SEE SHEET 2 FOR LIST OF SHEETS
AND LIST OF STANDARDS

RECORD PLANS	
CONTRACTOR:	PETTRICA CONISTRUCTION CO – PITTSFIELD, MA.
RESIDENT ENGINEER:	TIM POCKETTE
CONSTRUCTION BEGAN:	APRIL 13, 2006
CONSTRUCTION COMPLETE:	NOVEMBER 24, 2008
RECORD PLANS BY:	TIM POCKETTE & C. PIERCE

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

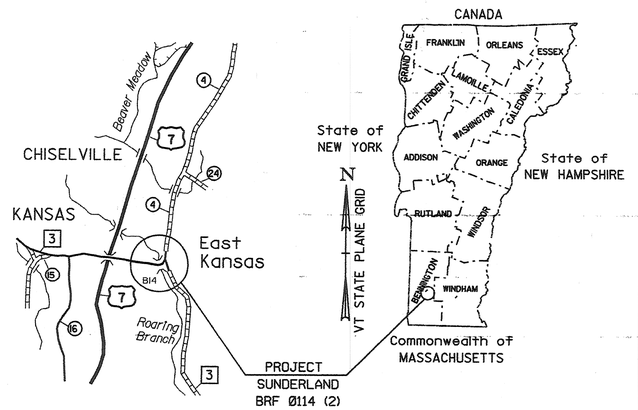
BY _____ RESIDENT ENGINEER

DATE 01-21-10

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

STATE OF VERMONT
AGENCY OF TRANSPORTATION

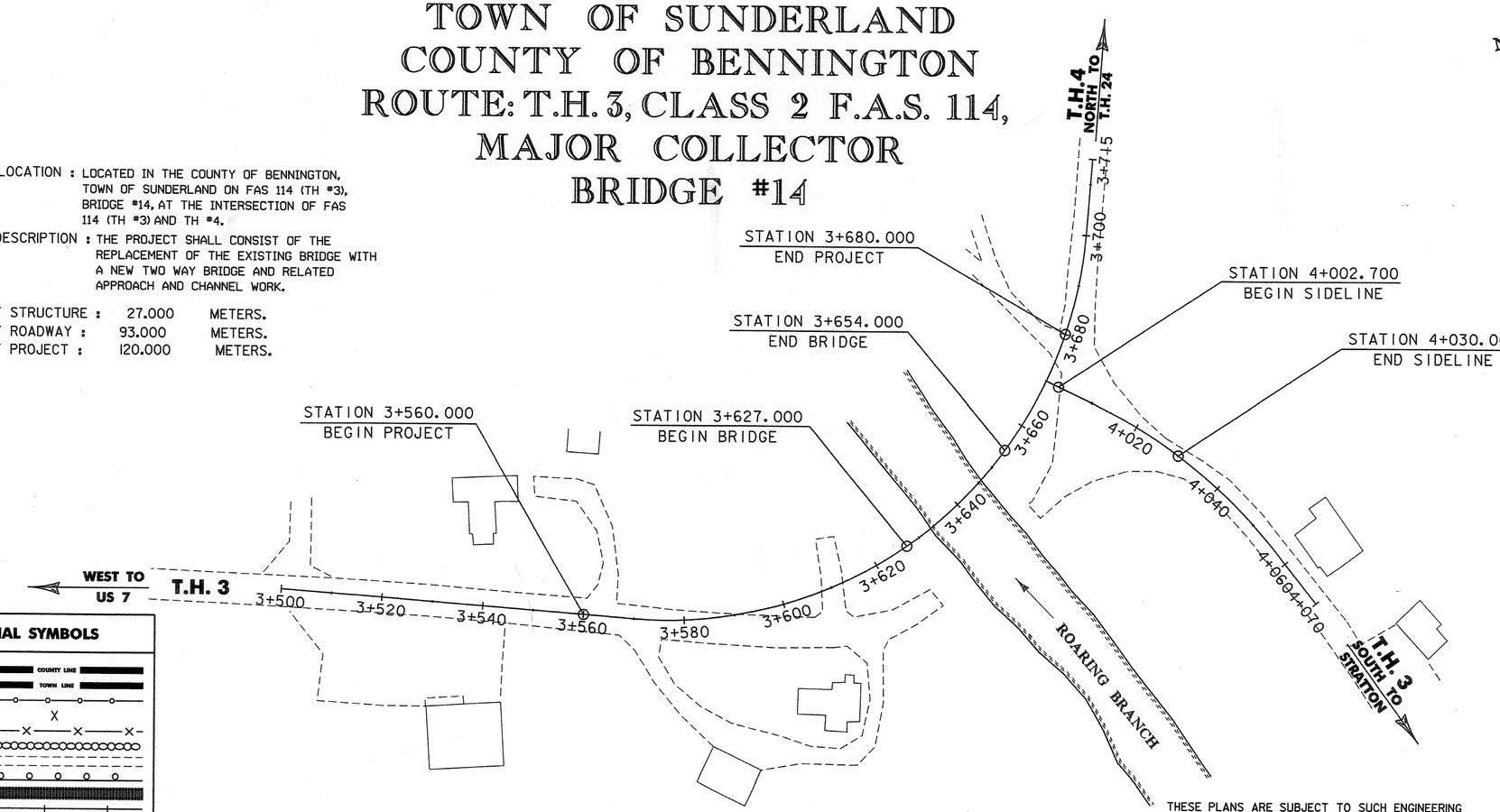
PROPOSED IMPROVEMENT
BRIDGE PROJECT
TOWN OF SUNDERLAND
COUNTY OF BENNINGTON
ROUTE: T.H. 3, CLASS 2 F.A.S. 114, MAJOR COLLECTOR
BRIDGE #14



PROJECT LOCATION : LOCATED IN THE COUNTY OF BENNINGTON, TOWN OF SUNDERLAND ON FAS 114 (TH #3), BRIDGE #14, AT THE INTERSECTION OF FAS 114 (TH #3) AND TH #4.

PROJECT DESCRIPTION : THE PROJECT SHALL CONSIST OF THE REPLACEMENT OF THE EXISTING BRIDGE WITH A NEW TWO WAY BRIDGE AND RELATED APPROACH AND CHANNEL WORK.

LENGTH OF STRUCTURE : 27.000 METERS.
LENGTH OF ROADWAY : 93.000 METERS.
LENGTH OF PROJECT : 120.000 METERS.



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 : L. ORVIS
SURVEYED DATE : SEPT 1995

DATUM
VERTICAL NAVD 88
HORIZONTAL SPC 83/92

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

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

/PW/93J009/sj009bdr.dgn sj009t1.i PLOTTED 15-NOV-2005

VAOT Metric

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

DIRECTOR OF PROGRAM DEVELOPMENT
APPROVED _____ DATE 11/15/05

PROJECT MANAGER : **R. R. WHITCOMB**

PROJECT NAME : **SUNDERLAND**
PROJECT NUMBER : **BRF 0114(2)**

SHEET 1 OF 67 SHEETS

STATE OF VERMONT
AGENCY OF TRANSPORTATION

PRELIMINARY INFORMATION SHEET

Metric

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1. TITLE SHEET
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4-5. QUANTITY SHEETS
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7-7a. RIGHT-OF-WAY PLAN SHEETS
8-9. TIE SHEETS
10-11. PLAN SHEETS
12. MAINLINE PROFILE
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14. DRIVE ALIGNMENTS
15. DRIVE PROFILES SHEET
16-17. TRAFFIC CONTROL SHEET
18. BORING LAYOUT SHEET
19-21. BORING LOG SHEETS
22. PLAN & ELEVATION
23. EROSION CONTROL NARRATIVE
24-25. EXISTING SITE PLAN
26-27. EROSION & SEDIMENT CONTROL PLAN
28-29. FINAL CONDITIONS SITE PLAN
30. EROSION CONTROL DETAILS
31. DRAINAGE SHEET
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35. BRIDGE RAILING & DECK DETAILS
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37. GIRDER DETAILS
38. SUPERSTRUCTURE DETAILS
39. CROSSFRAME & BRACING DETAILS
40-42. BEARING DETAILS
43. APPROACH SLAB DETAILS
44. ABUTMENT #1 DETAILS
45. ABUTMENT #2 DETAILS
46. FOOTING REINFORCING PLANS
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49. SIGNS & PAVEMENT MARKING SHEETS
50. SIGN SUMMARY SHEET
51. MAINLINE BANKING DIAGRAM
52. SUBBASE TRANSITION DIAGRAMS
53. SIDELINE BANKING DIAGRAM
54-59. MAINLINE CROSS SECTIONS
60-61. SIDELINE CROSS SECTIONS
62-67. CHANNEL CROSS SECTIONS

LIST OF STANDARDS

B-5M	1-03-00
B-12M	1-03-00
B-71	7-08-05
D-2M	6-13-97
E-100	1-02-04
E-100A	1-02-04
E-106	3-01-04
E-107	6-30-03
E-107A	8-08-95
E-121	8-08-95
E-138	5-30-03
E-142	9-20-95
E-143	6-15-04
E-144	3-29-99
E-164	5-20-99
E-193	8-18-95
G-1M	1-03-00
G-1DM	1-03-00
J-3M	6-13-97
SB-R6-82M	7-10-97
SB-R7-90M	7-10-97

FINAL HYDRAULIC REPORT

HYDROLOGIC DATA

Date: 11/2/99

DRAINAGE AREA : 53.3 sq. km
CHARACTER OF TERRAIN : Mountainous
STREAM CHARACTERISTICS : Sinuous, Steep and Flashy
NATURE OF STREAMBED : Boulders to Cobbles

PEAK FLOW DATA

Q 2.33 =	50 cms	Q 50 =	95 cms
Q 10 =	65 cms	Q 100 =	130 cms
Q 25 =	80 cms	Q 500 =	220 cms

DATE OF FLOOD RECORD : Unknown
ESTIMATED DISCHARGE: Unknown
WATER SURFACE ELEV.: Unknown
NATURAL STREAM VELOCITY : @ Q25 = 3.5 mps
ICE CONDITIONS : Moderate
DEBRIS: Moderate
DOES THE STREAM REACH MAXIMUM HIGHWATER ELEV. RAPIDLY? Yes
IS ORDINARY RISE RAPID? Yes
IS STAGE AFFECTED BY UPSTREAM OR DOWNSTREAM CONDITIONS? No
IF YES, DESCRIBE: N/A

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

EXISTING STRUCTURE INFORMATION

STRUCTURE TYPE: Single Span, One Lane Steel Beam w/ Concrete Deck
YEAR BUILT: 1939
CLEAR SPAN(NORMAL TO STREAM): 23.5 m
VERTICAL CLEARANCE ABOVE STREAMBED: 2.9 m
WATERWAY OF FULL OPENING: 45 sq. m
DISPOSITION OF STRUCTURE: Remove
TYPE OF MATERIAL UNDER SUBSTRUCTURE: Unknown

WATER SURFACE ELEVATIONS AT:

Q2.33 =	283.3 m	VELOCITY =	3.1 mps
Q10 =	283.5 m	"	3.4 mps
Q25 =	283.7 m	"	3.5 mps
Q50 =	283.9 m	"	3.7 mps
Q100 =	284.3 m	"	4.0 mps

LONG TERM STREAMBED CHANGES: Unknown

IS THE ROADWAY OVERTOPPED BELOW Q100: No
FREQUENCY: Above Q100
RELIEF ELEVATION: 284.8 m
DISCHARGE OVER ROAD @Q100: None

UPSTREAM STRUCTURE

TOWN: Sunderland
HIGHWAY # : TH-3
CLEAR SPAN: 16.2 m
YEAR BUILT: Unknown - Reconstructed in 1984
STRUCTURE TYPE: Single Span, One Lane, Steel Beam w/ Timber Deck
DISTANCE: 5.6 km
STRUCTURE #: 16
CLEAR HEIGHT: 2.1 m
FULL WATERWAY: Unknown

DOWNSTREAM STRUCTURE

TOWN: Sunderland
HIGHWAY # : U.S. 7
CLEAR SPAN: 21.6 m
YEAR BUILT: 1982
STRUCTURE TYPE: Single Span, Steel Beam w/ Concrete Deck
DISTANCE: 0.6 km
STRUCTURE #: 22
CLEAR HEIGHT: 3 m
FULL WATERWAY: Unknown

LOAD FACTOR LOAD RATING (METRIC TONNES)

LOADING LEVELS (LOAD FACTOR)	TRUCK						
	M	MS	3S2	6 AXLE	3A. STR.	4A. STR.	5A. SEMI
INVENTORY A=2.17 B=1.00	41	46					
POSTED A=1.55 B=1.40	46	58	61		48	49	56
OPERATING A=1.30 B=1.67		52	69	83	54	55	

STRENGTH RF = $\frac{\phi R_N - 1.3 M_{DL}}{A \times M_{LL+I}}$ SERVICEABILITY RF = B $\frac{.95 F_y S_{LL+I} - M_{DL} \frac{S_{LL+I}}{S_{DL}} - M_{SDL} \frac{S_{LL+I}}{S_{SDL}}}{1.67 M_{LL+I}}$

TRAFFIC DATA

YEAR	ADT	DHV	% D	% T	ADTT
2017	940	130	55	2	2
2037	1200	170	55	2	2

20 year ESAL for flexible pavement from 2002 to 2022 : 120,000
40 year ESAL for flexible pavement from 2002 to 2042 : 362,000
Design Speed : 55 km/h

PROPOSED STRUCTURE

STRUCTURE TYPE: Single Span, Two Lane, Steel Beam w/ Concrete Deck

CLEAR SPAN(NORMAL TO STREAM): 24.0 m
VERTICAL CLEARANCE ABOVE STREAMBED: 2.9 m
WATERWAY OF FULL OPENING: 49 sq. m

WATER SURFACE ELEVATIONS AT:

Q2.33 =	283.3 m	VELOCITY=	3.1 mps
Q10 =	283.5 m	"	3.4 mps
Q25 =	283.7 m	"	3.5 mps
Q50 =	283.9 m	"	3.7 mps
Q100 =	284.2 m	"	3.8 mps

IS THE ROADWAY OVERTOPPED BELOW Q100: No
FREQUENCY: Above Q100
RELIEF ELEVATION: 284.4 m
DISCHARGE OVER ROAD @Q100: None

AVERAGE LOW ELEVATION OF SUPERSTRUCTURE: 284.28 m
VERTICAL CLEARANCE: @ Q50 = 0.4 m

SCOUR: No contraction scour @ Q100 and 1 m of contraction scour @ Q500

REQUIRED CHANNEL PROTECTION: Stone Fill Type IV

PERMIT INFORMATION

AVERAGE DAILY FLOW:	1.2 cms	DEPTH OR ELEVATION:	
ORDINARY LOW WATER:	0.6 cms		0.3 m
ORDINARY HIGH WATER:	20.7 cms		1.0 m

TEMPORARY BRIDGE REQUIREMENTS

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

ADDITIONAL INFORMATION

DESIGN CRITERIA

1. DESIGN LIVE LOAD AASHTO MS 22.50
2. DESIGN SPAN 26.500m
3. ALLOWABLE LOAD FOR SPREAD FOOTINGS ON SOIL 240 kPa
   ON LEDGE N/A
4. ALLOWABLE LOAD FOR PILING N/A
   TYPE N/A
   ESTIMATED LENGTH N/A
5. STRUCTURAL STEEL AASHTO M270/M270M GRADE Grade 345W
6. REINFORCING STEEL GRADE 420
7. ALLOWABLE STRESS FOR CONCRETE
   HIGH PERFORMANCE CLASS A f'c: 30 Mpa
   HIGH PERFORMANCE CLASS B f'c: 25 Mpa
8. SOIL UNIT WEIGHT 22 KN/m³
9. DESIGN LOAD FOR SPREAD FOOTINGS ON SOIL 232 kPa

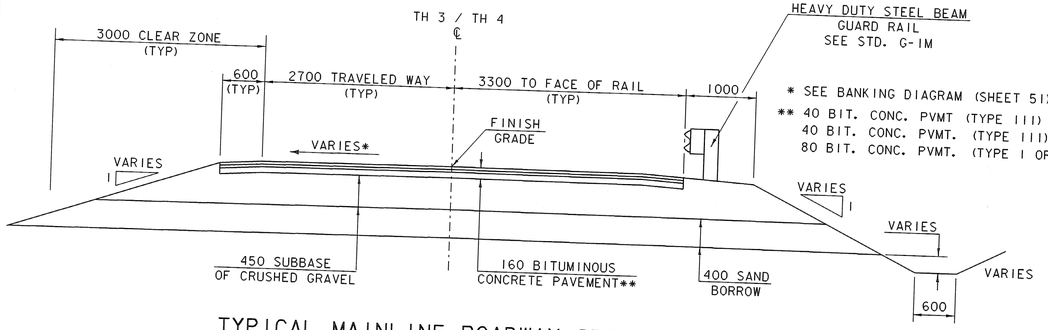
TRAFFIC MAINTENANCE

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

PROJECT NAME: SUNDERLAND
PROJECT NUMBER: BRF 0114(2)

FILE NAME: /TransFANS/93j009/sj009pi.xls
PROJECT MANAGER: R. R. WHITCOMB
DESIGNED BY: D. BONNEAU
PRELIMINARY INFORMATION SHEET

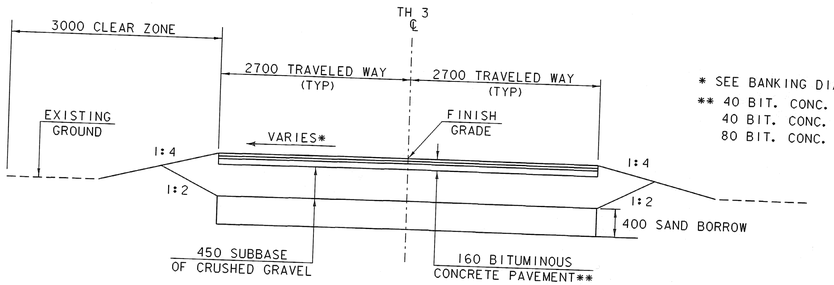
PLOT DATE: 11/16/2005
DRAWN BY: J. GILMORE
CHECKED BY: C. CARLSON
SHEET 2 OF 67



* SEE BANKING DIAGRAM (SHEET 51)
** 40 BIT. CONC. PVMT (TYPE III) OVER
40 BIT. CONC. PVMT. (TYPE III) OVER
80 BIT. CONC. PVMT. (TYPE I OR II)

TYPICAL MAINLINE ROADWAY SECTION

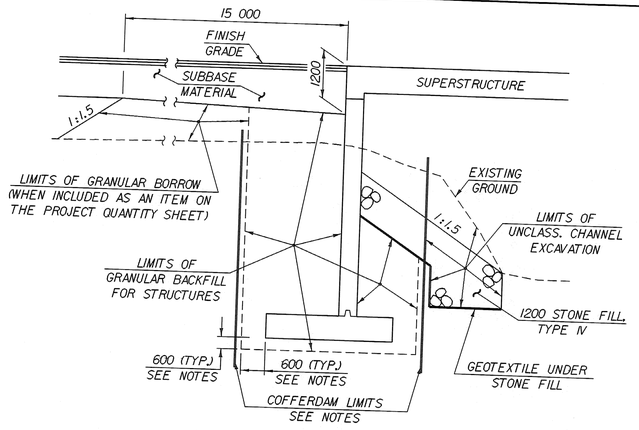
SCALE 1:40



* SEE BANKING DIAGRAM (SHEET 51)
** 40 BIT. CONC. PVMT (TYPE III) OVER
40 BIT. CONC. PVMT. (TYPE III) OVER
80 BIT. CONC. PVMT. (TYPE I OR II)

TYPICAL SIDELINE ROADWAY SECTION

SCALE 1:40

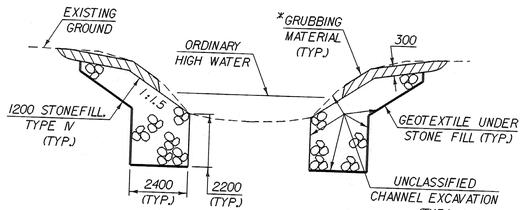


TYPICAL ABUTMENT SECTION

(NOT TO SCALE)

NOTES

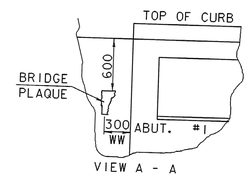
1. COFFERDAM LIMITS TO BE DETERMINED BY THE CONTRACTOR.
2. FOR PURPOSES OF ESTIMATING EARTHWORK QUANTITIES, THE LIMITS OF COFFERDAM HAVE BEEN ASSUMED TO BE 600 OUTSIDE THE PERIMETER OF THE FOOTING.
3. 600 UNDERCUT AS DETERMINED NECESSARY BY THE RESIDENT ENGINEER.
4. IF A COFFERDAM IS CONSTRUCTED WHICH IS MORE THAN THE INDICATED DISTANCE OUTSIDE THE FOOTING LIMITS, PAYMENT FOR ALL UNCLASSIFIED CHANNEL EXCAVATION INCLUDING THAT PORTION WHICH IS INSIDE THE COFFERDAM BUT OUTSIDE THE COFFERDAM LIMITS SHOWN WILL BE MADE AT THE CONTRACT UNIT PRICE FOR UNCLASSIFIED CHANNEL EXCAVATION.



TYPICAL CHANNEL SECTION

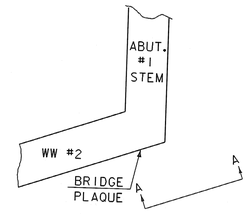
(NOT TO SCALE)

*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.

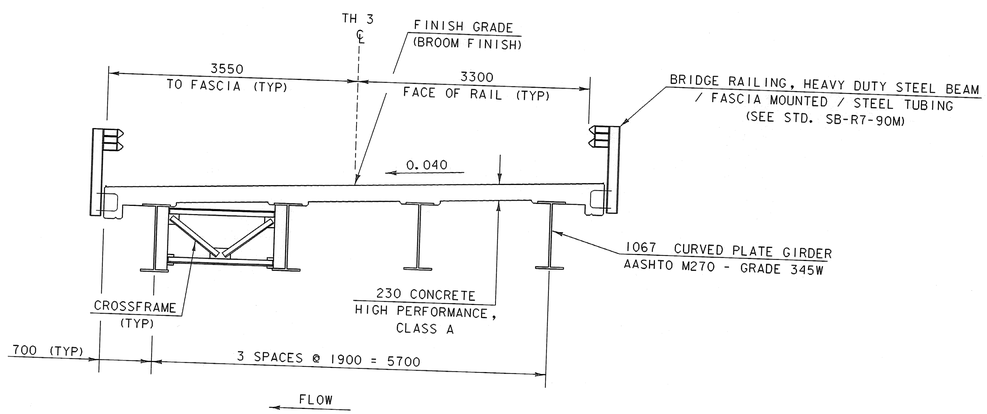


LOCATE BRIDGE PLAQUE

THE BRIDGE PLAQUE WILL BE SUPPLIED BY THE AGENCY OF TRANSPORTATION AND SHALL BE INSTALLED BY THE CONTRACTOR AT ABUTMENT #1 ON THE RIGHT SIDE AS SHOWN OR AS DIRECTED BY THE ENGINEER.
(DETAILS ABOVE ARE NOT MEANT TO BE SITE SPECIFIC.)



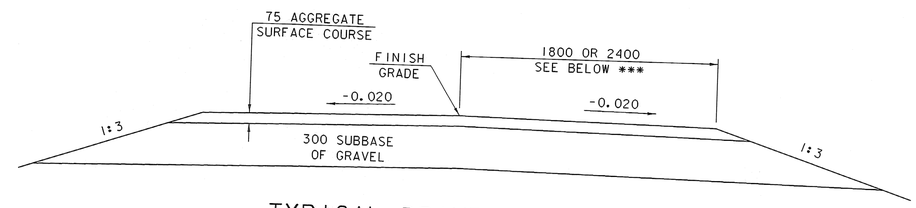
PLAN



TYPICAL BRIDGE SECTION

SCALE 1:40

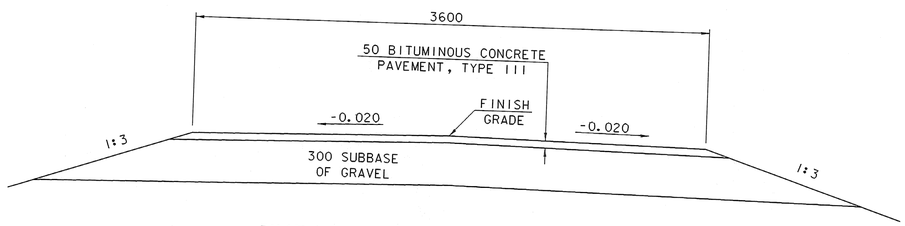
MATERIAL ITEM	TOLERANCE
PAVEMENT	±5 mm TOTAL THICKNESS
AGGREGATE SURFACE COURSE	±10 mm
BASE COURSE	±10 mm
SUBBASE	±30 mm
SAND BORROW	±30 mm
GRANULAR BORROW	±30 mm



TYPICAL DRIVE SECTION

SCALE 1:20

*** 1800 FOR DRIVES AT
3+564.0 LT
3+568.0 RT
3+593.4 RT
2400 FOR DRIVE AT
4+010.0 RT



TYPICAL DRIVE SECTION

SCALE 1:20

DRIVE AT 3+695.0 LT

SHEET NAME:	TYPICAL DETAIL SHEET		
PROJECT NAME:	SUNDERLAND	HIGHWAY NO.:	TH 3
PROJECT NUMBER:	BRF 0114(2)	BRIDGE NO.:	14
		OVER:	ROARING BRANCH
FILE NAME:	/PW/93J009/sj009typ.dgn	PLOT DATE:	14-DEC-2005
PROJECT MANAGER:	R. R. WHITCOMB	DRAWN BY:	K. UPMAL
DESIGNED BY:	K. UPMAL	IPARM NAME:	sj009typ.i
		SHEET	3 OF 67

STATE OF VERMONT
AGENCY OF TRANSPORTATION

QUANTITY SHEET

Metric

SUMMARY OF ESTIMATED QUANTITIES

ROADWAY	CHANNEL	ABUTMENT #1	ABUTMENT #2	SUPERSTR UCTURE	APPROACH SLAB #1	APPROACH SLAB #2	EROSION CONTROL	FULL C.E. ITEMS	BRIDGE QUANTITY
1									
530									
	710								710
440									
180									
1780									
210							10		
				55					55
		310	270						580
		95	95						190
		290	285						575
		1							1
			1						1
290									
750									
260							30		
589									
				54					54
		104	96		16	16			232
				42100					42100
		6290	6400						12690
				7500	1105	1320			9925
				1					1
				1					1
				1					1
		12	12	88	14	14			140
				7					7
				60					60
1									
92									
	1								1
				8					8
8									
8									
8									
19									
19									
19									
6									
							200		20
3		5	15						
							10		
							10		

TOTALS

ROUND	GRAND TOTAL	FINAL
	1	
	530	
	710	
	440	
	180	
	1780	
	220	
	55	
	580	
	190	
	575	
	1	
	1	
	290	
	780	
	260	
	589	
	54	
	232	
	42100	
	12690	
	9925	
	1	
	1	
	1	
	1	
	140	
	7	
	60	
	1	
	92	
	1	
	8	
	8	
	8	
	8	
	19	
	19	
	19	
	6	
	200	
	23	
	10	
	10	

DESCRIPTIONS

UNIT	ITEMS	ITEM NUMBER
LS	CLEARING AND GRUBBING (INCL. INDV. TREES & STUMPS)	201.10
CM	COMMON EXCAVATION	203.15
CM	UNCLASSIF CHANNEL EXCAVATION	203.27
CM	SAND BORROW	203.31
CM	GRANULAR BORROW	203.32
SM	FINE GRADING-SUBGRADE	203.40
CM	TRENCH EXCAVATION OF EARTH	204.20
CM	STRUCTURE EXCAVATION	204.25
CM	GRANULAR BACKFILL FOR STRUCTURES	204.30
CM	COFFERDAM EXCAVATION, EARTH	208.30
CM	COFFERDAM EXCAVATION, ROCK	208.35
LS	COFFERDAM (ABUTMENT #1)	208.40
LS	COFFERDAM (ABUTMENT #2)	208.40
SM	COLD PLANING-BIT.PAVEMENT	210.10
CM	SUBBASE OF CRUSHED GRAVEL (COARSE GRADED)	301.25
KG	EMULSIFIED ASPHALT	404.65
T	BITUMINOUS CONCRETE PAVEMENT (PG 58-34)	406.25
CM	CONCRETE, HIGH PERFORMANCE CLASS A	501.33
CM	CONCRETE, HIGH PERFORMANCE CLASS B	501.34
KG	STRUCTURAL STEEL (PLATE GIRDER) (CURVED)	506.55
KG	REINFORCING STEEL	507.15
KG	EPOXY COATED REINFORCING STEEL	507.17
LS	SHEAR CONNECTORS (802 - 22 x 180)	508.15
LS	STRUCTURAL PAINTING,SHOP APPLIED (4 METRIC TONS)	513.25
LS	SURFACE PREPARATION,SHOP (4 METRIC TONS)	513.40
L	WATER REPELLENT (MOD. - SILANE)	514.10
M	BRIDGE EXPANSION JOINT (POLYETHYLENE FOAM)	516.10
M	BRIDGE RAILING - HDSB/FASCIA MOUNTED/STEEL TUBING (GALVANIZED)	525.44
LS	MAINTENANCE OF TRAFFIC FOR BRIDGE PROJECTS (MOD.)	527.10
SM	REMOVAL OF BRIDGE PAVEMENT	529.10
EACH	PARTIAL REMOVAL OF STRUCTURE	529.20
EACH	BEARING DEVICE ASSEMBLY (POT)	531.10
	BEGIN 375 mm PIPE OPTIONS	
M	375 mm CAAP 1.91mm (68mm x 12mm)	601.0211
M	375 mm PCCSP 1.63mm (68mm x 12mm)	601.0410
M	375 mm CPEP	601.0910
	END 375 mm PIPE OPTIONS	
	BEGIN 450mm PIPE OPTIONS	
M	450 mm CAAP 2.67mm (68mm x12mm)	601.0217
M	450 mm PCCSP 1.63mm (68mm x 12mm)	601.0415
M	450 mm CPEP	601.0915
	END 450mm PIPE OPTIONS	
CM	CEMENT RUBBLE MASONRY	602.15
CM	DUST CONTROL WITH WATER	609.10
CM	STONE FILL, TYPE I	613.10
CM	STONE FILL, TYPE I (MOD.-CHECK DAMS)	613.10
CM	STONE FILL, TYPE I (MOD.-CONSTRUCTION ENTRANCE)	613.10

DETAILED SUMMARY OF QUANTITIES

QUANTITIES	UNIT	ITEMS
		TEMPORARY EROSION CONTROL ITEMS
10	CM	204.20 TRENCH EXCAVATION OF EARTH
30	CM	301.25 SUBBASE OF CRUSHED GRAVEL (COARSE GRADED)
200	CM	609.10 DUST CONTROL WITH WATER
10	CM	613.10 STONE FILL, TYPE I (MOD.- CHECK DAMS)
10	CM	613.10 STONE FILL, TYPE I (MOD.- CONSTR. ENTRANCE)
150	SM	649.51 GEOTEXTILE FOR SILT FENCE
5	KG	651.17 SEED- WINTER RYE
10	EA	651.26 HAY BALES FOR EROSION CONTROL
		NOTE:
		THERE IS APPROXIMATELY 1150 CM
		OF WASTE MATERIAL
		(N.A.B.I.) = NOT A BID ITEM

PROJECT NAME: **SUNDERLAND**
PROJECT NUMBER: **BRF 0114(2)**

FILE NAME: /PW/93j009/sj009qnt.xls
PROJECT MANAGER: R.R. WHITCOMB
DESIGNED BY: D. BONNEAU
QUANTITY SHEET #1

PLOT DATE: 12/16/2005
DRAWN BY: J. GILMORE
CHECKED BY: C. CARLSON
SHEET 4 OF 67

STATE OF VERMONT
AGENCY OF TRANSPORTATION

QUANTITY SHEET

Metric

SUMMARY OF ESTIMATED QUANTITIES

ROADWAY	CHANNEL	ABUTMENT #1	ABUTMENT #2	SUPERSTR UCTURE	APPROACH SLAB #1	APPROACH SLAB #2	EROSION CONTROL	FULL C.E. ITEMS
	870							
2								
10								
15								
							225	
							85	
52								
4								
24								
18								
12								
50								
								1
								1
								1
								1
1								
1								
494								
482								
7								
	600							
							150	
							5	
							5	
							90	
							1	
							1	
							10	
							80	
	350							
							1	
							50	
							1	
							70	
7								
2.2								
9								
9								
2								

TOTALS

BRIDGE QUANTITY	ROUND	GRAND TOTAL	FINAL
870		870	
		2	
		10	
		15	
		225	
		85	
		52	
		4	
		24	
		18	
		12	
		50	
		1	
		1	
		1	
		1	
		1	
		1	
		494	
		482	
		7	
600		600	
		150	
		5	
		5	
		90	
		1	
		1	
		10	
		80	
350		350	
		1	
		50	
		1	
		70	
		7	
		2.2	
		9	
		9	
		2	

DESCRIPTIONS

UNIT	ITEMS	ITEM NUMBER
CM	STONE FILL, TYPE IV	613.13
EACH	RELOCATE MAIL BOX, SINGLE SUPPORT	617.10
M	REMOVING AND RESETTING FENCE	620.50
M	REMOVAL OF EXISTING FENCE (MOD.)	620.55
M	SNOW FENCE (MOD. - PDF)	620.70
M	SNOW FENCE (MOD. - ARCH)	620.70
M	HEAVY DUTY STEEL BEAM GUARD RAIL (GALVANIZED)	621.21
EACH	ANCHOR FOR STEEL BEAM RAIL	621.60
M	REMOVL AND DISP OF GUARD RAIL	621.80
M	REMOVL AND DISP OF GUARD RAIL (MOD.)	621.80
EACH	REMOVL AND DISP OF GUIDE POSTS	621.81
HR	UNIFORMED TRAFFIC OFFICERS	630.10
LS	FIELD OFFICE-ENGINEERS	631.10
LS	TESTING EQUIPMENT - CONCRETE	631.16
LS	TESTING EQUIPMENT - BITUMINOUS	631.17
LU	FIELD OFFICE - TELEPHONE (N.A.B.I.)	631.25
LS	MOBILIZATION/DEMOBILIZATION	635.11
LS	TRAFFIC CONTROL	641.10
M	100 mm WHITE LINE	646.20
M	100 mm YELLOW LINE	646.21
M	300 mm WHITE LINE	646.24
SM	GEOTEXTILE UNDER STONE FILL	649.31
SM	GEOTEXTILE FOR SILT FENCE	649.51
KG	SEED	651.15
KG	SEED-WINTER RYE	651.17
KG	FERTILIZER	651.18
T	AGRICULTURAL LIMESTONE	651.20
T	HAY MULCH	651.25
EACH	HAY BALES FOR EROSION CONTROL	651.26
CM	TOPSOIL	651.35
SM	GRUBBING MATERIAL	651.40
LS	EROSION PREVENTION & SEDIMENT CONTROL PLAN	652.10
HR	MONITORING EROSION PREVENTION & SEDIMENT CONTROL PLAN	652.20
LU	MAINTENANCE OF EROSION PREVENTION & SEDIMENT CONTROL PLAN (N.A.B.I.)	652.30
SM	EROSION MATTING	654.10
EACH	EVERGREEN TREES (WHITE PINE) (2.5M - 4.0M)	656.20
SM	TRAFFIC SIGNS, TYPE A	675.20
	BEGIN SIGN POST OPTION	
M	FLANGED CHANNEL SIGN POSTS	675.301
M	SQUARE TUBE SIGN POSTS AND ANCHOR	675.341
	END SIGN POST OPTION	
EACH	REMOVING SIGNS	675.50

DETAILED SUMMARY OF QUANTITIES

QUANTITIES	UNIT	ITEMS

PROJECT NAME: **SUNDERLAND**
PROJECT NUMBER: **BRF 0114(2)**

FILE NAME: /PW/93j009/sj009qnt.xls
PROJECT MANAGER: R.R. WHITCOMB
DESIGNED BY: D. BONNEAU
QUANTITY SHEET #2

PLOT DATE: 7/21/2004
DRAWN BY: J. GILMORE
CHECKED BY: C. CARLSON
SHEET 5 OF 67

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

Metric

TABLE OF PROJECT PROPERTY ACQUISITION

PARCEL NO.	GRANTOR	SHEET NO.	BEGINNING STATION	ENDING STATION	TAKING	REM.	RIGHTS	TITLE TAKEN	DATE	TOWN OR CITY RECORDED	BK.	PG.	REMARKS
1A	WALSH, JOHN F. III &	10	3+569.7 LT.	3+626.7 LT.	290 SM±			WD	12-28-00	SUNDERLAND	59	488-489	3,122 S.F.±
	CINDY STRATTON												
													INCLUDES FENCES AND MAILBOX
1B			3+567.2 CL.	3+626.3 RT.	455 SM±		ALL R. T. & I.						
													T.H. 3 R.O.W. 0.11A±
1C					0.23HA±								
													UNECONMIC REMAINDER
													0.57A±
2	BUSHEE, BRIAN K. &	10	3+547.6 LT.	3+561.1 LT.			CONST. (T) 68 SM±						
	ANNA M.												INCLUDES EROSION CONTROL &
			3+560.3 LT.	3+568.4 LT.			CONST. (T) 49 SM±						TEMPORARY FENCE 732 S.F.±
			3+564.0 LT.										INCLUDES EROSION CONTROL &
			3+567.8 LT.	3+568.3 LT.			DRIVE (T)						TEMPORARY FENCE 527 S.F.±
			3+567.9 LT.				REMOVE & RESET (T)						
							REMOVE (T)						FENCE
													ASH TREE
3	MACROBBIE, DUNCAN &	10	3+646.1 RT.	3+699.0 LT.	297 SM±								
	GROOM, JANET C.		3+648.7 LT.	3+657.2 LT.			CHANNEL (P) 18 SM±	WDOE	08-26-04	SUNDERLAND	69	196-198	3,197 S.F.±
			3+649.8 LT.	3+698.5 LT.			CONST. (T) 86 SM±						194 S.F.±
													INCLUDES EROSION CONTROL &
			3+654.6 LT.	3+678.3 LT.			DIT. & DR. (P) 38 SM±						TEMPORARY FENCE 926 S.F.±
			3+664.0 LT.	3+685.5 LT.			LANDSCAPE (T)						409 S.F.±
													PLANT SEVEN EVERGREEN
			3+695.0 LT.				DRIVE (T)						TREES
			3+692.0 LT.				REMOVE (T)						
			3+694.1 LT.				REMOVE (T)						SHRUB
													MAPLE TREE
4	GODDARD, RICHARD J., II &	10	3+563.0 RT.	3+598.2 RT.			CONST. (T) 76 SM±	WDOE	09-21-04	SUNDERLAND	69	243-245	INCLUDES EROSION CONTROL
	KATHLEEN S.												818 S.F.±
			3+568.1 RT.	3+595.6 RT.			DRIVE (T)						
			3+570.8 RT.	3+576.4 RT.			CUL., DIT. & DR. (P)						
			3+575.6 RT.	3+582.0 RT.			ALL R. T. & I.						
			3+576.2 RT.	3+590.9 RT.			CONST. (T) 21 SM±						STONE WALL
			3+578.7 RT.				REMOVE (T)						226 S.F.±
			3+584.7 RT.	3+587.2 RT.			REMOVE (T)						ASH TREE
			3+590.7 RT.	3+598.7 RT.			REMOVE (T)						LILAC HEDGE
			3+627.2 RT.	3+634.0 RT.			CONST. (T) 6 SM±						LILAC HEDGE
													65 S.F.±
			3+571.2 RT.	3+577.3 RT.			CULVERT (T)						
5	HAUGSRUD, JOHN N.	10,11	SL 4+014.8 LT.	3+684.8 RT.	76 SM±								
			3+643.3 RT.	SL 4+045.3 RT.				WDOE	09-21-04	SUNDERLAND	249-250		818 S.F.±
							CONST. (T) 65 SM±						INCLUDES EROSION CONTROL
			3+644.1 RT.	3+654.9 RT.			CHANNEL (P) 44 SM±						700 S.F.±
			SL 4+010.0 RT.				DRIVE (T)						474 S.F.±
			SL 4+020.6 LT.	3+686.6 RT.			CONST. (T) 10 SM±						
													108 S.F.±

REVISION NO.	SHEET	DESCRIPTION OF REVISION	DATE	MADE BY	APPROVED BY
1	8,10	PARCEL NO. 4 GODDARD. CHANGE TITLE TO GODDARD, RICHARD J. II & KATHLEEN S. PER C.O. 9296.	03-18-03	M.J.R.	R.P.D.
2	4A,8,10	PARCEL NO. 4 GODDARD. REVISE SLOPE LIMITS & AREAS AROUND DRIVEWAY. REVISE DRIVEWAY PROFILE. ADD SHEET 4A OF 11, DRIVEWAY PROFILES. PER C.O. 9307.	07-23-03	G.J.F.	R.P.D.
		ELECTRONIC IPARMS TO STRUCTURES	05-20-05		

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

PRESENT R.O.W.
TAKING WITHOUT ACCESS
TAKING WITHOUT ACCESS ALONG PROPERTY LINE
TAKING WITH ACCESS
PERMANENT EASEMENT
TEMPORARY EASEMENT

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

APPROVED: ROGER P. DUMAS / ROGER P. DUMAS DATE: 11-6-00 / 9-27-00
CHIEF, PLANS & TITLES

R.O.W. PLANS
SUNDERLAND
BRF 0114(2)
8 11
SHEET 6A OF 67

ACCT.mcassidy
IP_PWP:dms02588\rj009d.dgn
DATE PLOTTED 14-DEC-2005

Metric

NOTES

1) REMOVAL OF TREES TO BE PAID FOR UNDER CLEARING AND GRUBBING

2) RADIUS OF CURVES LISTED IN METERS

3) LOCATIONS INDICATED FOR EVERGREEN TREES ARE APPROXIMATE. FINAL LOCATION TO BE DETERMINED BY ENGINEER & PROPERTY OWNER.

VT STATE PLANE GRID

(N) - NEW
(R) - REMOVE
(S) - SAVE

EROSION CONTROL LEGEND

- FILTER CURTAIN
- SILT FENCE
- HAY BALES
- STONE FILL TYPE IV
- STONE FILL TYPE I

CONSTRUCT GRAVEL DRIVES WITH PAVED APRONS
3+564.0 LT
3+568.0 RT (SKEWED 38.0°)
3+593.4 RT
4+015.0 RT

CONSTRUCT PAVED DRIVE
3+695.0 LT (SKEWED 14.0°)

CONSTRUCT PAVED APRON
3+520.0 RT - 3+545.0 RT

450 PIPE OPTION
3+577.0 RT - 3+589.6 LT

375 PIPE OPTION
3+571.2 RT - 3+576.6 RT

REMOVE 380 RCP
3+577.5 RT TO LT

REMOVE EXISTING LAID POLE BARRIER
3+539 LT - 3+556.5 LT

HEAVY DUTY STEEL BEAM GUARD RAIL
3+611.8 - 3+625.6 LT
3+615.1 - 3+625.8 RT
3+655.2 - 3+664.0 RT
3+655.4 - 3+667.2 LT

BRIDGE RAILING HEAVY DUTY STEEL BEAM / FASCIA MOUNTED / STEEL TUBING
3+625.6 - 3+655.4 LT
3+625.8 - 3+655.2 RT

ANCHOR FOR STEEL BEAM RAIL
3+613.8 LT
3+616.7 RT
3+663.3 RT
3+665.3 LT

REMOVE STONE WALLS
3+575.5 - 3+582.0 RT
3+666.0 - 3+674.5 LT

REMOVE EXISTING CONCRETE PAD
3+585.5 LT - 3+607.5 LT

REMOVAL OF EXISTING RAILING
3+650.0 - 3+657.5 RT

REMOVING & RESETTING FENCE
3+668.0 LT (3 SECTIONS)

RELOCATE MAILBOX, SINGLE SUPPORT
FROM 3+606.1 RT TO 3+588.0 LT
FROM 3+675 LT +/- TO 3+687.9 LT

CONSTRUCT SPECIAL DITCH
3+589.6 - 3+631.8 LT
3+600.0 - 3+625.5 RT
3+655.9 - 3+685.0 LT

REMOVE EXISTING DRIVE PVMT.
REPLACE WITH TOPSOIL
SEED AND MULCH

REMOVING SMALL TREES (SEE NOTE 1.)
3+578.7 RT (ASH)
4+026.4 RT (MAPLE)
4+028.5 RT (ASH)

REMOVING LARGE TREES (SEE NOTE 1.)
3+567.9 LT (ASH)
3+694.0 LT (MAPLE)
4+027.0 RT (ASH)

EVERGREEN TREES
3+664.0 (12.0 LT)
3+668.0 (15.0 LT)
3+671.5 (13.0 LT)
3+676.0 (16.0 LT)
3+682.0 (11.0 LT)
3+682.0 (16.0 LT)
3+685.5 (13.0 LT)

MAINLINE CURVE DATA
Δ = 89°-58'-55.7" LT
R = 83.000
T = 82.974
L = 130.350
E = 34.361
BANK = 0.040 M/M

STATION 3+520.000
BEGIN APPROACH

BEGIN R.O.W. PROJECT
SUNDERLAND BRF 0114 (2)
STA. 3+547.6 26.2M(86') LT.

STATION 3+560.000
END APPROACH
BEGIN PROJECT

STATION 3+627.000
BEGIN BRIDGE
F.G. = 285.768

STATION 3+654.000
END BRIDGE
F.G. = 285.773

STATION 3+680.000
END PROJECT
BEGIN APPROACH

STATION 3+710.000
END APPROACH

BUSHEE, BRIAN K. & ANNA M. (2)

WALSH, JOHN F. III & CINDY STRATTON (1C)

N/F COTROFELD AUTOMOTIVE, INC.

N/F TOWN OF SUNDERLAND

MACROBBIE, DUNCAN & GROOM, JANET C.

GODDARD, RICHARD J. II & KATHLEEN S. (4)

HAUGSRUD, JOHN N. (5)

HAUGSRUD, JOHN N.

T.H. 3 WEST TO U.S. 7

T.H. 4 NORTH TO T.H. 24

T.H. 3 SOUTH TO STRATTON

MATCH LINE

MATCH LINE TO SHEET 11 OF 11

BM #1
CHISELED SQUARE IN ROCK OUTCROP
ELEVATION = 283.583

BM #2
SPIKE IN ROOT MEDIUM STUMP
ELEVATION=286.165

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 TOWN OF SUNDERLAND'S ACQUISITION OF LAND AND RIGHTS FOR THIS PROJECT.

EXISTING BRIDGE DATA
3-STEEL BEAMS ON CONCRETE FACED STONE ABUTMENTS
BRIDGE WIDTH = 3.660m (12 ft)
ROADWAY WIDTH = 5.800m (19 ft)
CLEAR SPAN = 25.000m (82 ft)
BRIDGE LENGTH = 25.600m (84 ft)
CLEAR HEIGHT = 2.400m (8 ft)

0 10 20 30
SCALE (1:250) IN METERS

FOR R.O.W. USE ONLY

SHEET NAME:	PLAN SHEET		
PROJECT NAME:	SUNDERLAND	HIGHWAY NO.:	TH 3
PROJECT NUMBER:	BRF 0114(2)	BRIDGE NO.:	14
		OVER:	ROARING BRANCH
FILE NAME:	/PW/93J009/sJ009bdr.dgn	PLOT DATE:	17-NOV-2005
PROJECT MANAGER:	R. R. WHITCOMB	DRAWN BY:	K.UPMAL
DESIGNED BY:	K.UPMAL	IPARM NAME:	sJ009pll.i
R. O. W. SHEET 10 OF 11 SHEETS		SHEET 7A OF 67	

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 TOWN OF SUNDERLAND'S ACQUISITION OF LAND AND RIGHTS FOR THIS PROJECT.

FOR R.O.W. USE ONLY

DATUM
VERTICAL _____
HORIZONTAL _____

0 10 20 30
SCALE (1:250) IN METERS

PROJECT: SUNDERLAND	PROJECT NO.: BRF 0114 (2)
DESIGN FILE NAME: /user/stri/93j009/sj009bdr.dgn	
IPARM FILE NAME: sj009pl2.i	PLOT DATE: 17-NOV-2005
SURVEYED BY: L. ORVIS	SURVEY DATE: 9-95
SQUAD LEADER: G.S. ROGERS	DRAWN BY: K. UPMAL
R.O.W. SHEET 11 OF 11 SHEETS	SHEET 7B OF 67

GPS CONTROL POINTS

HCTRL # 1

IRON REBAR SET

TEMP #1

N = 62186.037
E = 448590.027
ELEV. = 253.60

THE MARK IS LOCATED AT THE JUNCTION OF SOUTH ROAD AND KELLEY STAND ROAD IN THE TOWN OF SUNDERLAND. TO REACH FROM THE CENTRE OF KELLEY STAND ROAD, PROCEED 9.1 METERS NORTHERLY TOWARDS THE " OLD SCHOOL HOUSE ". THE MARK IS AN IRON REBAR SET FLUSH WITH THE GROUND, 2.4 METERS WEST OF THE DRIVE THE SCHOOL HOUSE.

HCTRL # 2

IRON REBAR SET

TEMP #2

N = 62208.024
E = 449145.922
ELEV. = 278.22

TO REACH FROM THE JUNCTION OF SOUTH ROAD AND KELLEY STAND ROAD IN SUNDERLAND, PROCEED EAST ON KELLEY STAND ROAD FOR 0.6 KILOMETERS, PASSING OVER US 7, TO THE MARK ON THE LEFT. THE MARK IS AN IRON REBAR SET FLUSH WITH THE GROUND , LOCATED ON THE NORTH SIDE OF A STEEL GUARDRAIL.

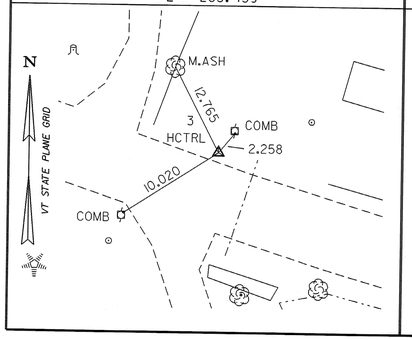
VTRANS Metric

* DESCRIPTION PROVIDED BY VERMONT AGENCY OF TRANSPORTATION ROUTE SURVEY UNIT

TRAVERSE TIES

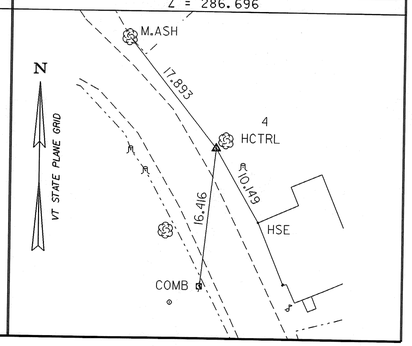
HCTRL #3

N = 62112.338
E = 449511.907
Z = 283.439



HCTRL #4

N = 62106.793
E = 449633.495
Z = 286.696

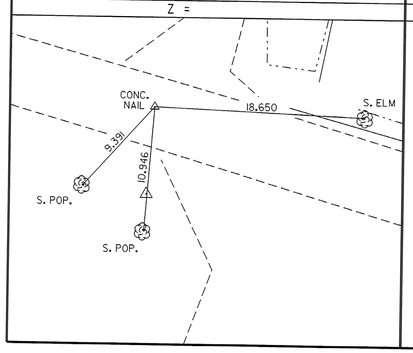


* MAIN TRAVERSE COMPLETED DECEMBER 27, 1994 BY L.ORVIS & R.BULLOCK

ALIGNMENT TIES

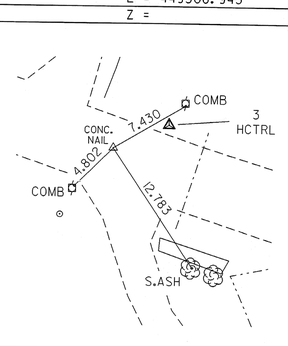
3+500.00 (P.O.B.)

N = 62131.297
E = 449440.438
Z =



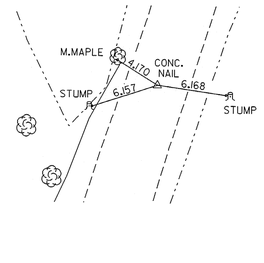
3+569.741 (P.C.)

N = 62110.301
E = 449506.943
Z =



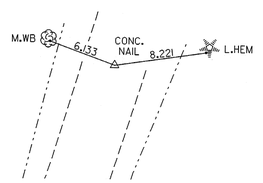
3+700.091 (P.T.)

N = 62164.439
E = 449611.072
Z =



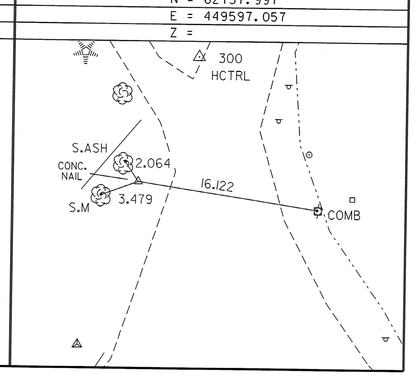
3+715.00 (P.O.E.)

N = 62178.655
E = 449615.565
Z =



4+000.00 (P.O.B.)

N = 62137.997
E = 449597.057
Z =



* ALIGNMENT STAKED SEPTEMBER 28,1999 BY L.ORVIS & R.BULLOCK

DATUM

VERTICAL NAVD 88
HORIZONTAL NAD 83/92

NOTE: TIE DISTANCES ARE IN METERS

SHEET NAME: TIE SHEET

PROJECT NAME: SUNDERLAND
PROJECT NUMBER: BRF 0114(2)

HIGHWAY NO.: TH 3
BRIDGE NO.: 14
OVER: ROARING BRANCH

FILE NAME: /PW/93j009/sj009tie.dgn
PROJECT MANAGER: R. R. WHITCOMB
DESIGNED BY: K.UPMAL

PLOT DATE: 14-DEC-2005
DRAWN BY: G.HITCHCOCK
IPARM NAME: sj009til.i
SHEET 8 OF 67

GPS CONTROL POINTS

ALTERNATE HCTRL

STANDARD DISK STAMPED

" M 15 "

N = 66179.823
E = 447946.304
ELEV. = 195.137

TO REACH THE MARK FROM THE POST OFFICE IN ARLINGTON, GO NORTH ON U.S. HIGHWAY 7 FOR 2.7 KILOMETERS TO A GRADE CROSSING AND THE MARK ON THE RIGHT. THE MARK IS A STANDARD DISK SET IN THE TOP OF A SQUARE CONCRETE MONUMENT THAT PROJECTS 15.2 CENTIMETERS. IT IS 1.7 METERS SOUTHWEST OF THE CENTER OF THE GRADE CROSSING, 12.5 METERS SOUTHEAST OF THE CENTER OF HIGHWAY 7, 2.6 METERS NORTHWEST OF THE WEST RAIL OF TRACKS, 2.3 METERS SOUTHWEST OF POWERLINE POLE NUMBER 304 AND 0.5 METERS NORTHEAST OF A METAL WITNESS POST.

ALTERNATE HCTRL

STANDARD DISK STAMPED

" RV 15 "

N = 60375.510
E = 445735.146
ELEV. = 236.420

TO REACH THE MARK FROM THE POST OFFICE IN IN ARLINGTON, GO NORTH ON U.S. HIGHWAY 7 FOR 1.4 KILOMETERS TO A PARKING LOT ON THE RIGHT AND THE MARK IN THE SOUTH END OF A BRIDGE ABOUT 45.7 METERS TO THE EAST. THE MARK IS A MONEL METAL RIVET CEMENTED IN A DRILL HOLE IN THE ROCK BRIDGE SEAT OF THE RAILROAD BRIDGE. IT IS 2.4 METERS WEST OF THE WEST RAIL OF TRACKS. 0.7 FOOT WEST OF THE WEST EDGE OF THE STEEL FOOTING OF THE BRIDGE AND 1.7 METERS LOWER THAN THE TRACKS.

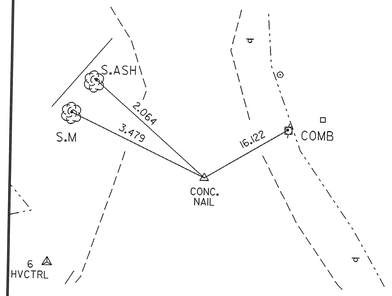
NDOT Metric

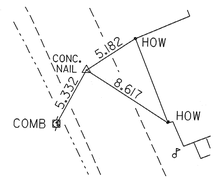
* DESCRIPTION PROVIDED BY VERMONT AGENCY OF TRANSPORTATION GEODETIC SURVEY UNIT

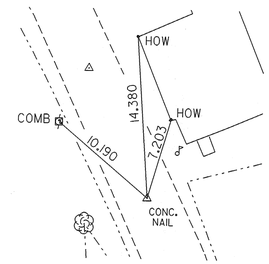
TRAVERSE TIES

ALIGNMENT TIES

4+010.958 P.C.	4+057.350 P.T.	4+070.00 P.O.E.
N = 62131.210	N = 62095.200	N = 62083.749
E = 449605.660	E = 449634.245	E = 449639.622
Z =	Z =	Z =







* ALIGNMENT STAKED SEPTEMBER 28,1999 BY L. ORVIS & R. BULLOCK

DATUM

VERTICAL NAVD 88
HORIZONTAL NAD 83/92

NOTE: TIE DISTANCES ARE IN METERS

SHEET NAME: TIE SHEET

PROJECT NAME: SUNDERLAND
PROJECT NUMBER: BRF 0114(2)

HIGHWAY NO.: TH 3
BRIDGE NO.: 14
OVER: ROARING BRANCH

FILE NAME: /PW/93J009/sJ009tie.dgn
PROJECT MANAGER: R. R. WHITCOMB
DESIGNED BY: K.UPMAL

PLOT DATE: 14-DEC-2005
DRAWN BY: G.HITCHCOCK
IPARM NAME: sJ009t12.i
SHEET 9 OF 67

Metric

CONSTRUCT GRAVEL DRIVES WITH PAVED APRONS
3+564.0 LT
3+568.0 RT (SKEWED 38.0°)
3+593.4 RT
4+015.0 RT

CONSTRUCT PAVED DRIVE
3+695.0 LT (SKEWED 14.0°)

CONSTRUCT PAVED APRON
3+520.0 RT - 3+545.0 RT

450 PIPE OPTION
3+577.0 RT - 3+589.6 LT

375 PIPE OPTION
3+571.2 RT - 3+576.6 RT

REMOVE 380 RCP
3+577.5 RT TO LT

REMOVE EXISTING LAID POLE BARRIER
3+539 LT- 3+556.5 LT

HEAVY DUTY STEEL BEAM GUARD RAIL
3+611.8 - 3+625.6 LT
3+615.1 - 3+625.8 RT
3+655.2 - 3+664.0 RT
3+655.4 - 3+667.2 LT

BRIDGE RAILING HEAVY DUTY STEEL BEAM / FASCIA MOUNTED / STEEL TUBING
3+625.6 - 3+655.4 LT
3+625.8 - 3+655.2 RT

ANCHOR FOR STEEL BEAM RAIL
3+613.8 LT
3+616.7 RT
3+663.3 RT
3+665.3 LT

REMOVE STONE WALLS
3+575.5 - 3+582.0 RT
3+666.0 - 3+674.5 LT

REMOVE EXISTING CONCRETE PAD
3+585.5 LT- 3+607.5 LT

REMOVAL OF EXISTING RAILING
3+650.0 - 3+657.5 RT

REMOVING & RESETTING FENCE
3+568.0 LT (3 SECTIONS)

RELOCATE MAILBOX, SINGLE SUPPORT
FROM 3+606.1 RT TO 3+588.0 LT
FROM 3+675 LT +/- TO 3+687.9 LT

CONSTRUCT SPECIAL DITCH
3+589.6 - 3+631.8 LT
3+600.0 - 3+625.5 RT
3+655.9 - 3+685.0 LT

REMOVING SMALL TREES (SEE NOTE 1.)
3+578.7 RT (ASH)
4+026.4 RT (MAPLE)
4+028.5 RT (ASH)

REMOVING LARGE TREES (SEE NOTE 1.)
3+567.9 LT (ASH)
3+694.0 LT (MAPLE)
4+027.0 RT (ASH)

EVERGREEN TREES
3+664.0 (12.0 LT)
3+668.0 (15.0 LT)
3+671.5 (13.0 LT)
3+676.0 (16.0 LT)
3+682.0 (11.0 LT)
3+682.0 (16.0 LT)
3+685.5 (13.0 LT)

NOTES

1) REMOVAL OF TREES TO BE PAID FOR UNDER CLEARING AND GRUBBING

2) RADIUS OF CURVES LISTED IN METERS

3) LOCATIONS INDICATED FOR EVERGREEN TREES ARE APPROXIMATE. FINAL LOCATION TO BE DETERMINED BY ENGINEER & PROPERTY OWNER.

VT STATE PLANE GRID

(N) - NEW
(R) - REMOVE
(S) - SAVE

MAINLINE CURVE DATA
Δ = 89°-58'-55.7" LT
R = 83.000
T = 82.974
L = 130.350
E = 34.361
BANK = 0.040 M/M

STATION 3+627.000
BEGIN BRIDGE
F.G. = 285.768

STATION 3+654.000
END BRIDGE
F.G. = 285.773

MAINLINE STATION 3+620.000 =
CHANNEL LINE STATION 2+035.000
Δ = 95°-57'-00"

MAINLINE STATION 3+670.000 =
SIDELINE STATION 4+000.000
Δ = 90°-00'-00"

SIDELINE STATION 4+002.700
EDGE OF MAINLINE SHOULDER
BEGIN SIDELINE

EXISTING BRIDGE DATA
3-STEEL BEAMS ON CONCRETE
FACED STONE ABUTMENTS
BRIDGE WIDTH = 3.660m (12 ft)
ROADWAY WIDTH = 5.800m (19 ft)
CLEAR SPAN = 25.000m (82 ft)
BRIDGE LENGTH = 25.600m (84 ft)
CLEAR HEIGHT = 2.400m (8 ft)

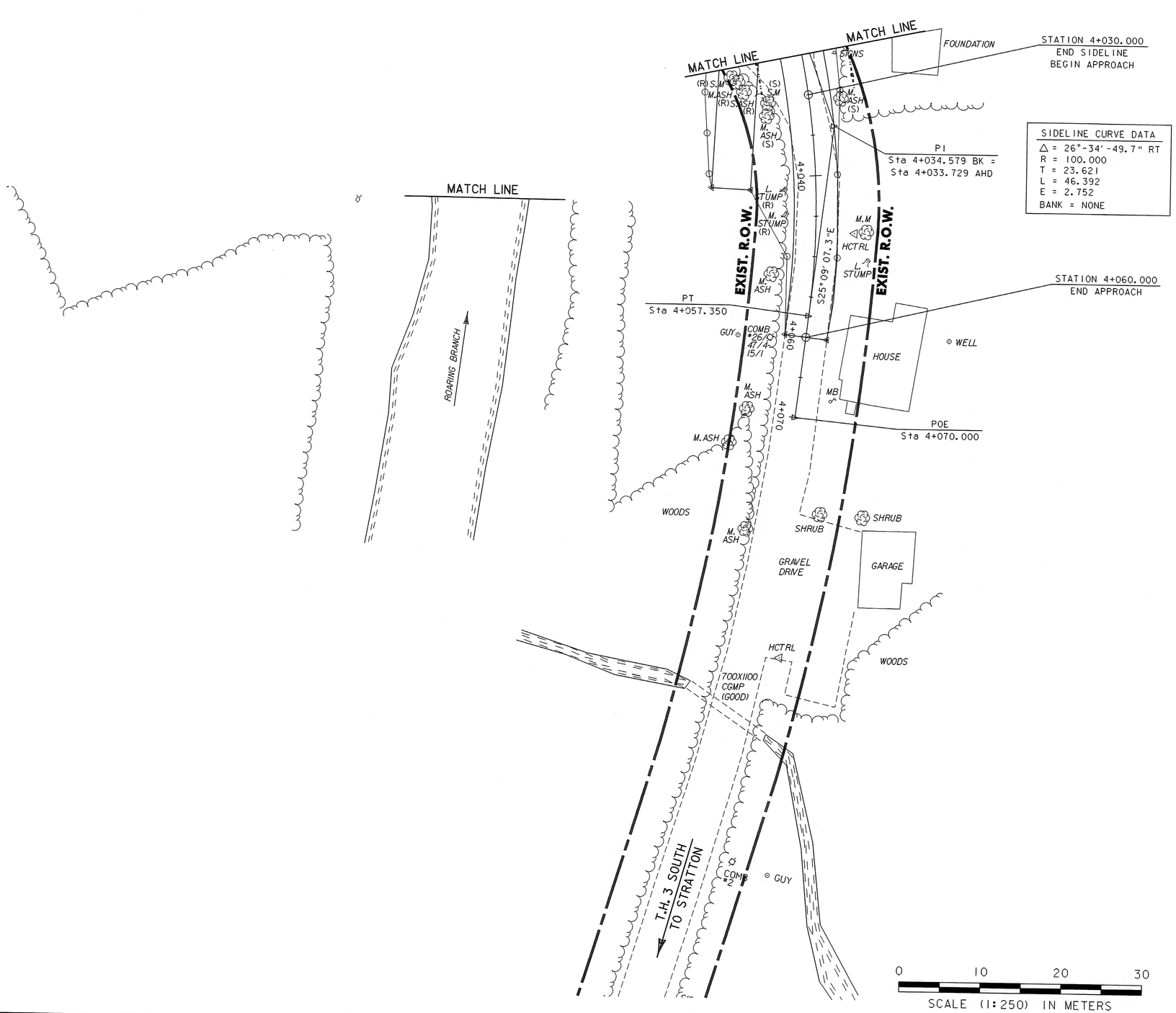
BM #1
CHISELED SQUARE IN ROCK OUTCROP
ELEVATION = 283.583

BM #2
SPIKE IN ROOT
MEDIUM STUMP
ELEVATION=286.165

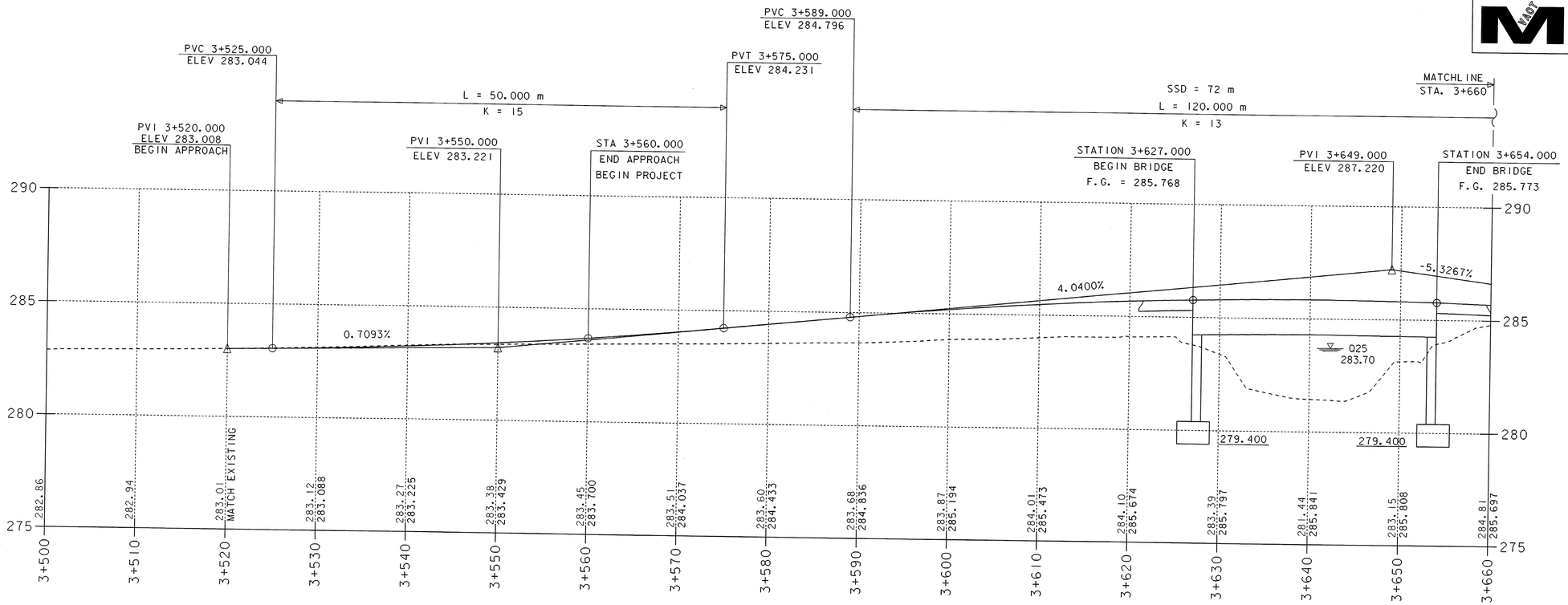
0 10 20 30
SCALE (1:250) IN METERS

SHEET NAME:	PLAN SHEET
PROJECT NAME:	SUNDERLAND
PROJECT NUMBER:	BRF 0114(2)
HIGHWAY NO.:	TH 3
BRIDGE NO.:	14
OVER:	ROARING BRANCH
FILE NAME:	/PW/93J009/sj009bdr.dgn
PROJECT MANAGER:	R. R. WHITCOMB
DESIGNED BY:	K.UPMAL
PLOT DATE:	14-DEC-2005
DRAWN BY:	K.UPMAL
IPARM NAME:	sj009pll.1
SHEET	10 OF 67

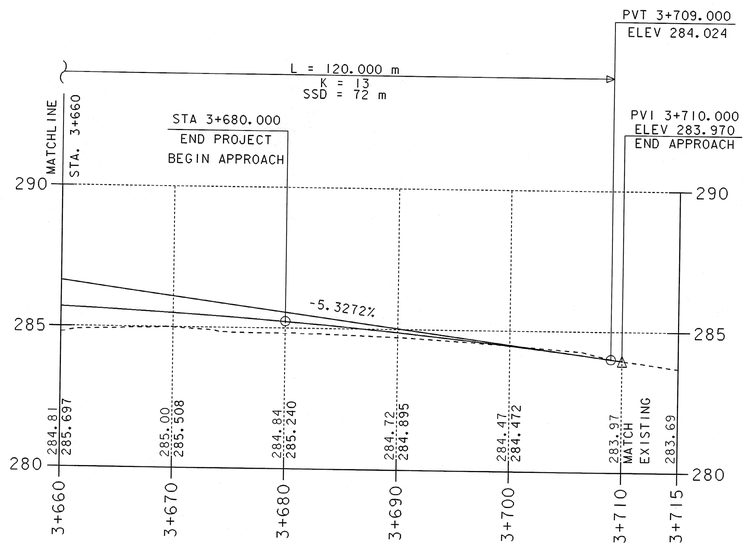
VTrans Metric



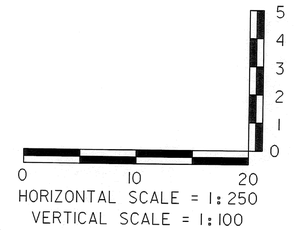
SHEET NAME:	PLAN SHEET #2		
PROJECT NAME:	SUNDERLAND	HIGHWAY NO.:	TH 3
PROJECT NUMBER:	BRF 0114(2)	BRIDGE NO.:	14
		OVER:	ROARING BRANCH
FILE NAME:	/PW/93j009/sj009bdr.dgn	PLOT DATE:	14-DEC-2005
PROJECT MANAGER:	R. R. WHITCOMB	DRAWN BY:	K.UPMAL
DESIGNED BY:	K.UPMAL	IPARM NAME:	sj009pl2.i
		SHEET	11 OF 67



MAINLINE PROFILE



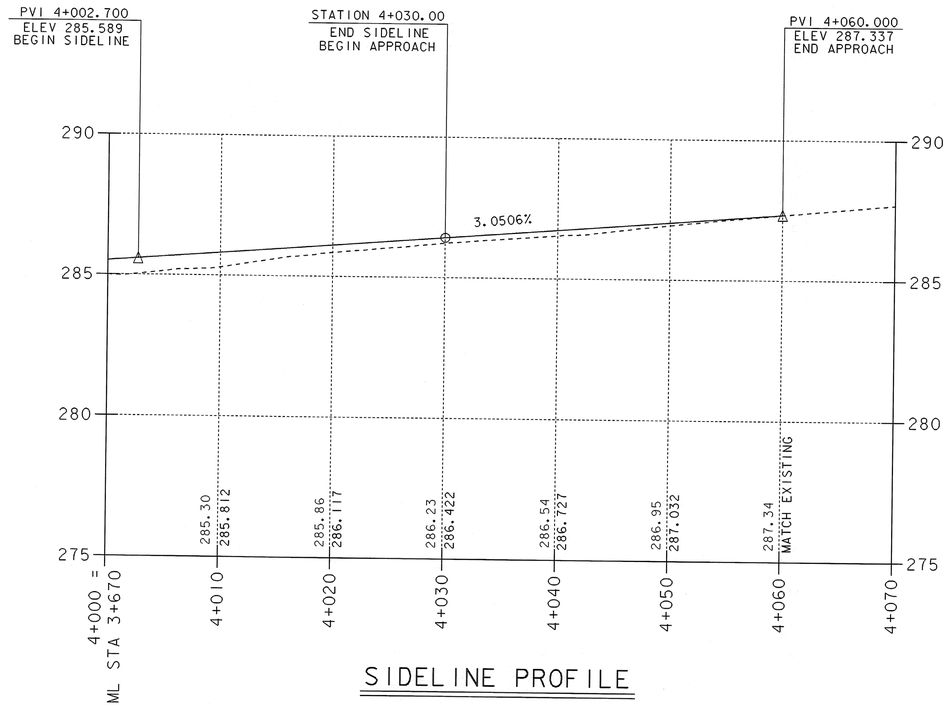
MAINLINE PROFILE CONTINUED



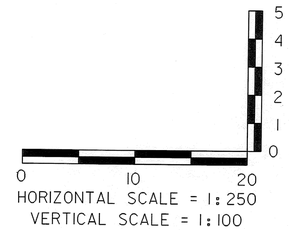
THE GRADES SHOWN TO THE NEAREST HUNDREDTH ARE THE OLD GROUND ALONG THE CENTERLINE. THE GRADES SHOWN TO THE NEAREST THOUSANDTH ARE THE PROPOSED FINISHED GRADE ALONG THE CENTERLINE.

SHEET NAME:	**MAINLINE PROFILE**	
PROJECT NAME:	SUNDERLAND	HIGHWAY NO.: TH 3
PROJECT NUMBER:	BRF 0114(2)	BRIDGE NO.: 14 OVER: ROARING BRANCH
FILE NAME: /PW/93j009/sj009xs.dgn		PLOT DATE: 14-DEC-2005
PROJECT MANAGER: R. R. R. WHITCOMB		DRAWN BY: J. GILMORE
DESIGNED BY: C. CARLSON		IPARM NAME: sj009mp.i
		SHEET 12 OF 67

Metric



SIDELINE PROFILE



HORIZONTAL SCALE = 1:250
VERTICAL SCALE = 1:100

THE GRADES SHOWN TO THE NEAREST HUNDREDTH ARE THE OLD GROUND ALONG THE CENTERLINE. THE GRADES SHOWN TO THE NEAREST THOUSANDTH ARE THE PROPOSED FINISHED GRADE ALONG THE CENTERLINE.

SHEET NAME:	**SIDELINE PROFILE**		
PROJECT NAME:	SUNDERLAND	HIGHWAY NO.:	TH 3
PROJECT NUMBER:	BRF 0114(2)	BRIDGE NO.:	14
		OVER:	ROARING BRANCH
FILE NAME:	/PW/93J009/sJ009xs.dgn	PLOT DATE:	14-DEC-2005
PROJECT MANAGER:	R. R. WHITCOMB	DRAWN BY:	K.UPMAL
DESIGNED BY:	K.UPMAL	IPARM NAME:	sJ009sp.i
		SHEET	13 OF 67

Metric

DRIVE HORIZONTAL CURVE DATA

DRIVE	1	2	3	4	5
MAINLINE	3+564.000 LEFT	3+568.000 RIGHT	3+593.40 RIGHT	3+695.000 LEFT	S/L 4+010.000 RIGHT
DELTA	28 -26'-07.6 LT	14 -53'-53.6" LT	37 -17'-35.7" RT		25 -17'-19.2 LT
RADIUS	15.000	20.000	12.000		28.000
TANGENT	3.801	2.615	4.049		6.281
LENGTH	7.444	5.200	7.811		12.358
EXTERNAL	0.474	0.170	0.665		0.696
DELTA	68 -09'-27.2" LT				
RADIUS	11.800				
TANGENT	7.983				
LENGTH	14.037				
EXTERNAL	2.447				

N

VT STATE PLANE GRID

POE
Sta 10+035.000
PT
Sta 10+032.934

PI
Sta 10+026.880

PC
Sta 10+018.807
PT
Sta 10+018.231

PC
Sta 3+569.741

PC
Sta 10+010.786

PI
Sta 10+014.587

MAINLINE Sta 3+568.000 =
DRIVE POB Sta 11+000.000
(SKEWED 38.000 DEGREES)

MAINLINE Sta 3+564.000 =
DRIVE POB Sta 10+000.000

MAINLINE Sta 3+593.400 =
DRIVE POB Sta 12+000.000

PC
Sta 11+015.417
PI
Sta 11+018.032
PT
Sta 11+020.617

POE
Sta 11+030.000

POE
Sta 12+028.000

PC
Sta 12+007.805

PI
Sta 12+011.855
PT
Sta 12+015.616

PI
Sta 3+652.715 BK =
Sta 3+617.117 AHD

MATCH LINE

POE
Sta 13+020.000

PT
Sta 3+700.091

POE
Sta 3+715.000

MAINLINE Sta 3+695.000 =
DRIVE POB Sta 13+000.000
(SKEWED 14.000 DEGREES)

POE
Sta 4+000.000

SIDELINE Sta 4+010.000 =
DRIVE POB Sta 14+000.000

PC
Sta 14+000.407
PT
Sta 14+012.766

PC
Sta 4+010.956

Sta 14+000.689

MATCH LINE

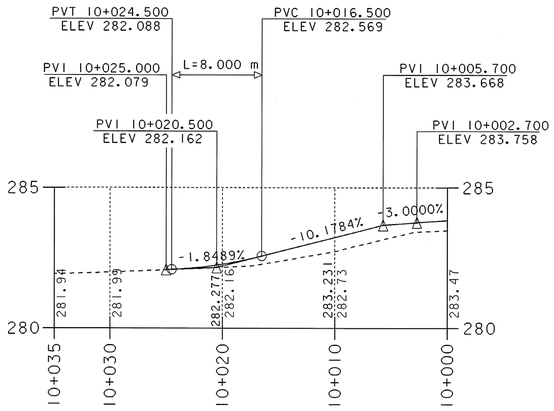
TH 3 SOUTH TO STRATTON

MATCH LINE

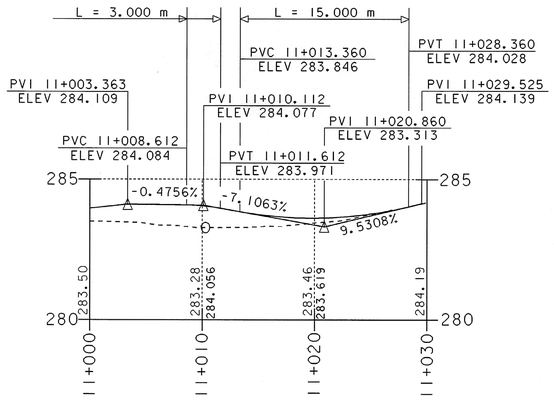
CLEAR ZONE

0 10 20 30
SCALE (1:250) IN METERS

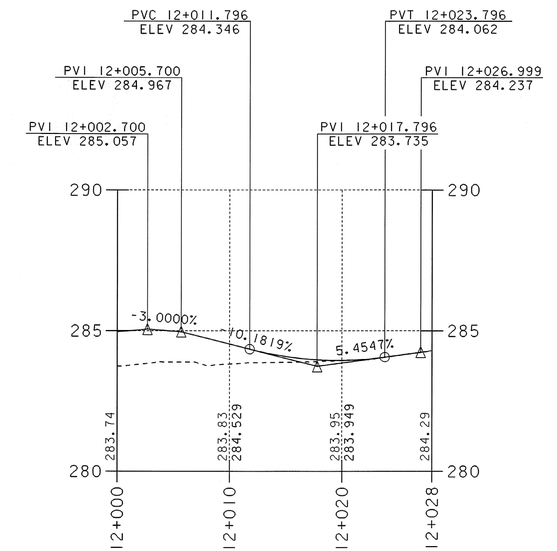
SHEET NAME:	DRIVE ALIGNMENTS
PROJECT NAME:	SUNDERLAND
PROJECT NUMBER:	BRF 0114(2)
HIGHWAY NO.:	TH 3
BRIDGE NO.:	14
OVER:	ROARING BRANCH
FILE NAME:	/PW/93j009/sj009bdr.dgn
PROJECT MANAGER:	R. R. WHITCOMB
DESIGNED BY:	K.UPMAL
PLOT DATE:	14-DEC-2005
DRAWN BY:	K.UPMAL
IPARM NAME:	sj009dal.i
SHEET	14 OF 67



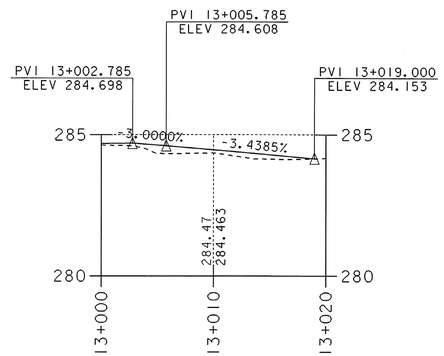
DRIVE PROFILE STA 3+564.000 LEFT



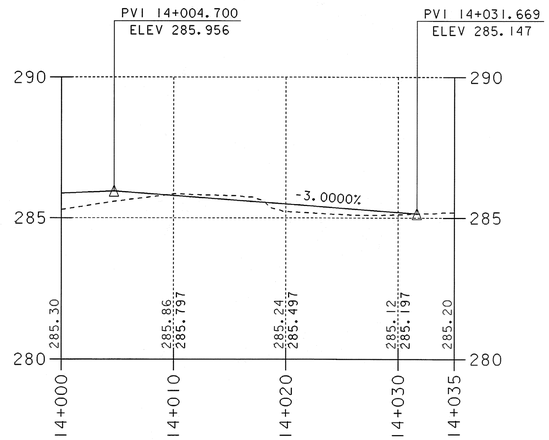
DRIVE PROFILE STA 3+568.000 RIGHT
(SKEWED 38.000 DEGREES)



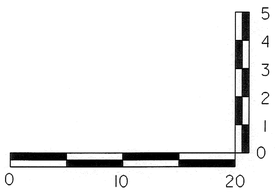
DRIVE PROFILE STA 3+593.400 RIGHT



DRIVE PROFILE STA 3+695.000 LEFT
(SKEWED 14.000 DEGREES)



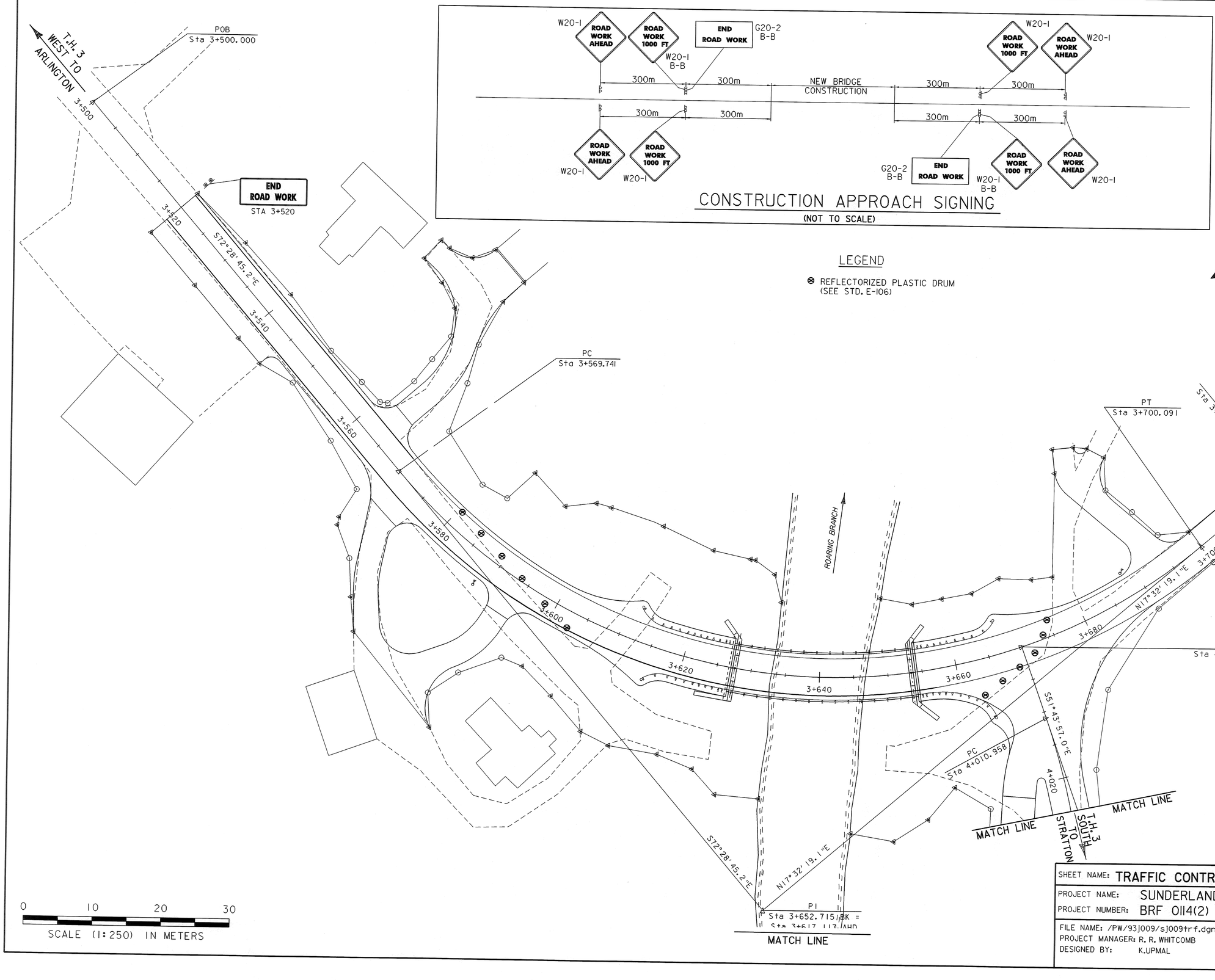
DRIVE PROFILE STA 4+010.000 RIGHT



HORIZONTAL SCALE = 1:250
VERTICAL SCALE = 1:100

THE GRADES SHOWN TO THE NEAREST HUNDREDTH ARE THE OLD GROUND ALONG THE CENTERLINE. THE GRADES SHOWN TO THE NEAREST THOUSANDTH ARE THE PROPOSED FINISHED GRADE ALONG THE CENTERLINE.

SHEET NAME:	DRIVE PROFILES		
PROJECT NAME:	SUNDERLAND	HIGHWAY NO.:	TH 3
PROJECT NUMBER:	BRF 0114(2)	BRIDGE NO.:	14
		OVER:	ROARING BRANCH
FILE NAME:	/PW/93J009/sJ009xs.dgn	PLOT DATE:	14-DEC-2005
PROJECT MANAGER:	R. R. WHITCOMB	DRAWN BY:	K.UPMAL
DESIGNED BY:	K.UPMAL	IPARM NAME:	sJ009dpr.i
		SHEET	15 OF 67



CONSTRUCTION APPROACH SIGNING

(NOT TO SCALE)

LEGEND

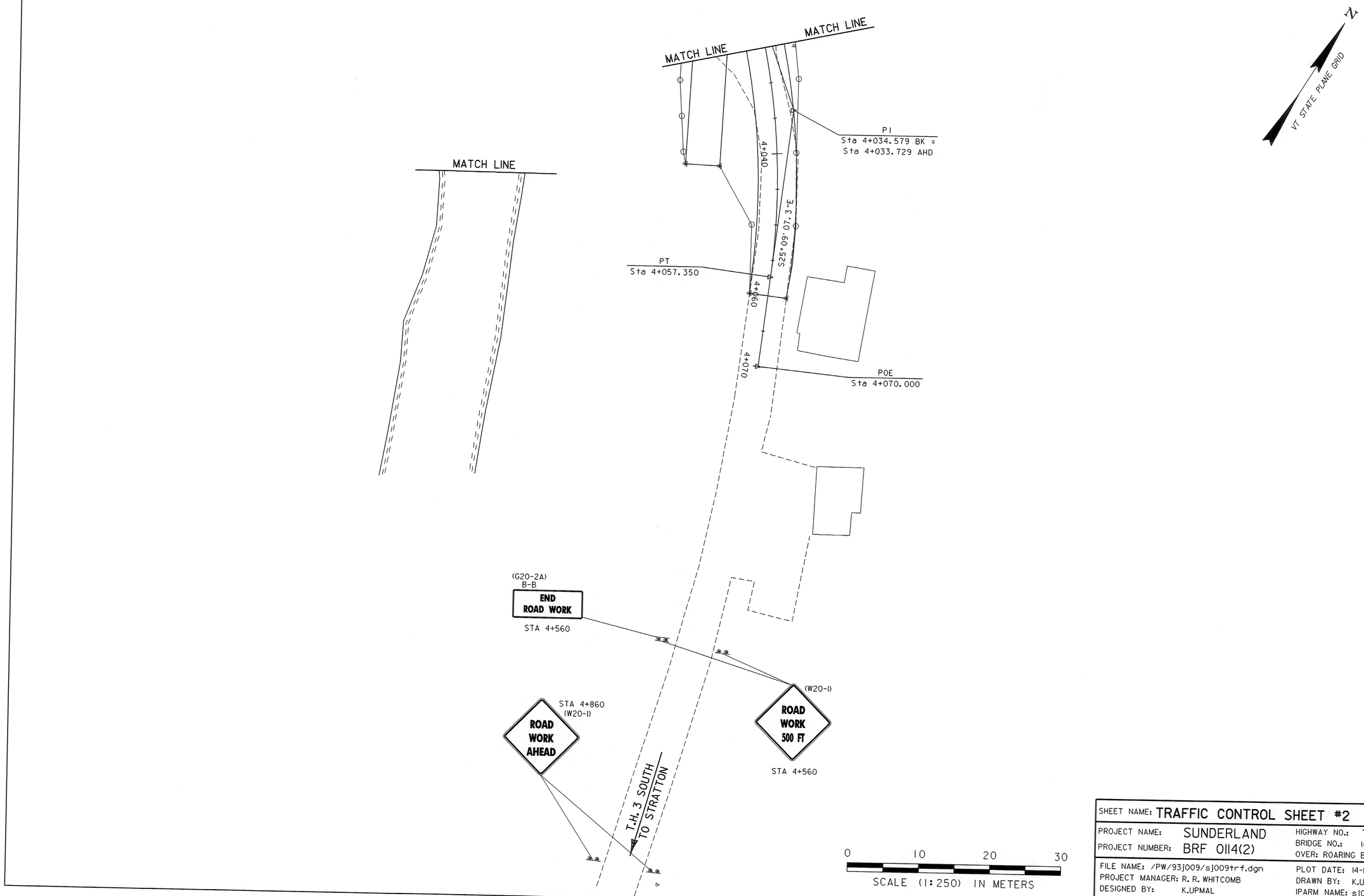
⊗ REFLECTORIZED PLASTIC DRUM (SEE STD. E-106)

N

VT STATE PLANE GRID

SHEET NAME: TRAFFIC CONTROL SHEET	
PROJECT NAME: SUNDERLAND	HIGHWAY NO.: TH 3
PROJECT NUMBER: BRF 0114(2)	BRIDGE NO.: 14
	OVER: ROARING BRANCH
FILE NAME: /PW/93j009/sj009trf.dgn	PLOT DATE: 14-DEC-2005
PROJECT MANAGER: R. R. WHITCOMB	DRAWN BY: K.UPMAL
DESIGNED BY: K.UPMAL	IPARM NAME: sj009tf1.1
	SHEET 16 OF 67

MDOT Metric



SHEET NAME: TRAFFIC CONTROL SHEET #2

PROJECT NAME: SUNDERLAND
PROJECT NUMBER: BRF 0114(2)

HIGHWAY NO.: TH 3
BRIDGE NO.: 14
OVER: ROARING BRANCH

FILE NAME: /PW/93J009/sj009trf.dgn
PROJECT MANAGER: R. R. WHITCOMB
DESIGNED BY: K.UPMAL

PLOT DATE: 14-DEC-2005
DRAWN BY: K.UPMAL
IPARM NAME: sj009tf2.i
SHEET 17 OF 67

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)		CONSISTENCY (COHESIVE SOILS)	
N	DESCRIPTIVE TERM	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.

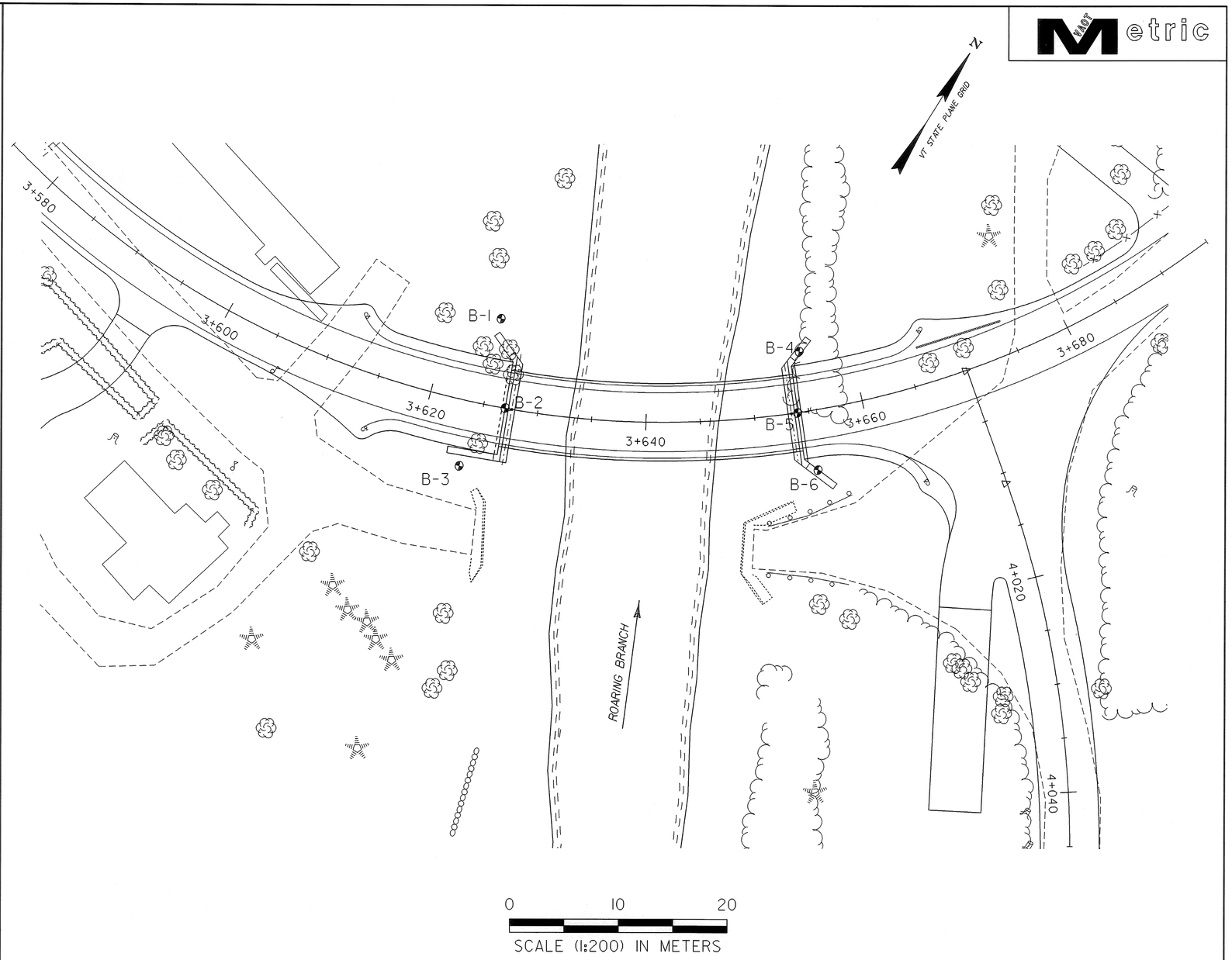
MUCK - Soft organic soil (containing > 10% organic material.

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.



GENERAL NOTES

1. The subsurface explorations shown herein were made between 6/20/00 and 8/1/00 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 NO.	STATION	OFFSET
B-1	3+625	8m LT
B-2	3+627	C/L
B-3	3+624	6m RT
B-4	3+656	5.5m LT
B-5	3+654	C/L
B-6	3+656	5.5m RT

SHEET NAME: **BORING LAYOUT SHEET**

PROJECT NAME: SUNDERLAND
PROJECT NUMBER: BRF 0114(2)
HIGHWAY NO.: TH 3
BRIDGE NO.: 14
RIVER: ROARING BRANCH

FILE NAME: /PW/93j009/sj009bor.dgn
PROJECT MANAGER: R. R. WHITCOMB
DESIGNED BY: C.C. BENDA
PLOT DATE: 14-DEC-2005
DRAWN BY: T. TOUCHETTE
IPARM NAME: sj009bri
SHEET 18 OF 67

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

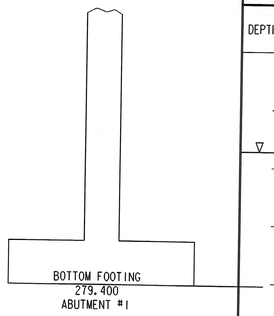
HOLE NO.: B-1
SHEET 1 OF 1
DATE STARTED: 7/31/00
DATE COMPLETED: 8/1/00

PROJECT NAME: SUNDERLAND
SITE NAME: BR 14
STATION: 3+625.00
GROUND EL.: 283.441

PROJECT NUMBER: BRF 0114 (2)
SITE NO.: TH 3
OFFSET: -8.00
G.W. DEPTH: 1.7

BORING CREW
CREW CHIEF: YOUNG
DRILLER: YOUNG
LOGGER: CHABOT
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
		No Sample, Boulders							
		No Sample, Boulders							
		BXDC, 3.95m-4.25m, Boulders							
5		No Sample, Boulders	R						
		BXDC, 5.70m-6.00m, Boulders							
		A-1-b, SaGr HP, brn-yel, Dry, Rec. = 0.15m	R	8.4	46.5	33.9	19.6		
		A-1-a, Gr HP, brn, Dry, Rec. = 0.08m	R	3.8	70.7	19.6	9.7		
			R						
		Hole stopped @ 9.00m							
10									

Drillers Notes:

No water return through-out drilling operation.
4.25m - Changed casing bit.
7.22m - Changed casing bit.

GEOLOGISTS REPORT:

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

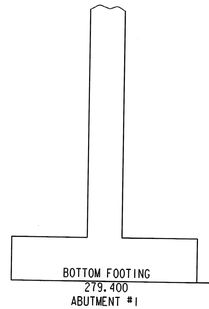
HOLE NO.: B-3
SHEET 1 OF 1
DATE STARTED: 7/27/00
DATE COMPLETED: 7/28/00

PROJECT NAME: SUNDERLAND
SITE NAME: BR 14
STATION: 3+624.00
GROUND EL.: 284.313

PROJECT NUMBER: BRF 0114 (2)
SITE NO.: TH 3
OFFSET: 6.00
G.W. DEPTH:

BORING CREW
CREW CHIEF: YOUNG
DRILLER: YOUNG
LOGGER: CHABOT
ADDITIONAL CREW:

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



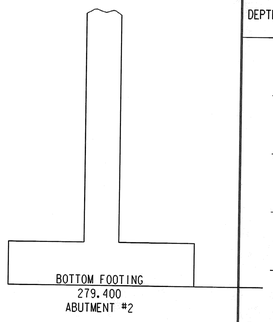
DEPTH	SYMBOL	CLASSIFICATION OF MATERIALS (Description)	BLOWS PER 0.3 m	M.C. %	GRAVEL %	SAND %	FINES %	LL	PI
		No Sample, Boulders							
		BXDC, 3.0m-3.6m, No Sample, Boulders							
5		BXDC, 4.5m-5.4m, No Sample, Boulders							
		BXDC, 6.0m-6.6m, No Sample, Boulders	R						
		BXDC, 7.5m-7.8m, No Sample, Boulders							
		BXDC, 8.1m-9.5m, No Sample, Boulders							
		Hole stopped @ 9.50m							
10									

Drillers Notes:

6.80m - Changed casing bit.
No water return through-out drilling operation.

GEOLOGISTS REPORT:

SHEET NAME:	BORING LOG SHEET		
PROJECT NAME:	SUNDERLAND	HIGHWAY NO.:	TH 3
PROJECT NUMBER:	BRF 0114(2)	BRIDGE NO.:	14
		RIVER:	ROARING BRANCH
FILE NAME:	/PW/93J009/sj009bor.dgn	PLOT DATE:	14-DEC-2005
PROJECT MANAGER:	R. R. WHITCOMB	DRAWN BY:	T. TOUCHETTE
DESIGNED BY:	C.C. BENDA	IPARM NAME:	sj009br2.i
		SHEET	19 OF 67



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

HOLE NO.: B-4
SHEET 1 OF 2
DATE STARTED: 6/23/00
DATE COMPLETED: 7/11/00

PROJECT NAME: SUNDERLAND
SITE NAME: BR 14
STATION: 3+656.00
GROUND EL.: 283.705

PROJECT NUMBER: BRF 0114 (2)
SITE NO.: TH 3
OFFSET: -5.50
G.W. DEPTH:

BORING CREW
CREW CHIEF: YOUNG
DRILLER: YOUNG
LOGGER: CHABOT
ADDITIONAL CREW:

BORING RIG: UNI-MOG
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
		BXDC, 0.30m-5.35m, Boulders							
5									
		BXDC, 6.0m-7.5m, Boulders	R						
		A-1-b, SaGr, Lt/brn, Moist, Rec. = 0.20m	R	10.4	56.8	26.8	16.4		
		BXDC, 7.7m-9.0m, Boulders							
		A-1-b, SiSaGr, Lt/brn, Moist, Rec. = 0.05m	R	13.7	41.3	35	23.7		
10									
		A-1-a, Gr, Lt/brn, Moist, Rec. = 0.05m	R	12.8	79.5	15.2	5.3		
		BXDC, 11.01m-15.00m, Boulders	R						
			R						
15									

GEOLOGISTS REPORT:

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

HOLE NO.: B-4
SHEET 2 OF 2
DATE STARTED: 6/23/00
DATE COMPLETED: 7/11/00

PROJECT NAME: SUNDERLAND
SITE NAME: BR 14
STATION: 3+656.00
GROUND EL.: 283.705

PROJECT NUMBER: BRF 0114 (2)
SITE NO.: TH 3
OFFSET: -5.50
G.W. DEPTH:

BORING CREW
CREW CHIEF: YOUNG
DRILLER: YOUNG
LOGGER: CHABOT
ADDITIONAL CREW:

BORING RIG: UNI-MOG
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
15		BXDC, 15.0m-16.20m, Boulders	R						
		A-1-b, GrSiSa, yel-brn, Moist, Rec. = 0.03m	R	19.4	23.3	51.8	24.9		
		BXDC, 16.67m-18.00m, Boulders	R						
20									
25									

Hole stopped @ 18.00m

Drillers Notes:

Changed casing bit at 0.83m, and 3.00m.
Changed core barrel bit at 1.65m, 5.35m, & 12.35m.
No water return through-out drilling operation.

GEOLOGISTS REPORT:

SHEET NAME:	BORING LOG SHEET		
PROJECT NAME:	SUNDERLAND	HIGHWAY NO.:	TH 3
PROJECT NUMBER:	BRF 0114(2)	BRIDGE NO.:	14
		RIVER:	ROARING BRANCH
FILE NAME:	/PW/93j009/sj009bor.dgn	PLOT DATE:	14-DEC-2005
PROJECT MANAGER:	R. R. WHITCOMB	DRAWN BY:	T. TOUCHETTE
DESIGNED BY:	C.C. BENDA	IPARM NAME:	sj009br3.i
		SHEET	20 OF 67

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

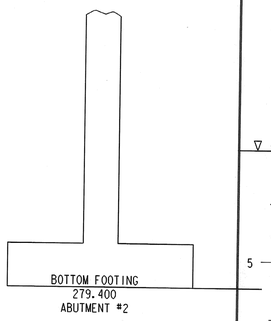
HOLE NO.: B-6
SHEET 1 OF 2
DATE STARTED: 6/20/00
DATE COMPLETED: 6/22/00

PROJECT NAME: SUNDERLAND
SITE NAME: BR 14
STATION: 3+656.00
GROUND EL.: 284.861

PROJECT NUMBER: BRF 0114 (2)
SITE NO.: TH 3
OFFSET: 5.50
G.W. DEPTH: 3.1

BORING CREW
CREW CHIEF: YOUNG
DRILLER: YOUNG
LOGGER: CHABOT
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
		BXDC, 1.5m-4.5m, Boulders							
		No Rec.	R						
5		BXDC, 5.18m-7.65m, Boulders							
		A-4, SiSa, brn, Moist, Rec. = 0.17m	64	20.4	17.4	45	37.6		
		BXDC, 9.00m-9.78m, Boulders							
10		A-2-4, GrSiSa, yel-brn, Moist, Rec. = 0.11m	R	15	21.7	49.3	29		
		BXDC, 10.20m-11.04m, Boulders							
		A-4, SiSa, yel, MTW, Rec. = 0.30m	R	22.8	11.5	49.9	38.6		
		BXDC, 11.70m-12.58m, Boulders, No sample							
		A-4, SaGrSi, yel, Moist, Rec. = 0.09m	R	15.1	33.8	24.9	41.3		

GEOLOGISTS REPORT:

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

HOLE NO.: B-6
SHEET 2 OF 2
DATE STARTED: 6/20/00
DATE COMPLETED: 6/22/00

PROJECT NAME: SUNDERLAND
SITE NAME: BR 14
STATION: 3+656.00
GROUND EL.: 284.861

PROJECT NUMBER: BRF 0114 (2)
SITE NO.: TH 3
OFFSET: 5.50
G.W. DEPTH: 3.1

BORING CREW
CREW CHIEF: YOUNG
DRILLER: YOUNG
LOGGER: CHABOT
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
		No Sample, Boulders, (stone in end of sampler)	R						
		No Sample, Boulders, (stone in end of sampler)	R						
		No Rec.	R						
20		BXDC, 19.50m-19.65m, No Rec. Core barrel bit broke							
		BXDC, 20.13m-21.65m, Boulders							
		Hole stopped @ 21.65m							

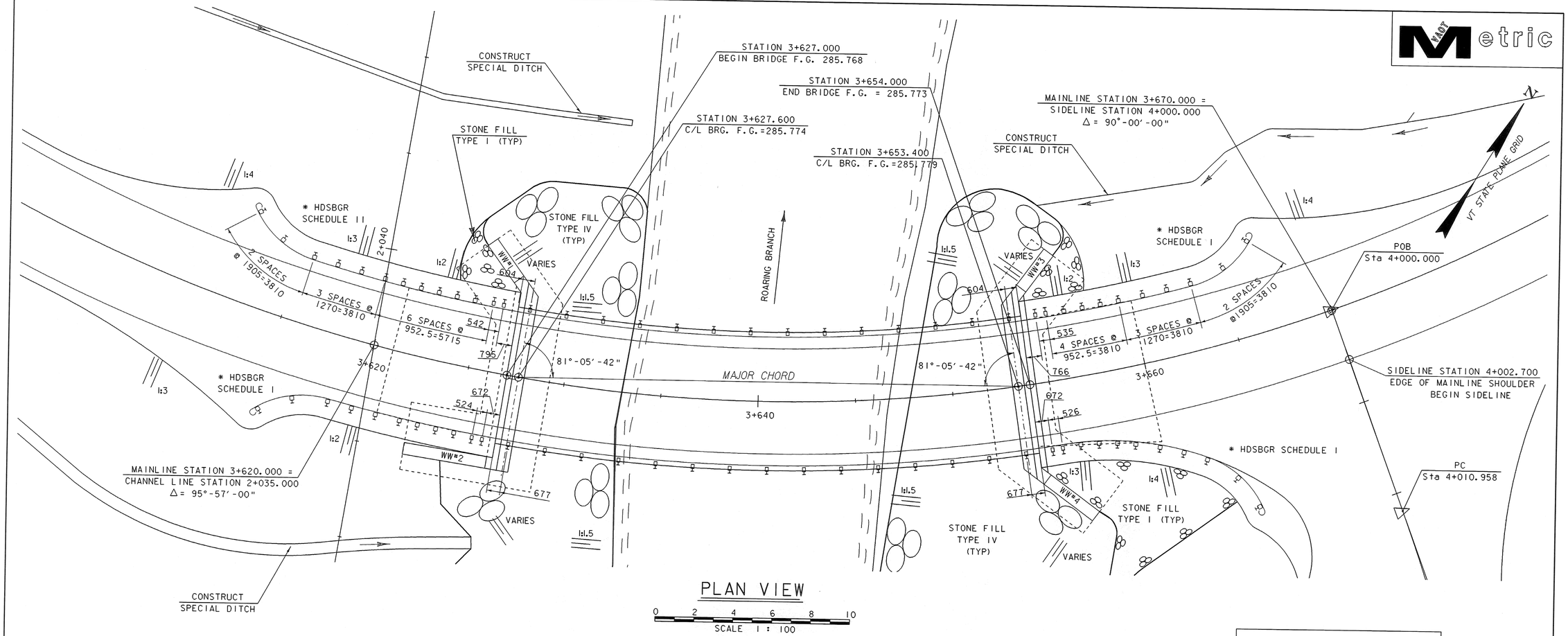
Drillers Notes:

Changed casing bit at 5.85m.
No water return though-out drilling operation.

GEOLOGISTS REPORT:

SHEET NAME:	BORING LOG SHEET
PROJECT NAME:	SUNDERLAND
PROJECT NUMBER:	BRF 0114(2)
HIGHWAY NO.:	TH 3
BRIDGE NO.:	14
RIVER:	ROARING BRANCH
FILE NAME:	/PW/93J009/sj009bor.dgn
PROJECT MANAGER:	R. R. WHITCOMB
DESIGNED BY:	C.C. BENDA
PLOT DATE:	14-DEC-2005
DRAWN BY:	T. TOUCHETTE
IPARM NAME:	sj009br4.i
SHEET	21 OF 67

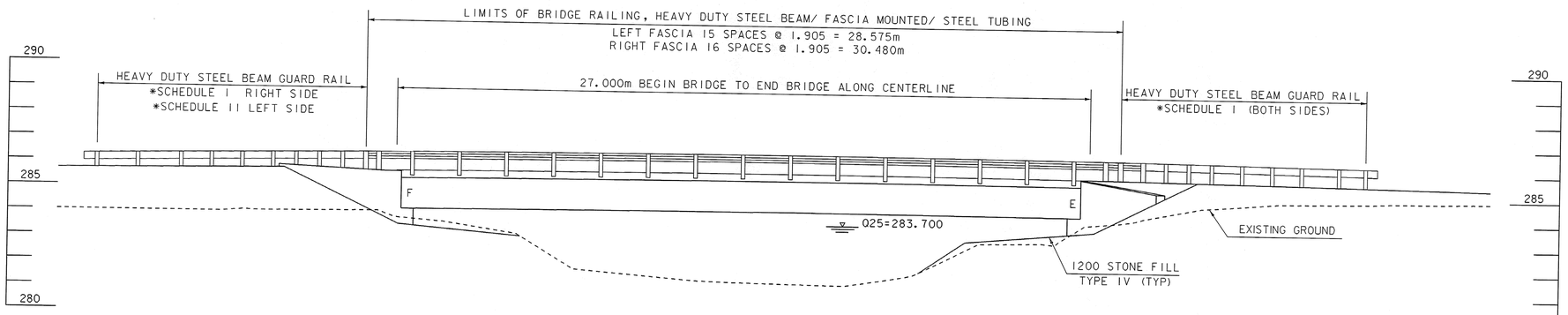
Metric



PLAN VIEW

0 2 4 6 8 10
SCALE 1 : 100

- SCHEDULE I (SEE STD.SB-R6-82M)
- SCHEDULE II (SEE STD.SB-R6-82M)



ELEVATION VIEW AT UPSTREAM FASCIA

0 2 4 6 8 10
SCALE 1 : 100

SHEET NAME:	PLAN AND ELEVATION		
PROJECT NAME:	SUNDERLAND	HIGHWAY NO.:	TH 3
PROJECT NUMBER:	BRF 0114(2)	BRIDGE NO.:	14
		OVER:	ROARING BRANCH
FILE NAME:	/PW/93J009/sJ009pe.dgn	PLOT DATE:	14-DEC-2005
PROJECT MANAGER:	R. R. WHITCOMB	DRAWN BY:	J.SCOTT
DESIGNED BY:	C. CARLSON	IPARM NAME:	sJ009pe.i
		SHEET	22 OF 67

STATE OF VERMONT
AGENCY OF TRANSPORTATION

EROSION CONTROL NARRATIVE

Metric

DESCRIPTION OF PROJECT

This project involves reconstruction of a bridge over the Roaring Branch. The project is on Town Highway 3 (TH3) in the town of Sunderland. A double lane, single span, curved steel girder bridge will be constructed downstream of the existing bridge while traffic is maintained on the existing bridge during construction. Total roadway approach work including both approaches is approximately 93 meters. The limits of construction do not approach any buildings or other structures. No 'Threatened & Endangered Species,' wetlands, or historic resources have been identified.

Total disturbed area (excluding waste, borrow and staging areas):
0.52 ha (1.28 ac.)

SITE INVENTORY & ANALYSIS

OFF SITE DRAINAGE CHARACTERISTICS:
The property surrounding the project site consists of well established vegetation, moderate to steeply sloping, mixed softwood and hardwood forest with well defined drainageways. Due to the nature of the surrounding terrain, runoff water entering the project site will be primarily limited to that which is conveyed along roadway ditches.

DRAINAGE, WATERWAYS, BODIES OF WATER:
Roaring Branch is located in the project area. There are no other waterbodies or wetlands within the project area. 'The Roaring Branch is classified as flashy and steep with mountainous, forested surroundings and containing a streambed of mostly ledge with some boulders, cobbles and gravel.' The contributing drainage area at the bridge crossing is 53.3 sq. km.

TOPOGRAPHY, EXISTING ROADS, BUILDINGS, UTILITIES:
The topography of the project site is mountainous and wooded with TH3 following parallel to Roaring Branch which is contained by steep river banks along each side. Development along TH3 consists of a mix of permanent and seasonal residences. Overhead utility service along TH3 will need to be relocated.

VEGETATION:
A mix of hardwood and softwood trees of all sizes exist along TH3. The two residences near the bridge site have small areas of lawn and landscape plantings. No fields or other agricultural crops exist near the project. Impacts to vegetation will be limited to that which are effected by the construction of the new bridge along a new alignment.

Following construction of the new bridge, the existing bridge and roadway approaches will be removed, the slopes stabilized with stone fill and vegetation reestablished with standard seed and mulch practices.

SOILS:
The soils in the project vicinity have not been mapped; therefore, treat all soils as highly erodible.

SENSITIVE RESOURCE AREAS:
No 'Threatened & Endangered Species' or wetlands have been identified within the project limits and there will be no adverse effect to Historic resources. Archaeological features will be protected with fencing as shown on the Plan. The Roaring Branch is a resource being protected with stone lining of stream banks and pumping sediment to settling basins.

PROXIMITY TO NATURAL OR MAN-MADE WATER FEATURES:
Disturbance of soils near natural or man-made waterways consists of that which is necessary to construct two new concrete bridge abutments and applicable roadway approaches as well as the removal of the existing crossing. Stabilization of disturbances to stream banks will be accomplished with Stone Fill, Type IV.

TEMPORARY EROSION PREVENTION & SEDIMENT CONTROL

Temporary erosion prevention measures to be utilized include:

"Project Demarcation Fencing," denoted -PDF- on the plans, to delineate the limits the contractor can access with construction equipment. This measure limits the area that can be disturbed and exposed to erosion.

Seeding, mulching and biodegradable erosion control matting, or an equivalent product, will be ulitized on all slopes steeper than 3:1 that are not lined with stone fill. The new drain swales from stations 3+591 - 3+632 will require this technique. These areas shall be stabilized within 48 hours of reaching final grade or during intermitant phases of construction activity.

Tracking of all exposed slopes, combined with temporary mulching, will also be utilized on a regular basis. Any slopes to be exposed for several days prior to final grading shall be tracked and mulched. The forecast of rainfall events shall also trigger protection of exposed slopes.

Temporary measures to control sediment transport include:

Silt fence will be installed a distance of 1500 - 3000 (5'-10') from the toe of slopes to prevent sediment transport to down gradient areas. Each line of silt fence will be placed along the contour with ends turned slightly uphill to create a ponding effect should water try to run along the fencing and around the ends. The maximum slope length between separate runs of silt fence is 30 000 (100'). Silt fence shall be installed prior to any upslope earthwork.

Measures such as temporary stone check dams, silt fence, and sand bags shall be checked regulary for accumulation of sediment. Sediment build-up shall be removed when the level of sediment reaches one-half the height of the control measure. Sediments shall be disposed of in an approved area such that they will not be subject to erosion.

Stabilized construction entrances to the project site, staging areas, as well as to waste and borrow areas shall be established. The minimum size of a stabilized construction entrance is 3700 x 15 000 (12' x 50'). All surface water flowing to or diverted towards a construction entrance shall be piped under the stone. Pipes shall be appropriately sized for the contributing area, however, no pipes smaller than 150mm diameter shall be used. See project special provisions for additional information.

Temporary sediment settling basins may or may not be utilized on this project. If a sediment settling basin is to be used for dewatering a cofferdam, it should be sized based upon the following criteria:
(See Sediment Settling Basin Sizing Criteria.)

PERMANENT EROSION CONTROL MEASURES

Several permanent erosion control measures will be utilized:

Roadway ditch slopes are less than 3% slope and therefore will be grass lined. Grass swales are adequate to prevent soil erosion in gently sloping ditches.

Stone lining of the stream banks with Stone Fill, Type IV as specified by VTrans Hydraulics personnel is specified. This stone will protect from stream bank erosion during design storm events.

Stone Fill, Type I will be utilized at culvert outlets and near the top of concrete abutments to dissipate water velocities and reduce erosion potential.

Grass, or other suitable ground cover will be established outside of the roadway limits where stone lining has not been specified.

GENERAL EROSION & SEDIMENT CONTROL GUIDELINES

The Erosion Control Plans are meant as a guideline for preventing erosion and controlling sediment transport. The work outlined in this narrative consists of applying measures throughout the life of the project to control erosion and minimize the sedimentation of receiving waters. The measures include stabilization and structural practices, stormwater controls and other pollution prevention controls.

Coordinate the installation, use, and removal of erosion and sediment control measures with contruction activities to ensure economical, effective and continuous erosion and sediment control. Employ temporary stabilization practices in incremental stages as construction proceeds. The contractor will use additional erosion control measures as necessitated by the sequence of construction and as directed by the Engineer or on-site coordinator. See section 105.23 of the Vermont AOT Standard Specifications for Construction, dated 2001.

Install all erosion and sediment control measures as shown in the Plan or as directed by the Engineer or on-site coordinator. Do not modify the type, size or location of any control without approval of the Engineer or on-site coordinator. Any changes shall be noted on the plans, in the weekly inspection report, and reported to the appropriate authority in a timely manner. Inspect all control measures weekly and after each rainfall event. Repair measures promptly once damage is discovered.

Preventing initial soil erosion is much more effective than treating eroded sediment. Therefore, stabilize all disturbed areas promptly after construction activity has temporarily or permanently ceased. Temporary vegetation shall be established if the area is to be without construction activity for a period of 14 days. Perimeter control measures shall be installed following clearing, but prior to the start of any grubbing or grading activity, install other temporary controls in incremental stages as construction proceeds.

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.

Control only sediment-laden runoff generated by the project site. Collect and route clean offsite runoff around or through the project site using diversion berms, diversion channels, culverts and/or temporary pipes.

Do not allow construction equipment to operate on the downslope side of perimeter control measures.

SEDIMENT SETTLING BASIN SIZING CRITERIA

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

PROJECT NAME:	SUNDERLAND		
PROJECT NUMBER:	BRF 0114(2)		
FILE NAME:	/PW//93j009/sj009ecn.xls	PLOT DATE:	7/21/2004
PROJECT LEADER:	R. R. WHITCOMB	DRAWN BY:	J. GILMORE
DESIGNED BY:	C. CARLSON	CHECKED BY:	C. CARLSON
EROSION CONTROL NARRATIVE		SHEET	23 OF 67

VAOT Metric

LEGEND

ARCHEOLOGICALLY SENSITIVE AREA

PRE-CONSTRUCTION DRAINAGE

POST-CONSTRUCTION DRAINAGE

POB Sta 3+500.000

EXIST. R.O.W.

EXIST. R.O.W.

3+500

3+520

3+540

3+560

3+580

3+600

3+620

3+640

3+660

3+680

S72°28'45.2"E

GRASS

GRAVEL PARKING LOT

BUSHEE, BRIAN K. & ANNA M.

WALSH, JOHN F. III & CINDY STRATTON

MACROBBIE, DUNCAN & GROOM, JANET C.

N/F COTROFELD AUTOMOTIVE, INC.

N/F TOWN OF SUNDERLAND

PC Sta 3+569.741

PT Sta 3+700.091

POE Sta 3+715.000

POE Sta 2+060.000

ROE Sta 4+000.000

PC Sta 4+010.958

PI Sta 3+652.715 BK =
Sta 3+617.111 AHD

N22°08'47.3"W

N17°32'19.1"E

S51°43'57.0"E

ARCH

WOODS

ROARING BRANCH

OHW

EXIST. R.O.W.

EXIST. R.O.W.

EXIST. R.O.W.

EXIST. R.O.W.

P L

RIPARIAN BUFFER

RIPARIAN BUFFER

GODDARD, RICHARD J. II & KATHLEEN S.

HAUGSRUD, JOHN N.

HAUGSRUD, JOHN

MATCH LINE

MATCH LINE

MATCH LINE

MATCH LINE TO STRATTON

T.H. 3 SOUTH

4+025

VT STATE PLANE GRID

N

0 10 20

SCALE 1:250

DATUM

VERTICAL	NAVD 88
HORIZONTAL	SPC 83/92

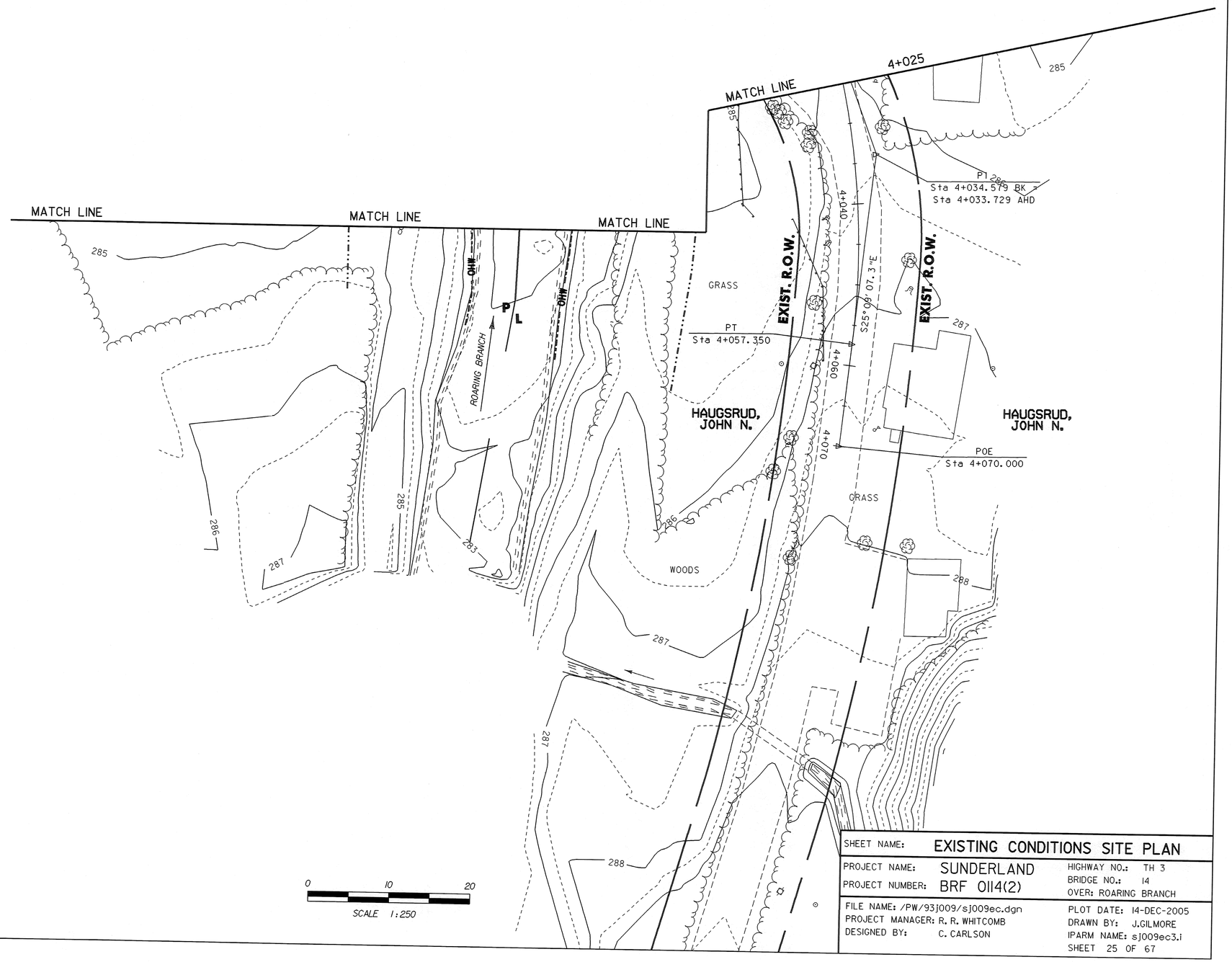
SHEET NAME: EXISTING CONDITIONS SITE PLAN

PROJECT NAME:	SUNDERLAND	HIGHWAY NO.:	TH 3
PROJECT NUMBER:	BRF 0114(2)	BRIDGE NO.:	14
		OVER:	ROARING BRANCH
FILE NAME:	/PW/93J009/sj009ec.dgn	PLOT DATE:	19-DEC-2005
PROJECT MANAGER:	R. R. WHITCOMB	DRAWN BY:	J.GILMORE
DESIGNED BY:	C. CARLSON	IPARM NAME:	sj009ec2.i
		SHEET	24 OF 67

VT STATE PLANE GRID

N

VAOT Metric



0 10 20

SCALE 1:250

DATUM

VERTICAL	NAVD 88
HORIZONTAL	SPC 83/92

SHEET NAME: **EXISTING CONDITIONS SITE PLAN**

PROJECT NAME:	SUNDERLAND	HIGHWAY NO.:	TH 3
PROJECT NUMBER:	BRF 0114(2)	BRIDGE NO.:	14
		OVER:	ROARING BRANCH
FILE NAME:	/PW/93j009/sj009ec.dgn	PLOT DATE:	14-DEC-2005
PROJECT MANAGER:	R. R. WHITCOMB	DRAWN BY:	J.GILMORE
DESIGNED BY:	C. CARLSON	IPARM NAME:	sj009ec3.i
		SHEET	25 OF 67

NOT Metric

NOTES:

- ALL DISTURBED AREAS OUTSIDE DRIVE AND ROADWAY LIMITS SHALL BE SEEDED & MULCHED.
- NO STABILIZED CONSTRUCTION ENTRANCE LOCATION OR DETAILS HAVE BEEN SHOWN, HOWEVER, THEY SHALL BE INCLUDED ON THE CONTRACTORS EROSION PREVENTION AND SEDIMENT CONTROL PLAN.

LEGEND

- ARCHEOLOGICALLY SENSITIVE AREA
- PRE-CONSTRUCTION DRAINAGE
- POST-CONSTRUCTION DRAINAGE
- SILT FENCE
- EROSION MATTING
- PDF — PROJECT BOUNDARY DEMARCATION FENCE (SNOW FENCE (MOD.-PDF))
- ARCH — ARCHAEOLOGY BOUNDARY DEMARCATION FENCE (SNOW FENCE (MOD.-ARCH))

POB Sta 3+500.000

STATION 3+520.000 BEGIN APPROACH

STATION 3+560.000 END APPROACH BEGIN PROJECT

STATION 3+627.000 BEGIN BRIDGE F.G. = 285.768

STATION 3+654.000 END BRIDGE F.G. = 285.773

STATION 3+680.000 END PROJECT BEGIN APPROACH

STATION 3+710.000 END APPROACH

PC Sta 3+569.741

PT Sta 3+700.091

POE Sta 2+060.000

POE Sta 3+715.000

ROE Sta 4+000.000

S72°28'45.2"E

N22°10'47.3"W

N17°32'19.1"E

S51°43'57.0"E

PC Sta 4+010.958

SIDELINE STATION 4+002.700 EDGE OF MAINLINE SHOULDER BEGINS SIDELINE

POB Sta 2+000.000

REMOVE EXISTING PAVEMENT REPLACE WITH 150 TOPSOIL

PI Sta 3+652.715 BK Sta 3+617.117 AHD

EXIST. R.O.W.

RIPARIAN BUFFER

ROARING BRANCH

GRAVEL PARKING LOT

GRASS

WOODS

MAJOR CHORD

MATCH LINE

MATCH LINE

MATCH LINE

TH 3 SOUTH TO STRATTON

VT STATE PLANE GRID

EROSION AND SEDIMENT CONTROL INDEX	
NO.	DESCRIPTION
1	LINE DITCH WITH SEED & EROSION MATTING
2	ENDS OF FENCE TURNED UPHILL TO CREATE PONDING
3	INSTALL SEDIMENT BASIN

DATUM

VERTICAL NAVD 88

HORIZONTAL SPC 83/92

0 10 20

SCALE 1:250

SHEET NAME: EROSION & SEDIMENT CONTROL PLAN

PROJECT NAME: SUNDERLAND

PROJECT NUMBER: BRF 0114(2)

HIGHWAY NO.: TH 3

BRIDGE NO.: 14

OVER: ROARING BRANCH

FILE NAME: /PW/93J009/sj009ec.dgn

PROJECT MANAGER: R. R. WHITCOMB

DESIGNED BY: C. CARLSON

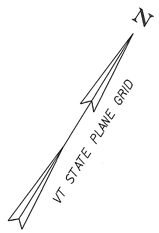
PLOT DATE: 21-DEC-2005

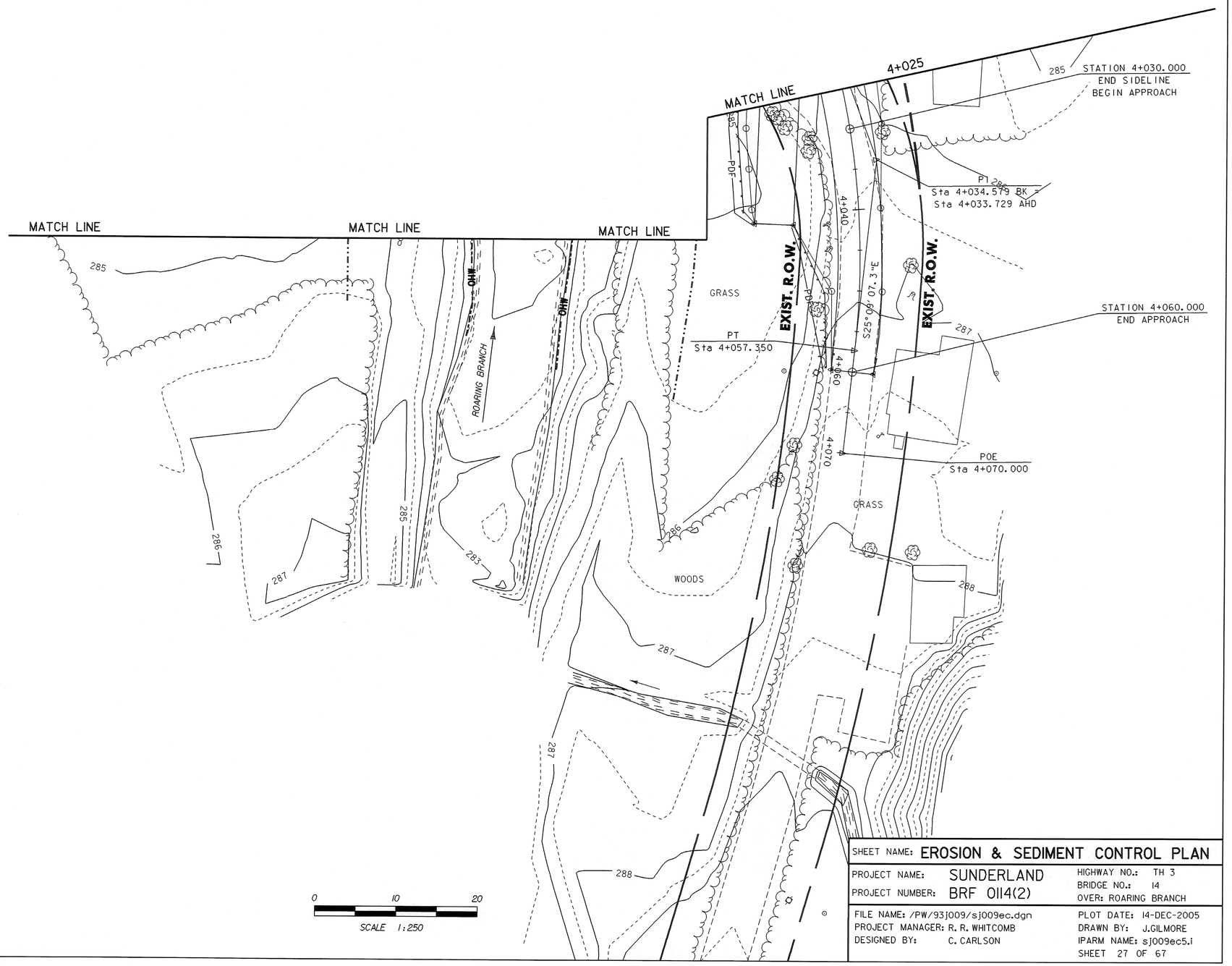
DRAWN BY: J.GILMORE

IPARM NAME: sj009ec4.i

SHEET 26 OF 67

VTrans Metric





0 10 20

SCALE 1:250

DATUM

VERTICAL	NAVD 88
HORIZONTAL	SPC 83/92

SHEET NAME: **EROSION & SEDIMENT CONTROL PLAN**

PROJECT NAME:	SUNDERLAND	HIGHWAY NO.:	TH 3
PROJECT NUMBER:	BRF 0114(2)	BRIDGE NO.:	14
		OVER:	ROARING BRANCH
FILE NAME:	/PW/93J009/sJ009ec.dgn	PLOT DATE:	14-DEC-2005
PROJECT MANAGER:	R. R. WHITCOMB	DRAWN BY:	J.GILMORE
DESIGNED BY:	C. CARLSON	IPARM NAME:	sJ009ec5.i
		SHEET	27 OF 67

VAOT Metric

NOTE: CONTOURS SHOWN REPRESENT PRE-CONSTRUCTION CONDITION. SEE CROSS SECTIONS FOR ROADWAY SLOPES AND GRADE CHANGES.

LEGEND

- ARCHEOLOGICALLY SENSITIVE AREA
- PRE-CONSTRUCTION DRAINAGE
- POST-CONSTRUCTION DRAINAGE

POB Sta 3+500.000

STATION 3+520.000 BEGIN APPROACH

STATION 3+560.000 END APPROACH BEGIN PROJECT

PC Sta 3+569.741

STATION 3+627.000 BEGIN BRIDGE F.G. = 285.768

STATION 3+654.000 END BRIDGE F.G. = 285.773

STATION 3+680.000 END PROJECT BEGIN APPROACH

STATION 3+710.000 END APPROACH

PT Sta 3+700.091

POE Sta 3+715.000

POE Sta 2+060.000

POB Sta 2+000.000

PI Sta 3+652.715 BK = Sta 3+617.111 AHD

POE Sta 4+000.000

S/DELINE STATION 4+002.70 EDGE OF MAINLINE SHOULDER BEGINS S/DELINE

PC Sta 4+010.958

EXIST. R.O.W.

P L

GRASS

GRAVEL PARKING LOT

WOODS

ROARING BRANCH

RIPARIAN BUFFER

S72°28'45.2"E

N22°05'47.3"W

N17°32'19.1"E

S51°43'57.0"E

MATCH LINE

T.H. 3 SOUTH TO STRATTON

VT STATE PLANE GRID

N

0 10 20

SCALE 1:250

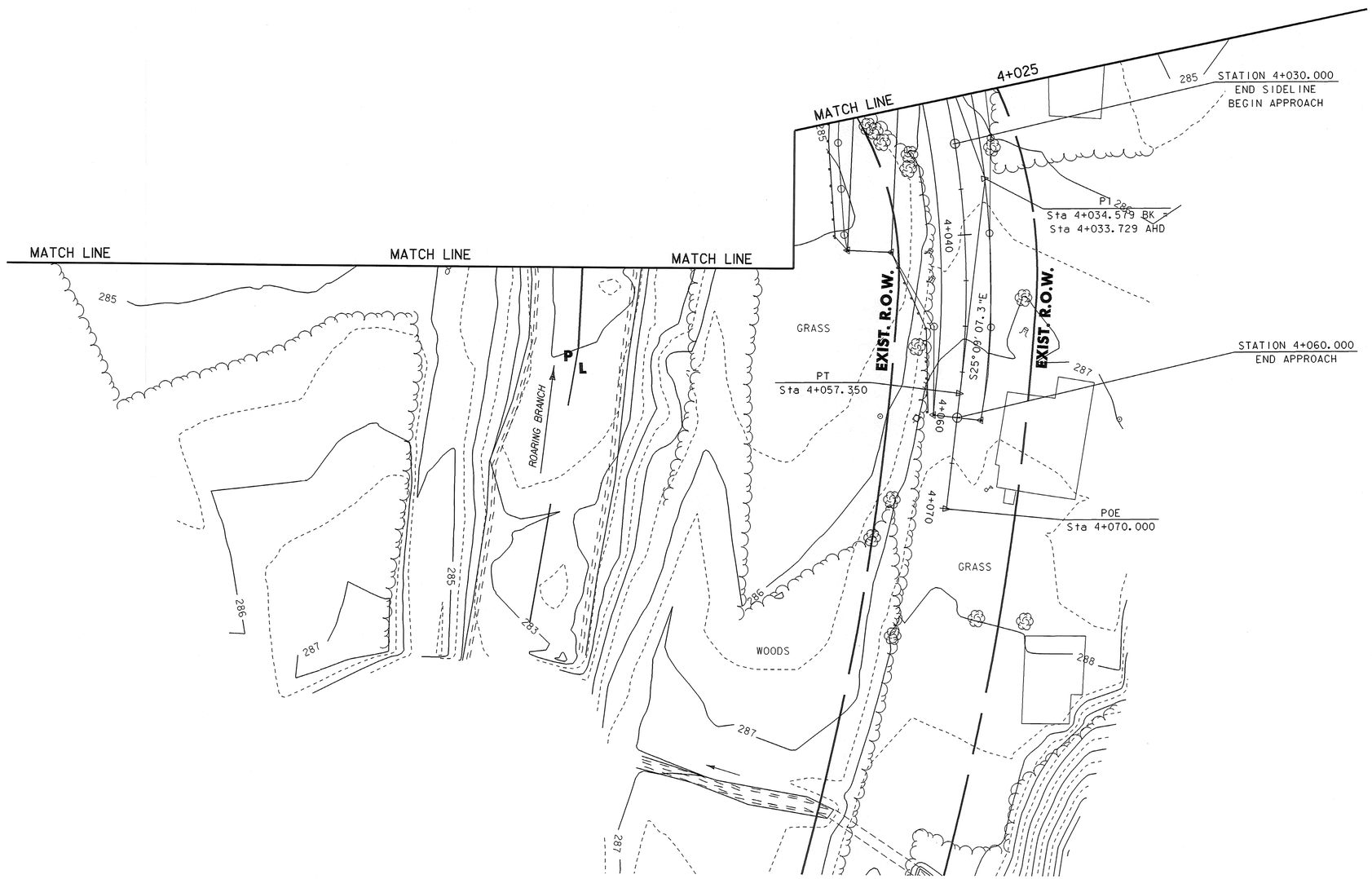
DATUM

VERTICAL	NAVD 88
HORIZONTAL	SPC 83/92

SHEET NAME:	FINAL CONDITIONS SITE PLAN		
PROJECT NAME:	SUNDERLAND	HIGHWAY NO.:	TH 3
PROJECT NUMBER:	BRF 0114(2)	BRIDGE NO.:	14
		OVER:	ROARING BRANCH
FILE NAME:	/PW/93J009/sj009ec.dgn	PLOT DATE:	14-DEC-2005
PROJECT MANAGER:	R. R. WHITCOMB	DRAWN BY:	J.GILMORE
DESIGNED BY:	C. CARLSON	IPARM NAME:	sj009ec6.i
		SHEET	28 OF 67

VT STATE PLANE GRID

NOTE: CONTOURS SHOWN REPRESENT PRE-CONSTRUCTION CONDITION. SEE CROSS SECTIONS FOR ROADWAY SLOPES AND GRADE CHANGES.

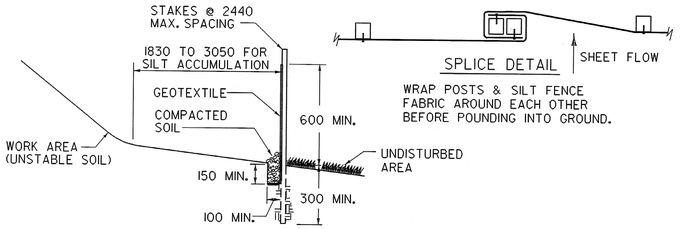


DATUM	
VERTICAL	NAVD 88
HORIZONTAL	SPC 83/92

0 10 20

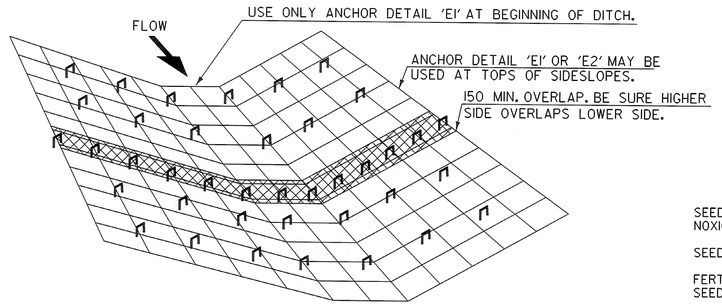
SCALE 1:250

SHEET NAME:	FINAL CONDITIONS SITE PLAN		
PROJECT NAME:	SUNDERLAND	HIGHWAY NO.:	TH 3
PROJECT NUMBER:	BRF 0114(2)	BRIDGE NO.:	14
		OVER:	ROARING BRANCH
FILE NAME:	/PW/93J009/sj009ec.dgn	PLOT DATE:	14-DEC-2005
PROJECT MANAGER:	R. R. WHITCOMB	DRAWN BY:	J.GILMORE
DESIGNED BY:	C. CARLSON	IPARM NAME:	sj009ec7.1
		SHEET	29 OF 67



DETAIL "A"
SILT FENCE

NOTES :
1. DO NOT USE SILT FENCE IN STREAMS, DRAINAGE DITCHES, OR AREAS OF CONCENTRATED FLOW.
2. BACK WITH STAKED-IN-PLACE HAY BALES OR WIRE FENCE IF ADDITIONAL SUPPORT IS NEEDED.
3. MUST BE REMOVED WHEN SOIL IS STABILIZED.



DETAIL "D"
EROSION MATTING FOR DITCHES

1. TO BE USED WHERE SLOPE OF DITCHLINE RANGES FROM 1% - 2.5%. SLOPES EXCEEDING 2.5% SHALL BE LINED WITH STONE FILL, TYPE 1.
2. OVERLAPS SHALL BE 150 MINIMUM IN THE DIRECTION OF FLOW AND STAPLED EVERY 500 MIN. THROUGH BOTH FABRICS.
3. USE 1000 MAX STAPLE SPACING IN OTHER AREAS.

SEEDING FORMULA
RURAL AREAS

% MASS	kg/ha	NAME	PUR %	GERM %
37.5	26.0	CREEPING RED FESCUE	98	85
37.5	26.0	TALL FESCUE	95	90
5.0	4.0	RED TOP	95	90
15.0	10.0	BIRDSFOOT TREFOIL	98	85
5.0	4.0	ANNUAL RYE GRASS	95	85
100.0	70.0			

GENERAL NOTES

SEED MIXTURE: SHALL NOT HAVE A WEED CONTENT EXCEEDING 0.40% BY MASS AND SHALL BE FREE OF ALL NOXIOUS SEED.

SEED: TO BE APPLIED PER SEEDING FORMULAS OR AS DIRECTED BY THE ENGINEER.

FERTILIZER: FORMULA 10-20-10, TO BE USED WITH SEED, APPLIED AT THE RATE OF 560 kg/ha. (HYDRO SEEDERS MAY USE 19-19-19 FORMULA).

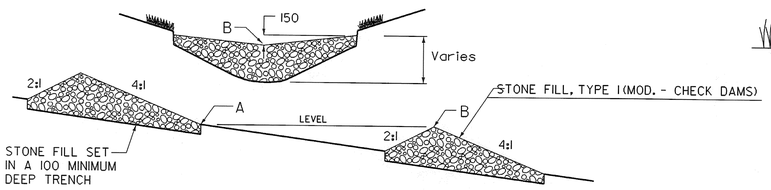
AGRICULTURAL LIMESTONE: TO BE APPLIED AT THE RATE OF 4500 kg/ha, OR AS DIRECTED BY THE ENGINEER.

HAY MULCH: TO BE PLACED ON EARTH SLOPES AT THE RATE OF 4500 kg/ha, OR AS DIRECTED BY THE ENGINEER.

TOPSOIL: TO BE USED WITH SEED AS INDICATED ON THE PLANS, OR AS DIRECTED BY THE ENGINEER.

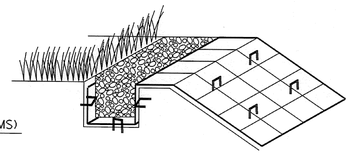
MARKER POSTS: TO BE PLACED AS INDICATED OR AS DIRECTED BY THE ENGINEER.

SLOPE ROUNDING: ALL CUT SLOPES TO BE ROUNDED IN ACCORDANCE WITH STANDARD SHEET B-5M.



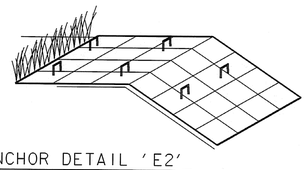
DETAIL "B"
TEMPORARY STONE CHECK DAM

NOTES :
1. CHECK DAMS TO BE USED DURING ESTABLISHMENT OF GRASS LINED DRAINAGE DITCHES
2. LOCATE DOWNSTREAM STRUCTURE SUCH THAT POINT "B" IS APPROXIMATELY LEVEL WITH THE LOWEST GROUND ELEVATION "A" OF THE UPSTREAM STRUCTURE.
3. PAYMENT FOR STONE CHECK DAMS WILL BE MADE FOR THE QUANTITY OF STONE FILL USED. REMOVAL OF THE STONE CHECK DAMS WILL BE INCIDENTAL TO PAY ITEM 613.10 "STONE FILL, TYPE 1 (MOD. - CHECK DAMS)".



ANCHOR DETAIL 'E1'

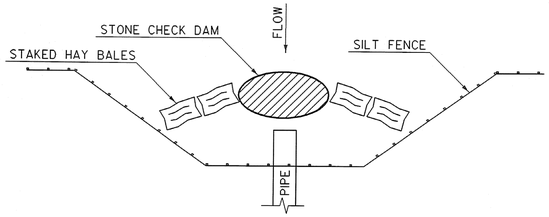
INSERT & STAPLE FABRIC INTO 150 X 150 TRENCH PRIOR TO BACKFILLING & COMPACTING SOIL. USE 3 STAPLE PATTERN EVERY 500.



ANCHOR DETAIL 'E2'

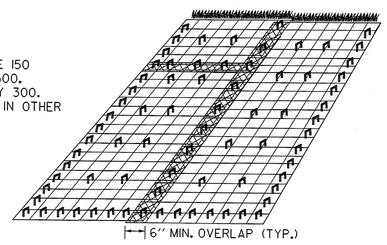
IF THE TOP OF SLOPE IS RELATIVELY FLAT EXTEND MATERIAL APPROXIMATELY 600 AND STAPLE EVERY 500 MINIMUM.

DETAIL "E"
ANCHOR DETAILS FOR EROSION MATTING

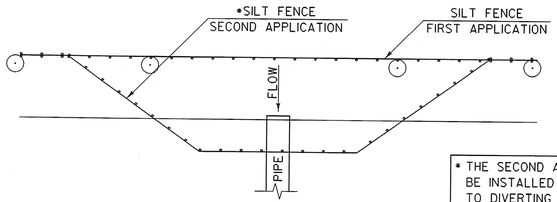


DETAIL "G"
EXISTING PIPE INLET CONTROL

NOTES:
1. ALL FABRIC OVERLAPS SHALL BE 150 MINIMUM WITH STAPLES EVERY 500.
2. STAPLE EDGES OF FABRIC EVERY 300.
3. USE 1000 MAX. STAPLE SPACING IN OTHER AREAS.
4. SEE "EROSION MATTING FOR DITCHES" DETAIL FOR ANCHORING AT TOPS OF SLOPES.

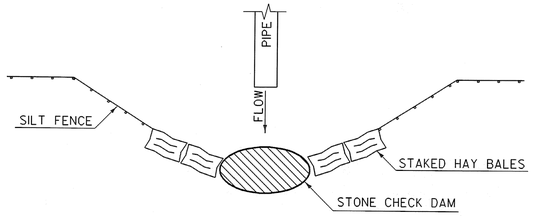


DETAIL "C"
EROSION MATTING FOR SLOPES STEEPER THAN 1:3

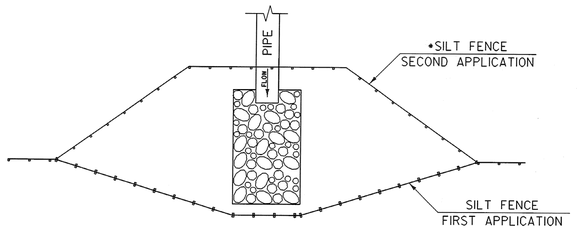


* THE SECOND APPLICATION OF SILT FENCE IS TO BE INSTALLED (REMOVE FIRST APPLICATION) PRIOR TO DIVERTING FLOW INTO NEW PIPE FOR BOTH PROPOSED INLET AND OUTLET CONTROLS

DETAIL "I"
PROPOSED PIPE INLET CONTROL



DETAIL "H"
EXISTING PIPE OUTLET CONTROL



DETAIL "J"
PROPOSED PIPE OUTLET CONTROL

NOTE: DETAILS NOT TO SCALE

SHEET NAME:	EROSION CONTROL DETAILS		
PROJECT NAME:	SUNDERLAND	HIGHWAY NO.:	TH 3
PROJECT NUMBER:	BRF 0114(2)	BRIDGE NO.:	14
		OVER:	ROARING BRANCH
FILE NAME:	/PW/93J009/sj009ec.dgn	PLOT DATE:	21-DEC-2005
PROJECT MANAGER:	R. R. WHITCOMB	DRAWN BY:	STRI
DESIGNED BY:	C. CARLSON	IPARM NAME:	sj009ec8.i
		SHEET	30 OF 67

NO.	STATIONS	DESCRIPTION
1	3+571.100 RT - 3+576.400 RT	NEW 375 x 6800 PIPE OPTION WITH STONE PAD TYPE I AT OUTLET CEMENT RUBBLE MASONRY HEADWALL AT INLET & OUTLET
2	3+577.100 RT - 3+589.600 LT	NEW 450 X 18 800 PIPE OPTION WITH STONE PAD TYPE I AT OUTLET CEMENT RUBBLE MASONRY HEADWALL AT INLET & OUTLET
3	3+589.600 LT - 3+631.800 LT	CONSTRUCT SPECIAL DITCH
4	3+600.000 RT - 3+625.500 RT	CONSTRUCT SPECIAL DITCH
5	3+655.900 LT - 3+685.000 LT	CONSTRUCT SPECIAL DITCH

VAOT Metric

N

VT STATE PLANE GRID

PIPE OPTIONS

CAAP
PCCSP
CPEP

POB
Sta 3+500.000

3+500

APPROX. AERIAL RELOC. ROUTE BY C.V.P.S. AND N.E.T.

STATION 3+520.000
BEGIN APPROACH

S72°28'45.2"E

3+540

HOUSE SERVICE

STATION 3+560.000
END APPROACH
BEGIN PROJECT

PC
Sta 3+569.741

EXIST POLE TO BE REMOVED

NEW POLE

5.5 ANCHOR

EXIST POLE TO BE REMOVED

3+560

ELECTRICAL METER BOX UNDERGROUND (REMOVE)

STATION 3+627.000
BEGIN BRIDGE
F.G. = 285.768

POE
Sta 2+060.000

N22°05'47.3"W

2+060

3+580

3+600

APPROX. AERIAL RELOC. ROUTE BY C.V.P.S. AND N.E.T.

2+040

3+620

3+640

STATION 3+654.000
END BRIDGE
F.G. = 285.773

2+020

REMOVE EXISTING PAVEMENT
REPLACE WITH 150 TOPSOIL

POB
Sta 2+000.000

2+000

S78°28'45.2"E

N17°32'19.1"E

PI
Sta 3+652.715 BK =
Sta 3+617.117 AHD

STATION 3+680.000
END PROJECT
BEGIN APPROACH

STATION 3+710.000
END APPROACH

PT
Sta 3+700.091

POE
Sta 3+715.000

3+715

3+700

N17°32'19.1"E

3+680

POE
Sta 4+000.000

SIDELINE STATION 4+002.700
EDGE OF MAINLINE SHOULDER
BEGIN SIDELINE

3+660

S51°43'57.0"E

PC
Sta 4+010.958

4+020

STATION 4+030.000
END SIDELINE
BEGIN APPROACH

4+040

0 10 20 30
SCALE (1:250) IN METERS

SHEET NAME:	DRAINAGE SHEET
PROJECT NAME:	SUNDERLAND
PROJECT NUMBER:	BRF 0114(2)
HIGHWAY NO.:	TH 3
BRIDGE NO.:	14
OVER:	ROARING BRANCH
FILE NAME:	/PW/93j009/sj009du.dgn
PROJECT MANAGER:	R. R. WHITCOMB
DESIGNED BY:	C. CARLSON
PLOT DATE:	21-DEC-2005
DRAWN BY:	J.GILMORE
IPARM NAME:	sj009dui
SHEET	31 OF 67

STATE OF VERMONT
AGENCY OF TRANSPORTATION

DRAINAGE DETAIL SHEET

Metric

STATION km + m	STATION km + m	POS.	ASKEW no. deg.	INLET/OUTLET TYPE INLET	INLET/OUTLET TYPE OUTLET	DITCH IN	DITCH OUT	PIPE ARCH SPAN mm	PIPE ARCH RISE mm	PIPE ARCH L m	PIPE D mm	PIPE L m	ALLOWABLE OPTIONS PCCSP mm	CAAP mm	RCP CL	CSP mm	CPEP mm	PCCSP PI mm	PIPE ELBOW no. deg.	ES ea	CB ea	SPECIAL	DEPTH DI mm	CONC CLASS B m^3	REINF STEEL kg	DI GRATE type	CHAN ELEV ea	CRM m^2	TRENCH EXCAVATION EARTH m^3	TRENCH EXCAVATION ROCK m^3	COMM EXC m^3	UNC CHAN EXC m^3	STRUCT EXCAV m^3	GRAN BKFILL STRUCT m^3	GRAN BORR m^3	EROS MATT m^2	STONE FILL m^2	STONE FILL type	MARKER POSTS LT ea	MARKER POSTS RT ea	REMARKS
3+571.100	3+576.400	RT		CRM HW	CRM HW						375	6.8	X		X		X										2.3	1.59					3.72			1.25	I			PIPE WITH STONE PAD TYPE I AT OUTLET
3+576.800	3+589.600	RT/LT		CRM HW	CRM HW						450	18.8	X		X		X										3.7	12.80					11.50			0.75	I			PIPE WITH STONE PAD TYPE I AT OUTLET
3+577.500		RT/LT																										8.8												REMOVAL OF 380 RCP
3+589.600	3+631.800	LT																																						CONSTRUCT SPECIAL DITCH
3+600.000	3+625.500	RT																																						CONSTRUCT SPECIAL DITCH
3+655.900	3+685.000	LT																																						CONSTRUCT SPECIAL DITCH
SUB-TOTAL																												23.19					15.22			2.00				
ROUNDING																												0.81					0.78			1.00				
TOTAL																											**6.0**	**24**					**16**			**3**				

PROJECT NAME:	**SUNDERLAND**
PROJECT NUMBER:	**BRF 0114(2)**
FILE NAME:	/PW/93j009/sj009drn.xls
PROJECT LEADER:	R. R. WHITCOMB
DESIGNED BY:	D. BONNEAU
DRAINAGE DETAIL SHEET	
PLOT DATE:	6/13/2005
DRAWN BY:	J. GILMORE
CHECKED BY:	D. BONNEAU
SHEET	32 OF 67

STATE OF VERMONT
AGENCY OF TRANSPORTATION

GENERAL NOTES

Metric

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

2. BRIDGE IS DESIGNED FOR MS 22.5 LIVE LOAD WITH AN ALLOWANCE FOR 80mm FUTURE PAVEMENT. LOAD RATING DOES NOT REFLECT FUTURE PAVEMENT.

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

4. THE CONTRACTOR SHALL REVIEW AND UNDERSTAND ALL APPLICABLE ENVIRONMENTAL PERMITS AND INSURE THAT ALL CONDITIONS ARE MET.

5. THE CONTRACTOR SHALL TAKE ALL PRECAUTIONS NECESSARY TO PREVENT SILTATION OR POLLUTION, ESPECIALLY THE DISCHARGE OF RAW CONCRETE, INTO ANY WATERCOURSE.

6. THE EXISTING SUPERSTRUCTURE SHALL BE REMOVED UNDER THE PAY ITEM 529.20 "PARTIAL REMOVAL OF STRUCTURE." THIS INCLUDES EXISTING BEAMS AND DECKING. THE REMOVED COMPONENTS WILL BECOME THE PROPERTY OF THE CONTRACTOR. THESE COMPONENTS MAY CONTAIN LEAD. THE CONTRACTOR SHALL INDEMNIFY AND HOLD THE STATE, ITS OFFICERS AND EMPLOYEES HARMLESS CONCERNING THE CONTRACTOR'S USE OR DISPOSITION OF THESE COMPONENTS.

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

8. THE EXISTING ABUTMENTS SHALL BE REMOVED UNDER THE PAY ITEM 529.20, "PARTIAL REMOVAL OF STRUCTURE". THE EXISTING ABUTMENTS SHALL BE REMOVED ONLY DOWN TO AN ELEVATION SUCH THAT THE STONE FILL, TYPE IV, MAY BE PLACED. SEE CHANNEL SECTIONS FOR LIMITS OF STONE FILL.

9. THE COST OF ON-PROJECT CONSTRUCTION SIGNS AND BARRICADES REQUIRED SHALL BE PAID FOR UNDER THE ITEM 641.10 "TRAFFIC CONTROL."

10. ALL DIMENSIONS ARE HORIZONTAL OR VERTICAL AND ARE GIVEN AT 20 DEGREES C UNLESS OTHERWISE NOTED.

11. DURING CONSTRUCTION, TRAFFIC WILL BE MAINTAINED ON THE EXISTING STRUCTURE.

12. ACCESS TO DRIVES WITHIN THE PROJECT LIMITS SHALL BE MAINTAINED. WHEN THE CONTRACTOR MUST TEMPORARILY RESTRICT ACCESS TO THE DRIVES, NOTICE TO THE PROPERTY OWNERS SHALL BE GIVEN IN ADVANCE BY THE CONTRACTOR. THIS WORK SHALL BE INCIDENTAL TO ITEM 641.10 "TRAFFIC CONTROL."

13. THE REMOVAL AND/OR RESETTING OF TRAFFIC SIGNS, AS DEEMED NECESSARY BY THE RESIDENT ENGINEER, WILL BE PAID FOR UNDER TO THE ITEM 641.10 "TRAFFIC CONTROL."

14. NOT USED.

15. STONE FILL, TYPE IV SHALL BE PLACED IN FRONT OF THE ABUTMENTS BEFORE THE DECK IS POURED.

16. PAY ITEM 210.10 "CLEARING AND GRUBBING", INCLUDES REMOVAL OF ALL INDIVIDUAL TREES SPECIFIED FOR REMOVAL ON THE PROJECT PLANS.

17. PAYMENT FOR REMOVAL AND RESETTING OF FENCING AT STATION 3+568 LT WILL BE MADE UNDER PAY ITEM 620.50 "REMOVING AND RESETTING FENCE".

18. PAYMENT FOR REMOVAL OF THE CONCRETE PIPE AT STATION 3+577 WILL MADE UNDER THE PAY ITEM 204.20 "TRENCH EXCAVATION OF EARTH".

19. A WATER QUALITY AND QUANTITY TEST WILL BE PERFORMED FOR THE WELL LOCATED AT STA 3+662.5 LT PRIOR TO AND IMMEDIATELY AFTER CONSTRUCTION. THIS WORK WILL BE PERFORMED BY AGENCY STAFF AND/OR DESIGNEES.

20. REMOVAL OF THE LAID POLE BARRIER BETWEEN STATIONS 3+539 - 3+556.5 LT WILL BE PAID UNDER ITEM 621.80 "REMOVAL AND DISPOSAL OF GUARDRAIL" (MOD.).

21. ANY TIMBER, INCLUDING FIREWOOD, TO BE CLEARED BETWEEN STATIONS 3+650 - 3+710 & 4+022 - 4+050 RT SHALL BE RETAINED BY THE PROPERTY OWNERS. THE TREES SHALL BE CUT, LIMBED, LEFT LOG LENGTH AND MOVED OUT OF THE RIGHT-OF-WAY TO A NEARBY AREA ON THE PROPERTY TO BE DETERMINED BY THE RESIDENT ENGINEER AND PROPERTY OWNER. PAYMENT FOR THIS WORK WILL BE INCIDENTAL TO PAY ITEM 201.10 "CLEARING AND GRUBBING".

22. STONE REMOVED FROM THE STONE WALLS BETWEEN STATIONS 3+575 RT - 3+582 RT & 3+666 LT - 3+674.5 LT SHALL BE RETAINED BY THE PROPERTY OWNER. IT SHALL BE STOCKPILED ON THE OWNERS PROPERTY, THE LOCATION TO BE DETERMINED BY THE RESIDENT ENGINEER AND PROPERTY OWNER. PAYMENT FOR THIS WORK WILL BE MADE UNDER PAY ITEM 620.55 "REMOVAL OF EXISTING FENCE" (MOD).

23. THERE WILL BE 7 - (2.5 METER TO 4 METER HIGH) EVERGREEN TREES PLANTED BETWEEN STATIONS 3+664 LT - 3+686 LT. THE LOCATION OF THESE TREES SHALL BE DETERMINED BY THE RESIDENT ENGINEER AND THE PROPERTY OWNER WITH CONSIDERATION GIVEN TO THE LOCATION OF THE DRILLED WELL AND WATERLINE AT STATION 3+662.5 LT. THIS WORK WILL BE PAID FOR UNDER THE ITEM 656.20, "EVERGREEN TREES (WHITE PINE) (2.5M - 4.0M)."

CONCRETE

24. THE HEIGHT OF FILL BEHIND ABUTMENTS WILL BE LIMITED TO THE BRIDGE SEAT ELEVATION UNTIL THE DECK HAS BEEN POURED AND THE CURING PERIOD IS UP.

25. THE KEY IN CONCRETE CONSTRUCTION JOINTS SHALL BE MONOLITHIC AND CONTINUOUS FOR THE FULL LENGTH OF THE JOINT, ANY UPWARD KEY SHALL BE PLACED INTEGRALLY WITH THE CONCRETE BELOW THE JOINT.

26. ALL EXPOSED EDGES OF CONCRETE SHALL BE CHAMFERED 25 mm BY 25 mm UNLESS A TOOLED RADIUS IS CALLED OUT.

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

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

29. REINFORCING PLACEMENT TOLERANCES SHALL BE:
SPACING +/- 25 mm
CLEARANCE +/- 5 mm

30. MINIMUM COVER FOR REINFORCING STEEL SHALL BE 50 mm ALONG THE BACK FACES OF WALLS AGAINST EARTH, 40 mm ALONG THE BOTTOM SURFACE OF THE DECK AND 80 mm ELSEWHERE, UNLESS OTHERWISE NOTED.

31. SURFACES OF BRIDGE SEATS UNDER BEARING DEVICES SHALL BE LEVEL, OTHER BRIDGE SEAT AREAS SHALL BE SLOPED 4.0 % TOWARDS MID-SPAN. THE ENTIRE BRIDGE SEAT SURFACE SHALL BE SMOOTHED WITH A MAGNESIUM FLOAT FINISH.

32. DECK POUR IS TO BE DONE IN ONE POUR WITHIN A MAXIMUM OF EIGHT HOURS. IF CIRCUMSTANCES BEYOND THE CONTRACTOR'S CONTROL PREVENT THIS FROM BEING ACCOMPLISHED, A MINIMUM DELAY OF NINETY-SIX (96) HOURS BETWEEN THE COMPLETION OF ONE DAY'S POUR AND THE BEGINNING OF ANY OTHER POUR WILL BE ADHERED TO. SEE 'DECK PLAN' SHEET FOR DETAIL OF TRANSVERSE BRIDGE SLAB CONSTRUCTION JOINT.

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

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

35. ALL SUBSTRUCTURE CONCRETE SHALL BE CONCRETE, HIGH PERFORMANCE CLASS B UNLESS OTHERWISE NOTED.

36. THE DECK SHALL BE CONCRETE, HIGH PERFORMANCE CLASS A, BROOM FINISHED PERPENDICULAR TO THE DIRECTION OF TRAFFIC. APPLYING A BROOM FINISH WILL NOT BE PAID SEPARATELY, BUT WILL BE MADE INCIDENTAL TO THE PAY ITEM 501.33 "CONCRETE, HIGH PERFORMANCE CLASS A".

STRUCTURAL STEEL

37. NOT USED.

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

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

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

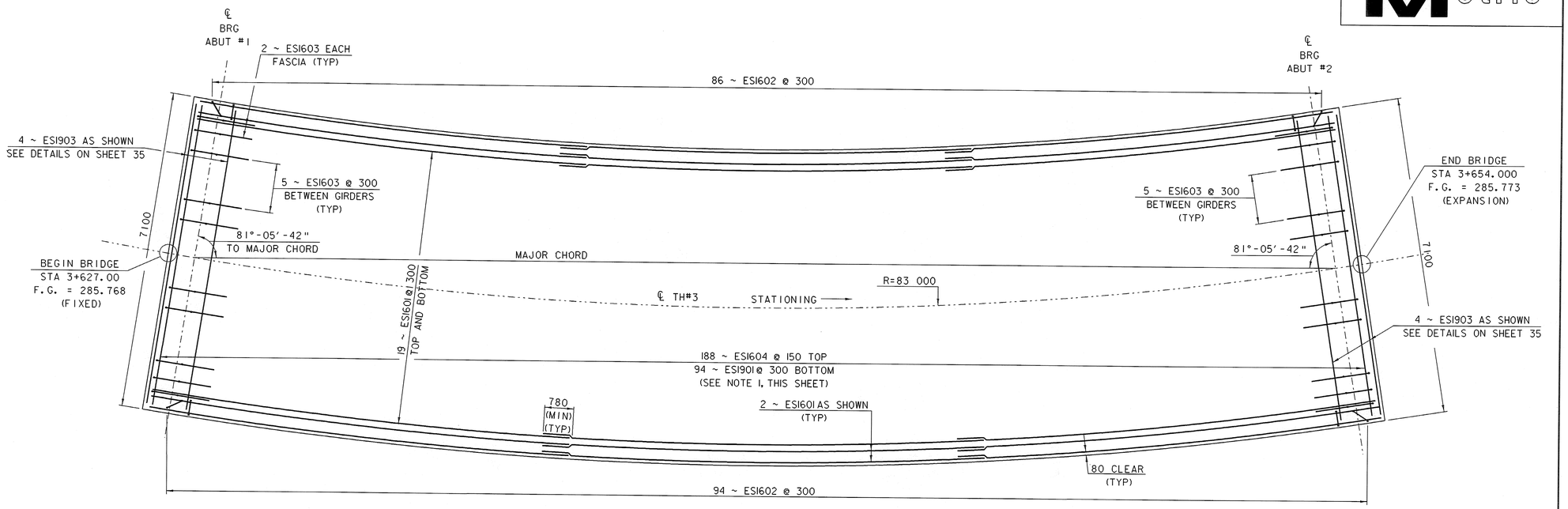
41. ANY HOLES IN THE WEBS OF THE FASCIA BEAMS/GIRDERS THAT ARE NOT OTHERWISE FILLED, SHALL BE FILLED WITH EITHER BUTTON HEAD OR HEX HEAD BOLTS. THESE BOLTS SHALL BE TIGHTENED IN ACCORDANCE WITH VERMONT SPECIFICATION 506.19.

42. FIELD CONNECTIONS SHALL BE MADE WITH 22 mm DIAMETER AASHTO DESIGNATION M 164M TYPE III BOLTS IN 24 mm DIAMETER HOLES, EXCEPT CONNECTION BETWEEN LATERAL BRACING AND BOTTOM FLANGES WHICH REQUIRE 20 DIAMETER BOLTS AND 22 AND 24 DIAMETER HOLES. ALL CONNECTIONS MADE WITHIN PAINTED AREAS SHALL BUT SHALL BE LIMITED TO A MAXIMUM OF 1.2 METER SPACING. BE MADE WITH M 164M TYPE I GALVANIZED BOLTS. SEE FRAMING PLAN SHEET FOR DETAILS.

43. THE DESIGN OF THE FLEMING BRACKETS SHALL BE LEFT UP TO THE CONTRACTOR BUT SHALL BE LIMITED TO A MAXIMUM OF 1.2 METER SPACING.

44. AFTER THE STEEL HAS BEEN ERECTED, ELEVATIONS SHALL BE TAKEN ALONG THE TOP OF THE BEAMS/GIRDERS, AS DIRECTED BY THE ENGINEER, FOR USE IN DETERMINING THE FINISHED GRADE.

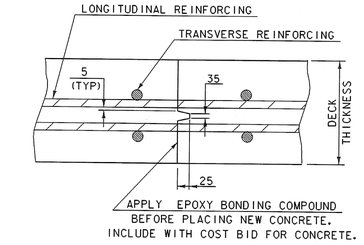
PROJECT NAME:	SUNDERLAND
PROJECT NUMBER:	BRF 0114(2)
FILE NAME: /PW/93j009/sj009notes.xls	PLOT DATE: 6/15/2005
PROJECT LEADER: R. WHITCOMB	DRAWN BY: D. BONNEAU
DESIGNED BY: D. BONNEAU	CHECKED BY: C. MEUNIER
GENERAL NOTES SHEET	SHEET 33 OF 67



DECK PLAN

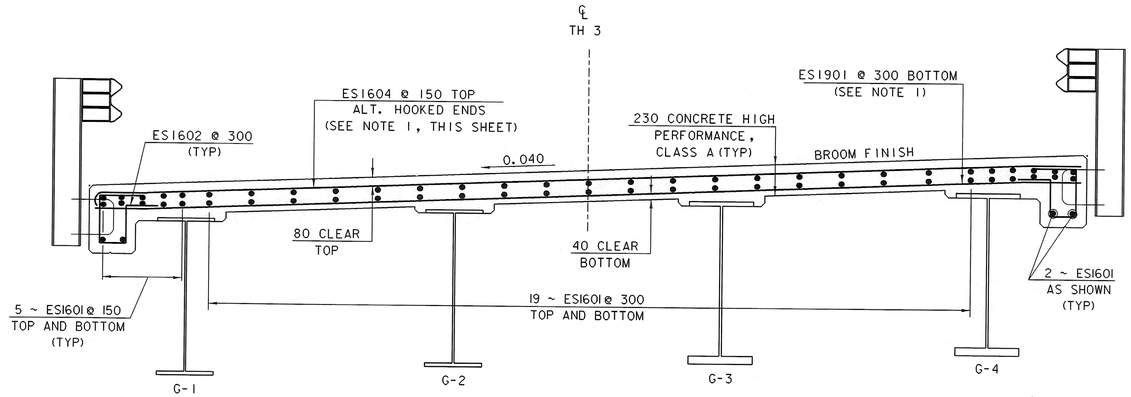
0 1 2 3 4 5

SCALE = 1:50



TRANSVERSE BRIDGE SLAB CONSTRUCTION JOINT DETAILS

SCALE: NTS



DECK REINFORCING STEEL LAYOUT

0 1 2

SCALE = 1:20

NOTES:

1) TRANSVERSE BARS IN DECK SHALL BE PLACED RADIALLY WITH SPACING BETWEEN BARS SET ALONG THE OUTSIDE GIRDER (G4).
2) SEE BRIDGE RAILING AND DECK DETAILS SHEET FOR DECK END DETAILS AND BRIDGE JOINT INFORMATION.

NOTE:

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

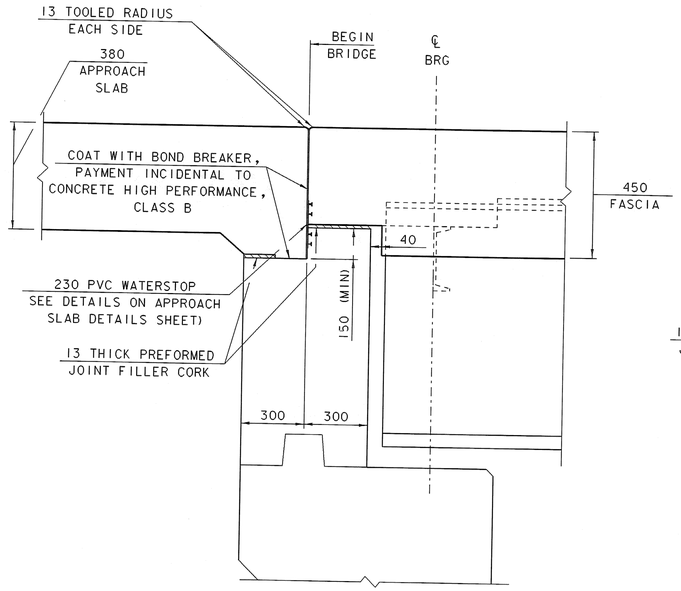
SHEET NAME: **DECK PLAN**

PROJECT NAME: SUNDERLAND
PROJECT NUMBER: BRF 0114(2)

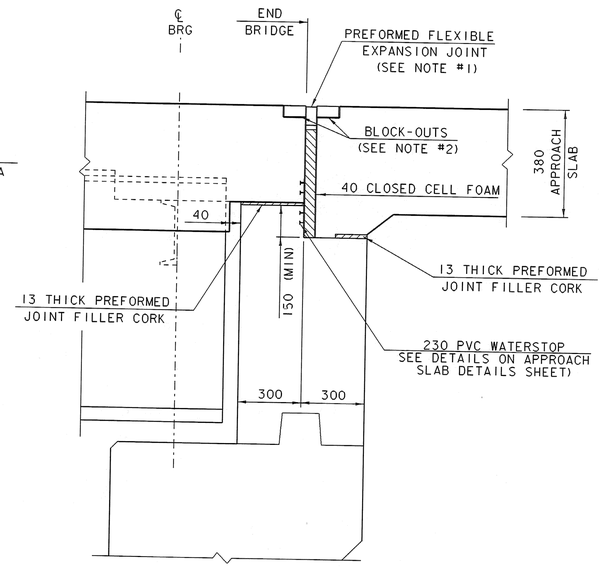
HIGHWAY NO.: TH 3
BRIDGE NO.: 14
OVER: ROARING BRANCH

FILE NAME: /PW/93J009/sj009sup.dgn
PROJECT MANAGER: R. R. WHITCOMB
DESIGNED BY: D. BONNEAU

PLOT DATE: 14-DEC-2005
DRAWN BY: J.GILMORE
IPARM NAME: sj009dkp.i
SHEET 34 OF 67



END DETAIL ABUTMENT #1
AT FASCIA
(FIXED END)

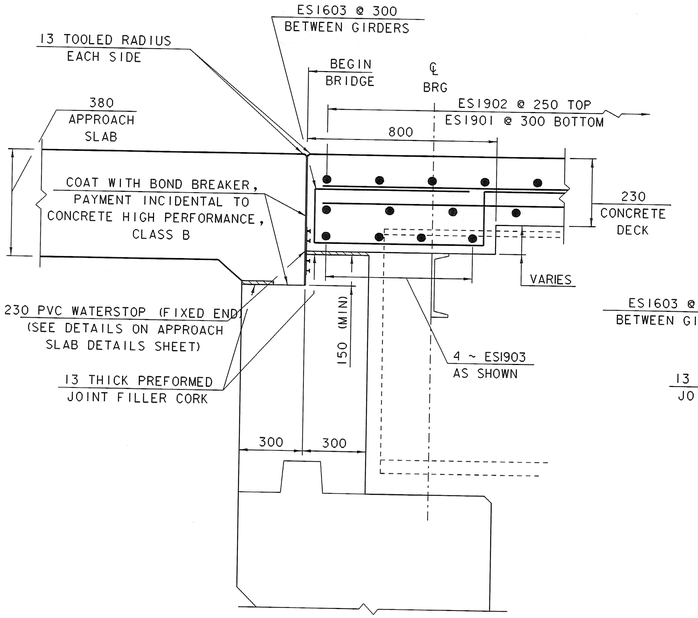


END DETAIL ABUTMENT #2
AT FASCIA
(EXPANSION END)

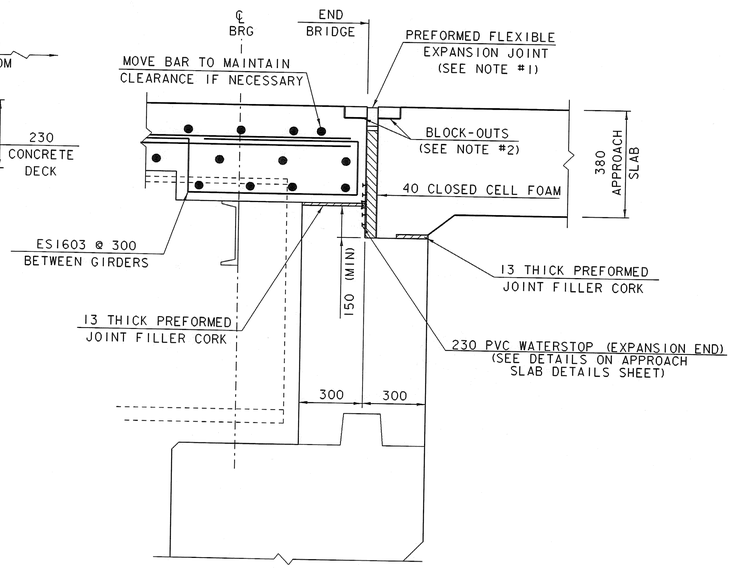
NOTES:

1) EXPANSION JOINT MATERIAL IS A PREFORMED, LOW-DENSITY, CLOSED CELL, IMPERMEABLE POLYETHYLENE FOAM ADHERED ON EACH SIDE WITH EPOXY ADHESIVE. (PRO-FLEX 2000 WITH METAZEAL BY CAPITAL SERVICES OF NY, INC., OR EQUAL)

2) BLOCK-OUTS FOR EXPANSION JOINT MATERIALS SHOWN AS 50 x 80 FOR THE JOINT SYSTEM SHOWN. A DIFFERENT BLOCK-OUT DIMENSION MAY BE REQUIRED BASED ON THE SUPPLIER, CHECK WITH CHOSEN SUPPLIER PRIOR TO POURING CONCRETE DECK. CLEARANCES TO REINFORCING BARS MUST BE MAINTAINED.

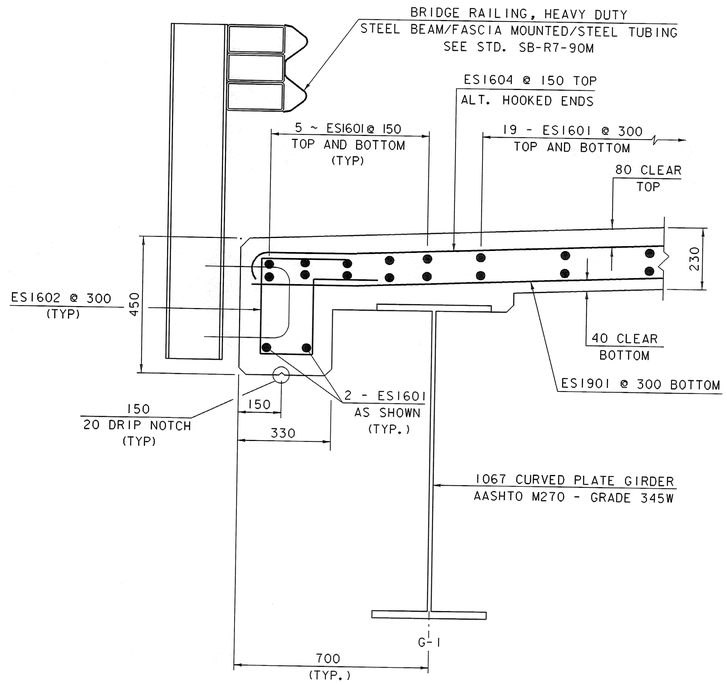


END DETAIL AT ABUT #1
(FIXED END)



END DETAIL AT ABUT #2
(EXPANSION END)

0 0.5 1
SCALE = 1:10



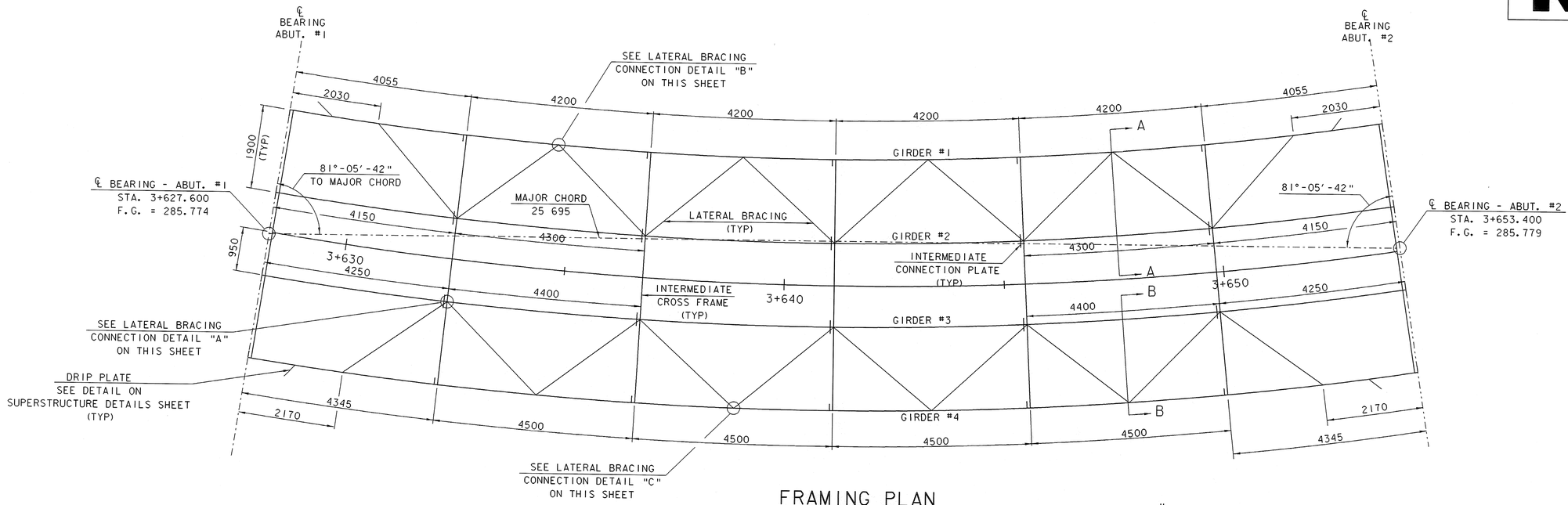
TYPICAL CURB SECTION

NOTE:

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

SHEET NAME:	**BRIDGE RAILING & DECK DETAILS**		
PROJECT NAME:	SUNDERLAND	HIGHWAY NO.:	TH 3
PROJECT NUMBER:	BRF 0114(2)	BRIDGE NO.:	14
		OVER:	ROARING BRANCH
FILE NAME:	/PW/93j009/sj009sup.dgn	PLOT DATE:	14-DEC-2005
PROJECT MANAGER:	R. R. WHITCOMB	DRAWN BY:	J.GILMORE
DESIGNED BY:	D. BONNEAU	IPARM NAME:	sc009dck.i
		SHEET	35 OF 67

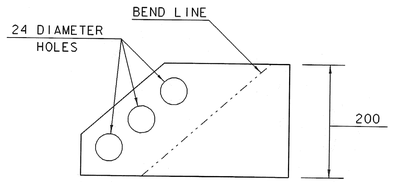
Not Metric



FRAMING PLAN

0 1 2 3 4 5

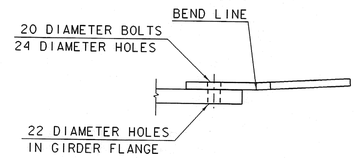
SCALE = 1:50



GUSSET PLATE PLAN

0 0.25 0.5

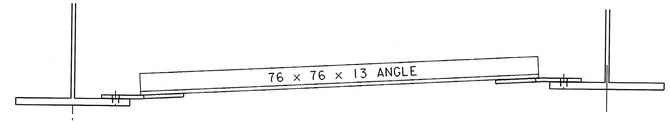
SCALE = 1:5



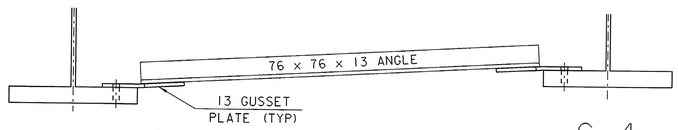
GUSSET PLATE ELEVATION

0 0.25 0.5

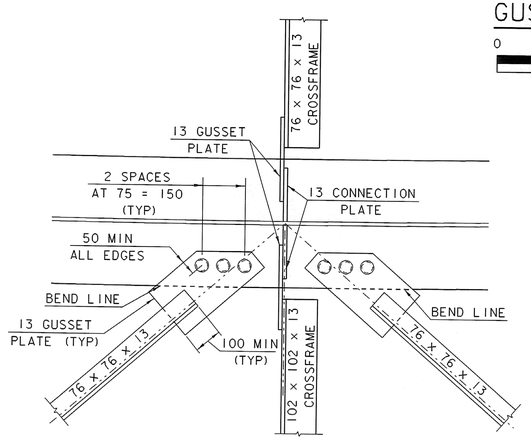
SCALE = 1:5



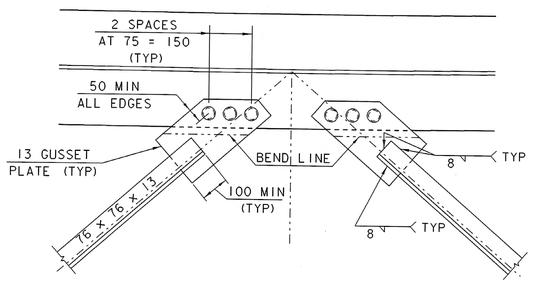
VIEW A-A



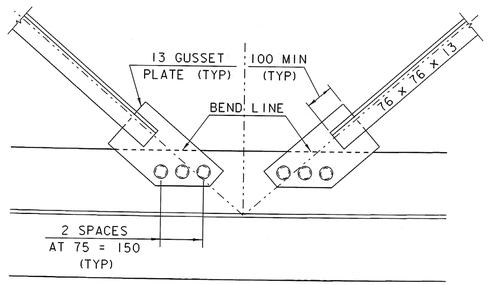
VIEW B-B



LATERAL BRACING CONNECTION DETAIL "A"



LATERAL BRACING CONNECTION DETAIL "B"



LATERAL BRACING CONNECTION DETAIL "C"

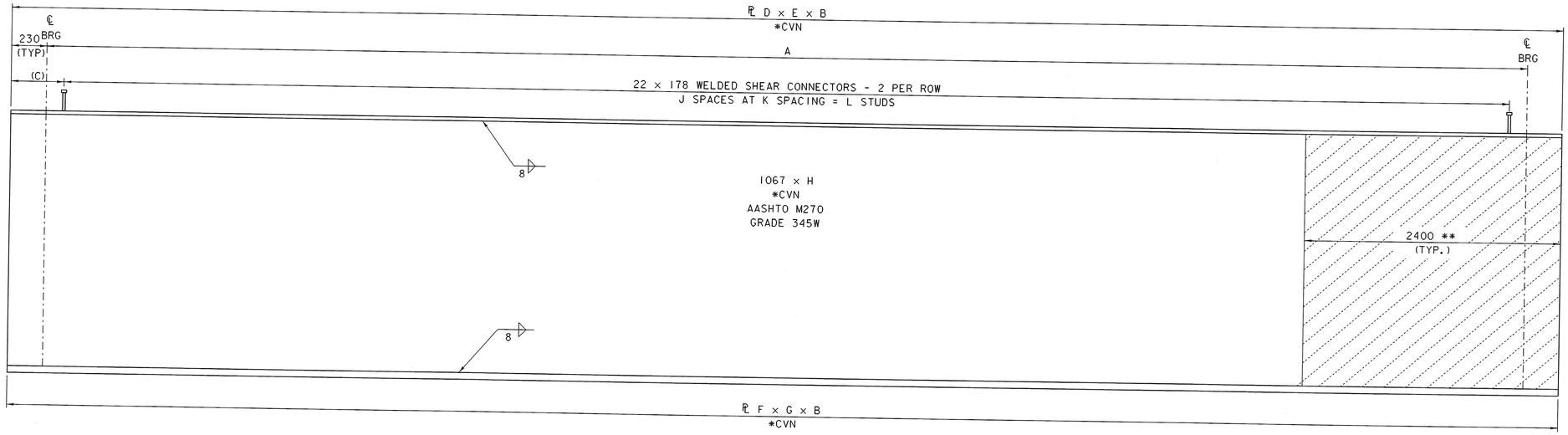
0 0.5 1

SCALE = 1:10

NOTES:

1. THE INTERMEDIATE CROSS-FRAMES ARE PLACED ALONG LINES THAT ARE RADIAL TO THE CURVE.
2. THE CROSS-FRAME SPACINGS ALONG GIRDERS 2 AND 3 ARE PROPORTIONAL TO THE SPACINGS GIVEN ALONG GIRDERS 1 AND 4

SHEET NAME: **FRAMING PLAN**			
PROJECT NAME: SUNDERLAND		HIGHWAY NO.: TH 3	
PROJECT NUMBER: BRF 0114(2)		BRIDGE NO.: 14	
		OVER: ROARING BRANCH	
FILE NAME: /PW/93J009/sJ009sup.dgn		PLOT DATE: 14-DEC-2005	
PROJECT MANAGER: R. R. WHITCOMB		DRAWN BY: J.GILMORE	
DESIGNED BY: D. BONNEAU		IPARM NAME: sJ009frm.i	
		SHEET 36 OF 67	



GIRDER ELEVATION

(NOT TO SCALE)

* DENOTES THAT CHARPY V-NOTCH (CVN) TESTING IS REQUIRED

** ALL STEEL MEMBERS AND CONNECTION COMPONENTS WITHIN 2400mm OF EXPANSION ENDS OF THE GIRDERS SHALL BE PAINTED AND GREASED. HOWEVER, BOTH ENDS OF GIRDER #1 (INTERIOR GIRDER) SHALL BE PAINTED AND GREASED. CONNECTIONS WITHIN THE PAINTED AREAS SHALL BE MADE WITH M 164M TYPE I GALVANIZED BOLTS. ALL OTHER CONNECTIONS SHALL USE M 164M TYPE III BOLTS. SEE SUPPLEMENTAL SPECIFICATION SECTION 513.

GIRDER DIMENSION TABLE

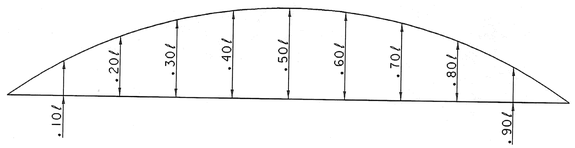
GIRDER	GIRDER				MEASUREMENTS					STUDS		
	RADIUS	LENGTH FROM ℄ BRG TO ℄ BRG (A)	LENGTH FROM END TO END (B)	END OF GIRDER TO ℄ STUD (C)	TOP FLANGE THICKNESS (D)	TOP FLANGE WIDTH (E)	BOTTOM FLANGE THICKNESS (F)	BOTTOM FLANGE WIDTH (G)	WEB THICKNESS (H)	NUMBER (J)	SPACING (K)	TOTAL NUMBER (L)
4	85.850m	26.686m	27.144m	237	32	457	57	457	14.3	105	254	210
3	83.950m	26.095m	26.553m	281	32	457	57	457	14.3	100	254	200
2	82.050m	25.505m	25.963m	203	22	406	25	406	12.7	99	254	198
1	80.150m	24.914m	25.372m	366	22	406	25	406	12.7	97	254	194

CAMBER TABLE - TOTAL (mm)

GIRDER	.10ℓ	.20ℓ	.30ℓ	.40ℓ	.50ℓ	.60ℓ	.70ℓ	.80ℓ	.90ℓ
4	29	51	67	77	80	77	67	51	29
3	26	47	61	70	73	70	61	47	26
2	24	43	57	65	68	65	57	43	24
1	23	41	54	61	64	61	54	41	23

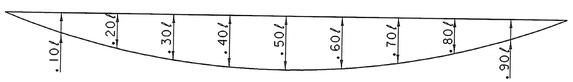
DEAD LOAD DEFLECTION TABLE (mm)

GIRDER	.10ℓ	.20ℓ	.30ℓ	.40ℓ	.50ℓ	.60ℓ	.70ℓ	.80ℓ	.90ℓ
4	17	33	45	52	55	52	45	33	17
3	15	29	39	46	48	46	39	29	15
2	14	26	35	41	43	41	35	26	14
1	12	23	31	37	39	37	31	23	12



CAMBER DIAGRAM

NTS - SEE TABLE BELOW



DEFLECTION DIAGRAM

NTS - SEE TABLE BELOW

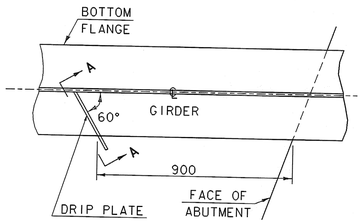
NOTES:

1. DIMENSIONS SHOWN ARE ALONG THE ARC OF THE ℄ OF THE GIRDER.
2. ENDS OF GIRDERS SHALL BE FABRICATED SO THAT THEY WILL BE PLUMB UNDER FULL DEAD LOAD.
3. BEARINGS STIFFENERS SHALL BE PLUMB AND PERPENDICULAR TO THE WEB IN THEIR FINAL POSITION.
4. DEAD LOAD DEFLECTION IS DUE TO GIRDER, DIAPHRAGMS, DECK, CURB AND RAILING.

SHEET NAME: **GIRDER DETAILS**

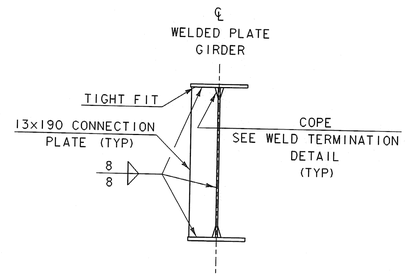
PROJECT NAME: SUNDERLAND
PROJECT NUMBER: BRF 0114(2)
HIGHWAY NO.: TH 3
BRIDGE NO.: 14
OVER: ROARING BRANCH

FILE NAME: /PW/93J009/sj009sup.dgn
PROJECT MANAGER: R. R. WHITCOMB
DESIGNED BY: D. BONNEAU
PLOT DATE: 14-DEC-2005
DRAWN BY: J.GILMORE
IPARM NAME: sj009grd.i
SHEET 37 OF 67



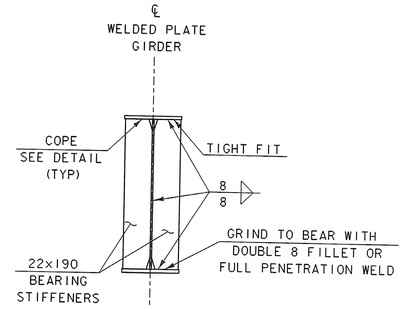
PLAN DRIP PLATE

NOTE: DRIP PLATES SHALL BE PLACED ON OUTSIDE EDGE OF THE TWO FASCIA GIRDERS ON EACH END OF THE BRIDGE, FOUR DRIP PLATES TOTAL.

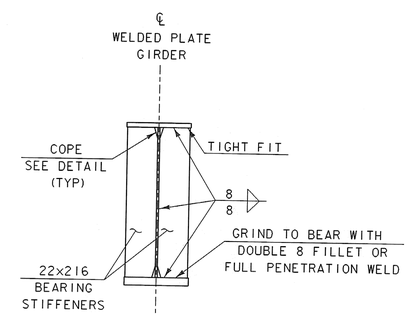


INTERMEDIATE CONNECTION PLATES FOR WELDED PLATE GIRDERS

SCALE: 1:20



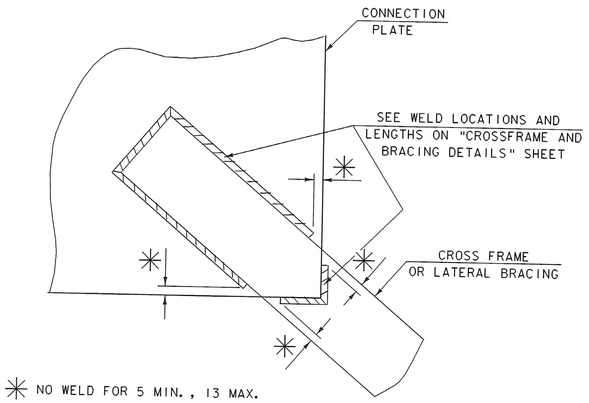
GIRDERS 1&2



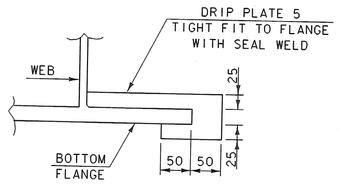
GIRDERS 3&4

ABUTMENT BEARING STIFFENERS FOR WELDED PLATE GIRDERS

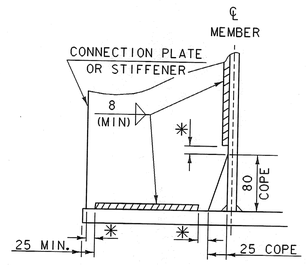
SCALE: 1:20



WELD LOCATION DETAIL AT CROSS FRAMES AND LATERAL BRACING



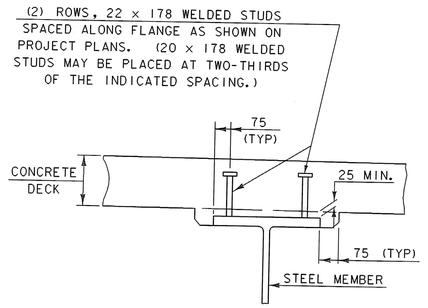
SECTION A - A



✳NO WELD FOR 10 MIN. 13 MAX.
(EXCEPT MUST MAINTAIN 25 MINIMUM FROM EDGE OF FLANGE.)

WELD TERMINATION AND COPING DETAILS FOR STEEL MEMBERS

NTS



HAUNCH AND SHEAR CONNECTOR DETAILS

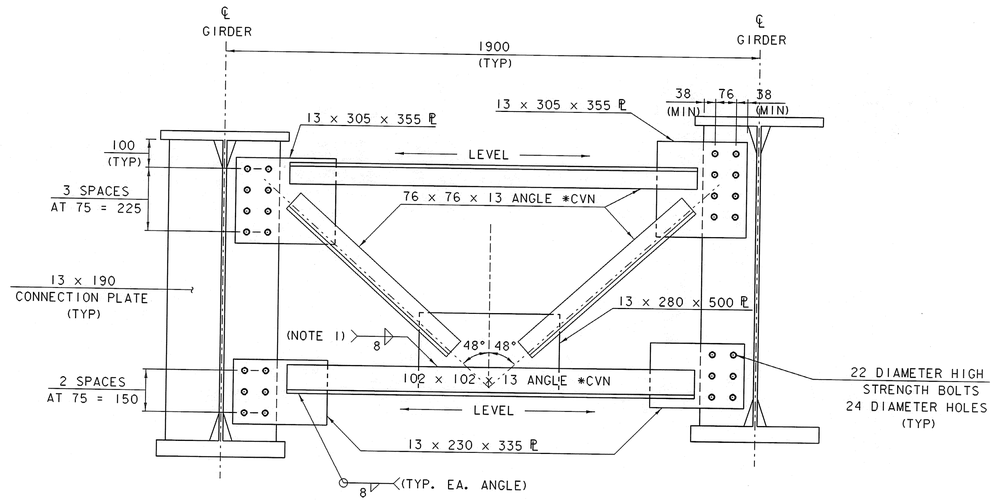
NTS

NOTE: THE 75 HORIZONTAL SECTION MAY BE ELIMINATED FOR FORMING SYSTEMS DESIGNED FOR THE CONSTRUCTION OF VERTICAL HAUNCHES IF APPROVED BY THE STRUCTURES ENGINEER. ANY HOLES RESULTING FROM THIS FORMING SYSTEM SHALL BE FILLED WITH MORTAR, TYPE IV.

0 1 2
SCALE = 1:20

SHEET NAME: **SUPERSTRUCTURE DETAILS**

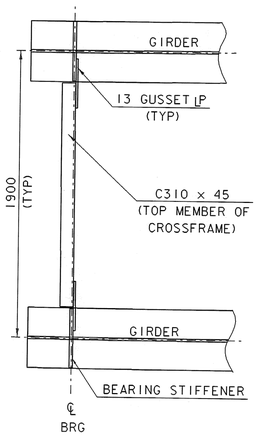
PROJECT NAME: SUNDERLAND	HIGHWAY NO.: TH 3
PROJECT NUMBER: BRF 0114(2)	BRIDGE NO.: 14
	OVER: ROARING BRANCH
FILE NAME: /PW/93J009/sj009sup.dgn	PLOT DATE: 14-DEC-2005
PROJECT MANAGER: R. R. WHITCOMB	DRAWN BY: J.GILMORE
DESIGNED BY: D. BONNEAU	IPARM NAME: sj009ssd.i
	SHEET 38 OF 67



ELEVATION VIEW
INTERIOR CROSSFRAME

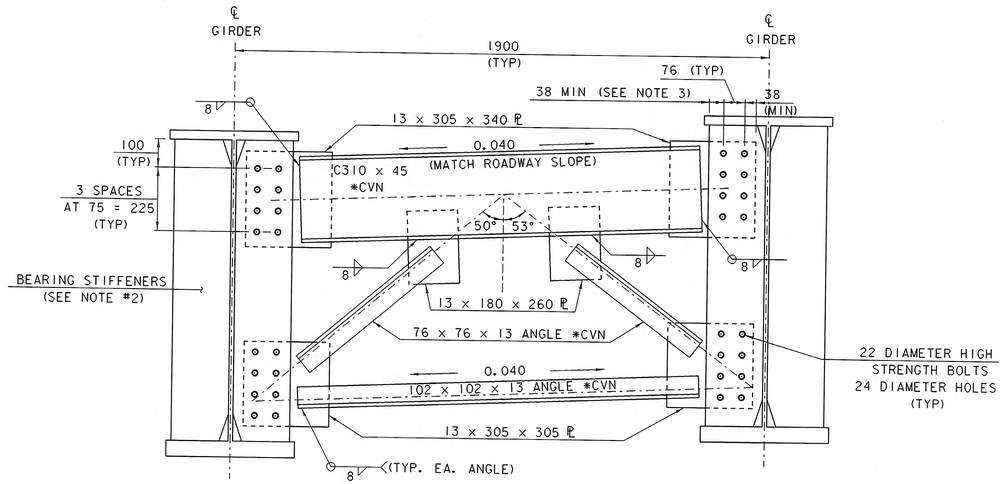
NOTES:

1) TOTAL WELD LENGTH REQUIRED IS 600. PLACE WELDS SYMETRICALLY ABOUT THE CENTERLINE OF THE GUSSET PLATE.
2) GIRDERS 1 & 2:
22 x 190 x 1067 BEARING STIFFENERS
GIRDERS 3 & 4:
22 x 216 x 1067 BEARING STIFFENERS
3) DIMENSION VARIES BETWEEN GIRDERS AS WIDTH OF BEARING STIFFENERS CHANGE.



PLAN VIEW OF CROSSFRAME
AT ABUTMENT #1

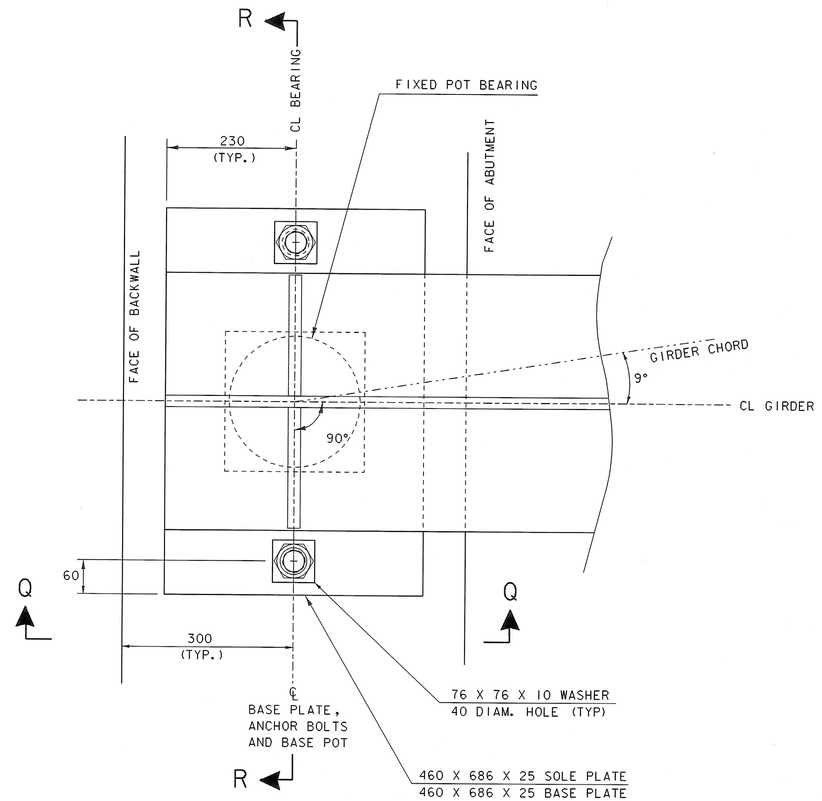
SCALE: NTS
(ABUTMENT #2 SIMILAR)



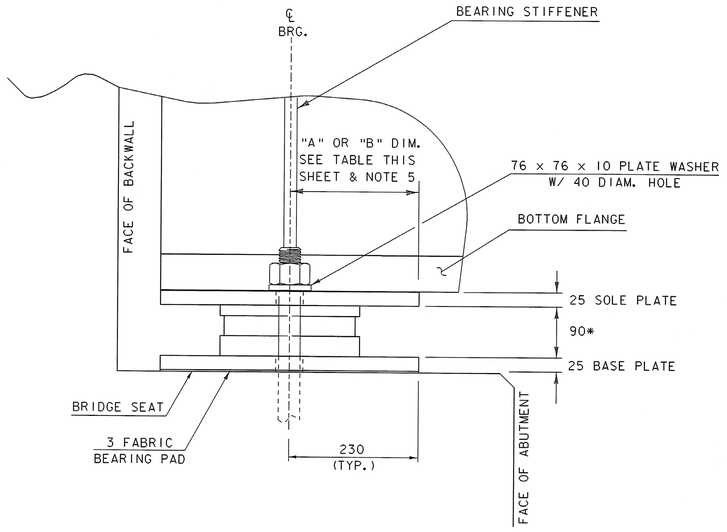
ELEVATION VIEW
END CROSSFRAME

0 0.5 1
SCALE = 1:10

SHEET NAME: CROSSFRAME AND BRACING DETAILS	
PROJECT NAME: SUNDERLAND	HIGHWAY NO.: TH 3
PROJECT NUMBER: BRF 0114(2)	BRIDGE NO.: 14
	OVER: ROARING BRANCH
FILE NAME: /PW/93j009/sj009sup.dgn	PLOT DATE: 14-DEC-2005
PROJECT MANAGER: R. R. WHITCOMB	DRAWN BY: J.GILMORE
DESIGNED BY: D. BONNEAU	IPARM NAME: sj009cbd.i
	SHEET 39 OF 67



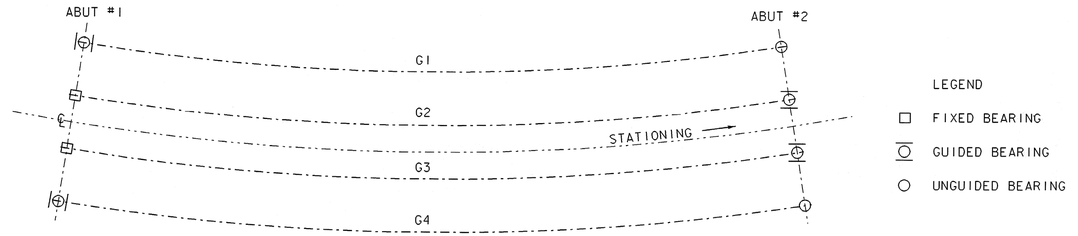
PLAN



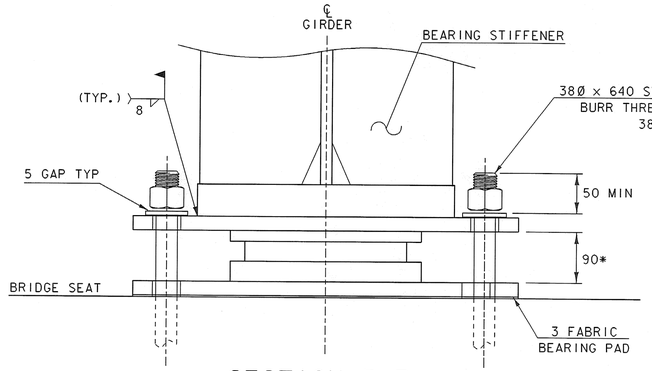
VIEW Q-Q

BEARING NOTES

1. Bearings shall conform to applicable subsections of Sections 531 and 731.
2. Bearings shall be paid for under Item 531.10 "Bearing Device Assembly (Pot)".
3. Shop drawings conforming to subsection 531.03 shall be submitted to include welding and bonding precedures.
4. The concrete surface under the bearing device shall be level.
5. "B" distance is the final setting for the bearing pad after the concrete slab, curb, and bridge rail are placed. "A" distance is listed for setting the bearing after the structural steel is erected and before the concrete deck and curbs have been placed. The difference is the theoretical elongation of the bottom flange due to dead load deflection. The final "B" distance, as shown in the table, must be attained within 2mm.
6. Design Criteria:
   A. Base plate to concrete design pressure = 7000 kPa maximum.
   B. Minimum allowable design rotation = 0.015 radians.
   C. Horizontal capacity shall be a minimum of 20% of the vertical load.
   D. Design load per bearing (unfactored)
      See Sheet 42
7. All steel in bearing devices (except stainless) shall be AASHTO M-270, grade 345.
8. Anchor bolts shall have a minimum embedment of 380 into the concrete and shall conform to subsection 714.08 in the "Vermont Standard Specifications for Construction.
9. All bearing devices shall be galvanized or metalized as per subsection 531.04(b) and 506.15 of the General Special Provisions. Areas of galvanizing or metalizing damaged by field welding or handling shall be painted with a zinc rich paint in accordance with Supplemental Specification 513. The inside of the pots shall not be galvanized or metalized.
10. All anchor bolts, nuts and washers shall be galvanized. All washers shall be 10 plate (minimum). Payment for drilling and grouting of anchor bolts, anchor bolts, nuts, and washers shall be included in the bid price for "Bearing Device Assembly".
11. Submit Designs for Alternate Bearings for approval.
12. All bearings shall be marked prior to shipping. The marks shall include the bearing location on the bridge, and a direction arrow that points up-station. All marks shall be permanent and be visible after the bearing is installed.



BEARING LAYOUT



SECTION R-R

* SEE FINAL SHOP DRAWINGS FOR EXACT DIMENSIONS. BRIDGE SEATS MAY NEED ADJUSTMENT.

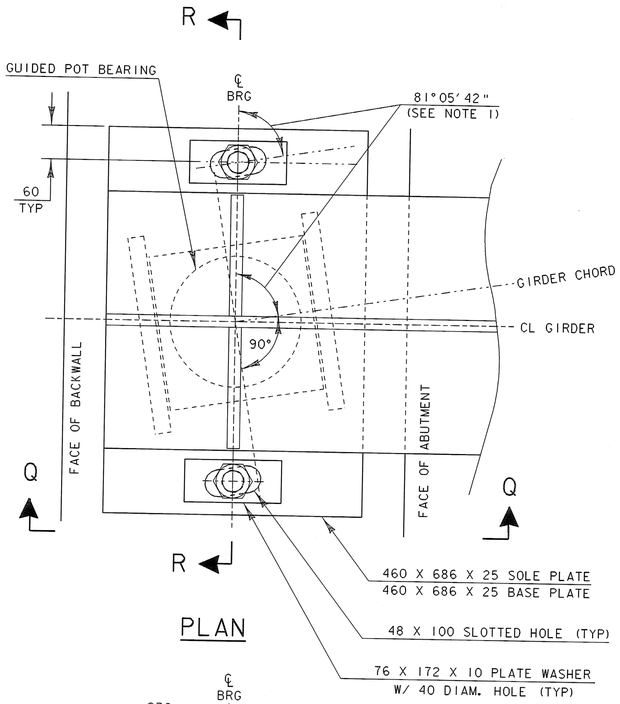
FIXED BEARING DETAILS
ABUTMENT 1
GIRDERS 2 & 3

0 0.25 0.5
SCALE = 1:5

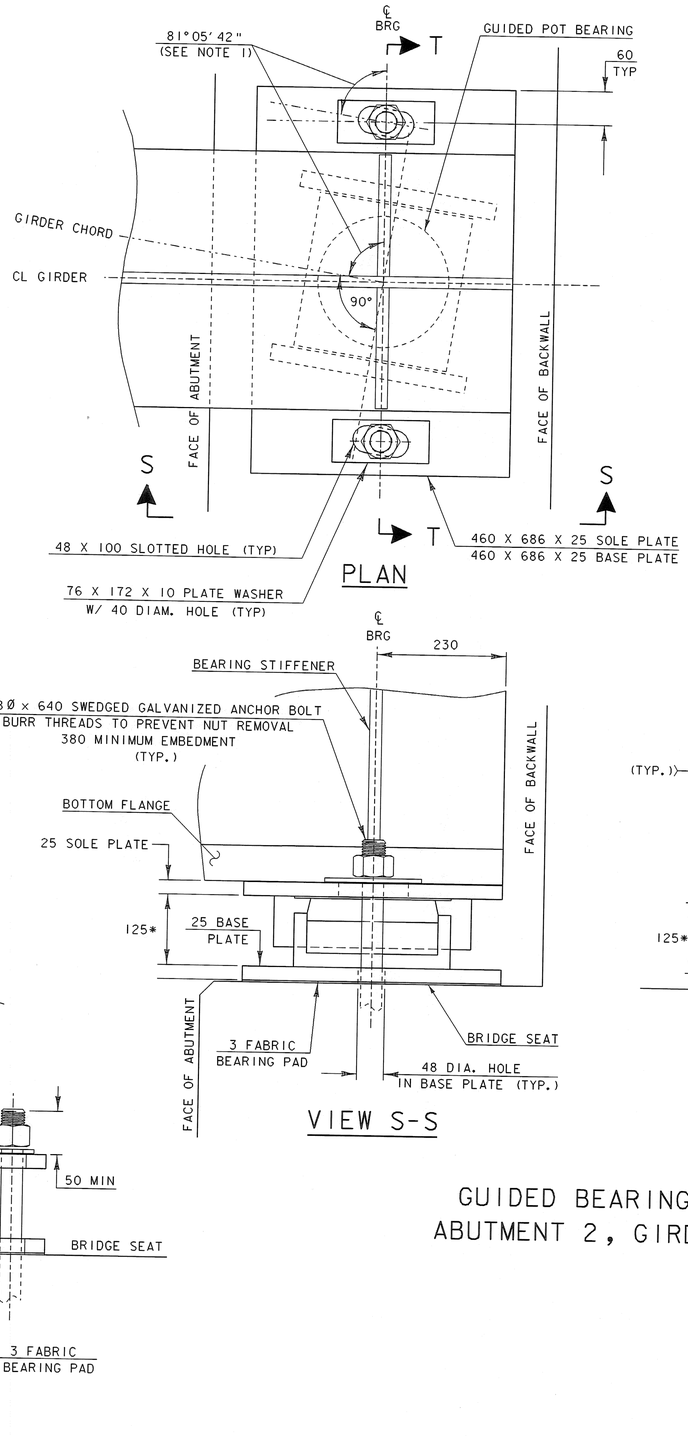
SHEET NAME: **BEARING DETAILS**

PROJECT NAME: SUNDERLAND
PROJECT NUMBER: BRF 0114(2)
HIGHWAY NO.: TH 3
BRIDGE NO.: 14
OVER: ROARING BRANCH

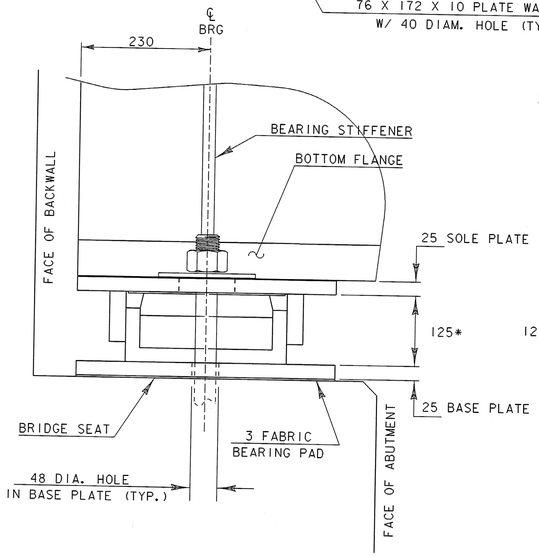
FILE NAME: /PW/93J009/sj009sup.dgn
PROJECT MANAGER: R. R. WHITCOMB
DESIGNED BY: D. BONNEAU
PLOT DATE: 14-DEC-2005
DRAWN BY: J.GILMORE
IPARM NAME: sc009brgl.i
SHEET 40 OF 67



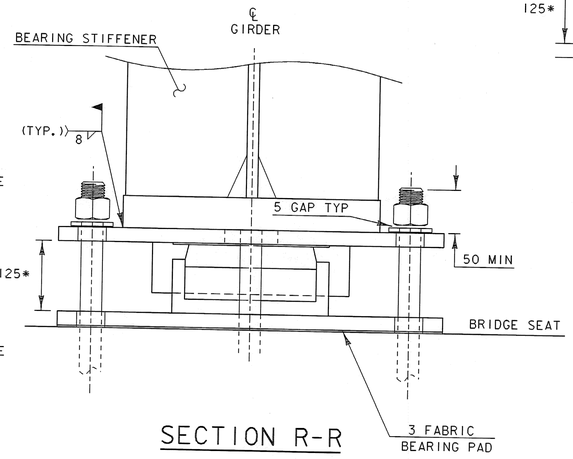
PLAN



PLAN

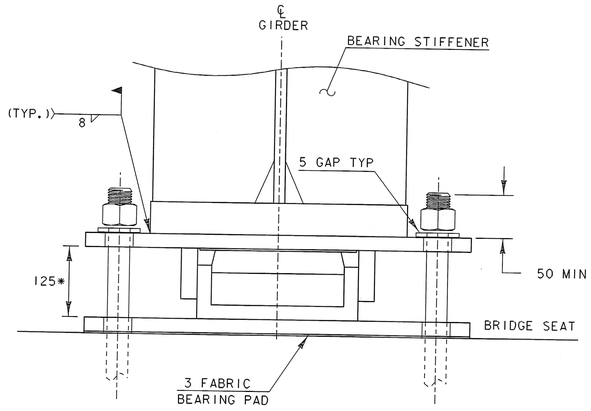


VIEW Q-Q



SECTION R-R

VIEW S-S



SECTION T-T

GUIDED BEARING DETAILS
ABUTMENT 1 GIRDERS 1 & 4

GUIDED BEARING DETAILS
ABUTMENT 2, GIRDERS 2 & 3

0 0.25 0.5
SCALE = 1:5

BEARING SETTINGS

TEMP	"A"	"B"
0°F	246	238
15°F	243	235
30°F	241	233
45°F	238	230
60°F	235	227
75°F	233	225
90°F	230	222

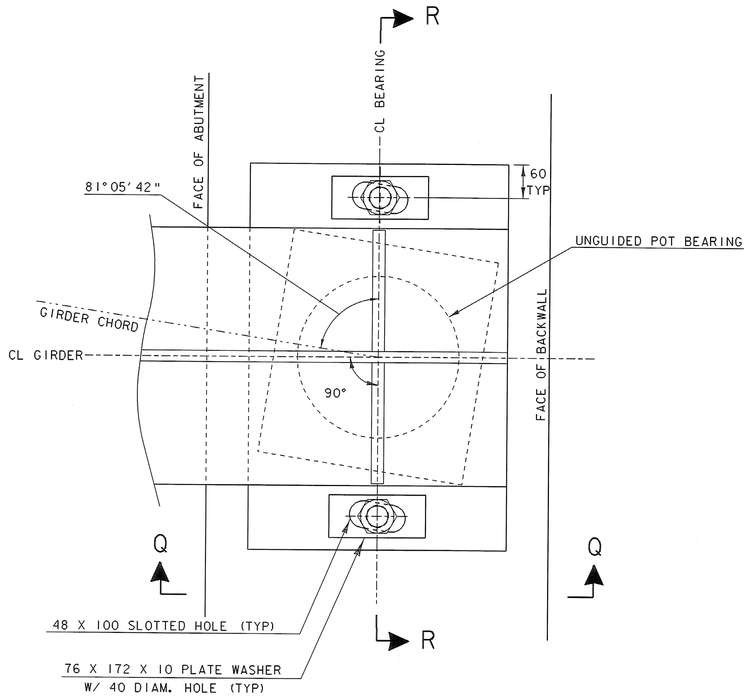
BEARINGS SET & ADJUSTMENTS MADE PARALLEL TO GIRDER CHORDS

NOTES:

1. SEE SHEET 40 OF 67 FOR BEARING NOTES.
2. SEE SHEET 42 OF 67 FOR POT BEARING DESIGN LOADS.
3. SLOTTED HOLES IN SOLE PLATES SHALL BE MANUFACTURED SUCH THAT THE LONG DIMENSION IS PARALLEL TO THE GIRDER CHORD AT EACH ABUTMENT.

* SEE FINAL SHOP DRAWINGS FOR EXACT DIMENSIONS. BRIDGE SEATS MAY NEED ADJUSTMENT.

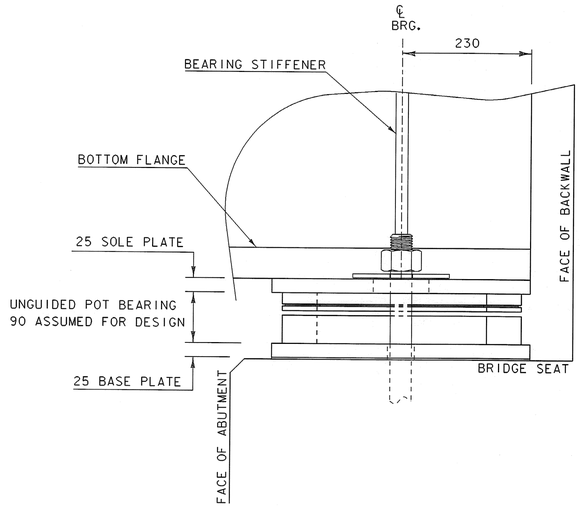
SHEET NAME:	**BEARING DETAILS**		
PROJECT NAME:	SUNDERLAND	HIGHWAY NO.:	TH 3
PROJECT NUMBER:	BRF 0114(2)	BRIDGE NO.:	14
		OVER:	ROARING BRANCH
FILE NAME:	/PW/93j009/sj009sup.dgn	PLOT DATE:	14-DEC-2005
PROJECT MANAGER:	R. R. WHITCOMB	DRAWN BY:	J.GILMORE
DESIGNED BY:	D. BONNEAU	IPARM NAME:	sc009brg2.i
		SHEET	41 OF 67



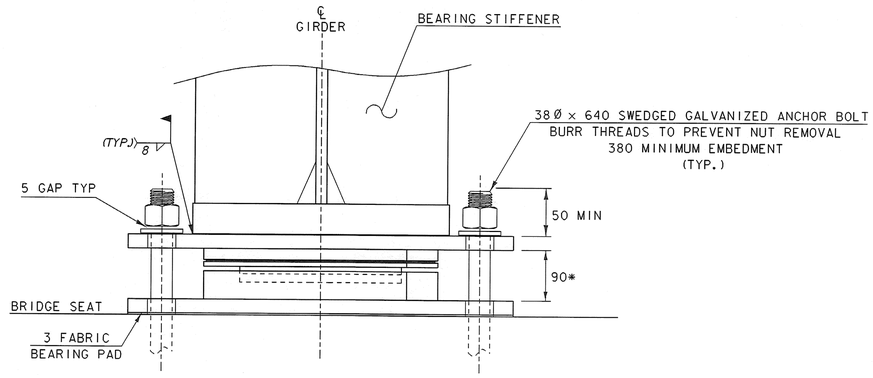
PLAN

POT BEARING DESIGN LOADS

ABUTMENT	GIRDER	BEARING TYPE	UNFACTORED			
			VERTICAL LOAD		ROTATION DUE TO LOAD	
			DEAD	LIVE & IMPACT	DEAD	LIVE & IMPACT
			kN	kN	rad	rad
1	1	GUIDED	140	132	0.005	0.002
1	2	FIXED	149	320	0.005	0.003
1	3	FIXED	258	356	0.005	0.004
1	4	GUIDED	266	378	0.006	0.004
2	1	UNGUIDED	140	132	0.005	0.002
2	2	GUIDED	149	320	0.005	0.003
2	3	GUIDED	258	356	0.005	0.004
2	4	UNGUIDED	266	378	0.006	0.004



VIEW Q-Q



SECTION R-R

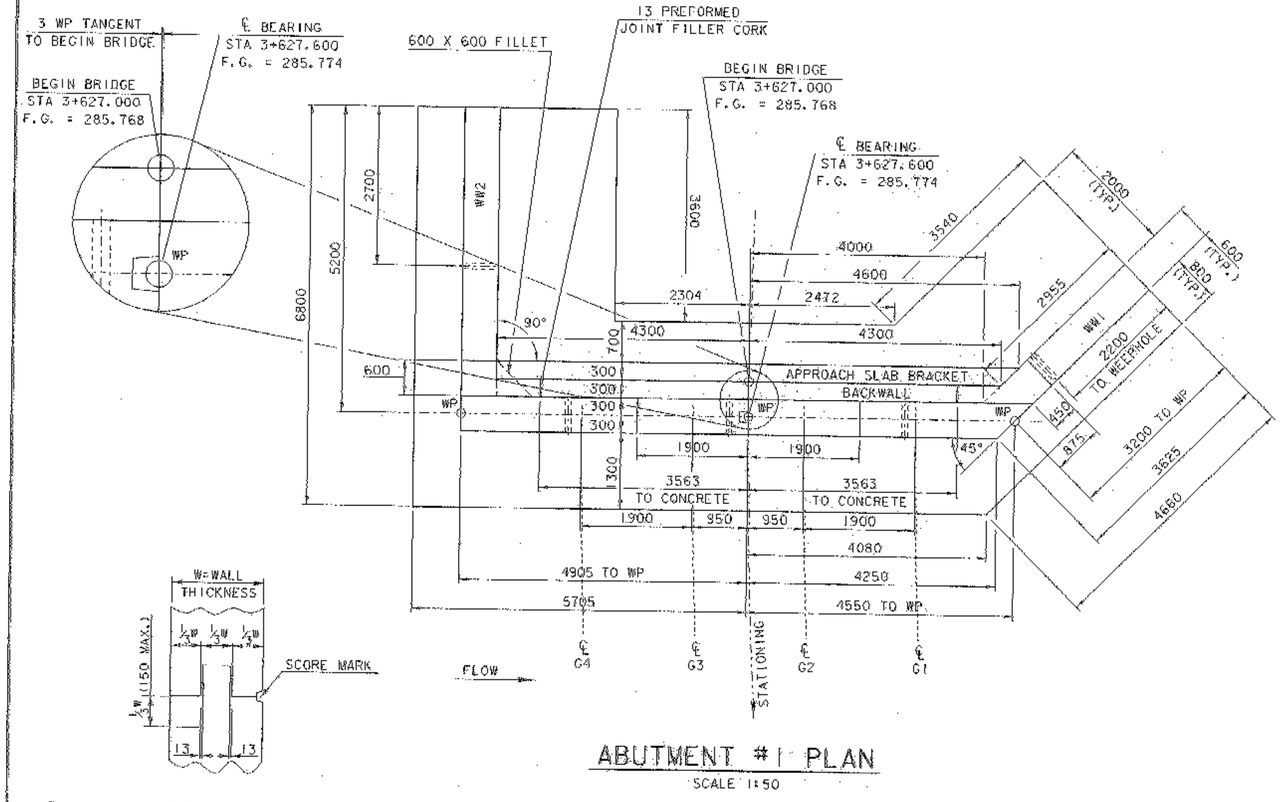
* SEE FINAL SHOP DRAWINGS FOR EXACT DIMENSIONS. BRIDGE SEATS MAY NEED ADJUSTMENT.

UNGUIDED BEARING DETAILS
ABUTMENT 2
GIRDERS 1 & 4

0 0.25 0.5
SCALE = 1:5

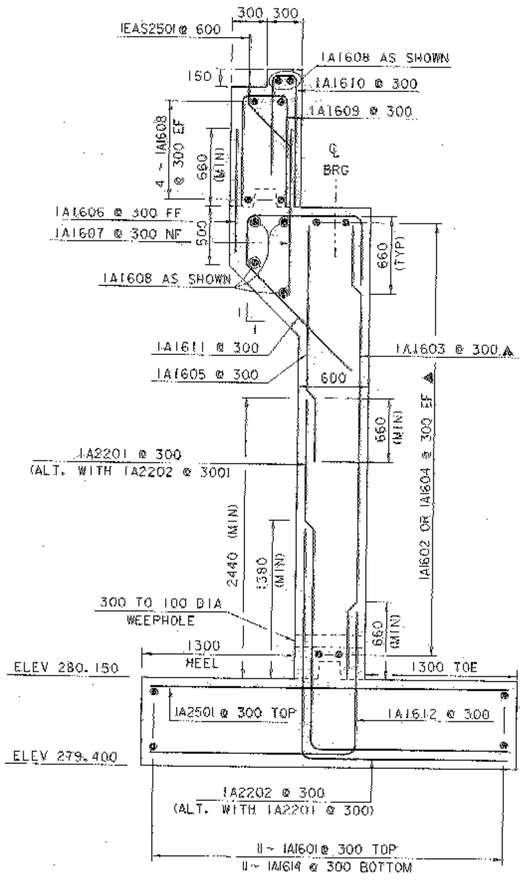
SHEET NAME:	**BEARING DETAILS**		
PROJECT NAME:	SUNDERLAND	HIGHWAY NO.:	TH 3
PROJECT NUMBER:	BRF 0114(2)	BRIDGE NO.:	14
		OVER:	ROARING BRANCH
FILE NAME:	/PW/93j009/sj009sup.dgn	PLOT DATE:	14-DEC-2005
PROJECT MANAGER:	R. R. WHITCOMB	DRAWN BY:	J.GILMORE
DESIGNED BY:	D. BONNEAU	IPARM NAME:	sc009brg3.i
		SHEET	42 OF 67

Metric



ABUTMENT #1 PLAN

SCALE 1:50

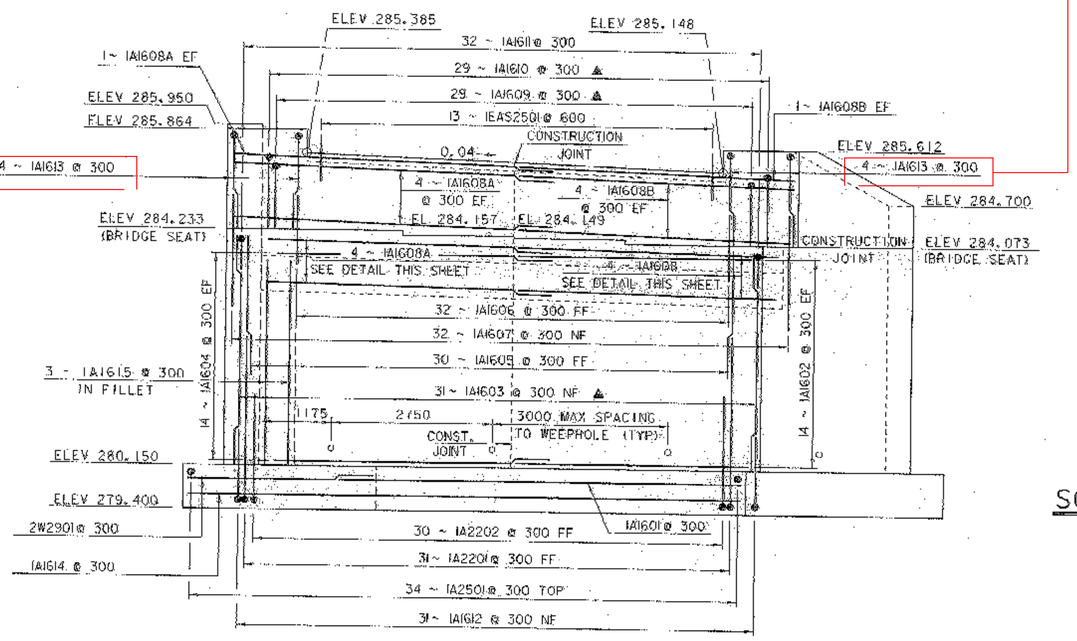


ABUTMENT #1 SECTION

SCALE 1:25

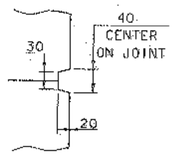
TYPICAL CONCRETE CONSTRUCTION JOINT

BARS ORDERED PER PLAN BUT NOT INSTALLED DUE TO INCORRECT SIZING. PAY FOR BARS.



ABUTMENT #1 ELEVATION

SCALE 1:50



SCORE MARK DETAIL

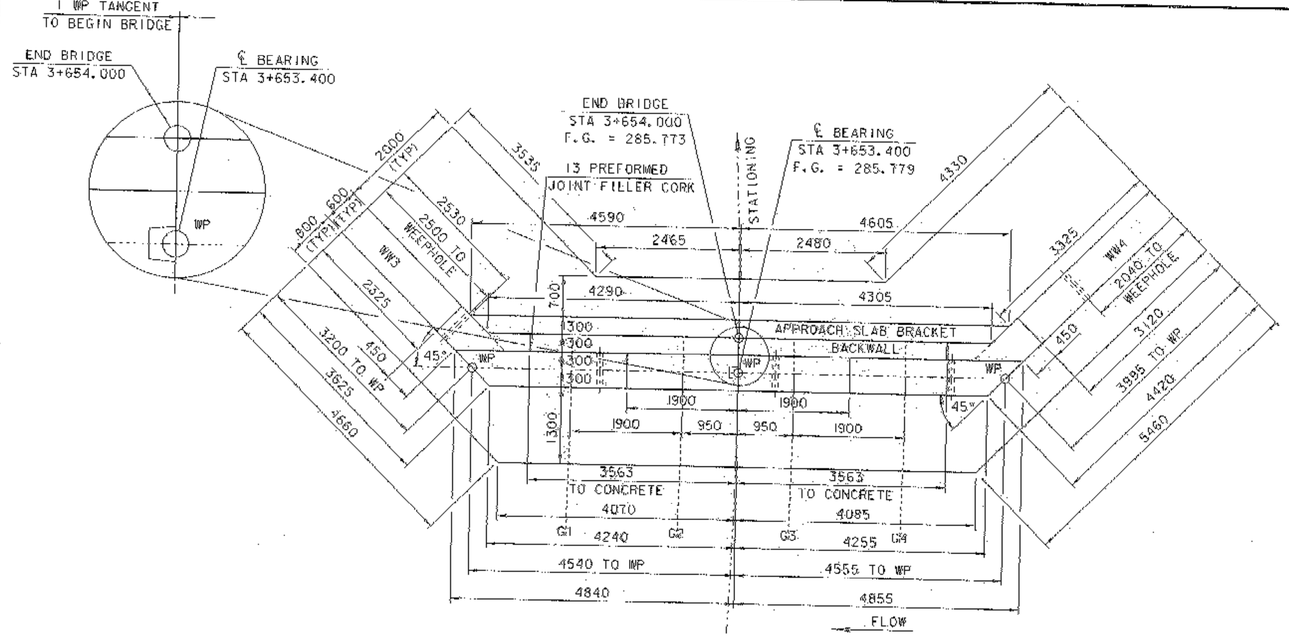
NOTE:
ALTERNATE BEARING DESIGN MAY CHANGE BRIDGE SEAT ELEVATIONS

NOTES:
1. NF = NEAR FACE
2. FF = FAR FACE
3. EF = EACH FACE
4. ▲ = CUT TO FIT IN FIELD
5. 80 CLEAR UNLESS OTHERWISE SPECIFIED ON THE PLANS.

SHEET NAME: ABUTMENT #1 DETAILS

PROJECT NAME: SUNDERLAND — HIGHWAY NO.: TN 3
PROJECT NUMBER: BRF 0114(2) — BRIDGE NO.: 14
OVER: ROARING BRANCH

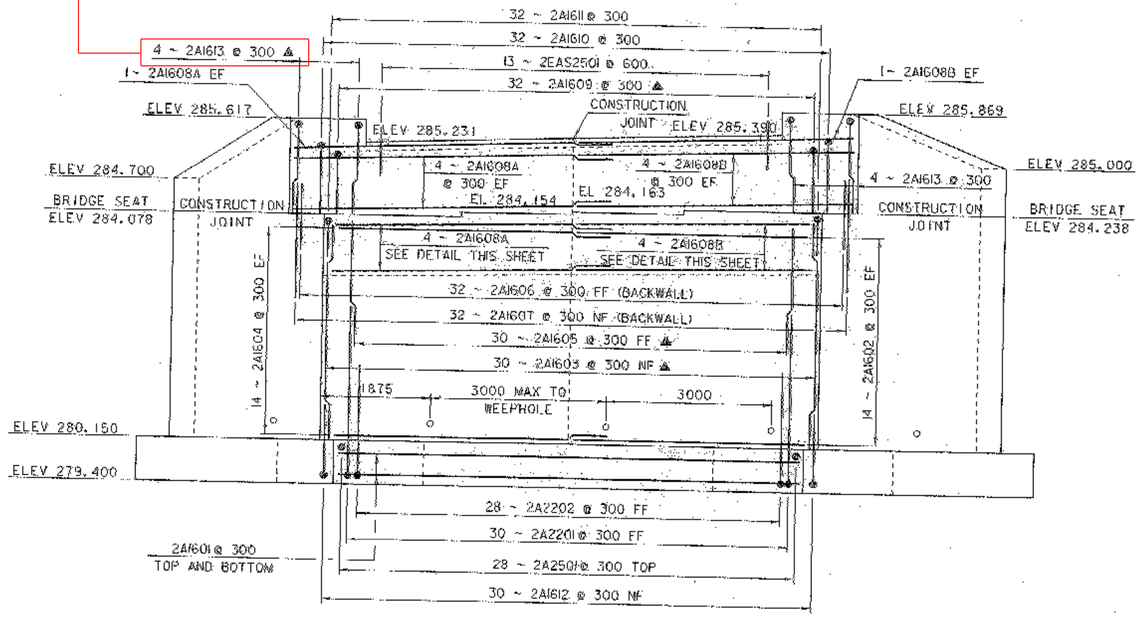
FILE NAME: /PW/93J009/sJ009sub.dgn — PLOT DATE: 14-DEC-2005
PROJECT MANAGER: R. R. WHITCOMB — DRAWN BY: J.GILMORE
DESIGNED BY: D. BONNEAU — IPARM NAME: sJ009abl.i
SHEET 44 OF 67



ABUTMENT #2 PLAN

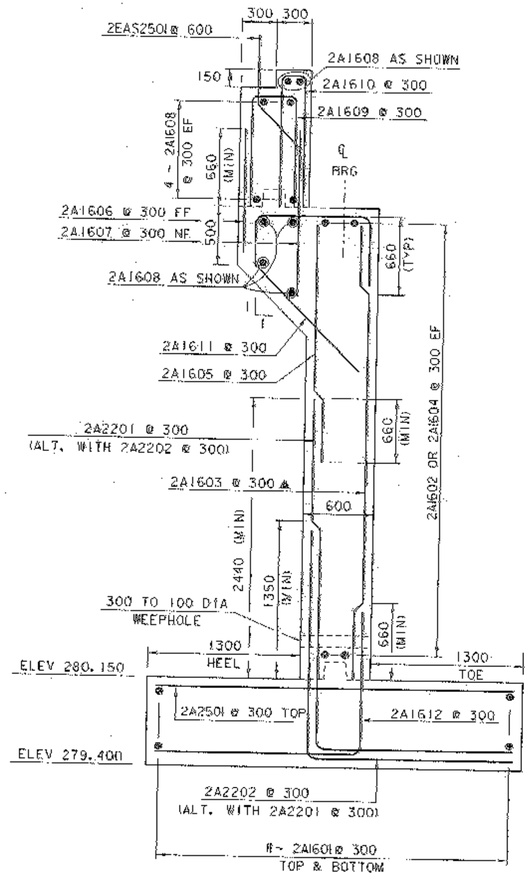
SCALE 1:50

BARS ORDERED PER PLAN BUT NOT INSTALLED DUE TO INCORRECT SIZING. PAY FOR BARS.



ABUTMENT #2 ELEVATION

SCALE 1:50



ABUTMENT #2 SECTION

SCALE 1:25

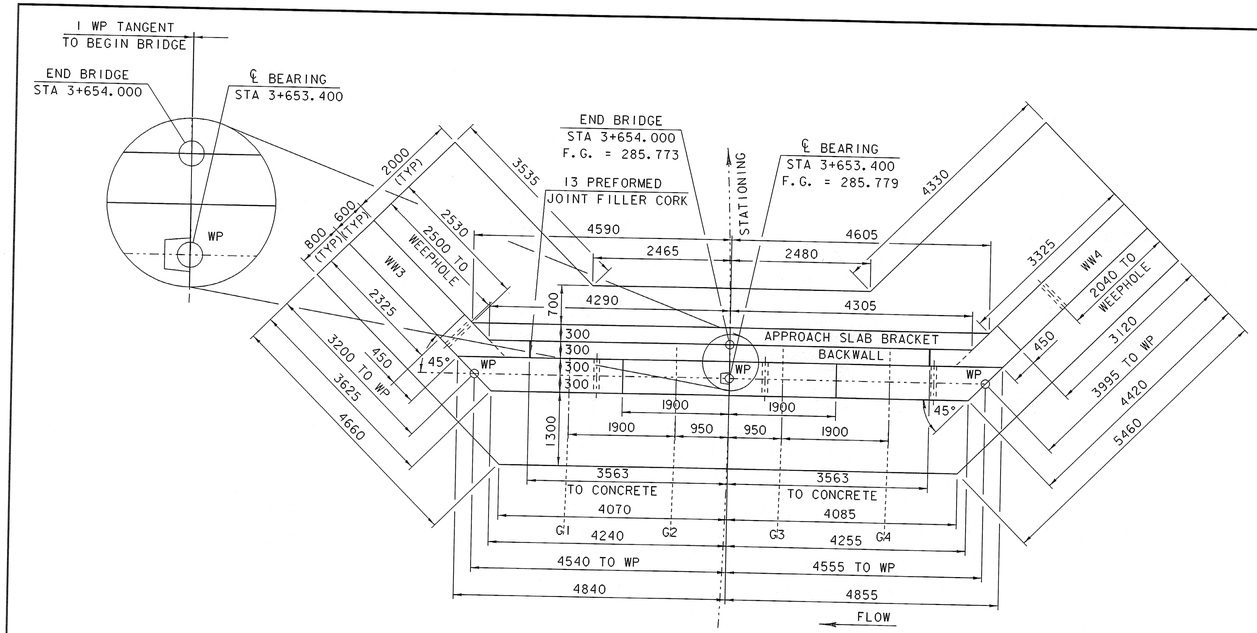
NOTE:
ALTERNATE BEARING DESIGN MAY CHANGE BRIDGE SEAT ELEVATIONS

NOTES:
1. NF = NEAR FACE
2. FF = FAR FACE
3. EF = EACH FACE
4. ▲ = CUT TO FIT IN FIELD
5. 80 CLEAR UNLESS OTHERWISE SPECIFIED ON THE PLANS.

SHEET NAME: **ABUTMENT #2 DETAILS**

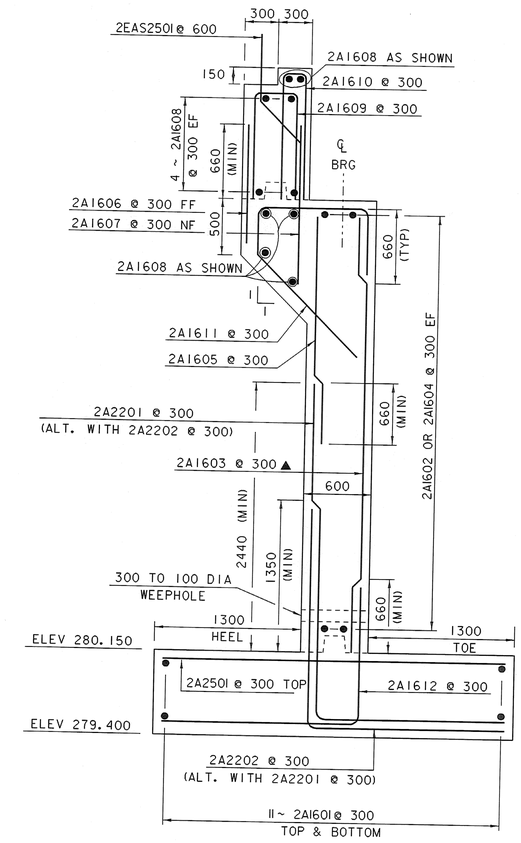
PROJECT NAME: SUNDERLAND
PROJECT NUMBER: BRF 011-4(2)
HIGHWAY NO.: TH 3
BRIDGE NO.: 14
OVER: ROARING BRANCH

FILE NAME: /PW/93J009/s1009su06.dgn
PROJECT MANAGER: R. R. WHITCOMB
DESIGNED BY: D. BONNEAU
PLOT DATE: 14-DEC-2005
DRAWN BY: J.GILMORE
PARM NAME: s1009ab2.1
SHEET 45 OF 67



ABUTMENT #2 PLAN

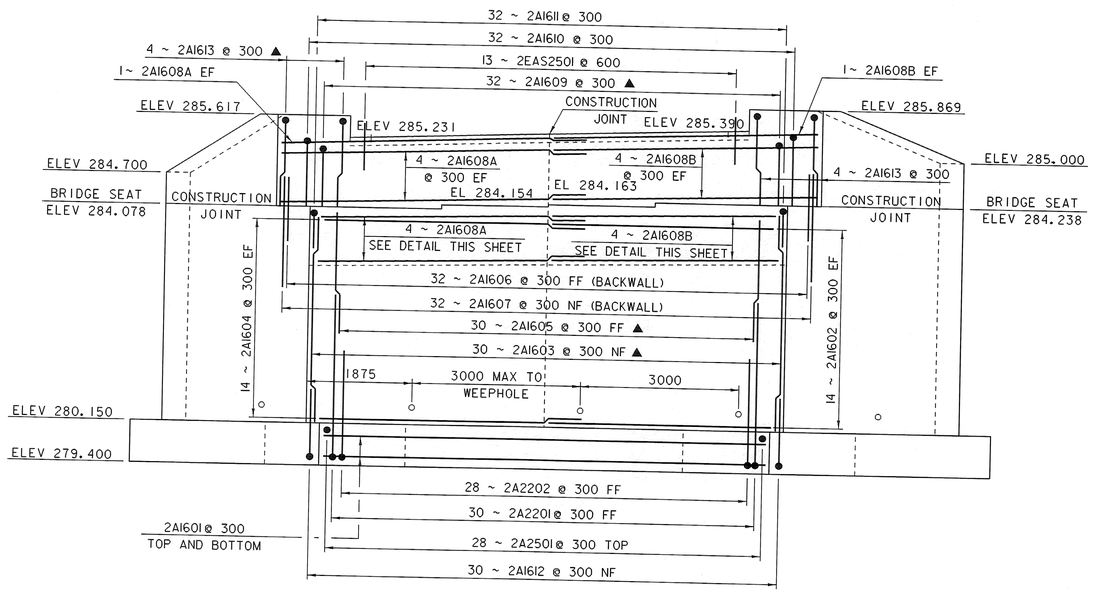
SCALE 1:50



ABUTMENT #2 SECTION

SCALE 1:25

NOTE:
ALTERNATE BEARING DESIGN MAY
CHANGE BRIDGE SEAT ELEVATIONS



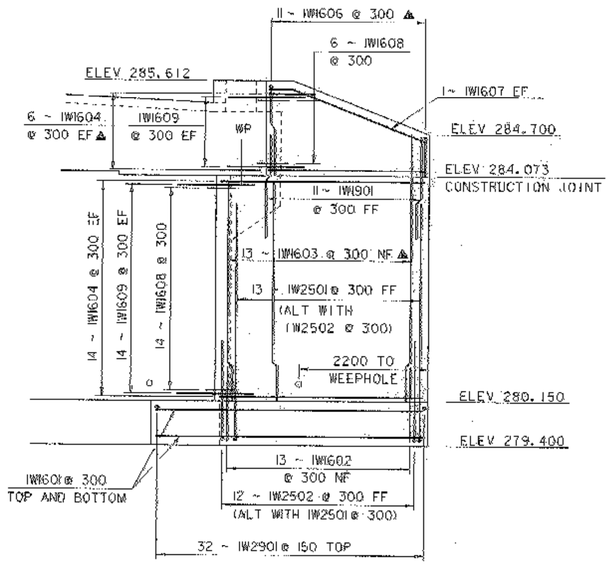
ABUTMENT #2 ELEVATION

SCALE 1:50

NOTES:
1. NF = NEAR FACE
2. FF = FAR FACE
3. EF = EACH FACE
4. ▲ = CUT TO FIT IN FIELD
5. 80 CLEAR UNLESS OTHERWISE SPECIFIED ON THE PLANS.

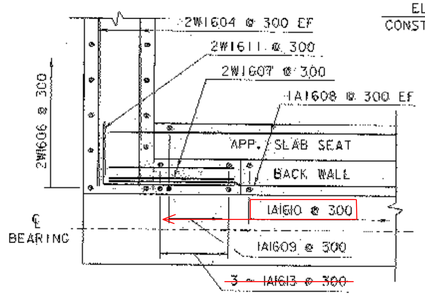
SHEET NAME: **ABUTMENT #2 DETAILS**

PROJECT NAME: SUNDERLAND	HIGHWAY NO.: TH 3
PROJECT NUMBER: BRF 0114(2)	BRIDGE NO.: 14
	OVER: ROARING BRANCH
FILE NAME: /PW/93J009/sj009sub.dgn	PLOT DATE: 14-DEC-2005
PROJECT MANAGER: R. R. WHITCOMB	DRAWN BY: J.GILMORE
DESIGNED BY: D. BONNEAU	IPARM NAME: sj009ab2.i
	SHEET 45 OF 67



WINGWALL #1 ELEVATION

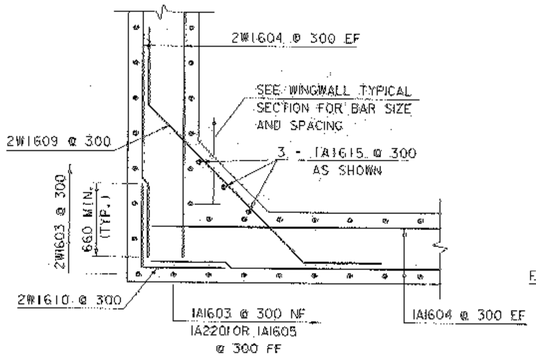
SCALE 1:50



ABUTMENT CORNER DETAILS ABOVE BRIDGE SEAT (WINGWALL #2)

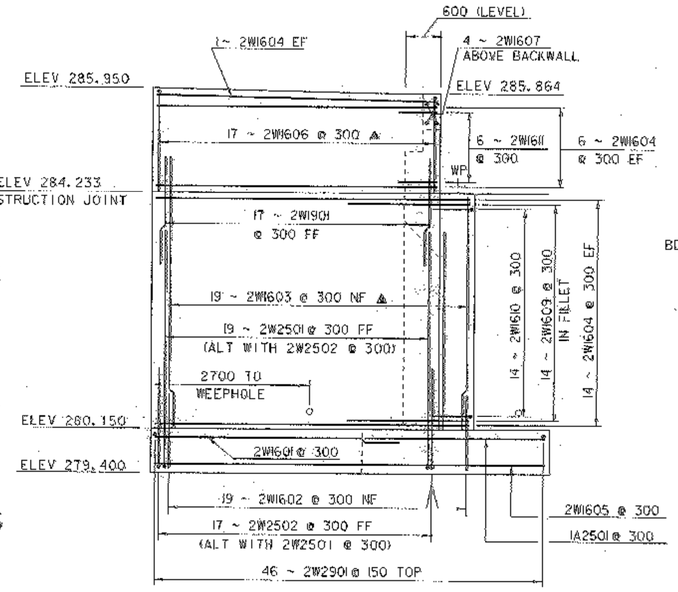
SCALE 1:25

TOP OF STIRRUP BARS OMITTED FOR CLARITY



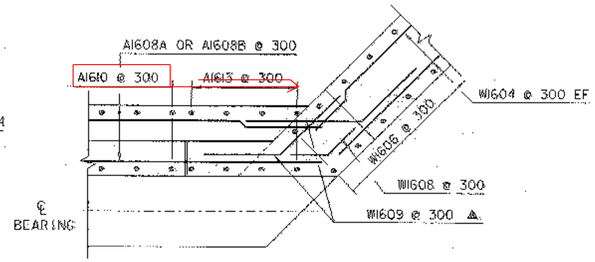
ABUTMENT CORNER DETAILS BELOW BRIDGE SEAT (WINGWALL #2)

SCALE 1:25

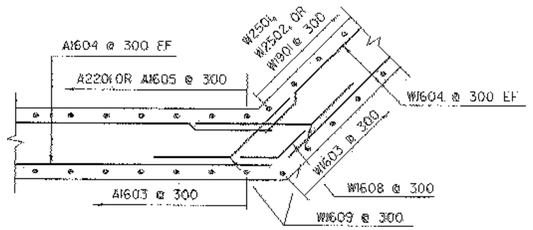


WINGWALL #2 ELEVATION

SCALE 1:50

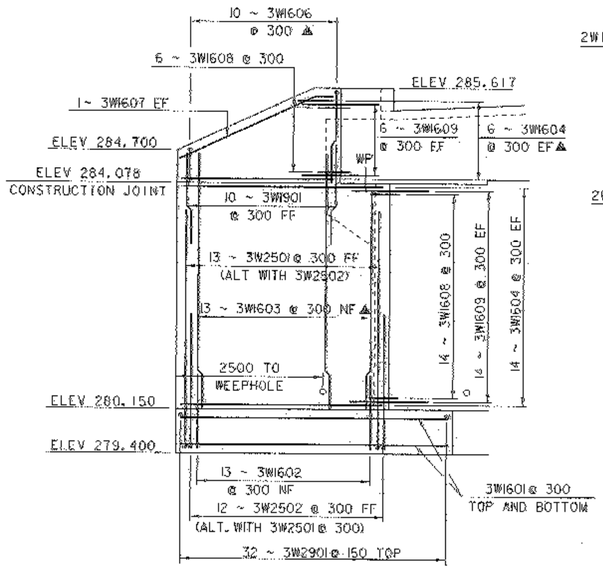


ABUTMENT CORNER DETAILS ABOVE BRIDGE SEAT (WINGWALLS 1,3&4)



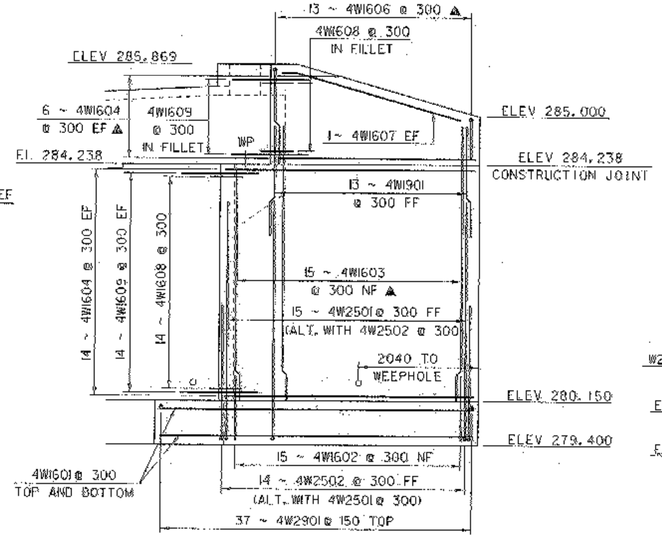
ABUTMENT CORNER DETAILS BELOW BRIDGE SEAT (WINGWALLS 1,3&4)

SCALE 1:25



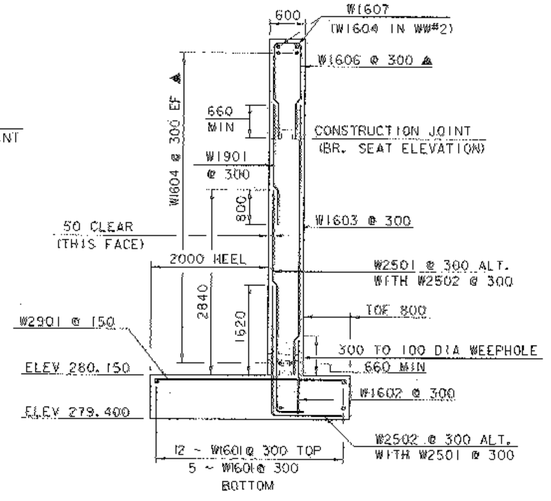
WINGWALL #3 ELEVATION

SCALE 1:50



WINGWALL #4 ELEVATION

SCALE 1:50



WINGWALL SECTION TYPICAL

SCALE 1:50

NOTES:
1. NF = NEAR FACE
2. FF = FAR FACE
3. EF = EACH FACE
4. ▲ = CUT TO FIT IN FIELD
5. 80 CLEAR UNLESS OTHERWISE SPECIFIED ON THE PLANS.

SHEET NAME: **WINGWALL ELEVATIONS**

PROJECT NAME: SUNDERLAND — HIGHWAY NO.: TH 3
PROJECT NUMBER: BRF 014(2) — BRIDGE NO.: 14
OVER: ROARING BRANCH

FILE NAME: /PW/93J009/sj009su8.dgn — PLOT DATE: 14-DEC-2005
PROJECT MANAGER: R. R. WHITCOMB — DRAWN BY: J.GILMORE
DESIGNED BY: D. BONNEAU — PARM NAME: sj009ww1
SHEET 47 OF 67

STATE OF VERMONT
AGENCY OF TRANSPORTATION

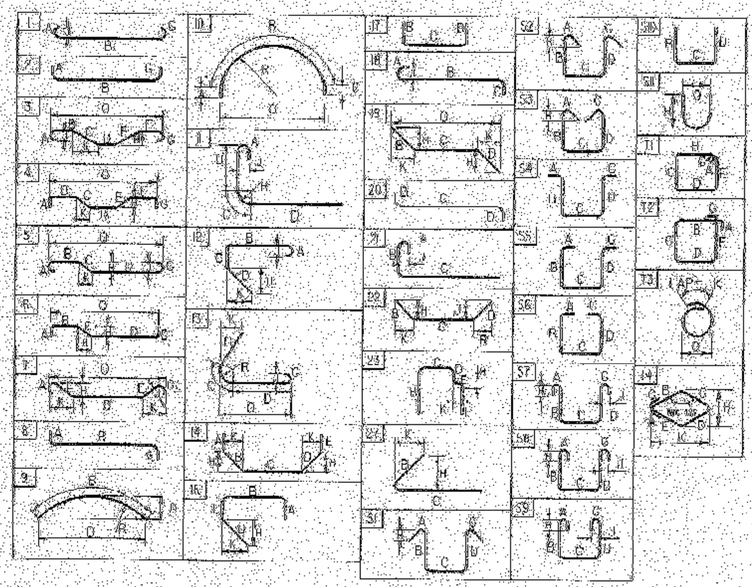
REINFORCING STEEL SCHEDULE

Metric

	EA	SIZE	LENGTH	MARK	TYPE	A	B	C	D	E	F	G	H	J	K	L	M	N	P	Q	R	S	T	U	V	W	X
DECK																											
	186	16	10075	ES1601	STR																						
	180	16	1455	ES1602	S5	300	320	215	320			300															
*	39	16	2360	ES1603	S5	600	220	680	140			660															
	188	16	7115	ES1604	1	175	6940																				
*	95	19	6940	ES1901	STR																						
▲	8	19	6940	CS1903	STR																						
APPROACH SLAB NO. 1																											
*	22	16	6440	1EAS1601	STR																						
	12	25	1100	1EAS2501	19		500	600	---																		
▲	27	29	6490	1EAS2901	1	500	5980					---		220													
APPROACH SLAB NO. 2																											
▲	22	16	7200	2EAS1601	STR																						
	12	25	1100	2EAS2501	19		500	600	---																		
*	31	29	6490	2EAS2901	1	500	5980					---		220													
ABUTMENT NO. 1																											
	11	16	7050	1A1601	STR																						
	28	16	4160	1A1602	STR																						
▲	30	16	3940	1A1603	STR																						
	28	16	4830	1A1604	STR																						
▲	30	16	2170	1A1605	STR																						
	32	16	1080	1A1606	STR																						
	32	16	1320	1A1607	STR																						
	14	16	5300	1A1608A	STR																						
	14	16	4700	1A1608B	STR																						
	11	16	9620	1A1614	STR																						
	3	16	4000	1A1615	STR																						
▲	32	16	2380	1A1609	S10		970	440	970																		
▲	32	16	2380	1A1610	S10		1120	140	1120																		
	32	16	3320	1A1611	16	660	1040	420	1200																		
▲	31	16	3070	1A1612	17		1330	1740	---																		
	8	16	3640	1A1613	S10		1600	440	1600																		
	31	22	4840	1A2201	17		1740	3100	---																		
* ▲	31	22	3790	1A2202	17		1740	2050	---																		
*	32	25	3040	1A2501	STR																						
WINGWALL NO. 1																											
	17	16	4555	1W1601	STR																						
	13	16	3830	1W1602	STR																						
▲	13	16	3450	1W1603	STR																						
▲	40	16	3465	1W1604	STR																						
				1W1605	NOT USED																						
▲	11	16	3520	1W1606	S10		1540	440	1540																		
	2	16	2780	1W1607	19		350	2430	---			130		930													
	20	16	1600	1W1608	19		800	800	---																		
▲	40	16	1660	1W1609	19		660	1200	---																		
	11	19	2500	1W1901	STR																						
*	13	25	3935	1W2501	17		425	3510	---																		
	11	25	3480	1W2502	17		1160	2300	---																		
*	32	29	3240	1W2901	STR																						
WINGWALL NO. 2																											
	12	16	4260	2W1601	STR																						
	19	16	1330	2W1602	STR																						
▲	18	16	4740	2W1603	STR																						
▲	42	16	5340	2W1604	STR																						
	5	16	6640	2W1605	STR																						
	4	16	1180	2W1607	STR																						
▲	17	16	3700	2W1608	S10		1630	440	1630																		
				2W1609	NOT USED																						
	14	16	3470	2W1609	22		860	2150	860																		
	14	16	1320	2W1610	17		660	860	---																		
	6	16	1840	2W1611	17		1180	660	---																		
	17	19	2700	2W1901	STR																						
	13	25	3925	2W2501	17		425	3500	---																		
	18	25	3540	2W2502	17		1240	2300	---																		
	46	29	3240	2W2901	STR																						
ABUTMENT NO. 2																											
	22	16	7655	2A1601	STR																						
	28	16	3130	2A1602	STR																						
▲	30	16	3945	2A1603	STR																						
	28	16	5430	2A1604	STR																						
	30	16	4770	2A1605	STR																						
	32	16	3590	2A1606	STR																						
△	34	16	1150	2A1607	STR																						
	14	16	1620	2A1608A	STR																						
	14	16	5780	2A1608B	STR																						
▲	32	16	2380	2A1608	S10		970	440	970																		
▲	32	16	2380	2A1610	S10		1120	140	1120																		
	32	16	3320	2A1611	16	660	1040	420	1200																		
	30	16	3070	2A1612	17		1330	1740	---																		
▲	8	16	3640	2A1613	S10		1600	440	1600																		
*	31	22	4840	2A2201	17		1740	3100	---																		
	29	22	3790	2A2202	17		1740	2050	---																		
*	29	25	3040	2A2501	STR																						
WINGWALL NO. 3																											
	17	16	4555	3W1601	STR																						
	13	16	3830	3W1602	STR																						
▲	13	16	3450	3W1603	STR																						
▲	40	16	3465	3W1604	STR																						
				3W1605	NOT USED																						
▲	10	16	3520	3W1606	S10		1540	440	1540																		
	2	16	2845	3W1607	19		350	2495	---			145		315													
	20	16	1600	3W1608	19		800	800	---																		
▲	40	16	1860	3W1609	19		660	1200	---																		
	10	19	2800	3W1901	STR																						
	13	25	3935	3W2501	17		425	3510	---																		
	12	25	3480	3W2502	17		1160	2300	---																		
*	33	29	3240	3W2901	STR																						
WINGWALL NO. 4																											
	17	16	5300	4W1601	STR																						
	15	16	1330	4W1602	STR																						
▲	15	16	3820	4W1603	STR																						
▲	40	16	4260	4W1604	STR																						
				4W1605	NOT USED																						
▲	13	16	3640	4W1606	S10		1600	440	1600																		
	2	16	3550	4W1607	19		355	3175	---			100		340													
	20	16	1600	4W1608	19		800	800	---																		
▲	40	16	1860	4W1609	19		660	1200	---																		
	13	19	3020	4W1901	STR																						
*	16	25	3935	4W2501	17		425	3510	---																		
	14	25	3480	4W2502	17		1160	2300	---																		
	37	29	3240	4W2901	STR																						

~ 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 M31M (ASTM A 615M-93). 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 IN BAR MARK PREFIX 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)	CIRCUMFERENCE (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: SUNDERLAND
PROJECT NUMBER: BRF 0114(2)

FILE NAME: /PW/93008/sj008rss.xls
PROJECT MANAGER: R. R. WHITCOMB
DESIGNED BY: D. BONNEAU
REINFORCING STEEL SCHEDULE SHEET #1

PLOT DATE: 9/21/2005
DRAWN BY: J. GILMORE
CHECKED BY: C. CARLSON
SHEET 48 OF 67

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
DECK																	
	186	16	10075	ES1601	STR												
	180	16	1455	ES1602	S5	300	320	215	320			300					
✳	39	16	2360	ES1603	S5	660	220	680	140			660					
	188	16	7115	ES1604	1	175	6940										
✳	95	19	6940	ES1901	STR												
▲	8	19	6940	ES1903	STR												
APPROACH SLAB NO. 1																	
✳	22	16	6440	1EAS1601	STR												
	12	25	1100	1EAS2501	19		500	600	---								
▲	27	29	6480	1EAS2901	1	500	5980					---		220			
APPROACH SLAB NO. 2																	
▲	22	16	7200	2EAS1601	STR												
	12	25	1100	2EAS2501	19		500	600	---								
✳	31	29	6480	2EAS2901	1	500	5980					---		220			
ABUTMENT NO. 1																	
	11	16	7050	1A1601	STR												
	28	16	4160	1A1602	STR												
▲	30	16	3940	1A1603	STR												
	28	16	4830	1A1604	STR												
▲	30	16	2170	1A1605	STR												
	32	16	1080	1A1606	STR												
	32	16	1320	1A1607	STR												
	14	16	5300	1A1608A	STR												
	14	16	4700	1A1608B	STR												
	11	16	9620	1A1614	STR												
	3	16	4000	1A1615	STR												
▲	32	16	2380	1A1609	S10		970	440	970								
▲	32	16	2380	1A1610	S10		1120	140	1120								
	32	16	3320	1A1611	16	660	1040	420	1200								
▲	31	16	3070	1A1612	17		1330	1740	---								
	8	16	3640	1A1613	S10		1600	440	1600								
	31	22	4840	1A2201	17		1740	3100	---								
✳ ▲	31	22	3790	1A2202	17		1740	2050	---								
✳	35	25	3040	1A2501	STR												
WINGWALL NO. 1																	
	17	16	4555	1W1601	STR												
	13	16	3830	1W1602	STR												
▲	13	16	3450	1W1603	STR												
▲	40	16	3465	1W1604	STR												
				1W1605		NOT USED											
▲	11	16	3520	1W1606	S10		1540	440	1540								
	2	16	2780	1W1607	19		350	2430	---				130		330		
	20	16	1600	1W1608	19		800	800	---								
▲	40	16	1860	1W1609	19		660	1200	---								
	11	19	2500	1W1901	STR												
✳	13	25	3935	1W2501	17		425	3510	---								
	11	25	3460	1W2502	17		1160	2300	---								
✳	32	29	3240	1W2901	STR												
WINGWALL NO. 2																	
	12	16	4260	2W1601	STR												
	19	16	1330	2W1602	STR												
▲	19	16	4740	2W1603	STR												
▲	42	16	5340	2W1604	STR												
	5	16	6640	2W1605	STR												
	4	16	1180	2W1607	STR												
▲	17	16	3700	2W1606	S10		1630	440	1630								
				2W1608		NOT USED											
	14	16	3470	2W1609	22		660	2150	660								
	14	16	1320	2W1610	17		660	660	---								
	6	16	1840	2W1611	17		1180	660	---								
	17	19	2700	2W1901	STR												
	19	25	3925	2W2501	17		425	3500	---								
	18	25	3540	2W2502	17		1240	2300	---								
	46	29	3240	2W2901	STR												

ITEM	EACH	SIZE	LENGTH	MARK	TYPE	A	B	C	D	E	F	G	H	J	K	R	O
ABUTMENT NO. 2																	
	22	16	7855	2A1601	STR												
	28	16	3130	2A1602	STR												
▲	30	16	3945	2A1603	STR												
	28	16	5430	2A1604	STR												
	30	16	4770	2A1605	STR												
	32	16	3590	2A1606	STR												
△	34	16	1150	2A1607	STR												
	14	16	1620	2A1608A	STR												
	14	16	5180	2A1608B	STR												
▲	32	16	2380	2A1609	S10		970	440	970								
▲	32	16	2380	2A1610	S10		1120	140	1120								
	32	16	3320	2A1611	16	660	1040	420	1200								
	30	16	3070	2A1612	17		1330	1740	---								
▲	8	16	3640	2A1613	S10		1600	440	1600								
✳	31	22	4840	2A2201	17		1740	3100	---								
	29	22	3790	2A2202	17		1740	2050	---								
✳	29	25	3040	2A2501	STR												
WINGWALL NO. 3																	
	17	16	4555	3W1601	STR												
	13	16	3830	3W1602	STR												
▲	13	16	3450	3W1603	STR												
▲	40	16	3465	3W1604	STR												
				3W1605		NOT USED											
▲	10	16	3520	3W1606	S10		1540	440	1540								
	2	16	2845	3W1607	19		350	2495	---								
	20	16	1600	3W1608	19		800	800	---								
▲	40	16	1860	3W1609	19		660	1200	---								
	10	19	2600	3W1901	STR												
	13	25	3935	3W2501	17		425	3510	---								
	12	25	3460	3W2502	17		1160	2300	---								
✳	33	29	3240	3W2901	STR												
WINGWALL NO. 4																	
	17	16	5300	4W1601	STR												
	15	16	1330	4W1602	STR												
▲	15	16	3020	4W1603	STR												
▲	40	16	4260	4W1604	STR												
				4W1605		NOT USED											
▲	13	16	3640	4W1606	S10		1600	440	1600								
	2	16	3530	4W1607	19		355	3175	---								
	20	16	1600	4W1608	19		800	800	---								
▲	40	16	1860	4W1609	19		660	1200	---								
	13	19	3020	4W1901	STR												
✳	16	25	3935	4W2501	17		425	3510	---								
	14	25	3460	4W2502	17		1160	2300	---								
	37	29	3240	4W2901	STR												

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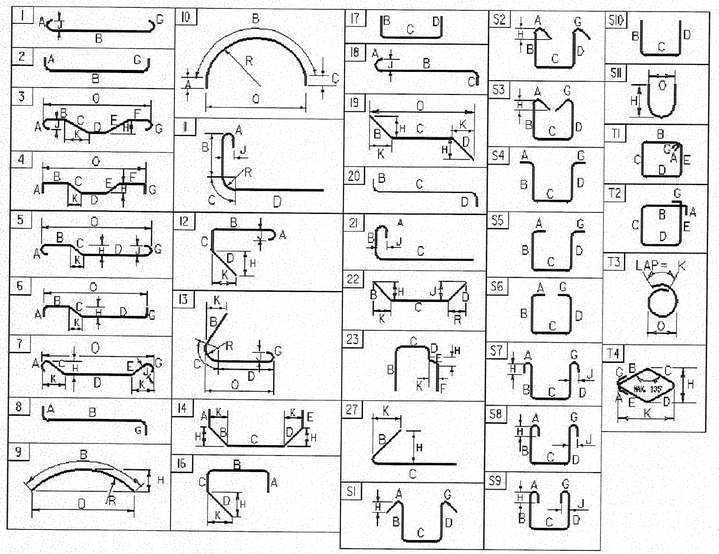
7. WHERE SLOPE DIFFERS FROM 45 DEGREES, DIMENSIONS "H" AND "K" MUST BE SHOWN.
8. ▲ DENOTES BARS TO BE CUT IN FIELD.
9. ✳ DENOTES ONE EXTRA BAR ADDED FOR TESTING PURPOSES.
10. △ DENOTES TWO EXTRA BARS ADDED FOR TESTING PURPOSES.
11. E IN BAR MARK PREFIX DENOTES EPOXY COATED REINFORCING STEEL.



ASTM STANDARD REINFORCING BARS

BAR SIZE	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: SUNDERLAND
PROJECT NUMBER: BRF 0114(2)

FILE NAME: /PW/93j009/sj009rss.xls
PROJECT MANAGER: R. R. WHITCOMB
DESIGNED BY: D. BONNEAU
REINFORCING STEEL SCHEDULE SHEET #1

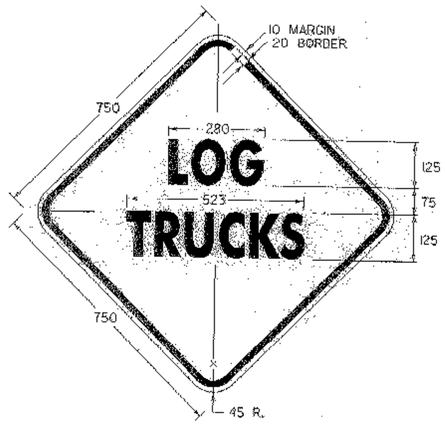
PLOT DATE: 9/21/2005
DRAWN BY: J. GILMORE
CHECKED BY: C. CARLSON
SHEET 48 OF 67

STATE OF VERMONT
AGENCY OF TRANSPORTATION

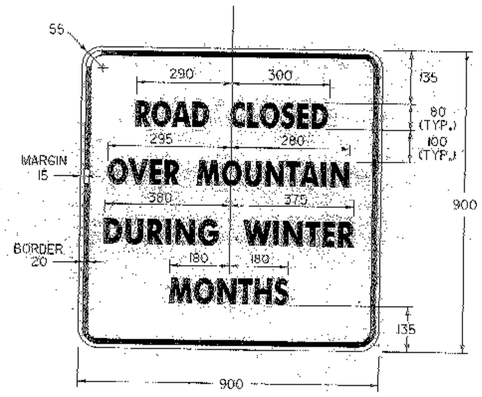
TRAFFIC SIGN SUMMARY SHEET

FIRST 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	EXIST POST SALVAGE	NEW SIGN POSTS NO. OF POSTS	FLANGED CHANNEL kg/m 4.7	3.0	4.5	SQUARE STEEL (mm) 44	50	63 kg/m 3.4	3.9	5.0	ANCHOR	SLEEVE	TUBULAR ALUMINUM Ø (mm) 75	100	100 MOD kg/m 1.9	2.5	2.5	TUBULAR STEEL Ø (mm) FOUNDATION	75	89	100	125 kg/m 11.3	13.4	16.1	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
4+006.8 LT ~~4+009.300 LT~~	STOP	1	750	750	0.563						1		X			X			X																					R1-1		E-143
4+009.300 LT	0114 0215 0103	1	150	200	0.030																																					E-138
4+022 RT ~~4+020.000 RT~~	SPEED LIMIT 35	1	600	750	0.450						1		X			X			X																					R2-1		E-142
4+030 RT ~~4+020.00 RT~~	road closed over mountain during winter months	1	750	750	0.563						~~1~~ 2		X			X			X																								SEE DETAIL THIS SHEET
4+049.00 RT	LOG TRUCKS	1	750	750	0.563																																					SEE DETAIL THIS SHEET
	ROUTE US 7 ←	2	180	700	.126 .126																																					
	KELLY STAND RD	2	180	800	.144 .144																																					
	NORTH RD	2	180	700	.126 .126																																					
											OPTION ITEMS																																	
					2.961																																					



COLORS
BORDER AND TEXT - BLACK
BACKGROUND - REFLECTORIZED YELLOW



COLORS
BORDER AND TEXT - BLACK
BACKGROUND - REFLECTORIZED WHITE

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			
TOTALS	m^2 2.2	m^2	EA.	m^2		m 12		Ø	kg	EA.	kg		EA.	EA.	kg				

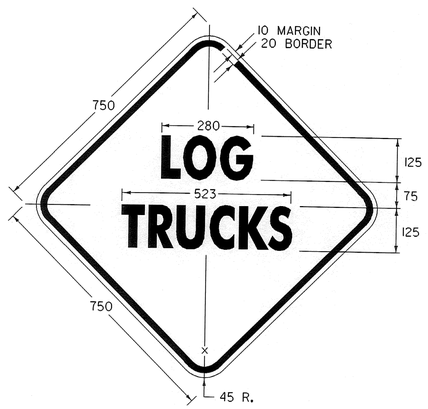
SHEET NAME:	SIGN SUMMARY SHEET
PROJECT NAME:	SUNDERLAND
PROJECT NUMBER:	BRF 0114(2)
HIGHWAY NO.:	TH 3
BRIDGE NO.:	14
OVER:	ROARING BRANCH
FILE NAME:	/PW/93J009/sJ009sgn.dgn
PROJECT MANAGER:	R. R. WHITCOMB
DESIGNED BY:	K. UPMAL
PLOT DATE:	14-DEC-2005
DRAWN BY:	K. UPMAL
IPARM NAME:	sJ009sll.i
SHEET	50 OF 67

STATE OF VERMONT
AGENCY OF TRANSPORTATION

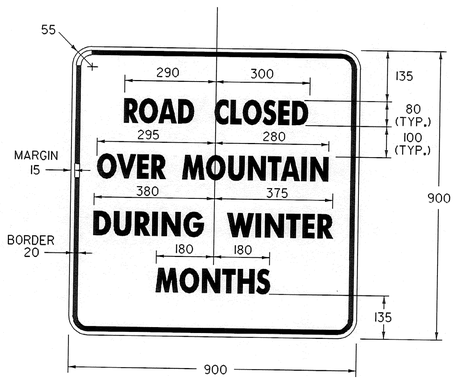
TRAFFIC SIGN SUMMARY SHEET

MAJOR 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	EXIST POST 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) FOUNDATION	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																									
4+009.300 LT	STOP	1	750	750	0.563						1		X			X		X																RI-1		E-143
4+009.300 LT	0114 0215 0103	1	150	200	0.030																														E-138
4+020.000 RT	SPEED LIMIT 35	1	600	750	0.450						1		X			X		X																R2-1		E-142
4+020.00 RT	ROAD CLOSED OVER MOUNTAIN DURING WINTER MONTHS	1	750	750	0.563						2		X			X		X																		SEE DETAIL THIS SHEET
4+049.00 RT	LOG TRUCKS	1	750	750	0.563																														SEE DETAIL THIS SHEET



COLORS
BORDER AND TEXT - BLACK
BACKGROUND - REFLECTORIZED YELLOW



COLORS
BORDER AND TEXT - BLACK
BACKGROUND - REFLECTORIZED WHITE

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."

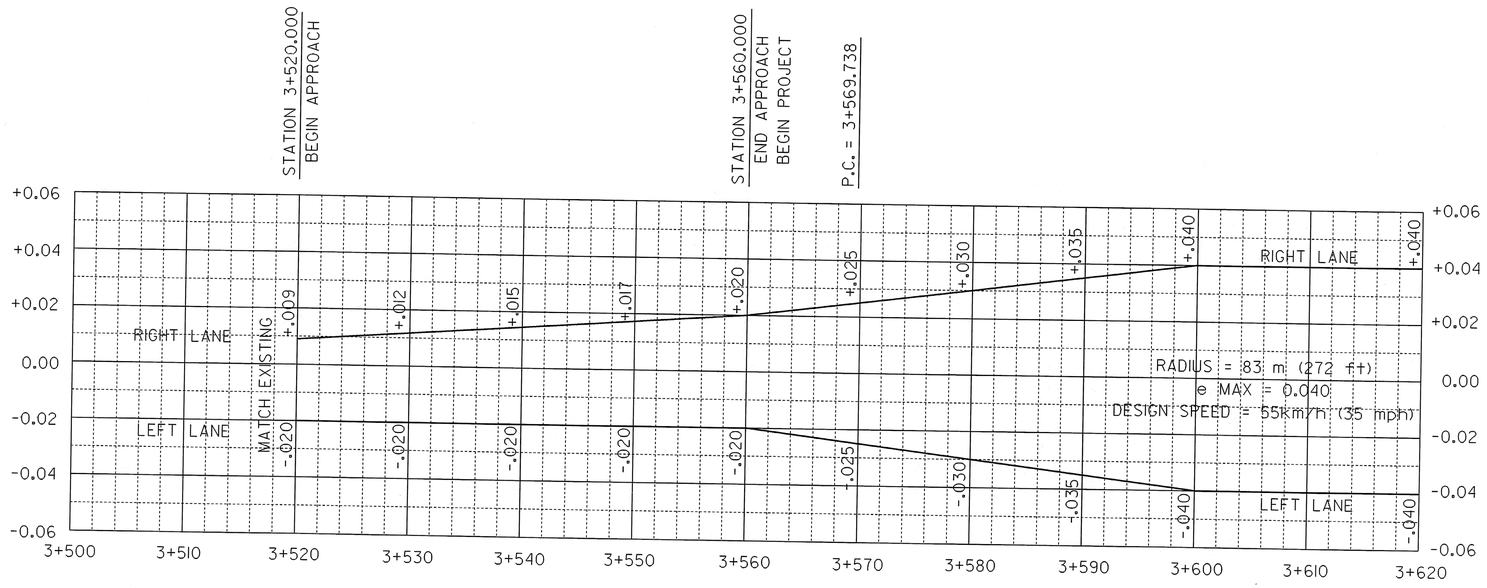
								m	m	m	m	m	m		EA	kg	kg	kg		kg	kg	kg	kg												
TOTALS	m^2 2.2	m^2	EA.	m^2		m 12		m							kg		EA.		kg				EA.	EA.	kg										

SHEET NAME: SIGN SUMMARY SHEET

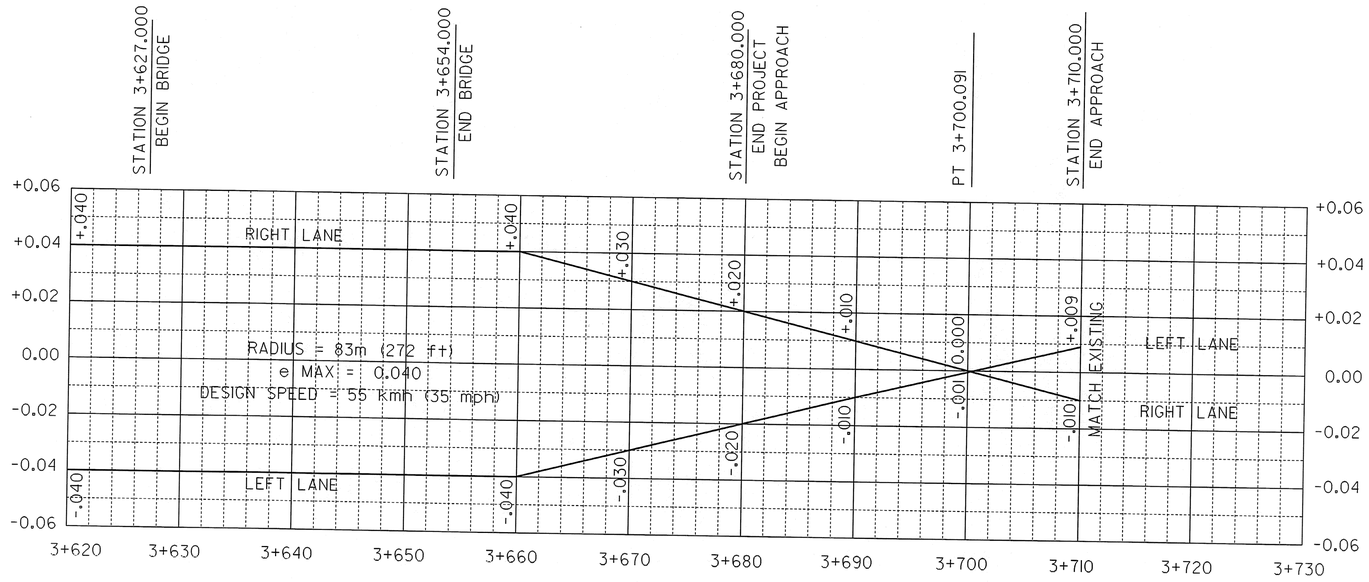
PROJECT NAME: SUNDERLAND
PROJECT NUMBER: BRF 0114(2)
HIGHWAY NO.: TH 3
BRIDGE NO.: 14
OVER: ROARING BRANCH

FILE NAME: /PW/93J009/sj009sgn.dgn
PROJECT MANAGER: R. R. WHITCOMB
DESIGNED BY: K. UPMAL
PLOT DATE: 14-DEC-2005
DRAWN BY: K. UPMAL
IPARM NAME: sj009sll.i
SHEET 50 OF 67

Metric



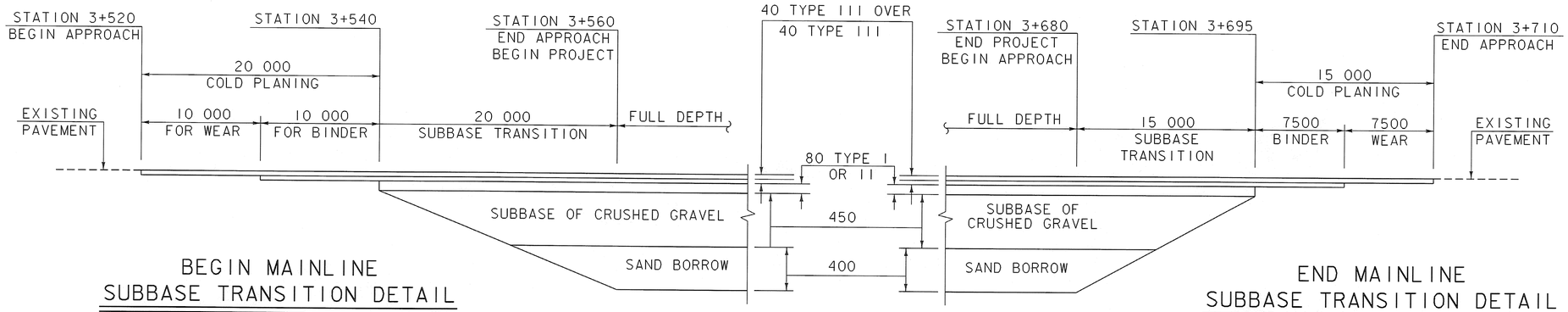
MAINLINE BANKING DIAGRAM



MAINLINE BANKING DIAGRAM CONTINUED

SHEET NAME: **MAINLINE BANKING DIAGRAM**		
PROJECT NAME: SUNDERLAND		HIGHWAY NO.: TH 3
PROJECT NUMBER: BRF 0114(2)		BRIDGE NO.: 14
		OVER: ROARING BRANCH
FILE NAME: /PW/93J009/sj009xs.dgn		PLOT DATE: 14-DEC-2005
PROJECT MANAGER: R. R. WHITCOMB		DRAWN BY: J.GILMORE
DESIGNED BY: C. CARLSON		IPARM NAME: sj009mbd.i
		SHEET 51 OF 67

MNDOT Metric

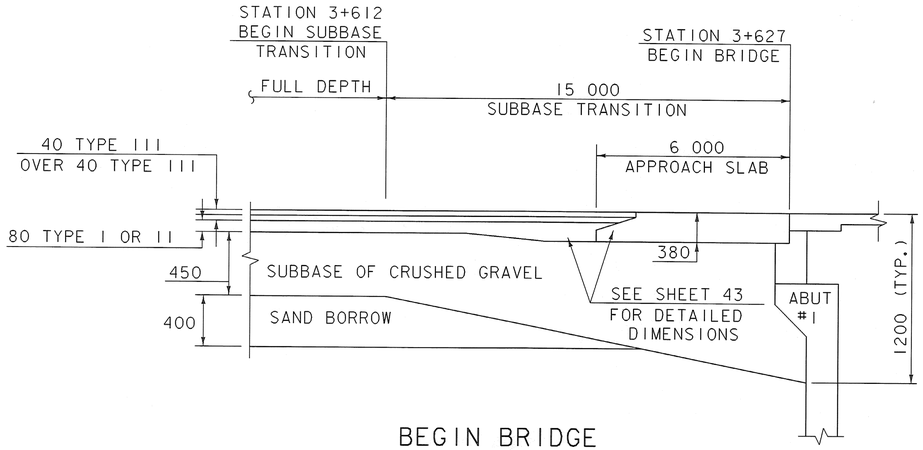


BEGIN MAINLINE SUBBASE TRANSITION DETAIL

N. T. S.

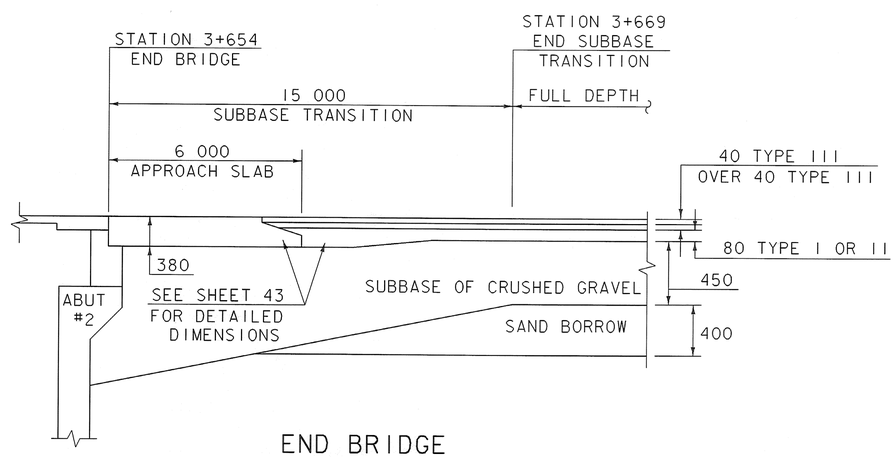
END MAINLINE SUBBASE TRANSITION DETAIL

N. T. S.



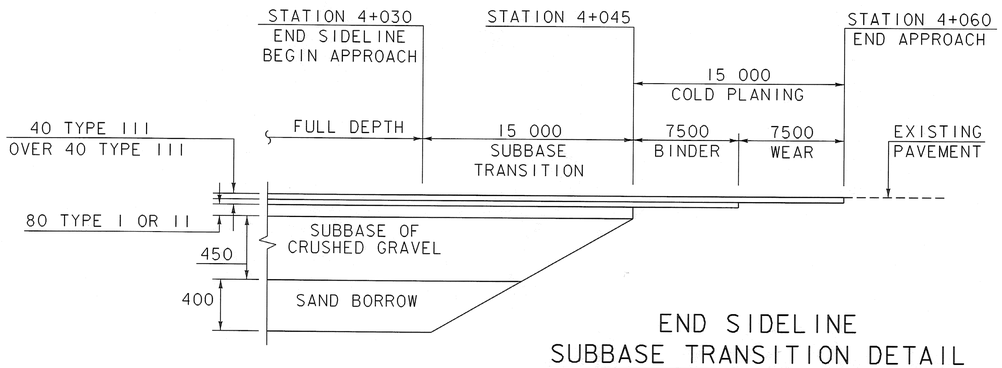
BEGIN BRIDGE SUBBASE TRANSITION DETAIL

N. T. S.



END BRIDGE SUBBASE TRANSITION DETAIL

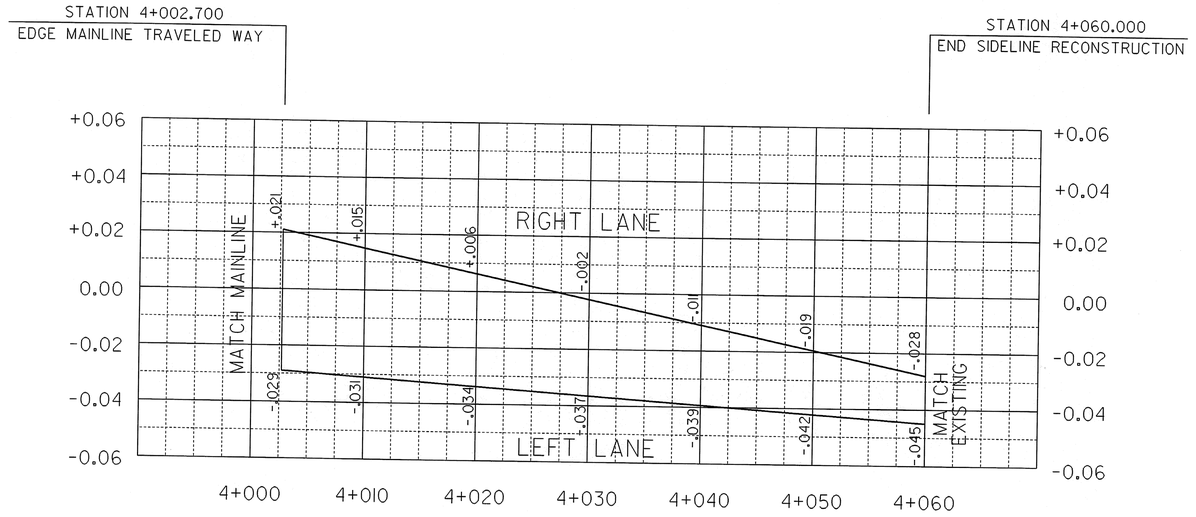
N. T. S.



END SIDELINE SUBBASE TRANSITION DETAIL

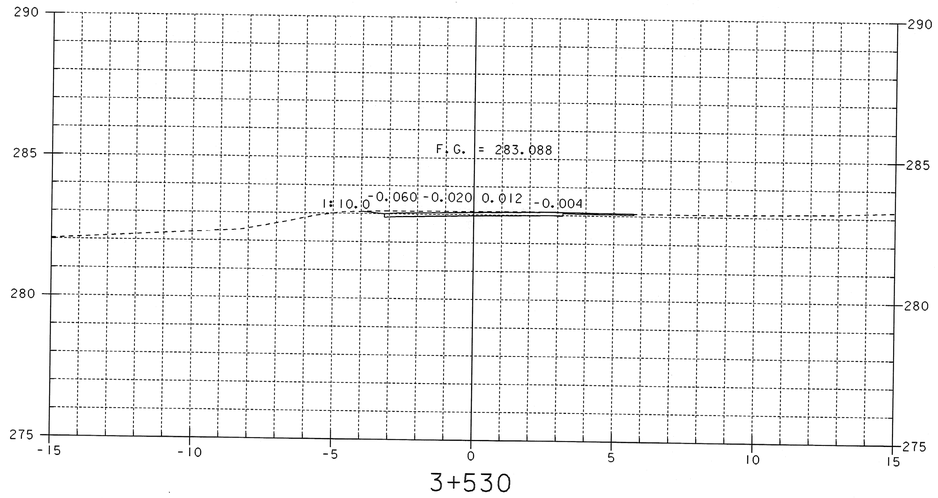
N. T. S.

SHEET NAME: **SUBBASE TRANSITION DIAGRAMS**		
PROJECT NAME: SUNDERLAND		HIGHWAY NO.: TH 3
PROJECT NUMBER: BRF 0114(2)		BRIDGE NO.: 14
		OVER: ROARING BRANCH
FILE NAME: /PW/93j009/sj009xs.dgn		PLOT DATE: 14-DEC-2005
PROJECT MANAGER: R. R. WHITCOMB		DRAWN BY: J.GILMORE
DESIGNED BY: C. CARLSON		IPARM NAME: sj009std.i
		SHEET 52 OF 67

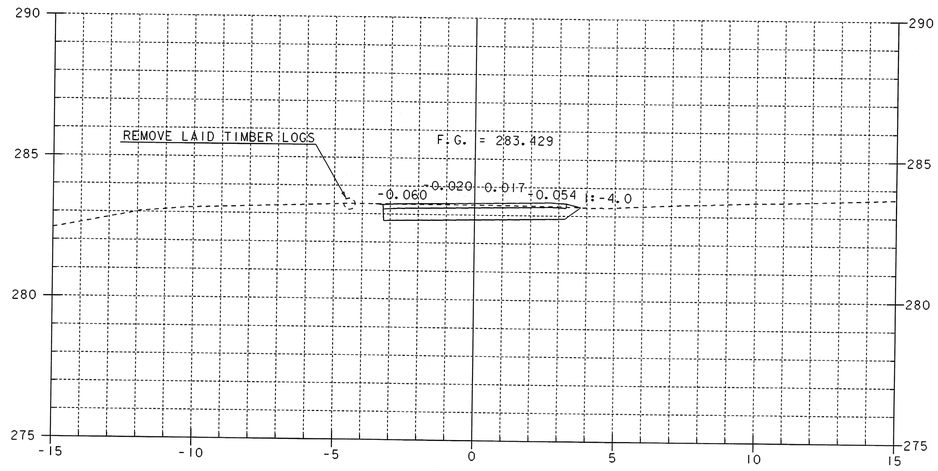


SIDELINE BANKING DIAGRAM

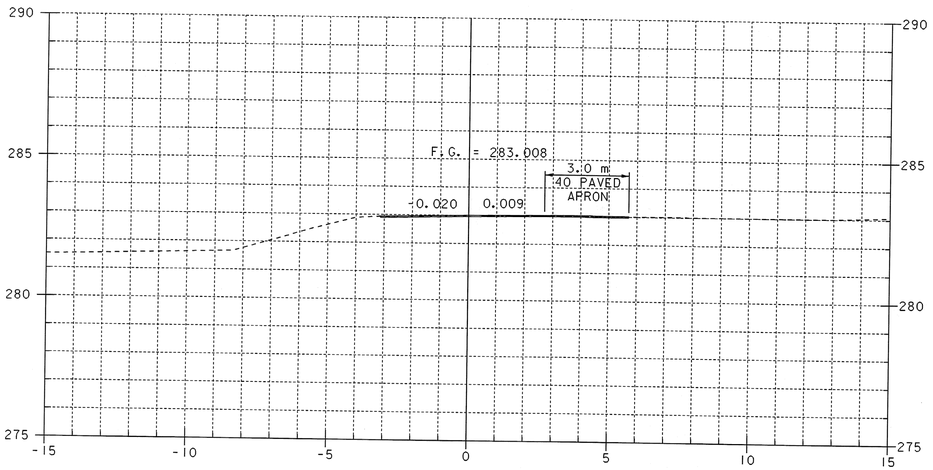
SHEET NAME: **SIDELINE BANKING DIAGRAM**	
PROJECT NAME: SUNDERLAND PROJECT NUMBER: BRF 0114(2)	HIGHWAY NO.: TH 3 BRIDGE NO.: 14 OVER: ROARING BRANCH
FILE NAME: /PW/93j009/sj009xs.dgn PROJECT MANAGER: R. R. WHITCOMB DESIGNED BY: C. CARLSON	PLOT DATE: 14-DEC-2005 DRAWN BY: J.GILMORE IPARM NAME: sj009sbd.i SHEET 53 OF 67



3+530

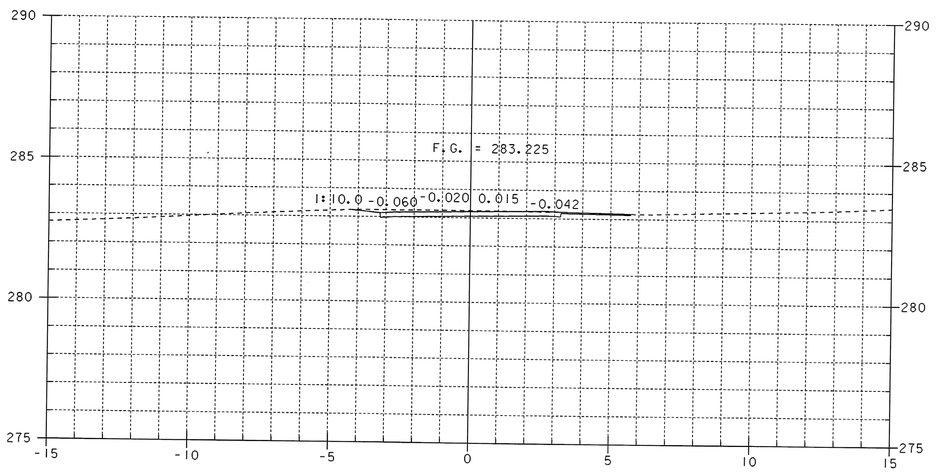


3+550



STA. 3+520.000
BEGIN APPROACH
COLD PLANING

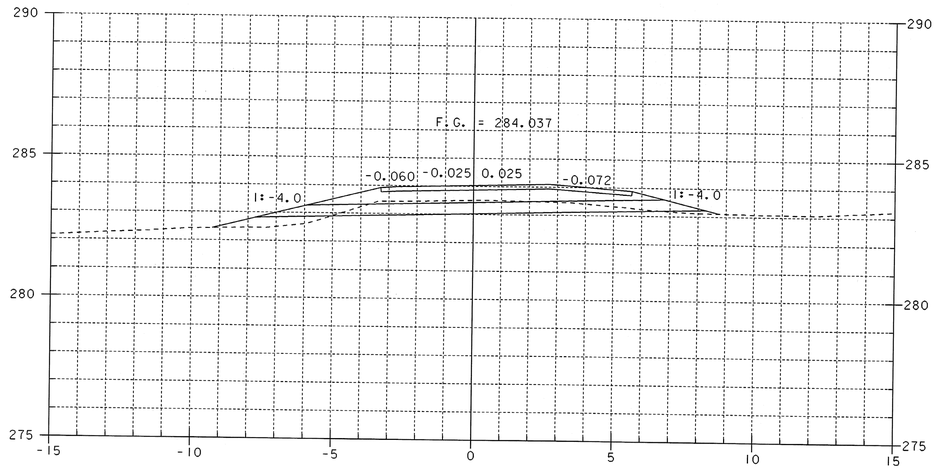
3+520



STA. 3+540.000
END COLD PLANING

3+540

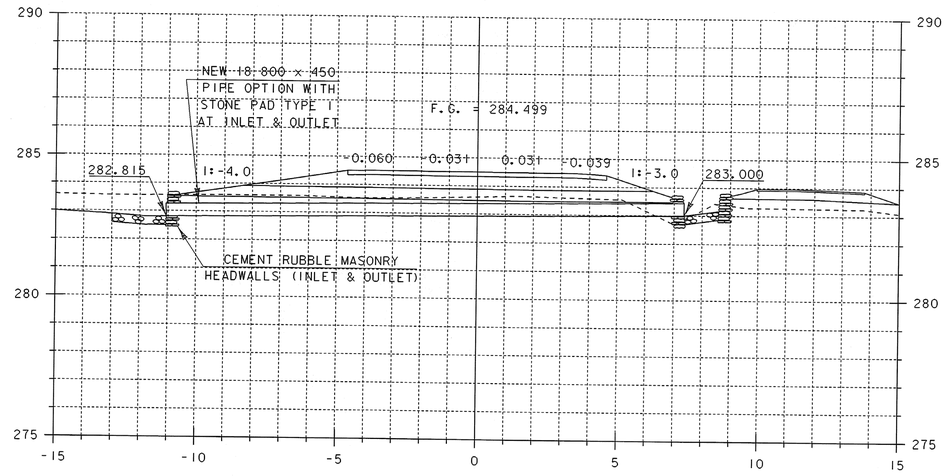
SHEET NAME: **MAINLINE CROSS SECTIONS**	
PROJECT NAME: SUNDERLAND PROJECT NUMBER: BRF 0114(2)	HIGHWAY NO.: TH 3 BRIDGE NO.: 14 OVER: ROARING BRANCH
FILE NAME: /PW/93J009/sJ009xs.dgn PROJECT MANAGER: R. R. WHITCOMB DESIGNED BY: C. CARLSON	PLOT DATE: 14-DEC-2005 DRAWN BY: J.GILMORE IPARM NAME: sJ009mxl.i SHEET 54 OF 67



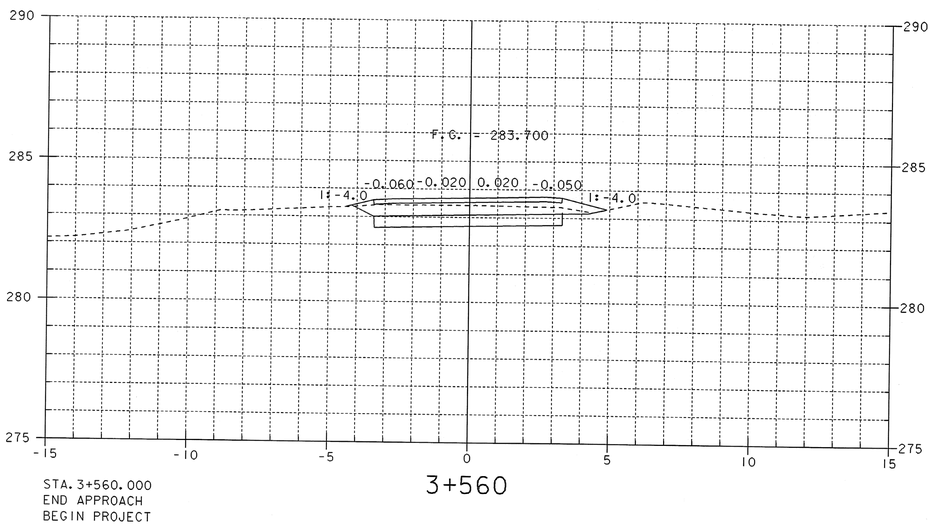
STA. 3+564.0 LT.
CONSTRUCT GRAVEL DRIVE
WITH 3000 PAVED APRON

3+570

STA. 3+568.0 RT. (SKEWED 38°)
CONSTRUCT GRAVEL DRIVE WITH
PAVED APRON

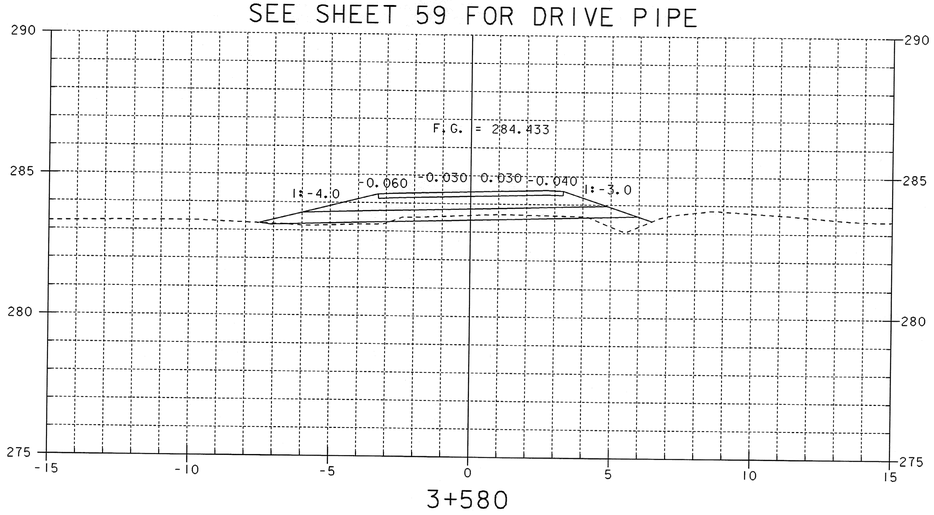


3+581.580
PIPE SKEWED 40°48'30" LT.
SEE SHEET 59 FOR DRIVE PIPE



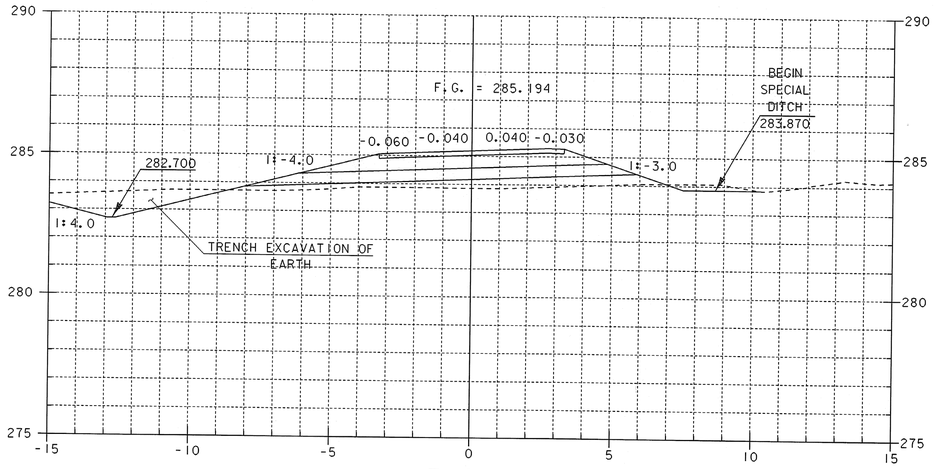
STA. 3+560.000
END APPROACH
BEGIN PROJECT

3+560



3+580

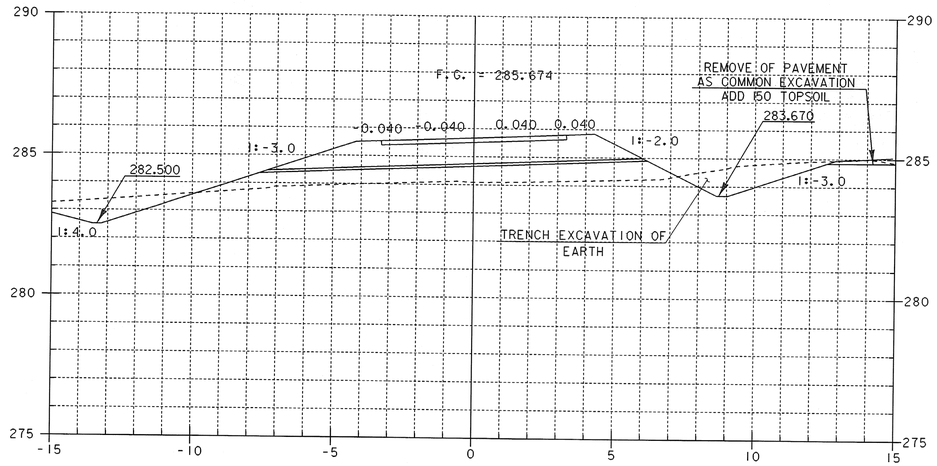
SHEET NAME: **MAINLINE CROSS SECTIONS**	
PROJECT NAME: SUNDERLAND	HIGHWAY NO.: TH 3
PROJECT NUMBER: BRF 0114(2)	BRIDGE NO.: 14
	OVER: ROARING BRANCH
FILE NAME: /PW/93j009/sj009xs.dgn	PLOT DATE: 21-DEC-2005
PROJECT MANAGER: R. R. WHITCOMB	DRAWN BY: J.GILMORE
DESIGNED BY: C. CARLSON	IPARM NAME: sj009mx2.i
	SHEET 55 OF 67



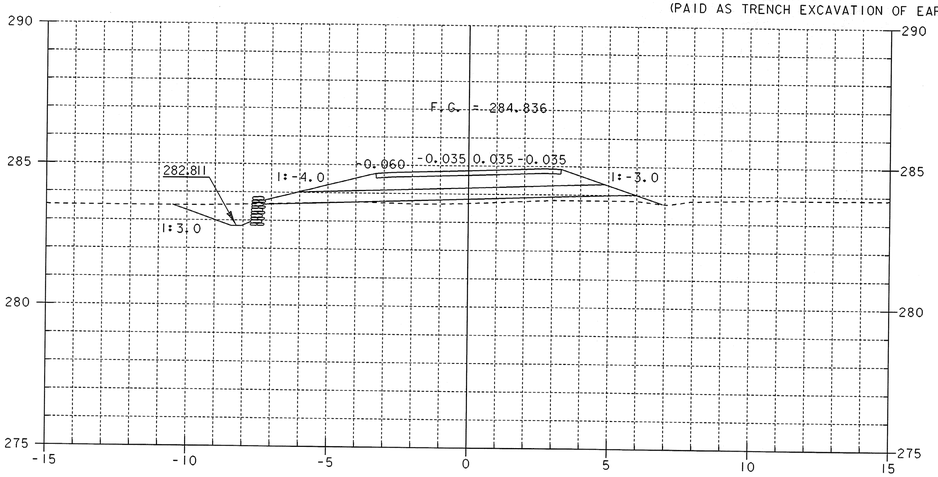
3+600

STA. 3+593.4 RT.
CONSTRUCT GRAVEL DRIVE WITH PAVED APRON

STA. 3+600.0 RT. - 3+625.5 RT.
CONSTRUCT SPECIAL DITCH
(PAID AS TRENCH EXCAVATION OF EARTH)

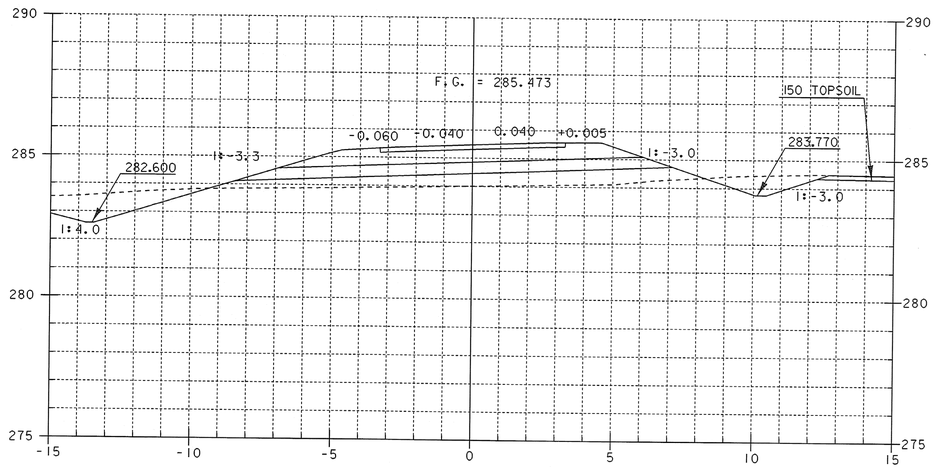


3+620



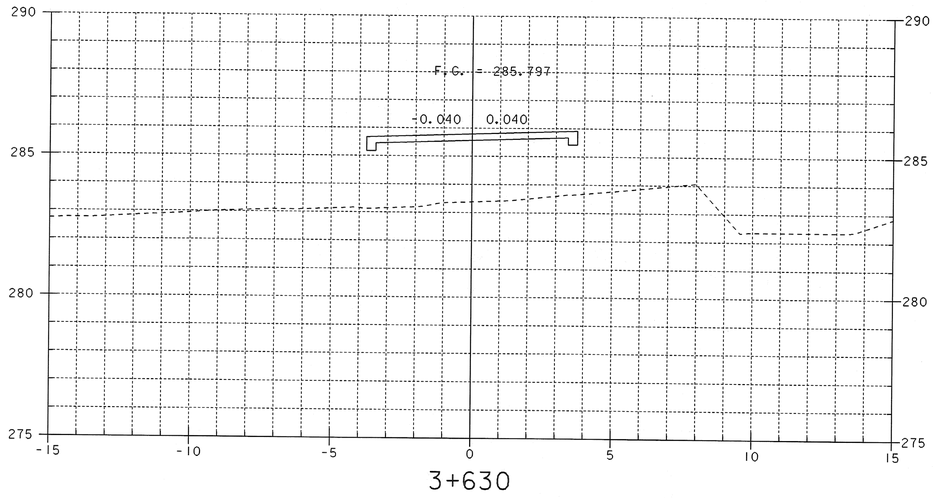
3+590

STA. 3+589.6 LT. - 3+631.8 LT.
CONSTRUCT SPECIAL DITCH

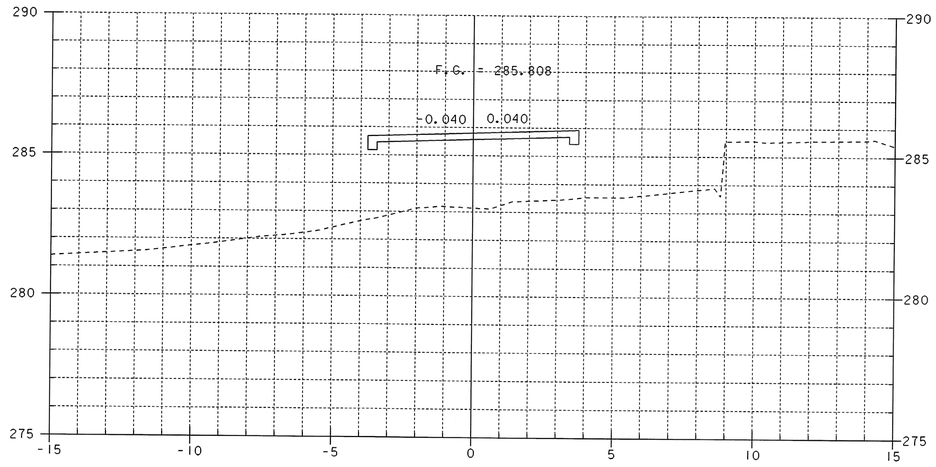


3+610

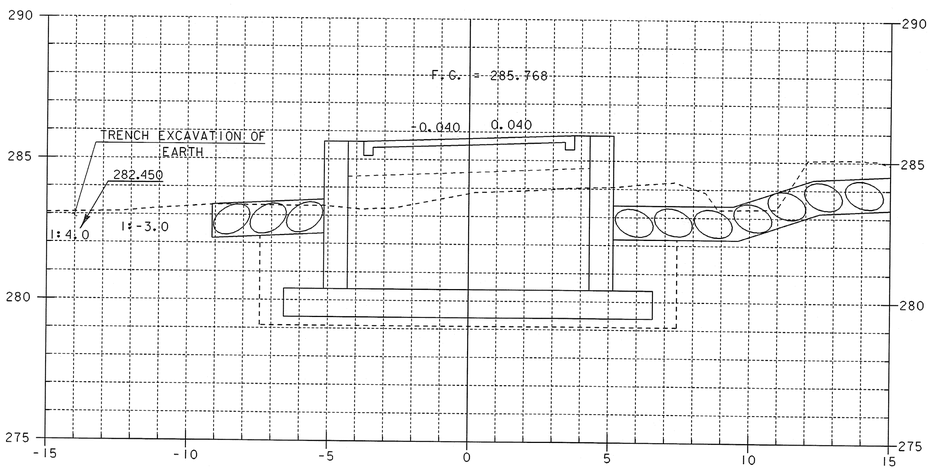
SHEET NAME: MAINLINE CROSS SECTIONS	
PROJECT NAME: SUNDERLAND PROJECT NUMBER: BRF 0114(2)	HIGHWAY NO.: TH 3 BRIDGE NO.: 14 OVER: ROARING BRANCH
FILE NAME: /PW/93j009/sj009xs.dgn PROJECT MANAGER: R. R. WHITCOMB DESIGNED BY: C. CARLSON	PLOT DATE: 14-DEC-2005 DRAWN BY: J.GILMORE IPARM NAME: sj009mx3.i SHEET 56 OF 67



3+630

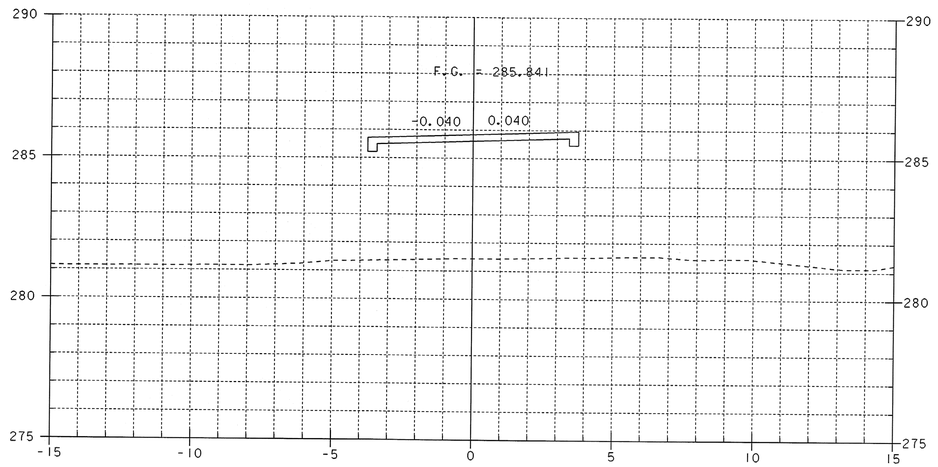


3+650



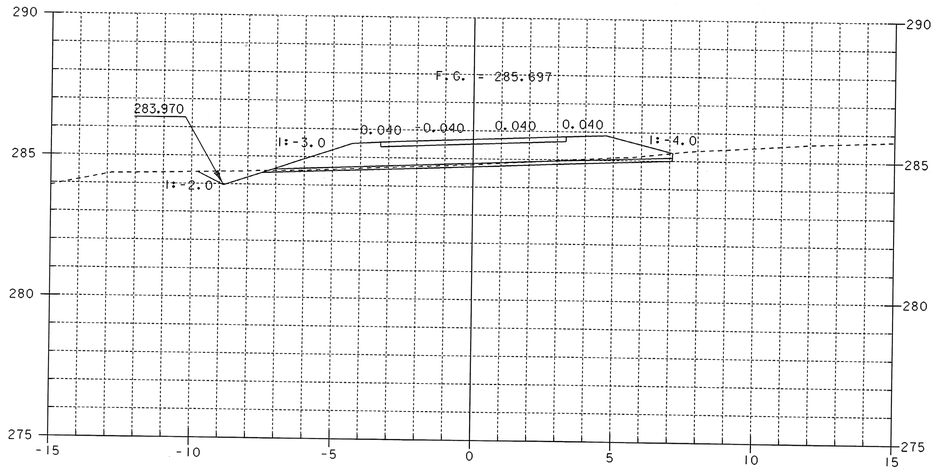
STA. 3+627.000
BEGIN BRIDGE

3+627



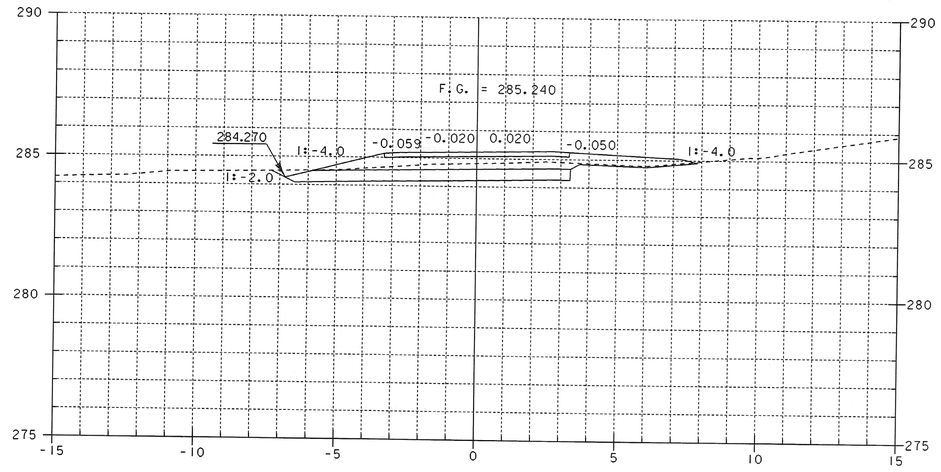
3+640

SHEET NAME: **MAINLINE CROSS SECTIONS**		
PROJECT NAME: SUNDERLAND		HIGHWAY NO.: TH 3
PROJECT NUMBER: BRF 0114(2)		BRIDGE NO.: 14
		OVER: ROARING BRANCH
FILE NAME: /PW/93j009/sj009xs.dgn		PLOT DATE: 14-DEC-2005
PROJECT MANAGER: R. R. WHITCOMB		DRAWN BY: J.GILMORE
DESIGNED BY: C. CARLSON		IPARM NAME: sj009mx4.i
		SHEET 57 OF 67



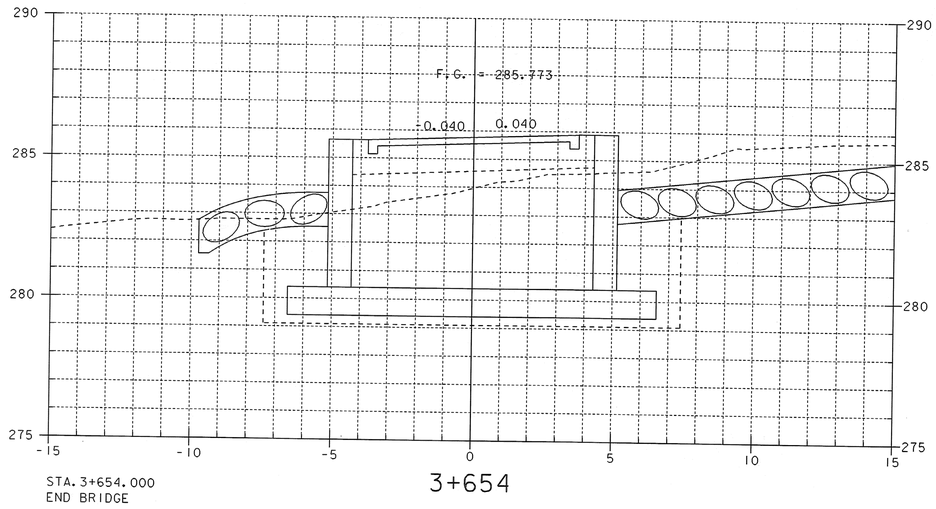
STA. 3+655.9 LT. - 3+685.0 LT.
CONSTRUCT SPECIAL DITCH
PAID AS TRENCH EXCAVATION OF EARTH

3+660



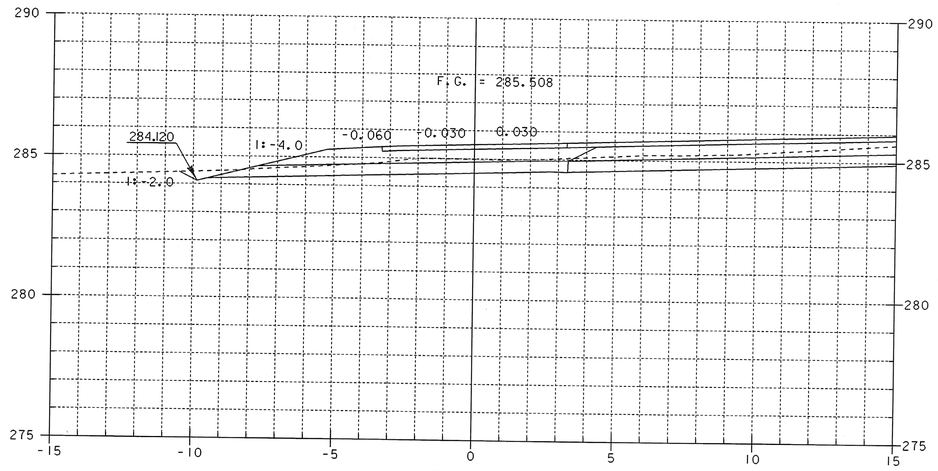
STA. 3+680.000
END PROJECT
BEGIN APPROACH

3+680



STA. 3+654.000
END BRIDGE

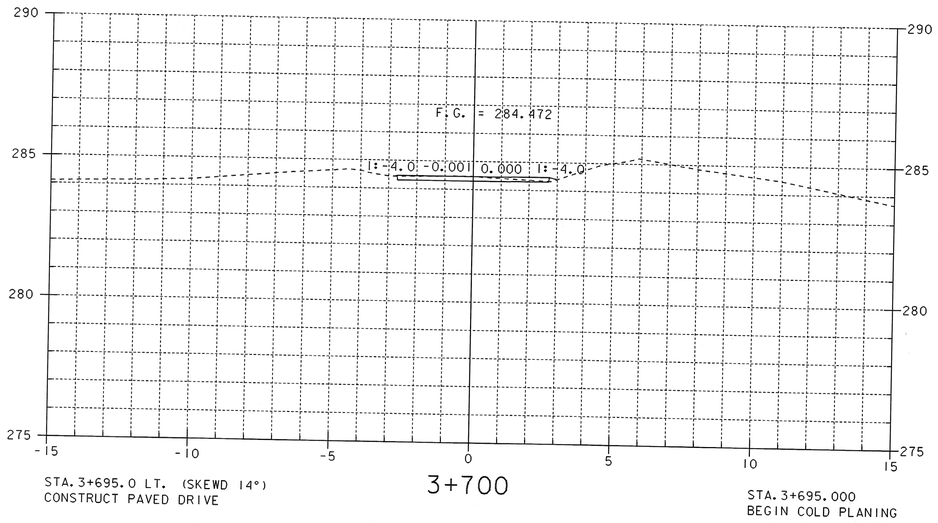
3+654



MAINLINE STA. 3+670.000 =
SIDELINE STA. 4+000.000

3+670

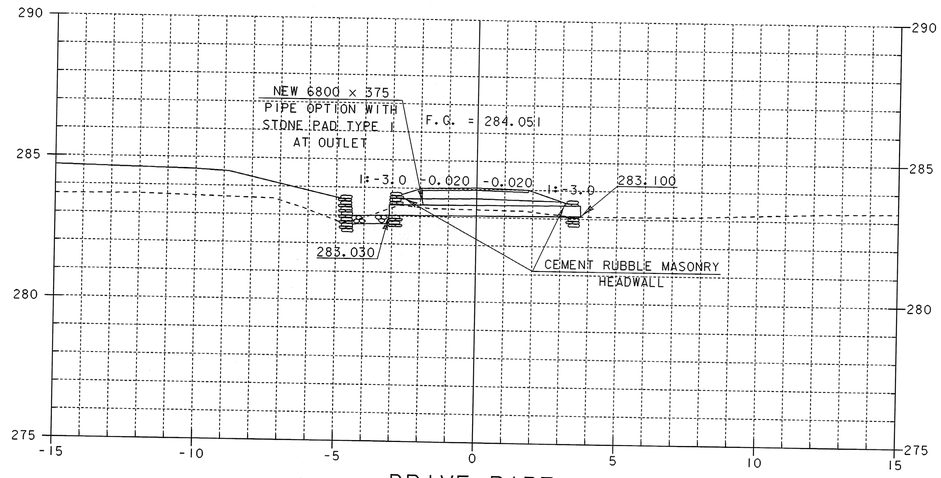
SHEET NAME: MAINLINE CROSS SECTIONS	
PROJECT NAME: SUNDERLAND PROJECT NUMBER: BRF 0114(2)	HIGHWAY NO.: TH 3 BRIDGE NO.: 14 OVER: ROARING BRANCH
FILE NAME: /PW/93j009/sj009xs.dgn PROJECT MANAGER: R. R. WHITCOMB DESIGNED BY: C. CARLSON	PLOT DATE: 14-DEC-2005 DRAWN BY: J.GILMORE IPARM NAME: sj009mx5.i SHEET 58 OF 67



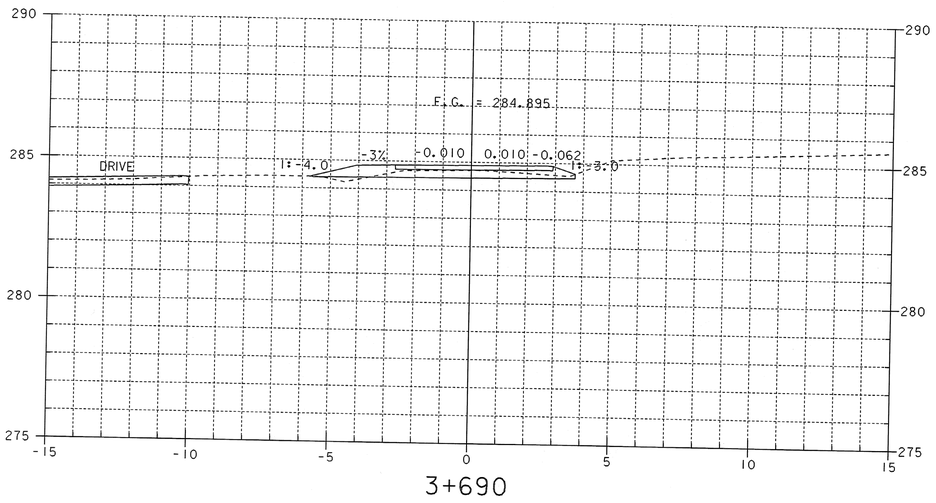
STA. 3+695.0 LT. (SKEWD 14°)
CONSTRUCT PAVED DRIVE

3+700

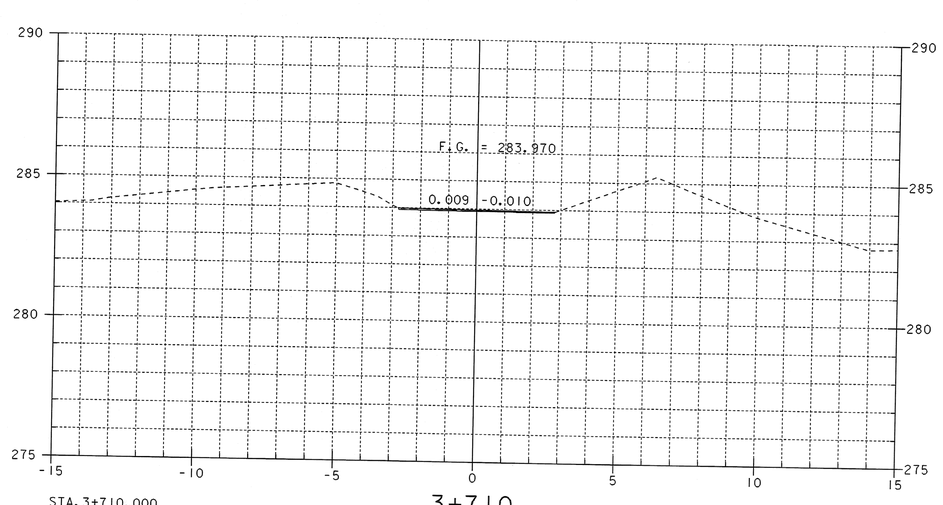
STA. 3+695.000
BEGIN COLD PLANING



DRIVE PIPE
MAINLINE STA. 3+576.8 RT.



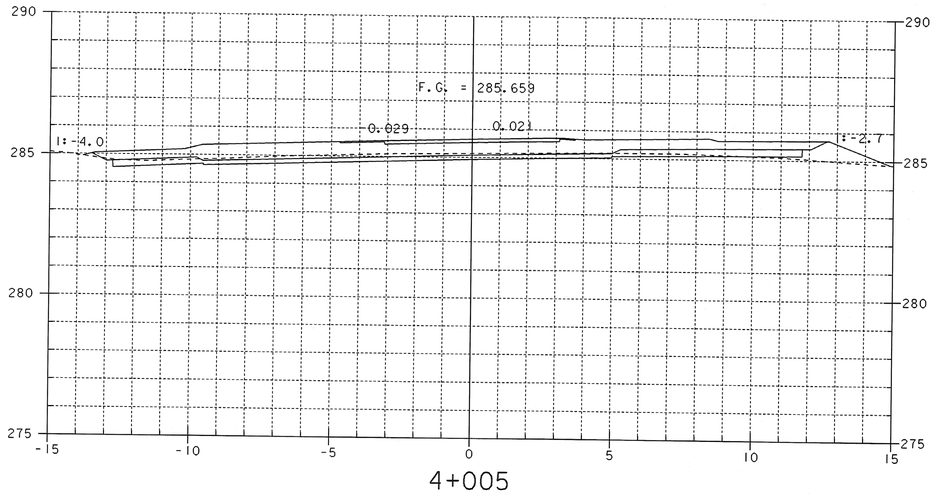
3+690



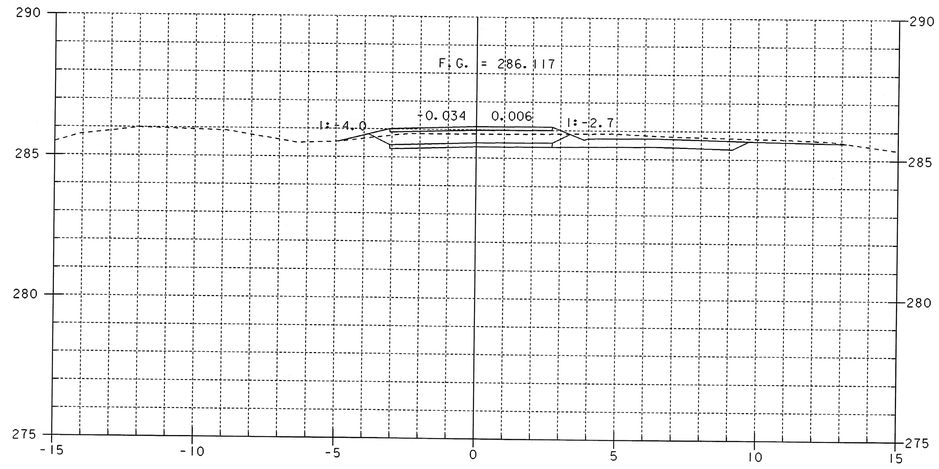
STA. 3+710.000
END APPROACH
COLD PLANING

3+710

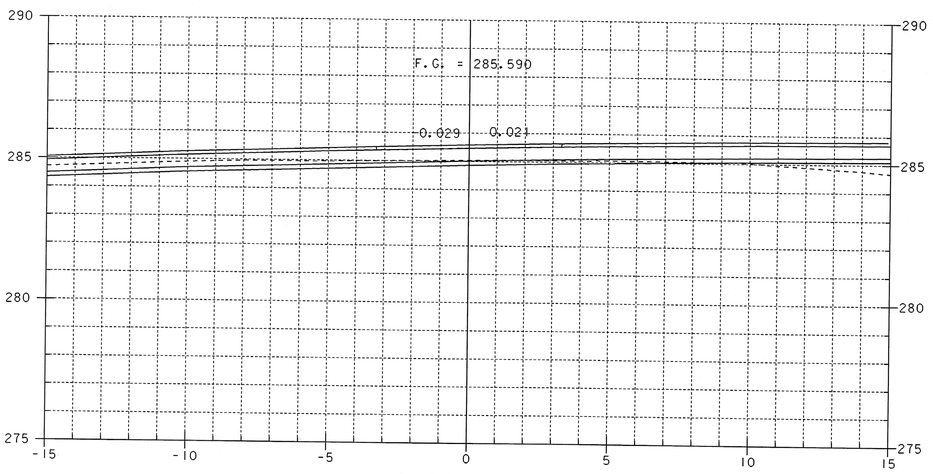
SHEET NAME: MAINLINE CROSS SECTIONS		
PROJECT NAME: SUNDERLAND	HIGHWAY NO.: TH 3	
PROJECT NUMBER: BRF 0114(2)	BRIDGE NO.: 14	
	OVER: ROARING BRANCH	
FILE NAME: /PW/93j009/sj009xs.dgn	PLOT DATE: 21-DEC-2005	
PROJECT MANAGER: R. R. WHITCOMB	DRAWN BY: J.GILMORE	
DESIGNED BY: C. CARLSON	IPARM NAME: sj009mx6.i	
	SHEET 59 OF 67	



4+005

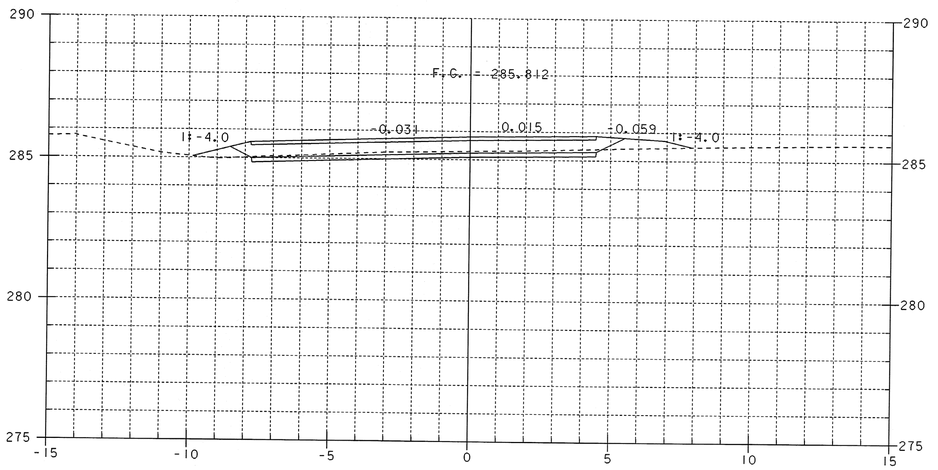


4+020



4+002.700

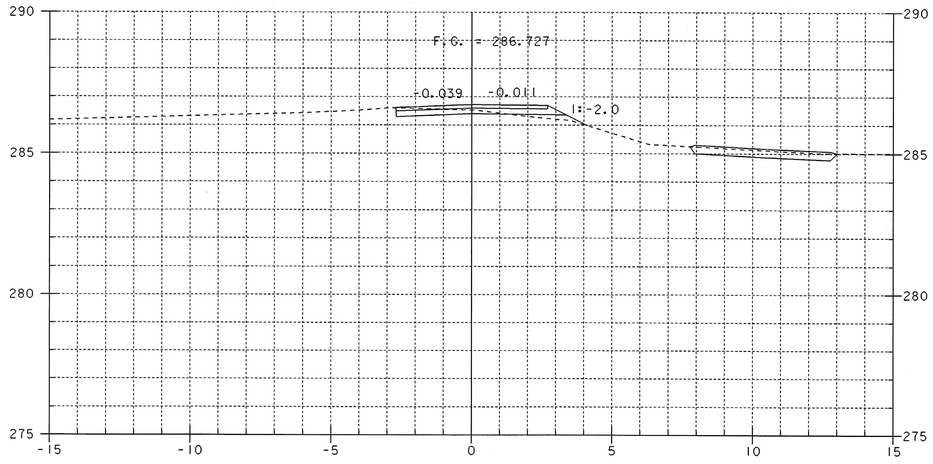
STA. 4+002.700
EDGE OF MAINLINE SHOULDER
BEGIN SIDELINE



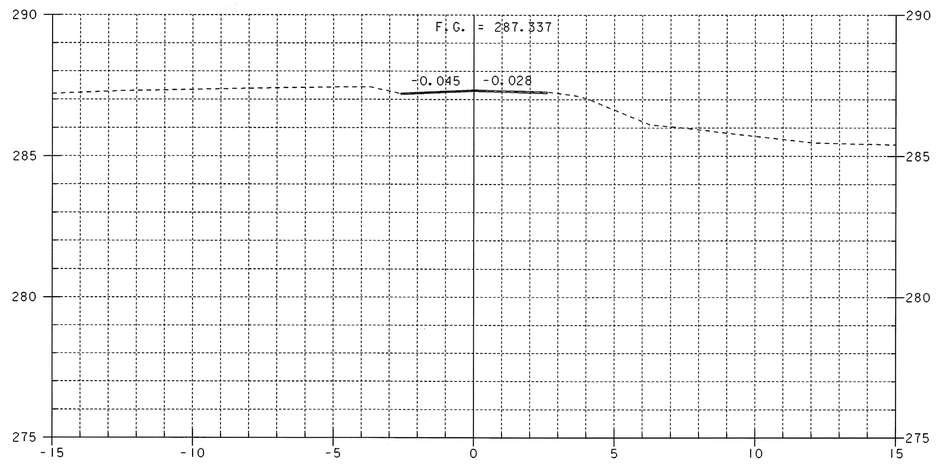
4+010

STA. 4+010.0 RT.
CONSTRUCT GRAVEL DRIVE WITH
PAVED APRON

SHEET NAME: SIDELINE CROSS SECTIONS	
PROJECT NAME: SUNDERLAND	HIGHWAY NO.: TH 3
PROJECT NUMBER: BRF 0114(2)	BRIDGE NO.: 14
	OVER: ROARING BRANCH
FILE NAME: /PW/93j009/sj009xs.dgn	PLOT DATE: 14-DEC-2005
PROJECT MANAGER: R. R. WHITCOMB	DRAWN BY: J.GILMORE
DESIGNED BY: C. CARLSON	IPARM NAME: sj009sxl.i
	SHEET 60 OF 67

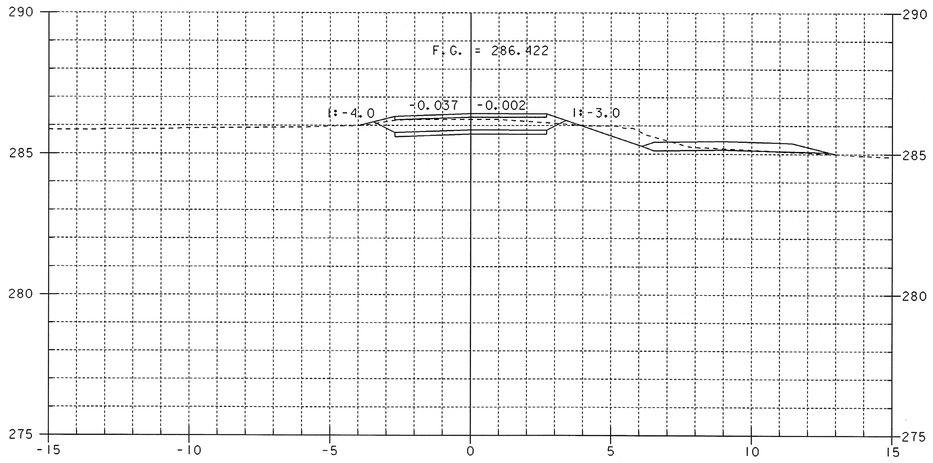


4+040



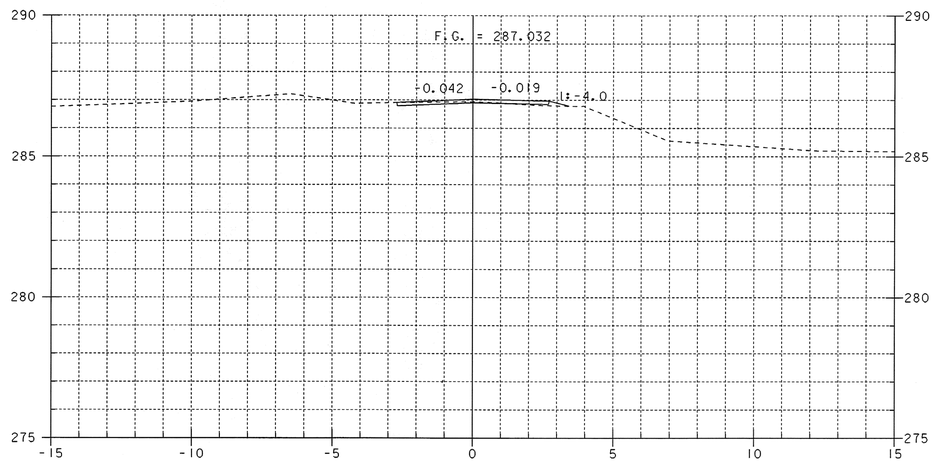
STA. 4+060.000
END APPROACH
COLD PLANING

4+060



STA. 4+030.000
END SIDELINE
BEGIN APPROACH

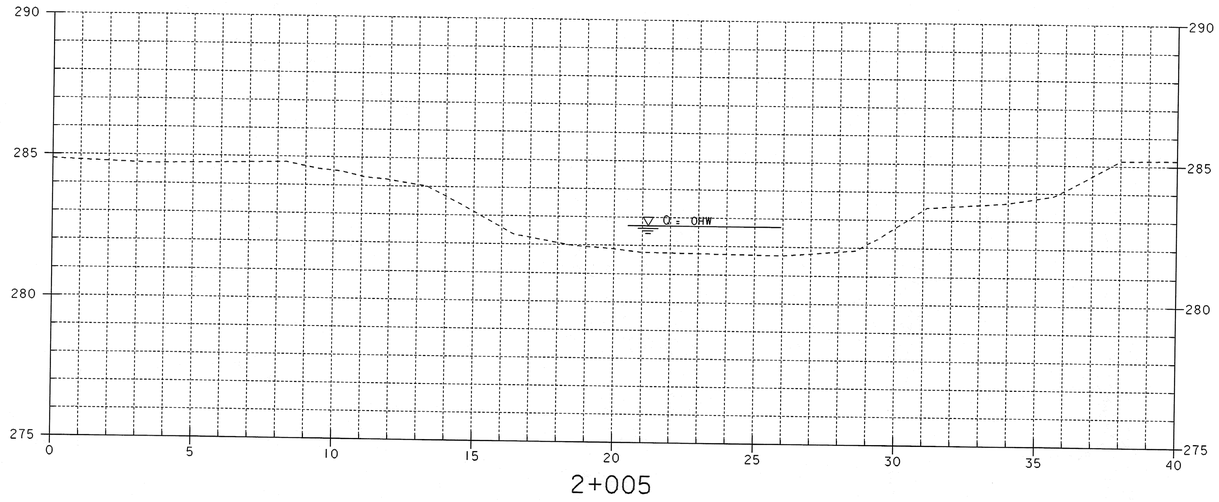
4+030



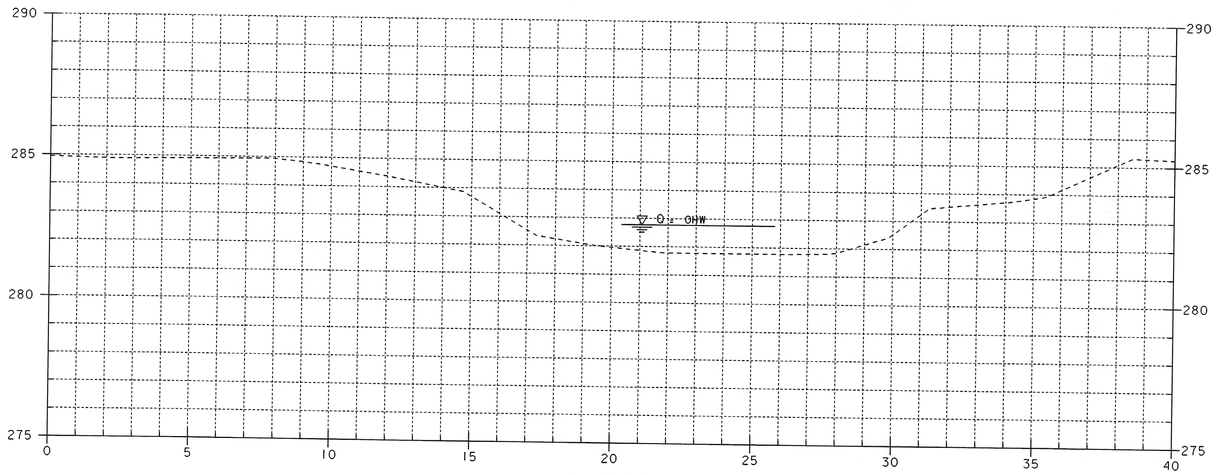
STA. 4+045.000
BEGIN COLD PLANING

4+050

SHEET NAME: SIDELINE CROSS SECTIONS	
PROJECT NAME: SUNDERLAND	HIGHWAY NO.: TH 3
PROJECT NUMBER: BRF 0114(2)	BRIDGE NO.: 14
	OVER: ROARING BRANCH
FILE NAME: /PW/93J009/sJ009xs.dgn	PLOT DATE: 14-DEC-2005
PROJECT MANAGER: R. R. WHITCOMB	DRAWN BY: J.GILMORE
DESIGNED BY: C. CARLSON	IPARM NAME: sJ009sx2.I
	SHEET 61 OF 67



2+005



2+000

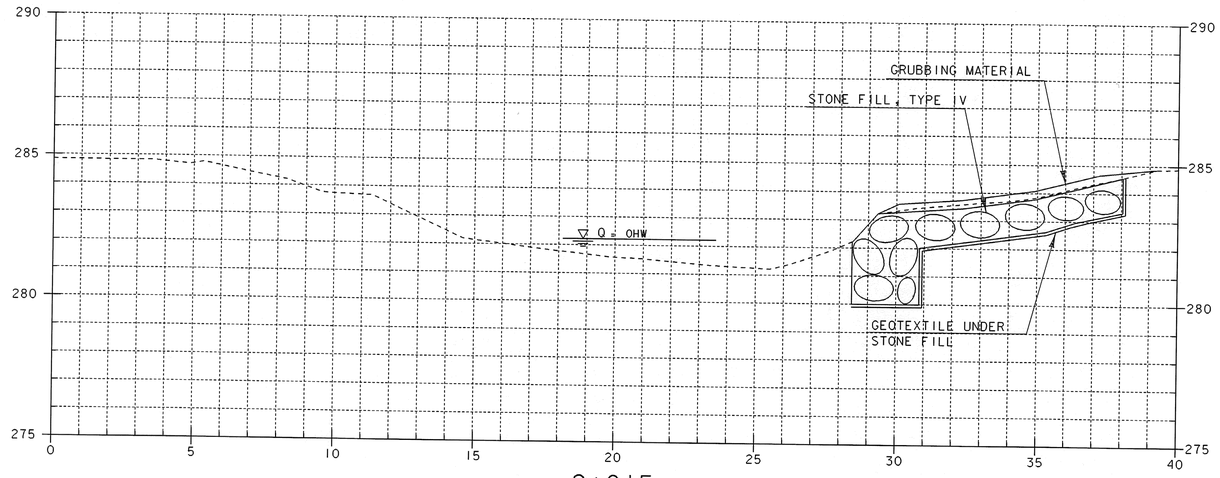
SHEET NAME: CHANNEL CROSS SECTIONS

PROJECT NAME: SUNDERLAND
PROJECT NUMBER: BRF 0114(2)

HIGHWAY NO.: TH 3
BRIDGE NO.: 14
OVER: ROARING BRANCH

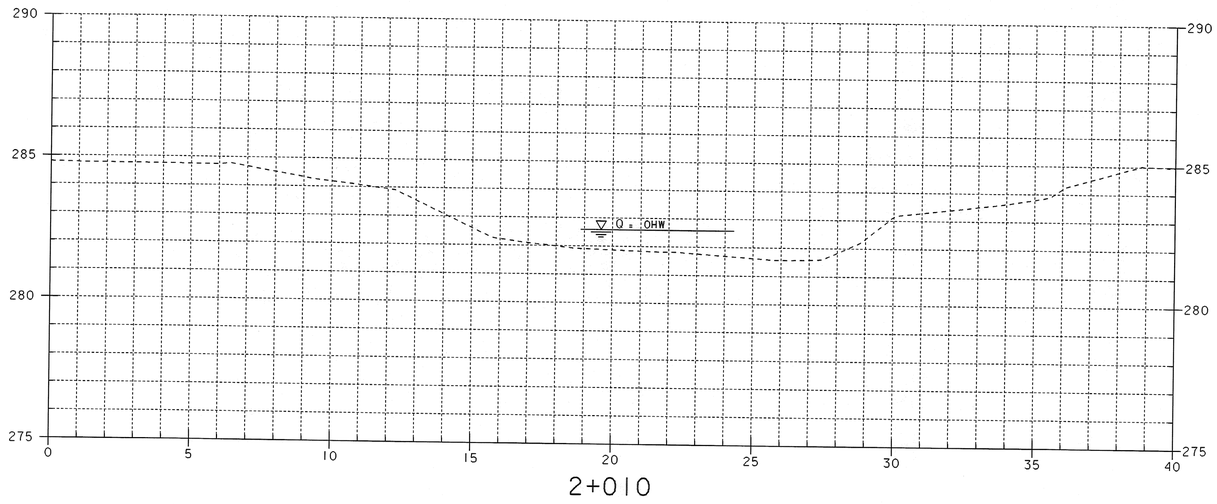
FILE NAME: /PW/93J009/sJ009xs.dgn
PROJECT MANAGER: R. R. WHITCOMB
DESIGNED BY: C. CARLSON

PLOT DATE: 14-DEC-2005
DRAWN BY: K.UPMAL
IPARM NAME: sJ009cxl.I
SHEET 62 OF 67



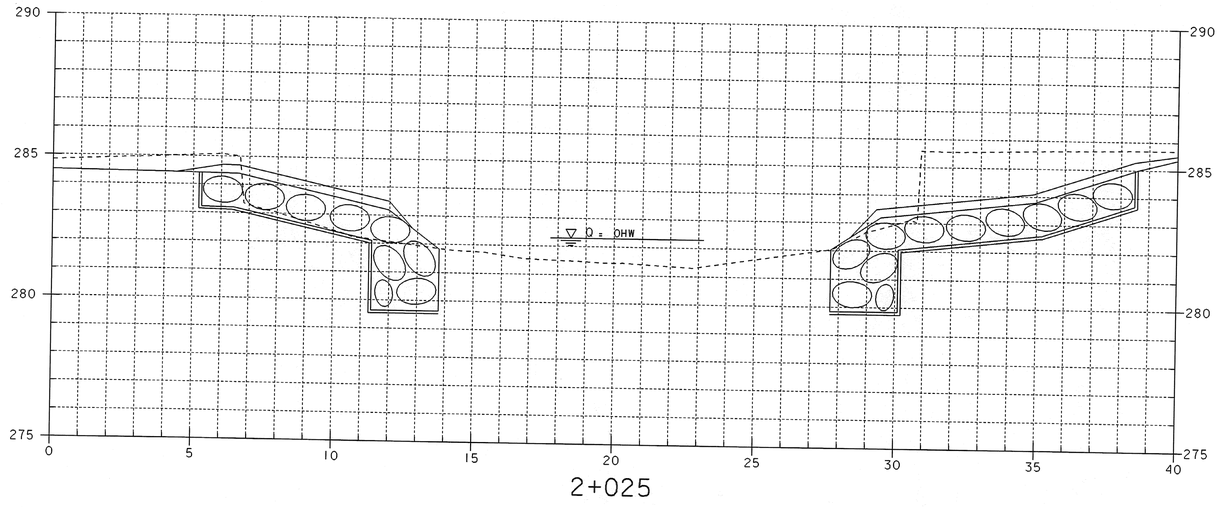
2+015

STA. 2+014.2 FAR RT.
BEGIN UNCL. CHANNEL EXCAVATION
GEOTEXTILE UNDER STONE FILL
STONE FILL, TYPE IV
GRUBBING MATERIAL

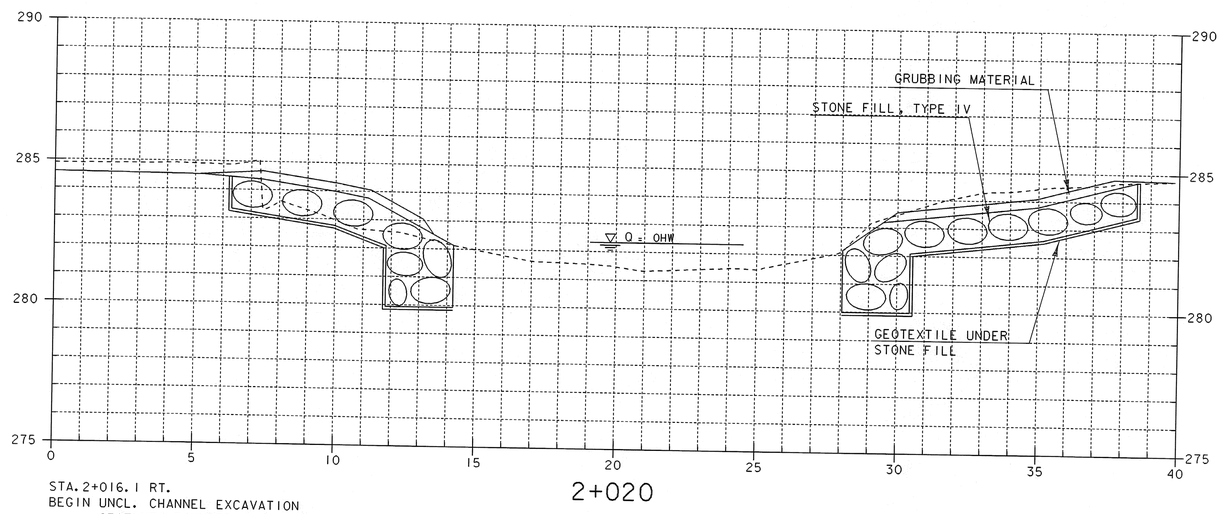


2+010

SHEET NAME: CHANNEL CROSS SECTIONS	
PROJECT NAME: SUNDERLAND PROJECT NUMBER: BRF 0114(2)	HIGHWAY NO.: TH 3 BRIDGE NO.: 14 OVER: ROARING BRANCH
FILE NAME: /PW/93j009/sj009xs.dgn PROJECT MANAGER: R. R. WHITCOMB DESIGNED BY: C. CARLSON	PLOT DATE: 14-DEC-2005 DRAWN BY: K.UPMAL IPARM NAME: sj009cx2.I SHEET 63 OF 67



2+025



2+020

STA. 2+016. 1 RT.
BEGIN UNCL. CHANNEL EXCAVATION
GEOTEXTILE UNDER STONE FILL
STONE FILL, TYPE IV
GRUBBING MATERIAL

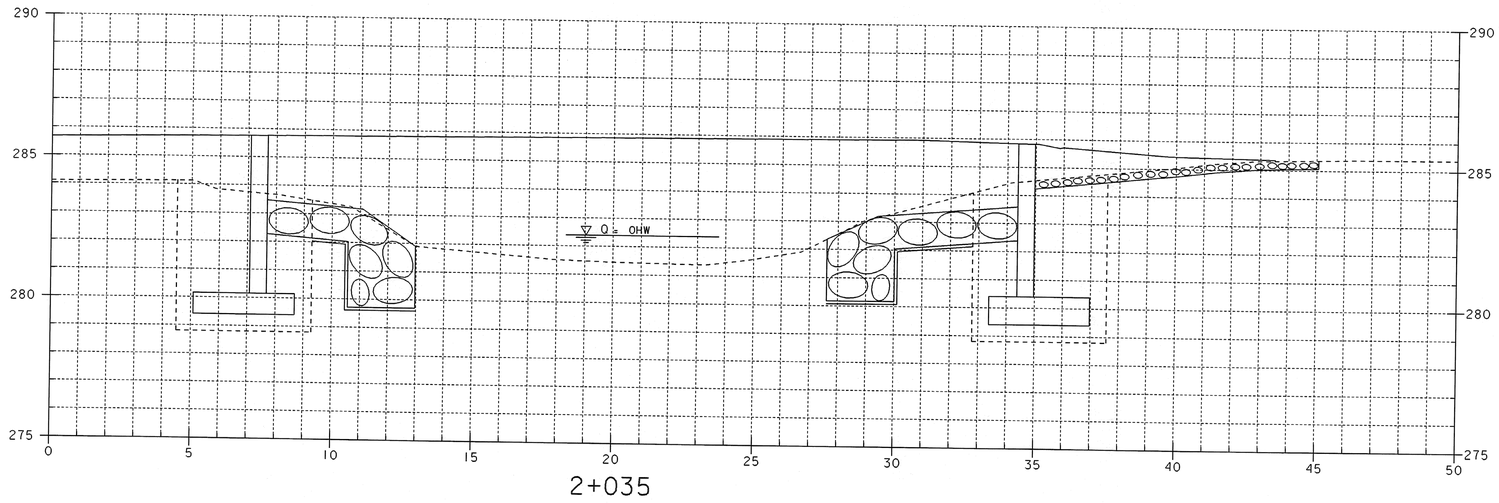
SHEET NAME: CHANNEL CROSS SECTIONS

PROJECT NAME: SUNDERLAND
PROJECT NUMBER: BRF 0114(2)

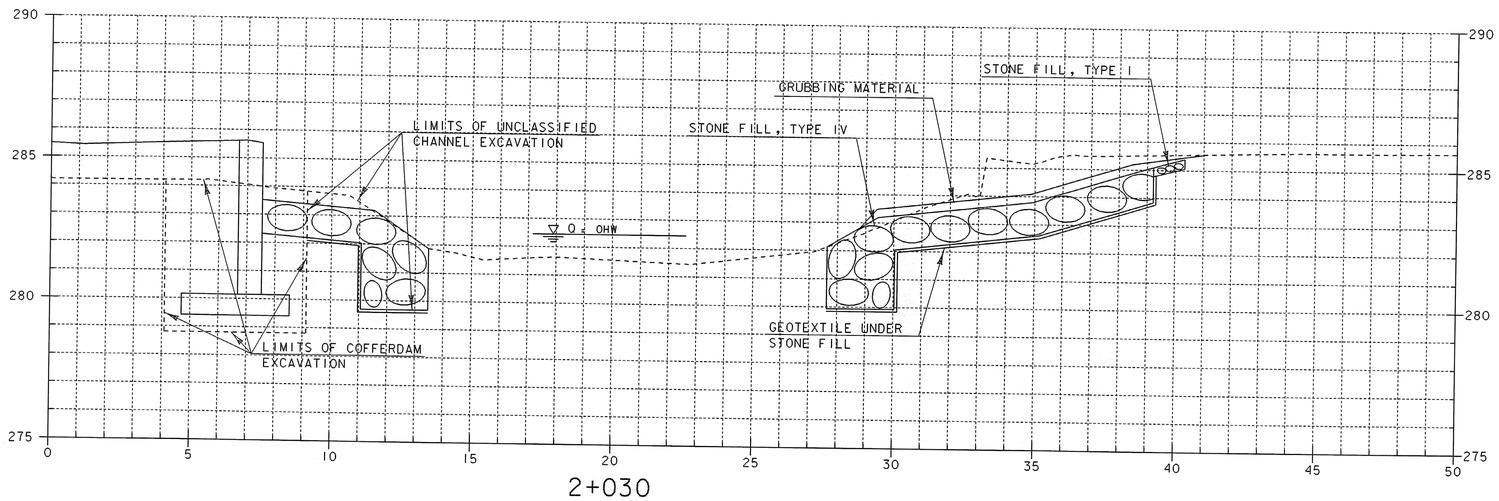
HIGHWAY NO.: TH 3
BRIDGE NO.: 14
OVER: ROARING BRANCH

FILE NAME: /PW/93J009/sj009xs.dgn
PROJECT MANAGER: R. R. WHITCOMB
DESIGNED BY: C. CARLSON

PLOT DATE: 14-DEC-2005
DRAWN BY: K.UPMAL
IPARM NAME: sj009cx3.i
SHEET 64 OF 67

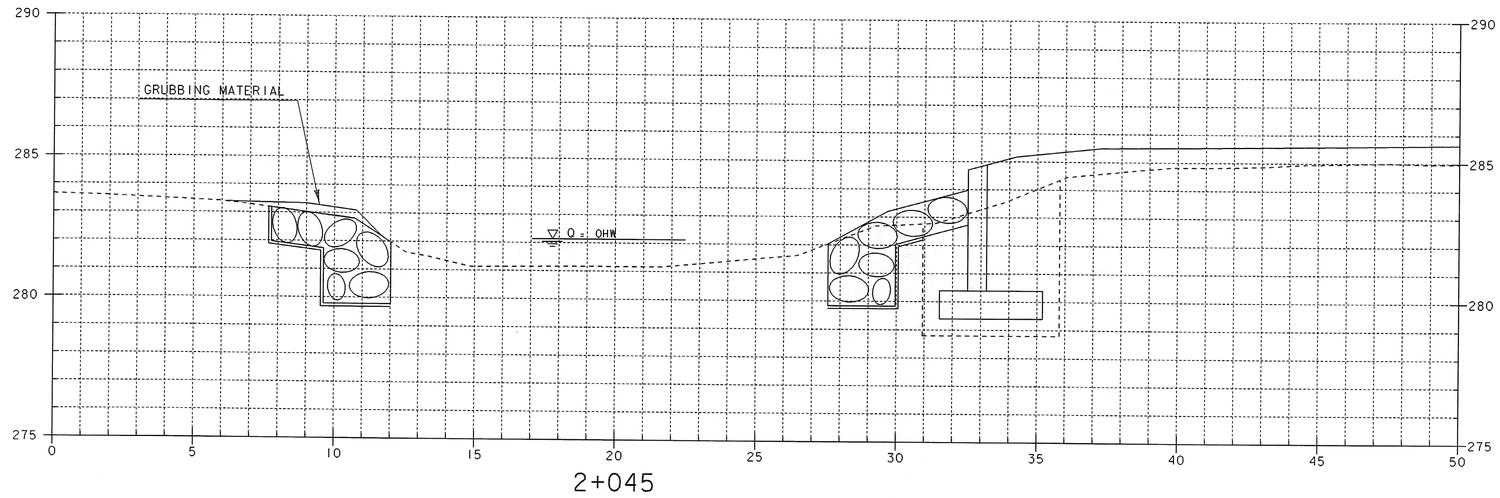


2+035

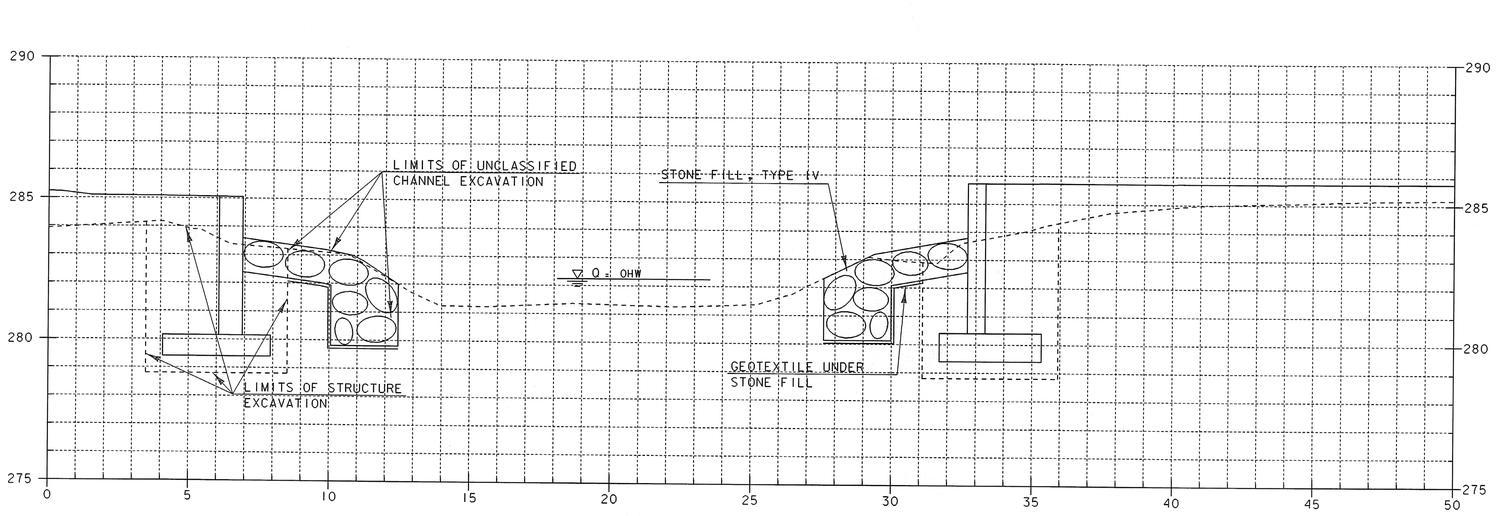


2+030

SHEET NAME: CHANNEL CROSS SECTIONS		
PROJECT NAME: SUNDERLAND	HIGHWAY NO.: TH 3	
PROJECT NUMBER: BRF 0114(2)	BRIDGE NO.: 14	
	OVER: ROARING BRANCH	
FILE NAME: /PW/93j009/sj009xs.dgn	PLOT DATE: 14-DEC-2005	
PROJECT MANAGER: R. R. WHITCOMB	DRAWN BY: K.UPMAL	
DESIGNED BY: C. CARLSON	IPARM NAME: sj009cx4.i	
	SHEET 65 OF 67	

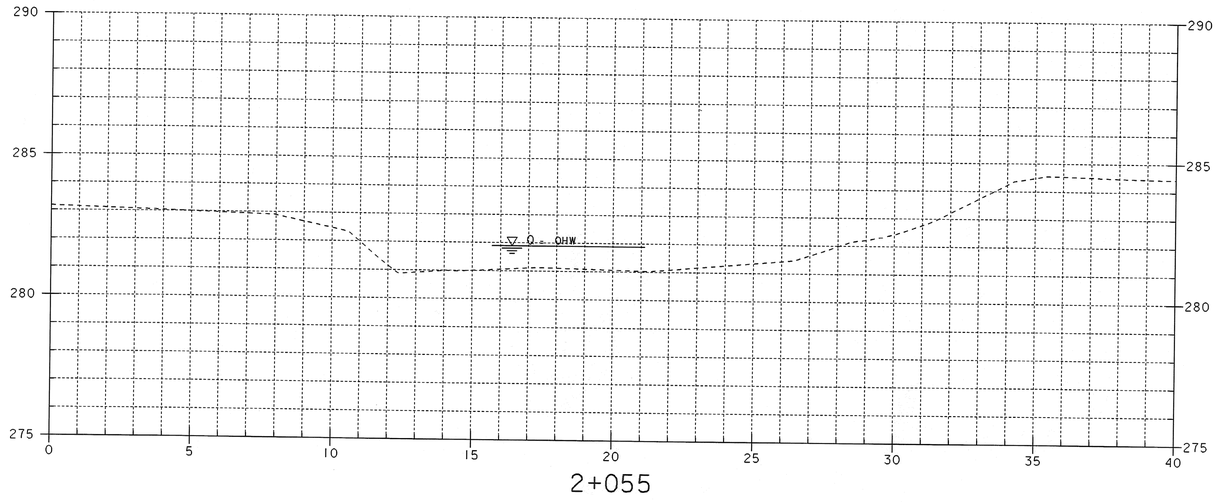


2+045

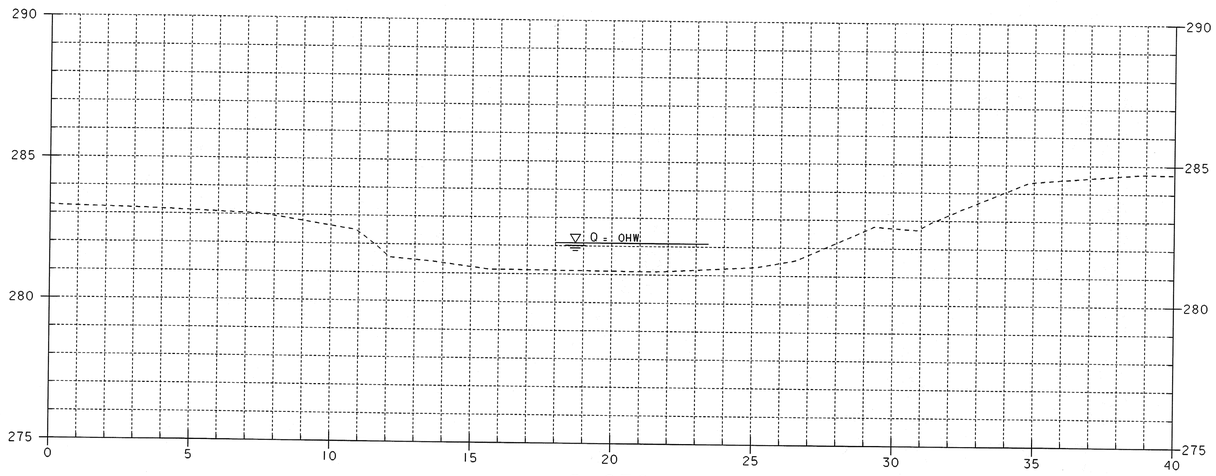


2+040

SHEET NAME: CHANNEL CROSS SECTIONS	
PROJECT NAME: SUNDERLAND PROJECT NUMBER: BRF 0114(2)	HIGHWAY NO.: TH 3 BRIDGE NO.: 14 OVER: ROARING BRANCH
FILE NAME: /PW/93j009/sj009xs.dgn PROJECT MANAGER: R. R. WHITCOMB DESIGNED BY: C. CARLSON	PLOT DATE: 14-DEC-2005 DRAWN BY: K.UPMAL IPARM NAME: sj009cx5.i SHEET 66 OF 67



2+055



2+050

STA. 2+045.4 RT.
END UNCL. CHANNEL EXCAVATION
GEOTEXTILE UNDER STONE FILL
STONE FILL, TYPE IV
GRUBBING MATERIAL

STA. 2+048.6 FAR RT.
END UNCL. CHANNEL EXCAVATION
GEOTEXTILE UNDER STONE FILL
STONE FILL, TYPE IV
GRUBBING MATERIAL

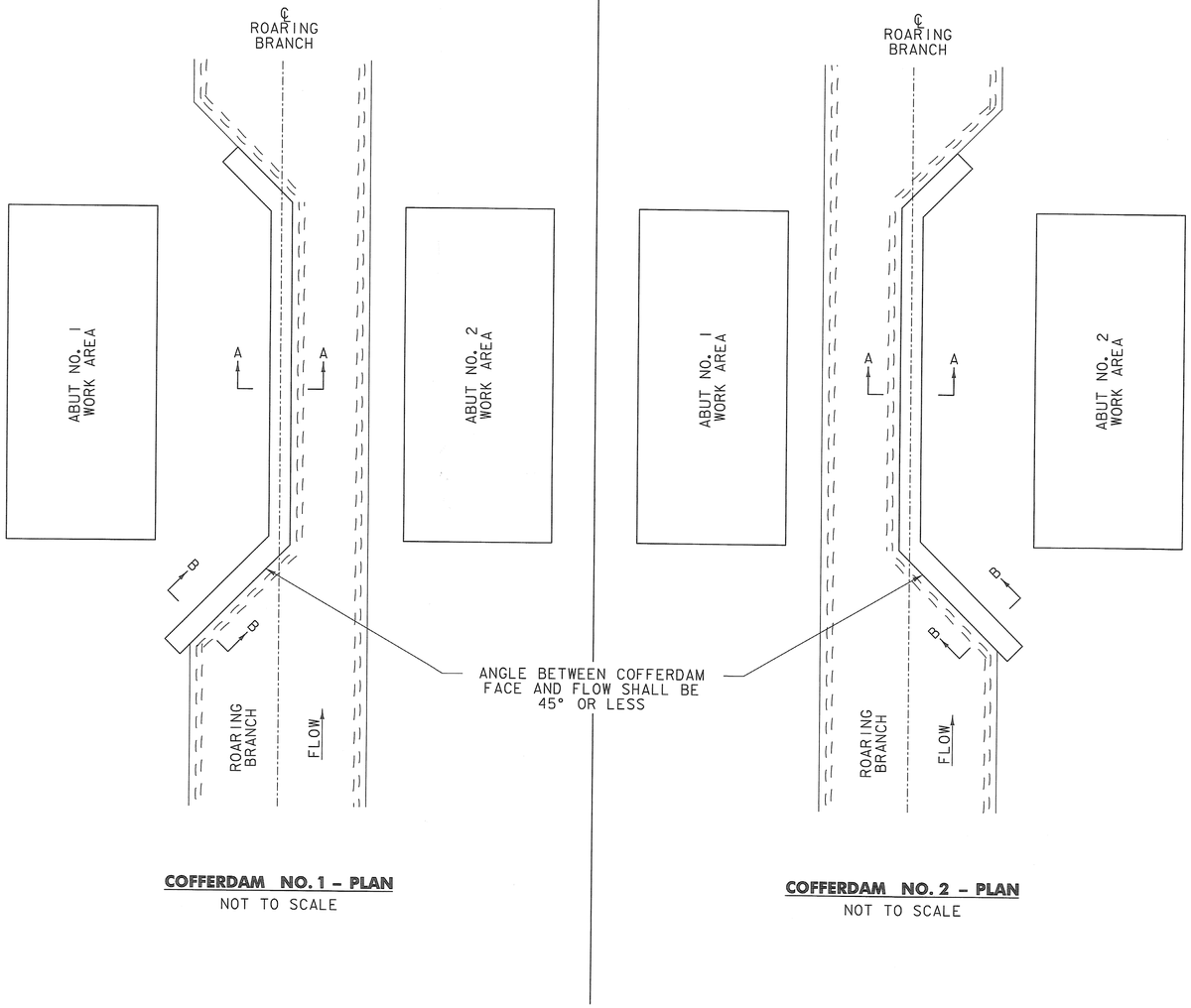
SHEET NAME: CHANNEL CROSS SECTIONS

PROJECT NAME: SUNDERLAND
PROJECT NUMBER: BRF 0114(2)

HIGHWAY NO.: TH 3
BRIDGE NO.: 14
OVER: ROARING BRANCH

FILE NAME: /PW/93J009/sJ009xs.dgn
PROJECT MANAGER: R. R. WHITCOMB
DESIGNED BY: C. CARLSON

PLOT DATE: 14-DEC-2005
DRAWN BY: K.UPMAL
IPARM NAME: sJ009cx6.i
SHEET 67 OF 67

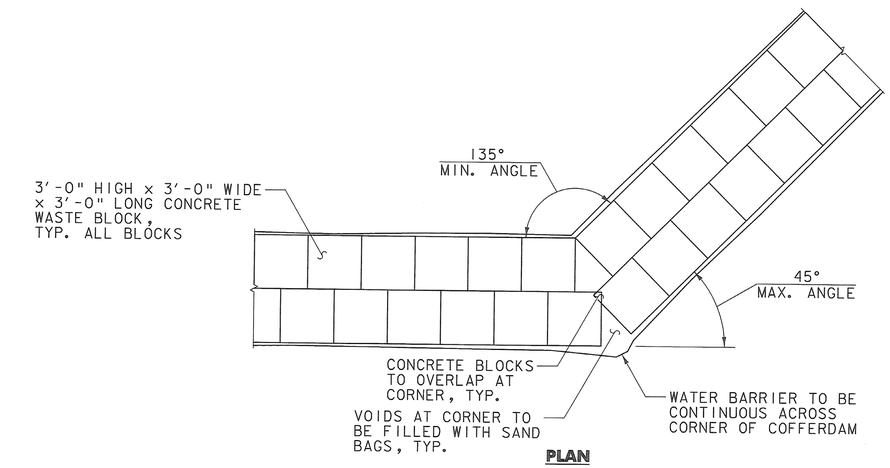


COFFERDAM NO. 1 – PLAN

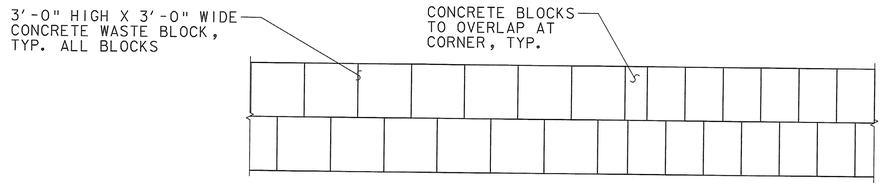
NOT TO SCALE

COFFERDAM NO. 2 – PLAN

NOT TO SCALE



PLAN



ELEVATION

CORNER DETAIL

SCALE 1/4" = 1'-0

1 0 2 4 6

COFFERDAM SHALL BE CONSTRUCTED ALONG THE CENTERLINE OF ROARING BRANCH. WATER SHALL BE DIVERTED TO FACILITATE CONSTRUCTION ON THE SIDE OF THE STREAM WHERE ACTIVE WORK IS OCCURING.

PLOTTED 04/25/2006

NO.	DATE	REVISIONS	BY	CK'D

STATE OF VERMONT · ELWIN F. DETRICK · NO. 6677 · CIVIL · LICENSED PROFESSIONAL ENGINEER

DuBois & King inc.

engineering planning management development

PETRICCA INDUSTRIES

SUNDERLAND BRIDGE REPLACEMENT

COFFERDAM

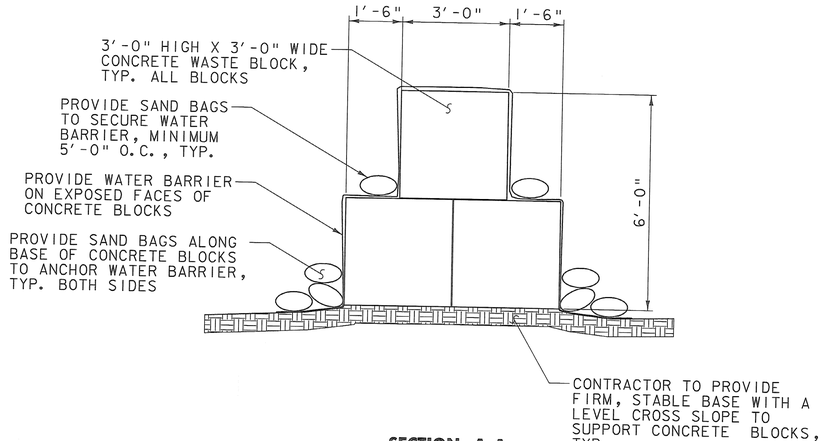
BRF 0114 (2)

PLAN SHEET

DRAWN BY	DATE
APG	APR. 2006
CHECKED BY	PROJ. NO.
EPD	119501
PROJ. ENG.	DRAW. NO.
APG	---

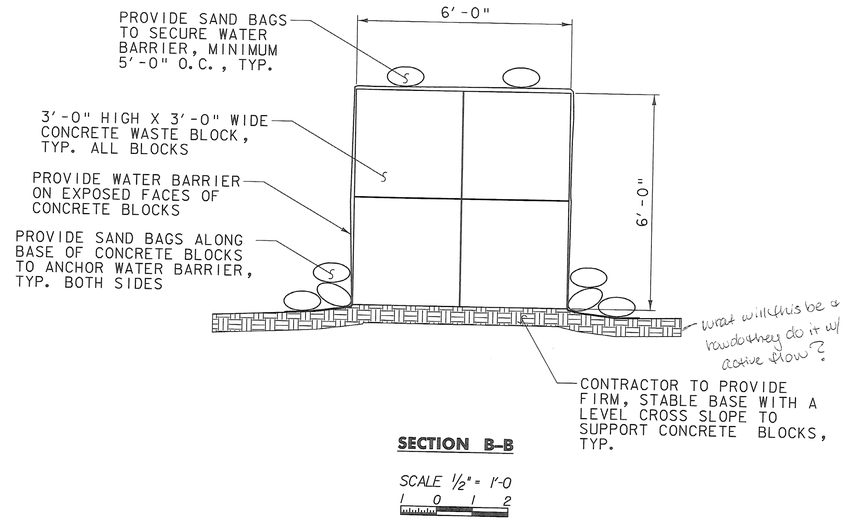
SHEET 1 OF 2

COFFERDAM.dgn 04/25/2006 10:47:52 AM



SECTION A–A

SCALE 1/2" = 1'-0



SECTION B–B

SCALE 1/2" = 1'-0

GENERAL NOTES

1. ALL MATERIALS AND CONSTRUCTION SHALL CONFORM TO THE AGENCY OF TRANSPORTATION'S STANDARD SPECIFICATIONS FOR CONSTRUCTION, DATED 2001, AND ITS LATEST REVISIONS, AND THE AASHTO STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES, SEVENTEENTH EDITION, AND ITS LATEST REVISIONS.
2. THE CONTRACTOR SHALL REVIEW AND UNDERSTAND ALL APPLICABLE ENVIRONMENTAL PERMITS AND INSURE THAT ALL CONDITIONS ARE MET.
3. ALL DIMENSIONS ARE HORIZONTAL OR VERTICAL AND ARE GIVEN AT 20 DEGREES C UNLESS OTHERWISE NOTED.
4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MONITORING WATER LEVELS DURING STORM EVENTS.
5. ALL EQUIPMENT AND MATERIALS SHALL BE REMOVED FROM BEHIND THE COFFERDAM WHEN WORK IS NOT ACTIVELY BEING PERFORMED.
6. THE WATER BARRIER SHALL HAVE SHALL HAVE AS FEW SPLICES AS POSSIBLE. WHERE SPLICES OCCUR, THE OVERLAP SHALL BE A MINIMUM OF 3-FEET, AND SHALL BE ORIENTED IN THE DOWNSTREAM DIRECTION.
7. CONTRACTOR SHALL BE RESPONSIBLE FOR ROUTINE INSPECTION OF SAND BAGS AND WATER BARRIER TO ENSURE THAT BOTH ARE FUNCTIONING CORRECTLY AND ARE KEPT IN THE PROPER POSTION.

DESIGN

1. THE COFFERDAM WAS DESIGNED USING THE STRIP FOOT METHOD.
2. THE COFFERDAM SHALL BE SIX FEET HIGH AND SIX FEET WIDE AT THE BASE, IN ACCORDANCE WITH THESE PLANS.
3. THE COFFERDAM WAS DESIGNED TO RESIST OVERTURNING AND SLIDING FORCES FROM A WATER SURFACE ELEVATION SIX AND ONE HALF FEET ABOVE THE STREAM BED.
4. COFFERDAM SHALL BE PLACED ON A STABLE BASE WITH A LEVEL CROSS SLOPE TO BE PREPARED BY THE CONTRACTOR. CONTRACTOR SHALL MAINTAIN STABLE BASE THROUGHOUT THE USE OF THE COFFERDAM.
5. THE CONTRACTOR SHALL ENSURE THAT THE COFFERDAM IS EXTENDED UPSTREAM AND DOWNSTREAM TO A DISTANCE THAT WILL ADEQUATELY DIRECT THE STREAM AROUND THE WORK AREA. THE CONTRACTOR SHALL ALSO ENSURE THAT THE COFFERDAM IS ADEQUATELY TIED INTO THE STREAMBANK ON THE UPSTREAM END.
6. PETRICCA CONSTRUCTION CO. DIRECTED DUBOIS & KING TO LIMIT THE COFFERDAM TO AN ELEVATION OF 6-FEET ABOVE THE BOTTOM OF THE STREAMBED.
7. THE 6-FOOT HEIGHT IS NOT ADEQUTE FOR A Q 2.33 STORM EVENT. TO RETAIN A Q 2.33 EVENT, THE HEIGHT OF THE COFFERDAM WOULD NEED TO BE APPROXIMATLY 10-FEET.
8. FOR SOME STORMS, THE DESIGNED COFFERDAM MAY BE OVERTOPPED.

CONSTRUCTION SEQUENCE

1. CONTRACTOR SHALL CONSTRUCT THE COFFERDAM IN THE CONFIGURATION SHOWN FOR COFFERDAM NO. 1.
2. COFFERDAM NO. 1 SHALL BE DEWATERED, PUMPING TO THE SEDIMENT BASIN. CONTRACTOR SHALL ADJUST CONCRETE BLOCKS AND WATER BARRIER TO ACHIEVE A SEALED AND WATERTIGHT COFFERDAM.
3. UPON DEWATERING THE COFFERDAM AND WITH APPROVAL OF THE ENGINEER, EXCAVATION BEHIND THE COFFERDAM SHALL BE ALLOWED. ABUTMENT NO. 1 SHALL BE CONSTRUCTED, BACKFILLED AND THE STREAMBANK SHALL BE STABILIZED IN ACCORDANCE WITH THE BRIDGE PLANS.
4. UPON PROPER STABILIZATION OF THE STREAMBANK, AND WITH THE APPROVAL OF THE ENGINEER, THE COFFERDAM SHALL BE RECONFIGURED AS SHOWN FOR THE COFFERDAM NO. 2.
5. COFFERDAM NO. 2 SHALL BE DEWATERED, PUMPING TO THE SEDIMENT BASIN. CONTRACTOR SHALL ADJUST CONCRETE BLOCKS AND WATER BARRIER TO ACHIEVE A SEALED AND WATERTIGHT COFFERDAM.
6. UPON DEWATERING THE COFFERDAM AND WITH APPROVAL OF THE ENGINEER, EXCAVATION BEHIND THE COFFERDAM SHALL BE ALLOWED. ABUTMENT NO. 2 SHALL BE CONSTRUCTED, BACKFILLED AND THE STREAMBANK SHALL BE STABILIZED IN ACCORDANCE WITH THE BRIDGE PLANS.
7. AFTER THE STABILIZATION OF THE STREAMBANK, AND WITH THE APPROVAL OF THE ENGINEER, THE COFFERDAM SHALL BE REMOVED. ALL FOREIGN MATERIAL ASSOCIATED WITH THE COFFERDAM SHALL BE REMOVED FROM THE STREAM BED.

PLOTTED 04/25/2006

NO.	DATE	REVISIONS	BY	CK'D

STATE OF VERMONT — ERIK P. DETHIER — NO. 9677 — LICENSED PROFESSIONAL ENGINEER

DuBois & King inc.
engineering planning management development

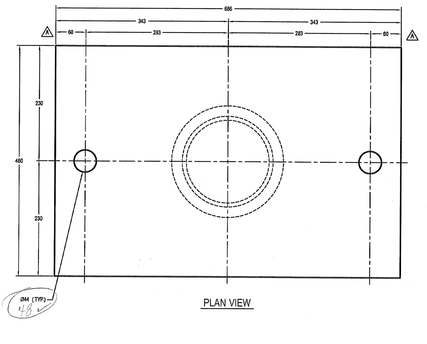
PETRICCA INDUSTRIES
SUNDERLAND BRIDGE REPLACEMENT
COFFERDAM
BRF 0114(2)
DETAIL SHEET

DRAWN BY	DATE
APG	APR. 2006
CHECKED BY	PROJ. NO.
EPD	119501
PROJ. ENG.	DRAW. NO.
APG	---

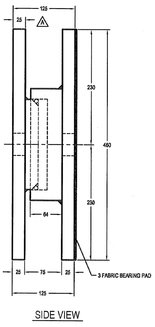
SHEET 2 OF 2

COFFERDAM.dgn 04/25/2006 10:48:20 AM

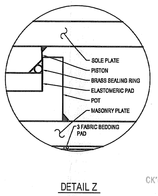
REVISIONS				
ZONE	REV	DESCRIPTION	DATE	APPROVED
- -	A	PDR ENGINEER'S MARK	11/17/06	C.A.M.
- -	B	PDR ENGINEER'S MARK	2/15/07	C.A.M.



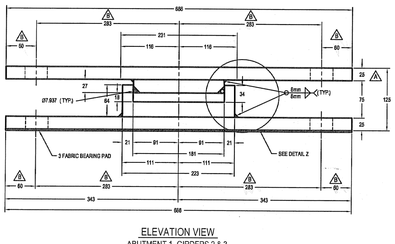
PLAN VIEW



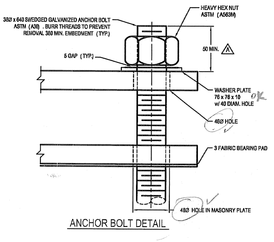
SIDE VIEW



DETAIL Z



ELEVATION VIEW
ABUTMENT 1, GIRDERS 2 & 3
VERTICAL LOAD CAPACITY = 6148kN
QTY. REQ'D = 2



ANCHOR BOLT DETAIL

NOTES
1. REFERENCE SHEET 7 OF 7 FOR BEARING NOTES.

Structures

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OK'D BY _____ OK'D BY _____
FEB 2 3 2007
RESUBMIT _____ APPROVED _____
BY _____ DATE _____

SUNDERLAND
PROJECT NO. BRF 0114(2)
HIGHWAY NO. TH 3, BRIGDE NO. 13
OVER ROARING BRANCH

FIXED POT BEARING DETAIL

AMSCOT
STRUCTURAL PRODUCTS CORP.
DOVER, NJ

JOB# 2291

SCALE: N.T.S.	APPRVD: B.F.	DRAWN BY: C.A.M.
DATE: 6/27/06		REVISION: B

FOR: PETRICCA CONSTRUCTION COMPANY

DWG NO: PC06A1RB | SHEET NO. 1 OF 7

ELEVATION VIEW
ABUTMENT 1, GIRDER 1
VERTICAL LOAD CAPACITY = 300kN
QTY: REQD=1
PLAN VIEW
SIDE VIEW
DETAIL Z
ANCHOR BOLT DETAIL
NOTES
1. REFERENCE SHEET 7 OF 7 FOR BEARING NOTES.
REVISIONS
ZONE
REV
DESCRIPTION
DATE
APPROVED
PER ENGINEER'S MARK
9/29/06
C.A.M.
PER ENGINEER'S MARK
11/17/06
C.A.M.
PER ENGINEER'S MARK
2/15/07
C.A.M.
RECEIVED
FEB 2 3 2007
SUNDERLAND
PROJECT NO. BRF 011(42)
HIGHWAY NO. TH 3, BRIDGE NO. 13
OVER ROARING BRANCH
GUIDED POT BEARING DETAIL
AMSCOT
STRUCTURAL PRODUCTS CORP.
DOVER, NJ
JOB# 2291
SCALE: N.T.S.
APPRVD: B.F.
DRAWN BY: C.A.M.
DATE: 6/27/06
REVISION: C
FOR: PETRICCA CONSTRUCTION COMPANY
DWG NO: PC0842RC
SHEET NO. 2 OF 7

NOTES
1. REFERENCE SHEET 7 OF 7 FOR BEARING NOTES.

SUNDERLAND
PROJECT NO. BRF 014(2)
HIGHWAY NO. TH 3, BRIDGE NO. 13
OVER ROARING BRANCH

GUIDED POT BEARING DETAIL

AMSCOT
STRUCTURAL PRODUCTS CORP.
DOVER, NJ

SCALE: N.T.S.	APPRV'D: B.F.	DRAWN BY: C.A.M.	JOB# 2281
DATE: 6/27/06		REVISION: C	

FOR: PETRICCA CONSTRUCTION COMPANY

DWG NO.: PO06A3RC | SHEET NO. 3 OF 7

ELEVATION VIEW
ABUTMENT 2, GIRDER 3
VERTICAL LOAD CAPACITY = 609kN
QTY. REQ'D = 1

PLAN VIEW

SIDE VIEW

DETAIL Z

ANCHOR BOLT DETAIL

ZONE	REV.	REVISIONS DESCRIPTION	DATE	APPROVED
-	A	PER ENGINEER'S MARK	9/29/06	C.A.M.
-	B	PER ENGINEER'S MARK	11/17/06	C.A.M.
-	C	PER ENGINEER'S MARK	2/15/07	C.A.M.

RECEIVED
FEB 23 2007
RESUBMIT

CK'D BY ____ CK'D BY ____
APPROVED AS NOTED
DATE

NOTES:
1. REFERENCE SHEET 7 OF 7 FOR BEARING NOTES.

SUNDERLAND
PROJECT NO. BRF 07(42)
HIGHWAY NO. T13, SEGMENT NO. 13
OVER ROARING BRANCH

GUIDED POT BEARING DETAIL

AMSCOT
STRUCTURAL PRODUCTS CORP.
DOVER, NJ

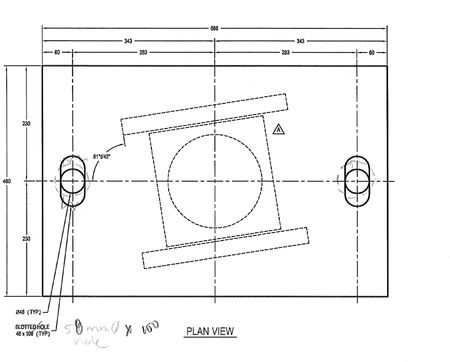
SCALE:	N.T.S.
DATE:	8/22/06
APPROV'D:	
BY:	
JOB#	2291
DRAWN BY:	C.A.M.
REVISION:	C

FOR: PETRICCA CONSTRUCTION COMPANY

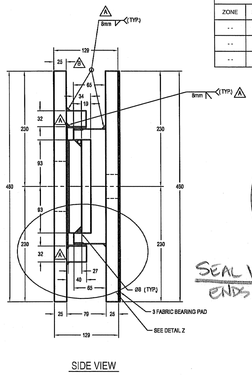
DWG NO: PO06A4RC

SHEET NO. 4 OF 7

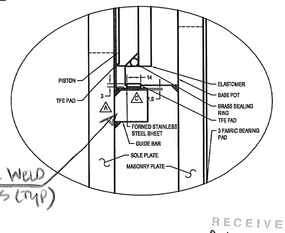
REVISIONS				
ZONE	REV	DESCRIPTION	DATE	APPROVED
- -	A	PER ENGINEER'S MARK	9/29/06	C.A.M.
- -	B	PER ENGINEER'S MARK	11/17/06	C.A.M.
- -	C	PER ENGINEER'S MARK	2/15/07	C.A.M.



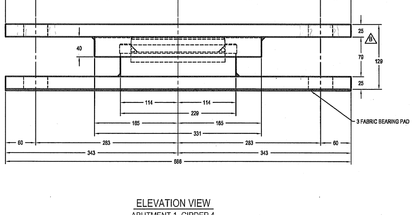
PLAN VIEW



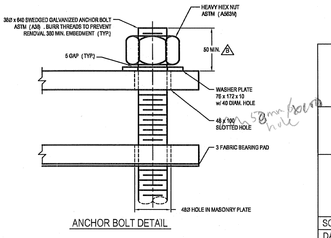
SIDE VIEW



DETAIL Z



ELEVATION VIEW
ABUTMENT 1, GIRDER 4
VERTICAL LOAD CAPACITY = 650kN
QTY. REQ'D = 1



ANCHOR BOLT DETAIL

NOTES.
1. REFERENCE SHEET 7 OF 7 FOR BEARING NOTES.

RECEIVED
FEB 23 2007

SUNDERLAND
PROJECT NO. BRF 0114(2)
HIGHWAY NO. TH 3, BRIGDE NO. 13
OVER ROARING BRANCH

GUIDED POT BEARING DETAIL

AMSCOT
STRUCTURAL PRODUCTS CORP.
DOVER, NJ

JOB# 2291

SCALE: N.T.S.	APPRVD: B.F.	DRAWN BY: C.A.M.
DATE: 8/27/06		REVISION: C

FOR: PETRICCA CONSTRUCTION COMPANY

DWG NO: PC06A5RC	SHEET NO. 5 OF 7

ELEVATION VIEW
ABUTMENT 2, GIRDERS 1 & 4
VERTICAL LOAD CAPACITY = 600kN
QTY. REQD = 1

PLAN VIEW

SIDE VIEW

ANCHOR BOLT DETAIL

DETAIL Z

5 9mm X 19mm slotted hole

ZONE	REV.	DESCRIPTION	DATE	APPROVED
--	A	PER ENGINEERS MARK	11/17/06	C.A.M.
--	B	PER ENGINEERS MARK	2/15/07	C.A.M.

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NOTES
1. REFERENCE SHEET 7 OF 7 FOR BEARING NOTES.

SUNDERLAND
PROJECT NO. BRF 0114(2)
HIGHWAY NO. TH 3, BRIDGE NO. 13
OVER ROARING BRANCH

UNGUIDED POT BEARING DETAIL

AMSCOT
STRUCTURAL PRODUCTS CORP.
DOVER, NJ

SCALE: N.T.S.	APPRV'D: B.F.	DRAWN BY: C.A.M.	JOB# 2291
DATE: 8/27/06		REVISION: B	

FOR: PETRICCA CONSTRUCTION COMPANY

DWG NO: PCOBABRB | SHEET NO. 6 OF 7

REVISIONS				
ZONE	REV	DESCRIPTION	DATE	APPROVED
--	A	PER ENGINEER'S MARK	11/17/06	C.A.M.
--	B	PER ENGINEER'S MARK	2/15/07	C.A.M.

1. ELASTOMERIC DISC
(A) -ELASTOMERIC DISCS SHALL HAVE THE MINIMUM THICKNESS PER AASHTO 14.6.4.3.

(B) -AREAS OF ELASTOMERIC DISCS SHALL BE DESIGNED FOR A MAXIMUM AVERAGE STRESS OF 3,000 PSI AT THE TOTAL DEAD AND LIVE LOADS OF THE STRUCTURE PER AASHTO 14.6.4.4

(C) -ELASTOMERIC DISC TO BE OF 50 SHORE "A" DUROMETER HARDNESS PER AASHTO 14.6.4.2.

2. POT
(A) -ALL STEEL USED IN POT BEARING TO BE AASHTO M270, GR. 345 HOT DIP GALVANIZED, EXCEPT FOR INSIDE OF BASE POT.

(B) -DEPTH OF THE POT CAVITY SHALL BE EQUAL TO OR GREATER THAN: (POT O.D) X DESIGN ROTATION (.03 RADIANS) + 1 + THE THICKNESS OF THE ELASTOMERIC DISC. + THE PISTON FACE WIDTH.

(C) -INSIDE DIAMETERS SHALL BE THE SAME AS THE ELASTOMERIC DISC.

3. PISTON
(A) -PISTONS SHALL BE DESIGNED AS FOLLOWS FOR THICKNESS AND CLEARANCE PER AASHTO 14.6.4.7.

(B) -PISTON FOR ROUND CROSS SECTION SEALING RINGS SHALL HAVE THE LOWER OUTSIDE EDGE BEVELED TO ACCEPT AND RETAIN THE RING AND PERMIT FULL DESIGN ROTATION.

4. ELASTOMERIC SEAL RINGS
(A) -ROUND CROSS SECTION BRASS SEALING RINGS SHALL MEET THE FOLLOWING DESIGN REQUIREMENTS PER AASHTO 14.6.4.5
(1) RINGS SHALL FIT THE POT ID SNUGLY 6mm@ MIN. (1.0mm TO 0.50mm LESS THAN POT ID).

(2) RINGS SHALL BE ROLLED INTO A CIRCLE AND BRAZED. (TO BE MADE FROM ONE PIECE) .

5. PTFE SLIDING SURFACE
(A) -THE AREA OF THE PTFE SHALL BE DESIGNED FOR A WORKING STRESS AS PER AASHTO SECTION 14.6.2. AT THE FULL DEAD AND LIVE LOAD OF THE STRUCTURE.

(B) -FILLED PTFE SHALL MEET THE FOLLOWING REQUIREMENTS:
(1) BONDED TO THE PISTON IT SHALL HAVE A MINIMUM THICKNESS OF 3mm AND SHALL BE RECESSED ONE-HALF OF ITS THICKNESS INTO STEEL PISTON. TO CONFORM TO AASHTO SECTION 14.6.2.6.1.

6. STAINLESS STEEL SLIDING SURFACE
(A) -THE STAINLESS STEEL SLIDING SURFACE SHALL COVER THE PTFE SURFACE IN ALL OPERATING POSITIONS PLUS ONE ADDITIONAL INCH IN EVERY DIRECTION OF MOVEMENT.

(B) -STAINLESS STEEL SHALL BE 14ga. (AASHTO 14.6.2.3.2). THICKNESS AND SHALL BE CONNECTED TO THE TOP PLATE BY MEANS OF AN EPOXY BOND & SEAL WELDED AROUND THE ENTIRE PERIMETER (AS PER AASHTO SECTION 14. 2002)

(C) -WELDING PROCEDURES SHALL BE CHOSEN SUCH THAT THE STAINLESS STEEL IN SERVICE IS IN CONTACT WITH THE TOP PLATE AND THE SURFACE IS SMOOTH AND FLAT.

(D) -STAINLESS STEEL SLIDING SURFACES SHALL BE PREFERABLY FACE DOWN.

7. GUIDE BARS
(A) -GUIDE BARS AND THEIR CONNECTIONS TO THE TOP PLATE SHALL BE DESIGNED FOR THE HORIZONTAL FORCES ON THE BEARING AND NOT LESS THAN 10% OF THE TOTAL VERTICAL LOAD CAPACITY OF THE BEARING.

(B) -UNLESS THE GUIDE BAR CLEAR. IS SPECIFIED IT SHALL BE A TOTAL OF 3mm (MAX.)

(C) -GUIDING ARRANGEMENTS SHALL BE DESIGNED SO THAT GUIDING MEMBER IS ALWAYS WITHIN THE GUIDES AT ALL POINTS OF TRANSLATION OF THE BEARING.

(D) -GUIDE BAR MATERIAL SHALL CONFORM TO THE REQUIREMENTS OF AASHTO M270 GR. 345 HOT DIP GALVANIZED.

8. MATERIALS
(A) -STRUCTURE STEEL SHALL CONFORM TO THE REQUIREMENTS OF AASHTO M270 GR. 345 HOT DIP GALVANIZED.

(B) -ELASTOMERS SHALL CONFORM TO AASHTO SECT. 14, 2002.

(C) -ELASTOMER SEALS MAY ONLY BE MADE OF METAL AS FOLLOWS:
(1) -ROUND CROSS SECTION BRASS RINGS, ASTM B-36 (HALF HARD) , SHALL CONFORM TO FEDERAL SPECIFICATION QQB626, COMPOSITION 2.

(D) -PTFE SLIDING SURFACES SHALL CONFORM TO THE REQUIREMENTS OF AASHTO SECTION 14, 2002.

(E) -STAINLESS STEEL SLIDING SURFACES SHALL CONFORM TO ASTM A-240 TYPE 304 WITH A SURFACE FINISH OF #9 MIRROR (AASHTO 14.6.2.2)

9. MANUFACTURING REQUIREMENTS
(A) -POTS AND PISTONS SHALL BE MACHINED FROM A SOLID PIECE OF STEEL AS PER AASHTO SECTION 18.5.1.5-1 POT BEARINGS.

(B) -ELASTOMERIC DISC TOLERANCES SHALL BE PER AASHTO TABLE 18.5.1.5-1 ELASTOMERIC DISC.

(C) -PTFE SLIDING SURFACE TOLERANCES SHALL BE PER AASHTO TABLE 18.5.1.5-1 PTFE.

(D) -STAINLESS STEEL SLIDING SURFACES SHALL BE EPOXY BONDED & SEAL WELDED. CONFORMING TO THE AMERICAN WELDING SOCIETY REQUIREMENTS FOR STAINLESS STEEL, AROUND IT'S PERIMETER USING TECHNIQUES WHICH WILL ENSURE IT REMAINS IN CONTACT WITH THE BACKING PLATE. FINISH SHALL BE #9 MIRROR. FLATNESS SHALL CONFORM TO CLASS "A" OR BETTER.

(E) -SOLE PLATE TOLERANCES SHALL CONFORM TO TABLE 18.5.1.5-1 REQUIREMENTS.

(F) -GUIDE BAR TOLERANCES SHALL CONFORM TO TABLE 18.5.1.5-1.

(G) -OVERALL HEIGHT OF BEARING SHALL NOT EXCEED THE NOMINAL HEIGHT BY MORE THAN 4.76mm

(H) -THE EDGES OF ALL PARTS SHALL BE BROKEN BY GRINDING SO THAT THERE ARE NO SHARP EDGES.

10. TOLERANCES FOR FLATNESS
(A) -FLATNESS OF BEARING SURFACES SHALL BE DETERMINED BY THE FOLLOWING METHOD:
(1) -A PRECISION STRAIGHT EDGE LONGER THAN THE NOMINAL DIMENSION TO BE MEASURED SHALL BE PLACED IN CONTACT WITH THE SURFACE TO BE MEASURED AS PARALLEL TO IT AS POSSIBLE.

(2) -SELECT A FEELER GAUGE HAVING AN ACCURACY OF ± 0254mm EQUAL TO THE TOLERANCE ALLOWED AND ATTEMPT TO INSERT IT UNDER THE STRAIGHT EDGE.

(3) -PLATES ARE "ACCEPTABLE" IF THE FEELER GAUGE DOES NOT PASS UNDER THE STRAIGHT EDGE.

(B) -FLATNESS TOLERANCES SHALL BE AS FOLLOWS:
(1) -CLASS "A" 0.254 X NOMINAL DIMENSION PER AASHTO TABLE 18.5.15-1.

(C) -"NOMINAL DIMENSIONS" SHALL BE INTERPRETED AS THE ACTUAL DIMENSION OF THE PLATE, IN METRIC UNITS, UNDER THE STRAIGHT EDGE WHERE THE STRAIGHT EDGE IS NOT PARALLEL TO ANY FLAN DIMENSION OF THE PLATE BEING MEASURED.

(D) -IN DETERMINING THE FLATNESS THE STRAIGHT EDGE MAY BE LOCATED IN ANY POSITION ON THE SURFACE BEING MEASURED.

11. REFERENCE
(A) -"AASHTO STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES, 17TH. EDITION 2002 WITH CURRENT INTERIMS, AS MODIFIED BY THE 3RD EDITION NEW JERSEY D.O.T. DESIGN MANUAL FOR BRIDGES AND STRUCTURES SECTION 23, AND 2001 NJDOT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, AS MODIFIED BY THE SPECIAL PROVISIONS.

12. ADDITIONAL COMMENTS
(A) -BEARINGS SHALL HAVE A MAXIMUM FRICTION COEFFICIENT OF 3%.

(B) -ALL WELDERS SHALL BE QUALIFIED AS PER AWS D1.5.

(C) -ALL BEARINGS SHALL BE PLACED ON A 3mm THK BEARING PAD SAME SIZE AS MASONRY PLATE.

(D) -ALL DIMENSIONS ARE IN MILIMETERS UNLESS OTHERWISE NOTED.

(E) -SCALE = N.T.S.

(F) -MANUFACTURING LOCATION:
AMSCOT STRUCTURAL PRODUCTS CORP. INC.
241 EAST BLACKWELL STREET
DOVER, NJ 07801
PH. (973) 989-8850
FX. (973) 989-8551
CONTACT: PETER SOMOGYI

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BY DATE

SUNDERLAND
PROJECT NO. BRF 0114(2)
HIGHWAY NO. TH 3, BRIDGE NO. 13
OVER ROARING BRANCH

POT BEARING NOTES

AMSCOT
STRUCTURAL PRODUCTS CORP.
DOVER, NJ

JOB# 2291

SCALE: N.T.S.	APPRVD: B.F.	DRAWN BY: C.A.M.
DATE: 6/27/06		REVISION: B

FOR: PETRICCA CONSTRUCTION COMPANY

DWG NO: PC06A7RB | SHEET NO. 7 OF 7

GENERAL NOTES:

1– MATERIAL: ASTM A709 GRADE 50W

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

BEARING STIFFENERS SHALL BE PLUMB AND PERPENDICULAR TO THE WEB IN THEIR FINAL POSITION.

DEAD LOAD DEFLECTION IS DUE TO GIRDER, DIAPHRAGMS, DECK, CURB AND RAILING.

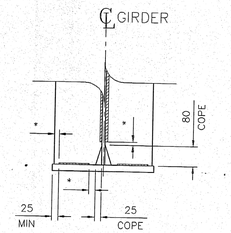
2– WELDING: ALL WELDING SHALL CONFORM TO THE PROVISIONS OF VERMONT SPECIFICATION 506.10

3– BOLTS: ANY HOLES IN THE WEBS OF THE FASCIA BEAMS/GIRDERS THAT ARE NOT OTHERWISE FILLED, SHALL BE FILLED WITH EITHER BUTTON HEAD OR HEX HEAD BOLTS. THESE BOLTS SHALL BE TIGHTENED IN ACCORDANCE WITH VERMONT SPECIFICATION 506.19.

FIELD CONNECTION SHALL BE MADE WITH 22mm DIAMETER AASHTO DESIGNATION M164M TYPE III BOLTS IN 24mm DIAMETER HOLES, EXCEPT CONNECTION BETWEEN LATERAL BRACING AND BOTTOM FLANGE WHICH REQUIRE 20 DIAMETER BOLTS AND 22 AND 24 DIAMETER HOLES. ALL CONNECTIONS MADE WITHIN PAINTED AREAS SHALL BE MADE WITH M164M TYPE 1 GALVANIZED BOLTS. SEE ERECTION PLAN FOR DETAILS.

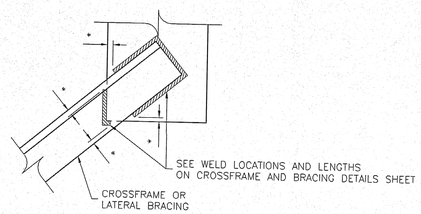
4– PAINT: ALL STEEL MEMBERS AND CONNECTION COMPONENTS WITHIN 2400mm OF EXPANSION ENDS OF THE GIRDERS SHALL BE PAINTED AND GREASED, except Girder 1 & will have both ends painted & greased, will have both ends painted

Paint System?



* NO WELD FOR 10 MIN. ~~13~~ 20 MAX
(EXCEPT MUST MAINTAIN 25 MIN. FROM EDGE OF FLANGE.)

WELD TERMINATION AND COPING
DETAILS FOR STEEL MEMBERS



* NO WELD FOR ~~8~~ 6 MIN. 13 MAX

WELD LOCATION DETAIL AT
CROSSFRAMES AND LATERAL BRACING

RECEIVED
CK'D BY Carl CK'D BY DRP
MAR 0 7 2007
RESUBMIT APPROVED As noted
BY DWC DATE 3/30/07

Structures copy

ALL MATERIAL (EXCEPT BOLTS) TO BE ASTM:	A709M-50W
ALL WELDS TO BE MADE WITH ELECTRODES SERIES E70XX	
OPEN HOLES ARE FOR H.S. BOLTS AND ARE TO BE FREE OF BURRS AND SCALE	
BOLTS: 7/8 A325M TYPE III	OPEN HOLES: 24 U/N — PAINT: SEE GN-1

International Bridge & Iron Co.
90 Day Street
Newington, CT. 06111

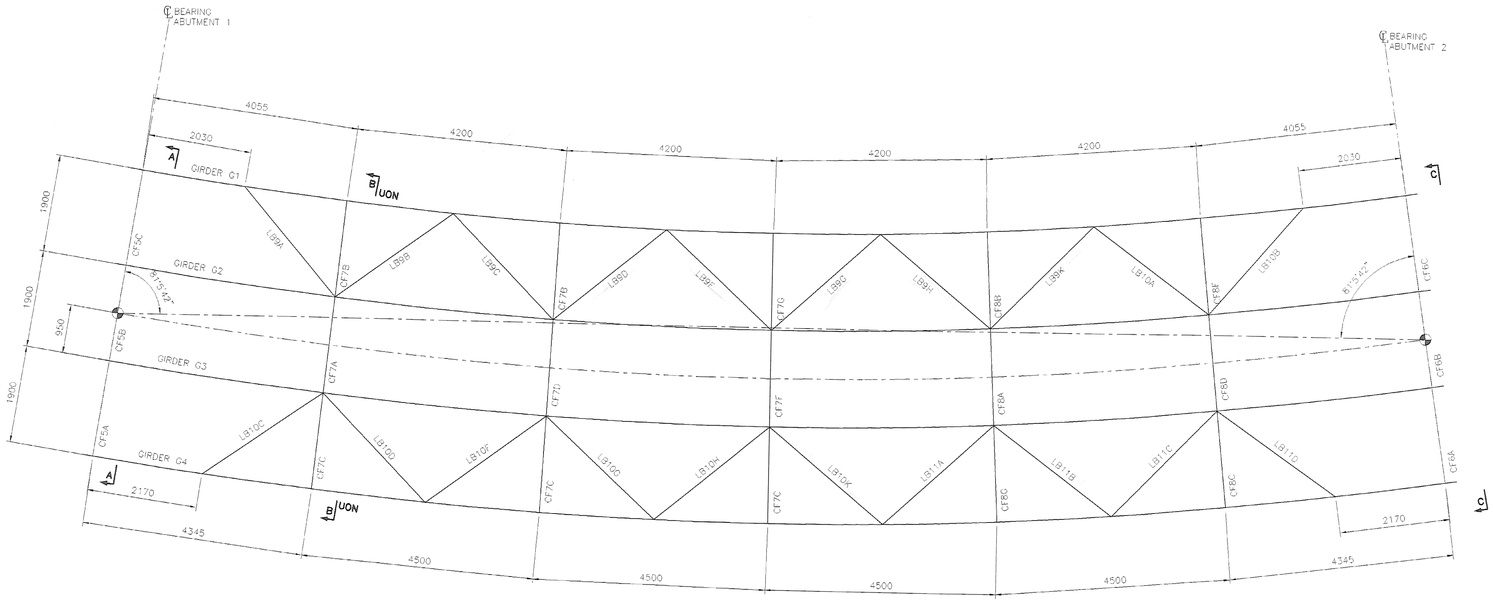
VERMONT DOT
SUNDERLAND BRIDGE
FED. AID PROJ. NO.: BRF-0114 (2)
CONTRACTOR: PETRICCA CONSTRUCTION CORP.
ENGINEER: ROGER WHITCOMB

For Approval	Revised	Issue to Shop

GENERAL NOTES

Drawn by: K.B. Date: 02/28/07 Chkd'd by: G.D. Date: 03/01/07

Contract		Suffix	Dwg. Number
606			GN1



Roger,

NSBA document for review prior to next Section 106 review.

Wayne

RECEIVED
CK'D BY: [illegible] CK'D BY: DRP
MAR 07 2007
RESUBMIT _____ APPROVED ✓
BY: CWC DATE: 3/30/07

*** THIS DRAWING SHOULD BE USED FOR THE MARKS AND THE BOLTS ONLY AND MUST BE READ IN CONJUNCTION WITH THE CONTRACT DRAWINGS, SPECIFICATIONS AND SPECIAL PROVISIONS.
THIS DRAWING IS NOT TO BE USED FOR CONSTRUCTION SEQUENCING OR AN ERECTION PROCEDURE.

ALL MATERIAL (EXCEPT BOLTS) TO BE ASTM:	A709M-50W
ALL WELDS TO BE MADE WITH ELECTRODES SERIES E7MXX	
OPEN HOLES ARE FOR H.S. BOLTS AND ARE TO BE FREE OF BURRS AND SCALE	
BOLTS: 7/8 M 164M TYPE III	OPEN HOLES: 24 UIN / PAINT: SEE GN-1

International Bridge & Iron Co.
90 Day Street
Newington, CT. 06111

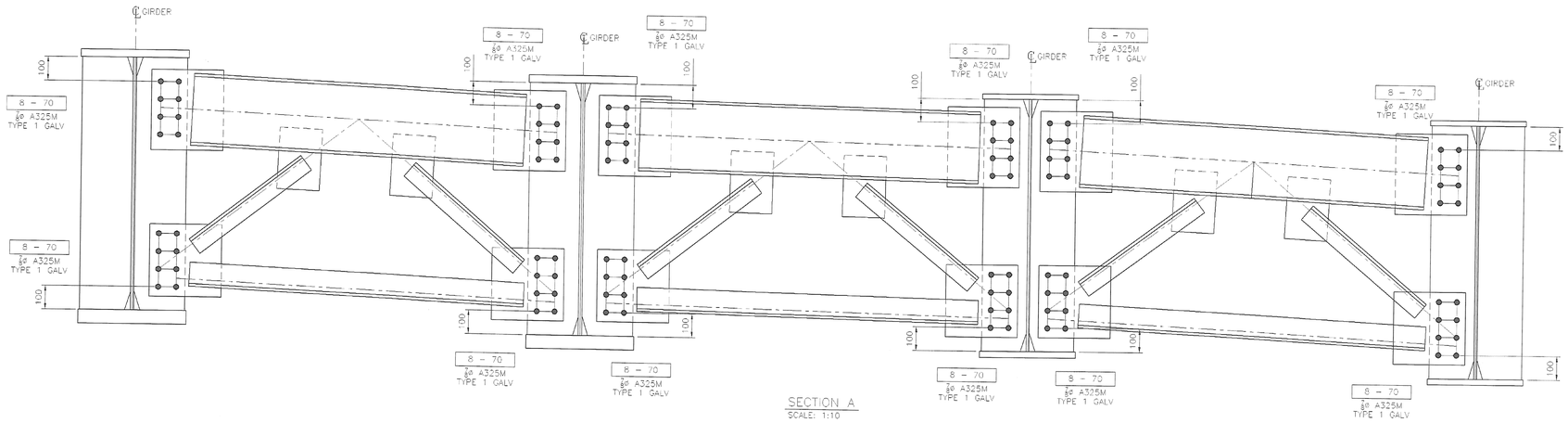
VERMONT DOT
SUNDERLAND BRIDGE
FED. AID PROJ. NO.: BRF-0114 (2)
CONTRACTOR: PETRICCA CONSTRUCTION CORP.
ENGINEER: ROGER WHITCOMB

For Approval	Revised	Issue to Shop

FRAMING PLAN

Drawn by D.E. Date 02/05/07 Checked by: _ Date MM/JJ/AA

Contract		Suffix	Dwg. Number
606			E1



SECTION A
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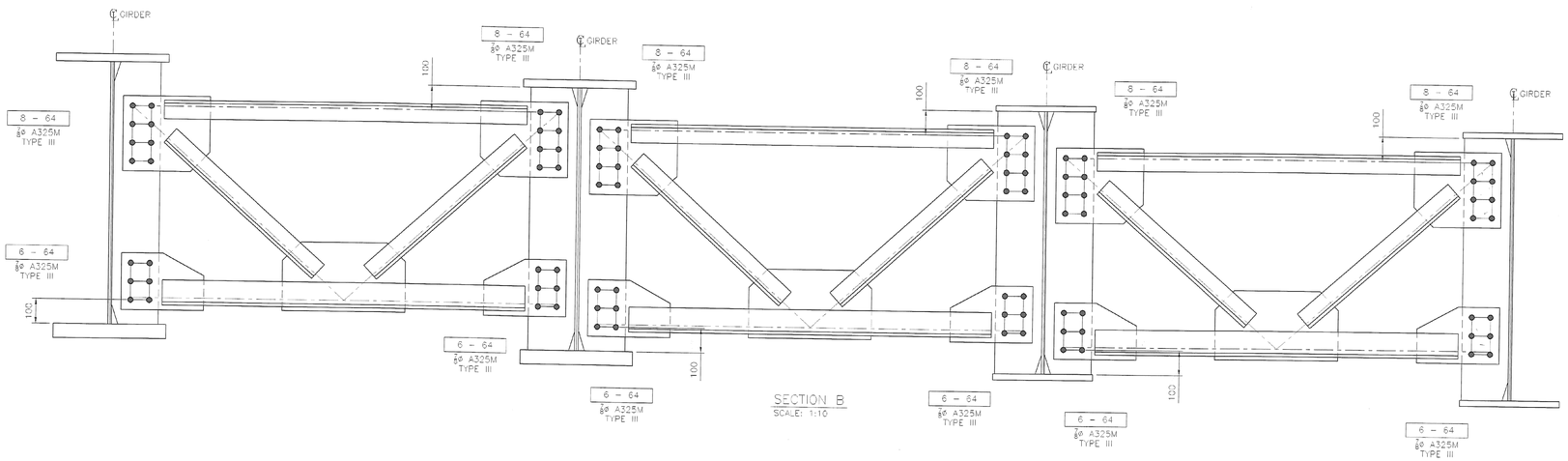
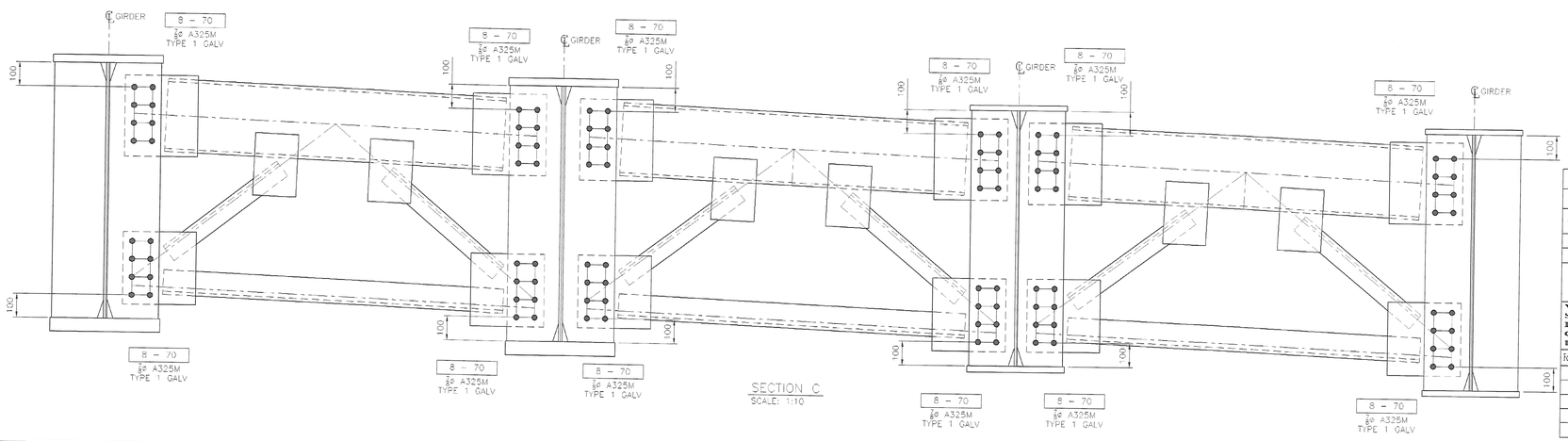


SECTION B
SCALE: 1:10



SECTION C
SCALE: 1:10

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MAR 07 2007
RESUBMIT_____ APPROVED ✓
BY Cwe DATE 3/30/07

ALL MATERIAL (EXCEPT BOLTS) TO BE ASTM:	A709M-50W
ALL WELDS TO BE MADE WITH ELECTRODES SERIES E*MXX	
OPEN HOLES ARE FOR H.S. BOLTS AND ARE TO BE FREE OF BURRS AND SCALE	
BOLTS: 7/8 M 164M TYPE III	OPEN HOLES: 24 UN / PAINT: SEE GN-1

International Bridge & Iron Co.
90 Day Street
Newington, CT. 06111

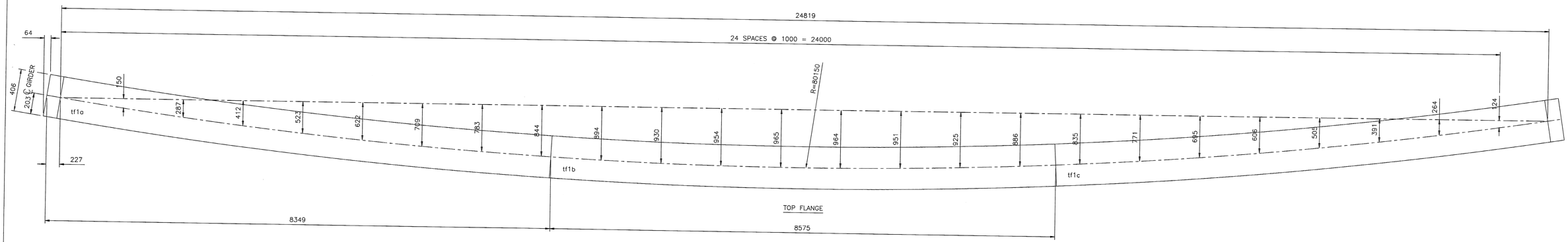
VERMONT DOT
SUNDERLAND BRIDGE
FED. AID PROJ. NO.: BRF-0114 (2)
CONTRACTOR: PETRICCA CONSTRUCTION CORP.
ENGINEER: ROGER WHITCOMB

For Approval	Revised	Issue to Shop

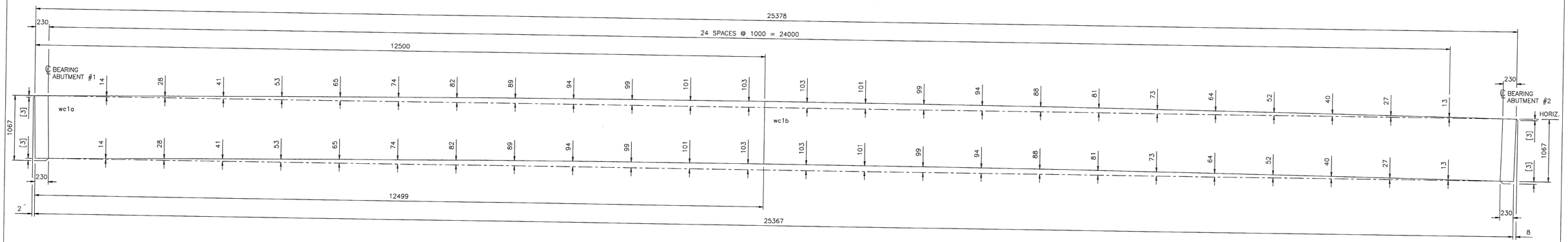
SECTIONS

Drawn by K.B. Date 02/27/07 Checked by - Date MM/JJ/AA

Contract		Suffix	Dwg. Number
606			E2

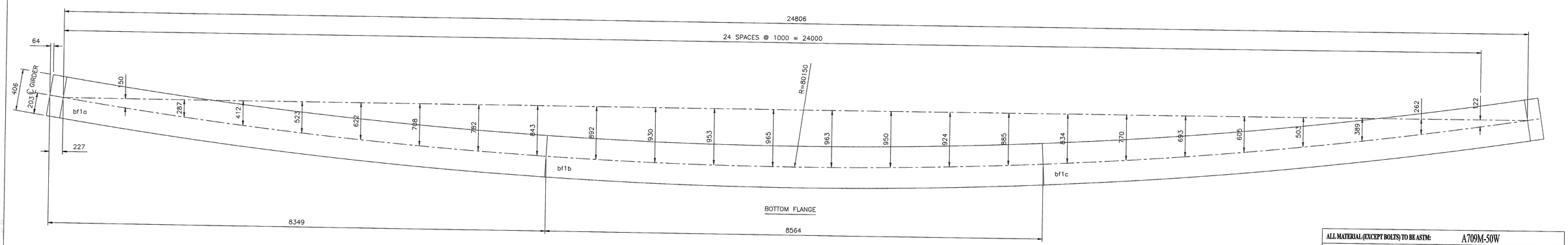


TOP FLANGE



WEB CUTTING WC1

wc1a = PL 13
wc1b = PL 13



BOTTOM FLANGE

RECEIVED
CK'D BY GWC CK'D BY DRD
MAR 29 2007
RESUBMIT ____ APPROVED ✓
BY GWC DATE 3/30/07

ALL MATERIAL (EXCEPT BOLTS) TO BE ASTM:	A709M-50W
ALL WELDS TO BE MADE WITH ELECTRODES SERIES E70XX	
OPEN HOLES ARE FOR H.S. BOLTS AND ARE TO BE FREE OF BURRS AND SCALE	
BOLTS: 7/8 A325M TYPE III	OPEN HOLES: 24 U/N — PAINT: SEE GN-1

International Bridge & Iron Co.
90 Day Street
Newington, CT. 06111

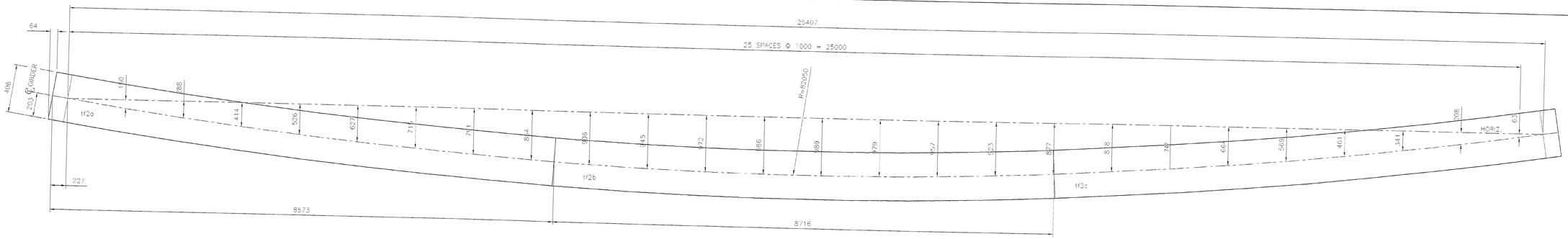
VERMONT DOT
SUNDERLAND BRIDGE
FED. AID PROJ. NO.: BRF-0114 (2)
CONTRACTOR: PETRICCA CONSTRUCTION CORP.
ENGINEER: ROGER WHITCOMB

For Approval	Revised	Issue to Shop
1		

WEB CUTTING G1

Drawn by: D.E. Date: 02/05/07 Checked by: G.D. Date: 02/27/07

Contract	Suffix	Dwg. Number
606		WC1



TOP FLANGE

WEB CUTTING WC2

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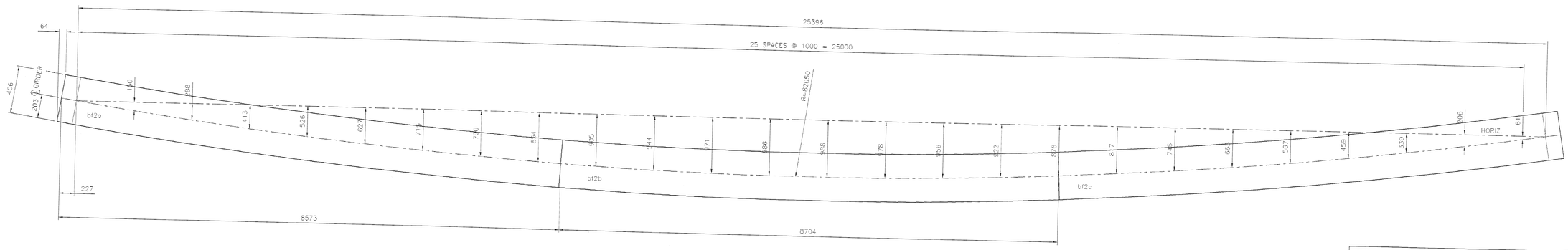

BOTTOM FLANGE

ALL MATERIAL (EXCEPT BOLTS) TO BE ASTM:	A709M-50W
ALL WELDS TO BE MADE WITH ELECTRODES SERIES E7XX	
OPEN HOLES ARE FOR H.S. BOLTS AND ARE TO BE FREE OF BURRS AND SCALE	
BOLTS: 7/8" M 164M TYPE III	OPEN HOLES: 24 UN / PAINT: SEE GN-1

International Bridge & Iron Co.
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Newington, CT. 06111

VERMONT DOT
SUNDERLAND BRIDGE
FED. AID PROJ. NO.: BRF-0114 (2)
CONTRACTOR: PETRICCA CONSTRUCTION CORP.
ENGINEER: ROGER WHITCOMB

RECEIVED
MAR 07 2007

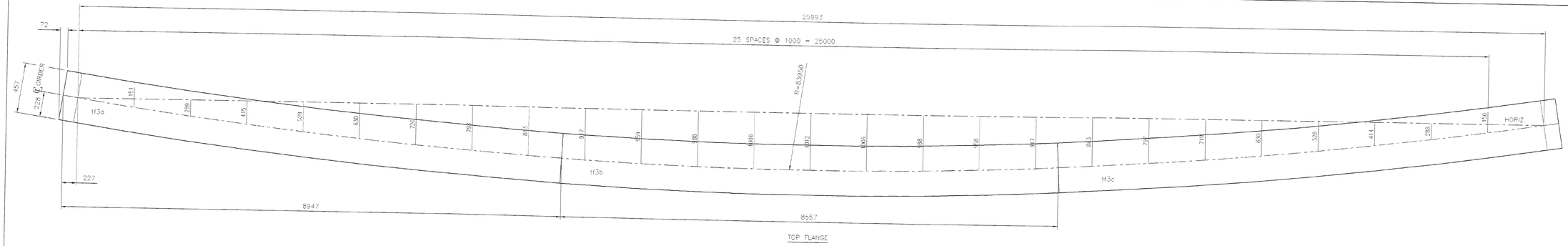
CK'D BY: CWC OK'D BY: DRP
RESUBMIT: APPROVED:
BY: CWC DATE: 3/30/07

For Approval	Revised	Issue to Shop

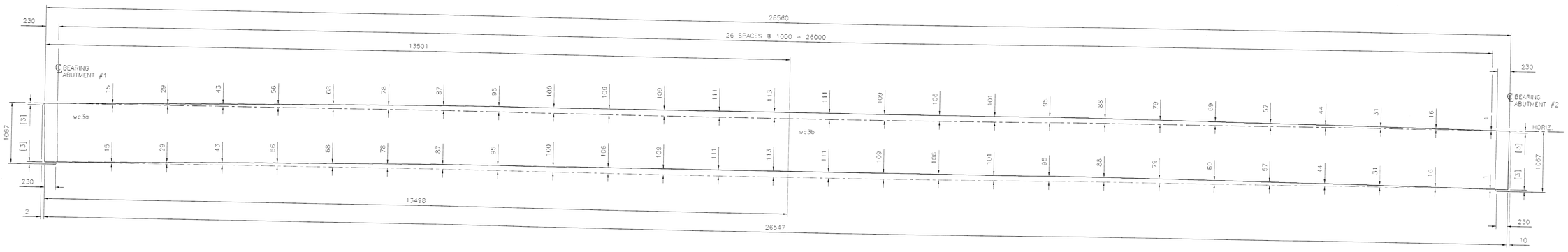
WEB CUTTING G2

Drawn By: D.E. Date: 02/05/07 Checked: G.L. Date: 03/27/07

Contract	Suffix	Dwg. Number
606		WC2



TOP FLANGE



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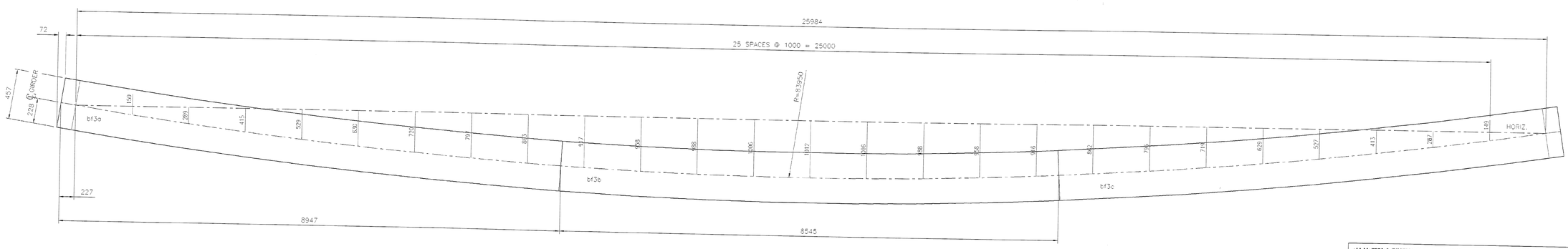


BOTTOM FLANGE

RECEIVED
CK'D BY CWC CK'D BY DRP
MAR 07 2007
RESUBMIT ____ APPROVED ✓
BY CWC DATE 3/30/07

ALL MATERIAL (EXCEPT BOLTS) TO BE ASTM:	A709M-50W
ALL WELDS TO BE MADE WITH ELECTRODES SERIES E70XX	
OPEN HOLES ARE FOR H.S. BOLTS AND ARE TO BE FREE OF BURRS AND SCALE	
BOLTS: 7/8 M 164M TYPE III	OPEN HOLES: 24 UN / PAINT: SEE GN-1

International Bridge & Iron Co.
90 Day Street
Newington, CT. 06111

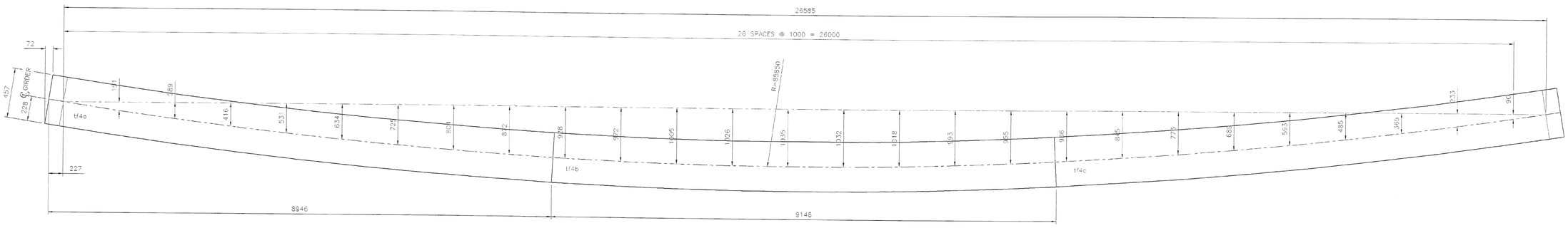
VERMONT DOT
SUNDERLAND BRIDGE
FED. AID PROJ. NO.: BRF-0114 (2)
CONTRACTOR: PETRICCA CONSTRUCTION CORP.
ENGINEER: ROGER WHITCOMB

For Approval	Revised	Issue to Shop

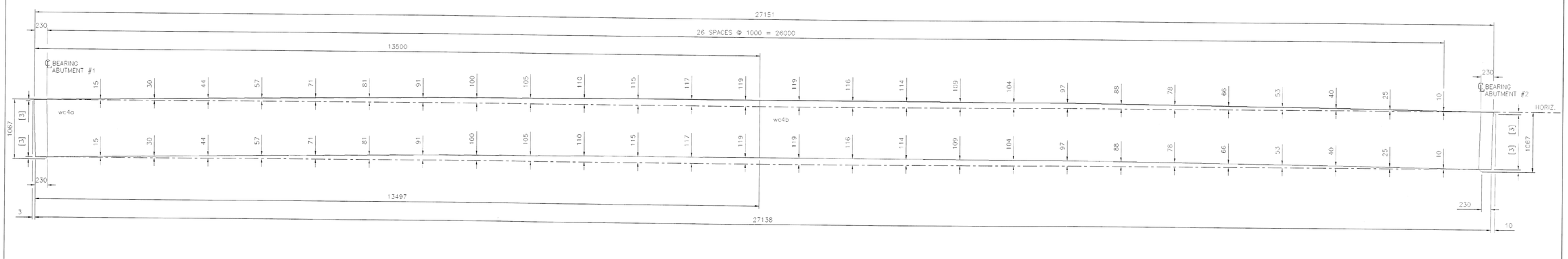
WEB CUTTING 03

Drawn by D.E. Date 02/19/07 Chkd'd by G.L. Date 02/26/07

Contract	Suffix	Dwg. Number
606		WC3



TOP FLANGE



WEB CUTTING WC4
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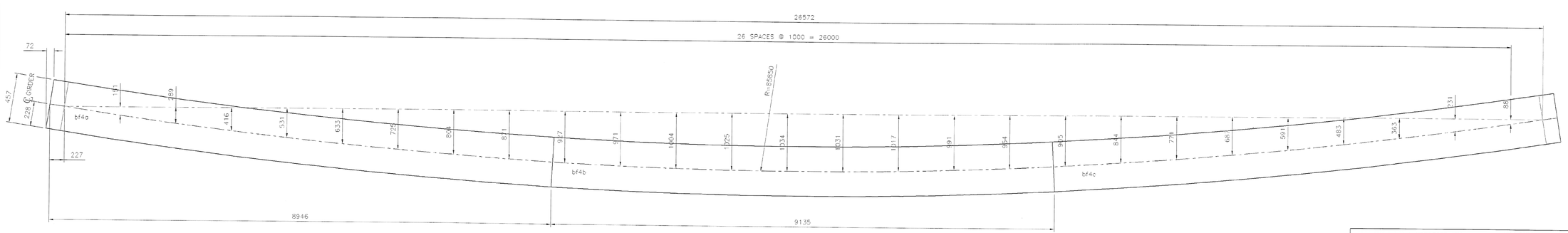


BOTTOM FLANGE

RECEIVED
OK'D BY CWC OK'D BY DRP
MAR 07 2007
RESUBMIT ____ APPROVED ✓
BY CWC DATE 3/30/07

ALL MATERIAL (EXCEPT BOLTS) TO BE ASTM:	A709M-50W
ALL WELDS TO BE MADE WITH ELECTRODES SERIES E70XX	
OPEN HOLES ARE FOR H.S. BOLTS AND ARE TO BE FREE OF BURRS AND SCALE	
BOLTS: 7/8 M 164M TYPE III	OPEN HOLES: 24 UIN / PAINT: SEE GN-1

International Bridge & Iron Co.
90 Day Street
Newington, CT. 06111

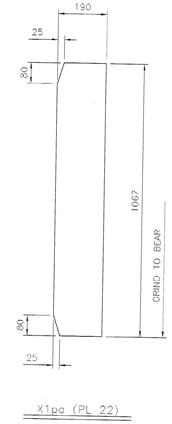
VERMONT DOT
SUNDERLAND BRIDGE
FED. AID PROJ. NO.: BRF-0114 (2)
CONTRACTOR: PETRICCA CONSTRUCTION CORP.
ENGINEER: ROGER WHITCOMB

For Approval	Revised	Issue to Shop

WEB CUTTING G4

Drawn By D.E. Date 02/05/07 Checked By G.L. Date 02/27/07

Contract	Suffix	Dwg. Number
606		WC4



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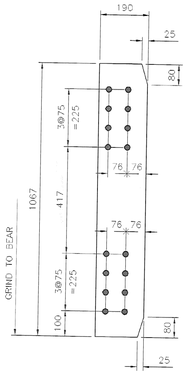
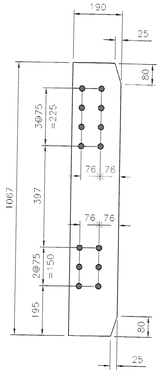


X1pb (PL 22)



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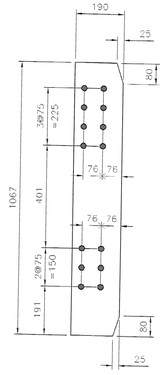

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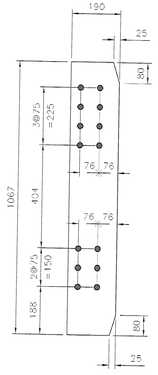

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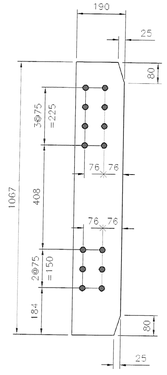
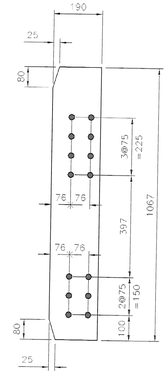


X1pg (PL 13)



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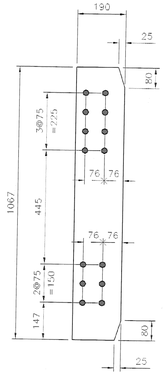

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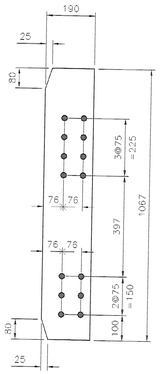

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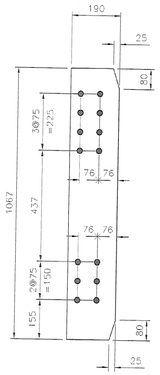

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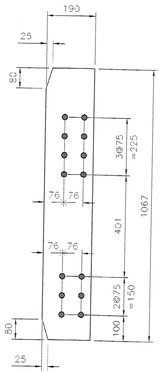

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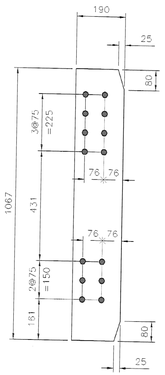

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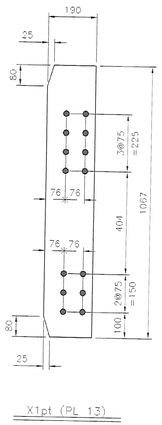

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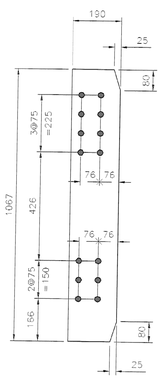

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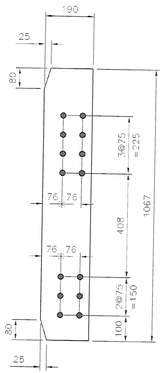

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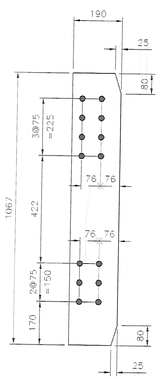
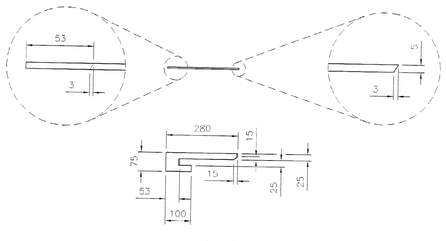


X1py (PL 13)



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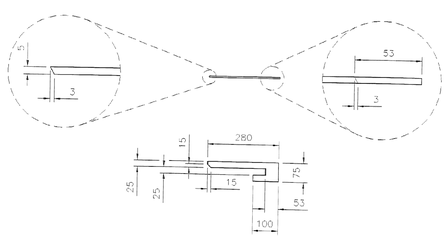

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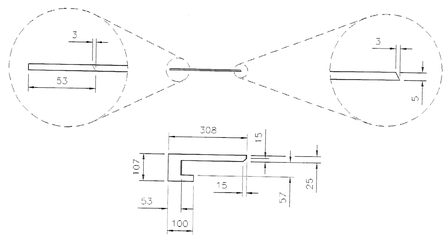

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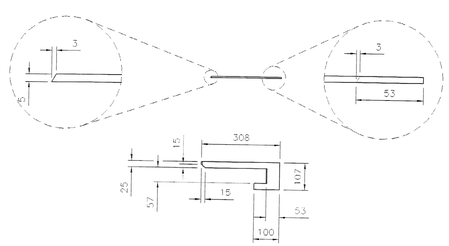

X1pad (PL 5)

RECEIVED
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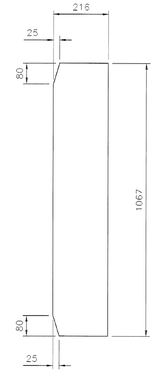
MAR 07 2007
RESUBMIT APPROVED
BY OWE DATE 3/30/07

ALL MATERIAL (EXCEPT BOLTS) TO BE ASTM:	A709M-50W
ALL WELDS TO BE MADE WITH ELECTRODES SERIES E*XX	
OPEN HOLES ARE FOR H.S. BOLTS AND ARE TO BE FREE OF BURRS AND SCALE	
BOLTS: 7/8 M 164M TYPE III	OPEN HOLES: 24 UN / PAINT: SEE GN-1

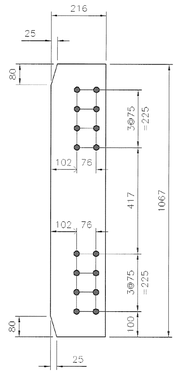
International Bridge & Iron Co.
90 Day Street
Newington, CT. 06111

VERMONT DOT
SUNDERLAND BRIDGE
FED. AID PROJ. NO.: BRF-0114 (2)
CONTRACTOR: PETRICCA CONSTRUCTION CORP.
ENGINEER: ROGER WHITCOMB

For Approval	Revised	Issue to Shop	DETAILS
			Drawn by: D.E. Date: 02/16/07 Checked by: G.D. Date: 02/27/07
			Contract: 606 / Suffix / Dwg. Number: X1



X2pa (PL 22)



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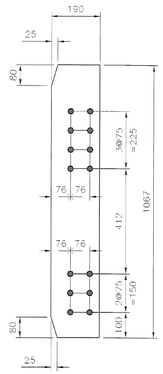

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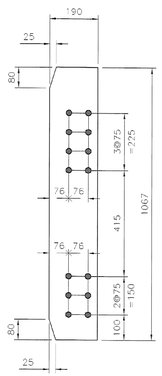

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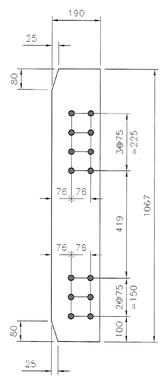

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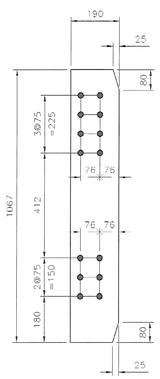
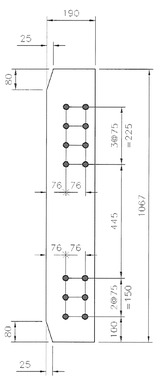


X2pg (PL 13)



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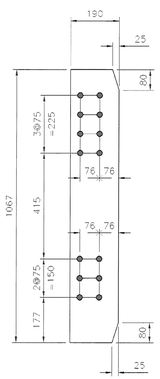
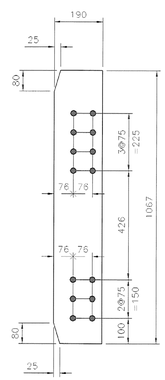


X2pk (PL 13)



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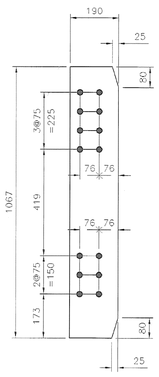

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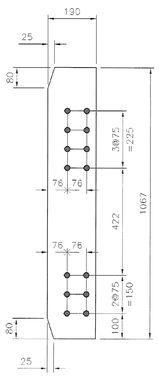

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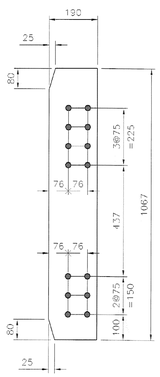

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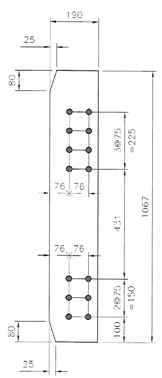

X2pr (PL 13)

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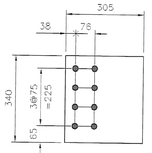
MAR 07 2007
RESUBMIT _____ APPROVED
BY CWE DATE 3/30/07

ALL MATERIAL (EXCEPT BOLTS) TO BE ASTM:	A709M-50W
ALL WELDS TO BE MADE WITH ELECTRODES SERIES E*MXX	
OPEN HOLES ARE FOR H.S. BOLTS AND ARE TO BE FREE OF BURRS AND SCALE	
BOLTS: 7/8 M 164M TYPE III	OPEN HOLES: 24 UN / PAINT: SEE GN-1

International Bridge & Iron Co.
90 Day Street
Newington, CT. 06111

VERMONT DOT
SUNDERLAND BRIDGE
FED. AID PROJ. NO.: BRF-0114 (2)
CONTRACTOR: PETRICCA CONSTRUCTION CORP.
ENGINEER: ROGER WHITCOMB

For Approval	Revised	Issue to Shop	DETAILS
			Drawn by E.T. Date 02/23/07 Detail by G.L. Date 02/27/07
			Contract 606 / Suffix / Dwg. Number X2



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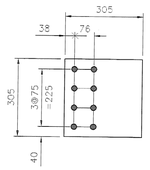

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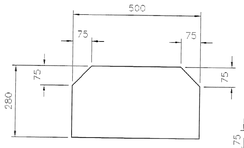

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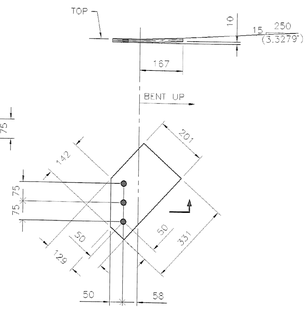

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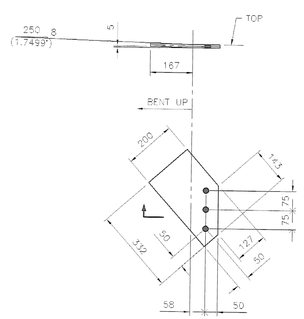

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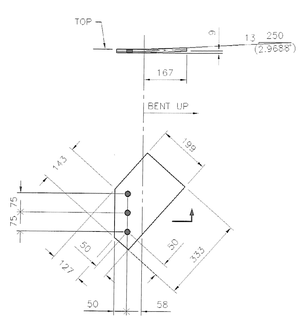

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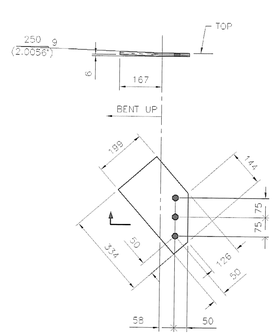

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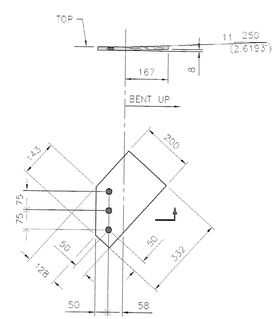

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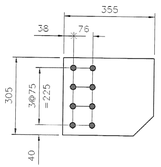

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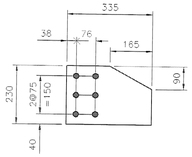

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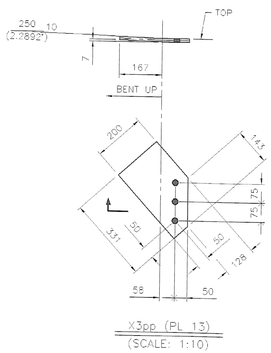

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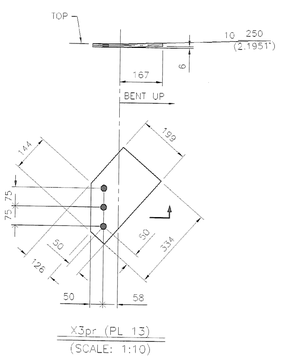

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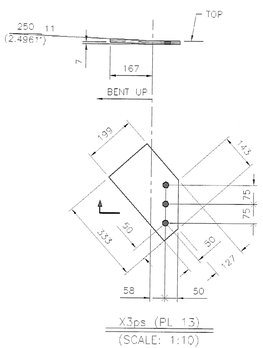

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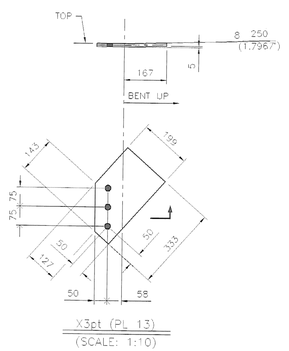

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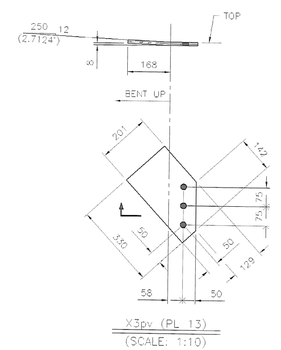

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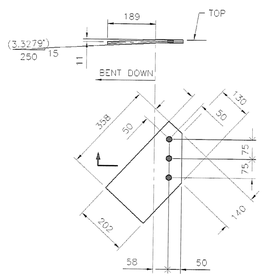

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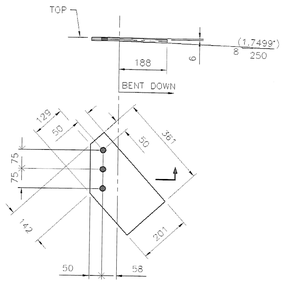

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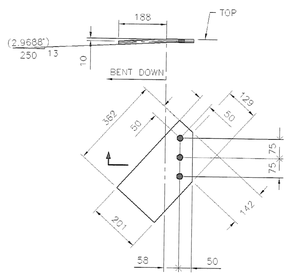

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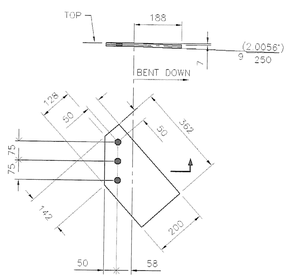

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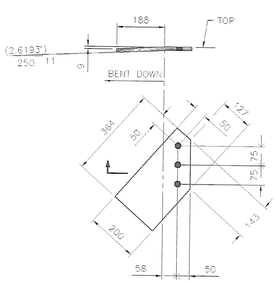

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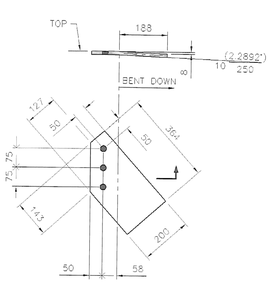

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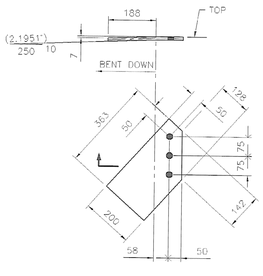

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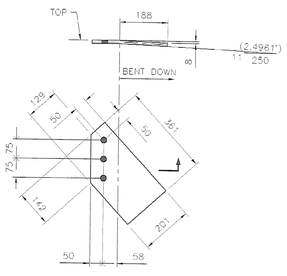

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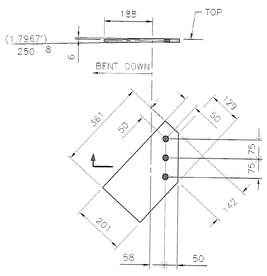

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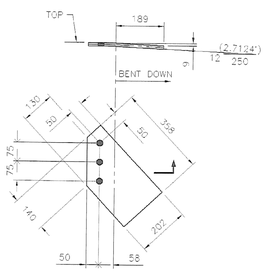

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OK'D BY CWC OK'D BY DRP
MAR 07 2007
RESUBMIT _____ APPROVED ✓
BY CWC DATE 3/30/07

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ALL WELDS TO BE MADE WITH ELECTRODES SERIES E*WXX	
OPEN HOLES ARE FOR H.S. BOLTS AND ARE TO BE FREE OF BURRS AND SCALE	
BOLTS: 7/8 M 164M TYPE III	OPEN HOLES: 24 UIN / PAINT: SEE GN-1

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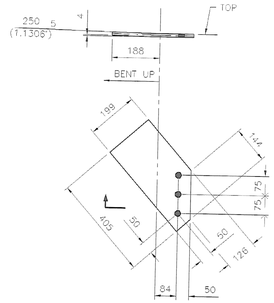
FED. AID PROJ. NO.: BRF-0114 (2)
CONTRACTOR: PETRICCA CONSTRUCTION CORP.
ENGINEER: ROGER WHITCOMB

For Approval	Revised	Issue to Shop

DETAILS

Drawn by D.E. Date 02/19/07 Detail by _ Date MM/JJ/AA

Contract	Suffix	Dwg. Number
606		X3



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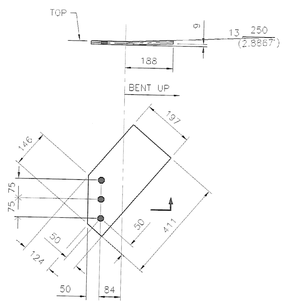

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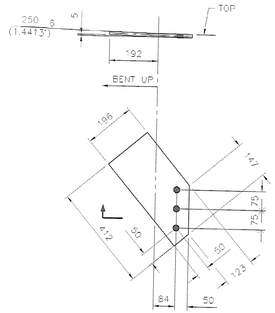

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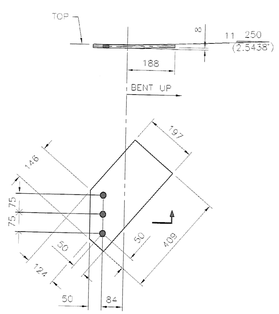

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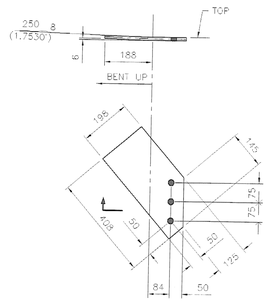

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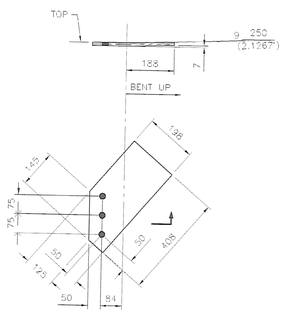

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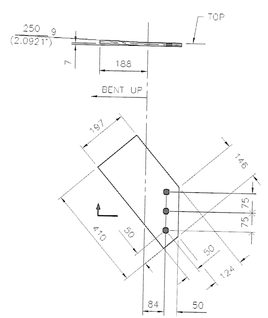

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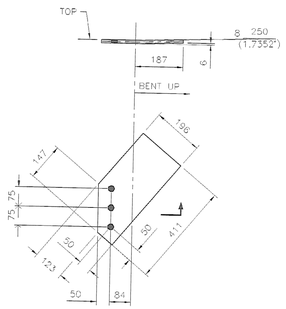

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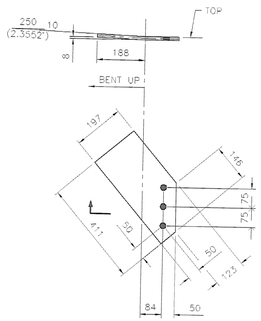

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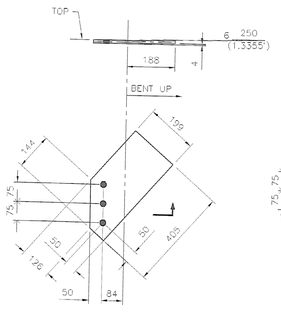

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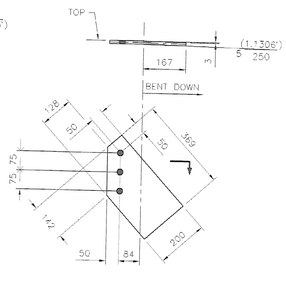

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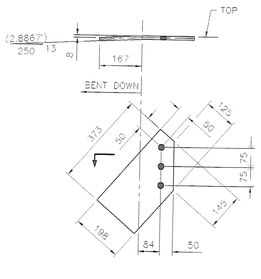

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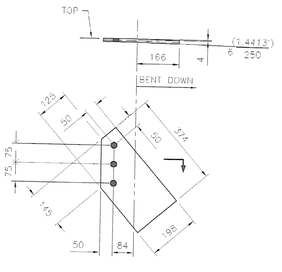

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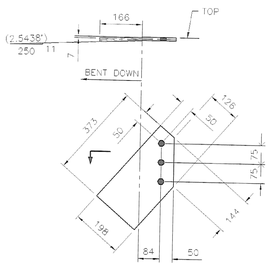

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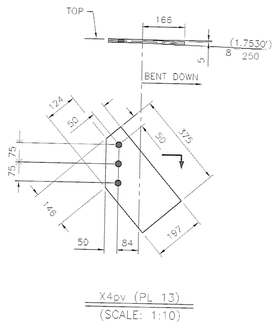

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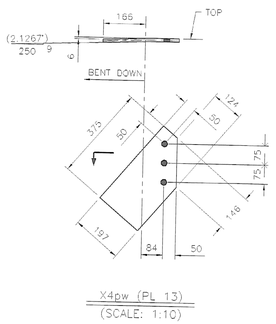

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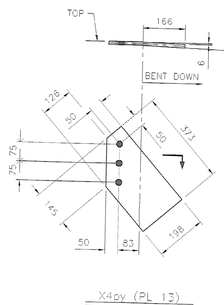

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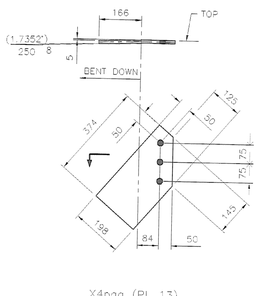

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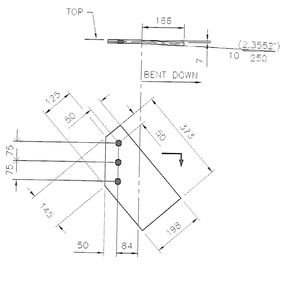

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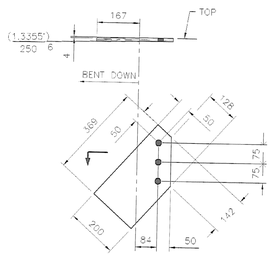

X4pac (PL 13)
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ALL WELDS TO BE MADE WITH ELECTRODES SERIES E70XX	
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BOLTS: 7/8" M 164M TYPE III	OPEN HOLES: 24 U/N — PAINT: SEE GN-1

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SUNDERLAND BRIDGE
FED. AID PROJ. NO.: BRF-0114 (2)
CONTRACTOR: PETRICCA CONSTRUCTION CORP.
ENGINEER: ROGER WHITCOMB

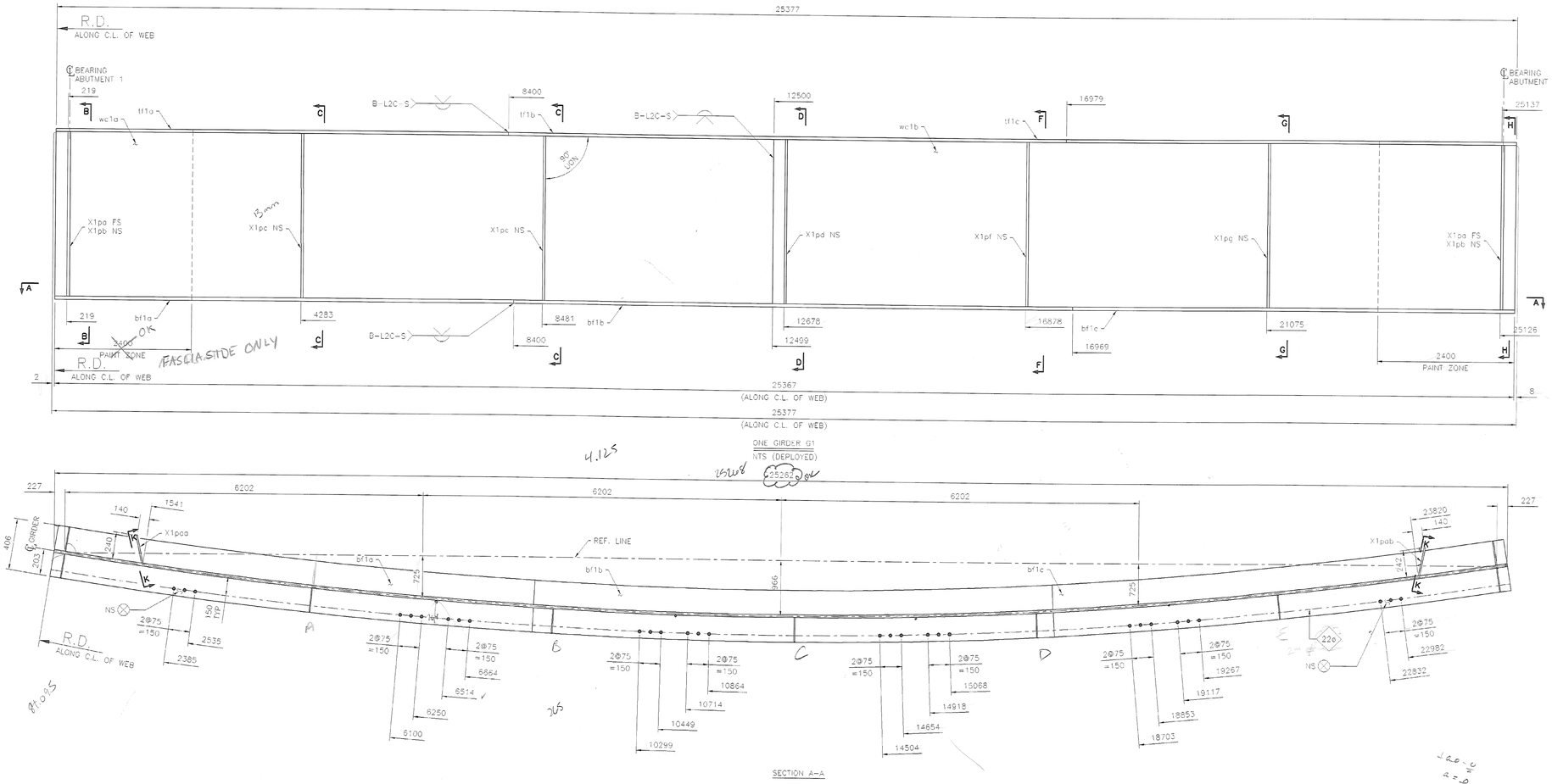
For Approval	Revised	Issue to Shop

DETAILS

Drawn by D.E. Date 02/19/07 Checked by – Date MM/JJ/AA

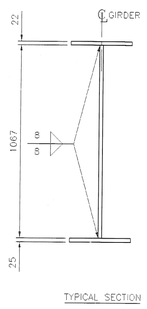
Contract	Suffix	Dwg. Number
606		X4

RECEIVED
OK'D BY awc OK'D BY DRP
MAR 07 2007
RESUBMIT ____ APPROVED ✓
BY awc DATE 3/30/07

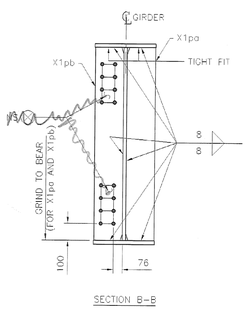


ONE GIRDER G1
NTS (DEPLOYED)

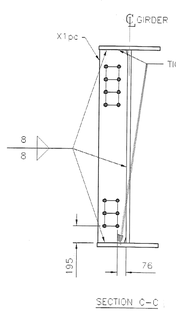
SECTION A-A



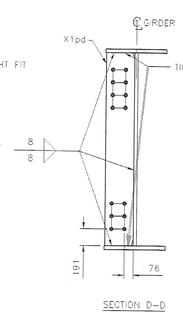
TYPICAL SECTION



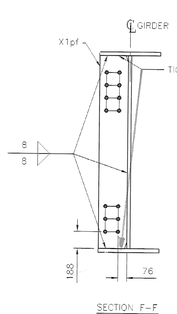
SECTION B-B



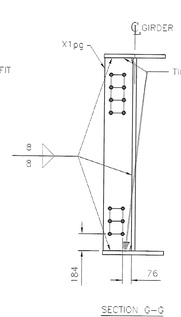
SECTION C-C



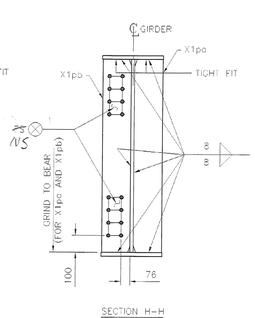
SECTION D-D



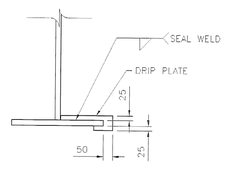
SECTION F-F



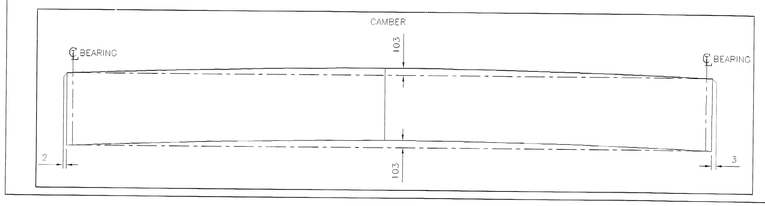
SECTION G-G



SECTION H-H



SECTION K-K



SHOP BILL

LINE	MARK	NUMBER	SHAPE	SECTION	FINISHED LENGTH mm	ITEM NO.	REMARKS	Weight lbs
1	G1	ONE		GIRDER				6809
2	tf1a	1	PL	22x406	8475		CVN	594
3	tf1b	1	PL	22x406	8428		CVN	591
4	tf1c	1	PL	22x406	8475		CVN	594
5	wc1a	1	PL	13x1067	12500		CVN	1361
6	wc1b	1	PL	13x1067	12877		CVN	1402
7	bf1a	1	PL	25x406	8472		CVN	675
8	bf1b	1	PL	25x406	8475		CVN	675
9	bf1c	1	PL	25x406	8472		CVN	675
10	X1pa	2	PL	22x190	1067			70
11	X1pb	2	PL	22x190	1067			70
12	X1pc	2	PL	13x190	1067			47
13	X1pd	1	PL	13x190	1067			23
14	X1pf	1	PL	13x190	1067			23
15	X1pg	1	PL	13x190	1067			23
16	X1paa	1	PL	5x75	280			1
17	X1pab	1	PL	5x75	280			1
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ALL MATERIAL (EXCEPT BOLTS) TO BE ASTM: A709M-50W

ALL WELDS TO BE MADE WITH ELECTRODES SERIES E*XX

OPEN HOLES ARE FOR H.S. BOLTS AND ARE TO BE FREE OF BURRS AND SCALE

BOLTS: 7/8 M 164M TYPE III | OPEN HOLES: 24 U/N | PAINT: SEE GN-1

International Bridge & Iron Co.
90 Day Street
Newington, CT. 06111

VERMONT DOT
SUNDERLAND BRIDGE
FED. AID PROJ. NO.: BRF-0114 (2)
CONTRACTOR: PETRICCA CONSTRUCTION CORP.
ENGINEER: ROGER WHITCOMB

For Approval	Revised	Issue to Shop

GIRDER 1

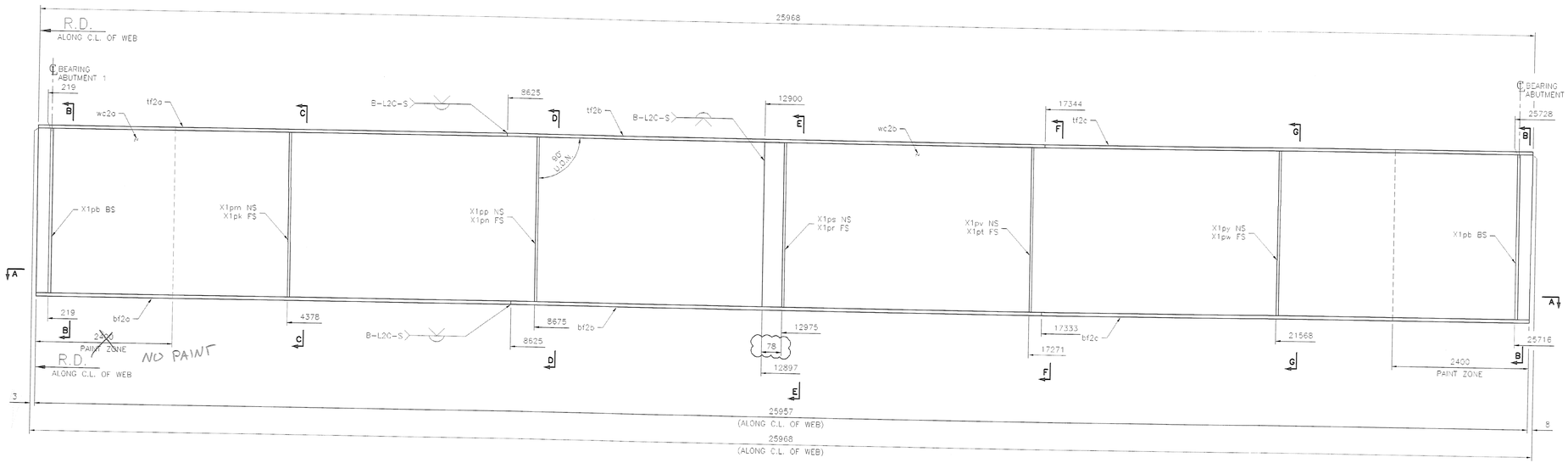
Drawn by D.E. Date 02/06/07 | Checked by G.D. Date 02/27/07

Contract	Suffix	Dwg. Number
606		1

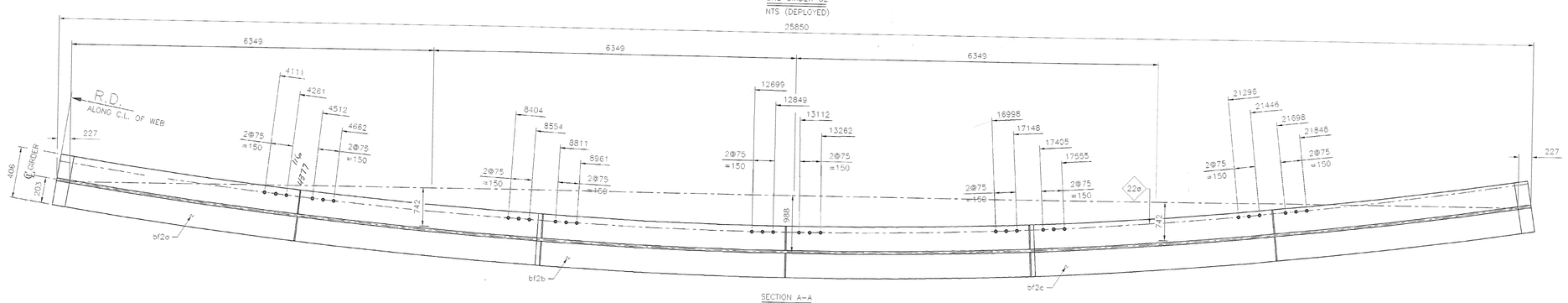
RECEIVED
CK'D BY CWC CK'D BY DRP
MAR 07 2007
RESUBMIT ____ APPROVED AS NOTED
BY CWC DATE 3/30/07

U.O.N. : UNLESS OTHERWISE NOTED

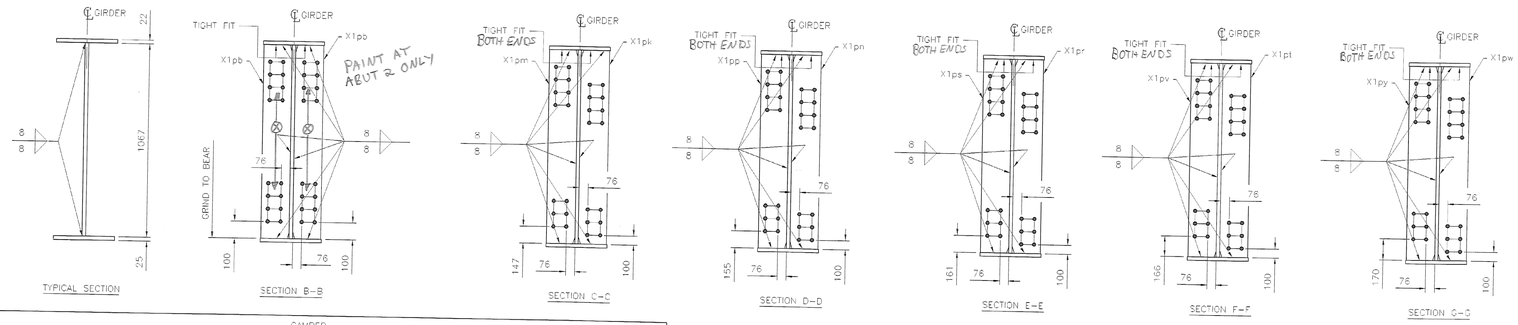
⊗ PRIMER ONLY WITHIN 3" OF OPEN HOLES AT FAYING SURFACES

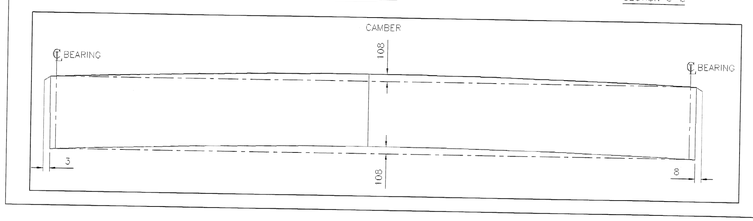


ONE GIRDER G2
NTS (DEPLOYED)



SECTION A-A





SHOP BILL

LINE	MARK	NUMBER	SHAPE	SECTION	FINISHED LENGTH mm	ITEM NO.	REMARKS	Weight lbs
1	G2	ONE		GIRDER				7067
2	tf2a	1	PL	22x406	8625		CVN	605
3	tf2b	1	PL	22x406	8720		CVN	611
4	tf2c	1	PL	22x406	8625		CVN	605
5	wc2a	1	PL	13x1067	12900		CVN	1405
6	wc2b	1	PL	13x1067	13068		CVN	1423
7	bf2a	1	PL	25x406	8625		CVN	687
8	bf2b	1	PL	25x406	8708		CVN	694
9	bf2c	1	PL	25x406	8625		CVN	687
10	X1pb	4	PL	22x190	1067			140
11	X1pm	1	PL	13x190	1067			21
12	X1pk	1	PL	13x190	1067			21
13	X1pp	1	PL	13x190	1067			21
14	X1pn	1	PL	13x190	1067			21
15	X1ps	1	PL	13x190	1067			21
16	X1pr	1	PL	13x190	1067			21
17	X1pv	1	PL	13x190	1067			21
18	X1pt	1	PL	13x190	1067			21
19	X1py	1	PL	13x190	1067			21
20	X1pw	1	PL	13x190	1067			21
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ALL MATERIAL (EXCEPT BOLTS) TO BE ASTM: A709M-50W

ALL WELDS TO BE MADE WITH ELECTRODES SERIES E7WXX

OPEN HOLES ARE FOR H.S. BOLTS AND ARE TO BE FREE OF BURRS AND SCALE

BOLTS: 7/8" M 164M TYPE III | OPEN HOLES: 24 UN | PAINT: SEE GN-1

International Bridge & Iron Co.
90 Day Street
Newington, CT. 06111

VERMONT DOT
SUNDERLAND BRIDGE
FED. AID PROJ. NO.: BRF-0114 (2)
CONTRACTOR: PETRICCA CONSTRUCTION CORP.
ENGINEER: ROGER WHITCOMB

For Approval	Revised	Issue to Shop

GIRDER 2

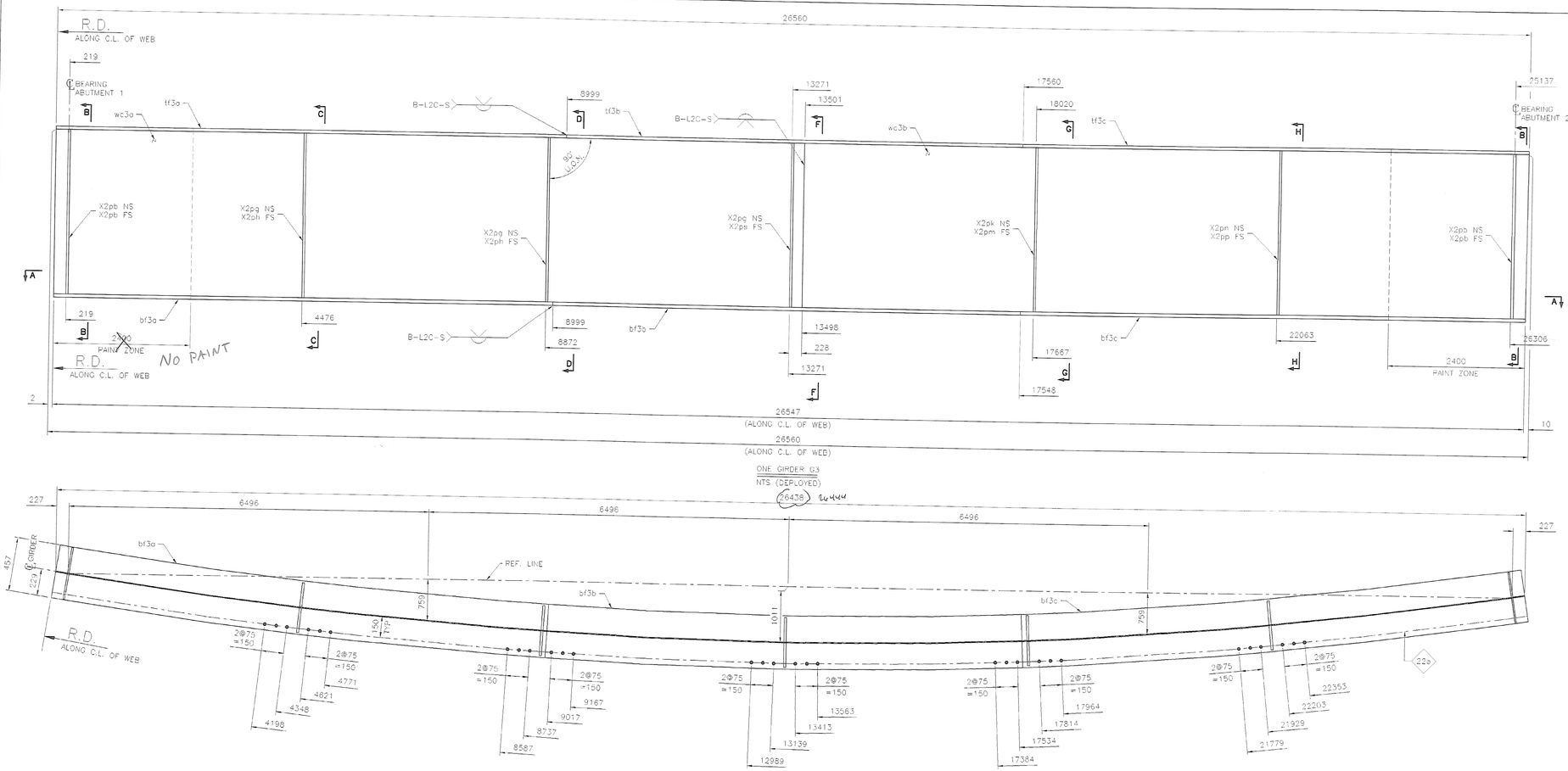
Drawn by D.E. Date 02/07/07 Chkd'd by – Date MM/JJ/AA

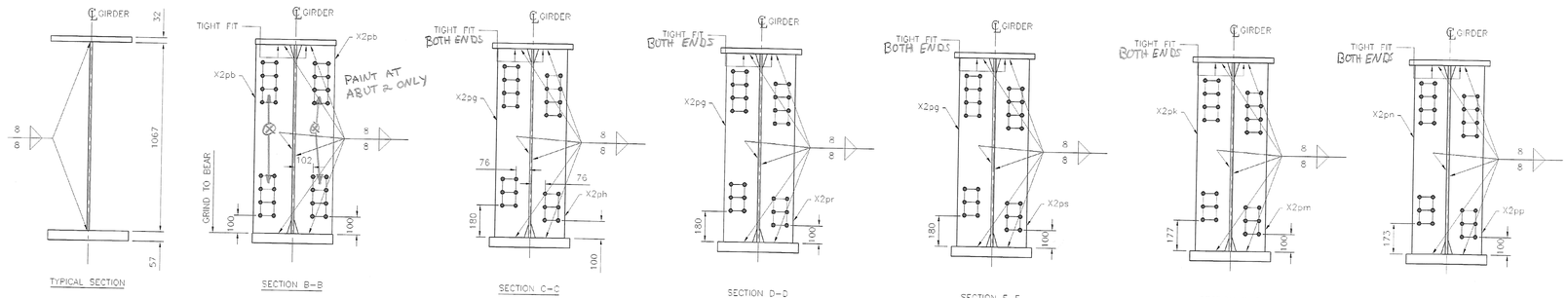
Contract	Suffix	Dwg. Number
606		2

RECEIVED
CK'D BY CWC OK'D BY DRP
MAR 07 2007
RESUBMIT ____ APPROVED AS NOTED
BY CWC DATE 3/30/07

U.O.N. : UNLESS OTHERWISE NOTED

⊗ PRIMER ONLY WITHIN 3" OF OPEN HOLES AT FAYING SURFACES





SHOP BILL

LINE	MARK	NUMBER	SHAPE	SECTION	FINISHED LENGTH mm	ITEM NO.	REMARKS	Weight lbs
1	G3	ONE		GIRDER				11959
2	tf3a	1	PL	32x457	9000		CVN	1033
3	tf3b	1	PL	32x457	8560		CVN	983
4	tf3c	1	PL	32x457	9000		CVN	1033
5	wc3a	1	PL	14x1067	13501		CVN	1583
6	wc3b	1	PL	14x1067	13059		CVN	1531
7	bf3a	1	PL	57x457	9000		CVN	1840
8	bf3b	1	PL	57x457	8548		CVN	1748
9	bf3c	1	PL	57x457	9000		CVN	1840
10	X2pb	4	PL	22x216	1067			158
11	X2pg	3	PL	13x190	1067			62
12	X2ph	1	PL	13x190	1067			21
13	X2pk	1	PL	13x190	1067			21
14	X2pm	1	PL	13x190	1067			21
15	X2pn	1	PL	13x190	1067			21
16	X2pp	1	PL	13x190	1067			21
17	X2pr	1	PL	13x190	1067			21
18	X2ps	1	PL	13x190	1067			21
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ALL MATERIAL (EXCEPT BOLTS) TO BE ASTM: A709M-50W

ALL WELDS TO BE MADE WITH ELECTRODES SERIES E7XX

OPEN HOLES ARE FOR H.S. BOLTS AND ARE TO BE FREE OF BURRS AND SCALE

BOLTS: 78 M 164M TYPE III | OPEN HOLES: 24 UN | PAINT: SEE GN-1

International Bridge & Iron Co.
90 Day Street
Newington, CT. 06111

VERMONT DOT
SUNDERLAND BRIDGE
FED. AID PROJ. NO.: BRF-0114 (2)
CONTRACTOR: PETRICCA CONSTRUCTION CORP.
ENGINEER: ROGER WHITCOMB

For Approval	Revised	Issue to Shop

GIRDER 3

Drawn by: E.T. Date 02/26/07 | Chkd by: _ Date MM/JJ/AA

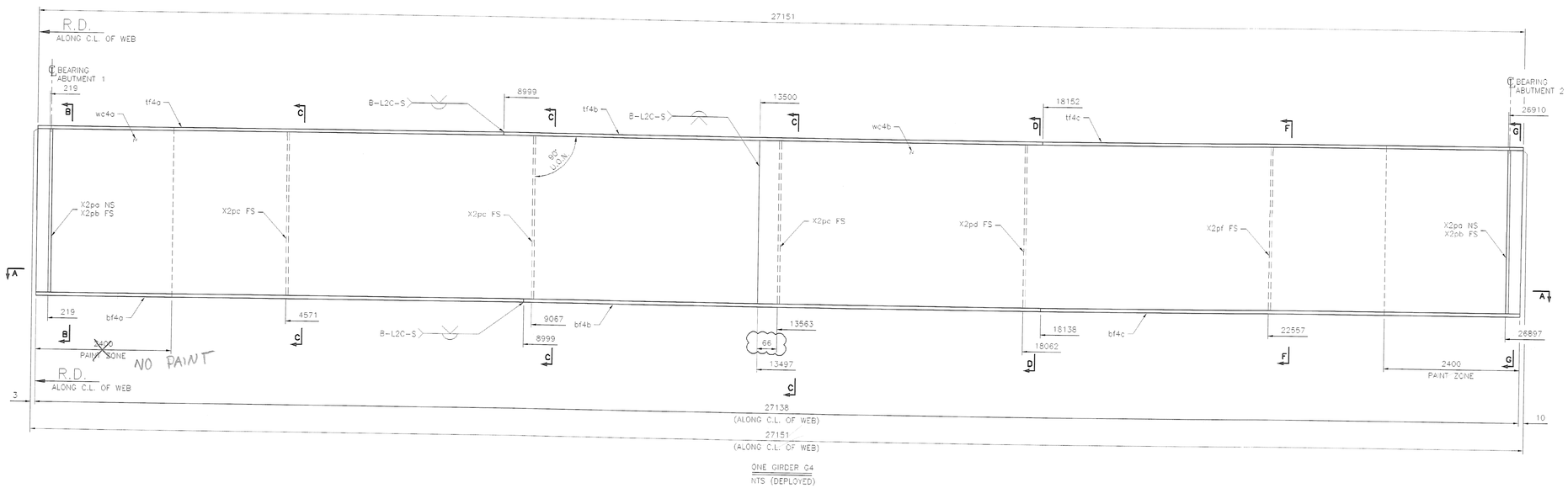
Contract	Suffix	Dwg. Number
606		3

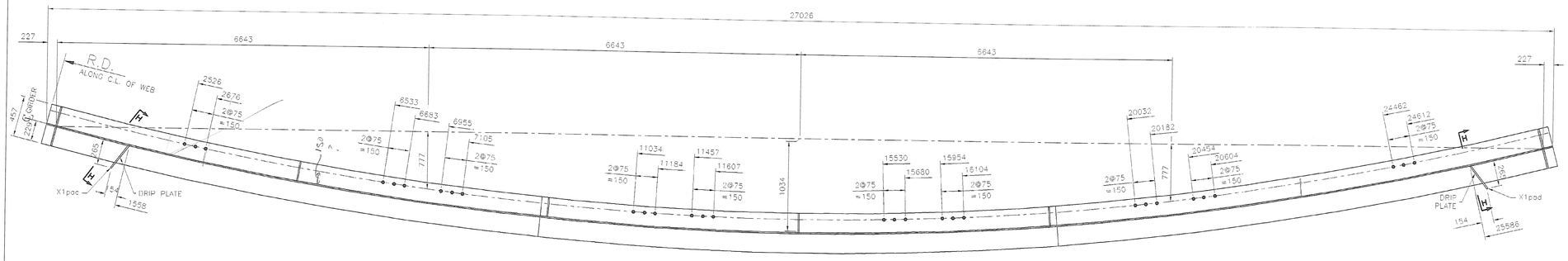
RECEIVED
CK'D BY CWL CK'D BY DRP
MAR 07 2007
RESUBMIT _____ APPROVED AS NOTED
BY CWL DATE 3/30/07

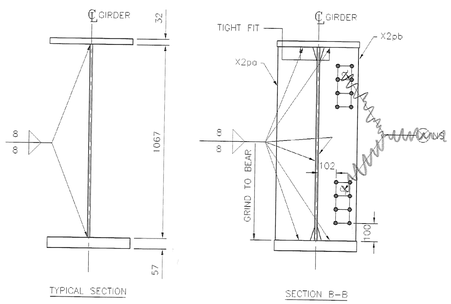
U.O.N. : UNLESS OTHERWISE NOTED

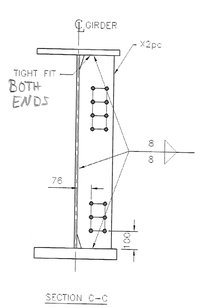
⊗ PRIMER ONLY WITHIN 3" OF OPEN HOLES AT FAYING SURFACES

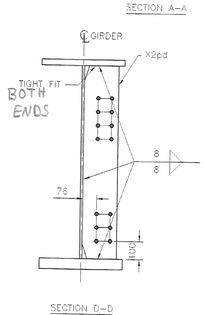
4400

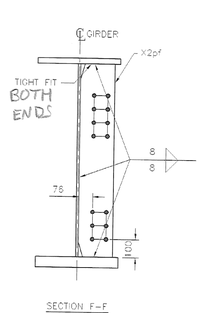


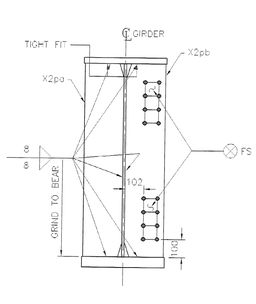


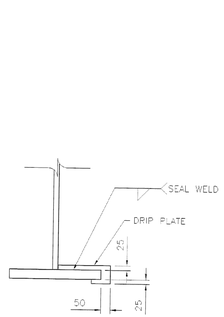




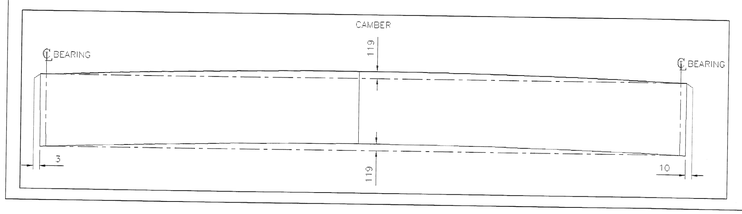








SECTION A-A



SHOP BILL

LINE	MARK	NUMBER	SHAPE	SECTION	FINISHED LENGTH mm	ITEM NO.	REMARKS	Weight lbs
1	G4	ONE		GIRDER				12116
2	tf4a	1	PL	32x457	9000		CVN	1033
3	tf4b	1	PL	32x457	9153		CVN	1051
4	tf4c	1	PL	32x457	9000		CVN	1033
5	wc4a	1	PL	14x1067	13500		CVN	1583
6	wc4b	1	PL	14x1067	13651		CVN	1601
7	bf4a	1	PL	57x457	9000		CVN	1840
8	bf4b	1	PL	57x457	9138		CVN	1869
9	bf4c	1	PL	57x457	9000		CVN	1840
10	X2pa	2	PL	22x216	1067			80
11	X2pb	2	PL	22x216	1067			80
12	X2pc	3	PL	13x190	1067			62
13	X2pd	1	PL	13x190	1067			21
14	X2pf	1	PL	13x190	1067			21
15	X1pac	1	PL	5x107	308			9
16	X1pad	1	PL	5x107	308			9
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ALL MATERIAL (EXCEPT BOLTS) TO BE ASTM: A709M-50W

ALL WELDS TO BE MADE WITH ELECTRODES SERIES E/WXX

OPEN HOLES ARE FOR H.S. BOLTS AND ARE TO BE FREE OF BURRS AND SCALE

BOLTS: 7/8" M 164M TYPE III | OPEN HOLES: 24" U/N | PAINT: SEE GN-1

International Bridge & Iron Co.
90 Day Street
Newington, CT. 06111

VERMONT DOT
SUNDERLAND BRIDGE
FED. AID PROJ. NO.: BRF-0114 (2)
CONTRACTOR: PETRICCA CONSTRUCTION CORP.
ENGINEER: ROGER WHITCOMB

For Approval	Revised	Issue to Shop

GIRDER 4

Drawn by: E.T. Date: 02/23/07 Checked by: — Date: MM/JJ/AA

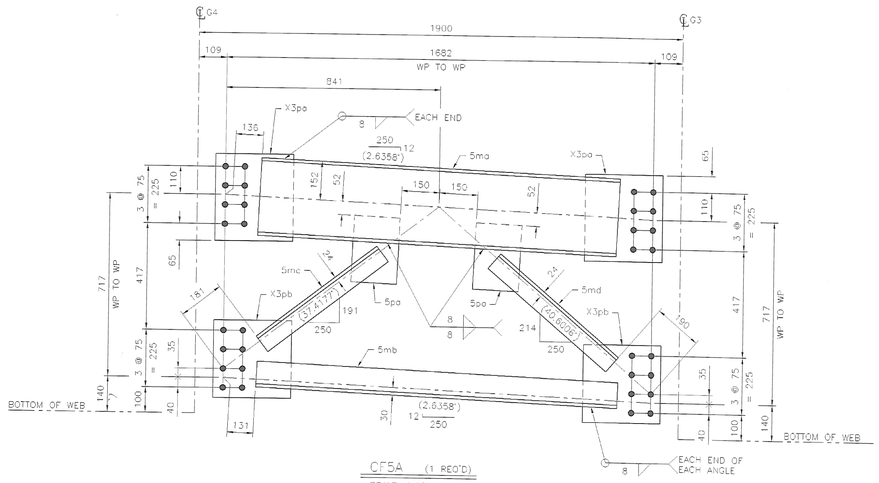
Contract	Suffix	Dwg. Number
606		4

RECEIVED
OK'D BY CWC OK'D BY DRP
MAR 07 2007
RESUBMIT _____ APPROVED AS NOTED
BY CWC DATE 3/30/07

263
2
526

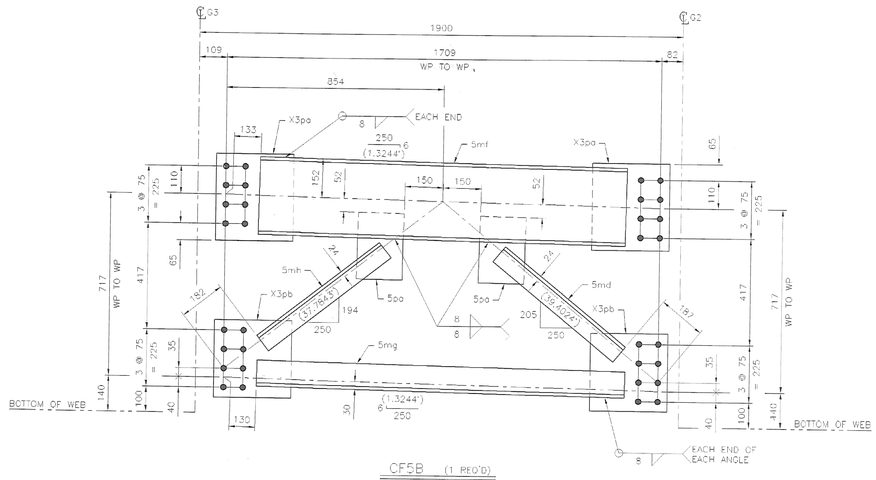
U.O.N. : UNLESS OTHERWISE NOTED

⊗ PRIMER ONLY WITHIN 3" OF OPEN HOLES AT PAYING SURFACES



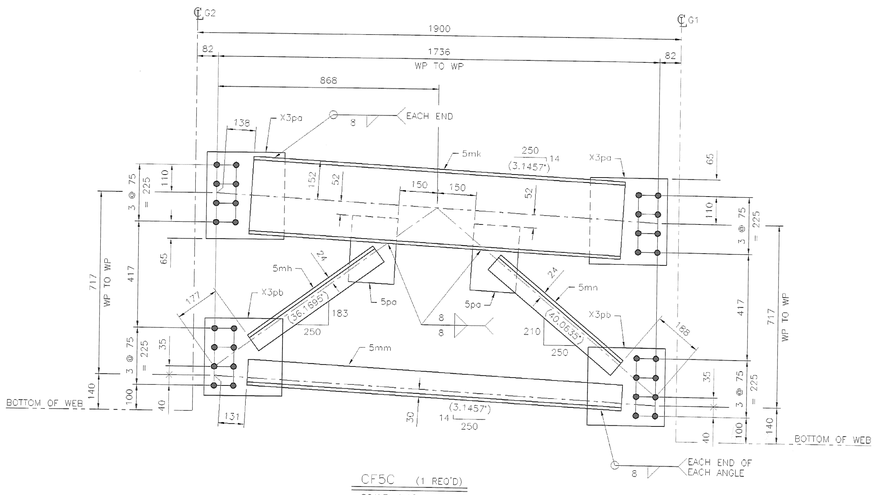
CF5A (1 REQ'D)
SCALE: 1:10

NO PAINT



CF5B (1 REQ'D)
SCALE: 1:10

NO PAINT



CF5C (1 REQ'D)
SCALE: 1:10

NO PAINT

SHOP BILL

LINE	MARK	NUMBER	SHAPE	SECTION	FINISHED LENGTH mm	ITEM NO.	REMARKS	Weight lbs
1	CF5A	1					TOTAL WEIGHT:	157
2	5ma	1	C	310x45	1411		CVN	63
3	5mb	1	L	102x102x13	1421		CVN	27
4	5mc	1	L	76x76x13	590		CVN	8
5	5md	1	L	76x76x13	615		CVN	9
6	5pa	2	PL	13x180	260			10
7	X3pa	2	PL	13x305	340			21
8	X3pb	2	PL	13x305	305			19
9								
10	CF5B	1					TOTAL WEIGHT:	160
11	5mf	1	C	310x45	1444		CVN	65
12	5md	1	L	76x76x13	615		CVN	9
13	5mg	1	L	102x102x13	1449		CVN	28
14	5mh	1	L	76x76x13	605		CVN	8
15	5pa	2	PL	13x180	260			10
16	X3pa	2	PL	13x305	340			21
17	X3pb	2	PL	13x305	305			19
18								
19	CF5C	1					TOTAL WEIGHT:	161
20	5mh	1	L	76x76x13	605		CVN	8
21	5mk	1	C	310x45	1463		CVN	66
22	5mm	1	L	102x102x13	1474		CVN	28
23	5mn	1	L	76x76x13	635		CVN	9
24	5pa	2	PL	13x180	260			10
25	X3pa	2	PL	13x305	340			21
26	X3pb	2	PL	13x305	305			19
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42								
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ALL MATERIAL (EXCEPT BOLTS) TO BE ASTM: A709M-50W

ALL WELDS TO BE MADE WITH ELECTRODES SERIES E7WXX

OPEN HOLES ARE FOR H.S. BOLTS AND ARE TO BE FREE OF BURRS AND SCALE

BOLTS: 7/8" M 164M TYPE III | OPEN HOLES: 24 U/N | PAINT: SEE GN-1

International Bridge & Iron Co.
90 Day Street
Newington, CT. 06111

VERMONT DOT
SUNDERLAND BRIDGE
FED. AID PROJ. NO.: BRF-0114 (2)
CONTRACTOR: PETRICCA CONSTRUCTION CORP.
ENGINEER: ROGER WHITCOMB

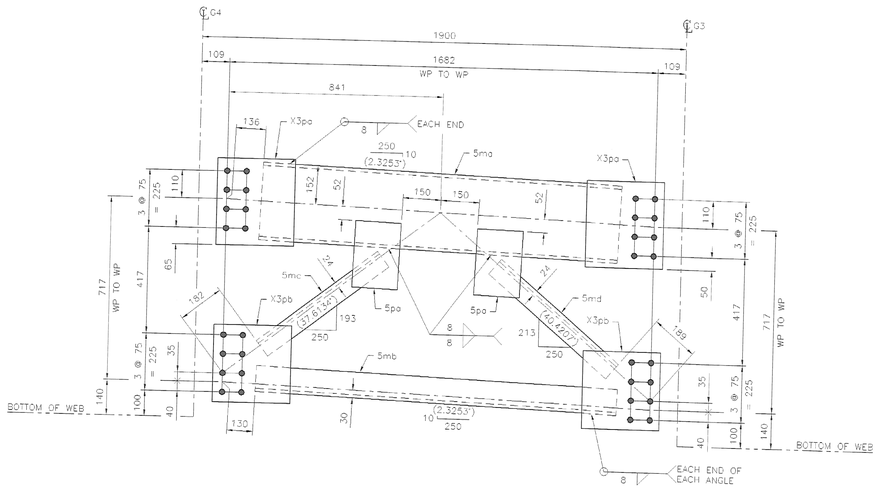
For Approval	Revised	Issue to Shop

END CROSSFRAMES

Drawn by J.V. Date 02/16/07 Checked by G.D. Date 02/27/07

Contract	Suffix	Dwg. Number
606		5

RECEIVED
CK'D BY CWC OK'D BY DRP
MAR 07 2007
RESUBMIT _____ APPROVED AS NOTED
BY CWC DATE 3/30/07



CF6A (1 REQ'D)
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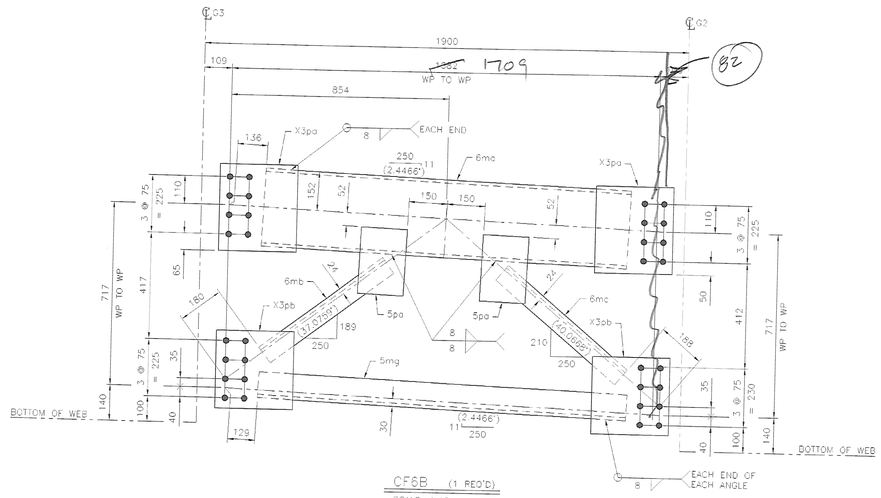

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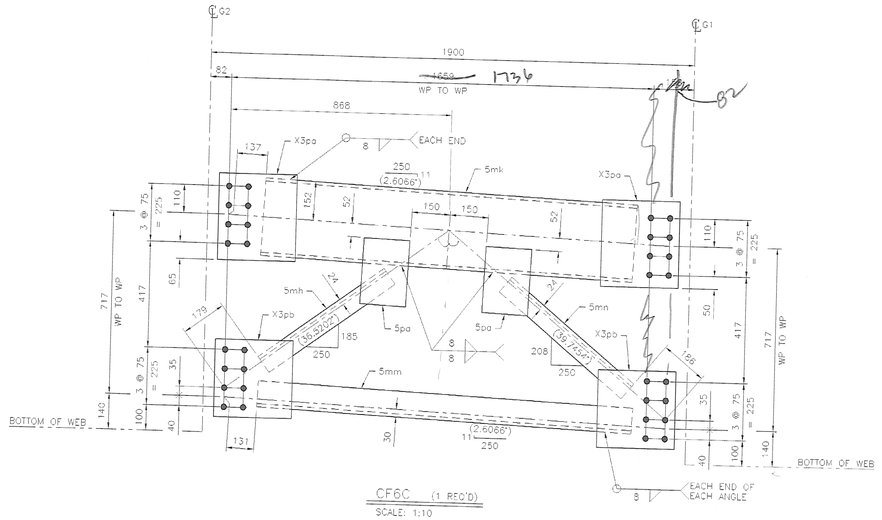

CF6C (1 REQ'D)
SCALE: 1:10
PAINTED

change web plate

RECEIVED
CK'D BY AWC CK'D BY DRF
MAR 07 2007
RESUBMIT____APPROVED ✓
BY AWC DATE 3/30/07

SHOP BILL

LINE	MARK	NUMBER	SHAPE	SECTION	FINISHED LENGTH mm	ITEM NO.	REMARKS	Weight lbs
1	CF6A	1					TOTAL WEIGHT:	148
2	5ma	1	C	310x45	1411		CVN	63
3	5mb	1	L	102x102x13	1421		CVN	27
4	5mc	1	L	76x76x13	590		CVN	8
5	5md	1	L	76x76x13	615		CVN	9
6	5pa	2	PL	13x180	260			10
7	X3pa	2	PL	13x305	340			21
8	X3pb	2	PL	13x305	305			19
9								
10	CF6B	1					TOTAL WEIGHT:	159
11	6ma	1	C	310x45	1439		CVN	65
12	5mg	1	L	102x102x13	1449		CVN	27
13	6mb	1	L	76x76x13	599		CVN	8
14	6mc	1	L	76x76x13	623		CVN	9
15	5pa	2	PL	13x180	260			10
16	X3pa	2	PL	13x305	340			21
17	X3pb	2	PL	13x305	305			19
18								
19	CF6C	1					TOTAL WEIGHT:	144
20	5mk	1	C	310x45	1463		CVN	66
21	5mm	1	L	102x102x13	1474		CVN	28
22	5mh	1	L	76x76x13	505		CVN	8
23	5mn	1	L	76x76x13	635		CVN	9
24	5pa	2	PL	13x180	260			10
25	X3pa	2	PL	13x305	340			21
26	X3pb	2	PL	13x305	305			19
27								
28								
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50								

ALL MATERIAL (EXCEPT BOLTS) TO BE ASTM: A709M-50W

ALL WELDS TO BE MADE WITH ELECTRODES SERIES E/MXX

OPEN HOLES ARE FOR H.S. BOLTS AND ARE TO BE FREE OF BURRS AND SCALE

BOLTS: 7/8 M 164M TYPE III | OPEN HOLES: 24 UN | PAINT: SEE GN-1

International Bridge & Iron Co.
90 Day Street
Newington, CT. 06111

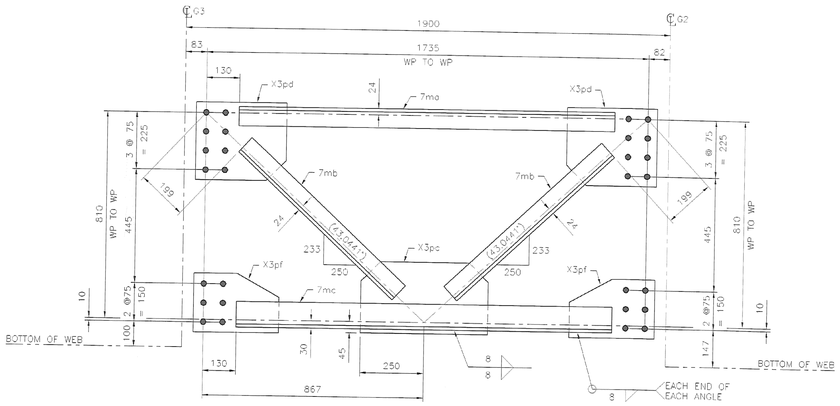
VERMONT DOT
SUNDERLAND BRIDGE
FED. AID PROJ. NO.: BRF-0114 (2)
CONTRACTOR: PETRICCA CONSTRUCTION CORP.
ENGINEER: ROGER WHITCOMB

For Approval	Revised	Issue to Shop

END CROSSFRAMES

Drawn by: J.V. Date: 02/16/07 Checked by: – Date: MM/JJ/AA

Contract	Suffix	Dwg. Number
606		8



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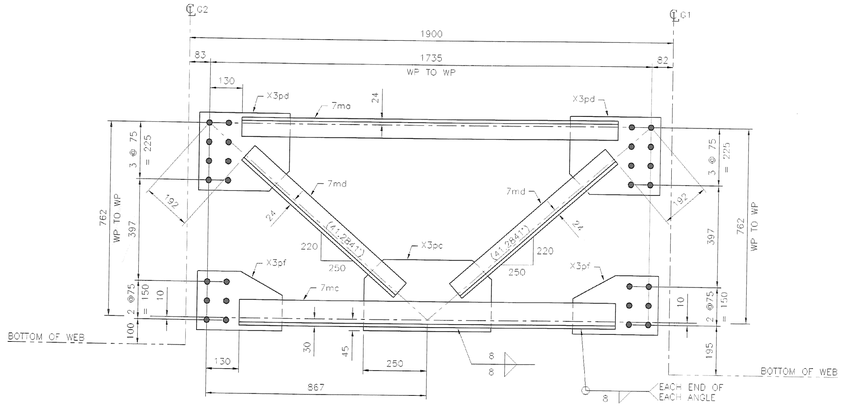
SCALE: 1:10



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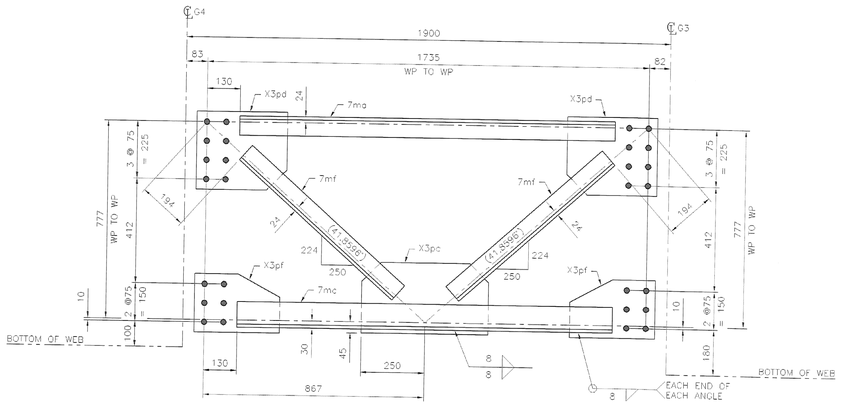

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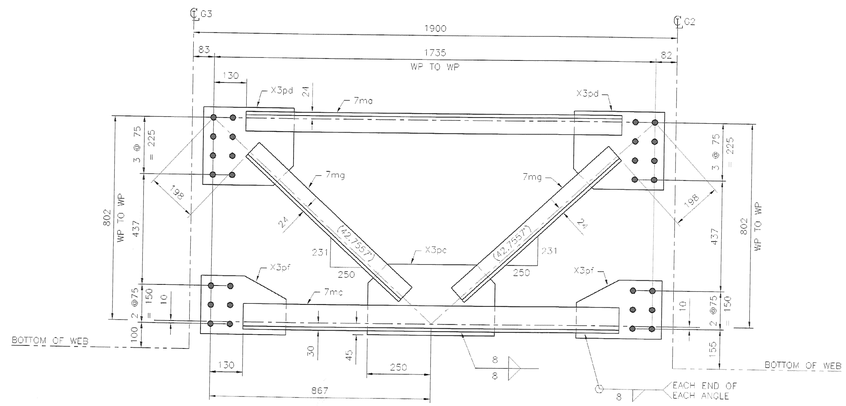

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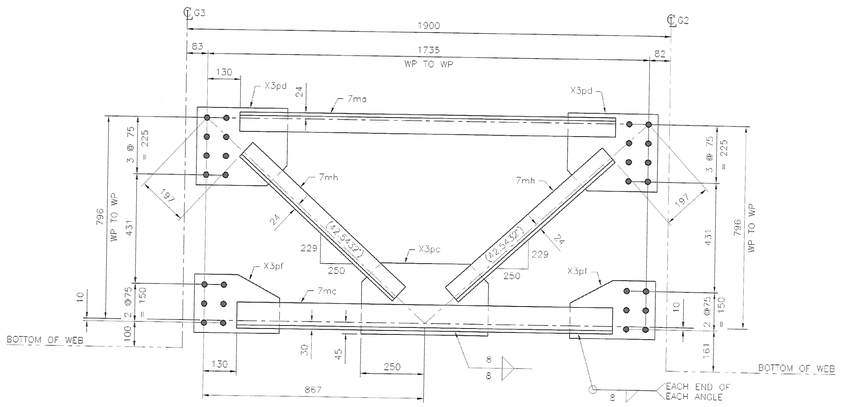

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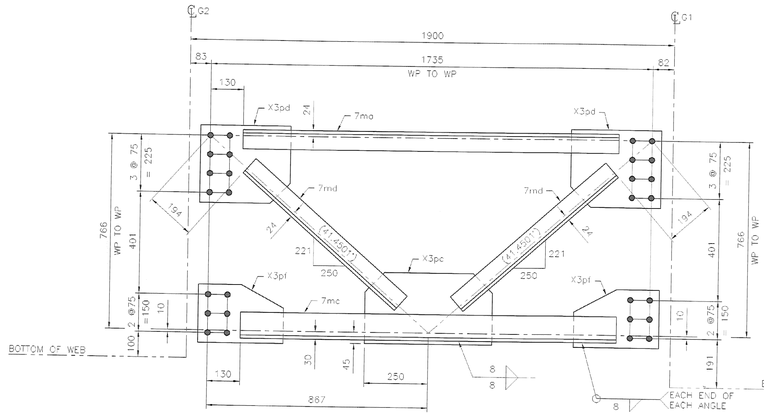
SCALE: 1:10



CF7G (1 REQ'D)
SCALE: 1:10

SHOP BILL

LINE	MARK	NUMBER	SHAPE	SECTION	FINISHED LENGTH mm	ITEM NO.	REMARKS	Weight lbs
1	CF7A	1					TOTAL WEIGHT:	124
2	7ma	1	L	76x76x13	1476		CVN	21
3	7mb	2	L	76x76x13	835		CVN	23
4	7mc	1	L	102x102x13	1476		CVN	28
5	X3pc	1	PL	13x280	500			14
6	X3pd	2	PL	13x305	355			22
7	X3pf	2	PL	13x230	335			16
8								
9	CF7B	2					TOTAL WEIGHT:	246
10	7ma	2	L	76x76x13	1476		CVN	41
11	7mc	2	L	102x102x13	1476		CVN	56
12	7md	4	L	76x76x13	804		CVN	45
13	X3pc	2	PL	13x280	500			29
14	X3pd	4	PL	13x305	355			44
15	X3pf	4	PL	13x230	335			31
16								
17	CF7C	3					TOTAL WEIGHT:	292
18	7ma	3	L	76x76x13	1476		CVN	62
19	7mc	1	L	102x102x13	1476		CVN	28
20	7mf	4	L	76x76x13	813		CVN	46
21	X3pc	3	PL	13x280	500			43
22	X3pd	6	PL	13x305	355			66
23	X3pf	6	PL	13x230	335			47
24								
25	CF7D	1					TOTAL WEIGHT:	124
26	7ma	1	L	76x76x13	1476		CVN	21
27	7mc	1	L	102x102x13	1476		CVN	28
28	7mg	2	L	76x76x13	830		CVN	23
29	X3pc	1	PL	13x280	500			14
30	X3pd	2	PL	13x305	355			22
31	X3pf	2	PL	13x230	335			16
32								
33	CF7F	1					TOTAL WEIGHT:	124
34	7ma	1	L	76x76x13	1476		CVN	21
35	7mc	1	L	102x102x13	1476		CVN	28
36	7mh	2	L	76x76x13	826		CVN	23
37	X3pc	1	PL	13x280	500			14
38	X3pd	2	PL	13x305	355			22
39	X3pf	2	PL	13x230	335			16
40								
41	CF7G	1					TOTAL WEIGHT:	124
42	7ma	1	L	76x76x13	1476		CVN	21
43	7mc	1	L	102x102x13	1476		CVN	28
44	7md	2	L	76x76x13	804		CVN	23
45	X3pc	1	PL	13x280	500			14
46	X3pd	2	PL	13x305	355			22
47	X3pf	2	PL	13x230	335			16
48								
49								
50								

ALL MATERIAL (EXCEPT BOLTS) TO BE ASTM: A709M-50W

ALL WELDS TO BE MADE WITH ELECTRODES SERIES E"MXX

OPEN HOLES ARE FOR H.S. BOLTS AND ARE TO BE FREE OF BURRS AND SCALE

BOLTS: 7/8" M 164M TYPE III | OPEN HOLES: 24 UN | PAINT: SEE GN-1

International Bridge & Iron Co.
90 Day Street
Newington, C.T. 06111

VERMONT DOT
SUNDERLAND BRIDGE
FED. AID PROJ. NO.: BRF-0114 (2)
CONTRACTOR: PETRICCA CONSTRUCTION CORP.
ENGINEER: ROGER WHITCOMB

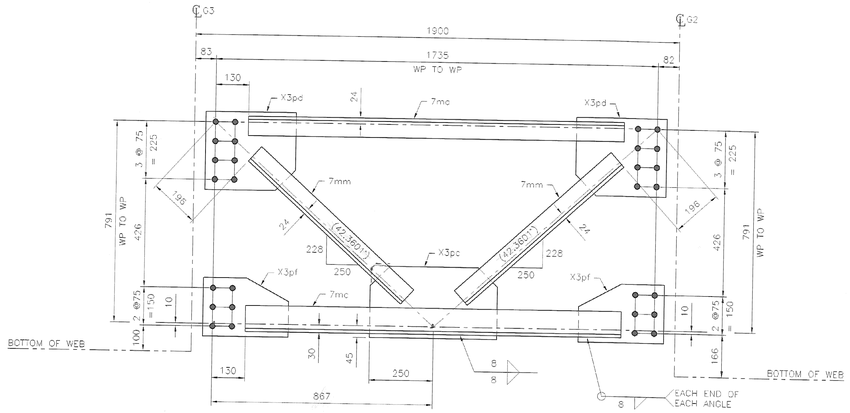
For Approval	Revised	Issue to Shop

INTERIOR CROSSFRAMES

Drawn by K.B. Date 02/14/07 | Checked by G.D. Date 02/26/07

Contract	Suffix	Dwg. Number
606		7

RECEIVED
CK'D BY CWC OK'D BY DRP
MAR 07 2007
RESUBMIT _____ APPROVED ✓
BY CWC DATE 3/30/07



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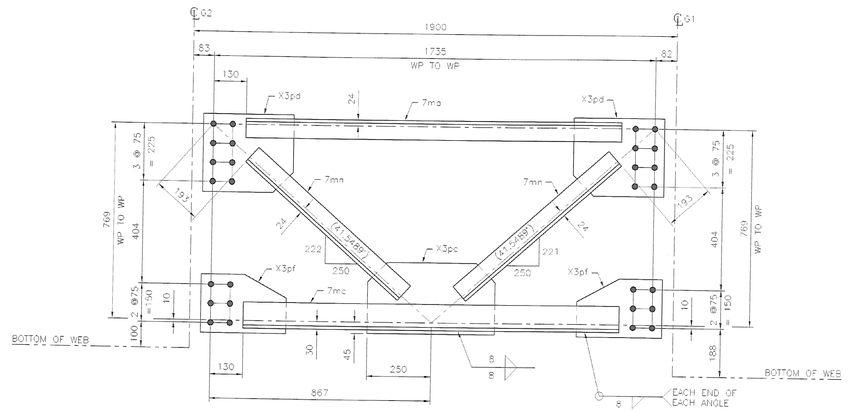
SCALE: 1:10



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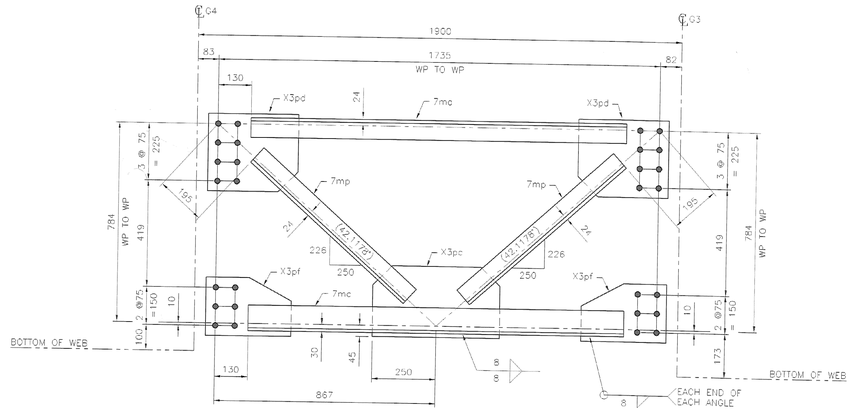

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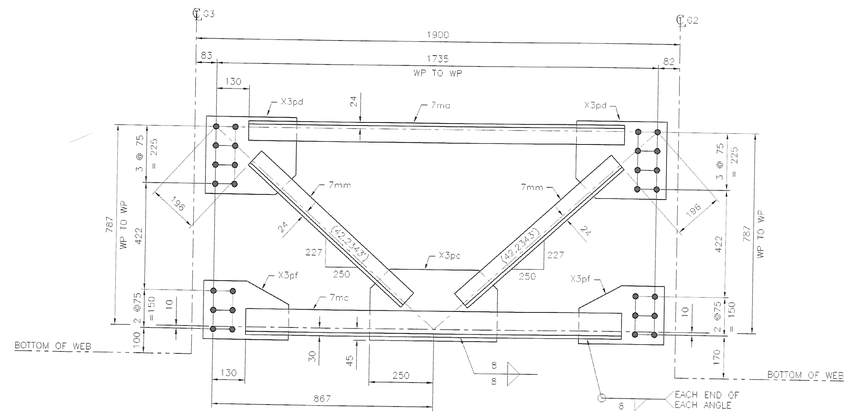

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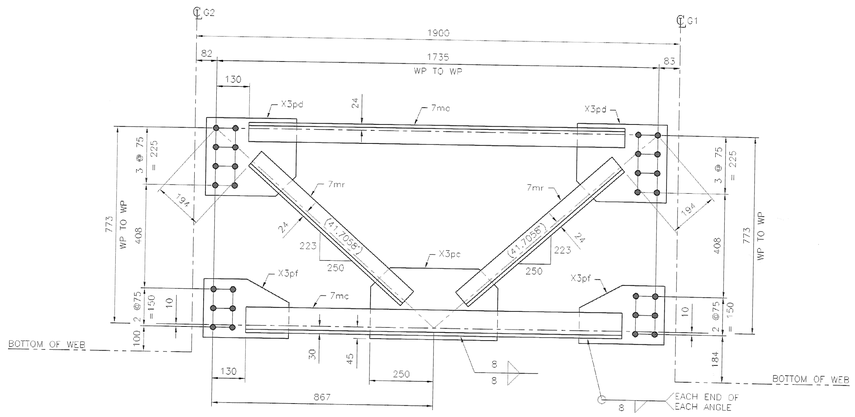

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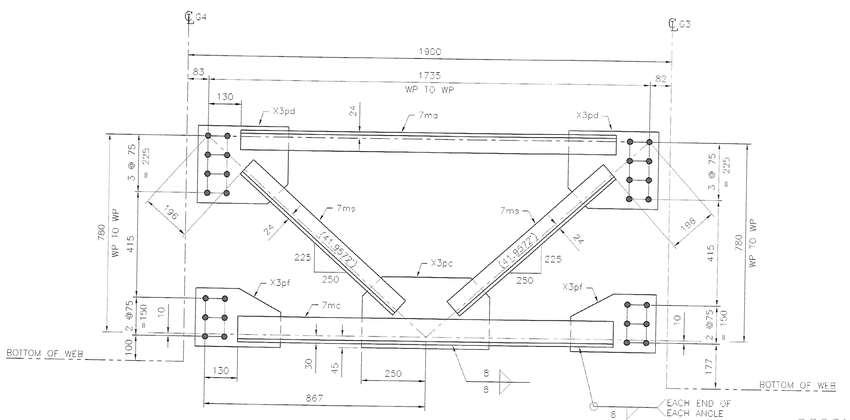
SCALE: 1:10



CF8G (1 REQ'D)
SCALE: 1:10

RECEIVED
CK'D BY CWC OK'D BY DRP
MAR 07 2007
RESUBMIT _____ APPROVED ✓
BY CWC DATE 3/30/07

SHOP BILL

LINE	MARK	NUMBER	SHAPE	SECTION	FINISHED LENGTH mm	ITEM NO.	REMARKS	Weight lbs
1	CF8A	1					TOTAL WEIGHT:	124
2	7ma	1	L	76x76x13	1476		CVN	21
3	7mc	1	L	102x102x13	1476		CVN	28
4	7mm	2	L	76x76x13	820		CVN	23
5	X3pc	1	PL	13x280	500			14
6	X3pd	2	PL	13x305	355			22
7	X3pf	2	PL	13x230	335			16
8								
9	CF8B	1					TOTAL WEIGHT:	124
10	7ma	1	L	76x76x13	1476		CVN	21
11	7mc	1	L	102x102x13	1476		CVN	28
12	7mn	2	L	76x76x13	808		CVN	23
13	X3pc	1	PL	13x280	500			14
14	X3pd	2	PL	13x305	355			22
15	X3pf	2	PL	13x230	335			16
16								
17	CF8C	1					TOTAL WEIGHT:	124
18	7ma	1	L	76x76x13	1476		CVN	21
19	7mc	1	L	102x102x13	1476		CVN	28
20	7mp	2	L	76x76x13	818		CVN	23
21	X3pc	1	PL	13x280	500			14
22	X3pd	2	PL	13x305	355			22
23	X3pf	2	PL	13x230	335			16
24								
25	CF8D	1					TOTAL WEIGHT:	124
26	7ma	1	L	76x76x13	1476		CVN	21
27	7mc	1	L	102x102x13	1476		CVN	28
28	7mm	2	L	76x76x13	820		CVN	23
29	X3pc	1	PL	13x280	500			14
30	X3pd	2	PL	13x305	355			22
31	X3pf	2	PL	13x230	335			16
32								
33	CF8F	1					TOTAL WEIGHT:	124
34	7ma	1	L	76x76x13	1476		CVN	21
35	7mc	1	L	102x102x13	1476		CVN	28
36	7mr	2	L	76x76x13	811		CVN	23
37	X3pc	1	PL	13x280	500			14
38	X3pd	2	PL	13x305	355			22
39	X3pf	2	PL	13x230	335			16
40								
41	CF8G	1					TOTAL WEIGHT:	124
42	7ma	1	L	76x76x13	1476		CVN	21
43	7mc	1	L	102x102x13	1476		CVN	28
44	7ms	2	L	76x76x13	815		CVN	23
45	X3pc	1	PL	13x280	500			14
46	X3pd	2	PL	13x305	355			22
47	X3pf	2	PL	13x230	335			16
48								
49								
50								

ALL MATERIAL (EXCEPT BOLTS) TO BE ASTM: A709M-50W

ALL WELDS TO BE MADE WITH ELECTRODES SERIES E*XX

OPEN HOLES ARE FOR H.S. BOLTS AND ARE TO BE FREE OF BURRS AND SCALE

BOLTS: 7/8 M 164M TYPE III | OPEN HOLES: 24 UN | PAINT: SEE GN-1

International Bridge & Iron Co.
90 Day Street
Newington, CT. 06111

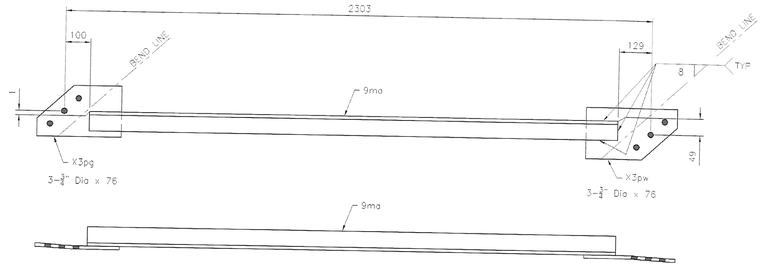
VERMONT DOT
SUNDERLAND BRIDGE
FED. AID PROJ. NO.: BRF-0114 (2)
CONTRACTOR: PETRICCA CONSTRUCTION CORP.
ENGINEER: ROGER WHITCOMB

For Approval	Revised	Issue to Shop

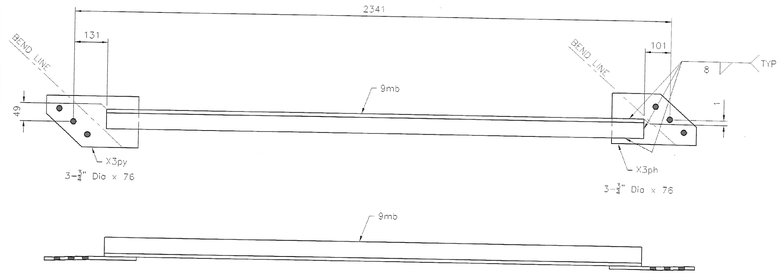
INTERIOR CROSSFRAMES

Drawn by J.V. Date 02/16/07 | Detail by G.D. Date 02/28/07

Contract	Suffix	Dwg. Number
606		8



ONE HORIZONTAL BRACING LB9A



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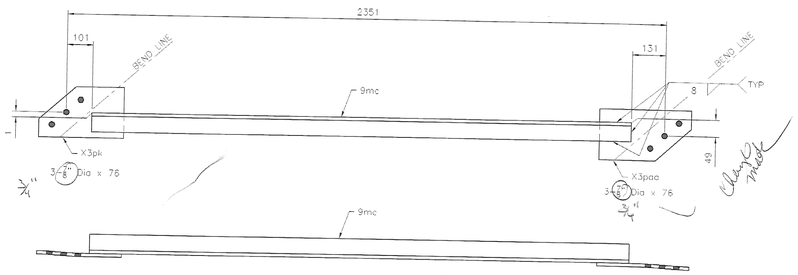

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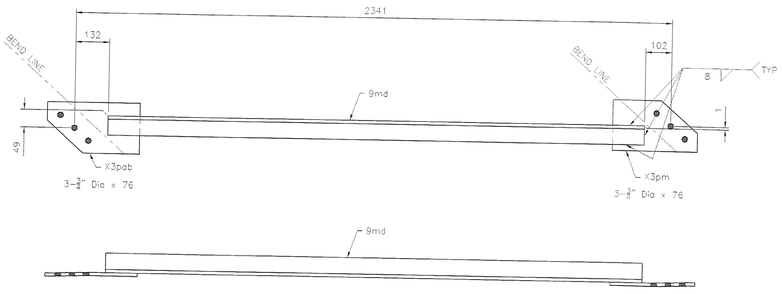

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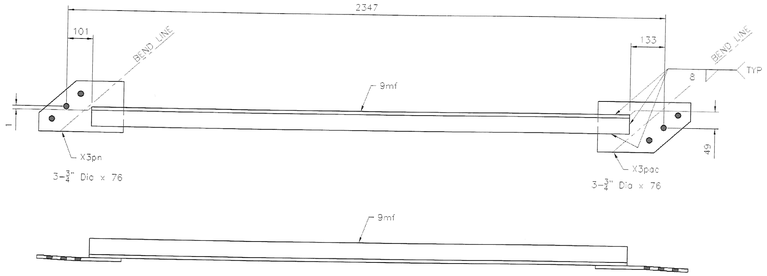

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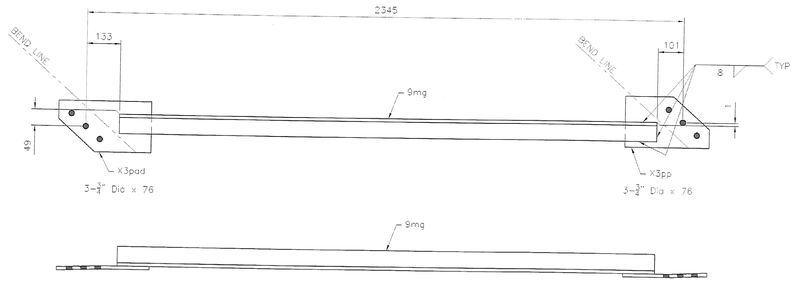

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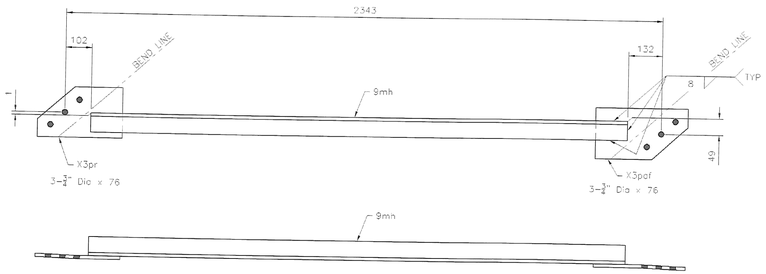

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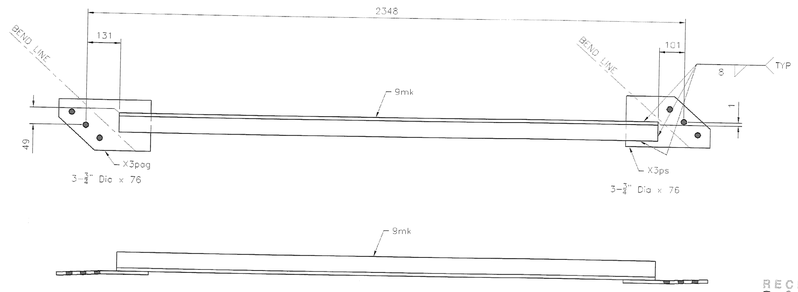


ONE HORIZONTAL BRACING LB9K

SHOP BILL

LINE	MARK	NUMBER	SHAPE	SECTION	FINISHED LENGTH mm	ITEM NO.	REMARKS	Weight lbs
1	LB9A	1		BRACING				43
2	9ma	1	L	76x76x13	2075			29
3	X3pg	1	PL	13x201	331			7
4	X3pw	1	PL	13x202	358			7
5	FB			FIELD BOLTS				
6	34F76D	6	FB	3/4 A325	76		C/W2 WASHERS	
7	LB9B	1		BRACING				44
8	9mb	1	L	76x76x13	2109			30
9	X3ph	1	PL	13x200	332			7
10	X3py	1	PL	13x201	361			7
11	FB			FIELD BOLTS				
12	34F76D	6	FB	3/4 A325	76		C/W2 WASHERS	
13	LB9C	1		BRACING				44
14	9mc	1	L	76x76x13	2118			30
15	X3paa	1	PL	13x201	362			7
16	X3pk	1	PL	13x199	333			7
17	FB			FIELD BOLTS				
18	34F76D	6	FB	3/4 A325	76		C/W2 WASHERS	
19	LB9D	1		BRACING				43
20	9md	1	L	76x76x13	2107			29
21	X3pm	1	PL	13x199	334			7
22	X3pab	1	PL	13x200	362			7
23	FB			FIELD BOLTS				
24	34F76D	6	FB	3/4 A325	76		C/W2 WASHERS	
25	LB9F	1		BRACING				44
26	9mf	1	L	76x76x13	2114			30
27	X3pac	1	PL	13x200	364			7
28	X3pn	1	PL	13x200	332			7
29	FB			FIELD BOLTS				
30	34F76D	6	FB	3/4 A325	76		C/W2 WASHERS	
31	LB9G	1		BRACING				44
32	9mg	1	L	76x76x13	2111			30
33	X3pp	1	PL	13x200	331			7
34	X3ad	1	PL	13x200	364			7
35	FB			FIELD BOLTS				
36	34F76D	6	FB	3/4 A325	76		C/W2 WASHERS	
37	LB9H	1		BRACING				44
38	9mh	1	L	76x76x13	2109			30
39	X3af	1	PL	13x200	363			7
40	X3pr	1	PL	13x199	334			7
41	FB			FIELD BOLTS				
42	34F76D	6	FB	3/4 A325	76		C/W2 WASHERS	
43	LB9K	1		BRACING				44
44	9mk	1	L	76x76x13	2116			30
45	X3ps	1	PL	13x199	333			7
46	X3pag	1	PL	13x201	361			7
47	FB			FIELD BOLTS				
48	34F76D	6	FB	3/4 A325	76		C/W2 WASHERS	
49								
50								

ALL MATERIAL (EXCEPT BOLTS) TO BE ASTM: A709M-50W

ALL WELDS TO BE MADE WITH ELECTRODES SERIES E70XX

OPEN HOLES ARE FOR H.S. BOLTS AND ARE TO BE FREE OF BURRS AND SCALE

BOLTS: ~~A~~ M 164M TYPE III | OPEN HOLES: ~~3/4" DIA~~ | PAINT: SEE GN-1

International Bridge & Iron Co.
90 Day Street
Newington, CT. 06111

VERMONT DOT
SUNDERLAND BRIDGE
FED. AID PROJ. NO.: BRF-0114 (2)
CONTRACTOR: PETRICCA CONSTRUCTION CORP.
ENGINEER: ROGER WHITCOMB

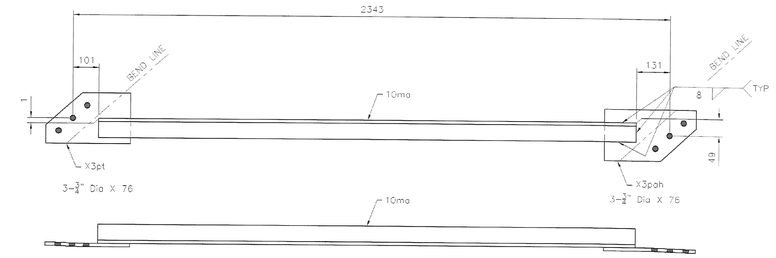
For Approval	Revised	Issue to Shop

HORIZONTAL BRACING

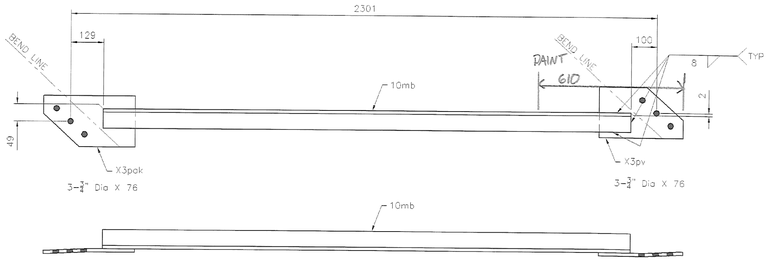
Drawn By O.E. Date 02/21/07 Check'd - Date MM/JJ/AA

Contract	Suffix	Dwg. Number
606		9

RECEIVED
CK'D BY CWC OK'D BY DRP
MAR 07 2007
RESUBMIT ____ APPROVED ✓
BY CWC DATE 3/30/07



ONE HORIZONTAL BRACING LB10A



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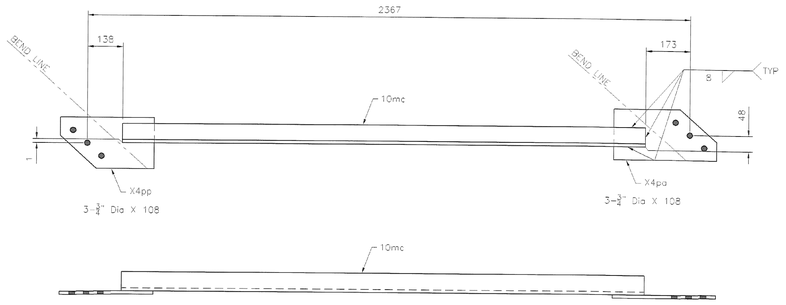
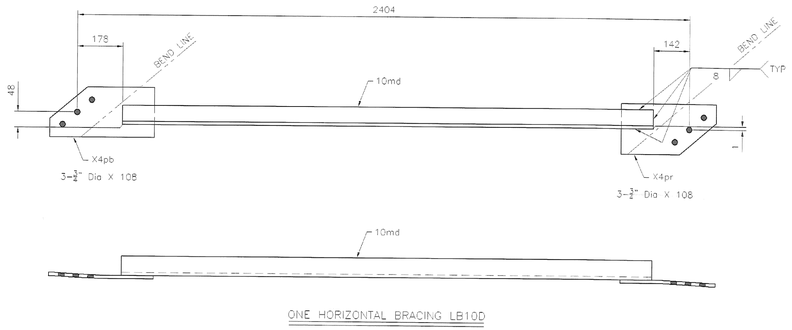


ONE HORIZONTAL BRACING LB10C



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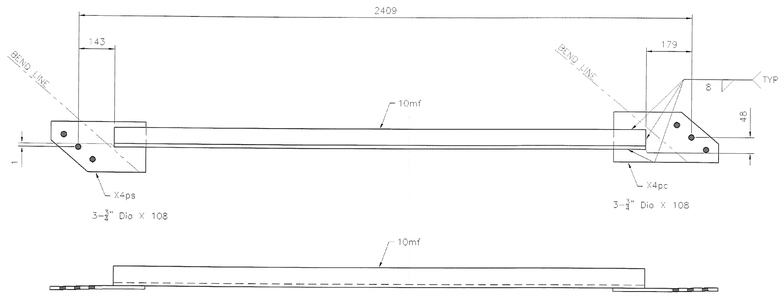

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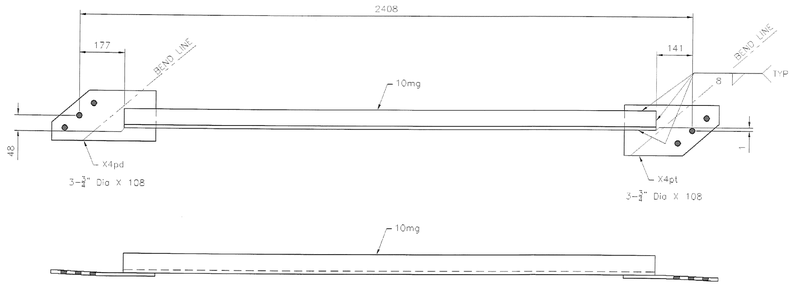
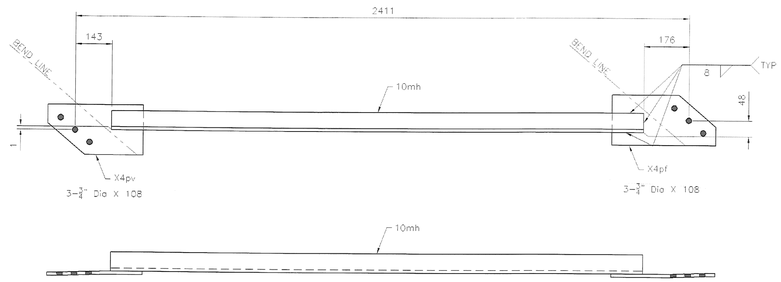
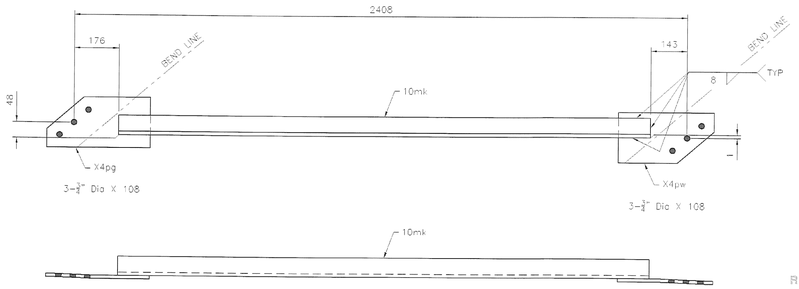


ONE HORIZONTAL BRACING LB10G



ONE HORIZONTAL BRACING LB10H



ONE HORIZONTAL BRACING LB10K

SHOP BILL

LINE	MARK	NUMBER	SHAPE	SECTION	FINISHED LENGTH mm	ITEM NO.	REMARKS	Weight lbs
1	LB10A	1		BRACING				44
2	10ma	1	L	76x76x13	2111			30
3	X3pah	1	PL	13x201	361			7
4	X3pt	1	PL	13x199	333			7
5	FB			FIELD BOLTS				
6	34F76D	6	FB	3/4 A325	76		C/W2 WASHERS	
7	LB10B	1		BRACING				43
8	10mb	1	L	76x76x13	2073			29
9	X3pv	1	PL	13x201	330			7
10	X3pak	1	PL	13x202	358			7
11	FB			FIELD BOLTS				
12	34F76D	6	FB	3/4 A325	76		C/W2 WASHERS	
13	LB10C	1		BRACING				45
14	10mc	1	L	76x76x13	2055			29
15	X4pa	1	PL	13x199	405			8
16	X4pp	1	PL	13x200	369			8
17	FB			FIELD BOLTS				
18	34F108D	6	FB	3/4 A325	108		C/W2 WASHERS	
19	LB10D	1		BRACING				45
20	10md	1	L	76x76x13	2084			29
21	X4pr	1	PL	13x198	373			8
22	X4pb	1	PL	13x197	411			8
23	FB			FIELD BOLTS				
24	34F108D	6	FB	3/4 A325	108		C/W2 WASHERS	
25	LB10F	1		BRACING				45
26	10mf	1	L	76x76x13	2088			29
27	X4pc	1	PL	13x196	412			8
28	X4ps	1	PL	13x198	374			8
29	FB			FIELD BOLTS				
30	34F108D	6	FB	3/4 A325	108		C/W2 WASHERS	
31	LB10G	1		BRACING				45
32	10mg	1	L	76x76x13	2090			29
33	X4pt	1	PL	13x198	373			8
34	X4pd	1	PL	13x197	409			8
35	FB			FIELD BOLTS				
36	34F108D	6	FB	3/4 A325	108		C/W2 WASHERS	
37	LB10H	1		BRACING				45
38	10mh	1	L	76x76x13	2091			29
39	X4pf	1	PL	13x198	406			8
40	X4pv	1	PL	13x197	375			8
41	FB			FIELD BOLTS				
42	34F108D	6	FB	3/4 A325	108		C/W2 WASHERS	
43	LB10K	1		BRACING				45
44	10mk	1	L	76x76x13	2089			29
45	X4pg	1	PL	13x199	400			8
46	X4pw	1	PL	13x197	375			8
47	FB			FIELD BOLTS				
48	34F108D	6	FB	3/4 A325	108		C/W2 WASHERS	
49								
50								

ALL MATERIAL (EXCEPT BOLTS) TO BE ASTM: A709M-50W

ALL WELDS TO BE MADE WITH ELECTRODES SERIES E7WXX

OPEN HOLES ARE FOR H.S. BOLTS AND ARE TO BE FREE OF BURRS AND SCALE

BOLTS: 7/8 M 164M TYPE III | OPEN HOLES: 24 U/N | PAINT: SEE GN-1

International Bridge & Iron Co.
90 Day Street
Newington, CT. 06111

VERMONT DOT
SUNDERLAND BRIDGE
FED. AID PROJ. NO.: BRF-0114 (2)
CONTRACTOR: PETRICCA CONSTRUCTION CORP.
ENGINEER: ROGER WHITCOMB

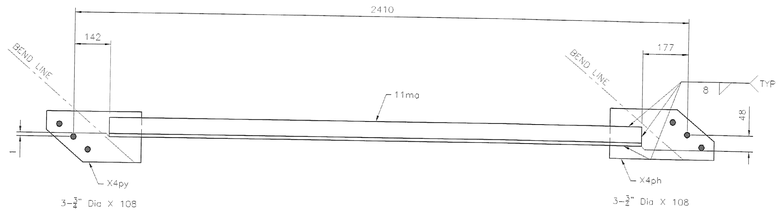
For Approval	Revised	Issue to Shop

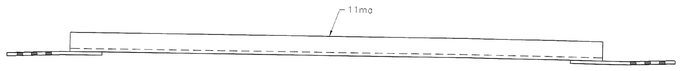
HORIZONTAL BRACING

Drawn by: D.E. | Date: 02/21/07 | Detail N.: – | Date: MM/JJ/AA

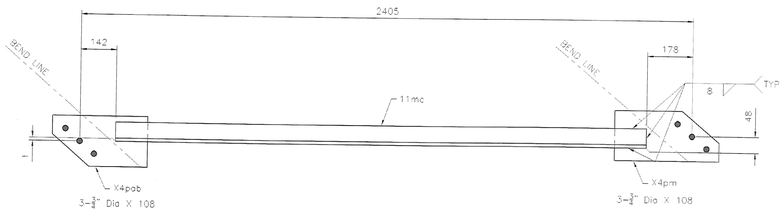
Contract	Suffix	Dwg. Number
606		10

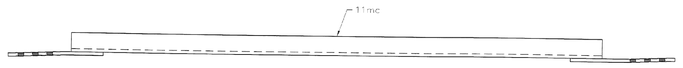
RECEIVED
OK'D BY: [illegible] OK'D BY: DRP
MAR 07 2007
RESUBMIT _____ APPROVED: AS NOTED
BY: CWR DATE: 3/30/07



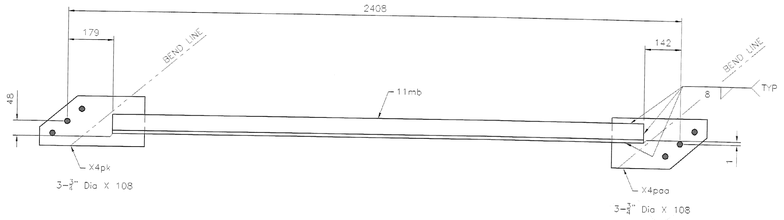


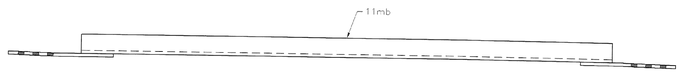
ONE HORIZONTAL BRACING LB11A



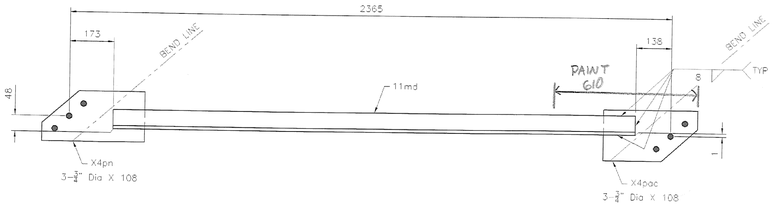


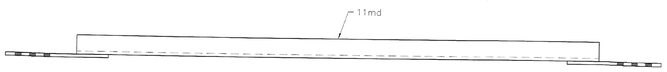
ONE HORIZONTAL BRACING LB11C





ONE HORIZONTAL BRACING LB11B





ONE HORIZONTAL BRACING LB11D

SHOP BILL

LINE	MARK	NUMBER	SHAPE	SECTION	FINISHED LENGTH mm	ITEM NO.	REMARKS	Weight lbs
1	LB11A	1		BRACING				45
2	11ma	1	L	76x76x13	2091			29
3	X4ph	1	PL	13x197	410			8
4	X4py	1	PL	13x198	373			8
5	FB			FIELD BOLTS				
6	34F108D	6	FB	3/4 A325	108		C/W2 WASHERS	
7	LB11B	1		BRACING				45
8	11mb	1	L	76x76x13	2087			29
9	X4pk	1	PL	13x196	411			8
10	X4paa	1	PL	13x195	374			8
11	FB			FIELD BOLTS				
12	34F108D	6	FB	3/4 A325	108		C/W2 WASHERS	
13	LB11C	1		BRACING				45
14	11mc	1	L	76x76x13	2085			29
15	X4pm	1	PL	13x197	411			8
16	X4pab	1	PL	13x196	373			8
17	FB			FIELD BOLTS				
18	34F108D	6	FB	3/4 A325	108		C/W2 WASHERS	
19	LB11D	1		BRACING				45
20	11md	1	L	76x76x13	2053			29
21	X4pn	1	PL	13x199	405			8
22	X4pac	1	PL	13x200	369			8
23	FB			FIELD BOLTS				
24	34F108D	6	FB	3/4 A325	108		C/W2 WASHERS	
25								
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ALL MATERIAL (EXCEPT BOLTS) TO BE ASTM: A709M-50W

ALL WELDS TO BE MADE WITH ELECTRODES SERIES E*XXX

OPEN HOLES ARE FOR H.S. BOLTS AND ARE TO BE FREE OF BURRS AND SCALE

BOLTS: 7/8 M 164M TYPE III | OPEN HOLES: 24 UN | PAINT: SEE GN-1

International Bridge & Iron Co.
90 Day Street
Newington, CT. 06111

VERMONT DOT
SUNDERLAND BRIDGE
FED. AID PROJ. NO.: BRF-0114 (2)
CONTRACTOR: PETRICCA CONSTRUCTION CORP.
ENGINEER: ROGER WHITCOMB

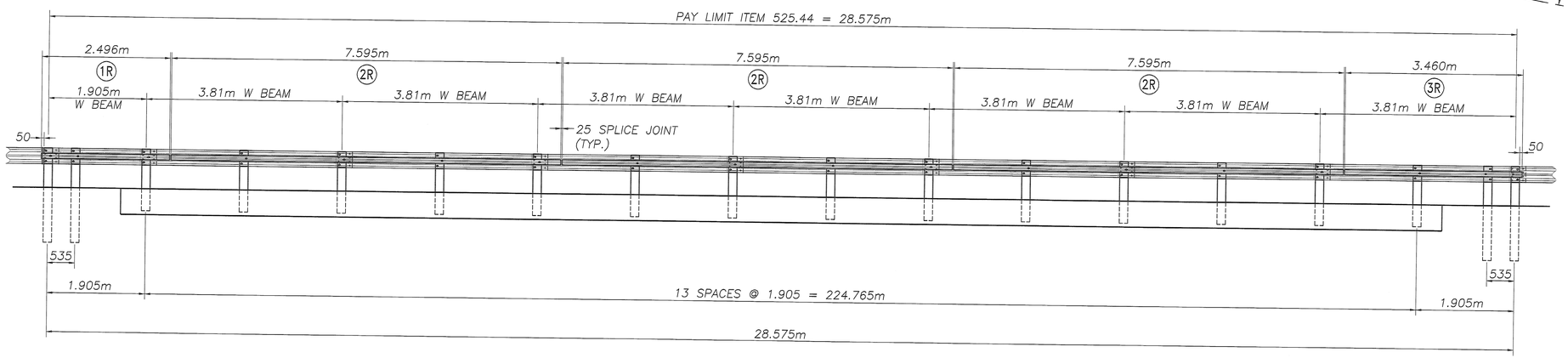
For Approval	Revised	Issue to Shop

HORIZONTAL BRACING

Drawn by D.E. Date 02/21/07 | Detail's: – Date MM/JJ/AA

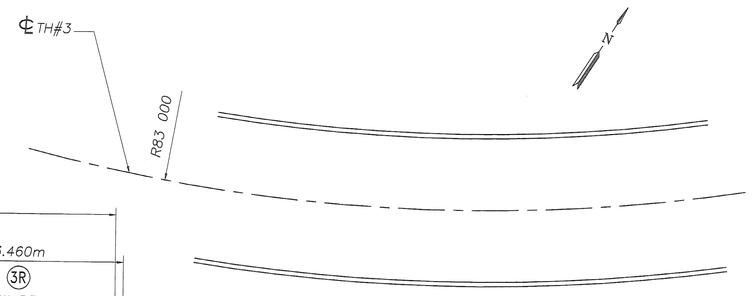
Contract		Suffix	Dwg. Number
606			11

RECEIVED
CK'D BY CWC CK'D BY DRP
MAR 07 2007
RESUBMIT ____ APPROVED AS NOTED
BY CWC DATE 3/20/07

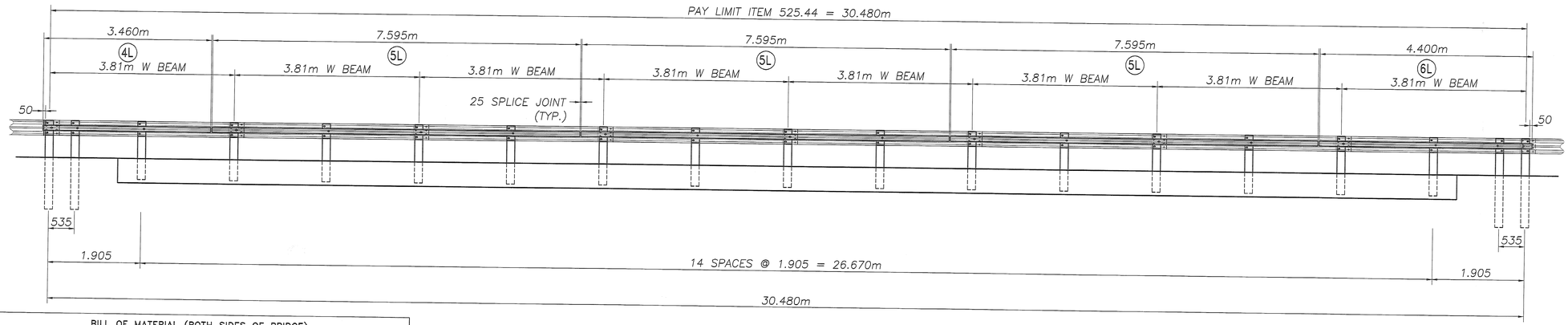


NORTHWEST RAIL ELEVATION

(CONVEX CURVE)



PARTIAL PLAN



SOUTHEAST RAIL ELEVATION

(CONCAVE CURVE)

BILL OF MATERIAL (BOTH SIDES OF BRIDGE)

Mark#	Qty.	Description	Size/Shape	Length	Material
	29	fascia mounted post	W200 x 35.9	1190	AASHTO M223
	74	blockout tube	TS 203x102x4.8	150	AASHTO M223
	8	driven post	W200 x 35.9	1828	AASHTO M223
	37	hex bolt w/ nut & 2 flat washers	M16	330	M164M type 1
	37	hex bolt w/ hx nut, flat washer & special washer	M16	250	M164M type 1
	74	hex bolt w/ 2 flat washers & hex nut	M16	50	M164M type 1
1R	1	curved tube (79.62m radius convex)	TS 203x102x4.8	2496	A500 gr B
2R	3	curved tube (79.62m radius convex)	TS 203x102x4.8	7595	A500 gr B
3R	1	curved tube (79.62m radius convex)	TS 203x102x4.8	3460	A500 gr B
4L	1	curved tube (86.38m radius concave)	TS 203x102x4.8	3460	A500 gr B
5L	3	curved tube (86.38m radius concave)	TS 203x102x4.8	7595	A500 gr B
6L	1	curved tube (86.38m radius concave)	TS 203x102x4.8	4400	A500 gr B
	1	w beam	1.905m		M180 B2
	15	w beam	3.810m		M180 B2
	128	w beam splice bolt w/ DR nut	M16	32	M164M type 1
	8	splice channel	C180 x 18.2	790	AASHTO M223
	32	hex bolt w/ flat washer & welded heavy hex nut	M16	50	M164M type 1
		ANCHORS (by others)			
	58	anchor u bolt w/ 4 hex nuts and 2 flat washers	25 x 250	305	AASHTO M223
	116	plate washer	PL 6x65	-130	AASHTO M223

PAY LIMIT ITEM 525.44 = 60m

NOTE:
W-BEAMS ARE PROVIDED STRAIGHT, THEY WILL FLEX ALONG REQUIRED CURVE.

REVISIONS		
No.	Remarks	Date
0	Initial submittal	08/01/06

RECORD PLANS
VTRANS
RECEIVED
CK'D BY G.Gay 8.21.06 CK'D BY
AUG 18 2006
RESUBMIT APPROVED
BY DATE

QUALITY FABRICATION AISC CERTIFICATION

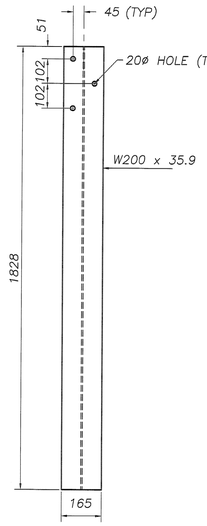
HIGHWAY SAFETY CORP.
GLASTONBURY, CT

ITEM 525.44 BRIDGE RAILING HDSB
FASCIA MOUNTED STEEL TUBING
TOWN OF SUNDERLAND, VERMONT
RTE.: TH3, CLASS 2 F.A.S. 114, MAJOR CONNECTOR
PROJECT NO. BRF 0114(2) BRIDGE NO. 14

GENERAL CONTRACTOR

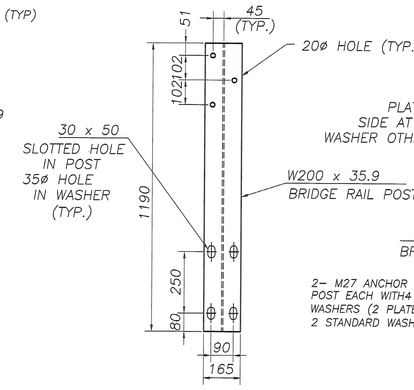
SUB CONTRACTOR F.R. LAFAYETTE, INC.

DRAWN MHM
CHECKED
DATE 7/31/06
SCALE NTS
HSC REFERENCE NO. 1565
SIZE D REVISION 0
SHEET NO. 1 of 2

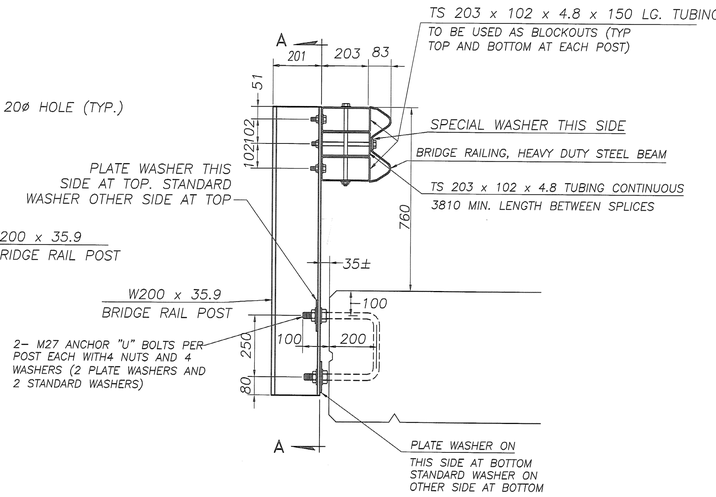


TRANSITION POST

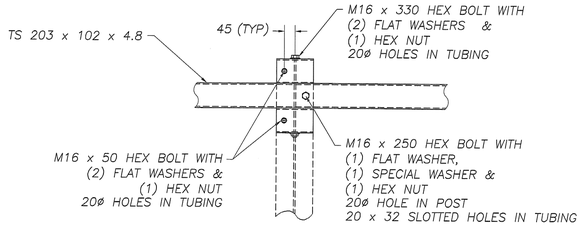
W200x35.9



SECTION A–A



FASCIA MOUNTED POST



DETAIL "C"

STEEL BEAM GUARD RAIL NOT SHOWN

NOTES:

1.) HEAVY DUTY STEEL BEAM GUARD RAIL SHALL CONFORM TO VAOT STD. SPECIFICATION 732.

2.) STRUCTURAL STEEL TUBING SHALL CONFORM TO VAOT STD. SPECIFICATION 732 AND SHALL BE GALVANIZED AFTER FABRICATION IN ACCORDANCE WITH AASHTO M 111.

3.) ANCHOR BOLTS, NUTS AND WASHERS SHALL BE GALVANIZED IN ACCORDANCE WITH AASHTO M 223 AND SHALL CONFORM TO VAOT STD. SPECIFICATION 714 UNLESS OTHERWISE NOTED.

4.) BRIDGE RAIL POSTS, SPECIAL WASHERS, PLATE WASHERS AND SPLICE BARS SHALL CONFORM TO AASHTO M 223/M 223M GRADE 345 AND SHALL BE GALVANIZED AFTER FABRICATION IN ACCORDANCE WITH AASHTO M 111.

5.) ALL BOLTS AND RELATED HARDWARE SHALL CONFORM TO AASHTO M 164M, TYPE 1 BOLTS AND SHALL BE HOT DIPPED OR MECHANICALLY GALVANIZED PER SPECIFICATION.

6.) PRIOR TO GALVANIZING, ALL EDGES OF STEEL SHAPES AND PLATES TO BE GROUND TO A MINIMUM OF 2mm RADIUS.

7.) SEE STANDARD DRAWING G–1M AND G–1dM FOR ADDITIONAL DETAILS CONCERNING GUARDRAIL.

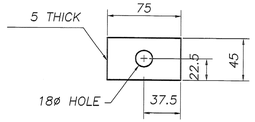
8.) SEE STANDARD DRAWING SB–R6–82M FOR APPROACH RAIL DETAILS AND FOR INFORMATION RELATIVE TO SCHEDULE 1 AND SCHEDULE 11. ALL APPROACH RAIL SHALL BE HEAVY DUTY STEEL BEAM GUARDRAIL. ALSO SEE STD. DRAWING SB–R6–82M FOR HANDRAIL DETAILS (EXCEPT END DETAILS) IF HANDRAIL IS REQUIRED.

9.) ALL POSTS SHALL BE SET NORMAL TO GRADE.

10.) SPLICES FOR THE STEEL BEAM GUARDRAIL SHALL LAP IN THE DIRECTION OF TRAFFIC.

11.) A RAILING JOINT SHALL BE PROVIDED AT EACH SUPERSTRUCTURE EXPANSION JOINT.

12.) ALL FIELD CUT OR DRILLED AREAS SHALL BE COATED WITH AN APPROVED SEALANT.



SPECIAL WASHER DETAIL

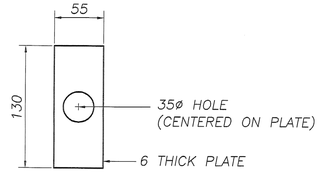
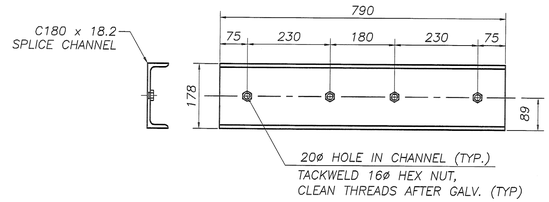
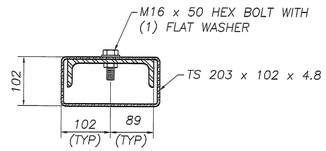


PLATE WASHER DETAIL

PROVIDED BY OTHERS – SHOWN FOR REFERENCE ONLY

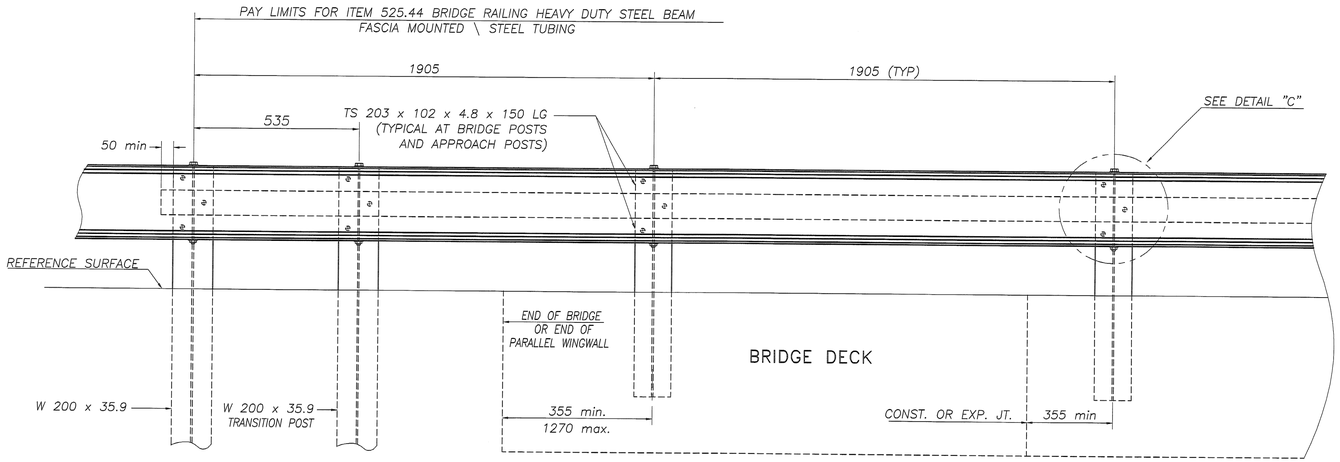


SPLICE BAR DETAIL



SECTION THROUGH SPLICE

SHOWING HAND RAIL TUBE & SPLICE CHANNEL



RAILING ELEVATION VIEW

(SHOWN LOOKING FROM ℄ WITHOUT CURB)

REVISIONS		
No.	Remarks	Date
0	Initial submittal	

– RECORD PLANS –
VTRANS
RECEIVED
CK'D BY GR OK'D BY
8/28/06
AUG 18 2006
RESUBMIT APPROVED X
BY DATE

HIGHWAY SAFETY CORP.

GLASTONBURY, CT

ITEM 525.44 BRIDGE RAILING HDSB
FASCIA MOUNTED STEEL TUBING
TOWN OF SUNDERLAND, VERMONT
RTE.: TH3, CLASS 2 F.A.S. 114, MAJOR CONNECTOR
PROJECT NO. BRF 0114(2) BRIDGE NO. 14

DRAWN	MHM
CHECKED	
DATE	7/31/06
SCALE	NTS
HSC REFERENCE NO.	1565
SIZE	D
REVISION	0
SHEET NO.	2 of 2

GENERAL CONTRACTOR

SUB CONTRACTOR F.R. LAFAYETTE, INC.