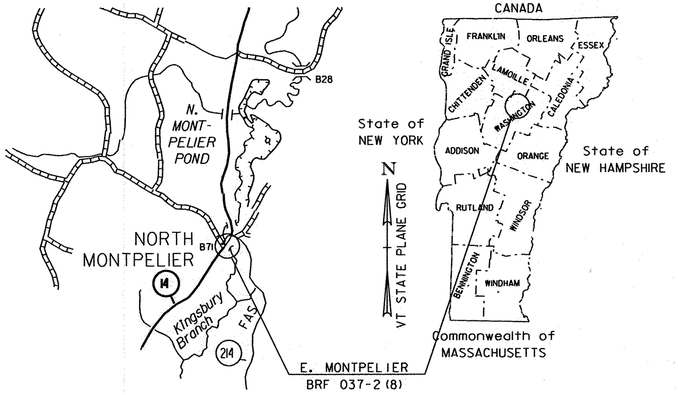
SEE SHEET 2 FOR THE
INDEX OF SHEETS AND
LIST OF STANDARDS

STATE OF VERMONT
AGENCY OF TRANSPORTATION



RECORD PLANS

CONTRACTOR: AL ST ONGE CONTRACTOR INC. – MONTGOMERY, VT

RESIDENT ENGINEER: CHRIS CRAIG

CONSTRUCTION BEGAN: MAY 9, 2011

CONSTRUCTION COMPLETE: OCTOBER 31, 2011

RECORD PLANS BY: CHRIS CRAIG & JENNA HYDE

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

BY _____ RESIDENT ENGINEER

DATE 7-3-14

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.

PROPOSED IMPROVEMENT
BRIDGE PROJECT

TOWN OF EAST MONTPELIER

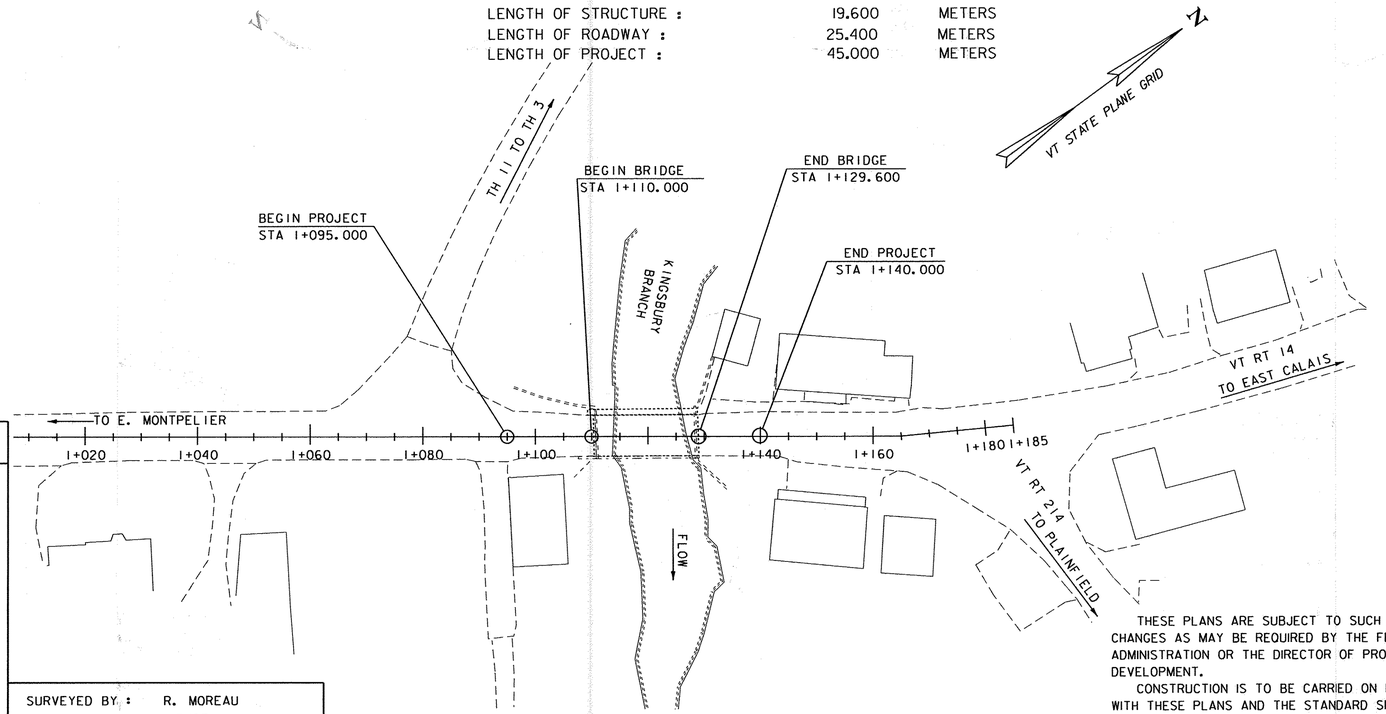
COUNTY OF WASHINGTON

ROUTE NO : VT RT 14, MINOR ARTERIAL BRIDGE NO: 71

PROJECT LOCATION : BEGINNING ON VT RT 14 APPROXIMATELY 0.085 KILOMETERS SOUTH OF THE INTERSECTION OF VT RT 214 AND VT RT 14 EXTENDING APPROXIMATELY 45 METERS IN A NORTHERLY DIRECTION.

PROJECT DESCRIPTION : REPLACEMENT OF BRIDGE NO. 71 ON THE EXISTING LOCATION AND NECESSARY APPROACH AND CHANNEL WORK.

LENGTH OF STRUCTURE :	19.600	METERS
LENGTH OF ROADWAY :	25.400	METERS
LENGTH OF PROJECT :	45.000	METERS



QUALITY ASSURANCE PROGRAM: LEVEL 2

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

SURVEYED BY : R. MOREAU
SURVEYED DATE : 3/93

DATUM
VERTICAL USGS
HORIZONTAL ASSUMED

0 20 40 60
SCALE IN METERS
1 : 500

MADE Metric

UNLESS NOTED OTHERWISE
STATIONS ARE IN KILOMETERS
ELEVATIONS ARE IN METERS
DIMENSIONS ARE IN MILLIMETERS

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 2006, AS APPROVED BY THE FEDERAL HIGHWAY ADMINISTRATION ON JUNE 15, 2006 FOR USE ON THIS PROJECT, INCLUDING ALL SUBSEQUENT REVISIONS AND SUCH REVISED SPECIFICATIONS AND SPECIAL PROVISIONS AS ARE INCORPORATED IN THESE PLANS.

86e054/structures/se054bdr.dgn se054tit.i

DIRECTOR OF PROGRAM DEVELOPMENT
APPROVED Richard Fetcault DATE 8-18-10

PROJECT MANAGER : C.P. WILLIAMS

PROJECT NAME : EAST MONTPELIER
PROJECT NUMBER : BRF 037-2(8)
PLOTTED 17-AUG-2010
SHEET 1 OF 63 SHEETS

STATE OF VERMONT
AGENCY OF TRANSPORTATION

PRELIMINARY INFORMATION SHEET (BRIDGE)

Version 09.02.03

LRFD

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STANDARDS LIST

B-71	STANDARD FOR RESIDENTIAL AND COMMERCIAL DRIVES	07-08-2005
E-100	CONSTRUCTION APPROACH SIGNS	01-02-2004
E-100A	SIDE ROAD CONSTRUCTION - APPROACH SIGNS	01-02-2004
E-101	CONSTRUCTION SIGN DETAILS	05-30-2003
E-102	CONSTRUCTION SIGN DETAILS	06-30-2003
E-102A	CONSTRUCTION SIGN DETAILS	05-01-2004
E-107	DELINEATION, BARRICADES AND DETOURS FOR CONSTRUCTION AREAS	06-30-2003
E-107A	BREAKAWAY BARRICADE DETAILS	06-08-2009
E-121	STANDARD SIGN PLACEMENT - CONVENTIONAL ROAD	08-08-1995
E-123	GUIDE SIGN PLACEMENT - MISCELLANEOUS DETAILS	03-16-2004
E-127	ROUTE MARKINGS AT RURAL INTERSECTIONS	08-08-1995
E-134	BRIDGE NUMBER PLAQUE	08-08-1995
E-136B	STATE ROUTE MARKER SIGN DETAILS	08-08-1995
E-138	MILE MARKER DETAILS - STATE & TOWN HIGHWAYS	05-30-2003
E-141	REGULATORY SIGN DETAILS	09-20-1995
E-143	REGULATORY SIGN DETAILS	06-15-2004
E-160	FLANGED CHANNEL STEEL SIGN POST	05-20-1999
E-193	PAVEMENT MARKING DETAILS	08-18-1995
E-198	DELINEATOR SAND MILE POSTS	04-01-2005
G-1	STEEL BEAM GUARDRAIL DETAILS (POST, DELINEATOR, TYPICALS)	01-03-2000
G-1D	STEEL BEAM GUARDRAIL DETAILS (END TERMINAL, ANCHOR, MEDIAN)	01-03-2000

STRUCTURES DETAIL SHEETS

SD-501.00	CONCRETE DETAILS AND NOTES	5/7/2010
SD-502.00	CONCRETE DETAILS AND NOTES	6/4/2010
SD-516.10	BRIDGE JOINT ASPHALTIC PLUG	5/7/2010
SD-601.00	STRUCTURAL STEEL DETAILS & NOTES	6/4/2010
SD-602.00	STRUCTURAL STEEL PLATE GIRDER DETAILS AND NOTES	5/7/2010

TRAFFIC DATA

YEAR	ADT	DHV	% D	% T	ADTT
2011	4700	530	69	6.4	360
2031	5700	640	69	9.7	650

20 year ESAL for flexible pavement from 2011 to 2031 : 3480000

40 year ESAL for flexible pavement from 2011 to 2051 : 8399000

Design Speed : 35 mph

FINAL HYDRAULIC REPORT

HYDROLOGIC DATA

Date:

DRAINAGE AREA : 131.3 sq. km
CHARACTER OF TERRAIN : Rolling to Mountainous
STREAM CHARACTERISTICS : Perennial, straight at site but sinuous up & downstream.
NATURE OF STREAMBED : Ledge

PEAK FLOW DATA

Q 2.33 =	41 cms	Q 50 =	133 cms
Q 10 =	75 cms	Q 100 =	160 cms
Q 25 =	105 cms	Q 500 =	270 cms

DATE OF FLOOD OF RECORD : November 1927
ESTIMATED DISCHARGE: Unknown
WATER SURFACE ELEV.: Unknown
NATURAL STREAM VELOCITY : @ Q50 = 3.7 mps
ICE CONDITIONS : Slight
DEBRIS: Slight
DOES THE STREAM REACH MAXIMUM HIGHWATER ELEV. RAPIDLY? No
IS ORDINARY RISE RAPID? No
IS STAGE AFFECTED BY UPSTREAM OR DOWNSTREAM CONDITIONS? Yes
IF YES, DESCRIBE: There is a concrete dam under the upstream side of the bridge.

WATERSHED STORAGE: 3.7%
HEADWATERS:
UNIFORM: X
IMMEDIATELY ABOVE SITE:

EXISTING STRUCTURE INFORMATION

STRUCTURE TYPE: Single span steel beam bridge
YEAR BUILT: 1936
CLEAR SPAN(NORMAL TO STREAM): 17.1 m
VERTICAL CLEARANCE ABOVE STREAMBED: 3.1 m to top of dam
WATERWAY OF FULL OPENING: 56 sq. m
DISPOSITION OF STRUCTURE: Remove and replace
TYPE OF MATERIAL UNDER SUBSTRUCTURE: Ledge

WATER SURFACE ELEVATIONS AT:

Q2.33 =	211.1	VELOCITY =	2.9 mps
Q10 =	211.7	"	3.5 mps
Q25 =	212.1	"	3.9 mps
Q50 =	212.5	"	4.2 mps
Q100 =	213.4	"	4.5 mps

LONG TERM STREAMBED CHANGES: None, due to ledge.

IS THE ROADWAY OVERTOPPED BELOW Q100: No
FREQUENCY: Above Q100
RELIEF ELEVATION: 213.5
DISCHARGE OVER ROAD @Q100: None

UPSTREAM STRUCTURE

TOWN: East Montpelier — DISTANCE: 240 m
HIGHWAY # : VT 14 — STRUCTURE #: 72
CLEAR SPAN: 24.4 m — CLEAR HEIGHT: 5.0 m
YEAR BUILT: 1991 — FULL WATERWAY: 87 sq. m
STRUCTURE TYPE: Single Span steel beam bridge

DOWNSTREAM STRUCTURE

TOWN: East Montpelier — DISTANCE: 2.4 km
HIGHWAY # : T.H. 31 — STRUCTURE #: 21
CLEAR SPAN: 7.9 m — CLEAR HEIGHT: 4.0 m
YEAR BUILT: N.A. — FULL WATERWAY: 34 sq. m
STRUCTURE TYPE: Single Span King truss bridge

LRFR LOAD RATING FACTORS

LOADING LEVELS	TRUCK						
	H-20	HL-93	3S2	6 AXLE	3A STR	4A STR	5A SEMI
TONNAGE							
INVENTORY	1.03	2.3	2.06	1.33	1.71	1.53	1.72
POSTING							
OPERATING	1.34	2.99	2.68	1.73	2.22	1.99	2.23
COMMENTS:	LRFR SERVICE II CONTROLS						

PROPOSED STRUCTURE

STRUCTURE TYPE: Single span steel beam bridge

CLEAR SPAN(NORMAL TO STREAM): 18.2 m
VERTICAL CLEARANCE ABOVE STREAMBED: 2.9 m to top of dam
WATERWAY OF FULL OPENING: 58 sq. m

WATER SURFACE ELEVATIONS AT:

Q2.33 =	211.0	VELOCITY=	2.8 mps
Q10 =	211.6	"	3.4 mps
Q25 =	212.0	"	3.8 mps
Q50 =	212.3	"	4.1 mps
Q100 =	212.7	"	4.4 mps

IS THE ROADWAY OVERTOPPED BELOW Q100: No
FREQUENCY: Above Q 100
RELIEF ELEVATION: 213.6
DISCHARGE OVER ROAD @Q100: None

AVERAGE LOW ELEVATION OF SUPERSTRUCTURE: 212.7
VERTICAL CLEARANCE: @ Q 50 = 0.4 m

SCOUR: None, Abutment footings will be poured on sound ledge.

REQUIRED CHANNEL PROTECTION: Stone Fill, Type IV

PERMIT INFORMATION

AVERAGE DAILY FLOW:	2.9 cms		
ORDINARY LOW WATER:	1.3 cms	DEPTH OR ELEVATION:	0.3 m
ORDINARY HIGH WATER:	17.6 cms		1.0 m

TEMPORARY BRIDGE REQUIREMENTS

STRUCTURE TYPE: Temporary Pedestrian Bridge
CLEAR SPAN (NORMAL TO STREAM): 17.0 m Min.
VERTICAL CLEARANCE ABOVE STREAMBED: Min. Bottom of Beam Elev. = 212.0
WATERWAY AREA OF FULL OPENING: 40.0 Sq. m Min.

ADDITIONAL INFORMATION

TRAFFIC MAINTENANCE NOTES

1. MAINTAIN TRAFFIC ON AN OFF SITE DETOUR.
2. TRAFFIC SIGNALS ARE NOT NECESSARY.
3. SIDEWALKS ARE NOT NECESSARY

DESIGN VALUES

1. DESIGN LIVE LOAD		HL-93
2. FUTURE PAVEMENT	d_p:	80 mm
3. DESIGN SPAN	L:	19.600 M
4. MIN. MID-SPAN POS. CAMBER @ RELEASE (PRESTRESSED UNITS)	Δ:	---
5. PRESTRESSING STRAND	f_y:	---
6. PRESTRESSED CONCRETE STRENGTH	f'_c:	---
7. PRESTRESSED CONCRETE RELEASE STRENGTH	f'_{ci}:	---
8. CONCRETE, HIGH PERFORMANCE CLASS AA	f'_c:	---
9. CONCRETE, HIGH PERFORMANCE CLASS A	f'_c:	30 MPa
10. CONCRETE, HIGH PERFORMANCE CLASS B	f'_c:	25 MPa
11. CONCRETE, CLASS C	f'_c:	20 Mpa
12. REINFORCING STEEL	f_y:	Grade 420
13. STRUCTURAL STEEL AASHTO M270 (WEATHERING)	f_y:	Grade 345W
14. SOIL UNIT WEIGHT	γ:	22 Kn/CM
15. NOMINAL BEARING RESISTANCE OF SOIL	q_n:	---
16. SOIL BEARING RESISTANCE FACTOR (REFER TO AASHTO LRFD)	ϕ:	---
17. NOMINAL BEARING RESISTANCE OF ROCK	q_n:	480 KPa
18. ROCK BEARING RESISTANCE FACTOR (REFER TO AASHTO LRFD)	ϕ:	0.45
19. NOMINAL AXIAL PILE RESISTANCE	q_p:	---
20. PILE YIELD STRENGTH ASTM A572	f_y:	---
21. PILE SIZE		---
22. EST. PILE LENGTH	L_p:	
23. PILE RESISTANCE FACTOR	ϕ:	---
24. LATERAL PILE DEFLECTION	Δ:	---
25. BASIC WIND SPEED	V_{3s}:	---
26. MINIMUM GROUND SNOW LOAD	p_g:	---
27. SEISMIC DATA PGA : ---	S_s:	---
	S_1:	---

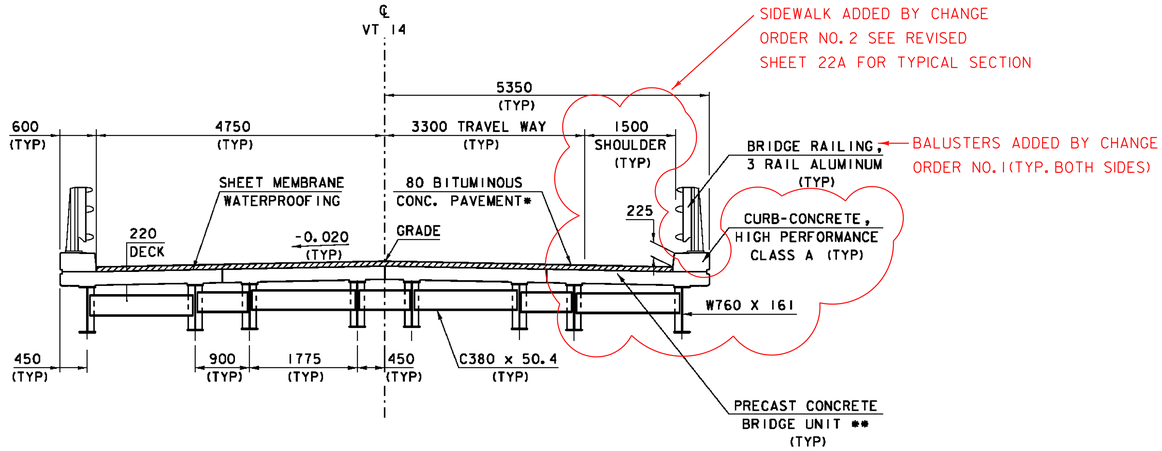
PROJECT NAME: **EAST MONTPELIER**

PROJECT NUMBER: **BRF 037-2(8)**

FILE NAME: **86e054/structures/se054pi.dgn**
PROJECT LEADER: **C.P.WILLIAMS**
DESIGNED BY: **H.I.SALLS**
PRELIMINARY INFORMATION SHEET 1

PLOT DATE: 6/22/2010
DRAWN BY: **D.D.BEARD**
CHECKED BY: **L.J.STONE**

Metric



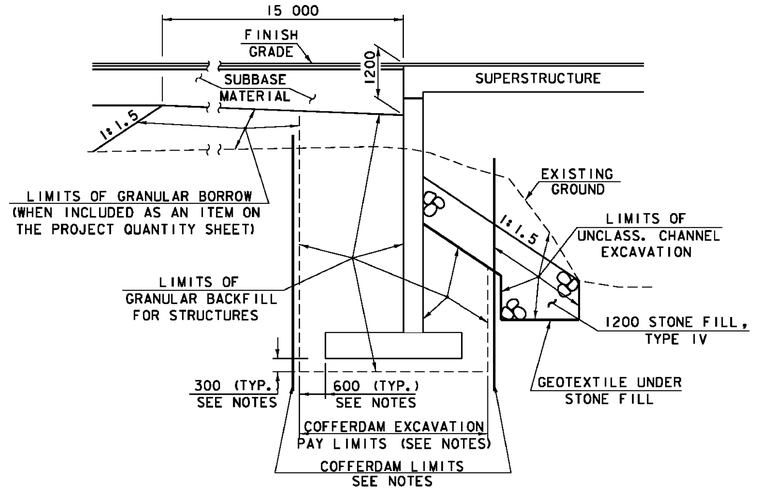
TYPICAL BRIDGE SECTION
(PRECAST)

0 1 2 3 4 5
SCALE = 1:50

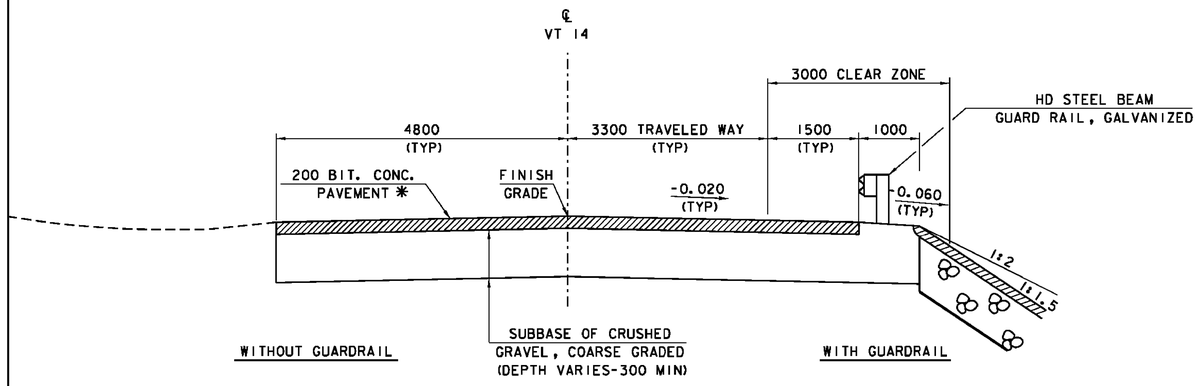
* 40 mm Type IIIS or IVS over
40 mm Type IIIS or IVS

PAID FOR UNDER ITEM: 900.680
SPECIAL PROVISION (BITUMINOUS CONCRETE PAVEMENT, SMALL QUANTITY)

** SEE PRECAST CONCRETE/STEEL COMPOSITE SUPERSTRUCTURE OF SECTION 900 OF THE SPECIAL PROVISIONS



TYPICAL ABUTMENT SECTION
(NOT TO SCALE)

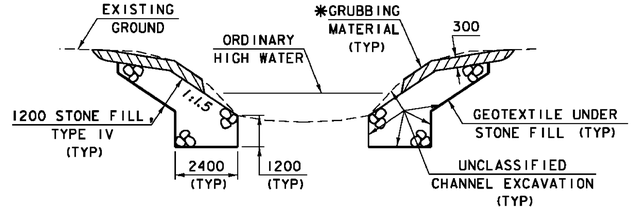


TYPICAL ROADWAY SECTION

0 1 2 3 4 5
SCALE = 1:50

* 40 mm Type IIIS or IVS over
40 mm Type IIIS or IVS over
60 mm Type IS or IIS over
60 mm Type IS or IIS

PAID FOR UNDER ITEM: 900.680
SPECIAL PROVISION (BITUMINOUS CONCRETE PAVEMENT, SMALL QUANTITY)



TYPICAL CHANNEL SECTION
(NOT TO SCALE)

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

NOTES

1. COFFERDAM LIMITS TO BE DETERMINED BY THE CONTRACTOR.
2. THE PAY LIMITS OF "COFFERDAM EXCAVATION, EARTH" AND "COFFERDAM EXCAVATION, ROCK" SHALL BE 600 OUTSIDE THE PERIMETER OF THE FOOTING, UP TO EXISTING GROUND OR BOTTOM OF SUBBASE, WHICHEVER IS LOWER.
3. 300 UNDERCUT AS DETERMINED NECESSARY BY THE 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 ITEM	TOLERANCE
PAVEMENT	±5 mm TOTAL THICKNESS
BASE COURSE	±10 mm
SUBBASE	±30 mm
SAND BORROW	±30 mm
GRANULAR BORROW	±30 mm

PROJECT:	PROJECT NO.:
EAST MONTPELIER	BRF 037-2 (8)
DESIGN FILE NAME: 86e054/structures/s86e054notes.dgn	
IPARM FILE NAME: se054excsect.i	PLOT DATE: 18-AUG-2010
DESIGNED BY: L. J. STONE	DRAWN BY: L. J. STONE
SQUAD LEADER: C. P. WILLIAMS	CHECKED BY: H. I. SALLS
TYPICAL SECTIONS	SHEET: 3 OF 63

STATE OF VERMONT
AGENCY OF TRANSPORTATION

QUANTITY SHEET 1

Metric

SUMMARY OF ESTIMATED QUANTITIES							TOTALS		DESCRIPTIONS				DETAILED SUMMARY OF QUANTITIES		
ROADWAY	TRAINING	EROSION CONTROL	BRIDGE	FULL C.E. ITEMS	GRAND TOTAL	FINAL	UNIT	ITEMS	ITEM NUMBER	ROUND	QUANTITIES	UNIT	ITEMS
													EARTHWORKS SUMMARY
													FILL AVAILABLE
1					1		LS	CLEARING AND GRUBBING, INCLUDING INDIVIDUAL TREES AND STUMPS	201.10		520	CM	COMMON EXCAVATION (520 x 1.0)
520					520		CM	COMMON EXCAVATION	203.15		45	CM	UNCLASSIFIED CHANNEL EXCAVATION (150 x 0.3)
			150		150		CM	UNCLASSIFIED CHANNEL EXCAVATION	203.27		245.4	CM	COFFERDAM EXCAVATION EARTH + ROCK (818 x 0.3)
7					7		CM	TRENCH EXCAVATION OF EARTH	204.20		4.6	CM	ROUNDING
2					2		CM	TRENCH EXCAVATION OF ROCK	204.21		**815**	**CM**	**TOTAL FILL AVAILABLE**
1					1		CM	TRENCH EXCAVATION OF EARTH, EXPLORATORY (N.A.B.I.)	204.22				FILL REQUIRED
10			360		370		CM	GRANULAR BACKFILL FOR STRUCTURES	204.30		34.5	CM	PLANIMETERED FILL
			558		558		CM	COFFERDAM EXCAVATION, EARTH	208.30		39.675	CM	FACTORED FILL (x 1.15)
			260		260		CM	COFFERDAM EXCAVATION, ROCK	208.35		0.325	CM	ROUNDING
			1		1		LS	COFFERDAM (ABUTMENT NO.1)	208.40		**40**	**CM**	**TOTAL FILL REQUIRED**
			1		1		LS	COFFERDAM (ABUTMENT NO.2)	208.40		**775**	**CM**	**TOTAL WASTE**
510					510		SM	COLD PLANING, BITUMINOUS PAVEMENT	210.10				
370					370		CM	SUBBASE OF CRUSHED GRAVEL, COARSE GRADED	301.25				
1					1		LU	PRICE ADJUSTMENT, ASPHALT CEMENT (N.A.B.I.)	406.50				
			18		18		CM	CONCRETE, HIGH PERFORMANCE CLASS A	501.33				
			258		258		CM	CONCRETE, HIGH PERFORMANCE CLASS B	501.34				
			13840		13840		KG	REINFORCING STEEL	507.15				
			38		38		M	DRILLING AND GROUTING DOWELS	507.16				
			4480		4480		KG	EPOXY COATED REINFORCING STEEL	507.17				
			192		192		EACH	MECHANICAL BAR CONNECTOR (#16 - EPOXY COATED)	507.19				
			83		83		L	WATER REPELLENT, SILANE	514.10				
			11		11		M	BRIDGE EXPANSION JOINT, ASPHALTIC PLUG	516.10				
			190		190		SM	SHEET MEMBRANE WATERPROOFING, TORCH APPLIED	519.20				
			11		11		M	JOINT SEALER, HOT POURED	524.11				
			41		41		M	BRIDGE RAILING, 3 RAIL ALUMINUM	525.22				
			1		1		LS	TEMPORARY PEDESTRIAN BRIDGE (100 SM - EST.)	528.12				
			1		1		EACH	REMOVAL OF STRUCTURE (165 SM - EST.)	529.15				
			16		16		EACH	BEARING DEVICE ASSEMBLY, ELASTOMERIC PAD	531.11				
			50		50		CM	CONCRETE, CLASS C	541.30				
								BEGIN OPTION AA					
3.5					3.5		M	450 CAAP 1.91 (68 X 12)	601.0216				
3.5					3.5		M	450 PCCSP(PI) 1.63 (68 X 12)	601.0615				
3.5					3.5		M	450 CPEP	601.0915				
								END OPTION AA					
1					1		EACH	PRECAST REINFORCED CONCRETE DROP INLET WITH CAST IRON GRATE	604.18				
	10				10		HR	ALL PURPOSE EXCAVATOR RENTAL, TYPE I	608.25				
1					1		T	DUST AND ICE CONTROL WITH CALCIUM CHLORIDE	609.15				
			10		10		CM	STONE FILL, TYPE I	613.10				
			200		200		CM	STONE FILL, TYPE IV	613.13				
40					40		M	HD STEEL BEAM GUARDRAIL, GALVANIZED	621.21				

PROJECT NAME: EAST MONTPELIER
PROJECT NUMBER: BRF 037-2(8)

FILE NAME: M:\36e054\se054excel.dgn
PROJECT LEADER: C.P.WILLIAMS
DESIGNED BY: L.J.STONE
QUANTITY SHEET #1

PLOT DATE: 07/26/2010
DRAWN BY: D.D.BEARD
CHECKED BY: H.I.SALLS
SHEET 4 OF 63

STATE OF VERMONT
AGENCY OF TRANSPORTATION

QUANTITY SHEET 2

Metric

SUMMARY OF ESTIMATED QUANTITIES							TOTALS		DESCRIPTIONS				DETAILED SUMMARY OF QUANTITIES		
ROADWAY	TRAINING	EROSION CONTROL	BRIDGE	FULL C.E. ITEMS			GRAND TOTAL	FINAL	UNIT	ITEMS	ITEM NUMBER	ROUND	QUANTITIES	UNIT	ITEMS
3							3		EACH	ANCHOR FOR STEEL BEAM RAIL	621.60				
27							27		M	ALUMINUM APPROACH RAILING	621.74				
51							51		M	REMOVAL AND DISPOSAL OF GUARDRAIL	621.80				
100							100		HR	UNIFORMED TRAFFIC OFFICERS	630.10				
624							624		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				
				3000			3000		DL	FIELD OFFICE TELEPHONE (N.A.B.I.)	631.26				
	520						520		HR	EMPLOYEE TRAINEESHIP	634.10				
1							1		LS	MOBILIZATION/DEMOBILIZATION	635.11				
1							1		LS	TRAFFIC CONTROL	641.10				
1							1		LS	PUBLIC RELATIONS OFFICER	641.12				
118							118		DAY	PORTABLE CHANGEABLE MESSAGE SIGN RENTAL	641.17				
219							219		M	100 MM WHITE LINE	646.20				
186							186		M	100 MM YELLOW LINE	646.21				
			270				270		SM	GEOTEXTILE UNDER STONE FILL	649.31				
		30					30		SM	GEOTEXTILE FOR SILT FENCE	649.51				
		50					50		SM	GEOTEXTILE FOR FILTER CURTAIN	649.61				
		5					5		KG	SEED	651.15				
		50					50		KG	FERTILIZER	651.18				
		1					1		T	AGRICULTURAL LIMESTONE	651.20				
		1					1		T	HAY MULCH	651.25				
		5					5		CM	TOPSOIL	651.35				
			140				140		SM	GRUBBING MATERIAL	651.40				
		1					1		LS	EPSC PLAN	652.10				
		16					16		HR	MONITORING EPSC PLAN	652.20				
		1					1		LU	MAINTENANCE OF EPSC PLAN (N.A.B.I.)	652.30				
		210					210		SM	PERMANENT EROSION MATTING	653.21				
		5					5		CM	TEMPORARY STONE CHECK DAM, TYPE I	653.25				
		16					16		CM	VEHICLE TRACKING PAD	653.35				
		1					1		EACH	INLET PROTECTION DEVICE, TYPE I	653.40				
		1					1		EACH	FILTER BAG	653.45				
		97					97		M	PROJECT DEMARCATION FENCE	653.55				
0.315							0.315		SM	TRAFFIC SIGNS, TYPE A	675.20				
9							9		M	SQUARE TUBE SIGN POST AND ANCHOR	675.341				
3							3		EACH	REMOVING SIGNS	675.50				
1							1		LU	SPECIAL PROVISION (INCENTIVE/DISINCENTIVE) (N.A.B.I.)	900.650				
1							1		LU	SPECIAL PROVISION (MAT DENSITY PAY ADJUSTMENT, SMALL QUANTITY) (N.A.B.I.)	900.650				
1							1		LU	SPECIAL PROVISION (MIXTURE PAY ADJUSTMENT) (N.A.B.I.)	900.650				

PROJECT NAME: EAST MONTPELIER
PROJECT NUMBER: BRF 037-2(8)

FILE NAME: M:\36e054\se054excel.dgn
PROJECT LEADER: C.P.WILLIAMS
DESIGNED BY: L.J.STONE
QUANTITY SHEET #2

PLOT DATE: 06/22/2010
DRAWN BY: D.D.BEARD
CHECKED BY: H.I.SALLS
SHEET 5 OF 63

STATE OF VERMONT
AGENCY OF TRANSPORTATION

QUANTITY SHEET 3

Metric

SUMMARY OF ESTIMATED QUANTITIES							TOTALS		DESCRIPTIONS				DETAILED SUMMARY OF QUANTITIES		
ROADWAY	TRAINING	EROSION CONTROL	BRIDGE	FULL C.E. ITEMS			GRAND TOTAL	FINAL	UNIT	ITEMS	ITEM NUMBER	ROUND	QUANTITIES	UNIT	ITEMS
			210				210		SM	SPECIAL PROVISION (PRECAST CONCRETE/STEEL COMPOSITE SUPERSTRUCTURE)	900.675				
392							392		T	SPECIAL PROVISION (BITUMINOUS CONCRETE PAVEMENT, SMALL QUANTITY)	900.680				

PROJECT NAME: EAST MONTPELIER
PROJECT NUMBER: BRF 037-2(8)

FILE NAME: M:\36e054\se054excel.dgn
PROJECT LEADER: C.P.WILLIAMS
DESIGNED BY: L.J.STONE
QUANTITY SHEET #3

PLOT DATE: 06/22/2010
DRAWN BY: D.D.BEARD
CHECKED BY: H.I.SALLS
SHEET 6 OF 63

STATE OF VERMONT
AGENCY OF TRANSPORTATION

BRIDGE QUANTITY SHEET 1

Metric

SUMMARY OF BRIDGE QUANTITIES					TOTALS	DESCRIPTIONS			DETAILED SUMMARY OF QUANTITIES		
APPROACH SLABS	BRIDGE 71	ABUT.#1	ABUT. #2	CHANNEL	BRIDGE TOTAL	UNIT	ITEMS	ITEM NUMBER	QUANTITIES	UNIT	ITEMS
				150	150	CM	UNCLASSIFIED CHANNEL EXCAVATION	203.27			
		173	187		360	CM	GRANULAR BACKFILL FOR STRUCTURES	204.30			
		279	279		558	CM	COFFERDAM EXCAVATION, EARTH	208.30			
		150	110		260	CM	COFFERDAM EXCAVATION, ROCK	208.35			
		1			1	LS	COFFERDAM (ABUTMENT NO.1)	208.40			
			1		1	LS	COFFERDAM (ABUTMENT NO.2)	208.40			
	18				18	CM	CONCRETE, HIGH PERFORMANCE CLASS A	501.33			
44		117	97		258	CM	CONCRETE, HIGH PERFORMANCE CLASS B	501.34			
		7370	6470		13840	KG	REINFORCING STEEL	507.15			
		19	19		38	M	DRILLING AND GROUTING DOWELS	507.16			
3117	1363				4480	KG	EPOXY COATED REINFORCING STEEL	507.17			
		96	96		192	EACH	MECHANICAL BAR CONNECTOR (#16 - EPOXY COATED)	507.19			
	83				83	L	WATER REPELLENT, SILANE	514.10			
	11				11	M	BRIDGE EXPANSION JOINT, ASPHALTIC PLUG	516.10			
	190				190	SM	SHEET MEMBRANE WATERPROOFING, TORCH APPLIED	519.20			
	11				11	M	JOINT SEALER, HOT POURED	524.11			
	41				41	M	BRIDGE RAILING, 3 RAIL ALUMINUM	525.22			
	1				1	LS	TEMPORARY PEDESTRIAN BRIDGE (100 SM - EST.)	528.12			
	1				1	EACH	REMOVAL OF STRUCTURE (165 SM - EST.)	529.15			
		8	8		16	EACH	BEARING DEVICE ASSEMBLY, ELASTOMERIC PAD	531.11			
		35	15		50	CM	CONCRETE, CLASS C	541.30			
		10			10	CM	STONE FILL, TYPE I	613.10			
		129	71		200	CM	STONE FILL, TYPE IV	613.13			
		170	100		270	SM	GEOTEXTILE UNDER STONE FILL	649.31			
		80	60		140	SM	GRUBBING MATERIAL	651.40			
	210				210	SM	SPECIAL PROVISION (PRECAST CONCRETE/STEEL COMPOSITE SUPERSTRUCTURE)	900.675			

PROJECT NAME: EAST MONTPELIER
PROJECT NUMBER: BRF 037-2(8)

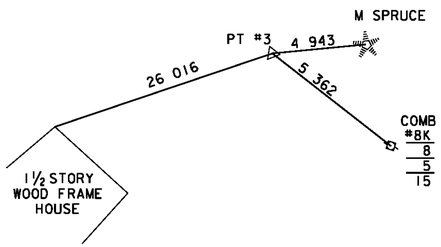
FILE NAME: M:\36e054\se054excel.dgn
PROJECT LEADER: C.P.WILLIAMS
DESIGNED BY: L.J.STONE
BRIDGE QUANTITY SHEET #1

PLOT DATE: 06/22/2010
DRAWN BY: D.D.BEARD
CHECKED BY: H.I.SALLS
SHEET 7 OF 63

GEODETIC CONTROL INFORMATION

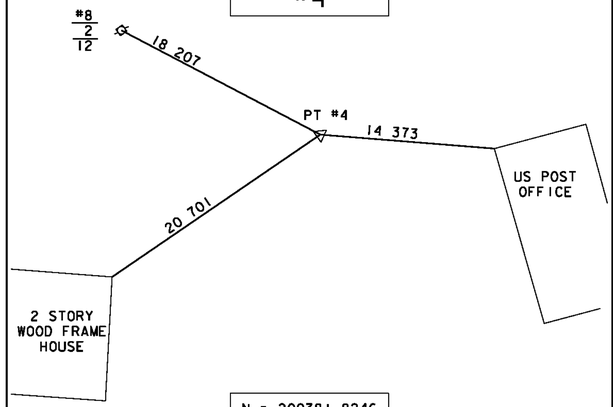
TRAVERSE TIE INFORMATION

POINT #3



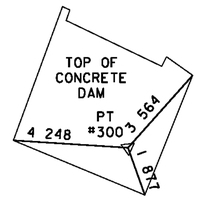
N = 200282.9853
E = 504178.6709
Z = 213.8570

POINT #4



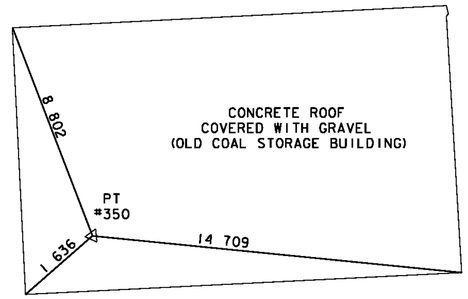
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E = 504262.1268
Z = 215.8860

POINT #300



N = 200349.2400
E = 504186.0505
Z = 215.1784

POINT #350



N = 200303.5850
E = 504227.7282
Z = 213.7451

NEW ALIGNMENT TIE INFORMATION

ALL TIES ARE SHOWN NOT TO SCALE

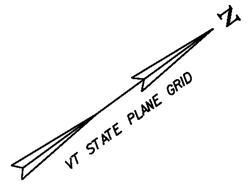
DATUM

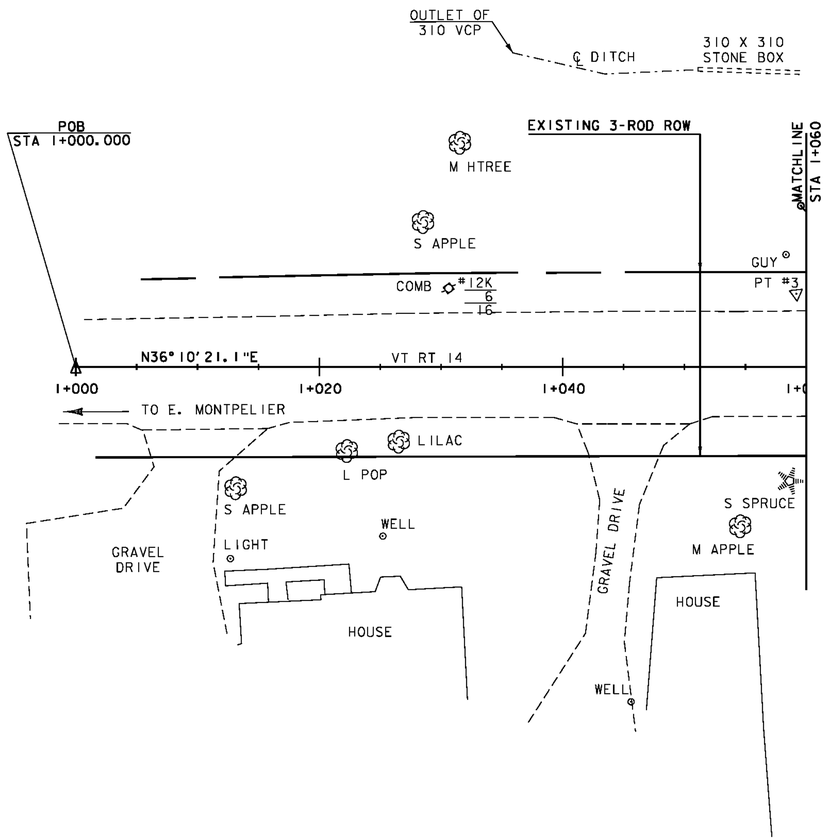
VERTICAL USGS
HORIZONTAL ASSUMED

PROJECT NAME: EAST MONTPELIER
PROJECT NUMBER: BRF 037-2(8)

FILE NAME: se054tie.dgn
PROJECT LEADER: C.P.WILLIAMS
DESIGNED BY: L.J.STONE
TIE SHEET

PLOT DATE: 18-AUG-2010
DRAWN BY: P.G.JARVIS
CHECKED BY: H.I.SALLS
SHEET 8 OF 63





LAYOUT
SCALE 1:250

0 10 20 30

SCALE IN METERS

DATUM	
VERTICAL	USGS
HORIZONTAL	ASSUMED

PROJECT:	PROJECT NO. :
EAST MONTPELIER	BRF 037-2 (8)
DESIGN FILE NAME: 86e054/structures/s86e054bdr.dgn	
IPARM FILE NAME: se054ai.i	PLOT DATE: 18-AUG-2010
SURVEYED BY: R.MOREAU	SURVEY DATE: 3/93
SQUAD LEADER: C.P.WILLIAMS	DRAWN BY: L.J. STONE
LAYOUT SHEET 1	SHEET: 9 OF 63

VTRANS Metric

REMOVAL AND DISPOSAL OF GUARDRAIL
STA 1+086.000 LT - 1+109.000 LT
STA 1+104.500 RT - 1+107.500 RT
STA 1+129.000 RT - 1+144.500 RT
STA 1+129.000 LT - 1+130.500 LT

CONSTRUCT DRIVE**
STA 1+092.000 RT - W/3000 PAVED APRON
STA 1+135.000 LT - PAVED DRIVE
STA 1+150.000 RT - PAVED DRIVE

** PAVEMENT FOR DRIVES SHALL BE ONE 40MM LIFT OF TYPE IIIS PAVEMENT.

UNDERGROUND UTILITIES
* STA 1+135.000 - SEWER LINE
* STA 1+160.000 - WATER LINE
* APPROXIMATE LOCATION

BARRIER FENCE (FOR PEDESTRIAN DETOUR)
STA 1+131 - 1+135 LT
(INCIDENTAL TO ITEM 528.12 TEMPORARY PEDESTRIAN BRIDGE)

BRIDGE RAILING, 3 RAIL ALUMINUM
STA 1+110.070 LT - 1+129.850 LT
STA 1+110.070 RT - 1+129.520 RT

HD STEEL BEAM GUARDRAIL, GALVANIZED
STA 1+085.600 LT - 1+102.460 LT
STA 1+095.200 RT - 1+102.460 RT
STA 1+137.140 RT - 1+144.080 RT

ANCHOR FOR STEEL BEAM RAIL
STA 1+085.000 LT
STA 1+097.000 RT
STA 1+143.000 RT

ALUMINUM APPROACH RAILING
STA 1+102.460 LT - 1+110.070 LT
STA 1+102.460 RT - 1+110.070 RT
STA 1+129.520 RT - 1+137.140 RT
STA 1+129.850 LT - 1+130.780 LT

N
VT STATE PLANE GRID

SEE REVISED SHEET 10A

PAVING LIMITS
STATION	OFFSET
1+077.22LT	17.84
1+085.66LT	15.09

WOODS
EXISTING 3-ROD ROW
POE STA 2+090.000
TH 11 (GRAVEL)
EXISTING STONE FILL
CONCRETE SIDEWALK
LIMITS OF TEMPORARY PEDESTRIAN DETOUR
PT #300
CONC. DAM
BM M-11 1928 USGS EL 216.970 m
PI STA 1+165.000 Δ=5°27'14" LT NO CURVE RUN
END APPROACH STA 1+170.000
BARRIER FENCE
END BRIDGE STA 1+129.600 FG=214.070
END PROJECT BEGIN APPROACH STA 1+140.000
℄ DITCH
M SPRUCE
760 X 760 STONE BOX
CHANNEL LINE
KINGSBURY BRANCH
600 MM PENSTOCK PIPE
℄ OF TEMP. PED. DETOUR
EXISTING DAM
NORTH MONT. GARAGE
GRAVEL DRIVE
HOUSE
M PINE
GUY
COMB #8
STEPS
PORCH
PAVED DITCH
OLD FOUNDATION
310 COMP
6.0X6.0 DI
CZ
AERIAL E&T
R 16 280
END APPROACH BEGIN PROJECT STA 1+095.000
MAIN LINE
VT RT 14
1+080
TO E. MONTPELIER
R 2500
1+100
1+120
1+140
N36° 10' 21.1"E R 4077
1+160
1+180
1+185
R 13 536
PAVING LIMITS
R 2000
CONSTRUCTION LIMITS
MATCHLINE STA 1+060
BEGIN APPROACH STA 1+065.000
POT CHANNEL STA 2+045.000= MAINLINE STA 1+105.000 Δ = 90°
BEGIN BRIDGE STA 1+110.000 FG=213.733
BUILDING FOUNDATION (COAL STORAGE)
PT #350
PAVED DRIVE
GRAVEL DRIVE
N53° 49' 38.9"W
2+020
1600mm PEN-STOCK PIPE
FLOW
2+000
POB STA 2+000.000
POWER HOUSE
EXISTING SEWER LINE*
EXISTING WATER LINE*
M POP (REMOVE)
M ELM
S BUTT
GRANITE BLOCK WALL
M WILLOW
M APPLE
POWER & ALARM FOR PUMPS
APPROXIMATE TEMPORARY UTILITY AERIAL RELOCATION ROUTE
460 RCP
N30° 43' 07"E
PT #4
EXISTING 610 X 610 WATER LINE
VT RT 214
S ELM
L PINE
STORE & US POST OFFICE
FLAG POLE
TO PLAINFIELD
610 X 610 DI
EL #21
EL #11
UNDERDRAIN FLUSHING BASIN
TO EAST CALAIS

LAYOUT
SCALE 1:250
0 10 20 30
SCALE IN METERS

ALIGNMENT COORDINATES
	NORTHING (Y)	EASTING (X)
POB	200231.6610	504148.5990
PI	200364.8560	504245.9850
POE	200382.0490	504256.2010
POT	200316.4220	504210.5730
CHANNEL		
POB	200289.8600	504246.8970
POE	200342.9850	504174.2480
POT	200316.4220	504210.5730

DATUM
VERTICAL USGS
HORIZONTAL ASSUMED

① - ② SEE PIPE SECTIONS AND DRAINAGE DETAIL SHEET

EXISTING BRIDGE DATA
YEAR BUILT = 1936
SINGLE SPAN ROLLED BEAM
OVERALL LENGTH = 18.90m (62')
CLEAR SPAN = 17.98m (59')
ROADWAY WIDTH = 7.32m (24')

PROJECT: EAST MONTPELIER	PROJECT NO. : BRF 037-2(8)
DESIGN FILE NAME: 86e054/structures/s86e054bdr.dgn	
IPARM FILE NAME: se0541a2.i	PLOT DATE: 18-AUG-2010
SURVEYED BY: R.MOREAU	SURVEY DATE: 3/93
SQUAD LEADER: C.P.WILLIAMS	DRAWN BY: L.J. STONE
LAYOUT SHEET 2	SHEET: 10 OF 63

VAOT Metric

REMOVAL AND DISPOSAL OF GUARDRAIL
STA 1+086.000 LT - 1+109.000 LT
STA 1+104.500 RT - 1+107.500 RT
STA 1+129.000 RT - 1+144.500 RT
STA 1+129.000 LT - 1+130.500 LT

CONSTRUCT DRIVE**
STA 1+092.000 RT - W/3000 PAVED APRON
STA 1+135.000 LT - PAVED DRIVE
STA 1+150.000 RT - PAVED DRIVE

** PAVEMENT FOR DRIVES SHALL BE ONE 40MM LIFT OF TYPE IIIS PAVEMENT.

UNDERGROUND UTILITIES
* STA 1+135.000 - SEWER LINE
* STA 1+160.000 - WATER LINE
* APPROXIMATE LOCATION

BARRIER FENCE (FOR PEDESTRIAN DETOUR)
STA 1+131 - 1+135 LT
(INCIDENTAL TO ITEM 528.12 TEMPORARY PEDESTRIAN BRIDGE)

BRIDGE RAILING, 3 RAIL ALUMINUM W/ SPINDLES ⚠1
STA 1+110.070 LT - 1+129.850 LT
STA 1+110.070 RT - 1+129.520 RT

HD STEEL BEAM GUARDRAIL, GALVANIZED
STA 1+085.600 LT - 1+102.460 LT
STA 1+095.200 RT - 1+102.460 RT
STA 1+137.140 RT - 1+144.080 RT

ANCHOR FOR STEEL BEAM RAIL
STA 1+085.000 LT
STA 1+097.000 RT
STA 1+143.000 RT

ALUMINUM APPROACH RAILING
STA 1+102.460 LT - 1+110.070 LT
STA 1+102.460 RT - 1+110.070 RT
STA 1+129.520 RT - 1+137.140 RT
STA 1+129.850 LT - 1+130.780 LT

CAST-IN-PLACE CONCRETE CURB, TYPE B ⚠1
STA 1+104.000 RT - 1+110.000 RT
STA 1+129.600 RT - 1+135.600 RT

PORTLAND CEMENT CONCRETE SIDEWALK, 5" ⚠1
STA 1+104.000 RT - 1+110.000 RT
STA 1+129.600 RT - 1+135.600 RT

N
VT STATE PLANE GRID

PAVING LIMITS
STATION	OFFSET
1+077.22LT	17.84
1+085.66LT	15.09

BM M-11
1928 USGS
EL 216.970 m

PI
STA 1+165.000
Δ=5°27'14" LT
NO CURVE RUN

END APPROACH
STA 1+170.000

POE
STA 1+185.000

END BRIDGE
STA 1+129.600
FG=214.070

END PROJECT
BEGIN APPROACH
STA 1+140.000

BARRIER FENCE

WOODS
EXISTING 3-ROD ROW
POE
STA 2+090.000
LIMITS OF TEMPORARY PEDESTRIAN DETOUR
CONCRETE SIDEWALK
PT #300
CONC. DAM
TH 11 (GRAVEL)
EXISTING STONE FILL
2+090
2+080
2+060
2+020
2+000
CHANNEL LINE
KINGSBURY BRANCH
600 MM PEN-STOCK PIPE
℄ OF TEMP. PED. DETOUR
760 X 760 STONE BOX
℄ DITCH
M SPRUCE
#8K
8
5
15
R 16 280
COMB
OLD FOUNDATION
EXISTING DAM
310 COMP
DI 610X610
NORTH MONT. GARAGE
GRAVEL DRIVE
HOUSE
PORCH
PAVED DITCH
CZ
EXISTING SEWER LINE*
EXISTING WATER LINE*
GUY
STEPS
COMB #8
M PINE
M WILLOW
GRAVEL DRIVE
HOUSE
610 X 610 DI
COMB #10
VT RT 14 TO EAST CALAIS
EL #11
UNDERDRAIN FLUSHING BASIN
END APPROACH
BEGIN PROJECT
STA 1+095.000
MAIN LINE
VT RT 14
1+060
1+080
TO E. MONTPELIER
R-2500
1+100
1+120
1+140
N36° 10' 21.1"E
R 4077
1+160
1+180
1+185
N30° 43' 07"E
R 13 536
PAVING LIMITS
PT #4
R 2000
CONSTRUCTION LIMITS
MATCHLINE STA 1+060
BEGIN APPROACH
STA 1+065.000
POT
CHANNEL STA 2+045.000=
MAINLINE STA 1+105.000
Δ = 90°
BEGIN BRIDGE
STA 1+110.000
FG=213.733
BUILDING FOUNDATION (COAL STORAGE)
PT #350
PAVED DRIVE
GRAVEL DRIVE
N53° 49' 38.9"W
1600mm PEN-STOCK PIPE
GUY
EL
EL W/TRANS
POB
STA 2+000.000
POWER HOUSE
C42 CONC. CURB
30K
14
8
3
13
DRAIN
GRAVEL DRIVE
PORCH
R 3363
(REMOVE)
M POP
M POP (REMOVE)
610 X 610 DI
EXISTING WATER LINE
M ELM
HOUSE
S ELM
M POP
VT RT 214
L PINE
STORE & US POST OFFICE
FLAG POLE
M WILLOW
GRAVEL DRIVE
TO PLAINFIELD
S BUTT
GRANITE BLOCK WALL
APPROXIMATE FINAL UTILITY AERIAL RELOCATION ROUTE
M WILLOW
310 CGMP
610 X 610 DI
460 RCP
EL #21
FLOW
APPROXIMATE TEMPORARY UTILITY AERIAL RELOCATION ROUTE
POWER & ALARM FOR PUMPS
M APPLE
M APPLE
M WILLOW
POWER & ALARM FOR PUMPS

① - ② SEE PIPE SECTIONS AND DRAINAGE DETAIL SHEET

LAYOUT
SCALE 1:250
0 10 20 30
SCALE IN METERS

ALIGNMENT COORDINATES

	NORTHING (Y)	EASTING (X)
POB	200231.6610	504148.5990
PI	200364.8560	504245.9850
POE	200382.0490	504256.2010
POT	200316.4220	504210.5730
CHANNEL		
POB	200289.8600	504246.8970
POE	200342.9850	504174.2480
POT	200316.4220	504210.5730

DATUM
VERTICAL USGS
HORIZONTAL ASSUMED

EXISTING BRIDGE DATA
YEAR BUILT = 1936
SINGLE SPAN ROLLED BEAM
OVERALL LENGTH = 18.90m (62')
CLEAR SPAN = 17.98m (59')
ROADWAY WIDTH = 7.32m (24')

REV. NO.	DATE	BY	DESCRIPTION
⚠1	2/18/2011	VAOT	ADDED SIDEWALK AND CURBING.

PROJECT: EAST MONTPELIER
PROJECT NO. : BRF 037-2(8)
DESIGN FILE NAME: 86e054/structures/SidewalkChange/Layout Sheet 2.dgn
IPARM FILE NAME: se0541a2.i
PLOT DATE: 23-FEB-2011
SURVEYED BY: R.MOREAU
SURVEY DATE: 3/93
SQUAD LEADER: C.P.WILLIAMS
DRAWN BY: L.J. STONE
LAYOUT SHEET 2
SHEET: 10A OF 63

TRAFFIC CONTROL NOTES:

THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL DETOUR AND CONSTRUCTION SIGNING. THE EXACT LOCATION WILL BE COORDINATED BY THE RESIDENT ENGINEER AND THE CONTRACTOR AND SHALL BE IN ACCORDANCE WITH THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, DATED 2009, AND ITS LATEST REVISIONS AND THE LATEST EDITION OF THE STANDARD HIGHWAY SIGNS (SHS) BOOK.

TRAFFIC CONTROL WARNING SIGNS SHALL BE PROVIDED PER STANDARDS E-100, E-102 AND E-102A. ADDITIONAL PROJECT CONSTRUCTION SIGNS SHALL BE INSTALLED AS REQUIRED BY THE RESIDENT ENGINEER.

ALL ON AND OFF PROJECT SIGNS AND BARRICADES AS REQUIRED FOR THE DETOUR AND/OR ORDERED BY THE RESIDENT ENGINEER WILL BE THE RESPONSIBILITY OF THE CONTRACTOR AND SHALL BE PAID FOR UNDER THE ITEM 641.10, "TRAFFIC CONTROL". ALL SIGNS AND BARRICADES SHALL BE INSPECTED DAILY AND REPAIRED AS NECESSARY. ALL SIGNS AND BARRICADES SHALL BE CLEARED OF DUST AND DEBRIS WEEKLY.

THE STATE ROUTE MARKERS USED FOR THE DETOUR AS SHOWN ON THE PLANS, SHALL FOLLOW STANDARDS E-127 AND E-136B. THESE SIGNS SHALL BE REMOVED AT THE END OF THE CONSTRUCTION PERIOD. THESE SIGNS AND THEIR REMOVAL SHALL BE PAID FOR UNDER ITEM 641.10 "TRAFFIC CONTROL"

PORTABLE CHANGEABLE MESSAGE SIGNS (PCMS) SHALL BE PLACED TO THE SOUTH OF THE INTERSECTION OF US 2 AND VT 14 AND NORTH OF THE INTERSECTION OF VT 14 AND VT 214 AT A LOCATION DESIGNATED BY THE RESIDENT ENGINEER. THE PCMS'S SHALL BE PLACED AT THE PROJECT LOCATION 14 DAYS PRIOR TO THE BRIDGE CLOSURE TO WARN OF THE IMPENDING DETOUR. THE MESSAGES SHALL BE UPDATED AS CONSTRUCTION PROGRESSES. PAYMENT FOR THESE SIGNS SHALL BE PAID FOR UNDER ITEM 641.17 "PORTABLE CHANGEABLE MESSAGE SIGN RENTAL".

THE MESSAGES ON THE PCMS'S AND THEIR PLACEMENT SHALL BE DETERMINED BY THE RESIDENT ENGINEER.

ITEM 641.12 "PUBLIC RELATIONS OFFICER" HAS BEEN INCLUDED FOR THE COORDINATION OF DETOUR INFORMATION AND TRAFFIC DELAYS FOR THE PUBLIC.

INSTALLATION OF DETOUR SIGNS SHALL NOT BLOCK ANY EXISTING TRAFFIC CONTROL SIGN ASSEMBLIES. CONTRACTOR SHALL TRY TO MAINTAIN AT LEAST 200 FEET BETWEEN SIGN ASSEMBLIES.

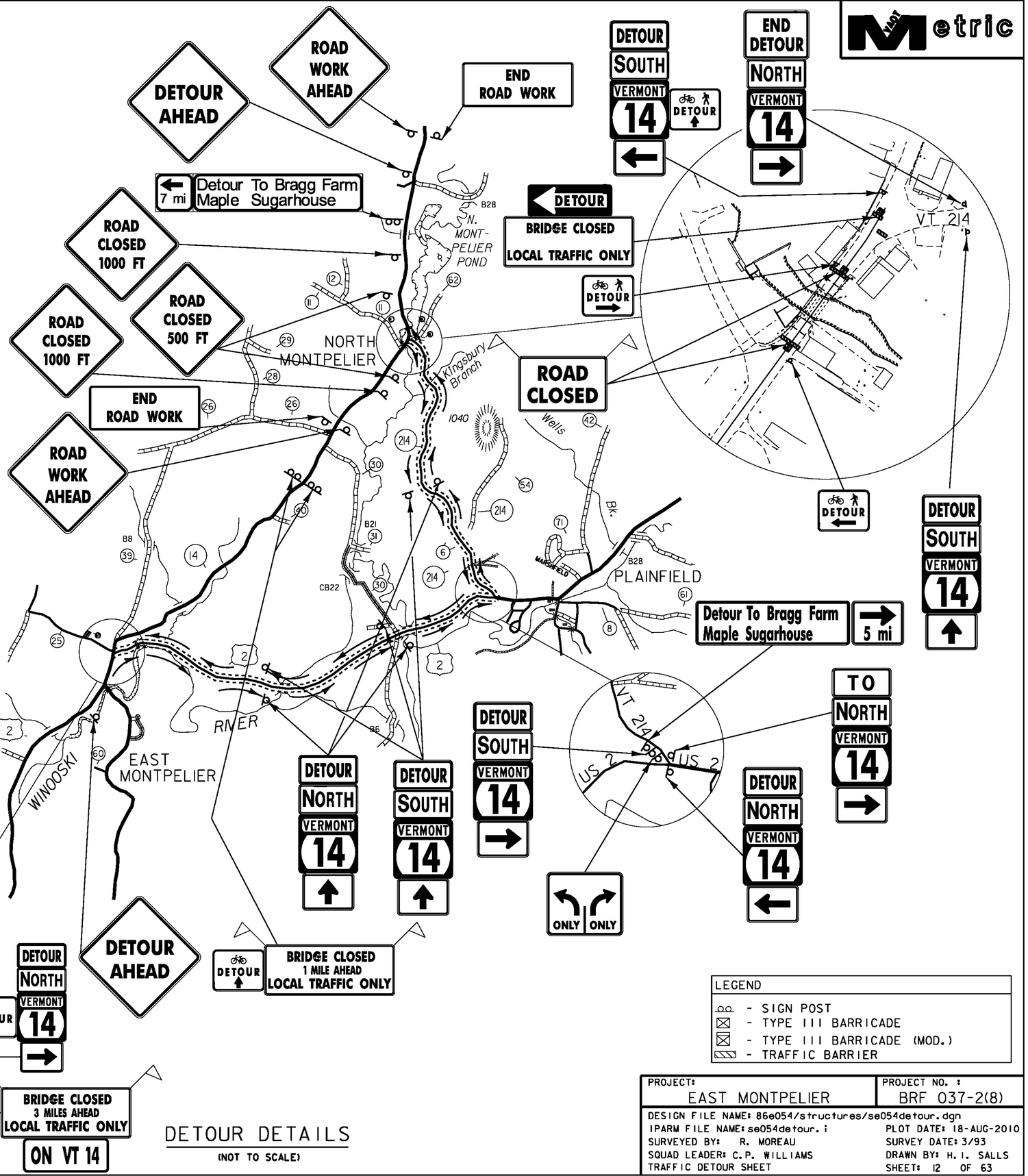
IT WILL BE THE RESPONSIBILITY OF THE RESIDENT ENGINEER TO MAKE ADJUSTMENTS AS NEEDED TO THE TRAFFIC CONTROL PLAN DUE TO CONFLICTS WITH EXISTING SIGNS AND DRIVEWAYS. ALL EXISTING TRAFFIC CONTROL SIGNS THAT CONFLICT WITH THE DETOUR SHALL BE FULLY COVERED. DETOUR SIGNS MAY BE USED TO ADJUST EXISTING ROUTE MARKER ASSEMBLIES WHERE APPROPRIATE. ALL SIGNS REMOVED OR COVERED BY THE CONTRACTOR SHALL BE REPLACED OR UNCOVERED WHEN THE TRAFFIC CONTROL PLAN IS DISASSEMBLED.

FULL ACCESS TO ALL SIDE ROADS AND DRIVES WITHIN THE PROJECT LIMITS SHALL BE MAINTAINED AT ALL TIMES. THIS WORK SHALL BE CONSIDERED INCIDENTAL TO ITEM 641.10, "TRAFFIC CONTROL".

CONTACT DIG-SAFE AT 1-888-344-7233 PRIOR TO BREAKING GROUND TO INSTALL ANY SIGN POSTS.

IT IS ANTICIPATED THAT THE INTERSECTION OF US 2 AND VT 14 WILL BE RECONSTRUCTED PRIOR TO THIS PROJECT BEING CONSTRUCTED. IT IS ALSO POSSIBLE THAT SOME CONSTRUCTION MAY STILL BE GOING ON IN THE AREA AND THE CONTRACTOR WILL NEED TO COORDINATE WITH THAT PROJECT'S RESIDENT ENGINEER TO AVOID SIGN CONFLICTS.

THE SHOULDER OF VT 214 SOUTH SHALL BE WIDENED TO ADD A RIGHT HAND TURN LANE AT THE INTERSECTION OF US 2 AND VT 214. THE TURN LANE IS TO BE 3.3 METERS WIDE, 20 METERS LONG AND TAPER BACK INTO VT 214. THE TURN LANE IS TO BE PAVED AND STRIPED AS PER THE RESIDENT ENGINEER. VT 214 IS TO BE RETURNED TO ITS ORIGINAL CONDITION AT THE END OF CONSTRUCTION. ALL WORK IS TO BE DONE INSIDE THE ROW. THIS WORK SHALL BE INCIDENTAL TO ITEM 641.40, "TRAFFIC CONTROL".



DETOUR DETAILS

(NOT TO SCALE)

LEGEND

- SIGN POST
- TYPE III BARRICADE
- TYPE III BARRICADE (MOD.)
- TRAFFIC BARRIER

DATUM

VERTICAL USGS

HORIZONTAL ASSUMED

PROJECT: EAST MONTPELIER	PROJECT NO. : BRF 037-2(8)
DESIGN FILE NAME: 86e054/structures/se054detour.dgn	
IPARM FILE NAME: se054detour.i	PLOT DATE: 18-AUG-2010
SURVEYED BY: R. MOREAU	SURVEY DATE: 3/93
SQUAD LEADER: C.P. WILLIAMS	DRAWN BY: H.I. SALLS
TRAFFIC DETOUR SHEET	SHEET: 12 OF 63

100mm WHITE LINE
STA. 1+065 RT - STA. 1+170 RT
STA. 1+065 LT - STA. 1+078 LT
STA. 1+084 LT - STA. 1+170 LT

100mm YELLOW LINE (DOUBLE)
STA. 1+065 - STA. 1+074
STA. 1+086 - STA. 1+170

REMOVING SIGNS
STA. 1+089 LT
STA. 1+108 RT
STA. 1+130 LT

TRAFFIC SIGNS, TYPE A
STA. 1+090 LT
STA. 1+105 RT
STA. 1+130 LT

N
VT STATE PLANE GRID

EXISTING 3-ROD ROW

FACTORY ST N N 1+090

FACTORY ST R R 1+089

RET
LEGAL LOAD LIMIT 24,000 POUNDS
1+087

TH 11 (GRAVEL)

BRIDGE 17 VT14 N N 1+130

BRIDGE 17 VT14 R R 1+130

KINGSBURY BRANCH

PAVING LIMITS

STATION	OFFSET
1+077.22LT	17.84
1+085.66LT	15.09

RET
STOP
1+075

END APPROACH
BEGIN PROJECT
STA 1+095.000

END BRIDGE
STA 1+129.600
FG=214.070

END PROJECT
BEGIN APPROACH
STA 1+140.000

END APPROACH
STA 1+170.000

RET
RET
SOUTH VERMONT 214
SOUTH VERMONT 14

EXISTING 3-ROD ROW

MAIN LINE
1+060 1+080 1+100 1+120 1+140 1+160 1+180 1+185

VT RT 14
TO EAST CALAIS

RET
NORTH VERMONT 14

PAVING LIMITS

MATCHLINE STA 1+060

CONSTRUCTION LIMITS

BEGIN APPROACH
STA 1+065.000

RET
NORTH VERMONT 14
SOUTH VERMONT 214
1+086

BEGIN BRIDGE
STA 1+110.000
FG=213.733

BRIDGE 17 VT14 N N 1+105

BRIDGE 17 VT14 R R 1+108

FLOW

VT RT 214

TO PLAINFIELD

RET
STOP

NOTE:
MATCH ALL NEW LINE STRIPING INTO EXISTING LINE STRIPING.

LEGEND
R = REMOVE
N = NEW
RET = RETAIN
R&S = REMOVE AND SALVAGE
S = ERECTING SALVAGED SIGNS

TRAFFIC SIGNS & PAVEMENT MARKING LAYOUT

SCALE 1:250

0 10 20 30
SCALE IN METERS

DATUM
VERTICAL USGS
HORIZONTAL ASSUMED

PROJECT:	PROJECT NO. :
EAST MONTPELIER	BRF 037-2 (8)
DESIGN FILE NAME: 86e054/structures/s86e054bdr.dgn	
IPARM FILE NAME: se054signs.i	PLOT DATE: 18-AUG-2010
SURVEYED BY: R.MOREAU	SURVEY DATE: 3/93
SQUAD LEADER: C.P.WILLIAMS	DRAWN BY: L.J. STONE
TRAFFIC SIGNS AND PAVEMENT MARKINGS	SHEET: 13 OF 63

STATE OF VERMONT
AGENCY OF TRANSPORTATION

TRAFFIC SIGN SUMMARY SHEET

Metric

KILOMETER MARKER, STATION, OR SIGN NUMBER	SIGN LEGEND	SIGN DIMENSIONS EA	WIDTH (mm)	HEIGHT (mm)	NEW & SALVAGED SIGNS "A"	"B"	SALV SIGN	SALV TIS	EXIST POST RETAIN	SALVAGE	NEW SIGN POSTS NO. OF POSTS	FLANGED CHANNEL kg/m 1.7	3.0	4.5	SQUARE STEEL (mm) kg/m 44 3.4	50 3.9	63 5.0	ANCHOR	SLEEVE	TUBULAR ALUMINUM Ø (mm) kg/m 75 1.9	100 2.5	100 MOD 2.5	TUBULAR STEEL Ø (mm) FOUND-ATION	kg/m 75 11.3	89 13.4	100 16.1	125 21.7	W-SHAPE STEEL FTG. SIZE 600 mm	750 mm	WEIGHT	POST SIZE	SIGN FRAME REQUIRED	REMARKS	SIGN DETAIL DETAIL ON SHEET NUMBER	STD. SHEET NUMBER
											OPTION ITEMS																									
1+090 LT	FACTORY ST FACTORY ST	1	750	300	0.225						1					4																	D3-1, SAME TEXT BOTH SIDES TEXT IS "Factory St." COLOR IS WHITE ON GREEN		E-123
1+105 RT	BRIDGE 17 VT14	1	150	300	0.045						1					2.5																	VD-701		E-134
1+130 LT	BRIDGE 17 VT14	1	150	300	0.045						1					2.5																	VD-701		E-134
SEE DETOUR SHEET	Detour To Bragg Farm Maple Sugarhouse	2	142 56*	41 16*	•						2			•																				
SEE DETOUR SHEET	5 mi	1	41 16*	41 16*	•						1			•																				
SEE DETOUR SHEET	7 mi	1	41 16*	41 16*	•						1			•																				

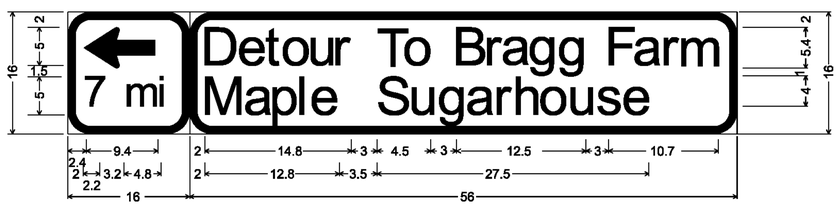
*THESE DETOUR SIGNS SHALL BE INCIDENTAL TO ITEM 641.10 'TRAFFIC CONTROL'. THEY ARE SHOWN HERE IN ORDER TO PROVIDE ACCURATE DIMENSIONS FOR FABRICATION.



3.0" Radius, 1.0" Border, Black on Orange;
[Detour To Bragg Farm] B 60} spacing;
[Maple Sugarhouse] B 70} spacing;

3.0" Radius, 1.0" Border, Black on Orange;
Standard Arrow Custom 9.4" X 5.4" 0{;
[5 mi] C 80} spacing;

SIGN DIMENSIONS SHOWN IN INCHES



3.0" Radius, 1.0" Border, Black on Orange;
[Detour To Bragg Farm] B 60} spacing;
[Maple Sugarhouse] B 70} spacing;

3.0" Radius, 1.0" Border, Black on Orange;
Standard Arrow Custom 9.4" X 5.4" 0{;
[5 mi] C 80} spacing;

SIGN DIMENSIONS SHOWN IN INCHES

SIGNS FOR DETOUR

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.'

								m	m	m	m	m	m		EA	kg	kg	kg		kg	kg	kg	kg											
												9																						
TOTALS	m^2 0.315	m^2	EA.	m^2				m			m					kg			EA.	kg				EA.	EA.	kg								
											9																								

PROJECT NAME:	E. MONTPELIER
PROJECT NUMBER:	BRF 037-2(8)
FILE NAME: 86e054/structures/se054tss.dgn	PLOT DATE: 18-AUG-2010
PROJECT LEADER: C.P. WILLIAMS	DRAWN BY: P.G. JARVIS
DESIGNED BY: L.J. STONE	CHECKED BY: H.I. SALLS
TRAFFIC SIGN SUMMARY SHEET	SHEET 14 OF 63

STATE OF VERMONT
AGENCY OF TRANSPORTATION

DRAINAGE DETAIL SHEET

Metric

STATION	STATION	POS.	ASKEW	INLET/OUTLET TYPE		DITCH		PIPE ARCH			PIPE		ALLOWABLE OPTIONS						PIPE ELBOW	ES	CB		DEPTH DI	CONC 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
				INLET	OUTLET	IN	OUT	SPAN	RISE	L	D	L	PCCSP	CAAP	RCP CL	CSP	CPEP	PCCSP PI										EARTH	ROCK									LT	RT			
km + m	km + m		no. deg.					mm	mm	m	mm	m	mm	mm		mm	mm	mm	no. deg.	ea	ea		mm	m^3	kg	type	ea	m^3	m^3	m^3	m^3	m^3	m^3	m^3	m^3	m^2	m^3	type	ea	ea			
1+127.600	1+131.325	LT		DI	RIVER						450	3.5	X	X			X											6	1													1	REMOVE EXISTING 310 CGMP PIPE NEW 450mm X 3.500m OPTION PIPE
1+131.325		LT																				X	1350			E			1	1			4								2	REMOVE EXISTING 610 X 610 RCDI NEW 1200 X 1200 RCDI

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 kPa	CONSISTENCY
<12	Very Soft
12-24	Soft
24-48	Med. Stiff
48-96	Stiff
96-192	Very Stiff
>192	Hard

CORRELATION GUIDE OF "N" TO DENSITY/CONSISTENCY

DENSITY (GRANULAR SOILS) N	DESCRIPTIVE TERM	CONSISTENCY (COHESIVE SOILS) N	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 300 mm For: 50.8 mm O. D. Sampler 35.0 mm I. D. Sampler Hammer Weight Of 63.5 kg. Hammer Fall Of 762 mm
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 30.1mm
BX	Core Size 42.0 mm
NX	Core Size 54.7 mm
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	mltc	Multicolored
or	Orange		

DEFINITIONS (AASHTO)

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

BOULDER - A rock fragment with an average dimension > 304.8 mm.

COBBLE - Rock fragments with an average dimension between 76.2 and 304.8 mm.

GRAVEL - Rounded particles of rock < 76.2 mm and > 2 mm (#10 sieve).

SAND - Particles of rock < 2 mm (#10 sieve) and > 75 μm (#200 sieve).

SILT - Soil < 75 μm (#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.

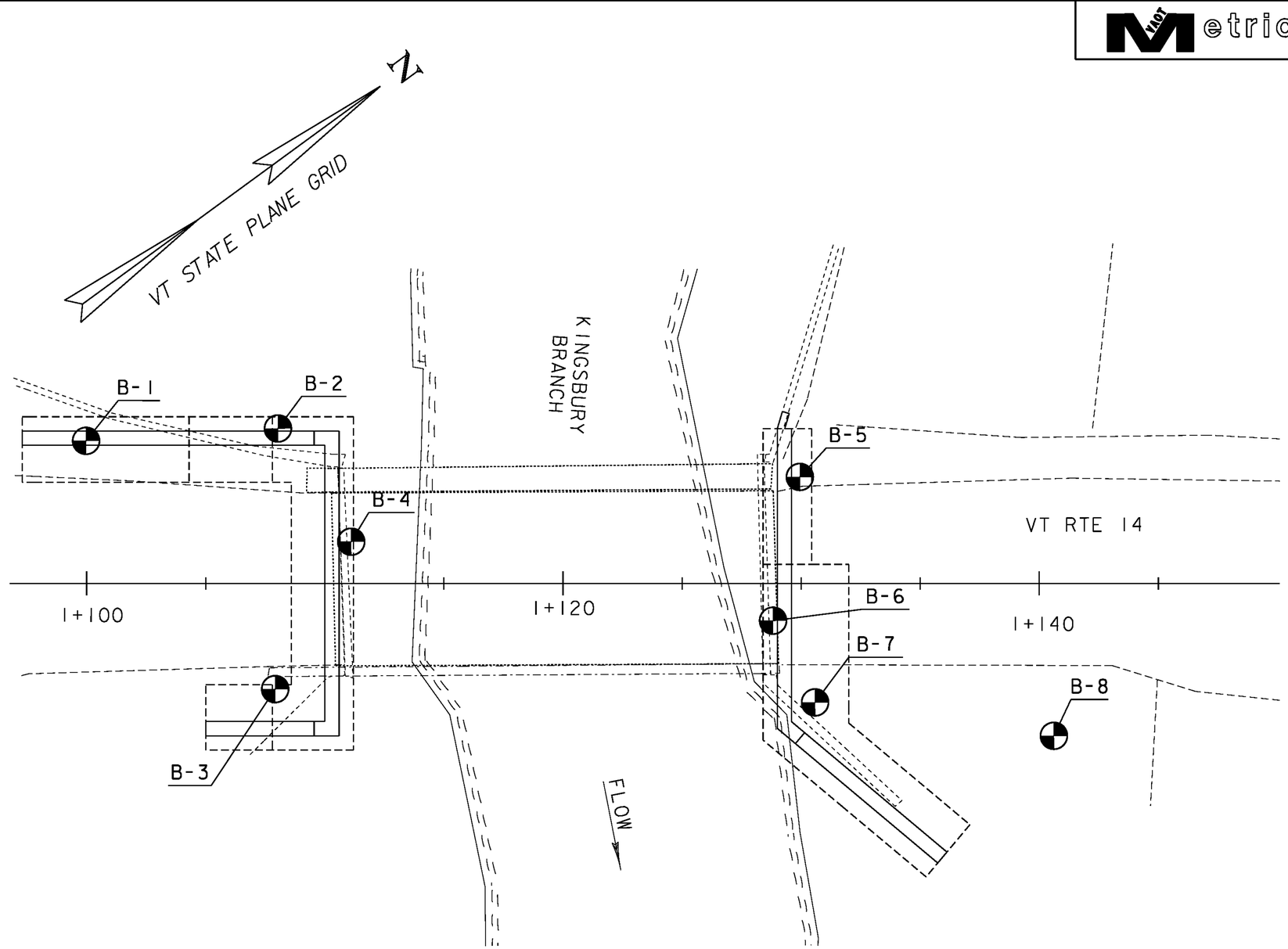
MUCK - Soft organic soil (containing > 10% organic material.

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.



BORING LAYOUT

0 2 4 6 8 10
SCALE 1 : 100

GENERAL NOTES

1. The subsurface explorations shown herein were made between Jan 1996 and March 1996 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 variations 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, methods of exploration and other factors.
4. Engineering judgement was exercised in preparing the subsurface information presented herein. Analysis and interpretation of subsurface data was performed 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.

BORING CHART

HOLE NO.	STATION	OFFSET (m)	GROUND ELEV.	TLOB ELEV.
B-1	1+100.00	5.99 LT	213.247	210.507
B-2	1+108.03	6.51 LT	210.099	207.659
B-3	1+107.97	4.42 RT	213.244	208.444
B-4	1+111.11	1.75 LT	213.598	207.498
B-5	1+129.94	4.47 LT	214.107	210.407
B-6	1+128.82	1.56 RT	214.067	207.367
B-7	1+130.59	5.00 RT	213.982	206.732
B-8	1+140.61	6.40 RT	214.110	209.090

PROJECT: EAST MONTPELIER
PROJECT NO.: BRF 037-2(8)
DESIGN FILE NAME: 86e054/structures/se054bor.dgn
IPARM FILE NAME: se086borloy.i
PLOT DATE: 18-AUG-2010
VT RTE 14 OVER KINGSBURY SHEET
BORING LAYOUT SHEET
SHEET: 17 OF 63

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

HOLE NO.: B-1
SHEET 1 OF 1
DATE STARTED: 2/8/96
DATE COMPLETED: 2/9/96

PROJECT NAME: EAST MONTPELIER
SITE NAME: VT 14
STATION: 1+040.70
GROUND EL.: 213.247

PROJECT NUMBER: BRF 037-2(8)
SITE NO.: BR #71
OFFSET: -2.83
G.W. DEPTH:

BORING CREW
CREW CHIEF: MCGLYNN
DRILLER: WARREN
LOGGER:
ADDITIONAL CREW:

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

WINGWALL NO. 1
TOP OF FOOTING
ELEVATION 211.600

DEPTH	SYMBOL	CLASSIFICATION OF MATERIALS (Description)	BLOWS PER 0.3 m	M.C. %	GRAVEL %	SAND %	FINES %	LL	PI
		A-2-4, SiGrSa, Moist, br, Rec. = 0.27 m	R	24.1	33.1	39.5	27.4		
		Top of bedrock @ 2.74 m							
		Run 1: BXDC 2.74 m - 3.35 m. Rec. = 0.46 m	Rec.% 32	Dip 65	Rqd.% 0				
		Run 2: BXDC 3.35 m. - 3.96 m. Rec. = 0.48 m	33	65	8				
		Run 3: BXMDC 3.96 m. - 5.48 m. Rec. = 1.52 m	100	45	55				
		Run 3: BXMDC 5.48 m. - 7.01 m. Rec. = 1.52 m	100	20-50	38				
		Hole stopped @ 7.01 m							

GEOLOGISTS REPORT:
Run 1: Core consists of grey micaceous siliceous limestone interbedded with thin muscovite zones along cleavage joints. Rock is moderately hard and unweathered. Moderate weathering in muscovite rich zones. Low RQD due to mechanical breakage along cleavage planes.

Run 2: Same as above with quartzite vein at high angle to core.

Run 3: Dark grey phyllite with weathered pitting of biotite porphyroblasts. Very pronounced crenulation cleavage. Rock is cut by large quartz vein. Rock is moderately hard and slightly weathered.

Run 4: 5.48 m - 6.36 m: Grey phyllite, moderately hard and unweathered.
6.36 m - 7.01 m: Grey siliceous limestone. Moderately hard and unweathered. Weathered void at 6.58 m.

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

HOLE NO.: B-2
SHEET 1 OF 1
DATE STARTED: 2/6/96
DATE COMPLETED: 2/6/96

PROJECT NAME: EAST MONTPELIER
SITE NAME: VT 14
STATION: 1+048.70
GROUND EL.: 210.099

PROJECT NUMBER: BRF 037-2(8)
SITE NO.: BR #71
OFFSET: -3.90
G.W. DEPTH:

BORING CREW
CREW CHIEF: MCGLYNN
DRILLER: WARREN
LOGGER: CHABOT .
ADDITIONAL CREW:

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

WINGWALL NO. 1
TOP OF FOOTING
ELEVATION 208.500

DEPTH	SYMBOL	CLASSIFICATION OF MATERIALS (Description)	BLOWS PER 0.3 m	M.C. %	GRAVEL %	SAND %	FINES %	LL	PI
		No sample. Boulders and concrete. No soil available for contamination testing.							
		Top of bedrock @ 2.44 m							
		Run 1: BXMDC 2.44 m - 3.97 m. Rec. = 1.53 m	Rec.% 100	Dip 50	Rqd.% 63				
		Run 2: BXMDC 3.97 m - 5.50 m. Rec. = 0.96 m	63		28				
		Hole stopped @ 5.50 m							

GEOLOGISTS REPORT:
Run 1: Grey siliceous limestone grading to phyllite. Fractures on 0.2 m spacing in limestone. Near vertical fracture in phyllite. Rock is hard and unweathered. Competent.

Run 2: Top 0.2 m: phyllite.
4.17 m - 4.57 m: siliceous limestone.
4.57 m - 5.14 m: quartz vein.
Competent.

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

HOLE NO.: B-3
SHEET 1 OF 1
DATE STARTED: 2/14/96
DATE COMPLETED: 2/15/96

PROJECT NAME: EAST MONTPELIER
SITE NAME: VT 14
STATION: 1+049.40
GROUND EL.: 213.244

PROJECT NUMBER: BRF 037-2(8)
SITE NO.: BR #71
OFFSET: 7.00
G.W. DEPTH:

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

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

ABUTMENT NO. 1
TOP OF FOOTING
ELEVATION 208.500

DEPTH	SYMBOL	CLASSIFICATION OF MATERIALS (Description)	BLOWS PER 0.3 m	M.C. %	GRAVEL %	SAND %	FINES %	LL	PI
		No recovery, stone at end of sampler.							
		A-4, Si, moist, brn, Rec. = 0.08 m.	4	29	15.8	10.9	73.3		
		A-2-4, SiSa, moist, dk brn, Rec. = 0.05 m	R	40	17.3	52.6	30.1		
		Top of bedrock @ 4.80 m							
		BXMDC 4.80 m - 6.30 m, Rec. = 1.45 m	Rec.% 95	Dip 50	Rqd.% 33				
		BXMDC 6.30 m - 7.80 m, Rec. = 1.50 m	99	50	87				
		Hole stopped @ 7.80 m							

GEOLOGISTS REPORT:
Run 1: 4.80 m - 5.30 m: Grey siliceous limestone.
5.30 m - 5.50 m: Grey phyllite.
5.50 m - 6.30 m: Grey quartzite interbedded with phyllite.
Rock is hard, unweathered and competent.

Run 2: Light grey interbedded siliceous limestone and calcareous quartzite. Competent.

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

HOLE NO.: B-4
SHEET 1 OF 1
DATE STARTED: 1/26/96
DATE COMPLETED: 1/29/96

PROJECT NAME: EAST MONTPELIER
SITE NAME: VT 14
STATION: 1+052.10
GROUND EL.: 213.598

PROJECT NUMBER: BRF 037-2(8)
SITE NO.: BR #71
OFFSET: 0.63
G.W. DEPTH:

BORING CREW
CREW CHIEF: MCGLYNN
DRILLER: WILLIS
LOGGER: WARREN
ADDITIONAL CREW:

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

ABUTMENT NO. 1
TOP OF FOOTING
ELEVATION 208.500

DEPTH	SYMBOL	CLASSIFICATION OF MATERIALS (Description)	BLOWS PER 0.3 m	M.C. %	GRAVEL %	SAND %	FINES %	LL	PI
		NXDC 0.00 m - 0.61 m, Rec. = 0.28 m, concrete							
		BXMDC 0.61 m - 2.44 m, Rec. = 1.50 m, concrete							
		Bottom of Concrete @ 2.44 m							
		BXMDC 2.13 m - 3.65 m, Rock wall							
		BXMDC 3.65 m - 5.17 m, rock wall							
		BXMDC 5.17 m - 6.10 m, rock wall, void 6.00 m - 6.10 m							
		Top of bedrock @ 6.10 m							
		BXMDC 6.10 m - 7.62 m, Rec. = 1.10 m	Rec.% 72	Dip 50	Rqd.% 50				
		BXMDC 7.62 m - 9.14 m, Rec. = 1.40 m	92	40	48				
		Hole stopped @ 9.14 m							

GEOLOGISTS REPORT:
Run 1: Grades from light gray calcareous quartzite, grey interbedded calcareous quartzite and siliceous limestone to dark grey phyllite. Hard to moderately hard, fresh. Fractures at 6.3 m, 6.57 m, 6.71 m, 6.81 m, 6.87 m, and 7.02 m. Core is competent.

Run 2: 7.62 m - 7.80 m: Grey calcareous quartzite.
7.80 m - 8.18 m: Quartz vein.
8.18 m - 9.14 m: Dark grey to black phyllite.
Quartzite is hard. Phyllite is moderately hard. Fractures at 7.76 m, 8.18 m, 8.29m ,8.54 m, 8.62m, 8.77m, 8.89 m. Core is competent.

NOTE:
THE STATION AND OFFSETS GIVEN IN THE BORING LOGS ON THIS SHEET ARE NOT RELATIVE TO THE PROPOSED CENTERLINE SHOWN ON THESE PLANS. THE CORRECT STATION AND OFFSET INFORMATION FOR THESE BORINGS IS SHOWN IN THE BORING CHART INCLUDED ON THE BORING LAYOUT SHEET.

VAOT Metric

PROJECT: EAST MONTPELIER	PROJECT NO.: BRF 037-2(8)
DESIGN FILE NAME: 86e054/structures/se054bor.dgn IPARM FILE NAME: se054bo2.I	PLOT DATE: 18-AUG-2010
DRAWN BY: S.COENYE	
BORING LOGS (B-1 THROUGH B-4)	SHEET: 18 OF 63

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

HOLE NO.: B-5
SHEET 1 OF 1
DATE STARTED: 1/31/96
DATE COMPLETED: 2/2/96

PROJECT NAME: EAST MONTPELIER
SITE NAME: VT 14
STATION: 1+070.70
GROUND EL.: 214.107

PROJECT NUMBER: BRF 037-2(8)
SITE NO.: BR #71
OFFSET: -3.40
G.W. DEPTH:

BORING CREW
CREW CHIEF: WILLIS
DRILLER: CHABOT E J
LOGGER: KELLY .
ADDITIONAL CREW:

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

DEPTH	SYMBOL	CLASSIFICATION OF MATERIALS (Description)	BLOWS PER 0.3 m	M.C. %	GRAVEL %	SAND %	FINES %	LL	PI
		Pavement	26	17.6	38.1	44.7	17.2		
		A-1-b, GrSa, MTW, brn, Rec. = 0.30 m	R						
		Field classification: GrSa, Rec. = 0.15 m BXDC, boulders or block wall parts.							
		A-1-b, SaGr, moist, brn, Rec. = 0.18 m BXDC, boulders or block wall parts.	R	11.1	50.2	34.7	15.1		
		A-1-a, Gr, moist, gr, Rec. = 0.15 m.	R	2.4	73.9	16.5	9.6		
				Top of bedrock @ 3.70 m					
		Run 1: BXWDC 3.20 m - 3.70 m, Rec. = 0.11 m. Boulders	Rec.%	Dip	Rqd,%				
		Run 2: BXWDC 3.70 m - 4.70 m, Rec. = 0.21 m.	21	50	8				
5		Run 3: BXWDC 4.70 m - 6.20 m, Rec. = 1.06 m	70	50	12				
		Run 4: BXWDC 6.20 m - 7.50 m, Rec. = 1.25 m	82	50	60				
				Hole stopped @ 7.50 m					
10									

ABUTMENT NO. 2
TOP OF FOOTING
ELEVATION 211.000

GEOLOGISTS REPORT:
Run 1: Recovered boulders.

Run 2: Light grey calcareous quartzite with quartz veins. Hard, fresh weathering. Poor recovery.

Run 3: Grey to dark grey interbedded siliceous limestone and phyllite. Moderately hard. Numerous fractures (some weathered) in phyllites. Poor competency.

Run 4: Light grey to grey calcareous quartzite, grey weathered phyllite and siliceous limestone, moderately hard. Weathered fractures. Competent.

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

HOLE NO.: B-6
SHEET 1 OF 1
DATE STARTED: 3/15/96
DATE COMPLETED: 3/16/96

PROJECT NAME: EAST MONTPELIER
SITE NAME: VT 14
STATION: 1+070.00
GROUND EL.: 214.067

PROJECT NUMBER: BRF 037-2(8)
SITE NO.: BR #71
OFFSET: 2.70
G.W. DEPTH:

BORING CREW
CREW CHIEF: MCGLYNN
DRILLER: WARREN
LOGGER: WILLIS
ADDITIONAL CREW:

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

DEPTH	SYMBOL	CLASSIFICATION OF MATERIALS (Description)	BLOWS PER 0.3 m	M.C. %	GRAVEL %	SAND %	FINES %	LL	PI
		BXWDC, pavement Concrete, Rec. = 0.82 m							
		Seam BXWDC, portions of block wall recovered.							
		BXWDC, portions of block wall recovered.							
		BXWDC, portions of block wall recovered.							
5		BXWDC 5.79 m - 6.70 m, Rec. = 0.30 m. Boulders, bottom portion could be possible soft rock.							
				Top of bedrock @ 6.70 m					
		Run 1: BXWDC 6.70 m - 7.62 m, Rec. = 0.34 m	Rec.%	Dip	Rqd,%				
			22	20	0				
		Run 2: BXWDC 7.62 m - 9.14 m, Rec. = 1.43 m	94	20	40				
		Run 3: BXWDC 9.14 m - 10.66 m, Rec. = 0.64 m. Poor recovery due to soft seams in rock which ground up and washed away.	42	30	22				
10				Hole stopped @ 10.66 m					

ABUTMENT NO. 2
TOP OF FOOTING
ELEVATION 207.640

GEOLOGISTS REPORT:
Run 1: Grey to dark grey micaceous quartzite. Hard, fresh. Poor recovery.

Run 2: 7.62 m - 8.22 m: Grey siliceous limestone. Hard, fresh.
8.22 m - 8.94 m: Greyish brown moderately severe weathered, phyllite. Soft.
8.94 m - 9.14 m: Grey siliceous limestone. Fracture near base of core.
Weathered phyllite is not competent.

Run 3: Grey siliceous limestone. Hard, fresh fractures at 9.41 m. Competent.

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

HOLE NO.: B-7
SHEET 1 OF 1
DATE STARTED: 2/7/96
DATE COMPLETED: 2/8/96

PROJECT NAME: EAST MONTPELIER
SITE NAME: VT 14
STATION: 1+072.00
GROUND EL.: 213.982

PROJECT NUMBER: BRF 037-2(8)
SITE NO.: BR #71
OFFSET: 6.00
G.W. DEPTH:

BORING CREW
CREW CHIEF: WILLIS
DRILLER: CHABOT E J
LOGGER: KELLY .
ADDITIONAL CREW:

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

DEPTH	SYMBOL	CLASSIFICATION OF MATERIALS (Description)	BLOWS PER 0.3 m	M.C. %	GRAVEL %	SAND %	FINES %	LL	PI
		A-1-b, GrSa, moist, brn, Rec. = 0.17	34	13.1	36.5	47.5	16.5		
		BX 2.75 m - 3.35 m, concrete							
		BXWDC 3.35 m - 4.87 m, concrete							
5		BXWDC 4.87 m - 6.40 m, concrete							
		BXWDC 6.40 m - 7.25 m, concrete							
				Top of bedrock @ 7.25 m					
		Run 1: BXWDC 7.25 m - 7.92 m, Rec. = 0.62 m	Rec.%	Dip	Rqd,%				
			43		17				
		Run 2: BXWDC 7.92 m - 9.44 m, Rec. = 1.09 m	72		16				
		Run 3: BXWDC 9.44 m - 10.97 m, Rec. = 1.50 m	99	40	37				
10				Hole stopped @ 10.97 m					

ABUTMENT NO. 2
TOP OF FOOTING
ELEVATION 207.640

GEOLOGISTS REPORT:
Run 1: Light grey siliceous limestone. Moderately hard. Fresh weathering. Few weathered fractures. Competent.

Run 2: Light grey to grey siliceous limestone with calcite veins. Moderately hard. Fresh weathering. Fracturing at 0.05 m intervals. Competent.

Run 3: 7.44m - 10.04 m: Grey siliceous limestone. Moderately hard. Fresh weathering.
10.04 m - 10.74 m: Grey phyllite interbedded with siliceous limestone.
10.74 m - 10.97 m: Light grey siliceous limestone.
Competent.

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

HOLE NO.: B-8
SHEET 1 OF 1
DATE STARTED: 2/9/96
DATE COMPLETED: 2/15/96

PROJECT NAME: EAST MONTPELIER
SITE NAME: VT 14
STATION: 1+082.10
GROUND EL.: 214.110

PROJECT NUMBER: BRF 037-2(8)
SITE NO.: BR #71
OFFSET: 6.70
G.W. DEPTH:

BORING CREW
CREW CHIEF: WILLIS
DRILLER: CHABOT E J
LOGGER: KELLY .
ADDITIONAL CREW:

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

DEPTH	SYMBOL	CLASSIFICATION OF MATERIALS (Description)	BLOWS PER 0.3 m	M.C. %	GRAVEL %	SAND %	FINES %	LL	PI
		A-1-b, SiGrSa, moist, brn, Rec. = 0.30 m	R	23.6	35.1	40.6	24.3		
		Boulders or possible broken ledge. No sample.	R						
				Top of bedrock @ 5.02 m					
5		Run 1: BXWDC 5.02 m - 6.51 m, Rec. = 1.39 m	Rec.%	Dip	Rqd,%				
			91	50	85				
		Run 2: BXWDC 6.52 m - 8.02 m, Rec. = 1.35 m	88	30	78				
				Hole stopped @ 8.02 m					
10									

ABUTMENT NO. 2
TOP OF FOOTING
ELEVATION 207.640

GEOLOGISTS REPORT:
Run 1: 5.02 m - 6.47 m: Grey siliceous micaceous limestone. Moderately hard, unweathered. Fractures along bedding planes at 6.12 m and 6.16 m.
6.47 m - 6.52 m: Dark grey phyllite with porphyroblasts of biotite. Moderately hard, unweathered.
Competent.

Run 2: 6.52 m - 7.05 m: Dark grey phyllite with porphyroblasts of biotite.
7.05 m - 8.02 m: grey slightly calcareous quartzite with fine pinstripe mica banding. Hard, unweathered.
Fractures at 6.67 m, 7.12 m and 7.84 m. Competent.

NOTE:
THE STATION AND OFFSETS GIVEN IN THE BORING LOGS ON THIS SHEET ARE NOT RELATIVE TO THE PROPOSED CENTERLINE SHOWN ON THESE PLANS. THE CORRECT STATION AND OFFSET INFORMATION FOR THESE BORINGS IS SHOWN IN THE BORING CHART INCLUDED ON THE BORING LAYOUT SHEET.

VAOT Metric

PROJECT: EAST MONTPELIER	PROJECT NO.: BRF 037-2(8)
DESIGN FILE NAME: 86e054/structures/se054bor.dgn	
IPARM FILE NAME: se054bo3.1	PLOT DATE: 18-AUG-2010
DRAWN BY: S.COENYE	
BORING LOGS (B-5 THROUGH B-8)	SHEET: 19 OF 63

VTrans Metric

℄ BEARING ABUTMENT #1
STA 1+110.300
FG=213.736

CHANNEL LINE

2+060

1600 PENSTOCK

KINGSBURY BRANCH

FLOW

R=11 000

R=9000

BEGIN BRIDGE
END APPROACH SLAB
STA 1+110.000
FG=213.733

WW1

FLOW

℄ BEARING ABUTMENT #2
STA 1+129.300
FG = 214.063

END BRIDGE
BEGIN APPROACH SLAB
STA 1+129.600
FG = 214.070

END PROJECT
1+140.000

N

VT STATE PLANE GRID

BEGIN PROJECT
STA 1+095.000

BEGIN APPROACH SLAB
STA 1+104.000

90°

1+100

1+120

1+140

END APPROACH SLAB
STA 1+135.600

TO E. MONTPELIER

2+040

WW2

R=4000

R=3500

1:1.5

1:1.5 (TYP)

WW4

POT
CHANNEL STA 2+045.000=
MAINLINE STA 1+105.000
△ = 90°

STONE FILL TYPE I
(TYP)

STONE FILL TYPE IV
(TYP)

PLAN

0 2 4 6 8 10
SCALE 1:100

SEE REVISED SHEET 20A

19 600 BACK OF ABUTMENT #1 TO BACK OF ABUTMENT #2

HD STEEL BEAM GUARDRAIL, GALVANIZED

ALUMINUM APPROACH RAILING

BRIDGE RAIL, 3 RAIL ALUMINUM

ALUMINUM APPROACH RAILING

HD STEEL BEAM GUARDRAIL, GALVANIZED

215
210
205

FIXED

EXP

Q_{50} =212.3

1600 PENSTOCK

STONE FILL TYPE IV
(TYP)

NOTE:
POST SPACING MODIFIED AT ABUTMENT #2 LEFT, SEE RAILING LAYOUT SHEET, SHEET 35 FOR DETAILS AND PAY LIMITS DIMENSIONS.

ELEVATION @ DOWNSTREAM FASCIA

0 2 4 6 8 10
SCALE 1:100

DATUM	
VERTICAL	USGS
HORIZONTAL	ASSUMED

PROJECT:	PROJECT NO. :
EAST MONTPELIER	BRF 037-2(8)

DESIGN FILE NAME:	86e054/structures/se054pe.dgn		
IPARM FILE NAME:	se054pe.i	PLOT DATE:	18-AUG-2010
SURVEYED BY:	R. MOREAU	SURVEY DATE:	3/93
SQUAD LEADER:	C. P. WILLIAMS	DRAWN BY:	L.J. STONE
PLAN AND ELEVATION SHEET		SHEET: 20	OF 63

VAOT Metric

℄ BEARING ABUTMENT #1
STA 1+110.300
FG=213.736

CHANNEL LINE

2+060

1600 PENSTOCK

KINGSBURY BRANCH

FLOW

R=11.000

R=9000

BEGIN BRIDGE
END APPROACH SLAB
STA 1+110.000
FG=213.733

WW1

FLOW

℄ BEARING ABUTMENT #2
STA 1+129.300
FG = 214.063

END BRIDGE
BEGIN APPROACH SLAB
STA 1+129.600
FG = 214.070

END PROJECT
1+140.000

N

VT STATE PLANE GRID

BEGIN PROJECT
STA 1+095.000

BEGIN APPROACH SLAB
STA 1+104.000

90°

1+100

1+120

1+140

3000
SIDEWALK
(TYP)

3000
RAMP
(TYP)

END APPROACH SLAB
STA 1+135.600

TO E. MONTPELIER

2+040

WW2

R=4000

R=3500

1:1.5

WW4

1:1.5
(TYP)

POT
CHANNEL STA 2+045.000=
MAINLINE STA 1+105.000
△ = 90°

STONE FILL TYPE I
(TYP)

STONE FILL TYPE IV
(TYP)

PLAN ⚠

0 2 4 6 8 10
SCALE 1:100

19 600 BACK OF ABUTMENT #1 TO BACK OF ABUTMENT #2

HD STEEL BEAM
GUARDRAIL, GALVANIZED

ALUMINUM APPROACH
RAILING

BRIDGE RAILING, 3 RAIL ALUMINUM W/ SPINDLES

ALUMINUM APPROACH
RAILING

HD STEEL BEAM
GUARDRAIL, GALVANIZED

215

210

205

FIXED

EXP

Q_{50} =212.3

1600
PENSTOCK

STONE FILL TYPE IV
(TYP)

NOTE:
POST SPACING MODIFIED AT ABUTMENT #2 LEFT,
SEE RAILING LAYOUT SHEET, SHEET 35 FOR
DETAILS AND PAY LIMITS DIMENSIONS.

ELEVATION @ DOWNSTREAM FASCIA ⚠

0 2 4 6 8 10
SCALE 1:100

DATUM	
VERTICAL	USGS
HORIZONTAL	ASSUMED

REV. NO.	DATE	BY	DESCRIPTION
⚠	2/18/2011	VAOT	MODIFIED RIGHT SIDE OF BRIDGE, ADDED SPINDLES AND APPROACH SLABS TO ACCOMMODATE SIDEWALK.

PROJECT:	PROJECT NO. :
EAST MONTPELIER	BRF 037-2(8)

DESIGN FILE NAME:	86e054\Structures\SidewalkChange\Plan-Elevation.dgn		
IPARM FILE NAME:	se054pe.i	PLOT DATE:	23-FEB-2011
SURVEYED BY:	R. MOREAU	SURVEY DATE:	3/93
SQUAD LEADER:	C. P. WILLIAMS	DRAWN BY:	L.J. STONE
PLAN AND ELEVATION SHEET		SHEET:	20A OF 63

Metric

GENERAL NOTES:

1. ALL MATERIALS AND CONSTRUCTION SHALL CONFORM TO THE STATE OF VERMONT AGENCY OF TRANSPORTATION STANDARD SPECIFICATIONS FOR CONSTRUCTION, DATED 2006, AND ITS LATEST REVISIONS, AND THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS FOURTH EDITION, DATED 2007, AND ITS LATEST REVISIONS. ALSO THE AASHTO LRFD BRIDGE CONSTRUCTION SPECIFICATIONS SECOND EDITION, DATED 2004, AND ITS LATEST REVISIONS.

2. ALL DIMENSIONS ARE HORIZONTAL OR VERTICAL AND ARE GIVEN AT 20°C, UNLESS OTHERWISE NOTED.

3. ALL ON AND OFF PROJECT CONSTRUCTION SIGNS AND BARRICADES AS REQUIRED BY RESIDENT ENGINEER, SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR AND PAID FOR UNDER THE ITEM 641.10 "TRAFFIC CONTROL".

4. ANY EXISTING SIGNS OR BARRICADES NOT REUSED SHALL REMAIN THE PROPERTY OF THE STATE AND SHALL BE STOCKPILED IN A SUITABLE PLACE FOR REMOVAL BY THE DISTRICT. DISTRICT 6 DTA IS WAYNE GAMMELL, HE CAN BE REACHED AT 828-2691 TO ARRANGE FOR PICK UP.

5. THE BRIDGE PLAQUE SHALL BE FURNISHED BY THE AGENCY OF TRANSPORTATION AND INSTALLED BY THE CONTRACTOR AS SHOWN ON SHEET 23.

6. THE 1600mm DIAMETER PENSTOCK NEAR THE SOUTHERN ABUTMENT (ABUTMENT #1) SHALL NOT BE DISTURBED. ANY DAMAGE TO THE PENSTOCK BY THE CONTRACTOR SHALL BE REPAIRED AT THE CONTRACTORS EXPENSE.

7. A TEMPORARY PEDESTRIAN BRIDGE SHALL BE CONSTRUCTED UPSTREAM OF THE EXISTING BRIDGE AND SHALL BE PAID FOR UNDER ITEM 528.12 "TEMPORARY PEDESTRIAN BRIDGE". THE BRIDGE SHALL REMAIN IN PLACE UNTIL THE COMPLETION OF THE PROJECT.

8. GRANITE BLOCKS FROM THE EXISTING ABUTMENTS ARE TO BE USED TO BUILD A WALL SO A DRAINAGE SWALE CAN BE BUILT. THE DRAINAGE SWALE IS TO BE LOCATED FROM STA 1+139RT - 1+161RT AND SHALL BE ORIENTED ACCORDING TO THE RESIDENT ENGINEER. THE SWALE IS TO EXTEND AROUND THE CORNER OF THE BUILDING WITH THE INTENT OF KEEPING THE RUN OFF AWAY FROM ALL STRUCTURES. THIS WORK IS CONSIDERED TO BE INCIDENTAL TO ITEM 529.15 "REMOVAL OF STRUCTURE".

9. AN ESTIMATED AMOUNT OF 2 CM OF ITEM 204.21, "TRENCH EXCAVATION OF ROCK" HAS BEEN ADDED FOR EXCAVATION FOR THE CONSTRUCTION OF NEW CULVERTS AND DROP INLETS.

10. THE EXISTING STEEL IS PAINTED WITH A MATERIAL THAT MAY CONTAIN LEAD. THE CONTRACTOR SHALL FOLLOW ALL APPLICABLE REGULATIONS WHEN HANDLING AND WORKING WITH THIS STEEL. 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 REMOVED EXISTING STRUCTURAL STEEL.

11. FOR INFORMATION REGARDING UTILITIES, SEE THE SPECIAL PROVISIONS.

12. NO BEDROCK SHALL BE EXCAVATED TO PLACE STONE FILL TYPE IV. ANY SMOOTH BEDROCK SHALL BE ROUGHENED TO KEY IN THE STONE FILL IF DEEMED NECESSARY BY THE RESIDENT ENGINEER. PAYMENT FOR ANY ROUGHENING OF BEDROCK SHALL BE CONSIDERED INCIDENTAL TO ITEM 613.13, "STONE FILL, TYPE IV".

13. LINE STRIPING TARGETS, IF USED, SHALL BE INCLUDED IN ITEM 641.10 "TRAFFIC CONTROL".

CONCRETE NOTES:

14. THE CURBS AND CURTAIN WALLS SHALL ALL BE MADE OF CONCRETE, HIGH PERFORMANCE CLASS A. ALL OTHER CONCRETE SHALL BE CONCRETE, HIGH PERFORMANCE CLASS B UNLESS NOTED OTHERWISE.

15. REINFORCING STEEL PLACEMENT TOLERANCE SHALL BE AS FOLLOWS:

SPACING	+/-	25mm
CLEARANCE	+/-	6mm

16. ALL REINFORCING STEEL IN THE DECK, CURTAIN WALLS AND CURBS SHALL BE EPOXY COATED. THE EPOXY COATED REBAR IN THE CURB AND CURTAIN WALLS SHALL BE PAID FOR UNDER THE ITEM 507.17 "EPOXY COATED REINFORCING STEEL".

17. ALL EXPOSED EDGES OF CONCRETE SHALL BE CHAMFERED 25mm X 25mm.

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

19. ITEM 514.10, "WATER REPELLENT, SILANE" SHALL BE APPLIED TO ALL EXPOSED CONCRETE SURFACES EXCEPT THE UNDERSIDE OF THE DECK BETWEEN DRIP NOTCHES.

20. THE SURFACE OF BRIDGE SEATS UNDER THE BEARING DEVICES SHALL BE LEVEL. OTHER AREAS OF THE BRIDGE SEAT SHALL BE SLOPED 0.02%. THE ABUTMENT SEATS SHALL BE SLOPED FULL WIDTH TOWARD MIDSPAN AND THE ENTIRE BRIDGE SEAT SHALL BE GIVEN A MAGNESIUM FLOAT FINISH. THIS WORK SHALL BE CONSIDERED INCIDENTAL TO ITEM 501.34 "CONCRETE, HIGH PERFORMANCE CLASS B".

21. IN ACCORDANCE WITH SUBSECTION 506.23 OF THE STANDARD SPECIFICATIONS FOR CONSTRUCTION AND AS DIRECTED BY THE RESIDENT ENGINEER, THE CONTRACTOR SHALL TAKE ALL MEASURES NECESSARY TO PROTECT ALL SUBSTRUCTURE CONCRETE FROM STAINING DUE TO OXIDATION FORMATION ON THE STRUCTURAL STEEL. THESE MEASURES WILL NOT BE PAID FOR SEPARATELY BUT SHALL BE CONSIDERED INCIDENTAL TO ITEM 501.34 "CONCRETE , HIGH PERFORMANCE CLASS B". ANY SUCH STAINING THAT OCCURS PRIOR TO PLACEMENT OF THE CURTAIN WALLS SHALL BE REMOVED AT NO ADDITIONAL COST TO THE STATE.

SUBSTRUCTURES ON BEDROCK:

22. FOOTINGS OR SUBFOOTINGS FOR SUBSTRUCTURES FOUNDED ON BEDROCK SHALL BE PLACED ON CLEAN COMPETENT ROCK. ALL LOOSE ROCK AND DEBRIS SHALL BE REMOVED.

23. UPON COMPLETION OF THE EXCAVATION FOR SUBSTRUCTURES FOUNDED ON BEDROCK AND PRIOR TO PLACING FORMWORK, THE RESIDENT ENGINEER SHALL NOTIFY THE PROJECT MANAGER AND THE VTRANS SOILS AND FOUNDATION ENGINEER. THE SOILS AND FOUNDATION ENGINEER WILL DETERMINE IF THE BEDROCK IS COMPETENT TO OBTAIN THE NOMINAL BEARING RESISTANCE AS SHOWN ON THE PLANS. FIVE (5) WORKING DAYS FROM NOTIFICATION SHALL BE ALLOWED TO MAKE THE INSPECTION AND THE DETERMINATION FOR THE COMPETENCY OF THE BEDROCK.

24. ONCE THE ELEVATION OF COMPETENT BEDROCK HAS BEEN DETERMINED, THE CONTRACTOR SHALL PROVIDE A BEDROCK PROFILE TO THE PROJECT MANAGER TO DETERMINE WHETHER THE DESIGN BOTTOM OF FOOTING ELEVATION SHALL BE RAISED OR LOWERED AND WHETHER A SUBFOOTING SHALL BE REQUIRED. FOOTING ELEVATIONS SHALL NOT BE ADJUSTED WITHOUT APPROVAL OF THE PROJECT MANAGER. THREE (3) WORKING DAYS FROM RECEIPT OF THE BEDROCK PROFILE SHALL BE ALLOWED TO MAKE THIS DETERMINATION. NO WORK SHALL BE DONE ON THE FOOTINGS UNTIL A REPLY IS RECEIVED.

25. THE LIMITS OF SUBFOOTINGS SHALL BE 300mm OUTSIDE OF THE HORIZONTAL LIMITS OF THE FOOTING. THE TOP SURFACE OF ALL SUBFOOTINGS SHALL BE INTENTIONALLY ROUGHENED TO 6mm AMPLITUDE.

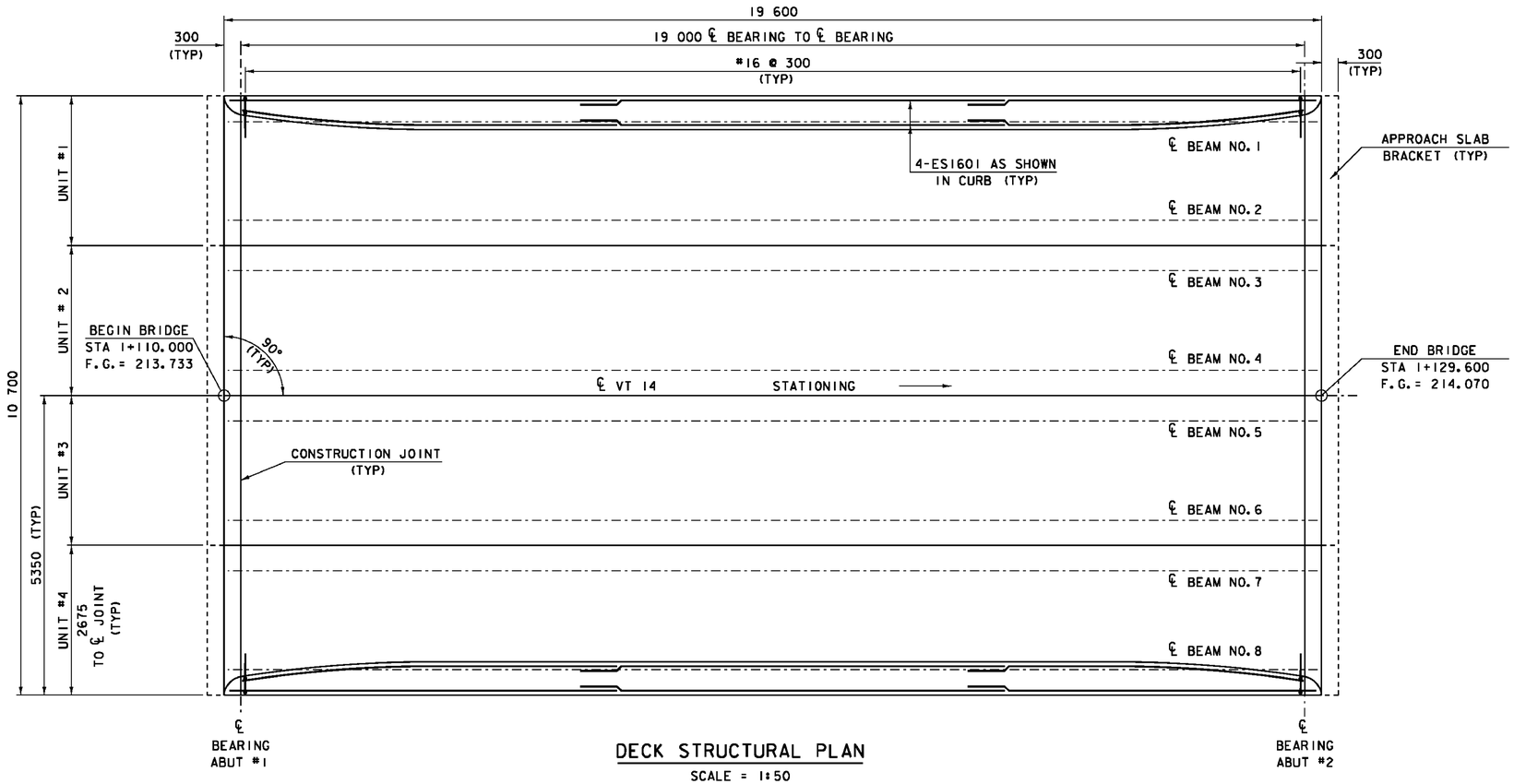
26. ANY CONCRETE REQUIRED FOR SUBFOOTINGS SHALL BE PAID FOR WITH ITEM 541.30 CONCRETE, CLASS C. AN ESTIMATED QUANTITY OF 50 CM OF ITEM 541.30 HAS BEEN INCLUDED IN THE CONTRACT.

27. ANY BEDROCK THAT NEEDS TO BE REMOVED SHALL BE PAID FOR WITH THE CORRESPONDING EXCAVATION ITEM INCLUDED IN THE CONTRACT. OVERBREAKAGE BEYOND THE AVERAGE MAXIMUM ALLOWANCE SPECIFIED IN SUBSECTIONS 204.09(B)(1) AND 208.11(C) WILL BE AT THE CONTRACTOR'S EXPENSE.

28. DOWELS SHALL BE DRILLED AND GROUTED INTO BEDROCK WHEN SHOWN ON THE PLANS OR AS ORDERED BY THE ENGINEER. THE DOWELS SHALL HAVE A 600mm MINIMUM EMBEDMENT IN THE BEDROCK AND SHALL EXTEND IN THE FOOTING OR SUBFOOTING A MINIMUM OF 450mm, UNLESS NOTED OTHERWISE.

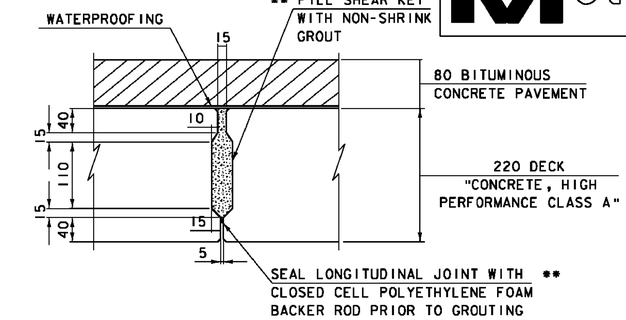
PROJECT: EAST MONTPELIER	PROJECT NO.: BRF 037-2(8)
DESIGN FILE NAME: 86e054/structures/s86e054notes.dgn	
IPARM FILE NAME: se054notes.i	PLOT DATE: 18-AUG-2010
DESIGNED BY: L.J.STONE	DRAWN BY: L.J.STONE
SQUAD LEADER: C.P.WILLIAMS	CHECKED BY: H.I.SALLS
GENERAL NOTES	SHEET: 21 OF 63

Metric



DECK STRUCTURAL PLAN

SCALE = 1:50



** NON-SHRINK GROUT AND BACKER ROD SHALL BE CONSIDERED INCIDENTAL TO PAY ITEM 900.675 "SPECIAL PROVISION (PRECAST CONCRETE/STEEL COMPOSITE SUPERSTRUCTURE)".

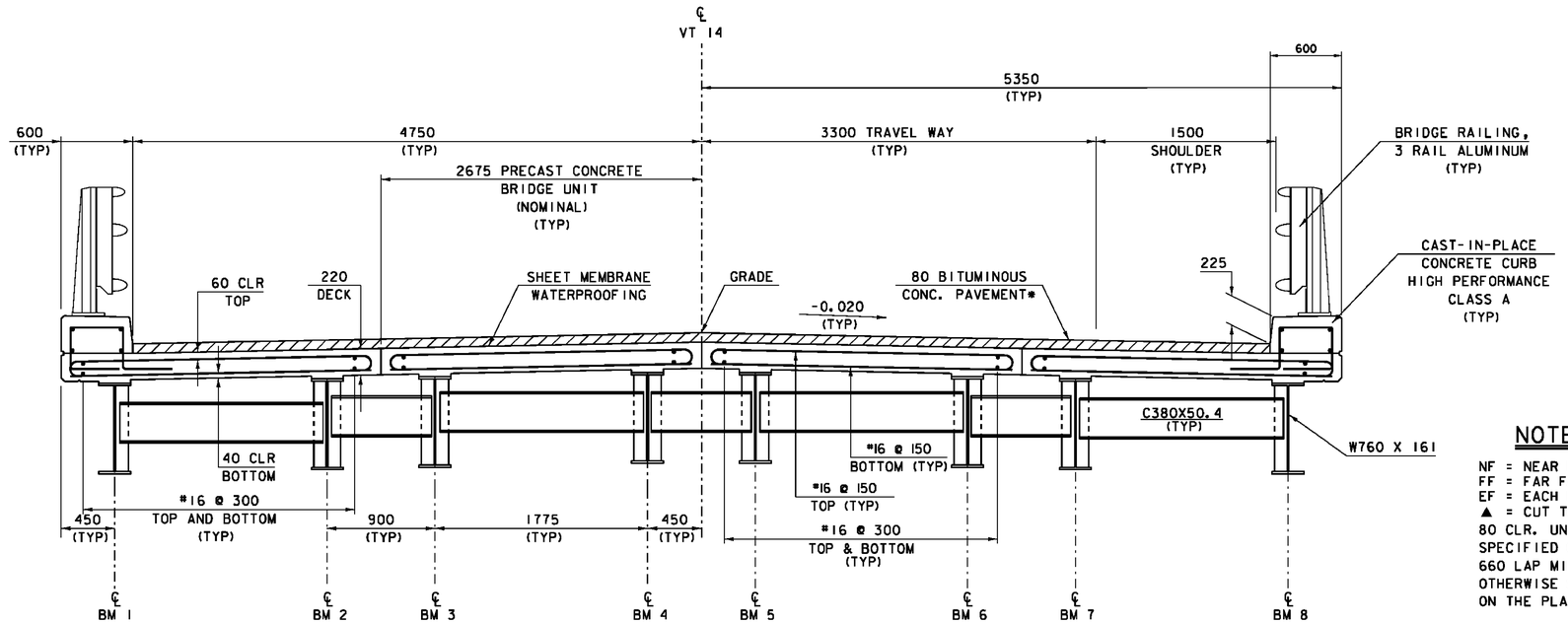
SHEAR KEY

NTS

NOTE

1. THE SLABS SHALL BE PLACED AT THE NOMINAL SPACING SHOWN ON THE PLANS WITH A ¼" WIDE GAP BETWEEN THE SLABS. THE WIDTH OF THE GAP CAN VARY DUE TO TOLERANCES OF THE SLABS.
2. GROUT FOR THE SHEAR KEYS SHALL BE RODDED OR VIBRATED TO ENSURE THAT ALL VOIDS IN THE SHEAR KEYS ARE FILLED.

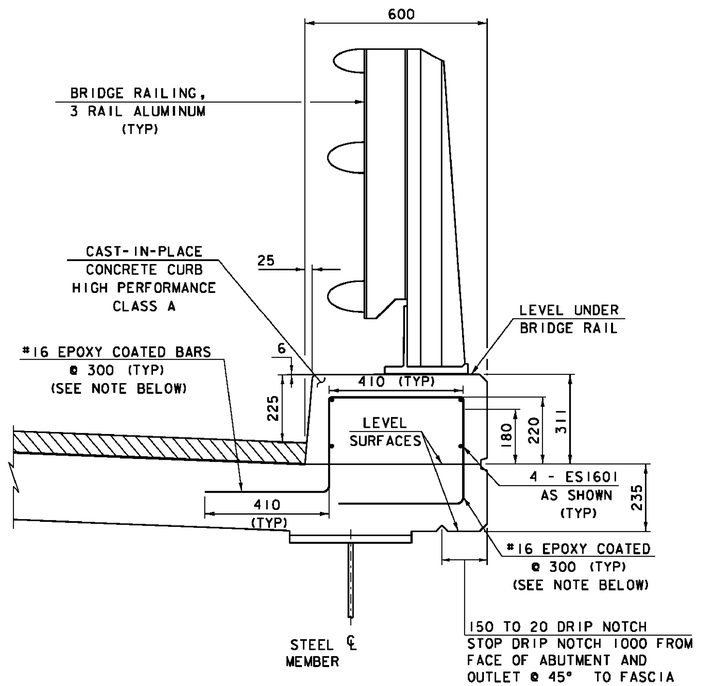
SEE REVISED SHEET 22A



* 40 mm Type IIIS or IVS over
40 mm Type IIIS or IVS

TYPICAL BRIDGE SECTION

SCALE = 1:100



NOTE:

NF = NEAR FACE
FF = FAR FACE
EF = EACH FACE
▲ = CUT TO FIT IN FIELD
80 CLR. UNLESS OTHERWISE SPECIFIED ON THE PLANS
660 LAP MIN. UNLESS OTHERWISE SPECIFIED ON THE PLANS

NOTE

1. THE #16 EPOXY COATED CURB BARS SHALL BE SUPPLIED BY THE MANUFACTURER OF THE PRECAST BRIDGE UNITS AND SHALL BE INCLUDED IN THE UNIT BID PRICE FOR ITEM 900.675 "SPECIAL PROVISION (PRECAST CONCRETE/STEEL COMPOSITE SUPERSTRUCTURE)".

TYPICAL CURB SECTION

SCALE = 1:50

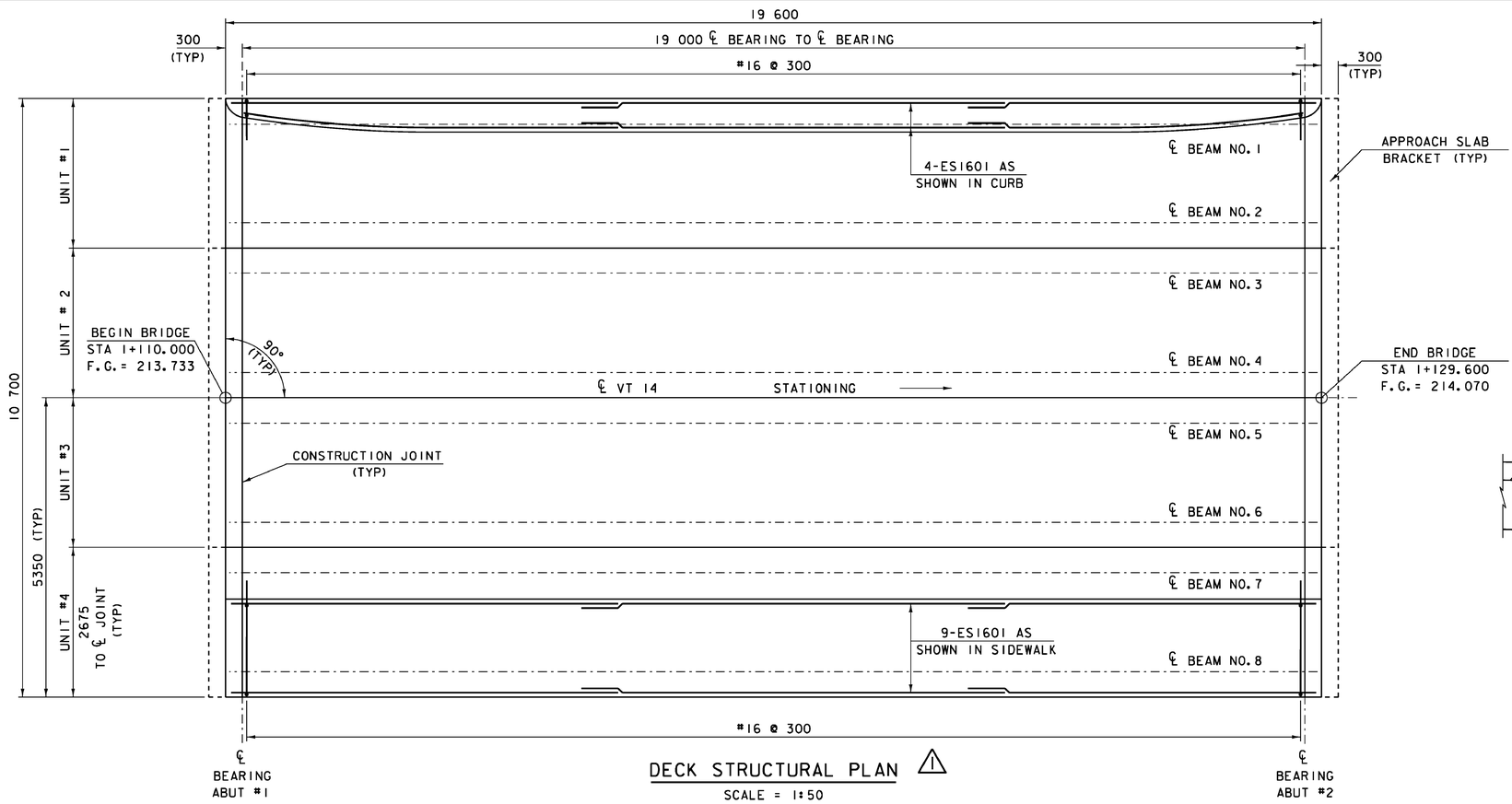
0 1 2 3 4 5

SCALE = 1:50

0 2 4 6 8 10

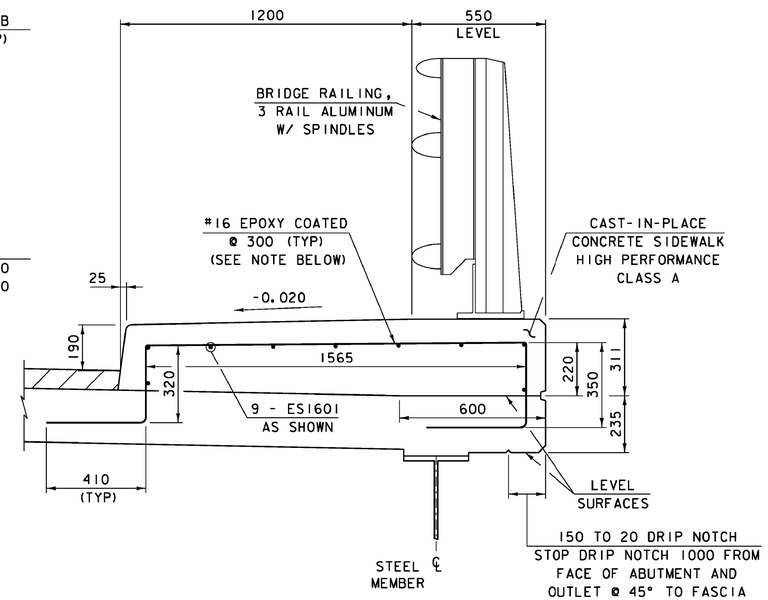
SCALE 1 : 100

PROJECT: EAST MONTPELIER	PROJECT NO.: BRF 037-2 (8)
DESIGN FILE NAME: 86e054\Structures\se054sup	
IPARM FILE NAME: se054deck.i	PLOT DATE: 18-AUG-2010
DESIGNED BY: L.J.STONE	DRAWN BY: D.D.BEARD
SQUAD LEADER: C.P.WILLIAMS	CHECKED BY: H.I.SALLS
DECK STRUCTURAL DETAILS	SHEET: 22 OF 63



DECK STRUCTURAL PLAN ⚠

SCALE = 1:50

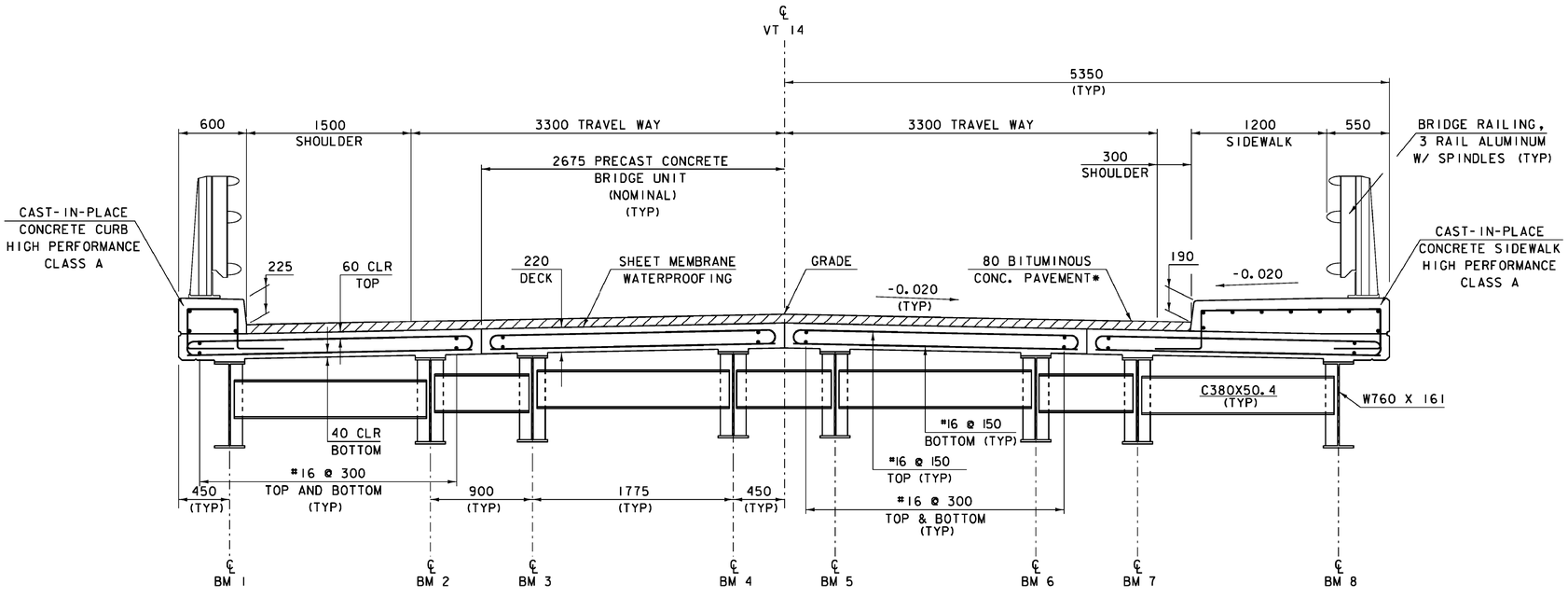


TYPICAL SIDEWALK SECTION ⚠

SCALE = 1:50

NOTE

1. THE #16 EPOXY COATED SIDEWALK BARS SHALL BE SUPPLIED BY THE MANUFACTURER OF THE PRECAST BRIDGE UNITS AND SHALL BE INCLUDED IN THE UNIT BID PRICE FOR ITEM 900.675 "SPECIAL PROVISION (PRECAST CONCRETE/STEEL COMPOSITE SUPERSTRUCTURE)".



* 40 mm Type IIIS or IVS over 40 mm Type IIIS or IVS

TYPICAL BRIDGE SECTION ⚠

SCALE = 1:100

NOTE:

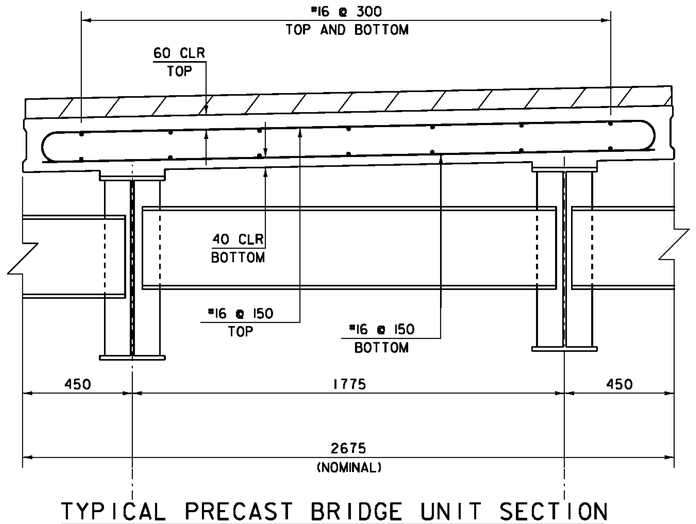
NF = NEAR FACE
FF = FAR FACE
EF = EACH FACE
▲ = CUT TO FIT IN FIELD
80 CLR. UNLESS OTHERWISE SPECIFIED ON THE PLANS
660 LAP MIN. UNLESS OTHERWISE SPECIFIED ON THE PLANS

REV. NO.	DATE	BY	DESCRIPTION
⚠	2/18/2011	VAOT	MODIFIED RIGHT CURB ON BRIDGE TO A SIDEWALK

0 1 2 3 4 5
SCALE = 1:50

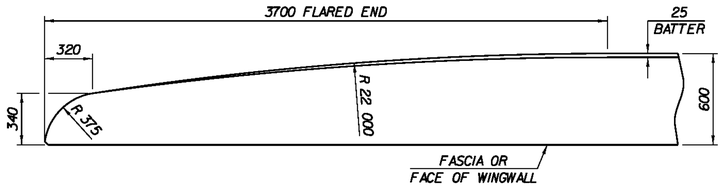
0 2 4 6 8 10
SCALE 1 : 100

PROJECT: EAST MONTPELIER	PROJECT NO.: BRF 037-2(8)
DESIGN FILE NAME: 86e054\Structures\SidewalkChange\TypicalSection.dgn	
IPARM FILE NAME: se054sidewalk.i	PLOT DATE: 23-FEB-2011
DESIGNED BY: L.J.STONE	DRAWN BY: D.D.BEARD
SQUAD LEADER: C.P.WILLIAMS	CHECKED BY: H.I.SALLS
DECK STRUCTURAL DETAILS	SHEET: 22A OF 63



TYPICAL PRECAST BRIDGE UNIT SECTION

SCALE = 1:200



FLARED END FOR 600 CURB

BARS SHALL BE TURNED AS REQUIRED TO FIT FLARED ENDS
(NOT TO SCALE)

CONCRETE CURB JOINT NOTES

1. CONCRETE CURBS MAY BE PLACED IN ONE CONTINUOUS OPERATION IF AN APPROVED SHRINKAGE REDUCING ADMIXTURE LISTED IN THE SPECIAL PROVISIONS IS USED WITH THE CONCRETE MIX DESIGN. PAYMENT FOR THE SHRINKAGE REDUCING ADMIXTURE WILL BE INCIDENTAL TO THE BRIDGE CURB CONCRETE ITEM.

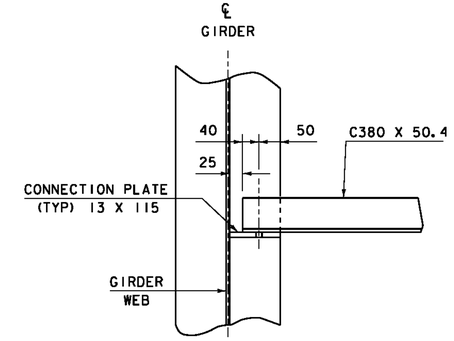
2. IF THE CONTRACTOR CHOOSES NOT TO USE AN APPROVED SHRINKAGE REDUCING ADMIXTURE, THE CURBS SHALL BE CONSTRUCTED WITH CONSTRUCTION JOINTS SPACED AT A MAXIMUM OF 4570 CENTER TO CENTER AND 610 MINIMUM FROM THE CENTER OF NEAREST BRIDGE RAILING POST.

3. ON MULTI-SPAN CONTINUOUS SUPERSTRUCTURES, REGARDLESS OF WHETHER APPROVED SHRINKAGE REDUCING ADMIXTURE IS USED, CURB JOINTS SHALL BE LOCATED OVER THE CENTERLINE OF PIERS AND 2135 EACH SIDE OF THE CENTERLINE OF EACH PIER.

4. WHEN CURB JOINTS ARE USED THE CURBS SHALL BE PLACED IN ALTERNATE SECTIONS WITH A MINIMUM OF 48 HOUR DELAY BETWEEN ADJACENT PLACEMENTS.

5. LONGITUDINAL REINFORCING SHALL BE CONTINUOUS THROUGH CURB CONSTRUCTION JOINTS. CURB STIRRUP BARS SHALL BE TURNED AS NECESSARY TO MAINTAIN COVER IN THE FLARED CURB ENDS.

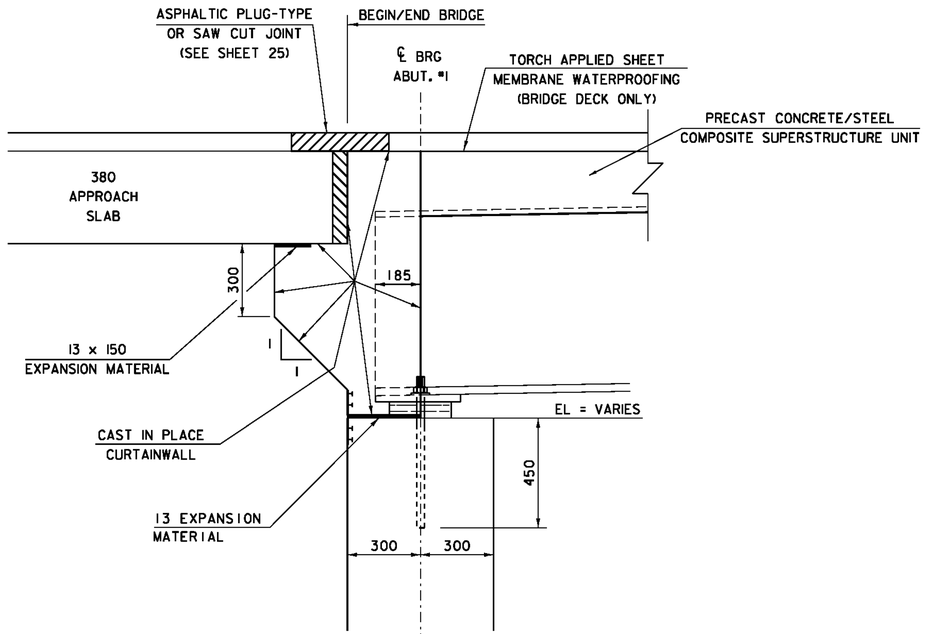
6. THE JOINT SPACING AND DETAILS SHOWN SHALL APPLY TO SIDEWALKS WHEN SHOWN IN THE PLANS.



ALL CONNECTIONS SHALL BE MADE USING 22 DIAMETER, AASHTO M164M BOLTS. ALL HOLES IN THE DIAPHRAGMS SHALL BE 24 DIAMETER, ALL HOLES IN THE CONNECTION PLATES SHALL BE 24 DIAMETER.

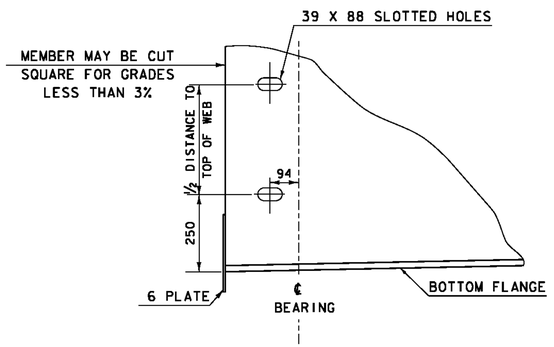
SECTION B - B

(NOT TO SCALE)



TYPICAL BRIDGE END SECTION

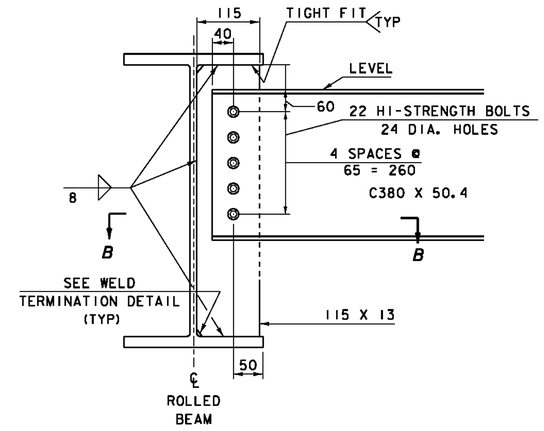
SCALE = 1:200



ELEVATION VIEW END OF STEEL MEMBER AT ABUTMENT

(NOT TO SCALE)

SLOTTED HOLES ARE FOR HORIZONTAL REINFORCING BARS IN FRONT FACE OF CURTAIN WALL.



NOTE: HI-STRENGTH BOLTS, NUTS AND WASHERS SHALL CONFORM TO AASHTO M164M.

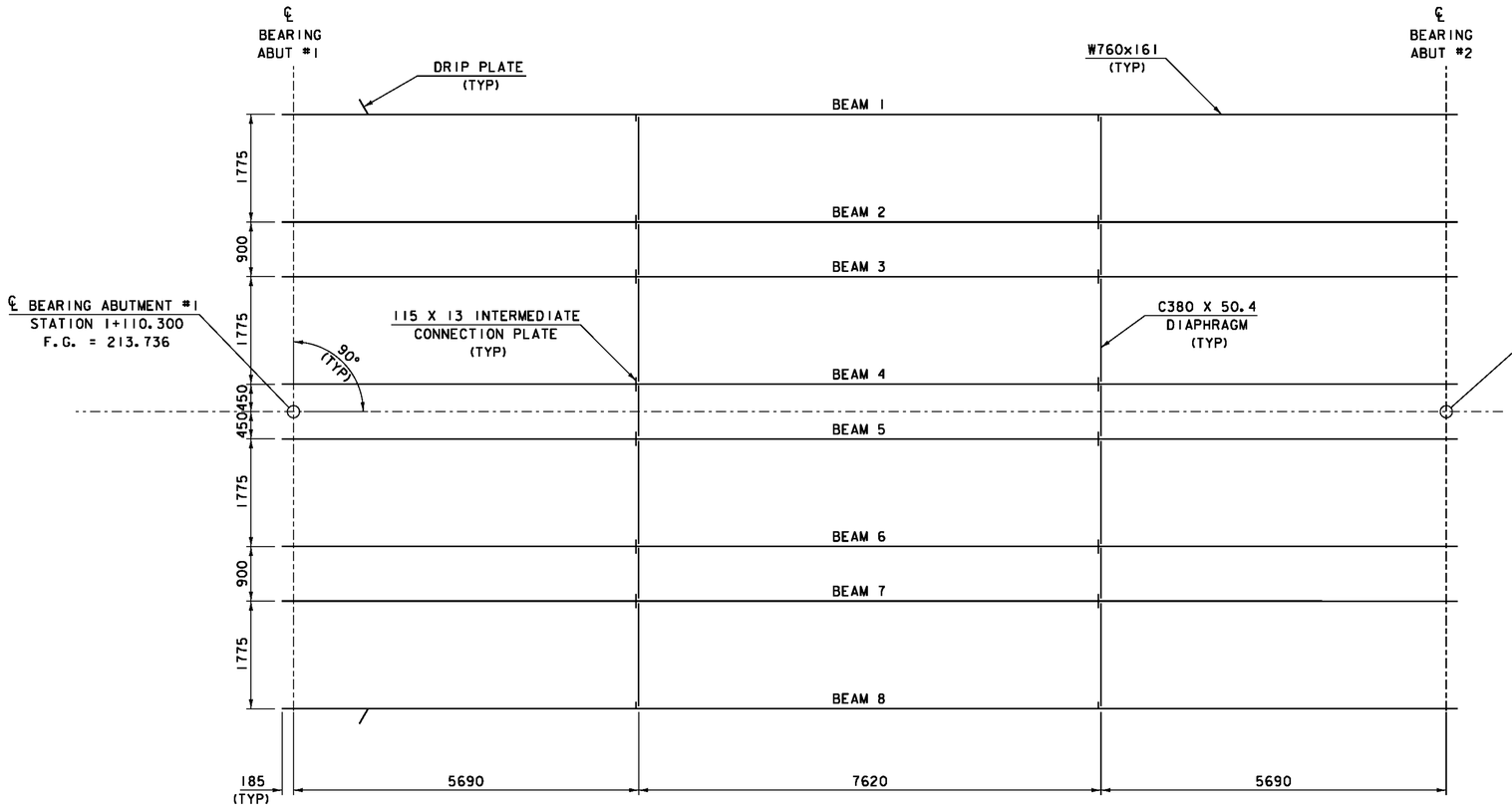
INTERMEDIATE DIAPHRAGMS

(NOT TO SCALE)

0 2 4 8 12 16 20

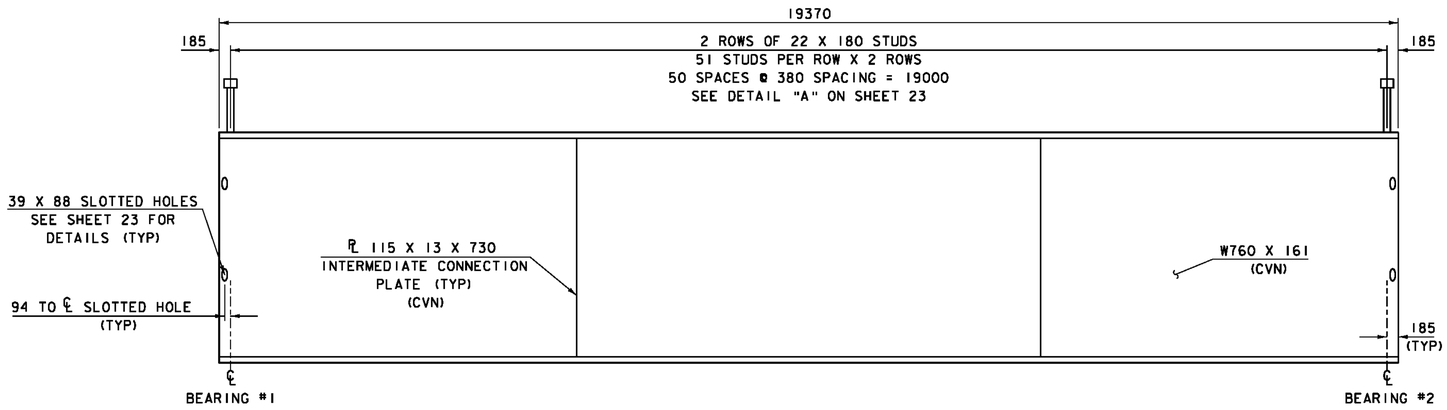
SCALE = 1:200

PROJECT: EAST MONTPELIER	PROJECT NO.: BRF 037-2 (8)
DESIGN FILE NAME: 86e054\Structures\se054sup	
IPARM FILE NAME: se054aps.i	PLOT DATE: 18-AUG-2010
DESIGNED BY: L.J. STONE	DRAWN BY: L.J. STONE
SQUAD LEADER: C.P. WILLIAMS	CHECKED BY: H.I. SALLS
SUPERSTRUCTURE DETAILS	SHEET: 23 OF 63



DECK FRAMING PLAN

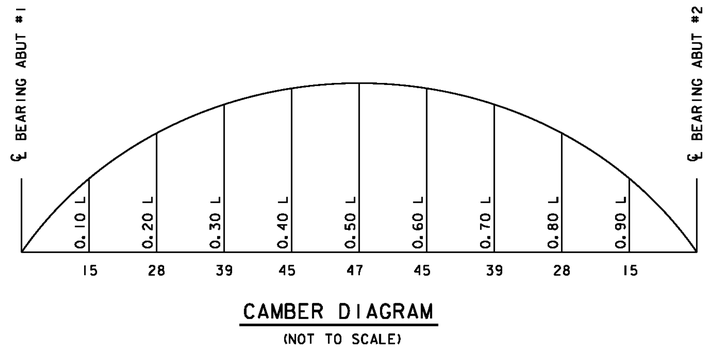
(SCALE 1:50)



BEAM ELEVATION

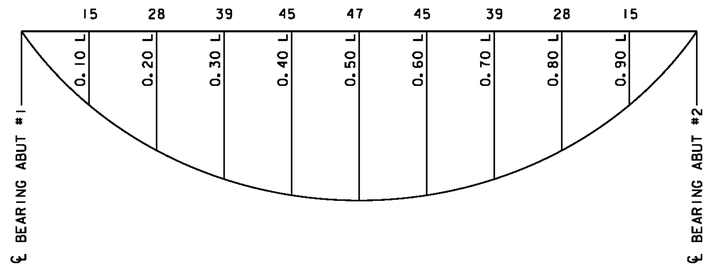
(SCALE: HORZ = 1:50
VERT = 1:10)

NOTE: ALL STEEL MARKED "CVN" SHALL BE CHARPY V-NOTCH TESTED



CAMBER DIAGRAM

(NOT TO SCALE)



TOTAL DEAD LOAD DEFLECTION DIAGRAM

(NOT TO SCALE)

INCLUDES 8 MM DEFLECTION DUE TO BEAM SELF WEIGHT AT MIDSPAN

0 0.5 1

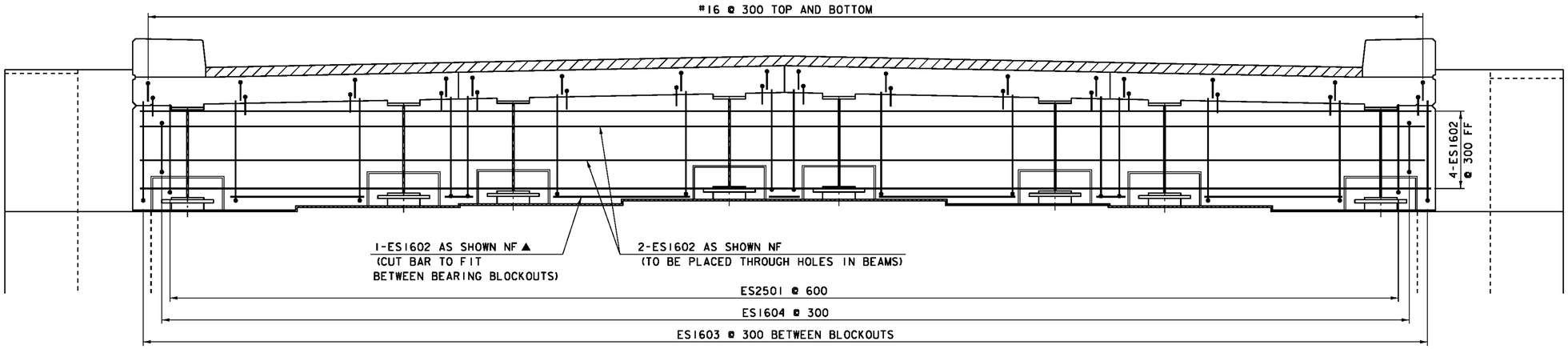
SCALE = 1:10

0 1 2 3 4 5

SCALE = 1:50

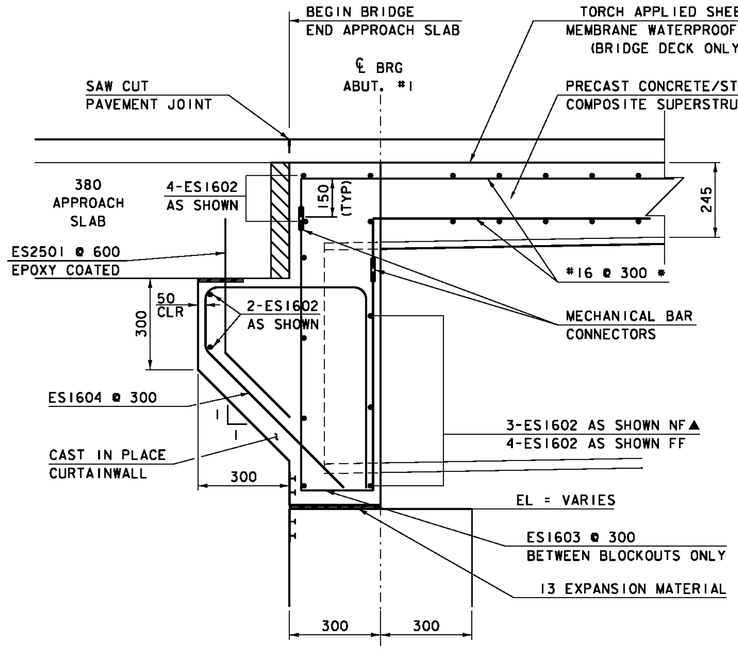
ALL STRUCTURAL STEEL SHALL BE GRADE 345 WEATHERING STEEL PER SUBSECTION 714.03.

PROJECT: EAST MONTPELIER	PROJECT NO.: BRF 037-2(8)
DESIGN FILE NAME: 86e054\Structures\se054sup	
IPARM FILE NAME: se054fram.i	PLOT DATE: 18-AUG-2010
DESIGNED BY: L.J.STONE	DRAWN BY: L.J.STONE
SQUAD LEADER: C.P.WILLIAMS	CHECKED BY: H.I.SALLS
FRAMING DETAILS	SHEET: 24 OF 63



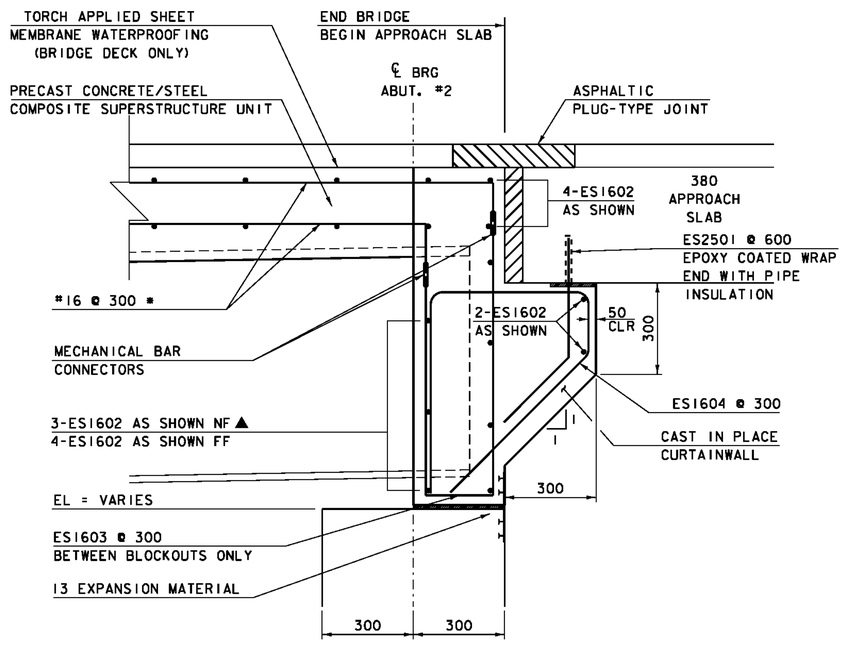
BACKWALL TYPICAL SECTION

NOT TO SCALE



ABUTMENT #1 BRIDGE END SECTION

NOT TO SCALE



ABUTMENT #2 BRIDGE END SECTION

NOT TO SCALE

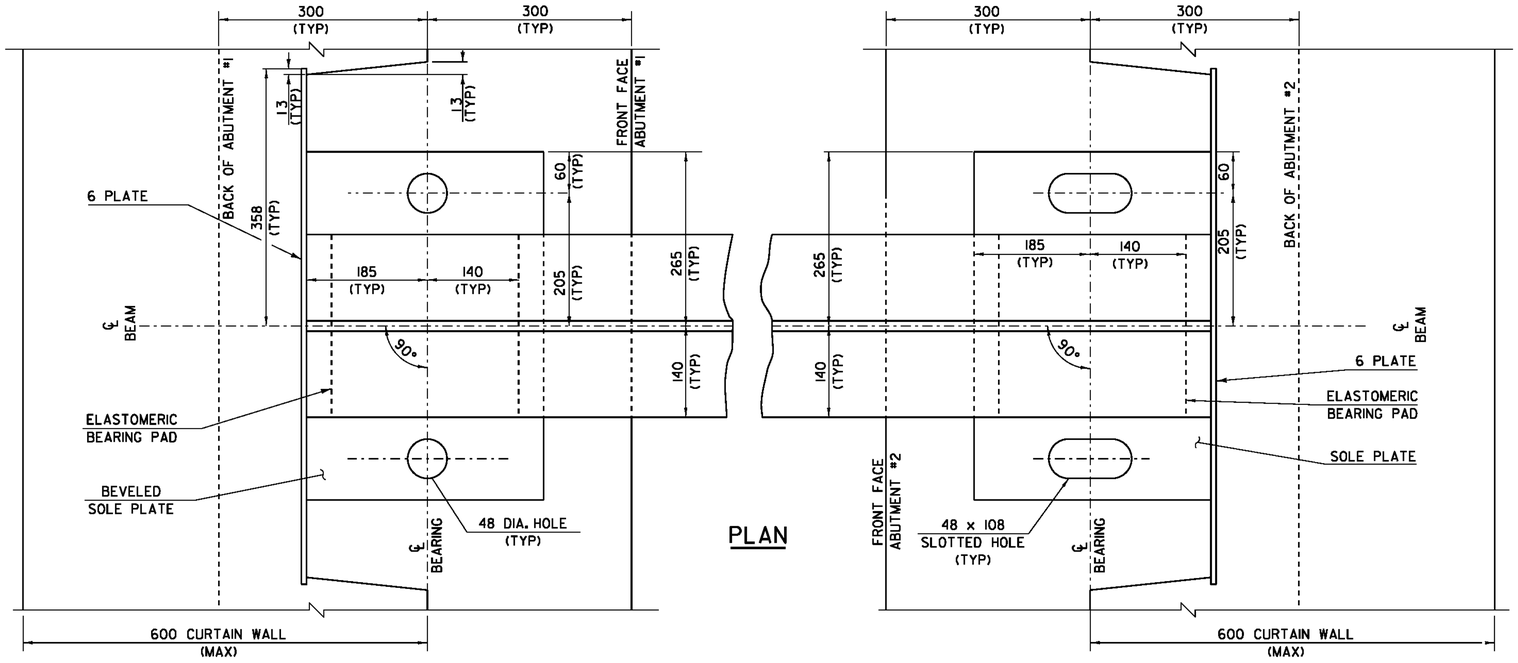
* SHALL BE INCIDENTAL TO ITEM 900.675
"SPECIAL PROVISION (PRECAST
CONCRETE/STEEL COMPOSITE SUPERSTRUCTURE)"

NOTE:

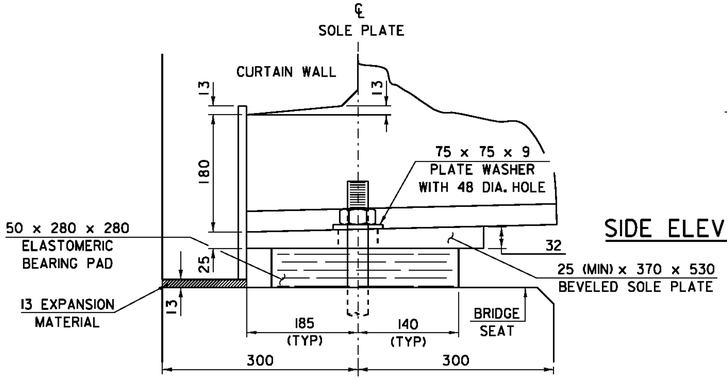
NF = NEAR FACE
FF = FAR FACE
EF = EACH FACE
▲ = CUT TO FIT IN FIELD
80 CLR. UNLESS OTHERWISE
SPECIFIED ON THE PLANS
660 LAP MIN. UNLESS
OTHERWISE SPECIFIED
ON THE PLANS

PROJECT:	PROJECT NO.:
EAST MONTPELIER	BRF 037-2(8)

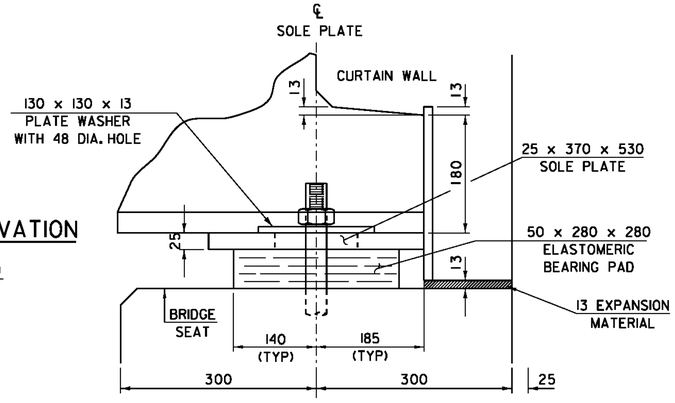
DESIGN FILE NAME: 86e054\Structures\se054sup
IPARM FILE NAME: se054curt.i
PLOT DATE: 18-AUG-2010
DESIGNED BY: L.J.STONE
DRAWN BY: L.J.STONE
SQUAD LEADER: C.P.WILLIAMS
CHECKED BY: H.I.SALLS
CURTAINWALL DETAILS
SHEET: 25 OF 63

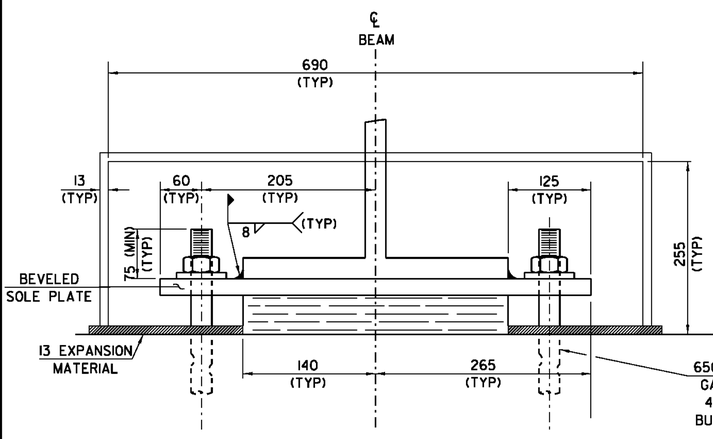


PLAN

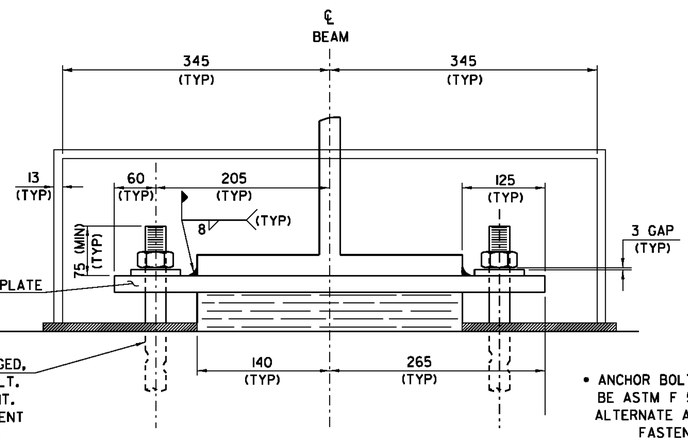


SIDE ELEVATION





FRONT VIEW



FIXED BEARING ℄ ABUT #1

EXPANSION BEARING ℄ ABUT #2

BEARING NOTES

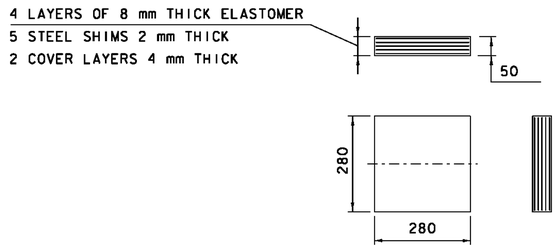
1. Bearings shall be paid for under the item 531.11 "Bearing Device Assembly, Elastomeric Pad" and shall conform to applicable subsections of Standard Specifications Sections 531 and 731.
2. All Bearing Devices shall be galvanized or metalized as per subsections 531.04 (b) and 506.15 of the Standard Specifications. If the bearings are metalized, they shall be sealed with an approved sealer as specified in subsection 506.15 (b) of the Standard Specifications. Areas of galvanizing of metalizing damaged by field welding or handling shall be repaired in conformance with section 513
3. Payment for anchor bolts, nuts, and washers shall be included in the unit bid price for Item 531.11 "Bearing Device Assembly, Elastomeric Pad." Anchor bolts, nuts and washers shall be galvanized per AASHTO M232M/M232.
4. All steel in bearing devices shall be AASHTO M270M/M270 Grade 50, unless noted otherwise.
5. All reinforcement between layers of elastomeric shall be steel AASHTO M270M/ M270 Grade 36. All internal steel plates shall be sand blasted and free of coatings, rust, and mill scale. The plates shall be free of sharp edges and burrs.
6. Steel reinforced elastomeric bearings shall have a minimum of 3 mm edge seal of elastomer integral with bearing over all internal plates.
7. Alternate configurations for bearings may be submitted for approval. Any alternate submitted shall be designed and certified to meet the design loads and criteria shown on this sheet. The alternate shall maintain the anchorage system shown and shall be designed per AASHTO LRFD Bridge Design Specifications 4th Edition and its latest revisions and shall be fabricated per AASHTO LRFD Construction Specifications 2nd Edition and its latest revisions.
8. Bridge seat elevations may be revised to accommodate an alternative configuration.
9. Design Criteria:
   Rotation = 0.0081 Radius
   RDL = 37 K
   RLL = 67 K
   Translation = s = 1"
   Temperature Range = -30°F to 120° F

   Bearings are designed as per AASHTO LRFD Bridge Design Specifications 4th Edition, Section 14, Method B.

   Elastomer shall have a Shear Modulus between 0.130 ksi and 0.200.

   The elastomer shall meet the requirements of Low Temperature Zone D, Grade 4.

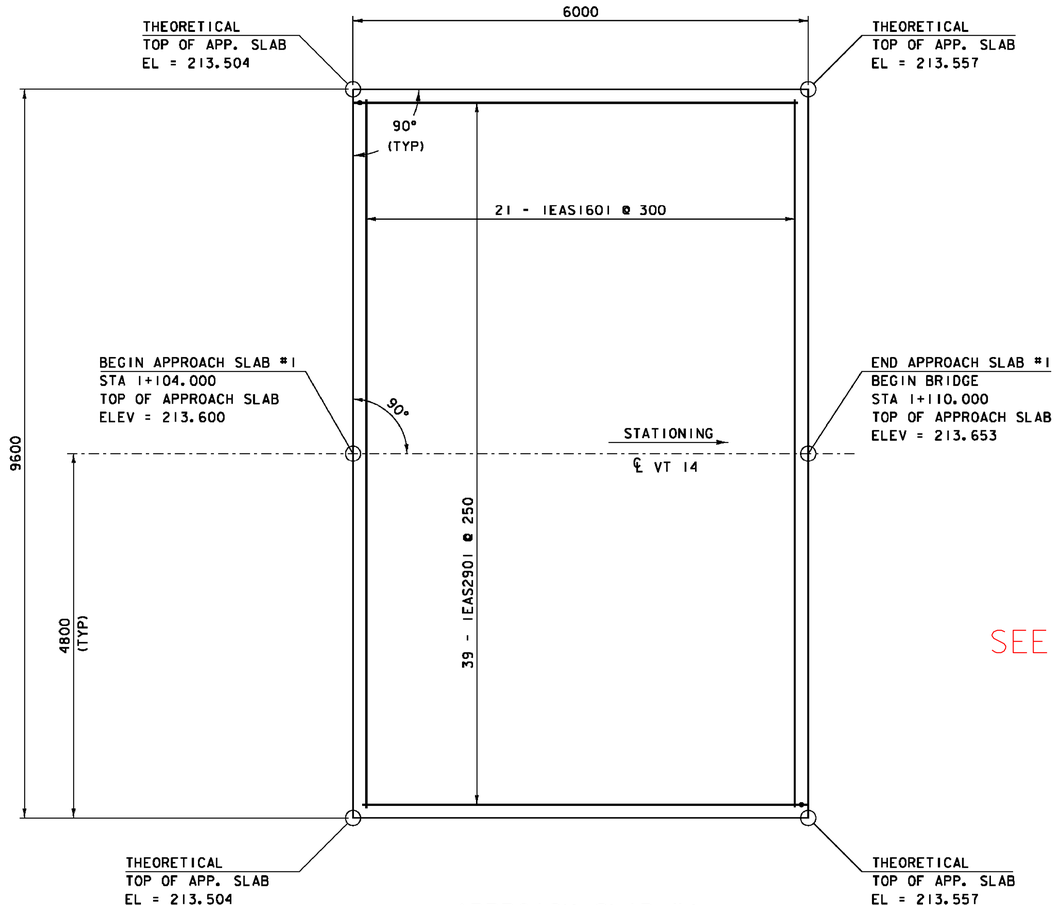
   No fabric reinforcement will be allowed in elastomeric pads.
10. The steel sole plates shall be hot bonded to the reinforced elastomeric pad during the vulcanization process. The steel surfaces to be bonded to the pad shall not be metalized.
11. The concrete surface under the Bearing Device shall be level.
12. All required fabrication of bearings will occur before vulcanization process.



ELASTOMERIC BEARING DETAIL

NTS

PROJECT: EAST MONTPELIER	PROJECT NO.: BRF 037-2 (8)
DESIGN FILE NAME: 86e054\Structures\se054sup	
IPARM FILE NAME: se054bear.i	PLOT DATE: 18-AUG-2010
DESIGNED BY: L.J.STONE	DRAWN BY: L.J.STONE
SQUAD LEADER: C.P.WILLIAMS	CHECKED BY: H.I.SALLS
BEARING DETAIL SHEET	SHEET: 26 OF 63

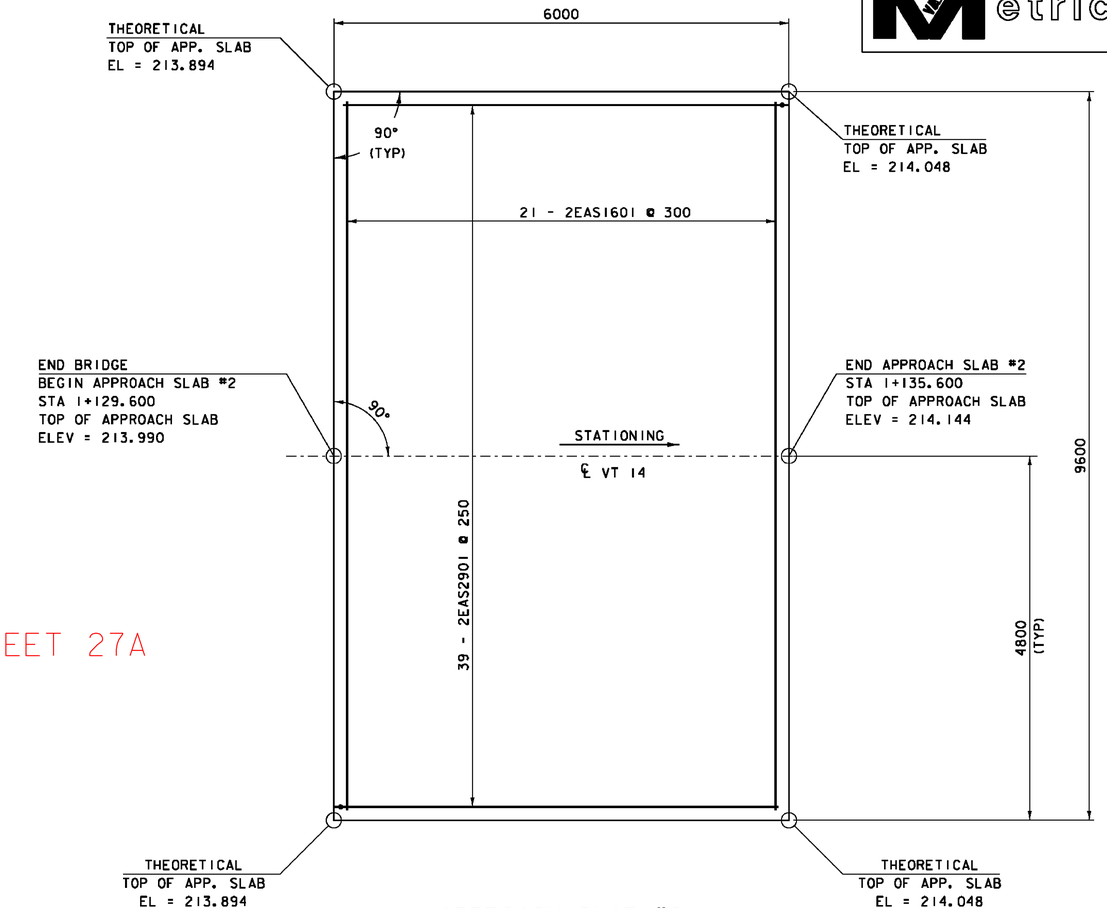


APPROACH SLAB #1

SCALE 1 : 40

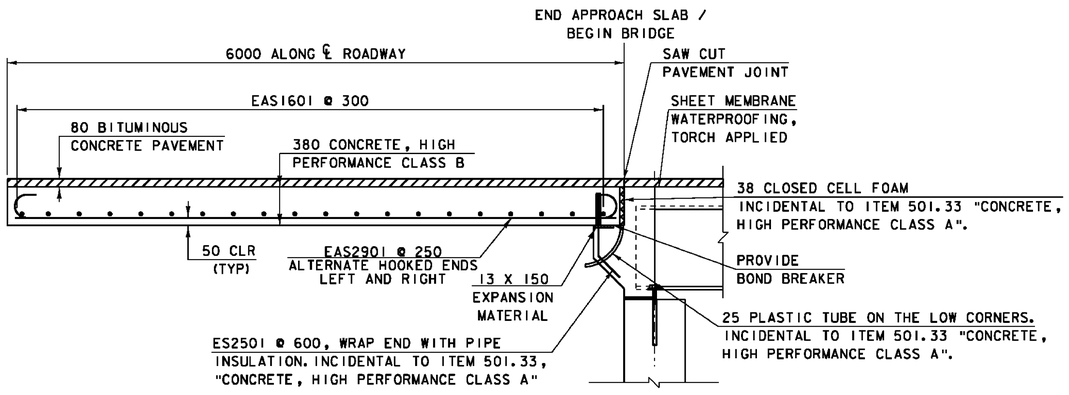
FLOW

SEE REVISED SHEET 27A



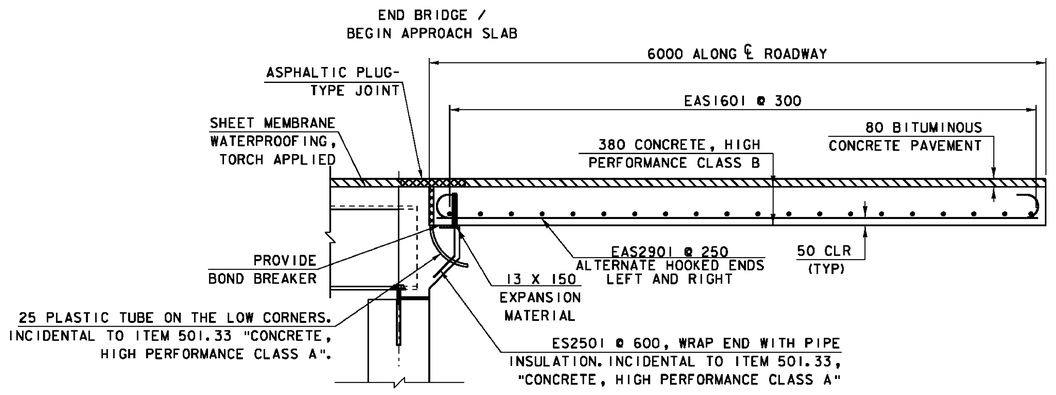
APPROACH SLAB #2

SCALE 1 : 40



APPROACH SLAB ABUTMENT #1

NTS



APPROACH SLAB ABUTMENT #2

NTS

NOTES:

NF = NEAR FACE
FF = FAR FACE
EF = EACH FACE
▲ = CUT TO FIT IN FIELD

80 CLEAR UNLESS OTHERWISE SPECIFIED ON THE PLANS

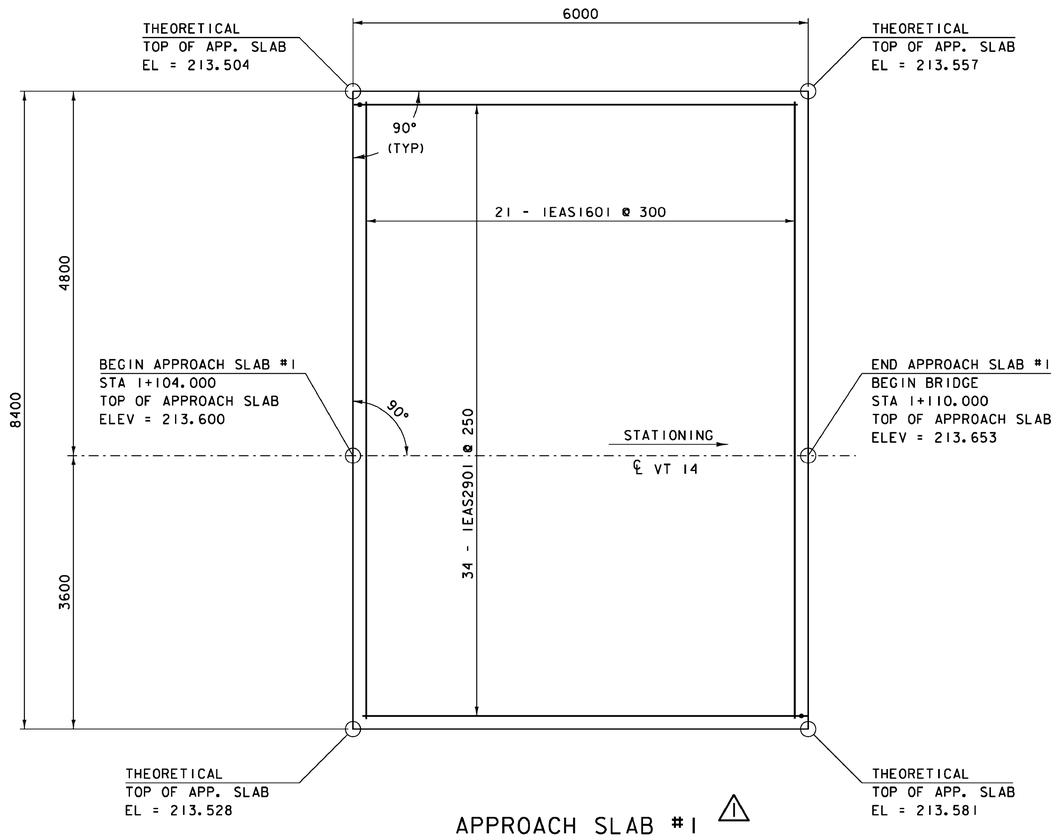
ALL LAPS 660 UNLESS OTHERWISE NOTED.

ALL REINFORCING STEEL SHALL BE EPOXY COATED.

0 1 2 3 4

SCALE = 1:40

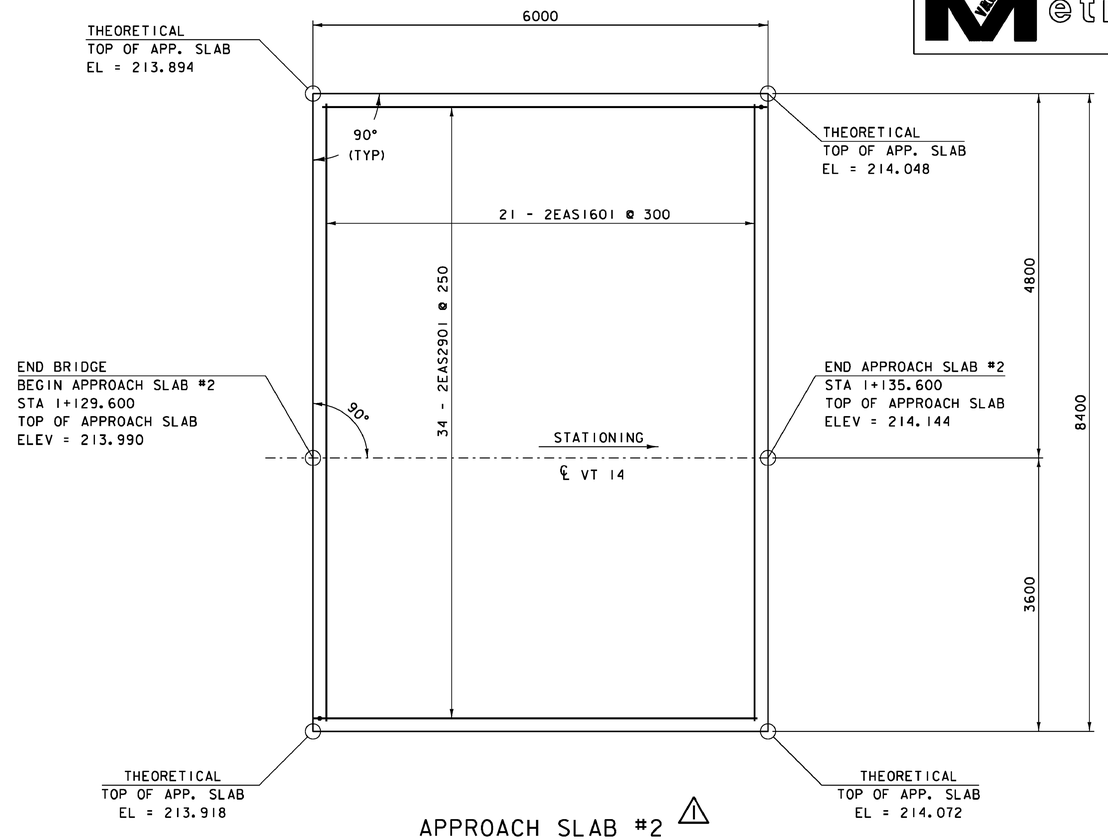
PROJECT: EAST MONTPELIER	PROJECT NO.: BRF 037-2 (8)
DESIGN FILE NAME: 86e054\Structures\se054sup	
IPARM FILE NAME: se054aps2.i	PLOT DATE: 18-AUG-2010
DESIGNED BY: L.J.STONE	DRAWN BY: L.J.STONE
SQUAD LEADER: C.P.WILLIAMS	CHECKED BY: H.I.SALLS
APPROACH SLAB DETAILS SHEET	SHEET: 27 OF 63



APPROACH SLAB #1 ⚠

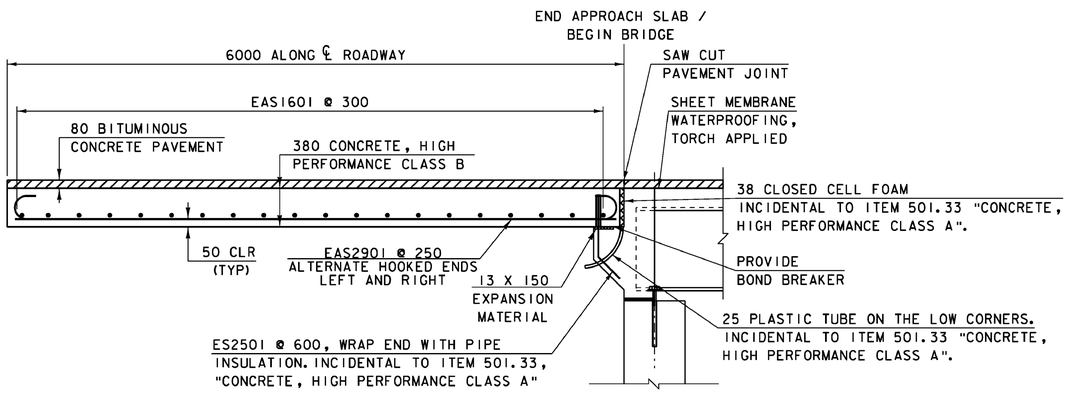
SCALE 1 : 40

FLOW



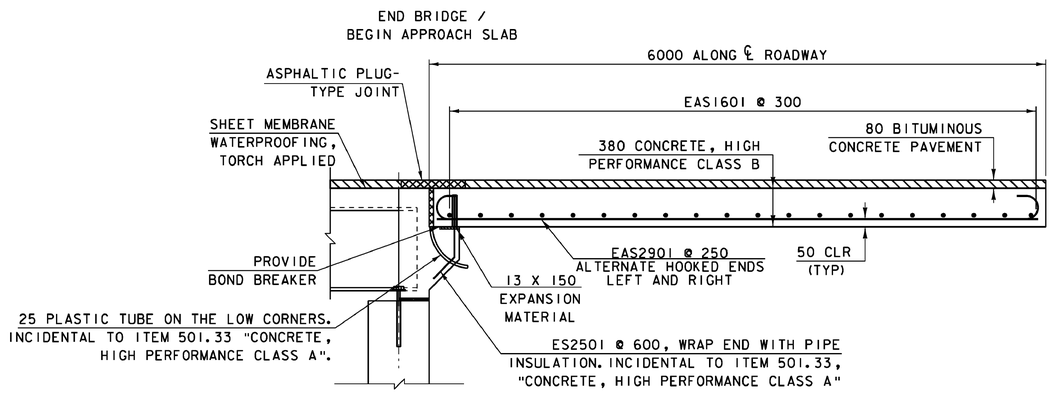
APPROACH SLAB #2 ⚠

SCALE 1 : 40



APPROACH SLAB ABUTMENT #1

NTS



APPROACH SLAB ABUTMENT #2

NTS

NOTES:

NF = NEAR FACE
FF = FAR FACE
EF = EACH FACE
▲ = CUT TO FIT IN FIELD

80 CLEAR UNLESS OTHERWISE SPECIFIED ON THE PLANS

ALL LAPS 660 UNLESS OTHERWISE NOTED.

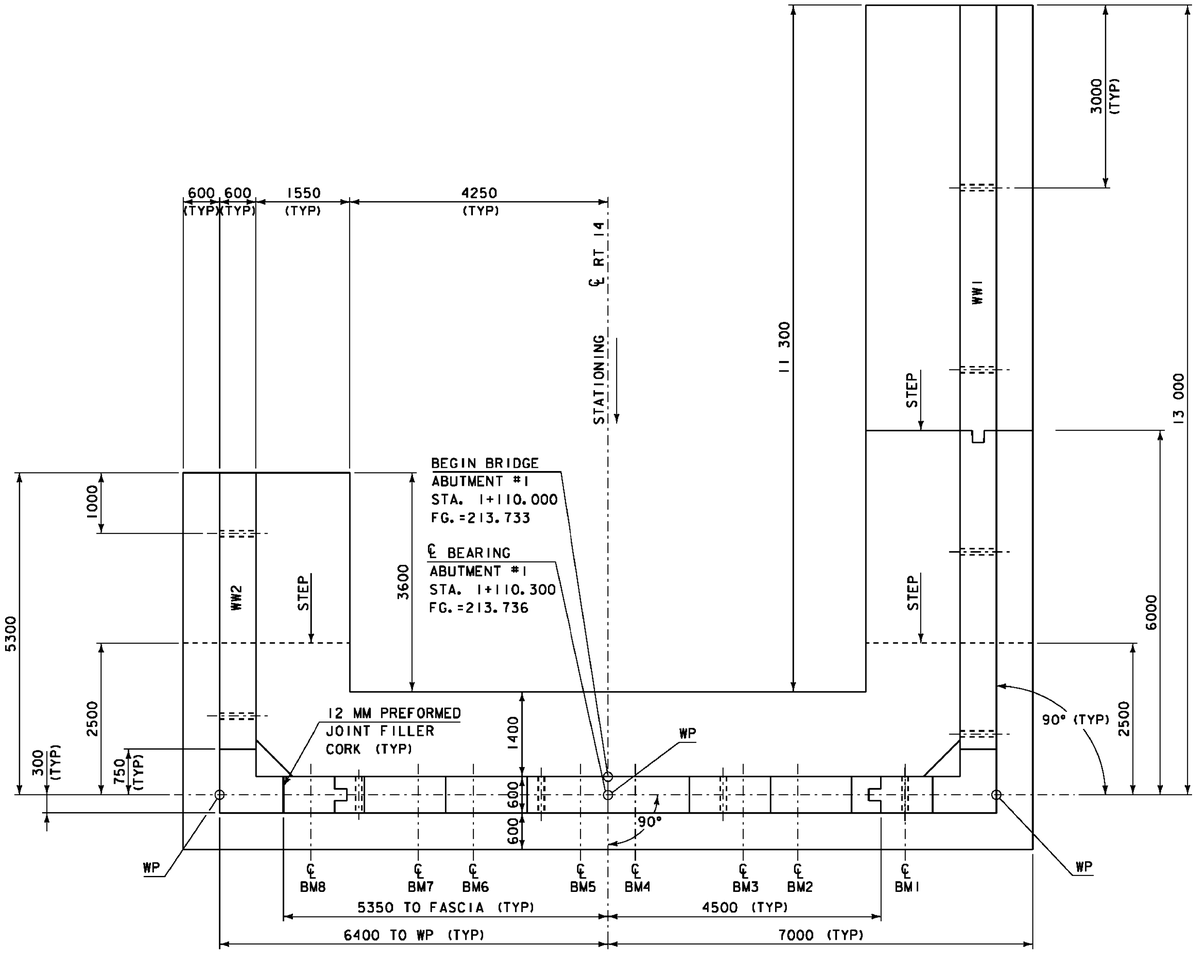
ALL REINFORCING STEEL SHALL BE EPOXY COATED.

0 1 2 3 4

SCALE = 1:40

REV. NO.	DATE	BY	DESCRIPTION
⚠	2/18/2011	VAOT	MODIFIED RIGHT WIDTH OF APPROACH SLABS IN ODRER TO ACCOMMODATE SIDEWALK.

PROJECT:	PROJECT NO.:
EAST MONTPELIER	BRF 037-2(8)
DESIGN FILE NAME: 86e054\Structures\SidewalkChange\ApproachSlab.dgn	
IPARM FILE NAME: se054aps2.i	PLOT DATE: 23-FEB-2011
DESIGNED BY: L.J.STONE	DRAWN BY: L.J.STONE
SQUAD LEADER: C.P.WILLIAMS	CHECKED BY: H.I.SALLS
APPROACH SLAB DETAILS SHEET	SHEET: 27A OF 63

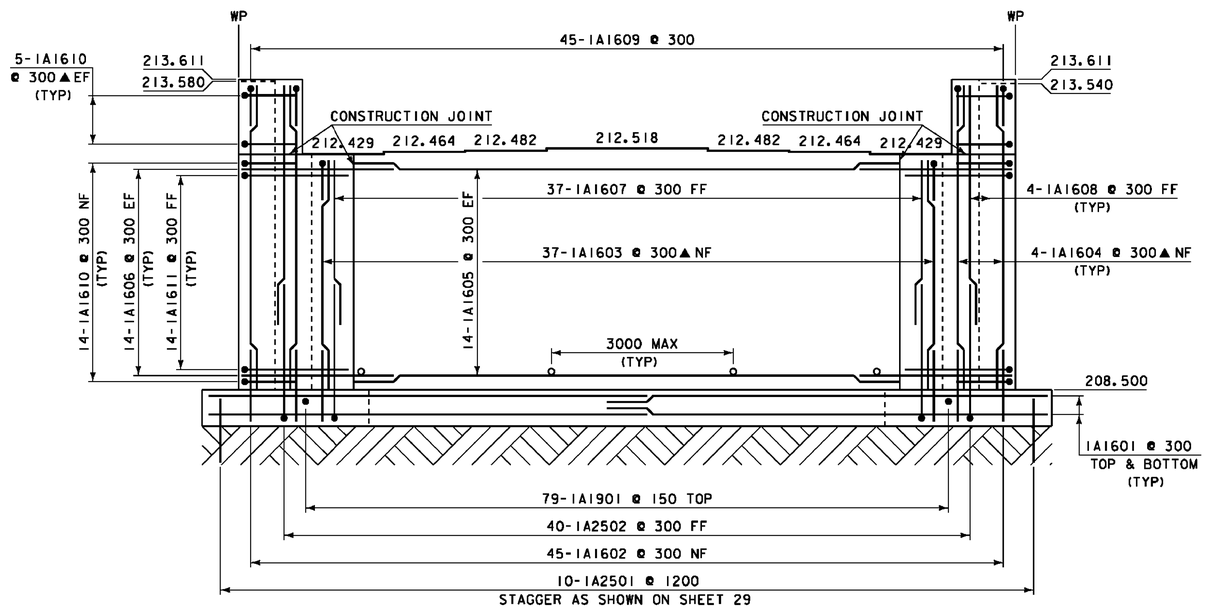


ABUTMENT #1 PLAN VIEW

SCALE 1:50

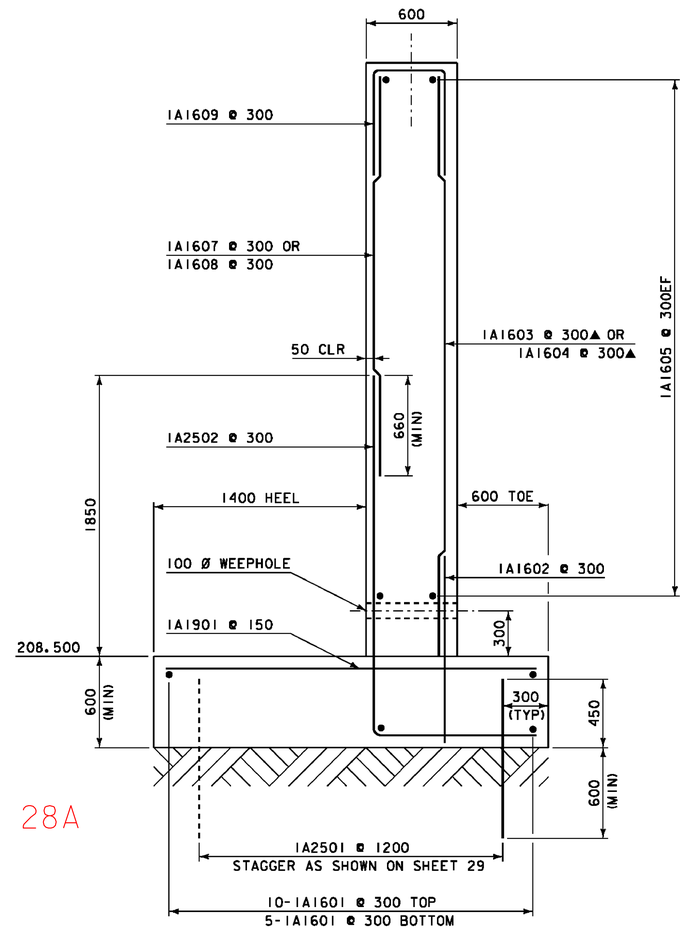
FLOW

SEE REVISED SHEET 28A



ABUTMENT #1 ELEVATION

SCALE 1:50



ABUTMENT #1 TYPICAL SECTION

SCALE 1:20

0 1 2

SCALE = 1:20

0 1 2 3 4 5

SCALE = 1:50

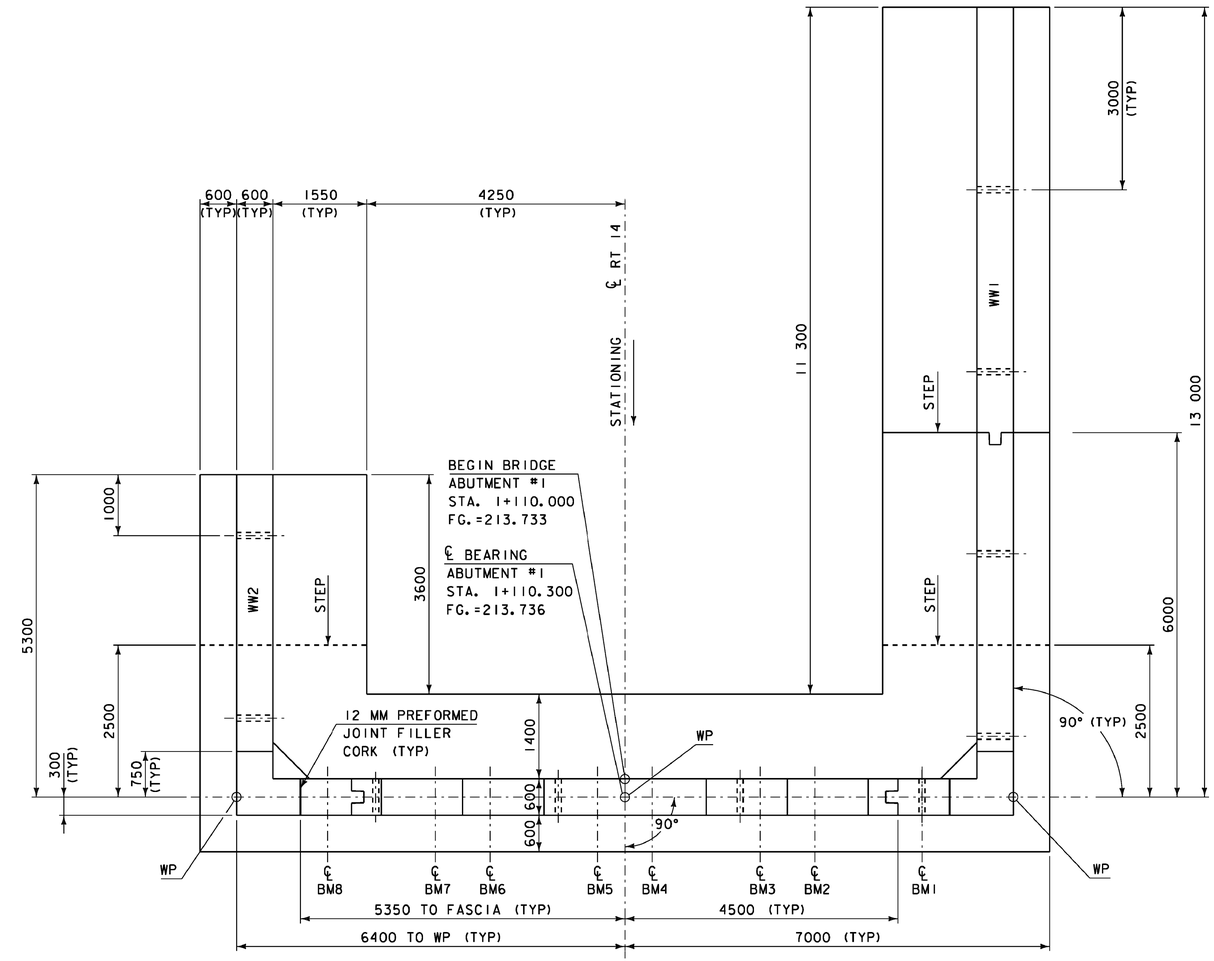
NOTE:

NF = NEAR FACE
FF = FAR FACE
EF = EACH FACE
▲ = CUT TO FIT IN FIELD

80 CLR. UNLESS OTHERWISE SPECIFIED ON THE PLANS.

ALL LAPS ARE 660 MIN UNLESS OTHERWISE SPECIFIED ON THE PLANS.

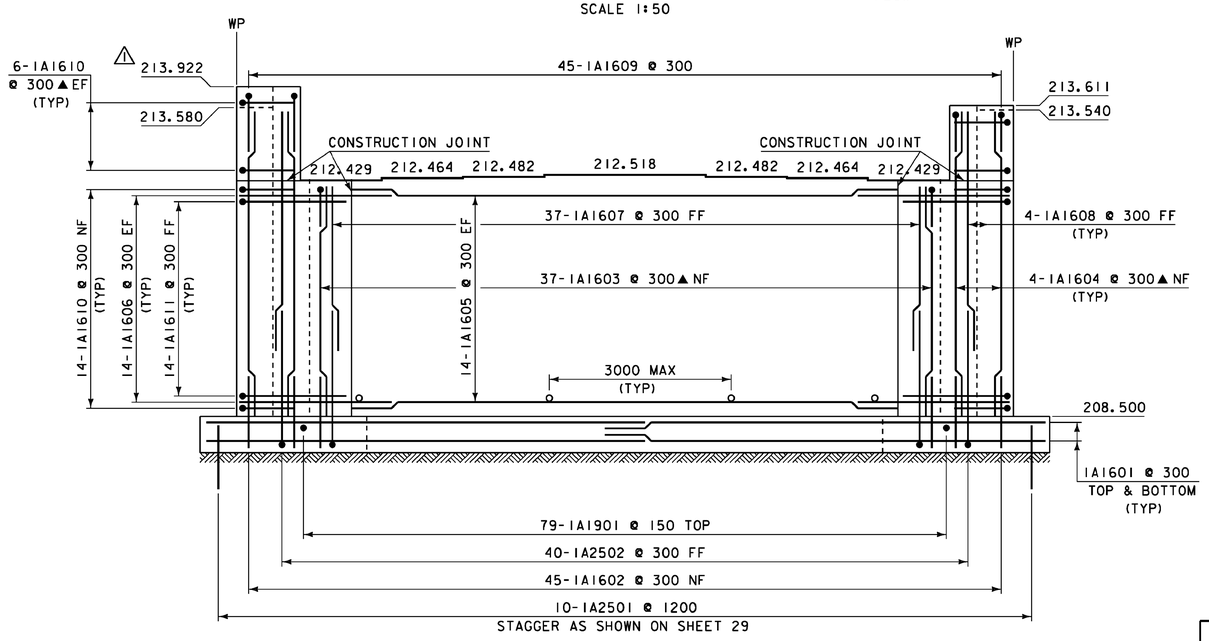
PROJECT: EAST MONTPELIER	PROJECT NO.: BRF 037-2 (8)
DESIGN FILE NAME: 86e054\Structures\se054sub	
IPARM FILE NAME: se054sbut1.i	PLOT DATE: 18-AUG-2010
DESIGNED BY: L. J. STONE	DRAWN BY: D. D. BEARD
SQUAD LEADER: C. P. WILLIAMS	CHECKED BY: H. I. SALLS
ABUTMENT 1 DETAILS	SHEET: 28 OF 63



ABUTMENT #1 PLAN VIEW

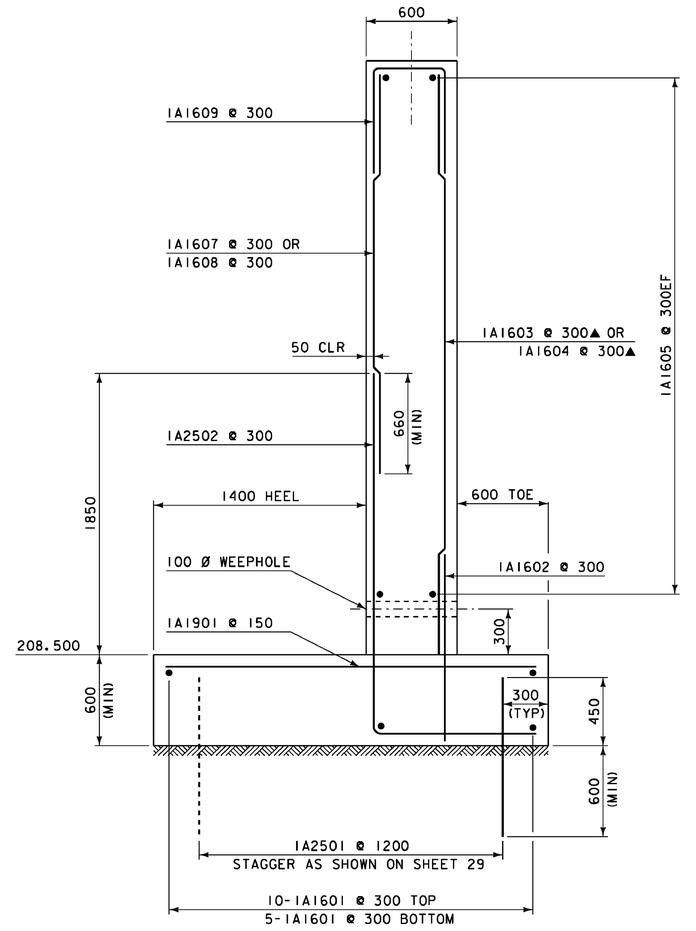
SCALE 1:50

FLOW



ABUTMENT #1 ELEVATION

SCALE 1:50



ABUTMENT #1 TYPICAL SECTION

SCALE 1:20

NOTE:

NF = NEAR FACE
FF = FAR FACE
EF = EACH FACE
▲ = CUT TO FIT IN FIELD

80 CLR. UNLESS OTHERWISE SPECIFIED ON THE PLANS.

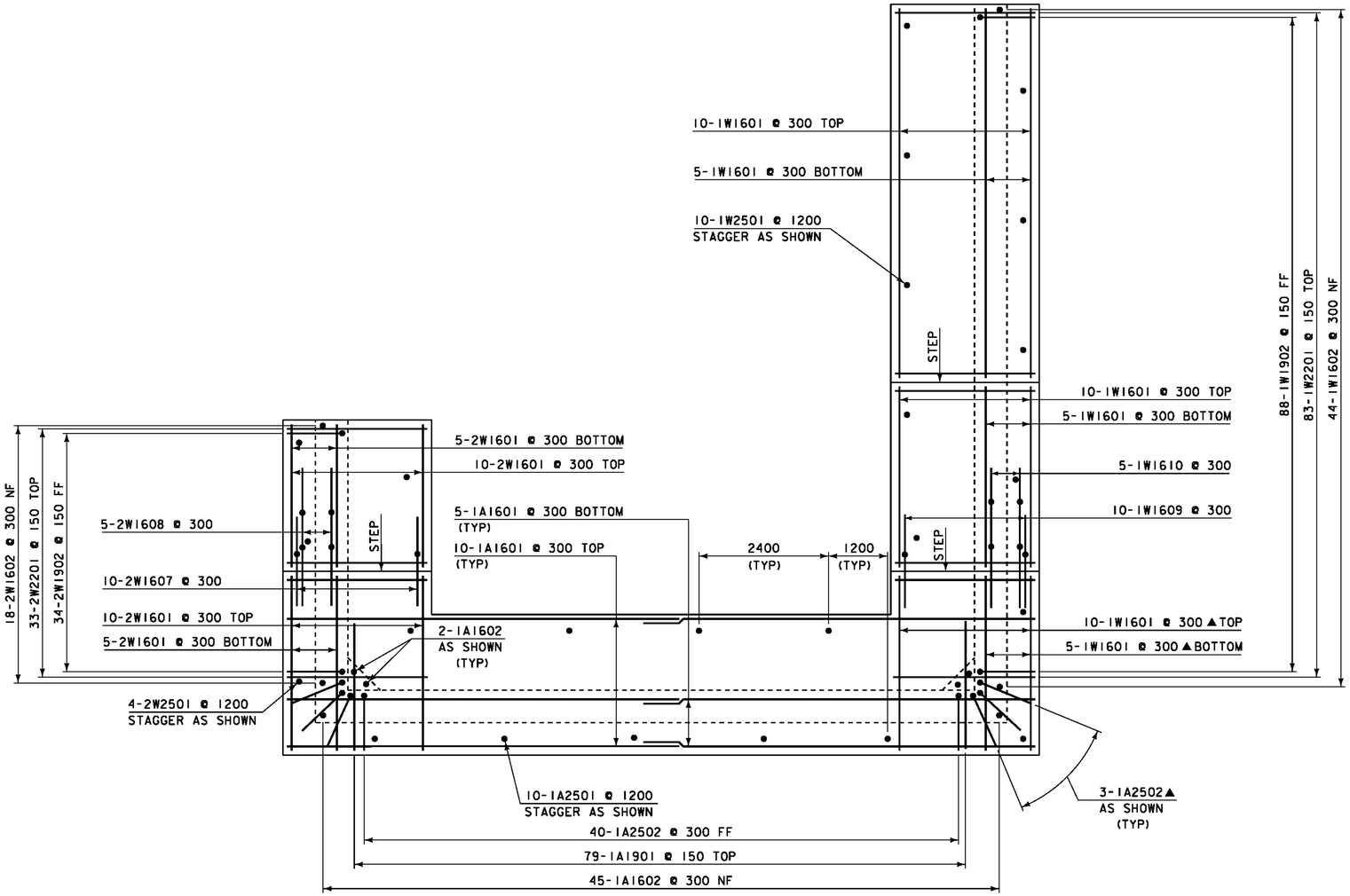
ALL LAPS ARE 660 MIN UNLESS OTHERWISE SPECIFIED ON THE PLANS.

0 1 2
SCALE = 1:20

0 1 2 3 4 5
SCALE = 1:50

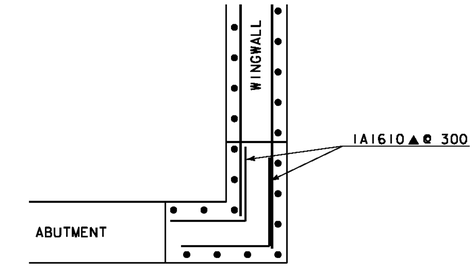
REV. NO.	DATE	BY	DESCRIPTION
⚠	2/18/2011	VAOT	MODIFIED ELEVATION OF WINGWALL.

PROJECT: EAST MONTPELIER	PROJECT NO.: BRF 037-2 (8)
DESIGN FILE NAME: 86e054\Structures\SidewalkChange\Abutment.dgn	
IPARM FILE NAME: se054abut1.i	PLOT DATE: 23-FEB-2011
DESIGNED BY: L. J. STONE	DRAWN BY: D. D. BEARD
SQUAD LEADER: C. P. WILLIAMS	CHECKED BY: H. I. SALLS
ABUTMENT 1 DETAILS	SHEET: 28A OF 63

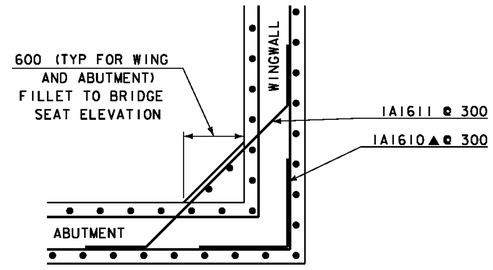


ABUTMENT #1 FOOTING REINFORCMENT

SCALE 1:50



WINGWALL CORNER DETAIL
ABOVE BRIDGE SEAT (TYP)



WINGWALL CORNER DETAIL
BELOW BRIDGE SEAT (TYP)

NOTE:

NF = NEAR FACE
FF = FAR FACE
EF = EACH FACE
▲ = CUT TO FIT IN FIELD

80 CLR. UNLESS OTHERWISE
SPECIFIED ON THE PLANS.

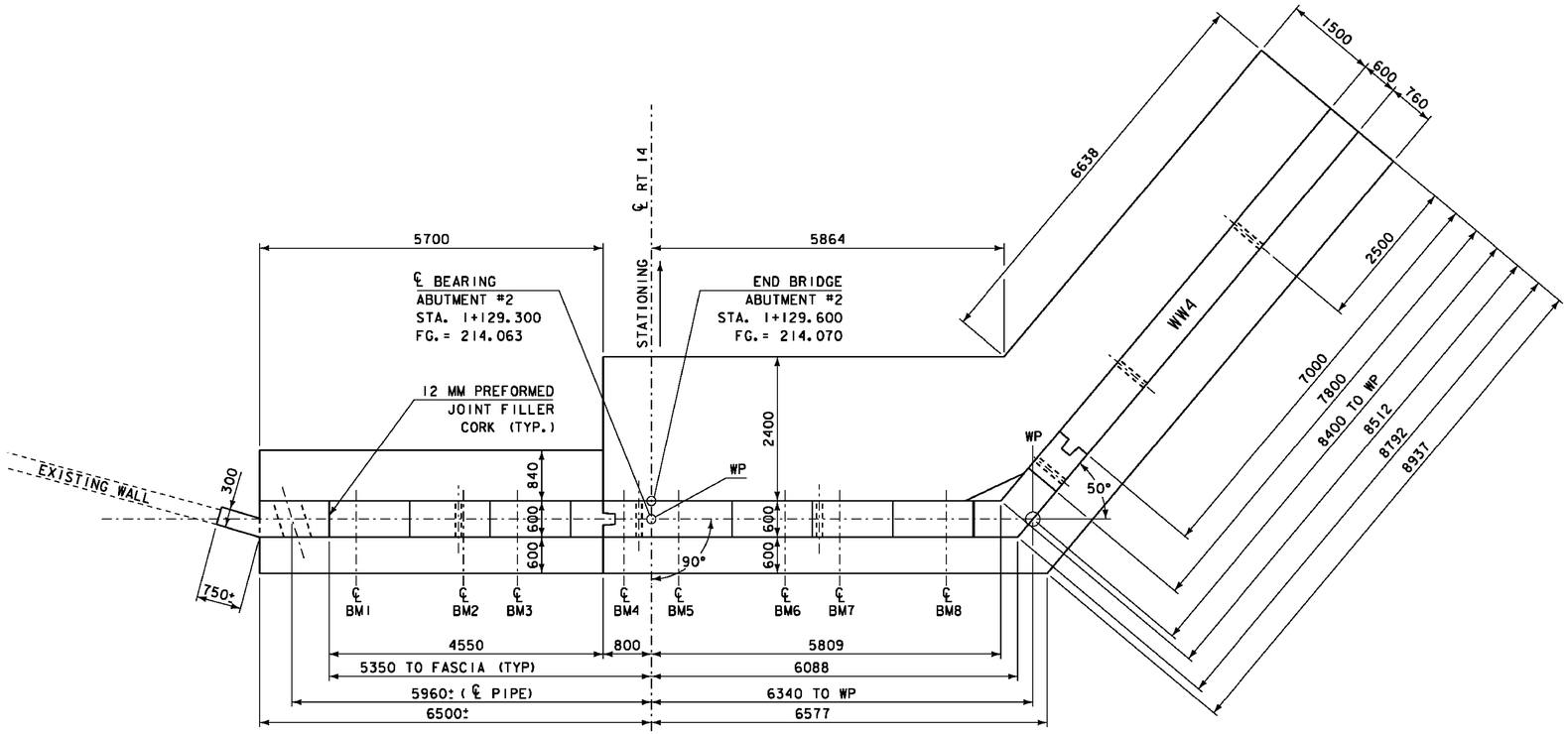
ALL LAPS ARE 660 MIN
UNLESS OTHERWISE
SPECIFIED ON THE PLANS.

0 1 2 3 4 5

SCALE = 1:50

PROJECT: EAST MONTPELIER	PROJECT NO.: BRF 037-2 (8)
DESIGN FILE NAME: 86e054/Structures/se054sub.dgn	
IPARM FILE NAME: se054ftgl.i	PLOT DATE: 18-AUG-2010
DESIGNED BY: L.J.STONE	DRAWN BY: D.D.BEARD
SQUAD LEADER: C.P.WILLIAMS	CHECKED BY: H.I.SALLS
ABUTMENT 1 FOOTING REINFORCEMENT	SHEET: 29 OF 63

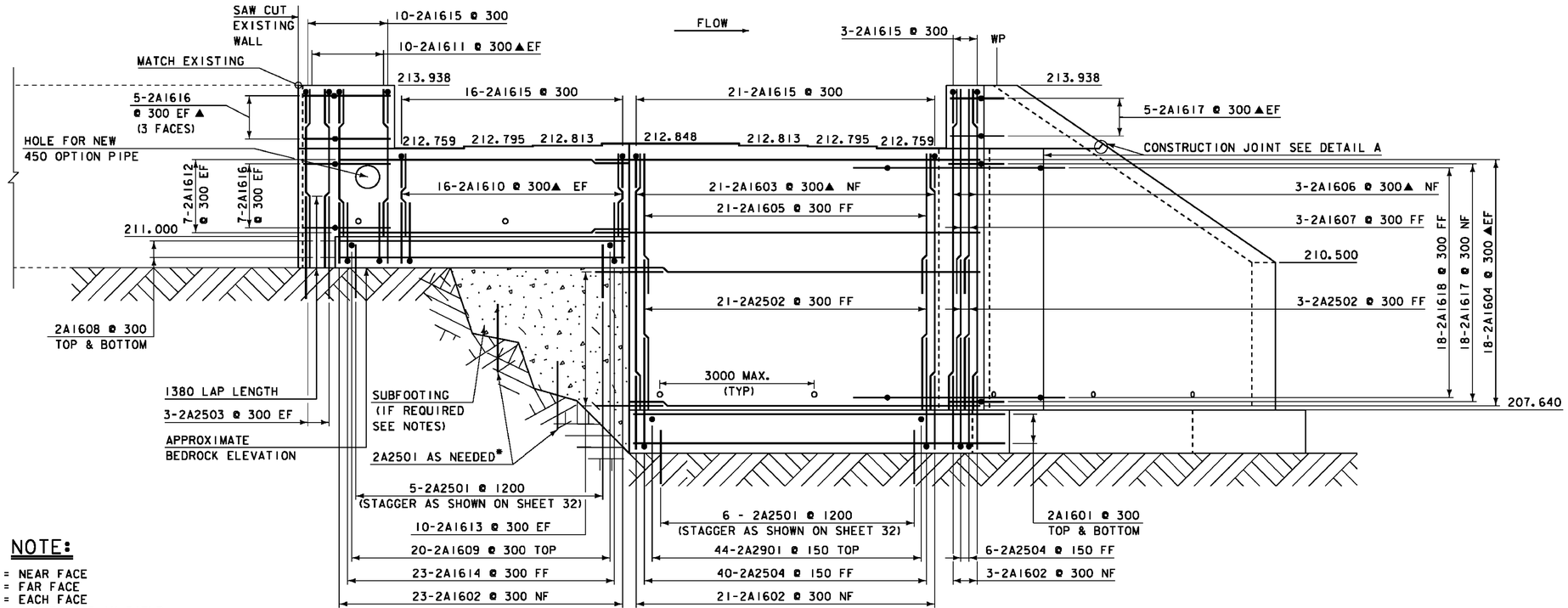
Metric



ABUTMENT #2 PLAN VIEW

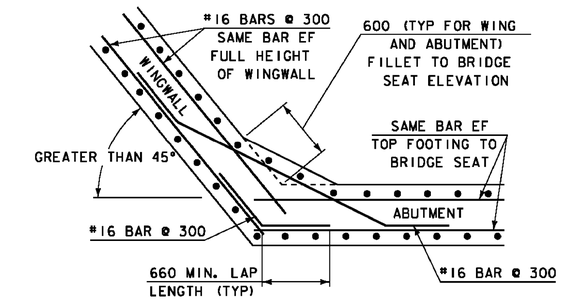
SCALE 1:50

SEE REVISED SHEET 30A

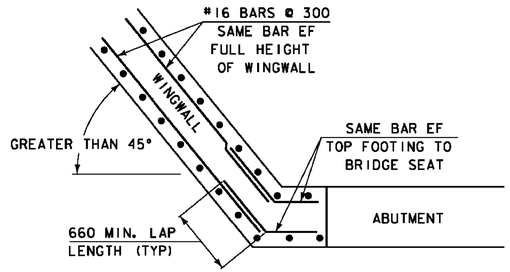


ABUTMENT #2 ELEVATION

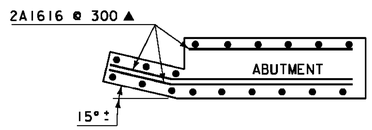
SCALE 1:50



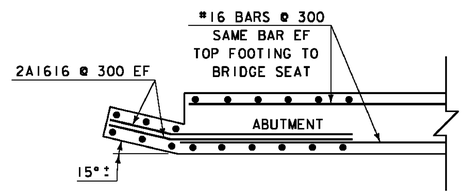
WINGWALL CORNER DETAIL FOR GREATER THAN 45° BELOW BRIDGESEAT (TYP)



WINGWALL CORNER DETAIL FOR GREATER THAN 45° ABOVE BRIDGESEAT (TYP)



CORNER DETAIL FOR WINGWALL #3 ABOVE BRIDGE SEAT



CORNER DETAIL FOR WINGWALL #3 BELOW BRIDGE SEAT

0 1 2 3 4 5

SCALE = 1:50

NOTE:

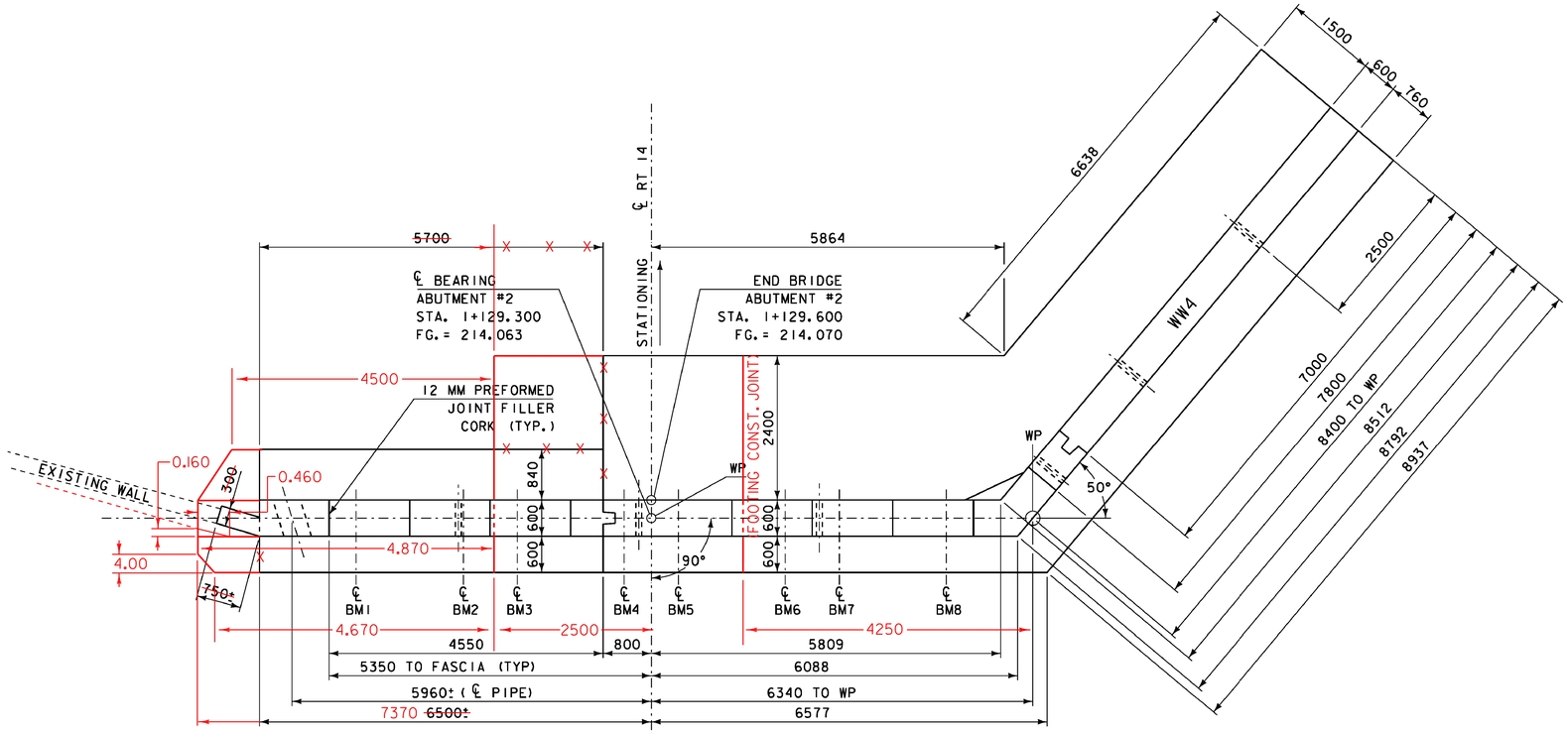
NF = NEAR FACE
FF = FAR FACE
EF = EACH FACE
▲ = CUT TO FIT IN FIELD

80 CLR. UNLESS OTHERWISE SPECIFIED ON THE PLANS.

ALL LAPS ARE 660 MIN UNLESS OTHERWISE SPECIFIED ON THE PLANS.

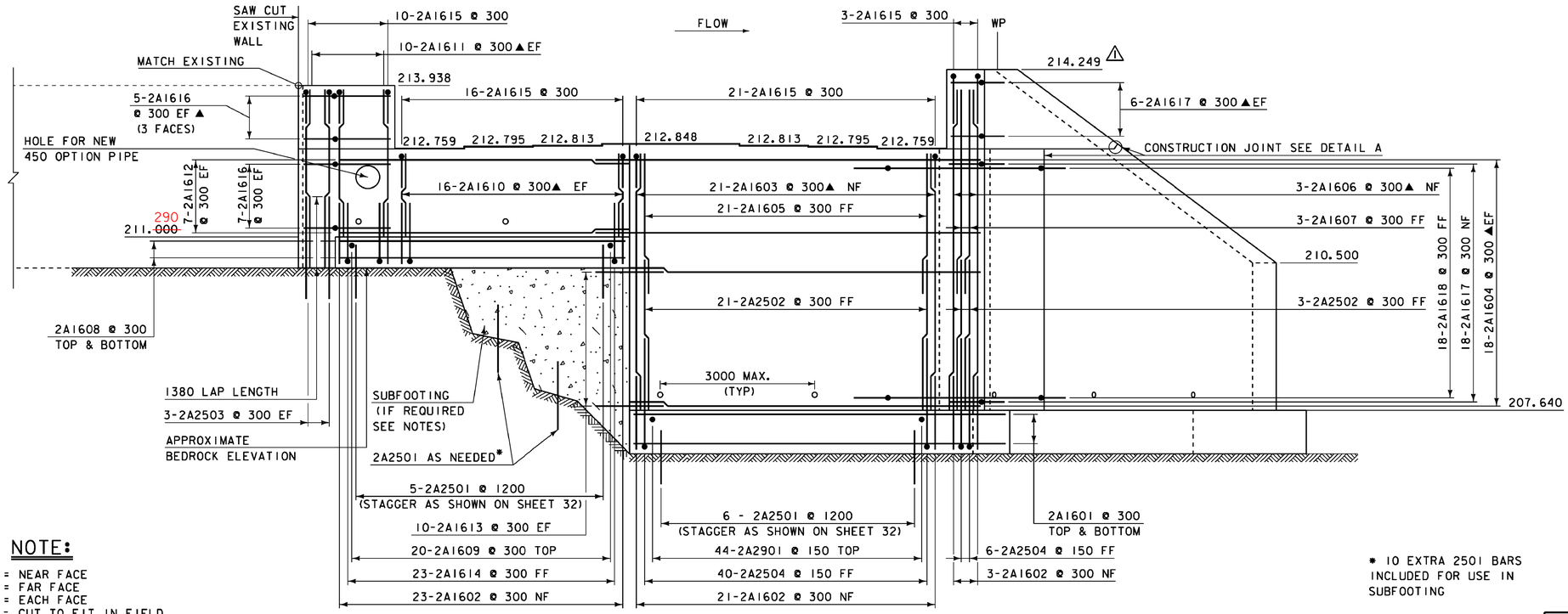
* 10 EXTRA 2501 BARS INCLUDED FOR USE IN SUBFOOTING

PROJECT: EAST MONTPELIER	PROJECT NO.: BRF 037-2 (8)
DESIGN FILE NAME: 86e054/Structures/se054sub.dgn	
IPARM FILE NAME: se054abut2.i	PLOT DATE: 18-AUG-2010
DESIGNED BY: L.J.STONE	DRAWN BY: D.D.BEARD
SQUAD LEADER: C.P.WILLIAMS	CHECKED BY: H.I.SALLS
ABUTMENT 2 DETAILS	SHEET: 30 OF 63



ABUTMENT #2 PLAN VIEW

SCALE 1:50



ABUTMENT #2 ELEVATION

SCALE 1:50

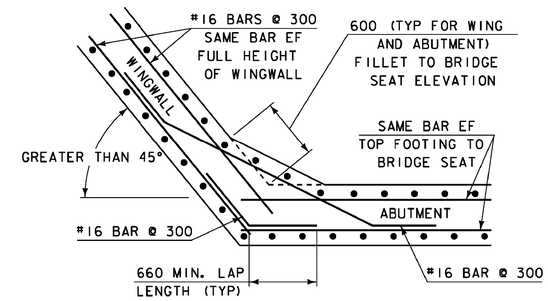
NOTE:

NF = NEAR FACE
FF = FAR FACE
EF = EACH FACE
▲ = CUT TO FIT IN FIELD

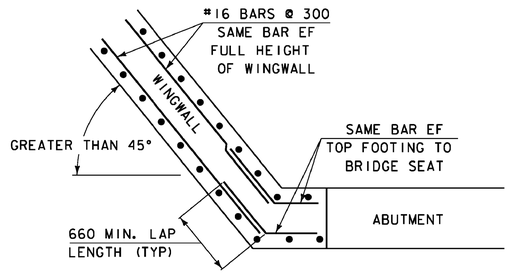
80 CLR. UNLESS OTHERWISE SPECIFIED ON THE PLANS.

ALL LAPS ARE 660 MIN UNLESS OTHERWISE SPECIFIED ON THE PLANS.

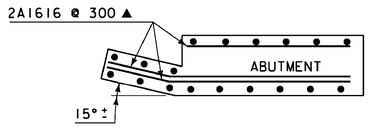
* 10 EXTRA 2501 BARS INCLUDED FOR USE IN SUBFOOTING



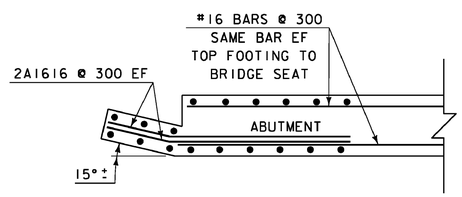
WINGWALL CORNER DETAIL FOR GREATER THAN 45° BELOW BRIDGESEAT (TYP)



WINGWALL CORNER DETAIL FOR GREATER THAN 45° ABOVE BRIDGESEAT (TYP)



CORNER DETAIL FOR WINGWALL #3 ABOVE BRIDGE SEAT



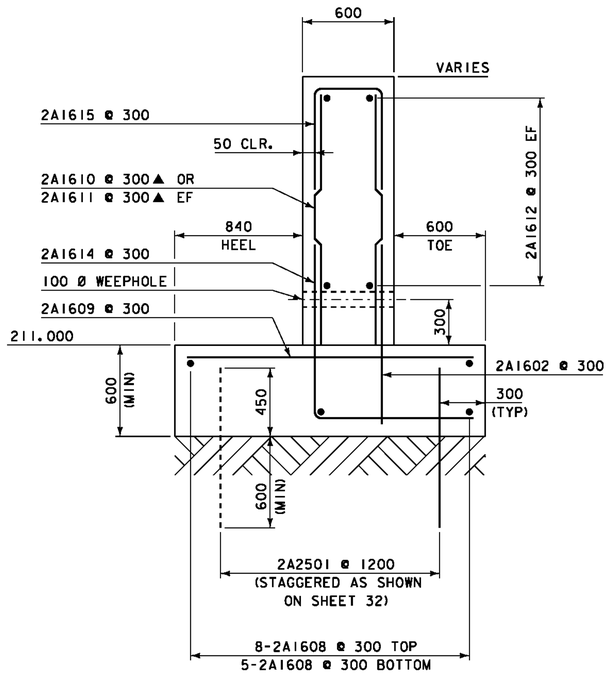
CORNER DETAIL FOR WINGWALL #3 BELOW BRIDGE SEAT

0 1 2 3 4 5

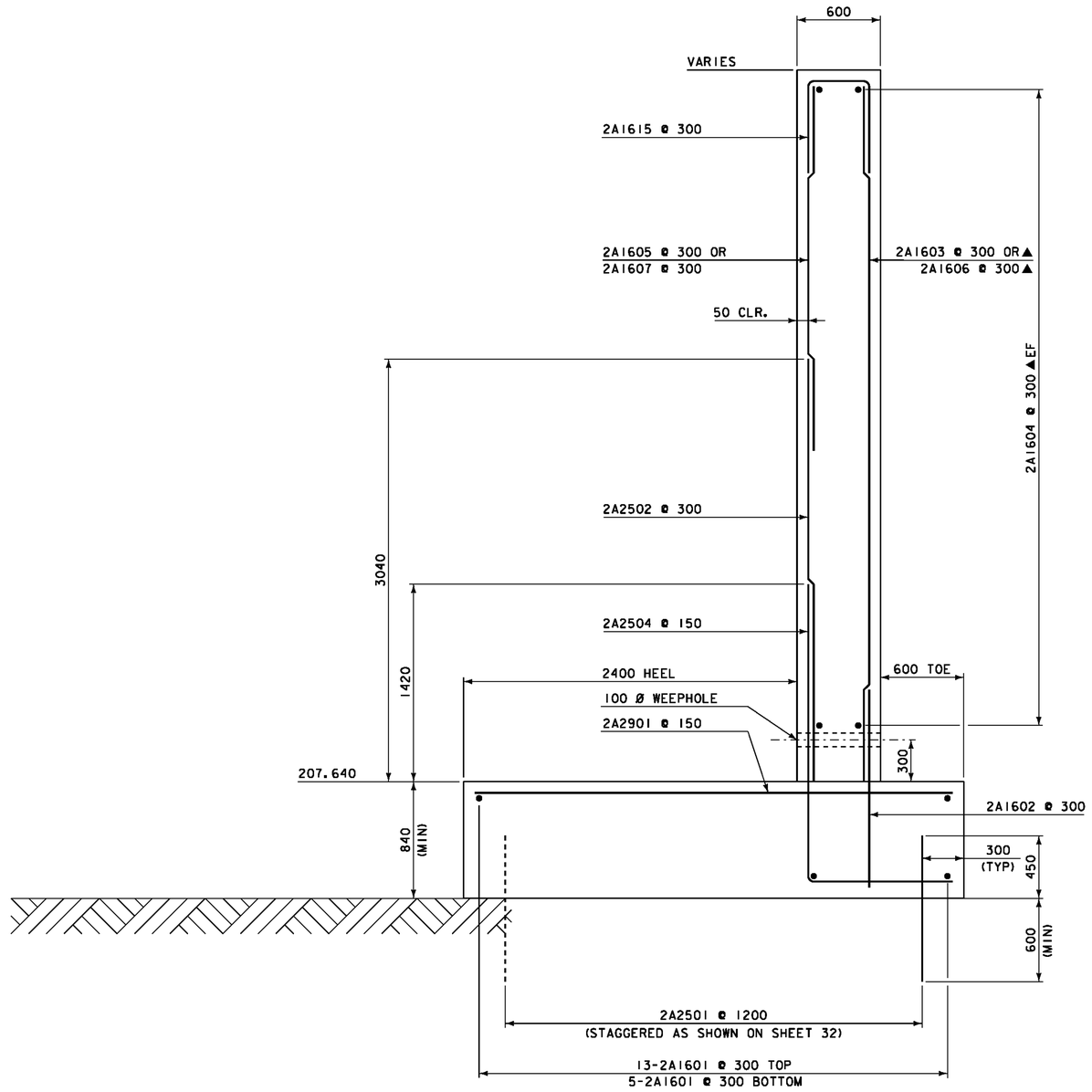
SCALE = 1:50

REV. NO.	DATE	BY	DESCRIPTION
⚠	2/18/2011	VAOT	MODIFIED ELEVATION OF WINGWALL.

PROJECT: EAST MONTPELIER	PROJECT NO.: BRF 037-2 (8)
DESIGN FILE NAME: 86e054\Structures\SidewalkChange\Abutment.dgn	
IPARM FILE NAME: se054abut2.i	PLOT DATE: 23-FEB-2011
DESIGNED BY: L.J.STONE	DRAWN BY: D.D.BEARD
SQUAD LEADER: C.P.WILLIAMS	CHECKED BY: H.I.SALLS
ABUTMENT 2 DETAILS	SHEET: 30A OF 63



ABUTMENT #2
SHORT TYPICAL SECTION
SCALE 1:20



ABUTMENT #2
TALL TYPICAL SECTION
SCALE 1:20

NOTE:

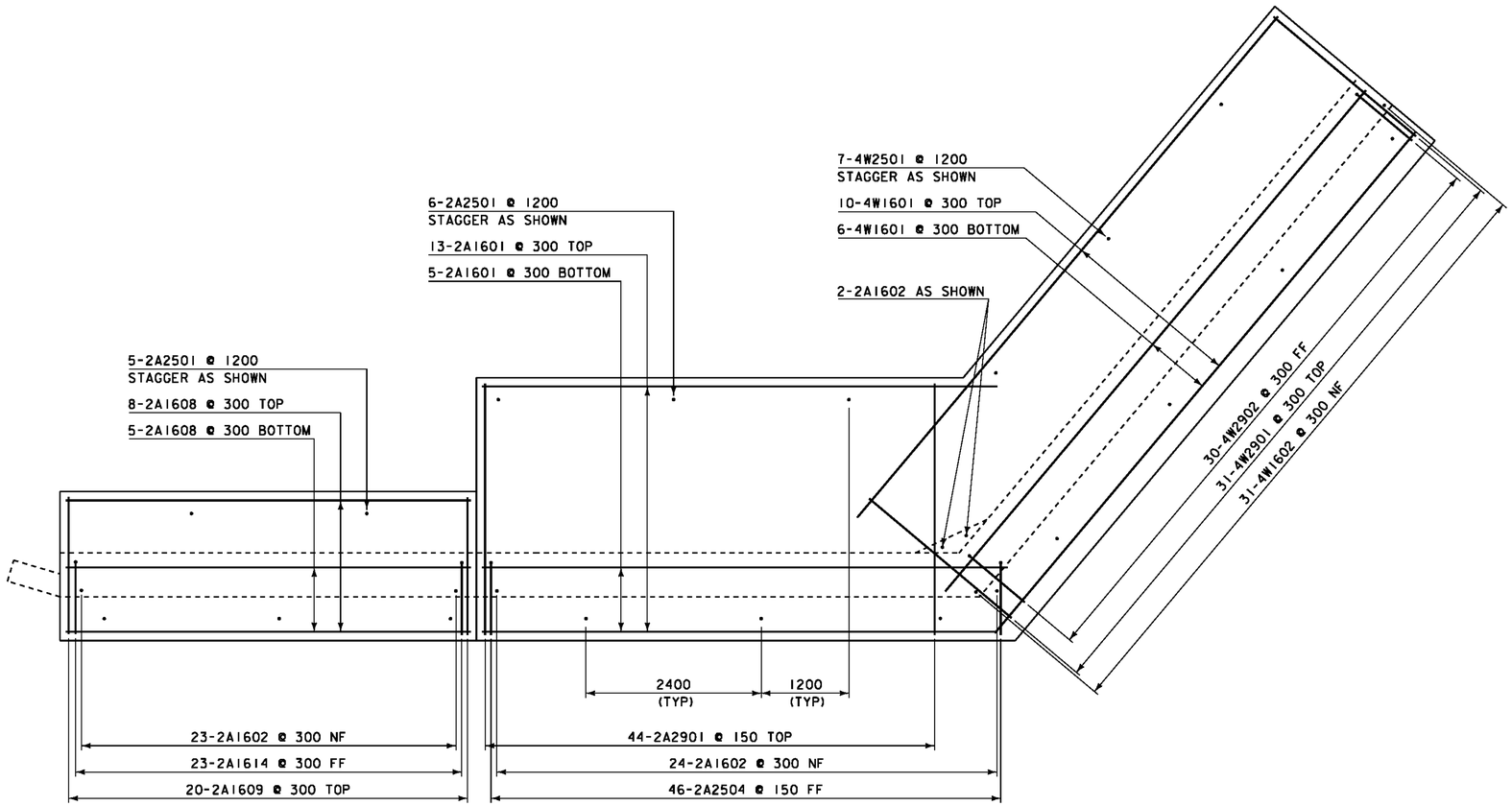
NF = NEAR FACE
FF = FAR FACE
EF = EACH FACE
▲ = CUT TO FIT IN FIELD

80 CLR. UNLESS OTHERWISE SPECIFIED ON THE PLANS.

ALL LAPS ARE 660 MIN UNLESS OTHERWISE SPECIFIED ON THE PLANS.

0 1 2
SCALE = 1:20

PROJECT: EAST MONTPELIER	PROJECT NO.: BRF 037-2 (8)
DESIGN FILE NAME: 86e054/Structures/se054sub.dgn	
IPARM FILE NAME: se054abut2typ.i	PLOT DATE: 18-AUG-2010
DESIGNED BY: L.J.STONE	DRAWN BY: D.D.BEARD
SQUAD LEADER: C.P.WILLIAMS	CHECKED BY: H.I.SALLS
ABUTMENT 2 TYPICAL DETAILS	SHEET: 31 OF 63



ABUTMENT #2 FOOTING REINFORCEMENT

SCALE 1:40

NOTE:

NF = NEAR FACE
FF = FAR FACE
EF = EACH FACE
▲ = CUT TO FIT IN FIELD

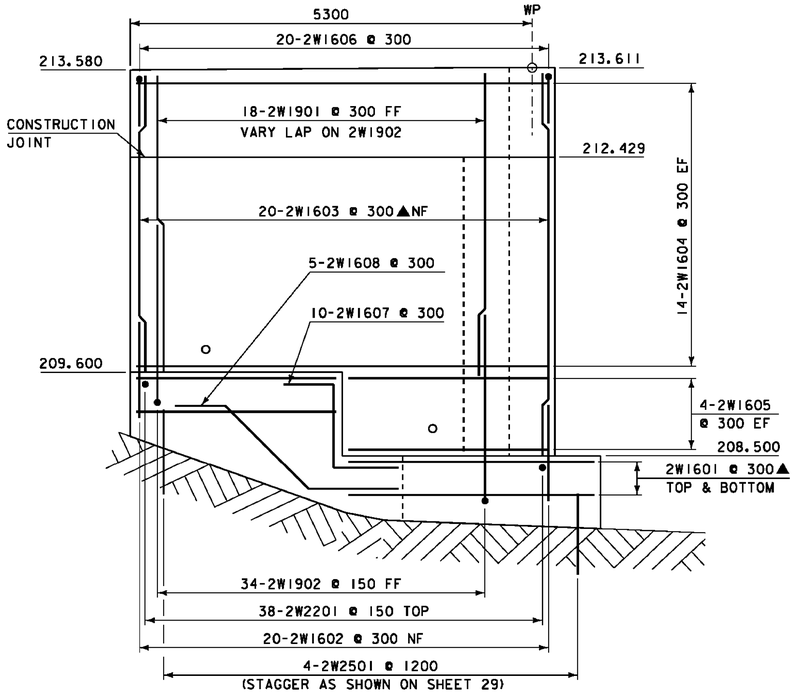
80 CLR. UNLESS OTHERWISE SPECIFIED ON THE PLANS.

ALL LAPS ARE 660 MIN UNLESS OTHERWISE SPECIFIED ON THE PLANS.

0 1 2 3 4

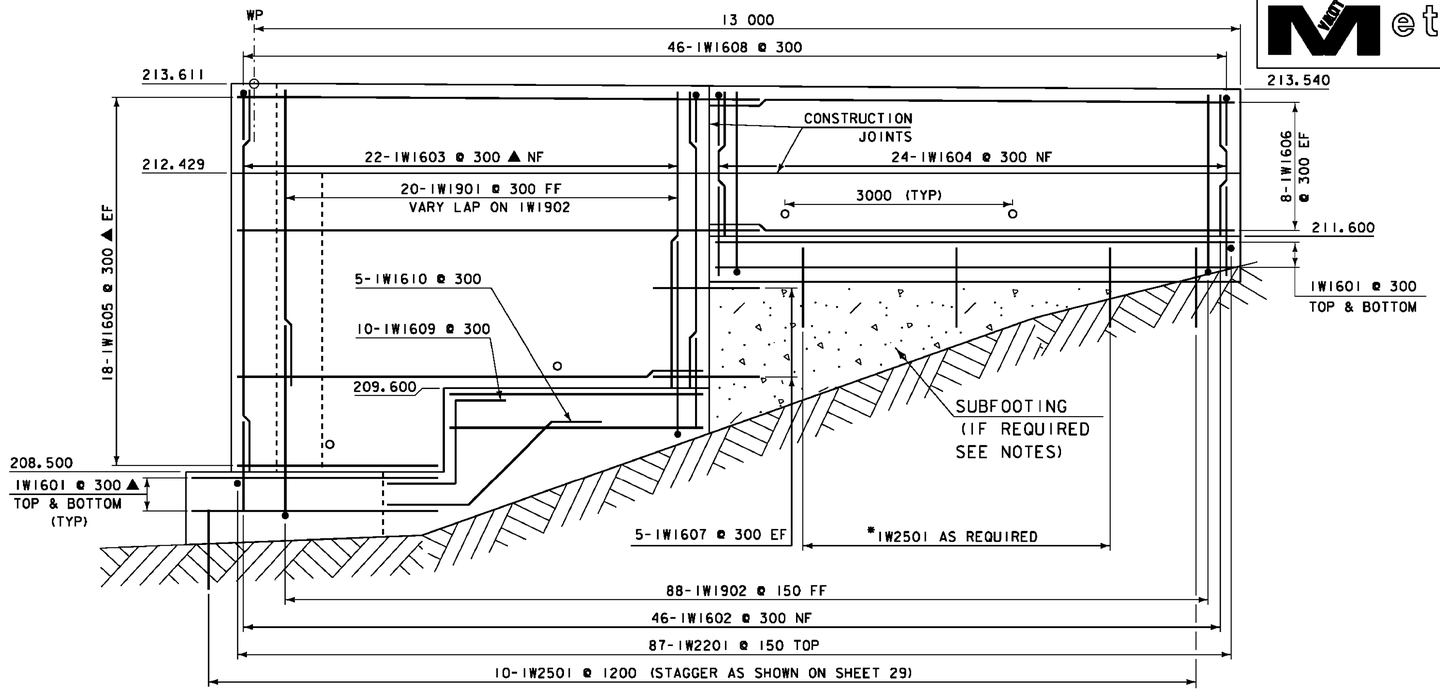
SCALE = 1:40

PROJECT: EAST MONTPELIER	PROJECT NO.: BRF 037-2(8)
DESIGN FILE NAME: 86e054/Stuructures/se054sub.dgn	
IPARM FILE NAME: se054ftg2.i	PLOT DATE: 18-AUG-2010
DESIGNED BY: L.J.STONE	DRAWN BY: D.D.BEARD
SQUAD LEADER: C.P.WILLIAMS	CHECKED BY: H.I.SALLS
ABUTMENT 2 FOOTING REINFORCEMENT	SHEET: 32 OF 63



WINGWALL 2 ELEVATION VIEW

SCALE 1:40

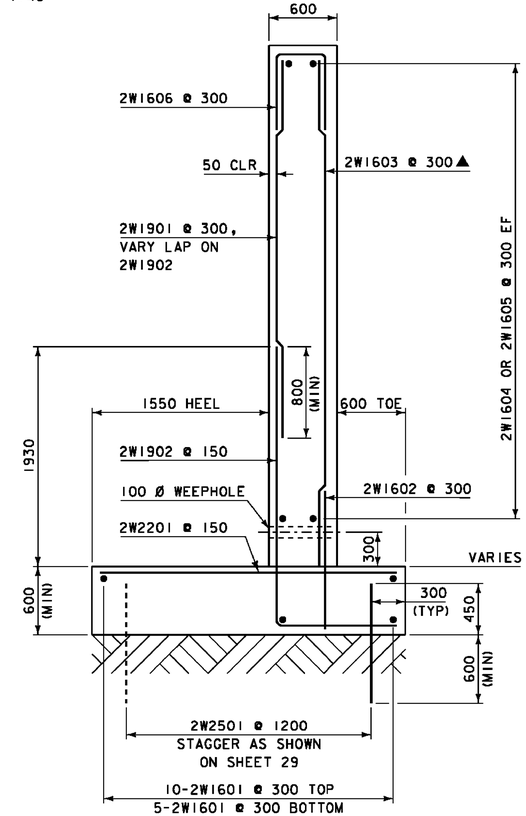


WINGWALL 1 ELEVATION VIEW

SCALE 1:40

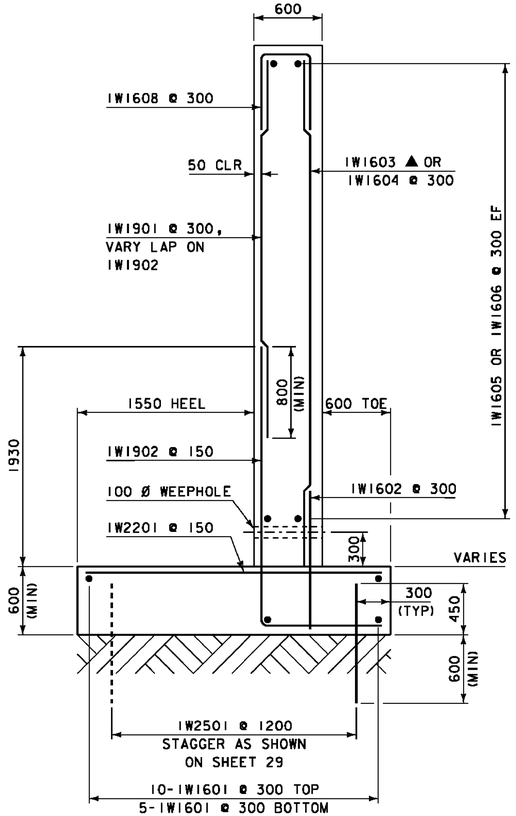
* 10 EXTRA 2501 BARS INCLUDED FOR USE IN SUBFOOTING

SEE REVISED SHEET 33A



WINGWALL 2 TYPICAL SECTION

SCALE 1:30



WINGWALL 1 TYPICAL SECTION

SCALE 1:30

0 1 2 3

SCALE = 1:30

0 1 2 3 4

SCALE = 1:40

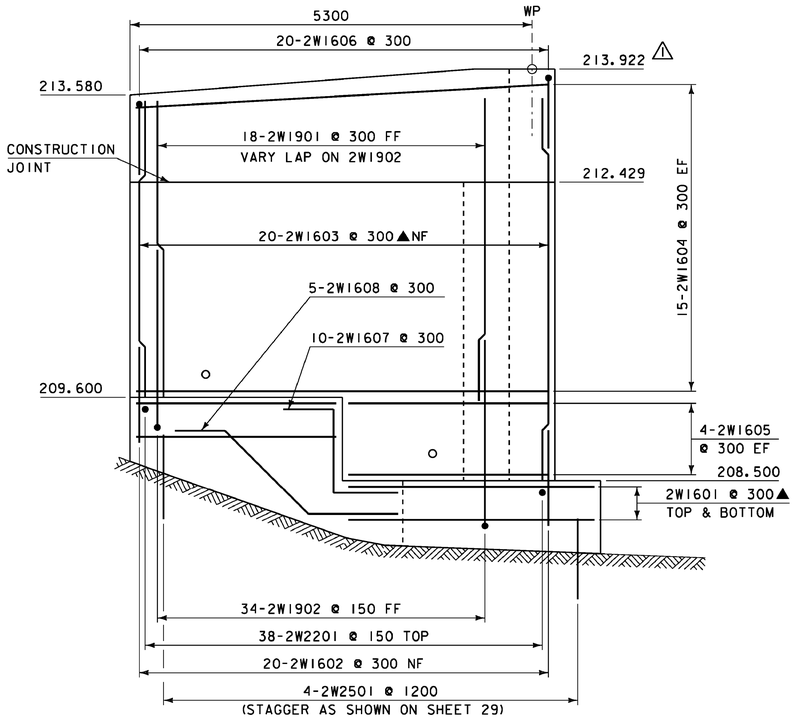
NOTE:

NF = NEAR FACE
FF = FAR FACE
EF = EACH FACE
▲ = CUT TO FIT IN FIELD

80 CLR. UNLESS OTHERWISE SPECIFIED ON THE PLANS

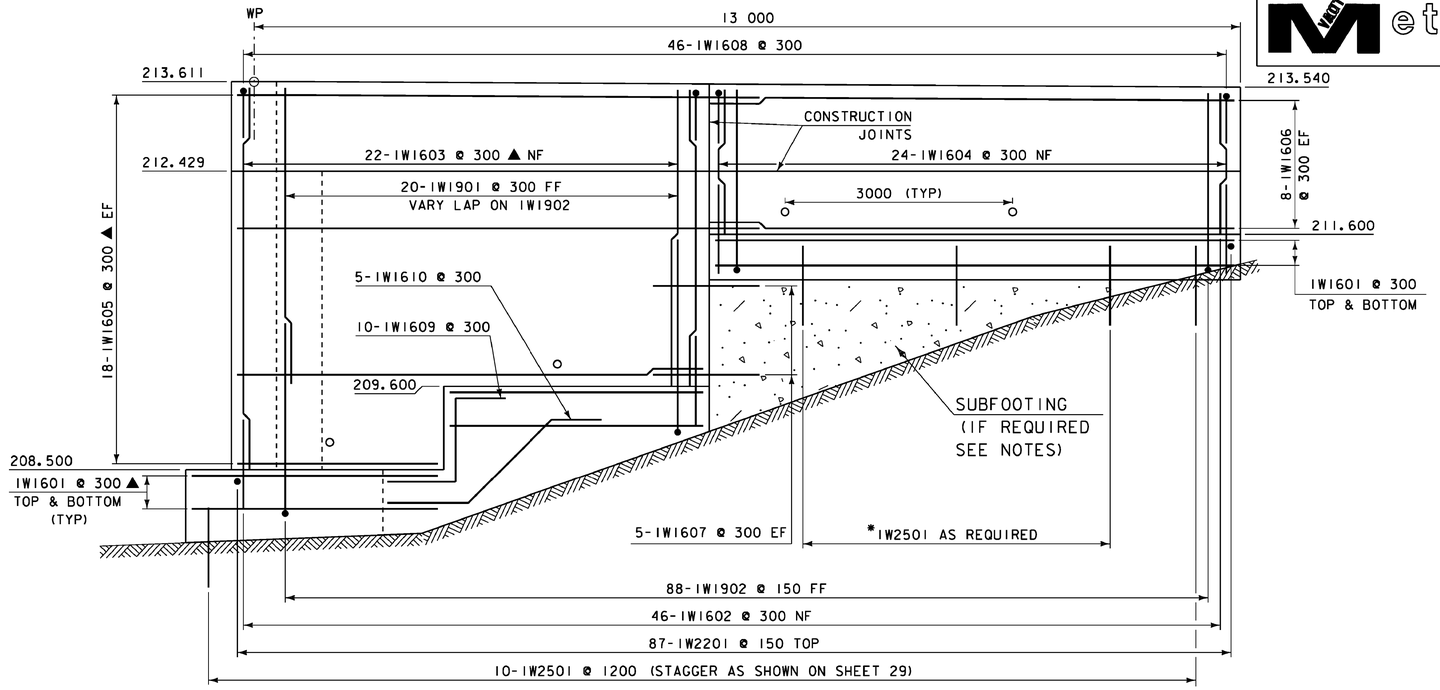
660 LAP MIN. UNLESS OTHERWISE SPECIFIED ON THE PLANS

PROJECT: EAST MONTPELIER	PROJECT NO.: BRF 037-2 (8)
DESIGN FILE NAME: 86e054\Structures\se054sub	
IPARM FILE NAME: se054ww1x2.i	PLOT DATE: 18-AUG-2010
DESIGNED BY: L.J.STONE	DRAWN BY: D.D.BEARD
SQUAD LEADER: C.P.WILLIAMS	CHECKED BY: H.I.SALLS
WINGWALLS 1 & 2 DETAILS	SHEET: 33 OF 63



WINGWALL 2 ELEVATION VIEW

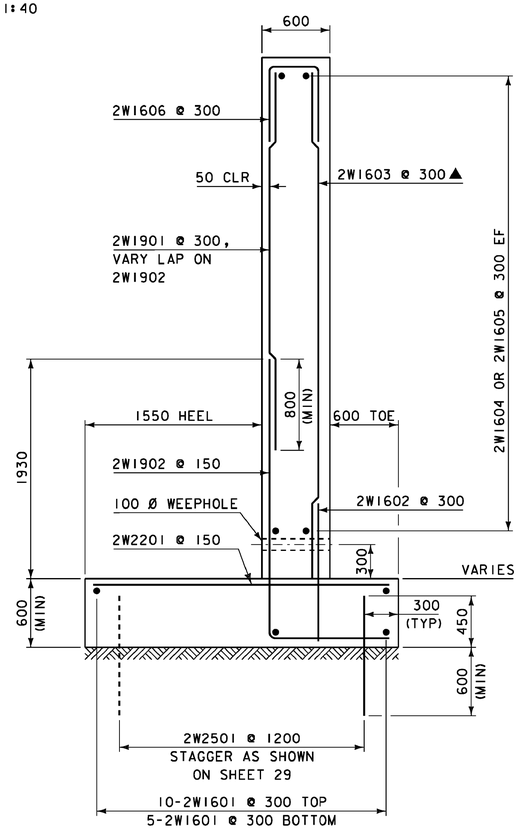
SCALE 1:40



WINGWALL 1 ELEVATION VIEW

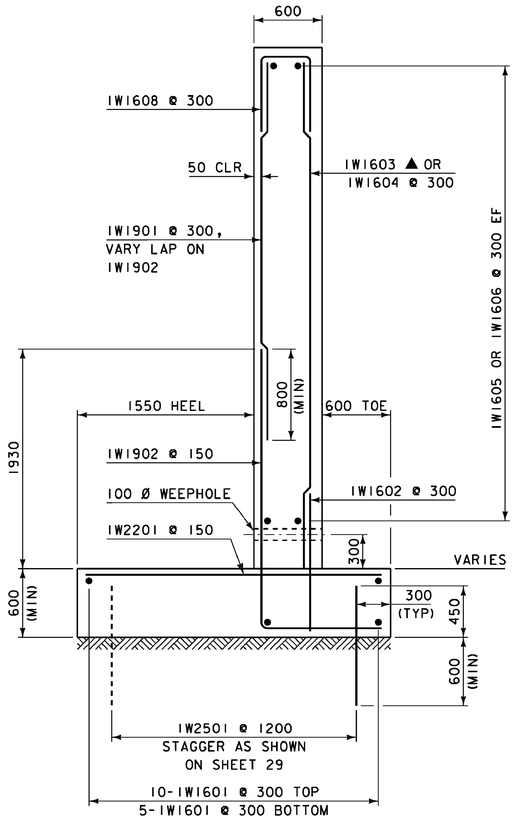
SCALE 1:40

* 10 EXTRA 2501 BARS INCLUDED FOR USE IN SUBFOOTING



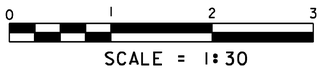
WINGWALL 2 TYPICAL SECTION

SCALE 1:30

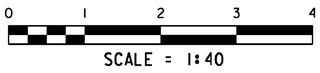


WINGWALL 1 TYPICAL SECTION

SCALE 1:30



SCALE = 1:30



SCALE = 1:40

NOTE:

NF = NEAR FACE
FF = FAR FACE
EF = EACH FACE
▲ = CUT TO FIT IN FIELD

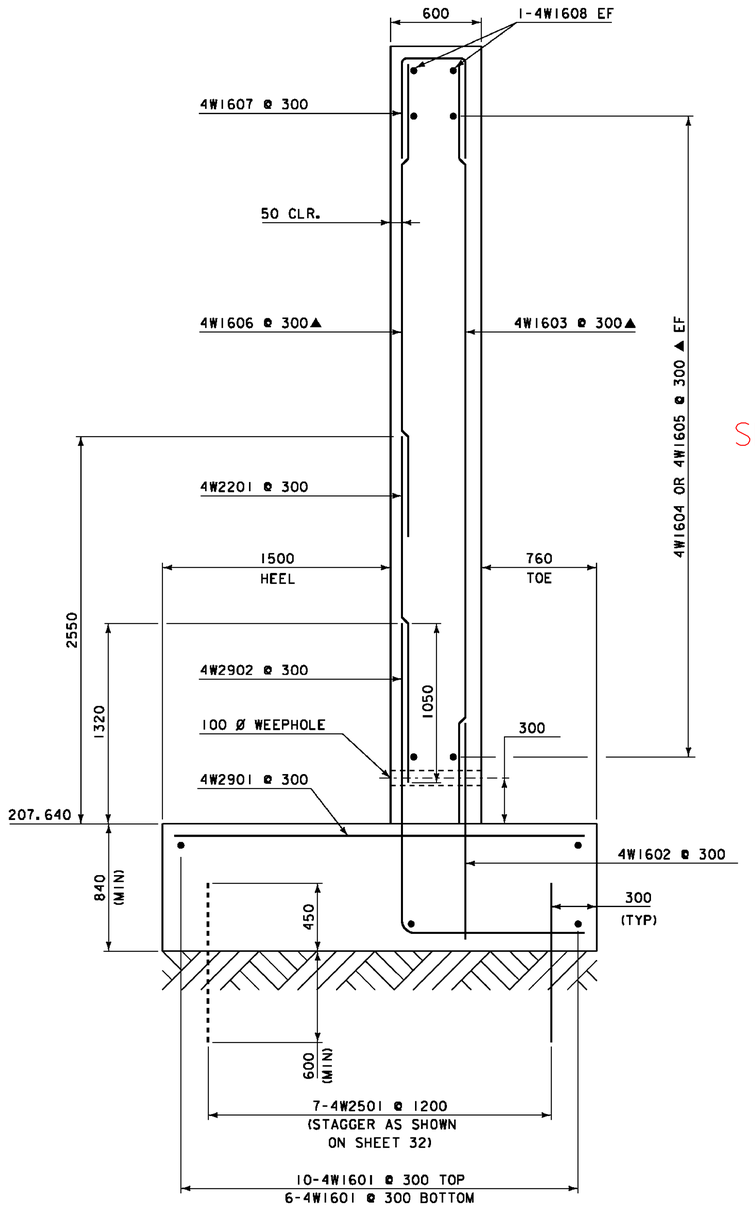
80 CLR. UNLESS OTHERWISE SPECIFIED ON THE PLANS

660 LAP MIN. UNLESS OTHERWISE SPECIFIED ON THE PLANS

REV. NO.	DATE	BY	DESCRIPTION
⚠	2/18/2011	VAOT	MODIFIED ELEVATION OF WINGWALL.

PROJECT:	PROJECT NO.:
EAST MONTPELIER	BRF 037-2(8)

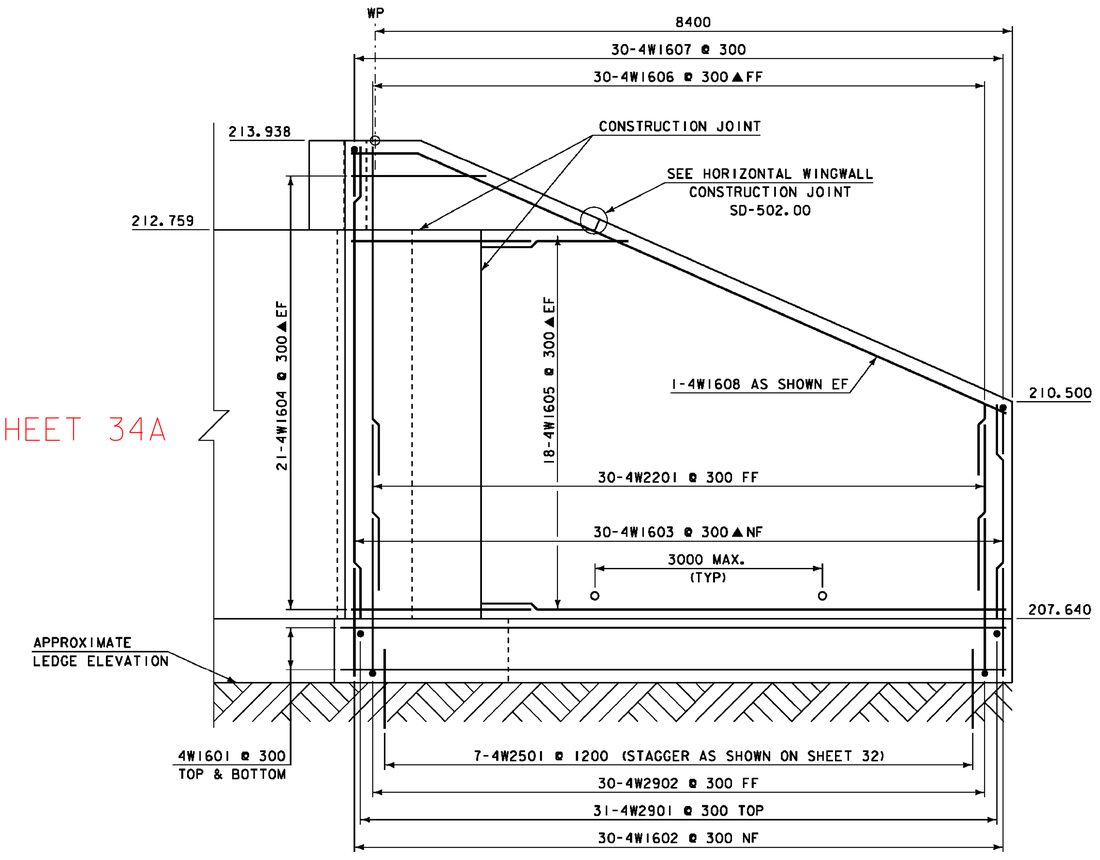
DESIGN FILE NAME: 86e054\Structures\SidewalkChange\Abutment.dgn
IPARM FILE NAME: se054ww1x2.i — PLOT DATE: 23-FEB-2011
DESIGNED BY: L.J.STONE — DRAWN BY: D.D.BEARD
SQUAD LEADER: C.P.WILLIAMS — CHECKED BY: H.I.SALLS
WINGWALLS 1 & 2 DETAILS — SHEET: 33A OF 63



WINGWALL #4 TYPICAL SECTION

SCALE = 1:20

SEE REVISED SHEET 34A



WINGWALL #4 ELEVATION

SCALE = 1:40

0 1 2

SCALE = 1:20

0 1 2 3 4

SCALE = 1:40

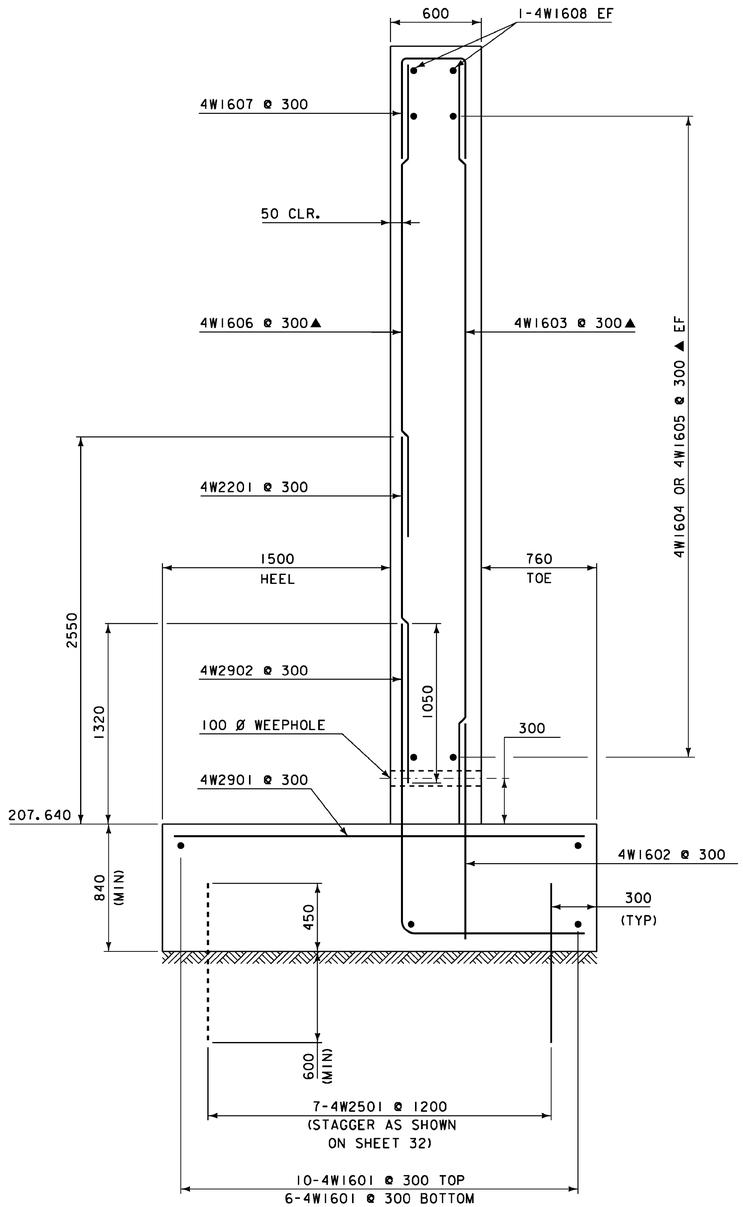
NOTE:

NF = NEAR FACE
FF = FAR FACE
EF = EACH FACE
▲ = CUT TO FIT IN FIELD

80 CLR. UNLESS OTHERWISE SPECIFIED ON THE PLANS.

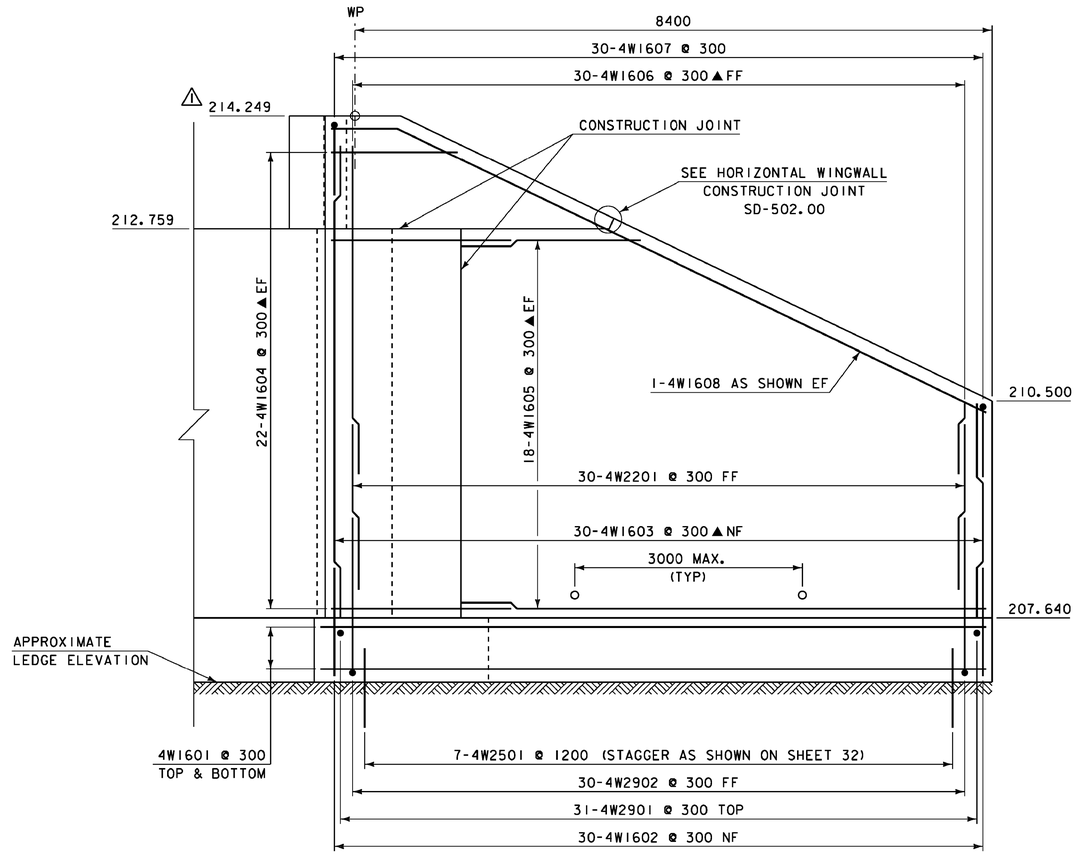
ALL LAPS ARE 660 MIN UNLESS OTHERWISE SPECIFIED ON THE PLANS.

PROJECT: EAST MONTPELIER	PROJECT NO.: BRF 037-2 (8)
DESIGN FILE NAME: 86e054/Stuructures/se054sub.dgn	
IPARM FILE NAME: se054ww3x4.i	PLOT DATE: 18-AUG-2010
DESIGNED BY: L. J. STONE	DRAWN BY: D. D. BEARD
SQUAD LEADER: C. P. WILLIAMS	CHECKED BY: H. I. SALLS
WINGWALL 4 DETAILS	SHEET: 34 OF 63



WINGWALL #4 TYPICAL SECTION

SCALE = 1:20



WINGWALL #4 ELEVATION

SCALE = 1:40

NOTE:

NF = NEAR FACE
FF = FAR FACE
EF = EACH FACE
▲ = CUT TO FIT IN FIELD

80 CLR. UNLESS OTHERWISE SPECIFIED ON THE PLANS.

ALL LAPS ARE 660 MIN UNLESS OTHERWISE SPECIFIED ON THE PLANS.

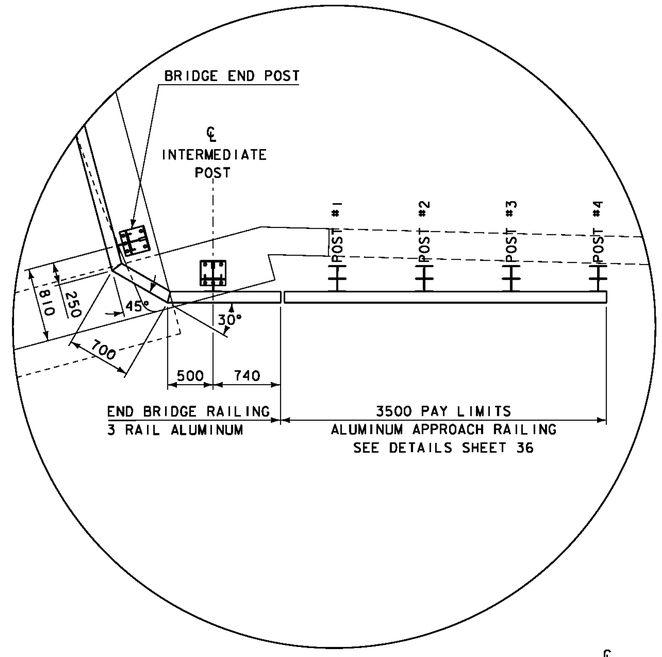
0 1 2
SCALE = 1:20

0 1 2 3 4
SCALE = 1:40

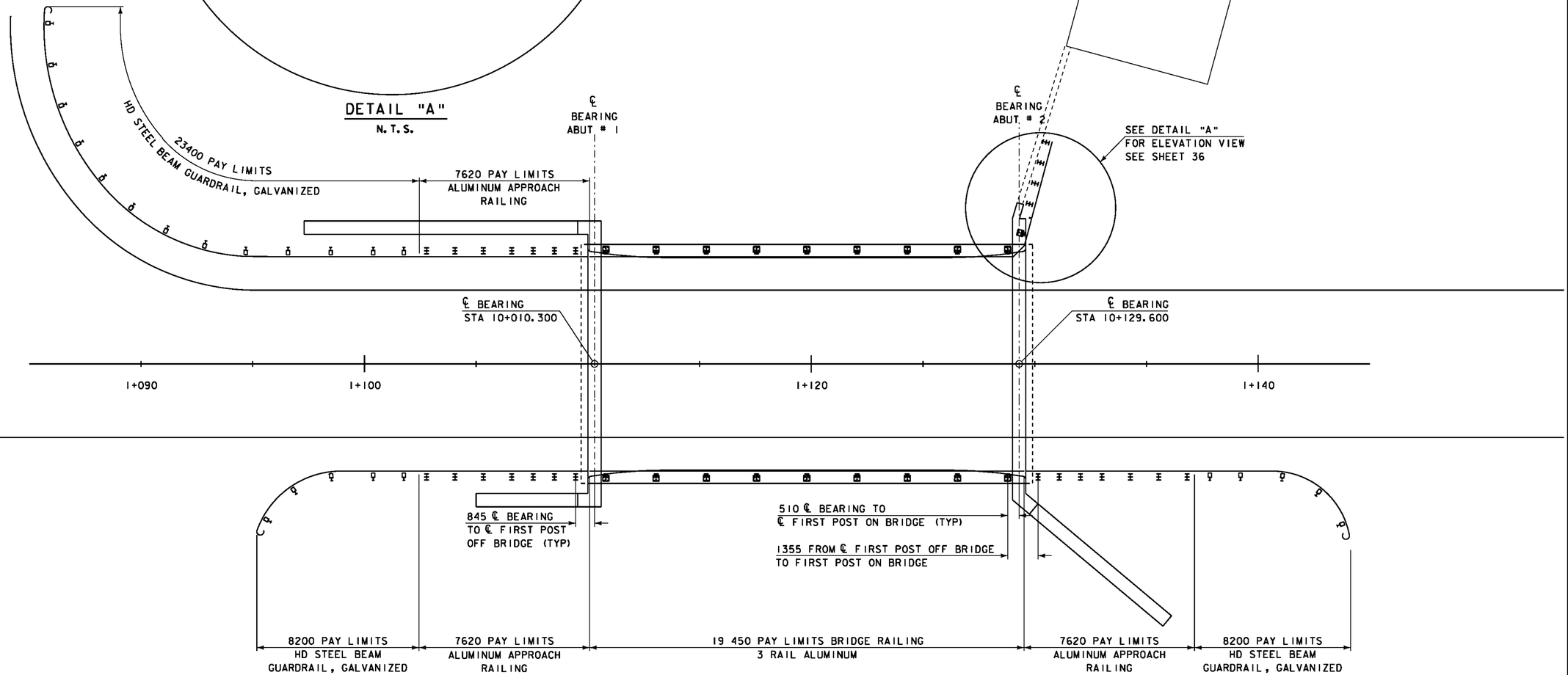
REV. NO.	DATE	BY	DESCRIPTION
⚠	2/18/2011	VAOT	MODIFIED ELEVATION OF WINGWALL.

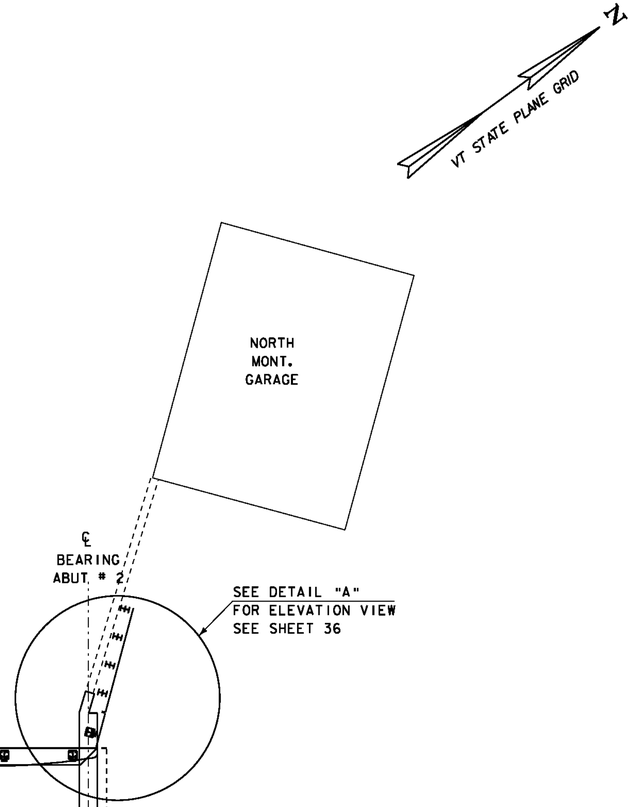
PROJECT: EAST MONTPELIER	PROJECT NO.: BRF 037-2(8)
DESIGN FILE NAME: 86e054\Structures\SidewalkChange\Abutment.dgn	
IPARM FILE NAME: se054ww3x4.i	PLOT DATE: 23-FEB-2011
DESIGNED BY: L.J.STONE	DRAWN BY: D.D.BEARD
SQUAD LEADER: C.P.WILLIAMS	CHECKED BY: H.I.SALLS
WINGWALL 4 DETAILS	SHEET: 34A OF 63

VAOT Metric



DETAIL "A"
N. T. S.





PLAN VIEW

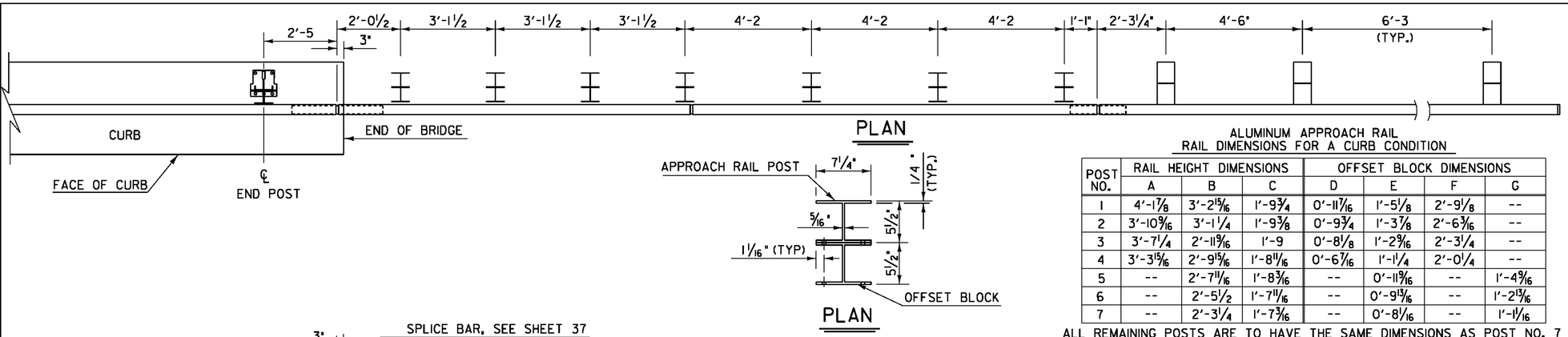
0 2 4 6 8 10
SCALE 1 : 100

NOTE: SEE SHEET 20 FOR GUARD RAIL RADII

DATUM

VERTICAL	USGS
HORIZONTAL	ASSUMED

PROJECT: EAST MONTPELIER	PROJECT NO. : BRF 037-2 (8)
DESIGN FILE NAME: 86e054/structures/se054rail.dgn	
IPARM FILE NAME: se054raillay.i	PLOT DATE: 18-AUG-2010
SURVEYED BY: R. MOREAU	SURVEY DATE: 3/93
SQUAD LEADER: C. P. WILLIAMS	DRAWN BY: D. D. BEARD
RAILING LAYOUT	SHEET: 35 OF 63



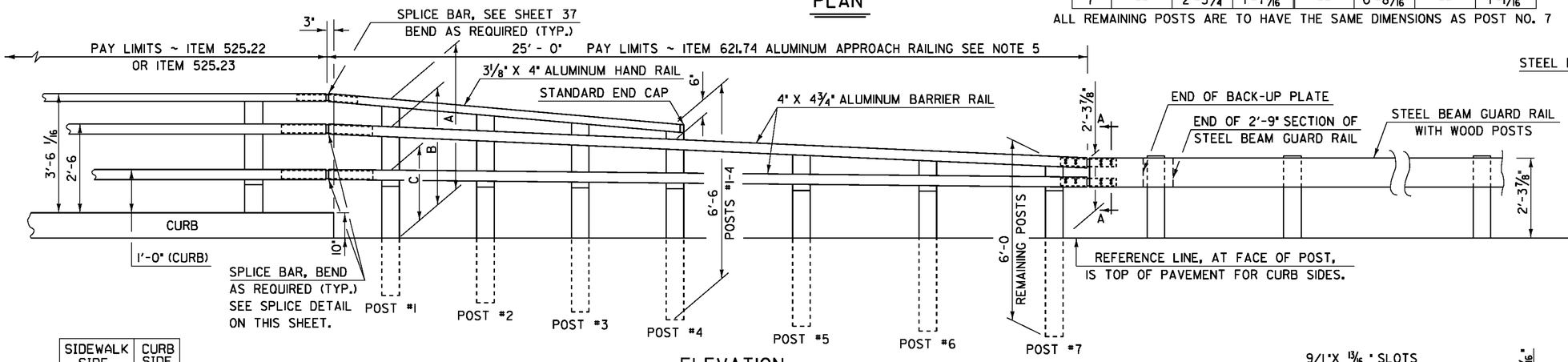
ALUMINUM APPROACH RAIL
RAIL DIMENSIONS FOR A CURB CONDITION

POST NO.	RAIL HEIGHT DIMENSIONS			OFFSET BLOCK DIMENSIONS			
	A	B	C	D	E	F	G
1	4'-1 7/8	3'-2 15/16	1'-9 3/4	0'-11 7/16	1'-5 1/8	2'-9 1/8	--
2	3'-10 9/16	3'-1 1/4	1'-9 3/8	0'-9 3/4	1'-3 1/8	2'-6 3/16	--
3	3'-7 1/4	2'-11 9/16	1'-9	0'-8 1/8	1'-2 9/16	2'-3 1/4	--
4	3'-3 15/16	2'-9 15/16	1'-8 11/16	0'-6 7/16	1'-1 1/4	2'-0 1/4	--
5	--	2'-7 11/16	1'-8 3/16	--	0'-11 9/16	--	1'-4 9/16
6	--	2'-5 1/2	1'-7 11/16	--	0'-9 13/16	--	1'-2 13/16
7	--	2'-3 1/4	1'-7 3/16	--	0'-8 1/16	--	1'-1 1/16

ALL REMAINING POSTS ARE TO HAVE THE SAME DIMENSIONS AS POST NO. 7

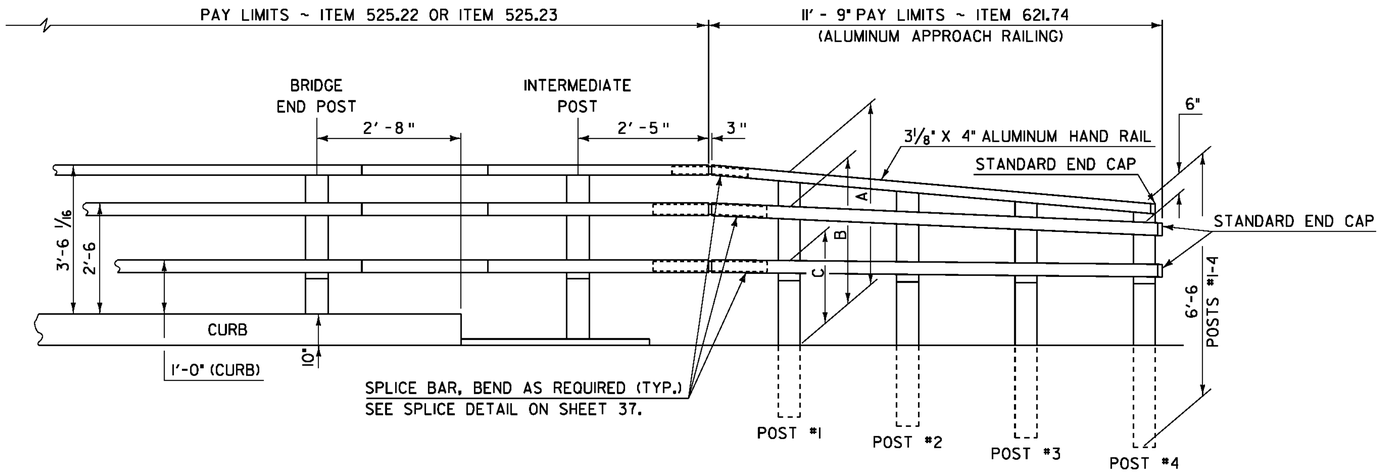
NOTES

1. POST 1 THROUGH 7 SHALL BE EXTRUDED ALUMINUM.
2. ALL STRUCTURAL STEEL SHALL BE AASHTO M270 GRADE 36 GALVANIZED AFTER FABRICATION.
3. ALL ITEMS NOT OTHERWISE INDICATED SHALL MEET THE SPECIFICATION REQUIREMENTS OF THE STANDARD SHEETS ON WHICH THEY ARE DETAILED.
4. SEE STANDARD G-1 FOR STEEL BEAM GUARD RAIL DETAILS. SEE SHEETS 37 AND 38 FOR ALUMINUM BRIDGE RAILING DETAILS.
5. THE COST OF ALL MATERIALS AND LABOR FOR THE SPLICE BETWEEN THE ALUMINUM APPROACH RAILING AND THE STEEL BEAM GUARD RAIL SHALL BE SUBSIDIARY TO ITEM 621.74, ALUMINUM APPROACH RAILING.
6. DETAILS ARE SHOWN FOR TRANSITION TO A 3 RAIL ALUMINUM BRIDGE RAILING.
7. DIMENSIONS SHOWN ARE FROM A REFERENCE LINE AT THE FACE OF POST FOR A NORMAL CROWNED SECTION. APPROPRIATE CORRECTIONS SHALL BE MADE FOR CROSS SLOPES OTHER THAN A NORMAL SECTION.

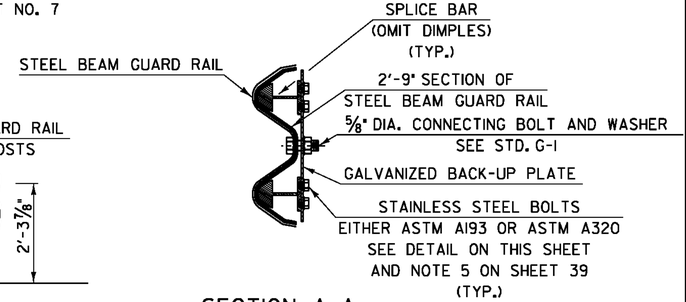


ELEVATION

	SIDEWALK SIDE	CURB SIDE
"X"		1/8"
"Y"		9/16"
"Z"		1 1/16"



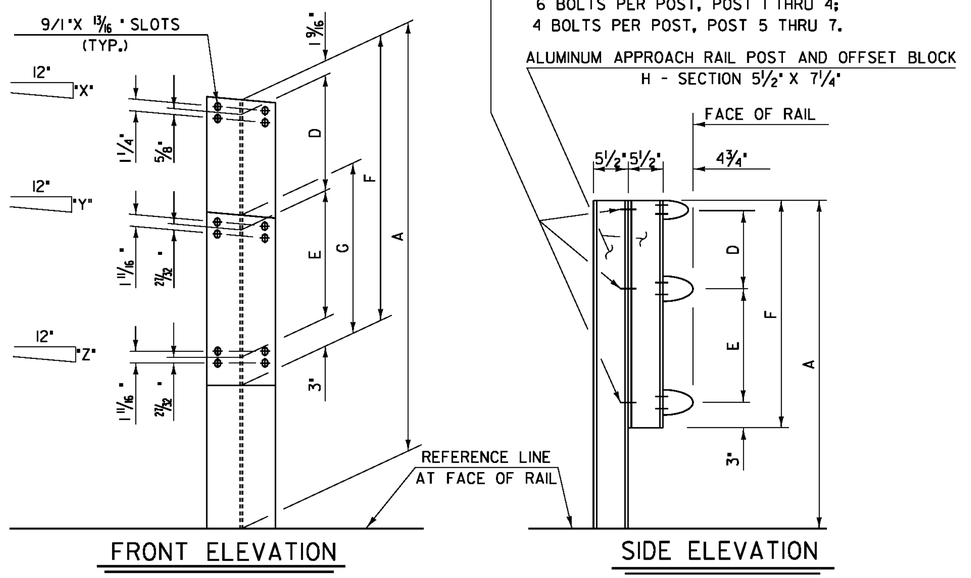
ELEVATION AT END BRIDGE-LEFT



SECTION A-A

ATTACH OFFSET BLOCK TO POST WITH
½" -13 UNC X 1½" LONG STAINLESS STEEL
HEX HEAD BOLTS, NUTS AND WASHERS.
6 BOLTS PER POST, POST 1 THRU 4;
4 BOLTS PER POST, POST 5 THRU 7.

ALUMINUM APPROACH RAIL POST AND OFFSET BLOCK
H - SECTION 5½" X 7¼"



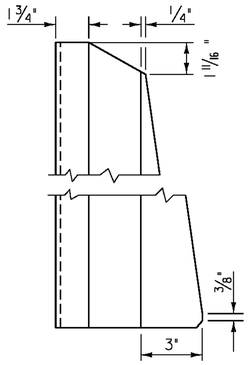
FRONT ELEVATION

SIDE ELEVATION

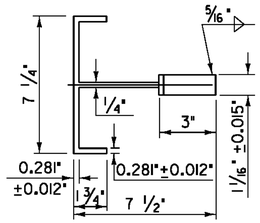
APPROACH RAIL DETAILS

NOTE: DETAILS IN ENGLISH UNITS

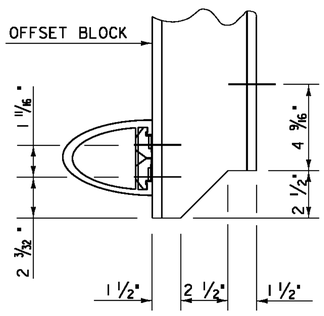
PROJECT: EAST MONTPELIER	PROJECT NO.: BRF 037 - 2 (8)
DESIGN FILE NAME: 86e054\Structures\se054rail.dgn	
IPARM FILE NAME: raildetl.i	PLOT DATE: 18-AUG-2010
DESIGNED BY: L. J. STONE	DRAWN BY: D. D. BEARD
SQUAD LEADER: C. P. WILLIAMS	CHECKED BY: H. I. SALLS
ALUMINUM RAILING DETAILS I	SHEET: 36 OF 63



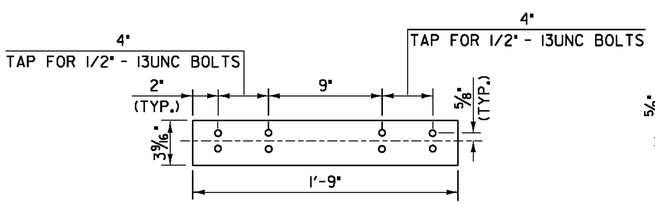
POST SIDE VIEW



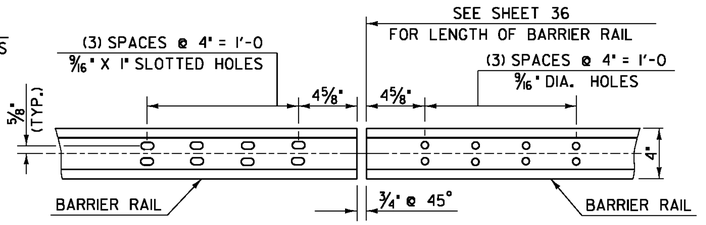
POST PLAN VIEW



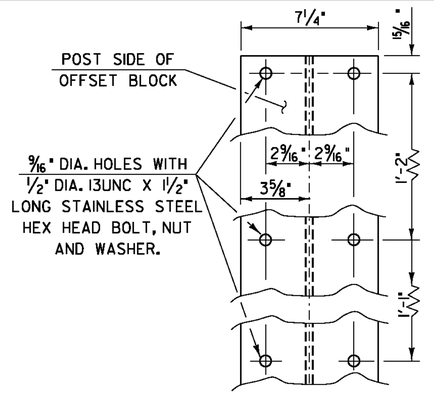
COPING DETAIL



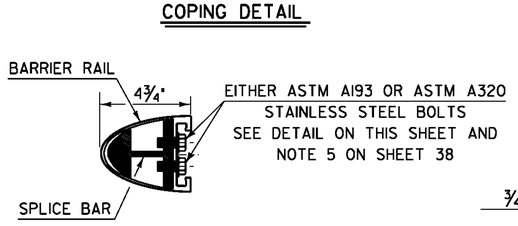
ELEVATION OF BARRIER RAIL SPLICE BAR TO BE USED AT TRANSITION BETWEEN APPROACH RAIL & GUARD RAIL (FROM BACK)



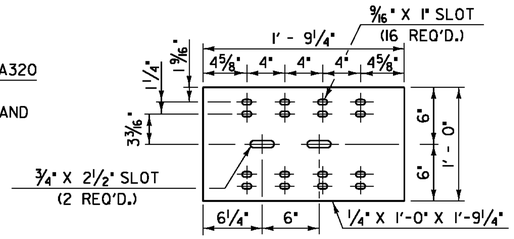
ELEVATION OF BARRIER RAIL (FROM BACK) AT ALL INTERMEDIATE RAIL SPLICES



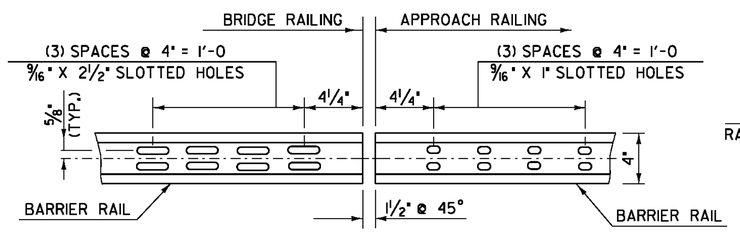
OFFSET BLOCK CONNECTION



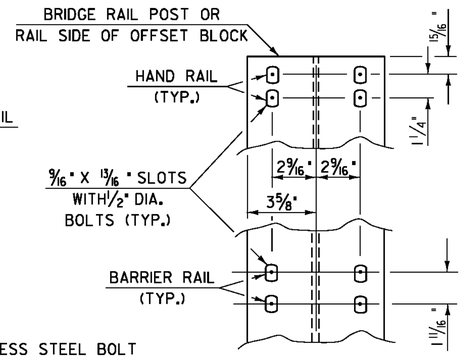
TYPICAL SECTION THROUGH BARRIER RAIL SPLICE



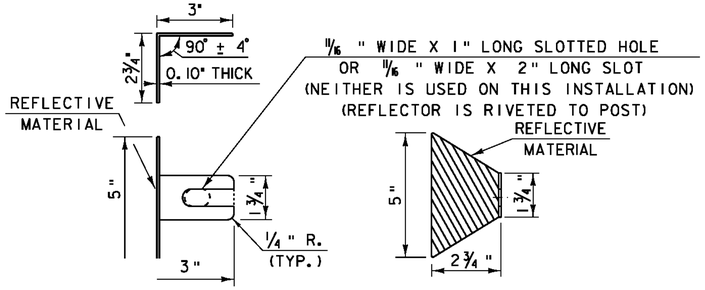
BACK-UP PLATE DETAILS



ELEVATION OF BARRIER RAIL (FROM BACK)



RAIL CONNECTION



REFLECTOR DETAILS

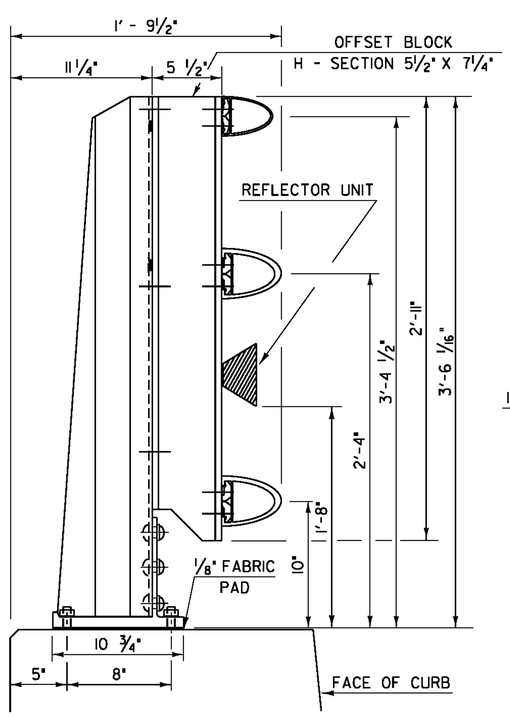
THIS REFLECTORIZED ALUMINUM DELINEATOR IS TO BE ERECTED EVERY 30 FEET (OR CLOSEST POST) WITH 2 NO. 8 X 3/4" SELF-TAPPING SCREWS.

DELINEATORS SHALL MEET SPECIFICATION REQUIREMENTS FOR ASTM B209 ALLOY 5052-H32.

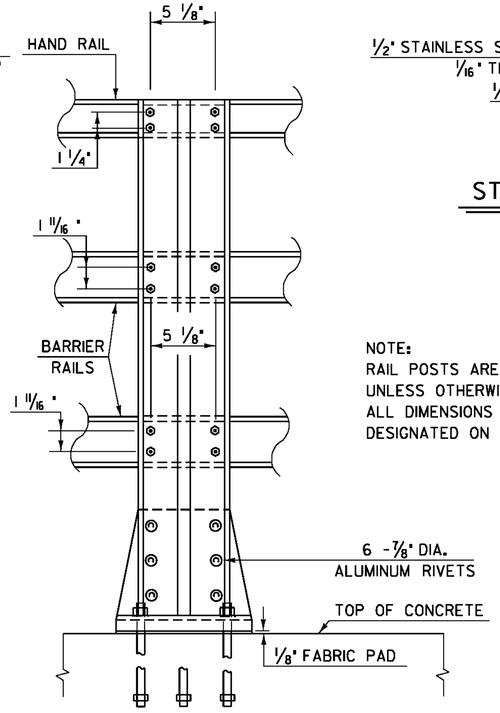
REFLECTIVE MATERIAL SHALL MEET THE REQUIREMENTS OF SUBSECTION 750.08 AND SHALL BE OF ENCAPSULATED LENS SILVER OR AMBER. AMBER IS TO BE INSTALLED ON THE DRIVER'S LEFT AND SILVER ON THEIR RIGHT.

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 RAIL ON THE CURB SIDE.)

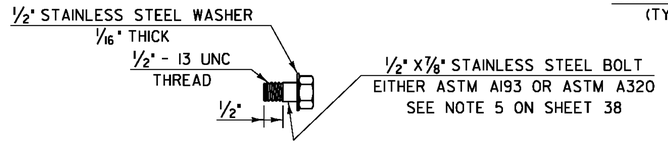
PAYMENT SHALL BE SUBSIDIARY TO ALL OTHER ITEMS.



RAIL POST DETAILS ON SUPERSTRUCTURE SIDE ELEVATION OF THREE RAIL TO BE USED ON CURB SIDE

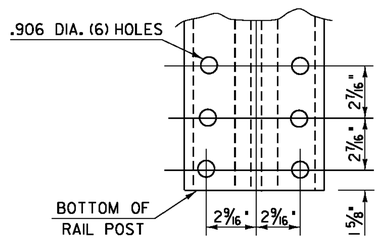


OUTSIDE ELEVATION OF THREE RAIL POST



STAINLESS STEEL BOLT DETAILS

NOTE:
RAIL POSTS ARE TO BE SET NORMAL TO GRADE UNLESS OTHERWISE DESIGNATED ON BRIDGE PLANS. ALL DIMENSIONS ARE TYPICAL UNLESS OTHERWISE DESIGNATED ON THE BRIDGE PLANS.



POST BASE BOLT HOLE DETAILS

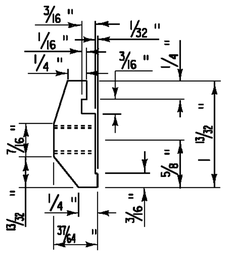
ALLOWABLE STRESSES:

RAILING : 21,000 PSI TENSION
22,000 PSI COMPRESSION

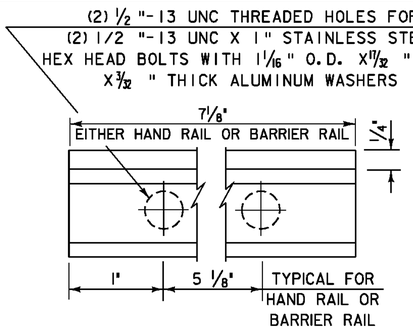
POSTS : 17,000 PSI TENSION
19,000 PSI COMPRESSION

NOTE: DETAILS IN ENGLISH UNITS

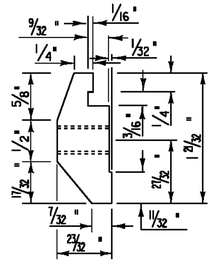
PROJECT: EAST MONTPELIER	PROJECT NO.: BRF 037 - 2 (8)
DESIGN FILE NAME: 86e054\Structures\se054rail.dgn	
IPARM FILE NAME: raildet2.i	PLOT DATE: 18-AUG-2010
DESIGNED BY: L. J. STONE	DRAWN BY: D. D. BEARD
SQUAD LEADER: C. P. WILLIAMS	CHECKED BY: H. I. SALLS
ALUMINUM RAILING DETAILS 2	SHEET: 37 OF 63



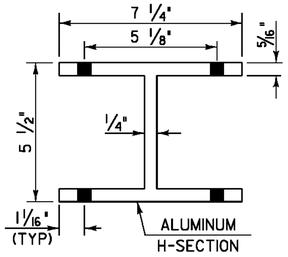
POST CONNECTION
HAND RAIL SECTION



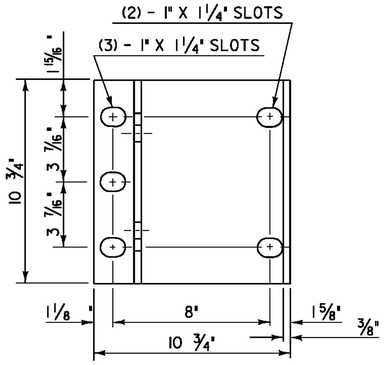
POST CONNECTION
ELEVATION



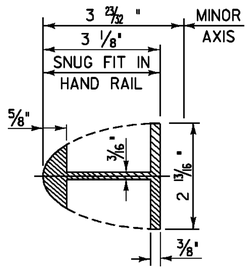
POST CONNECTION
BARRIER RAIL SECTION



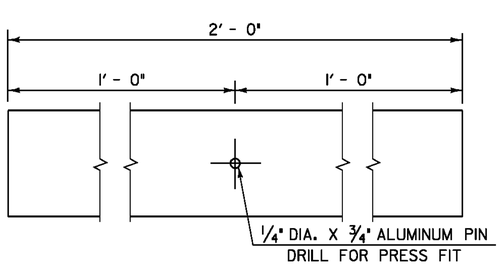
PLAN VIEW OF
OFFSET BLOCK
(TO BE USED ON
SUPERSTURCTURE
ON CURB SIDE)



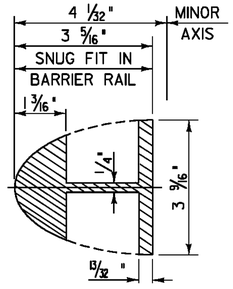
POST BASE
PLAN



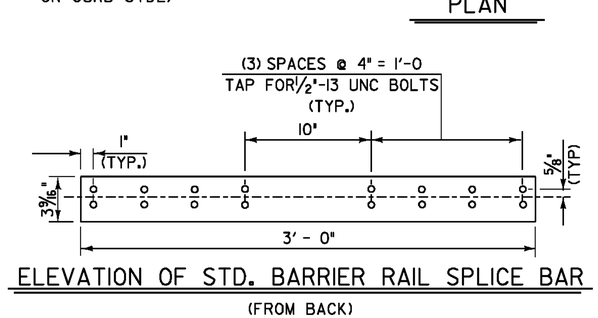
HAND RAIL
SPLICE SECTION



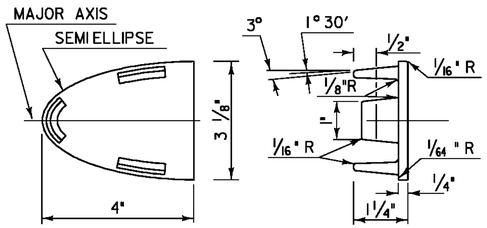
ELEVATION OF
HAND RAIL SPLICE BAR



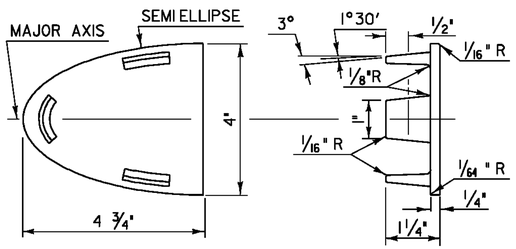
BARRIER RAIL
SPLICE SECTION
(SEE SHEET 36 FOR ELEVATION
OF BARRIER RAIL SPICE BAR)



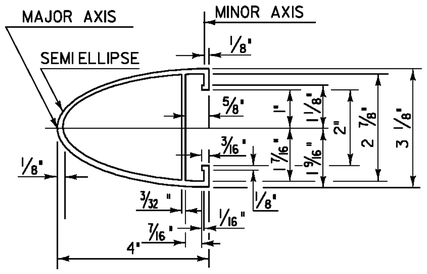
ELEVATION OF STD. BARRIER RAIL SPLICE BAR
(FROM BACK)



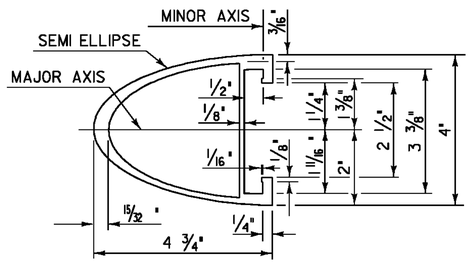
HAND RAIL END CAP



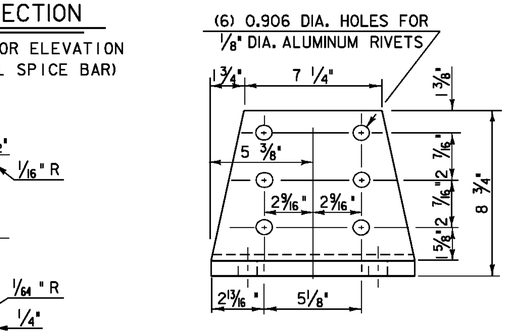
BARRIER RAIL END CAP



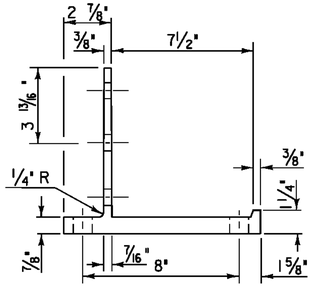
HAND RAIL SECTION



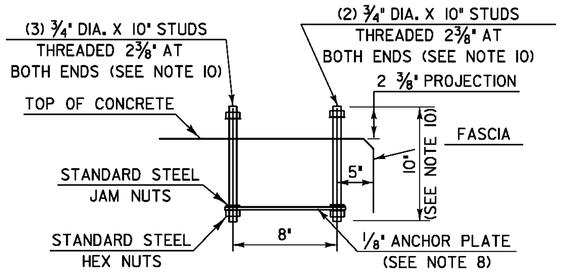
BARRIER RAIL SECTION
(SEE SHEET 36 FOR ELEVATION
OF BARRIER RAIL)



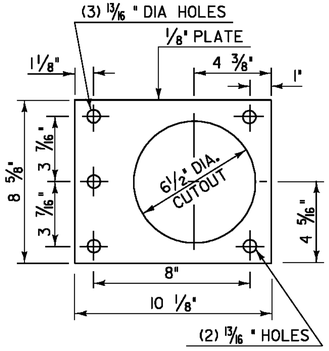
POST BASE
FRONT ELEVATION



POST BASE
SECTION



POST ANCHOR ASSEMBLY



ANCHOR PLATE

NOTE: DETAILS IN ENGLISH UNITS

NOTES:

1. ANCHOR BOLTS, WASHERS AND HEAVY HEX NUTS MAY BE ANY OF THE FOLLOWING:
   A. ASTM A449 GALVANIZED, OR
   B. AASHTO M164 (ASTM A325) GALVANIZED
   C. BOLTS AND WASHERS OF STAINLESS STEEL ASTM A276, TYPE 304 (MINIMUM ULTIMATE STRENGTH OF 100,000 PSI) WITH STAINLESS STEEL NUTS OF ASTM A194, GRADE 8NA.
2. ALUMINUM POSTS, POST BASES, SPLICE BARS, CONNECTION BARS, RAILS AND BALUSTER FRAMES SHALL CONFORM TO ASTM B221 ALLOY 6061-T6 OR ALLOY 6351-T5. MINIMUM ALLOWABLE STRESS Fy=35,000 PSI.
3. ALUMINUM BALUSTER TUBES SHALL CONFORM TO ASTM B210 ALLOY 6061-T5 OR 6063-T5
4. ALUMINUM RAIL END CAPS SHALL CONFORM TO ASTM B26 ALLOY 356-T6
5. THE POST, RAIL, AND OFFSET BLOCK CONNECTION BOLTS SHALL BE EITHER ASTM A193 OR ASTM A320. EITHER ONE SHALL BE CLASS 1, B8 GRADE AISI 304 WITH AN ULTIMATE TENSILE STRENGTH OF 75,000 PSI. NUTS FOR EITHER OF THE ABOVE BOLTS SHALL BE ASTM A194, GRADE 8, STAINLESS STEEL WITH AN ULTIMATE TENSILE STRENGTH OF 75,000 PSI.
6. SET SCREWS FOR ATTACHING BALUSTERS TO RAILING SHALL BE ASTM F880, TYPE 303 MATERIAL.
7. RIVETS SHALL BE COLD DRIVEN HIGH BUTTON HEAD "CONE POINT". CONFORMING TO ASTM B316 ALLOY 6061-T6.
8. THE ANCHOR PLATE FOR THE POST ANCHOR ASSEMBLY SHALL BE ASTM A36 STRUCTURAL STEEL.
9. WELDING SHALL CONFORM TO THE REQUIREMENTS OF SUBSECTION 506.10 USING THE GMAW-INERT GAS PROCESS AND ASW ER 5356 ELECTRODE WIRE.
10. UNLESS OTHERWISE SPECIFIED, ANCHOR BOLTS SHALL BE CAST INTO THE CONCRETE AS DETAILED.
11. WHENEVER FEASIBLE, BARRIER RAIL AND HAND RAIL SECTIONS SHALL BE FULL LENGTH SECTIONS (40' +) AND WHEN POSSIBLE SHALL BE ATTACHED TO THREE POSTS. RAILS SHALL BE SPLICED AT EACH DECK JOINT AND INTERMITTENTLY AS REQUIRED. SPLICES SHALL OCCUR WITHIN THE SAME PANEL.
12. ENDS OF RAILS SHALL BE CUT SQUARE AND GROUND FREE OF BURRS OR RAGGED EDGES. EXPOSED ENDS SHALL BE CAPPED.
13. THE CONCRETE CONTACT SURFACE AT THE POST BASE SHALL BE BUSH HAMMERED AND/OR SHIMMED AS REQUIRED FOR PROPER POST ALIGNMENT. POST HEIGHT ADJUSTMENTS LESS THAN 1/4" SHALL BE WITH 1/16" AND 1/8" SHIMS. CORRECTIONS EXCEEDING 1/4" SHALL BE WITH EPOXY MORTAR. FABRIC BEARING PADS AND ANY REQUIRED SHIMS OR EPOXY MORTAR ARE INCIDENTAL TO THE UNIT PRICE BID FOR THE RAILING.
14. SHIMS AND 1/8" FABRIC BEARING PADS SHALL BE 10 3/4" SQUARE WITH SLOTTED HOLES SIZED AND LOCATED THE SAME AS THE POST BASE DETAIL. FABRIC BEARING PADS SHALL CONFORM TO SUBSECTION 731.01 OR 731.02. SHIM MATERIAL SHALL BE ASTM B209 ALLOY 1100-0.
15. EXTRUDED SECTIONS ARE DETAILED TO COMPLY WITH CURRENT AASHTO-AGC-ARTBA STANDARDS. MINOR VARIATIONS OF THE DETAILS SHOWN MAY BE CONSIDERED PROVIDING THEY DO NOT REDUCE THE STRENGTH CAPACITY OF THE RAIL SYSTEM.
16. ALUMINUM WASHERS SHALL BE ASTM B209 ALLOY CLAD 2024-T4.

PROJECT:	PROJECT NO.:
EAST MONTPELIER	BRF 037 - 2 (8)
DESIGN FILE NAME: 86e054\Structures\se054rail.dgn	
IPARM FILE NAME: railset3.i	PLOT DATE: 07-SEP-2010
DESIGNED BY: L. J. STONE	DRAWN BY: D. D. BEARD
SQUAD LEADER: C. P. WILLIAMS	CHECKED BY: H. I. SALLS
ALUMINUM RAILING DETAILS 3	SHEET: 38 OF 63

STATE OF VERMONT
AGENCY OF TRANSPORTATION

REINFORCING STEEL SCHEDULE

Metric

BRIDGE #71

ITEM	EACH	SIZE	LENGTH	MARK	TYPE	A	B	C	D	E	F	G	H	J	K	R	O
	24	16	6920	ES1601	STR												
▲	26	16	10540	ES1602	STR												
	48	16	1600	ES1603	S10		790	140	670								
	74	16	1790	ES1604	T1	595	470	190	535				375		375		
✳	75	16	1850	ES1605	S10		840	170	840								
✳	39	25	900	ES2501	19		300	600					150		150		

APPROACH SLAB #1

ITEM	EACH	SIZE	LENGTH	MARK	TYPE	A	B	C	D	E	F	G	H	J	K	R	O
✳	22	16	9440	1EAS1601	STR												
✳	40	29	6220	1EAS2901	1	380	5840										

APPROACH SLAB #2

ITEM	EACH	SIZE	LENGTH	MARK	TYPE	A	B	C	D	E	F	G	H	J	K	R	O
	21	16	9440	2EAS1601	STR												
	39	29	6220	2EAS2901	1	380	5840										

ABUTMENT # 1

ITEM	EACH	SIZE	LENGTH	MARK	TYPE	A	B	C	D	E	F	G	H	J	K	R	O
	30	16	7250	1A1601	STR												
	49	16	1180	1A1602	STR												
▲	41	16	3940	1A1603	STR												
▲	8	16	5030	1A1604	STR												
	28	16	9000	1A1605	STR												
✳	57	16	2480	1A1606	STR												
	37	16	2750	1A1607	STR												
	8	16	3840	1A1608	STR												
	45	16	1790	1A1609	17		660	470	660								
▲	48	16	1740	1A1610	17		870	870	---								
	28	16	3460	1A1611	22		660	2140	660								
✳	79	19	2440	1A1901	STR												
	10	25	1050	1A2501	STR												
	46	25	3440	1A2502	17		2370	1070	---								

WINGWALL #1

ITEM	EACH	SIZE	LENGTH	MARK	TYPE	A	B	C	D	E	F	G	H	J	K	R	O
▲	15	16	6840	1W1601	STR												
	46	16	1180	1W1602	STR												
▲	22	16	5030	1W1603	STR												
✳	25	16	1930	1W1604	STR												
▲	36	16	6880	1W1605	STR												
	16	16	6920	1W1606	STR												
	10	16	1320	1W1607	STR												
	46	16	1790	1W1608	17		660	470	660								
	10	16	2640	1W1609	20		820	1160	660								
	5	16	3200	1W1610	19		990	1550	660								
✳	21	19	3900	1W1901	STR												
	88	19	3520	1W1902	17		2450	1070	---								
✳	87	22	2590	1W2201	STR												
✳	21	25	1050	1W2501	STR												

WINGWALL #2

ITEM	EACH	SIZE	LENGTH	MARK	TYPE	A	B	C	D	E	F	G	H	J	K	R	O
	15	16	2640	2W1601	STR												
	20	16	1180	2W1602	STR												
▲	20	16	5030	2W1603	STR												
	28	16	5440	2W1604	STR												
	8	16	2640	2W1605	STR												
	20	16	1790	2W1606	17		660	470	660								
	10	16	2580	2W1607	20		820	1100	660								
	5	16	3200	2W1608	19		990	1550	660								
✳	19	19	3900	2W1901	STR												
	34	19	3520	2W1902	17		2450	1070	---								
✳	38	22	2590	2W2201	STR												
✳	5	25	1050	2W2501	STR												

ABUTMENT # 2

ITEM	EACH	SIZE	LENGTH	MARK	TYPE	A	B	C	D	E	F	G	H	J	K	R	O
	18	16	7210	2A1601	STR												
	49	16	1420	2A1602	STR												
▲	23	16	5130	2A1603	STR												
▲	36	16	7470	2A1604	STR												
	21	16	2750	2A1605	STR												
▲	3	16	6210	2A1606	STR												
	3	16	3840	2A1607	STR												
	13	16	5540	2A1608	STR												
✳	21	16	1880	2A1609	STR												
✳ ▲	33	16	1770	2A1610	STR												
▲	20	16	3450	2A1611	STR												
	14	16	5620	2A1612	STR												
	20	16	1320	2A1613	STR												
	23	16	2250	2A1614	17		1180	1070	---								
	50	16	1790	2A1615	17		660	470	660								
▲	29	16	1710	2A1616	22		640	1070	---				180		610		
▲	28	16	1490	2A1617	22		620	870	---				475		400		
	18	16	2450	2A1618	22		660	1130	660				280		600		
	21	25	1050	2A2501	STR												
✳	25	25	2920	2A2502	STR												
✳	7	25	1980	2A2503	STR												
△	48	25	3250	2A2504	17		2180	1070									
✳	45	29	3440	2A2901	STR												

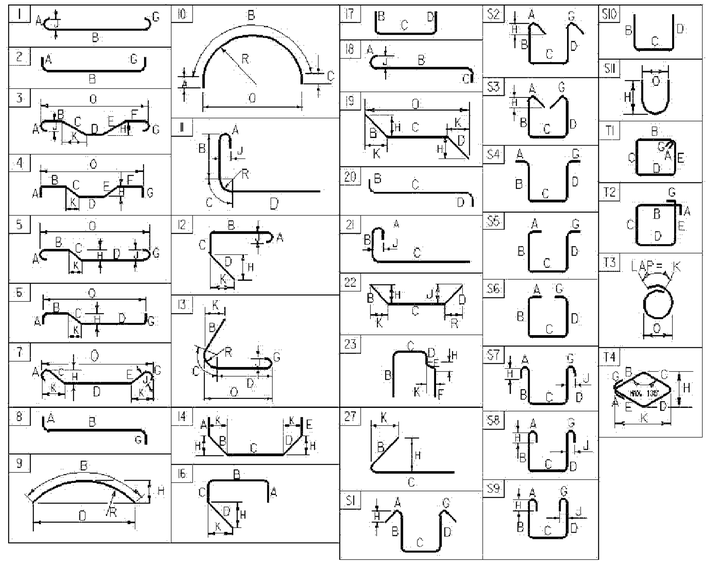
SEE REVISED SHEET 39A

WINGWALL #4

ITEM	EACH	SIZE	LENGTH	MARK	TYPE	A	B	C	D	E	F	G	H	J	K	R	O
	16	16	8770	4W1601	STR												
	30	16	1420	4W1602	STR												
▲	30	16	6210	4W1603	STR												
▲	42	16	2370	4W1604	STR												
▲	36	16	6920	4W1605	STR												
▲	30	16	4320	4W1606	STR												
	30	16	1790	4W1607	17		660	470	660								
	2	16	9360	4W1608	19		890	8470	---				362		813		
△	32	22	2280	4W2201	STR												
	7	25	1050	4W2501	STR												
✳	32	29	2700	4W2901	STR												
	30	29	3310	4W2902	17		2080	1230	---								

~ NOTES ~

1. UNLESS OTHERWISE DESIGNATED, ALL BAR REINFORCEMENT FOR CONCRETE IN SIZES UP TO AND INCLUDING 55M SHALL CONFORM TO THE REQUIREMENTS OF THE "SPECIFICATIONS FOR DEFORMED BILLET-STEEL BARS FOR CONCRETE REINFORCEMENT", AASHTO M 31M (ASTM A 615M-SI). ALL BARS SHALL BE GRADE 420, 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 DENOTES EPOXY COATED REINFORCING STEEL.



ASTM STANDARD REINFORCING BARS

BAR SIZE	NOMINAL MASS (Kg/m)	NOMINAL DIMENSIONS ROUND SECTION DIAMETER (mm)	CROSS SECTIONAL AREA (mm²)	PERIMETER (mm)
#10	0.560	9.5	71	29.84
#13	0.994	12.7	129	39.90
#16	1.552	15.9	199	49.95
#19	2.235	19.1	284	60.00
#22	3.042	22.2	387	69.74
#25	3.973	25.4	510	79.80
#29	5.060	28.7	645	90.16
#32	6.404	32.3	819	101.47
#36	7.907	35.8	1006	112.47
#43	11.380	43.0	1452	135.09
#57	20.240	57.3	2581	180.01

PROJECT NAME: **East Montpelier**
PROJECT NUMBER: **BRF 037-2(8)**

FILE NAME: **86e054rss.xls**
PROJECT MANAGER: **C. WILLIAMS**
DESIGNED BY: **L.J.STONE**
REINFORCING STEEL SCHEDULE

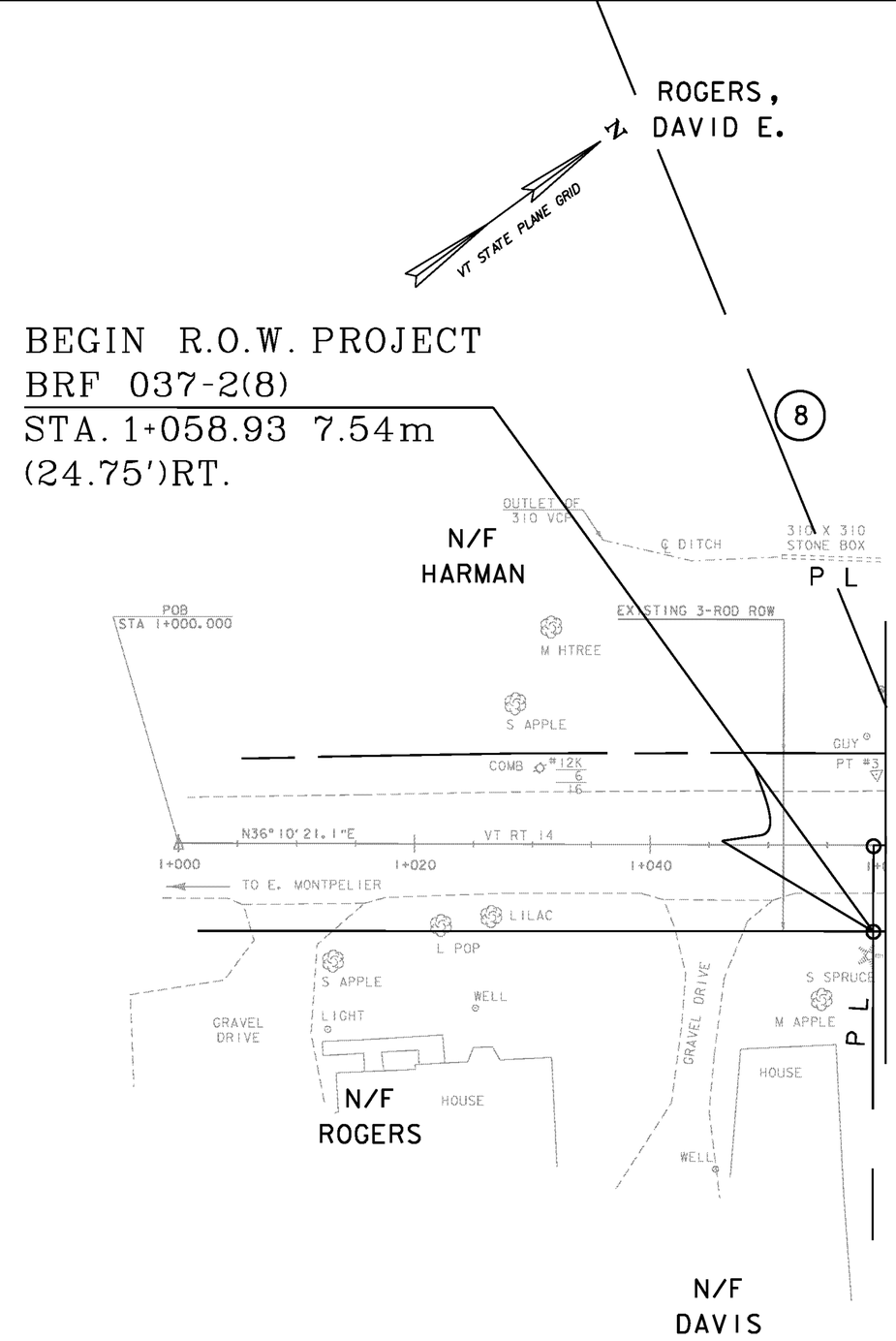
PLOT DATE: **5/13/2010**
DRAWN BY: **D.D.BEARD**
CHECKED BY: **H.I.SALLS**
SHEET **39** OF **63**

STATE OF VERMONT
AGENCY OF TRANSPORTATION

REINFORCING STEEL SCHEDULE

Metric

ITEM	EACH	SIZE	LENGTH	MARK	TYPE	A	B	C	D	E	F	G	H	J	K	R	O
BRIDGE #71																	
	39	16	6920	ES1601	STR												
▲	26	16	10540	ES1602	STR												
	48	16	1600	ES1603	S10		790	140	670								
	74	16	1790	ES1604	T1	595	470	190	535				375		375		
✳	75	16	1850	ES1605	S10		840	170	840								
✳	39	25	900	ES2501	19		300	600					150		150		
APPROACH SLAB #1																	
✳	22	16	8240	1EAS1601	STR												
✳	35	29	6220	1EAS2901	1	380	5840										
APPROACH SLAB #2																	
	21	16	8240	2EAS1601	STR												
	34	29	6220	2EAS2901	1	380	5840										
ABUTMENT # 1																	
	30	16	7250	1A1601	STR												
	49	16	1180	1A1602	STR												
▲	41	16	3940	1A1603	STR												
▲	8	16	5030	1A1604	STR												
	28	16	9000	1A1605	STR												
✳	57	16	2480	1A1606	STR												
	37	16	2750	1A1607	STR												
	8	16	3840	1A1608	STR												
	45	16	2412	1A1609	17		971	470	971								
▲	49	16	1740	1A1610	17		870	870	---								
	28	16	3460	1A1611	22		660	2140	660								
✳	79	19	2440	1A1901	STR												
	10	25	1050	1A2501	STR												
	46	25	3440	1A2502	17		2370	1070	---								
WINGWALL #1																	
▲	15	16	6840	1W1601	STR												
	46	16	1180	1W1602	STR												
▲	22	16	5030	1W1603	STR												
✳	25	16	1930	1W1604	STR												
▲	36	16	6880	1W1605	STR												
	16	16	6920	1W1606	STR												
	10	16	1320	1W1607	STR												
	46	16	1790	1W1608	17		660	470	660								
	10	16	2640	1W1609	20		820	1160	660								
	5	16	3200	1W1610	19		990	1550	660								
✳	21	19	3900	1W1901	STR												
	88	19	3520	1W1902	17		2450	1070	---								
✳	87	22	2590	1W2201	STR												
✳	21	25	1050	1W2501	STR												
WINGWALL #2																	
	15	16	2640	2W1601	STR												
	20	16	1180	2W1602	STR												
▲	20	16	5030	2W1603	STR												
	29	16	5440	2W1604	STR												
	8	16	2640	2W1605	STR												
	20	16	2412	2W1606	17		971	470	971								
	10	16	2580	2W1607	20		820	1100	660								
	5	16	3200	2W1608	19		990	1550	660								
✳	19	19	3900	2W1901	STR												
	34	19	3520	2W1902	17		2450	1070	---								
✳	38	22	2590	2W2201	STR												
✳	5	25	1050	2W2501	STR												



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.

DATUM

VERTICAL	USGS
HORIZONTAL	ASSUMED

FOR R.O.W. USE ONLY

PROJECT: EAST MONTPELIER	PROJECT NO. : BRF 037-2 (8)
DESIGN FILE NAME: re054zzz.dgn	
IPARM FILE NAME: se054row1	PLOT DATE: 18-AUG-2010
SURVEYED BY: R. MOREAU	SURVEY DATE: 3/93
SQUAD LEADER: C. P. WILLIAMS	DRAWN BY: L. J. STONE
ROW SHEET 13 OF 14	SHEET: 40 OF 63

Metric

END MAINTENANCE AGREEMENT
ZONE #1 TH 11
1+080.00 LT 7.54M (24.75')

REMOVAL AND DISPOSAL OF GUARDRAIL
STA 1+086.000 LT - 1+109.000 LT
STA 1+104.500 RT - 1+107.500 RT
STA 1+129.000 RT - 1+144.500 RT
STA 1+129.000 LT - 1+130.500 LT

CONSTRUCT DRIVE**
STA 1+092.000 RT - W/3000 PAVED APRON
STA 1+135.000 LT - PAVED DRIVE
STA 1+150.000 RT - PAVED DRIVE

** PAVEMENT FOR DRIVES SHALL BE ONE 40MM LIFT OF TYPE IIIS PAVEMENT.

UNDERGROUND UTILITIES
* STA 1+135.000 - SEWER LINE
* STA 1+160.000 - WATER LINE
* APPROXIMATE LOCATION

BARRIER FENCE (FOR PEDESTRIAN DETOUR)
STA 1+131 - 1+135 LT
(INCIDENTAL TO ITEM 528.12 TEMPORARY PEDESTRIAN BRIDGE)

BRIDGE RAILING, 3 RAIL ALUMINUM
STA 1+110.070 LT - 1+129.850 LT
STA 1+110.070 RT - 1+129.520 RT

HD STEEL BEAM GUARDRAIL, GALVANIZED
STA 1+085.600 LT - 1+102.460 LT
STA 1+095.200 RT - 1+102.460 RT
STA 1+137.140 RT - 1+144.080 RT

ANCHOR FOR STEEL BEAM RAIL
STA 1+085.000 LT
STA 1+097.000 RT
STA 1+143.000 RT

ALUMINUM APPROACH RAILING
STA 1+102.460 LT - 1+110.070 LT
STA 1+102.460 RT - 1+110.070 RT
STA 1+129.520 RT - 1+137.140 RT
STA 1+129.850 LT - 1+130.780 LT

VT STATE PLANE GRID

END R.O.W. PROJECT
BRF 037-2(8)
STA. 1+189.93 36.16m
(118.63')RT.

ROGERS, DAVID E.

PORTER, WILLIAM K. & STUWE, THOMAS J.

MASCITTI, MIKELJON. MASCITTI, PAUL A. LIFE ESTATE

N/F McKENNEY

N/F CERUTTI

PAVING LIMITS
STATION OFFSET
1+077 22LT 17.84
1+085.66LT 15.09

LIMITS OF TEMPORARY PEDESTRIAN DETOUR

BM M-11
1928 USGS
EL 216.070

PI
STA 1+165.000
Δ=5°27'14" LT
NO CURVE RUN

END APPROACH
STA 1+170.000

POE
STA 1+185.000

BARRIER FENCE
END BRIDGE
STA 1+129.600
FG=214.070

END PROJECT
BEGIN APPROACH
STA 1+140.000

EXCEPT & RESERVE

INSTALL (P)

INSTALL (T)

DETOUR (T)

SLOPE (P)

APPROACH (T)

CUL, DIT, DR (P)

DRIVE (T)

CH (P)

UE (P)

UE (T)

CONST. (T)

INSTALL & MAINTAIN (P)

BEGIN APPROACH
STA 1+065.000

POT
CHANNEL STA 2+045.000=
MAINLINE STA 1+105.000
Δ = 90°

BEGIN BRIDGE
STA 1+110.000
FG=213.733

END APPROACH
BEGIN PROJECT
STA 1+095.000

CONSTRUCTION LIMITS

ALIGNMENT COORDINATES

	NORTHING (Y)	EASTING (X)
POB	200388.4600	504246.3370
PT	200364.6360	504243.3830
POE	200362.3850	504245.2480
POT	200316.4220	504210.5730

BEGIN MAINTENANCE AGREEMENT
ZONE #1 VT. RT. 14
1+080.00 4.61m(15.12') LT
LENGTH 2.93m (9.6')

	NORTHING (Y)	EASTING (X)
POB	200388.4600	504246.3370
POE	200362.3850	504245.2480
POT	200316.4220	504210.5730

DATUM
VERTICAL USGS
HORIZONTAL ASSUMED

EXISTING BRIDGE DATA
YEAR BUILT = 1936
SINGLE SPAN ROLLED BEAM
OVERALL LENGTH = 18.90m (62')
CLEAR SPAN = 17.98m (59')
ROADWAY WIDTH = 7.32m (24')

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.

FOR R.O.W. USE ONLY

SCALE 1 : 250

PROJECT: EAST MONTPELIER	PROJECT NO. : BRF 037-2(8)
DESIGN FILE NAME: re054zzz.dgn	
IPARM FILE NAME: se054row2	PLOT DATE: 18-AUG-2010
SURVEYED BY: R. MOREAU	SURVEY DATE: 3/93
SQUAD LEADER: C.P. WILLIAMS	DRAWN BY: L.J. STONE
ROW SHEET 14 OF 14	SHEET: 41 OF 63

STATE OF VERMONT
AGENCY OF TRANSPORTATION

RIGHT - OF - WAY DETAIL SHEET

Metric

TABLE OF PROPERTY ACQUISITION

PARCEL NO.	PROPERTY OWNER	SHEET NO.	BEGINNING STATION	ENDING STATION	TAKE	REMAINDER	RIGHT			RECORDING DATA					REMARKS
					AREA ±	AREA ±	TYPE	(T)/(P)	AREA ±	TITLE	DATE	TOWN / CITY	BOOK	PAGE	
1A	PORTER, WILLIAM K., &	13, 14	1+077.13 RT	1+129.82 RT			UTILITY EASEMENT	(T)		WD	11/5/2008	E. MONTPELIER	104	119-122	TEMPORARY RELOCATION & GUYS
	STUWE, THOMAS J.														
			1+092.00 RT				DRIVE	(T)							5M(16') PAVED MM 0550
			1+095.40 RT	1+129.14 RT			UTILITY EASEMENT	(P)	127.00 SM						RELOCATED POWER ROUTE 1,367SF±
			1+105.09 RT	1+111.66 RT			CHANNEL	(P)	76.36 SM						822 SF+ INC. PDF & EROSION CONTROL
			1+105.37 RT	1+115.85 RT			CONST.	(T)	19.00 SM						205 SF+ INC. PDF & EROSION CONTROL
1B		14	1+087.52 LT	1+093.13 LT			INSTALL & MAINT.	(P)							GUARDRAIL
			1+087.49 LT	1+111.73 LT			SLOPE	(P)	43.00 SM						463 SF+
			1+091.09 LT	1+126.76 LT			DETOUR	(T)	0.05 HA						.12 ACRE + PED. DETOUR INC. E.C.
			1+092.09 LT	1+113.70 LT			INSTALL	(T)							PDF & EROSION CONTROL
			1+096.85 LT				CUL., DIT., DRAIN	(P)							
1C		13, 14	1+059.64 LT				INSTALL	(T)							GUY
1D		14	1+058.93 RT	1+128.55 RT	986.00 SM		ALL R.T. & I.								.24 ACRE HWY EASE VT RT 14 & TH 11
															EXCEPT & RESERVE
															PENSTOCK & APPURTENANCES @
															1+112.95LT - 1+112.49 RT
															FOUNDATION @ 1+095.21-1+104.88RT
2	ROGERS, DAVID E.	14	1+124.76 CL	1+170.18 RT.	324.00 SM					WDOE		E. MONTPELIER			3488 SF+
			1+128.55 RT	1+142.67 RT			INSTALL & MAINTAIN	(P)	84.67 SM						911 SF+ ,WINGWALL,FOOTING ,GRANITE WALL, & SLOPE
			1+129.02 RT	1+142.70 RT			CONST.	(T)	19.45 SM						210 SF+ INC. EROSION CONTROL & PDF
			1+129.14 RT	1+147.15 RT			UTILITY EASEMENT	(P)	58.00 SM						624 SF+
			1+144.08 RT				INSTALL & MAINTAIN	(P)							GUARDRAIL
			1+150.00 RT				DRIVE	(T)							17M(56') PAVED MM 0554
			1+129.82 RT	1+189.93 RT			UTILITY EASEMENT	(T)							TEMP. RELOCATION
3	MASCITTI, MIKELJON, &	14	1+124.76 LT.	1+171.28 LT.	367.38 SM					WDOE		E. MONTPELIER			3955 SF+
	MASCITTI, PAUL A. - LIFE ESTATE		1+124.76 LT	1+134.52 LT			DETOUR	(T)	52.55 SM						PEDESTRIAN DETOUR 566 SF+ INC.EC
			1+127.25 LT	1+131.74 LT			SLOPE	(P)	20.38 SM						219 SF+
			1+129.06 LT	1+131.74 LT			INSTALL & MAINT.	(P)							CONCRETE RETAINING WALL
			1+131.37 LT	1+134.41 LT			INSTALL	(T)							PEDESTRIAN FENCE
			1+135.00 LT				DRIVE	(T)							12M(39') PAVED MM0555
			1+135.00 CL				ALL R.T.&I.								SEWER LINE
			1+150.00 CL				ALL R.T.&I.								WATER LINE
			1+135.00 LT	1+135.00 RT											SEWER LINE AGREEMENT
			1+150.00 LT	1+150.00 RT											WATER LINE AGREEMENT
			1+168.80 LT				INSTALL	(P)							GUY
			1+148.00 LT	1+168.00 LT											EXCEPT AND RESERVE
															HOUSE ,PORCH ,& STEPS

TABLE OF REVISIONS

REVISION NO.	SHEET NO.	DESCRIPTION	DATE
1	11, 14	PARCEL NO. 3. CHANGE PROPERTY OWNER NAME FROM	9/7/2007
		MASCITTI, PAUL A. TO MASCITTI, MIKELJON & MASCITTI,	
		PAUL A. - LIFE ESTATE PER C.O. # 9498	
		APPROVED BY: HP COMPLETED BY: JAB	
2	11,14	PARCEL NO. 2 ROGERS. REMOVE ALL R.T. & I. FROM RTE.14	4/4/2008
		HWY. EASE. CHANGE 911 S.F. OF FEE TAKING TO A RIGHT TO	
		INSTALL & MAINTAIN (P). INCLUDES WINGWALL, FOOTINGS,	
		SLOPES AND GRANITE WALL. PARCEL 2B DELETED. PARCEL	
		2A IS NOW PARCEL 2. PER C.O. #9519	
		APPROVED BY: HP COMPLETED BY: FM	
3	11,14	PARCEL NO. 3 MASCITTI. REMOVE ALL R.T. & I. FROM RTE.14	4/4/2008
		HWY. EASE. PARCEL 3B DELETED. PARCEL 3A IS NOW	
		PARCEL 3. PER C.O. #9520	
		APPROVED BY: HP COMPLETED BY: FM	
4	12,13,14	PARCEL NO. 8 ROGERS. CREATE NEW PARCEL. THIS WILL	2/11/2009
		CONSISTS OF PARTS OF PARCEL 1C & PARCEL 1D. PORTER	
		& STUWE SOLD TO RODGERS AFTER STUWE & PORTER HAD	
		BEEN PAID FOR THE RIGHT AND INTERSET IN THIS PROPERTY.	
		PER C.O. 9556	
		APPROVED BY: HP COMPLETED BY: MR	
		ELECTRONIC IPARMS TO STRUCTURES	3/5/2010
		ELECTRONIC IPARMS TO STRUCTURES	3/18/2010

PLAN LEGEND

- EXISTING RIGHT-OF-WAY
- TAKING WITH ACCESS
- TAKING WITHOUT ACCESS
- CLEAR ZONE (CZ)
- PROPERTY LINE (P / L)
- TOE OF SLOPE
- TOP OF CUT
- SLOPE RIGHT (SR (P))
- CONSTRUCTION RIGHT (CONST. (T))
- PROJECT DEMARCATION FENCE (PDF — PDF)

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

APPROVED: FRANK J. MALNATI, JR DATE: 02-02-07
ACTING CHIEF, PLANS & TITLES

PLOT DATE 4/20/2010

PROJECT NAME: **EAST MONTPELIER**
PROJECT NUMBER: **BRF 037-2 (8)**

FILE NAME: **086e054**
PROJECT LEADER: **C.P. WILLIAMS**
DESIGNED BY: **K.M. HIGGINS**
R.O.W. SHEET 11 OF 14

PLOT DATE:
DRAWN BY: **JB**
CHECKED BY: **FM**
SHEET **42** OF **63**

STATE OF VERMONT
AGENCY OF TRANSPORTATION

RIGHT - OF - WAY DETAIL SHEET

Metric

TABLE OF PROPERTY ACQUISITION

PARCEL NO.	PROPERTY OWNER	SHEET NO.	BEGINNING STATION	ENDING STATION	TAKE	REMAINDER	RIGHT			RECORDING DATA					REMARKS
					AREA ±	AREA ±	TYPE	(T)/(P)	AREA ±	TITLE	DATE	TOWN / CITY	BOOK	PAGE	
4	TOWN OF EAST MONTPELIER	14	1+080.00 CL				APPROACH	(T)		QCD	10/1/2008	EAST MONTPELIER	103	435-	TOWN HIGHWAY 11
			1+070.34 LT	1+086.43 CL	125.47 SM		ALL R T & I							436	US RT. 14 1351 SF
5	GREEN MOUNTAIN POWER CORP.														UTILITY
6	VERIZON NEW ENGLAND, INC														UTILITY
7	COMCAST OF CONNECTICUT, etc. LLC														UTILITY
8	ROGERS, DAVID E.	13,14	1+061.59 CL	1+078.40 CL	126.60 SM		ALL R.T. & I.								HWY. EASE. VT. RTE. 14 & TH 11
															(1363 SF±) FORMERLY PARCEL 1C
															AND PART OF PARCEL 1D
			1+059.64 LT.				INSTALL	(T)							GUY
	MAINTENANCE AGREEMENT ZONE #1	14	VT RT 14 1+080.00 LT	VT RT 14 1+080.00 LT											LENGTH 3.22M (10.56') TH 11

TABLE OF REVISIONS

REVISION NO.	SHEET NO.	DESCRIPTION	DATE

PLOT DATE 4/20/2010

PLAN LEGEND

- EXISTING RIGHT-OF-WAY
- TAKING WITH ACCESS
- TAKING WITHOUT ACCESS
- CLEAR ZONE (CZ)
- PROPERTY LINE (P/L)
- TOE OF SLOPE
- TOP OF CUT
- SLOPE RIGHT (SR (P))
- CONSTRUCTION RIGHT (CONST. (T))
- PROJECT DEMARCATION FENCE (PDF)

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

APPROVED: FRANK J. MALNATI JR DATE: 02-02-07
ACTING CHIEF, PLANS & TITLES

PROJECT NAME: **EAST MONTPELIER**
PROJECT NUMBER: **BRF 037-2 (8)**

FILE NAME: **86e054Detail.xls**
PROJECT LEADER: **C.P. WILLIAMS**
DESIGNED BY: **K.M. HIGGINS**
R.O.W. SHEET 12 OF 14

PLOT DATE:
DRAWN BY: **JB**
CHECKED BY: **FM**
SHEET **43** OF **63**

VAOT Metric

EXISTING 3-ROD ROW

POE
STA 2+090.000

LIMITS OF TEMPORARY
PEDESTRIAN DETOUR

PAVING LIMITS

STATION	OFFSET
1+077.22LT	17.84
1+085.66LT	15.09

CHANNEL LINE

KINGSBURY BRANCH

℄ OF TEMP.
PED. DETOUR

BARRIER
FENCE

END BRIDGE
STA 1+129.600
FG=214.070

END PROJECT
BEGIN APPROACH
STA 1+140.000

PI
STA 1+165.000
Δ=5°27'14" LT
NO CURVE RUN

END APPROACH
STA 1+170.000

POE
STA 1+185.000

EXISTING 3-ROD ROW

END APPROACH
BEGIN PROJECT
STA 1+095.000

MAIN LINE

N30° 43' 07"E

N36° 10' 21.1"E

N53° 49' 38.9"W

PAVING
LIMITS

CONSTRUCTION LIMITS

BEGIN APPROACH
STA 1+065.000

POT
CHANNEL STA 2+045.000=
MAINLINE STA 1+105.000
Δ = 90°

BEGIN BRIDGE
STA 1+110.000
FG=213.733

POB
STA 2+000.000

FLOW

PDF

OHW

N
VT STATE PLANE GRID

NOTE:
ANY TEMPORARY FILLS BELOW OHW SHALL BE PLACED ON GEOTEXTILE FABRIC. SEE GENERAL NOTES FOR ADDITIONAL DETAILS.

OHW IMPACTS	
TEMP. CONSTRUCTION AREA	61 SM (657 SF)
PERM. CONSTRUCTION AREA	37 SM (398 SF)

TOTAL AREA OF EARTH DISTURBANCE = 2211.5 SM (23805 SF)
0.22 HECTARES (0.55 ACRES)

LAYOUT
SCALE 1:250

0 10 20 30
SCALE IN METERS

PROJECT:	PROJECT NO. :
EAST MONTPELIER	BRF 037-2(8)

DESIGN FILE NAME: s86e054/Str/environmental.dgn
IPARM FILE NAME: se054env.i
PLOT DATE: 18-AUG-2010
SURVEYED BY: R. MOREAU
SURVEY DATE: 3/93
SQUAD LEADER: C.P. WILLIAMS
DRAWN BY: M. FESSEL
ENVIRONMENTAL IMPACTS
SHEET: 44 OF 63

EROSION CONTROL NARRATIVE

1.1 PROJECT DESCRIPTION

THE PROJECT IS LOCATED IN EAST MONTPELIER ON VT RT. 14 OVER THE KINGSBURY BRANCH. THE PROJECT INCLUDES THE REPLACEMENT OF BRIDGE #71, THE ABUTMENTS AND SOME MINOR APPROACH WORK. THE HORIZONTAL ALIGNMENT IS ON THE EXISTING CENTERLINE OF RT. 14 AND THE VERTICAL ALIGNMENT IS NEARLY THE SAME AS EXISTING CONDITIONS.

THE BRIDGE WILL BE CLOSED TO TRAFFIC DURING CONSTRUCTION AND ALL TRAFFIC WILL BE DETOURED AROUND THE SITE AS SHOWN ON THE PLANS.

NOTE: AREA OF DISTURBANCE INCLUDES LIMITS OF EARTH DISTURBANCE WITHIN THE PROJECT AREA, AS WELL AS WASTE, BORROW, AND STAGING AREAS WITHIN OR DIRECTLY ADJACENT TO THE PROJECT LIMITS AS SHOWN ON THE ATTACHED EPSC PLAN.

TOTAL AREA OF EARTH DISTURBANCE IS APPROXIMATELY 0.223 HA (0.55 ACRES).

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

1.2 SITE INVENTORY

1.2.1 TOPOGRAPHY

THE TOPOGRAPHY OF THE PROJECT SITE IS ROLLING HILLS WITH GRASS AND BUILDINGS NEAR THE SITE. THERE ARE TWO BUILDINGS AT THE NORTH END OF THE BRIDGE, AN OLD FOUNDATION TO THE WEST OF THE BRIDGE, AN OLD COAL STORAGE BUILDING AT THE SOUTH END OF THE BRIDGE WITH A NATURAL COVERED ROOF (GRASS) THAT CANNOT BE DRIVEN ON, AND A 1600MM DIAMETER PENSTOCK NEAR THE SOUTHERN ABUTMENT THAT CANNOT BE DISTURBED.

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

KINGSBURY BRANCH IS LOCATED IN THE PROJECT AREA. THERE ARE NO OTHER WATER BODIES OR WETLANDS WITHIN THE PROJECT AREA. THE KINGSBURY BRANCH IS CLASSIFIED AS ROLLING TO MOUNTAINOUS, PERENNIAL, AND STRAIGHT AT SITE BUT SINUOUS UPSTREAM AND DOWNSTREAM CONTAINING A STREAMBED OF MOSTLY LEDGE. THE CONTRIBUTING DRAINAGE AREA AT THE BRIDGE CROSSING IS 131.1 SQ. KM. THERE IS ALSO A DAM LOCATED UPSTREAM FROM THE BRIDGE. THERE IS AN UNDERGROUND WATER PIPE AT THE NORTHERN END OF THE BRIDGE, AND A DROP INLET WITH A PIPE OUTLET THROUGH THE EXISTING WINGWALL. RUNOFF WATER ENTERING THE PROJECT SITE WILL BE PRIMARILY LIMITED TO WHAT IS CONVEYED ALONG ROADWAY DITCHES AND A BOX CULVERT LOCATED BETWEEN STATIONS 1+070 AND 1+105 LT.

1.2.3 VEGETATION

THERE ARE A FEW TREES ON SITE RANGING FROM SAPLINGS TO ONE LARGE TREE. THERE ARE TWO RESIDENCES NEAR THE BRIDGE SITE; EACH HAS A SMALL PARKING AREA AND ONE HAS A SMALL GRASSY AREA. IMPACT TO VEGETATION WILL BE LIMITED TO THE DISTURBANCE CAUSED BY CONSTRUCTION OF NEW ABUTMENTS. MOST IF NOT ALL OF THE TREES WILL BE REMOVED. THE SLOPES ARE STABILIZED WITH STONE FILL AND VEGETATION. THE SLOPE ON THE NORTHEAST SIDE OF THE BRIDGE IS APPROACHING 1:1 AND IS UNSTABLE. THE NEW WINGWALL WILL BE LONGER AND THE SLOPE WILL BE 1:1.5 AND STABILIZED WITH STONE.

1.2.4 SOILS

ACCORDING TO A SOIL SURVEY COMPLETED BY THE U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE THERE IS ONLY ONE TYPE OF SOIL AT THIS LOCATION. THE SOIL IS CLASSIFIED AS LAMOINE SILTY LOAM, WITH A K-VALUE EQUAL TO 0.32, SLOPES OF 3-8% AND PART OF HYDROLOGIC GROUP D. DUE TO THE STEEP SLOPES FOUND ON SITE THE SOIL HAS THE POTENTIAL OF BECOMING HIGHLY ERODIBLE.

NOTE: K-VALUES GENERALLY INDICATE THE FOLLOWING: 0.0-0.23 = LOW EROSION POTENTIAL; 0.24-0.36 = MODERATE EROSION POTENTIAL: 0.37 AND HIGHER = HIGH EROSION POTENTIAL.

1.2.5 SENSITIVE RESOURCE AREAS

CRITICAL HABITATS: NO
HISTORICAL OR ARCHEOLOGICAL AREAS: THE PROJECT LIES WITHIN THE NORTH MONTPELIER HISTORICAL DISTRICT. NO SIGNIFICANT ARCHEOLOGICAL RESOURCES ARE TO BE IMPACTED.
PRIME AGRICULTURAL LAND: NO
THREATENED AND ENDANGERED SPECIES: NO
WATER RESOURCE: KINGSBURY BRANCH
WETLANDS: NO

1.3 RISK EVALUATION

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

1.4 EROSION PREVENTION AND SEDIMENT CONTROL

THE EROSION CONTROL PLANS ARE MEANT AS A GUIDELINE FOR PREVENTING EROSION AND CONTROLLING SEDIMENT TRANSPORT. THE CONCEPTS OUTLINED IN THIS NARRATIVE CONSIST OF APPLYING MEASURES THROUGHOUT CONSTRUCTION OF THE PROJECT IN ORDER TO MINIMIZE SEDIMENT TRANSPORT TO THE RECEIVING WATERS. THE MEASURES INCLUDE STABILIZATION AND STRUCTURAL PRACTICES, STORM WATER CONTROLS, AND OTHER POLLUTION PREVENTION PRACTICES. THEY HAVE BEEN PROPOSED BY THE DESIGNER AS A BASIS FOR PROTECTING RESOURCES AND WILL NEED TO BE BUILT UPON BASED ON THE SPECIFIC MEANS AND METHODS OF THE CONTRACTOR. REFER TO THE LOW RISK SITE HANDBOOK AND APPROPRIATE DETAIL SHEETS FOR SPECIFIC GUIDANCE AND CONSTRUCTION DETAILING.

ALL MEASURES SHALL BE REGULARLY MAINTAINED AND SHALL BE CHECKED FOR SEDIMENT BUILD-UP. SEDIMENT SHALL BE DISPOSED OF AT AN APPROVED SITE WHERE IT WILL NOT BE SUBJECT TO EROSION.

1.4.1 MARK SITE BOUNDARIES
SITE BOUNDARIES AND AREAS CONSTRUCTION EQUIPMENT CAN ACCESS SHALL BE DELINEATED.

PROJECT DEMARCATION FENCING (PDF) SHALL BE USED TO DELINEATE THE LIMITS THE CONTRACTOR CAN ACCESS WITH CONSTRUCTION EQUIPMENT. THIS MEASURE LIMITS THE AREA THAT CAN BE DISTURBED AND EXPOSED TO EROSIVE EFFECTS.

1.4.2 LIMIT DISTURBANCE AREA
PREVENTING INITIAL SOIL EROSION BY MINIMIZING THE EXPOSED AREA IS MUCH MORE EFFECTIVE THAN TREATING ERODED SEDIMENT. EARTH DISTURBANCE CAN BE MINIMIZED THROUGH CONSTRUCTION PHASING BY ONLY OPENING UP EARTH AS NECESSARY. THIS CAN LIMIT THE AREA THAT WILL BE DISTURBED AND EXPOSED TO EROSION. EMPLOY TEMPORARY CONSTRUCTION STABILIZATION PRACTICES IN INCREMENTAL STAGES AS PHASES CHANGE. FOR PROJECTS WHICH FALL UNDER THE CONSTRUCTION GENERAL PERMIT, ONLY THE ACREAGE LISTED ON THE PERMIT AUTHORIZATION MAY BE EXPOSED AT ANY GIVEN TIME.

MAINTAINING VEGETATED BUFFERS ALONG STREAM BANKS, WETLANDS OR OTHER SENSITIVE AREAS IS A CRUCIAL EROSION AND SEDIMENT CONTROL MEASURE THAT SHOULD BE ESTABLISHED WHEREVER POSSIBLE.

1.4.3 SITE ENTRANCE/EXIT STABILIZATION
TRACKING OF SEDIMENT ONTO PUBLIC HIGHWAYS SHALL BE MINIMIZED TO REDUCE THE POTENTIAL FOR RUNOFF ENTERING RECEIVING WATERS. INSTALLATION SHALL COINCIDE WITH THE CONTRACTOR'S PROGRESS SCHEDULE.

STABILIZED CONSTRUCTION ENTRANCES SHALL BE INSTALLED ANYWHERE EQUIPMENT WILL BE GOING FROM AREAS OF EXPOSED SOILS TO PAVED SURFACES. LOCATIONS OF STABILIZED CONSTRUCTION ENTRANCES SHALL BE DETERMINED BY THE CONTRACTOR, SUBJECT TO APPROVAL BY THE ENVIRONMENTAL CONSTRUCTION ENGINEER.

1.4.4 INSTALL SEDIMENT BARRIERS
SEDIMENT BARRIERS SHALL BE UTILIZED TO INTERCEPT RUNOFF AND ALLOW SUSPENDED SEDIMENT TO SETTLE OUT. THEY SHALL BE INSTALLED PRIOR TO ANY UP SLOPE WORK.

SILT FENCE WILL BE INSTALLED AS PROPOSED ON THE EPSC PLAN AND EPSC DETAIL SHEET.

FILTER CURTAIN WILL BE INSTALLED AND MAINTAINED AS PROPOSED ON THE EPSC PLAN AND EPSC DETAIL SHEET.

INLET PROTECTION SHALL BE INSTALLED AS SHOWN ON THE EPSC PLAN AND EPSC DETAIL SHEET. THE HEIGHT OF THE BARRIER SHALL BE LIMITED SUCH THAT THE PONDING AREA DOES NOT PRESENT A HAZARD TO THE TRAVELING PUBLIC.

1.4.5 DIVERT UPLAND RUNOFF
DIVERSIONARY MEASURES SHALL BE USED TO INTERCEPT RUNOFF FROM ABOVE THE CONSTRUCTION AND DIRECT IT AROUND THE DISTURBED AREA SO THAT CLEAN WATER DOES NOT BECOME MUDDIED WHILE TRAVELING OVER EXPOSED SOILS ON THE CONSTRUCTION SITE.

THE PROJECT AREA IS RELATIVELY FLAT. IT IS ANTICIPATED THAT DIVERSION MEASURES WILL NOT BE NECESSARY.

1.4.6 SLOW DOWN CHANNELIZED RUNOFF
CHECK STRUCTURES SHALL BE UTILIZED TO REDUCE THE VELOCITY, AND THUS THE EROSIVE POTENTIAL, OF CONCENTRATED FLOW IN CHANNELS.

STONE CHECK DAMS SHALL BE INSTALLED AND MAINTAINED AS PROPOSED ON THE EPSC PLAN, AND EPSC DETAIL SHEET, AND WHEREVER THERE IS A CONCENTRATED FLOW OF STORMWATER ON THE PROJECT SITE.

1.4.7 CONSTRUCT PERMANENT CONTROLS
PERMANENT STORMWATER TREATMENT DEVICES SHALL BE INSTALLED AS SHOWN ON THE PLANS AND IN ACCORDANCE WITH PERMIT CONDITIONS.

THE CHANNEL SHALL BE ARMORED WITH STONE FILL TYPE IV AS SHOWN ON THE PLANS. AREAS INSIDE THE WINGWALLS SHALL BE ARMORED WITH STONE FILL TYPE I AS SHOWN ON THE PLANS.

1.4.8 STABILIZE EXPOSED SOILS DURING CONSTRUCTION
ALL AREAS OF DISTURBANCE MUST HAVE TEMPORARY STABILIZATION IN PLACE WITHIN 48 HOURS OF DISTURBANCE OR IN ACCORDANCE WITH THE CONSTRUCTION GENERAL PERMIT 3-9020 AUTHORIZATION.

SURFACE ROUGHENING OF ALL EXPOSED SLOPES, COMBINED WITH TEMPORARY MULCHING, SHALL BE UTILIZED ON A REGULAR BASIS. BIODEGRADABLE EROSION CONTROL MATTING OR AN EQUIVALENT SHALL BE USED TO STABILIZE ALL SLOPES STEEPER THAN 1:3.

THE FORECAST OF RAINFALL EVENTS SHALL TRIGGER IMMEDIATE PROTECTION OF EXPOSED SOILS.

1.4.9 WINTER STABILIZATION
VARIOUS MEASURES SPECIFIC TO WINTER MAY BE NECESSARY SHOULD THE PROJECT EXTEND INTO WINTER (OCTOBER 15 THROUGH APRIL 15). REFER TO THE LOW RISK SITE HANDBOOK FOR GUIDANCE.

1.4.10 STABILIZE SOIL AT FINAL GRADE
EXPOSED SOIL MUST BE STABILIZED WITHIN 48 HOURS OF REACHING FINAL GRADE.

SEED, MULCH, FERTILIZER AND LIME SHALL BE USED TO ESTABLISH PERMANENT VEGETATION. FOR SLOPES STEEPER THAN 1:3, BIODEGRADABLE EROSION CONTROL MATTING OR AN EQUIVALENT SHALL BE USED INSTEAD OF MULCH.

1.4.11 DE-WATERING ACTIVITIES
DISCHARGE FROM DEWATERING ACTIVITIES THAT FLOWS OFF OF THE CONSTRUCTION SITE MUST NOT CAUSE OR CONTRIBUTE TO A VIOLATION OF THE VERMONT WATER QUALITY STANDARDS.

WATER FROM DEWATERING ACTIVITIES THAT FLOWS OFF OF THE CONSTRUCTION SITE MUST BE CLEAR. WATER MUST NOT BE PUMPED INTO STORM SEWERS, LAKES, OR WETLANDS UNLESS THE WATER IS CLEAR. FILTER BAGS SHALL BE INSTALLED AS PROPOSED ON THE EPSC PLAN OR IN OTHER SUITABLE LOCATIONS BY THE CONTRACTOR, SUBJECT TO APPROVAL BY THE ENVIRONMENTAL CONSTRUCTION ENGINEER.

1.4.12 INSPECT YOUR SITE
INSPECT THE PROJECT SITE BASED ON SPECIAL PROVISION REQUIREMENTS OR CONSTRUCTION GENERAL PERMIT AUTHORIZATION STIPULATIONS.

1.5 SEQUENCE AND STAGING

THIS SECTION WILL BE DEVELOPED BY THE CONTRACTOR USING THE GUIDANCE OUTLINED IN THE VTRANS EPSC PLAN CONTRACTOR CHECKLIST.

1.5.1 CONSTRUCTION SEQUENCE

1.5.2 OFF-SITE ACTIVITIES
IN ADDITION TO THE CONTRACTOR CHECKLIST ANY ACTIVITIES OUTSIDE THE CONSTRUCTION LIMITS SHALL FOLLOW SUBSECTIONS 105.25- 105.29 OF THE STANDARD SPECIFICATIONS FOR CONSTRUCTION.

1.5.3 UPDATES

PROJECT: EAST MONTPELIER	PROJECT NO.: BRF 037-2 (8)
DESIGN FILE NAME: 86e054/structures/se054excel.dgn	
IPARM FILE NAME: se054ecnar.i	PLOT DATE: 18-AUG-2010
SURVEYED BY: R. MOREAU	SURVEY DATE: 3/93
SQUAD LEADER: C. P. WILLIAMS	DRAWN BY: M.FESSEL
EROSION CONTROL NARRATIVE	SHEET: 45 OF 63

EXISTING 3-ROD ROW
TH 11 (GRAVEL)
CONCRETE SIDEWALK
PT
CONC. DAM
EXISTING 24" CMP
KINGSBURY BRANCH
NORTH MONT. GARAGE
HOUSE
M SPRUCE
FLOW
C DITCH
60 X 60 STONE BOX
OLD FOUNDATION
EXISTING DAM
GRAVEL DRIVE
610X610 DI
PORCH
PAVED DITCH
M PINE
COMB
#8
GUY
STEPS
GRAVEL DRIVE
VT RT 14 TO EAST CALAIS
AERIAL E&T
P L
MAIN LINE
VT RT 14
TO E. MONTPELIER
MATCHLINE STA 1+060
1+080
1+100
1+120
1+140
1+160
1+180
1+185
PT #4
M WILLOW
L PINE
STORE & US POST OFFICE
FLAG POLE
VT RT 214
M WILLOW
GRAVEL DRIVE
TO PLAINFIELD
610 X 610 DI
EL #21
M POP
610 X 610 DI
S ELM
PORCH
HOUSE
HOUSE
GRAVEL DRIVE
S BUTT
M WILLOW
FLOW TO 36" CMP
FLOW TO 460 HCP
BUILDING FOUNDATION (COAL STORAGE)
PT #350
PAVED DRIVE
GRAVEL DRIVE
GUY
EL
EL W/TRANS
GUY
POWER HOUSE
RIPARIAN BUFFER
M APPLE
POWER & ALARM FOR PUMPS
RIPARIAN BUFFER
FLOW
208 WM
6" WATER
12" WATER
8" WATER
VT STATE PLANE GRID
N

EXISTING CONDITIONS

SCALE 1:250

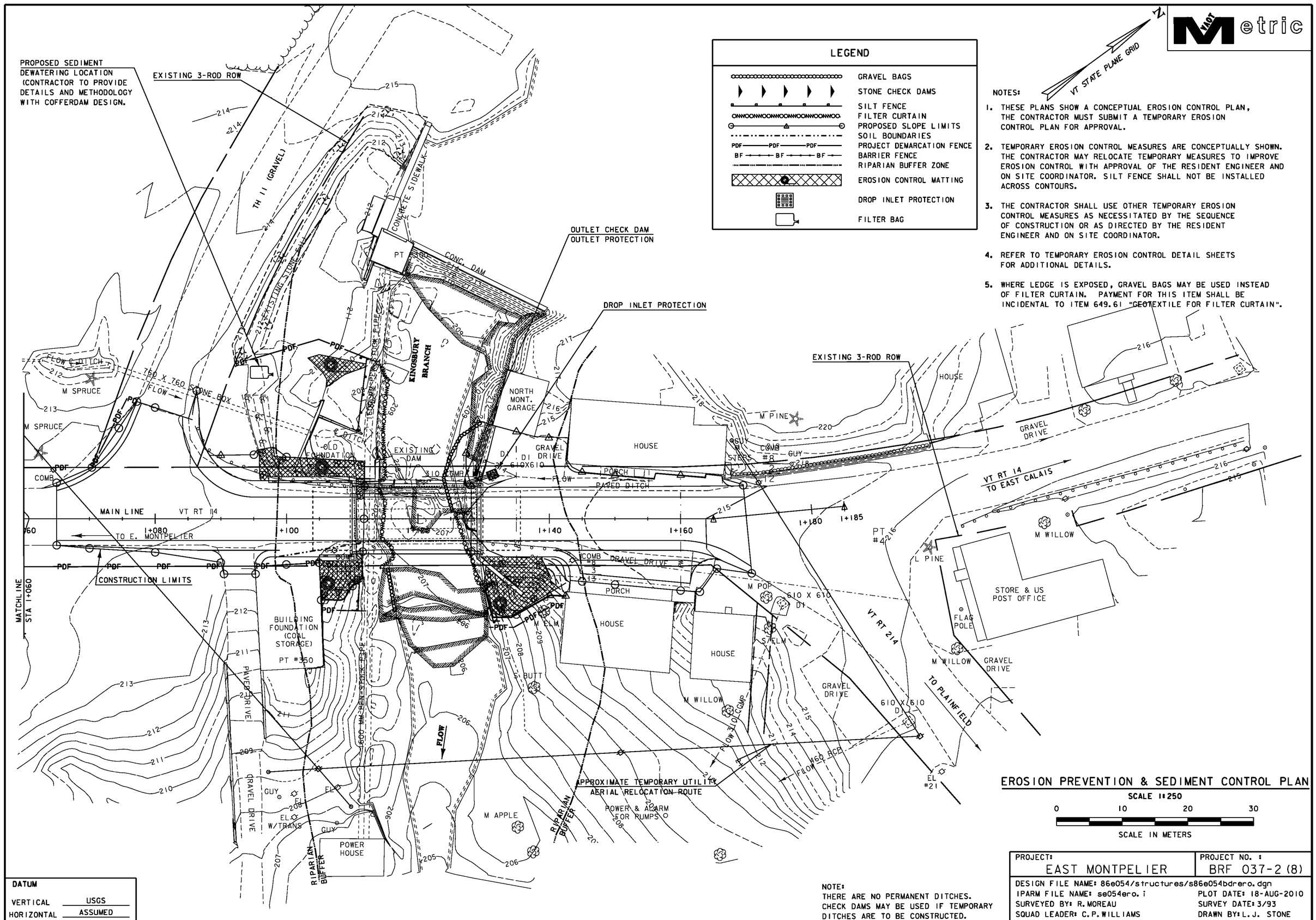
0 10 20 30

SCALE IN METERS

DATUM

VERTICAL	USGS
HORIZONTAL	ASSUMED

PROJECT:	PROJECT NO. :
EAST MONTPELIER	BRF 037-2 (8)
DESIGN FILE NAME: 86e054/structures/s86e054bdrero.dgn	
IPARM FILE NAME: se054excon.i	PLOT DATE: 18-AUG-2010
SURVEYED BY: R. MOREAU	SURVEY DATE: 3/93
SQUAD LEADER: C.P. WILLIAMS	DRAWN BY: L.J. STONE
EXISTING CONDITIONS	SHEET: 46 OF 63



LEGEND

- GRAVEL BAGS
- STONE CHECK DAMS
- SILT FENCE
- FILTER CURTAIN
- PROPOSED SLOPE LIMITS
- SOIL BOUNDARIES
- PROJECT DEMARCATION FENCE
- BARRIER FENCE
- RIPARIAN BUFFER ZONE
- EROSION CONTROL MATTING
- DROP INLET PROTECTION
- FILTER BAG

VT STATE PLANE GRID

NOTES:

1. THESE PLANS SHOW A CONCEPTUAL EROSION CONTROL PLAN, THE CONTRACTOR MUST SUBMIT A TEMPORARY EROSION CONTROL PLAN FOR APPROVAL.
2. TEMPORARY EROSION CONTROL MEASURES ARE CONCEPTUALLY SHOWN. THE CONTRACTOR MAY RELOCATE TEMPORARY MEASURES TO IMPROVE EROSION CONTROL WITH APPROVAL OF THE RESIDENT ENGINEER AND ON SITE COORDINATOR. SILT FENCE SHALL NOT BE INSTALLED ACROSS CONTOURS.
3. THE CONTRACTOR SHALL USE OTHER TEMPORARY EROSION CONTROL MEASURES AS NECESSITATED BY THE SEQUENCE OF CONSTRUCTION OR AS DIRECTED BY THE RESIDENT ENGINEER AND ON SITE COORDINATOR.
4. REFER TO TEMPORARY EROSION CONTROL DETAIL SHEETS FOR ADDITIONAL DETAILS.
5. WHERE LEDGE IS EXPOSED, GRAVEL BAGS MAY BE USED INSTEAD OF FILTER CURTAIN. PAYMENT FOR THIS ITEM SHALL BE INCIDENTAL TO ITEM 649.61 "GEOTEXTILE FOR FILTER CURTAIN".

EROSION PREVENTION & SEDIMENT CONTROL PLAN

SCALE 1:250

0 10 20 30

SCALE IN METERS

NOTE:
THERE ARE NO PERMANENT DITCHES.
CHECK DAMS MAY BE USED IF TEMPORARY DITCHES ARE TO BE CONSTRUCTED.

DATUM

VERTICAL	USGS
HORIZONTAL	ASSUMED

PROJECT: EAST MONTPELIER	PROJECT NO. : BRF 037-2 (8)
DESIGN FILE NAME: 86e054/structures/s86e054bdrero.dgn	
IPARM FILE NAME: se054ero.i	PLOT DATE: 18-AUG-2010
SURVEYED BY: R.MOREAU	SURVEY DATE: 3/93
SQUAD LEADER: C.P.WILLIAMS	DRAWN BY: L.J. STONE
EPSC PLAN SHEET	SHEET: 47 OF 63

VT STATE PLANE GRID

N

VAOT Metric

LEGEND

- RIPARIAN BUFFER ZONE
- SEED AND MULCH
- EROSION CONTROL MATTING

EXISTING 3-ROD ROW

TH 11 (GRAVEL)

KINGSBURY BRANCH

EXISTING 3-ROD ROW

VT RT 14
TO EAST CALAIS

VT RT 214

TO PLAINFIELD

MAIN LINE

1+080 1+100 1+120 1+140 1+160 1+180 1+185

AERIAL E&T

CONSTRUCTION LIMITS

MATCHLINE
STA 1+060

APPROXIMATE FINAL UTILITY
AERIAL RELOCATION ROUTE

FLOW

RIPARIAN BUFFER

RIPARIAN BUFFER

FINAL CONDITIONS

SCALE 1:250

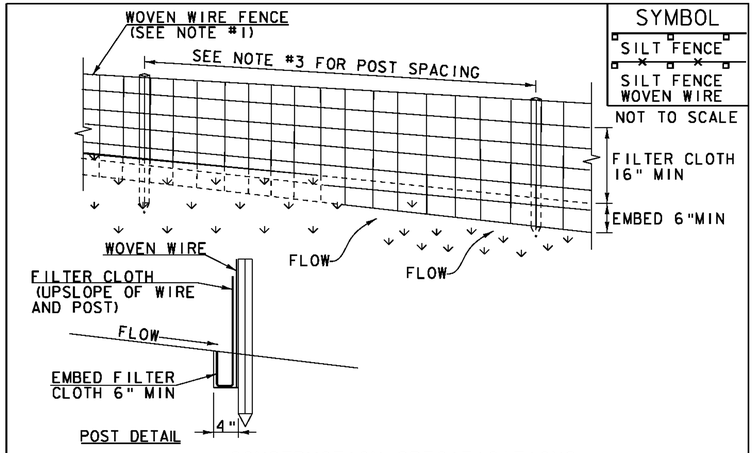
0 10 20 30

SCALE IN METERS

DATUM

VERTICAL	USGS
HORIZONTAL	ASSUMED

PROJECT: EAST MONTPELIER	PROJECT NO. : BRF 037-2 (8)
DESIGN FILE NAME: 86e054/structures/s86e054bdrero.dgn	
IPARM FILE NAME: se054fincon.i	PLOT DATE: 18-AUG-2010
SURVEYED BY: R.MOREAU	SURVEY DATE: 3/93
SQUAD LEADER: C.P.WILLIAMS	DRAWN BY: L.J. STONE
FINAL CONDITIONS SHEET	SHEET: 48 OF 63



SYMBOL

SILT FENCE

SILT FENCE WOVEN WIRE

NOT TO SCALE

CONSTRUCTION SPECIFICATIONS

1. WOVEN WIRE REINFORCED FENCE IS REQUIRED WITHIN 100' UPSLOPE OF RECEIVING WATERS WHEN THE PROJECT FALLS UNDER A CONSTRUCTION STORMWATER PERMIT. WOVEN WIRE SHALL BE A MIN. 14 GAUGE WITH A 6" MAX. MESH OPENING.
2. FILTER CLOTH SHALL BE EITHER FILTER X, MIRAFI100X, STABILINKA T140N OR APPROVED EQUIVALENT.
3. POST SPACING FOR WIRE-BACKED FENCE SHALL BE 10' MAXIMUM. FOR FILTER-CLOTH FENCE, WHEN ELONGATION IS >50%, POST SPACING SHALL NOT EXCEED 4' AND WHEN ELONGATION IS <50%, POST SPACING SHALL NOT EXCEED 6'.
4. WOVEN WIRE FENCE IS TO BE FASTENED SECURELY TO FENCE POSTS WITH WIRE TIES. FILTER CLOTH IS TO BE FASTENED SECURELY TO WOVEN WIRE FENCE WITH TIES SPACED EVERY 24" AT TOP AND MID SECTION.
5. WHEN TWO SECTIONS OF FILTER CLOTH ADJOIN EACH OTHER THEY SHALL BE OVER-LAPPED BY 6" AND FOLDED.
6. MAINTENANCE SHALL BE PERFORMED AS NEEDED AND MATERIAL REMOVED WHEN SEDIMENT REACHES HALF OF FABRIC HEIGHT.

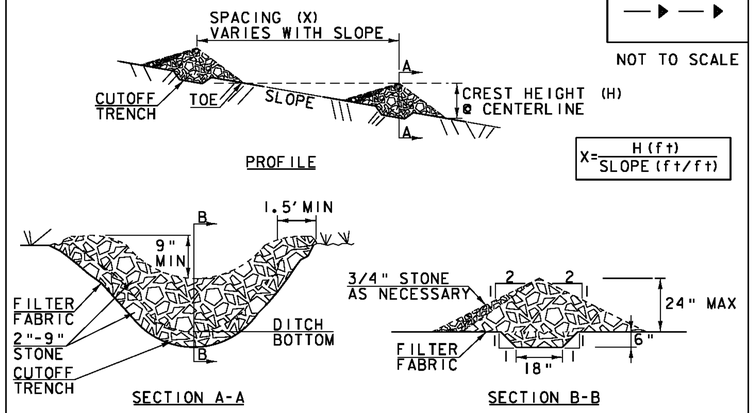
ADAPTED FROM DETAILS PROVIDED BY: NEW YORK STATE DEC
ORIGINALLY DEVELOPED BY USDA-NRCS
VERMONT DEPARTMENT OF ENVIRONMENTAL CONSERVATION

SILT FENCE

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

THIS WORK SHALL BE PERFORMED IN ACCORDANCE WITH SECTION 649 AND AS SHOWN IN THE PLANS FOR GEOTEXTILE FOR SILT FENCE (PAY ITEM 649.51) ~~OR GEOTEXTILE FOR SILT FENCE, WOVEN WIRE REINFORCED (PAY ITEM 649.515).~~

REVISIONS	
MARCH 21, 2008	WHF
DECEMBER 11, 2008	WHF
JANUARY 13, 2009	WHF



SYMBOL

NOT TO SCALE

CONSTRUCTION SPECIFICATIONS

1. STONE WILL BE PLACED ON A FILTER FABRIC FOUNDATION.
2. CHECK DAMS SHALL BE SPACED SO THAT THE ELEVATION OF THE CREST OF THE DOWNSTREAM DAM IS AT THE SAME ELEVATION AS THE TOE OF THE UPSTREAM DAM.
3. 3/4" FILTERING STONE MAY BE ADDED TO THE FACE OF THE CHECK DAM AS NECESSARY.
4. EXTEND THE STONE A MINIMUM OF 1.5' BEYOND THE DITCH BANKS TO PREVENT CUTTING AROUND THE DAM.
5. PROTECT CHANNEL DOWNSTREAM OF THE LOWEST CHECK DAM FROM SCOUR AND EROSION WITH STONE OR LINER AS APPROPRIATE.
6. ENSURE THAT CHANNEL APPURTENANCES SUCH AS CULVERT ENTRANCES BELOW CHECK DAMS ARE NOT SUBJECT TO DAMAGE OR BLOCKAGE FROM DISPLACED STONE.
7. MAXIMUM DRAINAGE AREA 2 ACRES.

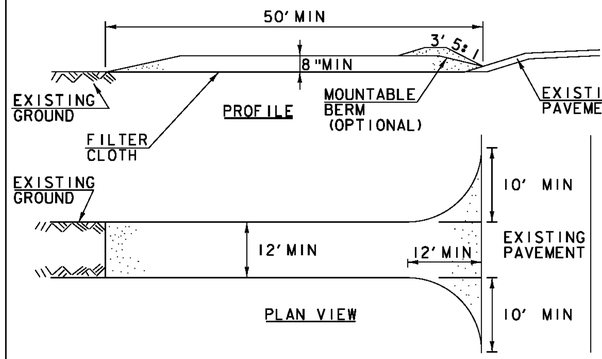
ADAPTED FROM DETAILS PROVIDED BY: NEW YORK STATE DEC
ORIGINALLY DEVELOPED BY USDA-NRCS
VERMONT DEPARTMENT OF ENVIRONMENTAL CONSERVATION

CHECK DAM

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

THIS WORK SHALL BE PERFORMED IN ACCORDANCE WITH SECTION 653 FOR TEMPORARY STONE CHECK DAM, TYPE I (PAY ITEM 653.25)

REVISIONS	
MARCH 21, 2008	WHF
JANUARY 8, 2009	WHF



SYMBOL

NOT TO SCALE

CONSTRUCTION SPECIFICATIONS

1. STONE SIZE- USE 1-4" STONE, RECLAIMED OR RECYCLED CONCRETE EQUIVALENT.
2. LENGTH- NOT LESS THAN 50' (EXCEPT ON A SINGLE RESIDENCE LOT WHERE A 30' MINIMUM LENGTH APPLIES).
3. THICKNESS- NOT LESS THAN 8".
4. WIDTH- 12' MINIMUM, BUT NOT LESS THAN THE FULL WIDTH AT POINTS WHERE INGRESS OR EGRESS OCCURS. 24' IF SINGLE ENTRANCE TO SITE.
5. GEOTEXTILE MUST BE PLACED OVER THE ENTIRE AREA PRIOR TO PLACING STONE.
6. SURFACE WATER- ALL SURFACE WATER FLOWING OR DIVERTED TOWARD CONSTRUCTION ENTRANCES SHALL BE PIPED BENEATH THE ENTRANCE. IF PIPING IS IMPRACTICAL, A MOUNTABLE BERM WITH 5:1 SLOPES WILL BE PERMITTED.
7. 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.
8. WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA STABILIZED WITH STONE AND WHICH DRAINS INTO AN APPROVED SEDIMENT TRAPPING DEVICE.
9. PERIODIC INSPECTION AND NEEDED MAINTENANCE SHALL BE PROVIDED ACCORDING TO PERMIT REQUIREMENTS.

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

STABILIZED CONSTRUCTION ENTRANCE

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

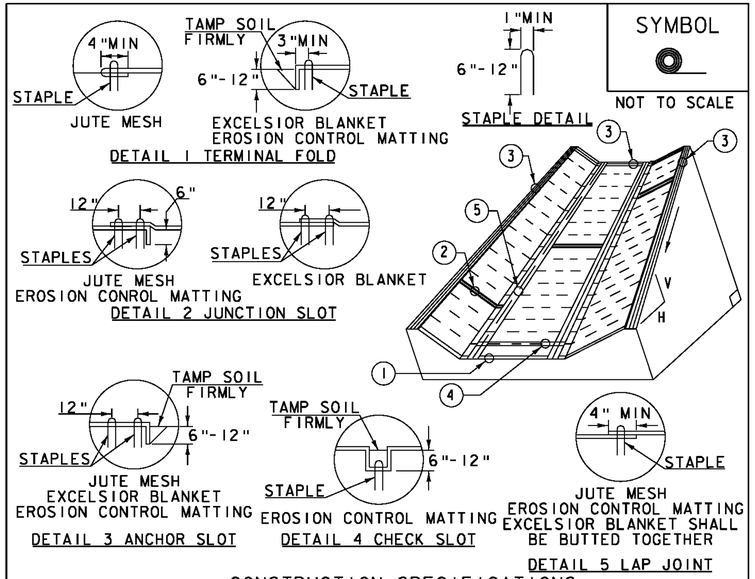
THIS WORK SHALL BE PERFORMED IN ACCORDANCE WITH SECTION 653 FOR VEHICLE TRACKING PAD (PAY ITEM 653.35) OR AS SPECIFIED IN THE CONTRACT.

REVISIONS	
MARCH 24, 2008	WHF
JANUARY 13, 2009	WHF

PROJECT NAME: EAST MONTPELIER
PROJECT NUMBER: BRF 037-2(8)

FILE NAME: se054erodet.dgn
PROJECT LEADER: C.P.WILLIAMS
DESIGNED BY: CONST. ENV. SECTION
EPSC DETAIL SHEET - 1

PLOT DATE: 18-AUG-2010
DRAWN BY: CON. ENV. SECT.
CHECKED BY: CON. ENV. SECT.
SHEET 49 OF 63



SYMBOL

NOT TO SCALE

CONSTRUCTION SPECIFICATIONS

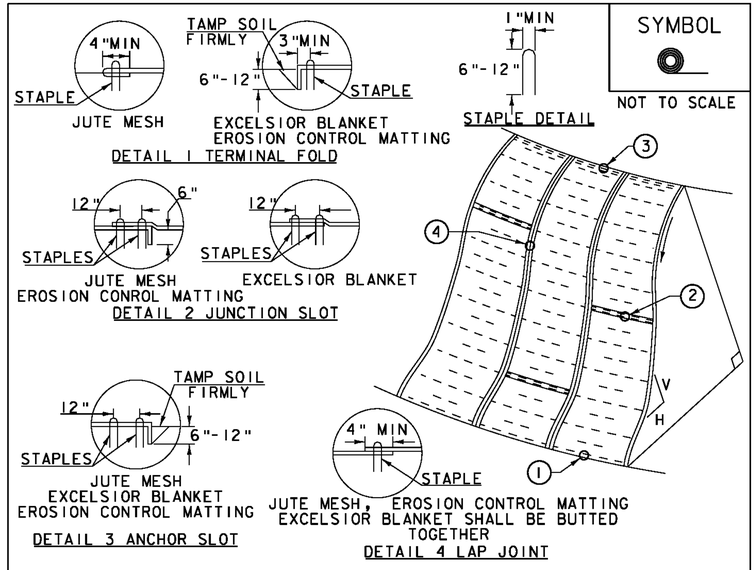
1. EROSION MATTING, CHECK SLOTS, SHALL BE SPACED IN DITCH CHANNEL SO THAT ONE OCCURS WITHIN EACH 50' ON SLOPES OF MORE THAN 4% AND LESS THAN 6%. ON SLOPES OF 6% OR MORE, THEY SHALL BE SPACED SO THAT ONE OCCURS WITHIN EACH 25'.
2. APPLY FERTILIZER, LIME SEED PRIOR TO PLACING MATTING.
3. STAPLES ARE TO BE PLACED ALTERNATELY, IN COLUMNS APPROXIMATELY 2' APART AND IN ROWS APPROXIMATELY 3' APART. APPROXIMATELY 175 STAPLES ARE REQUIRED PER 4'X225' ROLL OF MATERIAL AND 125 STAPLES ARE REQUIRED PER 4'X150' ROLL OF MATERIAL.
4. DISTURBED AREAS SHALL BE SMOOTHLY GRADED. EROSION CONTROL MATERIAL SHALL BE PLACED LOOSELY OVER GROUND SURFACE. DO NOT STRETCH.
5. ALL TERMINAL ENDS AND TRANSVERSE LAPS SHALL BE STAPLED AT APPROXIMATELY 12" INTERVALS.

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

ROLLED EROSION CONTROL PRODUCT (RECP) DITCH

NOTES:
REFER TO "THE VERMONT STANDARDS & SPECIFICATIONS FOR EROSION PREVENTION & SEDIMENT CONTROL -2006- " FROM THE VT AGENCY OF NATURAL RESOURCES FOR ADDITIONAL GUIDANCE.
THIS WORK SHALL BE PERFORMED IN ACCORDANCE WITH SECTION 653 AND AS SHOWN IN THE PLANS FOR ~~TEMPORARY EROSION MATTING (PAY ITEM 653.20) OR~~ PERMANENT EROSION MATTING (PAY ITEM 653.21).

REVISIONS	
MARCH 8, 2007	JMF
APRIL 16, 2007	WHF
JANUARY 13, 2009	WHF



SYMBOL

NOT TO SCALE

CONSTRUCTION SPECIFICATIONS

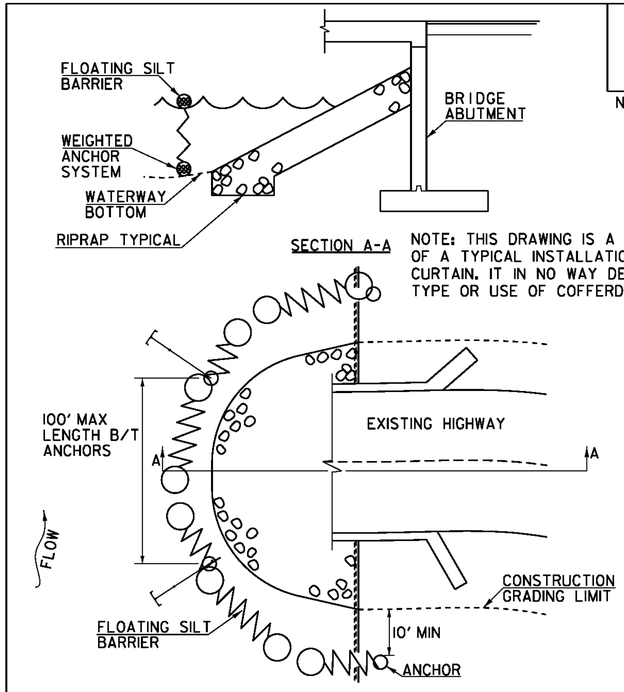
1. APPLY TO SLOPES GREATER THAN 3H: IV OR WHERE NECESSARY TO AID IN ESTABLISHING VEGETATION.
2. APPLY FERTILIZER, LIME SEED PRIOR TO PLACING MATTING.
3. STAPLES ARE TO BE PLACED ALTERNATELY, IN COLUMNS APPROXIMATELY 2' APART AND IN ROWS APPROXIMATELY 3' APART. APPROXIMATELY 175 STAPLES ARE REQUIRED PER 4'X225' ROLL OF MATERIAL AND 125 STAPLES ARE REQUIRED PER 4'X150' ROLL OF MATERIAL.
4. DISTURBED AREAS SHALL BE SMOOTHLY GRADED. EROSION CONTROL MATERIAL SHALL BE PLACED LOOSELY OVER GROUND SURFACE. DO NOT STRETCH.
5. ALL TERMINAL ENDS AND TRANSVERSE LAPS SHALL BE STAPLED AT APPROXIMATELY 12" INTERVALS.

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

ROLLED EROSION CONTROL PRODUCT (RECP) SIDE SLOPE

NOTES:
REFER TO "THE VERMONT STANDARDS & SPECIFICATIONS FOR EROSION PREVENTION & SEDIMENT CONTROL -2006- " FROM THE VT AGENCY OF NATURAL RESOURCES FOR ADDITIONAL GUIDANCE.
THIS WORK SHALL BE PERFORMED IN ACCORDANCE WITH SECTION 653 AND AS SHOWN IN THE PLANS FOR ~~TEMPORARY EROSION MATTING (PAY ITEM 653.20) OR~~ PERMANENT EROSION MATTING (PAY ITEM 653.21).

REVISIONS	
APRIL 16, 2007	JMF
JANUARY 13, 2009	WHF



SYMBOL

NOT TO SCALE

NOTE: THIS DRAWING IS A DEPICTION OF A TYPICAL INSTALLATION OF FILTER CURTAIN. IT IN NO WAY DEFINES THE TYPE OR USE OF COFFERDAM IF USED.

CONSTRUCTION SPECIFICATIONS

1. FILTER CURTAIN SHALL NOT BE PLACED ACROSS A FLOWING WATERWAY, OR IN A WATERWAY WITH STREAM VELOCITIES GREATER THAN 1.5 FEET/SECOND.
2. MAXIMUM 100' LENGTH BETWEEN ANCHORS.
3. LAST SECTION SHALL TERMINATE A MINIMUM OF 10' BEYOND LIMIT OF DISTURBANCE.
4. THE WEIGHTED ANCHOR SYSTEM SHALL BE A TYPE WHICH ALLOWS THE CURTAIN TO CONFORM TO THE BOTTOM OF THE WATERWAY.
5. THE CURTAIN SHALL BE REMOVED BY SLOWLY PULLING TOWARD THE SHORE MINIMIZING THE ESCAPE OF SEDIMENTS INTO WATERWAY.

FILTER CURTAIN

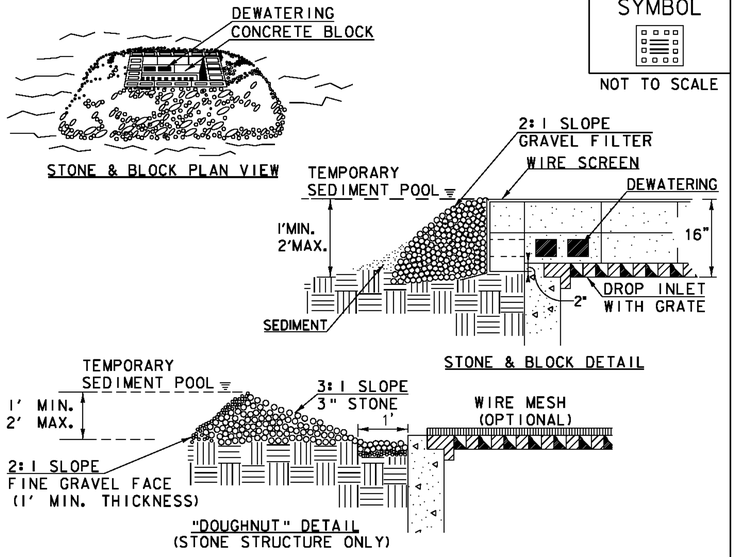
THIS WORK SHALL BE PERFORMED IN ACCORDANCE WITH SECTION 649 FOR GEOTEXTILE FOR FILTER CURTAIN (PAY ITEM 649.61).

REVISIONS	
APRIL 1, 2008	WHF
JANUARY 13, 2009	WHF
SEPTEMBER 4, 2009	WHF

PROJECT NAME: EAST MONTPELIER
PROJECT NUMBER: BRF 037-2(8)

FILE NAME: se054erodet.dgn
PROJECT LEADER: C.P.WILLIAMS
DESIGNED BY: CONST. ENV. SECTION
EPSC DETAIL SHEET - 2

PLOT DATE: 18-AUG-2010
DRAWN BY: CON. ENV. SECT.
CHECKED BY: CON. ENV. SECT.
SHEET 50 OF 63



SYMBOL

NOT TO SCALE

CONSTRUCTION SPECIFICATIONS

1. LAY ONE BLOCK ON EACH SIDE OF THE STRUCTURE ON ITS SIDE FOR DEWATERING. FOUNDATION SHALL BE 2" MINIMUM BELOW REST OF INLET AND BLOCKS SHALL BE PLACED AGAINST INLET FOR SUPPORT.
2. HARDWARE CLOTH OR ½" WIRE MESH SHALL BE PLACED OVER BLOCK OPENINGS TO SUPPORT STONE.
3. USE CLEAN STONE OR GRAVEL ½"- ¾" IN DIAMETER PLACED 2" BELOW TOP OF THE BLOCK ON A 2:1 SLOPE OR FLATTER.
4. FOR STONE STRUCTURES ONLY, A 1' THICK LAYER OF THE FILTER STONE WILL BE PLACED AGAINST THE 3" STONE AS SHOWN ON THE DRAWINGS.
5. MAXIMUM DRAINAGE AREA 1 ACRE

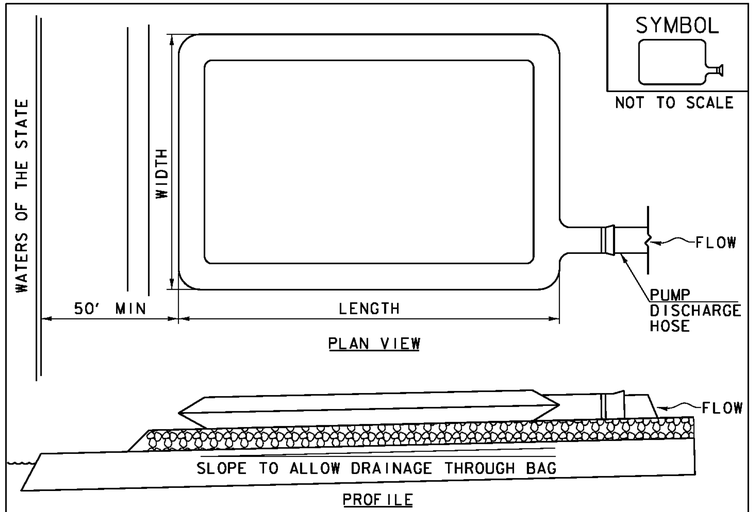
ADAPTED FROM DETAILS PROVIDED BY: NEW YORK STATE DEC ORIGINALLY DEVELOPED BY USDA-NRCS VERMONT DEPARTMENT OF ENVIRONMENTAL CONSERVATION

STONE & BLOCK DROP INLET PROTECTION

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

THIS WORK SHALL BE PERFORMED IN ACCORDANCE WITH SECTION 653 FOR INLET PROTECTION DEVICE, TYPE I (PAY ITEM 653.40).

REVISIONS	
MARCH 6, 2008	WHF
JANUARY 13, 2009	WHF



SYMBOL

NOT TO SCALE

CONSTRUCTION SPECIFICATIONS

1. THE PRIMARY PURPOSE OF FILTER BAG IS TO RETAIN SILT, SAND, AND FINES DURING DEWATERING OPERATIONS.
2. FILTER BAGS SHALL BE INSTALLED ON A VEGETATED SLOPE GRADED TO ALLOW INCOMING WATER TO FLOW THROUGH THE BAG.
3. FILTER BAGS MAY ALSO BE PLACED ON COARSE AGGREGATE, STONE, OR HAYBALES TO INCREASE FILTRATION EFFICIENCY.
4. FILTER BAGS SHALL BE LOCATED A MINIMUM OF 50' FROM WATERS OF THE STATE UNLESS OTHERWISE APPROVED BY THE ENGINEER.
5. THE NECK OF THE FILTER BAG SHALL BE STRAPPED TIGHTLY TO THE DISCHARGE HOSE.
6. A FILTER BAG IS FULL WHEN IT NO LONGER CAN EFFICIENTLY FILTER SEDIMENT OR ALLOW WATER TO PASS AT A REASONABLE RATE.
7. FILTER BAG SHALL BE DISPOSED OF AS APPROVED IN THE EPSC PLAN OR AS DIRECTED BY THE ENGINEER.

FILTER BAG

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

THIS WORK SHALL BE PERFORMED IN ACCORDANCE WITH SECTION 653 FOR FILTER BAG (PAY ITEM 653.45) AND AS SPECIFIED IN THE CONTRACT.

REVISIONS	
MARCH 24, 2008	WHF
JANUARY 13, 2009	WHF

VAOT RURAL AREA MIX

	LBS/AC				
% WEIGHT	BROADCAST	HYDROSEED	NAME	GERM %	PURITY %
37.5%	22.5	45	CREEPING RED FESCUE	85%	98%
37.5%	22.5	45	TALL FESCUE	90%	95%
5.0%	3	6	RED TOP	90%	95%
15.0%	9	18	BIRDSFOOT TREFOIL	85%	98%
5.0%	3	6	ANNUAL RYE GRASS	85%	95%
100%	60	120			

VAOT URBAN AREA MIX

	LBS/AC				
% WEIGHT	BROADCAST	HYDROSEED	NAME	GERM %	PURITY %
42.5%	34	68	CREEPING RED FESCUE	85%	98%
10.0%	8	16	PERENNIAL RYE GRASS	90%	95%
42.5%	34	68	KENTUCKY BLUE GRASS	85%	85%
5.0%	4	8	ANNUAL RYE GRASS	85%	95%
100%	80	160			

GENERAL GUIDANCE

FERTILIZER		LIME	
BROADCAST	HYDROSEED	BROADCAST	HYDROSEED
10-20-10	19-19-19	PELLETIZED	LIQUID
500 LBS/AC		2 TONS/AC	4.4 GAL/AC

CONSTRUCTION GUIDANCE

1. RURAL SEED MIX: USE AS INDICATED IN THE PLANS AND/OR FOR ALL ESTABLISHED UPLAND (NON WETLAND) AREAS DISTURBED BY THE CONTRACTOR.
2. URBAN SEED MIX: USE AS INDICATED IN THE PLANS AND/OR FOR ALL ESTABLISHED LAWN AREAS DISTURBED BY THE CONTRACTOR.
3. ALL SEED MIXTURES: SHALL NOT HAVE A WEED CONTENT EXCEEDING 0.40% BY WEIGHT AND SHALL BE FREE OF ALL NOXIOUS SEED.
4. FERTILIZER AND LIMESTONE: SHALL FOLLOW RATES SHOWN ON PLAN OR AS DIRECTED BY THE ENGINEER
5. HAY MULCH: TO BE PLACED ON EARTH SLOPES AT THE RATE OF 2 TONS/ACRE, ACHIEVE 90% GROUND COVER OR AS DIRECTED BY THE ENGINEER.
6. TOPSOIL: TO BE USED WITH SEED AS INDICATED ON THE PLANS, OR AS DIRECTED BY THE ENGINEER.
7. HYDROSEEDING: ALTHOUGH GUIDANCE IS GIVEN ABOVE THE SITE CONDITIONS AND THE TYPE OF HYDROSEED WILL ULTIMATELY DICTATE THE AMOUNTS AND TYPES OF SOIL AMENDMENTS TO BE APPLIED
8. TURF ESTABLISHMENT: PLACING SEED, FERTILIZER, LIME AND MULCH PRIOR TO SEPTEMBER 15 AND AFTER APRIL 15 CAN BETTER ENSURE A VIGOROUS GROWTH OF GRASS.

ADAPTED FROM VTRANS TECHNICAL LANSCAPE MAUAL FOR ROADWAYS AND TRANSPORTATION FACILITIES

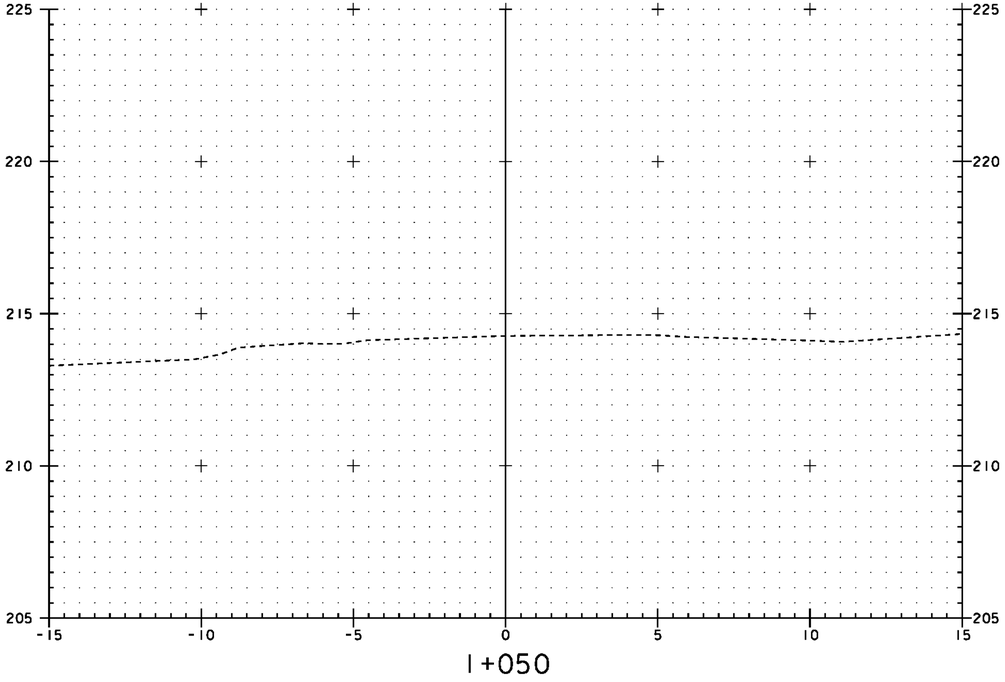
TURF ESTABLISHMENT

REVISIONS	
JUNE 23, 2009	WHF
JANUARY 15, 2010	WHF

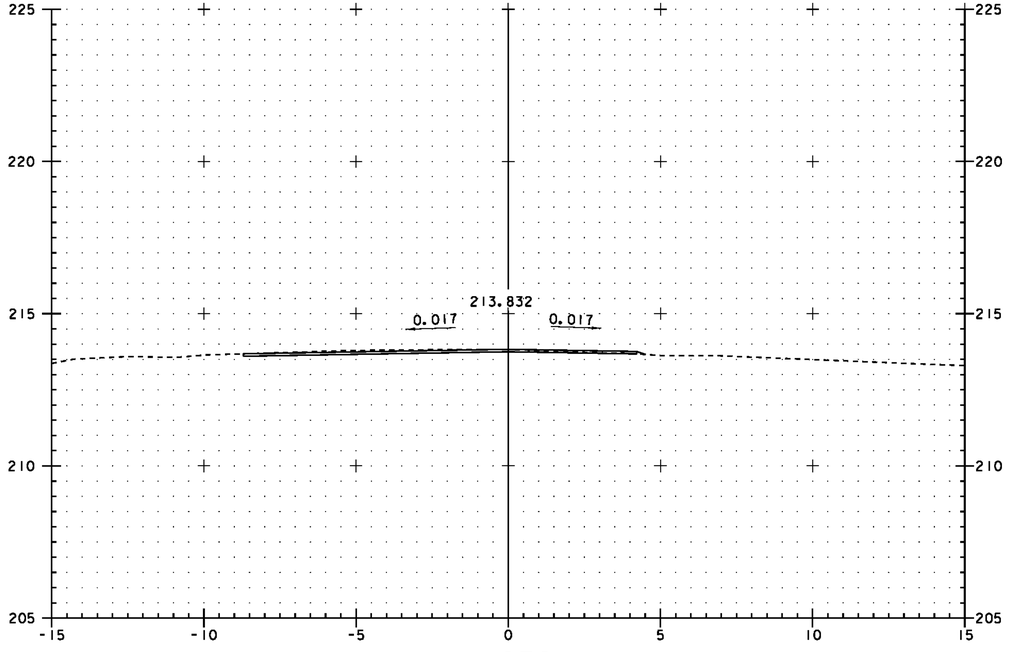
PROJECT NAME: EAST MONTPELIER
PROJECT NUMBER: BRF 037-2(8)

FILE NAME: se054erodet.dgn
PROJECT LEADER: C.P.WILLIAMS
DESIGNED BY: CONST. ENV. SECTION
EPSC DETAIL SHEET - 3

PLOT DATE: 18-AUG-2010
DRAWN BY: CON. ENV. SECT.
CHECKED BY: CON. ENV. SECT.
SHEET 51 OF 63

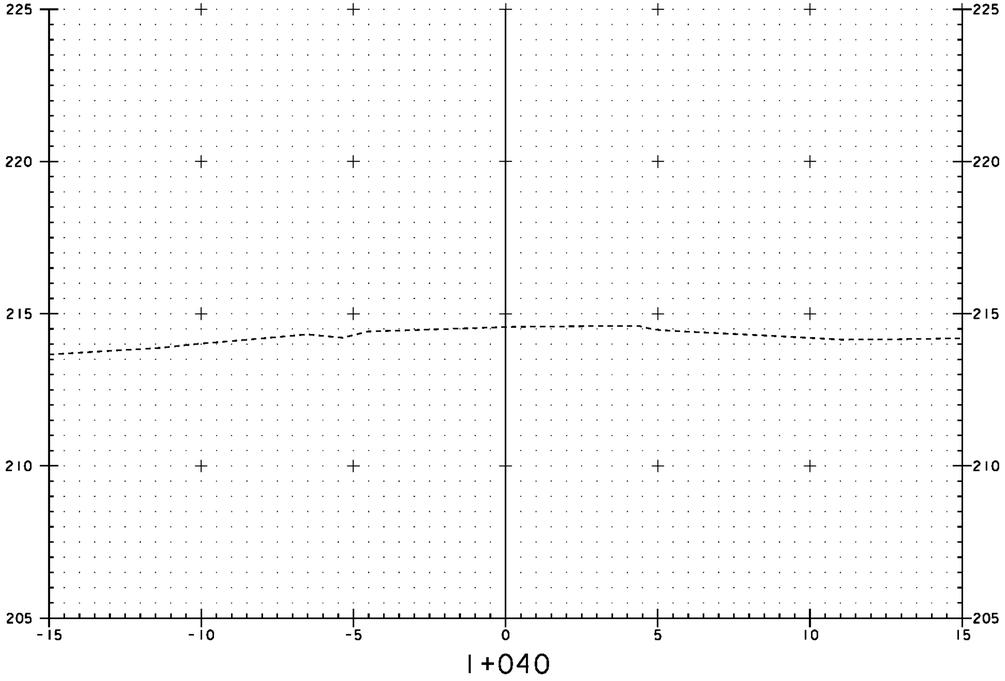


1+050

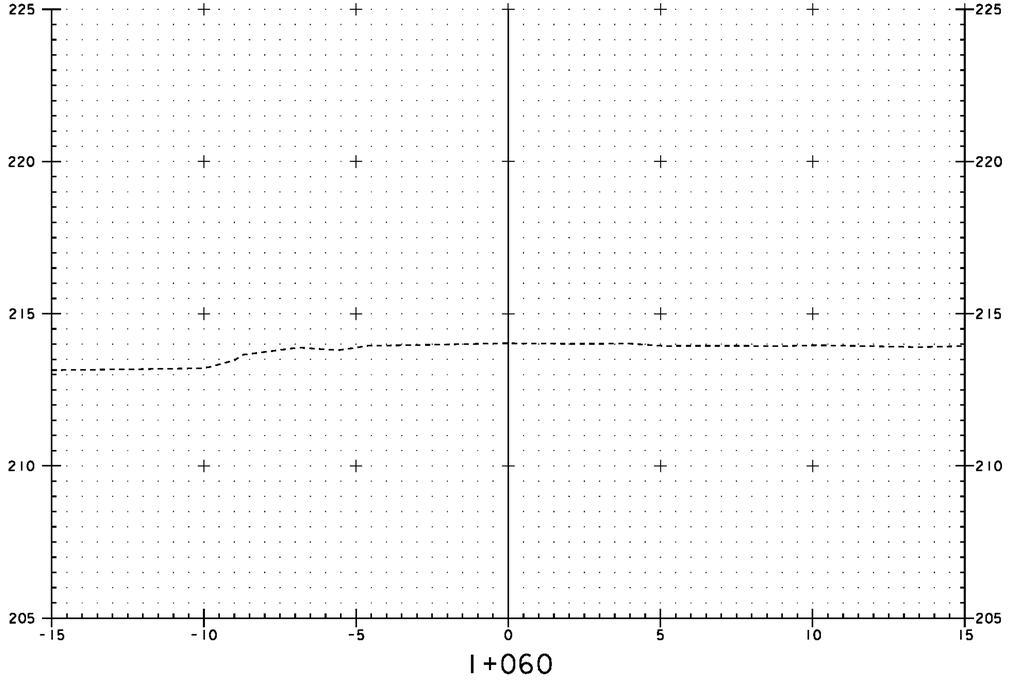


1+070

BEGIN APPROACH
STA 1+065.000



1+040

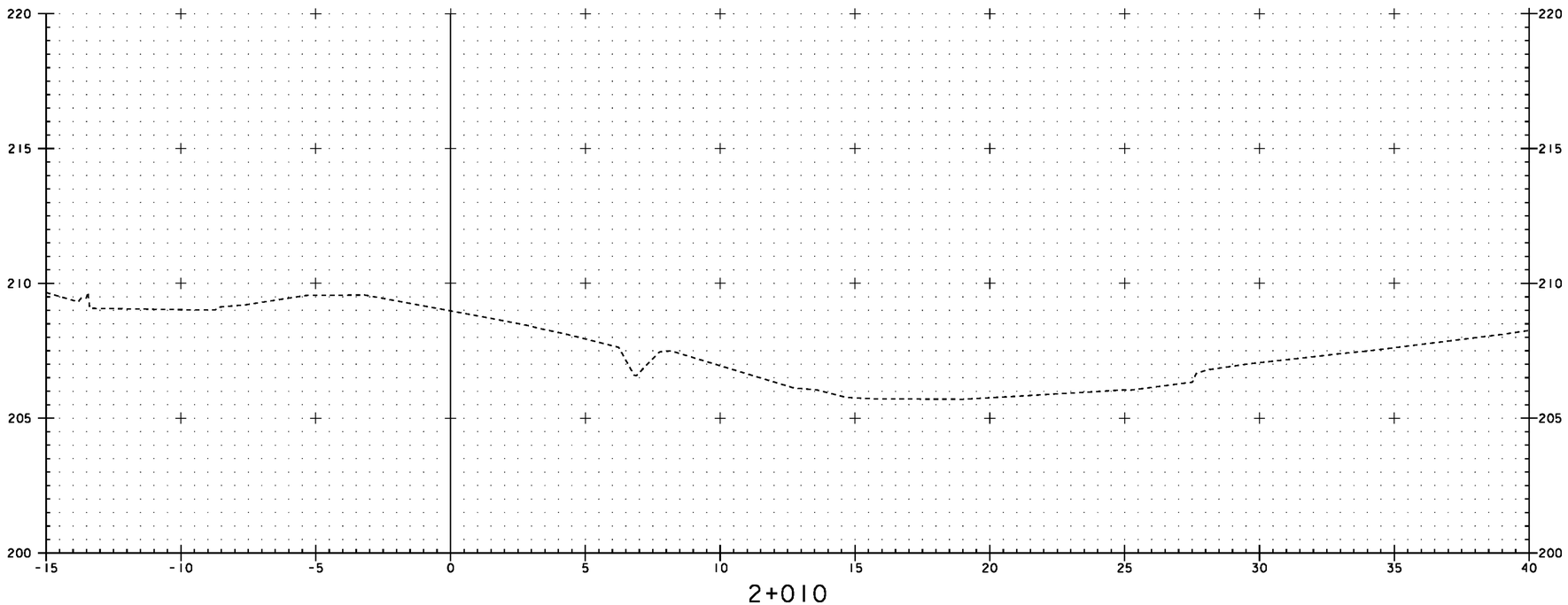


1+060

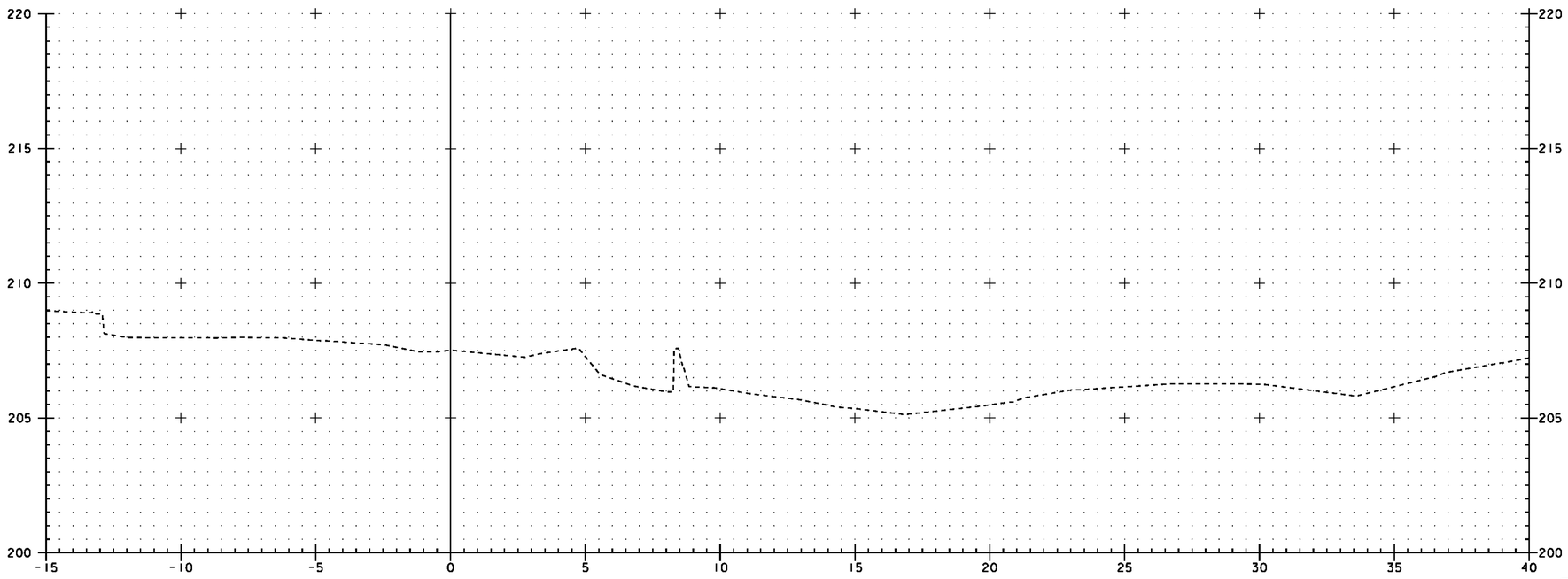
0 2 4 6 8 10
SCALE 1 : 100

VAOT Metric

PROJECT: EAST MONTPELIER	PROJECT NO.: BRF 037-2(8)
DESIGN FILE NAME: 86e054/structures/se054xsl.dgn IPARM FILE NAME: se054mll.i	PLOT DATE: 18-AUG-2010
SECTION 1+040 THROUGH 1+070	
MAINLINE SECTIONS	SHEET: 52 OF 63



2+010

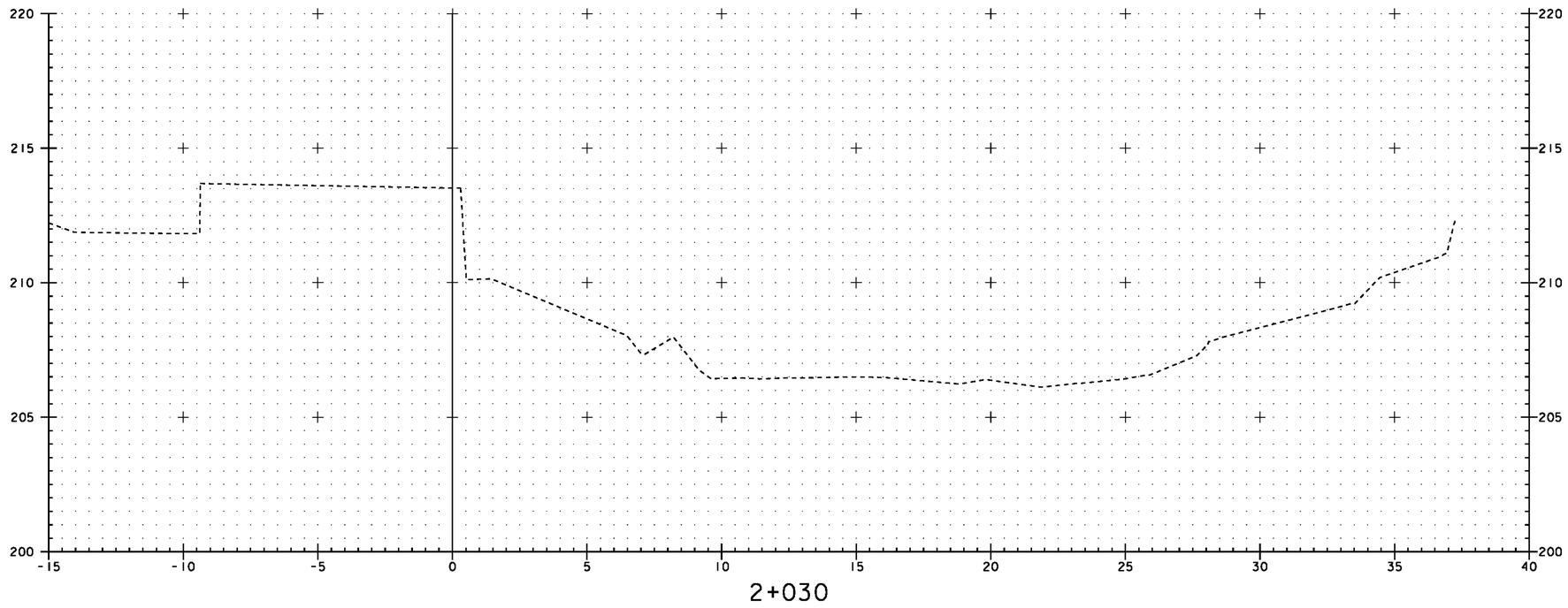


2+000

0 2 4 6 8 10
SCALE 1 : 100

VAOT Metric

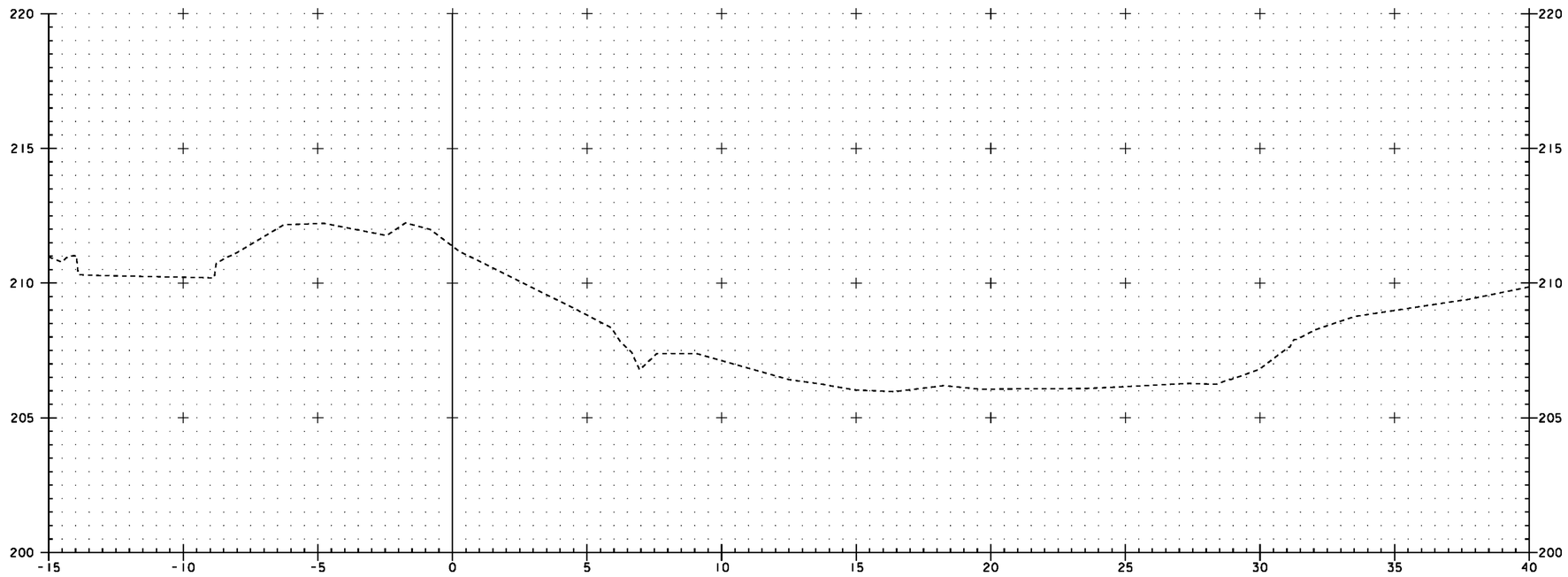
PROJECT: EAST MONTPELIER	PROJECT NO.: BRF 037-2(8)
DESIGN FILE NAME: 86e054/structures/se054xsl.dgn IPARM FILE NAME: se054chl.i	PLOT DATE: 18-AUG-2010
SECTION 2+00 THROUGH 2+10	
CHANNEL SECTIONS	SHEET: 57 OF 63



2+030

STA 2+033.000
(ABUTMENT No. 1)

BEGIN STONE FILL TYPE IV
BEGIN GEOTEXTILE UNDER STONE FILL
BEGIN GRUBBING MATERIAL
BEGIN UNCLASSIFIED CHANNEL EXCAVATION



2+020

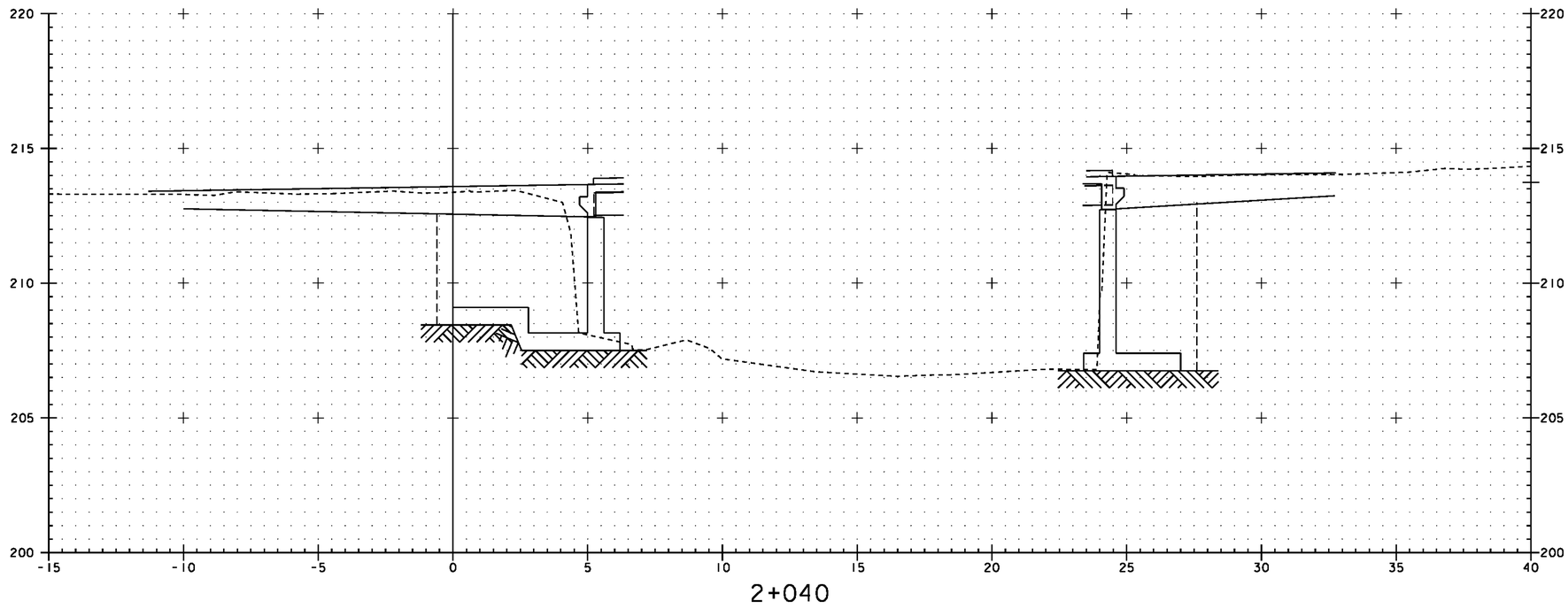
STA 2+030.200
(ABUTMENT No. 2)

BEGIN STONE FILL TYPE IV
BEGIN GEOTEXTILE UNDER STONE FILL
BEGIN GRUBBING MATERIAL
BEGIN UNCLASSIFIED CHANNEL EXCAVATION

0 2 4 6 8 10
SCALE 1 : 100

VAOT Metric

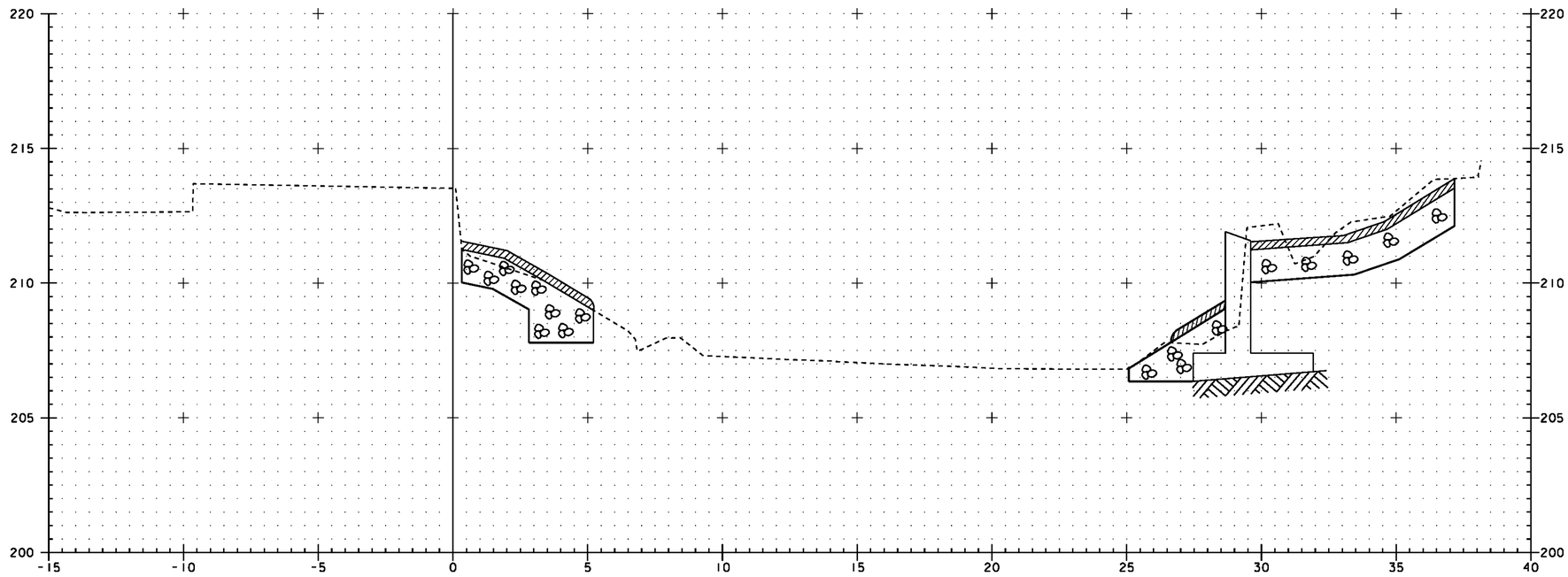
PROJECT: EAST MONTPELIER	PROJECT NO.: BRF 037-2(8)
DESIGN FILE NAME: 86e054/structures/se054xsl.dgn IPARM FILE NAME: se054ch2.i	PLOT DATE: 18-AUG-2010
SECTION 2+020 THROUGH 2+030	
CHANNEL SECTIONS	SHEET: 58 OF 63



2+040

STA 2+039.00
(ABUTMENT No. 1)

END STONE FILL TYPE IV
END GEOTEXTILE UNDER STONE FILL
END GRUBBING MATERIAL
END UNCLASSIFIED CHANNEL EXCAVATION



2+035

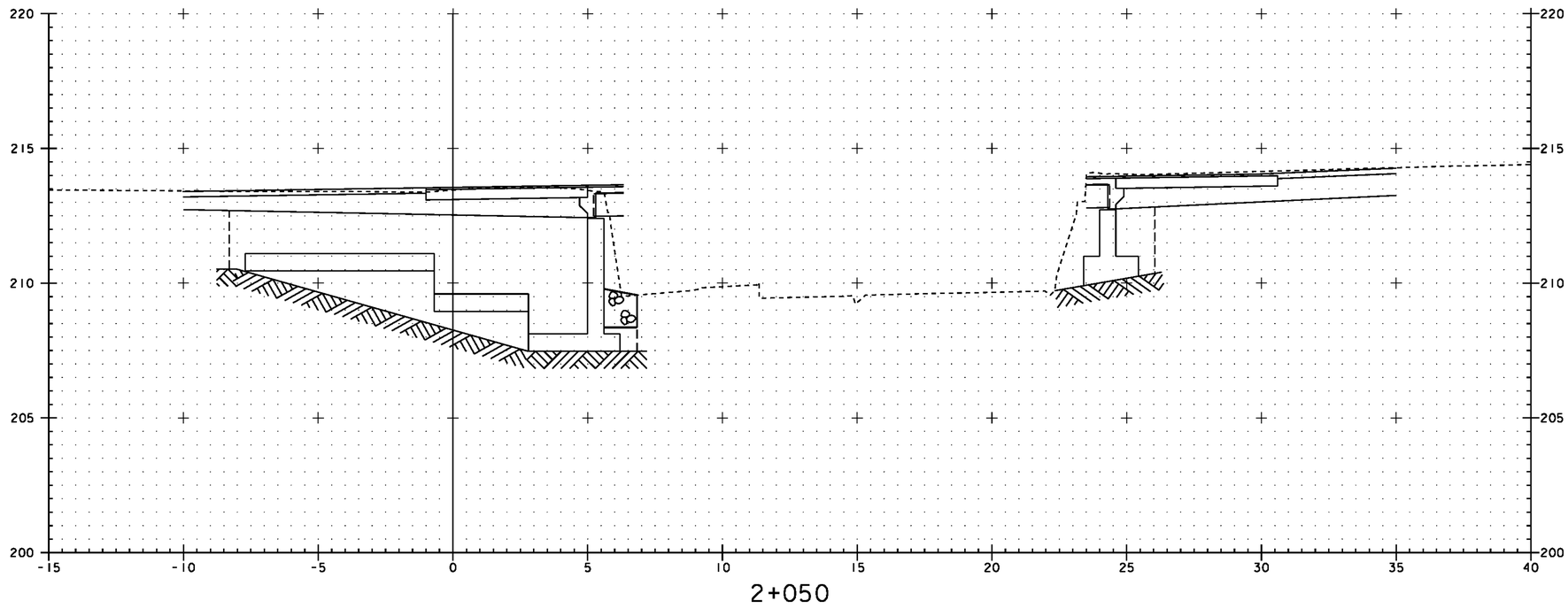
STA 2+039.00
(ABUTMENT No. 2)

END STONE FILL TYPE IV
END GEOTEXTILE UNDER STONE FILL
END GRUBBING MATERIAL
END UNCLASSIFIED CHANNEL EXCAVATION

0 2 4 6 8 10
SCALE 1 : 100

VAOT Metric

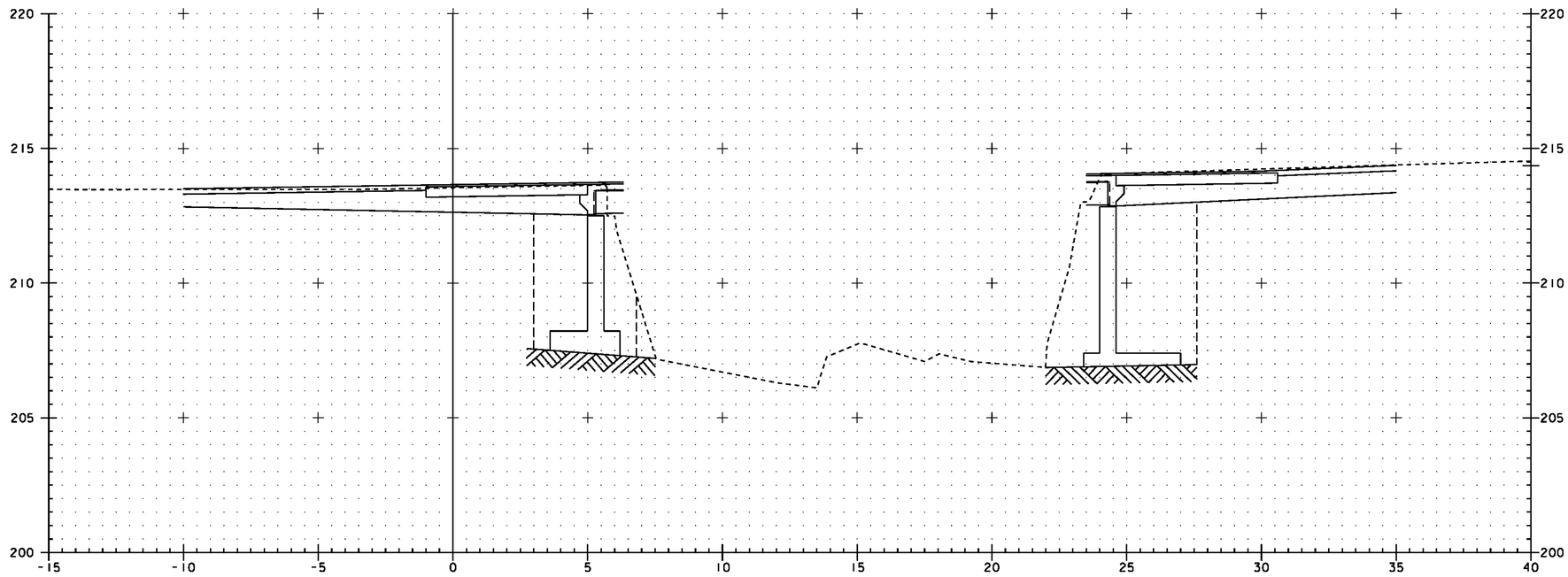
PROJECT: EAST MONTPELIER	PROJECT NO.: BRF 037-2(8)
DESIGN FILE NAME: 86e054/structures/se054xsl.dgn IPARM FILE NAME: se054ch3.1	PLOT DATE: 18-AUG-2010
SECTION 2+035 THROUGH 2+040	
CHANNEL SECTIONS	SHEET: 59 OF 63



2+050

STA 2+048.000
(ABUTMENT No. 1)

BEGIN STONE FILL TYPE IV
BEGIN GEOTEXTILE UNDER STONE FILL
BEGIN GRUBBING MATERIAL
BEGIN UNCLASSIFIED CHANNEL EXCAVATION

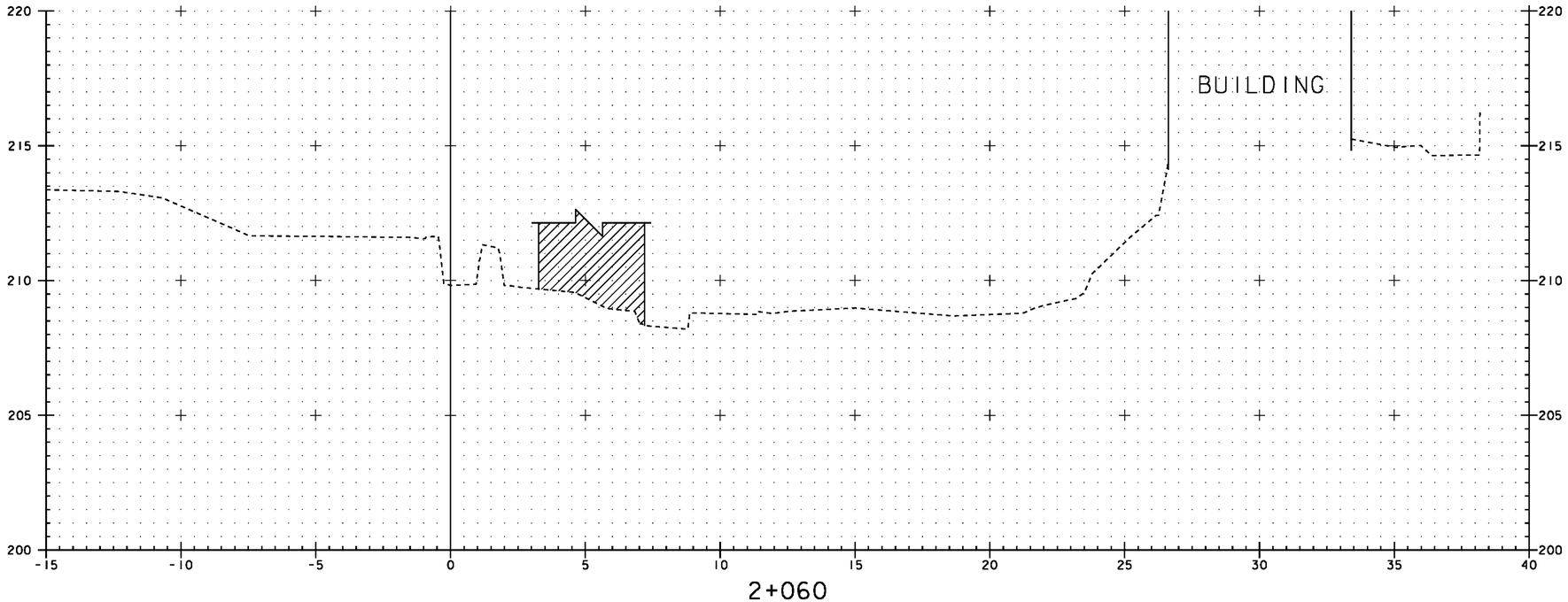


2+045

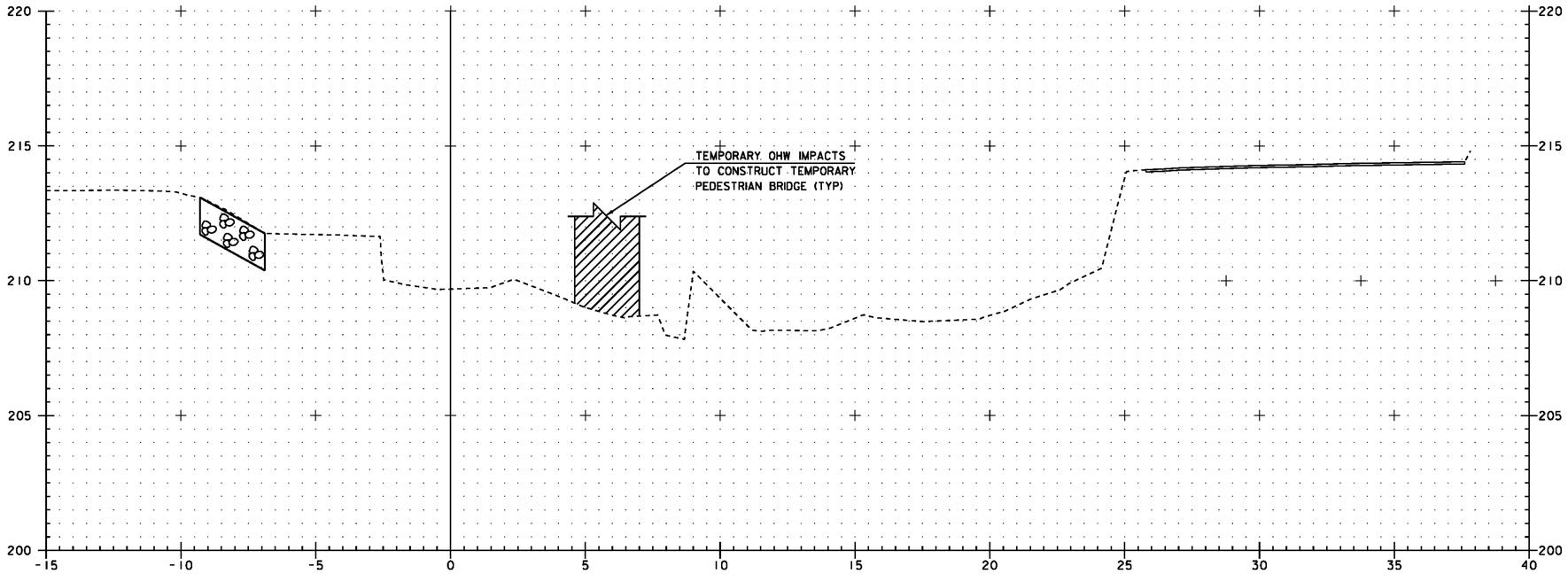
0 2 4 6 8 10
SCALE 1 : 100

VAOT Metric

EAST MONTPELIER	PROJECT NO.: BRF 037-2(8)
DESIGN FILE NAME: 86e054/structures/se054xsl.dgn IPARM FILE NAME: se054ch4.i	PLOT DATE: 18-AUG-2010
SECTION 2+045 THROUGH 2+050	
CHANNEL SECTIONS	SHEET: 60 OF 63



2+060



2+055

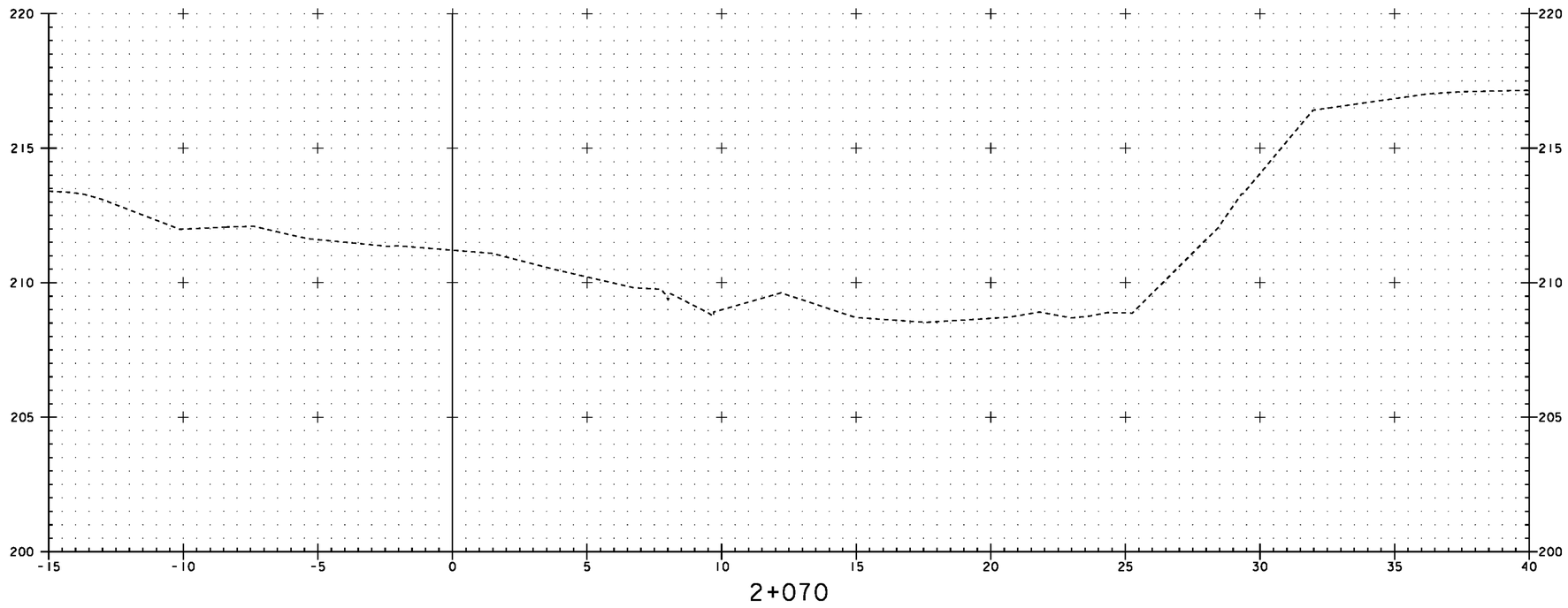
STA 2+055.900
(ABUTMENT No. 1)

END STONE FILL TYPE IV
END GEOTEXTILE UNDER STONE FILL
END GRUBBING MATERIAL
END UNCLASSIFIED CHANNEL EXCAVATION

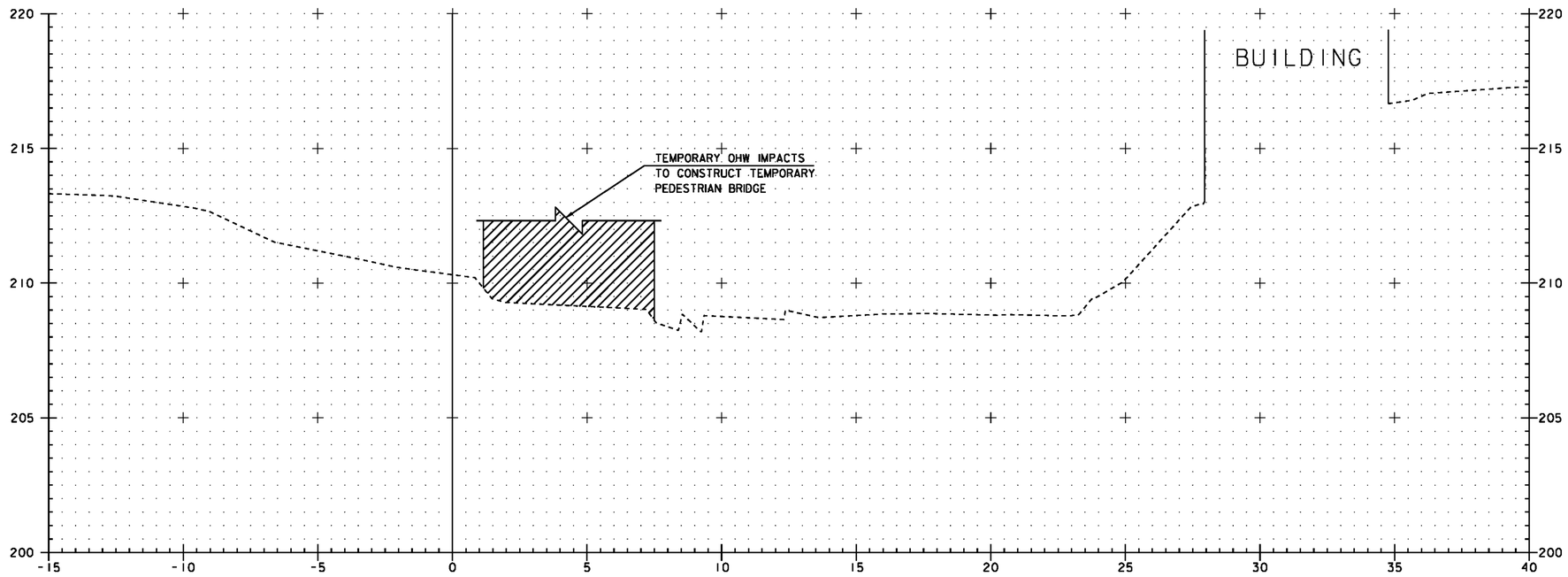
0 2 4 6 8 10
SCALE 1 : 100

VAOT Metric

PROJECT: EAST MONTPELIER	PROJECT NO.: BRF 037-2(8)
DESIGN FILE NAME: 86e054/structures/se054xs1.dgn IPARM FILE NAME: se054ch5.1	PLOT DATE: 18-AUG-2010
SECTION 2+055 THROUGH 2+060	
CHANNEL SECTIONS	SHEET: 61 OF 63



2+070

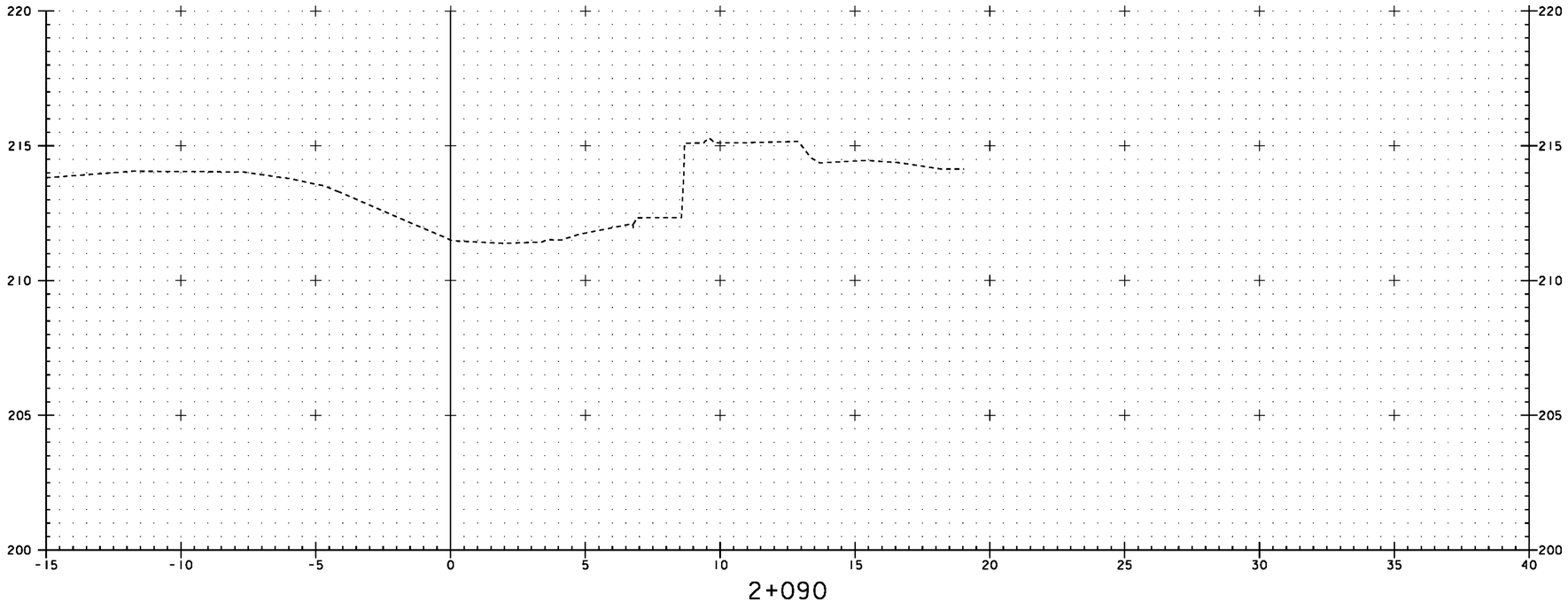


2+065

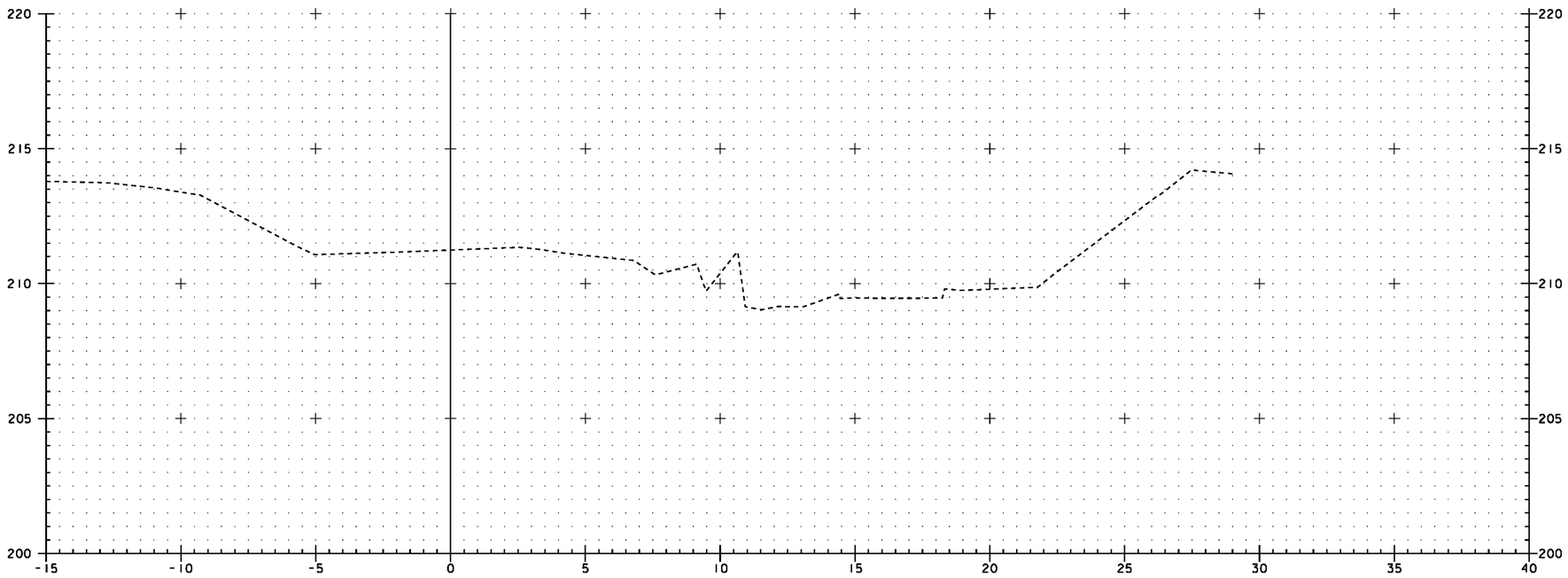
0 2 4 6 8 10
SCALE 1 : 100

VAOT Metric

PROJECT: EAST MONTPELIER	PROJECT NO.: BRF 037-2(8)
DESIGN FILE NAME: 86e054/structures/se054xsl.dgn IPARM FILE NAME: se054ch6.I	PLOT DATE: 18-AUG-2010
SECTION 2+065 THROUGH 2+070	
CHANNEL SECTIONS	SHEET: 62 OF 63



2+090



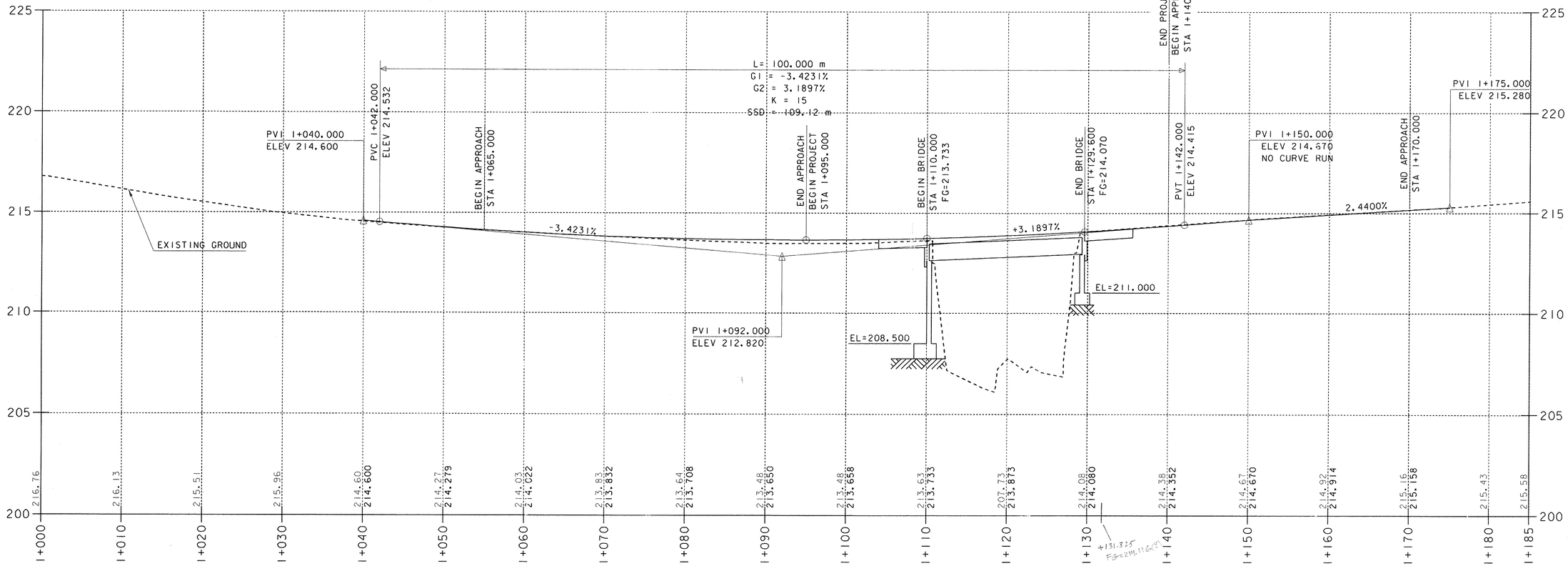
2+080

0 2 4 6 8 10
SCALE 1 : 100

VAOT Metric

PROJECT: EAST MONTPELIER	PROJECT NO.: BRF 037-2(8)
DESIGN FILE NAME: 86e054/structures/se054xsl.dgn IPARM FILE NAME: se054ch7.i	PLOT DATE: 18-AUG-2010
SECTION 2+080 THROUGH 2+090	
CHANNEL SECTIONS	SHEET: 63 OF 63

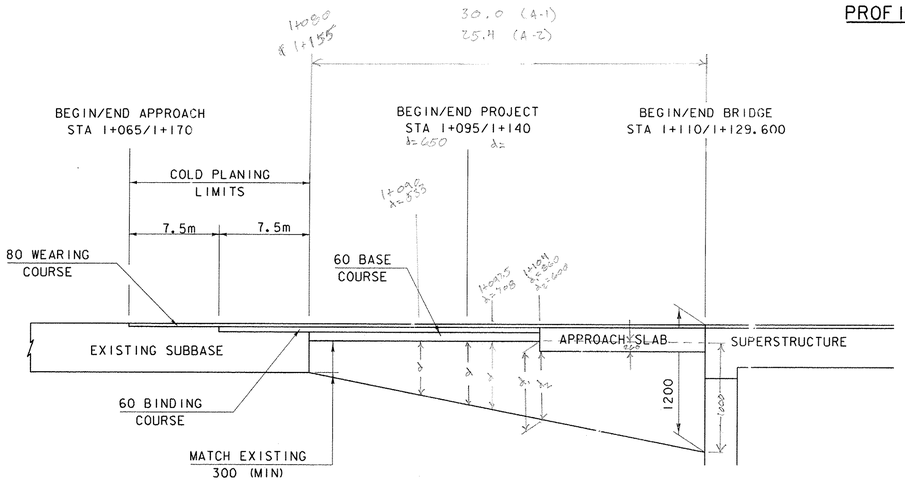
Metric



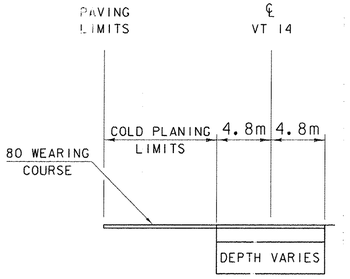
PROFILE VT RT 14

NOTE: GRADES SHOWN TO THE NEAREST HUNDREDTH ARE EXISTING GROUND ALONG CENTERLINE.

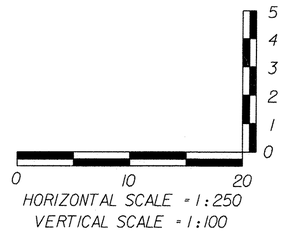
GRADES SHOWN TO THE NEAREST THOUSANDTH ARE FINISH GRADE ALONG CENTERLINE.



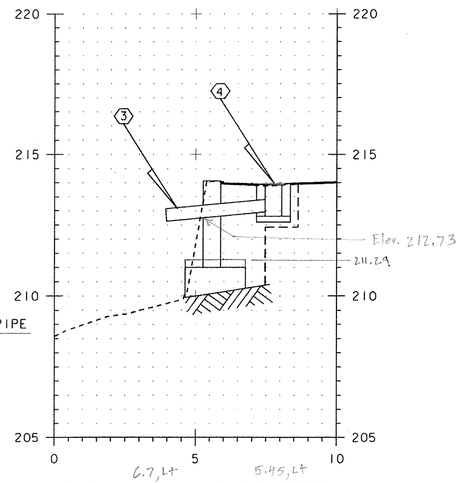
VT 14 SUBBASE TAPER
NTS



TH 11 PAVING
NTS



PROJECT NAME: EAST MONTPELIER	
PROJECT NUMBER: BRF 037-2(8)	
FILE NAME: se054pro.dgn	PLOT DATE: 18-AUG-2010
PROJECT LEADER: C.P.WILLIAMS	DRAWN BY: L.J.STONE
DESIGNED BY: L.J.STONE	CHECKED BY: H.I.SALLS
PROFILE VT RT 14	SHEET 11 OF 63



NEW 450 mm X 3500 mm OPTION PIPE

INLET INVERT
ELEVATION = 212.950

OUTLET INVERT
ELEVATION = 212.600

0.350

1+131.325 - 1+127.600
DROP INLET AND CULVERT

FG @ 1+131.325 = 214.116
– 0.02(67) = 213.982 ✓

$\frac{7.7}{3.5}(0.35) = .77$

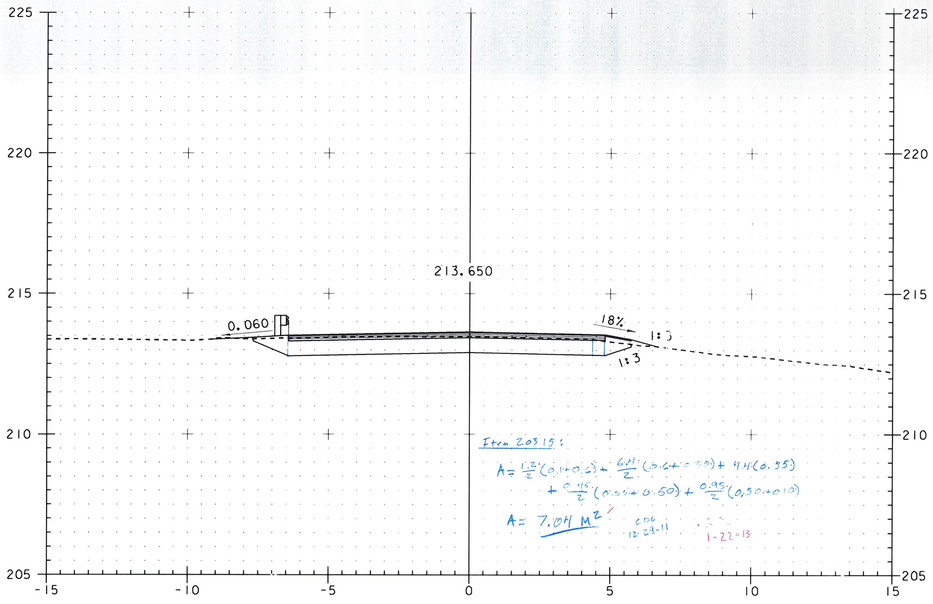
211.95 ⇒ USE 0.950
211.29
.660

T.E. Depth = 213.982
– 212.950
+ 0.150
+ 0.300
+ 0.300
1.782 M

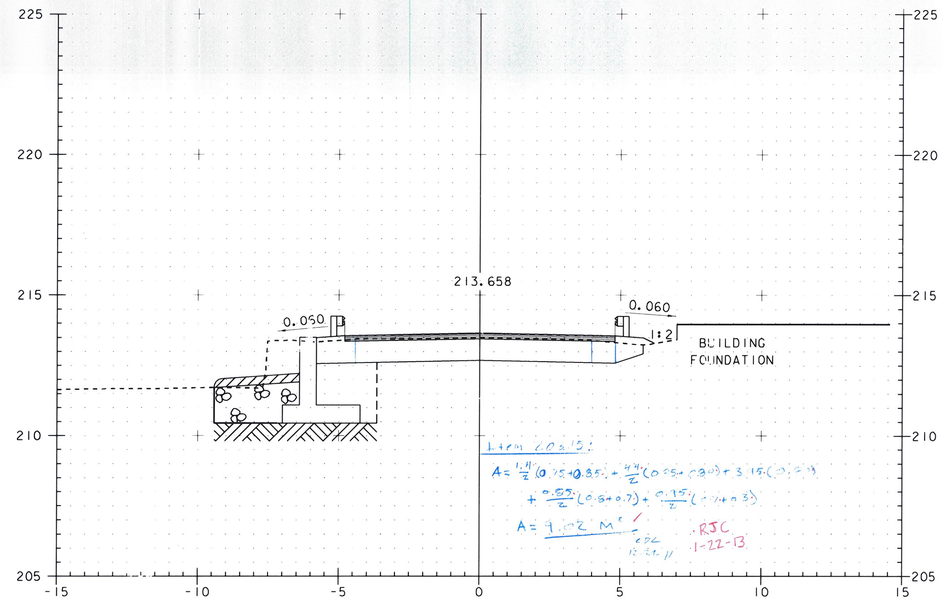
0 2 4 6 8 10
SCALE 1 : 100

Metric

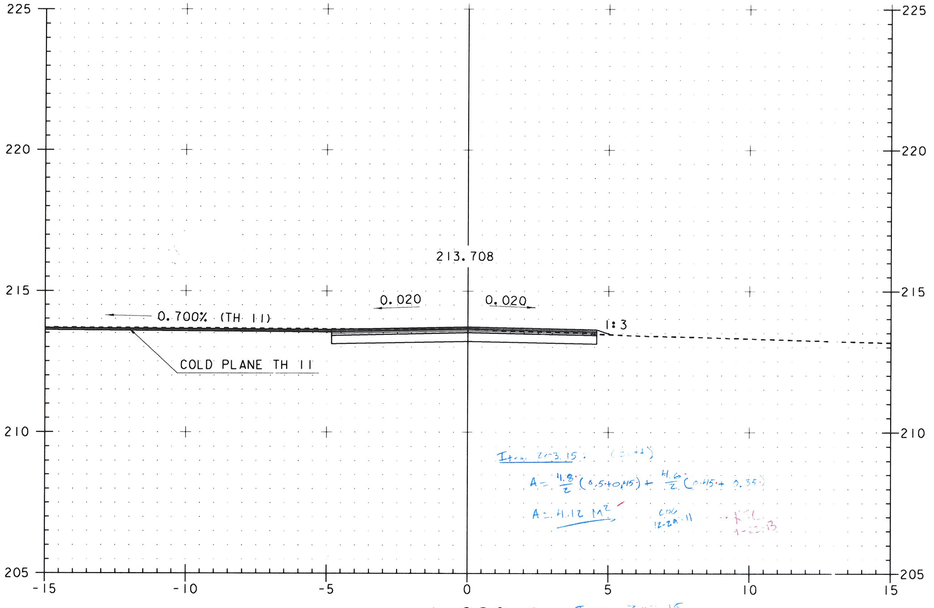
PROJECT: EAST MONTPELIER	PROJECT NO.: BRF 037-2(8)
DESIGN FILE NAME: 86e054/structures/se054xsl.dgn	
IPARM FILE NAME: se054pipesec.i	PLOT DATE: 18-AUG-2010
PIPE SECTIONS	SHEET: 15 OF 63



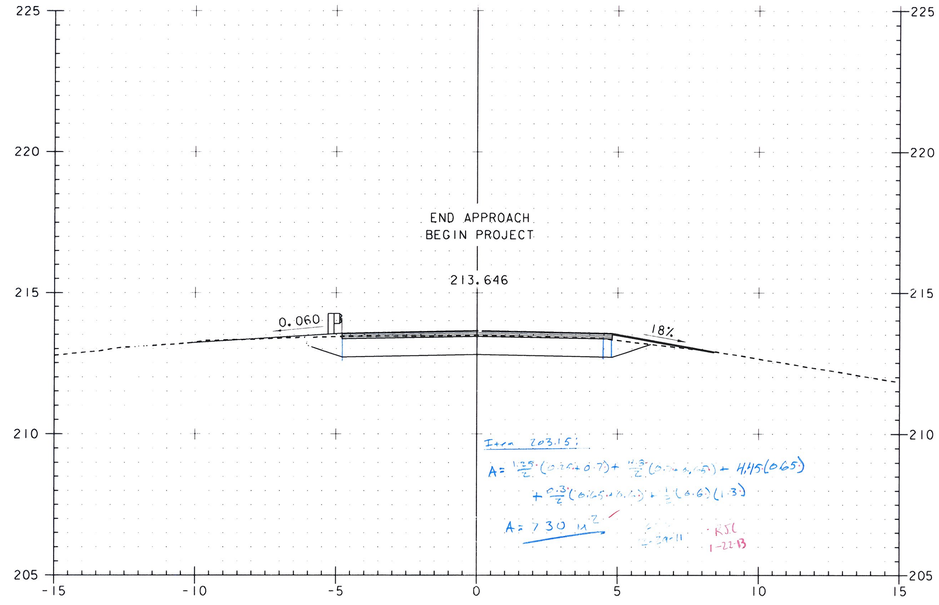
1+090



1+100



1+080, Beg. Item 203.15

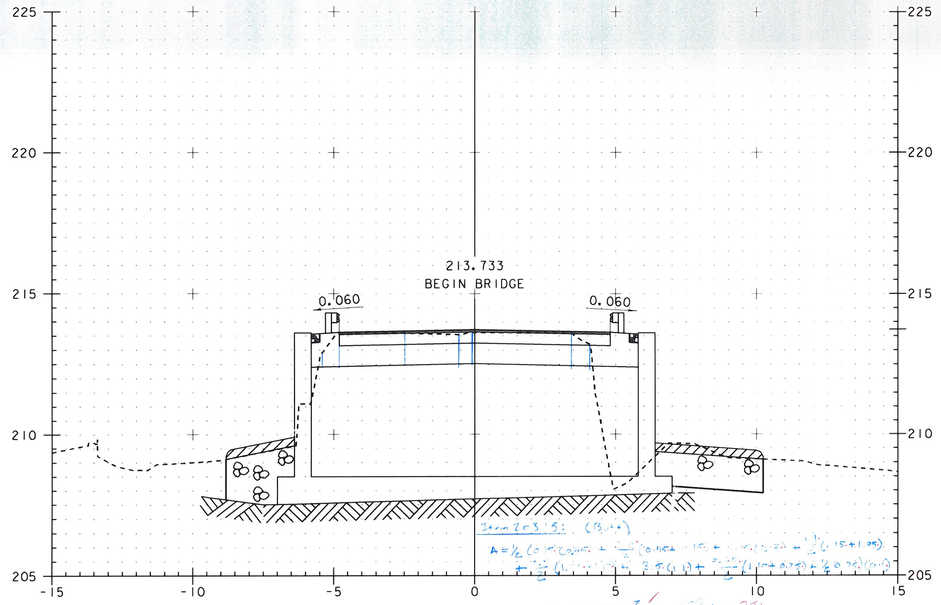


1+095

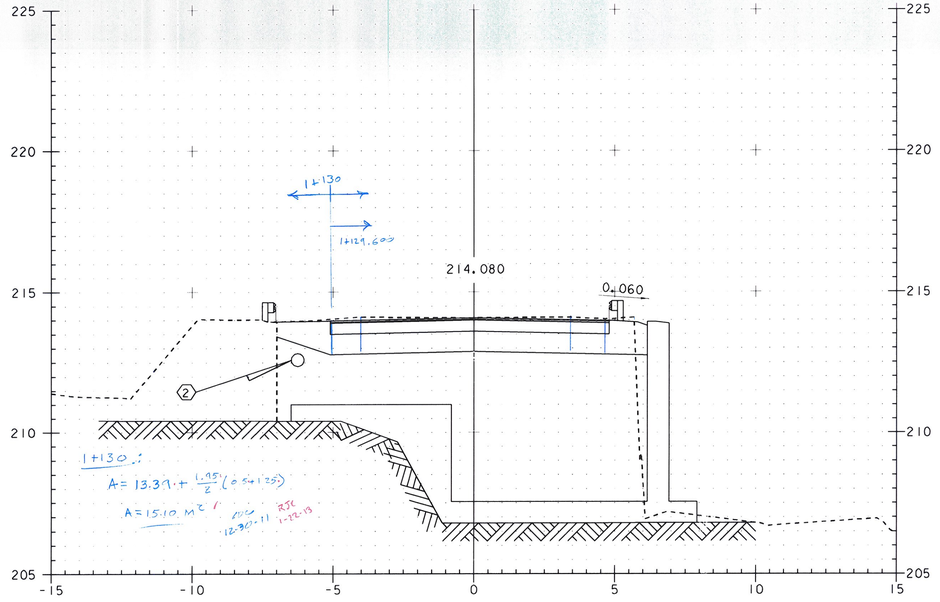
Metric

PROJECT: EAST MONTPELIER	PROJECT NO.: BRF 037-2(8)
DESIGN FILE NAME: 86e054/structures/se054xsl.dgn IPARM FILE NAME: se054ml2.i	PLOT DATE: 18-AUG-2010
SECTION 1+080 THROUGH 1+100	
MAINLINE SECTIONS	SHEET: 53 OF 63

0 2 4 6 8 10
SCALE 1 : 100

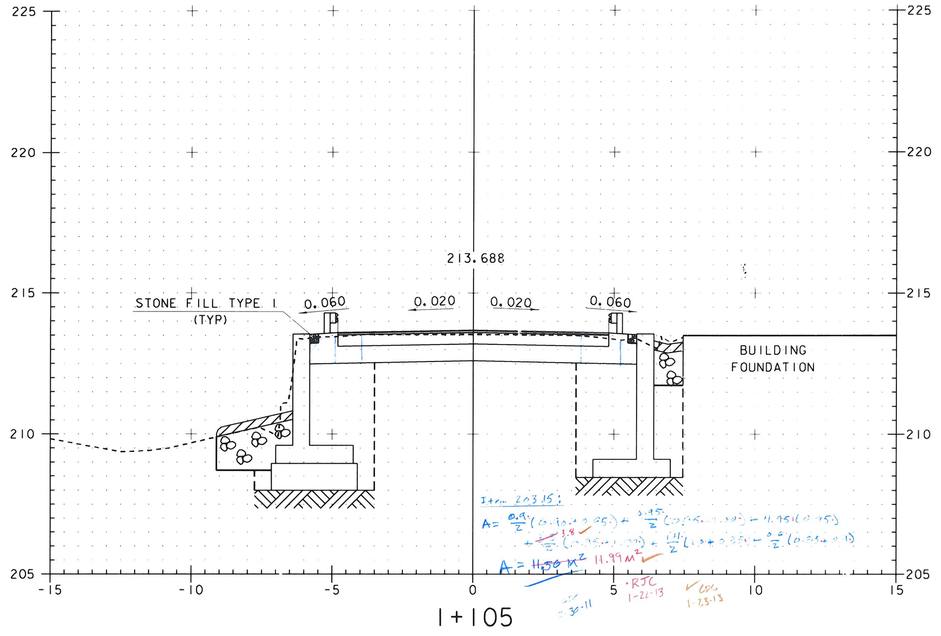


1+110

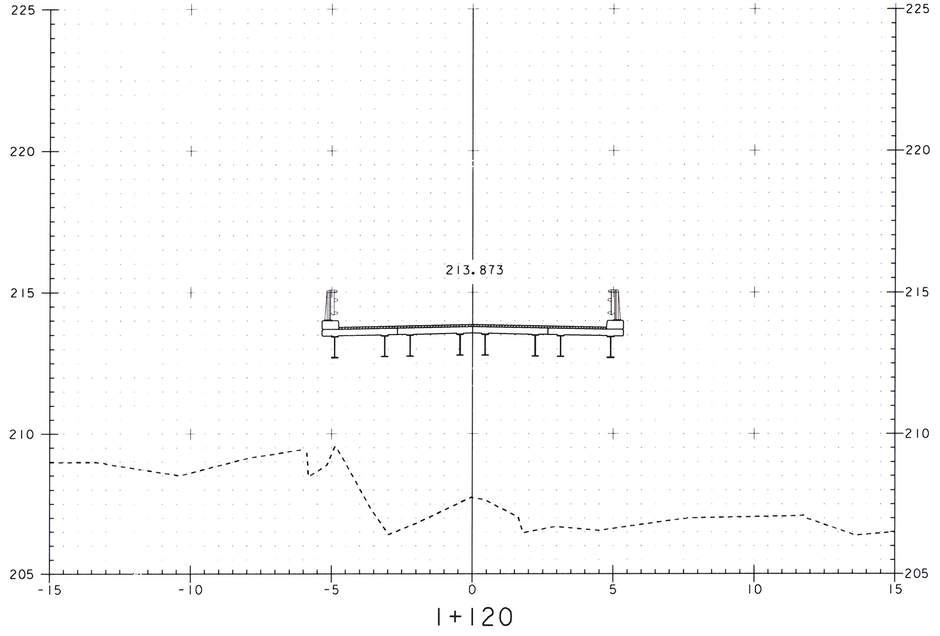


1+130

END BRIDGE
STA 1+129.600



1+105

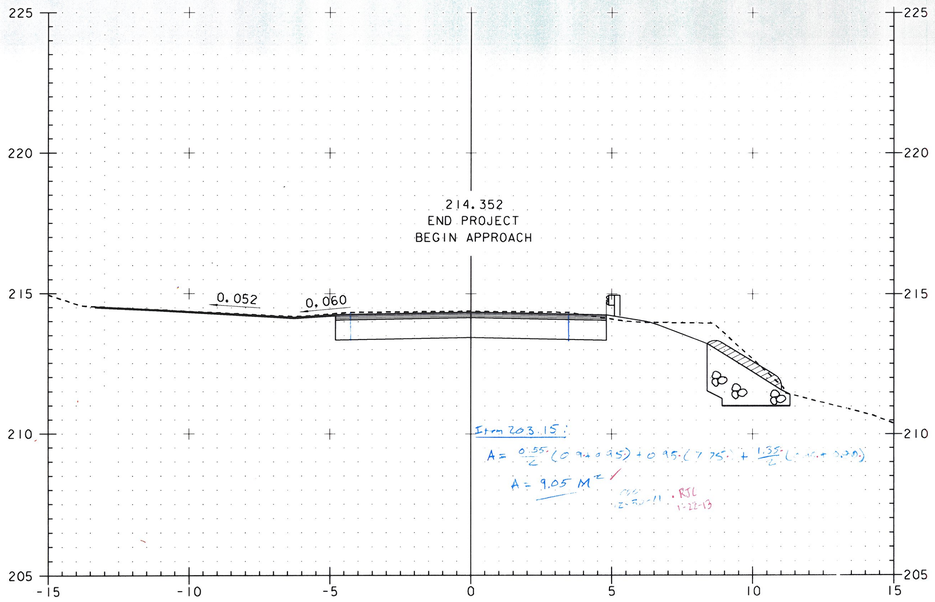


1+120

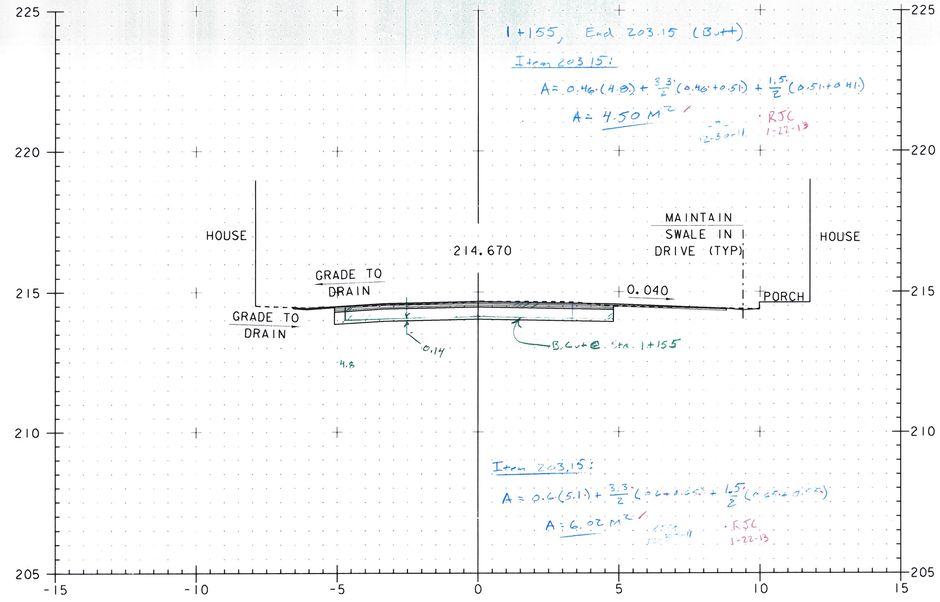
0 2 4 6 8 10
SCALE 1 : 100

VTrans Metric

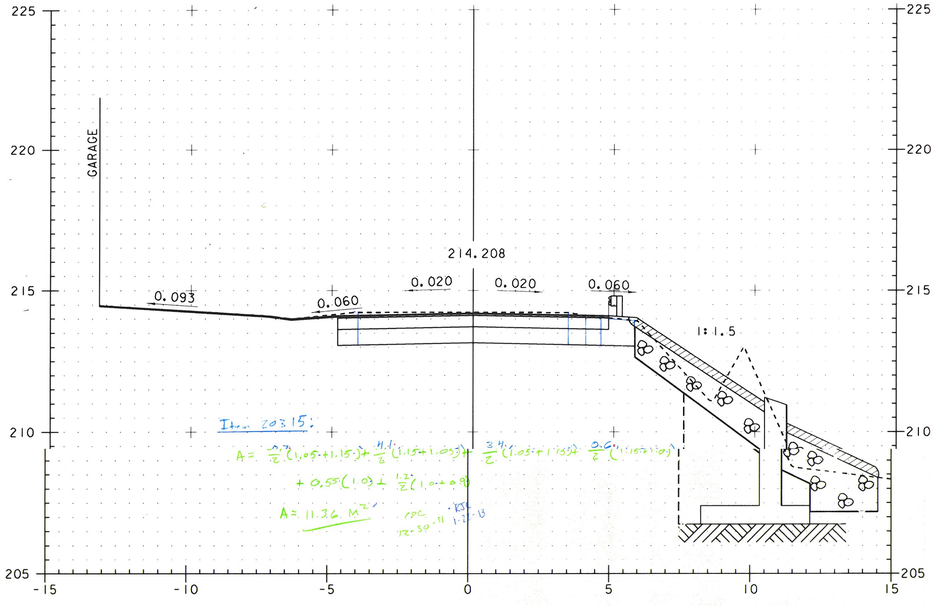
PROJECT: EAST MONTPELIER	PROJECT NO.: BRF 037-2(8)
DESIGN FILE NAME: 86e054/structures/se054xsl.dgn IPARM FILE NAME: se054ml3.1	PLOT DATE: 18-AUG-2010
SECTION 1+105 THROUGH 1+130	
MAINLINE SECTIONS	SHEET: 54 OF 63



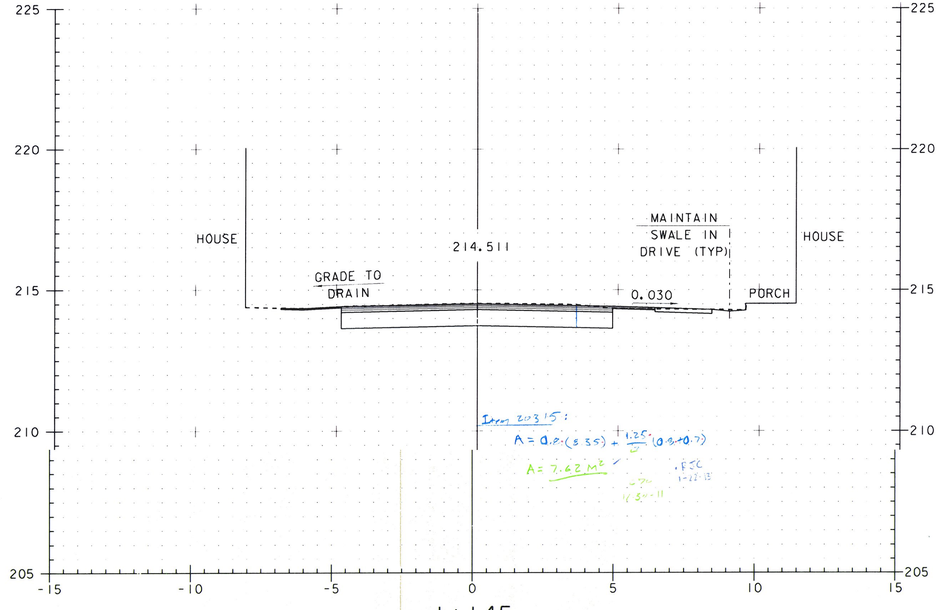
1+140



1+150



1+135

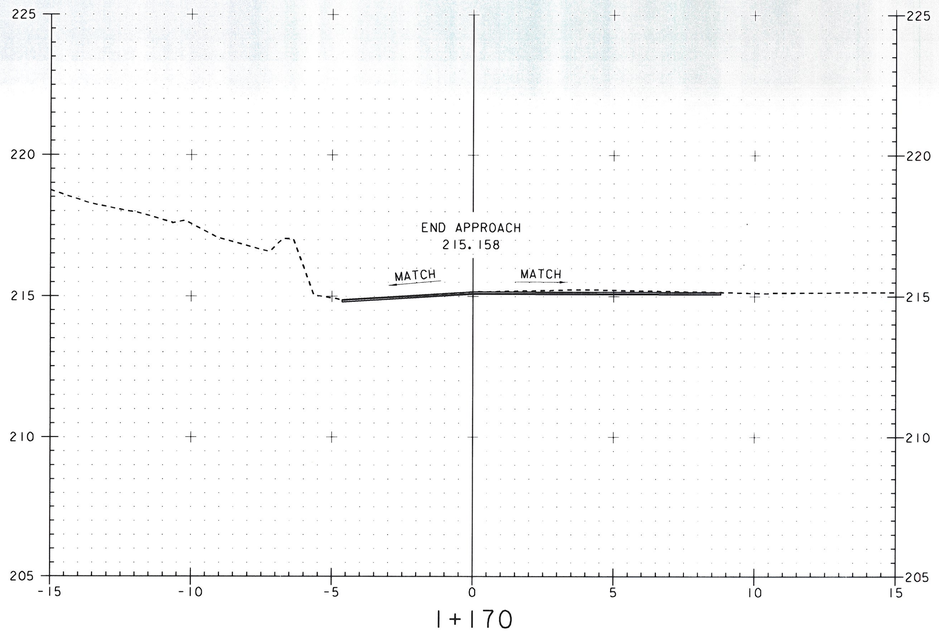


1+145

0 2 4 6 8 10
SCALE 1 : 100

Metric

PROJECT: EAST MONTPELIER	PROJECT NO.: BRF 037-2(8)
DESIGN FILE NAME: 86e054/structures/se054xsl.dgn IPARM FILE NAME: se054ml4.i	PLOT DATE: 18-AUG-2010
SECTION 1+135 THROUGH 1+150	
MAINLINE SECTIONS	SHEET: 55 OF 63



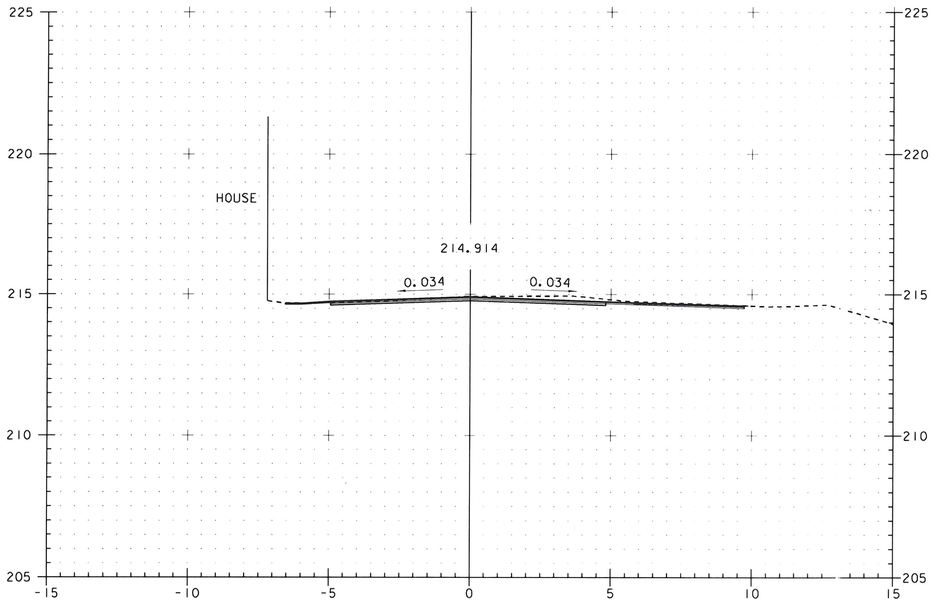
1+170

Item 203.15, Common Excavation

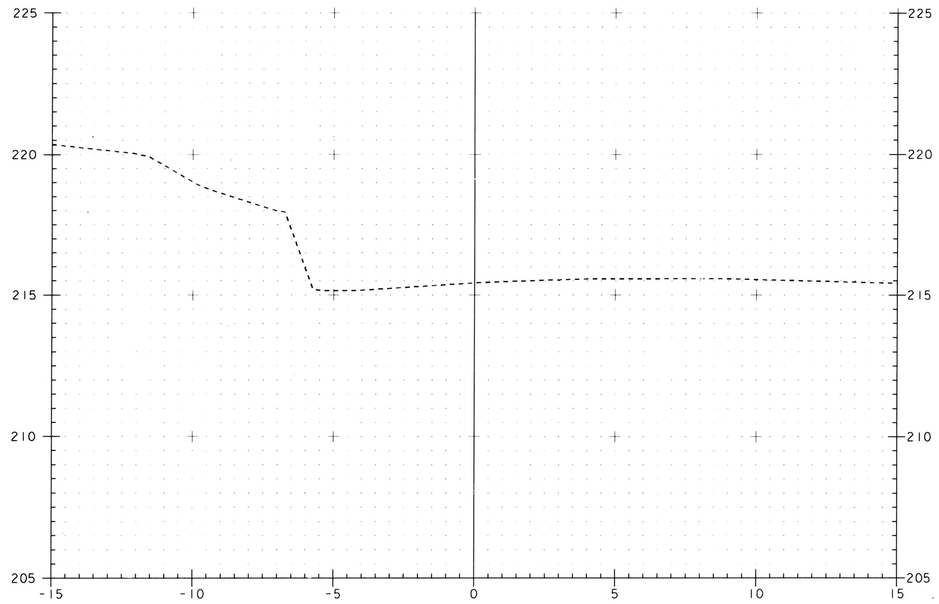
	Station	Distance	Area	Volume
(Bott)	1+080		4.12	55.80
	1+090	10.	7.04	35.85
	1+095	5.	7.30	10.80
	1+100	5.	9.02	~~52.53~~ 51.30
	1+105	5.	~~11.99~~ 11.50	~~55.68~~ 54.45
(Bott)	1+110	5.	10.28	—
	Bridge			
(Bott)	1+121.6	11.6	13.37	5.70
	1+130	8.4	15.10	66.15
	1+135	5.	11.36	51.03
	1+140	5.	9.25	41.68
	1+145	5.	7.62	34.10
	1+150	5.	6.32	26.30
(Bott)	1+155	5.	4.50	~~463.16~~ 465.62 M³

465.62 M³ CDG 1-23-13 RSC 1-22-13

RSC 12-20-11



1+160



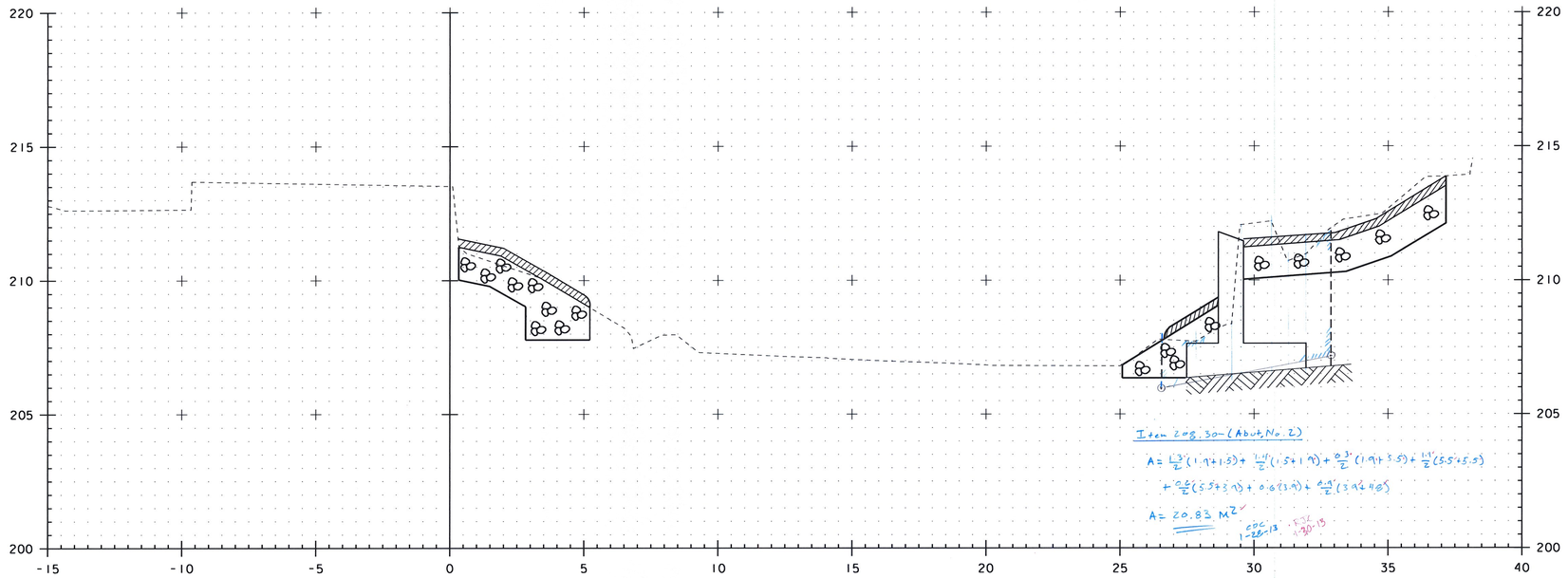
1+180

0 2 4 6 8 10

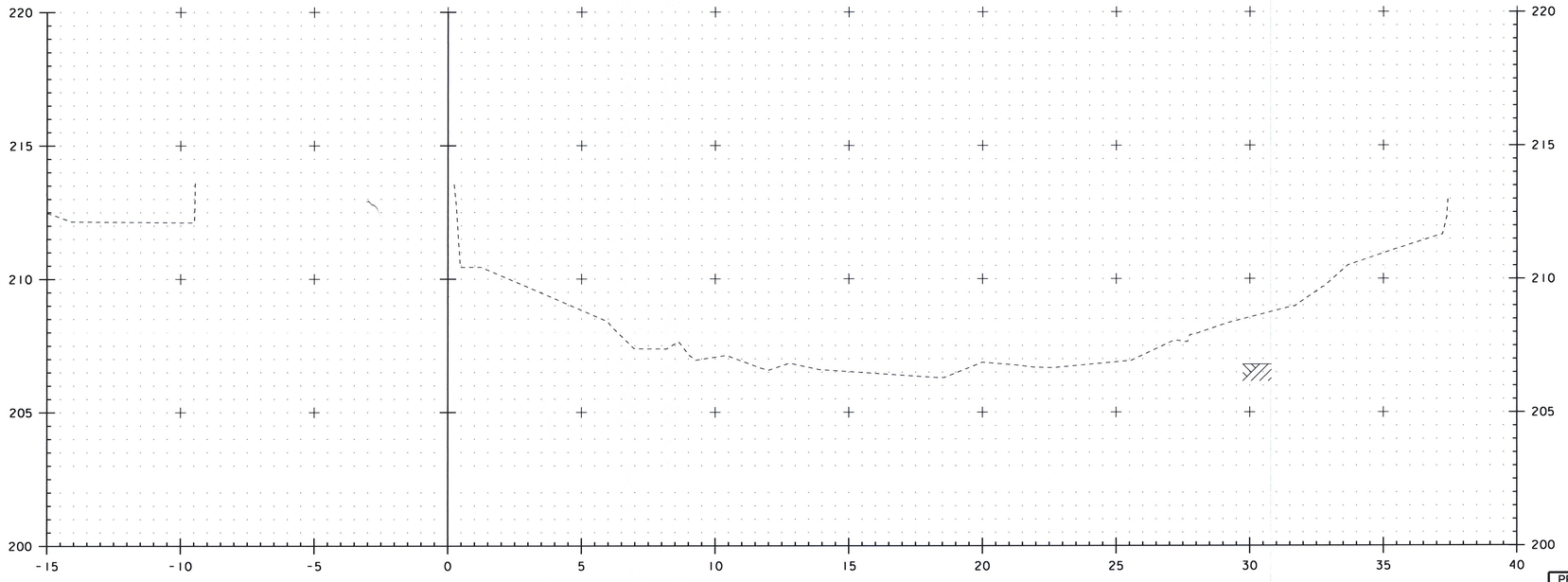
SCALE 1 : 100

Metric

PROJECT: EAST MONTPELIER	PROJECT NO.: BRF 037-2(8)
DESIGN FILE NAME: 86e054/structures/se054xsl.dgn IPARM FILE NAME: se054ml5.i	PLOT DATE: 18-AUG-2010
SECTION 1+160 THROUGH 1+180	
MAINLINE SECTIONS	SHEET: 56 OF 63



2+035.000



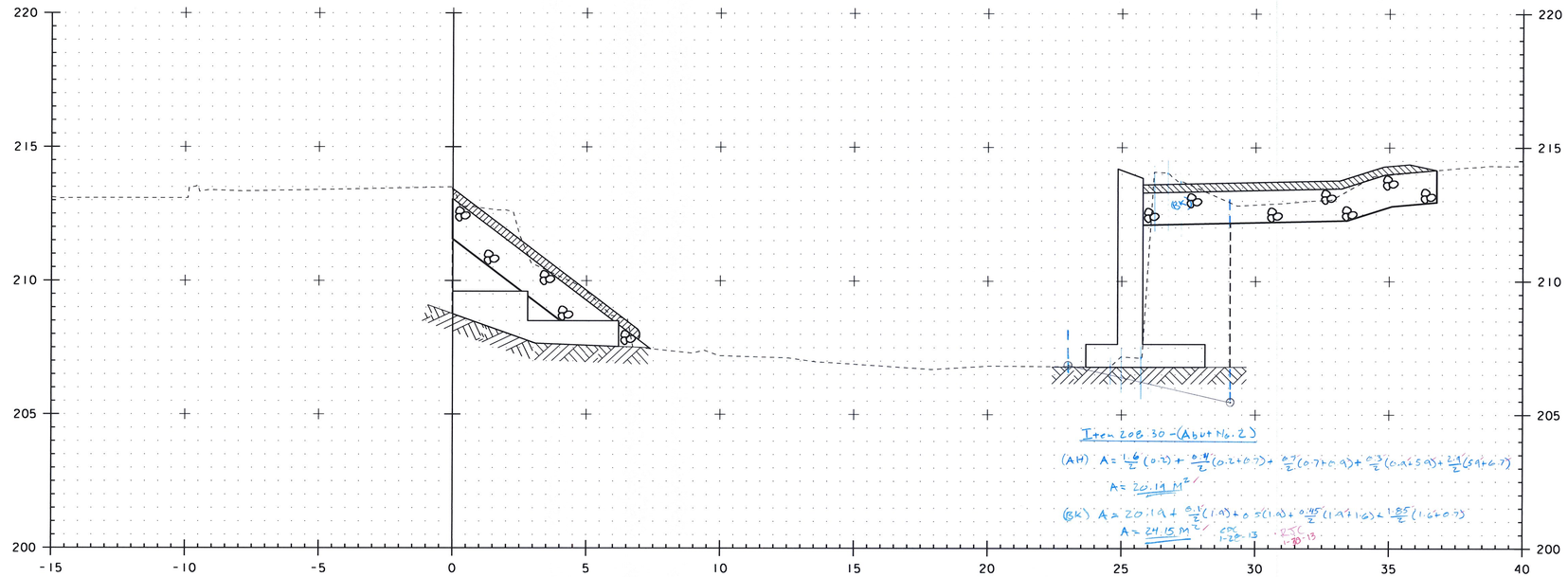
2+031.800

Beg. Item 208.30 - Abut #2 (Ø Section)

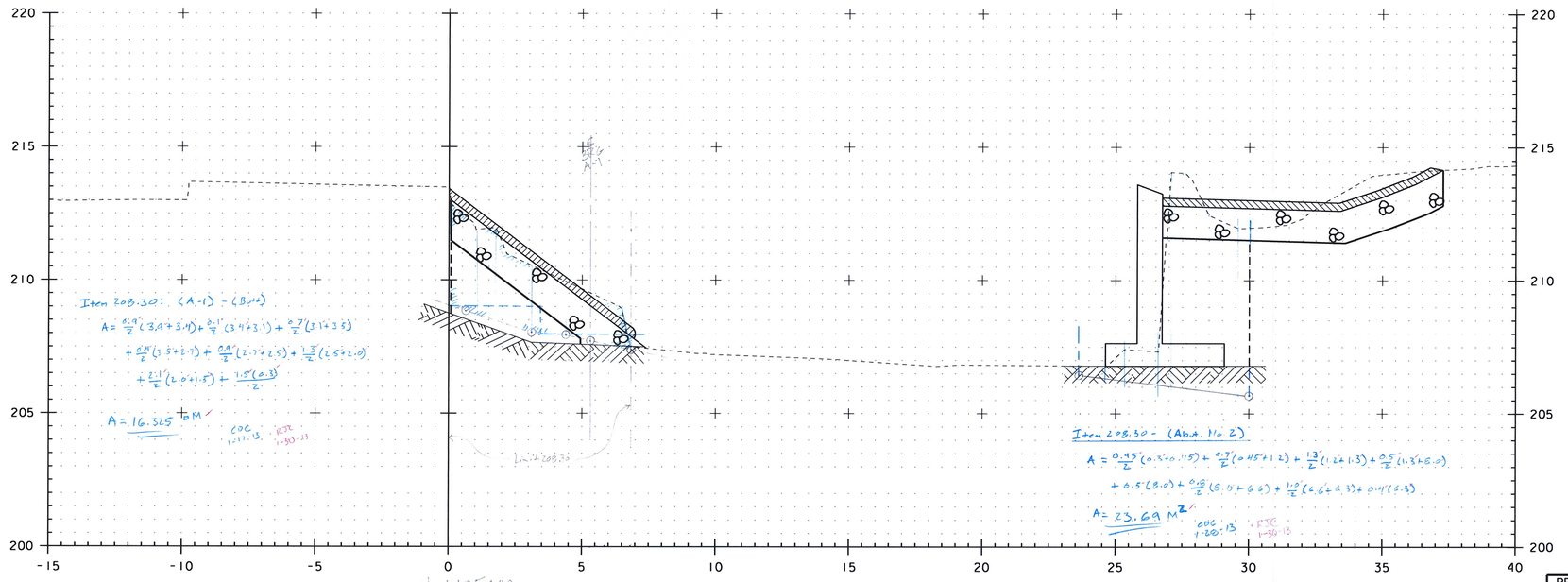
0 2 4 6 8 10
SCALE 1 : 100

VAOT Metric

PROJECT: EAST MONTPELIER	PROJECT NO.: BRF 037-2(8)
DESIGN FILE NAME: 86e054/structures/se054xsi_extra.dgn IPARM FILE NAME: se054chlextra.i	PLOT DATE: 19-DEC-2011
SECTION 2+031.800 THROUGH 2+035.000	
CHANNEL SECTIONS	SHEET: 1 OF 6



2+038.200



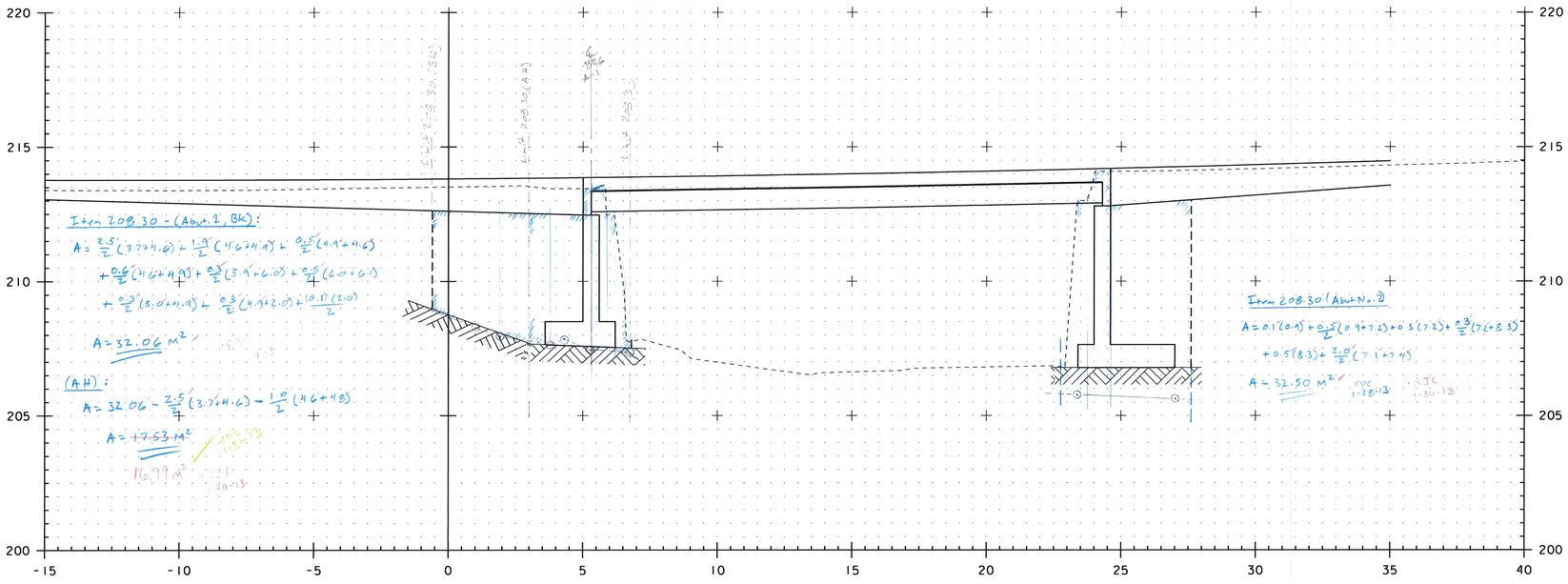
2+037.400

Abut No.1 - Begin Concrete Foundation (Bent)

0 2 4 6 8 10
SCALE 1 : 100

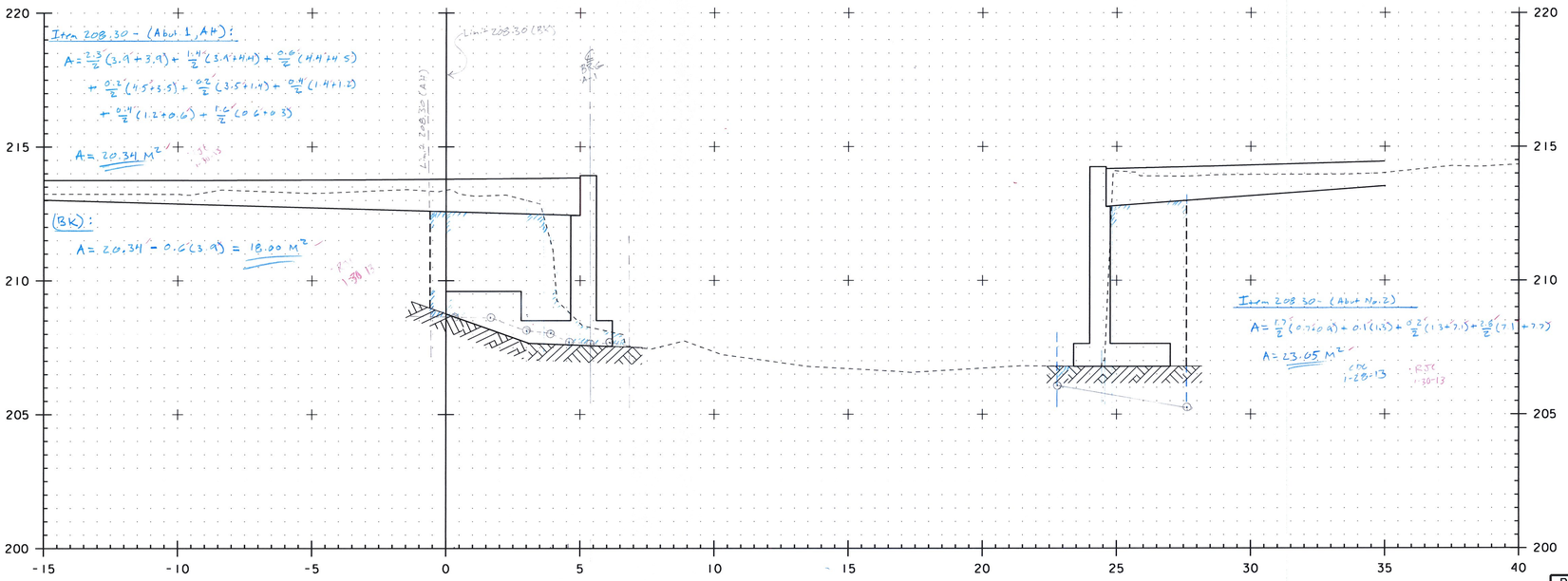
Metric

PROJECT: EAST MONTPELIER	PROJECT NO.: BRF 037-2(8)
DESIGN FILE NAME: 86e054/structures/se054xsl_extra.dgn IPARM FILE NAME: se054ch2extra.i	PLOT DATE: 19-DEC-2011
SECTION 2+037.400 THROUGH 2+038.200	
CHANNEL SECTIONS	SHEET: 2 OF 6



2+041.350

Same for 2+043.800 (Abut No.2)



2+039.450

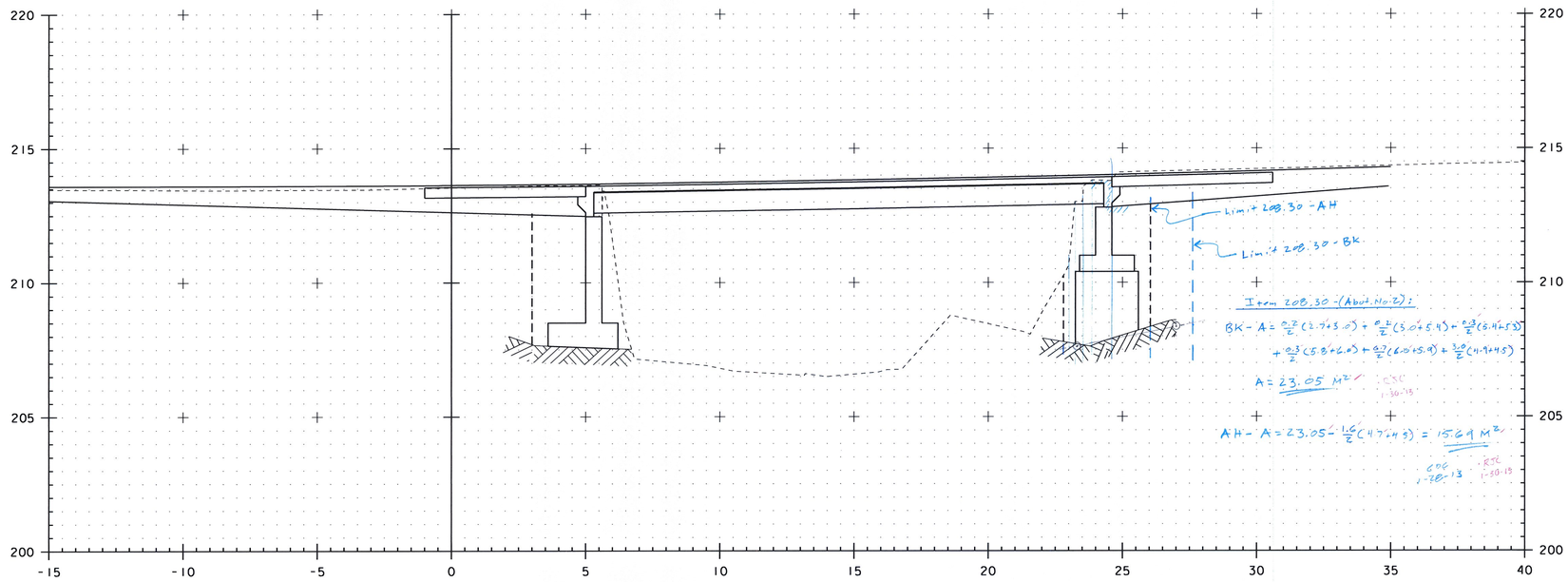
Same for: 2+039.200 (Abut No.1)

0 2 4 6 8 10

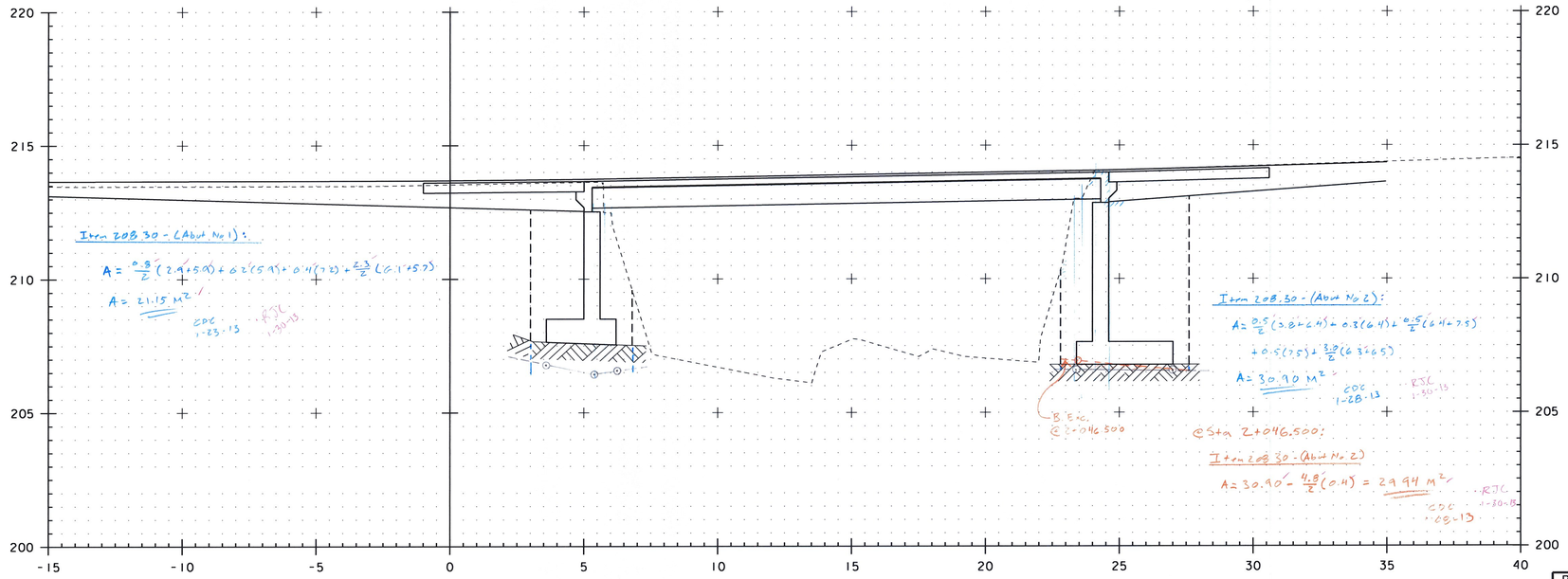
SCALE 1 : 100

Metric

PROJECT: EAST MONTPELIER	PROJECT NO.: BRF 037-2(8)
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SECTION 2+039.450 THROUGH 2+041.350	
CHANNEL SECTIONS	SHEET: 3 OF 6



2+048.100

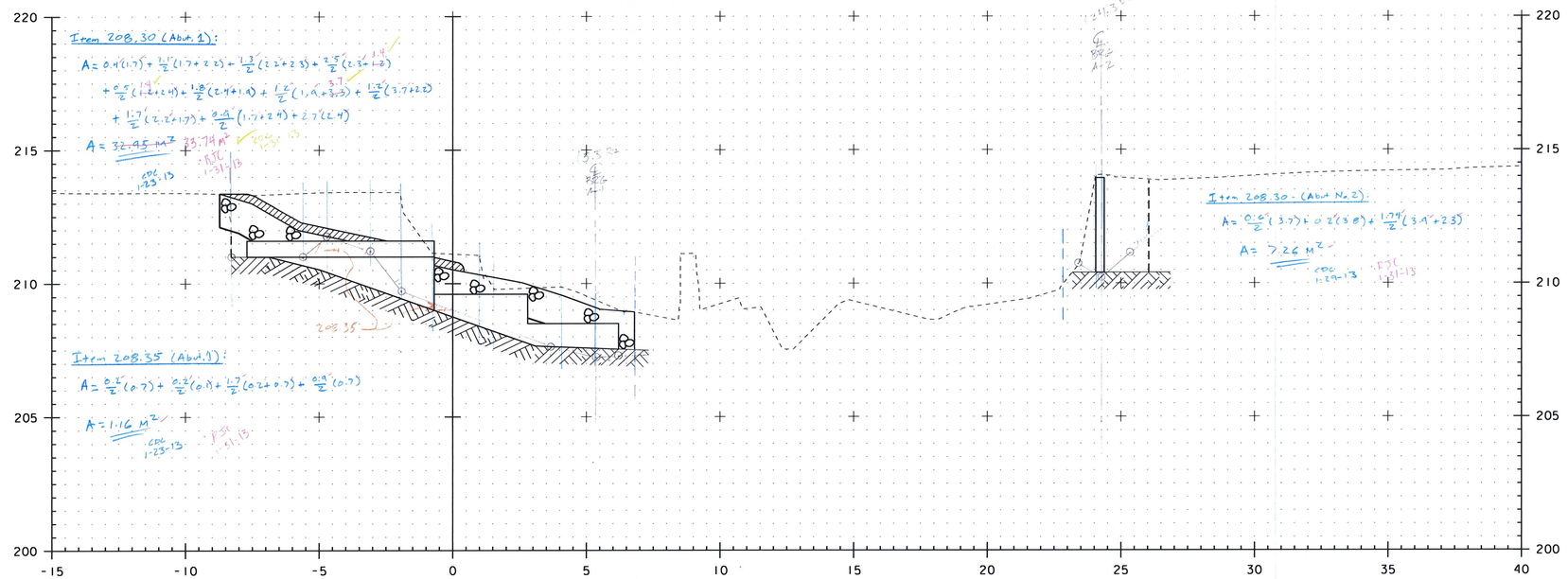


2+045.000 (Same for Sta 2+046.500 @ Abut. No 2)

0 2 4 6 8 10
SCALE 1 : 100

VDOT Metric

PROJECT: EAST MONTPELIER	PROJECT NO.: BRF 037-2(8)
DESIGN FILE NAME: 86e054/structures/se054xsl_extra.dgn IPARM FILE NAME: se054ch4extra.i	PLOT DATE: 19-DEC-2011
SECTION 2+045.000 THROUGH 2+048.100	
CHANNEL SECTIONS	SHEET: 4 OF 6



PROJECT: EAST MONTPELIER	PROJECT NO.: BRF 037-2(8)
DESIGN FILE NAME: 86e054/structures/se054xsl_extra.dgn IPARM FILE NAME: se054ch5extra.i	PLOT DATE: 19-DEC-2011
SECTION 2+048.650 THROUGH 2+051.700	
CHANNEL SECTIONS	SHEET: 5 OF 6

Item 208.30 - Cofferdam Excavation, Earth

Abutment No 1:

Station	Distance	Area	Volume
(Butt) Z+037.400	2.05	16.33	35.188
(BK) Z+039.450	—	18.00	—
(AH) Z+039.450	1.90	20.34	49.780
(BK) Z+041.350	—	32.06	—
(AH) Z+041.350	3.65	10.99 / ~~17.53~~	69.606 / 70.591
Z+045.000	3.65	21.15	70.208
(BK) Z+048.650	—	17.32	—
(AH) Z+048.650	2.75	49.42	114.345
Z+051.400	1.20	~~33.74~~ / ~~32.95~~	113.259 / 33.636 / 33.012
(Butt) Z+052.600		22.32 / ~~22.07~~	

~~372.038~~ m^3 372.763 m^3 CDC 1-23-13 · RJC 1-31-13 · CDC 1-31-13

Item 208.35 - Cofferdam Excavation, Rock

Abutment No 1:

Station	Distance	Area	Volume
(Butt) Z+048.650	2.75	1.01	2.984
Z+051.400	1.20	1.16	1.080
(Butt) Z+052.600		0.64	

4.064 m^3 CDC 1-23-13 · RJC 1-31-13

Abutment No. 2:

Station	Distance	Area	Volume
Z+031.800	3.2	Ø	33.328
Z+035.000	2.4	20.83	53.424
Z+037.400	6.8	23.69	19.136
(BK) Z+038.200	—	24.15	—
(AH) Z+038.200	1.25	20.19	27.025
Z+039.450	4.35	23.05	120.821
Z+043.800	1.2	32.50	38.040
Z+045.000	1.5	30.90	45.630
Z+046.500	1.6	29.94	42.392
(BK) Z+048.100	—	23.05	—
(AH) Z+048.100	0.9	15.69	13.712
Z+049.000	0.2	14.78	2.652
Z+049.200	2.3 / ~~1.3~~	11.74	21.850 / ~~12.350~~
Z+051.500	0.5	7.26	3.353
Z+052.000	0.4	6.15	2.460
(Butt) Z+052.400		6.15	

Sub-Total = 423.823 m^3 / 414.323 m^3 RJC 1-31-13 · CDC 1-29-13

Item 208.30, Cofferdam Excavation, Earth

Grand Totals:

Abutment No. 1 -

372.76 / 372.04 (See Left this sheet)
− 6.75 (Abut Cap - 208.35 - See IDR 6-8-11)

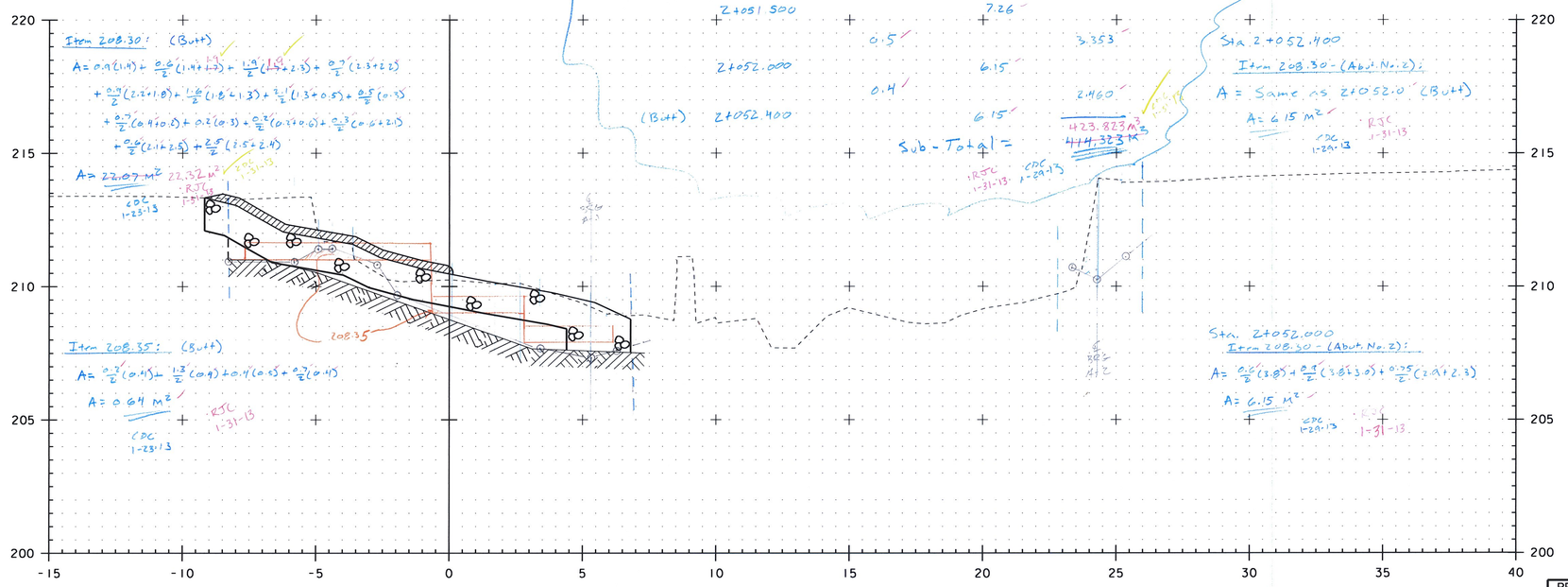
~~365.29~~ m^3 CDC 1-29-13
366.01 m^3 · RJC 1-31-13

Abutment No. 2 -

423.82 / ~~444.32~~
− 6.75 (Abut Cap - 208.35 - See IDR 6-8-11)
− 1.80 (Boulder. " " ")
− 26.40 (Exist. A-2 " - See IDR 6-9-11)
− 8.10 (A2, Rt & Wing 4 - See BG 3, Pg 23)

~~371.27~~ m^3 CDC 1-29-13
380.77 m^3 · RJC 1-31-13

CDC 1-31-13



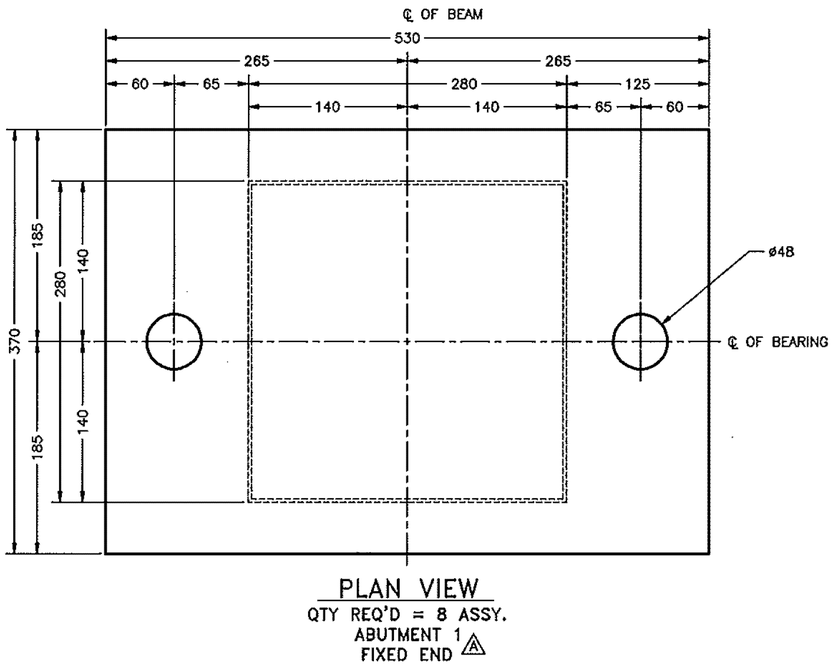
2+052.600

Same for 2+052.000 (Abut No. 2)

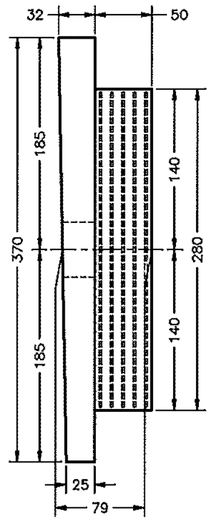
0 2 4 6 8 10
SCALE 1 : 100

Metric

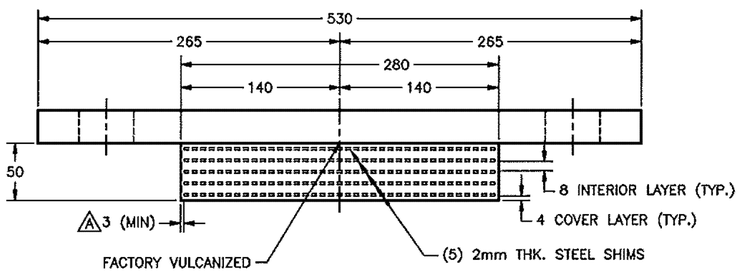
PROJECT: EAST MONTPELIER	PROJECT NO.: BRF 037-2(8)
DESIGN FILE NAME: 86e054/structures/se054xsl_extra.dgn IPARM FILE NAME: se054ch6extra.i	PLOT DATE: 19-DEC-2011
SECTION 2+052.600	
CHANNEL SECTIONS	SHEET: 6 OF 6



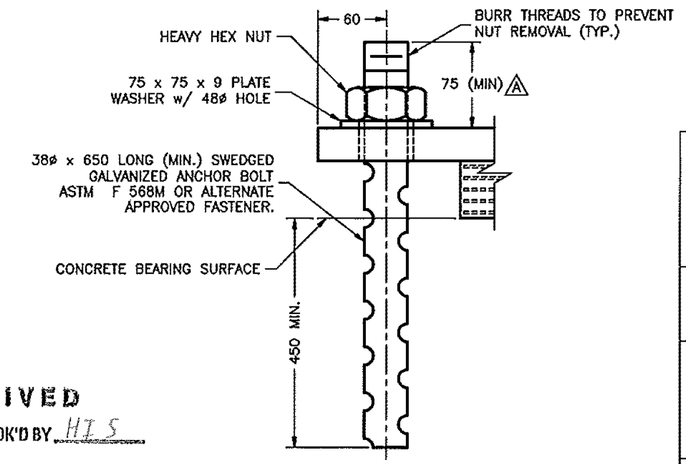
PLAN VIEW
QTY REQ'D = 8 ASSY.
ABUTMENT 1
FIXED END △A



SIDE VIEW



ELEVATION VIEW



ANCHOR BOLT DETAIL
QTY. REQ'D = 16, 2 PER BEARING
△A ABUTMENT 1

RECEIVED
CK'D BY_____ OK'D BY HIS
MAR 1 0 2011
RESUBMIT_____ APPROVED ✓
BY CPW DATE 3/11/11

REVISIONS				
ZONE	REV	DESCRIPTION	DATE	APPROVED
- -	A	PER ENGINEER'S MARK	3/4/11	C.A.M.

NOTES:

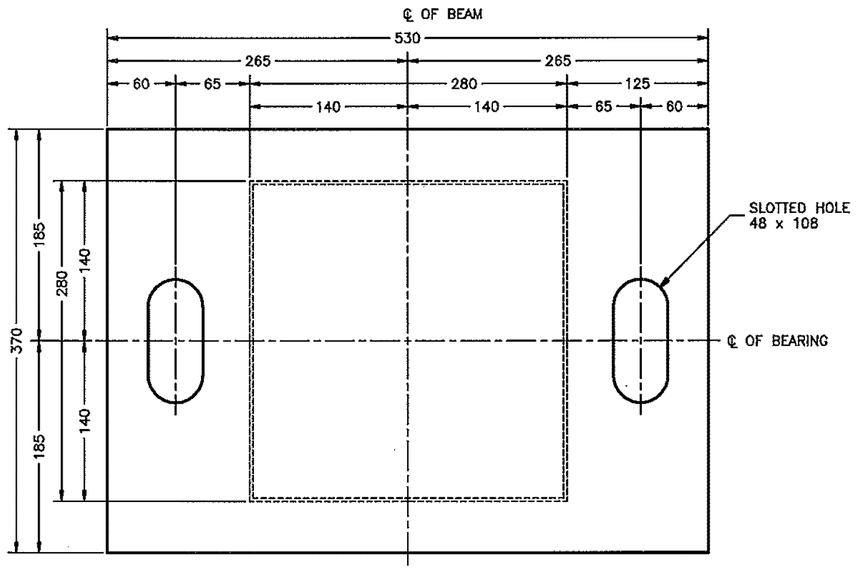
1. BEARINGS TO BE MANUFACTURED ACCORDING TO AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS 4th EDITION, SECTION 14, METHOD B.
2. THE BEARINGS ARE DESIGNED SO THAT THE SUPERSTRUCTURE MAY BE ERECTED WHEN THE AMBIENT AIR TEMPERATURE IS WITHIN THE RANGE OF 20°F. TO 70°F.
△A 3. THE ELASTOMER AASHTO GR. (NATURAL RUBBER), TEMPERATURE GR. 4, SHALL HAVE A DUROMETER HARDNESS SHORE A 60 ± 5 POINTS.
4. STEEL SHIM PLATES FOR INTERNAL LAMINATES SHALL BE AASHTO M270M/M270 GRADE 36. SHIMS SHALL BE SMOOTH CUT, DEBURRED, GRIT BLASTED, AND DEGREASED PRIOR TO VULCANIZATION.
△A 5. SOLE PLATES SHALL BE AASHTO M270M/M270 GRADE 50.
6. ALL STEEL PRODUCED IN THE U.S.A.
7. CONTACT PETER SOMOGYI , COORDINATOR.
8. TOLERANCES: THICKNESS −0+2mm
   PLAN −0+2mm
9. MANUFACTURING FACILITY LOCATION:
   AMSCOT STRUCTURAL PRODUCTS INC.
   241 EAST BLACKWELL STREET
   DOVER, NJ 07801
10. ALL DIMENSIONS ARE IN MILLIMETERS
△A 11. ALL SOLE PLATES, ANCHOR BOLTS, NUTS AND WASHERS SHALL BE GALVANIZED AS PER STANDARD SPECIFICATIONS 506.15 AND 531.04(b), AS MODIFIED BY THE GENERAL SPECIAL PROVISIONS. PRIOR TO GALVANIZING, ALL CORNERS AND EDGES OF STEEL PLATES, SHAPES, ECT,, SHALL BE GROUND TO A 1.6mm RADIUS.

VERMONT AGENCY OF TRANSPORTATION
TOWN OF EAST MONTPELIER
PROJECT NO. BRF 037-2 (8)

FIXED ELASTOMERIC BEARING DETAIL

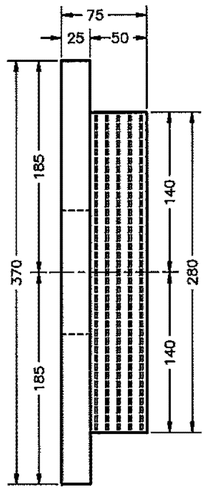
AMSCOT
STRUCTURAL PRODUCTS CORP.
DOVER, NJ
JOB # 3594

SCALE: N.T.S.	CHECKED: B.F.	DRAWN BY: C.A.M.	
DATE: 12/28/10		REVISION: A	
FOR: AL ST. ONGE			
DWG NO: ASO10A1RA		SHEET NO. 1 OF 2	

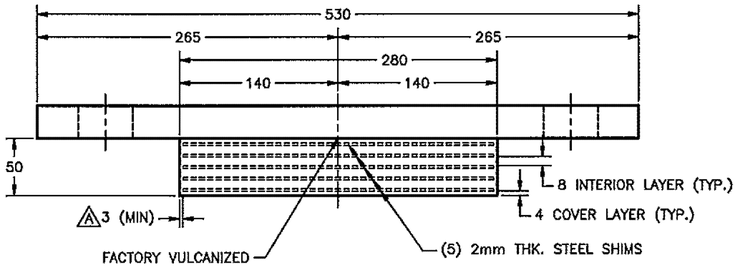


PLAN VIEW

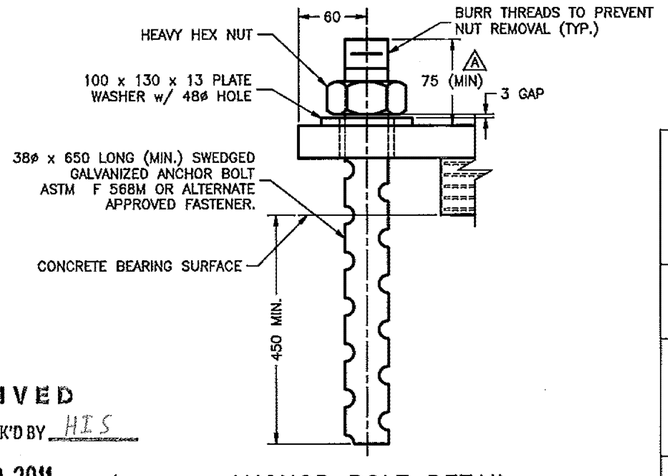
QTY REQ'D = 8 ASSY.
ABUTMENT 2
EXPANSION END △A



SIDE VIEW



ELEVATION VIEW



ANCHOR BOLT DETAIL

QTY. REQ'D = 16, 2 PER BEARING
△A ABUTMENT 2

REVISIONS				
ZONE	REV	DESCRIPTION	DATE	APPROVED
- -	A	PER ENGINEER'S MARK	3/4/11	C.A.M.

NOTES:

1. BEARINGS TO BE MANUFACTURED ACCORDING TO AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS 4th EDITION, SECTION 14, METHOD B.
2. THE BEARINGS ARE DESIGNED SO THAT THE SUPERSTRUCTURE MAY BE ERECTED WHEN THE AMBIENT AIR TEMPERATURE IS WITHIN THE RANGE OF 20°F. TO 70°F.
△A3. THE ELASTOMER AASHTO GR. (NATURAL RUBBER), TEMPERATURE GR. 4, SHALL HAVE A DUROMETER HARDNESS SHORE A 60 ± 5 POINTS.
4. STEEL SHIM PLATES FOR INTERNAL LAMINATES SHALL BE AASHTO M270M/M270 GRADE 36. SHIMS SHALL BE SMOOTH CUT, DEBURRED, GRIT BLASTED, AND DEGREASED PRIOR TO VULCANIZATION.
△A5. SOLE PLATES SHALL BE AASHTO M270M/M270 GRADE 50.
6. ALL STEEL PRODUCED IN THE U.S.A.
7. CONTACT PETER SOMOGYI , COORDINATOR.
8. TOLERANCES: THICKNESS −0+2mm
   PLAN −0+2mm
9. MANUFACTURING FACILITY LOCATION:
   AMSCOT STRUCTURAL PRODUCTS INC.
   241 EAST BLACKWELL STREET
   DOVER, NJ 07801
10. ALL DIMENSIONS ARE IN MILLIMETERS
△A11. ALL SOLE PLATES, ANCHOR BOLTS, NUTS AND WASHERS SHALL BE GALVANIZED AS PER STANDARD SPECIFICATIONS 506.15 AND 531.04(b), AS MODIFIED BY THE GENERAL SPECIAL PROVISIONS. PRIOR TO GALVANIZING, ALL CORNERS AND EDGES OF STEEL PLATES, SHAPES, ECT,, SHALL BE GROUND TO A 1.6mm RADIUS.

RECEIVED
CK'D BY_____ OK'D BY HIS
MAR 1 0 2011
RESUBMIT_____ APPROVED ✓
BY CPW DATE 3/11/11

VERMONT AGENCY OF TRANSPORTATION
TOWN OF EAST MONTPELIER
PROJECT NO. BRF 037-2 (8)

EXPANSION ELASTOMERIC BEARING DETAIL

AMSCOT
STRUCTURAL PRODUCTS CORP.
DOVER, NJ
JOB # 3684

SCALE: N.T.S.	CHECKED: B.F.	DRAWN BY: C.A.M.
DATE: 12/28/10		REVISION: A
FOR: AL ST. ONGE		
DWG NO: ASO10A2RA		SHEET NO. 2 OF 2

GENERAL NOTES

SPECIFICATIONS

- ALL MATERIAL AND CONSTRUCTION SHALL CONFORM TO THE STATE OF VERMONT AGENCY OF TRANSPORTATION STANDARD SPECIFICATIONS FOR CONSTRUCTION, DATED 2006 AND ITS LATEST REVISIONS.

- THE AASHTO LRFD BRIDGE DESIGN SPECS. (4TH EDITION), DATED 2007 AND ITS LATEST REVISIONS.
- THE AASHTO LRFD BRIDGE CONSTRUCTION SPECS. (2ND EDITION), DATED 2004 AND ITS LATEST REVISIONS.

- ALL WELDING SHALL CONFORM TO THE PROVISIONS OF SUBSECTION 506.10 OF VTAOT. (BRIDGE WELDING CODE D1.5 ~LATEST EDITION)

MATERIAL SPECIFICATIONS

ALL STRUCTURAL STEEL SHALL CONFORM TO THE REQUIREMENTS OF AASHTO DESIGNATION M270M GRADE 345W (WEATHERING STEEL PER SUBSECTION 714.03), UNCOATED.

ALL BOLTS SHALL CONFORM TO AASHTO M164 (ASTM A325) TYPE 3.
ALL BOLTS SHALL BE M22 ($\frac{7}{8}\phi$) HIGH STRENGTH HEAVY HEX HEAD IN STD. HOLES 24mm ($1\frac{15}{16}\phi$) U.O.N.

FABRICATION

CVN- INDICATES CHARPY V-NOTCH TESTING REQUIRED (ZONE 2) PER STD. SPECS. SUBSECTION 714.01.

MEMBERS WITH "CVN" REQUIREMENTS ARE: BEAMS AND DIAPH. CONNECTION PLATES.

THE BOTTOM FLANGE OF STEEL BEAMS AT BEARING AREAS SHALL BE SHOP STRAIGHTENED AS NECESSARY TO PROVIDE UNIFORM CONTACT BETWEEN THE BEAM FLANGE & THE BEARING AT THE BRIDGE SEAT.

STRUCTURAL ROLLED BEAMS SHALL BE CAMBERED TO THE AMOUNT SHOWN ON THE PLANS WITH A TOLERANCE OF 1/2" (-0,+12) FOR BEAMS 50'-0 (15M) OR LESS.
FOR BEAMS GREATER THAN 50'-0 (15M), THE PLUS TOLERANCE OF 1/2" (12mm) SHALL BE INCREASED BY 1/8" (3mm) FOR EACH 10'-0 (3M) OR FRACTION THEREOF IN EXCESS OF 50'-0 (15M).

WELD ELECTRODES SHALL BE: ER80S-Ni1

CLEANING

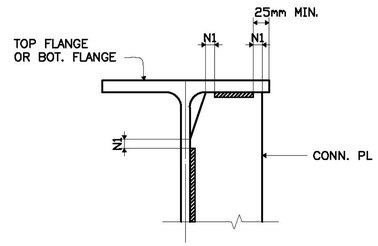
SURFACE PREPARATION
SSPC-SP10 (NEAR WHITE BLAST CLEANING).
PRIOR TO BLAST CLEANING, ALL OIL, GREASE OR OTHER FOREIGN MATTER SHALL BE REMOVED BY SOLVENT CLEANING (SSPC-SP1).

SHOP PAINTING:

NO PAINT REQUIRED FOR ALL STRUCTURAL STEEL.

INDEX OF DRAWINGS

SHEET	DESCRIPTION
GN1	GENERAL NOTES
E1, E2	STEEL ERECTION PLAN
P1	JOB STANDARD DETAILS
1 - 8	BEAM SUB-ASS'Y. DETAILS
9	DIAPHRAGM & MISC. DETAILS
10	SHOP ASSEMBLY DIAGRAMS



N1 = NO WELD FOR 10mm ($\frac{3}{8}$") MIN. TO 22mm ($\frac{7}{8}$") MAX.
EXCEPT MUST MAINTAIN 25mm (1") FROM EDGE OF FLG.

TYP. WELDING DETAIL

Received Date: 3/25/11
Checked By: Hiram Salls
Approval Type: Approved
Approved By: Chris Williams
Date: 4/13/11

REV.NO	DATE	REVISION
3		
2		
1		

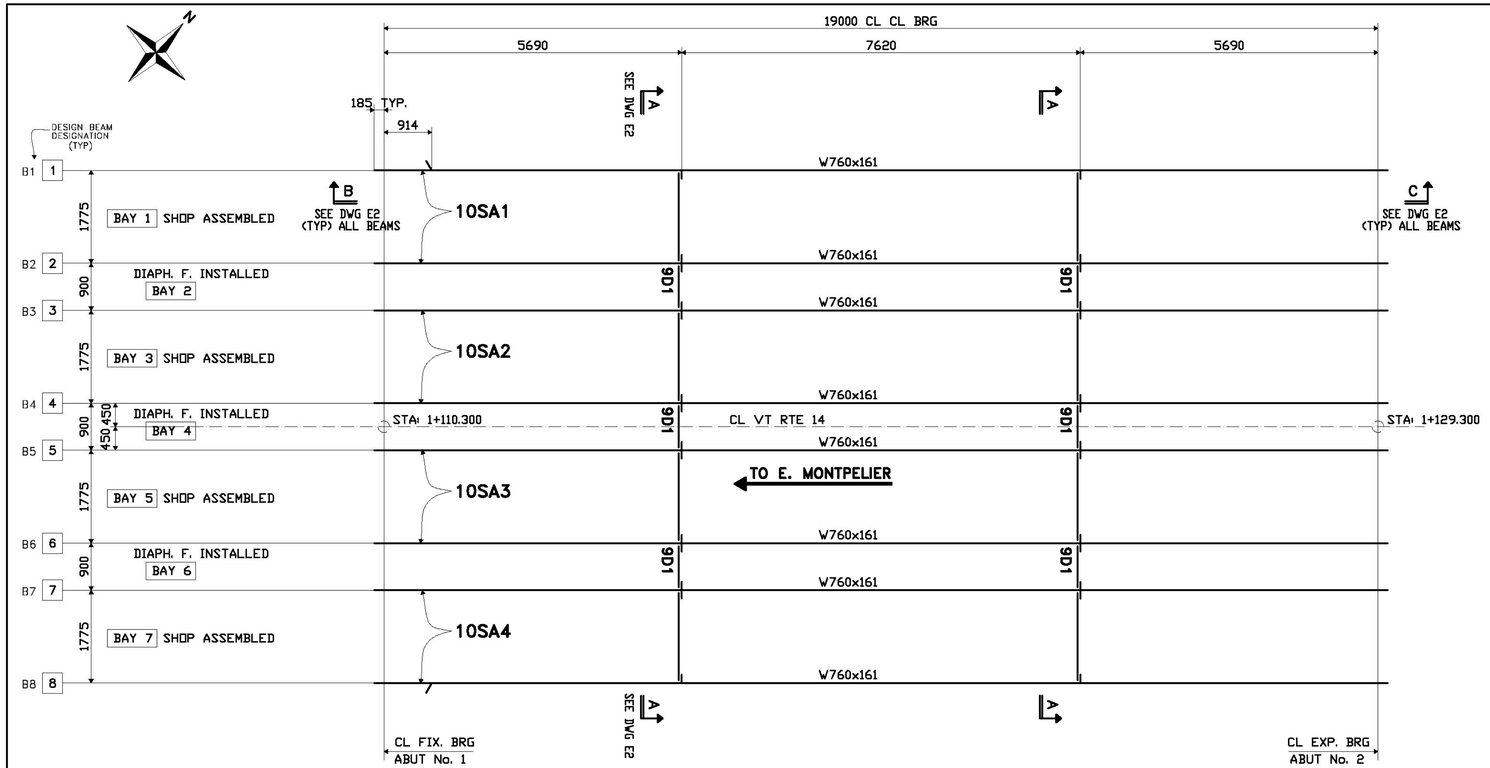
GENERAL NOTES

PROJECT No. BRF 037-2(8)
REPLACEMENT OF BRIDGE No. 71
TOWN OF EAST MONTPELIER, WASHINGTON COUNTY, VT

FOSTER . PRECISE
3 FARM LANE
GEORGETOWN, MA 01833-1843

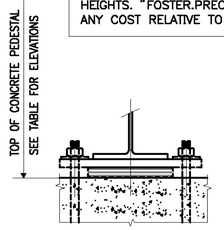
OWNER: STATE OF VERMONT AGENCY OF TRANSPORTATION
CONTRACTOR: J.R. SLAW

DRAWN BY	CHECKED BY	APP.	SHOP	DIST.	CONTRACT NO.	SHEET NO.
PDC/WS 03-2011	PDC/SB 03-2011				3561	GN1



CONTRACTOR NOTE:

TOP OF CONCRETE PEDESTAL ELEVATIONS SHOWN CONFORM TO CONTRACT DRAWING ELEVATIONS. TOP OF CONCRETE PEDESTAL ELEVATIONS MUST BE ADJUSTED FOR ANY DEVIATION IN BEARING HEIGHTS. "FOSTER.PRECISE" WILL NOT BE RESPONSIBLE FOR ANY COST RELATIVE TO IMPROPER PEDESTAL ELEVATIONS.



TOP OF CONCRETE PAD ELEV'S (mm)

BEAM	ABUT 1	ABUT 2
BM1	212429	212759
BM2	212464	212795
BM3	212482	212813
BM4	212518	212848
BM5	212518	212848
BM6	212482	212813
BM7	212464	212795
BM8	212429	212759

TYP ABUT. BRG.

SOLE PL, ELAST. PAD AND ANCHOR BOLTS (BY OTHERS)

STEEL ERECTION PLAN

- ALL DIMENSIONS SHOWN ARE HORIZONTAL AND DO NOT REFLECT ANY CHANGE DUE TO GRADE.
- ALL STEEL TO BE ERECTED WITH THE SHIPPING MARK IN THE SAME RELATIVE POSITION AS SHOWN ON THE ERECTION PLAN.
- SEE SHEET E2 FOR DIAPH. SECTION A-A & TYP. SECTIONS B & C.

FIELD BOLTS

(ACTUAL COUNT - NO EXTRA ADDED)

(ASTM A325 TYPE 3) H.S. BOLTS WITH HEAVY HEX HEAD & (ASTM A563 GR DH3) HEAVY HEX NUT.

TOTAL	
60	22ø H.S. BOLT x 57 INT. DIAPH. -C380x50 TO 13mm CONN. PL
60	HARD FLAT WASHER (F436 -WEATHERING) FOR 22ø (7/8ø) H.S. BOLTS

NOTICE TO ERECTOR

BACKCHARGES FOR CORRECTIVE WORK OR REPLACED MATERIALS WILL NOT BE ACCEPTED UNLESS EXPRESSLY AUTHORIZED BY FOSTER . PRECISE BEFORE ANY SUCH COSTS ARE INCURRED.

Received Date: 3/25/11
Checked By: Hiram Salls
Approval Type: Approved
Approved By: Chris Williams
Date: 4/13/11

REV.NO	DATE	REVISION
3		
2		
1		

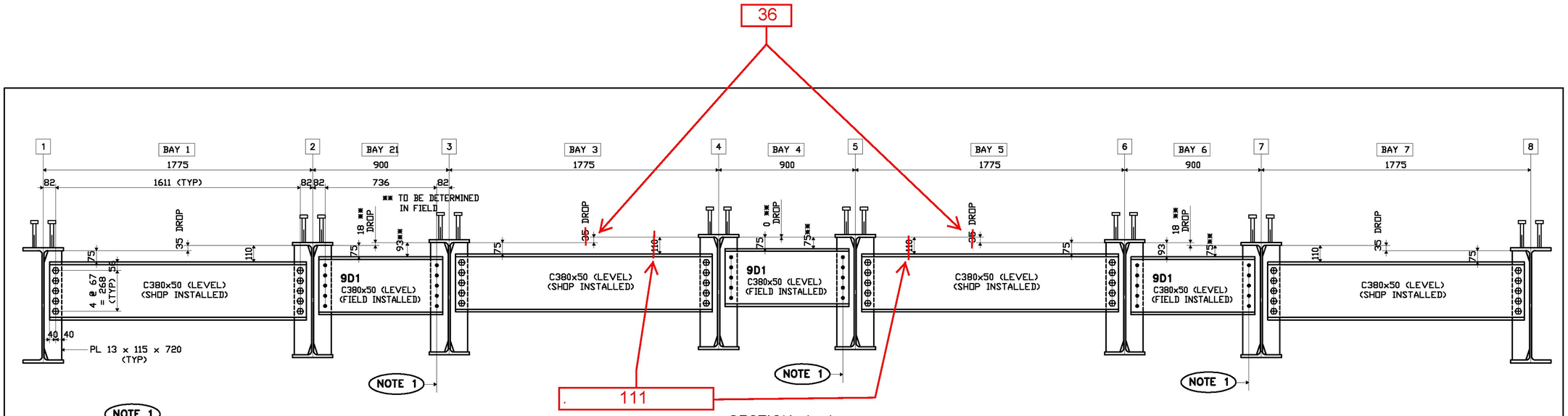
ERECTION PLAN

PROJECT No. BRF 037-2(8)
REPLACEMENT OF BRIDGE No. 71
TOWN OF EAST MONTPELIER, WASHINGTON COUNTY, VT

FOSTER . PRECISE
3 FARM LANE
GEORGETOWN, MA 01833-1843

OWNER: STATE OF VERMONT AGENCY OF TRANSPORTATION
CONTRACTOR: J.R. SLAW

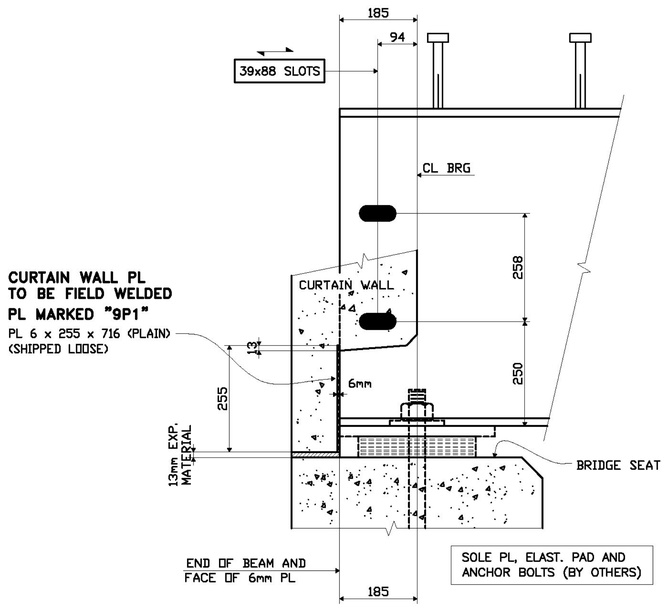
DRAWN BY	CHECKED BY	APP.	SHOP	DIST.	CONTRACT NO.	SHEET NO.
PDC/WS 03-2011	PDC/SB 03-2011				3561	E1



SECTION A–A
TYP. SECTION LOOKING UPSTATION

NOTE 1

FIELD DRILL 24ø (15/16)ø HOLES FOR M22ø (7/8)ø H.S. BOLTS IN THE CONN. PL USING THE SHOP DRILLED HOLES IN THE FIELD INSTALLED DIAPHRAGM AS A TEMPLATE. (ONE END OF DIAPH. WHERE INDICATED)



SECT. B (SHOWN)
SECT. C (OPP HAND)

Received Date: 3/25/11
Checked By: Hiram Salls
Approval Type: Approved As Noted
Approved By: Chris Williams
Date: 4/13/11

REV.NO	DATE	REVISION
3		
2		
1		

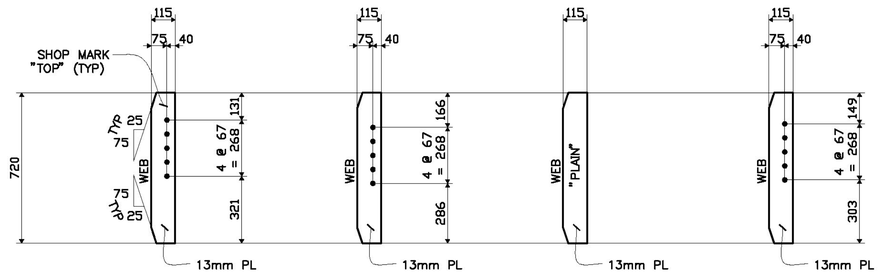
ERECTION PLAN

PROJECT No. BRF 037-2(8)
REPLACEMENT OF BRIDGE No. 71
TOWN OF EAST MONTPELIER, WASHINGTON COUNTY, VT

FOSTER . PRECISE
3 FARM LANE
GEORGETOWN, MA 01833-1843

OWNER: STATE OF VERMONT AGENCY OF TRANSPORTATION
CONTRACTOR: J.R. SLAW

DRAWN BY	CHECKED BY	APP.	SHOP	DIST.	CONTRACT NO.	SHEET NO.
PDC/WS 03-2011	PDC/SB 03-2011				3561	E2

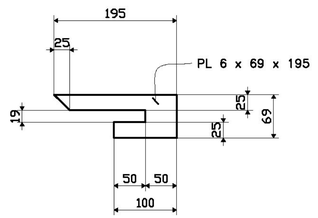


CONN. PL ~sf1
12 REQ'D.

CONN. PL ~sf2
8 REQ'D.

CONN. PL ~sf3
6 REQ'D.

CONN. PL ~sf4
2 REQ'D.



DRIP BAR ~dp1
2 REQ'D.
SCALE: 1=3

SHOP NOTE
ALL CONNECTION PLATES TO BE "CVN"

SHOP NOTE

DO NOT SHIP MATERIAL FROM THIS DRAWING. MATERIAL SHOWN ON THIS DRAWING SHALL BE SHOP ASSEMBLED TO STRINGERS. SEE BEAM DRAWINGS FOR LOCATION AND DETAILS OF ASSEMBLY.

Received Date: 3/25/11
Checked By: Hiram Salls
Approval Type: Approved
Approved By: Chris Williams
Date: 4/13/11

SHOP NOTES

HOLES 24ø (1⅜ø)
BOLTS NONE
PAINT NONE
WELDS TO BE MADE USING ___---___ ELECTRODES
MATERIAL M270-345W

REV.NO	DATE	REVISION
3		
2		
1		

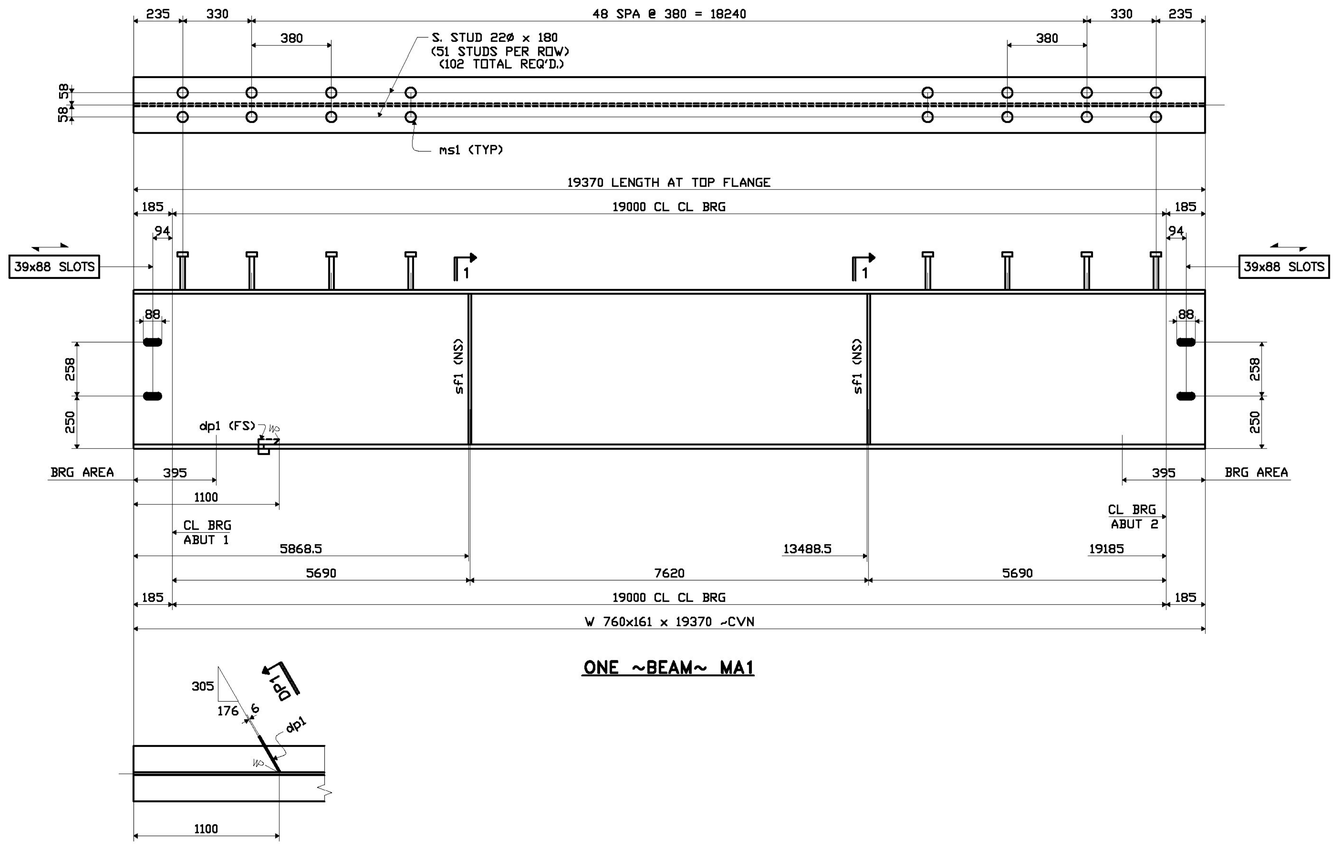
JOB STANDARD DETAILS

PROJECT No. BRF 037-2(8)
REPLACEMENT OF BRIDGE No. 71
TOWN OF EAST MONTPELIER, WASHINGTON COUNTY, VT

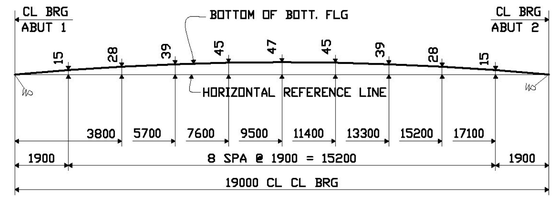
FOSTER . PRECISE
3 FARM LANE
GEORGETOWN, MA 01833-1843

OWNER: STATE OF VERMONT AGENCY OF TRANSPORTATION
CONTRACTOR: J.R. SLAW

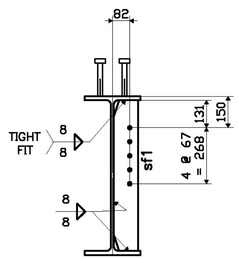
DRAWN BY	CHECKED BY	APP.	SHOP	DIST.	CONTRACT NO.	SHEET NO.
PDC/WS 03-2011	PDC/SB 03-2011				3561	P1



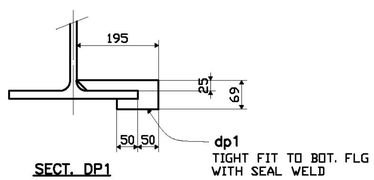
ONE ~BEAM~ MA1



CAMBER DIAGRAM



SECT. 1



SECT. DP1

SHIPPER		BILL OF MATERIAL						
NO.	MARK	NO.	MARK	SIZE	LENGTH	REMARKS	ITEM	WEIGHT
		1	MA1	BEAM SUB-ASSEMBLY				
		1		W760x161	19370	CVN		
		2	sf1	PL 13x115	720	CVN		
		102	ms1	S. STUD 22ø	180	A108		
		1	dp1	PL 6x69	195			

Received Date: 3/25/11
Checked By: Hiram Salls
Approval Type: Approved
Approved By: Chris Williams
Date: 4/13/11

SHOP NOTES

HOLES 24ø (15/16") (UN)
BOLTS NONE
PAINT NONE
WELDS TO BE MADE USING SEE GN1 ELECTRODES
MATERIAL M270-345W

REV.NO	DATE	REVISION
3		
2		
1		

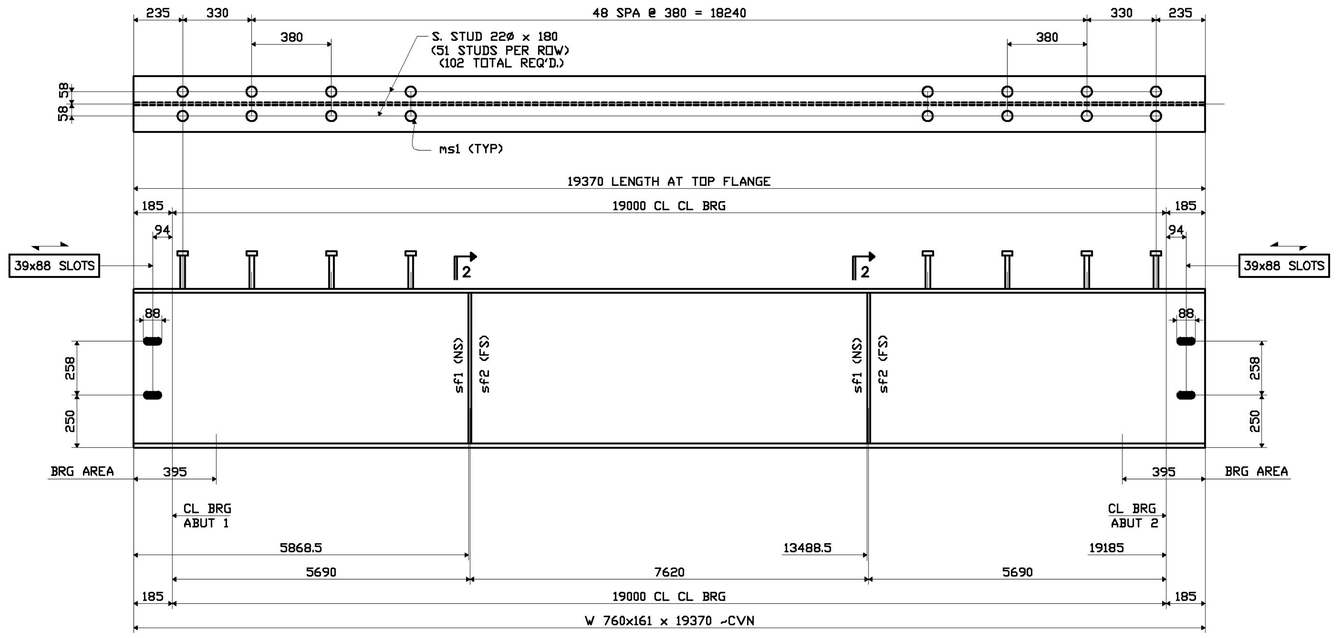
BEAM DETAIL

PROJECT No. BRF 037-2(8)
REPLACEMENT OF BRIDGE No. 71
TOWN OF EAST MONTPELIER, WASHINGTON COUNTY, VT

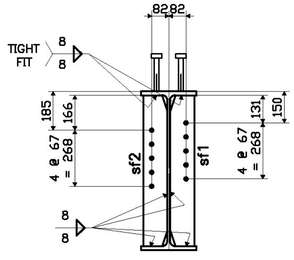
FOSTER . PRECISE
3 FARM LANE
GEORGETOWN, MA 01833-1843

OWNER: STATE OF VERMONT AGENCY OF TRANSPORTATION
CONTRACTOR: J.R. SLAW

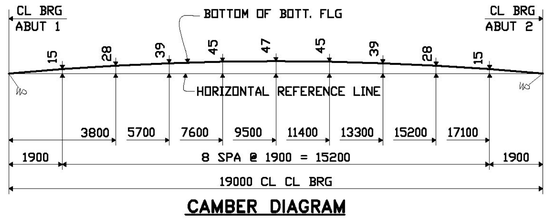
DRAWN BY	CHECKED BY	APP.	SHOP	DIST.	CONTRACT NO.	SHEET NO.
PDC/WS 03-2011	PDC/SB 03-2011				3561	1



ONE ~BEAM~ MA2



SECT. 2



CAMBER DIAGRAM

SHIPPER		BILL OF MATERIAL						
NO.	MARK	NO.	MARK	SIZE	LENGTH	REMARKS	ITEM	WEIGHT
		1	MA2	BEAM SUB-ASSEMBLY				
		1		W760x161	19370	CVN		
		2	sf1	PL 13x115	720	CVN		
		2	sf2	PL 13x115	720	CVN		
		102	ms1	S. STUD 22ø	180	A108		

Received Date: 3/25/11
Checked By: Hiram Salls
Approval Type: Approved
Approved By: Chris Williams
Date: 4/13/11

SHOP NOTES

HOLES 24ø ($\frac{15}{16}$ø) (UN)
BOLTS NONE
PAINT NONE
WELDS TO BE MADE USING SEE GN1 ELECTRODES
MATERIAL M270-345W

REV.NO	DATE	REVISION
3		
2		
1		

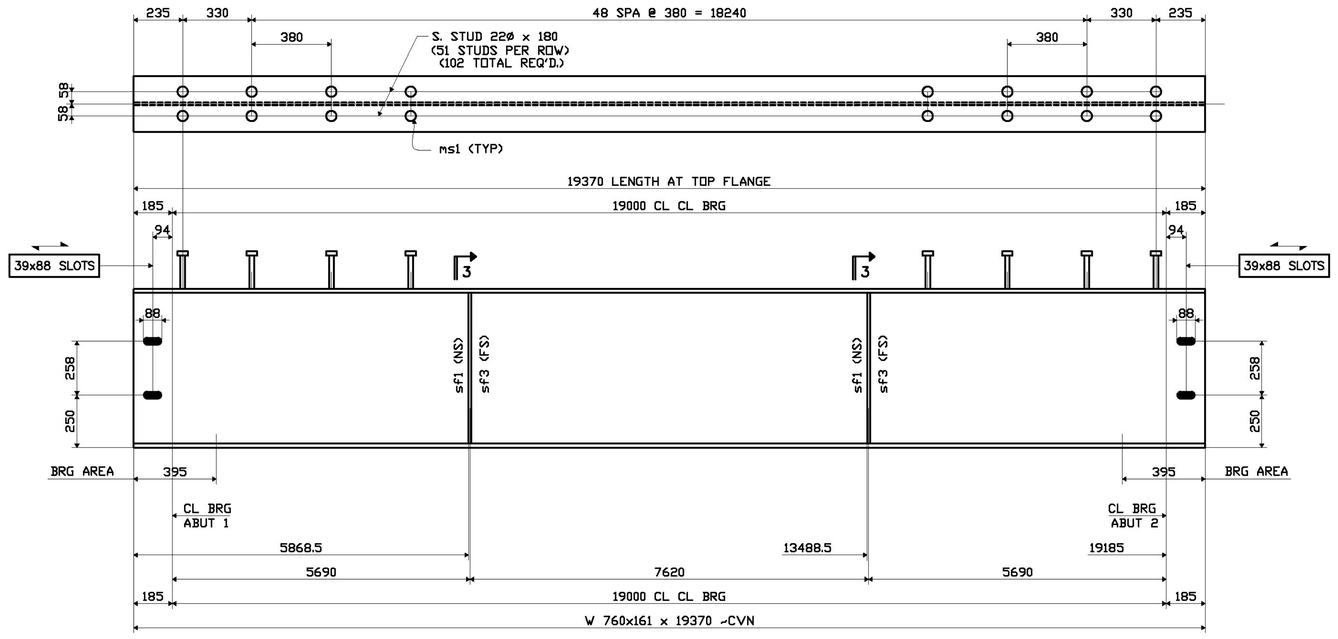
BEAM DETAIL

PROJECT No. BRF 037-2(8)
REPLACEMENT OF BRIDGE No. 71
TOWN OF EAST MONTPELIER, WASHINGTON COUNTY, VT

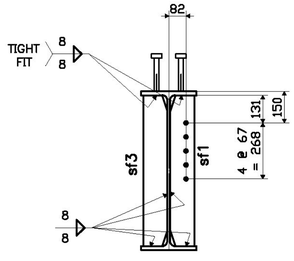
FOSTER . PRECISE
3 FARM LANE
GEORGETOWN, MA 01833-1843

OWNER: STATE OF VERMONT AGENCY OF TRANSPORTATION
CONTRACTOR: J.R. SLAW

DRAWN BY	CHECKED BY	APP.	SHOP	DIST.	CONTRACT NO.	SHEET NO.
PDC/WS 03-2011	PDC/SB 03-2011				3561	2

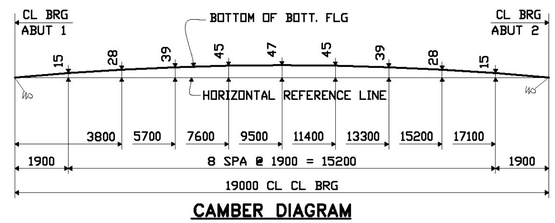


ONE ~BEAM~ MA3



SECT. 3

SHIPPER		BILL OF MATERIAL						
NO.	MARK	NO.	MARK	SIZE	LENGTH	REMARKS	ITEM	WEIGHT
		1	MA3	BEAM SUB-ASSEMBLY				
		1		W760x161	19370	CVN		
		2	sf1	PL 13x115	720	CVN		
		2	sf3	PL 13x115	720	CVN		
		102	ms1	S. STUD 22ø	180	A108		



CAMBER DIAGRAM

Received Date: 3/25/11
Checked By: Hiram Salls
Approval Type: Approved
Approved By: Chris Williams
Date: 4/13/11

SHOP NOTES

HOLES 24ø ($1\frac{5}{16}$") (UN)
BOLTS NONE
PAINT NONE
WELDS TO BE MADE USING SEE GN1 ELECTRODES
MATERIAL M270-345W

REV.NO	DATE	REVISION
3		
2		
1		

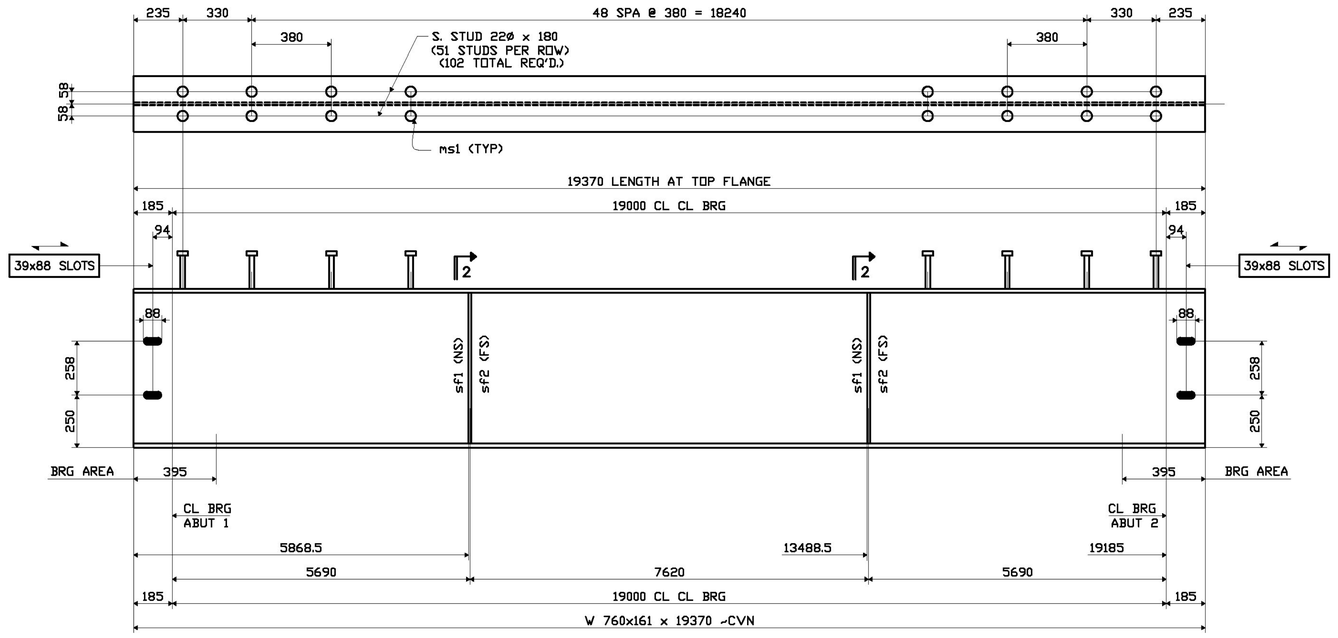
BEAM DETAIL

PROJECT No. BRF 037-2(8)
REPLACEMENT OF BRIDGE No. 71
TOWN OF EAST MONTPELIER, WASHINGTON COUNTY, VT

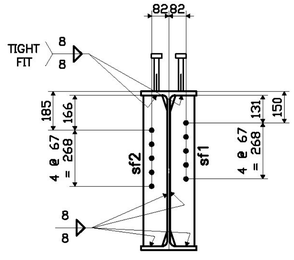
FOSTER . PRECISE
3 FARM LANE
GEORGETOWN, MA 01833-1843

OWNER: STATE OF VERMONT AGENCY OF TRANSPORTATION
CONTRACTOR: J.R. SLAW

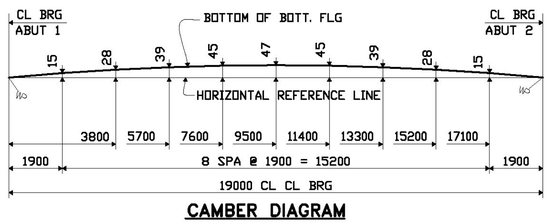
DRAWN BY	CHECKED BY	APP.	SHOP	DIST.	CONTRACT NO.	SHEET NO.
PDC/WS 03-2011	PDC/SB 03-2011				3561	3



ONE ~BEAM~ MA4



SECT. 2



CAMBER DIAGRAM

SHIPPER		BILL OF MATERIAL						
NO.	MARK	NO.	MARK	SIZE	LENGTH	REMARKS	ITEM	WEIGHT
		1	MA4	BEAM SUB-ASSEMBLY				
		1		W760x161	19370	CVN		
		2	sf1	PL 13x115	720	CVN		
		2	sf2	PL 13x115	720	CVN		
		102	ms1	S. STUD 22ø	180	A108		

Received Date: 3/25/11
Checked By: Hiram Salls
Approval Type: Approved
Approved By: Chris Williams
Date: 4/13/11

SHOP NOTES

HOLES 24ø ($\frac{15}{16}$ø) (UN)
BOLTS NONE
PAINT NONE
WELDS TO BE MADE USING SEE GN1 ELECTRODES
MATERIAL M270-345W

REV.NO	DATE	REVISION
3		
2		
1		

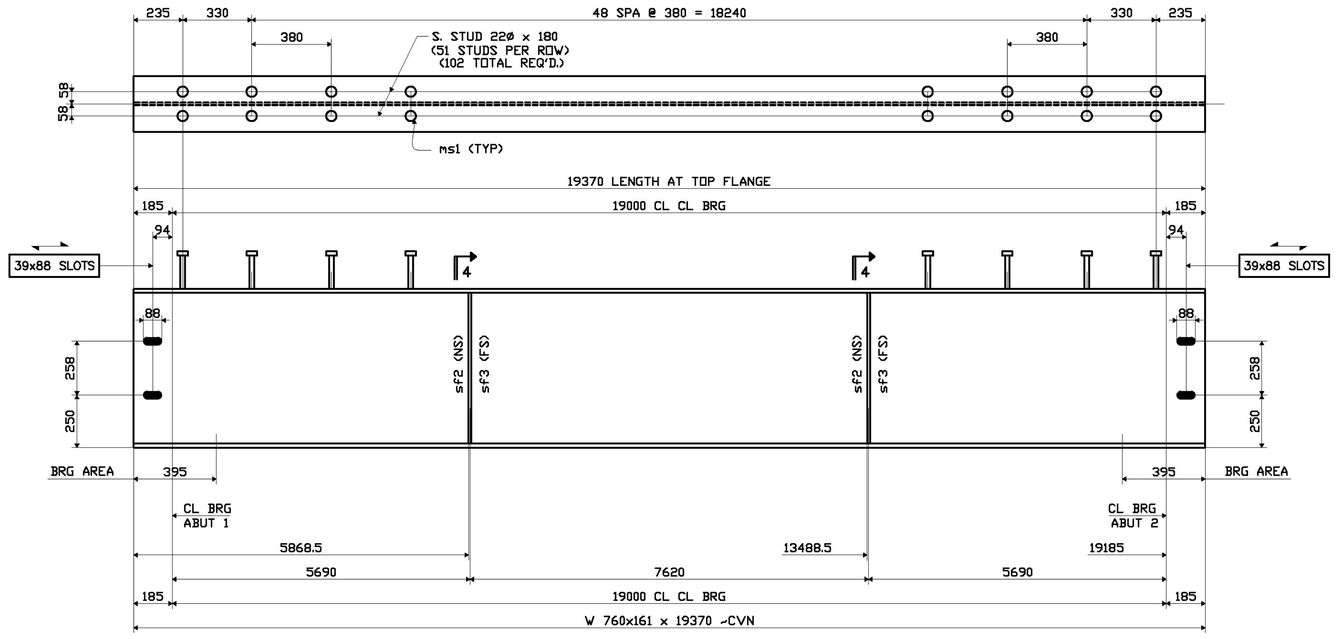
BEAM DETAIL

PROJECT No. BRF 037-2(8)
REPLACEMENT OF BRIDGE No. 71
TOWN OF EAST MONTPELIER, WASHINGTON COUNTY, VT

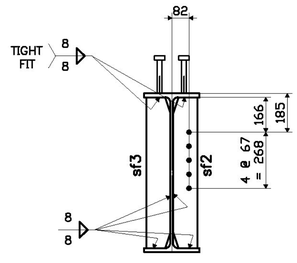
FOSTER . PRECISE
3 FARM LANE
GEORGETOWN, MA 01833-1843

OWNER: STATE OF VERMONT AGENCY OF TRANSPORTATION
CONTRACTOR: J.R. SLAW

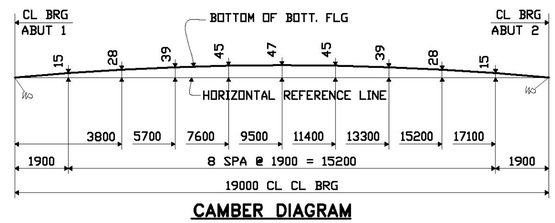
DRAWN BY	CHECKED BY	APP.	SHOP	DIST.	CONTRACT NO.	SHEET NO.
PDC/WS 03-2011	PDC/SB 03-2011				3561	4



ONE ~BEAM~ MA5



SECT. 4



CAMBER DIAGRAM

SHIPPER		BILL OF MATERIAL						
NO.	MARK	NO.	MARK	SIZE	LENGTH	REMARKS	ITEM	WEIGHT
		1	MA5	BEAM SUB-ASSEMBLY				
		1		W760x161	19370	CVN		
		2	sf3	PL 13x115	720	CVN		
		2	sf2	PL 13x115	720	CVN		
		102	ms1	S. STUD 22ø	180	A108		

Received Date: 3/25/11
Checked By: Hiram Salls
Approval Type: Approved
Approved By: Chris Williams
Date: 4/13/11

SHOP NOTES

HOLES 24ø ($\frac{15}{16}$ø) (UN)
BOLTS NONE
PAINT NONE
WELDS TO BE MADE USING SEE GN1 ELECTRODES
MATERIAL M270-345W

REV.NO	DATE	REVISION
3		
2		
1		

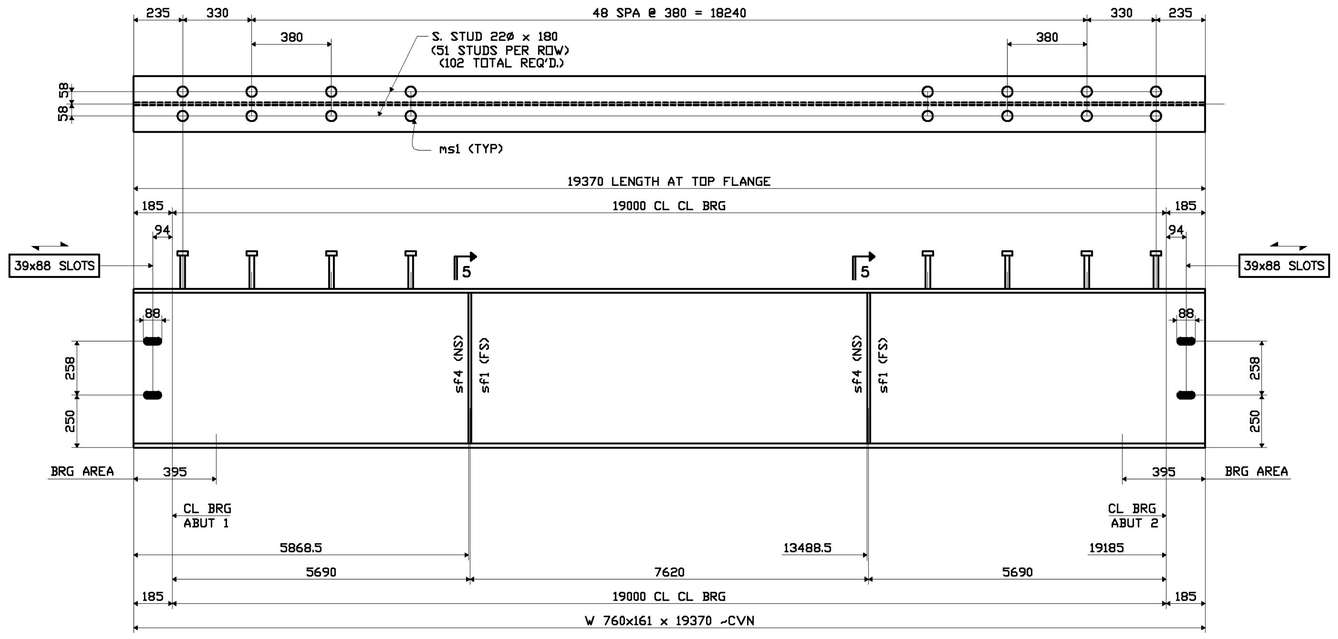
BEAM DETAIL

PROJECT No. BRF 037-2(8)
REPLACEMENT OF BRIDGE No. 71
TOWN OF EAST MONTPELIER, WASHINGTON COUNTY, VT

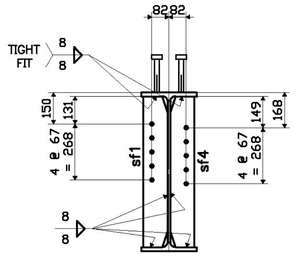
FOSTER . PRECISE
3 FARM LANE
GEORGETOWN, MA 01833-1843

OWNER: STATE OF VERMONT AGENCY OF TRANSPORTATION
CONTRACTOR: J.R. SLAW

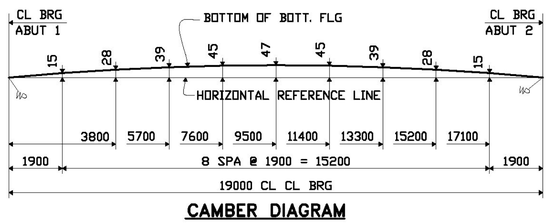
DRAWN BY	CHECKED BY	APP.	SHOP	DIST.	CONTRACT NO.	SHEET NO.
PDC/WS 03-2011	PDC/SB 03-2011				3561	5



ONE ~BEAM~ MA6



SECT. 5



CAMBER DIAGRAM

SHIPPER		BILL OF MATERIAL						
NO.	MARK	NO.	MARK	SIZE	LENGTH	REMARKS	ITEM	WEIGHT
		1	MA6	BEAM SUB-ASSEMBLY				
		1		W760x161	19370	CVN		
		2	sf1	PL 13x115	720	CVN		
		2	sf4	PL 13x115	720	CVN		
		102	ms1	S. STUD 22ø	180	A108		

Received Date: 3/25/11
Checked By: Hiram Salls
Approval Type: Approved
Approved By: Chris Williams
Date: 4/13/11

SHOP NOTES

HOLES 24ø ($\frac{15}{16}$ø) (UN)
BOLTS NONE
PAINT NONE
WELDS TO BE MADE USING SEE GN1 ELECTRODES
MATERIAL M270-345W

REV.NO	DATE	REVISION
3		
2		
1		

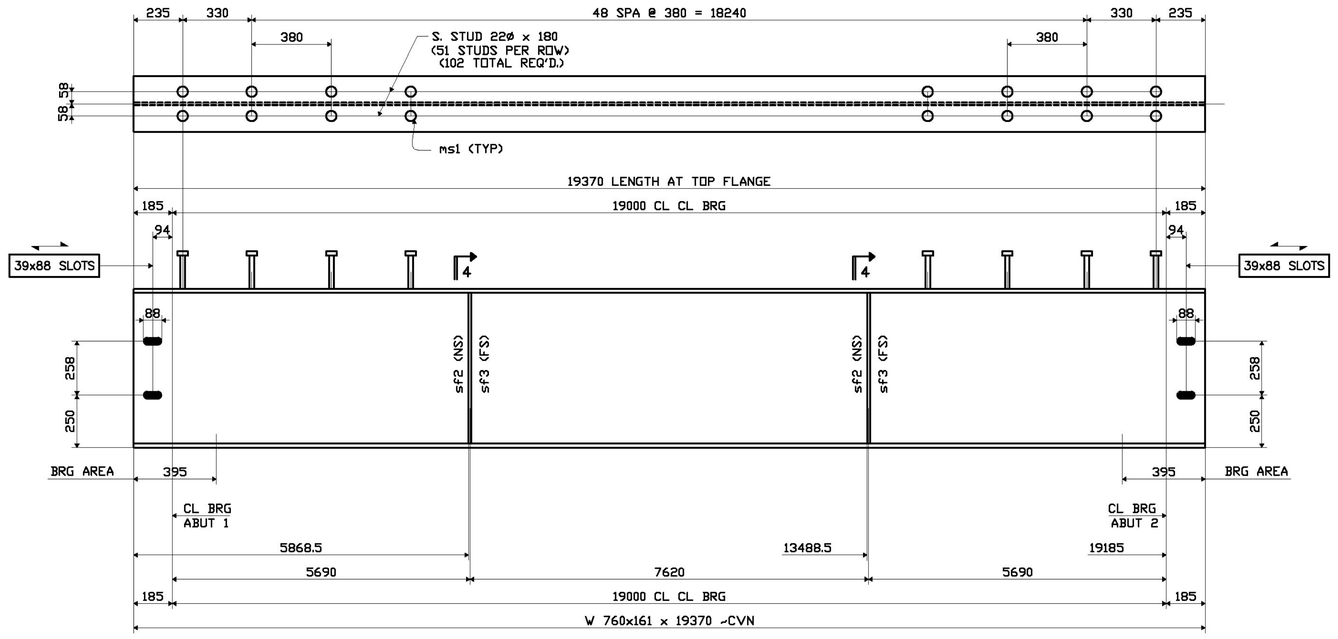
BEAM DETAIL

PROJECT No. BRF 037-2(8)
REPLACEMENT OF BRIDGE No. 71
TOWN OF EAST MONTPELIER, WASHINGTON COUNTY, VT

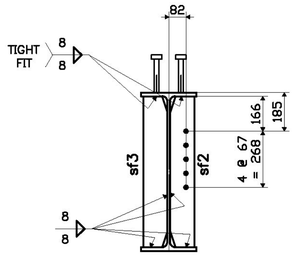
FOSTER . PRECISE
3 FARM LANE
GEORGETOWN, MA 01833-1843

OWNER: STATE OF VERMONT AGENCY OF TRANSPORTATION
CONTRACTOR: J.R. SLAW

DRAWN BY	CHECKED BY	APP.	SHOP	DIST.	CONTRACT NO.	SHEET NO.
PDC/WS 03-2011	PDC/SB 03-2011				3561	6

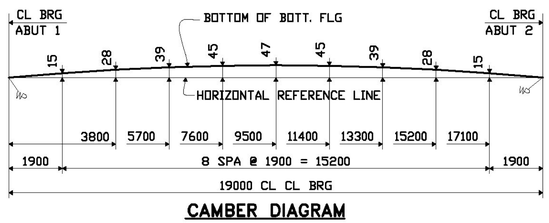


ONE ~BEAM~ MA7



SECT. 4

SHIPPER		BILL OF MATERIAL						
NO.	MARK	NO.	MARK	SIZE	LENGTH	REMARKS	ITEM	WEIGHT
		1	MA7	BEAM SUB-ASSEMBLY				
		1		W760x161	19370	CVN		
		2	sf2	PL 13x115	720	CVN		
		2	sf3	PL 13x115	720	CVN		
		102	ms1	S. STUD 22ø	180	A108		



CAMBER DIAGRAM

Received Date: 3/25/11
Checked By: Hiram Salls
Approval Type: Approved
Approved By: Chris Williams
Date: 4/13/11

SHOP NOTES

HOLES 24ø (15/16") (UN)
BOLTS NONE
PAINT NONE
WELDS TO BE MADE USING SEE GN1 ELECTRODES
MATERIAL M270-345W

REV.NO	DATE	REVISION
3		
2		
1		

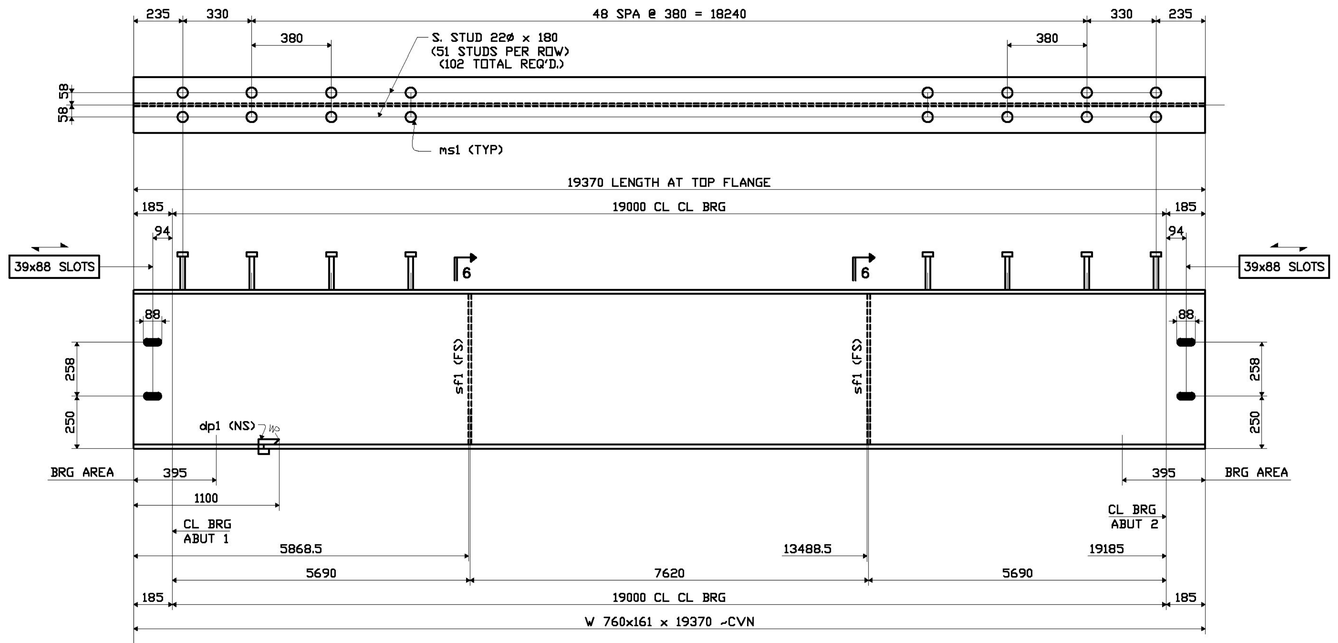
BEAM DETAIL

PROJECT No. BRF 037-2(8)
REPLACEMENT OF BRIDGE No. 71
TOWN OF EAST MONTPELIER, WASHINGTON COUNTY, VT

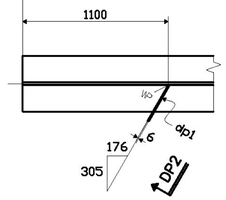
FOSTER . PRECISE
3 FARM LANE
GEORGETOWN, MA 01833-1843

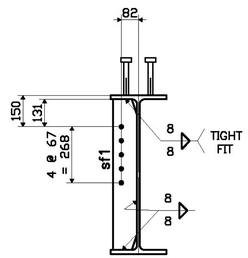
OWNER: STATE OF VERMONT AGENCY OF TRANSPORTATION
CONTRACTOR: J.R. SLAW

DRAWN BY	CHECKED BY	APP.	SHOP	DIST.	CONTRACT NO.	SHEET NO.
PDC/WS 03-2011	PDC/SB 03-2011				3561	7

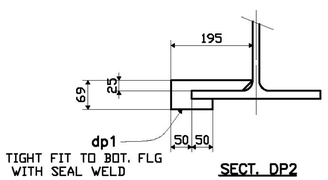


ONE ~BEAM~ MA8

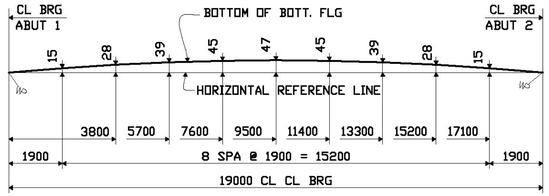




SECT. 8



SECT. DP2



CAMBER DIAGRAM

SHIPPER		BILL OF MATERIAL						
NO.	MARK	NO.	MARK	SIZE	LENGTH	REMARKS	ITEM	WEIGHT
		1	MA8	BEAM SUB-ASSEMBLY				
		1		W760x161	19370	CVN		
		2	sf1	PL 13x115	720	CVN		
		102	ms1	S. STUD 22ø	180	A108		
		1	dp1	PL 6x69	195			

Received Date: 3/25/11
Checked By: Hiram Salls
Approval Type: Approved
Approved By: Chris Williams
Date: 4/13/11

SHOP NOTES

HOLES 24ø (15/16ø) (UN)
BOLTS NONE
PAINT NONE
WELDS TO BE MADE USING SEE GN1 ELECTRODES
MATERIAL M270-345W

REV.NO	DATE	REVISION
3		
2		
1		

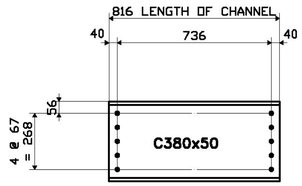
BEAM DETAIL

PROJECT No. BRF 037-2(8)
REPLACEMENT OF BRIDGE No. 71
TOWN OF EAST MONTPELIER, WASHINGTON COUNTY, VT

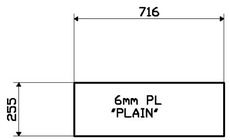
FOSTER . PRECISE
3 FARM LANE
GEORGETOWN, MA 01833-1843

OWNER: STATE OF VERMONT AGENCY OF TRANSPORTATION
CONTRACTOR: J.R. SLAW

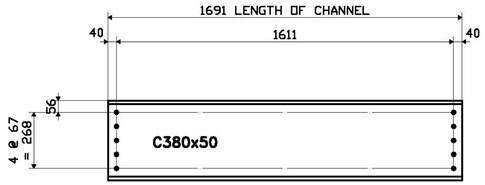
DRAWN BY	CHECKED BY	APP.	SHOP	DIST.	CONTRACT NO.	SHEET NO.
PDC/WS 03-2011	PDC/SB 03-2011				3561	8



INT. DIAPH.~ 9D1



CURTAIN WALL PL~ 9P1



INT. DIAPH.~ MA9

SHIPPER BILL OF MATERIAL								
NO.	MARK	NO.	MARK	SIZE	LENGTH	REMARKS	ITEM	WEIGHT
	FIELD INSTALLED MATERIAL							
6	9D1			C380x50	816			
16	9P1			PL 6x255	716			
	SHOP INSTALLED DIAPHRAGMS							
		8	MA9	C380x50	1691			

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Date: 4/13/11

SHOP NOTES

HOLES 24ø ($\frac{15}{16}$ø)
BOLTS NONE
PAINT NONE
WELDS TO BE MADE USING ____ ELECTRODES
MATERIAL M270-345W

REV.NO	DATE	REVISION
3		
2		
1		

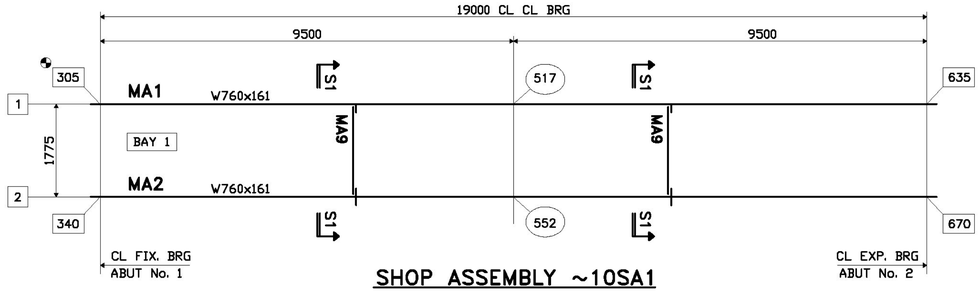
DIAPHRAGM & MISC. DETAILS

PROJECT No. BRF 037-2(8)
REPLACEMENT OF BRIDGE No. 71
TOWN OF EAST MONTPELIER, WASHINGTON COUNTY, VT

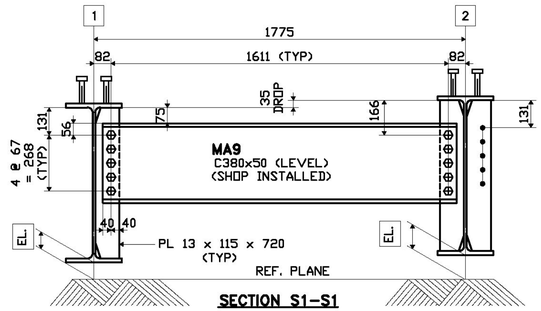
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OWNER: STATE OF VERMONT AGENCY OF TRANSPORTATION
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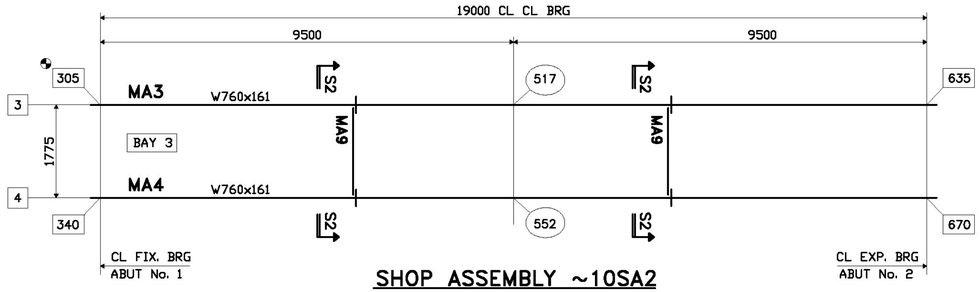
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PDC/WS 03-2011	PDC/SB 03-2011				3561	9



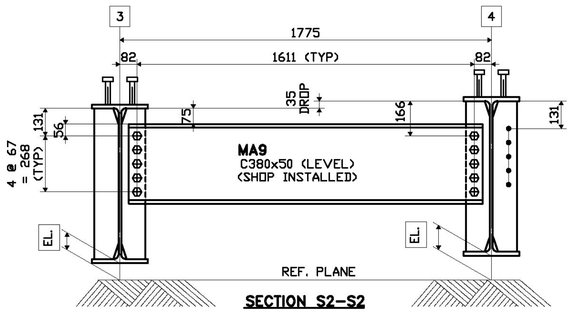
SHOP ASSEMBLY ~10SA1



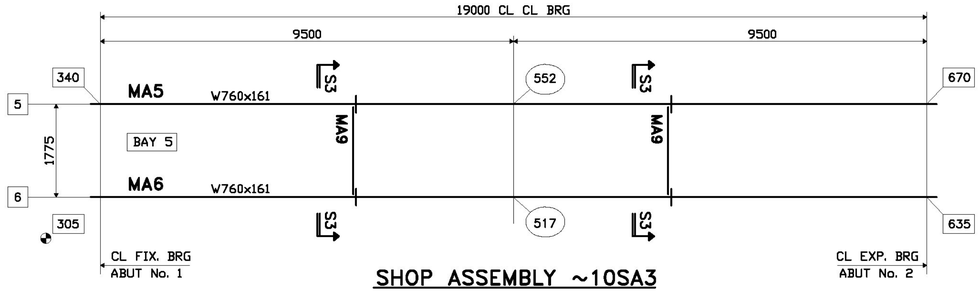
SECTION S1–S1



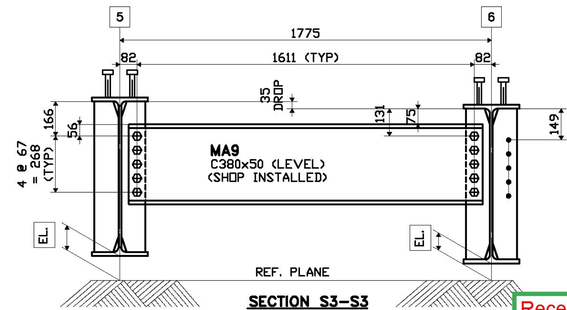
SHOP ASSEMBLY ~10SA2



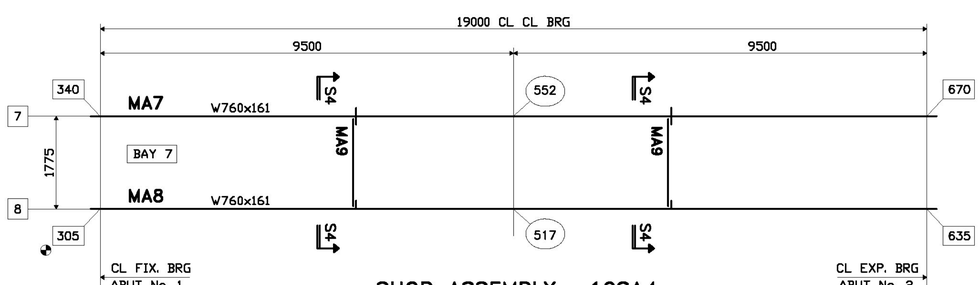
SECTION S2–S2



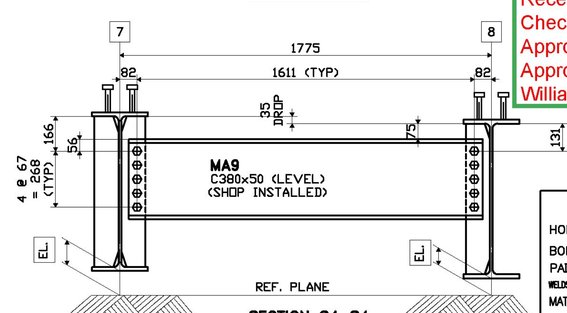
SHOP ASSEMBLY ~10SA3



SECTION S3–S3



SHOP ASSEMBLY ~10SA4



SECTION S4–S4

BILL OF MATERIAL

SHIPPER NO.	MARK	NO.	MARK	SIZE	LENGTH	REMARKS	ITEM	WEIGHT
1	**10SA1**		SHOP ASSEMBLY					
		1	MA1	BEAM SUB-ASS'Y.				
		1	MA2	BEAM SUB-ASS'Y.				
		2	MA9	DIAPH. SUB-ASS'Y.				
		20		HSBT 22ø	57	A325-3		
		20		HWASH 22ø		F436-3		
1	**10SA2**		SHOP ASSEMBLY					
		1	MA3	BEAM SUB-ASS'Y.				
		1	MA4	BEAM SUB-ASS'Y.				
		2	MA9	DIAPH. SUB-ASS'Y.				
		20		HSBT 22ø	57	A325-3		
		20		HWASH 22ø		F436-3		
1	**10SA3**		SHOP ASSEMBLY					
		1	MA5	BEAM SUB-ASS'Y.				
		1	MA6	BEAM SUB-ASS'Y.				
		2	MA9	DIAPH. SUB-ASS'Y.				
		20		HSBT 22ø	57	A325-3		
		20		HWASH 22ø		F436-3		
1	**10SA4**		SHOP ASSEMBLY					
		1	MA7	BEAM SUB-ASS'Y.				
		1	MA8	BEAM SUB-ASS'Y.				
		2	MA9	DIAPH. SUB-ASS'Y.				
		20		HSBT 22ø	57	A325-3		
		20		HWASH 22ø		F436-3		

SHOP ASSEMBLY NOTES

305 DENOTES ELEVATION GIVEN FROM REFERENCE PLANE (SHOP FLOOR) TO BOTTOM OF BOTTOM FLG. AT CL BRG.

517 DENOTES ELEVATION GIVEN FROM REF. PLANE (SHOP FLOOR) TO BOTTOM OF CAMBERED BOTTOM FLG. AT MIDPOINT OF BM. THESE ELEVATIONS ARE THEORETICAL AND MAY VARY SLIGHTLY DEPENDING ON FINAL SHOP CAMBER (± FABRICATION TOLERANCE) OBTAINED AFTER FABRICATION OF BEAM.

INDICATES LOWEST ELEVATION POINT OF THE SHOP ASSEMBLY.

SEE SHEETS 1 THRU 8 FOR BEAM SUB-ASSEMBLY DETAILS.
SEE SHEET 9 FOR DIAPHRAGM SUB-ASSEMBLY DETAILS.

Received Date: 3/25/11
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Approval Type: Approved
Approved By: Chris Williams

SHOP NOTES

HOLES 24ø (15/16ø)
BOLTS NONE
PAINT NONE
WELDS TO BE MADE USING ____ ELECTRODES
MATERIAL AS PER DETAIL DWGS

REV.NO	DATE	REVISION
3		
2		
1		

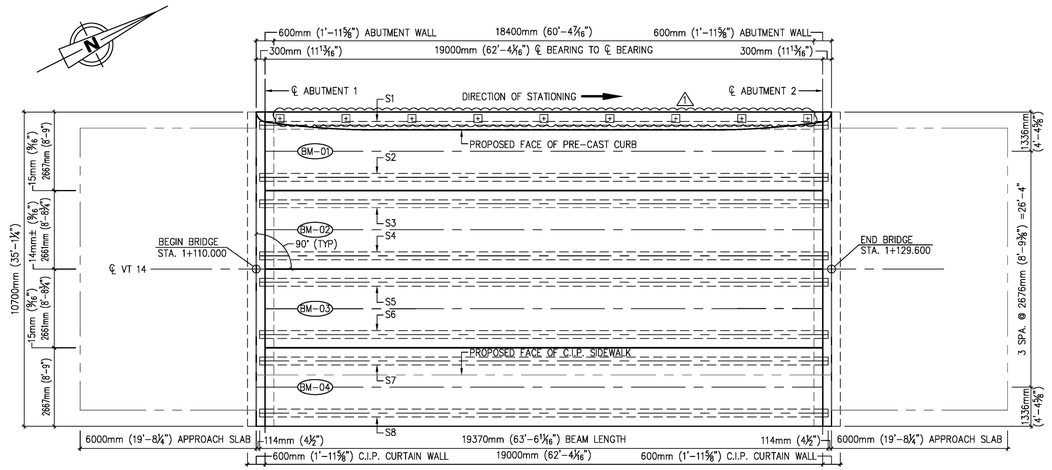
SHOP ASSEMBLY DIAGRAMS

PROJECT No. BRF 037-2(8)
REPLACEMENT OF BRIDGE No. 71
TOWN OF EAST MONTPELIER, WASHINGTON COUNTY, VT

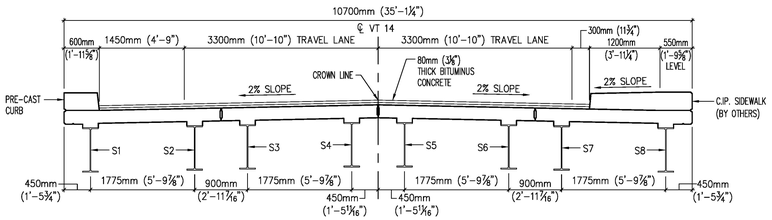
FOSTER . PRECISE
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OWNER: STATE OF VERMONT AGENCY OF TRANSPORTATION
CONTRACTOR: J.R. SLAW

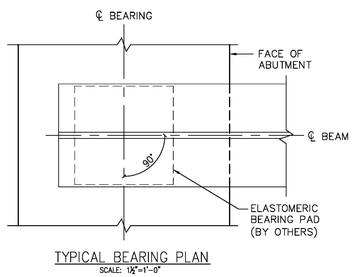
DRAWN BY	CHECKED BY	APP.	SHOP	DIST.	CONTRACT NO.	SHEET NO.
PDC/WS 03-2011	PDC/SB 03-2011				3561	10



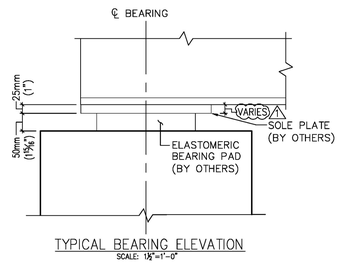
FRAMING PLAN
SCALE: 1/8"=1'-0"



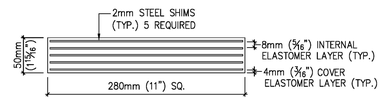
TYPICAL SECTION
SCALE: ½"= 1'-0"



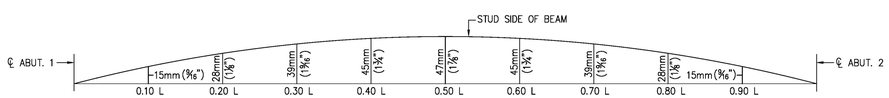
TYPICAL BEARING PLAN
SCALE: 1½"=1'-0"



TYPICAL BEARING ELEVATION
SCALE: 1½"=1'-0"



ELASTOMERIC BEARING PAD (BY OTHERS)
SCALE: 3"=1'-0"



REQ. SHOP CAMBER AFTER STUDS ARE WELDED
NTS

GENERAL NOTES

SPECIFICATIONS
1. ALL MATERIALS AND CONSTRUCTION SHALL CONFORM TO THE STATE OF VERMONT AGENCY OF TRANSPORTATION STANDARD SPECIFICATIONS FOR CONSTRUCTION (2006) AND ITS LATEST REVISIONS & AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, 4TH EDITION, 17TH EDITION (2007) AND ITS LATEST REVISIONS & AASHTO LRFD BRIDGE CONSTRUCTION SPECIFICATIONS, 2ND EDITION (2004), AND ITS LATEST REVISIONS.

DESCRIPTION OF FABRICATION FACILITIES FOR UNIT PRODUCTION
1. ALL CONCRETE TO BE SUPPLIED BY J & R SLAW USING APPROVED MIX (V-63) 4000 PSI.
2. QUALITY CONTROL EQUIPMENT
3. COMPRESSIVE STRENGTH TESTER – FORNEY MODEL F-250F-01
4. HIGH PRESSURE AIR METER – GILSON AR-8

QUALITY ASSURANCE
1. ALL UNITS SHALL BE MANUFACTURED IN ACCORDANCE WITH J& R SLAW QUALITY SYSTEM MANUAL APPROVED BY PCI.
2. ALL PLASTIC AND HARDENED CONCRETE TESTING SHALL BE PERFORMED UNDER J & R SLAW QUALITY ASSURANCE PROGRAM, BY ACI & PCI CERTIFIED TECHNICIANS.
3. CONCRETE TEST CYLINDERS SHALL BE TAKEN AS FOLLOWS:
   a. MIN (8) FOR STRIPPING STRENGTH – 4" DIA. X 8" LONG
   b. MIN (4) FOR 28 DAY STRENGTH – 4" DIA. X 8" LONG
4. NO UNIT SHALL BE SHIPPED TO THE JOBSITE WITHOUT THE APPROVAL OF THE STATE OF VERMONT AGENCY OF TRANSPORTATION. EACH UNIT SHALL BE MARKED ON THE UNDERSIDE OF THE CONCRETE DECK BY THE INSPECTOR TO INDICATE APPROVAL.
5. ADDITIONAL TESTS TO BE MADE IN ACCORDANCE WITH SPECIAL PROVISIONS SECTION 995 AND THIS NOTE SHEET.
6. ALL CONCRETE TO BE CONSOLIDATED USING INTERNAL VIBRATION.
7. CONCRETE SHALL BE NATURAL CURED. PRODUCT WILL BE COVERED WITH WET BURLAP AND AN IMPERMEABLE COVERING TO RETAIN MOISTURE, UNTIL STRIPPING STRENGTH IS ACHIEVED.

CONCRETE DATA
1. CONCRETE TO MEET THE REQUIREMENTS VERMONT AOT SPECIFICATIONS.
2. CONCRETE COMPRESSIVE STRENGTHS:
   a. REMOVAL FROM FORM: 4000 PSI STRIPPING STRENGTH IS ACHIEVED.
   b. 28 DAY: 4,000 PSI MIN.
3. MIX DESIGNS SHALL BE SUBMITTED UNDER A SEPARATE COVER (YIELD: ONE (1) CUBIC YARD):
4. MIX DESIGNS ARE SUBJECT TO CHANGE DUE TO AMBIENT CONDITIONS.
5. SLUMP: 6"+-1"
6. MAX. AGGREGATE SIZE - 3/4"
7. TOTAL CEMENTITIOUS MATERIAL: 710 LBS
8. ALL MATERIALS SHALL BE APPROVED BY VERMONT AGENCY OF TRANSPORTATION.
9. ENTRAINED AIR: 6.0% – 8.0%

REINFORCING STEEL
1. ALL CONCRETE REINFORCEMENT SHALL CONFIRM TO AASHTO-M31, GRADE 60, AND SHALL BE EPOXY COATED.

STRUCTURAL STEEL
1. ALL STRUCTURAL STEEL SHALL MEET THE REQUIREMENTS OF AASHTO M270, GRADE 50 WEATHERING.
2. NO STRUCTURAL STEEL SHALL BE PLACED INTO FORMS UNTIL APPROVED BY VERMONT AOT. EACH FRAME SHALL BE MARKED ON THE WEB OR BOTTOM FLANGE BY THE INSPECTOR TO INDICATE HIS APPROVAL PRIOR TO INSTALLATION IN THE FORM.
3. STRUCTURAL STEEL FABRICATOR: FOSTER-PRECISE; GEORGETOWN, MA.
4. THE ENDS OF THE BEAM SHALL BE VERTICAL. ALL STIFFENER/CONNECTION PLATES SHALL BE VERTICAL UNDER LOAD AT THE ENDS. ALL INTERMEDIATE STIFFENER/CONNECTION PLATES SHALL BE VERTICAL UNDER DEAD LOAD.
5. ALL WELDING, WELDING MATERIAL PREPARATION AND ASSEMBLY OF MATERIAL FOR WELDING SHALL CONFORM TO THE STANDARD SPECIFICATIONS FOR HIGHWAYS AND BRIDGES, THE AASHTO STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES, THE AASHTO/AWS BRIDGE WELDING CODE (ANSI/AASHTO/AWS D1.5), AND ALL INTERIM REVISIONS PUBLISHED BY AASHTO AS OF THE BID OPENING DATE.
6. ALL BOLTED CONNECTIONS SHALL BE CONSIDERED SLIP CRITICAL CONNECTIONS WITH CLASS B FAYING SURFACES.

FABRICATION PROCEDURE
1. THESE UNITS SHALL BE CAST IN AN UPRIGHT ORIENTATION.
2. SET STEEL BEAMS ON END SUPPORTS IN A VERTICAL, UPRIGHT POSITION.
3. FORM SHALL BE ASSEMBLED ON TOP OF STEEL BEAMS IN ACCORDANCE WITH THE SHOP DRAWINGS, THE REINFORCING STEEL SHALL THEN BE PLACED IN THE FORM. ALL FORM SIDES SHALL BE VERTICAL.
4. PLACE CONCRETE IN FORM AND SCREED TO PROPER LEVEL.
5. CONCRETE SHALL BE CURED UTILIZING WET BURLAP AND PLASTIC COVERS.
6. FORM MAY BE REMOVED UPON COMPLETION OF THE CURING PERIOD.
7. PRE-ASSEMBLY. THE UNITS SHALL BE PRE-ASSEMBLED AT THE FABRICATOR'S PLANT TO ASSURE PROPER MATCH BETWEEN UNITS BEFORE SHIPPING TO THE PROJECT SITE, TO THE SATISFACTION OF THE VAOT) DIMENSIONS SHALL BE PROVIDED TO THE CONTRACTOR FOR SETTING ABUTMENT DIMENSION AND ELEVATIONS.
8. THESE UNITS ARE ASSUMED TO BE FABRICATED IN AN UNSHORED STATE. HOWEVER, AT THE OPTION OF THE FABRICATOR, TEMPORARY SHORES MAY BE PLACED UNDER THE BEAMS TO IMPROVE STABILITY DURING FABRICATION. ALL TEMPORARY SHORES MUST BE REMOVED WHILE CONCRETE IS STILL FLUID.

FINISHING
1. DECK TEXTURE TO BE MAGNESIUM FLOAT FINISH.
2. UNDERSIDE OF DECK TO RECEIVE FORM FINISH.

HANDLING OF UNITS
1. HANDLING: SWEDGE LIFTING CABLES SHALL BE INSTALLED THROUGH THE HOLES IN THE DECK AND CONNECTED TO 18 TON OR LARGER COFFEE POTS. THE SWEDGE LIFTING CABLES WILL ATTACH TO CONVENTIONAL LIFTING EQUIPMENT. CONTRACTOR'S ERECTION PLAN SHALL INSURE FORCES FROM RIGGING DO NOT EXCEED 18 TONS.
2. SHIPPING: UNITS SHALL BE SHIPPED TO THE JOBSITE ON FLATBED TRAILERS.
3. ERECTION: ALL ERECTION HARDWARE IS BY OTHERS.

TOLERANCES
1. UNITS SHALL BE FABRICATED AND COMPLY WITH FOLLOWING TOLERANCES:
2. LENGTH: +/- 20mm (3/4")
3. WIDTH: +/- 10mm (3/8")
4. OVERALL DEPTH OF STRUCTURAL SLAB: +10mm (3/8") -6mm (1/4")
5. REINFORCING COVER: TOP MAT AND BOTTOM MAT (BOTTOM MAT IN MOLD): +/- 10mm (3/8")
6. DEVIATION FROM SQUARE – HORIZONTAL DIAGONALS : +/- 20mm (3/4")
7. OVERALL LENGTH OF UNIT: +/- 10mm (3/8")

LABELING
1. EACH UNIT SHALL BE CLEARLY AND PERMANENTLY LABELED (STENCILED) ON THE UNDERSIDE OF THE LEFT END, (AS SITUATED ON THE SHOP DRAWING), OF THE DECK WITH THE FOLLOWING INFORMATION:
   a. J & R SLAW CO.
   b. DATE OF MANUFACTURE
   c. DESIGN RATING – HL-93
   d. MARK NUMBER AS SHOWN ON LAYOUT SHEET OF SHOP DRAWINGS

MISCELLANEOUS:
1. CRACK WIDTHS 0.012" – 0.03" SHALL BE EPOXY INJECTED USING (VAOT) APPROVED MATERIALS AND PROCEDURES.
2. CRACK WIDTHS LESS THAN 0.012" SHALL BE SEALED WITH A PENETRATING SEALER USING (VAOT) APPROVED MATERIALS AND PROCEDURES.
3. A CERTIFICATION OF COMPLIANCE SHALL BE FURNISHED FOR THE SUPPLY OF THE UNITS. A COPY OF THE RESULTS OF ALL TESTS PERFORMED THAT ARE NECESSARY TO ASSURE COMPLIANCE WITH THESE SPECIFICATIONS SHALL ALSO BE PROVIDED.

INSTALLATION:
1. GENERAL: THE UNITS SHALL BE FABRICATED IN ACCORDANCE WITH THE APPLICABLE SECTIONS OF THE SPECIFICATIONS AND/OR THE SPECIAL PROVISIONS FOR EACH RESPECTIVE ITEM. SUBMIT CONSTRUCTION PROCEDURES AND PERMISSIBLE VARIATIONS OTHER THAN THOSE CONTAINED HEREIN, FOR APPROVAL.
2. ERECTION PROCEDURE: PROVIDE TO THE ENGINEER IN ADVANCE (15 WORKING DAYS) OF ANY ERECTION A DETAILED ERECTION PROCEDURE THAT INDICATES THE METHOD OF ERECTION AND THE EQUIPMENT TO BE USED. THE ERECTION PROCEDURE AND TIME ESTIMATE SHALL BE APPROVED BY THE ENGINEER PRIOR TO THE START OF ANY ERECTION WORK. ANY TEMPORARY CONSTRUCTION AND SUBSEQUENT RESTORATION REQUIRED FOR THE POSITIONING AND SUPPORT OF A CRANE OR CRANES SHALL BE INCLUDED IN THE COST OF THE WORK.
3. BEARING AND BEARING SURFACES: PROVIDE BEARING SURFACES PROPERLY FINISHED TO THE CORRECT ELEVATION TO PROVIDE FULL AND EVEN SUPPORTING SURFACES FOR ALL THE BEARINGS. INSTALL BEARINGS IN ACCORDANCE WITH THE DETAILS SHOWN ON THE PLANS.
4. ERECTION OF UNITS: ERECTION OF UNITS SHALL NOT PROCEED UNTIL SUBSTRUCTURE CONCRETE HAS BEEN CURED FOR THE MINIMUM LENGTH OF TIME AS SPECIFIED IN THE SPECIFICATIONS. INSTALL UNITS TO THE CORRECT LINE AND GRADE AS SHOWN ON THE APPROVED DRAWINGS AND AS INDICATED IN THE APPROVED ERECTION PROCEDURE. AFTER ALL THE UNITS ARE ERECTED, INSPECT THEM TO INSURE THE CORRECTNESS OF THEIR LOCATION. USE APPROVED STEEL SHIMS BETWEEN THE BEARING AND THE STRINGER, TO COMPENSATE FOR MINOR DIFFERENCES IN ELEVATION BETWEEN UNITS AND TO COMPLY WITH APPROACH AND ADJACENT DECK ELEVATIONS.
5. STRUCTURAL STEEL: INSTALL ALL DIAPHRAGMS AND OTHER STRUCTURAL STEEL WORK AS SHOWN ON THE APPROVED WORKING DRAWINGS AFTER THE UNITS ARE IN THEIR FINAL LOCATIONS.
6. MATCHING ELEVATIONS OF UNITS: ADJACENT UNITS SHALL MATCH ELEVATION WITHIN 1/4" VERTICALLY (ALONG LONGITUDINAL EDGES TAKING INTO ACCOUNT DIFFERENCES DUE TO DECK CROSS SLOPE) AND 1/4" VERTICALLY AT THE END OF UNITS, PROVIDED ALL DIAPHRAGMS CAN BE TIGHTENED WITHOUT PERMANENT DEFORMATION OR DAMAGE TO ANY STRUCTURAL COMPONENT. IF THE TOLERANCE IS NOT MET, ADJUST THE UNITS AS INDICATED IN THE PROCEDURES SHOWN ON THE APPROVED WORKING DRAWINGS.
7. CLOSURE POUR: THE SURFACE OF THE LONGITUDINAL JOINT SHALL BE FREE OF ANY MATERIAL SUCH AS OIL, GREASE OR DIRT, WHICH MAY PREVENT BONDING OF THE CONCRETE FILL MATERIAL. PRIOR TO PLACEMENT OF THE CONCRETE MATERIAL, FORM THE BOTTOM OF THE JOINT FLUSH WITH THE BOTTOM OF THE SLAB. DO NOT USE BAKER ROD. PLACE CLOSURE CONCRETE AND CURE IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS.
8. SEALING OF LIFTING HOLES: AFTER THE UNITS ARE IN THEIR FINAL LOCATIONS, APPLY BONDING AGENT AND FILL THE LIFTING HOLES WITH CEMENTITIOUS GROUT. PROVIDE A REMOVABLE FORM AT THE BOTTOM SURFACE OF THE DECK TO RETAIN THE CONCRETE.
9. LOADING: UNITS MAY BE LOADED UPON ERECTION AND BEFORE THE CLOSURE POUR IN ACCORDANCE WITH THE APPROVED ERECTION PROCEDURE. ONCE THE CLOSURE POUR IS CAST, NO FURTHER LOADING OF THE UNITS WILL BE ALLOWED UNTIL THE CLOSURE POUR CONCRETE HAS PROPERLY AND FINALLY CURED AND AS APPROVED BY THE ENGINEER. CURE THE CONCRETE IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS UNTIL DESIGN STRENGTH HAS BEEN MET.
10. FINAL REPAIRS: AFTER THE INSTALLATION WORK IS COMPLETE, REPAIR REMAINING CONCRETE DEFECTS, HOLES FOR INSERTS AND LIFTING HOLES AND INDICATED AND APPROVED BY THE ENGINEER.
11. TECHNICAL ASSISTANCE: HAVE A REPRESENTATIVE FROM THE FABRICATOR PRESENT AT THE PROJECT SITE, FULL TIME, DURING THE ERECTION OF PREFABRICATED SUPERSTRUCTURE UNITS TO PROVIDE TECHNICAL ASSISTANCE TO THE CONTRACTOR IN THE EVENT UNUSUAL PROBLEMS OR SPECIAL CIRCUMSTANCES ARISE.

Received Date: 4/22/11
Checked By: Hiram Salls
Approval Type: Approved
Approved By: Chris Williams
Date: 4/26/11

DRAWN	CHECKED	ENGINEERED	CHECKED	APPROVED
KLT 04/06/11	JJ 04/06/11	-- -/-/-	-- -/-/-	RLE 04/06/11

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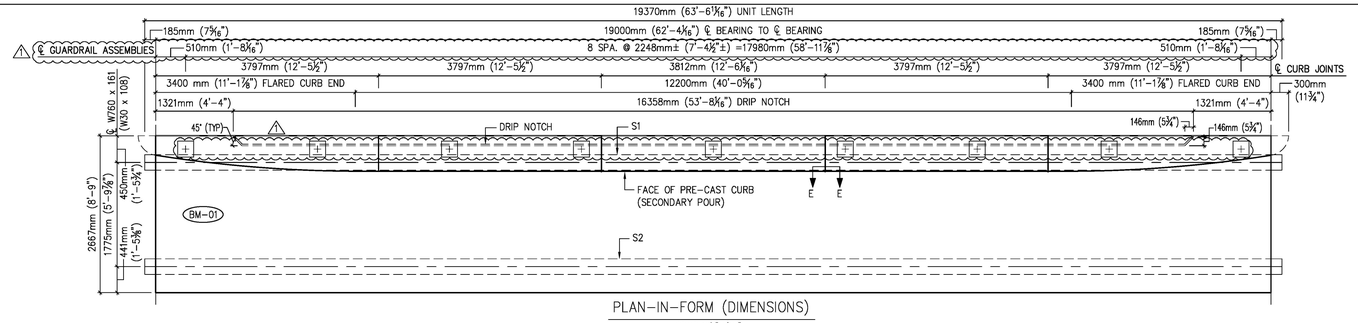
REVISIONS
1. PER REVISE & RESUBMIT DRAWINGS RECIEVED ON 04/14/11 & PER SLAW EMAIL ON 04/21/11

STATE OF VERMONT
AGENCY OF TRANSPORTATION
SUPERSTRUCTURE REPLACEMENT
EAST MONTPELIER

BRIDGE NO.: 71
CONTRACT NO.: SLAW #773
CONTRACTOR: AL ST. ONGE CONTRACTING
FED. AID PROJECT NO.: BRF 037-2(8)

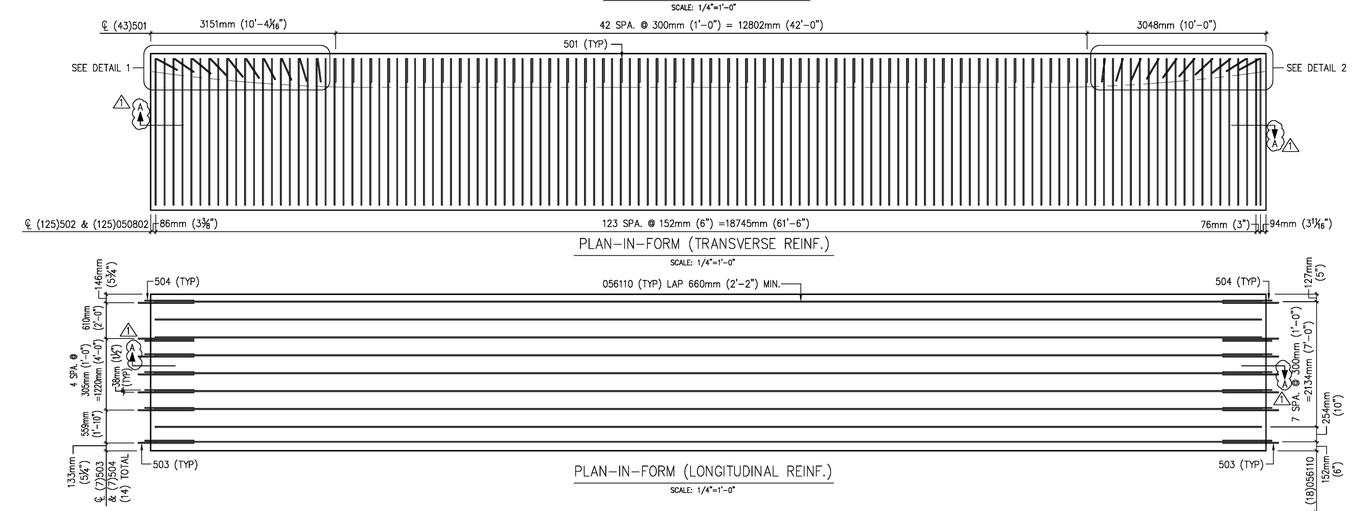
FRAMING PLAN AND GENERAL NOTES | SHEET 01 OF 06

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PLAN-IN-FORM (DIMENSIONS)

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

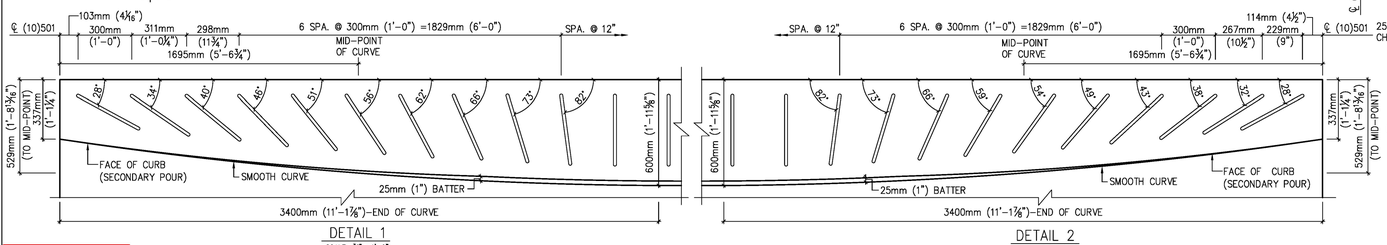


PLAN-IN-FORM (TRANSVERSE REINF.)

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

PLAN-IN-FORM (LONGITUDINAL REINF.)

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



DETAIL 1

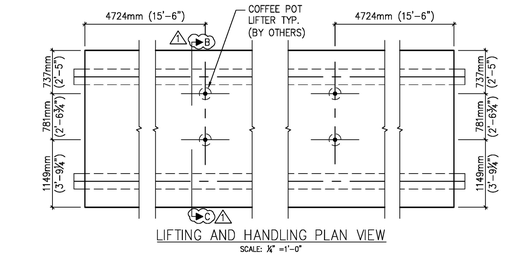
SCALE: 3/4" =1'-0"

NOTE: DIMENSIONS GIVEN FOR WIDTH OF CURB ARE TO THE BOTTOM.

DETAIL 2

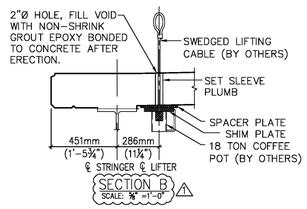
SCALE: 3/4" =1'-0"

NOTE: DIMENSIONS GIVEN FOR WIDTH OF CURB ARE TO THE BOTTOM.



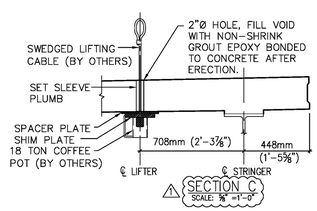
LIFTING AND HANDLING PLAN VIEW

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



SECTION B

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

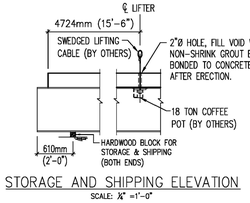


SECTION C

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

STORAGE AND SHIPPING SECTION

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

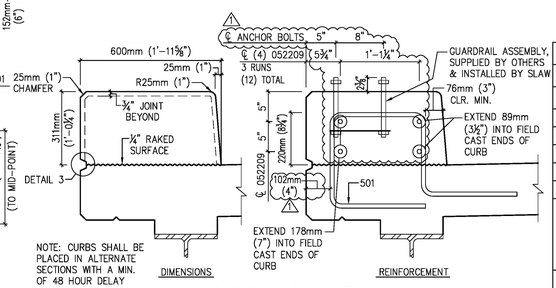


STORAGE AND SHIPPING ELEVATION

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

SHEAR KEY DETAIL

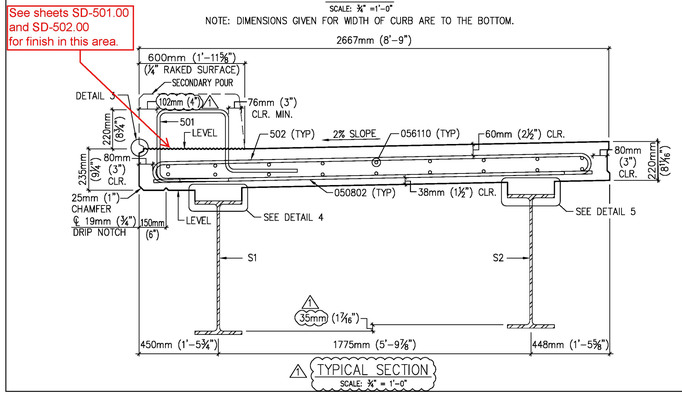
SCALE: 1 1/2" =1'-0"



NOTE: CURBS SHALL BE PLACED IN ALTERNATE SECTIONS WITH A MIN. OF 48 HOUR DELAY BETWEEN ADJACENT PLACEMENTS.

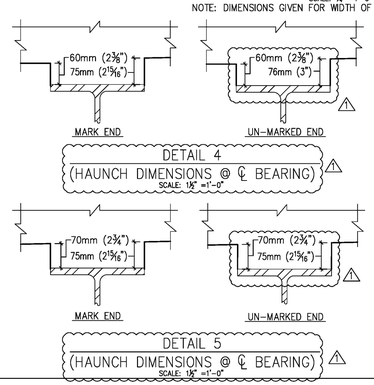
SECONDARY POUR DETAILS

SCALE: 1" =1'-0"



TYPICAL SECTION

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



DETAIL 4

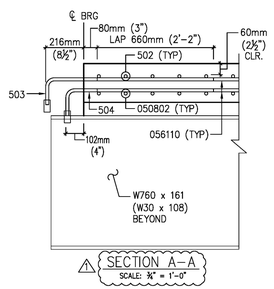
(HAUNCH DIMENSIONS @ ℄ BEARING)

SCALE: 1 1/2" =1'-0"

DETAIL 5

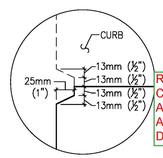
(HAUNCH DIMENSIONS @ ℄ BEARING)

SCALE: 1 1/2" =1'-0"



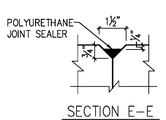
SECTION A-A

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



DETAIL 3

SCALE: 3" =1'-0"



SECTION E-E

SCALE: 3" =1'-0"

BAR LIST							
MARK #	BAR SIZE	QTY	LENGTH	WT/PC (LBS)	TOTAL WT	TYPE	REMARKS
501	#16 (#5)	63	6'-1"	6.3	400	BENT	EPOXY COATED
502	#16 (#5)	125	9'-5"	9.8	1228	BENT	EPOXY COATED
503	#16 (#5)	14	3'-6"	3.7	51	BENT	EPOXY COATED
504	#16 (#5)	14	3'-2"	3.3	46	BENT	EPOXY COATED
050802	#16 (#5)	125	8'-2"	8.5	1065	STR.	EPOXY COATED
056110	#16 (#5)	18	61'-10"	64.5	1161	STR.	EPOXY COATED
052209	#16 (#5)	12	22'-9"	23.7	285	STR.	EPOXY COATED
TOTAL:					4235		

MARK: BM-01	QTY: ONE	CONCRETE VOLUME:	20.02 cy
WT (CONC. & REBAR): 42.6 T		WT (STRUCT. STEEL):	6.9 T
TOTAL WT: 49.5 T			

EMBEDMENTS

MARK #	QTY	SUPPLIER	REMARKS
	--		

MATERIAL SPECIFICATION

TYPE	DESCRIPTION
CONCRETE	UNIT WEIGHT: 150 PCF
	REMOVAL FROM FORM : 4000 PSI
	28 DAY: 4000 PSI
	CORROSION INHIBITOR : 0.0 GALS/CY
REINFORCING STEEL	DEFORMED ASTM A775 EPOXY COATED REBAR

DRAWN	CHECKED	ENGINEERED	CHECKED	APPROVED
KLT 04/06/11	JJ 04/06/11	-- -/-/-	-- -/-/-	RLE 04/06/11

Eriksson technologies 813.989.3317 TAMPA, FL LRFD.COM

Received Date: 4/22/11
Checked By: Hiram Salls
Approval Type: Approved As Noted
Approved By: Chris Williams
Date: 4/26/11

J & R SLAW, INC.
438 RIVERVIEW ROAD
LEHIGHTON, PA. 18235
(610)852-2020

REVISIONS

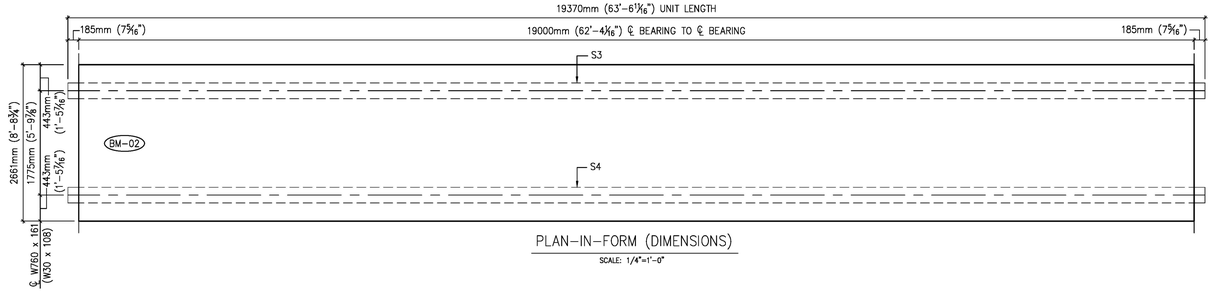
1 PER REVISE & RESUBMIT DRAWINGS RECIEVED ON 04/14/11
PER SLAW COMMENTS ON 04/21/11

STATE OF VERMONT
AGENCY OF TRANSPORTATION
SUPERSTRUCTURE REPLACEMENT
EAST MONTPELIER

BRIDGE NO.: 71
CONTRACT NO.: SLAW #773
CONTRACTOR: AL ST. ONGE CONTRACTING
FED. AID PROJECT NO.: BRF 037-2(8)

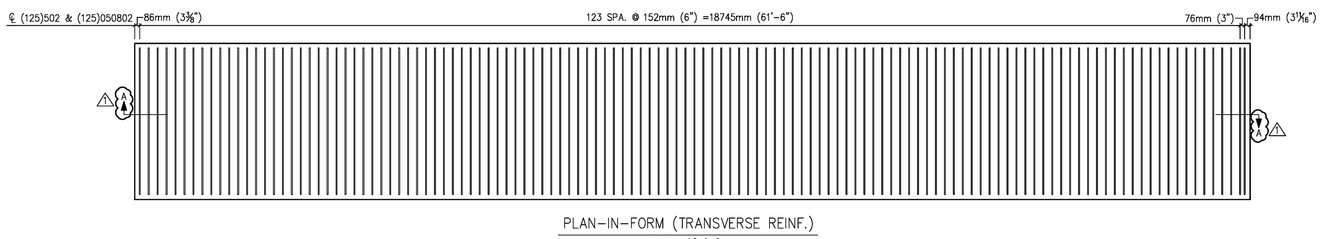
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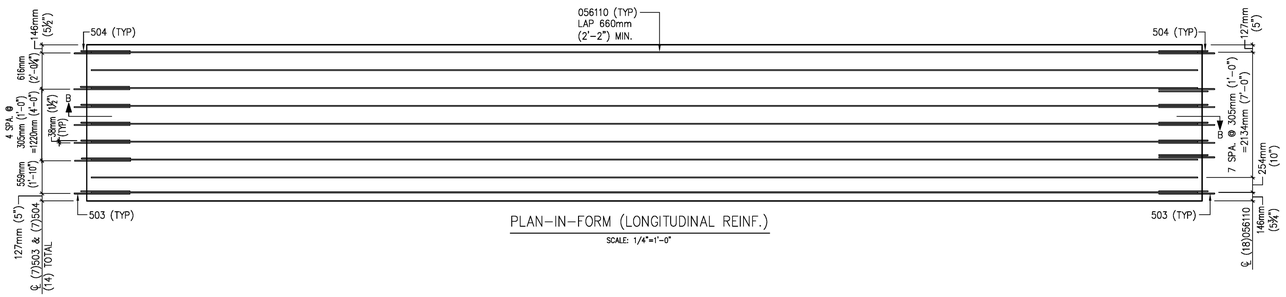
PLAN-IN-FORM (DIMENSIONS)

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



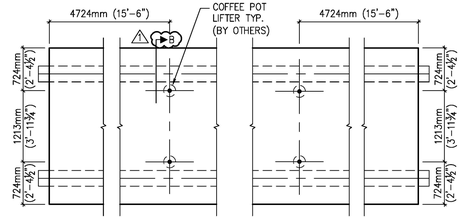
PLAN-IN-FORM (TRANSVERSE REINF.)

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



PLAN-IN-FORM (LONGITUDINAL REINF.)

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

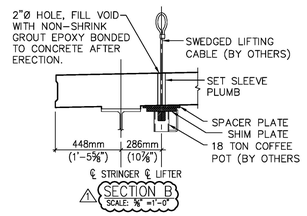


LIFTING AND HANDLING PLAN VIEW

SCALE: 1/8" =1'-0"

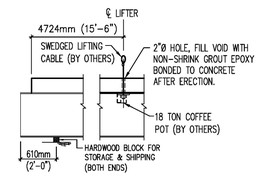
BAR LIST

MARK #	BAR SIZE	QTY	LENGTH	WT/PC (LBS)	TOTAL WT	TYPE	REMARKS
502	#16 (#5)	125	9'-5"	9.8	1228	BENT	EPOXY COATED
503	#16 (#5)	14	3'-6"	3.7	51	BENT	EPOXY COATED
504	#16 (#5)	14	3'-2"	3.3	46	BENT	EPOXY COATED
050802	#16 (#5)	125	8'-2"	8.5	1065	STR.	EPOXY COATED
056110	#16 (#5)	18	61'-10"	64.5	1161	STR.	EPOXY COATED
TOTAL:					3551		



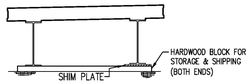
SECTION B

SCALE: 3/8" =1'-0"



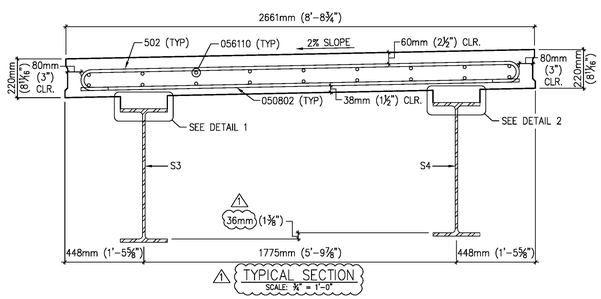
STORAGE AND SHIPPING ELEVATION

SCALE: 1/8" =1'-0"



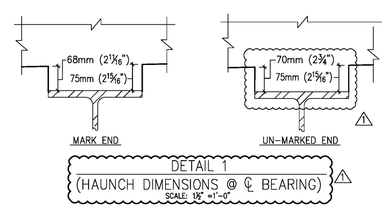
STORAGE AND SHIPPING SECTION

SCALE: 1/8" =1'-0"



TYPICAL SECTION

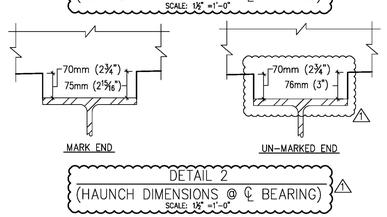
SCALE: 3/8" = 1'-0"



DETAIL 1

(HAUNCH DIMENSIONS @ ℄ BEARING)

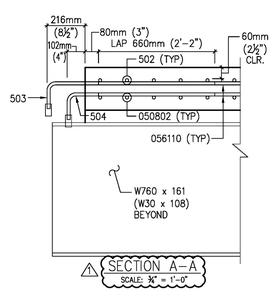
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DETAIL 2

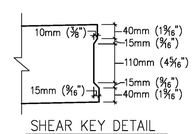
(HAUNCH DIMENSIONS @ ℄ BEARING)

SCALE: 1/2" =1'-0"



SECTION A-A

SCALE: 3/8" = 1'-0"



SHEAR KEY DETAIL

SCALE: 1/2" =1'-0"

MARK: BM-02	QTY: ONE	CONCRETE VOLUME:	15.47 cy
WT (CONC. & REBAR): 33.1 T		WT (STRUCT. STEEL):	6.9 T
TOTAL WT: 40.0 T			

EMBEDMENTS

MARK #	QTY	SUPPLIER	REMARKS
		--	

MATERIAL SPECIFICATION

TYPE	DESCRIPTION
CONCRETE	UNIT WEIGHT: 150 PCF
	REMOVAL FROM FORM: (4000 PSI) ⚠1
	28 DAY: 4000 PSI
	CORROSION INHIBITOR : 0.0 GALS/CY
REINFORCING STEEL	DEFORMED ASTM A775 EPOXY COATED REBAR

DRAWN	CHECKED	ENGINEERED	CHECKED	APPROVED
KLT 04/06/11	JJ 04/06/11	-- -/-/-	-- -/-/-	RLE 04/06/11

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J & R SLAW, INC.
438 RIVERVIEW ROAD
LEHIGHTON, PA. 18235
(610)852-2020

REVISIONS

⚠1 PER REVISE & RESUBMIT DRAWINGS RECIEVED ON 04/14/11
PER SLAW COMMENTS ON 04/21/11

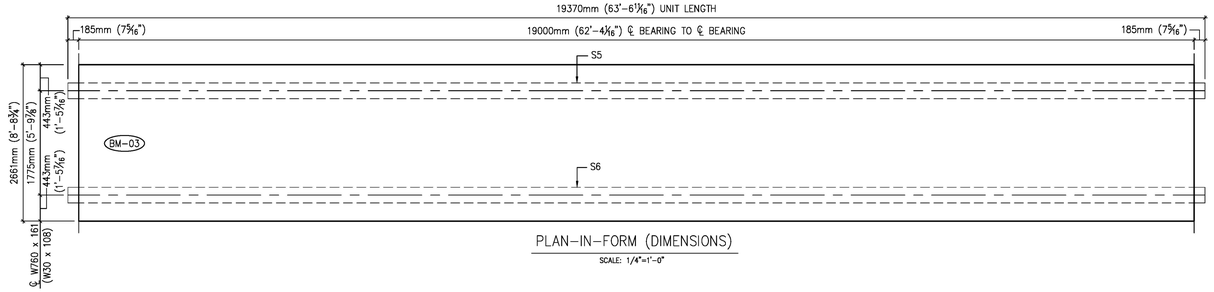
Received Date: 4/22/11
Checked By: Hiram Salls
Approval Type: Approved
Approved By: Chris Williams
Date: 4/26/11

STATE OF VERMONT
AGENCY OF TRANSPORTATION
SUPERSTRUCTURE REPLACEMENT
EAST MONTPELIER

BRIDGE NO.: 71
CONTRACT NO.: SLAW #773
CONTRACTOR: AL ST. ONGE CONTRACTING
FED. AID PROJECT NO.: BRF 037-2(8)

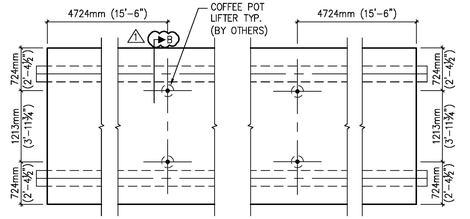
MARK NO.: BM-02 | SHEET 03 OF 06

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PLAN-IN-FORM (DIMENSIONS)

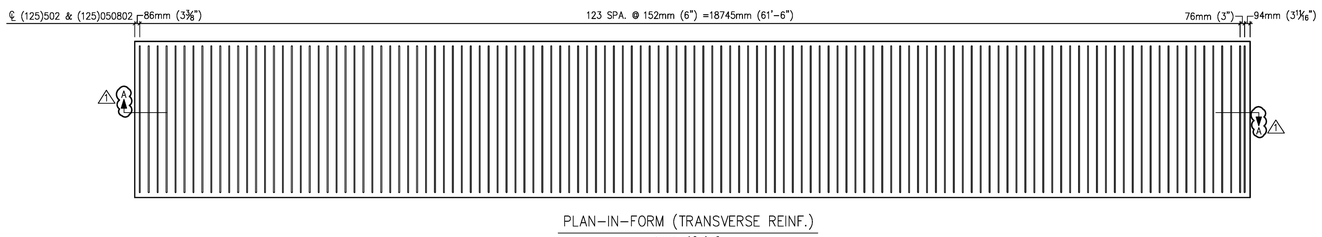
SCALE: 1/4"=1'-0"



LIFTING AND HANDLING PLAN VIEW

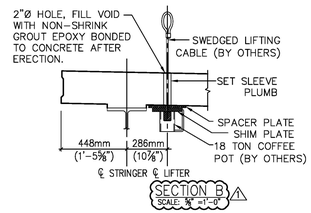
SCALE: 1/4" =1'-0"

BAR LIST							
MARK #	BAR SIZE	QTY	LENGTH	WT/PC (LBS)	TOTAL WT	TYPE	REMARKS
502	#16 (#5)	125	9'-5"	9.8	1228	BENT	EPOXY COATED
503	#16 (#5)	14	3'-6"	3.7	51	BENT	EPOXY COATED
504	#16 (#5)	14	3'-2"	3.3	46	BENT	EPOXY COATED
050802	#16 (#5)	125	8'-2"	8.5	1065	STR.	EPOXY COATED
056110	#16 (#5)	18	61'-10"	64.5	1161	STR.	EPOXY COATED
TOTAL:					3551		



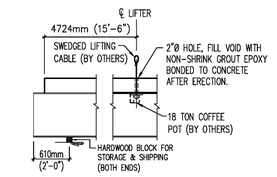
PLAN-IN-FORM (TRANSVERSE REINF.)

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



SECTION B

SCALE: 1/2" =1'-0"

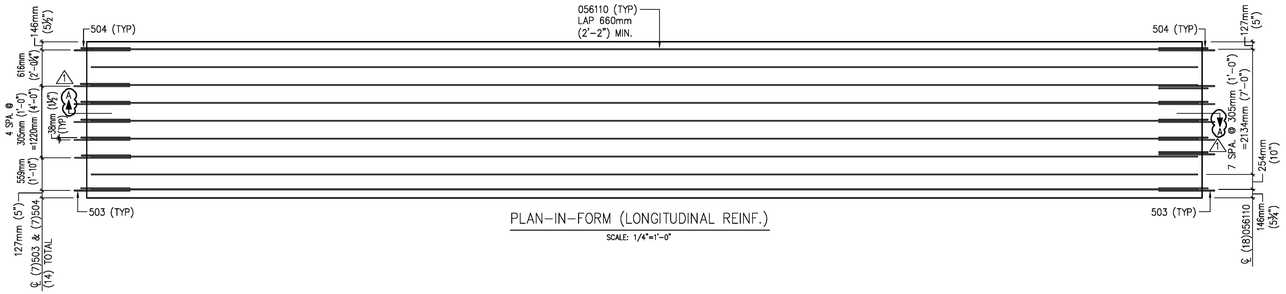


STORAGE AND SHIPPING ELEVATION

SCALE: 1/2" =1'-0"

STORAGE AND SHIPPING SECTION

SCALE: 1/2" =1'-0"



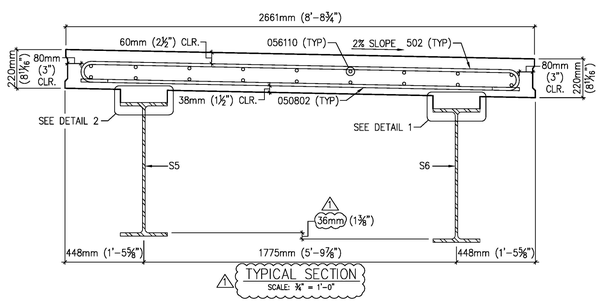
PLAN-IN-FORM (LONGITUDINAL REINF.)

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

MARK: BM-03	QTY: ONE	CONCRETE VOLUME:	15.47 cy
WT (CONC. & REBAR):	33.1 T	WT (STRUCT. STEEL):	6.9 T
TOTAL WT:	40.0 T		

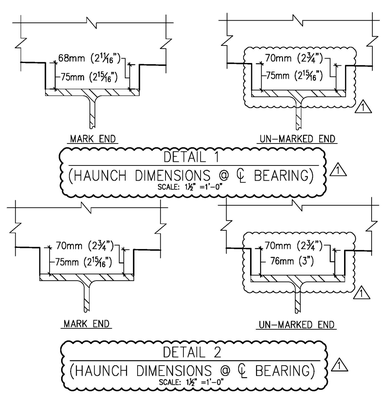
EMBEDMENTS			
MARK #	QTY	SUPPLIER	REMARKS
		--	

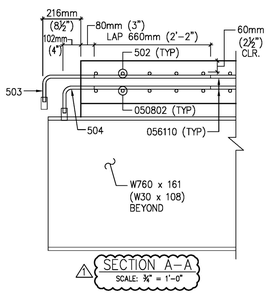
MATERIAL SPECIFICATION	
TYPE	DESCRIPTION
CONCRETE	UNIT WEIGHT: 150 PCF
	REMOVAL FROM FORM: (4000 PSI) ⚠
	28 DAY: 4000 PSI
	CORROSION INHIBITOR : 0.0 GALS/CY
REINFORCING STEEL	DEFORMED ASTM A775 EPOXY COATED REBAR



TYPICAL SECTION

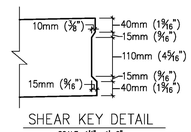
SCALE: 3/4" = 1'-0"





SECTION A-A

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



SHEAR KEY DETAIL

SCALE: 1 1/2" =1'-0"

DRAWN	CHECKED	ENGINEERED	CHECKED	APPROVED
KLT 04/06/11	JJ 04/06/11	-- -/-/-	-- -/-/-	RLE 04/06/11

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TAMPA, FL LRFD.COM

J & R SLAW, INC.
438 RIVERVIEW ROAD
LEHIGHTON, PA. 18235
(610)852-2020

REVISIONS
⚠ PER REVISE & RESUBMIT DRAWINGS RECIEVED ON 04/14/11 PER SLAW COMMENTS ON 04/21/11

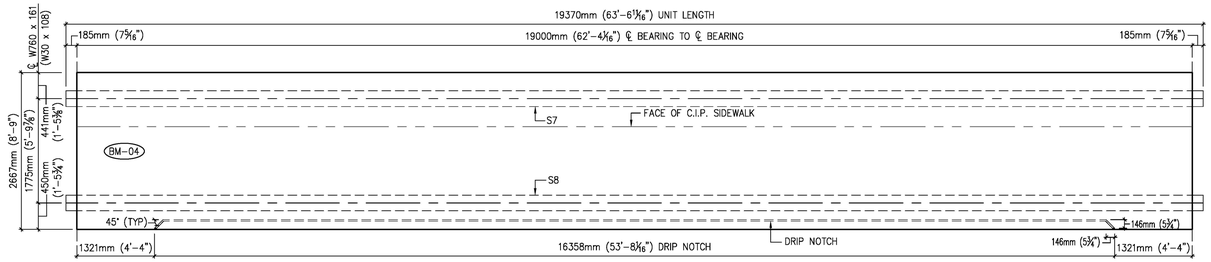
STATE OF VERMONT
AGENCY OF TRANSPORTATION
SUPERSTRUCTURE REPLACEMENT
EAST MONTPELIER

BRIDGE NO.: 71
CONTRACT NO.: SLAW #773
CONTRACTOR: AL ST. ONGE CONTRACTING
FED. AID PROJECT NO.: BRF 037-2(8)

MARK NO.: BM-03 | SHEET 04 OF 06

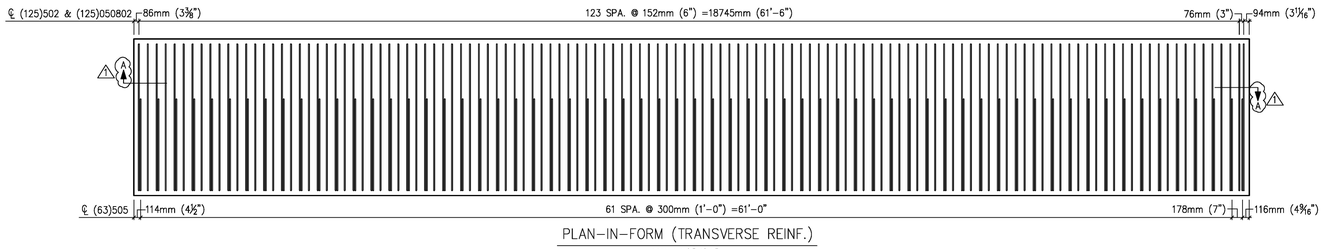
Received Date: 4/22/11
Checked By: Hiram Salls
Approval Type: Approved
Approved By: Chris Williams
Date: 4/26/11

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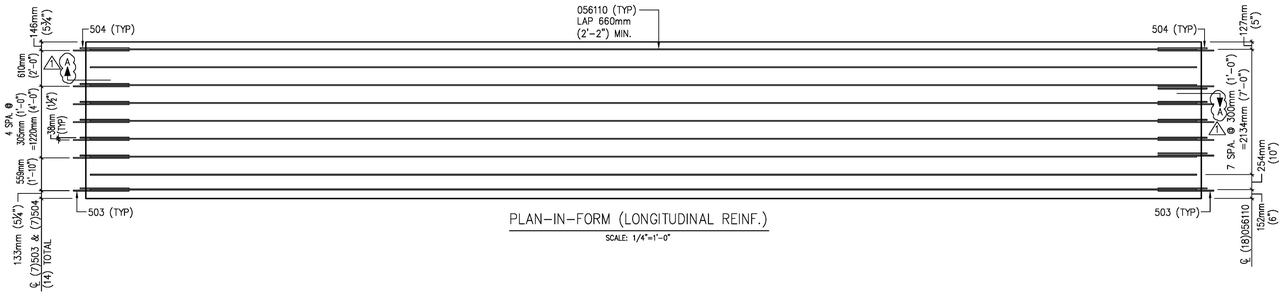
PLAN-IN-FORM (DIMENSIONS)

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



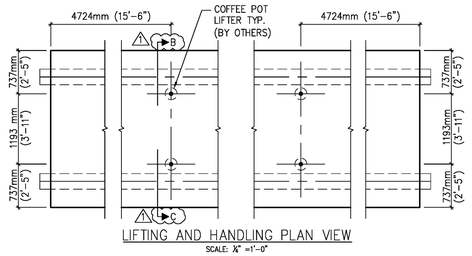
PLAN-IN-FORM (TRANSVERSE REINF.)

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



PLAN-IN-FORM (LONGITUDINAL REINF.)

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

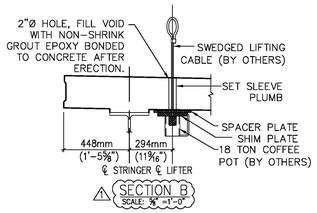


LIFTING AND HANDLING PLAN VIEW

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

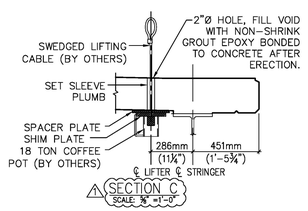
BAR LIST

MARK #	BAR SIZE	QTY	LENGTH	WT/PC (LBS)	TOTAL WT	TYPE	REMARKS
502	#16 (#5)	125	9'-5"	9.8	1228	BENT	EPOXY COATED
503	#16 (#5)	14	3'-6"	3.7	51	BENT	EPOXY COATED
504	#16 (#5)	14	3'-2"	3.3	46	BENT	EPOXY COATED
505	#16 (#5)	63	9'-7"	10.0	630	BENT	EPOXY COATED
050802	#16 (#5)	125	8'-2"	8.5	1065	STR.	EPOXY COATED
056110	#16 (#5)	18	61'-10"	64.5	1161	STR.	EPOXY COATED
TOTAL					4180		



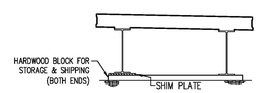
SECTION B

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



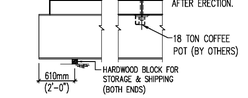
SECTION C

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



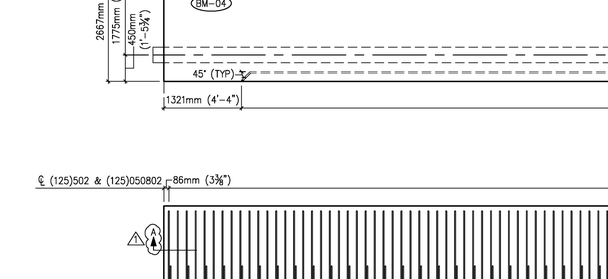
STORAGE AND SHIPPING SECTION

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



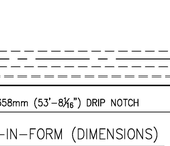
STORAGE AND SHIPPING ELEVATION

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



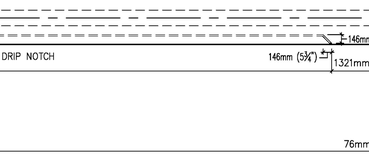
TYPICAL SECTION

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



DETAIL 3

SCALE: 3" =1'-0"



DETAIL 4

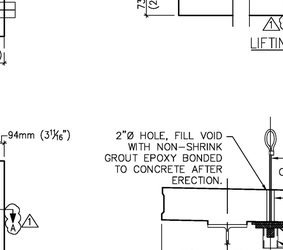
(HAUNCH DIMENSIONS @ ℄ BEARING)

SCALE: 1/2" =1'-0"

DETAIL 5

(HAUNCH DIMENSIONS @ ℄ BEARING)

SCALE: 1/2" =1'-0"



SECTION A-A

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

SHEAR KEY DETAIL

SCALE: 1/2" =1'-0"

MARK: BM-04	QTY: ONE	CONCRETE VOLUME: 15.63 cy
WT (CONC. & REBAR): 33.7 T		WT (STRUCT. STEEL): 6.9 T
TOTAL WT: 40.6 T		

EMBEDMENTS

MARK #	QTY	SUPPLIER	REMARKS
		--	

MATERIAL SPECIFICATION

TYPE	DESCRIPTION
CONCRETE	UNIT WEIGHT: 150 PCF
	REMOVAL FROM FORM: (4000 PSI) ⚠
	28 DAY: 4000 PSI
	CORROSION INHIBITOR : 0.0 GALS/CY
REINFORCING STEEL	DEFORMED ASTM A775 EPOXY COATED REBAR

DRAWN	CHECKED	ENGINEERED	CHECKED	APPROVED
KLT 04/06/11	JJ 04/06/11	-- -/-/-	-- -/-/-	RLE 04/06/11

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LEHIGHTON, PA. 18235
(610)852-2020

REVISIONS

⚠ PER REVISE & RESUBMIT DRAWINGS RECIEVED ON 04/14/11 PER SLAW COMMENTS ON 04/21/11

STATE OF VERMONT
AGENCY OF TRANSPORTATION
SUPERSTRUCTURE REPLACEMENT
EAST MONTPELIER

BRIDGE NO.: 71
CONTRACT NO.: SLAW #773
CONTRACTOR: AL ST. ONGE CONTRACTING
FED. AID PROJECT NO.: BRF 037-2(8)

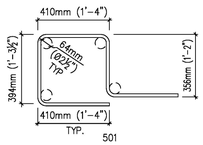
MARK NO.: BM-04 | SHEET 05 OF 06

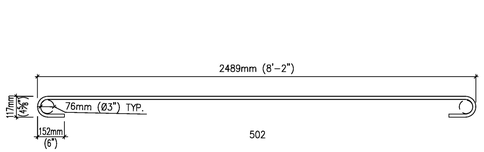
Received Date: 4/22/11
Checked By: Hiram Salls
Approval Type: Approved As Noted
Approved By: Chris Williams
Date: 4/26/11

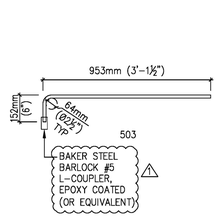
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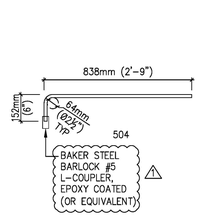
BAR LIST

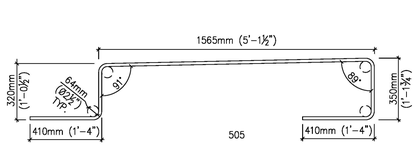
MARK #	BAR SIZE	QTY	LENGTH (METRIC)	LENGTH	WT/PC (LBS)	REMARKS
501	#5/#16	63	1854mm	6'-1"	6.3	EPOXY COATED
502	#5/#16	500	2870mm	9'-5"	9.8	EPOXY COATED
503	#5/#16	56	1067mm	3'-6"	3.7	EPOXY COATED
504	#5/#16	56	965mm	3'-2"	3.3	EPOXY COATED
505	#5/#16	63	2921mm	9'-7"	10.0	EPOXY COATED
050802	#5/#16	500	2489mm	8'-2"	8.5	EPOXY COATED
056110	#5/#16	72	18847mm	61'-10"	64.5	EPOXY COATED
052209	#5/#16	12	6920mm	22'-9"	23.7	EPOXY COATED











DRAWN	CHECKED	ENGINEERED	CHECKED	APPROVED
KLT 04/06/11	JJ 04/06/11	-- -/-/-	-- -/-/-	RLE 04/06/11

Eriksson technologies 813.989.3317 TAMPA, FL LRFD.COM

J & R SLAW, INC.
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LEHIGHTON, PA. 18235
(610)852-2020

REVISIONS

1 PER REVISE & RESUBMIT DRAWINGS RECIEVED ON 04/14/11 & PER SLAW EMAIL ON 04/18/11

Received Date: 4/22/11
Checked By: Hiram Salls
Approval Type: Approved
Approved By: Chris Williams
Date: 4/26/11

STATE OF VERMONT
AGENCY OF TRANSPORTATION

SUPERSTRUCTURE REPLACEMENT
EAST MONTPELIER

BRIDGE NO.: 71
CONTRACT NO.: SLAW #773
CONTRACTOR: AL ST. ONGE CONTRACTING
FED. AID PROJECT NO.: BRF 037-2(8)

BAR DETAILS | SHEET 06 OF 06

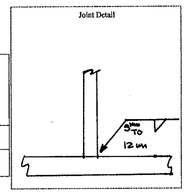
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AUCIELLO IRON WORKS, INC. 560 Main Street Hudson, MA 01749 Phone: 978-568-8382 Fax: 978-562-9382 Aucielloiron.com	Aluminum Production Joint Welding Procedure Specification Procedure No:2011-01 Date Issued:06/06/2011 Revision No: ____ Rev. Date: ____ D1.2-2003

1. Contractor (Fabricator)Auciello Iron Works Prepared by: Philippe Lefebvre QC
2. Referenced PQR No(s). 10 , ____, ____, ____
3. Base Metal M Num. & Alloy23Temper6061-T6
4. Base Metal M Num. & Alloy23Temper 6061-T6
5. Base Metal Thickness (es) 3 mm To 12 mm
6. Welding process(es): GMAW X GTAW____ PAW-VP____
7. Manual ☐ , Machine ☐ , Semiautomatic ☒
8. Position(s) of welding 2F
9. Filler metal F number23
10. Filler metal classification and brand nameALCOTEC/HARRIS ER 5356
11. Shielding gas 75%HELIUM 25% ARGON Flow rate (cfh)
12. Single or multiple pass MULTIPLE
13. Polarity DCEP
14. Welding progression FOREHAND
15. Stringer X Weave ____ Backing Type ____
16. Root treatment ____
17. Postheat treatment ____
    Original Temper ____, Final Temper ____Temperature ____
    Time____ Quench ____
18. AWS A5.12 Tungsten Electrode Class ____
19. Initial Cleaning: Oxide SS WIRE BRUSH Oil & Dirt SOLVENT
20. Interpass Cleaning: Oxide SS WIRE BRUSH

Weld Process	Weld size	Pass No(s).	Electrode Ext.	Electrode Size	Welding Process Variables		Travel Speed
					AMPS/WPS *	VOLTS	
GMAW	3 TO 12	ALL	1/2"	.035	116-174	21-29	18.26

Joint Detail



*Wire feed speed may be used along with amperage (See lude chart)

Preparer's Signature: _____

Additional Notes:

Preheat and Interpass Temperature Chart		
Minimum preheat (°F)	Max Preheat & Interpass (°F)	Maximum Heat Exposure Time
50	150	250

VTRANS
RECEIVED
OK'D BY_____ OK'D BY JOC
JUN 06 2011
RESUBMIT_____ APPROVED_____
BY DATE 06/13/11

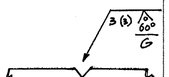
AUCIELLO IRON WORKS, INC. 560 Main Street Hudson, MA 01749 Phone: 978-568-8382 Fax: 978-562-9982 Aucielloiron.com	**Aluminum Production Joint Welding Procedure Specification** **Procedure No:2011-02 Date Issued: 06/06/2011** **Revision No: ____ Rev. Date: ____ D1.2-2003**

1. Contractor (Fabricator)Auciello Iron Works Prepared by: Philippe Lefebvre QC
2. Referenced PQR No(s). 10 , ____, ____, ____
3. Base Metal M Num. & Alloy23Temper6061-T6
4. Base Metal M Num. & Alloy23Temper 6061-T6
5. Base Metal Thickness (es) 3 mm To 12 mm
6. Welding process(es): GMAW X GTAW____ PAW-VP____
7. Manual ☐ , Machine ☐ , Semiautomatic ☒
8. Position(s) of welding 1G
9. Filler metal F number23
10. Filler metal classification and brand nameALCOTEC/HARRIS ER 5356
11. Shielding gas 75%HELIUM 25% ARGON Flow rate (cfh)
12. Single or multiple pass MULTIPLE
13. Polarity DCEP
14. Welding progression FOREHAND
15. Stringer X Weave ____ Backing Type ____
16. Root treatment ____
17. Postheat treatment ____
    Original Temper ____ Final Temper ____Temperature ____
    Time____ Quench ____
18. AWS A5.12 Tungsten Electrode Class ____
19. Initial Cleaning: Oxide SS WIRE BRUSH Oil & Dirt SOLVENT
20. Interpass Cleaning: Oxide SS WIRE BRUSH

Weld Process	Weld size	Pass No(s).	Electrode Ext	Electrode Size	Welding Process Variables		Travel Speed
					AMPS/WFS *	VOLTS	
GMAW	2	ALL	1/2"	.035	116.174	21-29	18.26

*Wire feed speed may be used along with amperage (include chart)

Joint Detail



Preparer's Signature:_____

Additional Notes:

Preheat and Interpass Temperature Chart		
Minimum preheat (°F)	Max Preheat & Interpass (°F)	Maximum Heat Exposure Time
50	150	250

VFRANC
RECEIVED
JUN 06 2011

OK'D BY_____ OK'D BY JWC

RESUBMIT_____ APPROVED ✓

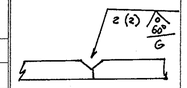
BY DATE 06/13/11

AUCIELLO IRON WORKS, INC. 560 Main Street Hudson, MA 01749 Phone: 978-568-8382 Fax: 978-562-9382 Aucielloiron.com	**Aluminum Production Joint Welding Procedure Specification** **Procedure No:2011-01 Date Issued: 06/06/2011** **Revision No: ____ Rev. Date: ____ D1.2-2003**

1. Contractor (Fabricator)Auciello Iron Works Prepared by: Philippe Lefebvre QC
2. Referenced PQR No(s). 10 _____ _____
3. Base Metal M Num. & Alloy23Temper6061-T6
4. Base Metal M Num. & Alloy23Temper 6061-T6
5. Base Metal Thickness (es) 3 mm To 12 mm
6. Welding process(es): GMAW X GTAW____ PAW-VP____
7. Manual ☐ , Machine ☐ , Semiautomatic ☒
8. Position(s) of welding 1G
9. Filler metal F number23
10. Filler metal classification and brand nameALCOTEC/HARRIS ER 5356
11. Shielding gas 75%HELIUM 25% ARGON Flow rate (cfh)
12. Single or multiple pass MULTIPLE
13. Polarity DCEP
14. Welding progression FOREHAND
15. Stringer X Weave _____ Backing Type _____
16. Root treatment _____
17. Postheat treatment _____
    Original Temper _____ Final Temper _____Temperature _____
    Time_____ Quench _____
18. AWS A5.12 Tungsten Electrode Class _____
19. Initial Cleaning: Oxide SS WIRE BRUSH Oil & Dirt SOLVENT
20. Interpass Cleaning: Oxide SS WIRE BRUSH

Weld Process	Weld size	Pass No(s).	Electrode Ext.	Electrode Size	Welding Process Variables		Travel Speed
					AMPS/WFS *	VOLTS	
GMAW	3	ALL	½"	.035	116-174	21-29	13-26

Joint Detail



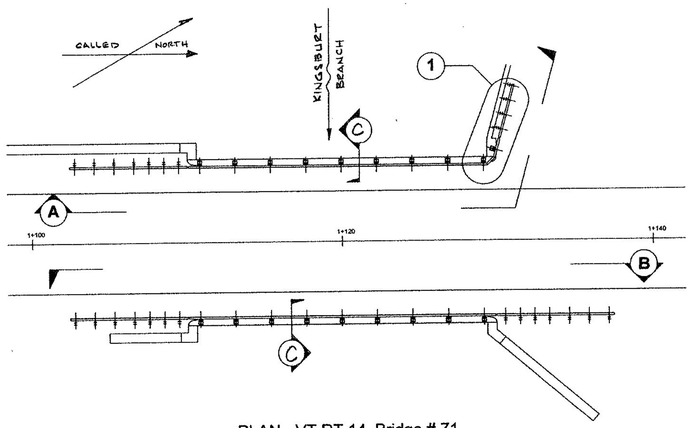
*Wire feed speed may be used along with amperage (include chart)

Preparer's Signature:_____

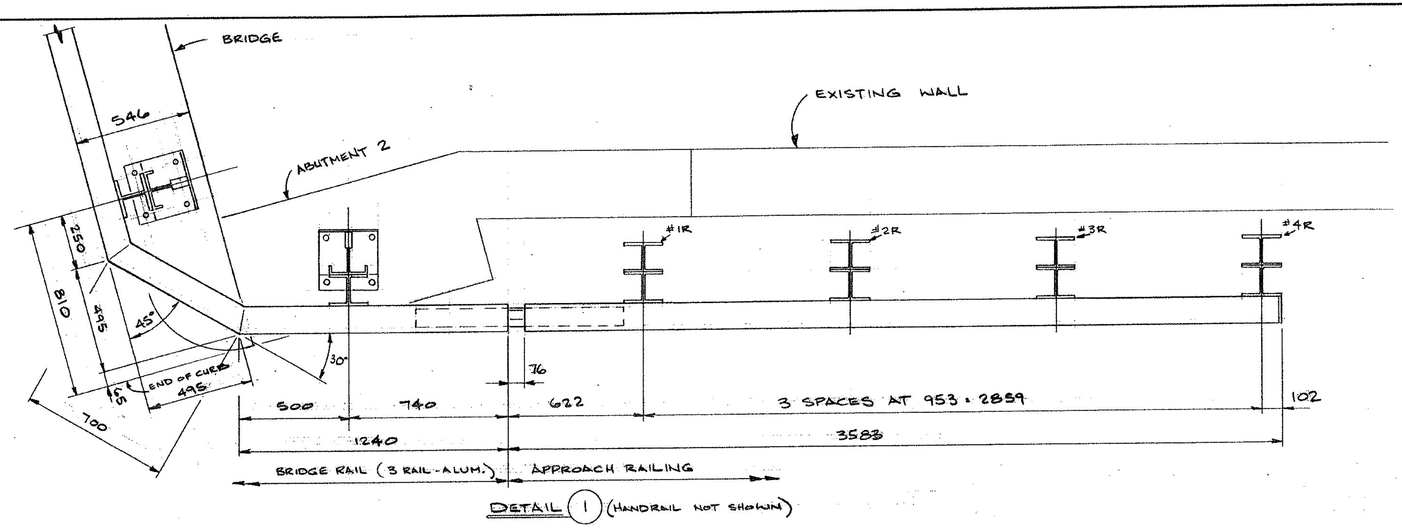
Additional Notes:

Preheat and Interpass Temperature Chart		
Minimum preheat (°F)	Max Preheat & Interpass (°F)	Maximum Heat Exposure Time
50	150	250

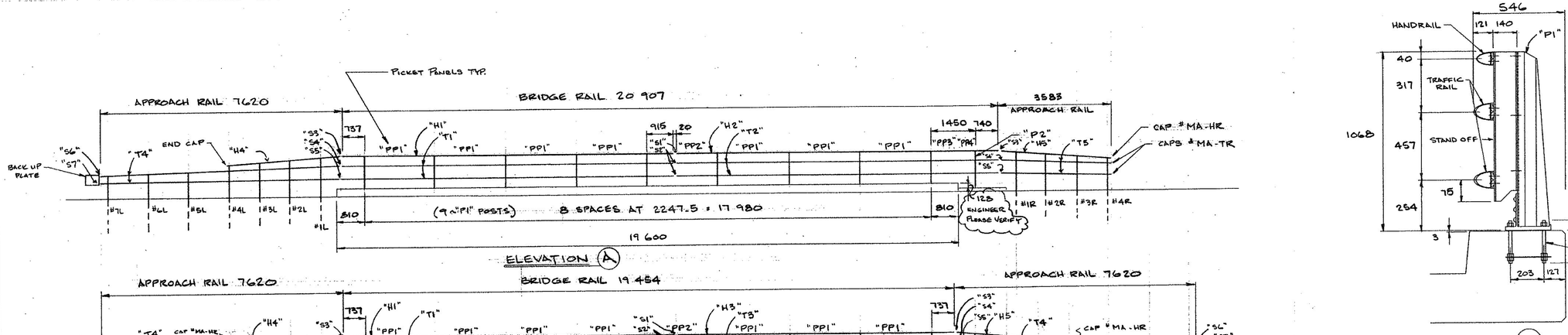
VTRANS
RECEIVED
OK'D BY_____OK'D BY SWC
JUN 06 2011
RESUBMIT_____APPROVED_____
BY DATE 06/13/11

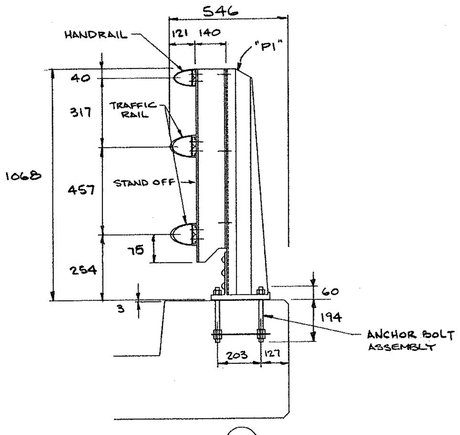


PLAN - VT RT 14, Bridge # 71



DETAIL (1) (HANDRAIL NOT SHOWN)





SECTION (C)

DIMENSIONS ARE IN MILLIMETERS

Recieved Date: 6/1/11
Checked By: Hiram Salls
Reviewed By: Rob Young
Approval Type: Approved
Approved By: Chris Williams
Date: 6/13/11

ISSUE	DATE	DESCRIPTION	BY
1	5-25-11	FOR APPROVAL	

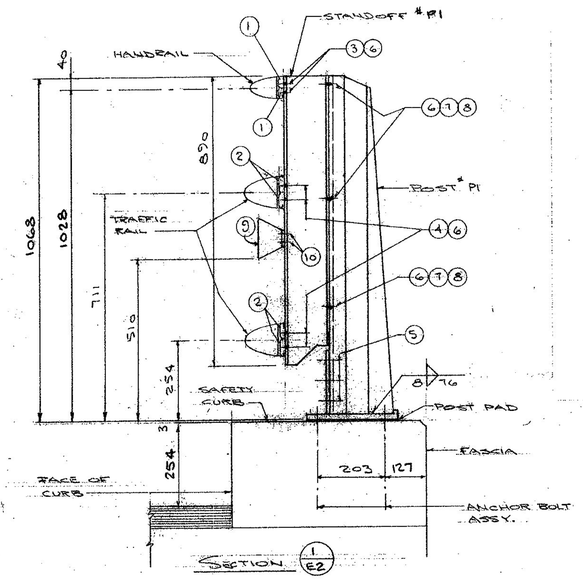
AUCIELLO IRON WORKS INC
560 MAIN ST. HUDSON, MA (978) 568-8382

EAST MONTPELIER, VT
VT RT 14, BRIDGE #17
BRF 037-2(8)

ALUM. BRIDGE AND APPROACH RAIL

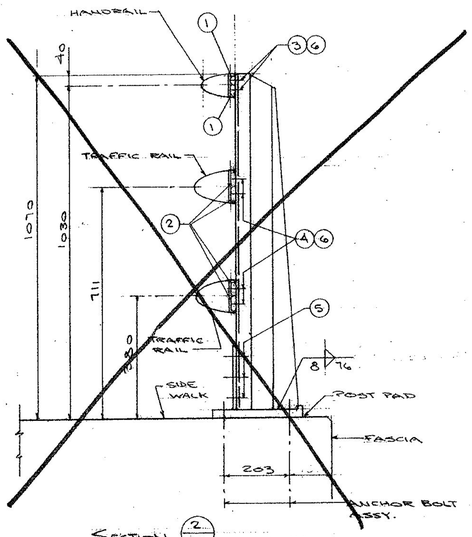
SURFACE PREP: NONE	FINISH: MILL
FOR: E.R. LAFAYETTE, INC.	
DR: [illegible] 5-12-2011	DWG. NO. BR-3006
CHK: [illegible] 5-25-11	
JOB NO. A5170.44-1001	SHEET 1-E1 OF

EL MASTERPIECE INC. 108918



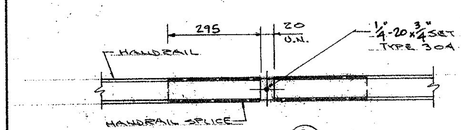
SECTION 1/E2

1. #4 CLAMP BAR
2. #1 CLAMP BAR
3. 1/2"-13 x 3/4" HEX HEAD CAP SCREW (A193, GRADE B8)
4. 1/2"-13 x 1" HEX HEAD CAP SCREW (A193, GRADE B8)
5. 7/16" DIA. ALUM. RIVET (6061-T6), BUTTON HEAD, CONE POINT COLD DRIVEN
6. ALUM. WASHER 1 1/16"OD x 9/16" ID x 3/32"THK (ALCAD 2024-T4)
7. 1/2"-13 x 1/2" HEX HEAD CAP SCREW (304 SS)
8. 1/2"-13 HEX NUT (304 SS)
9. REFLECTORIZED DELINIATOR (WHITE) PER SPECS. LOCATED EVERY 9M, OR CLOSEST POST. TYPICAL AT BRIDGE RAIL AND APPROACH RAIL. (BY OTHERS)
10. #8 x 3/4" SS SELF-TAPPING SCREW. POSTS DRILLED IN FIELD. (FURNISHED AND INSTALLED BY OTHERS)



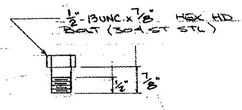
SECTION 2/E1

NOT USED

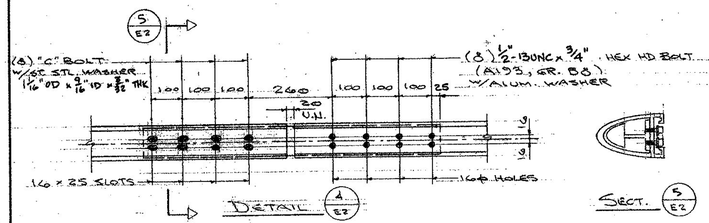


DETAIL 3/E2

OUTBOARD VIEW



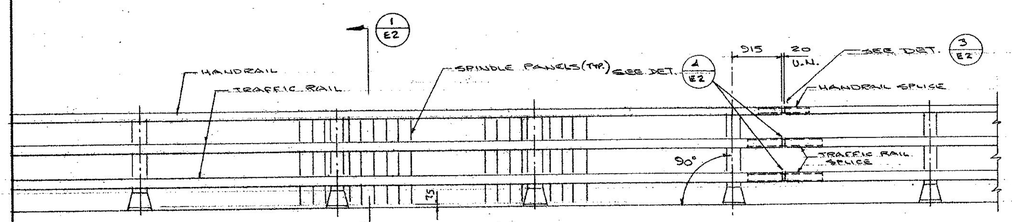
"C" BOLT



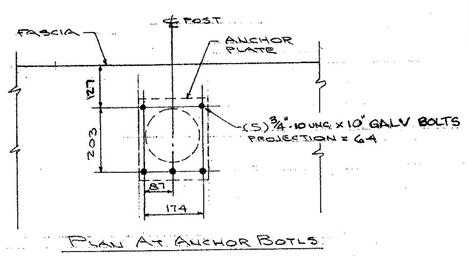
DETAIL 4/E2

OUTBOARD VIEW

SECT. 5/E2



TYP. DETAILS AT BRIDGE RAILING



PLAN AT ANCHOR BOLTS

			Job No. AB17044		
HANDRAIL			TRAFFIC RAIL		
QTY.	MK.	LENGTH	QTY.	MK.	LENGTH
2	H1	10 642	4	T1	10 642
1	H2	10 219 (DL)	2	T2	10 245 (DL)
1	H3	8792	2	T3	8792
2	H4	3556	6	T4	7587
2	H5	3556	2	T5	3556
4	MA-HR	END CAPS	2	MA-TR	END CAPS

STANDOFFS			POSTS		
19	P1	"BRIDGE" POSTS	18	P1	"BRIDGE" POSTS
2	1R	"APPROACH" POSTS	1	P2	"
2	2R	"	2	1R	"APPROACH" POSTS
2	3R	"	2	2R	"
2	4R	"	2	3R	"
1	5R	"	2	4R	"
1	6R	"	1	5R	"
2	7R	"	1	6R	"
2	1L	"	1	7R	"
2	2L	"	2	1L	"
2	3L	"	2	2L	"
2	4L	"	2	3L	"
2	5L	"	2	4L	"
2	6L	"	2	5L	"
2	7L	"	2	6L	"
FASTENERS			2	7L	"
176	#1 CLAMP BARS		PICKET PANELS		
70	#4 CLAMP BARS		14	PP1	2028 x 964
150	"C" BOLTS		2	PP2	2028 x 964
150	1/2" S.S. WASHER		1	PP3	582 x 964
184	1/2"-13 x 3/4" HEX HEAD CAP SCREW (SS)		1	PP4	228 x 1218
356	1/2"-13 x 1" HEX HEAD CAP SCREW (SS)		2	S1	HANDRAIL SPLICE
250	1/2"-13 x 1 1/2" HEX HEAD CAP SCREW (SS)		4	S3	"
250	1/2"-13 HEX NUTS S.S.		4	S2	TRAFFIC RAIL SPL.
790	1/2" ALUM. FLAT WASHER		4	S4	"
19	ANCHOR BOLT ASSEM.		4	S5	"
100	3/4"-10 HDG HVY HEX NUT		3	S6	"
100	3/4" HDG STR. FLAT WASH.		3	S7	"
168	1/4" x 3/8" ST. STL. SOCKET SET SCREWS		19	POST PADS	

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ALL FASTENERS ARE IN ENGLISH UNITS

DIM'S. ARE GIVEN IN MILIMETERS

ISSUE	DATE	DESCRIPTION	BY
1	5-25-11	FOR APPROVAL	

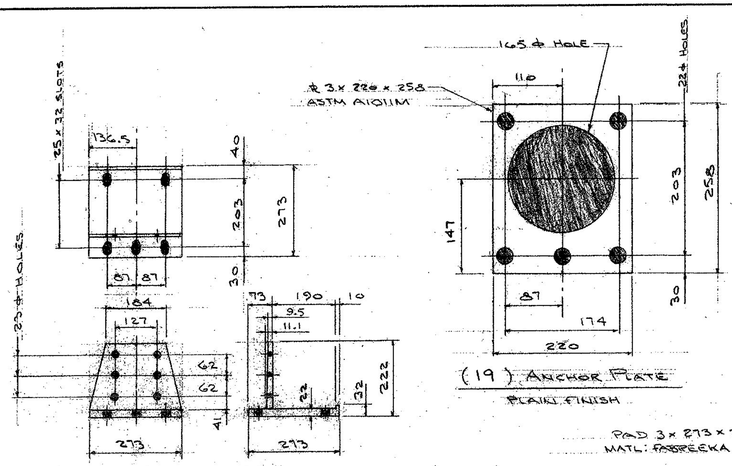
AUCIELLO IRON WORKS INC
560 MAIN ST. HUDSON, MA. (978) 568-8382

VT. AGENCY OF TRANSPORTATION
EAST MONTPELIER, VT
VT RT 14, BRIDGE # 17
BRF 037-2(8)

ALUM. BRIDGE RAILING

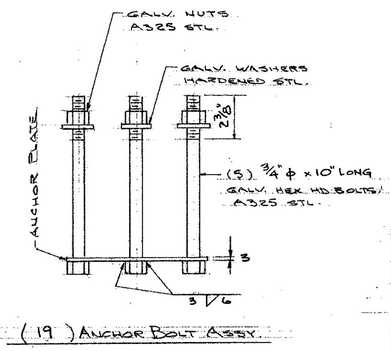
SURFACE PREP: NONE
FINISH: MILL
FOR: F.R. LAFAYETTE, INC.
DR: 5-17-2011
CHK: 5-25-11
JOB NO. AB17044-1001
DWG. NO. BR-3006
SHEET 1-E2 OF

EL MARSHACK INC. 10/8/18

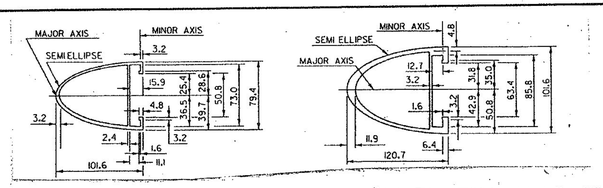


(19) POST BASE
ALLOY 6061-T6

(19) ANCHOR PLATE
PLAIN FINISH

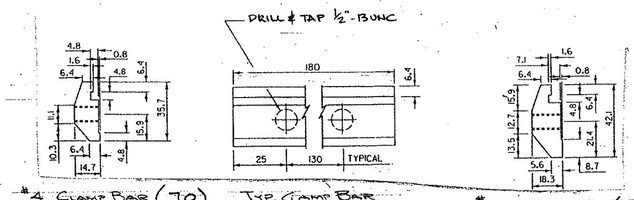


(19) ANCHOR BOLT ASSY.

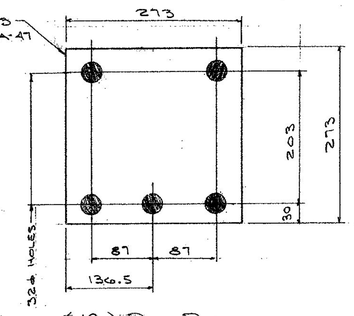


HANDRAIL EXTRUSION
ALLOY 6061-T6

TRAFFIC RAIL EXTRUSION
ALLOY 6061-T6

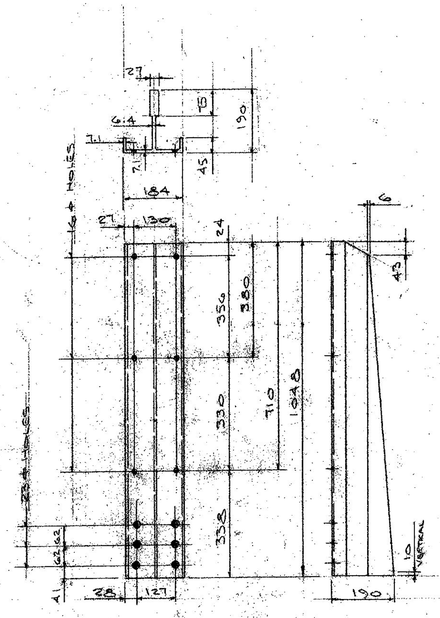


#4 CLAMP BAR (70) TYP. CLAMP BAR DETAIL #1 CLAMP BAR (176)
ALLOY 6061-T6

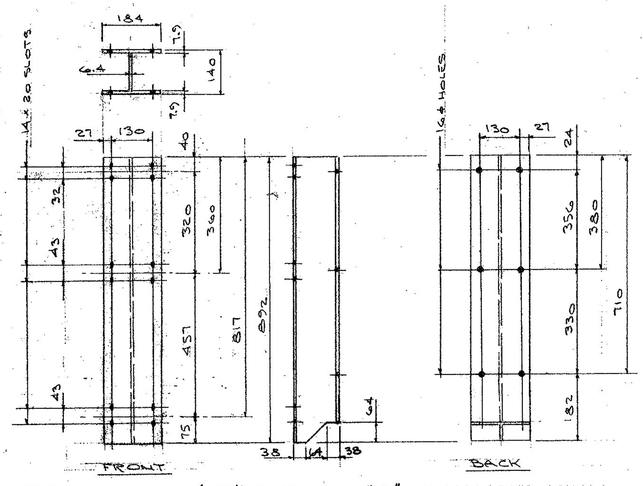


POST ASSEMBLY

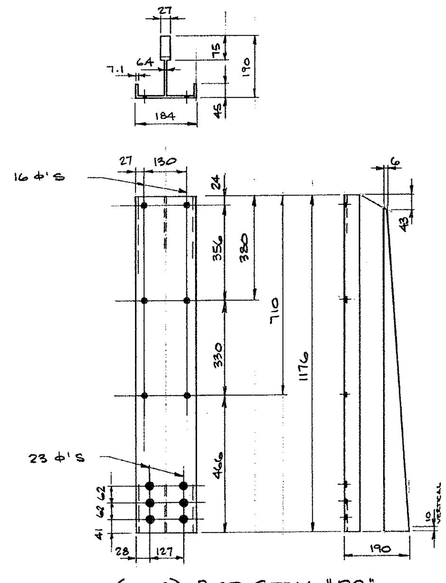
(19) POST PAD



(1B) POST STEM "P1"
ALLOY 6061-T6



(19) STANDOFF "P1"
ALLOY 6061-T6



(ONE) POST STEM "P2"
ALLOY 6061-T6

Received Date: 6/1/11
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Approval Type: Approved
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Date: 6/13/11

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ISSUE	DATE	DESCRIPTION	BY
1	5-25-11	FOR APPROVAL	

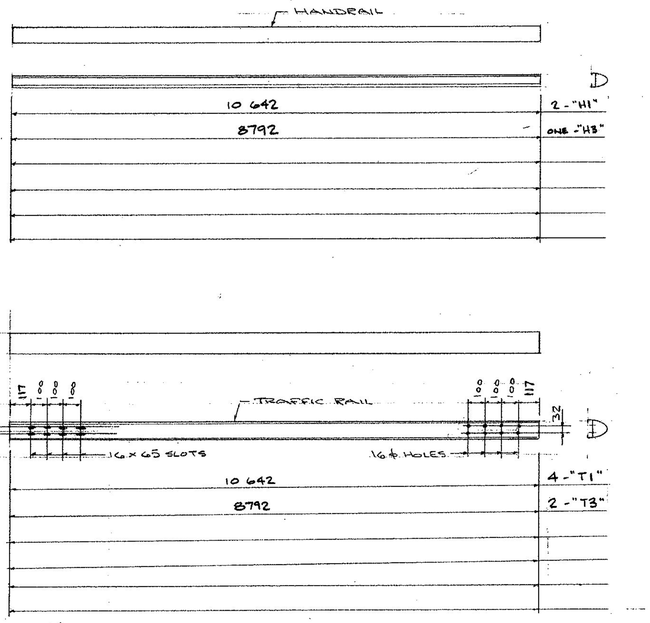
AUCIELLO IRON WORKS INC
560 MAIN ST. HUDSON, MA (978) 568-8382

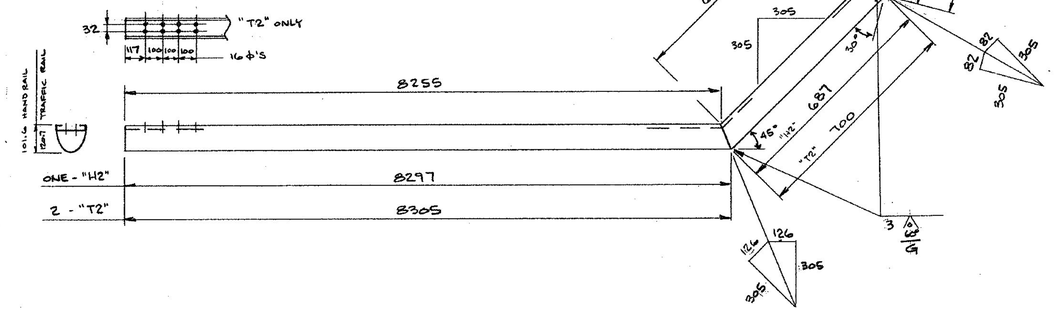
VT. AGENCY OF TRANSPORTATION
EAST MONTPELIER, VT
VT RT 14, BRIDGE # 17
BRF 037-2(8)

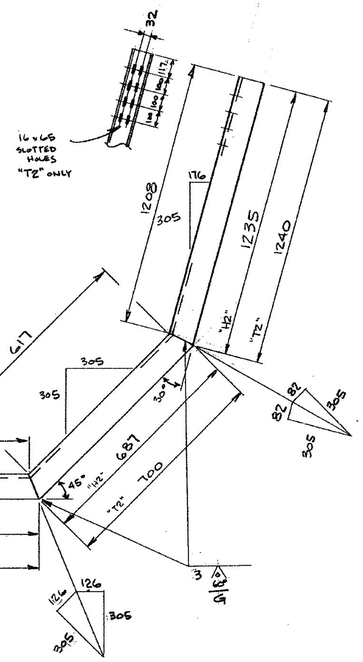
ALUM. BRIDGE RAILING

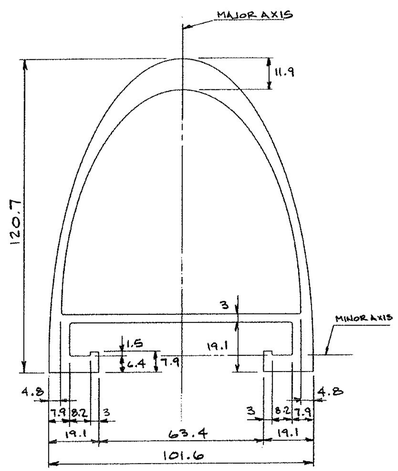
SURFACE PREP: NONE	FINISH: MILL
FOR: F.R. LAFAYETTE, INC	
DR. 3-17-2011	DWG. NO.
CHK. 5-25-11	BR-3006
JOB NO. AB17044-1001	SHEET 1-F1 OF

E.L. MACKIEWICZ INC. 10/2010

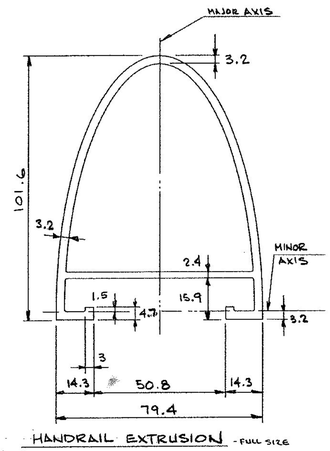




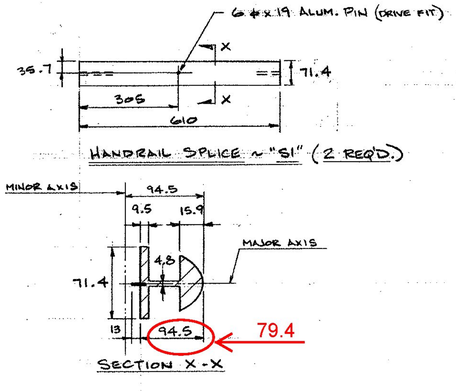


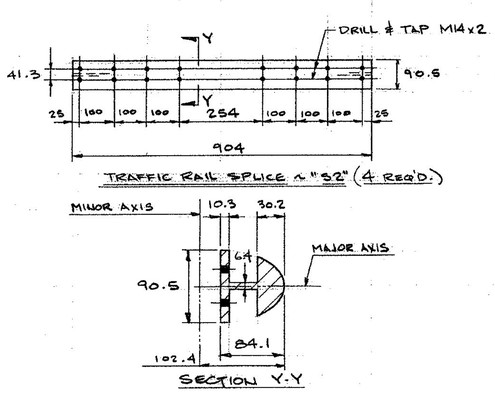


TRAFFIC RAIL EXTRUSION
FULL SIZE



HANDRAIL EXTRUSION - FULL SIZE





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Approval Type: Approved As Noted
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Date: 6/13/11

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AUCIELLO IRON WORKS INC
560 MAIN ST. HUDSON, MA (978) 568-8382

V.S. AGENCY OF TRANSPORTATION
EAST MONTPELIER, VT
VT RT 14, BRIDGE # 17
BRF 037-2(8)

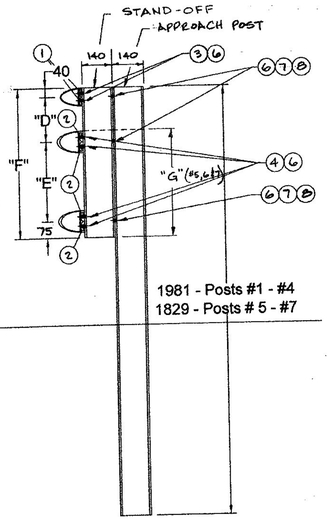
AL. BRIDGE & APPROACH RAILING

SURFACE PREP:	FINISH:
NONE	MILL

FOR: F.R. LAFAYETTE, INC
DR: 3/14/2011
CHK: 5-25-11
DWG. NO. B2-3006
JOB NO. AB17044-1001
SHEET 1-F2 OF

ISSUE	DATE	DESCRIPTION	BY
1	5-25-11	FOR APPROVAL	

AL. MASSFACE INC. - 10003

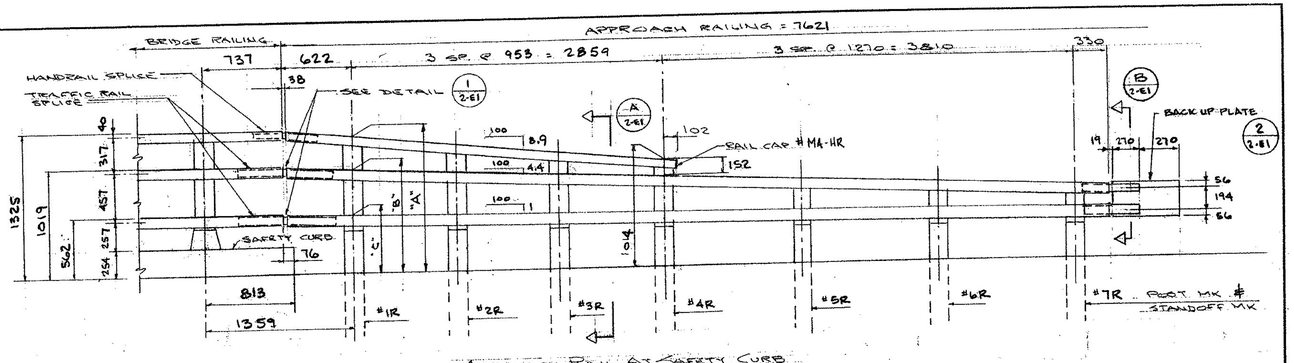


1981 - Posts #1 - #4
1829 - Posts # 5 - #7

Section Thru Approach Rail (A, 2-E1)

(1) #4 CLAMP BAR
(2) #1 CLAMP BAR
(3) ½"-13 UNC x ¾" HEX HEAD CAP SCREW (A193, GRADE B8)
(4) ½"-13UNC x 1" HEX HEAD CAP SCREW (A193, GRADE B8)
(5) ~~⅞" DIA. ALUM. RIVET (6061-T6), BUTTON HEAD, CONE POINT COLD DRIVEN~~
(6) ALUM. WASHER 1 1⁄16" OD x 9⁄16" ID x 3⁄32" THK (ALCAD 2024-T4)
(7) ½"-13UNC x 1 ½" HEX HEAD CAP SCREW (304 SS)
(8) ½"-13UNC HEX NUT (304 SS)
(9) ~~REFLECTORIZED DELINIATOR (WHITE) PER SPECS. LOCATED EVERY 9M, OR CLOSEST POST. TYPICAL AT BRIDGE RAIL AND APPROACH RAIL.~~
(10) ~~#8 x ¾" SS SELF-TAPPING SCREW. POSTS DRILLED IN FIELD.~~

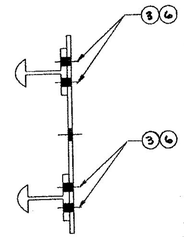
ALUMINUM APPROACH RAILING AT SAFETY CURB				
POST NO.	STAND-OFF DIMENSIONS			
	"D"	"E"	"F"	"G"
1	291	435	841	-
2	248	403	766	-
3	206	370	691	-
4	164	337	616	-
5	-	294	-	420
6	-	249	-	375
7	-	205	-	331



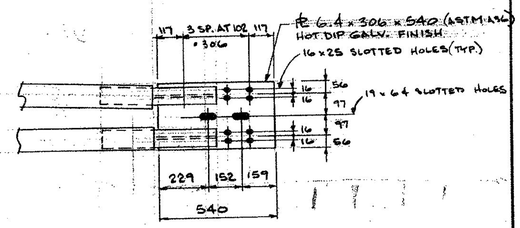
APPROACH RAIL AT SAFETY CURB

R.H. AS SHOWN (SW)
L.H. OPP. HAND (NW & SE)

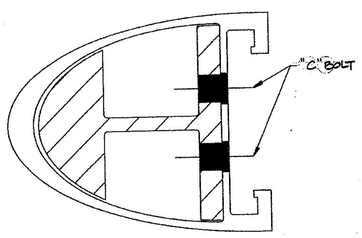
ALUMINUM APPROACH RAILING AT SAFETY CURB			
POST NO.	RAILING HEIGHTS		
	"A"	"B"	"C"
1	1267	989	552
2	1183	946	543
3	1099	903	533
4	1014	862	525
5	-	805	513
6	-	749	500
7	-	692	487



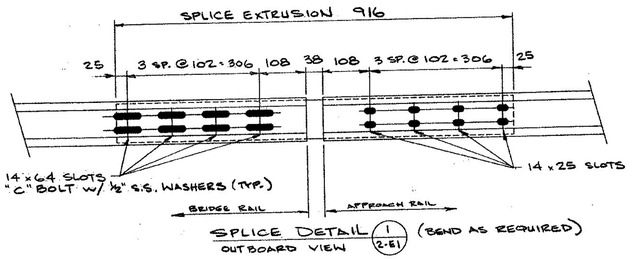
SECTION (B, 2-E1)



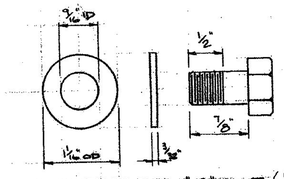
BACK UP PLATE DETAIL (2, 2-E1)



SECTION THRU SPLICE



SPLICE DETAIL (1, 2-E1) OUTBOARD VIEW (BEND AS REQUIRED)



S.S. WASHER

"C" BOLT (½"-13 UNC x ⅞" LG. 304 S.S.) HEX HEAD BOLT

Received Date: 6/1/11
Checked By: Hiram Salls
Reviewed By: Rob Young
Approval Type: Approved
Approval By: Chris Williams
Date: 6/13/11

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DIM'S ARE GIVEN IN MILLIMETERS

ISSUE	DATE	DESCRIPTION	BY
1	5-25-11	FOR APPROVAL	

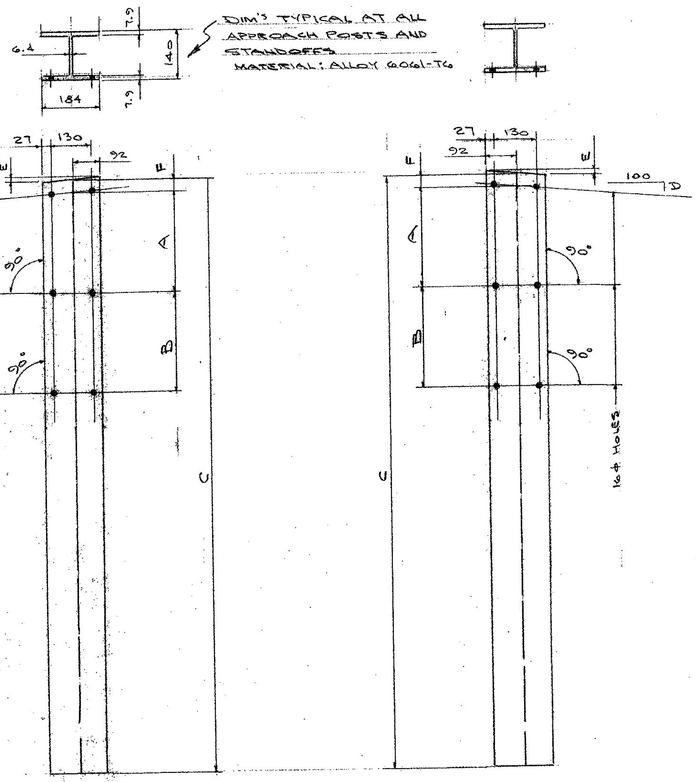
AUCIELLO IRON WORKS INC
560 MAIN ST. HUDSON, MA (978) 568-8382

VT. AGENCY OF TRANSPORTATION
EAST MONTPELIER, VT
VT. RT. 14, BRIDGE #17
BRF 037-2(8)

AL. APPROACH RAIL AT SAFTY CURB

SURFACE PREP: NONE	FINISH: MILL
FOR: F.R. LAFAYETTE, INC.	
DR: 3-22-2011 CHK: 5-25-11	DWG. NO. BR-3006
JOB NO.: AB17044-1002	SHEET 2-E1 OF

B.L. MANUFACTURING INC. 100615

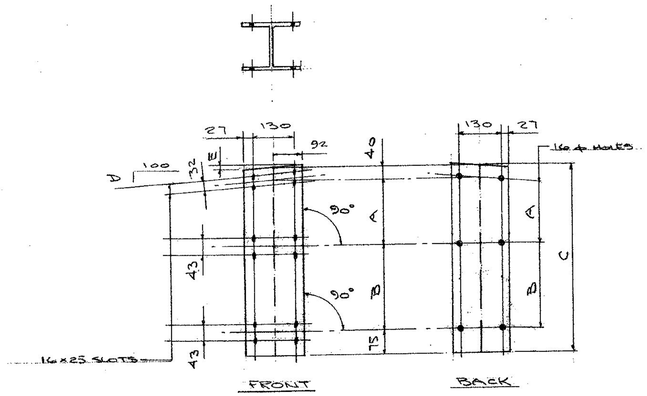


APPROACH POSTS

QUAN	MK	A	B	C	D	E	F
2	1L	291	435	1981	8.9	16	40
2	2L	248	403	1981	8.9	16	40
2	3L	206	370	1981	8.9	16	40
2	4L	167	337	1981	8.9	16	40
2	5L	—	294	1829	4.4	8	51
2	6L	—	249	1829	4.4	8	51
2	7L	—	205	1829	4.4	8	51

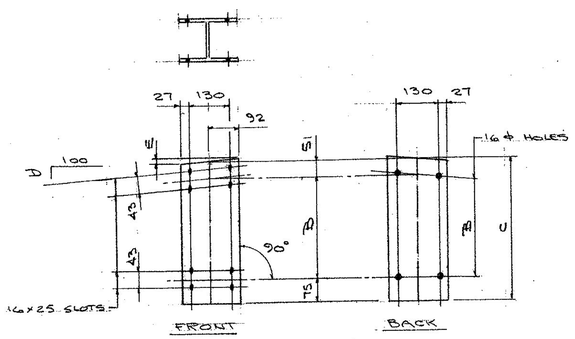
APPROACH POSTS

QUAN	MK	A	B	C	D	E	F
2	1R	291	435	1981	8.9	16	40
2	2R	248	403	1981	8.9	16	40
2	3R	206	370	1981	8.9	16	40
2	4R	167	337	1981	8.9	16	40
ONE	5R	—	294	1829	4.4	8	51
ONE	6R	—	249	1829	4.4	8	51
ONE	7R	—	205	1829	4.4	8	51



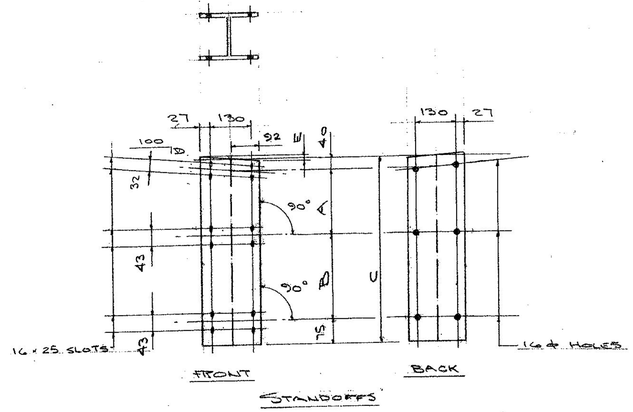
STANDOFFS

QUAN	MK	A	B	C	D	E
2	1L	291	435	841	8.9	16
2	2L	248	403	766	8.9	16
2	3L	206	370	691	8.9	16
2	4L	167	337	619	8.9	16



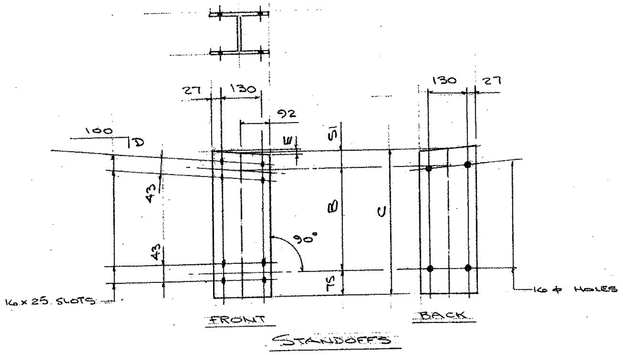
STANDOFFS

QUAN	MK	B	C	D	E
2	5L	294	420	4.4	8
2	6L	249	375	4.4	8
2	7L	205	331	4.4	8



STANDOFFS

QUAN	MK	A	B	C	D	E
2	1R	291	435	841	8.9	16
2	2R	248	403	766	8.9	16
2	3R	206	370	691	8.9	16
2	4R	167	337	619	8.9	16



STANDOFFS

QUAN	MK	B	C	D	E
ONE	5R	294	420	4.4	8
ONE	6R	249	375	4.4	8
ONE	7R	205	331	4.4	8

Received Date: 6/1/11
Checked By: Hiram Salls
Reviewed By: Rob Young
Approval Type: Approved
Approved By: Chris Williams
Date: 6/13/11

DIM'S ARE GIVEN IN MILIMETERS

ISSUE	DATE	DESCRIPTION	BY
1	5-25-11	FOR APPROVAL	

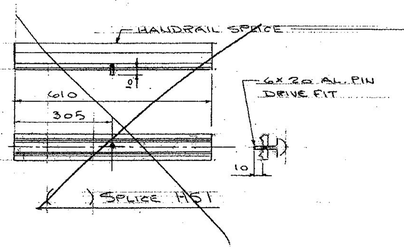
AUCIELLO IRON WORKS INC
560 MAIN ST. HUDSON, MA (978) 568-8382

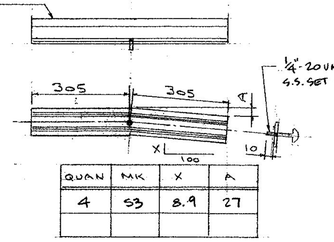
VT. AGENCY OF TRANSPORTATION
EAST MONTPELIER, VT
VT. RT. 14, BRIDGE # 17
BRF 037-2(8)

ALUM. APPROACH RAILING

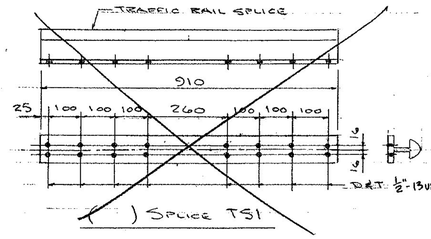
SURFACE PREP: NONE	FINISH: MILL
FOR: F.R. LAFAYETTE, INC.	
DR: 3-22-2011 CHK: 5-25-11	DWG. NO. BR-3006
JOB NO. AB17044-1002	SHEET 2 OF 2

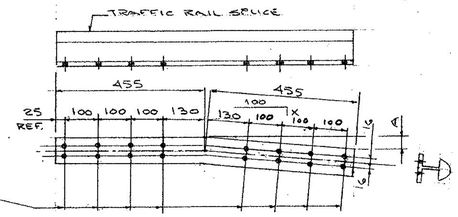
B.L. MAKEPEACE INC. 10/2010



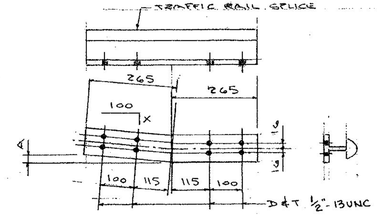


QUAN	MK	X	A
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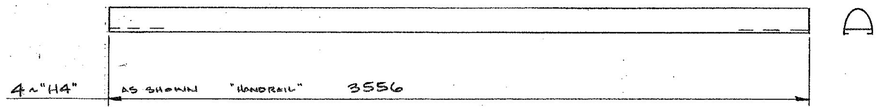


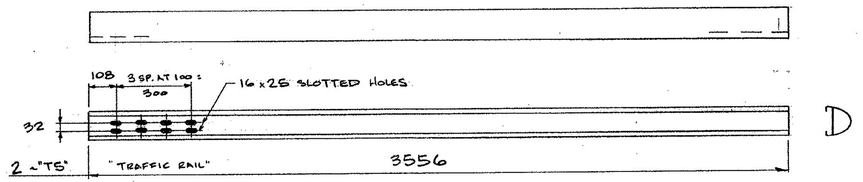


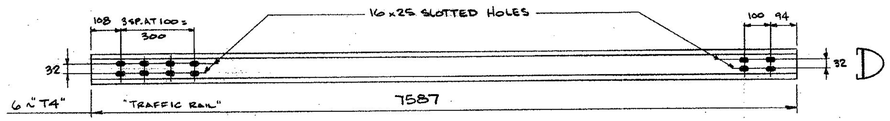
QUAN	MK	X	A
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4	S5	1	5

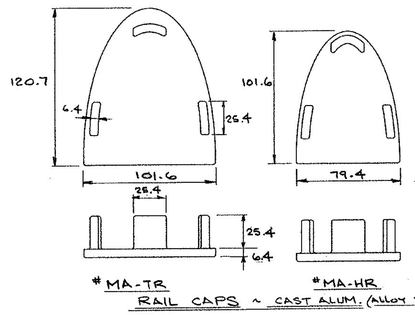


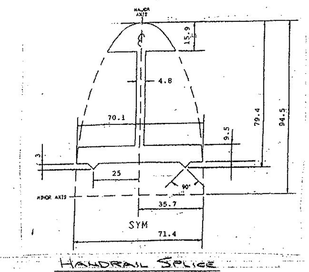
QUAN	MK	X	A
3	S6	4.4	12
3	S7	1	3



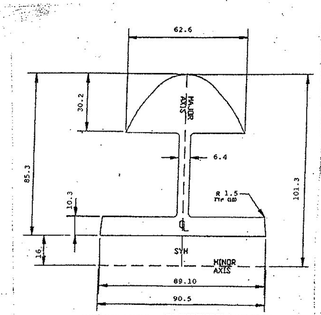








HANDRAIL SPLICE EXTRUSION
ALLOY 6061-T6



TRAFFIC RAIL SPLICE EXTRUSION
ALLOY 6061-T6

Received Date: 6/1/11
Checked By: Hiram Salls
Reviewed By: Rob Young
Approval Type: Approved
Approved By: Chris Williams
Date: 6/13/11

FASTENERS ARE IN ENGLISH UNITS

DIM'S ARE GIVEN IN MILLIMETERS

ISSUE	DATE	DESCRIPTION	BY
1	5-25-11	FOR APPROVAL	

AUCIELLO IRON WORKS INC
560 MAIN ST. HUDSON, MA (978) 568-8382

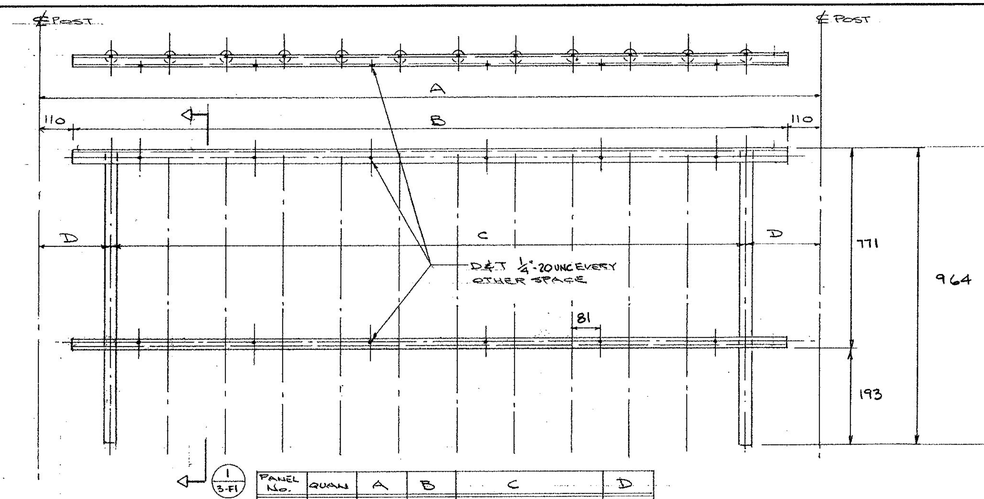
V.T. AGENCY OF TRANSPORTATION
EAST MONTPELIER, VT.
VT. RT. 14, BRIDGE # 17
BRF 037-2(8)

AL. BRIDGE & APPROACH RAILING

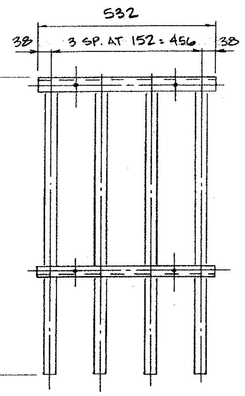
SURFACE PREP: NONE
FINISH: MILL

FOR: FR. LAFAYETTE, INC.
DR: 3-22-2011
CHK: 5-25-11
DWG. NO. BR-3006
JOB NO. AB17044-1002
SHEET 2-F2 OF

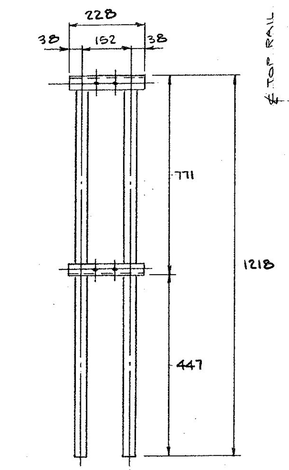
EL-MASTERFACE INC. 10004



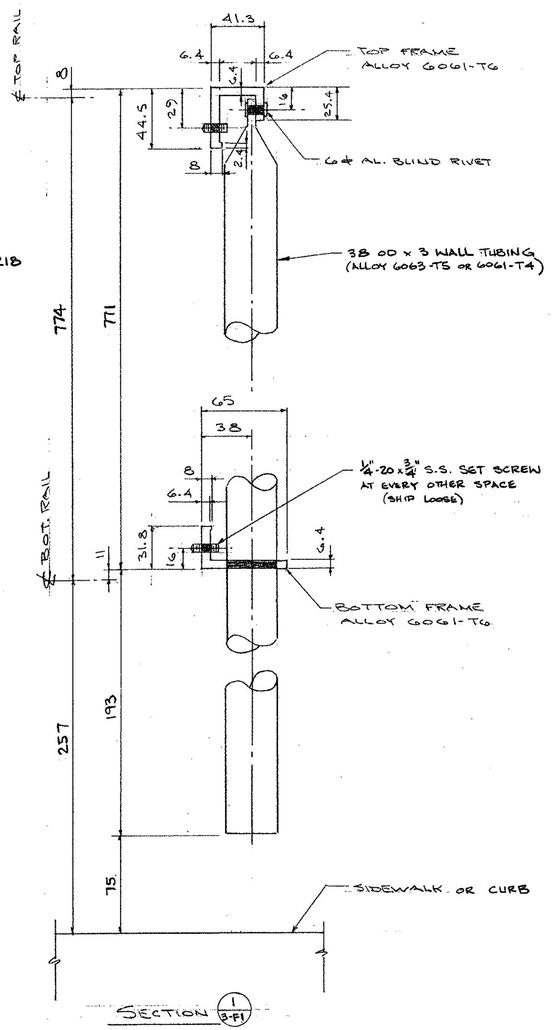
PANEL No.	QUAN	A	B	C	D
PP1	14	2248	2028	11 SP. AT 162 = 1782	233

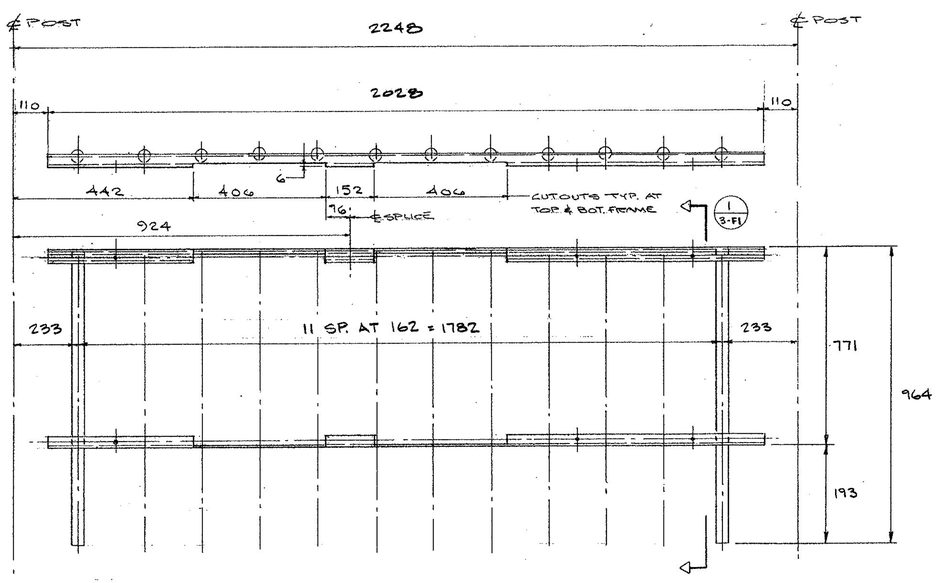


PANEL "PP3" (ONE REQ'D.)



PANEL "PP4" (ONE REQ'D.)
(ABUTMENT # 2)





SPINDLE PANEL "PP2" (2 REQ'D.)

DIM'S ARE GIVEN IN MILIMETERS

AUCIELLO IRON WORKS INC
560 MAIN ST. HUDSON, MA (978) 568-8382

VT. AGENCY OF TRANSPORTATION
EAST MONTPELIER, VT
VT RT 14, BRIDGE # 17
BRF 037-2(8)

AL. BRIDGE & APPROACH RAILING

SURFACE PREP: NONE	FINISH: MILL
FOR: F.R. LAFAYETTE, INC.	
DR: 3-12-2011 CHK: 5-25-11	DWG. NO. BR-3006
JOB NO. AB17044-1003	SHEET 3-F1 OF 1

ISSUE	DATE	DESCRIPTION	BY
1	5-25-11	FOR APPROVAL	

Received Date: 6/1/11
Checked By: Hiram Salls
Reviewed By: Rob Young
Approval Type: Approved
Approved By: Chris Williams
Date: 6/13/11

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