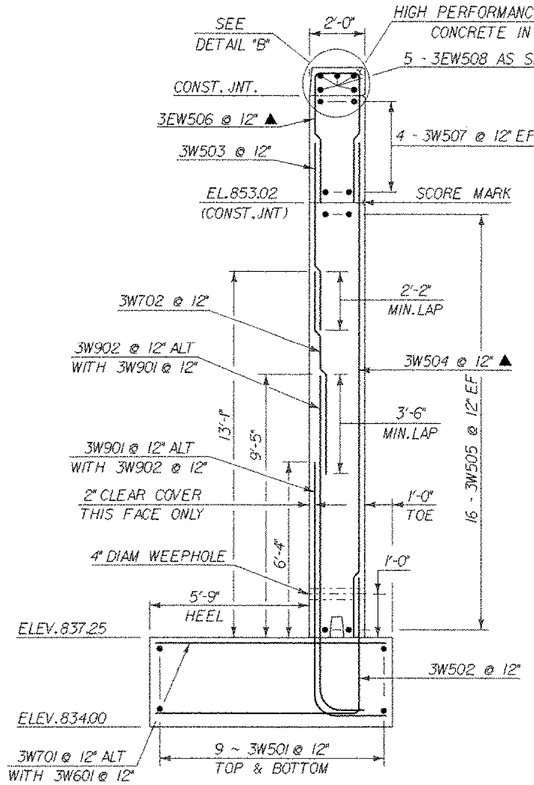
NOTES:

1. NF = NEAR FACE
2. FF = FAR FACE
3. EF = EACH FACE
4. ▲ = CUT TO FIT IN FIELD
5. 3" CLR. UNLESS OTHERWISE SPECIFIED ON THE PLANS.
6. LAP SPLICES ARE 2'-2" UNLESS OTHERWISE NOTED.

SHEET NAME: WINGWALL #1 &#2 DETAILS

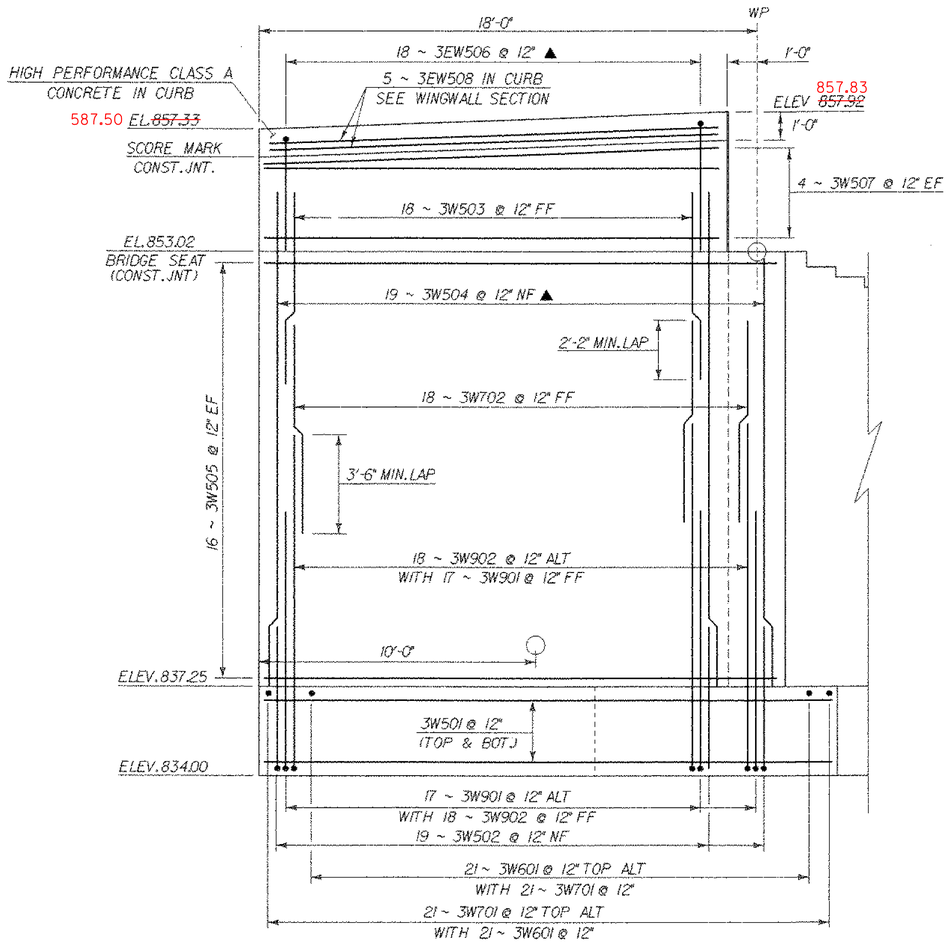
PROJECT NAME: READING
PROJECT NUMBER: BRS 0148(6)S
HIGHWAY NO.: VT 44
BRIDGE NO.: 1
OVER: THE MILL BROOK

FILE NAME: PW/85e034/Structures/se034sub.dgn
PROJECT MANAGER: R. WHITCOMB
DESIGNED BY: C. CARLSON
BRIDGE SHEET NUMBER:
PLOT DATE: 17-FEB-2006
DRAWN BY: T. FILLBACH
IPARM NAME: se034ww1
SHEET 56 OF 83



WINGWALL #3 SECTION

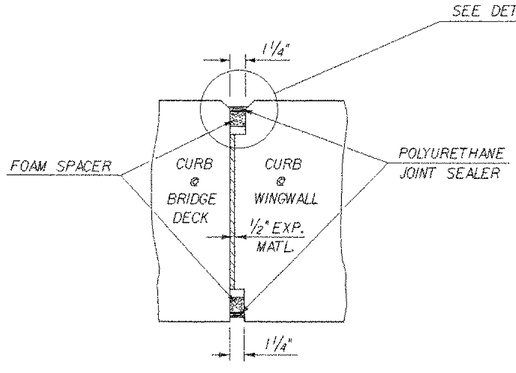
SCALE 3/8" = 1'-0



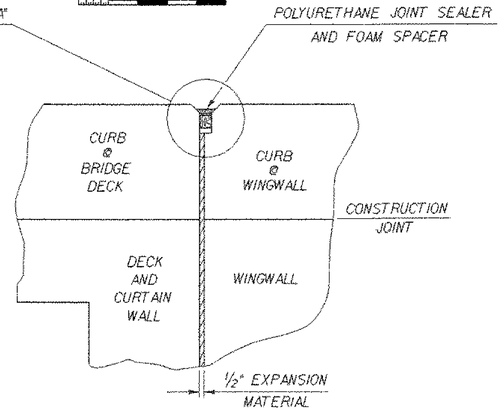
WINGWALL #3 ELEVATION

SCALE 3/8" = 1'-0

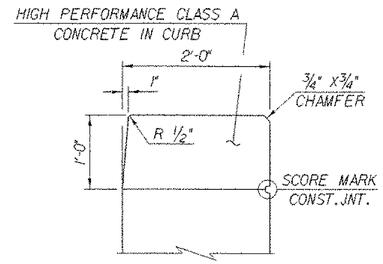
TYPICAL SECTION THROUGH CURB JOINT AT FIXED END OF BRIDGE BETWEEN END OF BRIDGE AND WINGWALL #3



SECTION D - D

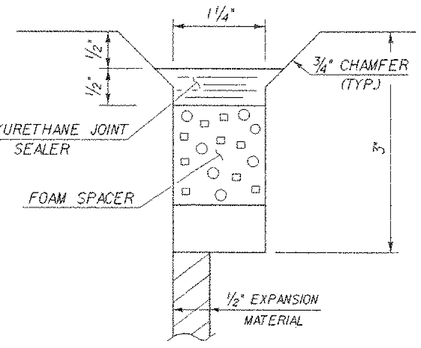


SECTION E - E



DETAIL "B"

SCALE 1" = 1'-0



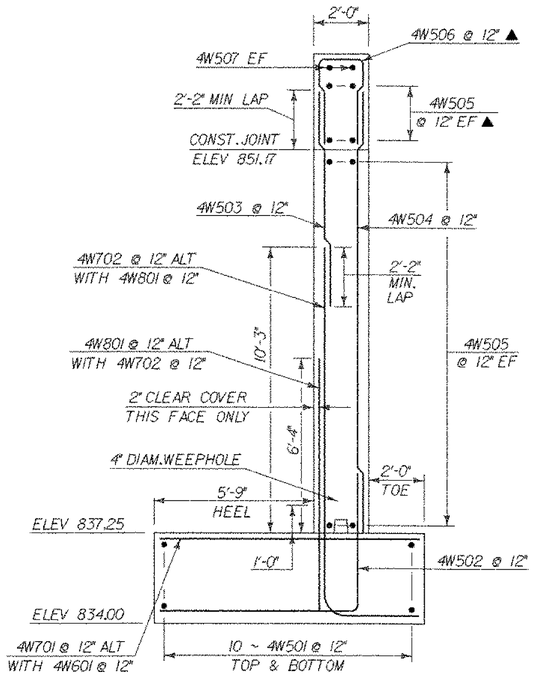
DETAIL "A"

SEE SUBSECTION 524.06 FOR SPECIFICATIONS OF POLYURETHANE JOINT SEALER AND FOAM SPACER.

NOTES:

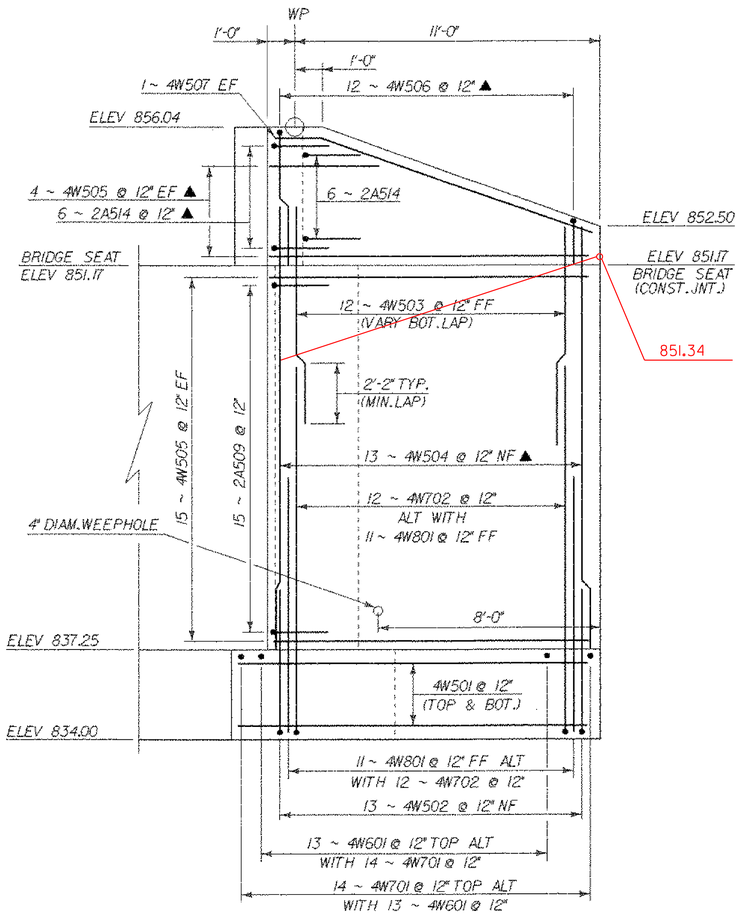
1. NF = NEAR FACE
2. FF = FAR FACE
3. EF = EACH FACE
4. ▲ = CUT TO FIT IN FIELD
5. 3" CLR. UNLESS OTHERWISE SPECIFIED ON THE PLANS.
6. LAP SPLICES ARE 2'-2" UNLESS OTHERWISE NOTED.
7. SEE SHT. 56 FOR SCORE MARK DETAILS

SHEET NAME:	WINGWALL #3 DETAILS		
PROJECT NAME:	READING	HIGHWAY NO.:	VT 44
PROJECT NUMBER:	BRS 0148(6)S	BRIDGE NO.:	1
		OVER:	THE MILL BROOK
FILE NAME:	PW/85e034/Structures/se034sub.dgn	PLOT DATE:	17-FEB-2006
PROJECT MANAGER:	R. WHITCOMB	DRAWN BY:	T. FILLBACH
DESIGNED BY:	C. CARLSON	IPARM NAME:	se034ww2.1
BRIDGE SHEET NUMBER:		SHEET	57 OF 83



WINGWALL #4 SECTION

SCALE 3/8" = 1'-0



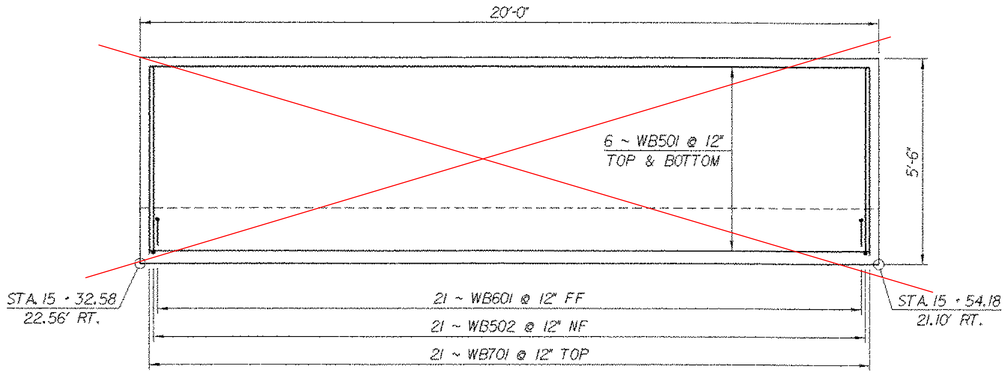
WINGWALL #4 ELEVATION

SCALE 3/8" = 1'-0

NOTES:

1. NF = NEAR FACE
2. FF = FAR FACE
3. EF = EACH FACE
4. ▲ = CUT TO FIT IN FIELD
5. 3" CLR. UNLESS OTHERWISE SPECIFIED ON THE PLANS.
6. LAP SPLICES ARE 2'-2" UNLESS OTHERWISE NOTED.

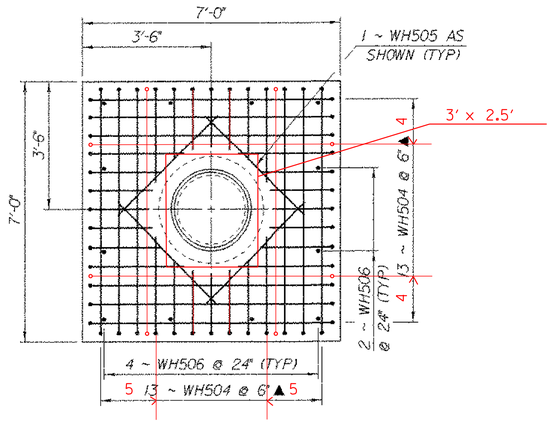
SHEET NAME:	WINGWALL #4 DETAILS		
PROJECT NAME:	READING	HIGHWAY NO.:	VT 44
PROJECT NUMBER:	BRS 0148(6)S	BRIDGE NO.:	1
		OVER:	THE MILL BROOK
FILE NAME:	PW/85e034/Structures/se034sub.dgn	PLOT DATE:	17-FEB-2006
PROJECT MANAGER:	R. WHITCOMB	DRAWN BY:	T. FILLBACH
DESIGNED BY:	C. CARLSON	IPARM NAME:	se034ww3.i
BRIDGE SHEET NUMBER:		SHEET 58	OF 83



WELL BARRIER PLAN

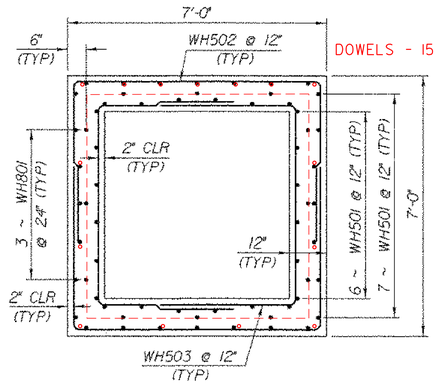
SCALE ½" = 1'-0

4



WELL HEAD CAP PLAN

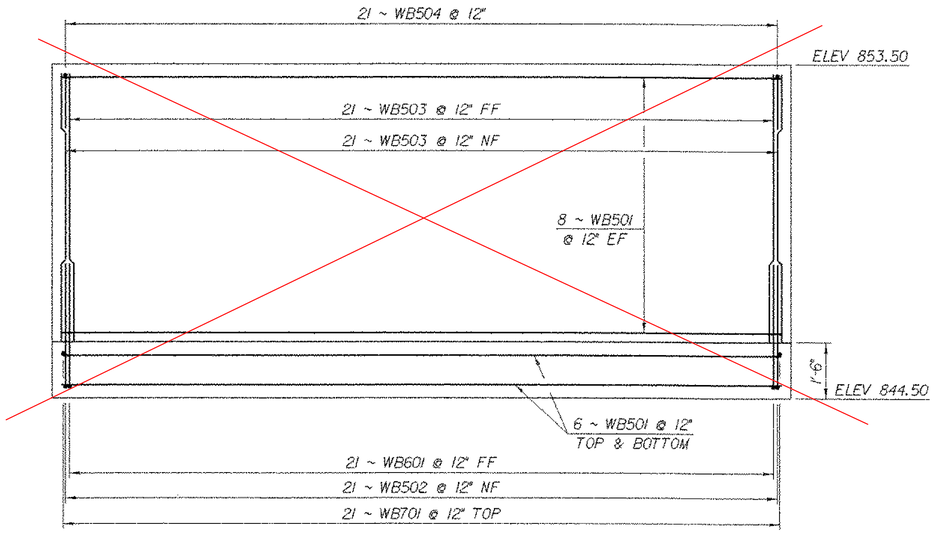
SCALE ½" = 1'-0



WELL HEAD BOX PLAN

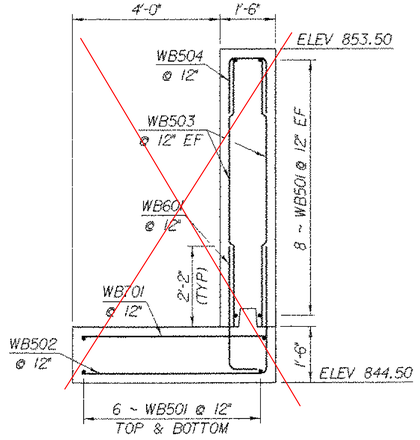
SCALE ½" = 1'-0

WALL NOT CONSTRUCTED



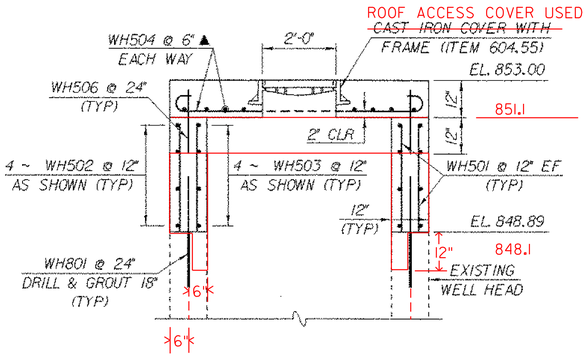
WELL BARRIER ELEVATION

SCALE ½" = 1'-0



WELL BARRIER TYPICAL SECTION

SCALE ½" = 1'-0



WELL HEAD BOX SECTION

SCALE ½" = 1'-0

NOTES:

1. NF = NEAR FACE
2. FF = FAR FACE
3. EF = EACH FACE
4. ▲ = CUT TO FIT IN FIELD
5. 3" CLR. UNLESS OTHERWISE SPECIFIED ON THE PLANS.
6. SEE SHEET 60A FOR EARTHWORK TYPICAL AND PLAN VIEW OF WELL HEAD.
7. ALL CONCRETE SHALL BE HIGH PERFORMANCE CLASS B.

SHEET NAME: WELL BARRIER & WELL HEAD DETAILS

PROJECT NAME: READING	HIGHWAY NO.: VT 44
PROJECT NUMBER: BRS 0148(6)S	BRIDGE NO.: 1
	OVER: THE MILL BROOK
FILE NAME: PW/85e034/Structures/se034sub.dgn	PLOT DATE: 17-FEB-2006
PROJECT MANAGER: R. WHITCOMB	DRAWN BY: G. ROY
DESIGNED BY: C. CARLSON	IPARM NAME: se034wbd.1
BRIDGE SHEET NUMBER:	SHEET 59 OF 83

STATE OF VERMONT
AGENCY OF TRANSPORTATION

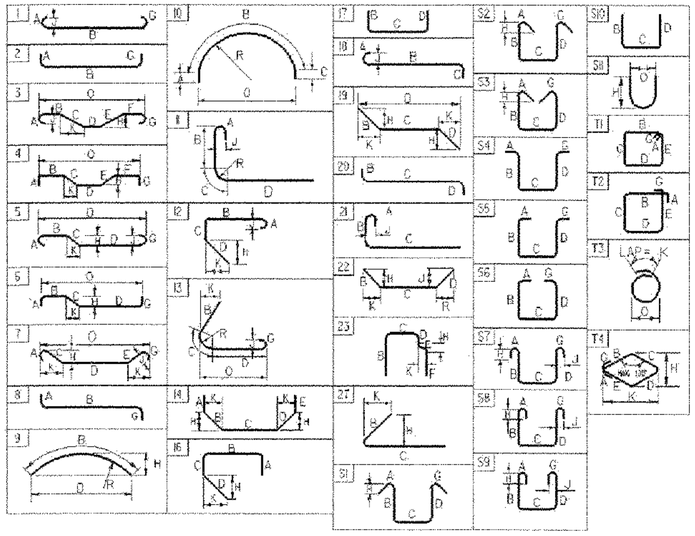
REINFORCING STEEL SCHEDULE

ITEM	EACH	SIZE	LENGTH	MARK	TYPE	A	B	C	D	E	F	G	H	J	K	R	O
SUPERSTRUCTURE																	
✳	265	5	24'- 1"	ES501	STR												
	189	5	6'- 0"	ES502	S5	0'- 7"	1'- 8"	1'- 6"	1'- 8"			0'- 7"					
▲	20	5	39'- 11"	ES503	STR												
	58	5	9'- 2"	ES504	S5	1'- 0"	3'- 4"	0'- 9"	3'- 1"			1'- 0"					
	72	5	10'- 6"	ES505	16	2'- 3"	1'- 11"	0'- 8"	2'- 4"				1'- 8"		1'- 8"		
✳	109	6	24'- 1"	ES601	STR												
	134	6	18'- 5"	ES602	STR												
	134	6	25'- 6"	ES603	STR												
	134	6	28'- 3"	ES604	STR												
	134	6	15'- 5"	ES605	STR												
	42	8	2'- 5"	ES801	19		1'- 5"	1'- 0"	---								
APPROACH SLAB #1																	
✳	22	5	36'- 6"	1EAS501	STR	36'- 6"											
✳	42	9	20'- 9"	1EAS901	1	1'- 3"	19'- 6"					---		1'- 0"			
APPROACH SLAB #2																	
✳	22	5	32'- 6"	2EAS501	STR												
✳	42	9	20'- 9"	2EAS901	1	1'- 3"	19'- 6"					---		1'- 0"			
ABUTMENT #1																	
	44	5	24'- 4"	1A501	STR												
	48	5	9'- 6"	1A502	STR												
✳	52	5	5'- 2"	1A503	STR												
	51	5	8'- 10"	1A504	STR												
✳	91	5	9'- 8"	1A505	STR												
	32	5	12'- 6"	1A506	STR												
	34	5	25'- 9"	1A507	STR												
	34	5	11'- 6"	1A508	STR												
	10	5	12'- 2"	1A509	STR												
	48	5	6'- 2"	1A510	S10		2'- 2"	1'- 10"	2'- 2"								
▲	42	5	6'- 4"	1A511	19		2'- 2"	4'- 2"	---				1'- 5"		1'- 8"		
	21	5	4'- 4"	1A512	19		2'- 2"	2'- 2"	---				1'- 5"		1'- 8"		
	17	5	13'- 10"	1A513	22		2'- 2"	9'- 6"	2'- 2"				1'- 1"	1'- 1"	1'- 11"		
▲	27	5	5'- 2"	1A514	19		2'- 2"	3'- 0"	---				1'- 11"		1'- 1"		
✳	97	6	9'- 6"	1A601	STR												
✳	48	7	8'- 10"	1A701	STR												
✳	48	9	9'- 2"	1A901	2	1'- 7"	7'- 7"					---					
WINGWALL #1																	
	20	5	13'- 10"	1W501	STR												
				1W502		NOT	USED										
	14	5	12'- 5"	1W503	17		5'- 2"	7'- 3"	---								
▲	14	5	18'- 9"	1W504	STR												
▲	44	5	12'- 8"	1W505	STR												
▲	13	5	9'- 7"	1W506	S10		4'- 0"	1'- 7"	4'- 0"								
	2	5	13'- 0"	1W507	19		1'- 9"	11'- 3"	---				0'- 7"		1'- 9"		
	14	6	9'- 3"	1W601	STR												
	15	7	9'- 3"	1W701	STR												
▲	13	7	13'- 3"	1W702	STR												
	14	9	12'- 10"	1W901	2	3'- 7"	9'- 3"					---					
	13	9	13'- 7"	1W902	2	1'- 7"	12'- 0"					---					
WINGWALL #2																	
	20	5	13'- 10"	2W501	STR												
				2W502		NOT	USED										
	14	5	12'- 5"	2W503	17		5'- 2"	7'- 3"	---								
	14	5	17'- 1"	2W504	STR												
▲	42	5	13'- 1"	2W505	STR												
▲	13	5	10'- 9"	2W506	S10		4'- 7"	1'- 7"	4'- 7"								
	2	5	13'- 3"	2W507	19		2'- 3"	11'- 0"	---				0'- 6"		2'- 3"		
	14	6	9'- 3"	2W601	STR												
	15	7	9'- 3"	2W701	STR												
	13	7	11'- 6"	2W702	STR												
	14	9	12'- 10"	2W901	2	3'- 7"	9'- 3"					---					
	13	9	13'- 7"	2W902	2	1'- 7"	12'- 0"					---					

ITEM	EACH	SIZE	LENGTH	MARK	TYPE	A	B	C	D	E	F	G	H	J	K	R	O
ABUTMENT #2																	
	44	5	22'- 0"	2A501	STR												
	42	5	9'- 6"	2A502	STR												
✳	49	5	5'- 2"	2A503	STR												
▲	48	5	15'- 6"	2A504	STR												
	42	5	8'- 5"	2A505	STR												
	30	5	10'- 4"	2A506	STR												
	32	5	25'- 2"	2A507	STR												
	34	5	8'- 3"	2A508	STR												
	15	5	4'- 4"	2A509	19		2'- 2"	2'- 2"	---						1'- 11"		1'- 1"
	17	5	12'- 5"	2A510	22		2'- 2"	8'- 1"	2'- 2"						1'- 5"	1'- 5"	1'- 8"
	15	5	14'- 2"	2A511	22		2'- 2"	9'- 10"	2'- 2"						1'- 2"	1'- 2"	1'- 10"
	42	5	8'- 2"	2A512	S10		2'- 2"	1'- 10"	2'- 2"								
	17	5	4'- 4"	2A513	19		2'- 2"	2'- 2"	---						2'- 2"		0'- 4"
▲	12	5	5'- 2"	2A514	19		2'- 2"	3'- 0"	---						1'- 11"		1'- 1"
✳	43	6	9'- 6"	2A601	STR												
✳	43	7	9'- 6"	2A701	STR												
	42	7	12'- 7"	2A702	2	3'- 10"	8'- 9"										
	46	7	13'- 5"	2A703	2	1'- 2"	12'- 3"					---					
WINGWALL #3																	
	18	5	20'- 4"	3W501	STR												
	19	5	12'- 5"	3W502	17		5'- 2"	7'- 3"	---								
✳	19	5	7'- 1"	3W503	STR												
▲	19	5	17'- 1"	3W504	STR												
▲	32	5	18'- 6"	3W505	STR												
▲	17	5	10'- 9"	3EW506	S10		4'- 7"	1'- 7"	4'- 7"								
	8	5	16'- 6"	3W507	STR												
	5	5	16'- 6"	3EW508	STR												
	21	6	8'- 3"	3W601	STR												
	21	7	8'- 3"	3W701	STR												
	18	7	7'- 3"	3W702	STR												
	17	9	11'- 11"	3W901	2	2'- 7"	9'- 4"					---					
	18	9	14'- 0"	3W902	2	1'- 7"	12'- 5"					---					
WINGWALL #4																	
	20	5	12'- 10"	4W501	STR												
	13	5	12'- 5"	4W502	17		5'- 2"	7'- 3"	---								
	12	5	8'- 0"	4W503	STR												
▲	13	5	16'- 0"	4W504	STR												
▲	38	5	11'- 8"	4W505	STR												
▲	12	5	11'- 1"	4W506	S10		4'- 9"	1'- 7"	4'- 9"								
	2	5	12'- 3"	4W507	19		1'- 10"	10'- 5"	---				0'- 8"		1'- 9"		
	13	6	9'- 3"	4W601	STR												
	14	7	9'- 3"	4W701	STR												
	12	7	14'- 10"	4W702	2	1'- 7"	13'- 3"					---					
	11	8	9'- 4"	4W801	STR												
WELL BARRIER																	
	28	5	19'- 6"	WB501	STR												
	21	5	8'- 5"	WB502	17		---	5'- 0"	3'- 5"								
✳	43	5	7'- 3"	WB503	STR												
	21	5	4'- 0"	WB504	S10		1'- 6"	1'- 0"	1'- 6"								
	21	6	4'- 2"	WB601	17		3'- 5"	0'- 9"									
✳	22	7	5'- 0"	WB701	STR												
WELL HEAD																	
	52	5	2'- 11"	WH501	STR												
	8	5	15'- 4"	WH502	17		4'- 4"	6'- 8"	4'- 4"								
	8	5	12'- 8"	WH503	17		3'- 8"	5'- 4"	3'- 8"								
✳ ▲	27	5	7'- 10"	WH504	1	0'- 7"	6'- 8"					0'- 7"		0'- 5"			
	4	5	3'- 10"	WH505	STR												
	12	5	1'- 9"	WH506	STR												
	12	8	3'- 0"	WH801	STR												

~ NOTES ~

1. UNLESS OTHERWISE DESIGNATED, ALL BAR REINFORCEMENT FOR CONCRETE IN SIZES UP TO AND INCLUDING NO. 18 SHALL CONFORM TO THE REQUIREMENTS OF THE "SPECIFICATIONS FOR DEFORMED BILLET-STEEL BARS FOR CONCRETE REINFORCEMENT", AASHTO M 31 (ASTM A 615-SI). ALL BARS SHALL BE GRADE 60, UNLESS OTHERWISE DESIGNATED.
2. FOR TYPICAL BENDING DETAILS, RECOMMENDED PIN DIAMETER "D" OF BENDS AND HOOKS, AND OTHER STANDARD PRACTICE, SEE CURRENT CONCRETE REINFORCING STEEL INSTITUTE "MANUAL OF STANDARD PRACTICE".
3. BARS WHICH REQUIRE MORE ACCURATE BENDING THAN STANDARD PRACTICES SHOULD HAVE LIMITS INDICATED.
4. ALL DIMENSIONS ARE OUT TO OUT OF BAR EXCEPT "A" AND "G" ON STANDARD 180 DEGREE AND 135 DEGREE HOOKS.
5. "J" DIMENSION ON 180 DEGREE HOOKS TO BE SHOWN ONLY WHERE NECESSARY TO RESTRICT HOOK SIZE. OTHERWISE, STANDARD HOOKS ARE TO BE USED.
6. "H" DIMENSION ON STIRRUPS TO BE SHOWN ONLY WHEN NECESSARY TO MAINTAIN CLEARANCES.
7. WHERE SLOPE DIFFERS FROM 45 DEGREES, DIMENSIONS "H" AND "K" MUST BE SHOWN.
8. ▲ DENOTES BARS TO BE CUT IN FIELD.
9. ✳ DENOTES ONE EXTRA BAR ADDED FOR TESTING PURPOSES.
10. △ DENOTES TWO EXTRA BARS ADDED FOR TESTING PURPOSES.
11. E IN BAR MARK PREFIX DENOTES EPOXY COATED REINFORCING STEEL.



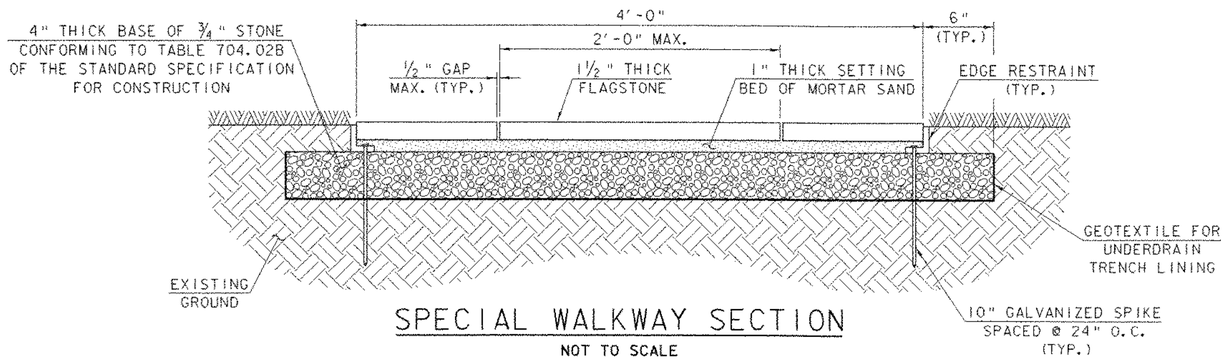
ASTM STANDARD REINFORCING BARS

BAR SIZE DESIGNATION	WEIGHT POUNDS PER FOOT	NOMINAL DIMENSIONS ROUND SECTION DIAMETER INCHES	AREA INCHES²	PERIMETER INCHES
#3	0.376	0.375	0.11	1.178
#4	0.668	0.500	0.20	1.571
#5	1.043	0.625	0.31	1.963
#6	1.502	0.750	0.44	2.356
#7	2.044	0.875	0.60	2.749
#8	2.670	1.000	0.79	3.142
#9	3.400	1.128	1.00	3.544
#10	4.303	1.270	1.27	3.990
#11	5.313	1.410	1.56	4.430
#14	7.65	1.693	2.25	5.32
#18	13.60	2.257	4.00	7.09

PROJECT NAME: READING
PROJECT NUMBER: BRS 0148(6)S

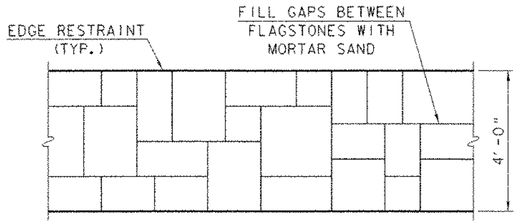
FILE NAME: PW/85e034/Structures/s85e034rss.xls
PROJECT MANAGER: R. WHITCOMB
DESIGNED BY: T. FILLBACH
REINFORCING STEEL SCHEDULE SHEET #1

PLOT DATE: 2/7/2006
DRAWN BY: L. BULLOCK
CHECKED BY: D. BONNEAU
SHEET 60 OF 83



SPECIAL WALKWAY SECTION

NOT TO SCALE

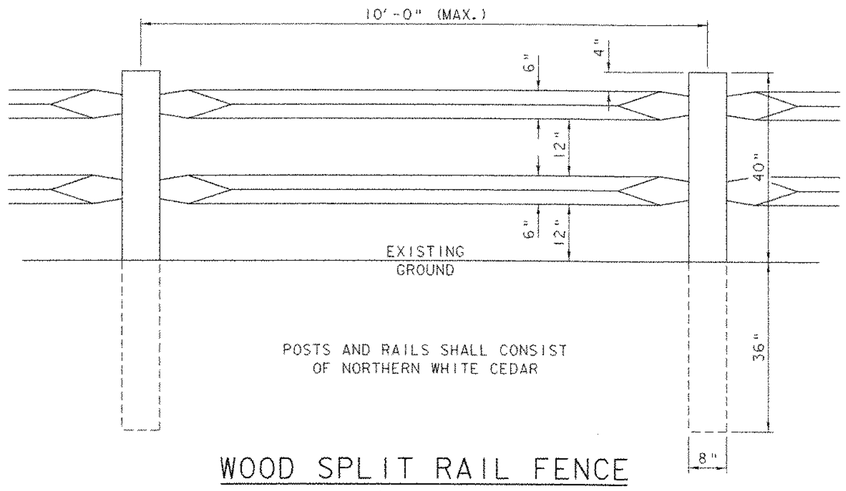


SPECIAL WALKWAY PLAN

NOT TO SCALE

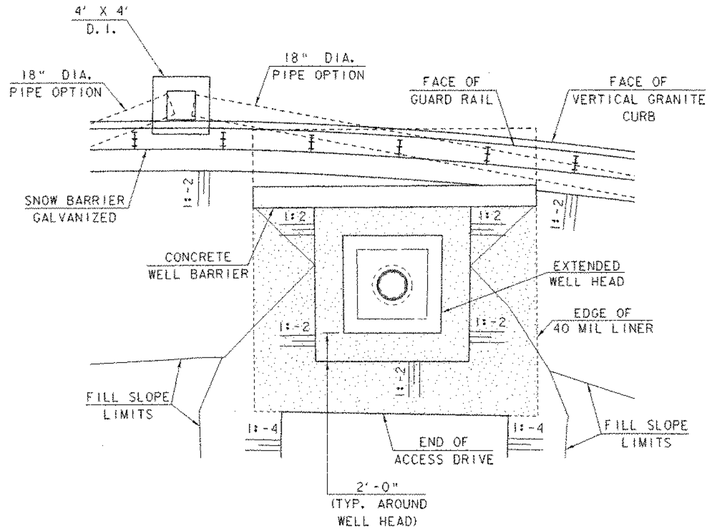
NOTES:

1. MAXIMUM SLOPE OF WALKWAY SHALL BE 2%.
2. STEPS SHALL CONSIST OF 6 INCH MAXIMUM RISE AND 12 INCH MINIMUM RUN.
3. EXCAVATION FOR THE WALKWAY SHALL BE PAID FOR UNDER ITEM 203.15, "COMMON EXCAVATION".
4. THE GEOTEXTILE FABRIC AND ITS INSTALLATION SHALL BE PAID FOR UNDER ITEM 649.41, "GEOTEXTILE FOR UNDERDRAIN TRENCH LINING".
5. MATERIALS AND LABOR TO INSTALL WALKWAY BASE, SETTING BED, EDGE RESTRAINTS, SPIKES, AND FLAGSTONE SHALL BE PAID FOR UNDER ITEM 618.10, "PORTLAND CEMENT CONCRETE SIDEWALK, 5 INCH (MOD.)". SEE SPECIAL PROVISIONS.



WOOD SPLIT RAIL FENCE

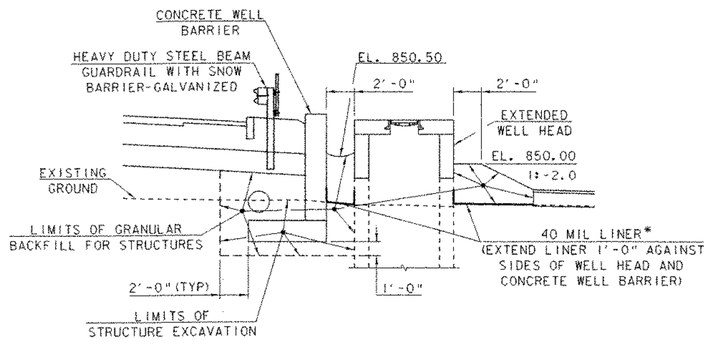
NOT TO SCALE



PLAN VIEW OF WELL HEAD

5 0 5

SCALE: 1" = 5'-0"



EARTHWORK TYPICAL AT WELL HEAD

5 0 5

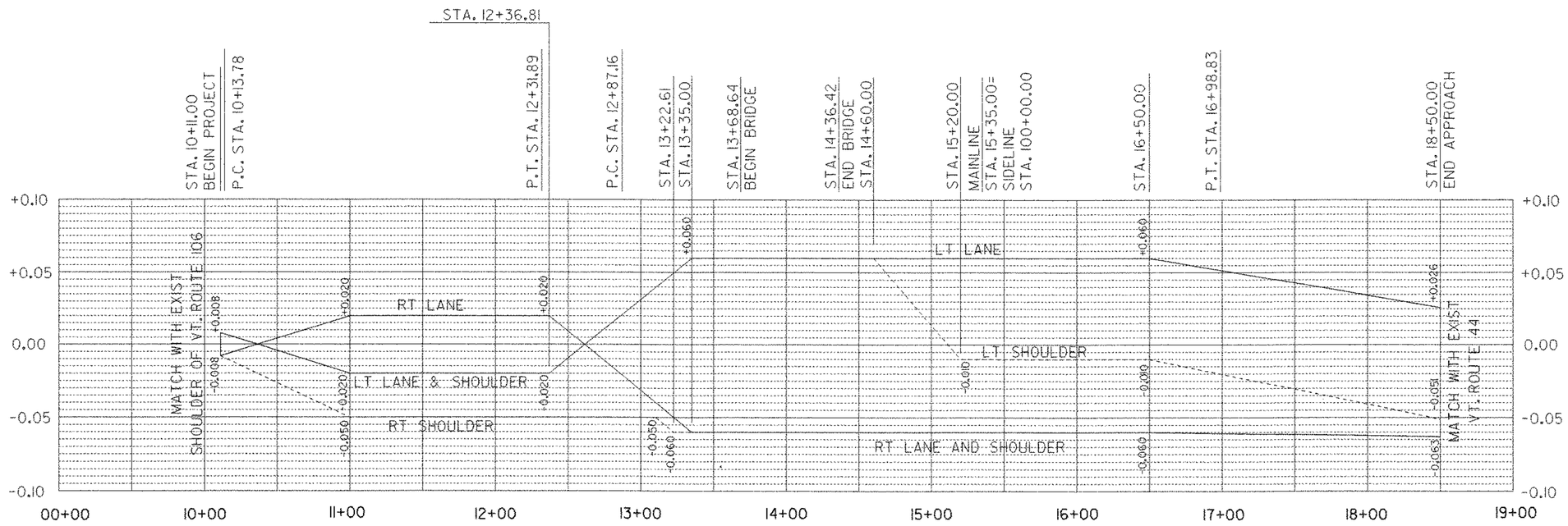
SCALE: 1" = 5'-0"

*COST FOR MATERIAL AND INSTALLATION SHALL BE PAID FOR UNDER ITEM 649.11, "GEOTEXTILE FOR ROADBED SUBGRADE SEPARATOR (MOD.)".

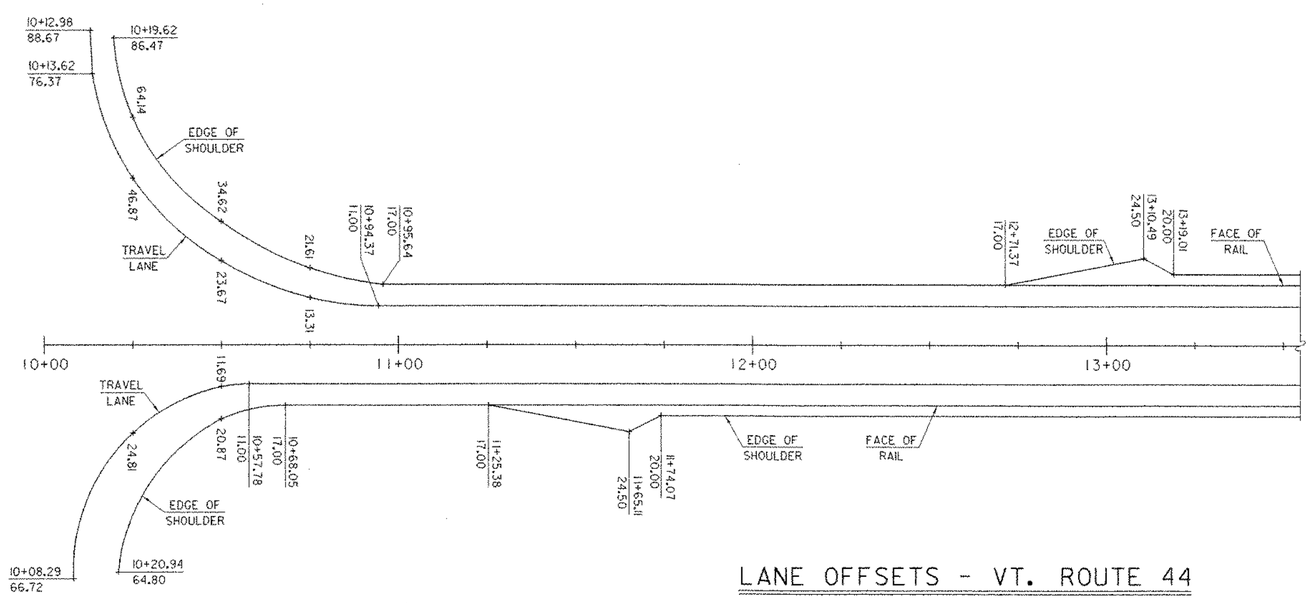
SHEET NAME: MISCELLANEOUS DETAILS

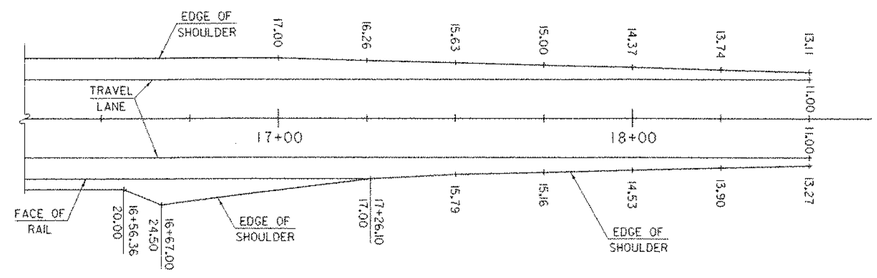
PROJECT NAME: READING
PROJECT NUMBER: BRS 0148(6)S
HIGHWAY NO.: VT 44
BRIDGE NO.: 1
OVER: THE MILL BROOK

FILE NAME: PW/85e034/Structures/se034misc.dgn
PROJECT MANAGER: R. WHITCOMB
DESIGNED BY: C. CARLSON
BRIDGE SHEET NUMBER:
PLOT DATE: 17-FEB-2006
DRAWN BY: G. ROY
IPARM NAME: se034misc.i
SHEET 60A OF 83



MAINLINE BANKING DIAGRAM - VT. ROUTE 44





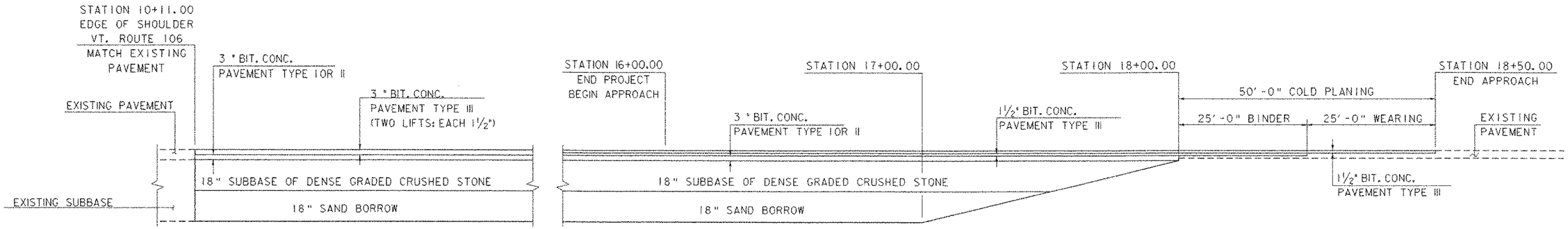
LANE OFFSETS - VT. ROUTE 44

UNLESS OTHERWISE NOTED, OFFSETS ARE
FROM CENTERLINE AT 25' STATIONS.

20 0 20

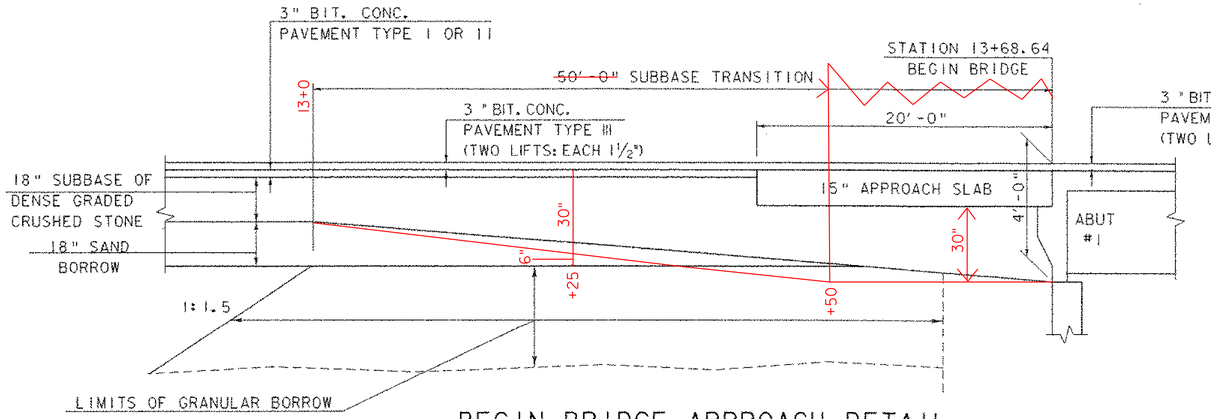
SCALE: 1" = 20'-0"

SHEET NAME: **MAINLINE BANKING DIAGRAM/LANE OFFSETS**	
PROJECT NAME: READING	HIGHWAY NO.: VT 44
PROJECT NUMBER: BRS 0148(6)S	BRIDGE NO.: 1
	OVER: THE MILL BROOK
FILE NAME: PW/85e034/Structures/se034xsl.dgn	PLOT DATE: 17-FEB-2006
PROJECT MANAGER: R. WHITCOMB	DRAWN BY: J. GILMORE
DESIGNED BY: C. CARLSON	IPARM NAME: se034bd.I
BRIDGE SHEET NUMBER:	SHEET 61 OF 83

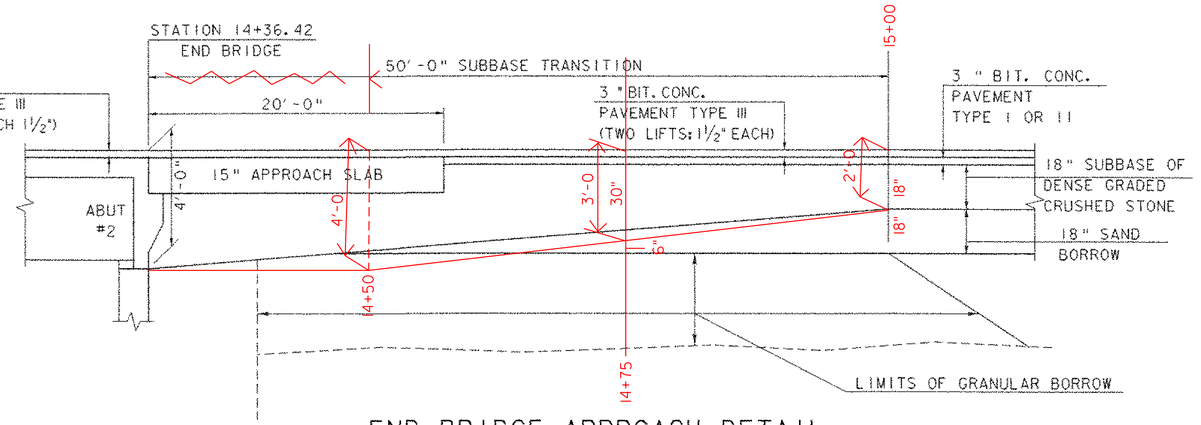


BEGIN MAINLINE SUBBASE DETAIL (VT 44)
N. T. S.

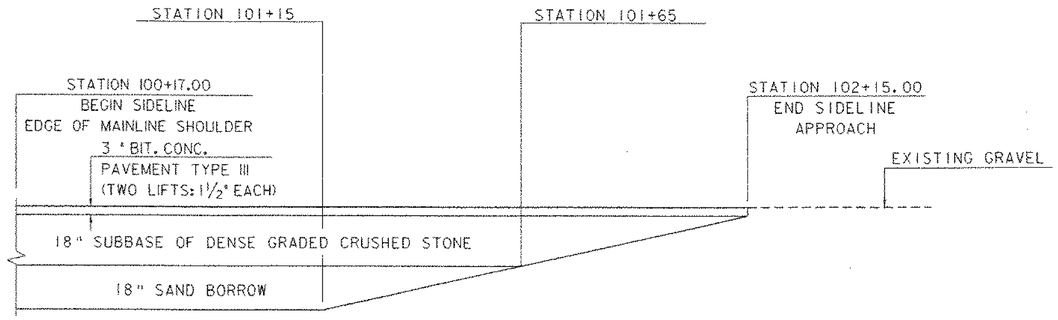
END MAINLINE SUBBASE TRANSITION DETAIL (VT 44)
N. T. S.



BEGIN BRIDGE APPROACH DETAIL
N. T. S.

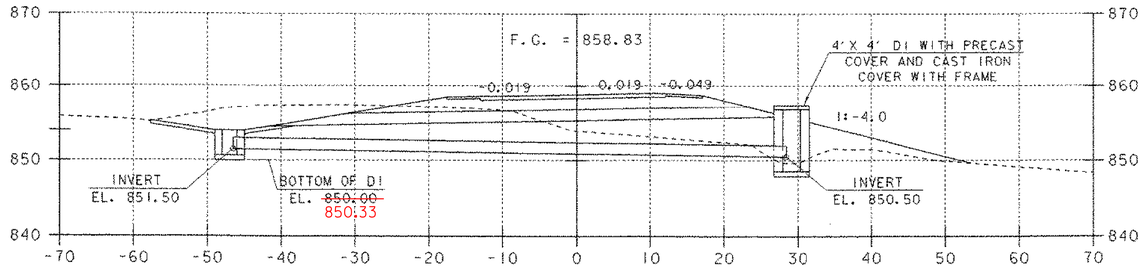


END BRIDGE APPROACH DETAIL
N. T. S.

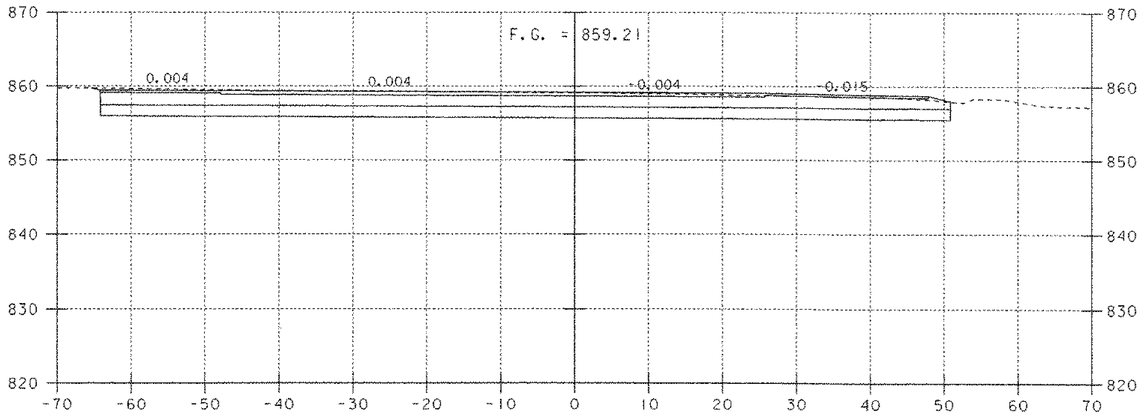


SIDELINE SUBBASE TRANSITION DETAIL (FLAT IRON RD.)
N. T. S.

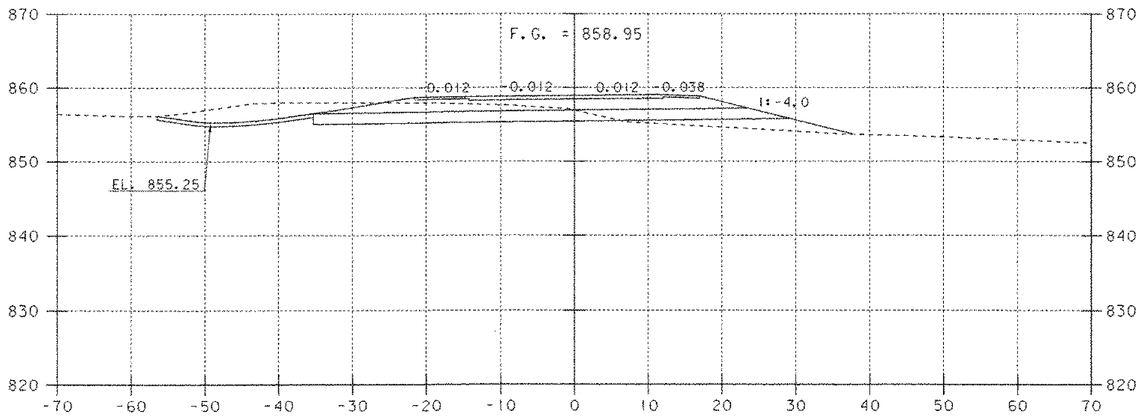
SHEET NAME: SUBBASE TRANSITION DIAGRAMS	
PROJECT NAME: READING	HIGHWAY NO.: VT 44
PROJECT NUMBER: BRS 0148(6)S	BRIDGE NO.: 1
	OVER: THE MILL BROOK
FILE NAME: PW/85e034/Structures/se034xsl.dgn	PLOT DATE: 17-FEB-2006
PROJECT MANAGER: R. WHITCOMB	DRAWN BY: J. GILMORE
DESIGNED BY: C. CARLSON	IPARM NAME: se034std.i
BRIDGE SHEET NUMBER:	SHEET 62 OF 83



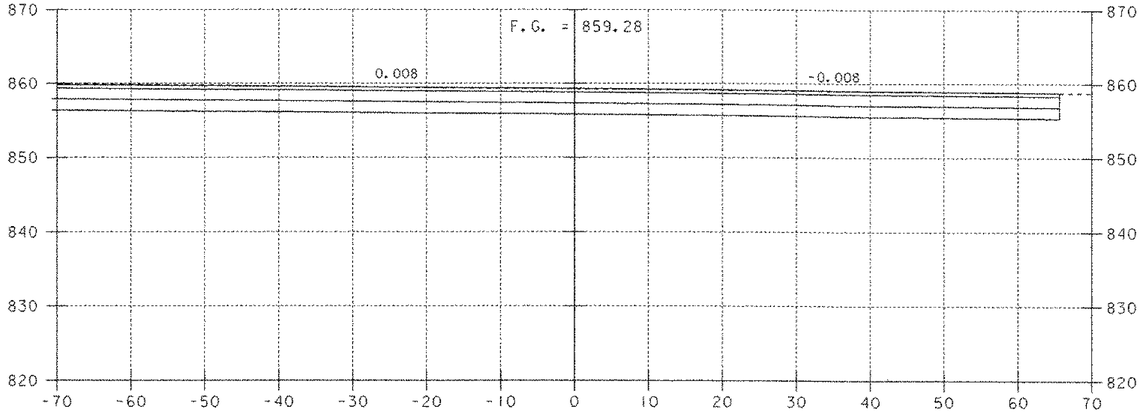
18" X 74' PIPE OPTION
10+90 LT. - 11+00 RT.



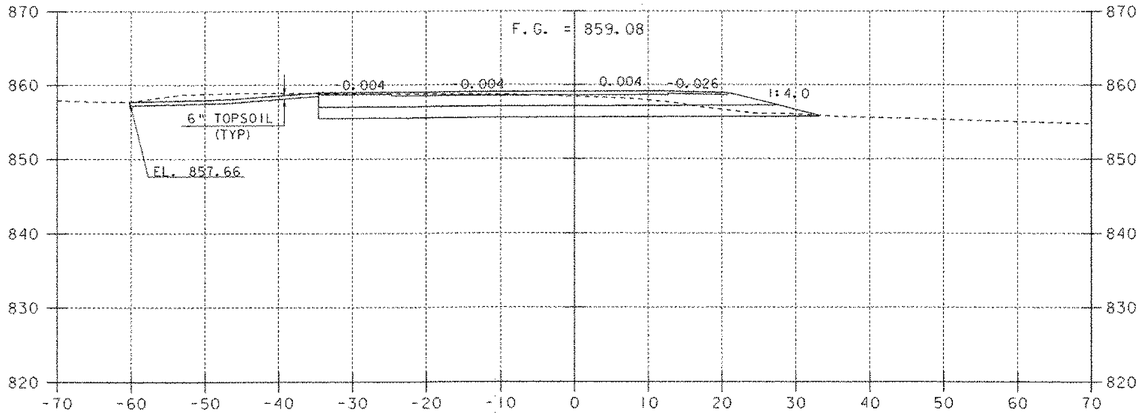
10+25



10+75



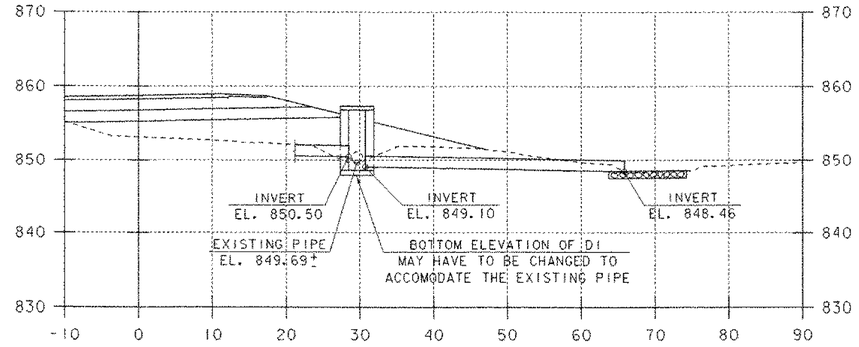
10+11
BEGIN PROJECT



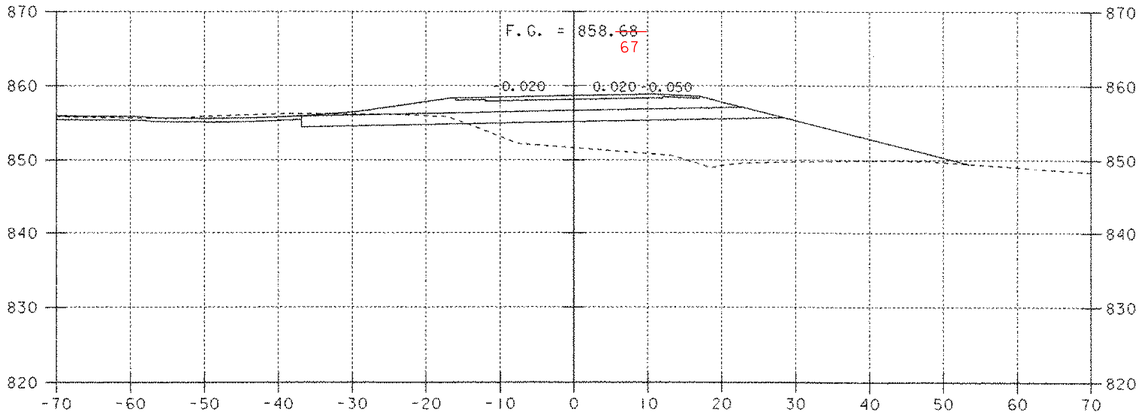
10+50

10 0 10
SCALE: 1" = 10'-0"

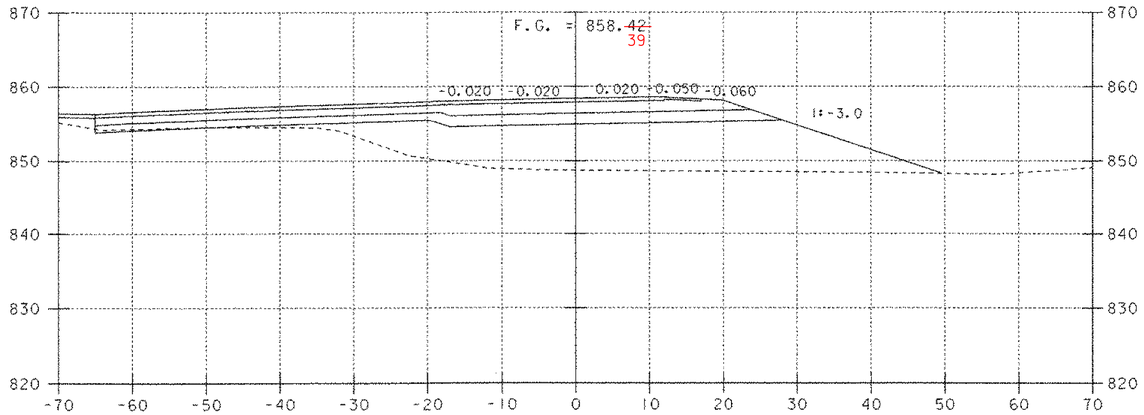
SHEET NAME: MAINLINE CROSS SECTIONS	
PROJECT NAME: READING	HIGHWAY NO.: VT 44
PROJECT NUMBER: BRS 0148(6)S	BRIDGE NO.: 1
	OVER: THE MILL BROOK
FILE NAME: PW/85e034/Structures/se034xsl.dgn	PLOT DATE: 17-FEB-2006
PROJECT MANAGER: R. WHITCOMB	DRAWN BY: J. GILMORE
DESIGNED BY: C. CARLSON	IPARM NAME: se034mxl1
BRIDGE SHEET NUMBER:	SHEET 63 OF 83



18" X 36' CPEP (SL) PIPE
11+00 RT. - 10+93 RT.

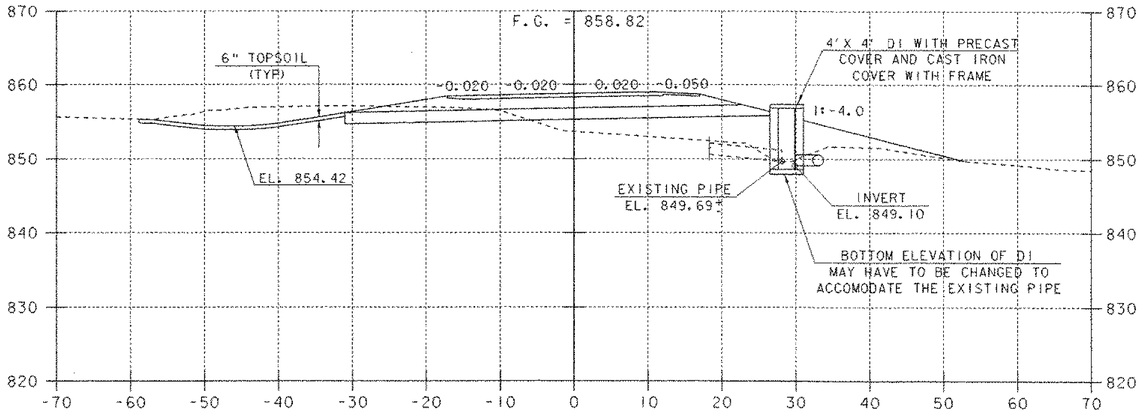


11+25

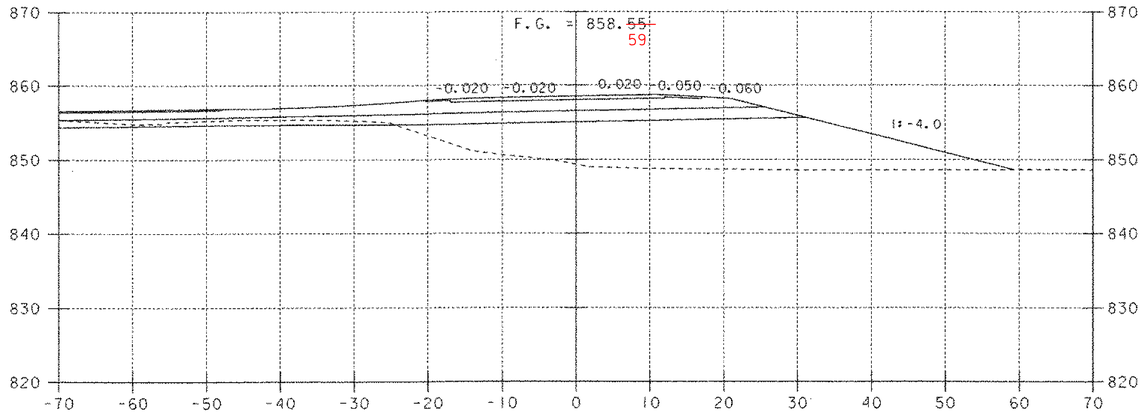


11+75

CONSTRUCT DRIVE LEFT



11+00

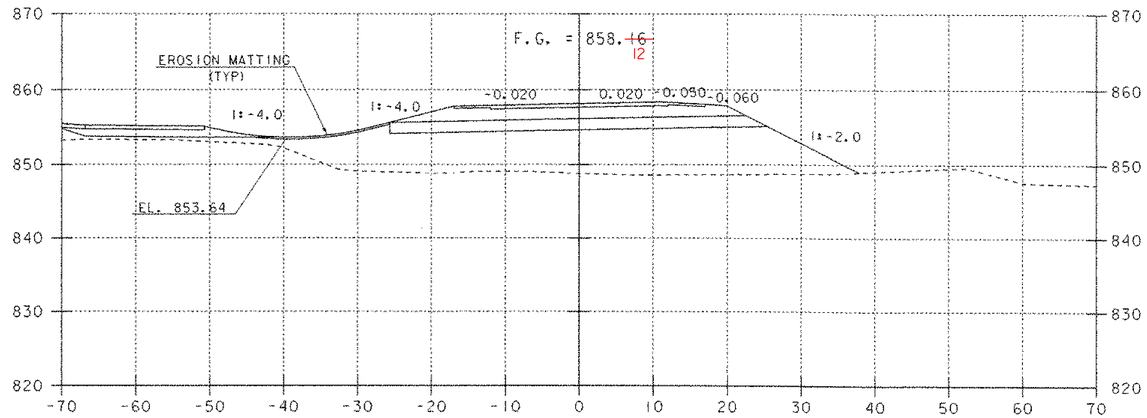


11+50

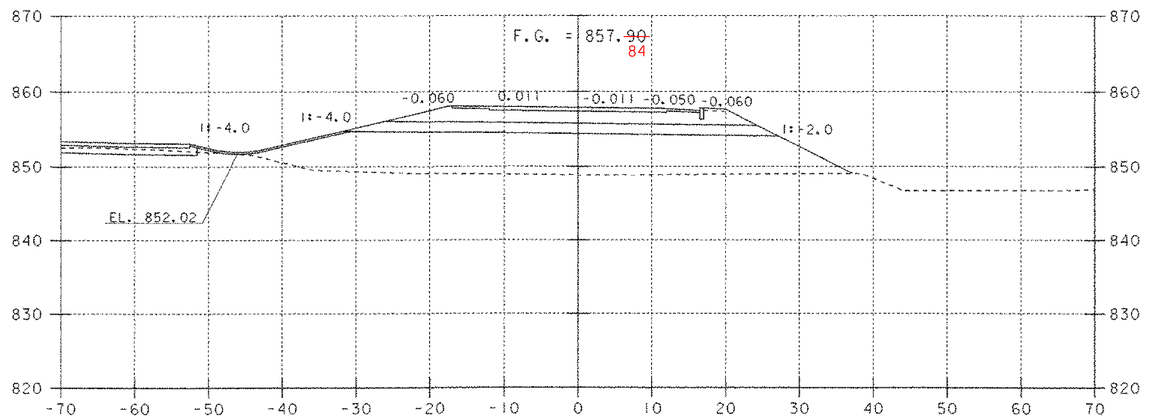
10 0 10

SCALE: 1" = 10'-0"

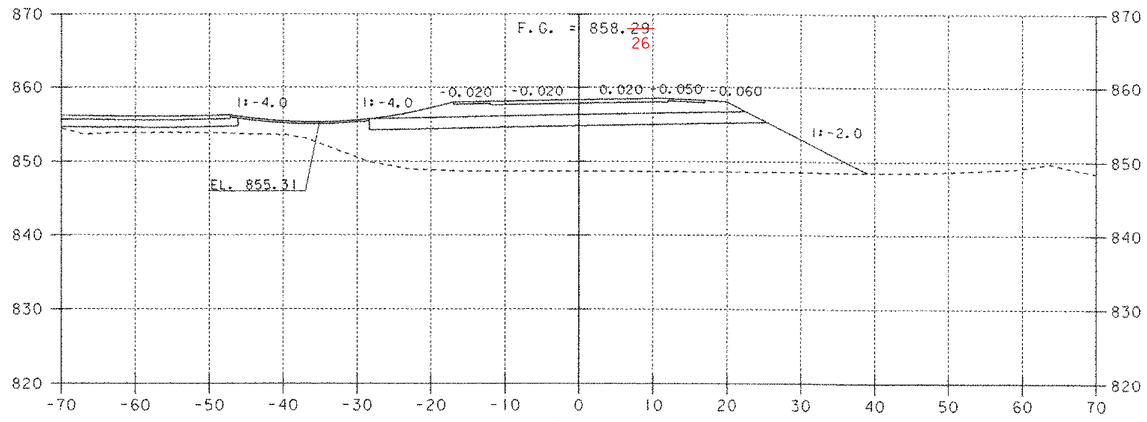
SHEET NAME: MAINLINE CROSS SECTIONS	
PROJECT NAME: READING	HIGHWAY NO.: VT 44
PROJECT NUMBER: BRS 0148(6)S	BRIDGE NO.: 1
	OVER: THE MILL BROOK
FILE NAME: PW/85e034/Structures/se034xsl.dgn	PLOT DATE: 17-FEB-2006
PROJECT MANAGER: R. WHITCOMB	DRAWN BY: J. GILMORE
DESIGNED BY: C. CARLSON	IPARM NAME: se034mx2.1
BRIDGE SHEET NUMBER:	SHEET 64 OF 83



12+25

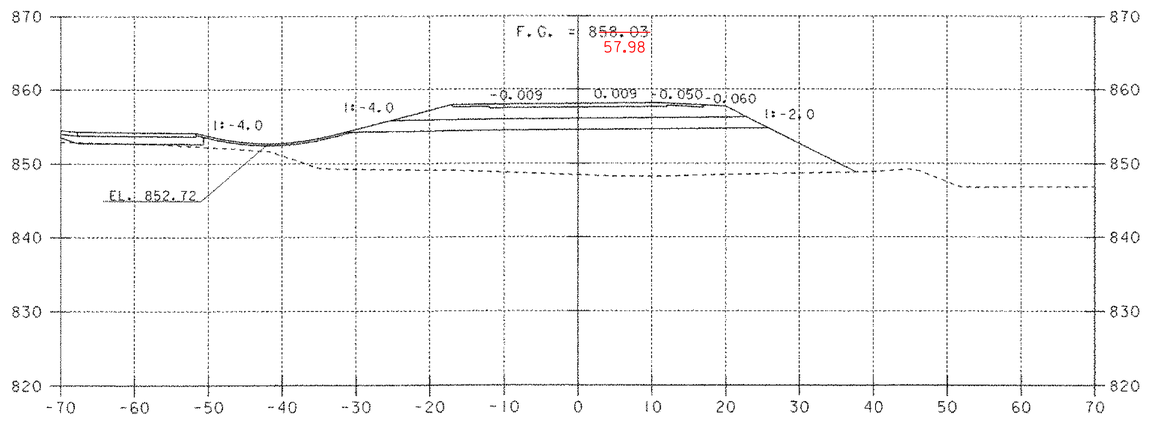


12+75



STA 12+00 LT
BEGIN SPECIAL DITCH
WITH EROSION MATTING

12+00



12+50

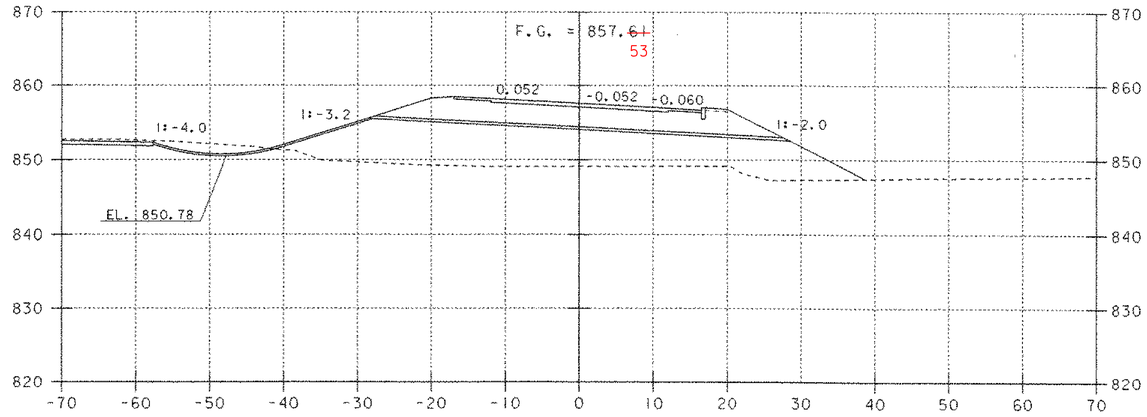
10 0 10

SCALE: 1" = 10'-0"

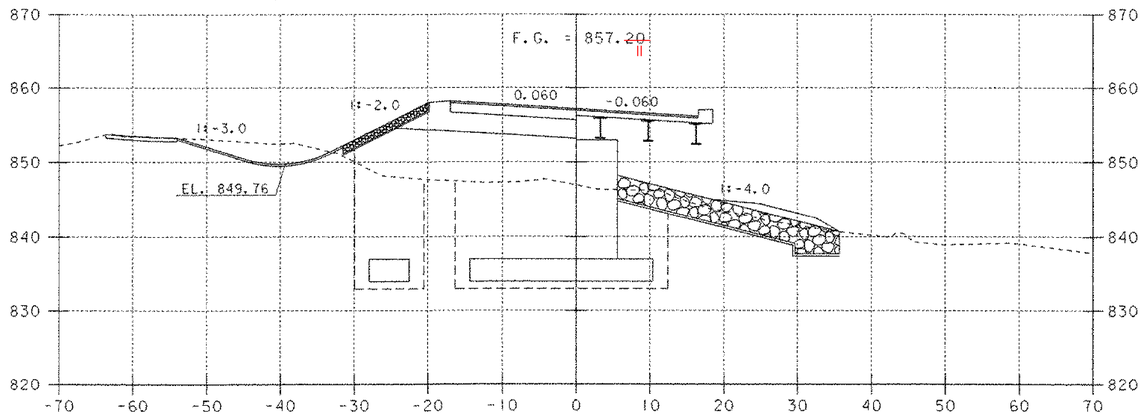
SHEET NAME: MAINLINE CROSS SECTIONS

PROJECT NAME: READING
PROJECT NUMBER: BRS 0148(6)S
HIGHWAY NO.: VT 44
BRIDGE NO.: 1
OVER: THE MILL BROOK

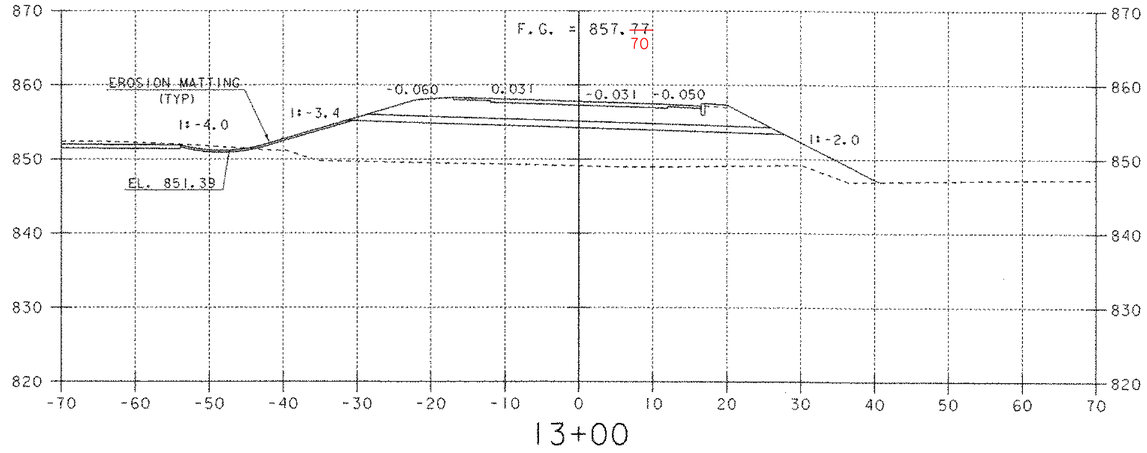
FILE NAME: PW/85e034/Structures/se034xsl.dgn
PROJECT MANAGER: R. WHITCOMB
DESIGNED BY: C. CARLSON
BRIDGE SHEET NUMBER:
PLOT DATE: 17-FEB-2006
DRAWN BY: J. GILMORE
IPARM NAME: se034mx3.i
SHEET 65 OF 83



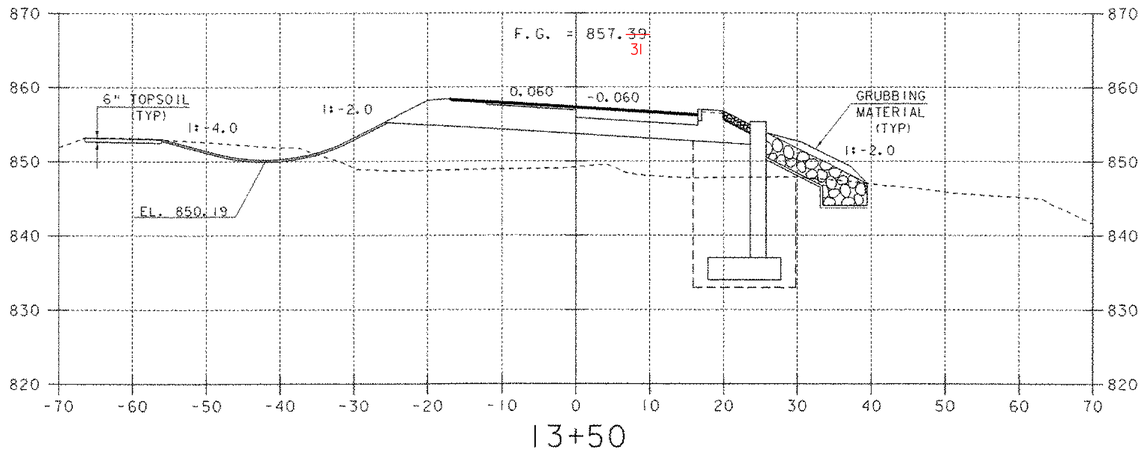
13+25



13+68.64
BEGIN BRIDGE



13+00



13+50

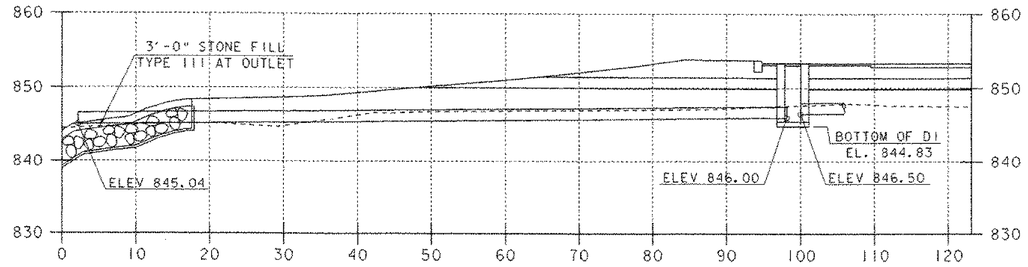
10 0 10

SCALE: 1" = 10'-0"

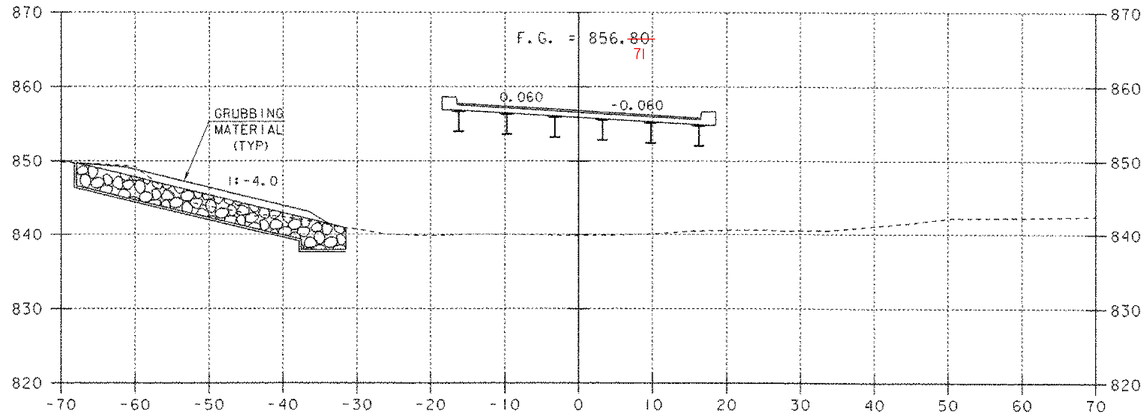
SHEET NAME: MAINLINE CROSS SECTIONS

PROJECT NAME: READING
PROJECT NUMBER: BRS 0148(6)S
HIGHWAY NO.: VT 44
BRIDGE NO.: 1
OVER: THE MILL BROOK

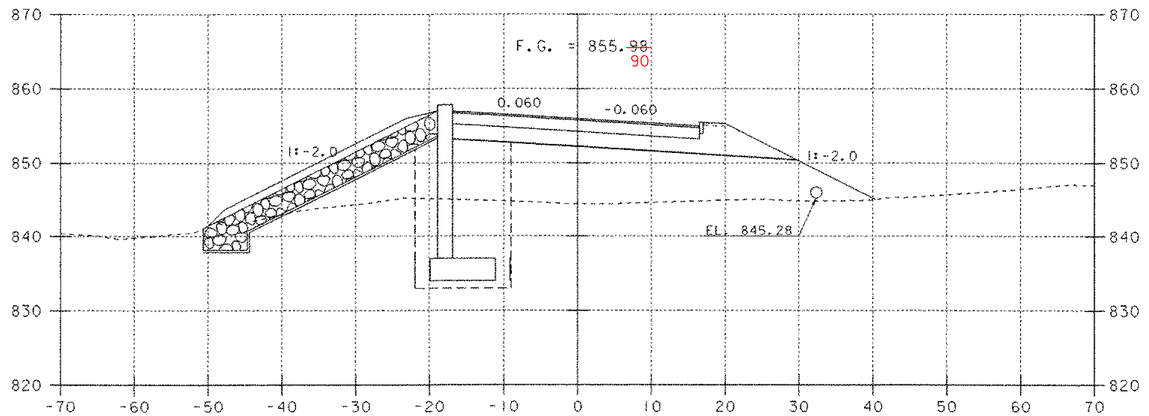
FILE NAME: PW/85e034/Structures/se034xsl.dgn
PROJECT MANAGER: R. WHITCOMB
DESIGNED BY: C. CARLSON
BRIDGE SHEET NUMBER:
PLOT DATE: 17-FEB-2006
DRAWN BY: J. GILMORE
IPARM NAME: se034mx4.i
SHEET 66 OF 83



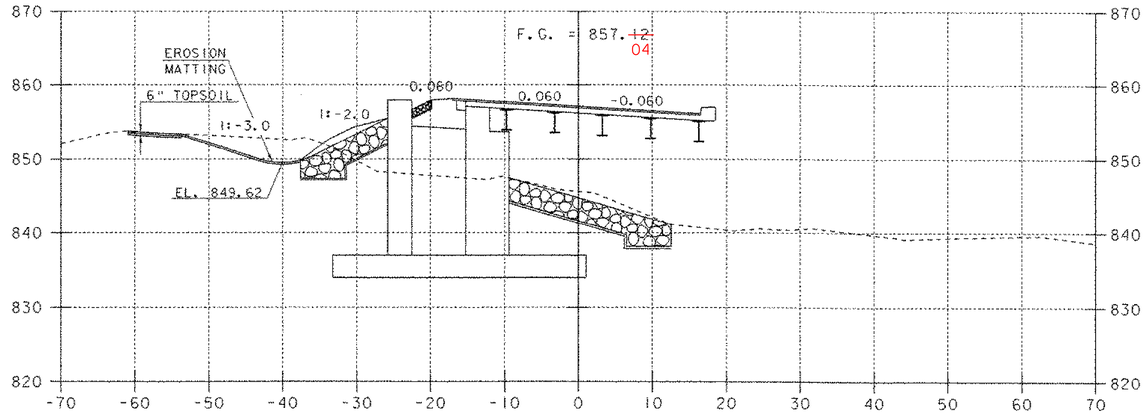
18" X 96' PIPE OPTION
14+22 RT. - 15+27 RT.



14+00

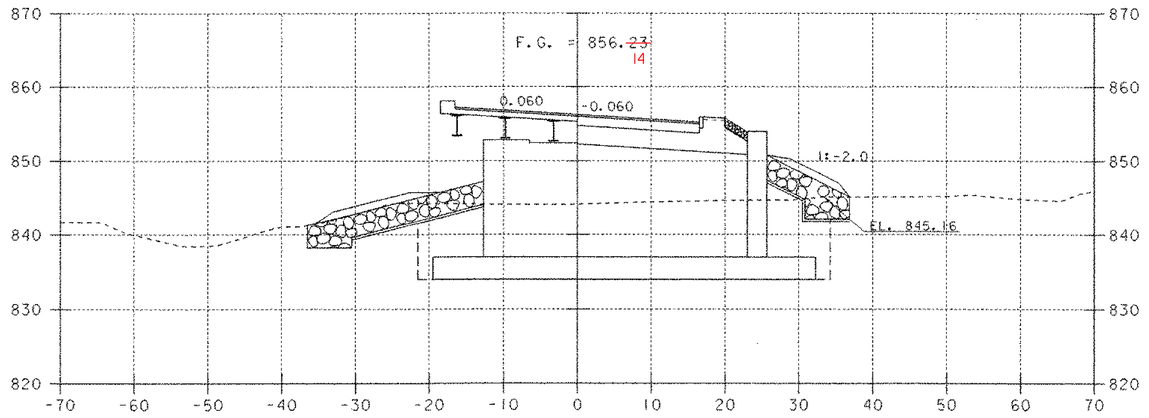


14+50



13+75

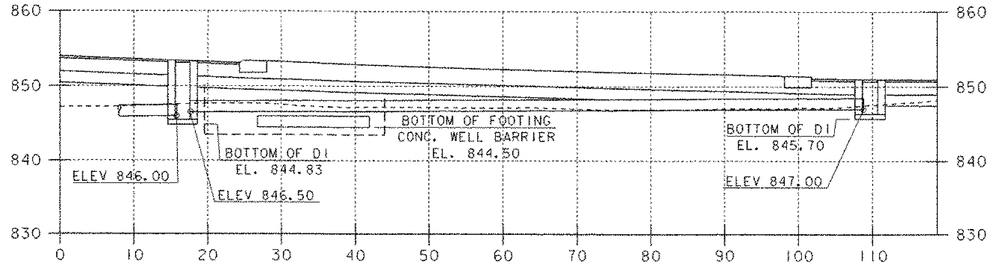
STA 13+75 LT
END SPECIAL DITCH
WITH EROSION MATTING



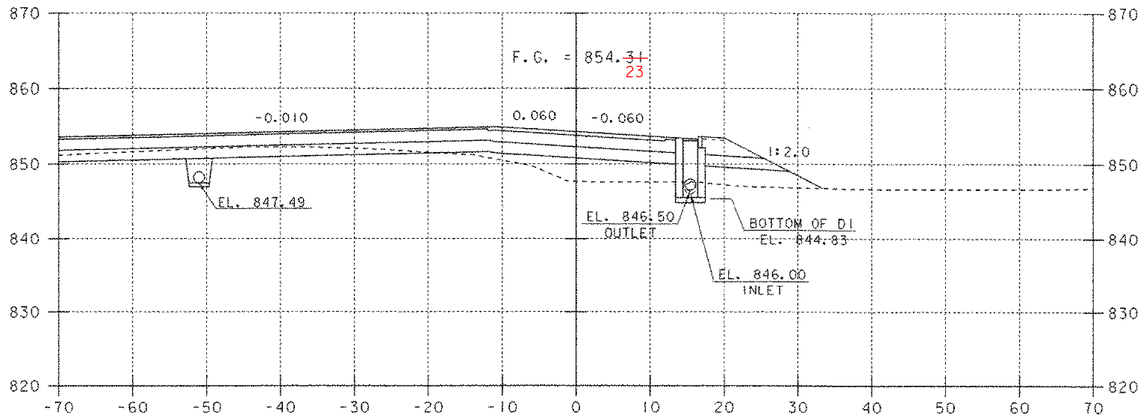
14+36.42
END BRIDGE

10 0 10
SCALE: 1" = 10'-0"

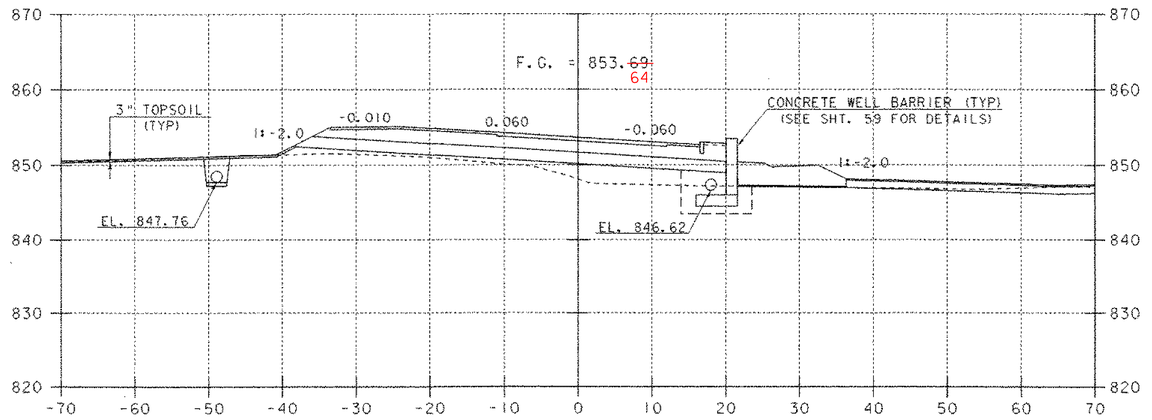
SHEET NAME: MAINLINE CROSS SECTIONS	
PROJECT NAME: READING	HIGHWAY NO.: VT 44
PROJECT NUMBER: BRS 0148(6)S	BRIDGE NO.: 1
	OVER: THE MILL BROOK
FILE NAME: PW/85e034/Structures/se034xsl.dgn	PLOT DATE: 17-FEB-2006
PROJECT MANAGER: R. WHITCOMB	DRAWN BY: J. GILMORE
DESIGNED BY: C. CARLSON	IPARM NAME: se034mx5.i
BRIDGE SHEET NUMBER:	SHEET 67 OF 83



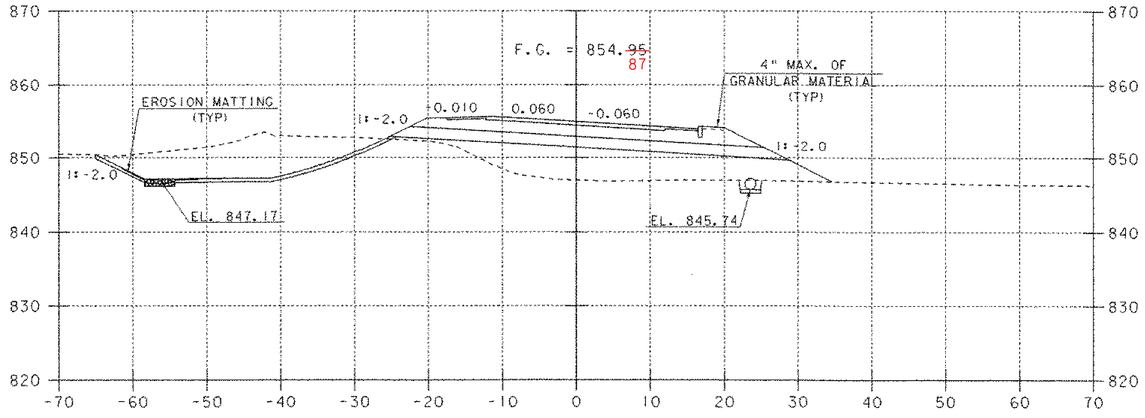
18" X 92' PIPE OPTION
15+27 RT. - 16+26 RT.



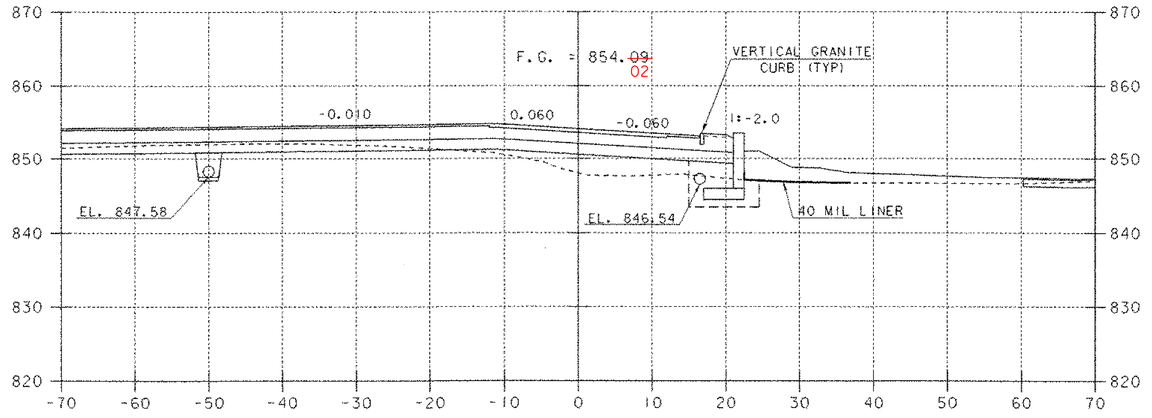
15+27
CONSTRUCT DROP INLET RIGHT



15+50



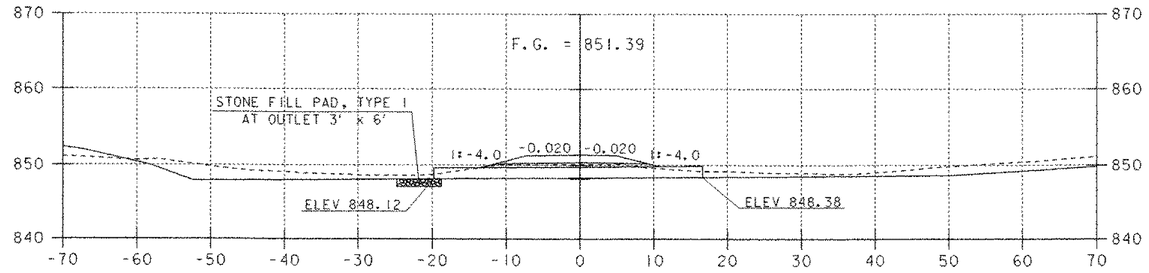
15+00



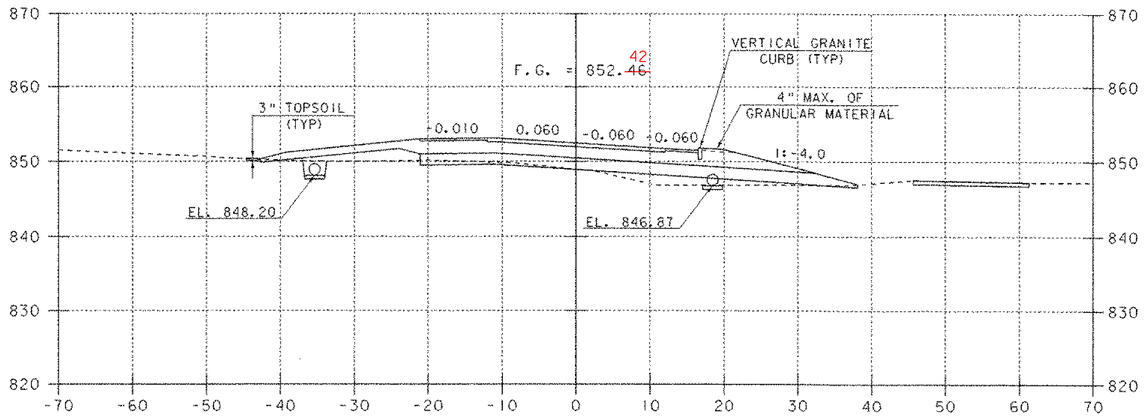
15+35
CONSTRUCT SIDELINE LEFT

10 0 10
SCALE: 1" = 10'-0"

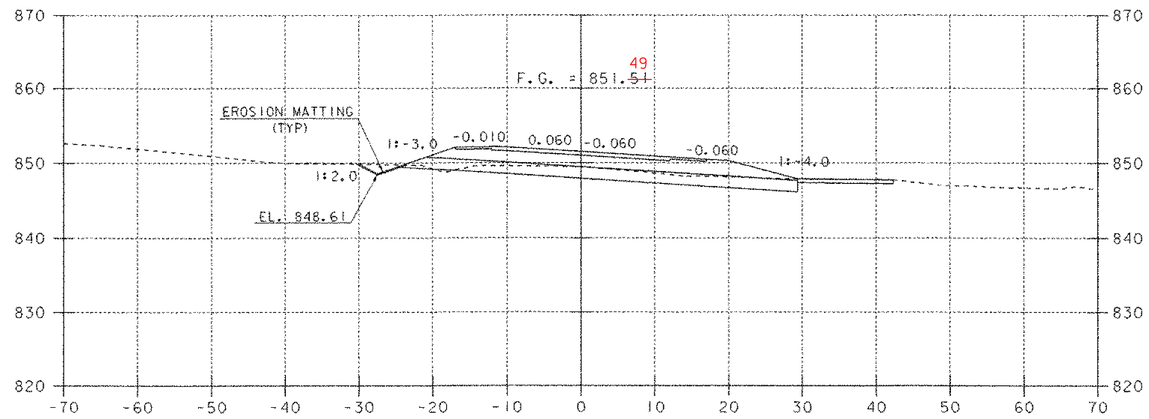
SHEET NAME: MAINLINE CROSS SECTIONS	
PROJECT NAME: READING	HIGHWAY NO.: VT 44
PROJECT NUMBER: BRS 0148(6)S	BRIDGE NO.: 1
	OVER: THE MILL BROOK
FILE NAME: PW/85e034/Structures/se034xsl.dgn	PLOT DATE: 17-FEB-2006
PROJECT MANAGER: R. WHITCOMB	DRAWN BY: J. GILMORE
DESIGNED BY: C. CARLSON	IPARM NAME: se034mx6.i
BRIDGE SHEET NUMBER:	SHEET 68 OF 83



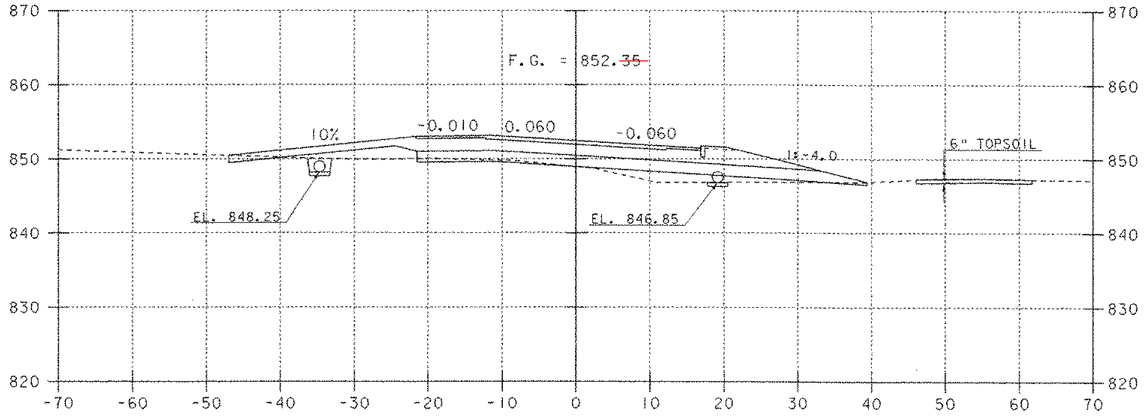
18" X 36' CPEP (SL) PIPE
15+88 LT. - 16+20 LT.



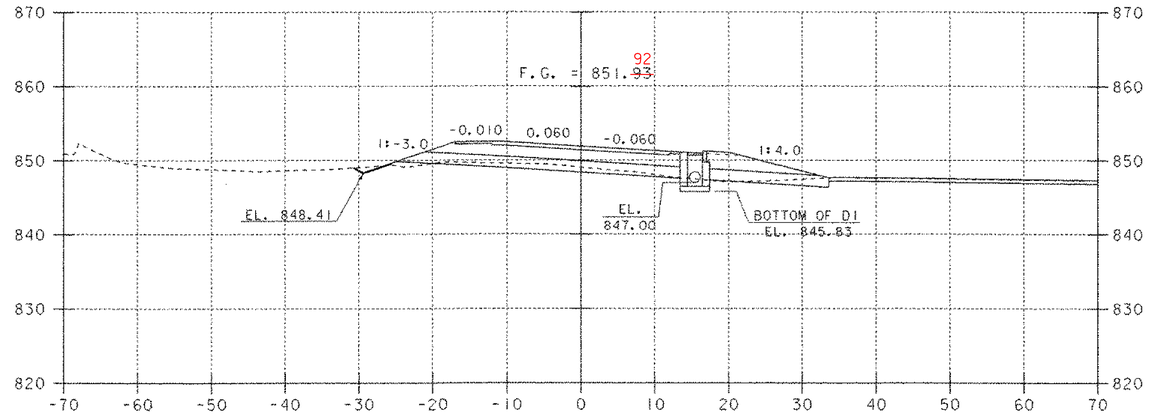
16+00
END PROJECT
BEGIN APPROACH



16+50



15+99
DRIVE LEFT
SKEW = 12°

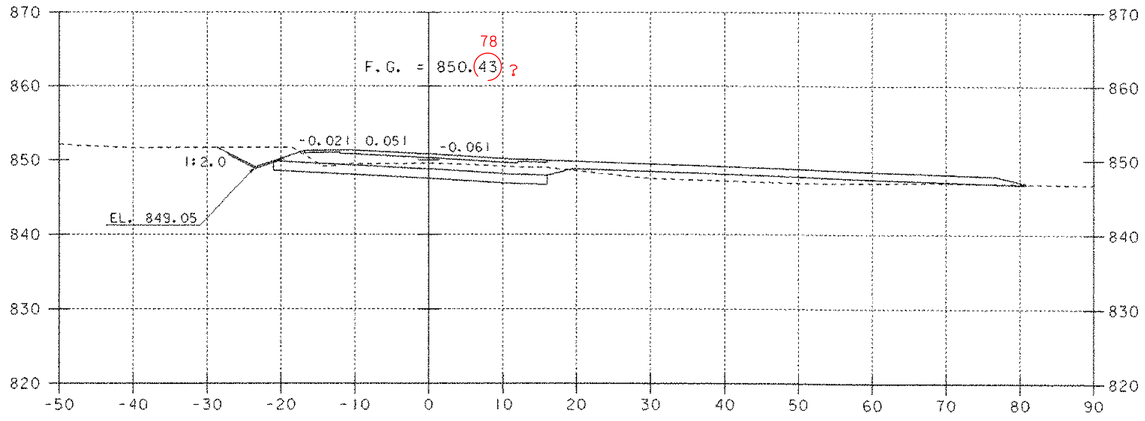


STA 16+20 LT
BEGIN SPECIAL DITCH
WITH EROSION MATTING

16+25
CONSTRUCT DROP INLET RIGHT

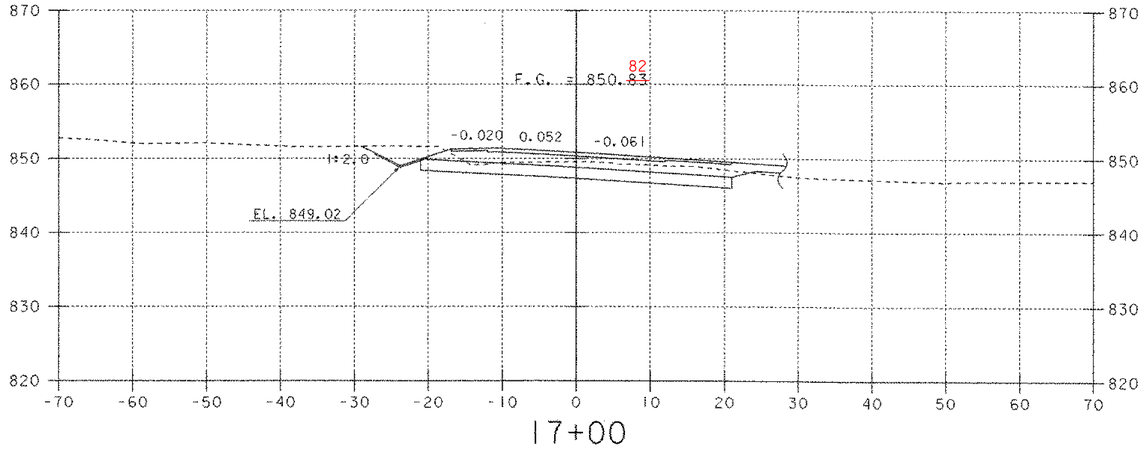
10 0 10
SCALE: 1" = 10'-0"

SHEET NAME: MAINLINE CROSS SECTIONS	
PROJECT NAME: READING	HIGHWAY NO.: VT 44
PROJECT NUMBER: BRS 0148(6)S	BRIDGE NO.: 1
	OVER: THE MILL BROOK
FILE NAME: PW/85e034/Structures/se034xsl.dgn	PLOT DATE: 17-FEB-2006
PROJECT MANAGER: R. WHITCOMB	DRAWN BY: J. GILMORE
DESIGNED BY: C. CARLSON	IPARM NAME: se034mx7.1
BRIDGE SHEET NUMBER:	SHEET 69 OF 83

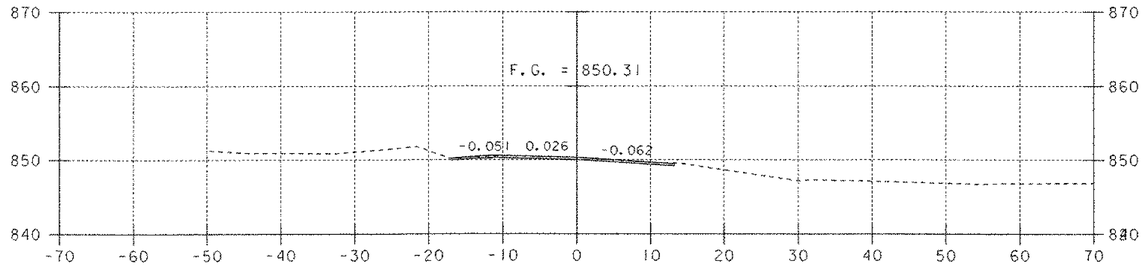


17+04
DRIVE RIGHT

SEE SHEET 76 FOR DRIVE DETAILS

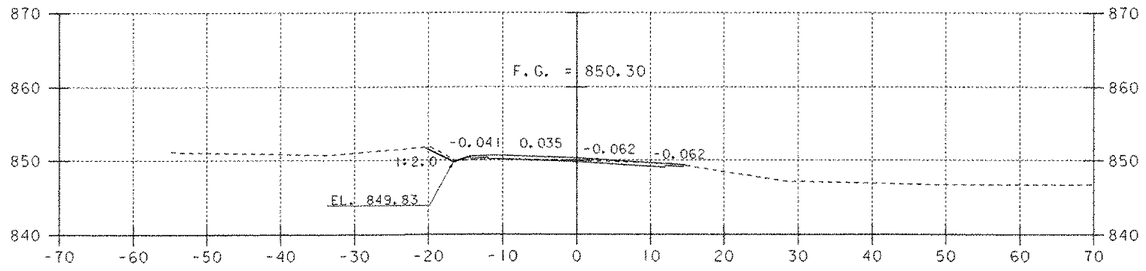


17+00

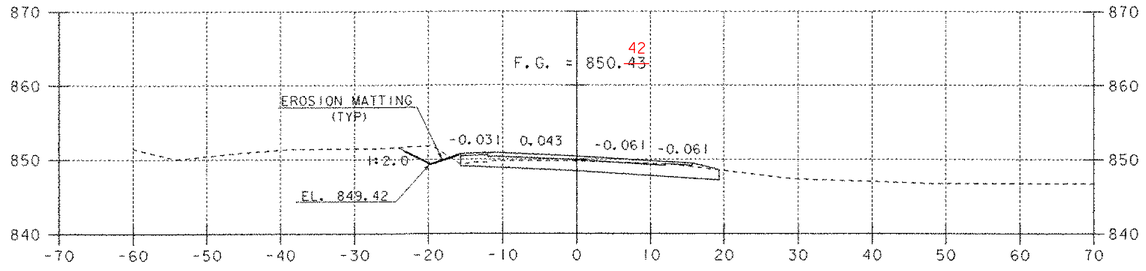


STA 18+50 LT
END SPECIAL DITCH
WITH EROSION MATTING

18+50
END APPROACH



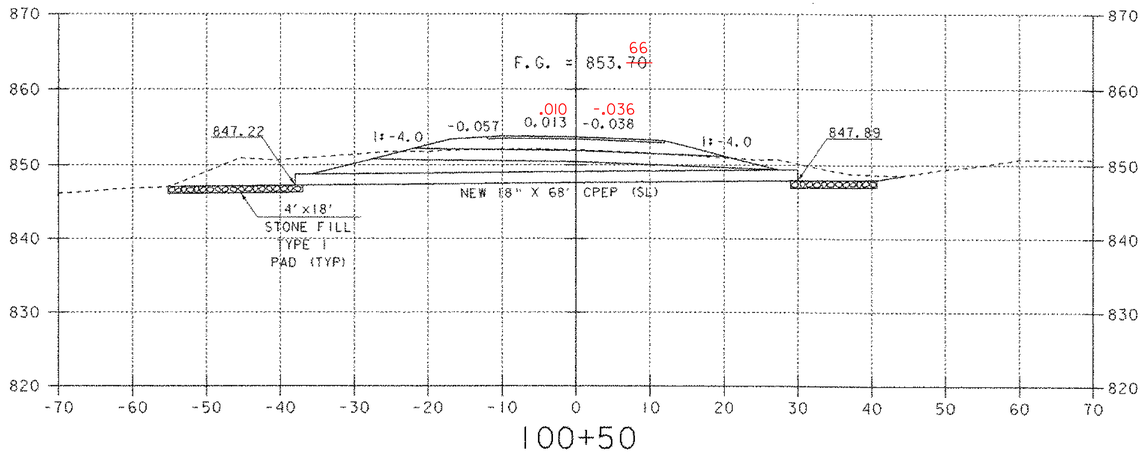
18+00



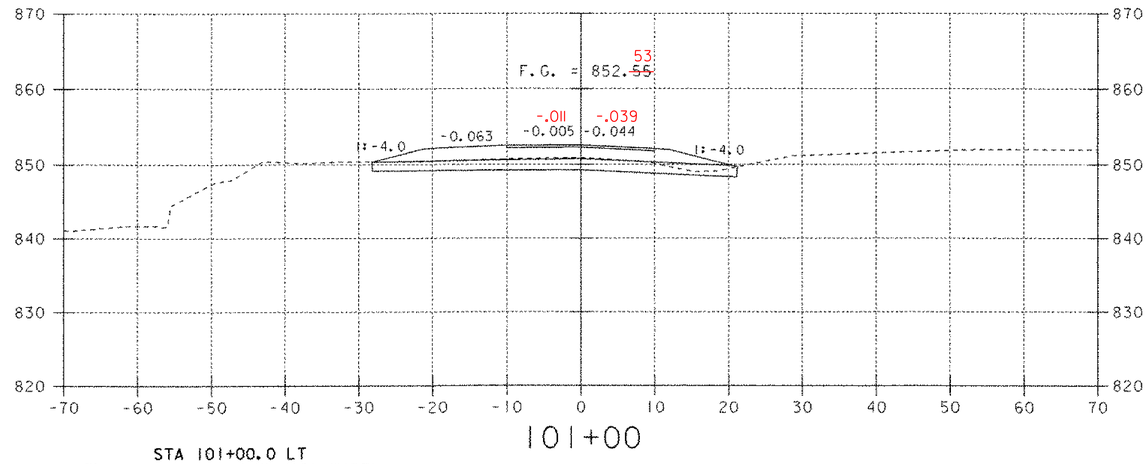
17+50

10 0 10
SCALE: 1" = 10'-0"

SHEET NAME: MAINLINE CROSS SECTIONS	
PROJECT NAME: READING	HIGHWAY NO.: VT 44
PROJECT NUMBER: BRS 0148(6)S	BRIDGE NO.: 1
	OVER: THE MILL BROOK
FILE NAME: PW/85e034/Structures/se034xsl.dgn	PLOT DATE: 17-FEB-2006
PROJECT MANAGER: R. WHITCOMB	DRAWN BY: J. GILMORE
DESIGNED BY: C. CARLSON	IPARM NAME: se034mx8.1
BRIDGE SHEET NUMBER:	SHEET 70 OF 83

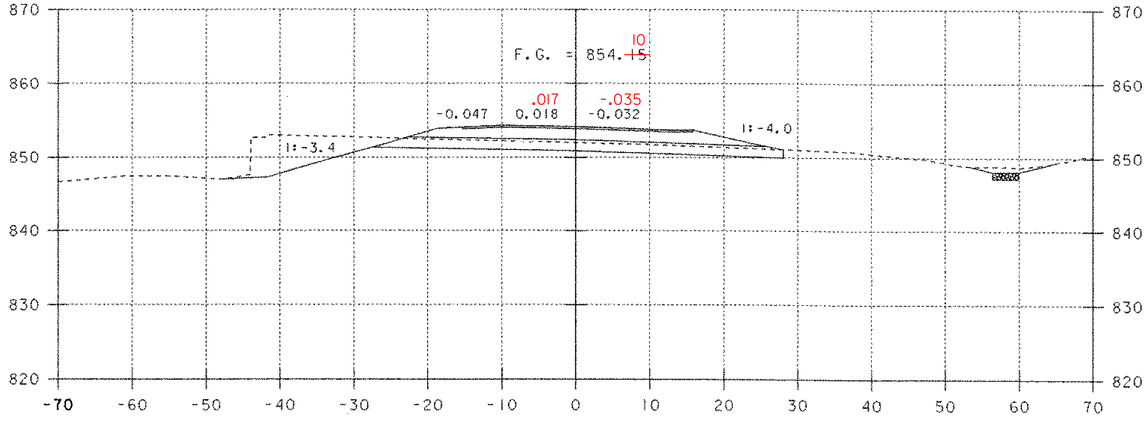


100+50



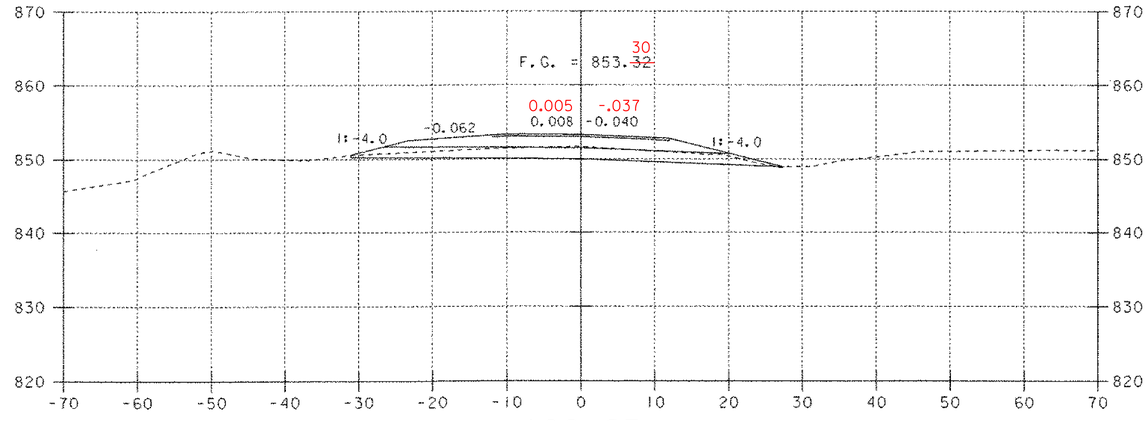
101+00

STA 101+00.0 LT
END GRAVEL TURNOUT (12' WIDE)



STA 100+17
BEGIN SIDELINE APPROACH

100+35



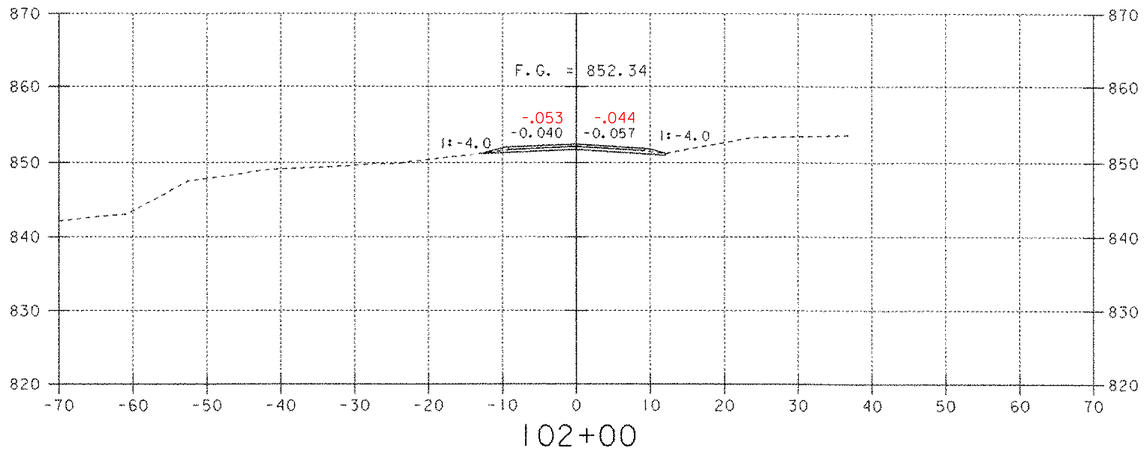
STA 100+58.6 LT
BEGIN GRAVEL TURNOUT (12' WIDE)

100+63
MAX FLARE LEFT

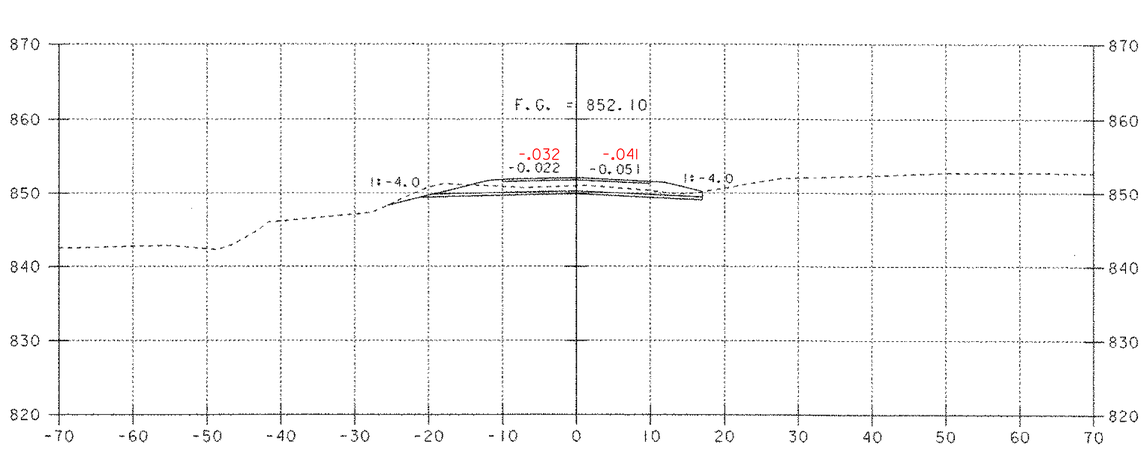
10 0 10
SCALE: 1" = 10'-0"

FLAT IRON ROAD

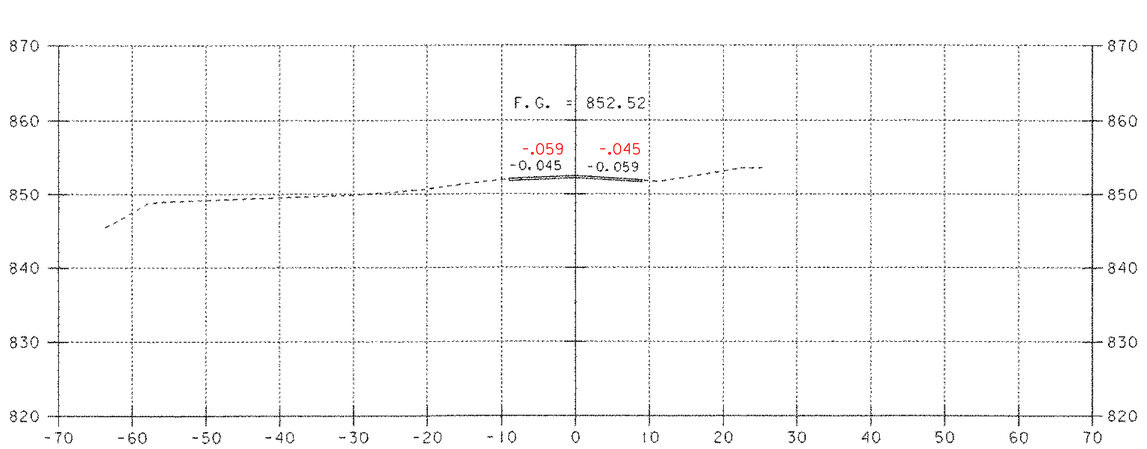
SHEET NAME: SIDELINE CROSS SECTIONS	
PROJECT NAME: READING	HIGHWAY NO.: VT 44
PROJECT NUMBER: BRS 0148(6)S	BRIDGE NO.: 1
	OVER: THE MILL BROOK
FILE NAME: PW/85e034/Structures/se034xsl.dgn	PLOT DATE: 17-FEB-2006
PROJECT MANAGER: R. WHITCOMB	DRAWN BY: J. GILMORE
DESIGNED BY: C. CARLSON	IPARM NAME: se034sxl.i
BRIDGE SHEET NUMBER:	SHEET 71 OF 83



102+00



101+50



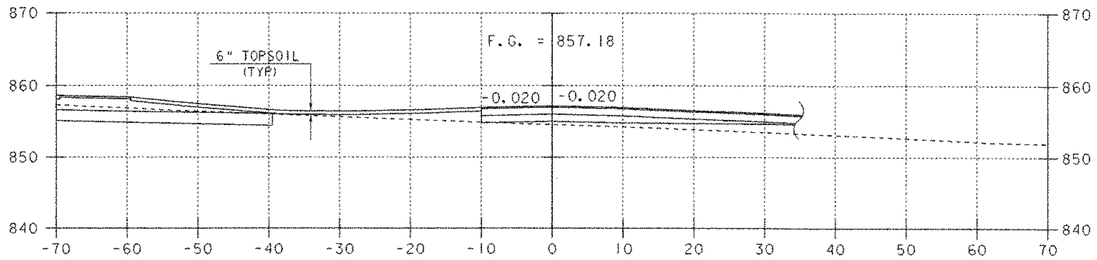
102+15
END SIDELINE

10 0 10

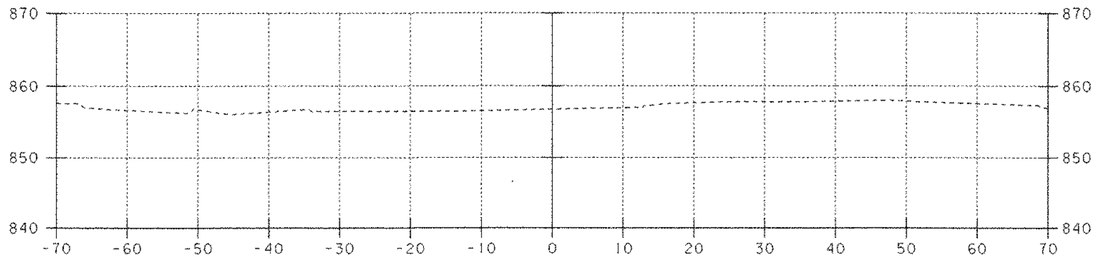
SCALE: 1" = 10'-0"

FLAT IRON ROAD

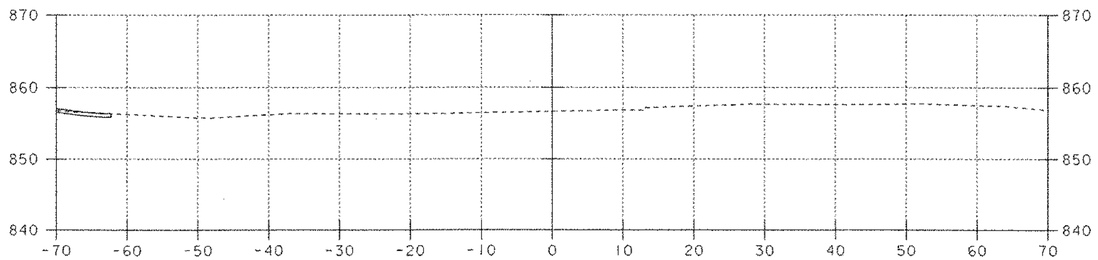
SHEET NAME: SIDELINE CROSS SECTIONS	
PROJECT NAME: READING	HIGHWAY NO.: VT 44
PROJECT NUMBER: BRS 0148(6)S	BRIDGE NO.: 1
	OVER: THE MILL BROOK
FILE NAME: PW/85e034/Structures/se034xsl.dgn	PLOT DATE: 17-FEB-2006
PROJECT MANAGER: R. WHITCOMB	DRAWN BY: J. GILMORE
DESIGNED BY: C. CARLSON	IPARM NAME: se034sx2.i
BRIDGE SHEET NUMBER:	SHEET 72 OF 83



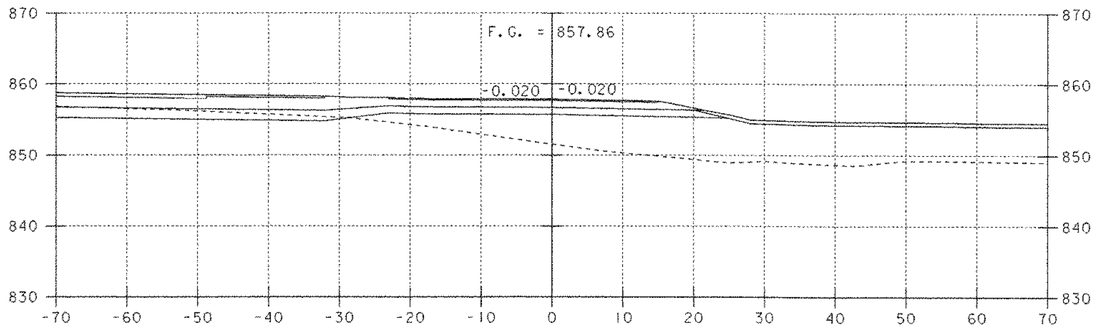
60+50



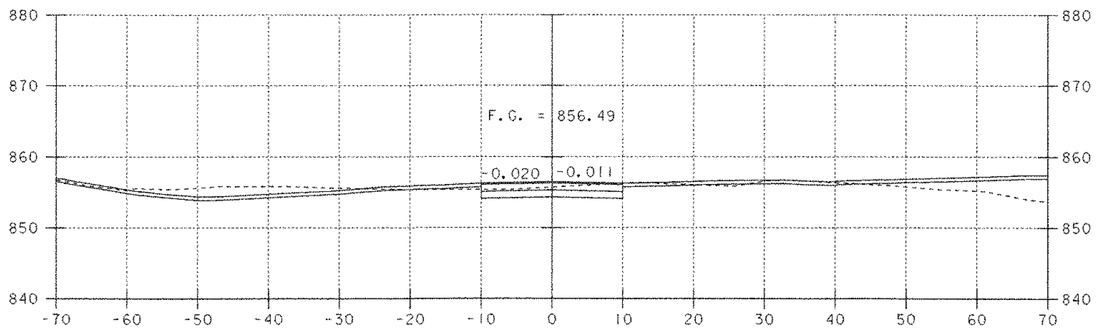
61+06



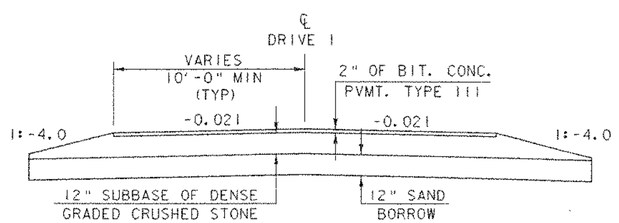
61+00
END ℄ DRIVE AT STA 60+90



60+25



60+75



TYPICAL DRIVE 1 SECTION

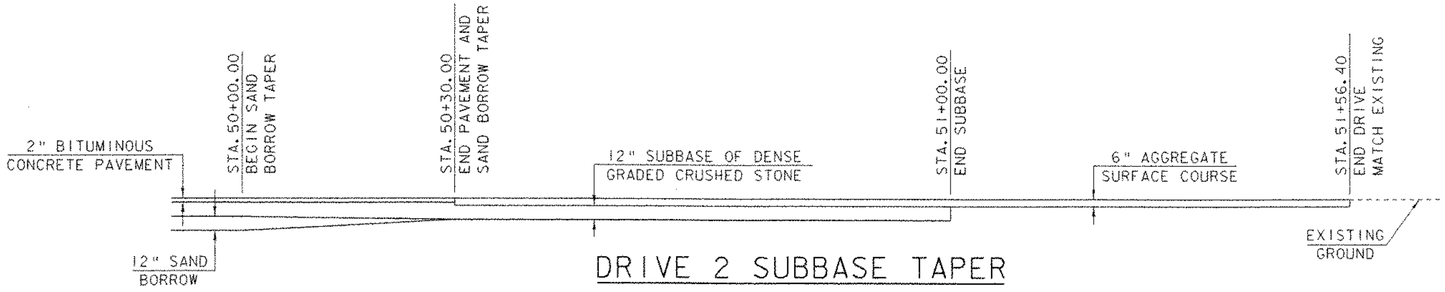
NTS

10 0 10

SCALE: 1" = 10'-0"

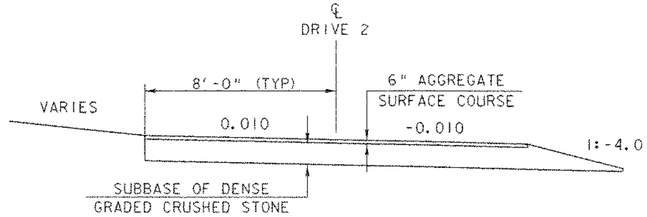
DRIVE 1

SHEET NAME: PARKING LOT DRIVE CROSS SECTIONS	
PROJECT NAME: READING	HIGHWAY NO.: VT 44
PROJECT NUMBER: BRS 0148(6)S	BRIDGE NO.: 1
	OVER: THE MILL BROOK
FILE NAME: PW/85e034/Structures/se034xsl.dgn	PLOT DATE: 17-FEB-2006
PROJECT MANAGER: R. WHITCOMB	DRAWN BY: J. GILMORE
DESIGNED BY: C. CARLSON	IPARM NAME: se034dxl.1
BRIDGE SHEET NUMBER:	SHEET 73 OF 83



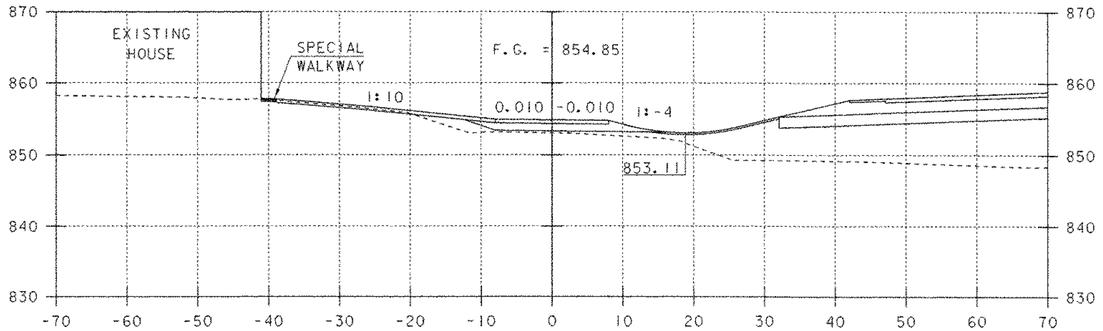
DRIVE 2 SUBBASE TAPER

NOT TO SCALE



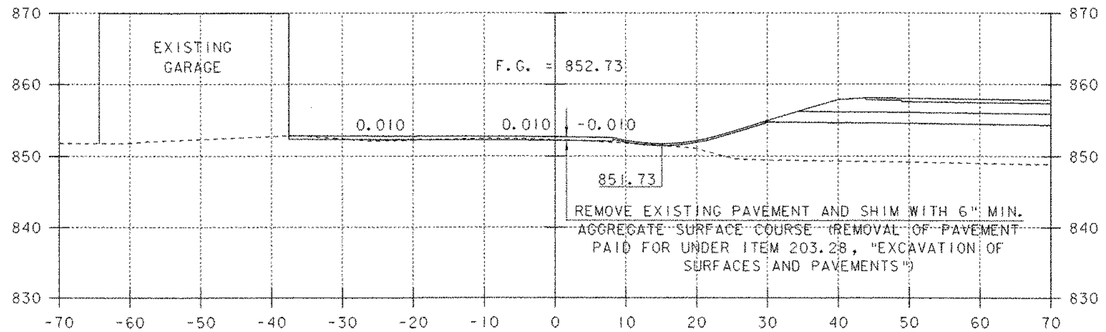
TYPICAL DRIVE 2 SECTION

NTS



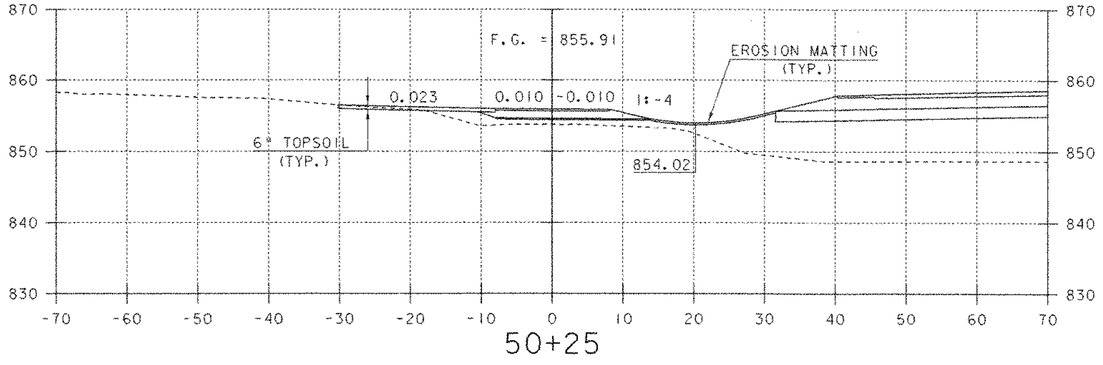
STA 50+48.3 LT
BEGIN SPECIAL WALKWAY

50+50

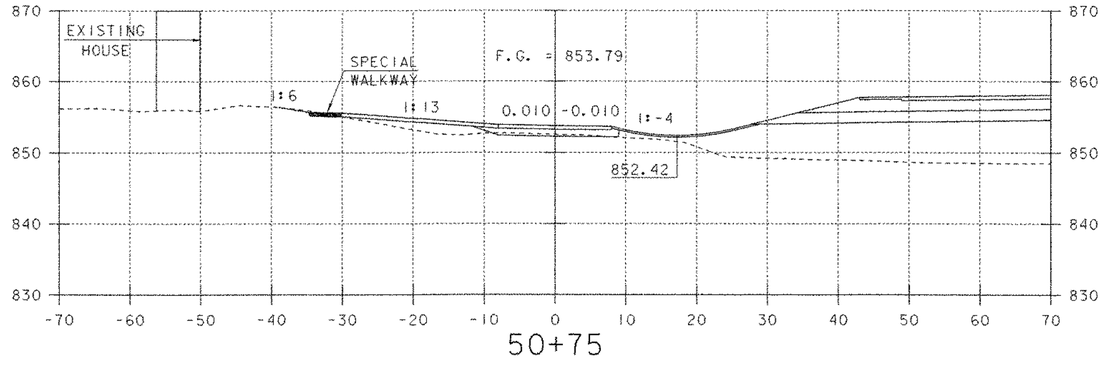


STA 50+90.9 LT
END SPECIAL WALKWAY

51+00



50+25

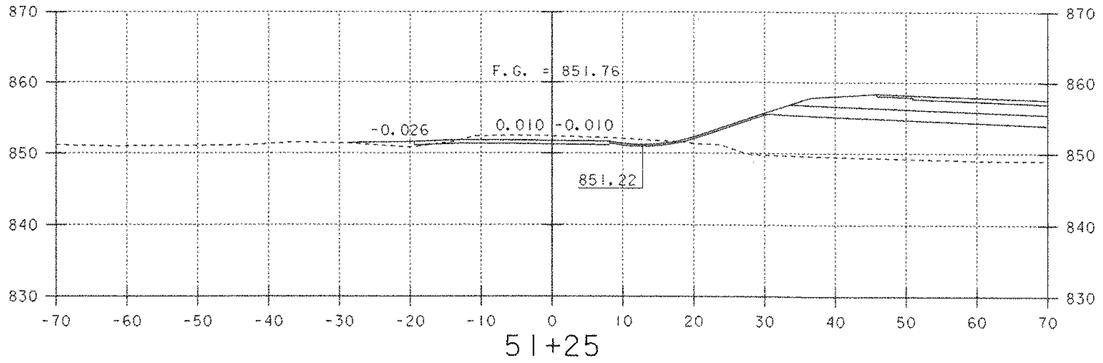


50+75

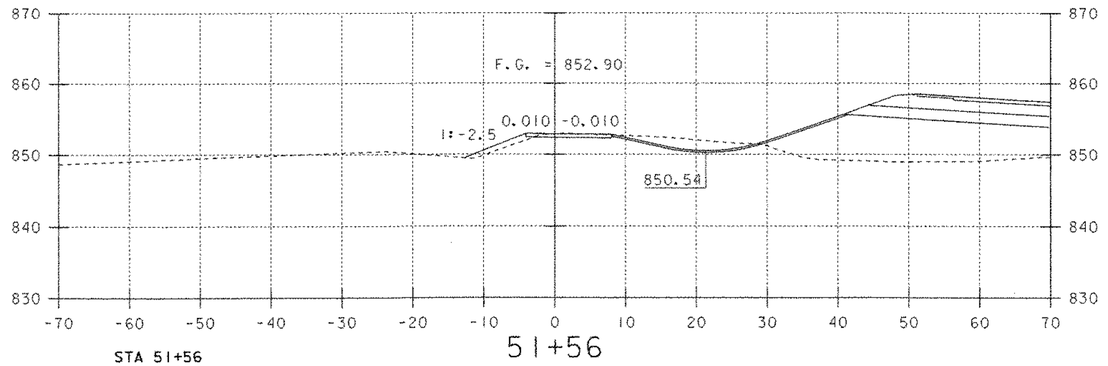
10 0 10
SCALE: 1" = 10'-0"

DRIVE 2

SHEET NAME: DRIVE CROSS SECTIONS	
PROJECT NAME: READING	HIGHWAY NO.: VT 44
PROJECT NUMBER: BRS 0148(6)S	BRIDGE NO.: 1
	OVER: THE MILL BROOK
FILE NAME: PW/85e034/Structures/se034xsl.dgn	PLOT DATE: 17-FEB-2006
PROJECT MANAGER: R. WHITCOMB	DRAWN BY: G. ROY
DESIGNED BY: C. CARLSON	IPARM NAME: se034dx2.i
BRIDGE SHEET NUMBER:	SHEET 74 OF 83

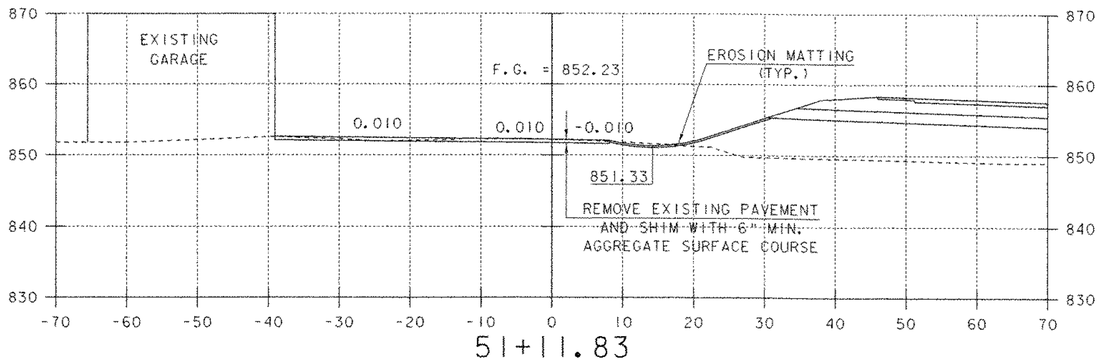


51+25

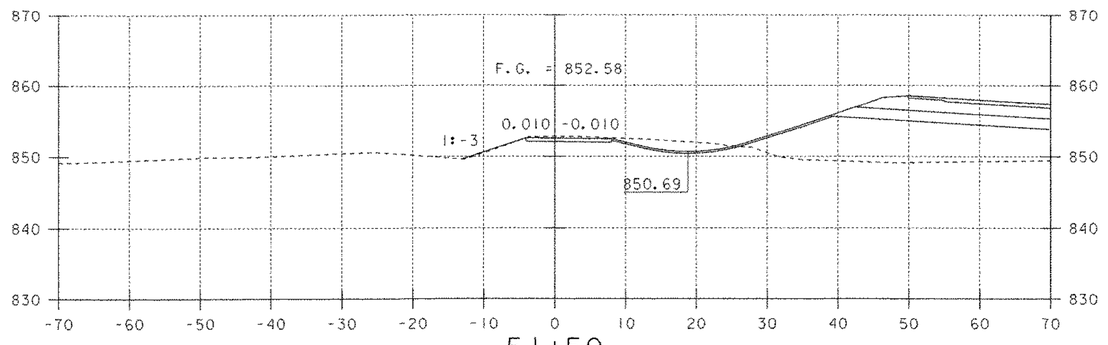


51+56

STA 51+56
END DRIVE



51+11.83
DRIVE LEFT
SKEW = -9° 12' 27"

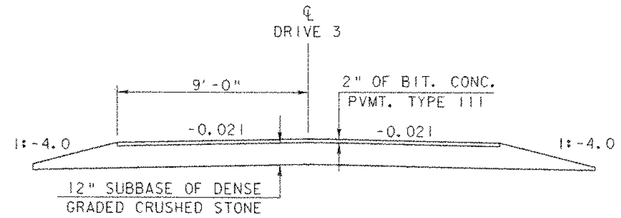


51+50

10 0 10
SCALE: 1" = 10'-0"

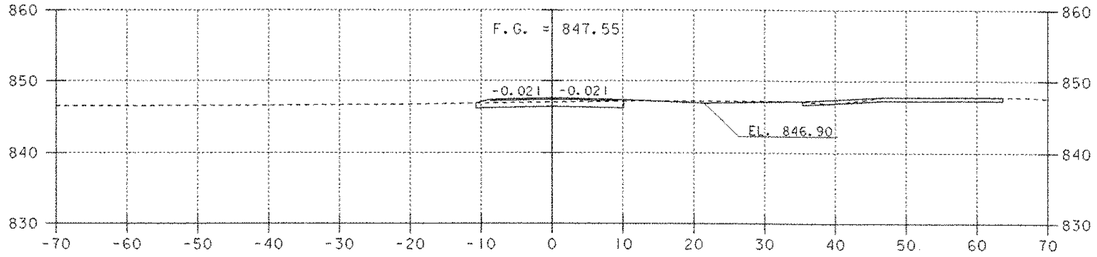
DRIVE 2

SHEET NAME: DRIVE CROSS SECTIONS	
PROJECT NAME: READING	HIGHWAY NO.: VT 44
PROJECT NUMBER: BRS 0148(6)S	BRIDGE NO.: 1
	OVER: THE MILL BROOK
FILE NAME: PW/85e034/Structures/se034xsl.dgn	PLOT DATE: 17-FEB-2006
PROJECT MANAGER: R. WHITCOMB	DRAWN BY: G. ROY
DESIGNED BY: C. CARLSON	IPARM NAME: se034dx3.1
BRIDGE SHEET NUMBER:	SHEET 75 OF 83

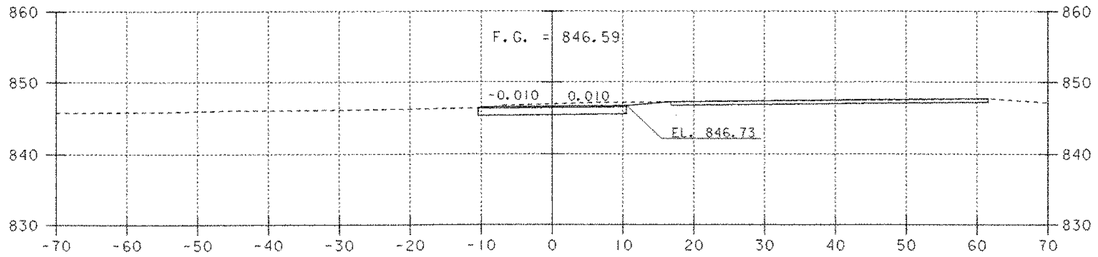


TYPICAL DRIVE 3 SECTION

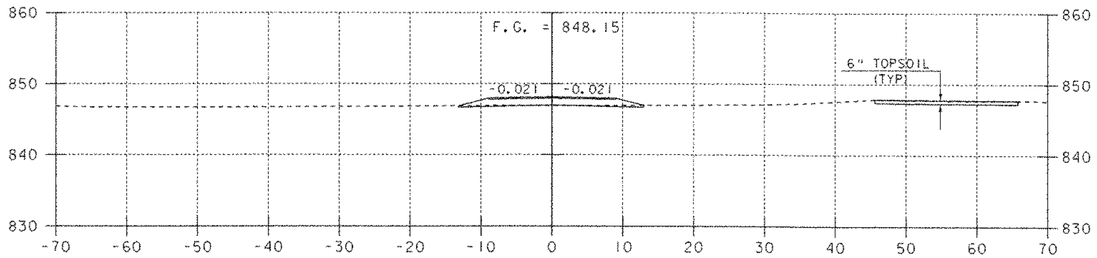
NTS



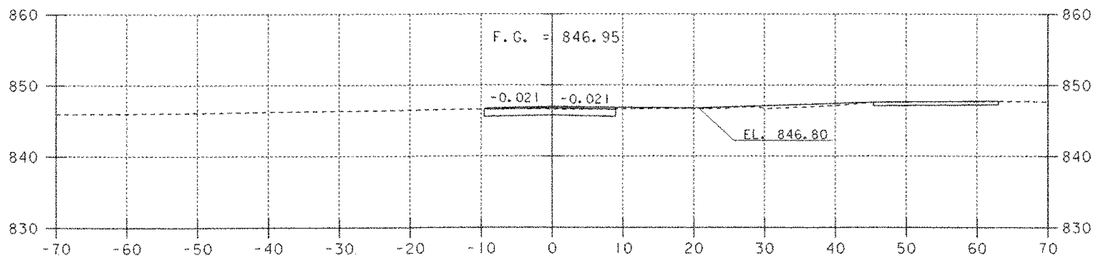
1+75



2+25



1+50



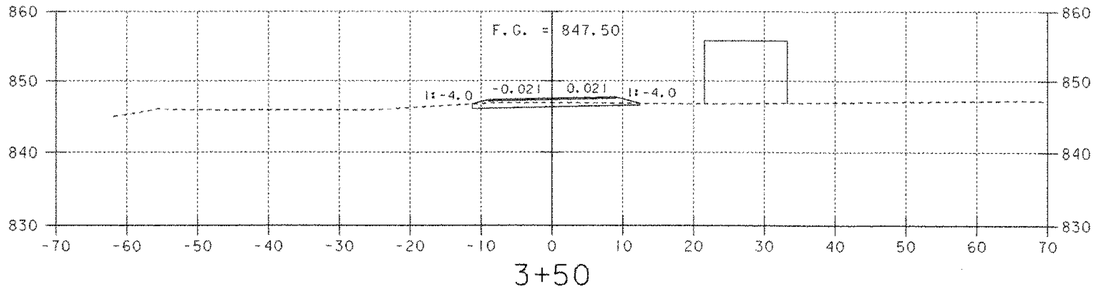
2+00

DRIVE 3

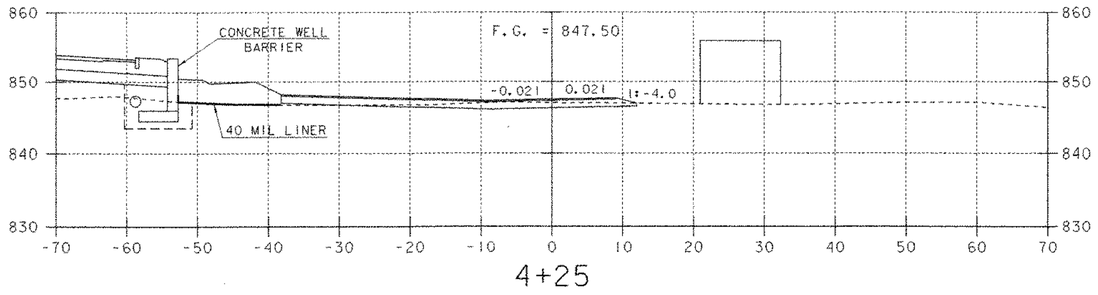
10 0 10

SCALE: 1" = 10'-0"

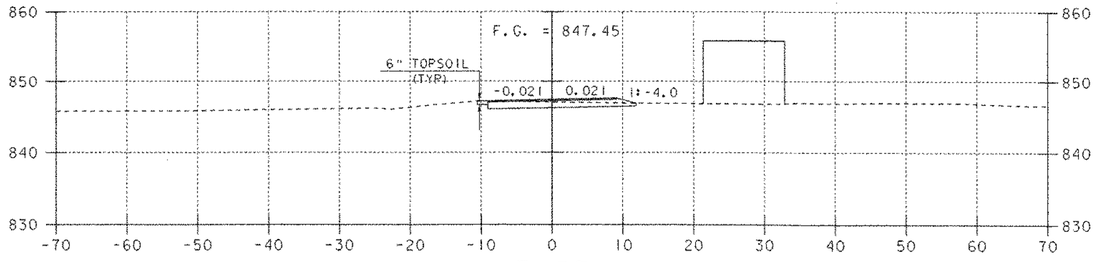
SHEET NAME: WELL DRIVE CROSS SECTIONS	
PROJECT NAME: READING	HIGHWAY NO.: VT 44
PROJECT NUMBER: BRS 0148(6)S	BRIDGE NO.: 1
	OVER: THE MILL BROOK
FILE NAME: PW/85e034/Structures/se034xsl.dgn	PLOT DATE: 17-FEB-2006
PROJECT MANAGER: R. WHITCOMB	DRAWN BY: J. GILMORE
DESIGNED BY: C. CARLSON	IPARM NAME: se034wdl1
BRIDGE SHEET NUMBER:	SHEET 76 OF 83



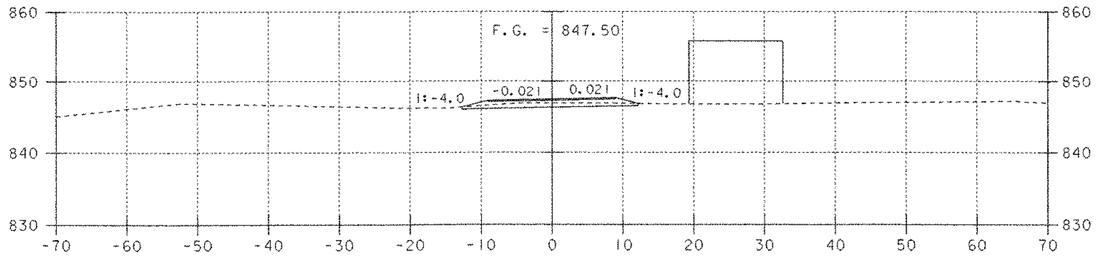
3+50



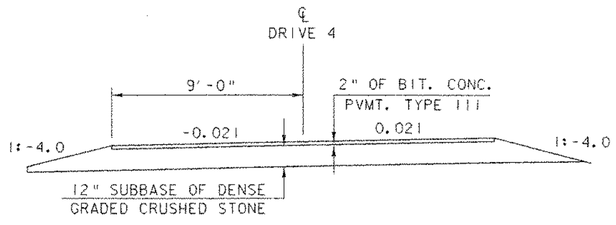
4+25



3+25

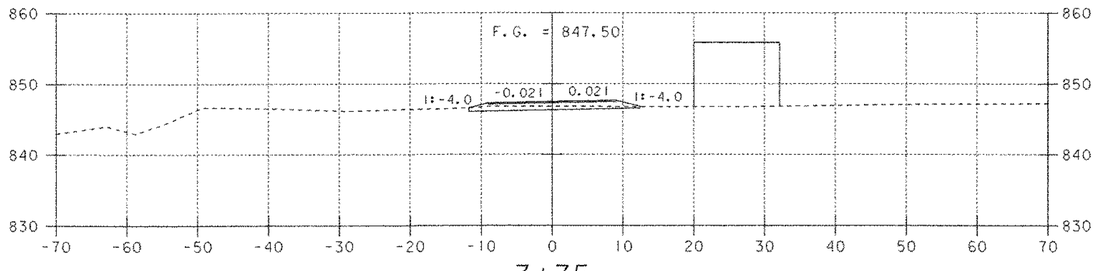


4+00



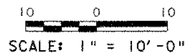
TYPICAL DRIVE 4 SECTION

NTS



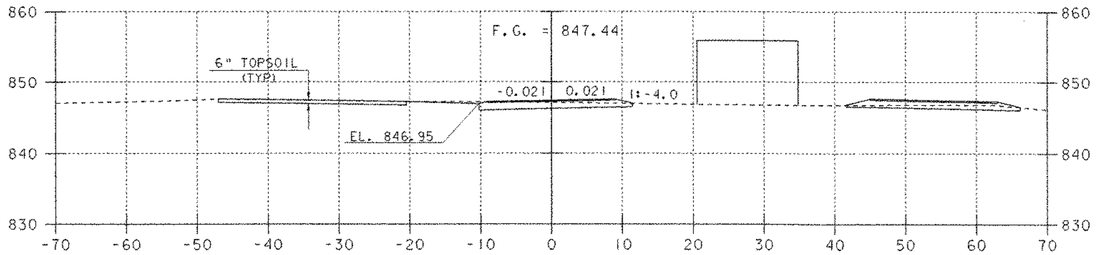
3+75

DRIVE 4

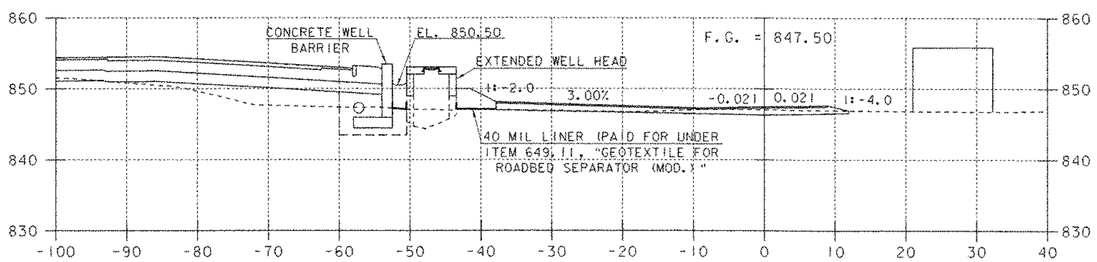


SCALE: 1" = 10'-0"

SHEET NAME: CIRCLE DRIVE CROSS SECTIONS	
PROJECT NAME: READING	HIGHWAY NO.: VT 44
PROJECT NUMBER: BRS 0148(6)S	BRIDGE NO.: 1
	OVER: THE MILL BROOK
FILE NAME: PW/85e034/Structures/se034xsl.dgn	PLOT DATE: 17-FEB-2006
PROJECT MANAGER: R. WHITCOMB	DRAWN BY: J. GILMORE
DESIGNED BY: C. CARLSON	IPARM NAME: se034wd2.i
BRIDGE SHEET NUMBER:	SHEET 77 OF 83



4+50

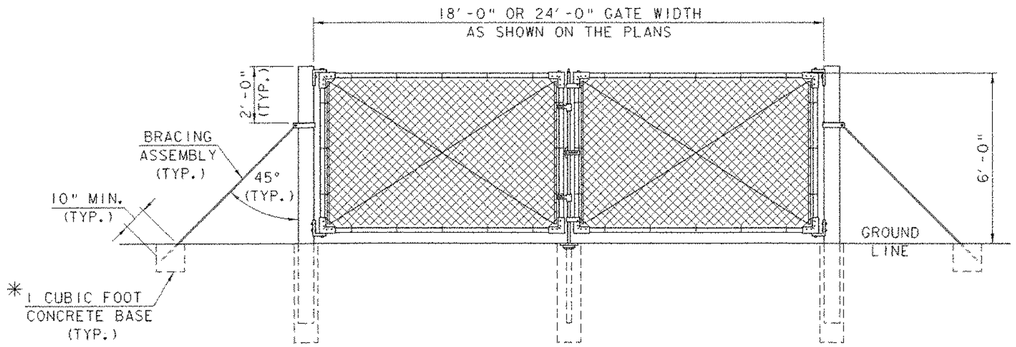


4+27

DRIVE LEFT

SKEW = 90° FROM CENTERLINE

✳ THE COST OF CONCRETE BASES SHALL BE INCIDENTAL TO ITEM 620.21, "BRACING ASSEMBLY FOR CHAIN LINK FENCE, 6 FEET".



DRIVE GATE DETAIL ⚠

NOT TO SCALE

(SEE STANDARD F-4 FOR ADDITIONAL DETAILS)

DRIVE 4

KEY	DATE	BY	REVISION
⚠	03/22/2006	VAOT	ADDED DRIVE GATE DETAIL

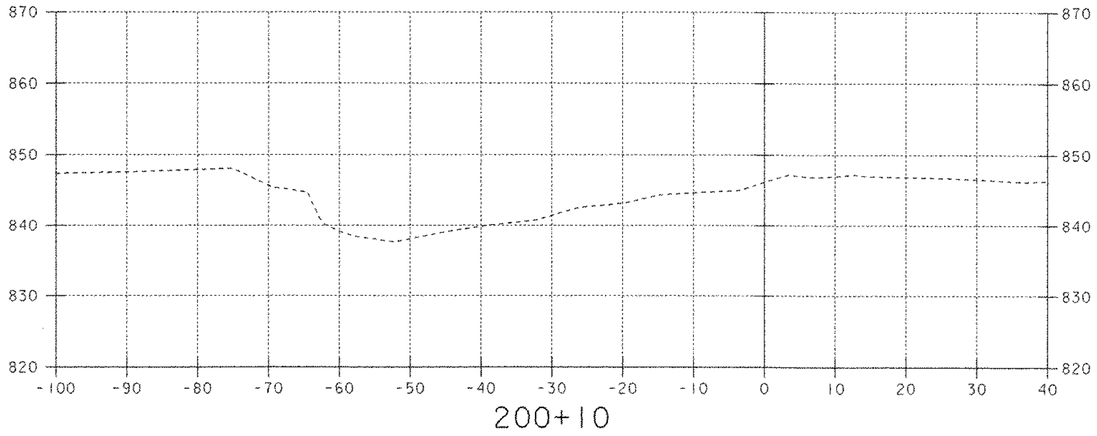
SHEET NAME: CIRCLE DRIVE CROSS SECTIONS

PROJECT NAME: READING
PROJECT NUMBER: BRS 0148(6)S

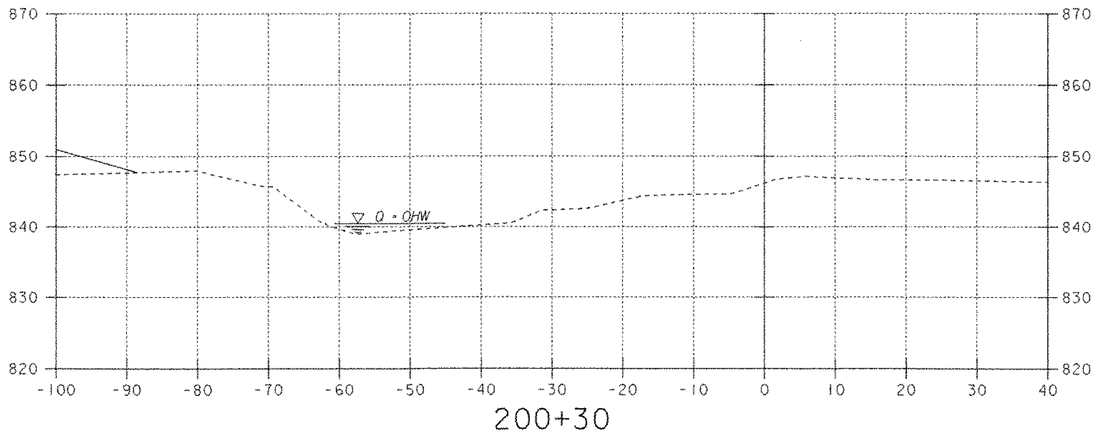
HIGHWAY NO.: VT 44
BRIDGE NO.: 1
OVER: THE MILL BROOK

FILE NAME: PW/85e034/Structures/se034xsl.dgn
PROJECT MANAGER: R. WHITCOMB
DESIGNED BY: C. CARLSON
BRIDGE SHEET NUMBER:

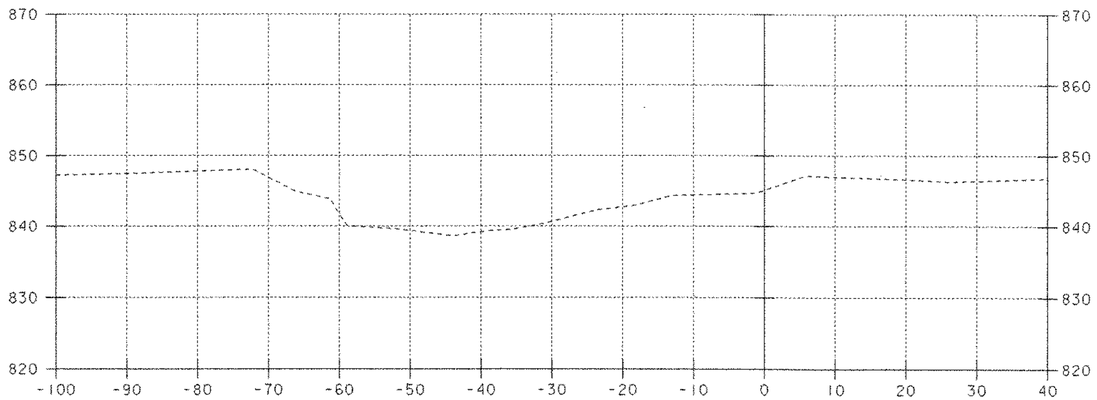
PLOT DATE: 28-MAR-2006
DRAWN BY: J. GILMORE
IPARM NAME: se034wd3.1
SHEET 78 OF 83



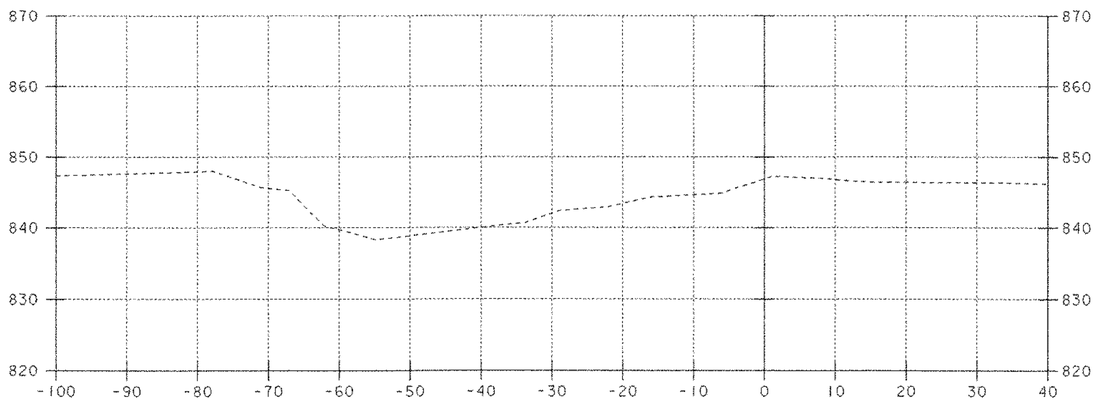
200+10



200+30



200+00



200+20

10 0 10

SCALE: 1" = 10'-0"

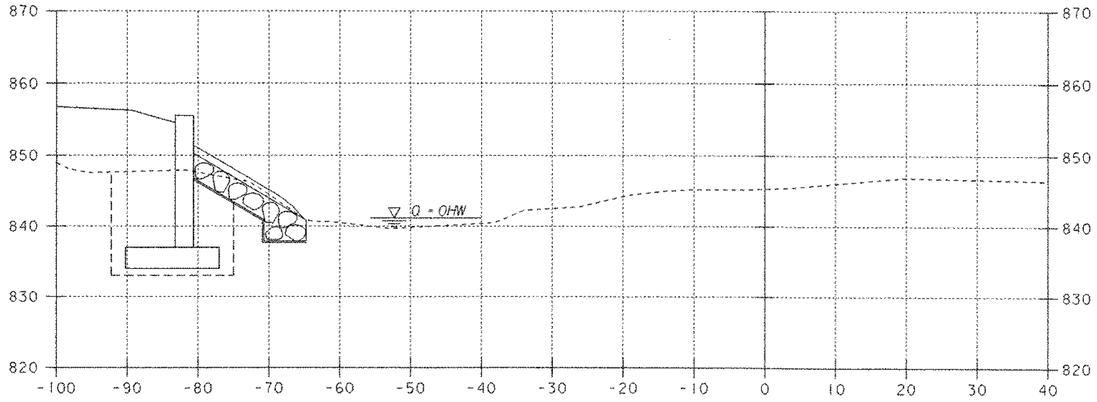
SHEET NAME: CHANNEL CROSS SECTIONS

PROJECT NAME: READING
PROJECT NUMBER: BRS 0148(6)S

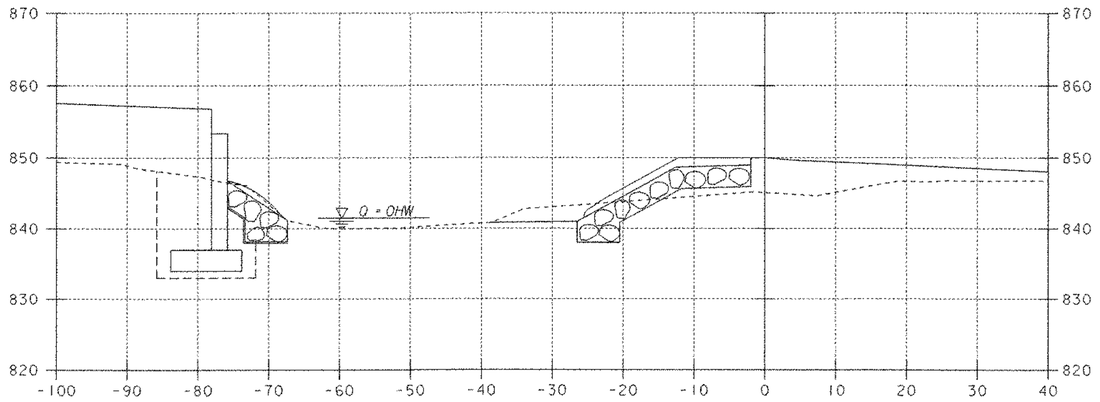
HIGHWAY NO.: VT 44
BRIDGE NO.: 1
OVER: THE MILL BROOK

FILE NAME: PW/85e034/Structures/se034xsl.dgn
PROJECT MANAGER: R. WHITCOMB
DESIGNED BY: C. CARLSON
BRIDGE SHEET NUMBER:

PLOT DATE: 17-FEB-2006
DRAWN BY: J. GILMORE
IPARM NAME: se034cxl.i
SHEET 79 OF 83



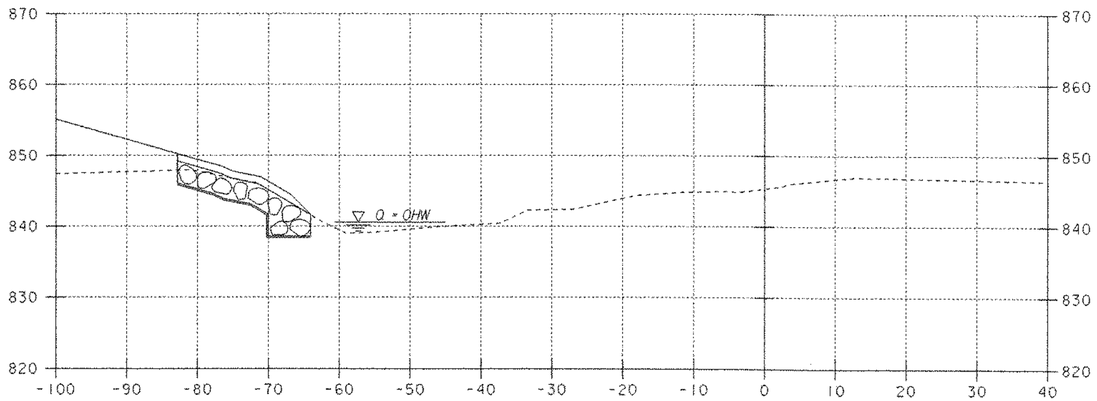
200+50



200+70

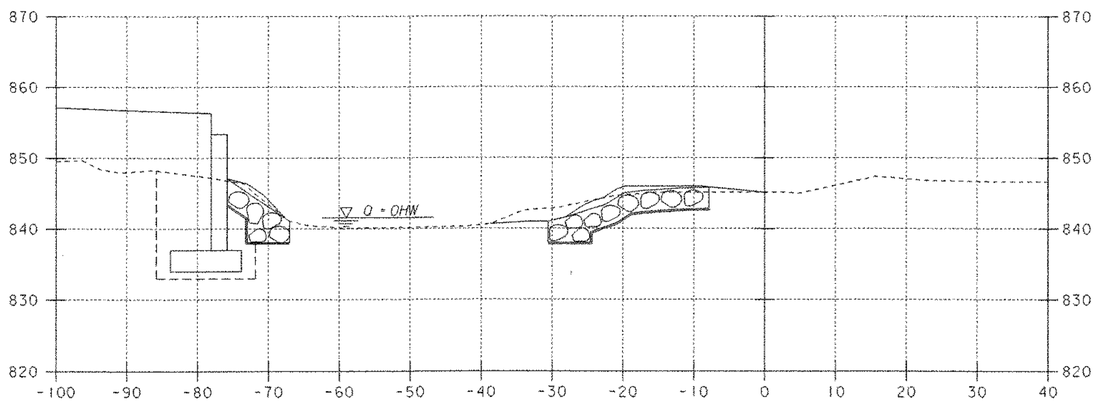
STA 200+60 LEFT
END GRUBBING MATERIAL

STA 200+79 RIGHT
END GRUBBING MATERIAL



200+40

STA 200+37 LEFT
BEGIN STONE FILL TYPE III
BEGIN GEOTEXTILE FABRIC FILTER
BEGIN GRUBBING MATERIAL
BEGIN UNCLASSIFIED CHANNEL EXCAVATION



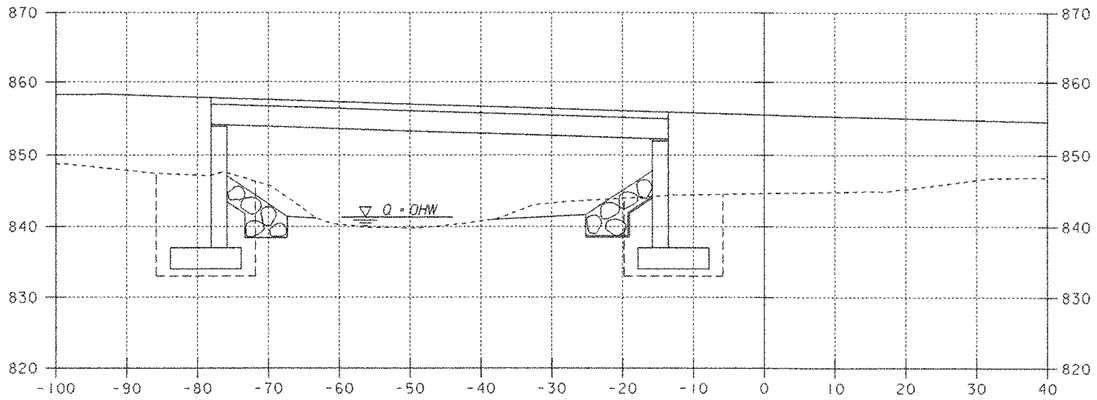
200+60

STA 200+55 RIGHT
BEGIN STONE FILL TYPE III
BEGIN GEOTEXTILE FABRIC FILTER
BEGIN GRUBBING MATERIAL
BEGIN UNCLASSIFIED CHANNEL EXCAVATION

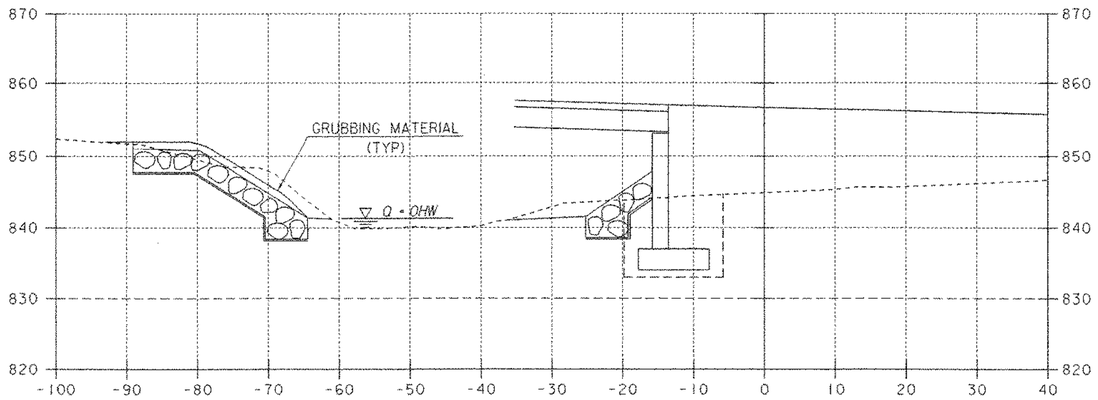
10 0 10
SCALE: 1" = 10'-0"

SHEET NAME: CHANNEL CROSS SECTIONS

PROJECT NAME: READING	HIGHWAY NO.: VT 44
PROJECT NUMBER: BRS 0148(6)S	BRIDGE NO.: 1
	OVER: THE MILL BROOK
FILE NAME: PW/85e034/Structures/se034xsl.dgn	PLOT DATE: 17-FEB-2006
PROJECT MANAGER: R. WHITCOMB	DRAWN BY: J. GILMORE
DESIGNED BY: C. CARLSON	IPARM NAME: se034cx2.i
BRIDGE SHEET NUMBER:	SHEET 80 OF 83

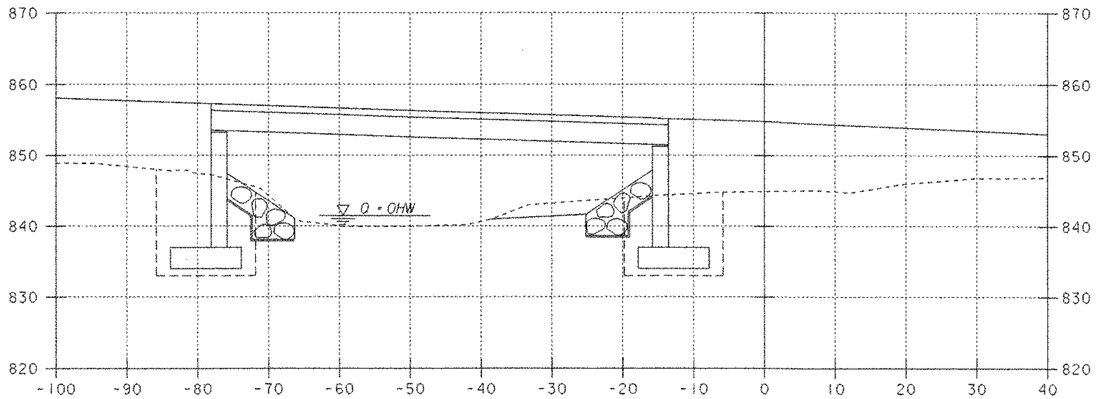


200+90

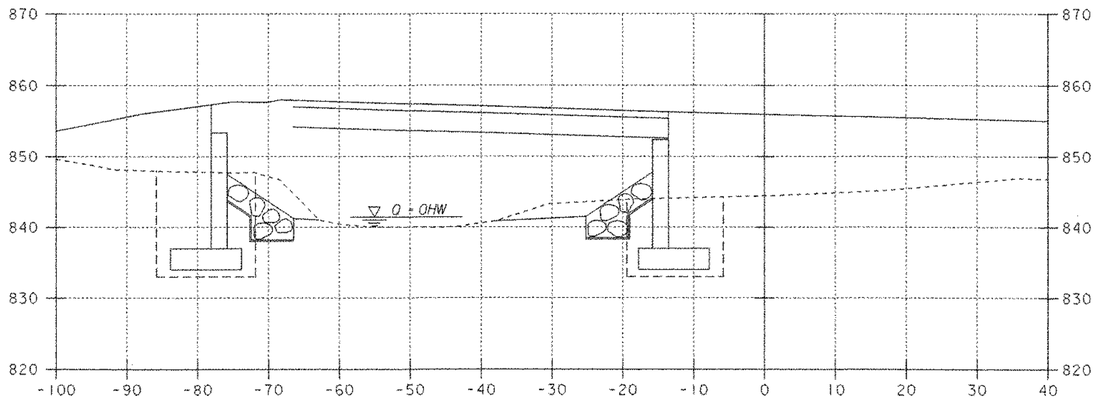


201+10

STA 201+15 RIGHT
BEGIN GRUBBING MATERIAL



200+80

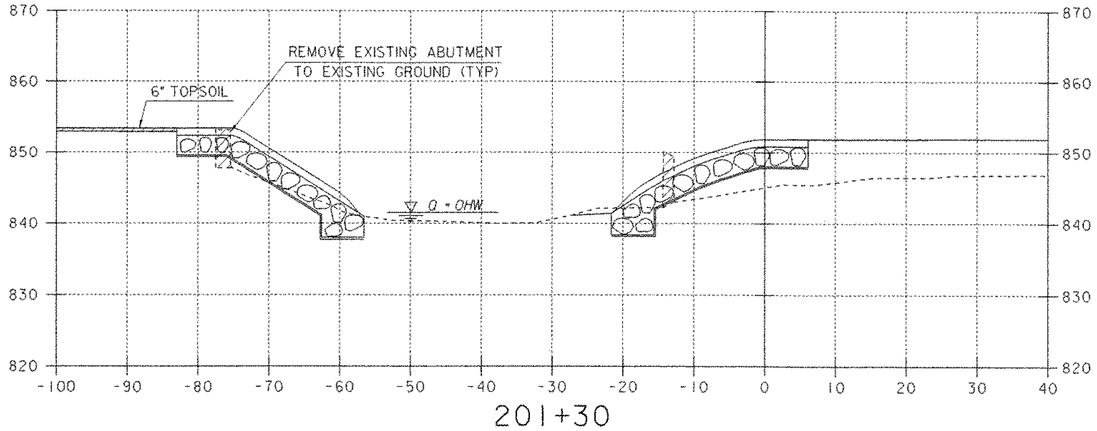


STA 198+00 LEFT
BEGIN GRUBBING MATERIAL

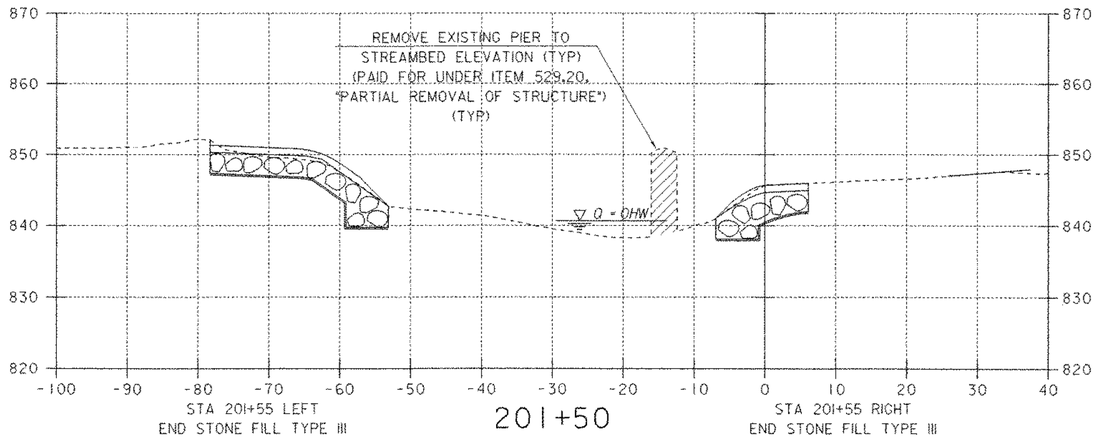
201+00

10 0 10
SCALE: 1" = 10'-0"

SHEET NAME: CHANNEL CROSS SECTIONS	
PROJECT NAME: READING	HIGHWAY NO.: VT 44
PROJECT NUMBER: BRS 0148(6)S	BRIDGE NO.: 1
	OVER: THE MILL BROOK
FILE NAME: PW/85e034/Structures/se034xsl.dgn	PLOT DATE: 17-FEB-2006
PROJECT MANAGER: R. WHITCOMB	DRAWN BY: J. GILMORE
DESIGNED BY: C. CARLSON	IPARM NAME: se034cx3.1
BRIDGE SHEET NUMBER:	SHEET 81 OF 83



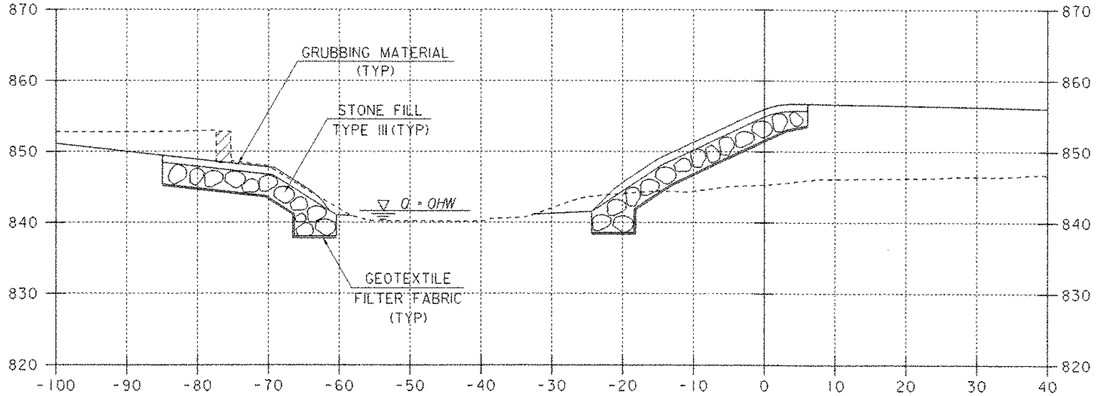
201+30



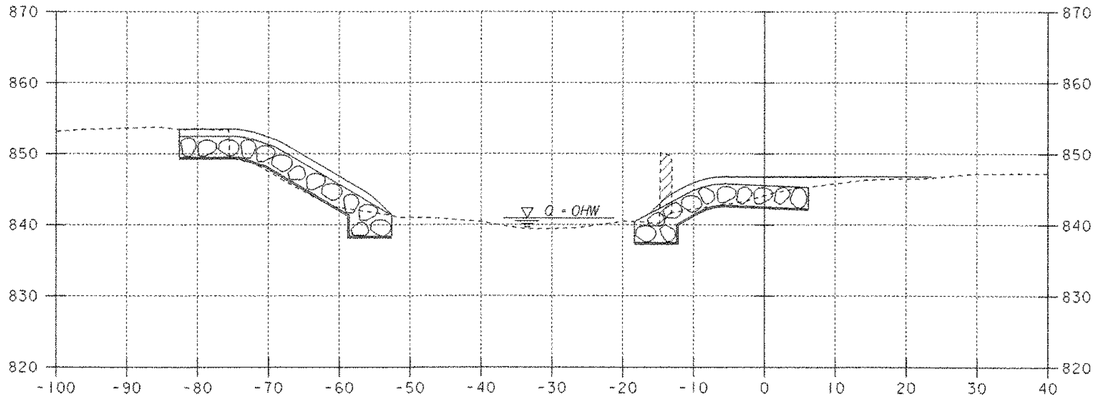
201+50

STA 201+55 LEFT
END STONE FILL TYPE III
END GEOTEXTILE FABRIC FILTER
END GRUBBING MATERIAL
END UNCLASSIFIED CHANNEL EXCAVATION

STA 201+55 RIGHT
END STONE FILL TYPE III
END GEOTEXTILE FABRIC FILTER
END GRUBBING MATERIAL
END UNCLASSIFIED CHANNEL EXCAVATION



201+20



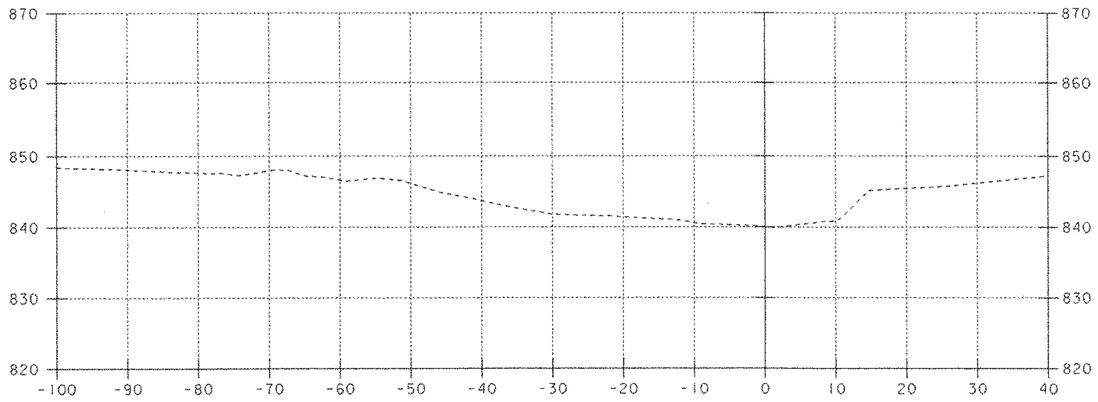
201+40

10 0 10
SCALE: 1" = 10'-0"

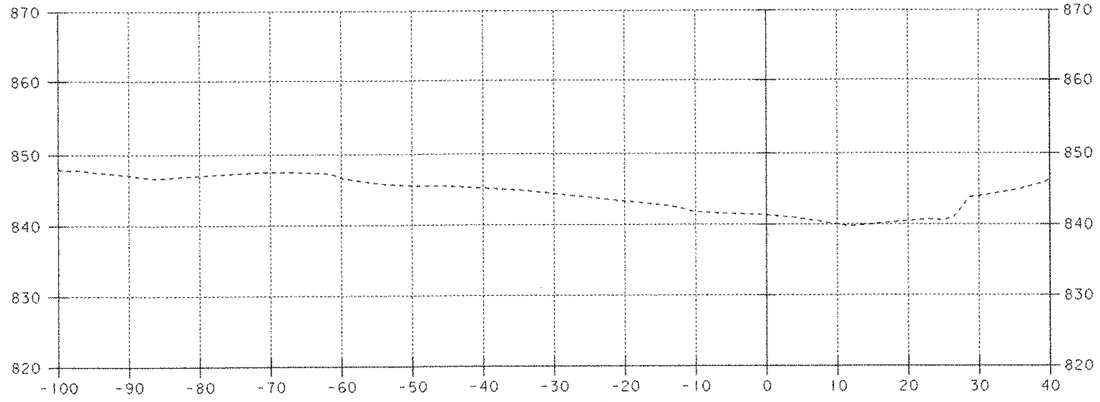
SHEET NAME: CHANNEL CROSS SECTIONS

PROJECT NAME: READING
PROJECT NUMBER: BRS 0148(6)S
HIGHWAY NO.: VT 44
BRIDGE NO.: 1
OVER: THE MILL BROOK

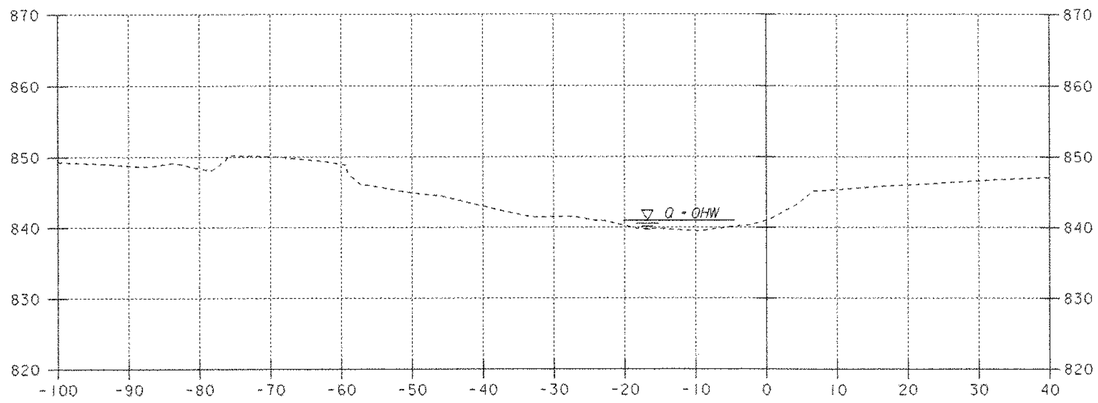
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PROJECT MANAGER: R. WHITCOMB
DESIGNED BY: C. CARLSON
BRIDGE SHEET NUMBER:
PLOT DATE: 17-FEB-2006
DRAWN BY: J. GILMORE
IPARM NAME: se034cx4.1
SHEET 82 OF 83



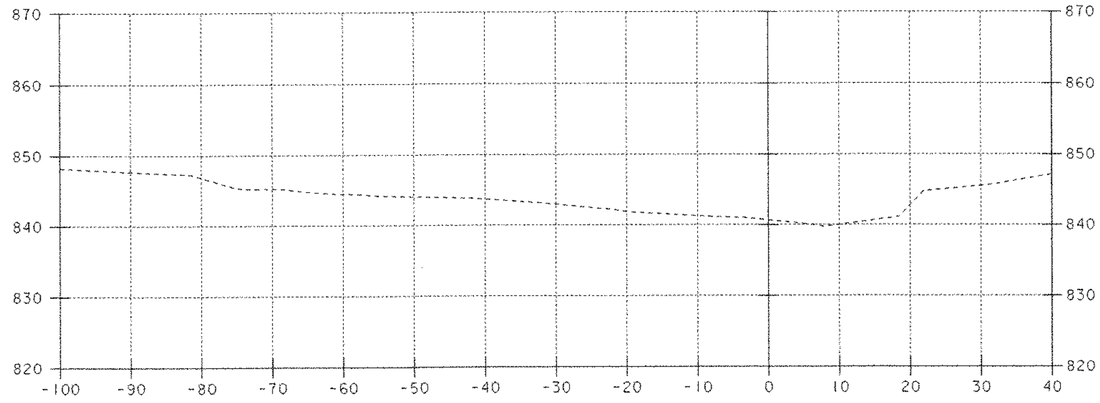
201+70



201+90



201+60



201+80

10 0 10

SCALE: 1" = 10'-0"

SHEET NAME: CHANNEL CROSS SECTIONS

PROJECT NAME: READING
PROJECT NUMBER: BRS 0148(6)S

HIGHWAY NO.: VT 44
BRIDGE NO.: 1
OVER: THE MILL BROOK

FILE NAME: PW/85e034/Structures/se034xsl.dgn
PROJECT MANAGER: R. WHITCOMB
DESIGNED BY: C. CARLSON
BRIDGE SHEET NUMBER:

PLOT DATE: 17-FEB-2006
DRAWN BY: J. GILMORE
IPARM NAME: se034cx5.i
SHEET 83 OF 83