SEE SHEET 2 FOR INDEX OF SHEETS
& LIST OF STANDARDS

RECORD PLANS	
CONTRACTOR:	WINTERSET, INC.– LYNDONVILLE, VT
RESIDENT ENGINEER:	TOM CHASE
CONSTRUCTION BEGAN:	NOVEMBER 2, 2006
CONSTRUCTION COMPLETE:	OCTOBER 15, 2008
RECORD PLANS BY:	TOM CHASE & N. GARBACIK

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

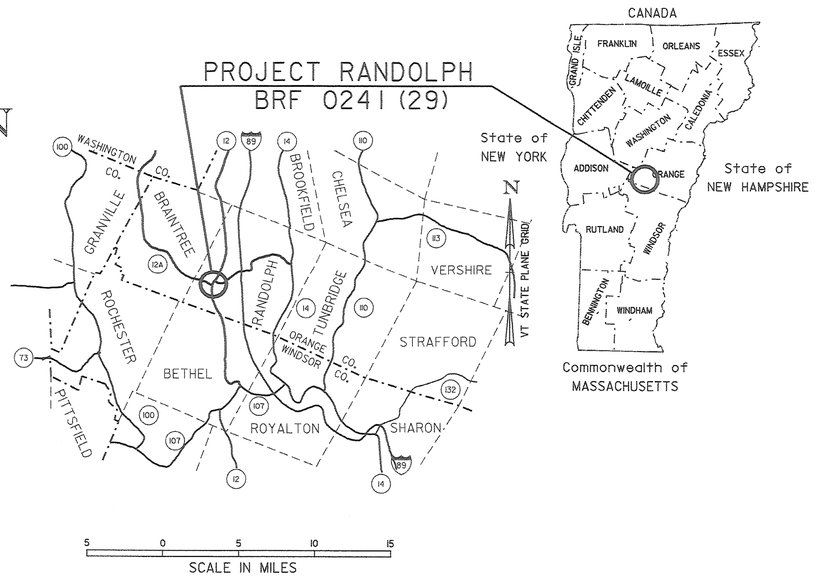
BY Thomas A. Chase RESIDENT ENGINEER

DATE 02/04/10

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 RANDOLPH
COUNTY OF ORANGE

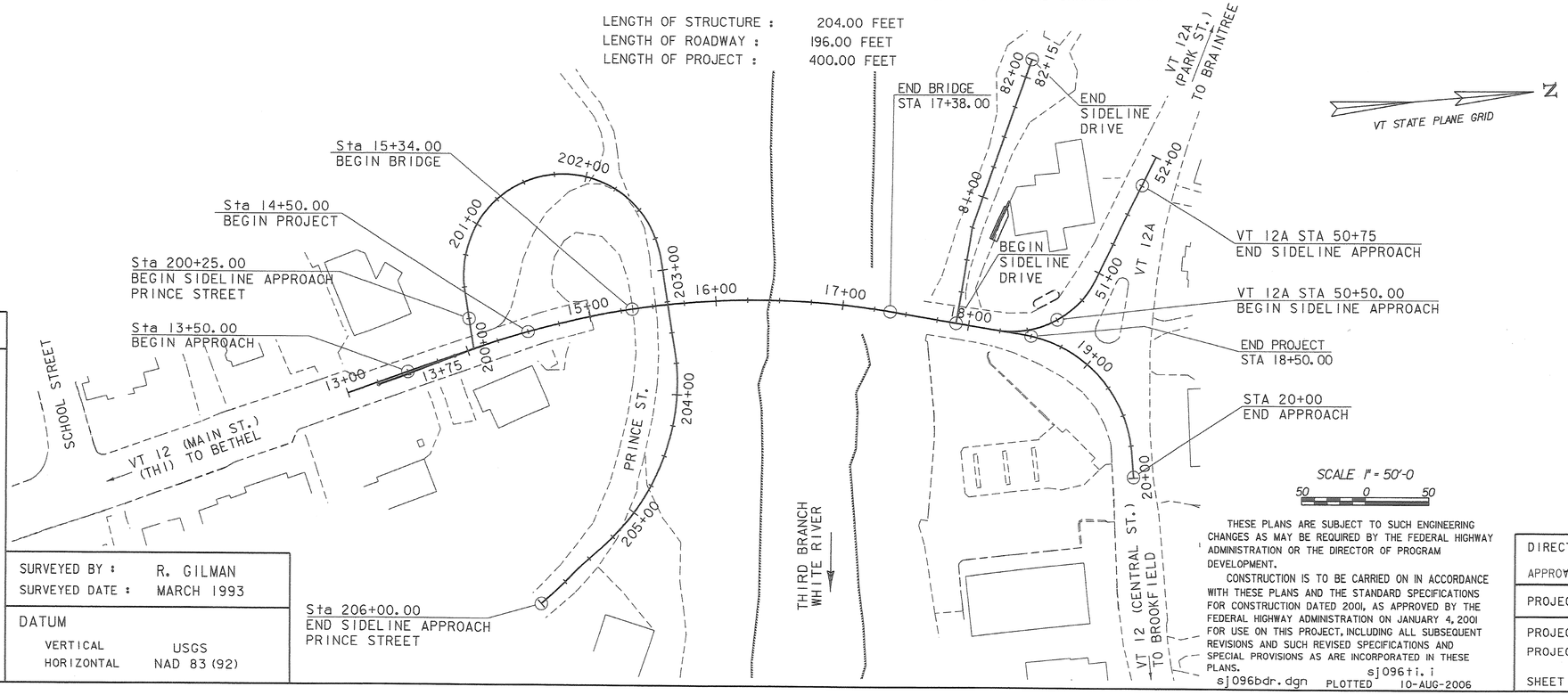


ROUTE NO : VT 12 (CL 1, TH 1) MAJOR COLLECTOR BRIDGE NO : 42

PROJECT LOCATION : BEGINNING AT A POINT ON VT 12 (TH 1) APPROXIMATELY 0.07 MILES NORTH OF THE INTERSECTION OF VT 12 AND SCHOOL STREET AND PROGRESSING NORTHERLY ALONG VT 12 FOR 0.08 MILES.

PROJECT DESCRIPTION : CONSTRUCTION OF A NEW STRUCTURE ALONG WITH RELATED ROADWAY AND CHANNEL WORK.

LENGTH OF STRUCTURE : 204.00 FEET
LENGTH OF ROADWAY : 196.00 FEET
LENGTH OF PROJECT : 400.00 FEET



CONVENTIONAL SYMBOLS

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

SURVEYED BY : R. GILMAN
SURVEYED DATE : MARCH 1993

DATUM
VERTICAL USGS
HORIZONTAL NAD 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.

sj096bdr.dgn PLOTTED 10-AUG-2006
sj096ti.i

DIRECTOR OF PROGRAM DEVELOPMENT
APPROVED Richard Tetreault DATE 8/10/06

PROJECT MANAGER : WAYNE SYMONDS

PROJECT NAME : RANDOLPH
PROJECT NUMBER : BRF 0241(29)

SHEET 1 OF 135 SHEETS

STATE OF VERMONT
AGENCY OF TRANSPORTATION

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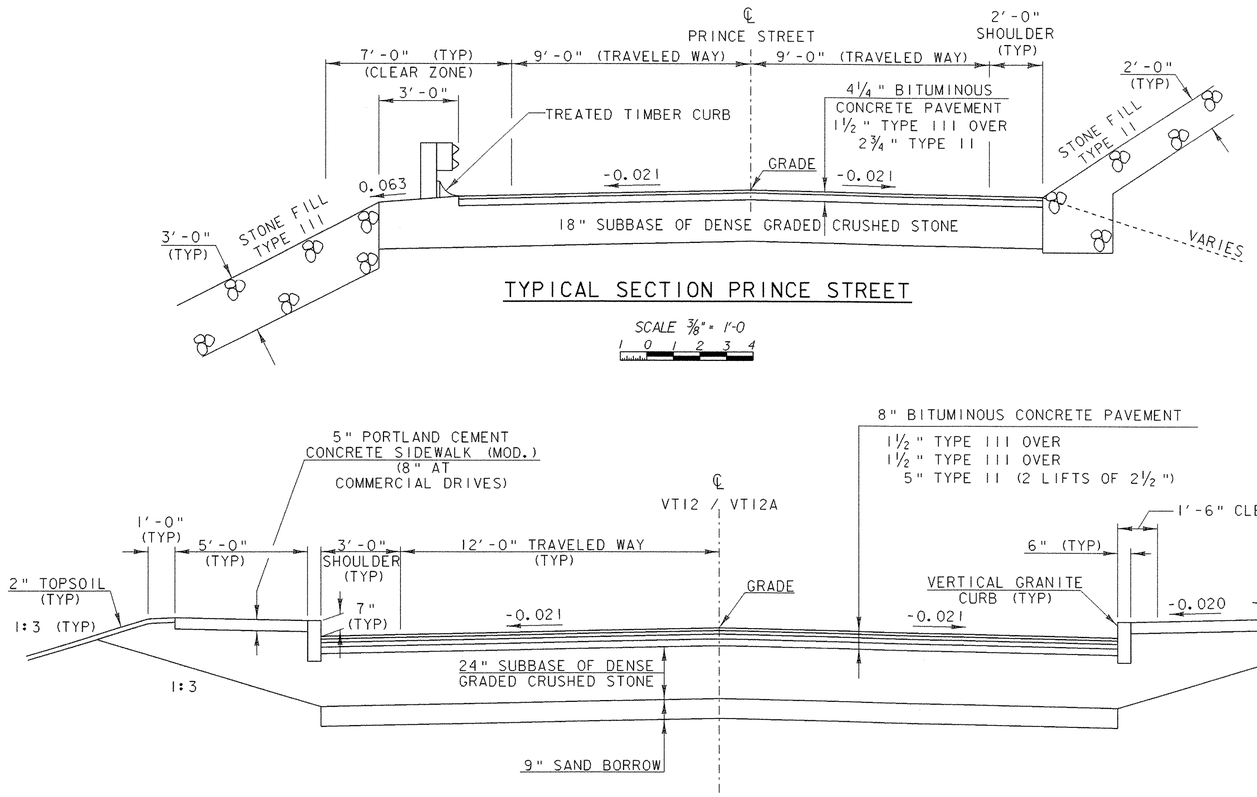
J-2	STANDARD CONCRETE STEPS; METAL HAND RAILING	6/1/1994

PROJECT NAME: **RANDOLPH**
PROJECT NUMBER: **BRF 0241(29)**

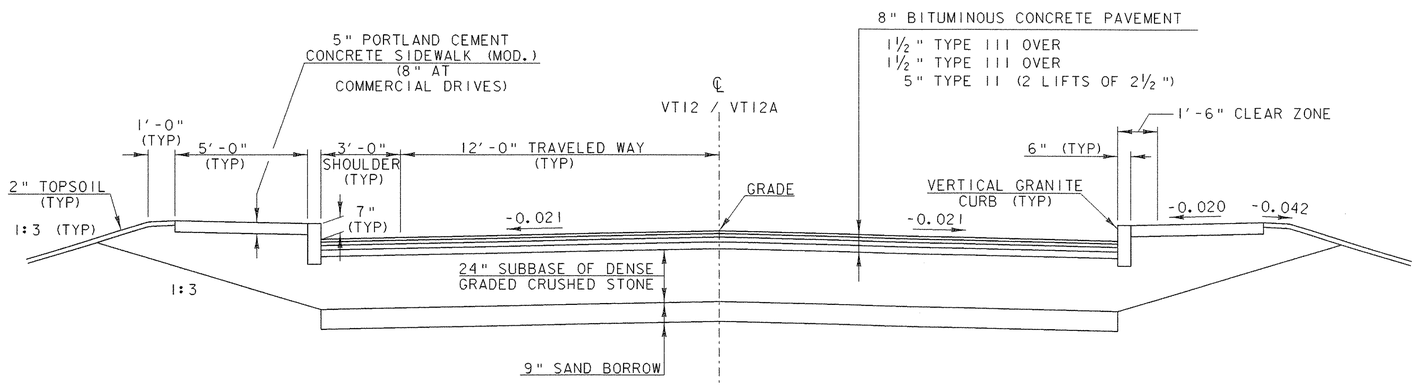
FILE NAME: **/str5/88j096/s88j096xcl.dgn**
PROJECT LEADER: **W. SYMONDS**
DESIGNED BY: **T. SUMNER**
sj096inx.i

PLOT DATE: **8/15/2006**
DRAWN BY: **G. SHANGRAW**
CHECKED BY: **T. FILLBACH**
SHEET **2** OF **135**



TYPICAL SECTION PRINCE STREET

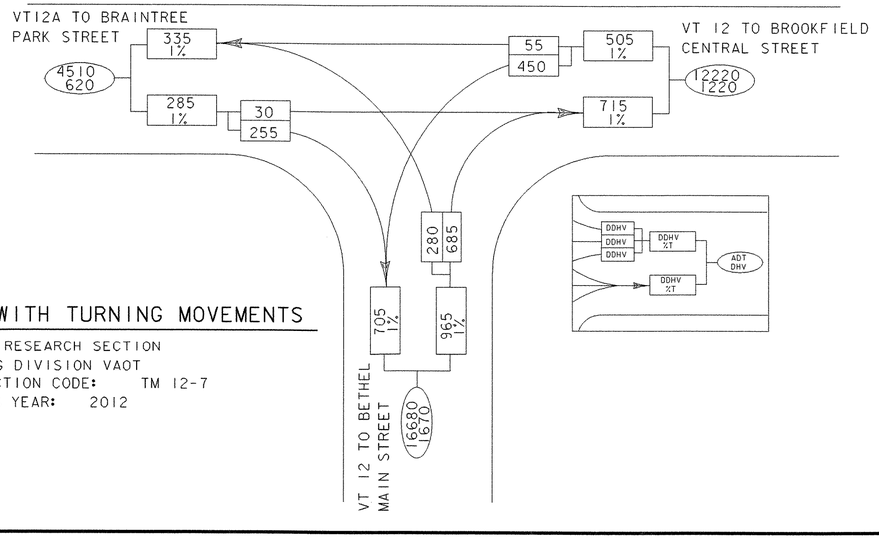
SCALE ⅜" = 1'-0



VT12 / VT12A TYPICAL SECTION

SCALE ⅜" = 1'-0

MATERIAL ITEM	TOLERANCE
PAVEMENT	±¼" TOTAL THICKNESS
AGGREGATE SURFACE COURSE	± ½"
BASE COURSE	± ½"
SUBBASE	± 1"
SAND BORROW	± 1"
GRANULAR BORROW	± 1"



TRAFFIC DATA WITH TURNING MOVEMENTS

TRAFFIC RESEARCH SECTION
PLANNING DIVISION VAOT
INTERSECTION CODE: TM 12-7
ANALYSIS YEAR: 2012

FINAL HYDRAULICS REPORT

HYDROLOGIC DATA

DRAINAGE AREA= 62.3 sq. mi.
CHARACTER OF TERRAIN: Rolling to hilly
CHARACTER & TYPE OF STREAM: Straight, semi-alluvial, not braided, and not anabranched
NATURE OF STREAMBED: Gravel and cobbles

Q2.33=	3500 cfs	Q50=	8000 cfs
Q10=	6000 cfs	Q100=	10500 cfs
Q25=	7200 cfs	Q500=	15000 cfs

DATE OF FLOOD OF RECORD: November 1927
WATER SURFACE ELEV.: 656.0+- ESTIMATED DISCHARGE: Unknown
NATURAL STREAM VELOCITY @ Q 50 = 11.9 fps
ICE CONDITIONS: Moderate DEBRIS: Moderate
DOES THE STREAM REACH MAXIMUM HIGHWATER ELEVATION RAPIDLY? No
IS ORDINARY RISE RAPID? No
IS STAGE AFFECTED BY UPSTREAM OR DOWNSTREAM CONDITIONS? Yes
IF YES, DESCRIBE. There is a low dam just downstream of the bridge.

WATERSHED STORAGE 1% HEADWATERS ___ UNIFORM THROUGHOUT WATERSHED X ___ IMMEDIATELY ABOVE SITE ___

EXISTING STRUCTURE

STRUCTURE TYPE: Four span concrete T-beam bridge YEAR BUILT: 1929
CLEAR SPAN (NORMAL TO STREAM): 203' total
VERTICAL CLEARANCE ABOVE STREAMBED: 30'
WATERWAY OF FULL OPENING: 4,500 sq. ft.
DISPOSITION OF STRUCTURE: Replace

TYPE OF MATERIAL UNDER SUBSTRUCTURE: Unknown

WATER SURFACE ELEV. @ Q2.33= 645.1 VELOCITY= 10.3 fps
Q10= 647.1 " 11.5 fps
Q25= 647.8 " 11.7 fps
Q50= 648.3 " 11.9 fps
Q100= 649.8 " 12.1 fps

LONG TERM STREAM BED CHANGES: none noted.

IS THE ROADWAY OVERTOPPED BELOW THE Q100? No FREQUENCY:
RELIEF ELEVATION: 665.5 DISCHARGE OVER ROAD @ Q100: None

UPSTREAM STRUCTURE: TOWN: Randolph DISTANCE: 1.2 miles
HIGHWAY NO.: CVRR STRUCTURE NO.:
STRUCTURE TYPE: Unknown
CLEAR SPAN: CLEAR HEIGHT:
YEAR BUILT: FULL WATERWAY:

DOWNSTREAM STRUCTURE: TOWN: Bethel DISTANCE:
HIGHWAY NO.: CVRR STRUCTURE NO.:
STRUCTURE TYPE: Unknown
CLEAR SPAN: CLEAR HEIGHT:
YEAR BUILT: FULL WATERWAY:

PROPOSED STRUCTURE

STRUCTURE TYPE: Two span bridge

CLEAR SPAN (NORMAL TO STREAM): 2 SPAN 100' - 100'
VERTICAL CLEARANCE ABOVE STREAMBED: 32'
WATERWAY OF FULL OPENING: 4,800 sq. ft.

WATER SURFACE ELEV. @ Q2.33= 644.8 VELOCITY= 10.3 fps
Q10= 646.8 " = 11.5 fps
Q25= 647.6 " = 11.7 fps
Q50= 648.0 " = 11.9 fps
Q100= 649.4 " = 12.1 fps

IS THE ROADWAY OVERTOPPED BELOW THE Q100? No FREQUENCY:
RELIEF ELEVATION: 673.4 DISCHARGE OVER ROAD @ Q100: None

AVERAGE LOW ELEVATION OF SUPERSTRUCTURE: 668.6
VERTICAL CLEARANCE @ Q 100 = 19.2'

SCOUR: 1' of contraction scour + 6' of pier scour, at Q100 and Q500.
REQUIRED CHANNEL PROTECTION: Stone Fill, Type III below elev. 650.0.

PERMIT INFORMATION

AVERAGE DAILY FLOW: 130 cfs
ORDINARY LOW WATER: 60 cfs ELEV.: 638.0
ORDINARY HIGH WATER: 1500 cfs ELEV.: 642.0

ADDITIONAL COMMENTS

DESIGN CRITERIA:
1. DESIGN LIVE LOAD AASHTO HS-25
2. DESIGN SPAN 2 SPAN 100' - 100'
3. ALLOWABLE LOAD FOR SPREAD FOOTINGS ON SOIL N/A ON LEDGE 10 KSF
4. ALLOWABLE LOAD FOR PILING 162 K TYPE HP 14 x 73 ESTIMATED LENGTH SEE BORING LOGS
5. STRUCTURAL STEEL AASHTO GRADE M270, GRADE 50W
6. REINFORCING STEEL GRADE 60
7. CONCRETE CLASS A (HPC-A) f'_c : 4000 PSI
   CONCRETE CLASS B (HPC-B) f'_c : 3500 PSI
8. DESIGN METHOD LOAD FACTOR

TRAFFIC MAINTENANCE:
1. IS TRAFFIC TO BE MAINTAINED? YES IF YES, ON EXISTING STRUCTURE NO OR ON TEMPORARY BRIDGE YES
2. TEMPORARY BRIDGE REQUIREMENTS: ONE OR TWO WAY TWO WAY TRAFFIC CONTROL SIGNALS REQUIRED NO
   MINIMUM CLEAR SPAN (NORMAL TO STREAM): 100 ft min VERTICAL CLEARANCE ABOVE STREAMBED: Bottom of beam elev. 649.0 min
   WATERWAY OF FULL OPENING: 1300 sq. ft. min
   ARE SIDEWALKS REQUIRED? YES IF SO, ON WHAT SIDE? DOWNSTREAM SIDE
   STRUCTURE TYPE: Two-way bridge

LOAD FACTOR LOAD RATING (TONS)

LOADING LEVELS (LOAD FACTOR)	TRUCK H	HS	3S2	6 AXLE	3A. STR.	4A. STR.	5A. SEMI
INVENTORY A=2.17 B=1.00	38*	69					
POSTED A=1.55 B=1.40	54*	96	114		88	90	105
OPERATING A=1.30 B=1.67		115	136	154	105	107	

STRENGTH RF= $\frac{\phi M_N - 1.3\,M_{DL}}{A \times M_{LL+I}}$ SERVICEABILITY RF= $B\left[\frac{.95\,F_y S_{LL+I} - M_{DL}\frac{S_{LL+I}}{S_{DL}} - M_{SDL}\frac{S_{LL+I}}{S_{SDL}}}{1.67\,M_{LL+I}}\right]$

* LANE LOAD GOVERNS

ESAL SUMMARY

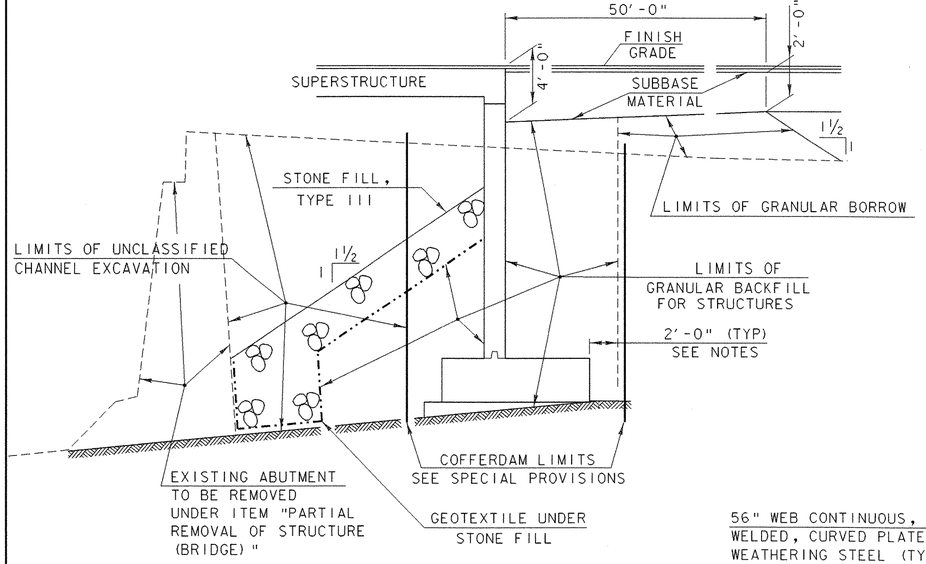
Intersection Leg	1994-2012	1994-2032
VT12A	1,765,000	6,788,000
VT12 (Braintree)	4,713,000	18,026,000
VT12 (Randolph)	6,432,000	24,595,000

DESIGN SPEED: 30 mph

PRELIMINARY INFORMATION & ROADWAY TYPICALS

PROJECT NAME: RANDOLPH
PROJECT NUMBER: BRF 0241(29)

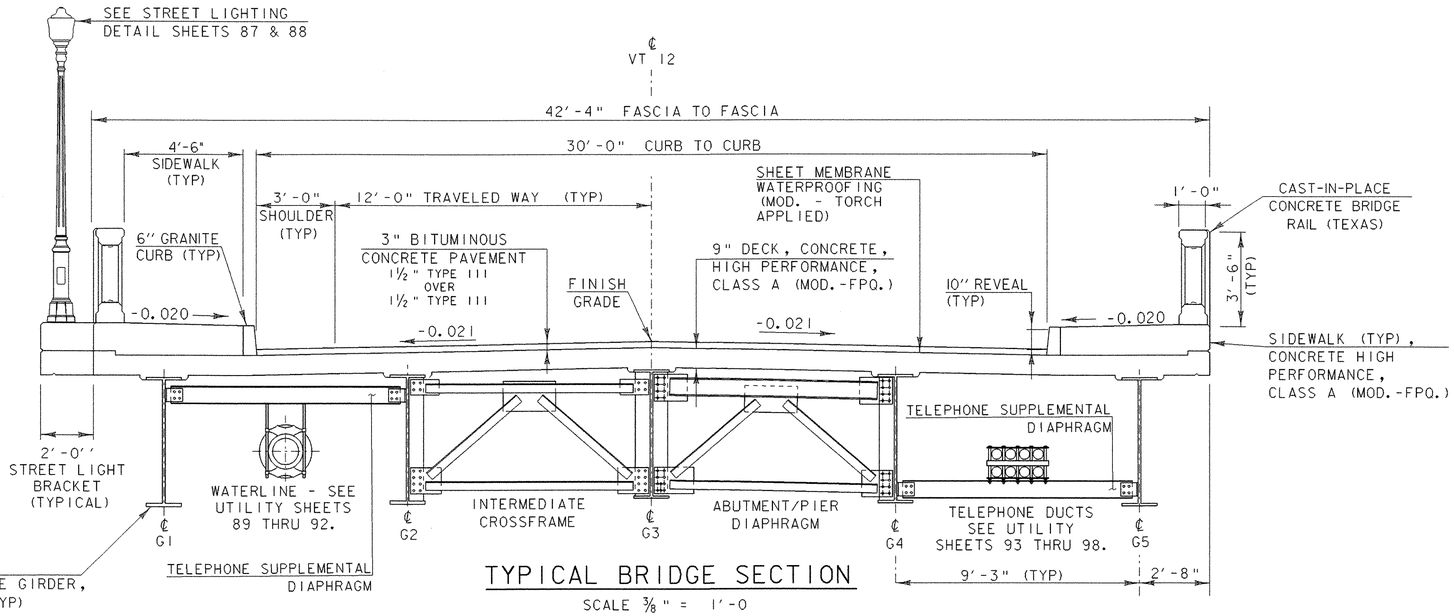
FILE NAME: /str5/88j096/sj096typ.dgn PLOT DATE: 29-AUG-2006
PROJECT LEADER: W. SYMONDS DRAWN BY: G. SHANGRAW
DESIGNED BY: W.B. SYMONDS CHECKED BY: T. SUMNER
sj096pi.i SHEET 3 OF 135



NOTE: REFER TO SHEET #45, NOTE #7.

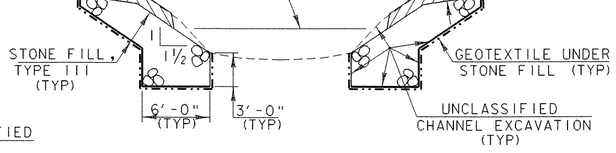
ABUTMENT EARTHWORK TYPICAL FOR ABUTMENT 2

NOT TO SCALE



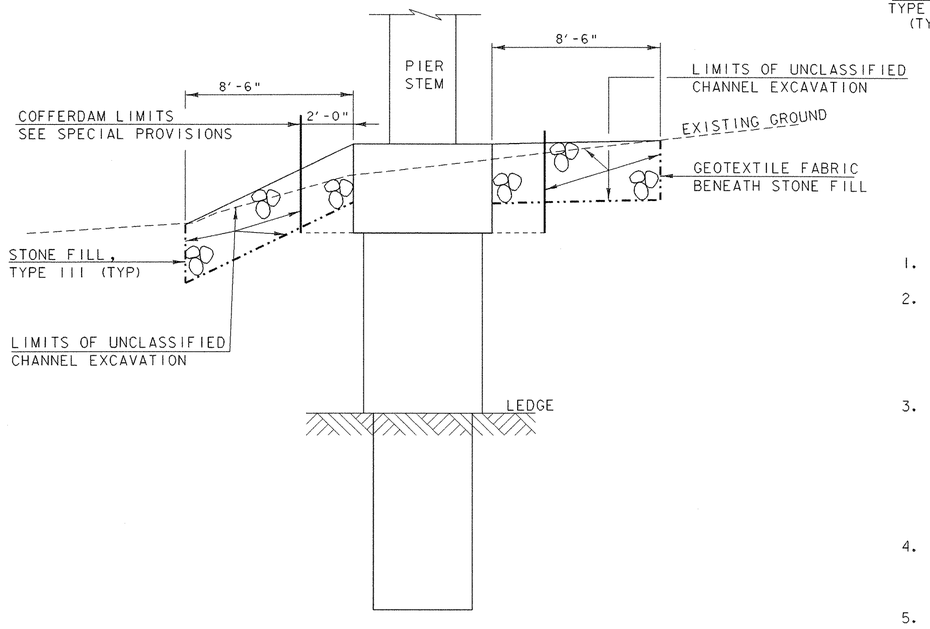
TYPICAL BRIDGE SECTION

SCALE ⅜" = 1'-0



TYPICAL CHANNEL SECTION

*GRUBBING MATERIAL SHALL NOT BE PLACED ON THE STONE FILL IN THE AREA UNDER THE BRIDGE.

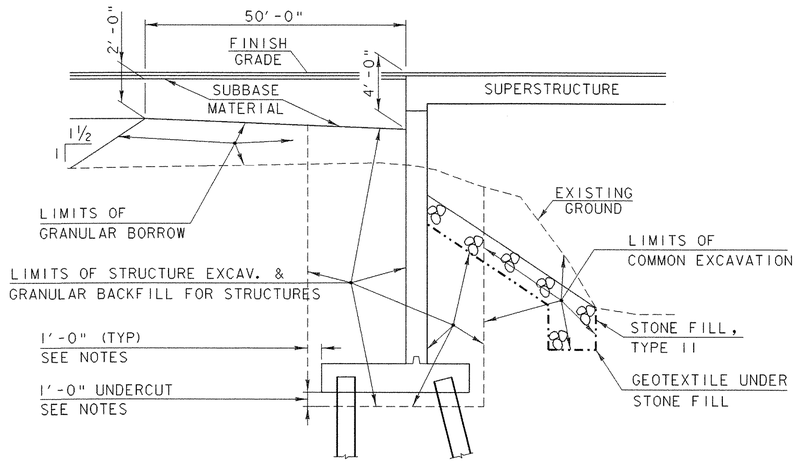


PIER EARTHWORK TYPICAL

NOT TO SCALE

NOTES

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



ABUTMENT EARTHWORK TYPICAL FOR ABUTMENT 1

NOT TO SCALE

TYPICAL BRIDGE SECTION

PROJECT NAME:	RANDOLPH
PROJECT NUMBER:	BRF 0241(29)

FILE NAME: /str5/88j096/sj096typ.dgn	PLOT DATE: 29-AUG-2006
PROJECT LEADER: W. SYMONDS	DRAWN BY: G. SHANGRAW
DESIGNED BY: W.B. SYMONDS	CHECKED BY: T. SUMNER
sj096typ.i	SHEET 4 OF 135

STATE OF VERMONT
AGENCY OF TRANSPORTATION

QUANTITY SHEET

SUMMARY OF ESTIMATED QUANTITIES

ROADWAY	TRAINING	LANDSCAPING	EROSION CONTROL	UTILITIES	BRIDGE	BRIDGE - ALTERNATE 1	BRIDGE - ALTERNATE 2	FULL C. E. ITEMS
1								
4000								
75								
					800			
480								
120				40				
					1475			
550				170				
					140			
22								
				40	420			
					570			
					570			
					1			
					1			
460								
2500								
40								
8								
1300								
5								
					75			
						351		
							351	
21					832			
					1			
					1400			
1350								
					1			
					298450			
13679					83953			
4					360			
					106935			
					1			
					1			
					32			
					20			
					4			
30					85			
					60			

TOTALS

GRAND TOTAL	FINAL
1	
4000	
75	
800	
480	
160	
1475	
720	
140	
22	
460	
570	
570	
1	
1	
460	
2500	
40	
8	
1300	
5	
75	
351	
351	
853	
1	
1400	
1350	
1	
298450	
97632	
364	
106935	
1	
1	
32	
20	
4	
115	
60	

DESCRIPTIONS

UNIT	ITEMS	ITEM NUMBER	ROUND
LS	CLEARING AND GRUBBING (INCL. INDV. TREES & STUMPS)	201.10	NONE
CY	COMMON EXCAVATION	203.15	46
CY	SOLID ROCK EXCAVATION	203.16	2
CY	UNCLASSIFIED CHANNEL EXCAVATION	203.27	18
CY	EXCAVATION OF SURFACES AND PAVEMENTS	203.28	4
CY	SAND BORROW	203.31	4
CY	GRANULAR BORROW	203.32	24
CY	TRENCH EXCAVATION OF EARTH	204.20	33
CY	STRUCTURE EXCAVATION	204.25	1
CY	STRUCTURE EXCAVATION (MOD. - SOLDIER PILE)	204.25	NONE
CY	GRANULAR BACKFILL FOR STRUCTURES	204.30	8
CY	COFFERDAM EXCAVATION,EARTH	208.30	2
CY	COFFERDAM EXCAVATION,ROCK	208.35	3
LS	COFFERDAM (ABUTMENT 2)	208.40	NONE
LS	COFFERDAM (PIER)	208.40	NONE
SY	COLD PLANING-BIT.PAVEMENT	210.10	2
CY	SUBBASE OF DENSE GRADED CRUSHED STONE	301.35	33
CY	AGGREGATE SURFACE COURSE	401.10	4
CWT	EMULSIFIED ASPHALT	404.65	.2
TON	BITUMINOUS CONCRETE PAVEMENT (PG 58-34)	406.25	17
CY	CONCRETE, CLASS B	501.25	NONE
CY	CONCRETE, CLASS C	501.30	EST
CY	CONCRETE, HIGH PERFORMANCE CLASS A (MOD. - FPQ)	501.33	NONE
CY	CONCRETE, HIGH PERFORMANCE CLASS A (SIPCMF) (MOD.- FPQ)	501.33	NONE
CY	CONCRETE, HIGH PERFORMANCE CLASS B	501.34	NONE
LS	FURNISHING EQUIPMENT FOR DRIVING PILING	504.10	NONE
LF	STEEL PILING (HP 14 X 73)	505.17	36
SF	TEMPORARY STEEL SHEET PILING	505.36	NONE
EACH	DYNAMIC PILE LOADING TEST	505.45	NONE
LB	STRUCTURAL STEEL(PLATE GIRDER) (CURVED)	506.55	26
LB	REINFORCING STEEL	507.15	NONE
LF	DRILLING AND GROUTING DOWELS	507.16	EST
LB	EPOXY COATED REINFORCING STEEL	507.17	NONE
LS	SHEAR CONNECTORS (2324 - 7/8" X 7")	508.15	NONE
LS	MOBILIZATION OF DRILLED SHAFT EQUIPMENT	512.30	NONE
LF	DRILLED SHAFT IN EARTH (6 FT DIA.)	512.31	NONE
LF	DRILLED SHAFT IN ROCK (5 FT DIA.)	512.32	NONE
LF	DRILLED SHAFT OBSTRUCTION DRILLING AND REMOVAL (6 FT DIA.)	512.33	NONE
GAL	WATER REPELLENT (MOD. - SILANE)	514.10	2
LF	BRIDGE EXPANSION JOINT (ASPHALTIC PLUG)	516.10	NONE

DETAILED SUMMARY OF QUANTITIES

QUANTITIES	UNIT	ITEMS
		UNCLASSIFIED CHANNEL EXCAVATION
675	CY	ABUTMENT 2 BANK
107	CY	PIER
18	CY	ROUNDING
800	CY	TOTAL
		STRUCTURE EXCAVATION
63	CY	ABUTMENT 1
59	CY	RETAINING WALL 80+71 - 81+00 RT
15	CY	STAIRS RETAINING WALL 14+34 - 14+45 RT
3	CY	ROUNDING
140	CY	TOTAL
		GRANULAR BACKFILL FOR STRUCTURES
120	CY	ABUTMENT 1
244	CY	ABUTMENT 2
7	CY	STAIRS RETAINING WALL 14+34 - 14+45 RT
41	CY	RETAINING WALL 80+71 - 81+00 RT
40	CY	UTILITIES
8	CY	ROUNDING
460	CY	TOTAL
		SUBBASE OF DENSE GRADED CRUSHED STONE
972	CY	MAINLINE
169	CY	VT. 12A
139	CY	DRIVE 80+20 - 81+75
908	CY	PRINCE STREET
104	CY	CUMBERLAND FARM DRIVE
103	CY	PARKING LOT
72	CY	DRIVES
33	CY	ROUNDING
2500	CY	TOTAL
		BITUMINOUS CONCRETE PAVEMENT (TYPE II)
284	TONS	MAINLINE
129	TONS	VT. 12A
224	TONS	PRINCE STREET
637	TONS	TOTAL TYPE II
		BITUMINOUS CONCRETE PAVEMENT (TYPE III)
212	TONS	MAINLINE
117	TONS	VT. 12A
122	TONS	PRINCE STREET
37	TONS	PARKING LOT
35	TONS	CUMBERLAND FARMS DRIVE
136	TONS	BRIDGE DECK & APPROACH SLABS
659	TONS	TOTAL TYPE III
		BITUMINOUS CONCRETE PAVEMENT - GRAND TOTALS
637	TONS	TYPE II
659	TONS	TYPE III
4	TONS	ROUNDING
1300	TONS	GRAND TOTAL - ALL TYPES (EXCLUDING DETOUR)**
		** NOTE: THE BITUMINOUS CONCRETE PAVEMENT REQUIRED FOR THE TEMPORARY DETOUR IS APPROXIMATELY 325 TONS. PAYMENT FOR THE TEMPORARY DETOUR PAVEMENT WILL BE INCIDENTAL TO ITEM 528.11 - 'TWO-WAY TEMPORARY BRIDGE (MOD.)'

PROJECT NAME: RANDOLPH
PROJECT NUMBER: BRF 0241(29)

FILE NAME: /str5/88j096/s88j096xcl.dgn
PROJECT MANAGER: W. SYMONDS
DESIGNED BY: T. FILLBACH
QUANTITY SHEET #1

PLOT DATE: 08/25/2006
DRAWN BY: G. SHANGRAW
CHECKED BY: T. SUMNER

STATE OF VERMONT
AGENCY OF TRANSPORTATION

QUANTITY SHEET

SUMMARY OF ESTIMATED QUANTITIES									TOTALS		DESCRIPTIONS				DETAILED SUMMARY OF QUANTITIES		
ROADWAY	TRAINING	LANDSCAPING	EROSION CONTROL	UTILITIES	BRIDGE	BRIDGE - ALTERNATE 1	BRIDGE - ALTERNATE 2	FULL C. E. ITEMS	GRAND TOTAL	FINAL	UNIT	ITEMS	ITEM NUMBER	ROUND	QUANTITIES	UNIT	ITEMS
					710				710		SY	SHEET MEMBRANE WATERPROOFING (MOD. - TORCH APPLIED)	519.20	7			
					107				107		LF	METAL HAND RAILING (PAINTED)	525.15	NONE			
					511				511		LF	CAST-IN-PLACE CONCRETE BRIDGE RAIL (TEXAS)	525.50	.5			
					350				350		SF	TREATED TIMBER BIN-TYPE RETAINING WALL (MOD.- SOLDIER PILE)	526.15	9			
					1				1		LS	TWO-WAY TEMPORARY BRIDGE (3000 SF - EST) (MOD.)	528.11	NONE			
					700				700		SY	REMOVAL OF BRIDGE PAVEMENT	529.10	NONE			
					1				1		EACH	PARTIAL REMOVAL OF STRUCTURE (BRIDGE)	529.20	NONE			
					1				1		EACH	PARTIAL REMOVAL OF STRUCTURE (RETAINING WALL) (STA. 14+39 RT.)	529.20	NONE			
					1				1		EACH	PARTIAL REMOVAL OF STRUCTURE (RETAINING WALL) (STA. 80+20 RT.)	529.20	NONE			
					10				10		EACH	BEARING DEVICE ASSEMBLY (ELASTOMERIC)	531.10	NONE			
					5				5		EACH	BEARING DEVICE ASSEMBLY (POT)	531.10	NONE			
												BEGIN OPTION AA					
650									650		LF	18" CAAP .060 (2-2/3 X 1/2)	601.0215	NONE			
650									650		LF	18" PCCSP .064 (2-2/3 X 1/2)	601.0415	NONE			
650									650		LF	18" CPEP	601.0915	NONE			
												END OPTION AA					
												BEGIN OPTION BB					
124									124		LF	24" CAAP .060 (2-2/3 X 1/2)	601.0225	NONE			
124									124		LF	24" PCCSP .064 (2-2/3 X 1/2)	601.0425	NONE			
124									124		LF	24" CPEP	601.0920	NONE			
												END OPTION BB					
10									10		CY	DRY RUBBLE MASONRY (MOD.)	602.20	EST			
30									30		SY	STONE MASONRY FACING (MOD. - FORM LINER)	602.25	NONE			
2									2		EACH	PRECAST REINFORCED CONC. CATCH BASIN WITH CAST IRON GRATE (MOD.)	604.20	NONE			
13									13		EACH	PRC PIPE DROP INLET WITH CAST IRON GRATE (MOD.)	604.25	NONE			
				4					4		EACH	CHANGING ELEVATION OF SEWER MANHOLE	604.42	NONE			
20									20		LF	6" UNDERDRAIN	605.10	NONE			
100									100		HR	ALL PURPOSE EXCAVATOR RENTAL, TYPE I	608.25	EST			
1.5									1.5		TON	DUST AND ICE CONTROL WITH CALCIUM CHLORIDE	609.15	EST			
			30						30		CY	STONE FILL, TYPE I	613.10	4			
			30						30		CY	STONE FILL, TYPE I (MOD. - CHECK DAM)	613.10	EST			
			60						60		CY	STONE FILL, TYPE I (MOD. - CONSTRUCTION ENTRANCE)	613.10	EST			
			15						15		CY	STONE FILL, TYPE I (MOD. - INLET PROTECTION)	613.10	EST			
			610						610		CY	STONE FILL, TYPE II	613.11	4			
					1050				1050		CY	STONE FILL, TYPE III	613.12	21			STONE FILL, TYPE III
															178	CY	PRINCE STREET LEFT SIDE
															122	CY	PIER
710									710		LF	VERTICAL GRANITE CURB	616.21	9	729	CY	ABUTMENT 2 BANK
					408				408		LF	GRANITE BRIDGE CURB	616.22	NONE	21	CY	ROUNDING
															1050	CY	TOTAL
250									250		LF	PRECAST REINFORCED CONCRETE CURB, TYPE A (MOD. - TEMPORARY)	616.25	NONE			
72									72		LF	PRECAST REINFORCED CONCRETE CURB, TYPE A (MOD.)	616.25	NONE			
62									62		LF	CAST-IN PLACE CONCRETE CURB, TYPE B (MOD.)	616.28	.9			

PROJECT NAME: RANDOLPH
PROJECT NUMBER: BRF 0241(29)

FILE NAME: /str5/88j096/s88j096xcl.dgn
PROJECT MANAGER: W. SYMONDS
DESIGNED BY: T. FILLBACH
QUANTITY SHEET #2

PLOT DATE: 08/25/2006
DRAWN BY: G. SHANGRAW
CHECKED BY: T. SUMNER

STATE OF VERMONT
AGENCY OF TRANSPORTATION

QUANTITY SHEET

SUMMARY OF ESTIMATED QUANTITIES									TOTALS		DESCRIPTIONS				DETAILED SUMMARY OF QUANTITIES		
ROADWAY	TRAINING	LANDSCAPING	EROSION CONTROL	UTILITIES	BRIDGE	BRIDGE - ALTERNATE 1	BRIDGE - ALTERNATE 2	FULL C. E. ITEMS	GRAND TOTAL	FINAL	UNIT	ITEMS	ITEM NUMBER	ROUND	QUANTITIES	UNIT	ITEMS
330									330		LF	TREATED TIMBER CURB	616.35	7			
400									400		SY	PORTLAND CEMENT CONCRETE SIDEWALK, 5 INCH (MOD.)	618.10	9			
70									70		SY	PORTLAND CEMENT CONCRETE SIDEWALK, 8 INCH (MOD.)	618.11	3			
5									5		SY	DETECTABLE WARNING SURFACE	618.30	.3			
9									9		EACH	STEEL MARKER POSTS	619.16	NONE			
105									105		LF	CHAIN-LINK FENCE, 4 FEET	620.11	NONE			
600									600		LF	CHAIN-LINK FENCE, 4 FEET (MOD. - TEMPORARY)	620.11	19			
60									60		LF	REMOVAL OF EXISTING FENCE	620.55	3			
1200									1200		LF	SNOW FENCE (MOD.-PDF)	620.70	15			
675									675		LF	STEEL BEAM GUARD RAIL (GALVANIZED)	621.20	NONE			
165									165		LF	HEAVY DUTY STEEL BEAM GUARD RAIL (GALVANIZED)	621.21	NONE			
3									3		EACH	TERMINAL CONNECTOR FOR STEEL BEAM GUARD RAIL	621.53	NONE			
7									7		EACH	ANCHOR FOR STEEL BEAM RAIL	621.60	NONE			
72									72		LF	REMOVL AND DISP OF GUARD RAIL	621.80	NONE			
1000									1000		LF	TEMPORARY TRAFFIC BARRIER	621.90	15			
				.5					.5		MFBM	INSULATION BOARD	622.10	NONE			
236									236		LF	DUCTS, CONCRETE ENCASED (8 x 4")	624.20	NONE			
				1					1		LS	DUCTS ON BRIDGE (8 x 4")	625.16	NONE			
				200					200		LF	DUCTILE, IRON PIPE, CEM LINED (12")	629.24	NONE			
				10					10		LF	DUCTILE, IRON PIPE, CEM LINED (4")	629.24	NONE			
				70					70		LF	DUCTILE, IRON PIPE, CEM LINED (8")	629.24	NONE			
				3					3		EACH	GATE VALVE WITH VALVE BOX (8")	629.27	NONE			
				1					1		EACH	HYDRANT, RELOCATE	629.29	NONE			
				1					1		LS	TRANSFER TO NEW SYSTEM-WATER SYSTEM	629.42	NONE			
				1					1		LS	WATER MAIN ON BRIDGE (12")	629.60	NONE			
400									400		HR	UNIFORMED TRAFFIC OFFICERS	630.10	EST			
1500									1500		HR	FLAGGERS	630.15	204			
								1	1		LS	FIELD OFFICE-ENGINEERS	631.10	NONE			
								1	1		LS	TESTING EQUIPMENT - CONCRETE	631.16	NONE			
								1	1		LS	TESTING EQUIPMENT - BITUMINOUS	631.17	NONE			
								1	1		LU	FIELD OFFICE - TELEPHONE (N.A.B.I.)	631.25	NONE			
	1040								1040		HR	EMPLOYEE TRAINEESHIP	634.10	NONE			
1									1		LS	MOBILIZATION / DEMOBILIZATION	635.11	NONE			
1									1		LS	TRAFFIC CONTROL	641.10	NONE			
3100									3100		LF	DURABLE 4" WHITE LINE (THERMOPLASTIC)	646.40	26			
2700									2700		LF	DURABLE 4" YELLOW LINE (THERMOPLASTIC)	646.41	12			
45									45		LF	DURABLE 8" WHITE LINE (THERMOPLASTIC)	646.42	NONE			
45									45		LF	DURABLE 24" STOP BAR (THERMOPLASTIC)	646.46	NONE			
23									23		EACH	DURABLE LETTER OR SYMBOL (THERMOPLASTIC)	646.50	NONE			
80									80		LF	DURABLE CROSSWALK MARKING W/DIAGONAL LINES (THERMOPLASTIC) (MOD.)	646.51	NONE			

PROJECT NAME: RANDOLPH
PROJECT NUMBER: BRF 0241(29)

FILE NAME: /str5/88j096/s88j096xcl.dgn
PROJECT MANAGER: W. SYMONDS
DESIGNED BY: T. FILLBACH
QUANTITY SHEET #3

PLOT DATE: 08/25/2006
DRAWN BY: G. SHANGRAW
CHECKED BY: T. SUMNER

STATE OF VERMONT
AGENCY OF TRANSPORTATION

QUANTITY SHEET

SUMMARY OF ESTIMATED QUANTITIES

ROADWAY	TRAINING	LANDSCAPING	EROSION CONTROL	UTILITIES	BRIDGE	BRIDGE - ALTERNATE 1	BRIDGE - ALTERNATE 2	FULL C. E. ITEMS
1850								
1520								
40								
4								
52								
250								
2200								
400								
100								
50								
800								
3								
3								
		20						
100								
550								
			1					
			240					
			1					
			1200					
		20						
		2						
		10						
		10						
153								
128								
128								
801								
6								
38								
19								
1								
				100				
				50				
				150				
1								
1								
				1				
1								

TOTALS

GRAND TOTAL	FINAL
1850	
1520	
40	
4	
52	
250	
2200	
400	
100	
50	
800	
3	
3	
20	
100	
550	
1	
240	
1	
1200	
20	
2	
10	
10	
153	
128	
128	
801	
6	
38	
19	
1	
100	
50	
150	
1	
1	
1	
1	

DESCRIPTIONS

UNIT	ITEMS	ITEM NUMBER	ROUND
LF	TEMPORARY 4" WHITE LINE (PAINT)	646.60	NONE
LF	TEMPORARY 4" YELLOW LINE (PAINT)	646.61	9
LF	TEMPORARY 24" STOP BAR (PAINT)	646.66	3
EACH	TEMPORARY LETTERS OR SYMBOLS (PAINT)	646.70	NONE
SF	PAINTED ISLAND	646.82	NONE
SF	REMOVAL OF EXISTING PAVEMENT MARKINGS	646.85	EST
SY	GEOTEXTILE UNDER STONE FILL	649.31	62
SY	GEOTEXTILE FOR SILT FENCE	649.51	NONE
LB	SEED (LOW GROW MIX)	651.15	10
LB	SEED-WINTER RYE	651.17	EST
LB	FERTILIZER	651.18	50
TON	AGRICULTURAL LIMESTONE	651.20	NONE
TON	HAYMULCH	651.25	NONE
CY	CEDAR BARK MULCH	651.27	1
CY	TOPSOIL	651.35	2
SY	GRUBBING MATERIAL	651.40	17
LS	EROSION PREVENTION & SEDIMENT CONTROL PLAN	652.10	NONE
HR	MONITORING EROSION PREVENTION & SEDIMENT CONTROL PLAN	652.20	NONE
LU	MAINTENANCE OF EROSION PREVENTION & SEDIMENT CONTROL PLAN (N.A.B.I.)	652.30	NONE
SY	EROSION MATTING (MOD. - STRAW MATTING)	654.10	13
EACH	DECIDUOUS TREES (RED MAPLE) (ACER RUBRUM) (10 FT) (B & B)	656.30	NONE
EACH	DECIDUOUS TREES (SARGENT CRABAPPLE) (MALUS SARGENTII) (6 FT) (B & B)	656.30	NONE
EACH	DECIDUOUS TREES (SILVER MAPLE) (ACER SACCHARINUM) (10 FT) (B & B)	656.30	NONE
EACH	DECIDUOUS SHRUBS (KOREAN LILAC) (SYRINGA MEYERI - 'PALIBIN') (18 INCH) (3 GAL.)	656.35	NONE
SF	TRAFFIC SIGNS, TYPE A	675.20	.61
	BEGIN OPTION CC		
LF	FLANGED CHANNEL SIGN POST	675.301	NONE
LF	SQUARE TUBE SIGN POSTS AND ANCHOR	675.341	NONE
	END OPTION CC		
LB	TUBULAR STEEL SIGN POSTS	675.33	NONE
EACH	FOUNDATION FOR TUBULAR STEEL POSTS	675.43	NONE
EACH	REMOVING SIGNS	675.50	NONE
EACH	ERECTING SALVAGED SIGNS	675.60	NONE
EACH	ERECTING SALVAGED SIGNS (MOD.)	675.60	NONE
LF	ELECTRICAL CONDUIT (2") (PVC) (SCH. 40)	678.21	NONE
LF	ELECTRICAL CONDUIT (2") (PVC) (SCH. 80)	678.21	NONE
LF	ELECTRICAL WIRING	678.24	NONE
LS	STREET LIGHTING	679.15	NONE
EACH	REMOVE & RESETTING LIGHT POLE	679.25	NONE
EACH	POWER STANCHION	679.28	NONE
LU	FUEL ADJUSTMENT, FUEL (N.A.B.I.)	690.50	NONE

DETAILED SUMMARY OF QUANTITIES

QUANTITIES	UNIT	ITEMS

PROJECT NAME: RANDOLPH
PROJECT NUMBER: BRF 0241(29)

FILE NAME: /str5/88j096/s88j096xct.dgn
PROJECT MANAGER: W. SYMONDS
DESIGNED BY: T. FILLBACH
QUANTITY SHEET #4

PLOT DATE: 08/25/2006
DRAWN BY: G. SHANGRAW
CHECKED BY: T. SUMNER
SHEET 8 OF 135

STATE OF VERMONT
AGENCY OF TRANSPORTATION

EARTHWORKS

STATION	DIST FT.	TOTAL EXCAVATION EARTH AND ROCK AREA S.F.	TOTAL EXCAVATION EARTH AND ROCK VOLUME C.Y.	SAND BORROW AREA S.F.	SAND BORROW VOLUME C.Y.	EMBANKMENT AREA S.F.	EMBANKMENT VOLUME C.Y.	SUBBASE AREA S.F.	SUBBASE VOLUME C.Y.
MAINLINE									
13+50		16		0		0		11	
	16		9				1		7
13+66		13		0		1		12	
	9		5				1		4
13+75		19		0		1		14	
	8		6				1		4
13+83		19		0		1		14	
	17		12				1		8
14+00		19		0		1		11	
	25		25				1		21
14+25		34		0		2		34	
	25		92				10		51
14+50		164		22	BUTT	20		77	
	25		331		20		11		73
14+75		550		22		3		81	
	25		406		21		75		80
15+00		328		24		160		92	
	11		111		5		118		41
15+11		217		0		420		108	
	4		32				62		17
15+15		217	BUTT	0		420	BUTT	115	
	19								85
15+34								127	BUTT
	SUB	TOTALS	1028		47		282		391
MAINLINE									
17+38		0		0		174		127	BUTT
	33				13				144
17+71		0		22		175		108	
	8				7		49		28
17+79		0		23		157		80	
	21				18		97		63
18+00		0		23	BUTT	92		81	
	50						170		144
18+50		0		0		92		75	
	25						69		66
18+75		0		0		58		67	
	25		27				27		62
19+00		59		0		0		67	
	50		61						69
19+50		7		0		0		7	
	25		6						6
19+75		7	BUTT	0		0		7	
	SUB	TOTALS	95		38		413		581
	FROM	ABOVE	1028		47		282		391
	GRAND	TOTALS	1123		85		695		972
	MAINLINE								
VT 12A									
50+00		0		0		27		8	
	25		2		1		1		11
50+25		5		3		21		16	
	25		6		1		18		31
50+50		9		0		17		52	
	25		14		0		17		46
50+75		22		0		20		48	
	25		31		0		9		47
51+00		45		0		0		54	
	25		23		0				28
51+25		5		0		0		6	
	25		6		0				6
51+50		9	BUTT	0		0		6	BUTT
	GRAND	TOTALS	84		3		45		169
	VT 12A								

STATION	DIST FT.	TOTAL EXCAVATION EARTH AND ROCK AREA S.F.	TOTAL EXCAVATION EARTH AND ROCK VOLUME C.Y.	SAND BORROW AREA S.F.	SAND BORROW VOLUME C.Y.	EMBANKMENT AREA S.F.	EMBANKMENT VOLUME C.Y.	SUBBASE AREA S.F.	SUBBASE VOLUME C.Y.
DRIVE LT				NO	SAND				
80+20		0				132		28	
	5						24		5
80+25		0				132		28	
	25						111		25
80+50		0				108		25	
	25						97		23
80+75		0				101		24	
	25						82		22
81+00		0				77		24	
	25		1				40		27
81+25		3				10		34	
	25		20				5		27
81+50		40				0		24	
	25		23						11
81+75		10				0		0	
	GRAND	TOTALS	44				360		139
	DRIVE	LEFT							
PRINCE									
STREET				NO	SAND				
200+10		0				0		0	
	11		30						14
200+21		146				0		70	
	4		22						10
20025		146				0		70	
	25		110						62
20050		91				0		63	
	25		82				206		54
20075		87				446		54	
	25		124				379		49
20100		180				373		52	
	25		172				411		48
20125		191				515		52	
	25		206				381		48
20150		253				308		52	
	25		243				221		48
20175		272				170		52	
	7		70				37		13
20182		267				116		52	
	18		175				41		31
20200		257				7		42	
	25		223				3		40
20225		225				0		45	
	25		208						37
20250		224				0		34	
	25		153						32
20275		106				0		35	
	25		105						33
20300		120				0		37	
	10		35						14
20310		68				0		37	
	10		21				12		14
20320		43				67		37	
	10		16				28		14
20330		43				85		37	
	10		19				23		14
20340		57				38		37	
	10		27				11		14
20350		89				22		37	
	3		10				14		4
20353		89				224		37	
	22		70				206		31
20375		83				281		39	
	25		94				162		37
20400		121				69		41	
	25		105				47		40
20425		106				33		46	
	25		67				23		43
20450		39				16		47	
	25		43				9		38
20475		53				4		36	
	25		46				2		32
20500		46				0		34	
	25		44						31
20525		50				0		33	
	25		42						31
20550		40				0		33	
	25		31						23
20575		26				0		17	
	25		12						8
20600		0				0		0	
	GRAND	TOTALS	2601				2217		908
	PRINCE	STREET							

STATION	DIST FT.	TOTAL EXCAVATION EARTH AND ROCK AREA S.F.	TOTAL EXCAVATION EARTH AND ROCK VOLUME C.Y.	SAND BORROW AREA S.F.	SAND BORROW VOLUME C.Y.	EMBANKMENT AREA S.F.	EMBANKMENT VOLUME C.Y.	SUBBASE AREA S.F.	SUBBASE VOLUME C.Y.
CUMBY	DRIVE								
				NO	SAND				
17+71		0						0	
	4								1
17+75		0						17	
	11		1				53		15
17+86		5				182		56	
	14		3				81		26
18+00		6				131		46	
	11		2				51		18
18+11		6				118		41	
	14		3				51		23
18+25		6				79		46	
	25		6				37		21
18+50		6				0		0	
	GRAND	TOTALS	15				273		104
	CUMBY	DRIVE							
PARKING	LOT								
VT 12A	LEFT			NO	SAND				
50+00		5				50		30	
	25		5						28
50+25		5				50		31	
	25		5				37		26
50+50		5				30		26	
	25		6				17		20
50+75		7				6		18	
	25		7				3		14
51+00		9				0		13	
	25		7						10
51+25		6						8	
	25		3						4
51+50		0						0	
	GRAND	TOTALS	32				56		103
	PARKING	LOT							
	VT 12A	LEFT							

SUMMARY AND BALANCES

STATION TO STATION		TOT EXC EARTH & ROCK C.Y.	ROCK EXCAV C.Y.	EMBANK C.Y.	EXCESSES CUT	EXCESSES FILL	ACUMULATIVE EXCESSES CUT	ACUMULATIVE EXCESSES FILL
MAINLINE								
13+50	19+75	1128	0	695	329		329	
VT. 12A								
50+00	51+50	84	0	45	32		361	
DRIVE LT.								
80+20	81+75	44	0	360		370		9
PRINCE	STREET							
200+10	206+00	2601	0	2216	53		44	
CUMBYS	DRIVE							
17+71	18+50	15	0	273		299		255
PARKING	LOT	32	0	56		32		287
VT 12A	LEFT							
DRIVE	13+79 RT	3	0	0	3			284
DRIVE	202+07 LT	2	0	6		5		289
DRIVE	205+15 LT	43	0	0	43			246
CHANNEL	STONE	0	0	78		90		336
GRAND	TOTALS	3952		3729		336		

REMARKS

EARTH AND ROCK EXCAVATION		
SOLID ROCK EXCAVATION	75	
EARTH EXCAVATION	3952	
PLANIMETERED FILL	3729	
LESS FACTORED SOLID ROCK (NOT APPLICABLE)	0	
LESS DISPLACEMENT OF ANY LARGE STRUCTURES	0	
NET PLANIMETERED FILL	3729	
FACTOR (3729 x 0.15 = 559)	559	
PLANIMETERED FILL INCLUDING FACTOR	4288	
MATERIALS AVAILABLE FOR FILLS		
EARTH EXCAVATION	3952	
UNCLASSIFIED CHANNEL EXCAVATION (920 x 80% = 736)	640	
UNDERDRAIN EXCAVATION (517 x 80% = 414)	414	
STRUCTURE EXCAVATION (140 x 80% = 112)	112	
COFFERDAM EXCAVATIONS (920 x 80% = 736)	912	
TOTAL MATERIAL AVAILABLE FOR FILL	6030	
TOTAL FILL INCLUDING FACTOR	4288	
TOTAL MATERIAL FOR FILL	6030	
BORROW	NA	
EXCESS EXCAVATION	1742	

PROJECT NAME: **RANDOLPH**
PROJECT NUMBER: **BRF 0241(29)**

FILE NAME: **/str5/88j096/s88j096xcl.dgn**
PROJECT LEADER: **W. SYMONDS**
DESIGNED BY: **T. FILLBACH**
EARTHWORK SHEET #1

PLOT DATE: **8/14/2006**
DRAWN BY: **G. SHANGRAW**
CHECKED BY: **T. SUMNER**
SHEET **10** OF **135**

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

TABLE OF PROJECT PROPERTY ACQUISITION

PARCEL NO.	GRANTOR	SHEET NO.	BEGINNING STATION	ENDING STATION	TAKING	REM.	RIGHTS	TITLE TAKEN	DATE	TOWN OR CITY RECORDED	BK.	PG.	REMARKS
1	KHAN, S. SHAHID & LEE A.	17,18	13+64 RT. 13+65 RT.				INSTALL & MAINTAIN (P)	OPTION	08-28-03	RANDOLPH	146	487-488	PUSH BRACE MONITOR WELL
2	VARGO, STEVEN A. & MARIE R.	17,18	13+87 LT. 13+74 LT. 13+79 LT. 13+50 LT. PRINCE ST. 200+50 LT. PRINCE ST. 200+50 LT.	14+29 LT. PRINCE ST. 200+52 LT. 13+88 LT. PRINCE ST. 200+59 LT. PRINCE ST. 200+65 LT. PRINCE ST. 200+66 LT.	918 S.F.±		CONST. (T) 90 S.F.± SLOPE (T) 5 S.F.± LANDSCAPE (T) SLOPE (P) 60 S.F.± INSTALL (T) 65 S.F.±	WDOE	10-17-03	RANDOLPH	147	401-402	 PLANT SHRUBS EROSION CONTROL
3	COWDREY, JACK A.	17,18	14+25 RT. 14+29 RT. 14+47 RT. 14+74 RT. 14+86 RT. 14+62 RT. 14+75 RT. 14+60 RT. 14+79 RT. PRINCE ST. 204+40 RT. PRINCE ST. 205+21 RT.	14+45 RT. 15+30 RT. 15+10 RT. PRINCE ST. 205+25 RT. 15+33 RT. PRINCE ST. 205+59 RT. PRINCE ST. 205+59 RT.			WALK (T) SLOPE (T) 15 S.F.± WALK (T) DRIVE (T) INSTALL & MAINTAIN (P) INSTALL (T) SLOPE (T) 495 S.F.± SLOPE (P) 1125 S.F.± SLOPE (P) 1552 S.F.± INSTALL (T) 600 S.F.± SLOPE (T) 285 S.F.±	WDOE	01-20-04	RANDOLPH	148	605-606	 20' GRAVEL PUSH BRACE & POLE UTILITY LINE EROSION CONTROL
4	ALLEN, SHERMAN V., JR.	17,18	PRINCE ST. 203+52 RT. PRINCE ST. 203+53 LT. PRINCE ST. 203+63 LT. PRINCE ST. 205+22 LT. PRINCE ST. 204+25 LT. PRINCE ST. 204+18 LT. PRINCE ST. 203+65 RT. PRINCE ST. 205+61 LT. PRINCE ST. 204+14 LT.	PRINCE ST. 206+00 LT. PRINCE ST. 204+25 LT. PRINCE ST. 205+00 LT. PRINCE ST. 204+92 LT. PRINCE ST. 203+73 LT. PRINCE ST. 205+75 LT. PRINCE ST. 204+28 LT.	0.13A±		CHANNEL (P) 1257 S.F.± CONST. (T) 1899 S.F.± DRIVE (T) SLOPE (T) 569 S.F.± INSTALL & MAINTAIN (P) INSTALL (T) REMOVE & RESET (T) ALL R.T.& I.	WDOE	03-15-04	RANDOLPH	149	617-618	 INCLUDES EROSION CONTROL 40' GRAVEL GUARD RAIL UTILITY LINE, POLE & GUY FENCE CONCRETE WALL
5	V.S.H. REALTY INC.	19	17+25 RT. 17+25 RT. 17+45 RT. 17+71 RT. 17+28 RT. 17+27 RT. 17+58 RT. 17+73 RT. 17+72 RT. 18+04 RT. 18+20 RT. 18+20 RT. 18+75 RT. 18+80 RT. 19+00 RT.	17+69 RT. 17+83 RT. 17+75 RT. 17+78 RT. 18+46 RT. 17+58 RT. 17+81 RT. 17+78 RT. 18+14 RT. 19+80 RT. 18+88 RT. 19+40 RT. 19+65 RT.			CHANNEL (P) 1842 S.F.± CONST. (T) 570 S.F.± SLOPE (P) 599 S.F.± SLOPE (T) 168 S.F.± INSTALL (T) DITCH & DRAINAGE (P) CULVERT & D.I. (P) INSTALL (T) INSTALL (T) DRIVE (T) LANDSCAPE (T) INSTALL (T) ACCESS (T) CULVERT (P) INSTALL (T) 111 S.F.±	WDOE	05-10-04	RANDOLPH	150	447-450	INCLUDES EROSION CONTROL UTILITY LINE, POLE & GUY CURB & GUARD RAIL BARRICADE 40' PAVED PLANT SHRUBS, IF NECESSARY CURB ACCESS FROM DETOUR EROSION CONTROL

REVISION NO.	SHEET	DESCRIPTION OF REVISION	DATE	MADE BY	APPROVED BY
1	15,17 18	PARCEL NO. 4 ALLEN. ADD REMOVE & RESET (T) FOR FENCE FROM 205+61 LT. ~ 205+75 LT ADD ALL R.T. & I. FOR CONCRETE WALL FROM 204+14 LT. ~ 204+28 LT. PER C.O. 9250.	07-26-02	G.J.F.	R.P.D.
2	16,19	PARCEL NO. 6 SAMMIS. SPLIT THE EXISTING UTILITY EASE. (P) INTO TWO INDIVIDUAL RIGHTS. A UTILITY EASE. (P) FROM STA. 17+20 LT. ~ 17+80 LT.; 818 S.F.± AND A CLEAR & TRIM (P) FROM STA. 17+80 LT. ~ 18+32 LT.; 468 S.F.± PER C.O. 9298.	03-25-03	M.J.R.	R.P.D.
		ELECTRONIC IPARMS TO STRUCTURES.	07-24-06	J.A.B.	

ACCT.mcassidy
M:\Projects\88J096\RightOfWay\rJ096d.dgn
DATE PLOTTED 29-AUG-2006

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 (P)
TEMPORARY EASEMENT (T)

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

APPROVED: ROGER P. DUMAS DATE: 09-14-01
AGENT D. PLANS & TITLES

R.O.W. PLANS
RANDOLPH
BRF 0241(29)
15 19
SHEET 11 OF 135

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

TABLE OF PROJECT PROPERTY ACQUISITION

PARCEL NO.	GRANTOR	SHEET NO.	BEGINNING STATION	ENDING STATION	TAKING	REM.	RIGHTS			TITLE TAKEN	DATE	TOWN OR CITY RECORDED	BK.	PG.	REMARKS
6A	SAMMIS, JESSE F., III & JEAN T.	19	17+20 LT.	17+80 LT.			UTILITY EASE.	(P)	818 S.F.±	WD	03-15-04	RANDOLPH	149	621-624	
			17+30 LT.				ALL R.T. & I.								STONE WALLS
			17+20 LT.	17+85 LT.			CHANNEL	(P)	3307 S.F.±						
			17+18 LT.	17+70 LT.			DITCH & DRAINAGE	(P)							
			17+16 LT.	TH 4 51+27 LT.			DETOUR	(T)	0.23A±						TWO WAY VEHICULAR AND PEDESTRIAN
			17+68 LT.				INSTALL & MAINTAIN	(P)							GUY WIRE
			17+63 LT.				REMOVE & RESET	(T)							SIGN PERSONAL
			17+80 LT.	18+32 LT.			CLEAR & TRIM	(P)	468 S.F.±						
			18+00 LT.				REMOVE & RESET	(T)							SIGN PERSONAL
			17+16 LT.	17+90 LT.			INSTALL	(T)	401 S.F.±						EROSION CONTROL
			18+23 LT.	18+32 LT.			INSTALL	(T)	216 S.F.±						EROSION CONTROL
			17+78 LT.	17+90 LT.			INSTALL	(T)							GUARD RAIL
			17+90 LT.				ACCESS	(T)							ACCESS FROM DETOUR IN COMMON WITH PARCEL #7
			17+90 LT.				DRIVE	(T)							20' GRAVEL IN COMMON WITH PARCEL #7
			18+10 LT.				REMOVE & RESET	(T)							PROPANE TANK & BOLLARDS
			18+10 LT.	18+50 LT.			INSTALL	(T)							SHEET PILING
			18+05 LT.	18+17 LT.			INSTALL	(T)							RETAINING WALL & RAILING
			18+06 LT.	18+17 LT.			INSTALL	(T)							CURBING
			TH 4 50+15 LT.				DRIVE	(T)							22' PAVED
			17+70 LT.	18+43 LT.			CULVERT & D.I.	(P)							
			TH 4 50+90 LT.				DRIVE	(T)							22' PAVED
			DRIVE STA. 81+00 RT.				INSTALL	(T)							ATTACH NEW WALL TO EXISTING WALL
			17+16 LT.	TH 4 51+50 LT.			EASE TO REMOVE	(T)							UST & CONTAMINATED SOIL IN CONSTRUCTION LIMITS
			DRIVE STA. 81+47 LT.	DRIVE STA. 81+50 RT.			CUL., DIT., D.I. & DR.	(T)							
			TH 4 51+83 LT.				INSTALL & MAINTAIN	(P)							GUY WIRE
6B		19	18+82 LT.	19+05 LT.	748 S.F.±		ALL R. T. & I.								TRAFFIC ISLAND
7	SAMMIS, JESSE F., III	19	17+90 LT.				ACCESS	(T)				RANDOLPH			ACCESS FROM DETOUR IN COMMON WITH PARCEL #6
			17+90 LT.				DRIVE	(T)							20' GRAVEL IN COMMON WITH PARCEL #6
8	CENTRAL VERMONT PUBLIC SERVICE CORP.														UTILITY
9	VERIZON NEW ENGLAND, INC.														UTILITY
10	ADELPHIA CABLE COMMUNICATIONS														UTILITY

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

ACCT.mcassidy
M:\Projects\88J096\RightOfWay\rJ096d.dgn
DATE PLOTTED 29-AUG-2006

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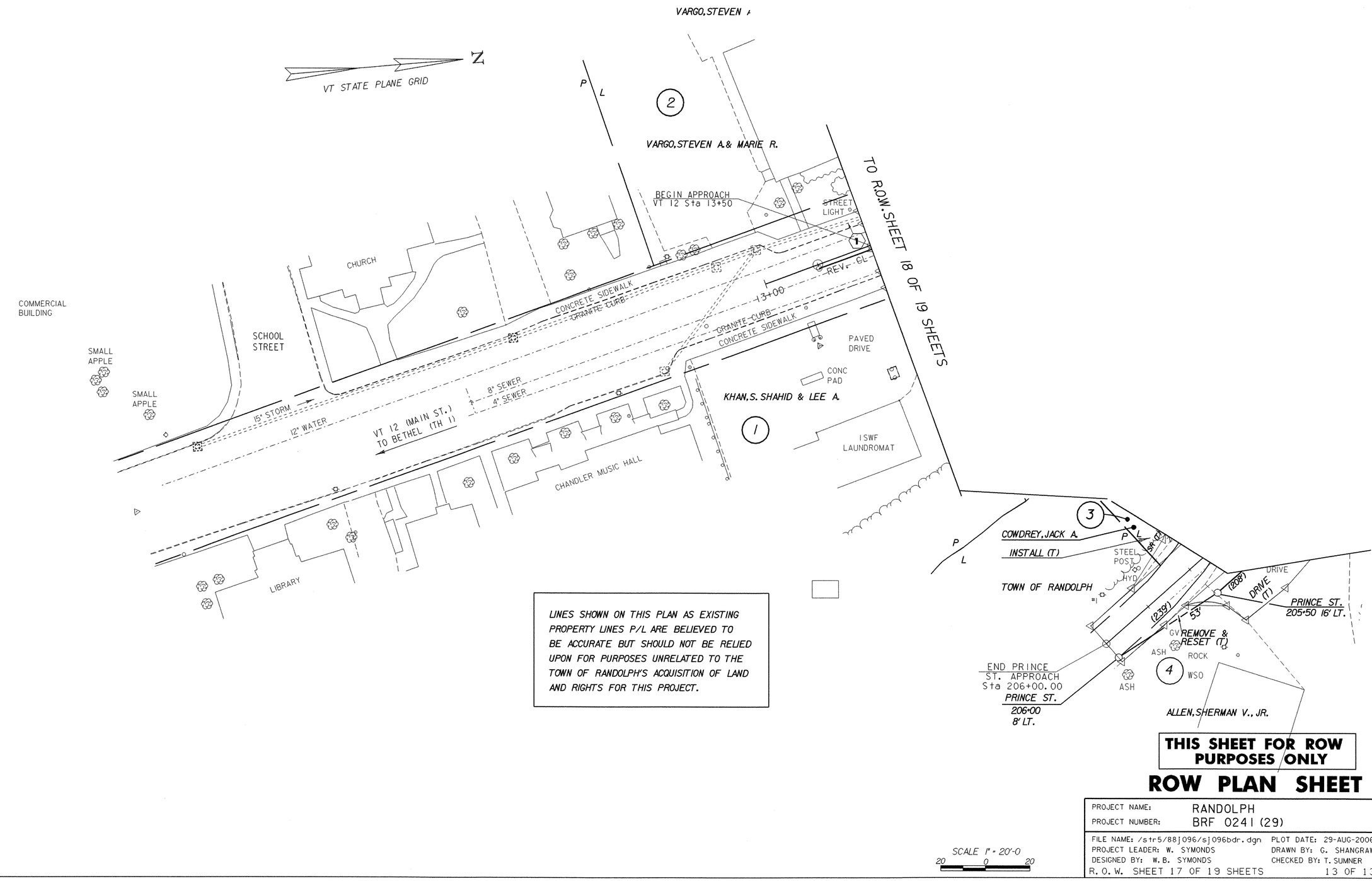
[W]- WATER SOURCES

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
PROPERTY LINE
TOP OF CUT
TOE OF SLOPE

APPROVED: ROGER P. DUMAS DATE: 09-14-01
AGENT D. PLANS & TITLES

R. O. W. PLANS
RANDOLPH
BRF 0241(29)
16 19
SHEET 12 OF 135



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 RANDOLPH'S ACQUISITION OF LAND AND RIGHTS FOR THIS PROJECT.

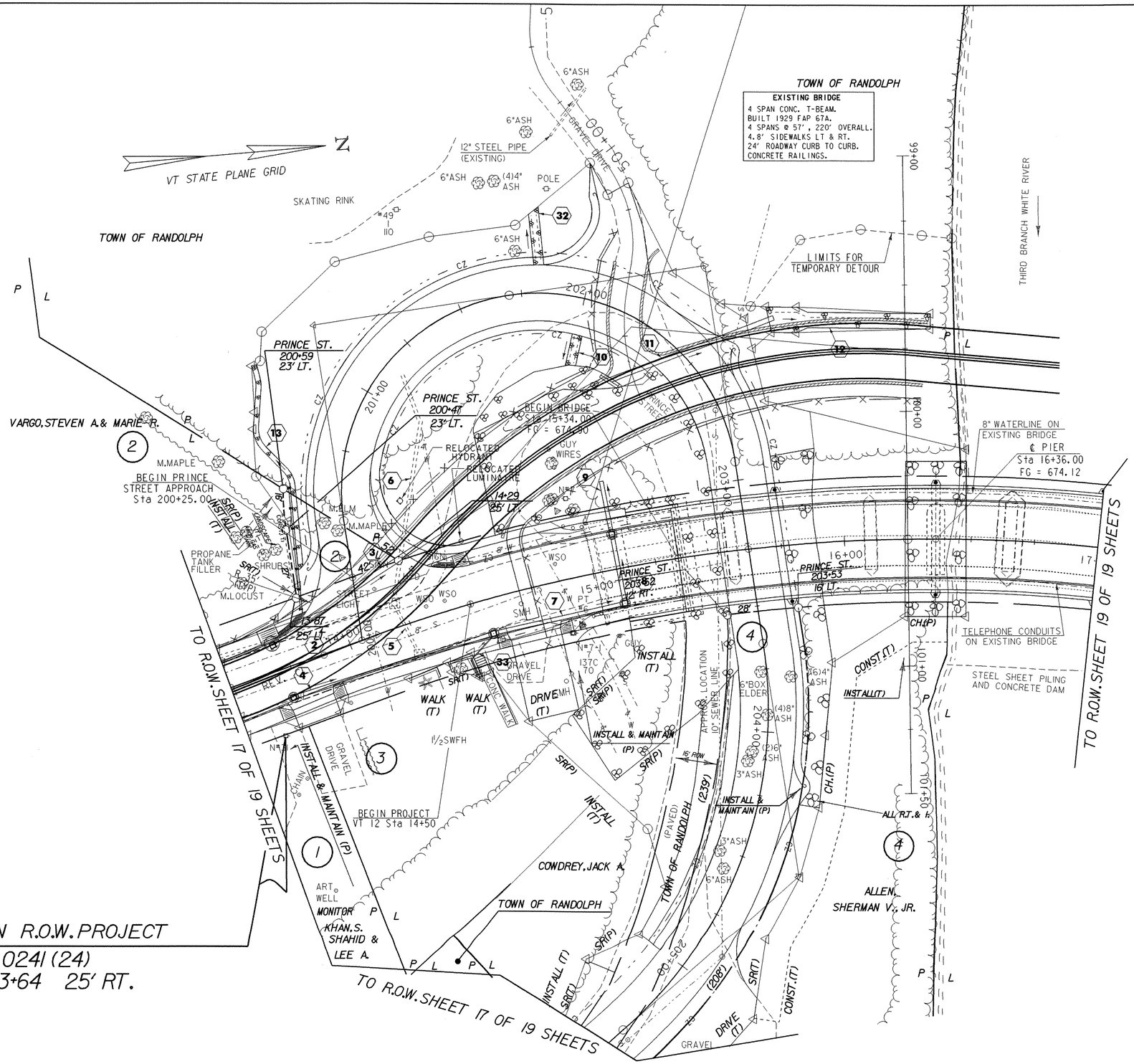
THIS SHEET FOR ROW PURPOSES ONLY

ROW PLAN SHEET 1

SCALE 1" = 20'-0
20 0 20

PROJECT NAME:	RANDOLPH
PROJECT NUMBER:	BRF 0241 (29)
FILE NAME: /str5/88j096/sj096bdr.dgn	PLOT DATE: 29-AUG-2006
PROJECT LEADER: W. SYMONDS	DRAWN BY: G. SHANGRAW
DESIGNED BY: W.B. SYMONDS	CHECKED BY: T. SUMNER

R. O. W. SHEET 17 OF 19 SHEETS



SCALE 1" = 20'-0
20 0 20

EXCAVATION OF SURFACES & PAVEMENT

MAINLINE 14+00 - 15+00
PRINCE 200+15 - 205+00

COLD PLANING BITUMINOUS PAVEMENT

MAINLINE 13+50 - 14+00

CAST-IN-PLACE CONCRETE BRIDGE RAIL (TEXAS)

MAINLINE 15+17.4 - 17+68.8 LT.
MAINLINE 15+10.2 - 17+69.2 RT.

TREATED TIMBER BIN-TYPE RETAINING WALL (MOD.-SOLDIER PILE)

PRINCE STREET
200+15 - 200+60 LT.

REMOVAL OF BRIDGE PAVEMENT

MAINLINE 15+00 - 17+60

CHANGE ELEVATION OF SEWER MANHOLE

MAINLINE 14+78.2' RT.
PRINCE 202+71.2' RT.
PRINCE 204+88.11' LT.
PRINCE 205+36.4' LT.

VERTICAL GRANITE CURB

ML 13+50.0 - 13+71.3 LT.
ML 13+50.0 - 13+69.2 RT.
ML 13+88.2 - 14+60.7 RT.
ML 14+50.3 - 15+34.3 LT.
ML 14+83.1 - 15+34.3 RT.

GRANITE BRIDGE CURB

ML 15+34.3 - 17+37.3 LT.
ML 15+34.3 - 17+37.3 RT.

TREATED TIMBER CURB

ML 14+52 LT. - PRINCE 201+98 RT.
PRINCE 200+42 LT. - 201+82 LT.

PORTLAND CEMENT CONCRETE SIDEWALK - 5" (MOD.)

ML 13+50 - 13+88 LT.
ML 13+50 - 15+34 RT.
ML 14+39 - 13+34 LT.
ML 14+47 RT.
NOTE: MATCH WIDTH & GRADE OF EXISTING SIDEWALKS IN AREAS WHERE NEW SIDEWALK ABUTS EXISTING SIDEWALKS.

CONSTRUCT SIDEWALK RAMP, TYPE I

MAINLINE 13+72 LT.
MAINLINE 14+51LT.

DETECTABLE WARNING SURFACE

13+75 - 13+88 LT.
14+39 - 14+49 LT.

CONSTRUCT DRIVE

MAINLINE 14+74 RT. w/ 12" AGGREGATE SURFACE COURSE

PRINCE 202+10 LT. w/ 6" AGGREGATE SURFACE COURSE

PRINCE 205+15 LT. w/ 12" AGGREGATE SURFACE COURSE

CONSTRUCT REINFORCED CONCRETE RETAINING WALL

MAINLINE 14+29 - 14+45 RT.

REMOVAL OF EXISTING FENCE

ML 17+70 RT. (CUMBY'S)

STEEL BEAM GUARD RAIL (GALVANIZED)

PRINCE 200+30.5 - 201+95 LT.
PRINCE 200+43.4 - 202+45.8 RT.
PRINCE 202+56.0 - 204+18.3 LT.

HEAVY DUTY STEEL BEAM GUARDRAIL (GALVANIZED)

ML 14+30.3 - 15+18.9 LT.
ML 14+88.0 - 15+11.7 RT.

TERMINAL CONNECTOR FOR STEEL BEAM GUARDRAIL

ML 15+20 LT.
ML 15+13 RT.

ANCHOR FOR STEEL BEAM RAIL

ML 14+50 LT.
PRINCE 200+40 LT.
PRINCE 201+85 LT.
PRINCE 202+40 RT.
PRINCE 202+67 LT.
PRINCE 204+10 LT.

REMOVAL & DISPOSAL OF EXISTING GUARDRAIL

ML 14+88.4 - 15+00.0 LT.
ML 14+87.2 - 15+01.0 RT.

DECIDUOUS TREES & DECIDUOUS SHRUBS

30 TREES
10 SHRUBS
SEE EROSION CONTROL FINAL CONDITIONS SHEET FOR PROPOSED LOCATIONS

RELOCATE HYDRANT

FROM PRINCE 200+25, 23' RT.
TO PRINCE 200+53, 23' RT.

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 RANDOLPH'S ACQUISITION OF LAND AND RIGHTS FOR THIS PROJECT.

REMOVE & RESETTING LIGHT POLE

FROM MAINLINE 14+16, 17' LT.
TO MAINLINE 14+53, 25' LT.

CONSTRUCT CONCRETE STAIRS w/ METAL HAND RAILING

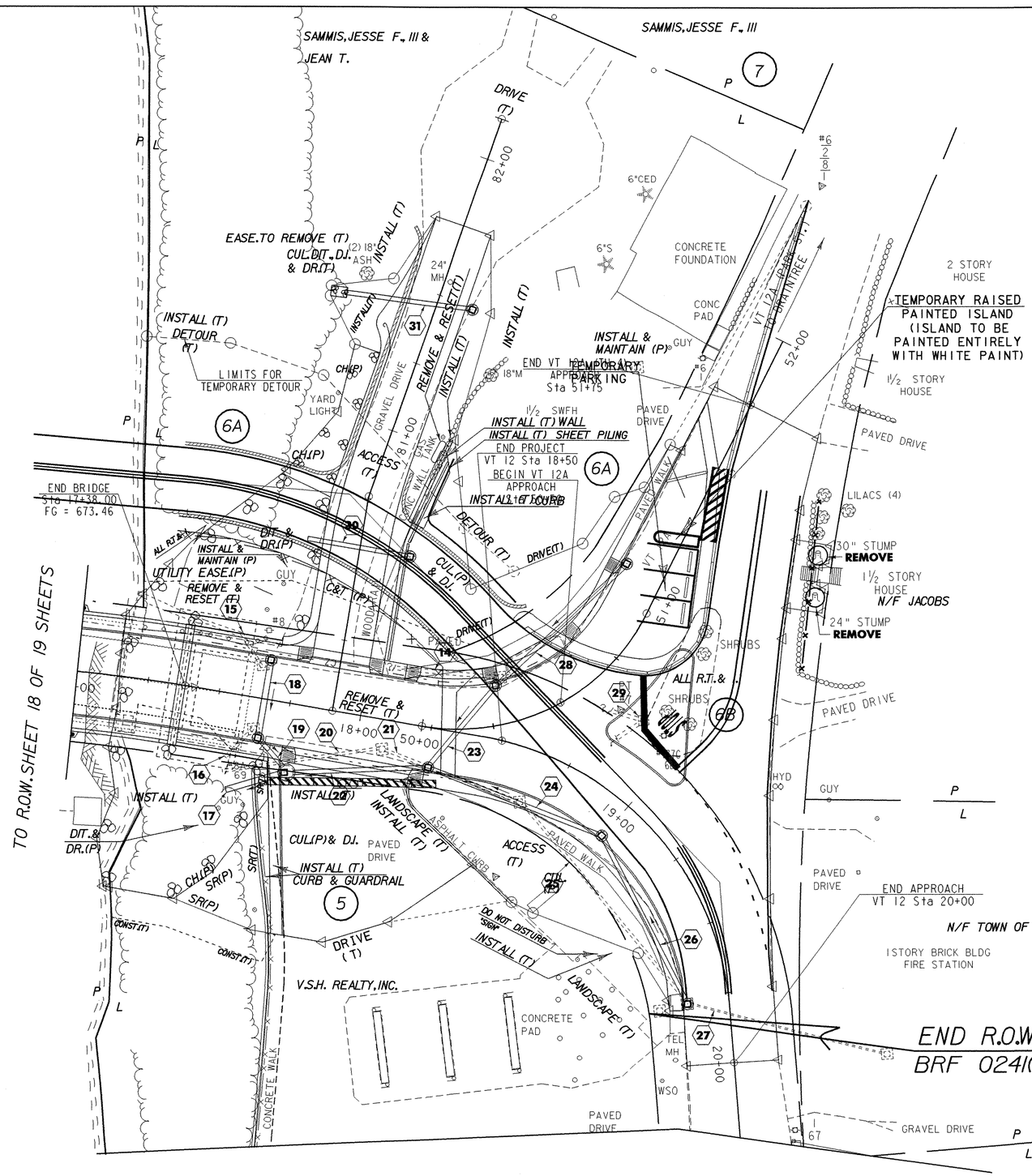
MAINLINE 14+47 RT.

THIS SHEET FOR ROW PURPOSES ONLY

ROW PLAN SHEET 2

PROJECT NAME:	RANDOLPH
PROJECT NUMBER:	BRF 0241 (29)
FILE NAME: /str5/88j096/sj096bdr.dgn	PLOT DATE: 29-AUG-2006
PROJECT LEADER: W. SYMONDS	DRAWN BY: G. SHANGRAW
DESIGNED BY: W.B. SYMONDS	CHECKED BY: T. SUMNER

R. O. W. SHEET 18 OF 19 SHEETS



REMOVE EXISTING STUMPS
(PAID FOR UNDER ITEM 201.10)

VT12A 51+25, 50' RT.
VT12A 51+39, 44' RT.

COLD PLANING BITUMINOUS PAVEMENT

MAINLINE 19+50 - 20+00
VT 12A 51+25 - 51+50

VERTICAL GRANITE CURB

ML 17+37.3 - 17+79.2 LT.
ML 17+37.3 - 17+79.2 RT.
ML 18+00.8 - 18+17.2 LT.
ML 18+20.8 - 19+79.2 RT.
VT 12A 50+25.3 - 50+48.7 LT.
VT 12A 51+02.0 - 51+50.0 LT.
ISLAND @ VT12A RT.

CAST-IN-PLACE
CONCRETE CURB, TYPE B (MOD.)

CUMBERLAND DRIVE
ML 17+75, 20' RT. TO
ML 17+86, 80' RT.

CUMBERLAND DRIVE
ML 18+21, 20' RT. TO
ML 18+88, 52' RT.

PORTLAND CEMENT
CONCRETE SIDEWALK - 5" (MOD.)

ML 17+38 - 18+13 LT.
ML 17+38 - 17+75 RT.
ML 18+25 - 19+79 RT.
VT 12A 50+30 - 50+69 LT.
VT 12A 51+06 - 51+50 LT.
ML 17+75 RT. (CUMBERLAND)
NOTE: MATCH WIDTH & GRADE OF EXISTING SIDEWALKS IN AREAS WHERE NEW SIDEWALK ABUTS EXISTING SIDEWALKS.

CONSTRUCT REINFORCED
CONCRETE RETAINING WALL

DRIVE 80+20 - 81+04 RT.

METAL HAND RAILING

DRIVE 80+20 - 81+04 RT.
VT. 12A 51+00 - 51+57 RT.

PRECAST REINFORCED
CONCRETE CURB, TYPE A (MOD.)

80+20 - 80+95 RT.

DRY RUBBLE MASONRY (MOD.)

VT12A 51+32 RT.

PORTLAND CEMENT
CONCRETE SIDEWALK - 8" (MOD.)

ML 17+75 - 18+25 RT.
ML 18+13 LT. - VT 12A 50+30 LT.
VT 12A 50+69 - 51+06 LT.

STEEL BEAM GUARD RAIL (GALVANIZED)

DRIVE 80+37.2 - 81+34.4 LT.

HEAVY DUTY STEEL
BEAM GUARDRAIL (GALVANIZED)

ML 17+67.3 - DRIVE 80+37.2 LT.

TERMINAL CONNECTOR FOR
STEEL BEAM GUARDRAIL

ML 17+66 LT.

ANCHOR FOR STEEL BEAM RAIL

DRIVE 81+24 LT.

REMOVAL & DISPOSAL
OF EXISTING GUARDRAIL

ML 17+21.4 - 17+64.0 LT.

CONSTRUCT DRIVE

MAINLINE 17+90 LT. w/ 12"
AGGREGATE SURFACE COURSE

MAINLINE 18+04 RT. w/
2" BITUMINOUS PAVEMENT

VT 12A 50+15 LT. w/
2" BITUMINOUS PAVEMENT

VT 12A 50+90 LT. w/
2" BITUMINOUS PAVEMENT

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THIS SHEET FOR ROW PURPOSES ONLY

ROW PLAN SHEET 3

PROJECT NAME: RANDOLPH
PROJECT NUMBER: BRF 0241(29)

FILE NAME: /str5/88j096/sj096bdr.dgn PLOT DATE: 29-AUG-2006
PROJECT LEADER: W. SYMONDS DRAWN BY: G. SHANGRAW
DESIGNED BY: W.B. SYMONDS CHECKED BY: T. SUMNER
R.O.W. SHEET 19 OF 19 SHEETS

GPS CONTROL POINTS

HVCTRL # 1

STANDARD DISK STAMPED

Stoneleigh

N = 518944.653
E = 1601311.789
ELEV. = 685.70

FROM THE WEST END OF VT 66 BRIDGE OVER I89 IN RANDOLPH, GO WEST FOR 1.8 MI. TO THE INTERSECTION OF STOCK FARM ROAD LEFT. TRAVEL SOUTHWARD ALONG STOCK FARM ROAD FOR 0.4 MI. TO A DRIVEWAY RIGHT. TURN RIGHT, GO WESTWARD FOR 0.05 MI. TO STONELEIGH EQUIPMENT BARN, SITE OF THE MARK ON THE MOWED PROMOMTORY SOUTH OF THE BARN.

HVCTRL # 2

STANDARD DISK STAMPED

Stoneleigh Az

N = 520797.760
E = 1600128.861
ELEV. = 669.29

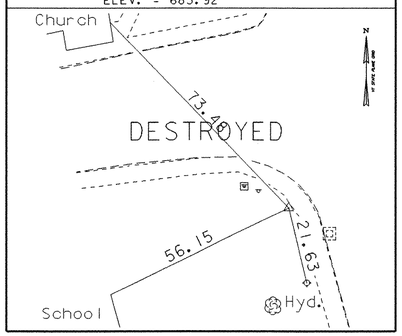
FROM THE WEST END OF VT 66 BRIDGE OVER I89 IN RANDOLPH, GO WEST FOR 1.9 MI. TO THE MARK ON THE LEFT AT THE NORTH END OF A GOLF COURSE. MARK IS 0.5 MI. EAST ALONG ROUTE 66 FROM ITS INTERSECTION WITH VT 12 IN RANDOLPH.

- DESCRIPTION PROVIDED BY VERMONT AGENCY OF TRANSPORTATION GEODETIC SURVEY UNIT
- TO ALLOW THE STATE PLANE COORDINATES TO FIT THE AGENCY DESIGN PLANE, SUBTRACT 500,000 FROM THE NORTHING AND SUBTRACT 1,500,000 FROM THE EASTING

TRAVERSE TIES

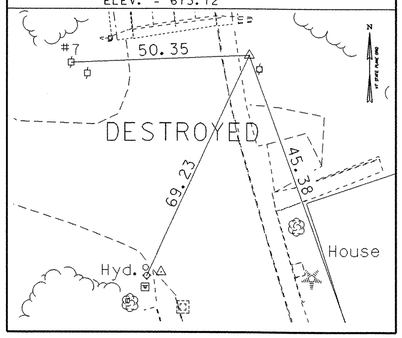
HVCTRL # 5

NORTH = 16518.28
EAST = 96829.27
ELEV. = 683.92



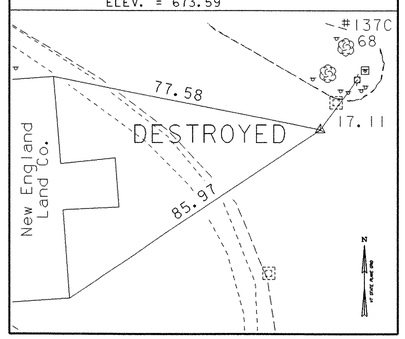
HVCTRL # 6

NORTH = 19959.24
EAST = 96763.95
ELEV. = 673.72



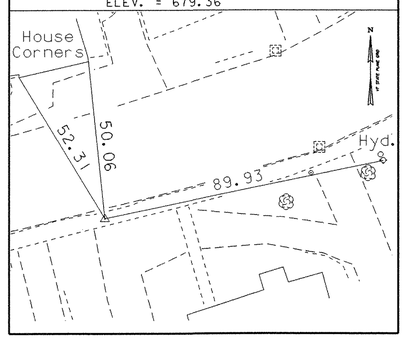
HVCTRL # 7

NORTH = 20351.96
EAST = 96780.46
ELEV. = 673.59



HVCTRL # 8

NORTH = 20413.33
EAST = 97286.04
ELEV. = 679.36



HVCTRL

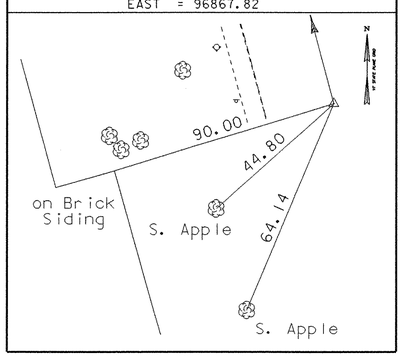
NORTH =
EAST =
ELEV. =

- MAIN TRAVERSE COMPLETED 03/08/93 by R. Gilman P.C. & T. Morse

ALIGNMENT TIES

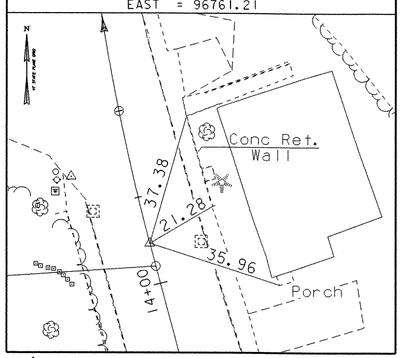
ML POT 10+00.00

NORTH = 19481.21
EAST = 96867.82



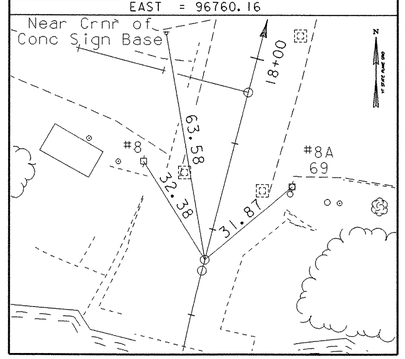
ML PC 14+11.67

NORTH = 19878.84
EAST = 96761.21



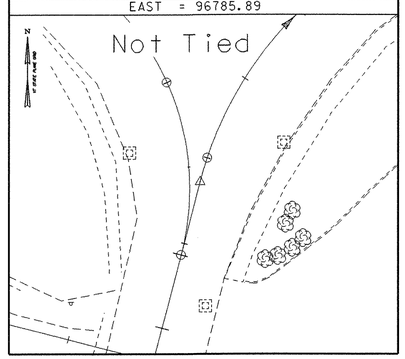
ML PT 17+41.14

NORTH = 20204.64
EAST = 96760.16



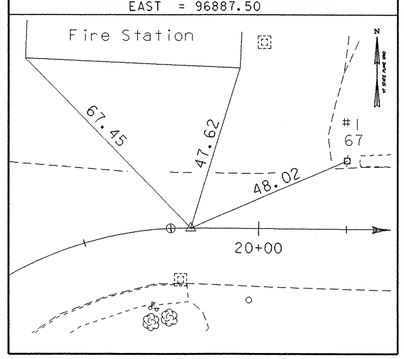
ML PC 18+42.90

NORTH = 20303.10
EAST = 96785.89



ML PT 19+80.74

NORTH = 20380.93
EAST = 96887.50



- ALIGNMENT STAKED 08/1998 by R. Gilman P.C. & T. Companion

DATUM

VERTICAL NAD 88
HORIZONTAL NAVD 83
ADJUSTMENT compass

TIE SHEET 1

PROJECT NAME: Randolph
PROJECT NUMBER: BRF 024I(29)

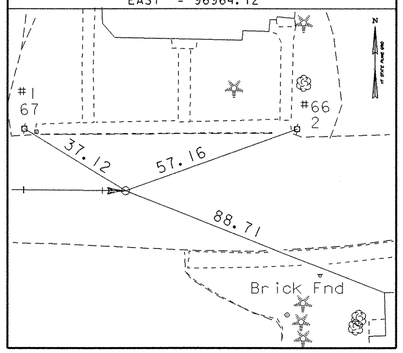
FILE NAME: 88J096/survey/xJ096t1.dgn
PROJECT LEADER: W. SYMONDS
DESIGNED BY: SURVEY
sj096tie1.i

PLOT DATE: 29-AUG-2006
DRAWN BY: R. Bullock
CHECKED BY: SURVEY
SHEET 16 OF 135

ALIGNMENT TIES

ML POT 20+57.36

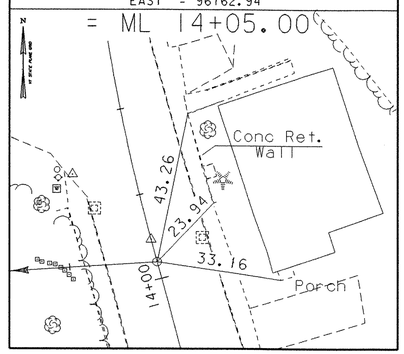
NORTH = 20380.33
EAST = 96964.12



Prin POT 200+00.00

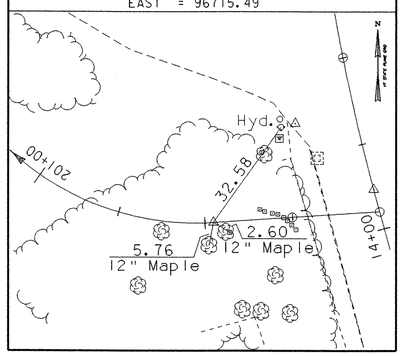
NORTH = 19872.39
EAST = 96762.94

= ML 14+05.00



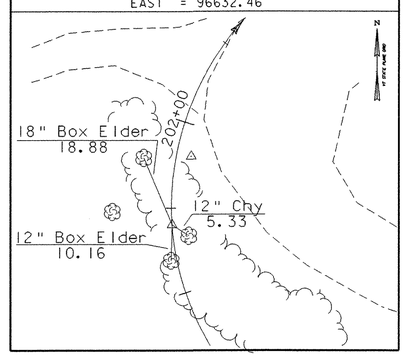
Prin PC 200+47.56

NORTH = 19869.23
EAST = 96715.49



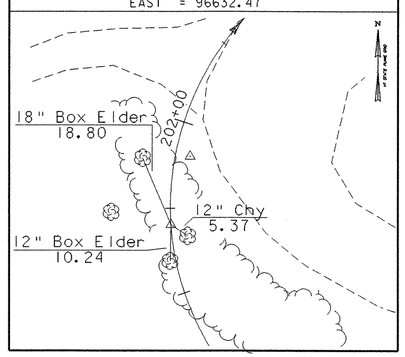
Prin PT 201+70.07

NORTH = 19941.94
EAST = 96632.46



Prin PC 201+70.15

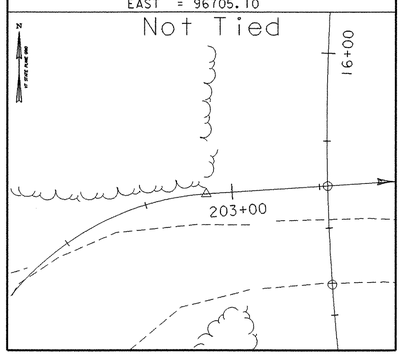
NORTH = 19941.86
EAST = 96632.47



ALIGNMENT TIES

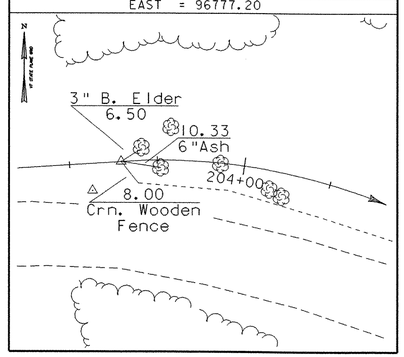
Prin PT 202+92.67

NORTH = 20024.96
EAST = 96705.10



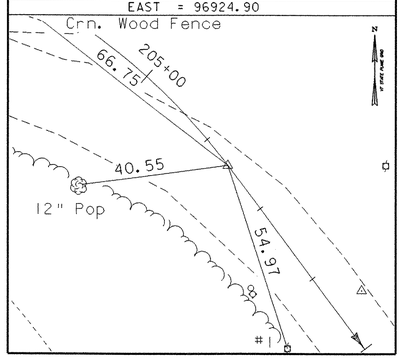
Prin PC 203+64.94

NORTH = 20029.78
EAST = 96777.20



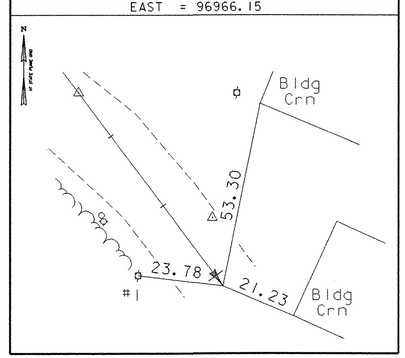
Prin PT 205+34.54

NORTH = 19961.66
EAST = 96924.90



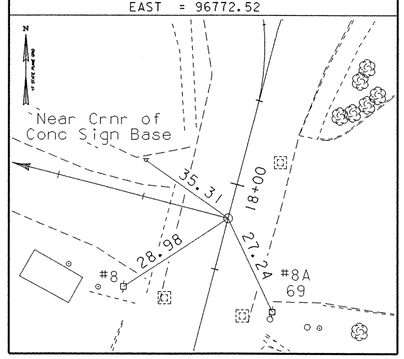
Prin POT 206+03.63

NORTH = 19906.23
EAST = 96966.15



Dr80+00.00=ML17+90.00

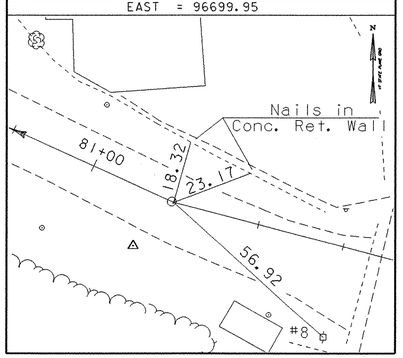
NORTH = 20251.91
EAST = 96772.52



ALIGNMENT TIES

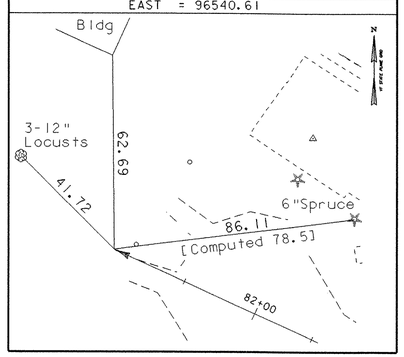
Dr. PI 80+75.00

NORTH = 20270.87
EAST = 96699.95



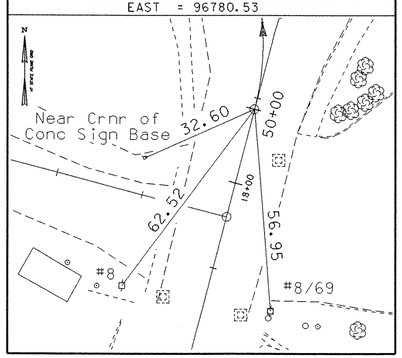
Dr. POT 82+50.00

NORTH = 20343.23
EAST = 96540.61



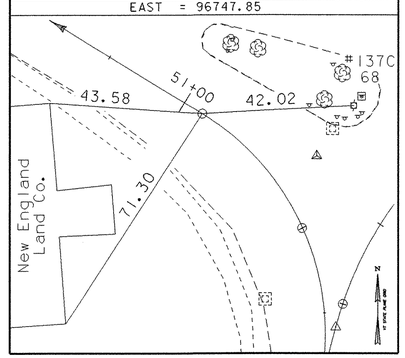
ThPC50+00.00=ML18+21.68

NORTH = 20282.57
EAST = 96780.53



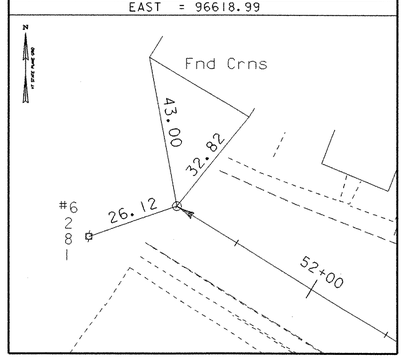
TH PT 50+93.99

NORTH = 20364.02
EAST = 96747.85



TH POT 52+45.36

NORTH = 20443.43
EAST = 96618.99



DATUM

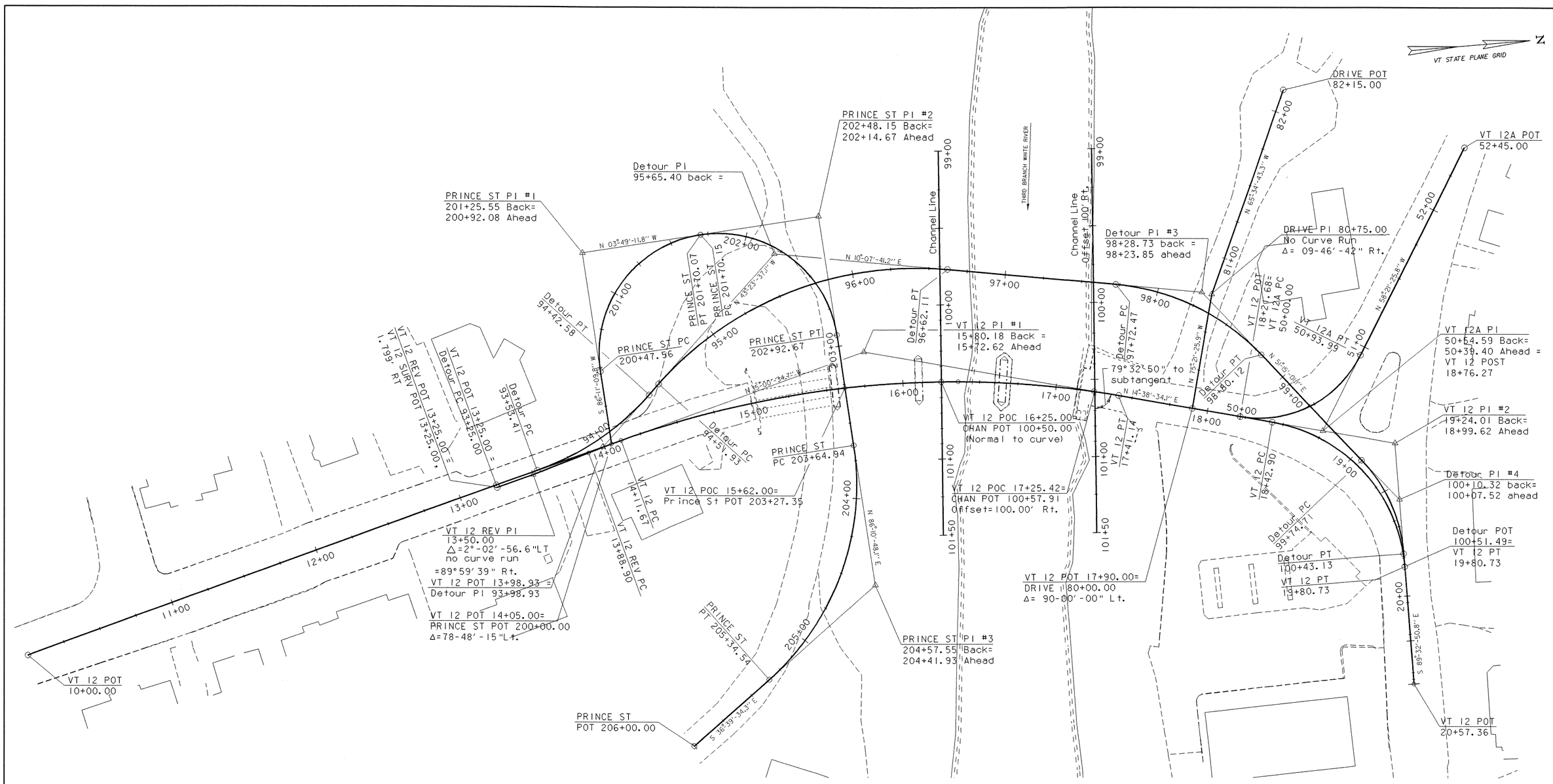
VERTICAL	NAD 88
HORIZONTAL	NAVD 83
ADJUSTMENT	compass

TIE SHEET 2

PROJECT NAME: Randolph
PROJECT NUMBER: BRF 0241(29)

FILE NAME: 88J096/survey/xJ096ti.dgn
PROJECT LEADER: W. SYMONDS
DESIGNED BY: SURVEY
sJ096tie2.i

PLOT DATE: 29-AUG-2006
DRAWN BY: R. Bullock
CHECKED BY: SURVEY
SHEET 17 OF 135



DETOUR CURVE DATA

Detour CURVE #1	Detour CURVE #2	Detour CURVE #3	Detour CURVE #4
Δ=28°23'02" Lt.	Δ=53°31'18" Rt.	Δ=41°07'20" Rt.	Δ=39°12'08" Rt.
D=31°49'52"	D=25°27'53"	D=38°11'50"	D=57°17'45"
R=180.00'	R=225.00'	R=150.00'	R=100.00'
T=45.52'	T=113.46'	T=56.27'	T=35.61'
L=89.17'	L=210.18'	L=107.66'	L=68.42'
E=5.67'	E=26.99'	E=10.21'	E=6.15'

PRINCE STREET CURVE DATA

PRINCE STREET CURVE #1 DATA	PRINCE STREET CURVE #2 DATA	PRINCE STREET CURVE #3 DATA
Δ=89°59'39" Rt.	Δ=90°00'00" Rt.	Δ=57°09'38" Rt.
D=73°27'22"	D=73°27'22"	D=33°42'12"
R=78.00	R=78.00'	R=170.00'
T=77.99	T=78.00'	T=92.61'
L=122.51	L=122.52'	L=169.60'
E=32.30	E=32.30'	E=23.59'
BANK=Normal	BANK=NORMAL	BANK=Normal

VT 12 CURVE DATA

VT ROUTE 12 CURVE #1 DATA	VT ROUTE 12 CURVE #2 DATA
Δ=29°39'09" Rt.	Δ=75°48'35" Rt.
D=9°00'00"	D=55°00'08"
R=636.62'	R=104.17'
T=168.51'	T=81.11'
L=329.47'	L=137.83'
E=21.93'	E=27.85'
BANK=Normal	BANK=NORMAL

VT 12A CURVE DATA

VT 12A CURVE DATA
Δ=72°60'00" Lt.
D=77°40'05"
R=73.77'
T=54.59'
L=93.99'
E=18.00'
BANK=NORMAL

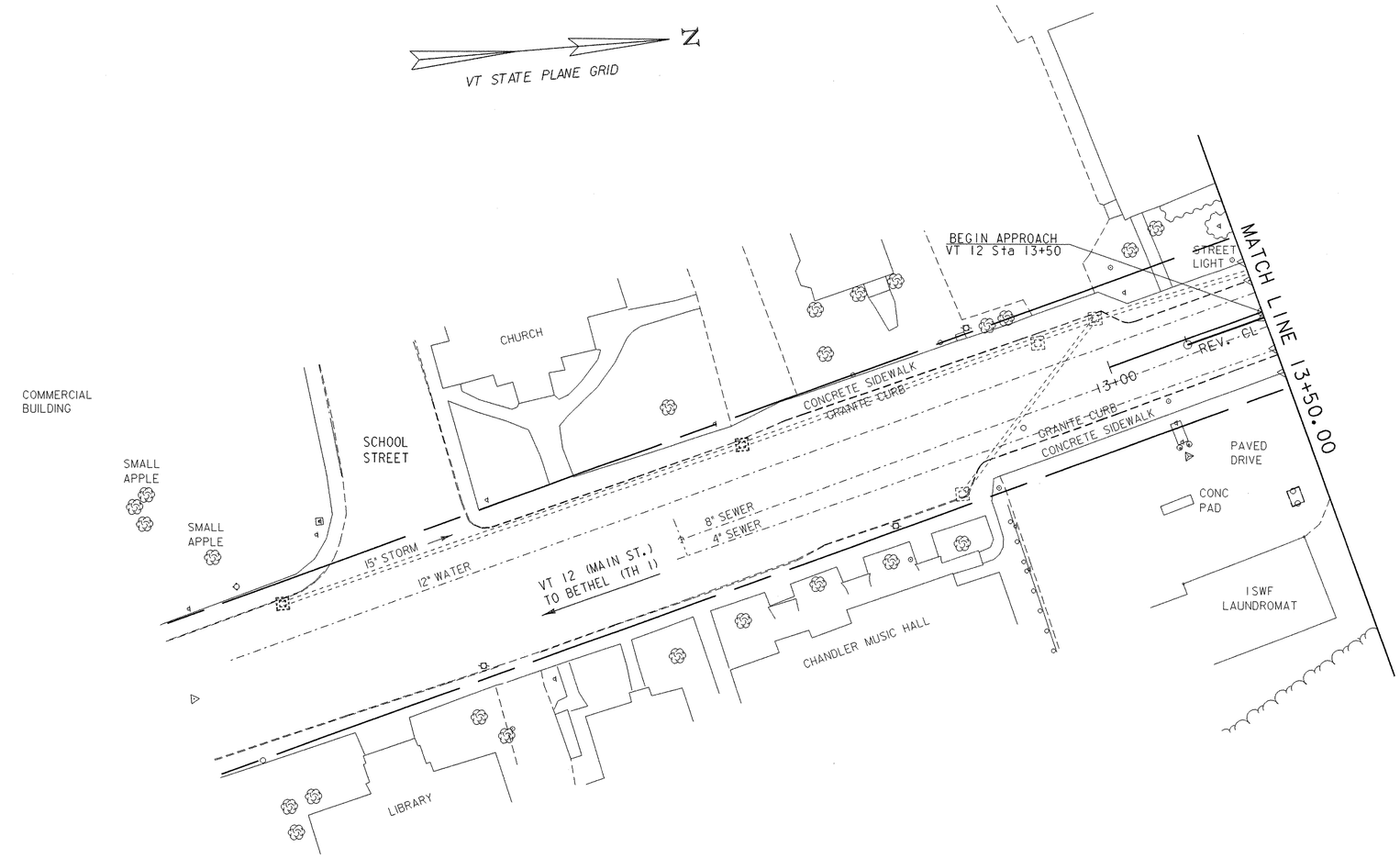
SCALE 1" = 30'
30 20 10 0 30

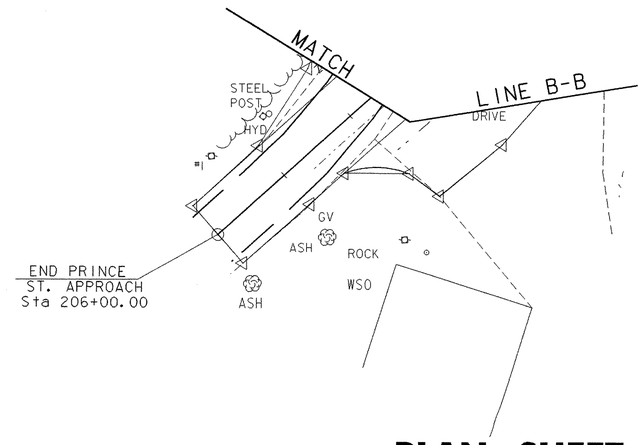
ALIGNMENT SHEET

PROJECT NAME: RANDOLPH
PROJECT NUMBER: BRF 0241(29)

FILE NAME: /str5/88J096/sJ096align.dgn
PROJECT LEADER: W. SYMONDS
DESIGNED BY: W. SYMONDS
88J096align.I

PLOT DATE: 29-AUG-2006
DRAWN BY: G. SHANGRAW
CHECKED BY: T. SUMNER
SHEET 18 OF 135





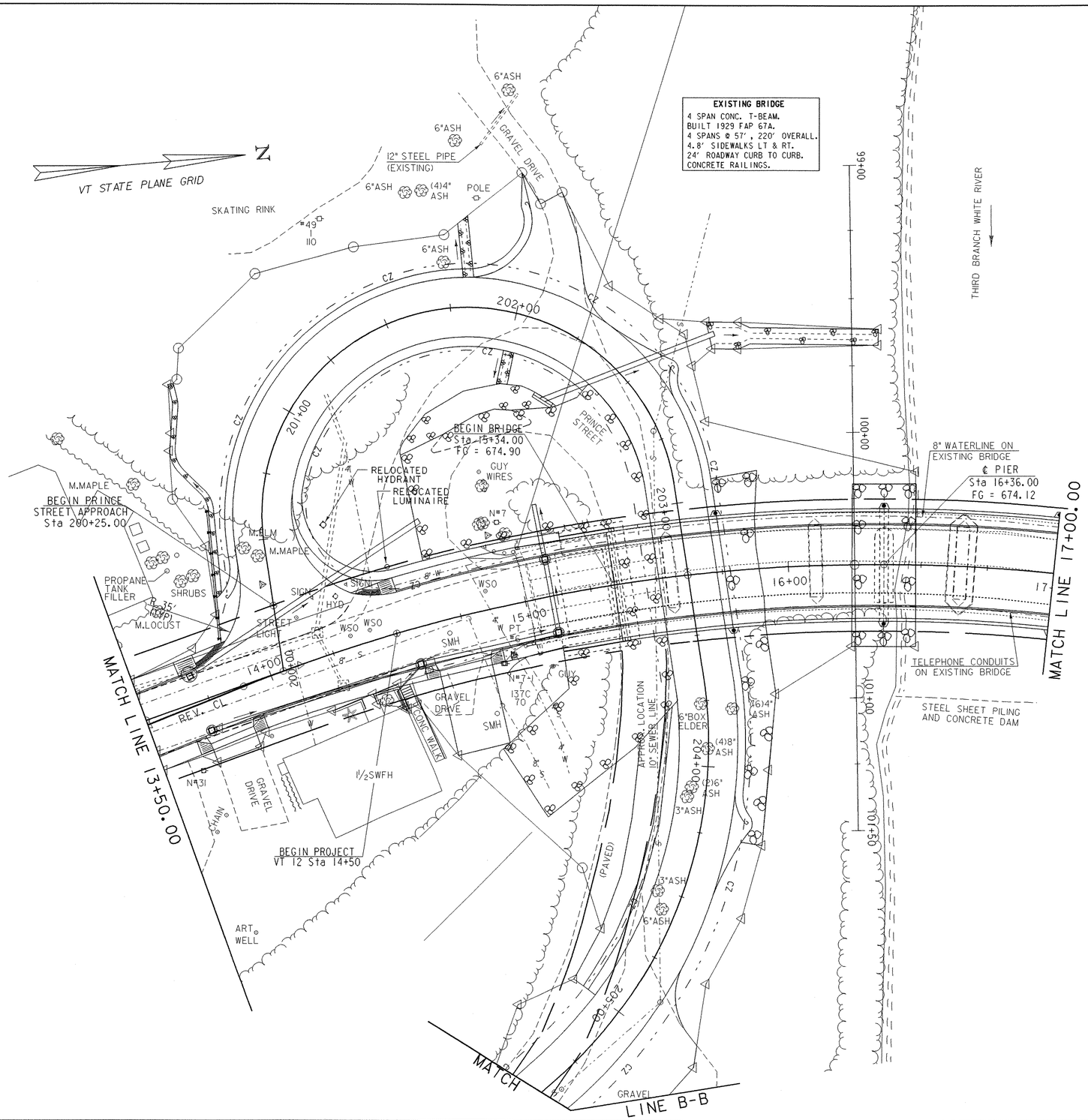
SCALE 1" = 20'-0
20 0 20

PLAN SHEET 1

PROJECT NAME:	RANDOLPH
PROJECT NUMBER:	BRF 0241(29)

FILE NAME: /str5/88j096/sj096bdr.dgn
PROJECT LEADER: W. SYMONDS
DESIGNED BY: W.B. SYMONDS
sj096la1.i

PLOT DATE: 29-AUG-2006
DRAWN BY: G. SHANGRAW
CHECKED BY: T. SUMNER
SHEET 20 OF 135



EXCAVATION OF SURFACES & PAVEMENT

MAINLINE 14+00 - 15+00
PRINCE 200+15 - 205+00

COLD PLANING BITUMINOUS PAVEMENT

MAINLINE 13+50 - 14+00

CAST-IN-PLACE CONCRETE BRIDGE RAIL (TEXAS)

MAINLINE 15+17.4 - 17+68.8 LT.
MAINLINE 15+10.2 - 17+69.2 RT.

TREATED TIMBER BIN-TYPE RETAINING WALL (MOD.-SOLDIER PILE)

PRINCE STREET
200+15 - 200+60 LT.

REMOVAL OF BRIDGE PAVEMENT

MAINLINE 15+00 - 17+60

CHANGE ELEVATION OF SEWER MANHOLE

MAINLINE 14+78, 2' RT.
PRINCE 202+71, 2' RT.
PRINCE 204+88, 11' LT.
PRINCE 205+36, 4' LT.

VERTICAL GRANITE CURB

ML 13+50.0 - 13+71.3 LT.
ML 13+50.0 - 13+69.2 RT.
ML 13+88.2 - 14+60.7 RT.
ML 14+50.3 - 15+34.3 LT.
ML 14+83.1 - 15+34.3 RT.

GRANITE BRIDGE CURB

ML 15+34.3 - 17+37.3 LT.
ML 15+34.3 - 17+37.3 RT.

TREATED TIMBER CURB

ML 14+52 LT. - PRINCE 201+98 RT.
PRINCE 200+42 LT. - 201+82 LT.

PORTLAND CEMENT CONCRETE SIDEWALK - 5" (MOD.)

ML 13+50 - 13+88 LT.
ML 13+50 - 15+34 RT.
ML 14+39 - 13+34 LT.
ML 14+47 RT.
NOTE: MATCH WIDTH & GRADE OF EXISTING SIDEWALKS IN AREAS WHERE NEW SIDEWALK ABUTS EXISTING SIDEWALKS.

CONSTRUCT SIDEWALK RAMP, TYPE I

MAINLINE 13+72 LT.
MAINLINE 14+51LT.

DETECTABLE WARNING SURFACE

13+75 - 13+88 LT.
14+39 - 14+49 LT.

CONSTRUCT DRIVE

MAINLINE 14+74 RT. w/ 12" AGGREGATE SURFACE COURSE

PRINCE 202+10 LT. w/ 6" AGGREGATE SURFACE COURSE

PRINCE 205+15 LT. w/ 12" AGGREGATE SURFACE COURSE

CONSTRUCT REINFORCED CONCRETE RETAINING WALL

MAINLINE 14+29 - 14+45 RT.

REMOVAL OF EXISTING FENCE

ML 17+70 RT. (CUMBY'S)

STEEL BEAM GUARD RAIL (GALVANIZED)

PRINCE 200+30.5 - 201+95 LT.
PRINCE 200+43.4 - 202+45.8 RT.
PRINCE 202+56.0 - 204+18.3 LT.

HEAVY DUTY STEEL BEAM GUARDRAIL (GALVANIZED)

ML 14+30.3 - 15+18.9 LT.
ML 14+88.0 - 15+11.7 RT.

TERMINAL CONNECTOR FOR STEEL BEAM GUARDRAIL

ML 15+20 LT.
ML 15+13 RT.

ANCHOR FOR STEEL BEAM RAIL

ML 14+50 LT.
PRINCE 200+40 LT.
PRINCE 201+85 LT.
PRINCE 202+40 RT.
PRINCE 202+67 LT.
PRINCE 204+10 LT.

REMOVAL & DISPOSAL OF EXISTING GUARDRAIL

ML 14+88.4 - 15+00.0 LT.
ML 14+87.2 - 15+01.0 RT.

DECIDUOUS TREES & DECIDUOUS SHRUBS

30 TREES
10 SHRUBS
SEE EROSION CONTROL FINAL CONDITIONS SHEET FOR PROPOSED LOCATIONS

RELOCATE HYDRANT

FROM PRINCE 200+25, 23' RT.
TO PRINCE 200+53, 23' RT.

REMOVE & RESETTING LIGHT POLE

FROM MAINLINE 14+16, 17' LT.
TO MAINLINE 14+53, 25' LT.

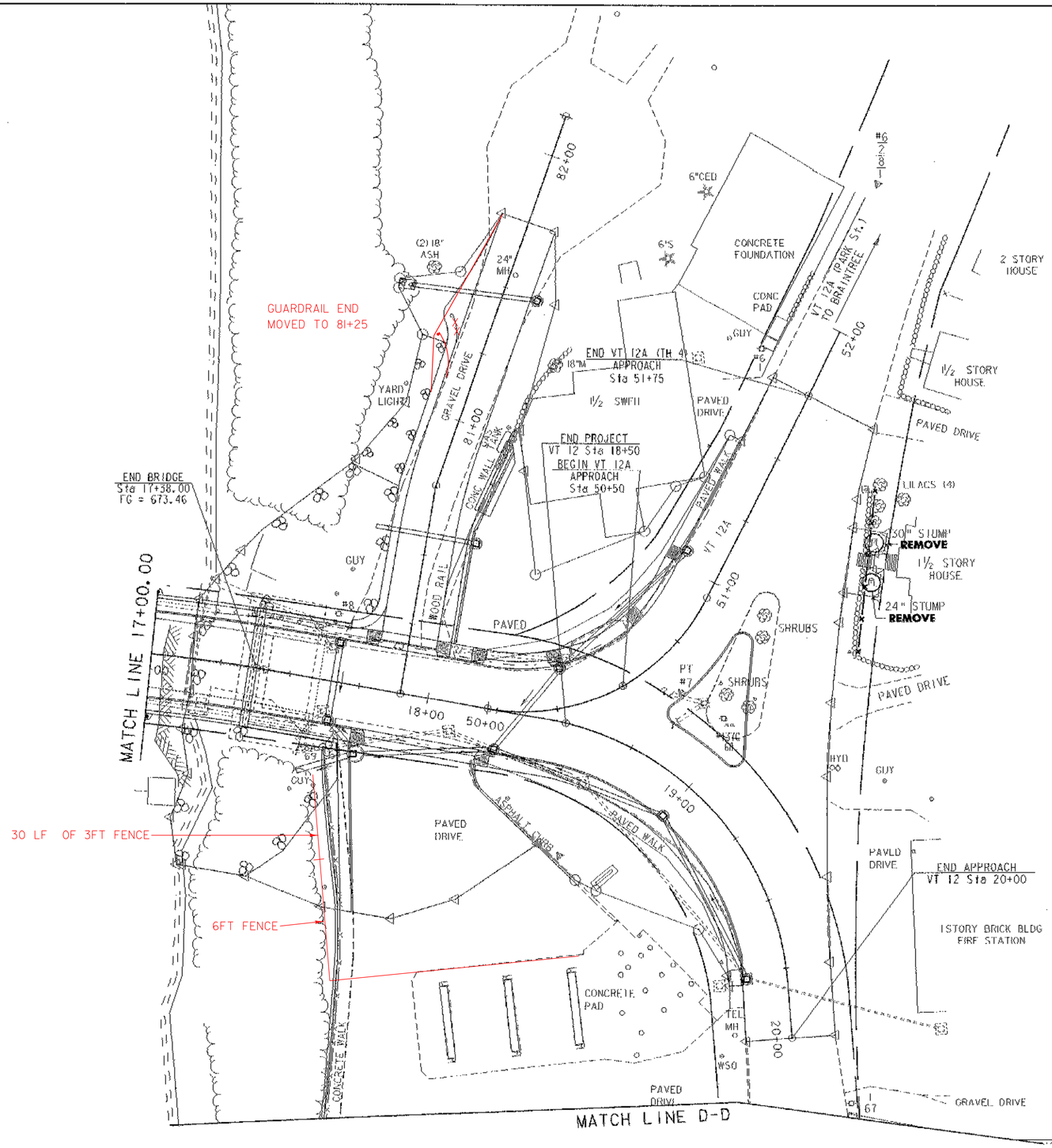
CONSTRUCT CONCRETE STAIRS w/ METAL HAND RAILING

MAINLINE 14+47 RT.

PLAN SHEET 2

PROJECT NAME:	RANDOLPH
PROJECT NUMBER:	BRF 0241 (29)

FILE NAME: /str5/88j096/sj096bdr.dgn	PLOT DATE: 29-AUG-2006
PROJECT LEADER: W. SYMONDS	DRAWN BY: G. SHANGRAW
DESIGNED BY: W.B. SYMONDS	CHECKED BY: T. SUMNER
sj0961a2.i	SHEET 21 OF 135



REMOVE EXISTING STUMPS
(PAID FOR UNDER ITEM 201.10)

VT12A 51+25, 50' RT.
VT12A 51+39, 44' RT.

COLD PLANING BITUMINOUS PAVEMENT

MAINLINE 19+50 - 20+00
VT 12A 51+25 - 51+50

VERTICAL GRANITE CURB

ML 17+37.3 - 17+79.2 LT.
ML 17+37.3 - 17+79.2 RT.
ML 18+00.8 - 18+17.2 LT.
ML 18+20.8 - 19+79.2 RT.
VT 12A 50+25.3 - 50+48.7 LT.
VT 12A 51+02.0 - 51+50.0 LT.
ISLAND @ VT12A RT.

CAST-IN-PLACE
CONCRETE CURB, TYPE B (MOD.)

CUMBERLAND DRIVE
ML 17+75, 20' RT. TO
ML 17+86, 80' RT.

CUMBERLAND DRIVE
ML 18+21, 20' RT. TO
ML 18+88, 52' RT.

PORTLAND CEMENT
CONCRETE SIDEWALK - 5" (MOD.)

ML 17+38 - 18+13 LT.
ML 17+38 - 17+75 RT.
ML 18+25 - 19+79 RT.
VT 12A 50+30 - 50+69 LT.
VT 12A 51+06 - 51+50 LT.
ML 17+75 RT. (CUMBERLAND)
NOTE: MATCH WIDTH & GRADE OF EXISTING SIDEWALKS IN AREAS WHERE NEW SIDEWALK ABUTS EXISTING SIDEWALKS.

CONSTRUCT REINFORCED
CONCRETE RETAINING WALL

DRIVE 80+20 - 81+04 RT.

METAL HAND RAILING

DRIVE 80+20 - 81+04 RT.
VT. 12A 51+00 - 51+57 RT.

PRECAST REINFORCED
CONCRETE CURB, TYPE A (MOD.)

80+20 - 80+95 RT.

DRY RUBBLE MASONRY (MOD.)

VT12A 51+32 RT.

PORTLAND CEMENT
CONCRETE SIDEWALK - 8" (MOD.)

ML 17+75 - 18+25 RT.
ML 18+13 LT. - VT 12A 50+30 LT.
VT 12A 50+69 - 51+06 LT.

STEEL BEAM GUARD RAIL (GALVANIZED)

DRIVE 80+37.2 - 81+34.4 LT.

HEAVY DUTY STEEL
BEAM GUARDRAIL (GALVANIZED)

ML 17+67.3 - DRIVE 80+37.2 LT.

TERMINAL CONNECTOR FOR
STEEL BEAM GUARDRAIL

ML 17+66 LT.

ANCHOR FOR STEEL BEAM RAIL

DRIVE 81+24 LT.

REMOVAL & DISPOSAL
OF EXISTING GUARDRAIL

ML 17+21.4 - 17+64.0 LT.

CONSTRUCT DRIVE

MAINLINE 17+90 LT. w/ 12"
AGGREGATE SURFACE COURSE

MAINLINE 18+04 RT. w/
2" BITUMINOUS PAVEMENT

VT 12A 50+15 LT. w/
2" BITUMINOUS PAVEMENT

VT 12A 50+90 LT. w/
2" BITUMINOUS PAVEMENT

SCALE 1" = 20'-0
20 0 20

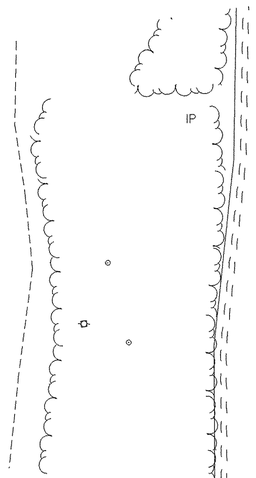
PLAN SHEET 3

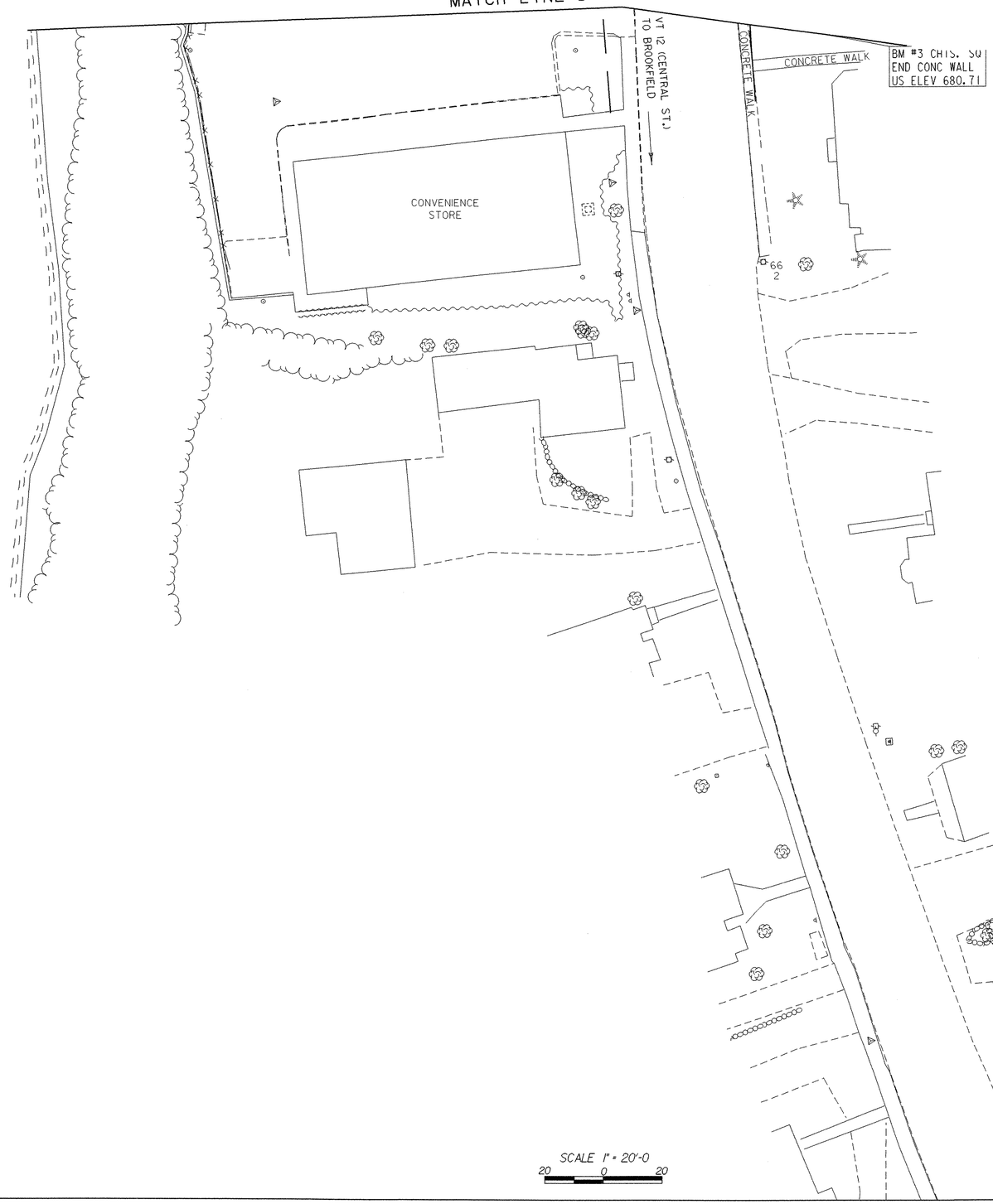
PROJECT NAME:	RANDOLPH
PROJECT NUMBER:	BRF 0241(29)

FILE NAME: /str5/88j096/sj096bdr.dgn
PROJECT LEADER: W. SYMONDS
DESIGNED BY: W.B. SYMONDS
sj096la3.i

PLOT DATE: 29-AUG-2006
DRAWN BY: C. SHANGRAW
CHECKED BY: T. SUMNER
SHEET 22 OF 35

MATCH LINE D-D



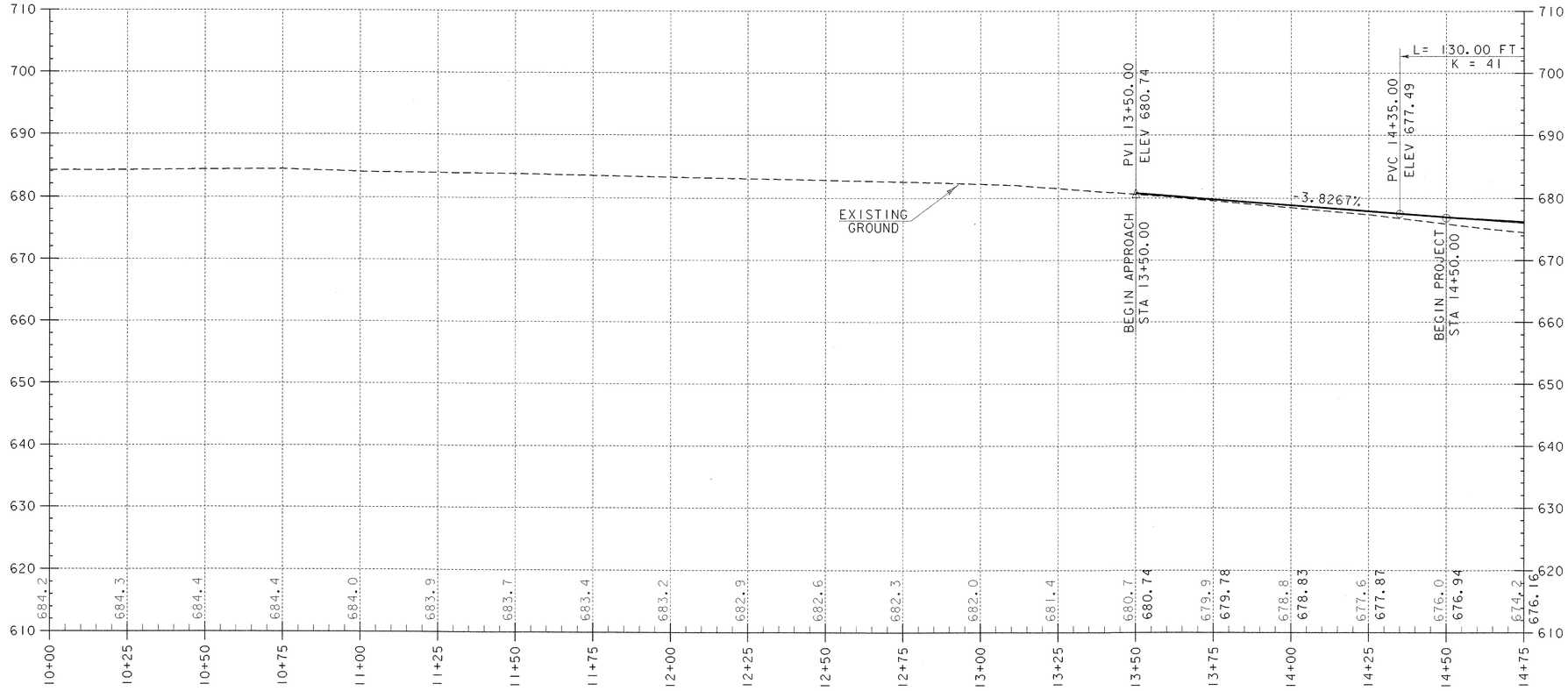


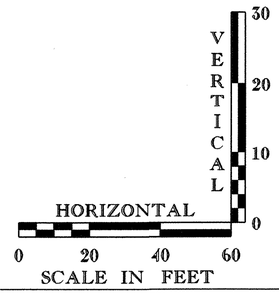
SCALE 1" = 20'-0
20 0 20

PLAN SHEET 4

PROJECT NAME:	RANDOLPH
PROJECT NUMBER:	BRF 0241(29)

FILE NAME: /str5/88j096/sj096bdr.dgn	PLOT DATE: 29-AUG-2006
PROJECT LEADER: W. SYMONDS	DRAWN BY: G. SHANGRAW
DESIGNED BY: W.B. SYMONDS	CHECKED BY: T. SUMNER
sj0961a4.i	SHEET 23 OF 135



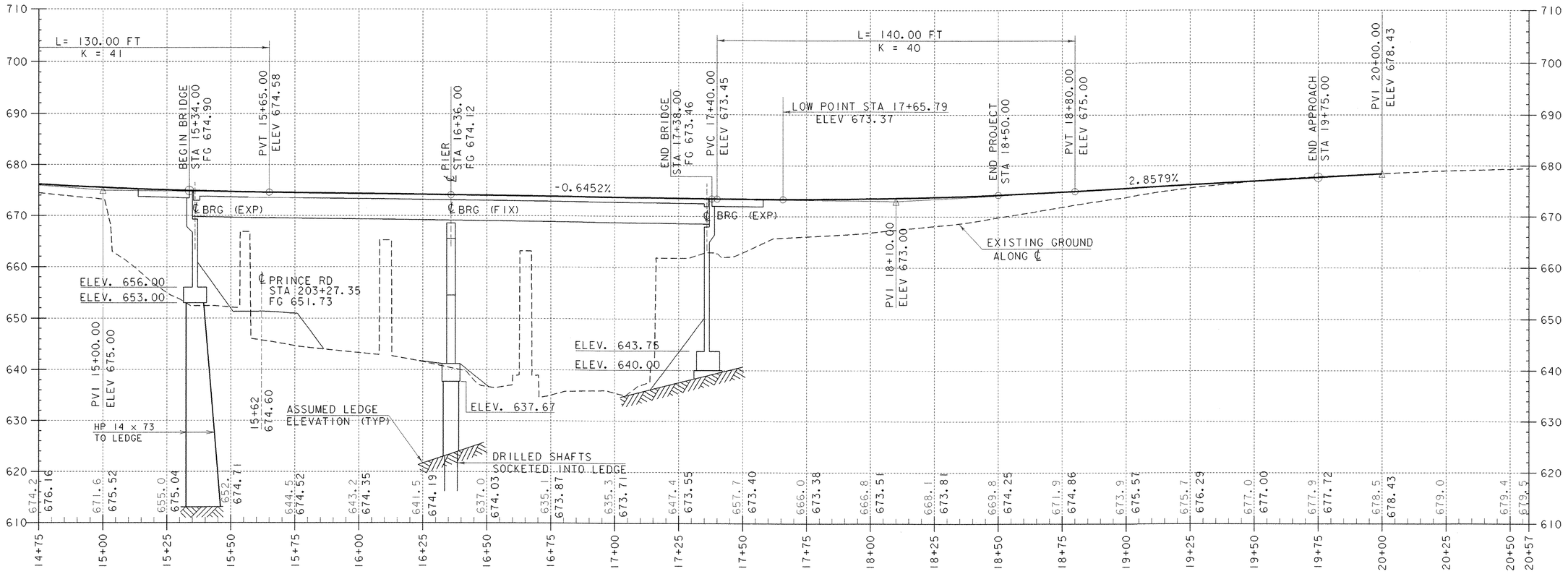


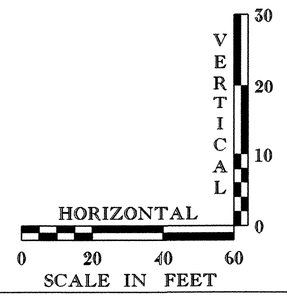
NOTE: ELEVATIONS TO NEAREST TENTH ARE EXISTING.
ELEVATIONS TO NEAREST HUNDREDTH ARE PROPOSED.

MAINLINE PROFILE
STA. 10+00 – STA. 14+75

PROJECT NAME:	RANDOLPH
PROJECT NUMBER:	BRF 0241 (29)

FILE NAME: /str5/88j096/sj096pr2.dgn	PLOT DATE: 29-AUG-2006
PROJECT LEADER: W. SYMONDS	DRAWN BY: G. SHANGRAW
DESIGNED BY: W.B. SYMONDS	CHECKED BY: T. SUMNER
sj096pr1.i	SHEET 24 OF 135



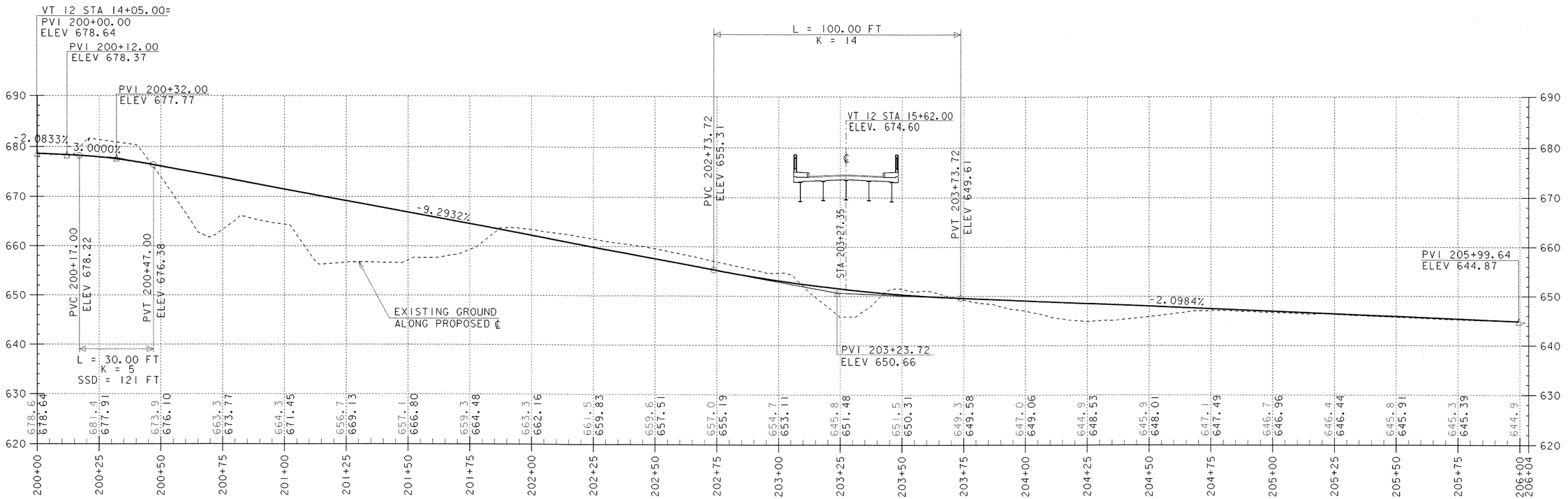


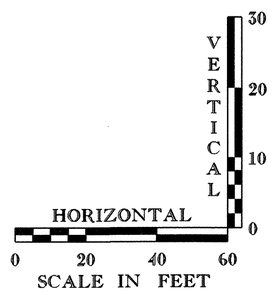
NOTE: ELEVATIONS TO NEAREST TENTH ARE EXISTING.
ELEVATIONS TO NEAREST HUNDREDTH ARE PROPOSED.

MAINLINE PROFILE
STA. 14+75 – STA. 20+57

PROJECT NAME:	RANDOLPH
PROJECT NUMBER:	BRF 0241 (29)

FILE NAME: /str5/88j096/sj096pr2.dgn	PLOT DATE: 29-AUG-2006
PROJECT LEADER: W. SYMONDS	DRAWN BY: G. SHANGRAW
DESIGNED BY: W.B. SYMONDS	CHECKED BY: T. SUMNER
sj096pr2.i	SHEET 25 OF 135



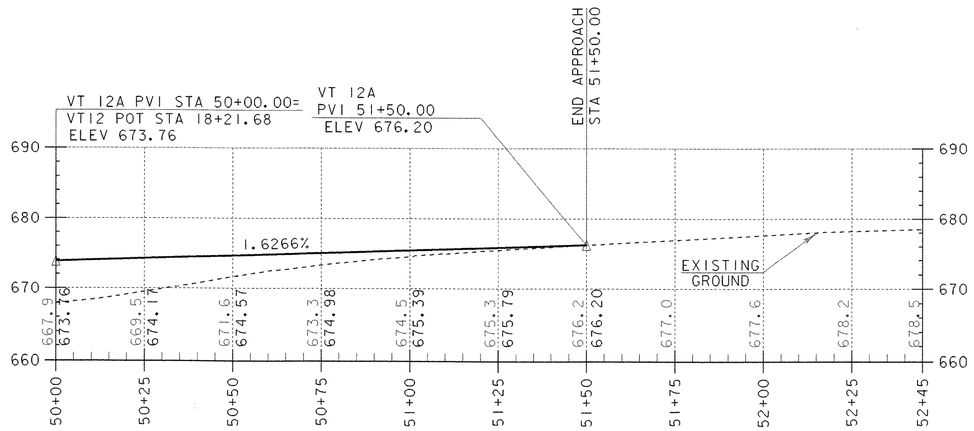


NOTE: ELEVATIONS TO NEAREST TENTH ARE EXISTING.
ELEVATIONS TO NEAREST HUNDREDTH ARE PROPOSED.

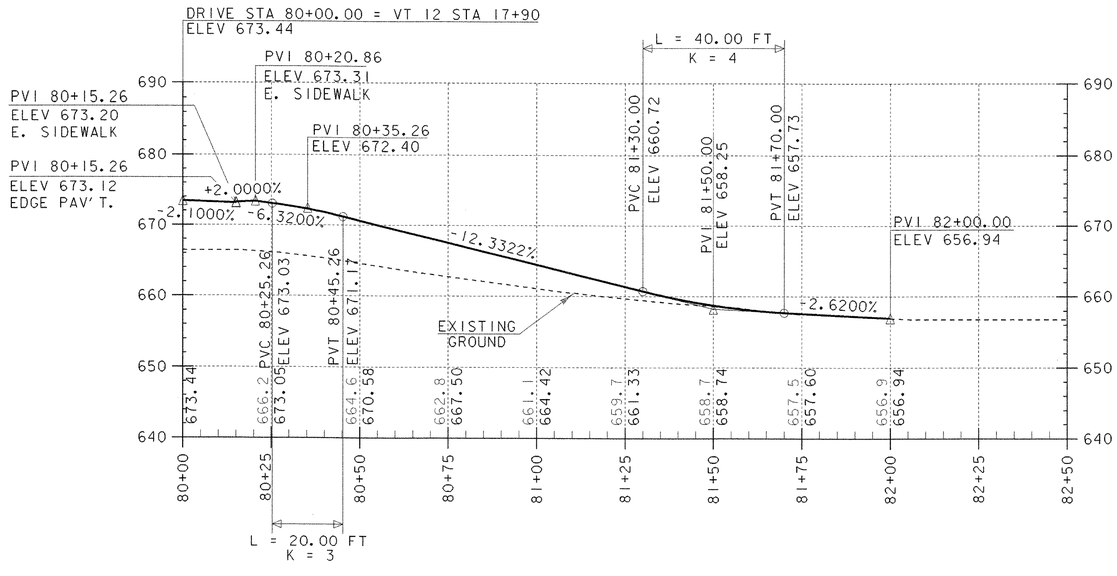
PRINCE STREET PROFILE

PROJECT NAME:	RANDOLPH
PROJECT NUMBER:	BRF 0241(29)

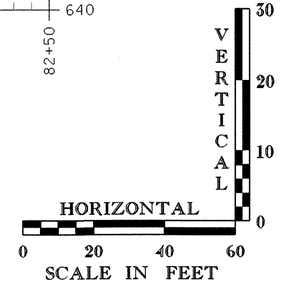
FILE NAME: /str5/88j096/sj096pr2.dgn	PLOT DATE: 29-AUG-2006
PROJECT LEADER: W. SYMONDS	DRAWN BY: G. SHANGRAW
DESIGNED BY: W.B. SYMONDS	CHECKED BY: T. SUMNER
sj096pr3.i	SHEET 26 OF 135



PROFILE VT 12A FROM VT12 TO VT 12A NORTH



PROFILE DRIVE VT12 17+90 LT



NOTE: ELEVATIONS TO NEAREST TENTH ARE EXISTING.
ELEVATIONS TO NEAREST HUNDREDTH ARE PROPOSED.

VT 12A & DRIVE PROFILES

PROJECT NAME:	RANDOLPH
PROJECT NUMBER:	BRF 0241(29)

FILE NAME: /str5/88J096/sj096pr2.dgn	PLOT DATE: 29-AUG-2006
PROJECT LEADER: W. SYMONDS	DRAWN BY: G. SHANGRAW
DESIGNED BY: W.B. SYMONDS	CHECKED BY: T. SUMNER
sj096pr4.i	SHEET 27 OF 135

STATE OF VERMONT
AGENCY OF TRANSPORTATION

EROSION CONTROL NARRATIVE

PROJECT DESCRIPTION

This project is located on VT Route 12 (Main St) in Randolph beginning at a point approximately 420 feet north of the intersection of School St and extending northerly along VT Route 12 for 400 feet. The purpose of the project is to replace Bridge 42 on VT Route 12 on same alignment over Prince St and the Third Branch of the White River with a new two-span curved steel girder and concrete deck bridge. A two-way temporary bridge will be utilized to carry traffic during construction.

This project includes the removal of the old bridge and railing, removal and replacement of the concrete sidewalk, construction of three retaining walls, grading, drainage, sub-base, pavement, installation of guardrails, landscaping, signage, striping and necessary approach work on Main St, Park St and Prince St.

The total disturbed area, excluding waste, borrow and staging areas, is 2.13 acres.

SITE INVENTORY AND ANALYSIS

OFF SITE DRAINAGE CHARACTERISTICS

The area surrounding this project is classified, in the context of Vermont, as urban and residential. The vegetation consists of individual trees and grass within the small residential lawns. The existing traveled ways and parking areas utilize drop inlets and subsurface pipes to convey runoff to the Third Branch of the White River. The surrounding area is classified as hilly but the project area is fairly flat except for the steep manmade fill slopes near the river.

DRAINAGE, WATERWAYS, BODIES OF WATER

The Third Branch of the White River flows under the existing bridge. The Third Branch of the White River is characterized as a straight, semi-alluvial, not braided, and not anabranched, with a drainage area of 62.3 square miles at the bridge. There are several drop inlets in the project area that carry runoff from the road to the river, but there are no known wetlands, ephemeral streams or ponds within the project site.

TOPOGRAPHY, EXISTING ROADS, BUILDINGS, UTILITIES

The terrain is hilly surrounding the project site. Main St, Park St, Central St and Prince St are within the project area; all are paved roads. A gas station and convenience store and realtor business are located on the north side of the project and they contain paved parking areas. There are numerous commercial and residential buildings, with drives, along Main St on the south end of the project. The utilities within the project consist of overhead lines owned by Vermont Public Service and Verizon, which will be relocated by their respective owners. The underground sewer and waterlines within the project are owned by the town. Thewaterline will be relocated to the new bridge by the town. The sewerline will not be affected.

VEGETATION

The vegetation on the project site is primarily limited to residential lawns and landscaped town and commercial property. There are scattered trees consisting of some Ash, Box Elder, Cherry, Elm, Maple and Locust. There are also some hedges, shrubs and grassy lawns.

The realignment of Prince St will necessitate the removal of some grass, shrubs, and trees. Several trees at the beginning of the Prince St. alignment are marked to be saved. By realigning Prince St., a fair sized stormwater treatment basin can be located within the new alignment. Various grasses will be planted within this region.

SOILS

The soils in the project area consist mainly of different slopes of Merrimac. There is a small amount of Winooski soil in the project and the project is bordered by some Hadley soils.

The Merrimac series consists of a fine sandy loam on level to steep, deep, somewhat excessively drained soils on terraces. These soils formed in stratified outwash and sand and gravel derived from granite, schist, quartzite, gneiss and phyllite. Slopes for the classifications on this project range from 0 to 50 percent. Permeability is rapid. The erosion K factor ranges from 0.17 to 0.24.

The Winooski series consists of level, deep, moderately well drained soils on flood plains of major streams and their tributaries. These soils formed in very fine sandy loam and silt loam alluvium. Permeability is moderate. The hazard of water erosion is slight.

The Hadley series consists of deep, well drained level soils on the flood plains of the major streams and their tributaries. These soils formed in very fine sandy loam and silt loam alluvium. Permeability is moderate. The erosion K factor is 0.49.
(USDA Soil Conservation Service, 1967)

SENSITIVE RESOURCE AREAS

No 'Threatened & Endangered Species', prime agricultural land, wetlands, or critical habitats have been identified within the project area. The only sensitive area within the project site is the Third Branch of the White River.

PROXIMITY TO NATURAL OR MAN-MADE WATER FEATURES

The removal of the existing structure, construction and removal of the temporary bridge, and construction of the new bridge will take place on the banks and over the Third Branch of the White River.

TEMPORARY EROSION PREVENTION AND SEDIMENT CONTROL

CHECK DAM

A check dam is a small dam made of concrete, masonry, rock, metal, wood, staked hay bales, sandbags, or other erosion-resistant materials placed in small erosion control waterways or around storm drain inlets. The purpose of a check dam is to reduce or prevent erosion and sedimentation by reducing velocities, by promoting deposition of sediment, and by stabilizing channel grades. Check dams can be damaged by heavy runoff or high water velocities, so be sure to inspect them often and repair or replace them when necessary.

PROJECT DEMARCATION FENCE

Install PDF along the perimeters of areas of disturbed soils. This fencing provides a physical reminder of the limit of allowable soil and vegetation disturbance.

INLET PROTECTION

Sand bags filled with clean, small diameter stone, or an equivalent barrier, will be utilized around the drop inlet to create a temporary ponding area for particles to settle out as water drains through the barrier. Inlet protection shall be installed as soon as there is the possibility of water flowing to the structure. The height of the barrier shall be limited such that the ponding area does not present a hazard to the traveling public. Alternative inlet control measures shall be approved by the engineer and on-site coordinator prior to implementation.

SILT FENCE

A silt fence is a temporary sediment barrier installed at the toe of a slope, or adjacent waterway. The purpose of the silt fence is to intercept and detain small amounts of sediment from unprotected areas of limited extent, and to reduce water velocity on the construction site. A silt fence is constructed of synthetic sedimentation control fabric fastened to a support structure such as a lightweight stock fence. The fence is built parallel to contours. The lower edge of the filter fabric must be buried approximately 6 inches below ground surface to prevent underflow, and the ends of the fence should be curved uphill to prevent flow around the ends.

SEDIMENT BASIN

A suggested sediment basin location has been shown on the Erosion Control Plans. However, the Contractor will ultimately select the final location of the basin(s).

EROSION MATTING

Seeding, mulching and biodegradable erosion control matting, or an equivalent product, will be utilized on all slopes steeper than 3:1 that are not lined with stone fill. The purpose of Erosion Matting is to help bind soil particles together so that they can better resist the shear stresses built up by water flowing down the slope. These slopes shall be stabilized within 48 hours of reaching final grade or during intermittent phases of construction activity.

SEEDING AND MULCHING

Hay mulch should be applied to exposed soil at the end of each work day. This will require careful planning of the phasing of earth moving. Seed and hay mulch should be applied as soon as no more soil disturbance is expected to occur, of if the area is to be without construction activity for a period of 14 days. Seed and hay mulch should be applied to topsoil stockpiles as well as to areas of disturbed soil. All exposed areas shall be appropriately stabilized prior to a significant rain event.

SURFACE ROUGHENING

If surfaces of slopes are left rough, this can help to reduce water velocity and increase infiltration rates. Rough slopes hold water, seed, and mulch better than smooth slopes. Slope surfaces can be roughened by running wheeled construction equipment across the slope or driving tracked equipment up and down the slope. The grooves created by the construction equipment should run across the slope horizontally and not up and down the slope. Slopes can also be scarified to produce the desired surface roughness. Surface roughening should occur after hay mulch has been applied.

STABILIZED CONSTRUCTION ENTRANCE

A stabilized pad of crushed stone located at any point where traffic will be entering or leaving a construction site to or from a public right-of-way, street, sidewalk or parking area. The purpose of a stabilized construction entrance is to reduce or eliminate the tracking of sediment onto public rights-of-way.

PERMANENT EROSION CONTROL MEASURES

STONE FILL

Stone fill, Type III, will be placed along Prince St at STA 202+92 – 204.25 LT and surrounding the Pier at STA 16+36. This stone fill will help prevent scour from undermining Prince St and the pier, respectively.

Stone fill, Type III, will be placed front of and on the sides of Abutment #2 at STA 17+38 to help prevent runoff from eroding the steep banks leading down to the river from the road surface.

Stone fill, Types I & II are being used to line a water retention structure on the inside of the Prince Street curve. This permanent structure will collect stormwater from an off-project closed drainage system. The closed system collects stormwater from the village area.

STONE LINED CHANNELS

Stone lined channels will be constructed down the embankment at STA 202+50 LT and 204+00 LT on Prince Street to convey surface runoff safely down the slope without causing erosion.

SEED AND MULCH

Seeding and mulching is one of the most effective means of controlling erosion. Therefore, all exposed surfaces outside of the roadway limits, which are not specified to be covered by stones or some other suitable cover, will be seeded and mulched. Specifically, make sure the traffic island at STA 18+80 – 19+07 LT and the stormwater treatment basin at STA 200+25 – 203+00 RT are appropriately covered.

STATE OF VERMONT
AGENCY OF TRANSPORTATION

EROSION CONTROL NARRATIVE

DRAINAGE INLETS AND PIPES

Drainage inlets and underground pipes will be installed at specified intervals to help convey the surface water runoff from the roadway surface and surrounding limited permeability ground surface to the Third Branch of the White River. These structures help prevent undermined roadway surfaces and limit erosion from unchanneled flow. Drainage inlets will be installed at STA 13+66.1 LT, STA 13+67.5 RT, STA 14+55.6, STA 15+09.8 RT, STA 15+10.4 LT, STA 17+66.0 LT & RT, STA 17+77.9 RT, STA 18+26.2 RT, STA 19+00.0 RT, STA 50+29.0 LT, STA 51+06.2 LT, STA 81+57.7 RT and STA 81+49.1 RT. A stone outflow pad will be constructed at STA 81+39.1 LT. This pad will help prevent the concentrated flow leaving the drainage pipe from eroding the soil in the immediate vicinity of the end of the pipe. See Erosion control 'during construction' plan sheet.

SOIL RETENTION WALLS

Three soil retaining walls will be installed at Sta. 14+47 Rt., Sta. 80+77.0 to 81+03.8 Rt., and Sta. 200+25.0 to 200+65.0 Lt. The retaining walls allow the elimination of steep slopes on the sides of the parking lot and Prince St, respectively, which are highly susceptible to surface erosion from water runoff.

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, storm water controls and other pollution prevention controls.

Coordinate the installation, use, and removal of erosion and sediment control measures with construction activities to ensure economical, effective and continuous erosion and sediment control. Employ temporary stabilization practices in incremental stages as construction proceeds. The contractor will use additional erosion control measures as necessitated by the sequence of construction and as directed by the Engineer. 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 Erosion Control Plan or as directed by the Engineer. Do not modify the type, size or location of any control or practice without approval of the Engineer. 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 or replace any damaged measures.

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 down slope side of perimeter control measures.

EROSION CONTROL NARRATIVE

PROJECT NAME:	RANDOLPH
PROJECT NUMBER:	BRF 0241(29)

FILE NAME: /str5/88j096/s88j096xc1.dgn	PLOT DATE: 29-AUG-2006
PROJECT LEADER: W. SYMONDS	DRAWN BY: G. SHANGRAW
DESIGNED BY: T. SUMNER	CHECKED BY: T. FILLBACH
s88j096ec21.i	SHEET 29 OF 135

EROSION CONTROL EXISTING CONDITIONS

PROJECT NAME:	RANDOLPH
PROJECT NUMBER:	BRF 0241(29)
FILE NAME: /str5/88j096/sj096ec.dgn	PLOT DATE: 29-AUG-2006
PROJECT LEADER: W. SYMONDS	DRAWN BY: G. SHANGRAW
DESIGNED BY: T. SUMNER	CHECKED BY: T. SUMNER
sj096ec3.i	SHEET 30 OF 135

SCALE 1" = 20'-0
20 0 20

N

VT STATE PLANE GRID

LIMITS FOR TEMPORARY DETOUR

LIMITS FOR TEMPORARY DETOUR

50' RIPARIAN BUFFER

50' RIPARIAN BUFFER

50' RIPARIAN BUFFER

50' RIPARIAN BUFFER

SEDIMENT BASIN

RELOCATED HYDRANT

RELOCATED LUMINAIRE

REV. CL

REV. CL

PDF

LEGEND

	STONE CHECK DAMS
PDF——PDF—	PROJECT DEFINITION FENCE
	INLET PROTECTION
	AREAS OF STONE FILL
	SILT FENCE
	SEDIMENT BASIN
	STRAW MATTING ON ALL SLOPES EQUAL TO OR STEEPER THAN 1-3

SCALE 1" = 20'-0

20 0 20

EROSION CONTROL DURING CONSTRUCTION

PROJECT NAME: RANDOLPH
PROJECT NUMBER: BRF 0241(29)

FILE NAME: /str5/88j096/sj096ec.dgn
PROJECT LEADER: W. SYMONDS
DESIGNED BY: T. SUMNER
sj096ec4.i

PLOT DATE: 29-AUG-2006
DRAWN BY: G. SHANGRAW
CHECKED BY: T. SUMNER
SHEET 31 OF 135

LANDSCAPE ITEMS:
DECIDUOUS TREES SHALL CONSIST OF THIRTY TWO TREES (32). THERE WILL BE TWENTY (20) RED MAPLES (Acer rubrum), TEN (10) SILVER MAPLES (Acer saccharinum), AND TWO (2) SARGENT CRABAPPLES (Malus sargentii) PLANTED AS SHOWN.

IN THE AREA OF THE DETOUR, THE TWO SPECIES SHALL BE INTERMIXED. THE TWO TREES AT VT12A 51+50 RT. SHALL BE SARGENT CRABAPPLES.

ALL MAPLES SHALL BE A MINIMUM HEIGHT OF 10 FEET. THEY MAY BE EITHER BALLED & BURLAPPED, OR CONTAINERIZED.

LANDSCAPE ITEMS:
DECIDUOUS SHRUBS SHALL CONSIST OF TEN (10) DWARF KOREAN LILACS (Syringa meyrel 'Palibin') PLANTED AT 4' SPACINGS, AND 4' OFFSET FROM THE CHAIN LINK FENCE.

NOTE : THE GRAY SHADING REPRESENTS DISTURBED AREAS THAT WILL REQUIRE ESTABLISHMENT OF GRASS. INCLUDED ARE THE AREAS WHERE STONE FILL IS COVERED BY GRUBBING MATERIAL.

NOTE : FINAL GROUND CONTOURS ARE NOT AVAILABLE FOR THIS PROJECT. SLOPE INDICATORS (I-2 >) HAVE BEEN INCLUDED ON THIS SHEET TO AID THE REVIEWER UNDERSTAND THE FINAL GROUND SLOPES.

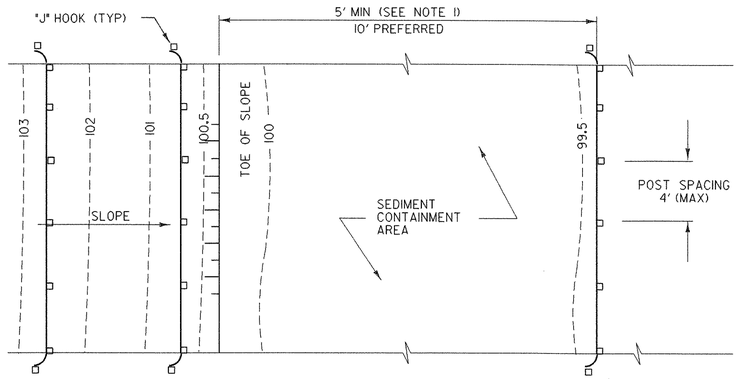
LEGEND

- AREAS OF STONE FILL
- NEW DECIDUOUS TREE
- NEW DECIDUOUS SHRUB

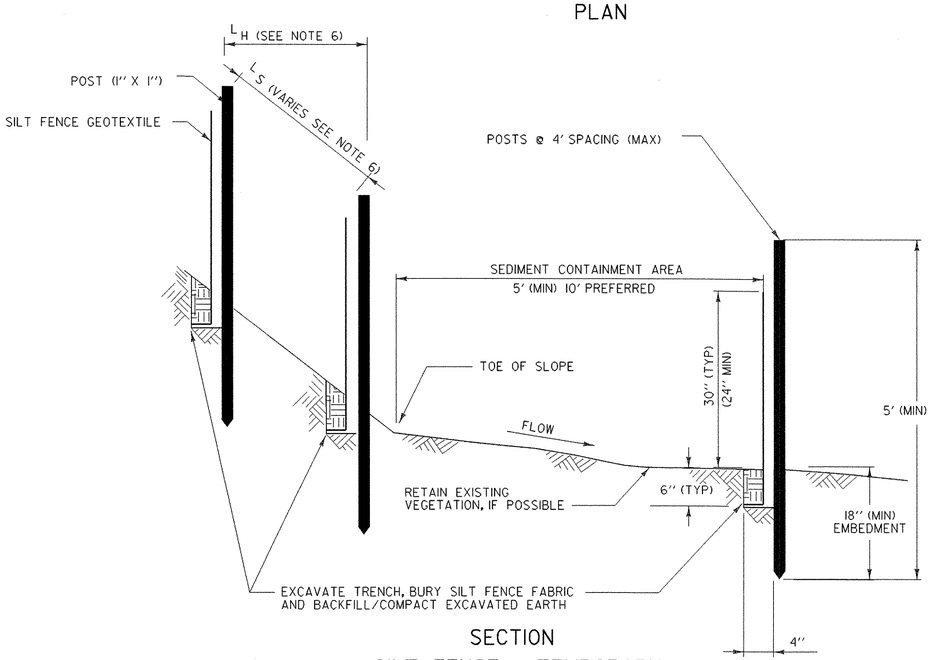
EROSION CONTROL FINAL CONDITIONS & LANDSCAPE ITEMS

SCALE 1" = 20'-0

PROJECT NAME:	RANDOLPH
PROJECT NUMBER:	BRF 0241(29)
FILE NAME: /str5/88j096/sj096ec.dgn	PLOT DATE: 29-AUG-2006
PROJECT LEADER: W. SYMONDS	DRAWN BY: G. SHANGRAW
DESIGNED BY: T. SUMNER	CHECKED BY: T. SUMNER
sj096ec5.i	SHEET 32 OF 135

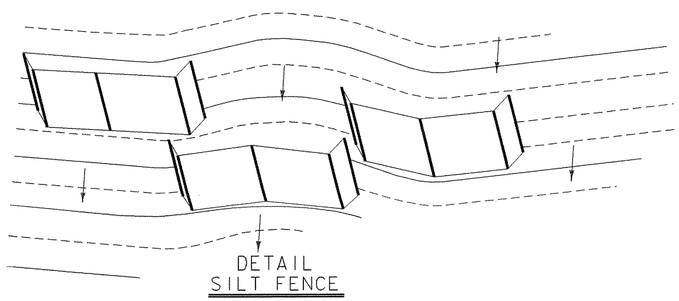


PLAN



SECTION

SILT FENCE - TEMPORARY



DETAIL

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.

SILT FENCE

APPLICATION NOTES:

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

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

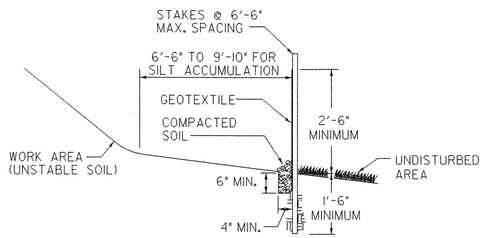
C. SILT FENCE SHALL NOT BE USED ACROSS CONCENTRATED FLOW.

GENERAL NOTES:

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

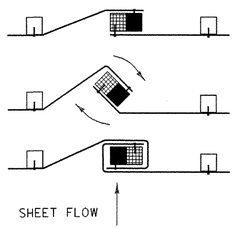
CONSTRUCTED SLOPE	SLOPE LENGTH (LS) FT	HORIZONTAL LENGTH (LH) FT
3 : 1	80	75
4 : 1	130	125
5 : 1	200	200
> 5 : 1	250	250

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



SILT FENCE DETAIL AT BOTTOM OF FILL SLOPES

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.



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

SPLICING DETAIL

DETAILS NOT TO SCALE

EROSION CONTROL DETAILS - SILT FENCE

PROJECT NAME:	RANDOLPH
PROJECT NUMBER:	BRF 0241 (29)

FILE NAME: /str5/88j096/sj096ecd.dgn
PROJECT LEADER: W. SYMONDS
DESIGNED BY: T. SUMNER
sj096slt.i

PLOT DATE: 29-AUG-2006
DRAWN BY: VARIOUS
CHECKED BY: T. SUMNER
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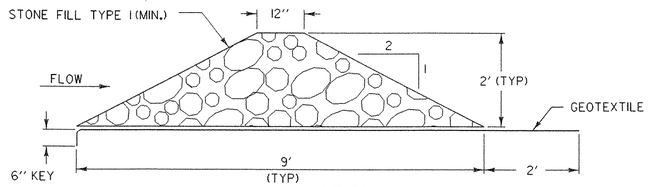
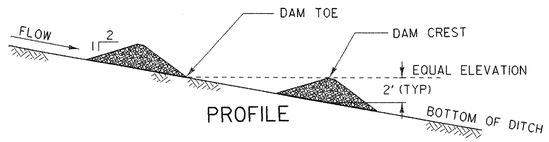
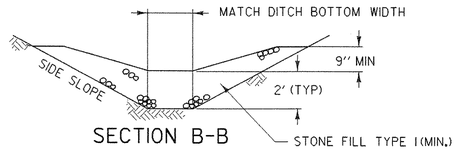


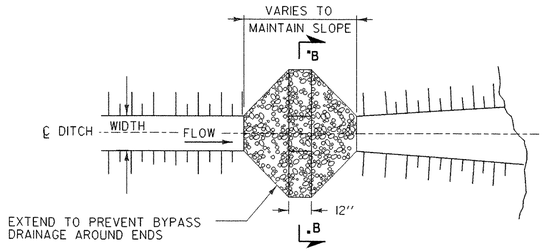
CROSS SECTION



PROFILE



SECTION B-B



PLAN

CHECK DAM - TEMPORARY
(STONE)

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

** BASED ON 2' TYPICAL HEIGHT

CHECK DAMS

APPLICATION NOTES:

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

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

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

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

GENERAL NOTES:

1. GEOTEXTILE SHALL BE INSTALLED UNDER STONE FILL. IT SHALL BE KEYED IN ON THE UP HILL END AND SHALL EXTEND 2 FEET BEYOND THE STONE ON THE DOWN HILL END.
2. CORE MATERIAL FOR THE STONE CHECK DAM SHALL MEET THE GRADATION REQUIREMENTS OF STONE FILL TYPE I (MIN.). STONE SIZE SHOULD BE INCREASED WITH INCREASED SLOPE AND VELOCITY.
3. MEASURES SHALL BE INSPECTED EVERY SEVEN (7) CALENDAR DAYS AND WITHIN 24 HOURS OF A STORM EVENT GREAT ENOUGH TO CAUSE WATER TO LEAVE THE CONSTRUCTION SITE.
4. MEASURES SHALL BE CLEANED AND REPAIRED AS NEEDED. SEDIMENT SHALL BE REMOVED WHEN ACCUMULATION REACHES ONE-HALF OF THE MEASURE HEIGHT. SEDIMENT SHALL BE DISPOSED OF AS UNSUITABLE MATERIAL.
5. AT TIME OF REMOVAL OF THE CHECK DAMS, THE DISTURBED AREA SHALL BE REPAIRED AND STABILIZED.
6. PAYMENT FOR MONITORING CHECK DAMS SHALL BE MADE UNDER THE MONITORING EROSION & SEDIMENT CONTROL PLAN ITEM.
7. PAYMENT FOR MAINTAINING CHECK DAMS SHALL BE MADE UNDER STONE FILL, TYPE I (MOD.-CHECK DAM).

SEEDING FORMULA
LOW GROW /FINE FESCUE MIX

RATE : DOUBLE IF HYDROSEEDING

% WT.	LBS./A.	NAME	PUR %	GERM %
38	32	CREEPING RED FESCUE	98	90
29	24	SPARTAN HARD FESCUE	95	85
15	12	AZAY SHEEP'S FESCUE	95	87
15	12	ANNUAL RYE GRASS	95	90
3	--	INERTS	--	--
100%	80 LB/A			

GENERAL NOTES

SEED MIXTURE: SHALL NOT HAVE A WEED CONTENT EXCEEDING 0.40% BY WEIGHT 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 500 LBS./ACRE. (HYDRO SEEDERS MAY USE 19-19-19 FORMULA).

AGRICULTURAL LIMESTONE: TO BE APPLIED AT THE RATE OF 2 TONS/ACRE, OR AS DIRECTED BY THE ENGINEER.

HAY MULCH: TO BE PLACED ON EARTH SLOPES AT THE RATE OF 2 TONS/ACRE, OR AS DIRECTED BY THE ENGINEER.

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

EROSION CONTROL DETAILS - CHECK DAMS

DETAILS NOT TO SCALE

PROJECT NAME:	RANDOLPH
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FILE NAME: /str5/88j096/sj096ecd.dgn	PLOT DATE: 29-AUG-2006
PROJECT LEADER: W. SYMONDS	DRAWN BY: VARIOUS
DESIGNED BY: T. SUMNER	CHECKED BY: T. SUMNER
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DROP INLET PROTECTION

APPLICATION NOTES:

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

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

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

GENERAL NOTES:

1. THE TOP OF THE INLET PROTECTION SHALL BE SET AT THE MAXIMUM DESIRED WATER LEVEL, BASED ON FIELD LOCATION AND CONDITIONS.

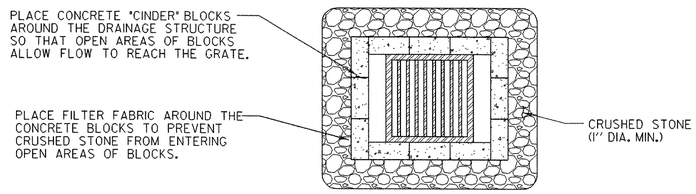
2. MEASURES SHALL BE INSPECTED EVERY SEVEN (7) CALENDAR DAYS AND WITHIN 24 HOURS OF A STORM EVENT GREAT ENOUGH TO CAUSE WATER TO LEAVE THE CONSTRUCTION SITE.

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

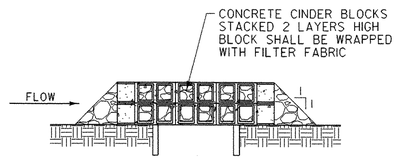
4. PAYMENT OF INLET PROTECTION SHALL BE MADE UNDER STONE FILL, TYPE I (MOD.-INLET PROTECTION)

5. PAYMENT FOR MONITORING INLET PROTECTION SHALL BE MADE UNDER THE MONITORING EROSION & SEDIMENT CONTROL PLAN ITEM.

6. PAYMENT FOR MAINTAINING INLET PROTECTION SHALL BE MADE UNDER THE FIELD MAINTENANCE OF EROSION & SEDIMENT CONTROL PLAN ITEM.

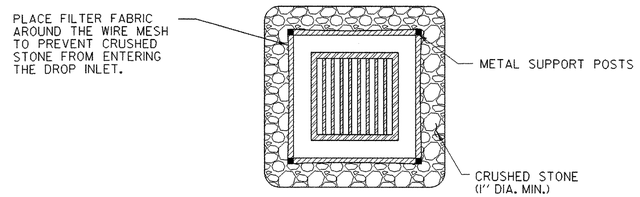


PLAN

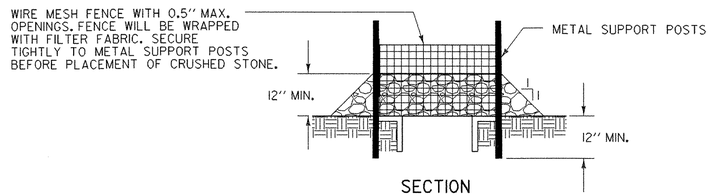


SECTION

ROCK BARRIER DROP INLET PROTECTION
TEMPORARY PAVED AREAS



PLAN



SECTION

ROCK BARRIER INLET PROTECTION
TEMPORARY UNPAVED AREAS

DETAILS NOT TO SCALE

EROSION CONTROL DETAILS
DROP INLET PROTECTION

PROJECT NAME:	RANDOLPH
PROJECT NUMBER:	BRF 0241 (29)
FILE NAME: /str5/88j096/sj096ecd.dgn	PLOT DATE: 29-AUG-2006
PROJECT LEADER: W. SYMONDS	DRAWN BY: VARIOUS
DESIGNED BY: T. SUMNER	CHECKED BY: T. SUMNER
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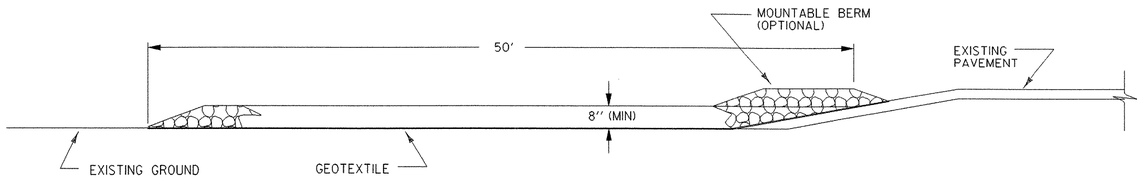
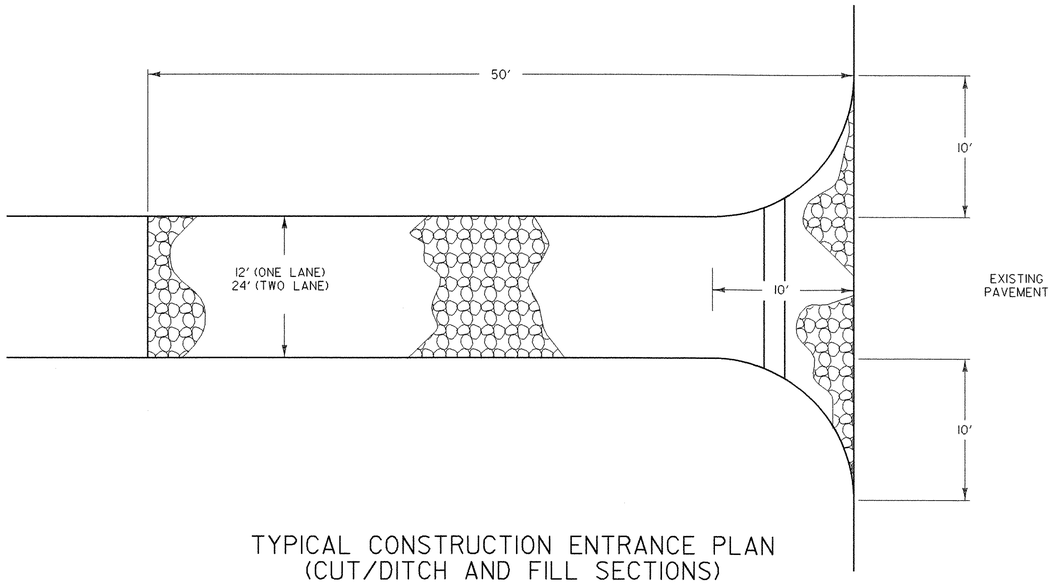


TYPICAL CONSTRUCTION ENTRANCE PROFILE
(CUT AND DITCH SECTIONS)



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

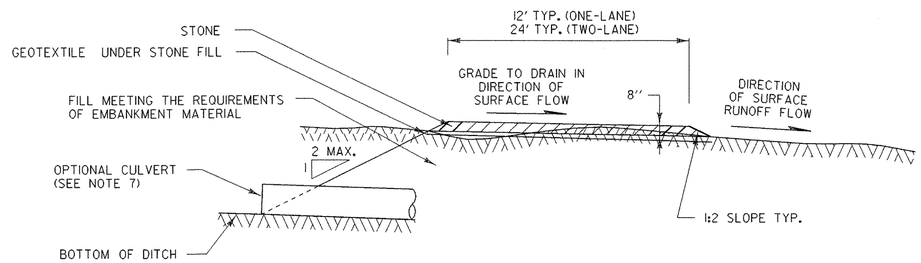
STABILIZED CONSTRUCTION ENTRANCE

APPLICATION NOTES:

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

GENERAL NOTES:

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



TYPICAL CONSTRUCTION ENTRANCE SECTION

EROSION CONTROL DETAILS
CONSTRUCTION ENTRANCE

PROJECT NAME:	RANDOLPH
PROJECT NUMBER:	BRF 0241(29)

FILE NAME: /str5/88j096/sj096ecd.dgn	PLOT DATE: 29-AUG-2006
PROJECT LEADER: W. SYMONDS	DRAWN BY: VARIOUS
DESIGNED BY: T. SUMNER	CHECKED BY: T. SUMNER
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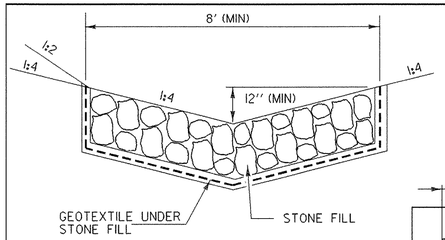
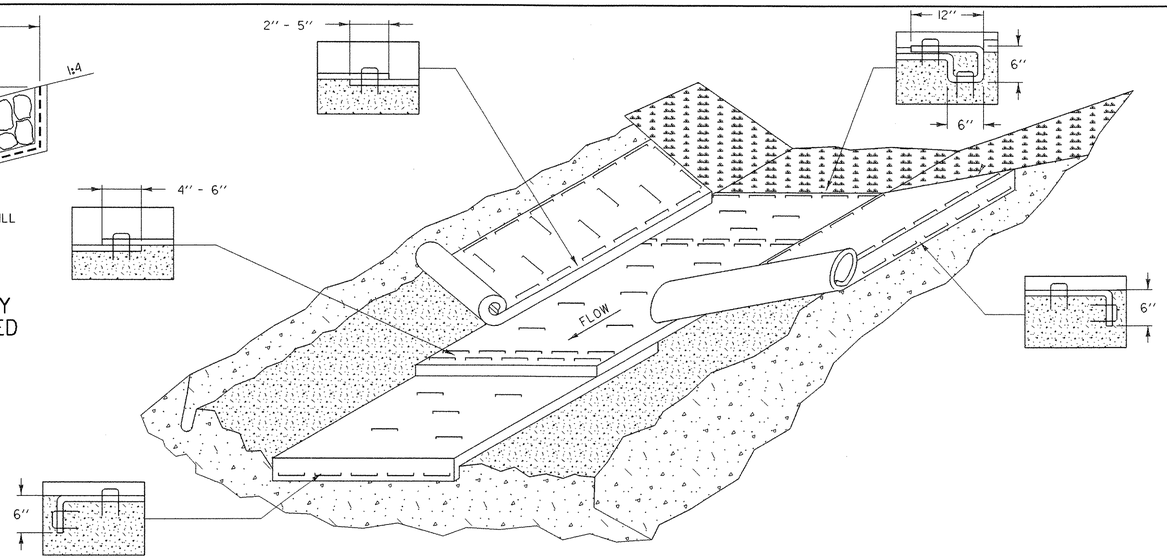


TEMPORARY STONE LINED DITCH



EROSION PROTECTION FOR DITCHES

APPLICATION NOTES:

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

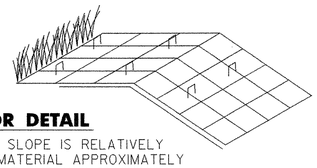
B. THE FOLLOWING CHARTS SHALL BE USED TO DETERMINE THE APPROPRIATE EROSION CONTROL MEASURE:

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

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

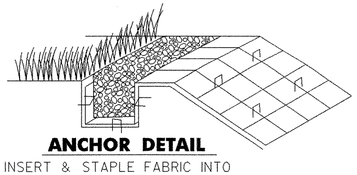
GENERAL NOTES:

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



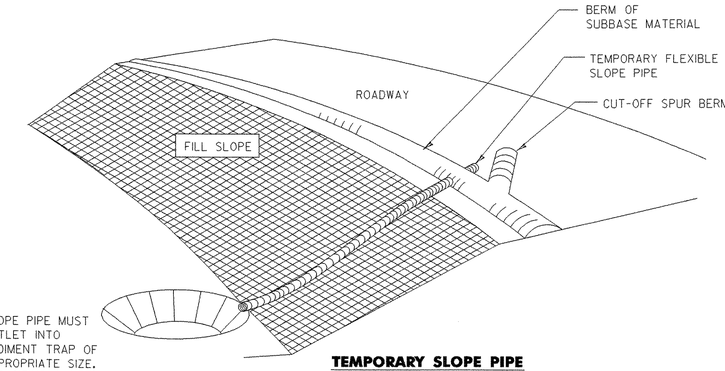
ANCHOR DETAIL

IF THE TOP OF SLOPE IS RELATIVELY FLAT EXTEND MATERIAL APPROXIMATELY 2'-0" AND STAPLE EVERY 1'-8" MINIMUM.



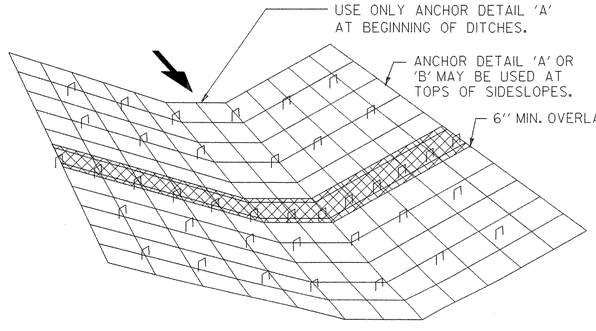
ANCHOR DETAIL

INSERT & STAPLE FABRIC INTO 6" x 6" TRENCH PRIOR TO BACKFILLING & COMPACTING SOIL. USE 3 STAPLE PATTERN EVERY 1'-8".



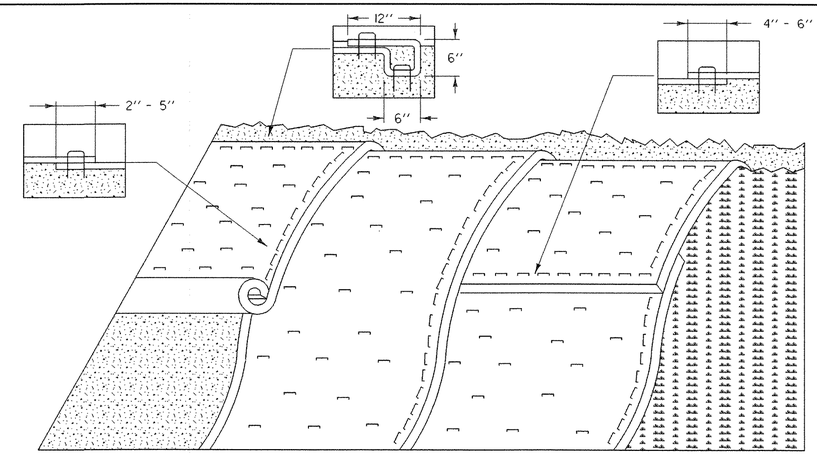
SLOPE PIPE MUST OUTLET INTO SEDIMENT TRAP OF APPROPRIATE SIZE. SEE SIZING CHART ON THIS SHEET.

TEMPORARY SLOPE PIPE



STRAW MATTING FOR DITCHES

NOTES:
1. OVERLAPS SHALL BE 150 mm MINIMUM IN THE DIRECTION OF FLOW AND STAPLED EVERY 500 mm MIN. THROUGH BOTH FABRICS.
2. USE 1000 mm MAX STAPLE SPACING IN OTHER AREAS.



EROSION PREVENTION FOR SIDE SLOPES

APPLICATION NOTES:

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

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

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

GENERAL NOTES:

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

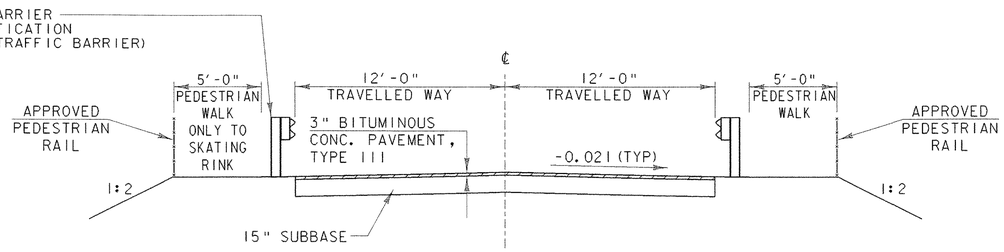
SEDIMENT SETTLING BASIN SIZING CRITERIA

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

EROSION CONTROL DETAILS DITCH & SLOPE PROTECTION

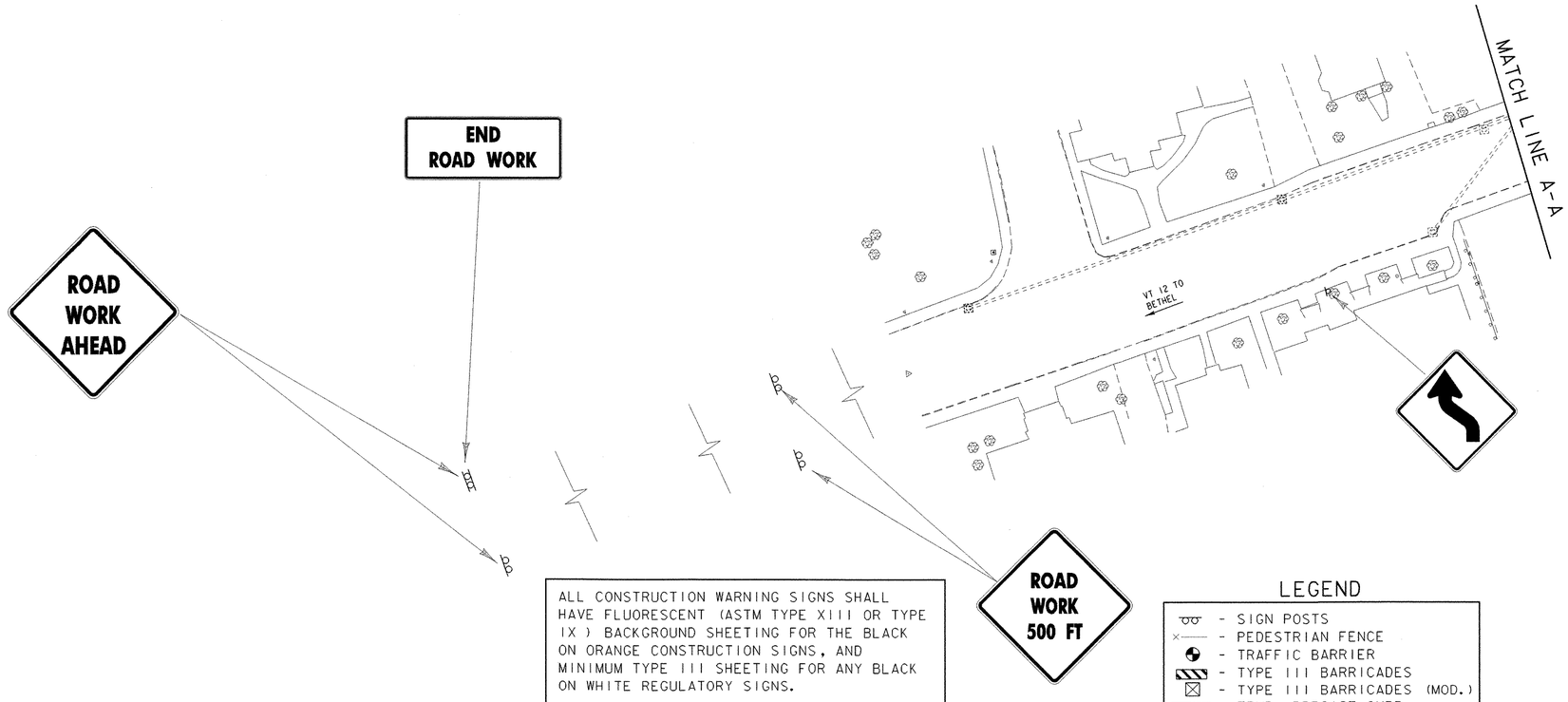
DETAILS NOT TO SCALE

PROJECT NAME:	RANDOLPH
PROJECT NUMBER:	BRF 0241(29)
FILE NAME: /str5/88j096/sj096ecd.dgn	PLOT DATE: 29-AUG-2006
PROJECT LEADER: W. SYMONDS	DRAWN BY: VARIOUS
DESIGNED BY: T. SUMNER	CHECKED BY: T. SUMNER
sj096dsp.i	SHEET 37 OF 135



TYPICAL DETOUR ROAD SECTION

SCALE 1/4" = 1'-0
1 0 2 4 6



ALL CONSTRUCTION WARNING SIGNS SHALL HAVE FLUORESCENT (ASTM TYPE XIII OR TYPE IX) BACKGROUND SHEETING FOR THE BLACK ON ORANGE CONSTRUCTION SIGNS, AND MINIMUM TYPE III SHEETING FOR ANY BLACK ON WHITE REGULATORY SIGNS.

FIELD INSTALLATION OF THE APPROACH SIGNS, AND TEMPORARY CONSTRUCTION SIGNS SHOULD NOT VISUALLY OBSCURE ANY OTHER TRAFFIC CONTROL DEVICES IN THE AREA. THERE ARE A NUMBER OF CROSSWALKS IN THIS AREA (AS WELL AS BUSINESS AND PRIVATE DRIVES).

LEGEND

- SIGN POSTS
- PEDESTRIAN FENCE
- TRAFFIC BARRIER
- TYPE III BARRICADES
- TYPE III BARRICADES (MOD.)
- TEMP. PRECAST CURB
- TEMP. TRAFFIC BARRIER

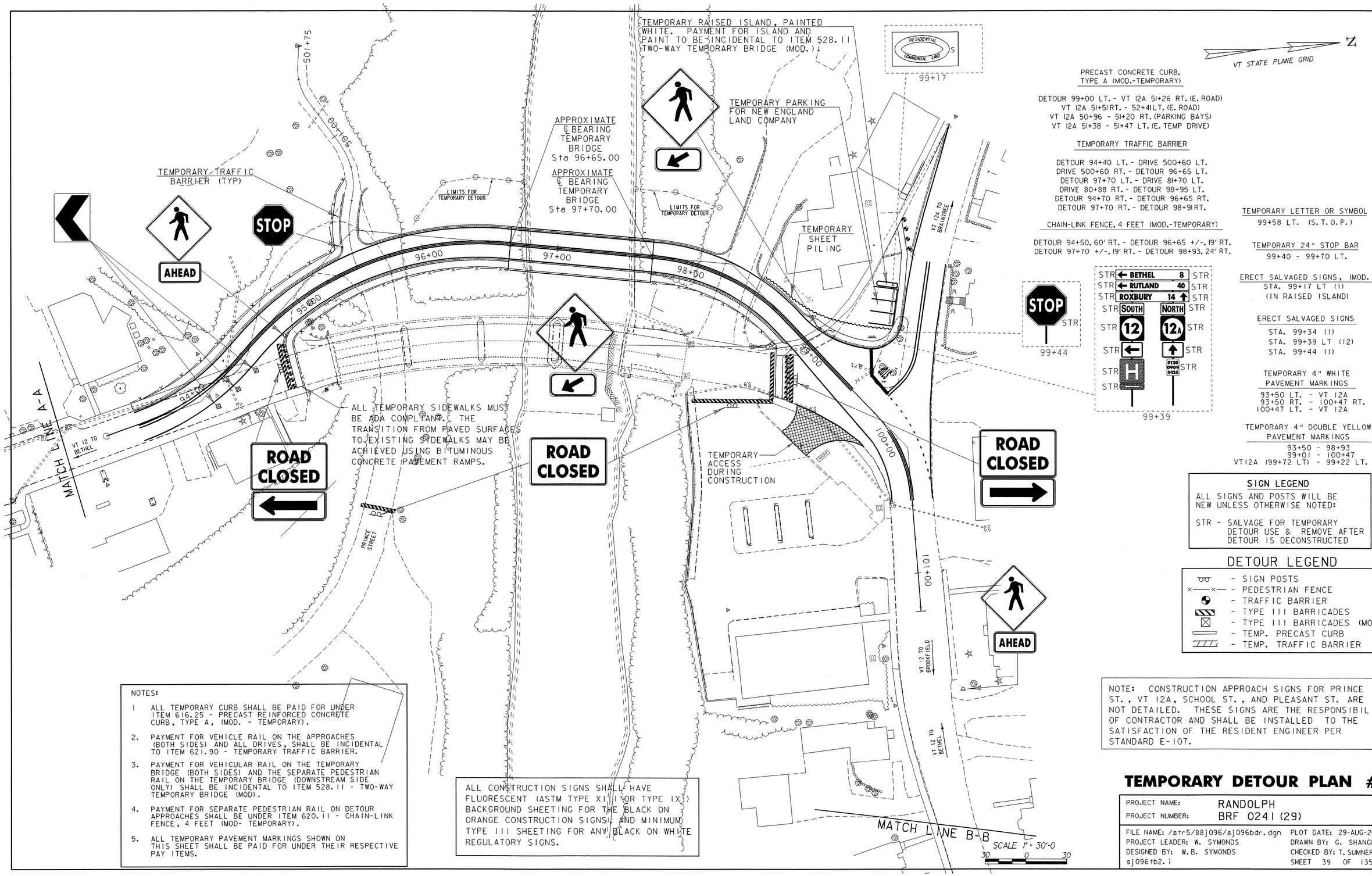
SCALE 1" = 30'-0
30 0 30

TEMPORARY DETOUR PLAN #1

PROJECT NAME:	RANDOLPH
PROJECT NUMBER:	BRF 0241 (29)

FILE NAME: /str5/88j096/sj096bdr.dgn
PROJECT LEADER: W. SYMONDS
DESIGNED BY: W.B. SYMONDS
sj096tbl.i

PLOT DATE: 29-AUG-2006
DRAWN BY: G. SHANGRAW
CHECKED BY: T. SUMNER
SHEET 38 OF 135



PRECAST CONCRETE CURB, TYPE A (MOD.-TEMPORARY)

DETOUR 99+00 LT. - VT 12A 51+26 RT. (E. ROAD)
VT 12A 51+51RT. - 52+41LT. (E. ROAD)
VT 12A 50+96 - 51+20 RT. (PARKING BAYS)
VT 12A 51+38 - 51+47 LT. (E. TEMP DRIVE)

TEMPORARY TRAFFIC BARRIER

DETOUR 94+40 LT. - DRIVE 500+60 LT.
DRIVE 500+60 RT. - DETOUR 96+65 LT.
DETOUR 97+70 LT. - DRIVE 81+70 LT.
DRIVE 80+88 RT. - DETOUR 98+95 LT.
DETOUR 94+70 RT. - DETOUR 96+65 RT.
DETOUR 97+70 RT. - DETOUR 98+91RT.

CHAIN-LINK FENCE, 4 FEET (MOD.-TEMPORARY)

DETOUR 94+50, 60' RT. - DETOUR 96+65 +/-, 19' RT.
DETOUR 97+70 +/-, 19' RT. - DETOUR 98+93, 24' RT.

TEMPORARY LETTER OR SYMBOL
99+58 LT. (S.T.O.P.)

TEMPORARY 24" STOP BAR
99+40 - 99+70 LT.

ERECT SALVAGED SIGNS, (MOD.)
STA. 99+17 LT (1)
(IN RAISED ISLAND)

ERECT SALVAGED SIGNS
STA. 99+34 (1)
STA. 99+39 LT (12)
STA. 99+44 (1)

TEMPORARY 4" WHITE PAVEMENT MARKINGS
93+50 LT. - VT 12A
93+50 RT. - 100+47 RT.
100+47 LT. - VT 12A

TEMPORARY 4" DOUBLE YELLOW PAVEMENT MARKINGS
93+50 - 98+93
99+01 - 100+47
VT12A (99+72 LT) - 99+22 LT.

SIGN LEGEND

ALL SIGNS AND POSTS WILL BE NEW UNLESS OTHERWISE NOTED:

STR - SALVAGE FOR TEMPORARY DETOUR USE & REMOVE AFTER DETOUR IS DECONSTRUCTED

DETOUR LEGEND

- SIGN POSTS
- PEDESTRIAN FENCE
- TRAFFIC BARRIER
- TYPE III BARRICADES
- TYPE III BARRICADES (MOD.)
- TEMP. PRECAST CURB
- TEMP. TRAFFIC BARRIER

NOTES:

1. ALL TEMPORARY CURB SHALL BE PAID FOR UNDER ITEM 616.25 - PRECAST REINFORCED CONCRETE CURB, TYPE A, (MOD. - TEMPORARY).
2. PAYMENT FOR VEHICLE RAIL ON THE APPROACHES (BOTH SIDES) AND ALL DRIVES, SHALL BE INCIDENTAL TO ITEM 621.90 - TEMPORARY TRAFFIC BARRIER.
3. PAYMENT FOR VEHICULAR RAIL ON THE TEMPORARY BRIDGE (BOTH SIDES) AND THE SEPARATE PEDESTRIAN RAIL ON THE TEMPORARY BRIDGE (DOWNSTREAM SIDE ONLY) SHALL BE INCIDENTAL TO ITEM 528.11 - TWO-WAY TEMPORARY BRIDGE (MOD).
4. PAYMENT FOR SEPARATE PEDESTRIAN RAIL ON DETOUR APPROACHES SHALL BE UNDER ITEM 620.11 - CHAIN-LINK FENCE, 4 FEET (MOD- TEMPORARY).
5. ALL TEMPORARY PAVEMENT MARKINGS SHOWN ON THIS SHEET SHALL BE PAID FOR UNDER THEIR RESPECTIVE PAY ITEMS.

ALL CONSTRUCTION SIGNS SHALL HAVE FLUORESCENT (ASTM TYPE XI (1) OR TYPE IX) BACKGROUND SHEETING FOR THE BLACK ON ORANGE CONSTRUCTION SIGNS, AND MINIMUM TYPE III SHEETING FOR ANY BLACK ON WHITE REGULATORY SIGNS.

NOTE: CONSTRUCTION APPROACH SIGNS FOR PRINCE ST., VT 12A, SCHOOL ST., AND PLEASANT ST. ARE NOT DETAILED. THESE SIGNS ARE THE RESPONSIBILITY OF CONTRACTOR AND SHALL BE INSTALLED TO THE SATISFACTION OF THE RESIDENT ENGINEER PER STANDARD E-107.

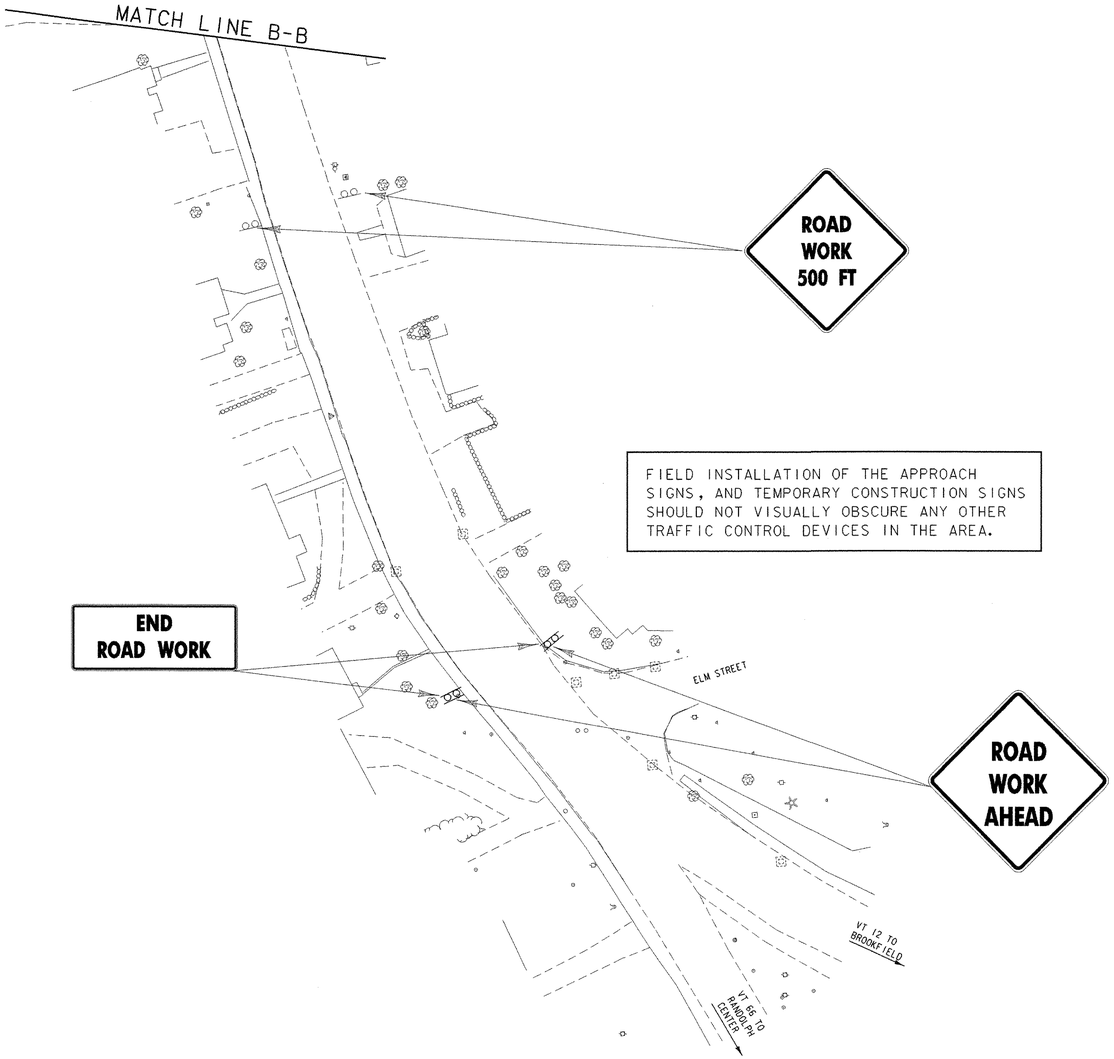
TEMPORARY DETOUR PLAN #2

PROJECT NAME:	RANDOLPH
PROJECT NUMBER:	BRF 0241(29)

FILE NAME: /str5/88j096/sj096bdr.dgn
PROJECT LEADER: W. SYMONDS
DESIGNED BY: W.B. SYMONDS
sj096tb2.i
PLOT DATE: 29-AUG-2006
DRAWN BY: G. SHANGRAW
CHECKED BY: T. SUMNER
SHEET 39 OF 135

N

VT STATE PLANE GRID



FIELD INSTALLATION OF THE APPROACH SIGNS, AND TEMPORARY CONSTRUCTION SIGNS SHOULD NOT VISUALLY OBSCURE ANY OTHER TRAFFIC CONTROL DEVICES IN THE AREA.

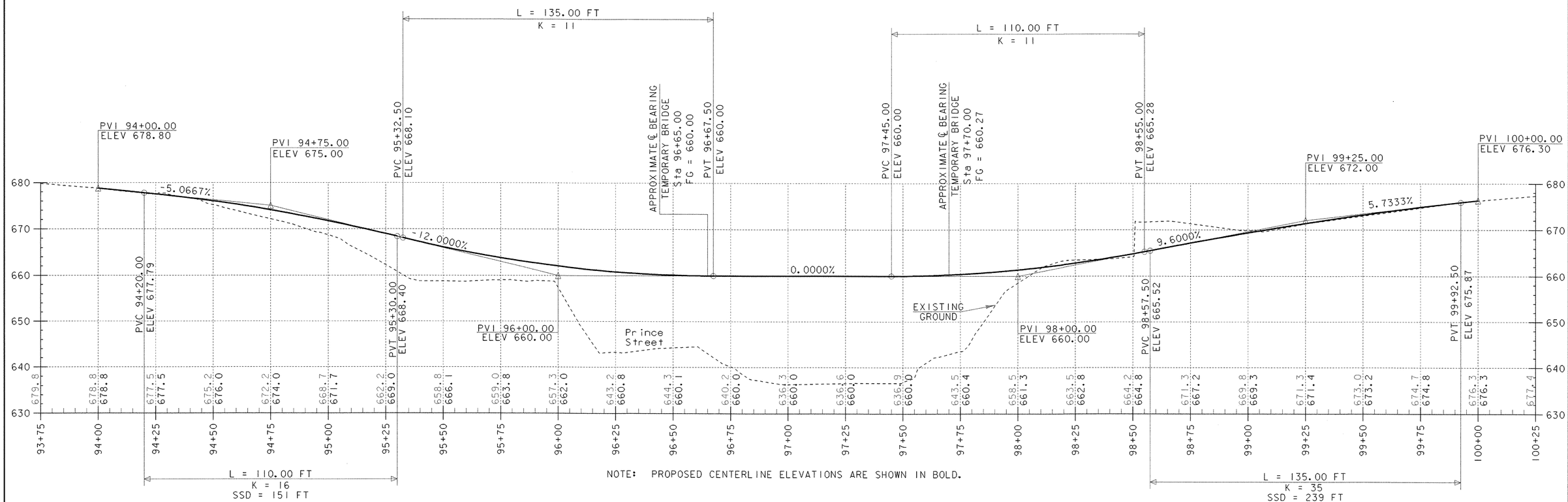
SCALE 1" = 30'-0

30 0 30

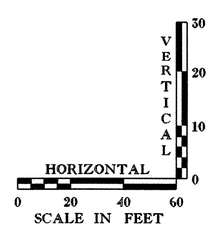
TEMPORARY DETOUR PLAN #3

PROJECT NAME:	RANDOLPH
PROJECT NUMBER:	BRF 0241(29)

FILE NAME: /str5/88j096/sj096bdr.dgn	PLOT DATE: 29-AUG-2006
PROJECT LEADER: W. SYMONDS	DRAWN BY: G. SHANGRAW
DESIGNED BY: W.B. SYMONDS	CHECKED BY: T. SUMNER
sj096tb3.i	SHEET 40 OF 135



NOTE: PROPOSED CENTERLINE ELEVATIONS ARE SHOWN IN BOLD.



TEMPORARY DETOUR PROFILE

PROJECT NAME:	RANDOLPH
PROJECT NUMBER:	BRF 0241 (29)

FILE NAME: /str5/88j096/sj096tem.dgn
PROJECT LEADER: W. SYMONDS
DESIGNED BY: W.B. SYMONDS
sj096tmp.i

PLOT DATE: 29-AUG-2006
DRAWN BY: G. SHANGRAW
CHECKED BY: T. SUMNER
SHEET 41 OF 135

RELOCATED HYDRANT

RELOCATED LUMINAIRE

NOTE: PCCB @ 13+71
CHANGED TO PCDI
WITH SOLID ROUND TOP
MOVED TO 13+55
BEDCAUSE WATER LINE IS
AT THE CURB

DRAINAGE PLAN

PROJECT NAME:	RANDOLPH
PROJECT NUMBER:	BRF 024I(29)

FILE NAME: str5/88J096/sJ096str.dgn	PLOT DATE: 29-AUG-2006
PROJECT LEADER: T. Sumner	DRAWN BY: G. Shangraw
DESIGNED BY: G. Shangraw	CHECKED BY: T. Sumner
sJ096draln.I	SHEET 42 OF 135

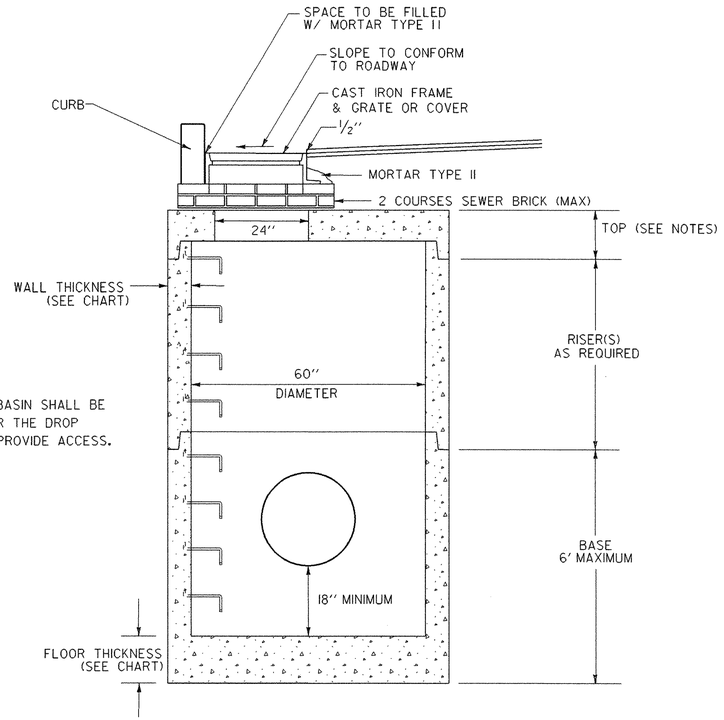
STATE OF VERMONT
AGENCY OF TRANSPORTATION

DRAINAGE DETAIL SHEET

STATION	STATION	POS.	KEY	INLET/OUTLET TYPE		DITCH		UNDERDRAIN			PIPE		ALLOWABLE OPTIONS					PIPE ELBOW	PRE-CAST DROP INLET	PRE-CAST CATCH BASIN	PRECOST	DEPTH DI	CONC CLASS B	REINF STEEL	DI GRATE	CHAN ELEV	CRM	TRENCH EXCAVATION		COMM EXC	UNC CHAN EXC	STRUCT EXCAV	SOLID ROCK EXCAV.	GRAN BORR	GEOTEX TILE FABRIC	STONE FILL			MARKER POSTS		KEY		REMARKS
				INLET	OUTLET	IN	OUT	D IN	L FT		D IN	L FT	RCP (A)	PCCSP (B)	CAAP (C)	CPEP (D)	CSP (E)		NO. DEG	EA	EA		FT	CY	LBS	TYPE	EA	CY	EARTH CY	ROCK CY	CY	CY	CY	CY	CY	SY	CY	TYPE	LT EA	RT EA			
13+01	13+70	LT	1		PCDI																																			1		EXISTING 15" PVC - DO NOT DISTURB
13+70	14+21	LT	2																									23												2		CUT OFF EXISTING 15" PVC. REMOVE TO 14+22 LT
13+71	14+69	LT	3	PCCB	SF-II						24	104								1				E			90											1		3		NEW PCCB @ 13+71 LT w/ TYPE 'E' GRATE
13+72	14+56	RT	4	PCDI	PCDI						18	84								1				E			30													4		NEW PCDI @ 13+72 RT w/ TYPE 'E' GRATE
14+22	14+25	LT-RT	5																								8					3							5		REMOVE PIPE & EXISTING DI @ 14+25 RT
14+22	201+15	LT-RT	6																								55					3							6		REMOVE PIPE & EXISTING DI @ 14+22 LT
14+56	15+10	RT	7	PCDI	PCDI						18	52								1				E			6													7		NEW PCDI @ 14+56 RT w/ TYPE 'E' GRATE
15+10	15+10	RT-LT	8	PCDI	PCDI						18	26								1				E			0													8		NEW PCDI @ 15+10 RT w/ TYPE 'E' GRATE
15+10	15+10	LT-LT	9	PCDI	SF-II						18	20								1				E			0													9		NEW PCDI @ 15+10 LT w/ TYPE 'E' GRATE
202+00		RT	10		SF-1																						3							12	3	I			10		SPECIAL DITCH w/ STONE FILL, TYPE I
202+25	202+50	RT-LT	11	HDWL	SF-II						18	70												2	31		43												1	1	11		NEW CONCRETE HEADWALL @ 202+25 RT
202+55	202+73	LT	12																								32							81	32	II	1	1	12		SPECIAL DITCH w/ STONE FILL, TYPE II
200+32	200+92	LT	13	DITCH	SF-I																						7							40	7	1			13		SPECIAL DITCH w/ STONE FILL, TYPE I
17+66	50+55	LT	14																								40	3											14		REMOVE PIPE & EXISTING DI @ 50+55 LT
17+54	17+64	LT	15																								1					3							15		REMOVE PIPE & EXISTING DI @ 17+64 LT
17+54	17+64	RT	16																								1					3							16		REMOVE PIPE & EXISTING DI @ 17+64 RT
17+58	17+78	RT	17	PCCB	SF-III						24	20									1			D			8											1		17		NEW PRCB @ 17+78 RT
17+67		LT-RT	18	PCDI	PCDI						18	26								1				D			0													18		NEW PCDI @ 17+67 LT w/ TYPE 'D' GRATE
17+67	17+76	RT-RT	19	PCDI	PCCB						18	14								1				D			0													19		NEW PCDI @ 17+67 RT w/ TYPE 'D' GRATE
17+56	18+09	RT	20																								24					2							20		REMOVE PIPE & EXISTING DI @ 18+09 RT
18+09	18+64	RT	21																								22					2							21		REMOVE PIPE & EXISTING DI @ 18+64 RT
17+78	18+26	RT	22	PCDI	PCCB						18	46								1				E			3													22		NEW PCDI @ 18+26 RT w/ TYPE 'E' GRATE
50+28	18+26	LT-RT	23	PCDI	PCDI						18	36								1				E			2													23		NEW PCDI @ 50+28 LT w/ TYPE 'E' GRATE
18+26	19+00	RT	24	PCDI	PCDI						18	64								1				E			33													24		NEW PCDI @ 19+00 RT w/ TYPE 'E' GRATE
18+64	19+77	RT	25																								39					4							25		REMOVE PIPE & EXISTING DI @ 19+77 RT
19+00	19+75	RT	26	PCDI	PCDI						18	64								1				E			30													26		NEW PCDI @ 19+75 RT w/ TYPE 'E' GRATE
19+77	20+01	RT-LT	27																																					27		EXISTING 6" PVC - DO NOT DISTURB
50+28	51+06	LT	28	PCDI	PCDI						18	60								1				E			16													28		NEW PCDI @ 51+06 LT w/ TYPE 'E' GRATE
50+67		RT	29																								18					2							29		REMOVE EXISTING DI @ 50+67 RT
80+57		RT-LT	30	PCDI	SF-III						18	42								1				D			8											1		30		NEW PCDI @ 80+57 RT w/ TYPE 'D' GRATE
81+40	81+50	LT-RT	31	PCDI	SF-II						18	46								1				D			16										1	I	1		31		NEW PCDI @ 81+50 RT w/ TYPE 'D' GRATE
201+82		LT	32		SF-1																						4								4	I	1		32		SPECIAL DITCH w/ SF, TYPE I
14+45	14+56	RT	33		PCDI			6	20																		2												33		NEW 6" x 20' UNDERDRAIN
	TOTALS							6	20		18 24	650 124							13	2			2	31	5-D 10-E		541					25		93	15 32	TYPE I TYPE 2	6 9	3				

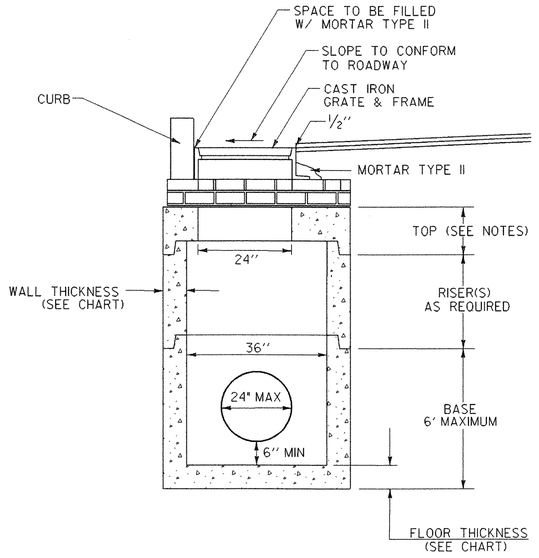
PROJECT NAME:	**RANDOLPH**
PROJECT NUMBER:	**BRF 0241(29)**

FILE NAME:	/str5/88j096/s88j096xcl.dgn	PLOT DATE:	8/14/2006
PROJECT LEADER:	W.B. SYMONDS	DRAWN BY:	G. SHANGRAW
DESIGNED BY:	G. SHANGRAW	CHECKED BY:	T. SUMNER
DRAINAGE DETAIL SHEET #1		SHEET 43	OF 135



NOTE:
STEPS IN CATCH BASIN SHALL BE ORIENTATED UNDER THE DROP INLET GRATE TO PROVIDE ACCESS.

PRECAST CATCH BASIN
N. T. S.



PRECAST DROP INLET
N. T. S.

SIZING CHART

DIAMETER	WALL THICKNESS	FLOOR THICKNESS
48" OR SMALLER	5"	6"
60"	6"	8"
72"	7"	8"
84"	8"	10"
96"	9"	10"

NOTES:

1. ALL PRECAST CONCRETE DROP INLETS SHALL BE DESIGNED AND MANUFACTURED IN ACCORDANCE WITH AASHTO M199M / AASHTO M199
2. THE CONTRACTOR IS RESPONSIBLE FOR VERIFYING ALL INVERT ELEVATIONS, PIPE SIZES AND LOCATIONS SHOWN PRIOR TO ORDERING THE PRECAST COMPONENTS.
3. SEE STANDARDS D-11, D-15, AND D-16 FOR CAST IRON FRAME AND GRATE DETAILS.
4. THE TOP SECTIONS MAY BE EITHER THE FLAT TOPS AS SHOWN OR CONE SECTIONS. IF CONE SECTIONS ARE USED THEY MAY EITHER BE CONCENTRIC OR ECCENTRIC. PIPES ARE NOT PERMITTTED TO ENTER CONE SECTIONS.
5. PRECAST SECTIONS SHALL HAVE A TONGUE AND GROVE JOINT 4" HIGH AT AN ANGLE OF 11 DEGREES CENTERED IN THE WIDTH OF THE JOINT. ALL SECTIONS SHALL BE ASSEMBLED USING AN APPROVED FLEXIBLE SEALANT.
6. ALL SECTIONS WITH MULTIPLE PIPES SHALL HAVE A MINIMUM OF 1'-0" OF OUTSIDE SURFACE BETWEEN HOLES. NO MORE THAN 75% OF A HORIZONTAL CROSS SECTION SHALL BE HOLES. HOLES SHALL BE NO CLOSER THAN 3" TO A JOINT.
7. SEE STANDARD D-15 FOR SIZING AND SPACING OF STEPS.

Not To Scale

PRECAST DROP INLET & PRECAST CATCH BASIN

PROJECT NAME:	RANDOLPH
PROJECT NUMBER:	BRF 024I(29)

FILE NAME: /str5/88j096/precastDI.dgn		PLOT DATE:	29-AUG-2006
PROJECT LEADER:	W. Symonds	DRAWN BY:	G. Shangraw
DESIGNED BY:	W. Symonds	CHECKED BY:	T. Sumner
sj096precast.i		SHEET	44 OF 135

SOIL CLASSIFICATION

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

ROCK QUALITY DESIGNATION

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

SHEAR STRENGTH

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

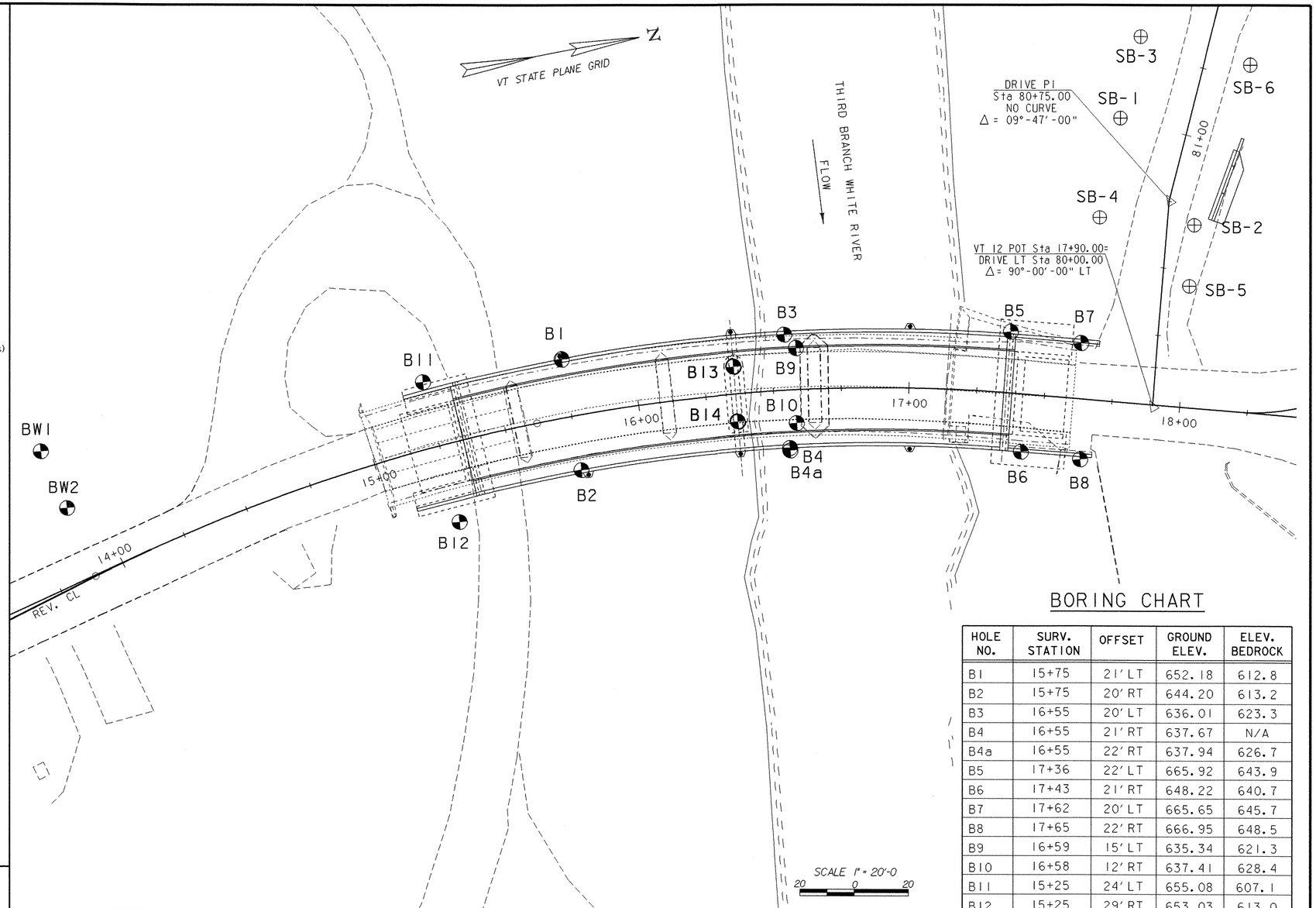
CORRELATION GUIDE OF "N" TO DENSITY/CONSISTENCY

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

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



BORING CHART

HOLE NO.	SURV. STATION	OFFSET	GROUND ELEV.	ELEV. BEDROCK
B1	15+75	21' LT	652.18	612.8
B2	15+75	20' RT	644.20	613.2
B3	16+55	20' LT	636.01	623.3
B4	16+55	21' RT	637.67	N/A
B4a	16+55	22' RT	637.94	626.7
B5	17+36	22' LT	665.92	643.9
B6	17+43	21' RT	648.22	640.7
B7	17+62	20' LT	665.65	645.7
B8	17+65	22' RT	666.95	648.5
B9	16+59	15' LT	635.34	621.3
B10	16+58	12' RT	637.41	628.4
B11	15+25	24' LT	655.08	607.1
B12	15+25	29' RT	653.03	613.0
B13	16+36	10' LT	640.49	626.6
B14	16+36	10' RT	639.48	622.5
BW1	13+90	27' LT	681.24	N/A
BW2	13+96	50' LT	681.14	N/A

BORING LAYOUT

DEFINITIONS (AASHTO)

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

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

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

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

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

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

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

VARVED - Alternate layers of silt and clay.

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

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

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

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

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

DIP - Inclination of bed with a horizontal plane.

GENERAL NOTES

1. The subsurface explorations shown herein were made between **06/12/98** and **07/16/98** 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.
7. **The VAOT Geotechnical Engineer predicts that ledge in the area of abutment 2 is incompetent to 4 or 5 feet below top of bedrock.**

PROJECT NAME:	RANDOLPH
PROJECT NUMBER:	BRF 0241(29)

FILE NAME: /str5/88j096/sj096bor.dgn	PLOT DATE: 29-AUG-2006
PROJECT LEADER: W. SYMONDS	DRAWN BY: G. SHANGRAW
DESIGNED BY: W.B. SYMONDS	CHECKED BY: T. SUMNER
sj096bo1.i	SHEET 45 OF 135

BOTTOM OF FOOTING ABUT. #1
ELEVATION = 653.00

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

HOLE NO.: B-01
SHEET 1 OF 1
DATE STARTED: 7/1/97
DATE COMPLETED: 7/7/97

PROJECT NAME: RANDOLPH
SITE NAME: BRIDGE 42
STATION: 15+75.00
GROUND EL.: 652.18

PROJECT NUMBER: BRF 0241(29)
SITE NO.: Rt.12
OFFSET: -21.00
G.W. DEPTH:

BORING CREW
CREW CHIEF: MCGLYNN
DRILLER: CHABOT E J
LOGGER: TALLMAN .

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

DEPTH	CLASSIFICATION OF MATERIALS (Description)	BLOWS PER FOOT	M.C. %	GRAVEL %	SAND %	FINES %	LL	PI
5	A-2-4, Sa, Moist, br, Rec. = 0.7'	14	13.6	18.3	66.8	14.9		
10	A-1-b, GrSa, Moist, br, Rec. = 0.9'	18	15.9	30.5	60.2	9.3		
15	A-1-a, SaGr and fractured blue stones, Moist, gr, Rec. = 0.4'	R	7.5	66.7	20.9	12.4		
20	BXDC, 20.0'-21.2', Rec. = 1.0', Boulders							
25	A-2-4, SiGrSa, Moist, gr, Rec. = 1.1'	R	16	34.1	36.9	29		
30	BXDC, 27.0'-39.4' Rec. = 1.8' Many Boulders							
35	Top of bedrock @ 39.4'							
40	Run #1: BXDC, 39.5'-44.5' Rec. = 4.5', See Geologist's Report.		DIP°	REC %	ROD %			
45	Run #2: BXDC, 44.5'-49.5' Rec. = 3.4' See Geologist's Report	RUN 1	40	90	50			
50	Run #3: BXDC, 49.5'-53.5' Rec. = 4.0' See Geologist's Report	RUN 2	30	68	53			
55	Hole stopped @ 53.5' In bedrock	RUN 3	40	100	69			
60	Geologist's Report							
65	Run #1: Blue-gray siliceous limestone. Hard. Unweathered. Competent.							
70	Run #2: Blue-gray phyllite. Medium hard to moderately hard. Unweathered. Competent.							
75	Run #3: Blue-gray phyllite. Moderately hard. Unweathered. Competent.							
80								
85								
90								
95								

BOTTOM OF FOOTING ABUT. #1
ELEVATION = 653.00

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

HOLE NO.: B-02
SHEET 1 OF 1
DATE STARTED: 6/24/97
DATE COMPLETED: 6/25/97

PROJECT NAME: RANDOLPH
SITE NAME: BRIDGE 42
STATION: 15+75.00
GROUND EL.: 644.20

PROJECT NUMBER: BRF 0241(29)
SITE NO.: Rt.12
OFFSET: 20.00
G.W. DEPTH:

BORING CREW
CREW CHIEF: MCGLYNN
DRILLER: CHABOT E J
LOGGER: TALLMAN .

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

DEPTH	CLASSIFICATION OF MATERIALS (Description)	BLOWS PER FOOT	M.C. %	GRAVEL %	SAND %	FINES %	LL	PI
5	BXDC, 3.0'-6.0', Boulders							
10	Fractured Angular Blue Stones, 1.0'-12.0', Rec. = 0.5'	R	15.3	85.1	12.2	2.7		
15	A-2-4, SaSiGr, Wet, gr, Rec. = 0.5'	R	22.1	44.2	27.4	28.4		
20	BXDC, 15.0'-20.0', Rec. = 2.5' BXDC, 20.0'-24.0', Rec. = 1.0'							
25	A-1-b, SiSaGr, Moist, gr, Rec. = 1.0'	R	8.3	56.2	22.2	21.6		
30	BXDC, 25.0'-31.0', Rec. = 1.3', Boulders							
35	Top of bedrock @ 31.0'							
40	Run #1: BXDC, 31.0'-36.0' Rec. = 4.3' See Geologist's Report		DIP°	REC %	ROD %			
45	Run #2: BXDC, 36.0'-41.0' Rec. = 4.6' See Geologist's Report	RUN 1	35	86	27			
50	Hole stopped @ 41.0' In bedrock	RUN 2	35	92	70			
55	Geologist's Report							
60	Run #1: Blue-gray phyllite. Medium hard. Top 17" moderately to severly weathered. Remainder of core slightly weathered to unweathered. Rock is competent below 32.5 feet.							
65	Run #2: Blue-gray phyllite to 38 feet. Medium hard. Slightly weathered, to unweathered Blue-gray siliceous limestone below 38 feet. Hard. Unweathered. Rock is competent.							
70								
75								
80								
85								
90								
95								

BOTTOM OF PIER FOOTING
ELEVATION = 637.67

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

HOLE NO.: B-03
SHEET 1 OF 1
DATE STARTED: 6/12/97
DATE COMPLETED: 6/13/97

PROJECT NAME: RANDOLPH
SITE NAME: BRIDGE 42
STATION: 16+55.00
GROUND EL.: 636.01

PROJECT NUMBER: BRF 0241(29)
SITE NO.: Rt.12
OFFSET: -20.00
G.W. DEPTH:

BORING CREW
CREW CHIEF: MCGLYNN
DRILLER: TALLMAN R
LOGGER: GAMMELL .

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

DEPTH	CLASSIFICATION OF MATERIALS (Description)	BLOWS PER FOOT	M.C. %	GRAVEL %	SAND %	FINES %	LL	PI
5	No Rec., Boulders	80						
10	BXDC, 2.6'-6.0', No Rec., Mostly Concrete	R						
15	BXDC, 6.0'-8.0', Boulders	12	18	68.7	22.8	8.5		
20	A-1-a, SaGr with trace of concrete, Wet, gr, Rec. = 0.4'	R	14.3	78.5	13	8.5		
25	BXDC, 10.0'-11.5', Boulders	Top of bedrock @ 12.7'						
30	A-1-a, Gr, Wet, gr, Rec. = 0.6'		DIP°	REC %	ROD %			
35	Run #1: BXMDC, 12.7'-17.2' Rec. = 4.4' See Geologist's Report.	RUN 1	35	98	94			
40	Run #2: BXMDC, 17.2'-22.2' Rec. = 4.7' See Geologist's Report.	RUN 2	30	94	80			
45	Hole stopped @ 22.2' In bedrock							
50	Geologist's Report							
55	Run #1: Blue-gray phyllite. Moderately hard. Unweathered. Competent.							
60	Run #2: Blue-gray phyllite. Moderately hard. Unweathered. Competent.							
65								
70								
75								
80								
85								
90								
95								

BORING LOGS #1

PROJECT NAME: RANDOLPH
PROJECT NUMBER: BRF 0241(29)

FILE NAME: /str5/88j096/sj096bor.dgn
PROJECT LEADER: W. SYMONDS
DESIGNED BY: W.B. SYMONDS
sj096bo2.i

PLOT DATE: 29-AUG-2006
DRAWN BY: J. TOUCHETTE
CHECKED BY: T. SUMNER
SHEET 46 OF 135

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

HOLE NO.: B-04
SHEET 1 OF 1
DATE STARTED: 6/16/97
DATE COMPLETED: 6/17/97

PROJECT NAME: RANDOLPH
SITE NAME: BRIDGE 42
STATION: 16+55.00
GROUND EL.: 637.67

PROJECT NUMBER: BRF 0241(29)
SITE NO.: Rt.12
OFFSET: 21.00
G.W. DEPTH:

BORING CREW
CREW CHIEF: MCGLYNN
DRILLER: TALLMAN R
LOGGER: GAMMELL .

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

BOTTOM OF PIER FOOTING ELEVATION = 636.67

DEPTH	SYMBOL	CLASSIFICATION OF MATERIALS (Description)	BLOWS PER FOOT	M.C. %	GRAVEL %	SAND %	FINES %	LL	PI
0		Mostly Boulders, 0.0'-1.5'							
5		BXDC, Mostly Concrete, 1.5'-7.8'							
10		A-1-b, GrSa, Wet, br, Rec. = 1.0'	R	8.7	47.6	48.1	4.3		
15		Hole stopped @ 11.2' Due to loss of casing shoe.							
20									
25									
30									
35									
40									
45									
50									
55									
60									
65									
70									
75									
80									
85									
90									
95									

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

HOLE NO.: B-04A
SHEET 1 OF 1
DATE STARTED: 6/16/97
DATE COMPLETED: 6/17/97

PROJECT NAME: RANDOLPH
SITE NAME: BRIDGE 42
STATION: 16+55.00
GROUND EL.: 637.94

PROJECT NUMBER: BRF 0241(29)
SITE NO.: Rt.12
OFFSET: 22.00
G.W. DEPTH:

BORING CREW
CREW CHIEF: MCGLYNN
DRILLER: TALLMAN R
LOGGER: GAMMELL .

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

BOTTOM OF PIER FOOTING ELEVATION = 636.67

DEPTH	SYMBOL	CLASSIFICATION OF MATERIALS (Description)	BLOWS PER FOOT	M.C. %	GRAVEL %	SAND %	FINES %	LL	PI
0		BXDC, 2.0'-5.0', Rec. = 1.0', Granite							
5		BXDC, 5.0'-6.5', Boulders & Wood							
10		BXDC, 6.5'-9.0', Rec. = 2.5', Concrete, Advanced casing to 11.2'							
15		Run #1: BXDC, 11.2'-16.2' Rec. = 4.7' See Geologist's Report							
20		Run #2: BXDC, 16.2'-21.2' Rec. = 5.0' See Geologist's Report							
25		Geologist's Report							
30		Run #1: Blue-gray siliceous limestone to 15.1 feet. Moderately hard Unweathered. Competent. Blue-gray phyllite below 15.1 feet. Hard. Unweathered. Competent.							
35									
40									
45									
50		Run #2: Blue-gray siliceous limestone. Hard. Unweathered. Competent. Quartz vein 20.8'-21.2'.							
55									
60									
65									
70									
75									
80									
85									
90									
95									

Top of bedrock @ 11.2'

	DIP°	REC %	ROD %
RUN 1	45	94	52
RUN 2	30	100	83

Hole stopped @ 21.2'

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

HOLE NO.: B-05
SHEET 1 OF 1
DATE STARTED: 7/14/97
DATE COMPLETED: 7/16/97

PROJECT NAME: RANDOLPH
SITE NAME: BRIDGE 42
STATION: 17+36.00
GROUND EL.: 665.92

PROJECT NUMBER: BRF 0241(29)
SITE NO.: Rt.12
OFFSET: -22.00
G.W. DEPTH:

BORING CREW
CREW CHIEF: MCGLYNN
DRILLER: CHABOT E J
LOGGER:

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

BOTTOM OF FOOTING ABUT. #2 ELEVATION = 640.00

DEPTH	SYMBOL	CLASSIFICATION OF MATERIALS (Description)	BLOWS PER FOOT	M.C. %	GRAVEL %	SAND %	FINES %	LL	PI
0		No. Sample at 5.0'-7.0', Boulders							
5		BXDC, 10.0'-12.0', Rec. = 0.5', Boulders							
10		BXDC, 15.0'-18.0', Rec. = 1.4', Boulders							
15		BXDC, 20.0'-22.0', Rec. = 0.8', Boulders							
20		Run #1: BXDC, 22.0'-27.0' Rec. = 2.8' See Geologist's Report							
25		Run #2: BXDC, 27.0'-32.0' Rec. = 4.8' See Geologist's Report							
30		Geologist's Report							
35		Run #1: Blue-gray siliceous limestone. Hard. Unweathered. Presence of possible void. Rock not competent. Severely weathered from 25.3'-25.5'.							
40									
45									
50		Run #2: Blue-gray siliceous limestone. Hard. Unweathered. Numerous joints. Rock competency-fair.							
55									
60									
65									
70									
75									
80									
85									
90									
95									

Top of bedrock @ 22.0'

	DIP°	REC %	ROD %
RUN 1	75	56	40
RUN 2	75	96	65

Hole stopped @ 32.0'

BORING LOGS #2

PROJECT NAME: RANDOLPH
PROJECT NUMBER: BRF 0241(29)

FILE NAME: /str5/88j096/sj096bor.dgn
PROJECT LEADER: W. SYMONDS
DESIGNED BY: W.B. SYMONDS
sj096bo3.i

PLOT DATE: 29-AUG-2006
DRAWN BY: J. TOUCHETTE
CHECKED BY: T. SUMNER

BOTTOM OF FOOTING ABUT. #2
ELEVATION = 640.00

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

HOLE NO.: B-06
SHEET 1 OF 1
DATE STARTED: 6/30/97
DATE COMPLETED: 7/1/97

PROJECT NAME: RANDOLPH
SITE NAME: BRIDGE 42
STATION: 17+43.00
GROUND EL.: 648.22

PROJECT NUMBER: BRF 0241(29)
SITE NO.: Rt.12
OFFSET: 21.00
G.W. DEPTH:

BORING CREW
CREW CHIEF: MCGLYNN
DRILLER: CHABOT E J
LOGGER: GAMMELL .

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

DEPTH	SYMBOL	CLASSIFICATION OF MATERIALS (Description)	BLOWS PER FOOT	M.C. %	GRAVEL %	SAND %	FINES %	LL	PI
0		Ream casing mostly in Rock Fill.							
5									
		Top of bedrock @ 7.5'							
				DIP°	REC %	ROD %			
10		Run #1: BXDC, 7.5'-9.5', Rec. = 1.5' See Geologist's Report.	RUN 1	45	75	33			
		Run #2: BXDC, 9.5'-11.5' Rec. = 1.4' See Geologist's Report	RUN 2	45	70	0			
15		Run #3: BXDC, 11.5'-15.5' Rec. = 3.4' See Geologist's Report	RUN 3	45	68	50			
			RUN 4	55	80	69			
20		Run #4: BXDC, 15.5'-21.0' Rec. = 4.0' See Geologist's Report.							
		Hole stopped @ 21.0'							
25		Geologist's Report							
		Run #1: Blue-gray phyllite. Medium hardness. Slightly to very slight weathering. Top 8" of core very broken up by very close spaced joints. (2.0' Run)							
30									
35									
40									
45									
50		Run #2: Blue-gray siliceous limestone and blue-gray phyllite. Hard. Slightly weathered to unweathered. Poor RQD. (2.0' Run)							
55									
60		Run #3: Blue-gray siliceous limestone. Hard. Slightly weathered to Unweathered. Closely spaced jointing. Rock is competent. (5.0' Run)							
65									
70									
75		Run #4: Same as Run #3, but no natural jointing. (5.0' Run)							
80									
85									
90									
95									

BOTTOM OF FOOTING ABUT. #2
ELEVATION = 640.00

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

HOLE NO.: B-07
SHEET 1 OF 1
DATE STARTED: 7/10/97
DATE COMPLETED: 7/10/97

PROJECT NAME: RANDOLPH
SITE NAME: BRIDGE 42
STATION: 17+62.00
GROUND EL.: 665.65

PROJECT NUMBER: BRF 0241(29)
SITE NO.: Rt.12
OFFSET: -20.00
G.W. DEPTH:

BORING CREW
CREW CHIEF: MCGLYNN
DRILLER: CHABOT E J
LOGGER: TALLMAN .

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

DEPTH	SYMBOL	CLASSIFICATION OF MATERIALS (Description)	BLOWS PER FOOT	M.C. %	GRAVEL %	SAND %	FINES %	LL	PI
0		No Rec. Loose stone fill, 0.0'-5.0'							
5		BXDC, 5.0'-9.5', Rec. = 0.3', Concrete							
10		No Rec., 10.0'-12.0'	20						
15		A-1-b, GrSa, Wet, br/trace of light brown, Rec. = 0.9'	12	19.3	38.8	44	17.2		
		Top of bedrock @ 20.0'							
20		Run #1: BXMDC, 20.0'-25.0', Rec. = 4.8', See Geologist's Report.		DIP°	REC %	ROD %			
			RUN 1	45	96	95			
25		Run #2: BXMDC, 25.0'-30.0', Rec. = 4.8', See Geologist's Report.	RUN 2	65	96	88			
30		Hole stopped @ 30.0' in bedrock.							
35		Geologist's Report							
		Run #1: Blue-gray siliceous limestone. Hard. Unweathered. Rock is competent.							
40									
45									
50		Run #2: Blue-gray siliceous limestone. Hard. Unweathered. Rock is competent.							
55									
60									
65									
70									
75									
80									
85									
90									
95									

BOTTOM OF FOOTING ABUT. #2
ELEVATION = 640.00

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

HOLE NO.: B-08
SHEET 1 OF 1
DATE STARTED: 7/8/97
DATE COMPLETED: 7/8/97

PROJECT NAME: RANDOLPH
SITE NAME: BRIDGE 42
STATION: 17+65.00
GROUND EL.: 666.95

PROJECT NUMBER: BRF 0241(29)
SITE NO.: Rt.12
OFFSET: 22.00
G.W. DEPTH:

BORING CREW
CREW CHIEF: MCGLYNN
DRILLER: CHABOT E J
LOGGER: TALLMAN .

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

DEPTH	SYMBOL	CLASSIFICATION OF MATERIALS (Description)	BLOWS PER FOOT	M.C. %	GRAVEL %	SAND %	FINES %	LL	PI
0		Ream casing in mostly in Rock Fill, 0.0'-10.0', No Rec.							
5									
10		A-1-a, SaGr, Moist, br, Rec. = 0.5'	R	14.5	59.2	34.8	6		
15		No Rec.	16						
		Top of bedrock @ 18.5'							
20		Run #1: BXDC, 18.5'-20.5' Rec. = 1.0' See Geologist's Report		DIP°	REC %	ROD %			
			RUN 1	40	50	29			
25		Run #2: BXMDC, 20.5'-25.5' Rec. = 3.1' See Geologist's Report	RUN 2	35	62	55			
			RUN 3	70	92	77			
30		Run #3: BXMDC, 25.5'-30.5' Rec. = 4.6' See Geologist's Report							
		Hole stopped @ 30.5' in bedrock							
35		Geologist's Report							
		Run #1: Blue-gray siliceous limestone. Hard. Unweathered. Rock is competent.							
40									
45									
50		Run #2: Blue-gray siliceous limestone. Hard. Unweathered. Rock is competent.							
55									
60									
65		Run #3: Blue-gray siliceous limestone (25.5'-27.0'). Hard. Unweathered. Rock is competent. Blue-gray phyllite limestone (27.0'-30.5'). moderately hard. Unweathered. Rock is competent.							
70									
75									
80									
85									
90									
95									

BORING LOGS #3

PROJECT NAME: RANDOLPH
PROJECT NUMBER: BRF 0241(29)

FILE NAME: /str5/88j096/sj096bor.dgn
PROJECT LEADER: W. SYMONDS
DESIGNED BY: W.B. SYMONDS
sj096bo4.i

PLOT DATE: 29-AUG-2006
DRAWN BY: J. TOUCHETTE
CHECKED BY: T. SUMNER
SHEET 48 OF 135

BOTTOM OF PIER FOOTING
ELEVATION = 637.00

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

HOLE NO.: B-09
SHEET 1 OF 1
DATE STARTED: 6/5/97
DATE COMPLETED: 6/12/97

PROJECT NAME: RANDOLPH
SITE NAME: BRIDGE 42
STATION: 16+59.00
GROUND EL.: 635.34

PROJECT NUMBER: BRF 0241(29)
SITE NO.: Rt. 12
OFFSET: -15.00
G.W. DEPTH:

BORING CREW
CREW CHIEF: MCGLYNN
DRILLER: WILLIS
LOGGER: TALLMAN .

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

DEPTH	CLASSIFICATION OF MATERIALS (Description)	BLOWS PER FOOT	M.C. %	GRAVEL %	SAND %	FINES %	LL	PI
0	A-1-a, SaGr, Wet, gr, Rec. = 0.7'	22	7.1	59.4	29.7	10.9		
2	A-1-a, SaGr, Wet, gr, Rec. = 0.2'	90	11.1	65.2	24.1	10.7		
5	Ream casing 5.0'-10.0', Boulders							
10	BXDC, 10.0'-14.0', Boulders	Top of bedrock @ 14.0'						
15	Run #1: BXDC, 14.0'-15.0' Rec. = 1.0' See Geologist's Report		DIP°	REC %	ROD %			
15		RUN 1	60	100	0			
15		RUN 2	60	93	90			
20	Run #2: BXDC, 15.0'-16.4' Rec. = 1.3' See Geologist's Report.	RUN 3	60	68	68			
20		RUN 4	60	32	32			
25	Run #3: BXDC, 16.4'-21.4' Rec. = 3.4' See Geologist's Report	Hole stopped @ 23.9' In bedrock						
30	Run #4: BXDC, 21.4'-23.9' Rec. = 0.8' See Geologist's Report.							
35	Geologist's Report Run #1: Blue-gray siliceous limestone. Hard. Unweathered. Low RQD may be due to mechanical breakage during drilling.							
40	Run #2: Blue-gray siliceous limestone. Hard. Unweathered. Competent. Core very broken up during drilling.							
45	Run #3: Blue-gray siliceous limestone. (16.4'-18.4') Hard. Unweathered. Competent. Core very broken up during drilling. Blue-gray phyllite from 18.4'-21.4'. Medium to moderately hard. Very Slightly weathered. Core very broken up during drilling. Competent.							
50	Run #4: Blue-gray phyllite Medium to moderately hard. Very slightly weathered. Core very broken up during drilling.							
55								
60								
65								
70								
75								
80								
85								
90								
95								

BOTTOM OF PIER FOOTING
ELEVATION = 637.67

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

HOLE NO.: B-10
SHEET 1 OF 1
DATE STARTED: 6/5/97
DATE COMPLETED: 6/6/97

PROJECT NAME: RANDOLPH
SITE NAME: BRIDGE 42
STATION: 16+58.00
GROUND EL.: 637.41

PROJECT NUMBER: BRF 0241(29)
SITE NO.: Rt. 12
OFFSET: 12.00
G.W. DEPTH:

BORING CREW
CREW CHIEF: MCGLYNN
DRILLER: WILLIS
LOGGER: TALLMAN .

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

DEPTH	CLASSIFICATION OF MATERIALS (Description)	BLOWS PER FOOT	M.C. %	GRAVEL %	SAND %	FINES %	LL	PI
0	A-1-a, SaGr, Wet, br, Rec. = 0.7'	21	12.5	65.4	27.2	7.4		
2	A-1-a, SaGr, Wet, br, Rec. = 0.2'	84	13.7	62.6	29.1	8.3		
5	Weathered Bedrock, Rec. = 1.0'	Top of bedrock @ 9.0'						
10	BXMDC, 6.0'-9.0', Boulders		DIP°	REC %	ROD %			
15	Run #1: BXMDC, 9.0'-14.0' Rec. = 4.6' See Geologist's Report.	RUN 1	70	92	92			
15		RUN 2	70	96	90			
20	Run #2: BXMDC, 14.0'-19.0' Rec. = 4.8' See Geologist's Report.	Hole stopped @ 19.0' In bedrock						
25	Geologist's Report Run #1: Blue-gray siliceous limestone. Hard. Unweathered. Thin Blue-gray phyllite bed at 11.5 feet. Competent.							
30	Run #2: Blue-gray siliceous limestone. Hard. Unweathered. Competent.							
35								
40								
45								
50								
55								
60								
65								
70								
75								
80								
85								
90								
95								

BOTTOM OF FOOTING ABUT. #1
ELEVATION = 653.00

ESTIMATED BOTTOM OF PILES ABUT. #1
ELEVATION = 613.00

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

HOLE NO.: B-11
SHEET 1 OF 1
DATE STARTED: 11/26/97
DATE COMPLETED: 12/4/97

PROJECT NAME: RANDOLPH
SITE NAME: BRIDGE 42
STATION: 15+25.00
GROUND EL.: 655.08

PROJECT NUMBER: BRF 0241(29
SITE NO.: Rt. 12
OFFSET: -24.00
G.W. DEPTH:

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

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

DEPTH	CLASSIFICATION OF MATERIALS (Description)	BLOWS PER FOOT	M.C. %	GRAVEL %	SAND %	FINES %	LL	PI
5	No Rec.	5						
10	A-4, SiSa with broken rock, gry, Moist, Rec. = 0.9'	26	8.4	13.7	45.1	41.2		
15	No Rec.	R						
20	A-4, SiSa with broken rock, gry, Moist, Rec. = 0.6'	40	13.2	2.5	49.9	47.6		
25	BXMDC, 22.5'-27.5', Boulders, Rec. = 2.2'							
30	No Rec., Boulders							
35	A-2-4, SiSa with broken rock, gry, Moist, Rec. = 0.5'	R	12.1	12.2	59	28.8		
40	BXMDC, 35.6'-39.5', Boulders							
45	A-4, SaSi with broken rock, gry, Moist, Rec. = 1.3'	97	12.7	8.2	38	53.8		
45		Top of bedrock @ 48.0'						
50	Run #1: BXMDC, 48.0'-52.0' Rec. = 2.8' See Geologist's Report.	RUN	REC %	ROD %	Dip°			
50		1	70	17	25			
55	Run #2: BXMDC, 52.0'-57.0' Rec. = 4.5', See Geologist's Report.	2	90	70	25			
55		3	90	90	25			
60	Run #3: BXMDC, 57.0'-59.0', Rec. = 1.8' See Geologist's Report.	Hole stopped @ 59.0' In bedrock						
65	Geologist's Report Run #1: (48.0'-49.0') Blue-Gray siliceous Limestone. Hard. Unweathered. (49.0'-52.0') Blue-Gray phyllite. Moderately hard. Unweathered. Poor RQD due to mechanical breakage during drilling.							
70	Run #2: Blue-Gray phyllite Moderately hard. Unweathered. Competent							
75	Run #3: Same as Run #2.							
80								
85								
90								
95								

BORING LOGS #4

PROJECT NAME: RANDOLPH
PROJECT NUMBER: BRF 0241(29)

FILE NAME: /str5/88j096/sj096bor.dgn
PROJECT LEADER: W. SYMONDS
DESIGNED BY: W.B. SYMONDS
sj096bo5.i

PLOT DATE: 29-AUG-2006
DRAWN BY: J. TOUCHETTE
CHECKED BY: T. SUMNER
SHEET 49 OF 135

BOTTOM OF FOOTING ABUT. #1
ELEVATION = 653.00

ESTIMATED BOTTOM OF PILES ABUT. #1
ELEVATION = 613.00

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

HOLE NO.: B-12
SHEET 1 OF 1
DATE STARTED: 12/8/97
DATE COMPLETED: 12/10/97

PROJECT NAME: RANDOLPH
SITE NAME: BRIDGE 42
STATION: 15+25.00
GROUND EL.: 653.03

PROJECT NUMBER: BRF 0241(29
SITE NO.: Rt.12
OFFSET: 29.00
G.W. DEPTH:

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

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

DEPTH	SYMBOL	CLASSIFICATION OF MATERIALS (Description)	BLOWS PER FOOT	M.C. %	GRAVEL %	SAND %	FINES %	LL	PI
5		A-4, SiSa, brn, Wet, Rec. = 0.2'	4	23.6	9.5	50.1	40.4		
10		No Rec.							
15		A-4, Si, gry, Wet, Rec. = 0.3'	4	43.5		1.5	98.5		
20		No Rec., Boulders							
25		Pulverized Rock, Dk/gry, Moist, Rec. = 1.2'	24	15.6	(visual class.)				
30		A-4, SiSa with broken rock, gry, Moist, Rec. = 0.6'	27 (53% of sample was broken rock)	12.6		54.4	45.6		
35		A-4, SaSi with broken rock, gry, Moist, Rec. = 0.5'	R (60% of sample was broken rock)	7.2		40.1	59.9		
40		No Rec. 40.0'-40.03'	R Top of bedrock @ 40.03'						
45		Run #1: BXMDC, 40.03'-42.03', Rec. = 2.0', See Geologist's Report.	1	100	100	25			
50		Run #2: BXMDC, 42.03'-47.03', Rec. = 3.8', See Geologist's Report.	2	76	76	25			
55		Run #3: BXMDC, 47.03'-51.03' Rec. = 4.0' See Geologist's Report.	3	100	100	25			
60			Hole stopped @ 51.03' In bedrock						
65									
70									
75									
80									
85									
90									
95									

RUN	REC %	RQD %	Dip°
1	100	100	25
2	76	76	25
3	100	100	25

Geologist's Report

Run #1: Blue-Gray siliceous limestone. Hard. Unweathered. Competent

Run #2: Same as Run #1

Run #3: Same as Run #1

BOTTOM OF PIER FOOTING
ELEVATION = 637.67

ESTIMATED BOTTOM OF DRILLED SHAFT
ELEVATION = 616.6

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

HOLE NO.: B-13
SHEET 1 OF 1
DATE STARTED: 4/4/02
DATE COMPLETED: 4/11/02

PROJECT NAME: RANDOLPH
SITE NAME: BRIDGE 42
STATION: 16+36.00
GROUND EL.: 640.49

PROJECT NUMBER: BRF 0241(29)
SITE NO.: Rt.12
OFFSET: -10.00
G.W. DEPTH:

BORING CREW
CREW CHIEF: TALLMAN
DRILLER: TALLMAN
LOGGER: RUSSELL

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

DEPTH	SYMBOL	CLASSIFICATION OF MATERIALS (Description)	BLOWS PER FOOT	M.C. %	GRAVEL %	SAND %	FINES %		
5		BXDC, 3.0'-4.5', Boulder							
		BXDC, 4.5'-5.5', Boulder							
		No Rec., Plugged sampler	28						
		NXMDC, 8.0'-9.5', No sample, Broke through rock.							
10		NXMDC, 10.0'-11.0', No sample, Broke through rock							
		A-1-b, SiSaGr, gry, Moist, Rec. = 0.45'	R Top of bedrock @ 13.9'	10.3	54.1	24.1	21.8		
15		Run#1: NXMDC, 13.9'-18.9', Rec. = 5.0', See Geologist's Report.	1	100	46	35			
20		Run#2: NXMDC, 18.9'-23.9', Rec. = 4.5', See Geologist's Report.	2	90	70	35			
25			Hole stopped @ 23.9'						
30									
35									
40									
45									

RUN	REC%	RQD%	Dip°	SD	Co	Eo
1	100	46	35	17.1	3474	1303
				17.9	7865	2865
2	90	70	35	20.2	6400	1383
				20.8	5862	2389
				21.8	6079	3216
				22.3	5102	2554
				22.9	7342	2612

Geologist's Report:

Run#1: Dark gray slate, Moderately hard, Unweathered, Competent.

Run#2: Same as Run#1, Competent.

SD = Sample Center Depth, ft.
Co = Uniaxial Compressive Strength of Intact Rock, psi
Eo = Elastic Modulus of Intact Rock, ksi

BOTTOM OF PIER FOOTING
ELEVATION = 637.67

ESTIMATED BOTTOM OF DRILLED SHAFT
ELEVATION = 616.6

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

HOLE NO.: B-14
SHEET 1 OF 1
DATE STARTED: 4/12/02
DATE COMPLETED: 5/2/02

PROJECT NAME: RANDOLPH
SITE NAME: BRIDGE 42
STATION: 16+36.00
GROUND EL.: 639.48

PROJECT NUMBER: BRF 0241(29)
SITE NO.: Rt.12
OFFSET: 10.00
G.W. DEPTH:

BORING CREW
CREW CHIEF: TALLMAN
DRILLER: TALLMAN
LOGGER: RUSSELL

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

DEPTH	SYMBOL	CLASSIFICATION OF MATERIALS (Description)	BLOWS PER FOOT	M.C. %	GRAVEL %	SAND %	FINES %		
5		A-1-b, SaGr, brn-blk, Moist, Rec. = 0.8'	21	15.9	56	28.7	15.3		
		A-1-a, Gr, blk, Moist, Rec. = 0.4', Broken Rock was within sample.	R	6.1	75.5	16.6	7.9		
		BXDC, 6.0'-8.1', Boulders Advaned casing, Cleaned out casing.							
10		A-1-b, GrSa, gry, Moist, Rec. = 0.4', Broken Rock was within sample.	19	15.7	36.4	56.8	6.8		
		BXDC, 10.1'-10.75', Boulders							
		NXGDC, 10.75'-12.50', Boulders, Broke through at 12.5'.							
		BXDC, 13.65'-14.0', Cleaned out casing.	86	11.1	36.7	27.7	35.6		
15		A-4, SaSiGr, gry, Moist, Rec. = 1.65'	R Broken Rock was within sample Top of bedrock @ 17.0'	14.5	21.3	39.4	39.3		
		A-4, GrSiSa, gry, Moist, Rec. = 0.6',	RUN	REC%	RQD%	Dip°	SD	Co	Eo
		Run#1: NXGDC, 17.0'-22.0', Rec. = 5.0', See Geologist's Report.	1	100	100	60	17.9	16658	5264
20							19.1	21766	5169
							21.2	23177	6621
		Run#2: NXGDC, 22.0'-27.0', Rec. = 5.0' See Geologist's Report.	2	100	100	60	22.4	23652	7730
							23.5	23383	6053
25							24.4	22206	5726
							26.1	19983	6056
30			Hole stopped @ 27.0'						
35									
40									
45									

Geologist's Report:

Run#1: Light gray meta-limestone, Hard, Unweathered, Competent.

Run#2: Same as Run#1, Competent.

SD = Sample Center Depth, ft.
Co = Uniaxial Compressive Strength of Intact Rock, psi
Eo = Elastic Modulus of Intact Rock, ksi

BORING LOGS #5

PROJECT NAME: RANDOLPH
PROJECT NUMBER: BRF 0241 (29)

FILE NAME: /str5/88j096/sj096bor.dgn
PROJECT LEADER: W. SYMONDS
DESIGNED BY: W.B. SYMONDS
sj096bo6.i

PLOT DATE: 29-AUG-2006
DRAWN BY: J. TOUCHETTE
CHECKED BY: T. SUMNER
SHEET 50 OF 135

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

BORING NUMBER: BW1
SHEET 1 of 1
DATE STARTED: 3/27/06
DATE COMPLETED: 3/28/06

PROJECT NAME: RANDOLPH
SITE NAME: PRINCE ST.
STATION: 13+90.00
OFFSET: -27.00
VTSPG: N 519850.9153 ft E 1596740.7418 ft

PROJECT NUMBER: BRF 0241(29)
SITE NUMBER: RETAINING WALL
GROUND ELEVATION: 681.24 ft
GROUNDWATER DEPTH: No water found.
PROJECT PIN NUMBER: 88J096

BORING CREW
CREW CHIEF: GARROW
DRILLER: GARROW
LOGGER: RUSSELL

BORING RIG: SMALL SKID RIG
BORING TYPE: WASH BORE
SAMPLE TYPE: SPLIT BARREL
CHECKED BY: DLG

DEPTH (ft)	SYMBOL	CLASSIFICATION OF MATERIALS (Description)	BLOWS PER FOOT	M.C. (%)	GRAVEL (%)	SAND (%)	FINES (%)
		A-4, Si, brn, Moist, Rec. = 1.5 ft	6	45.3	0.0	10.8	89.2
5		A-4, SaSi, gry-brn, Moist, Rec. = 1.7 ft	9	28.5	0.0	33.3	66.7
10		A-4, SaSi, brn-gry, Moist, Rec. = 1.1 ft	9	21.8	2.0	42.9	55.1
15		A-4, SaSi, brn-gry, Moist, Rec. = 1.2 ft	13	22.7	0.0	38.7	61.3
20		A-4, SaSi, brn-gry, Moist, Rec. = 1.4 ft	15	27.8	0.0	25.8	74.2
25		A-4, SiSa, brn-gry, Moist, Rec. = 1.0 ft	14	18.9	0.0	59.7	40.3
		Hole stopped @ 27.0 ft					
30							
35							
40							
45							

LOG OF BORING RANDOLPH BRF 0241(29)SP1 VT ADT.GDT 4/13/06

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

BORING NUMBER: BW2
SHEET 1 of 1
DATE STARTED: 3/23/06
DATE COMPLETED: 3/24/06

PROJECT NAME: RANDOLPH
SITE NAME: PRINCE ST.
STATION: 13+96.00
OFFSET: -50.00
VTSPG: N 519850.7533 ft E 1596716.9699 ft

PROJECT NUMBER: BRF 0241(29)
SITE NUMBER: RETAINING WALL
GROUND ELEVATION: 681.14 ft
GROUNDWATER DEPTH: Hole caved in at 36.0'
PROJECT PIN NUMBER: 88J096

BORING CREW
CREW CHIEF: HOLT
DRILLER: RUSSELL
LOGGER: GARROW

BORING RIG: SMALL SKID RIG
BORING TYPE: WASH BORE
SAMPLE TYPE: SPLIT BARREL
CHECKED BY: DLG

DEPTH (ft)	SYMBOL	CLASSIFICATION OF MATERIALS (Description)	BLOWS PER FOOT	M.C. (%)	GRAVEL (%)	SAND (%)	FINES (%)
		A-4, SaSi, gry-brn, Moist, Rec. = 1.7 ft	17	30.8	0.6	26.4	73.0
5		Field Note:, Cleaned out casing. A-1-b, SaGr, brn, Moist, Rec. = 0.7 ft	24	10.5	47.3	41.1	11.6
10		A-4, SiSa, brn, Moist, Rec. = 0.2 ft	16	22.7	2.5	60.7	36.8
15		A-4, SaSi, gry, Moist, Rec. = 1.3 ft	9	21.1	0.0	33.8	66.2
20		A-4, SaSi, brn-gry, Moist, Rec. = 1.4 ft	16	22.8	0.0	39.8	60.2
25		A-4, SaSi, brn-gry, Moist, Rec. = 1.1 ft	12	22.4	0.0	37.2	62.8
30		A-4, Si, brn-gry, Moist, Rec. = 1.3 ft	16	25.1	0.0	19.2	80.8
35		A-4, Si, brn-gry, Moist, Rec. = 1.0 ft	13	27.7	0.0	13.7	86.3
40		A-4, Si, gry, Moist, Rec. = 1.4 ft	9	27.7	0.0	19.6	80.4
		Hole stopped @ 42.0 ft					
45							

LOG OF BORING RANDOLPH BRF 0241(29)SP1 VT ADT.GDT 4/13/06

PROJECT NO. RANDOLPH BRF 0241(29)
DRILLER McGlynn
DATE 09/15/99

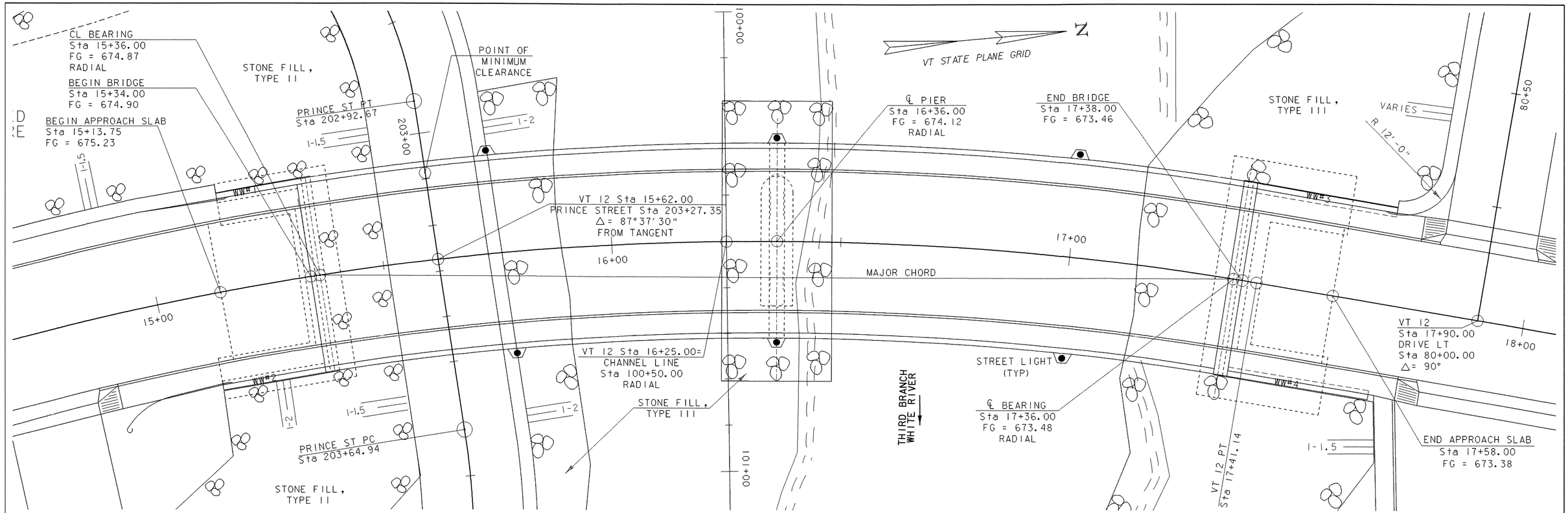
BORING NO.	STATION	OFFSET	DEPTH ft.	FIELD SOIL DESCRIPTION: SOIL TYPE	COLOR	MOISTURE	PID READING	COMMENTS
SB-5	80+44	10' RT	0 - 5 5 - 10 10 - 13	SiSa SiSa SiSa	Brn Brn Brn/Gry	Dry Dry Moist	ND ND 10	Slight Petroleum Odor. Refusal at 13 feet
SB-2	80+67	10' RT	0 - 5	SiSa SiSa	Brn Brn/Gry	Dry Moist	ND 120	Brick Rubble 6 to 8 feet. Petroleum odor. Refusal at 9.5 feet.
SB-4	80+67	25' LT	0 - 3 3 - 8 8 - 13 13 - 18 18 - 19	SiSa Sa SiSa SiSa SiSa	Brn Brn Brn Brn Brn	Dry Dry Dry Dry Dry	ND ND ND ND ND	Brick Rubble 10 to 12 feet. Refusal at 19 feet.
SB-1	81+00	25' LT	0 - 2 2 - 7 7 - 12 12 - 13.5	SiGrSa Sa Sa Sa	Brn Brn Brn Brn	Dry Dry Dry Moist	ND ND ND 3	Petroleum odor. Refusal at 13.5 feet.
SB-6	81+30	16.5' RT	0 - 5 5 - 7.5	SiSa SiSa	Brn Brn/Gry	Dry Moist	ND 40	Petroleum odor. Refusal at 7.5 feet.
SB-3	81+30	19' LT	0 - 3.5	SiSa	Brn	Dry	ND	Refusal at 3.5 feet.

Notes: ND indicates not detectable above background levels.
PID results reported in parts per million (ppm).

CONTAMINATED SOILS & SOLDIER PILE WALL BORING LOGS

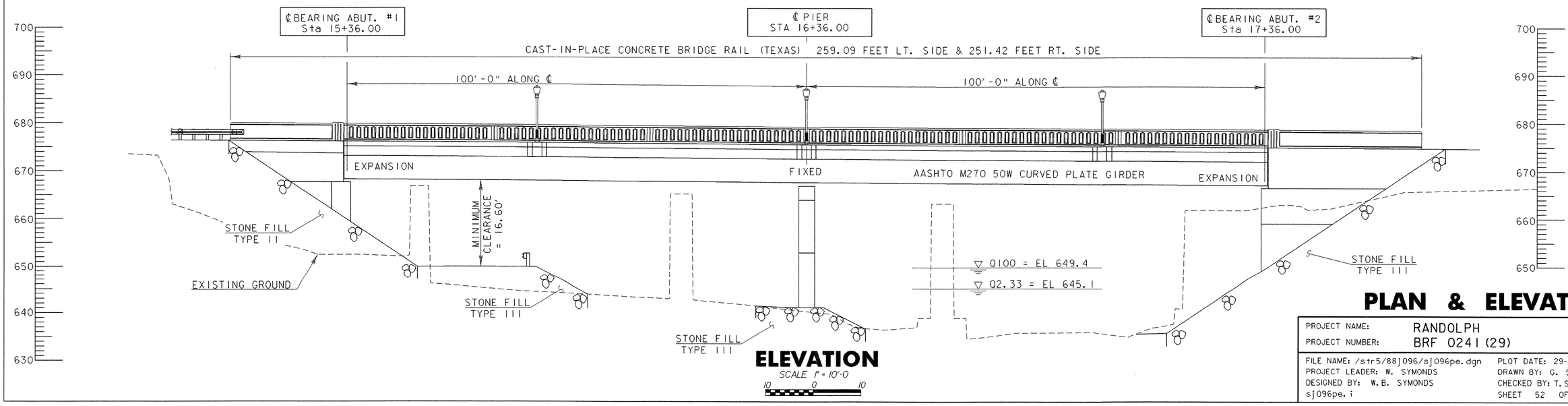
PROJECT NAME: RANDOLPH
PROJECT NUMBER: BRF 0241(29)

FILE NAME: /str5/88j096/sj096bor2.dgn PLOT DATE: 29-AUG-2006
PROJECT LEADER: W. SYMONDS DRAWN BY: G. SHANGRAW
DESIGNED BY: W.B. SYMONDS CHECKED BY: T.SUMNER
sj096bo7.i SHEET 51 OF 135



PLAN

SCALE 1" = 10'-0



ELEVATION

SCALE 1" = 10'-0

PLAN & ELEVATION

PROJECT NAME:	RANDOLPH
PROJECT NUMBER:	BRF 0241(29)

FILE NAME: /str5/88j096/sj096pe.dgn
PROJECT LEADER: W. SYMONDS
DESIGNED BY: W.B. SYMONDS
sj096pe.i

PLOT DATE: 29-AUG-2006
DRAWN BY: G. SHANGRAW
CHECKED BY: T. SUMNER
SHEET 52 OF 135

STATE OF VERMONT
AGENCY OF TRANSPORTATION

GENERAL NOTES

GENERAL

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

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

3. ALL DIMENSIONS ARE HORIZONTAL OR VERTICAL AND ARE GIVEN AT 68 DEGREES F UNLESS OTHERWISE NOTED.

STRUCTURAL STEEL

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

5. 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.

6. ALL FIELD CONNECTIONS SHALL BE MADE WITH 7/8" DIAMETER ASTM DESIGNATION A-325 TYPE III BOLTS IN 15/16" DIAMETER HOLES.

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

TEMPORARY DETOUR

8. DURING CONSTRUCTION TRAFFIC SHALL BE MAINTAINED ON A TWO-WAY TEMPORARY BRIDGE LOCATED UPSTREAM OF THE EXISTING STRUCTURE. THE CONTRACTOR SHALL NOTIFY THE TOWN OF RANDOLPH A MINIMUM OF TWO WEEKS PRIOR TO DIVERTING TRAFFIC TO THE TEMPORARY BRIDGE. THE RANDOLPH TOWN OFFICE CAN BE REACHED BY TELEPHONE AT (802-728-5682).

9. THE ROADWAY APPROACHES AND THE TEMPORARY BRIDGE WILL BE PAVED. SEE TYPICAL SECTION ON SHEET 38 OF 135.

10. THE REMOVAL AND/OR RESETTING OF TRAFFIC SIGNS, AS DEEMED NECESSARY BY THE RESIDENT ENGINEER, WILL BE CONSIDERED INCIDENTAL TO ITEM 641.10 "TRAFFIC CONTROL".

11. THE CONTRACTOR SHALL ERECT AND MAINTAIN ALL TEMPORARY SIGNS AND TEMPORARY BARRICADES AS SHOWN ON THE PLANS AND AS DIRECTED BY THE RESIDENT ENGINEER. PAYMENT FOR THIS WORK SHALL BE INCIDENTAL TO ITEM 641 "TRAFFIC CONTROL".

12. WHERE EXISTING PAVEMENT MARKINGS ARE NOT APPROPRIATE TO THE MOVEMENT OF TRAFFIC THROUGH THE CONSTRUCTION AREA, THE MARKINGS SHALL BE REMOVED IN A MANNER APPROVED BY THE RESIDENT ENGINEER.

13. THE EXPOSED END OF THE TEMPORARY BARRIER SHALL BE PLACED BEYOND THE CLEAR ZONE.

14. PRINCE STREET SHALL BE CLOSED TO THRU TRAFFIC DURING THE CONSTRUCTION PERIOD. THE TOWN SHALL BE NOTIFIED TWO WEEKS PRIOR TO PRINCE STREET BEING CLOSED.

15. ACCESS TO THE ICE RINK SHALL BE MAINTAINED AT ALL TIMES.

16. A SIDEWALK SHALL BE INCORPORATED IN THE DESIGN AND CONSTRUCTION OF THE TEMPORARY BRIDGE AND INCLUDED IN THE BID PRICE FOR ITEM 528.11. PEDESTRIAN TRAFFIC THROUGH THE PROJECT SHALL BE MAINTAINED AT ALL TIMES.

17. BLANK

LEDGE

18. FINAL LEDGE GRADE TO COMPETENT ROCK WILL BE DETERMINED BY THE SOILS AND FOUNDATIONS ENGINEER. LEDGE ELEVATIONS SHOWN ON PLANS ARE APPROXIMATE AND MAY VARY FROM ACTUAL FINAL LEDGE GRADE. THE CONTRACTOR IS RESPONSIBLE FOR COORDINATION WITH THE SOILS AND FOUNDATIONS ENGINEER AND THE RESIDENT ENGINEER, IN DETERMINING ACTUAL FINAL LEDGE GRADE. THE AGENCY WILL NOT GRANT ANY EXTENSION OF TIME DUE TO THE CONTRACTOR'S FAILURE TO PROPERLY COORDINATE THE FINAL LEDGE GRADE DETERMINATION.

19. WHERE LEDGE IS 6" OR LESS BELOW THE DESIGN BOTTOM OF FOOTING ELEVATION, THE FOOTING SHALL BE PLACED FROM THE TOP OF THE LEDGE USING "CONCRETE, HIGH PERFORMANCE, CLASS B".

20. ABUTMENT #2, WINGWALL #3, AND WINGWALL #4 HAVE BEEN DESIGNED FOR THE TOP OF FOOTING ELEVATIONS SHOWN ON THE PLANS. IF LEDGE IS GREATER THAN 6" BELOW THE DESIGN BOTTOM OF FOOTING, THE CONTRACTOR SHALL PLACE A SUB-FOOTING TO THE INDICATED DESIGN BOTTOM OF FOOTING ELEVATION. THE SUB-FOOTING SHALL BE "CONCRETE, CLASS C".

21. IF LEDGE IS LESS THAN 2'-0" ABOVE THE DESIGN BOTTOM OF FOOTING ELEVATION, THE LEDGE SHALL BE EXCAVATED TO THE BOTTOM OF THE FOOTING ELEVATION.

22. IF LEDGE IS GREATER THAN 2'-0" ABOVE THE DESIGN BOTTOM OF FOOTING ELEVATION, THE FOOTING ELEVATION MAY BE RAISED WITH PERMISSION OF THE PROJECT MANAGER. THE PROJECT MANAGER SHALL BE NOTIFIED WITH A LEDGE PROFILE AND WILL PROVIDE REVISED DESIGN IF THE FOOTING ELEVATION IS APPROVED TO BE RAISED.

23. DOWELS SHALL BE DRILLED AND GROUTED INTO LEDGE AS SHOWN ON THE PLANS, OR AS DIRECTED BY THE RESIDENT ENGINEER. THE DOWELS SHALL HAVE A 1'-6" EMBEDMENT INTO THE LEDGE AND SHALL EXTEND INTO THE FOOTING A MINIMUM OF 2'-0" UNLESS OTHERWISE NOTED.

24. FOOTINGS OR SUB-FOOTINGS SHALL BE FOUNDED ON LEDGE, WHICH HAS BEEN CLEANED OF ALL LOOSE ROCK AND OTHER DEBRIS. THE LEDGE SHALL BE PREPARED TO ENSURE THE FOOTINGS ARE PLACED ON COMPETENT ROCK.

25. ABUTMENT NO. 2 AND WINGWALLS NO. 3 & 4 ARE DESIGNED FOR A MAXIMUM FOOTING PRESSURE OF 10 KSF.

STONE FILL

26. THE STONE FILL, TYPE III SHALL BE PLACED IN FRONT OF THE ABUTMENTS BEFORE THE STRUCTURAL STEEL HAS BEEN SET.

27. THE STONE FILL, TYPE III SHALL BE PLACED AROUND THE PIER(S) BEFORE THE STRUCTURAL STEEL HAS BEEN SET.

CONCRETE

28. 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.

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

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

31. REINFORCING PLACEMENT TOLERANCES SHALL BE:
SPACING + - 1"
CLEARANCE + - 1/4"

32. MINIMUM COVER FOR REINFORCING STEEL SHALL BE TWO (2) INCHES ALONG THE BACK FACES OF WALLS AGAINST EARTH, ONE AND ONE-HALF INCHES (1 ½") ALONG THE BOTTOM SURFACE OF THE DECK AND THREE INCHES (3") ELSEWHERE, UNLESS OTHERWISE NOTED.

33. SURFACES OF BRIDGE SEATS UNDER BEARING DEVICES SHALL BE LEVEL, OTHER BRIDGE SEAT AREAS SHALL BE SLOPED 1/4" PER FOOT TOWARDS MID-SPAN. THE ENTIRE BRIDGE SEAT SURFACE SHALL BE SMOOTHED WITH A MAGNESIUM FLOAT FINISH.

34. 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.

35. NO TRAFFIC SHALL BE ALLOWED ON THE NEW DECK UNTIL THE CURE PERIOD IS UP AND THE 28 DAY DESIGN STRENGTH IS ATTAINED, AS EVIDENCED BY TEST CYLINDERS CURED UNDER FIELD CONDITIONS.

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

37. 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.

38. FOR BRIDGE DECK POURS, THE MAXIMUM TIME LIMIT FOR ANY COMBINATION OF POURS DONE IN ANY ONE DAY SHALL BE EIGHT HOURS. THERE SHALL BE A MINIMUM OF 96 HOURS BETWEEN THE COMPLETION OF ONE DAY'S POUR AND THE BEGINNING OF OTHER ADJACENT POURS. ALL INDIVIDUAL DECK POURS SHALL START FROM THE LOW END OF THE BRIDGE.

39. FLEMING BRACKETS OR SIMILAR FALSEWORK SHALL BE PLACED AT A MAXIMUM SPACING OF 4'-0".

PILES

40. THE PILES FOR ABUTMENT #1 WILL REQUIRE PILE SHOES. THE SHOES SHALL BE CAST STEEL AND SHALL CONFORM TO SECTION 505.

41. THE PILES SHALL BE DRIVEN TO LEDGE WITH AN ULTIMATE CAPACITY OF 365 KIPS AS DETERMINED BY THE RESIDENT ENGINEER.

STAY-IN-PLACE CORRUGATED METAL FORMS

42. THE USE OF STAY-IN-PLACE CORRUGATED METAL FORMS IS ALLOWED ON THIS PROJECT AS AN ALTERNATIVE USING ITEM 501.33 "CONCRETE, HIGH PERFORMANCE, CLASS A (SIPCMF)(MOD.-FPQ)". SEE SPECIAL PROVISIONS FOR SPECIFICATIONS FOR THE FORMS.

43. THE CONTRACTOR MAY CHOOSE TO COMBINE STAY-IN-PLACE CORRUGATED METAL FORMS AND REMOVABLE FORMS AS ALLOWED IN THE SPECIAL PROVISIONS. IF ANY PORTION OF THE DECK IS TO BE FORMED WITH STAY-IN-PLACE CORRUGATED METAL FORMS, THE ENTIRE DECK PAYMENT SHALL BE UNDER THE "CONCRETE, HIGH PERFORMANCE, CLASS A (SIPCMF)(MOD.-FPQ) ITEM.

REMOVAL OF STRUCTURE

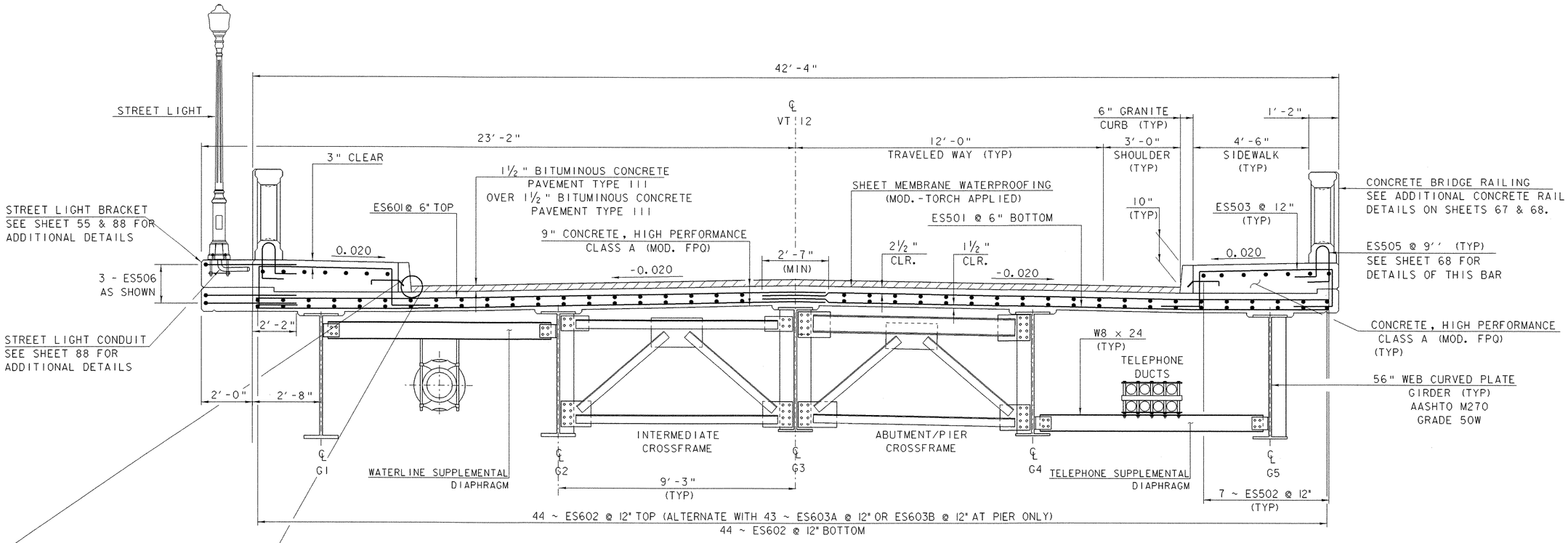
44. THE ITEM 529.20 "PARTIAL REMOVAL OF STRUCTURE (BRIDGE)" SHALL BE PAYMENT FOR REMOVAL OF THE EXISTING SUPERSTRUCTURE AND ANY PORTION OF THE SUB-SUBSTRUCTURE NOT REMOVED UNDER THE ITEMS 208.30 "COFFERDAM EXCAVATION EARTH", 208.35 "COFFERDAM EXCAVATION ROCK, AND 203.27 "UNCLASSIFIED CHANNEL EXCAVATION.

45. ITEM 529.20 "PARTIAL REMOVAL OF STRUCTURE (BRIDGE)" SHALL INCLUDE PAYMENT FOR DEMOLITION OF EXISTING UTILITY FACILITIES AND ANY ADDITIONAL OVERBURDEN ON THE BRIDGE. THE EXISTING BRIDGE PAVEMENT SHALL BE REMOVED UNDER ITEM 529.10 REMOVAL OF BRIDGE PAVEMENT".

46. THE EXISTING PIERS SHALL BE REMOVED A MINIMUM OF 2'-0" BELOW FINISHED GRADE IN CHANNEL LOCATIONS. AT THE COMPLETION OF THE PIER REMOVALS IN CHANNEL LOCATIONS, THE DISTURBED AREAS SHALL BE STABILIZED WITH STONE FILL, TYPE II. THE EXISTING PIER LOCATED UNDER THE NEW PRINCE STREET ALIGNMENT SHALL BE REMOVED TO 2'-0" BELOW THE BOTTOM OF SUBBASE. ABUTMENT #1 SHALL BE REMOVED DOWN TO ELEVATION 668.0.

47. ITEM 529.20 - "PARTIAL REMOVAL OF STRUCTURE (RETAINING WALL)" SHALL BE PAYMENT FOR REMOVAL OF PORTIONS OF THE EXISTING RETAINING WALL. THE CONTRACTOR SHALL MAINTAIN THE INTEGRITY OF THOSE PORTIONS OF THE EXISTING EXISTING WALL TO BE RETAINED. ANY DAMAGE TO RETAINED PORTIONS WILL BE REPAIRED AT THE CONTRACTOR'S EXPENSE.

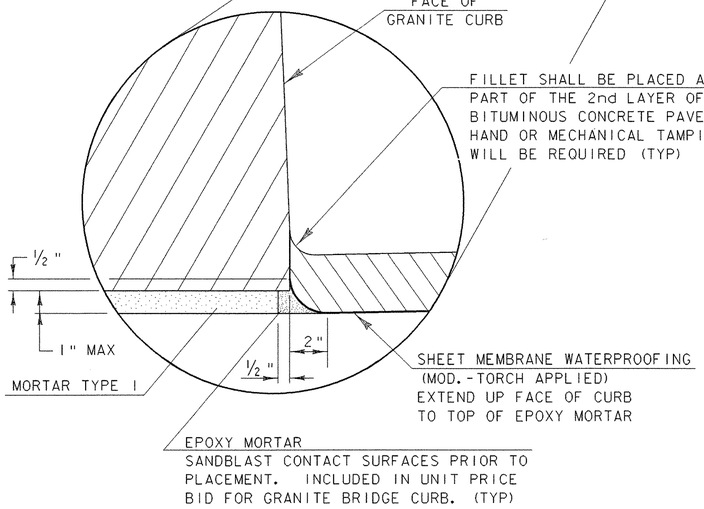
PROJECT NAME:	RANDOLPH		
PROJECT NUMBER:	BRF 0241(29)		
FILE NAME:	/str5/88j096/s88j096xcl.dgn	PLOT DATE:	8/14/2006
PROJECT LEADER:	W. SYMONDS	DRAWN BY:	G. SHANGRAW
DESIGNED BY:	T. SUMNER	CHECKED BY:	T. SUMNER
GENERAL NOTES SHEET		SHEET 53 OF 135	



DECK SECTION

SCALE ½" = 1′-0

0 1 2



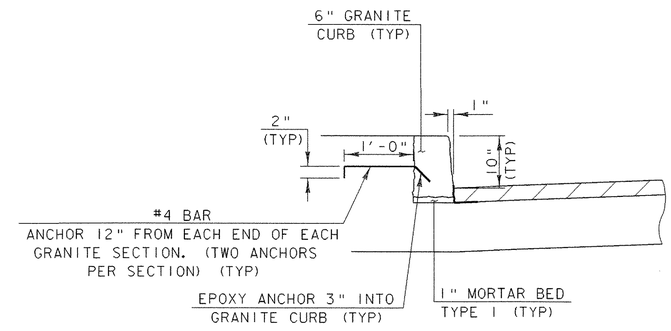
GRANITE CURBING ON BRIDGE

1. THE ITEM 616.22 "GRANITE BRIDGE CURB" SHALL INCLUDE THE COSTS OF MORTAR, TYPE I, EPOXY MORTAR, #4 EPOXY COATED ANCHORS, AND EPOXY USED TO SECURE THE ANCHORS TO THE GRANITE BRIDGE CURB.

2. BEFORE INSTALLATION OF THE GRANITE BRIDGE CURB THE CONTRACTOR SHALL PROVIDE THE RESIDENT ENGINEER WITH A TECHNICAL DATA SHEET FOR THE PROPOSED EPOXY FOR SECURING ANCHORS TO THE GRANITE CURBING. THE TECHNICAL DATA SHEET SHALL INCLUDE SPECIFICATIONS, AND MANUFACTURERS APPLICATION INSTRUCTIONS. THE RESIDENT ENGINEER SHALL APPROVE THE PRODUCT PRIOR TO ANY INSTALLATION.

3. THE EPOXY COATED ANCHORS SHALL BE SHIPPED FROM THE SUPPLIER, AFTER CUTTING AND BENDING, WITH A TOTAL SHOP APPLIED EPOXY COATING MEETING THE REQUIREMENTS FOR EPOXY COATED REINFORCING STEEL.

4. THE BLOCKS FOR THE GRANITE BRIDGE CURB MAY BE SHOP ASSEMBLED WITH THE ANCHORS WITH PERMISSION FROM THE RESIDENT ENGINEER.



GRANITE CURB ATTACHMENT DETAILS

SCALE 1" = 1′-0

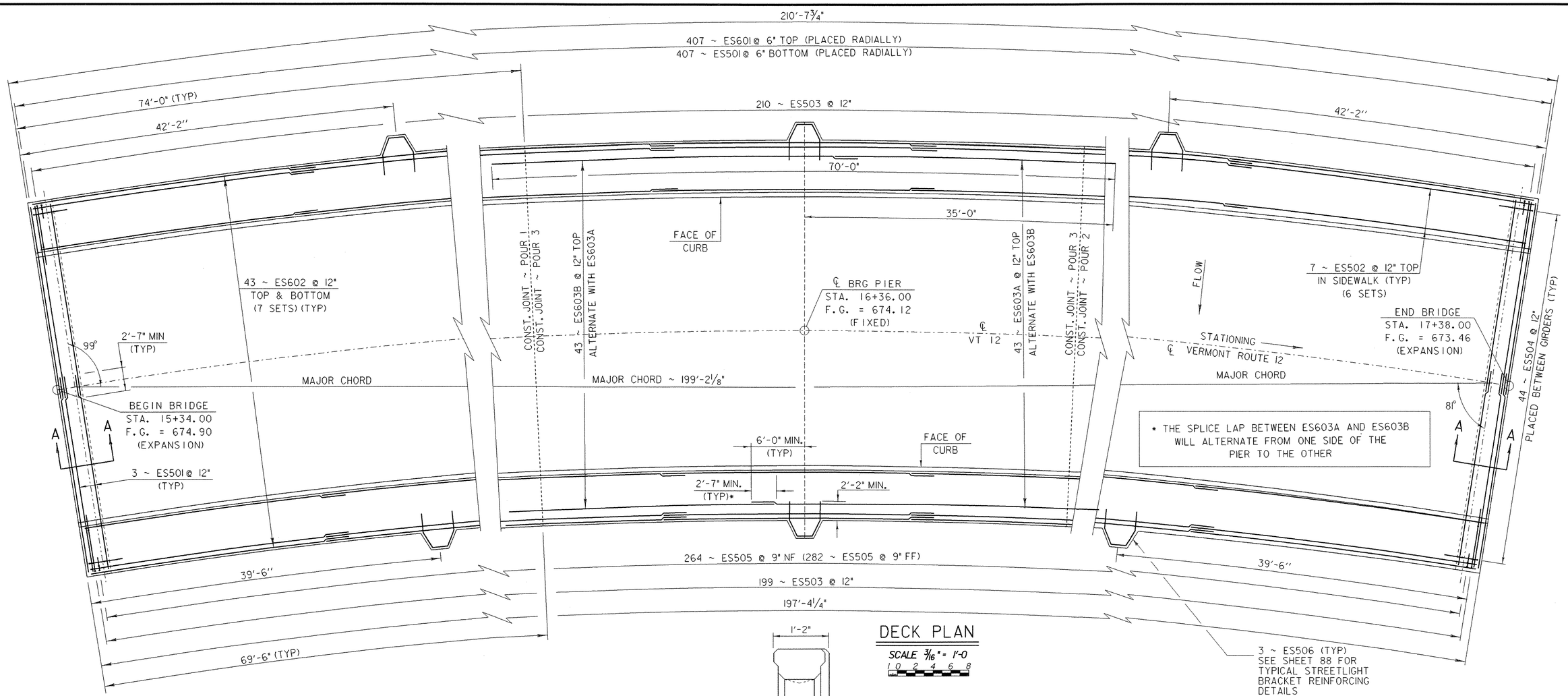
1 9 6 3 0 1 2

NOTE:
THE BACK FACE OF THE GRANITE CURB SHALL BE SATURATED. SURFACE DRY IMMEDIATELY PRIOR TO PLACEMENT OF ADJACENT SIDEWALK OR CURB CONCRETE.

DECK TYPICAL SECTION

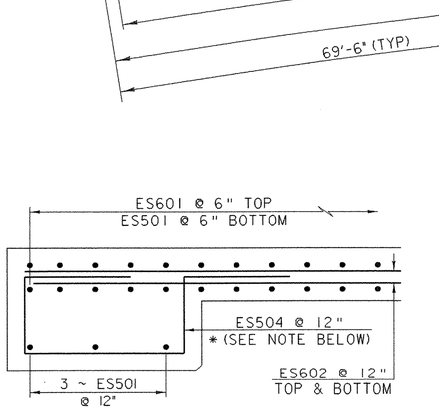
PROJECT NAME:	RANDOLPH
PROJECT NUMBER:	BRF 0241 (29)

FILE NAME: /str5/88j096/sj096sup.dgn	PLOT DATE: 29-AUG-2006
PROJECT LEADER: W. SYMONDS	DRAWN BY: G. SHANGRAW
DESIGNED BY: T. SUMNER	CHECKED BY: T. FILLBACH
sj096dk2.i	SHEET 54 OF 135



DECK PLAN

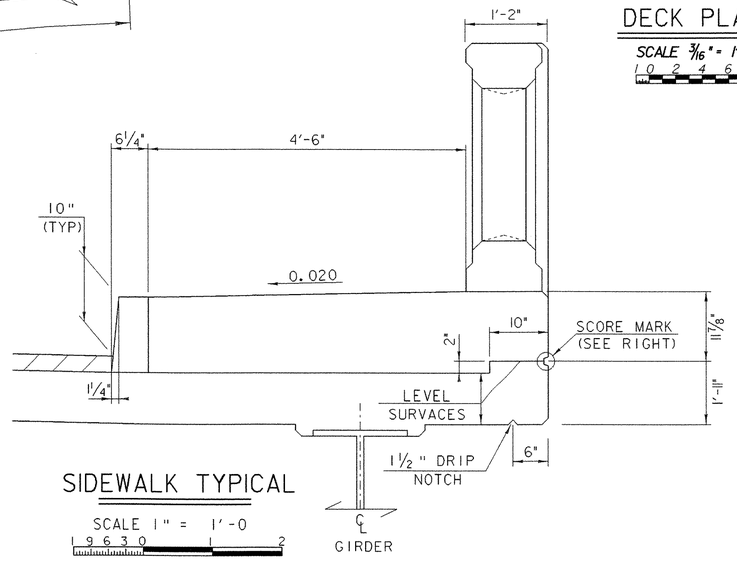
SCALE 3/16" = 1'-0



*TILT BARS AS NECESSARY TO MAINTAIN CLEARANCE

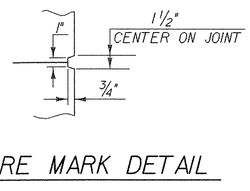
SECTION A-A

SCALE 1" = 1'-0



SIDEWALK TYPICAL

SCALE 1" = 1'-0



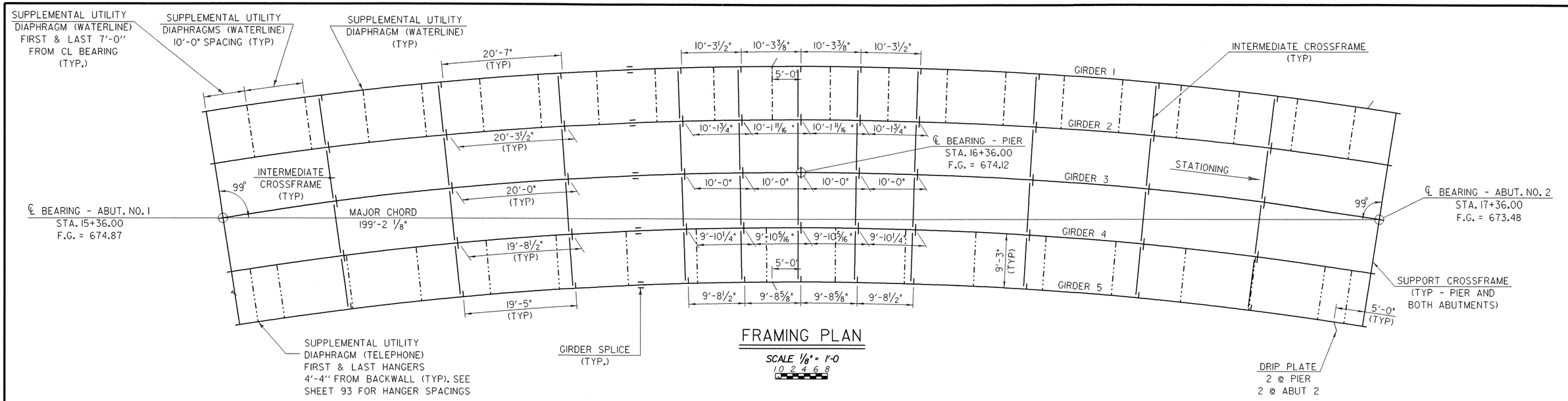
SCORE MARK DETAIL

DECK REINFORCING PLAN

PROJECT NAME:	RANDOLPH
PROJECT NUMBER:	BRF 0241 (29)

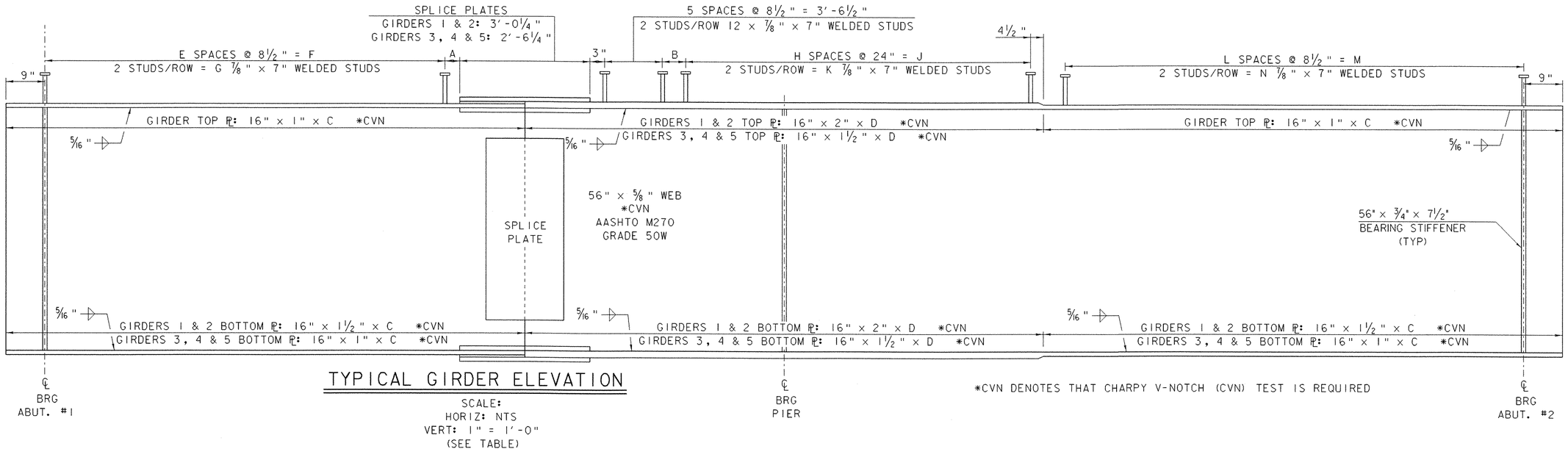
FILE NAME: /str5/88j096/sj096sup.dgn
PROJECT LEADER: W. SYMONDS
DESIGNED BY: T. SUMNER
sj096dck.i

PLOT DATE: 29-AUG-2006
DRAWN BY: G. SHANGRAW
CHECKED BY: T. FILLBACH
SHEET 55 OF 135



FRAMING PLAN

SCALE 1/8" = 1'-0
0 2 4 6 8



TYPICAL GIRDER ELEVATION

SCALE:
HORIZ: NTS
VERT: 1" = 1'-0"
(SEE TABLE)

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

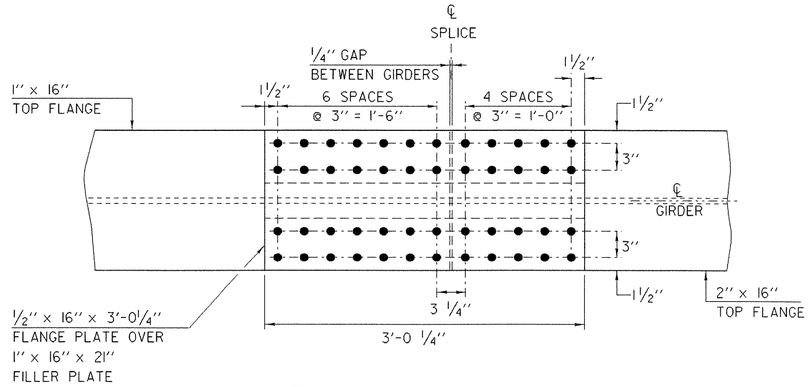
GIRDER DIMENSION TABLE

GIRDER	RADIUS	A	B	C	D	E	F	G	H	J	K	L	M	N
1	655.12	0'-6 7/8"	2'-0 5/8"	73'-11"	59'-5 3/4"	100	70'-10"	202	26	52'-0"	54	102	72'-3"	206
2	645.87	0'-3 7/8"	1'-7 3/4"	73'-8"	57'-0 7/8"	100	70'-10"	202	25	50'-0"	52	102	72'-3"	206
3	636.62	0'-4 7/8"	1'-6 7/8"	73'-3"	55'-0"	100	70'-10"	202	24	48'-0"	50	101	71'-6 1/2"	204
4	627.37	0'-2 3/8"	0'-6"	72'-4"	53'-11 1/8"	99	70'-1 1/2"	200	24	48'-0"	50	100	70'-10"	202
5	618.12	0'-1 7/8"	1'-1 1/8"	71'-7"	52'-6 1/4"	98	69'-5"	198	23	46'-0"	48	99	70'-1 1/2"	200

FRAMING PLAN & GIRDER DETAILS

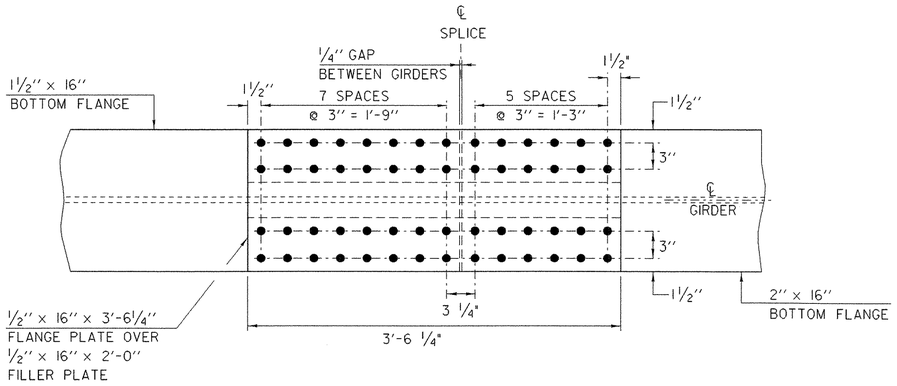
PROJECT NAME: RANDOLPH
PROJECT NUMBER: BRF 0241(29)

FILE NAME: /str5/88j096/sj096sup.dgn
PROJECT LEADER: W. SYMONDS
DESIGNED BY: T. SUMNER
sj096grd.i
PLOT DATE: 29-AUG-2006
DRAWN BY: G. SHANGRAW
CHECKED BY: T. FILLBACH
SHEET 56 OF 135



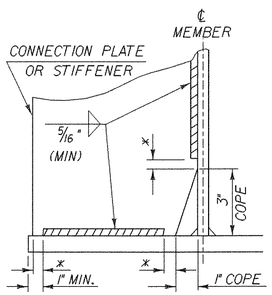
TOP FLANGE SPLICE PLATE DETAIL

SCALE 1 1/2" = 1'-0



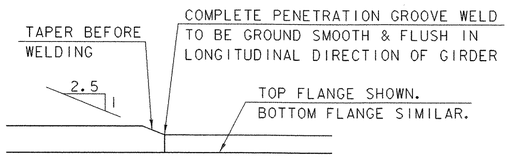
BOTTOM FLANGE SPLICE PLATE DETAIL

SCALE 1 1/2" = 1'-0

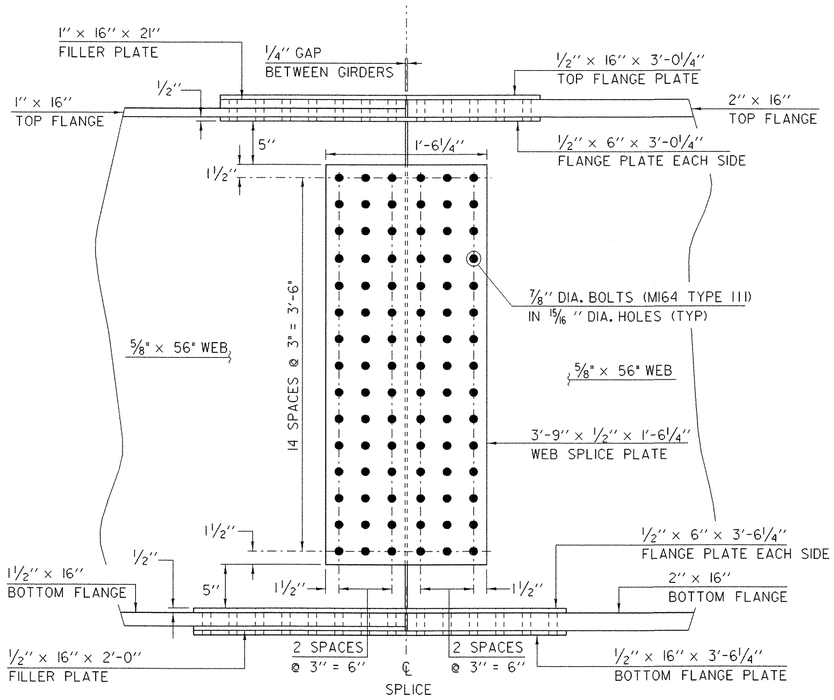


WELD TERMINATION AND COPING DETAILS FOR STEEL MEMBERS

* NO WELD FOR 3/8" MIN. 7/8" MAX. (EXCEPT MUST MAINTAIN 1" MINIMUM FROM EDGE OF FLANGE)

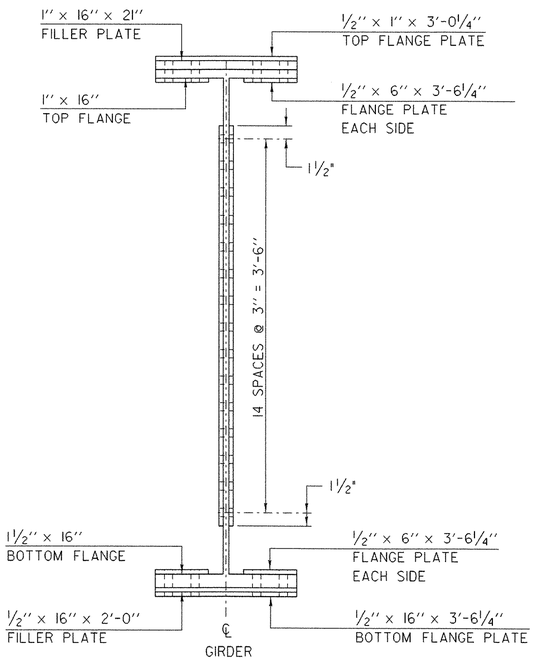


FLANGE THICKNESS TRANSITION DETAIL



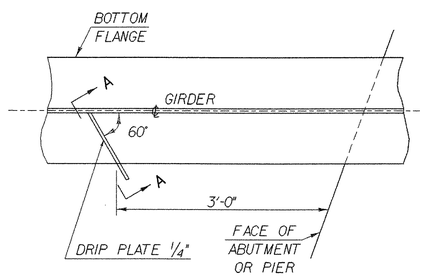
WEB SPLICE PLATE DETAIL

SCALE 1 1/2" = 1'-0

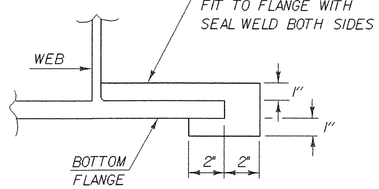


GIRDER SECTION

SCALE 1 1/2" = 1'-0



PLAN DRIP PLATE



SECTION A - A

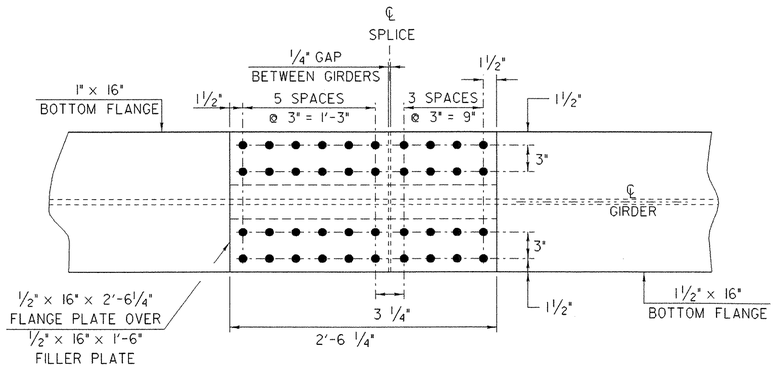
NOTE: DRIP PLATES SHALL BE PLACED ON OUTSIDE EDGE OF FASCIA GIRDERS ON THE HIGH SIDE OF ALL PIERS AND ABUTMENTS OR AS INDICATED ON PROJECT PLANS.

ALL SECTIONS OF THE SPLICE SHALL BE CVN (CHARPY V-NOTCH)

SPLICE DETAILS GIRDERS 1 & 2

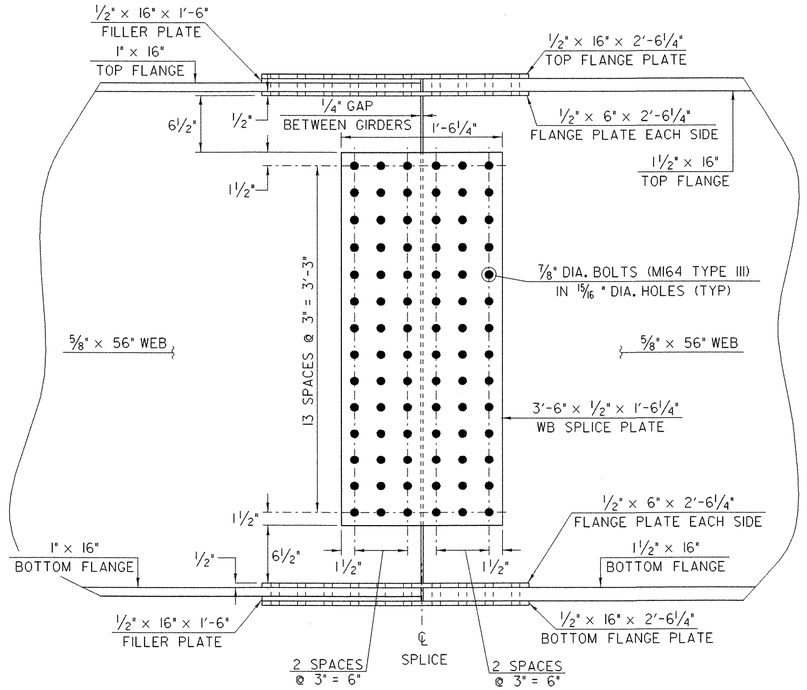
PROJECT NAME:	RANDOLPH
PROJECT NUMBER:	BRF 0241(29)

FILE NAME: /str5/88j096/sj096sup.dgn	PLOT DATE: 29-AUG-2006
PROJECT LEADER: W. SYMONDS	DRAWN BY: G. SHANGRAW
DESIGNED BY: T. SUMNER	CHECKED BY: T. FILLBACH
sj096sd1.i	SHEET 57 OF 135



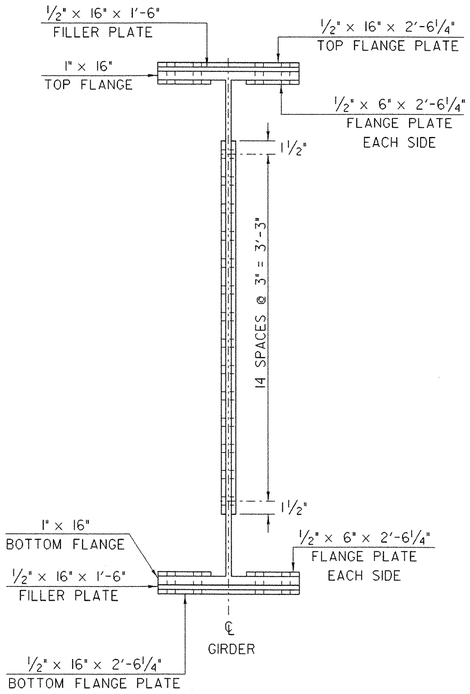
TOP FLANGE SPLICE PLATE DETAIL

SCALE 1 1/2" = 1'-0



WEB SPLICE PLATE DETAIL

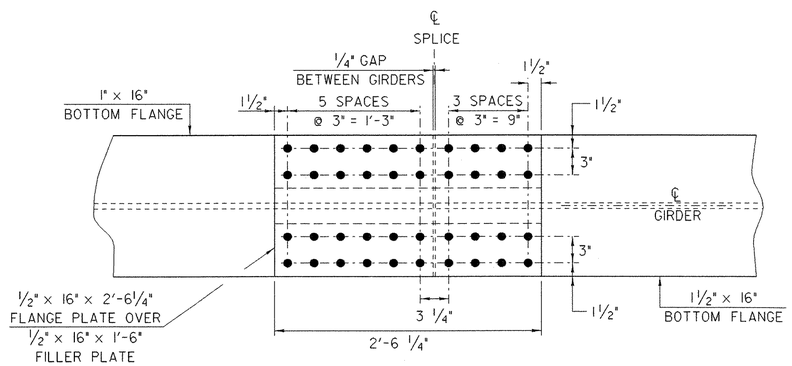
SCALE 1 1/2" = 1'-0



GIRDER SECTION

SCALE 1 1/2" = 1'-0

ALL SECTIONS OF THE SPLICE
SHALL BE CVN (CHARPY V-NOTCH)



BOTTOM FLANGE SPLICE PLATE DETAIL

SCALE 1 1/2" = 1'-0

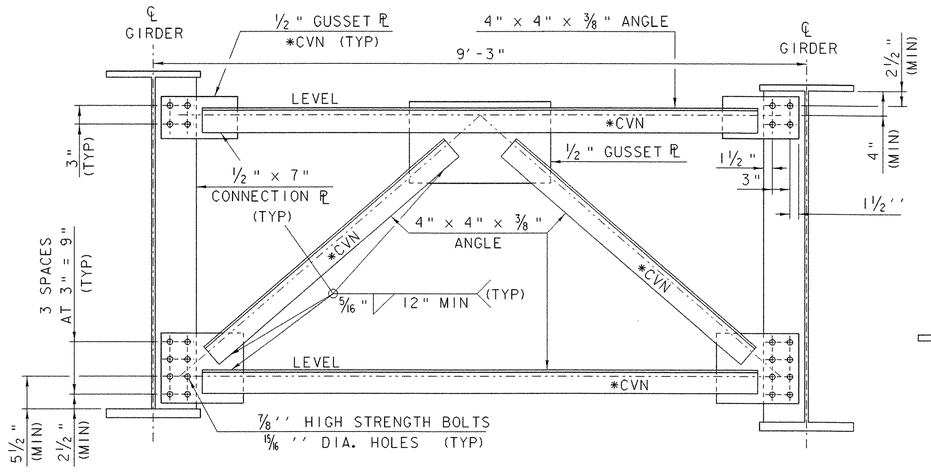
ALL SECTIONS OF THE SPLICE
SHALL BE CVN (CHARPY V-NOTCH)

SPLICE DETAILS
GIRDERS 3, 4, & 5

PROJECT NAME:	RANDOLPH
PROJECT NUMBER:	BRF 0241 (29)

FILE NAME: /str5/88j096/sj096sup.dgn
PROJECT LEADER: W. SYMONDS
DESIGNED BY: T. SUMNER
sj096sd2.i

PLOT DATE: 29-AUG-2006
DRAWN BY: G. SHANGRAW
CHECKED BY: T. FILLBACH
SHEET 58 OF 135

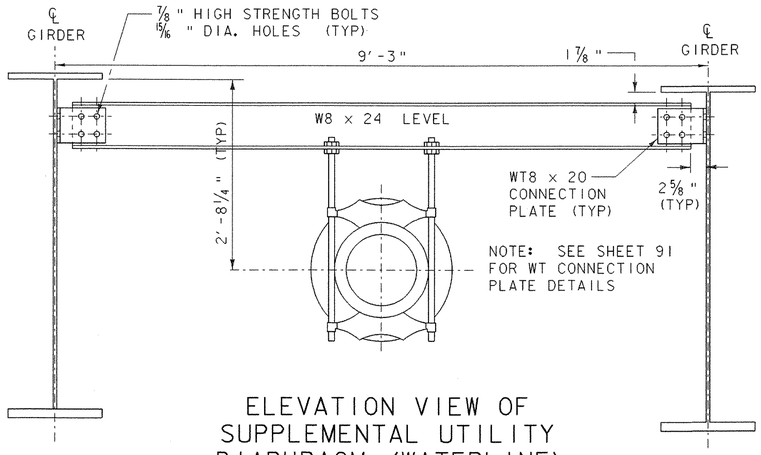


ELEVATION VIEW OF INTERMEDATE CROSSFRAME

SCALE 1" = 1'-0

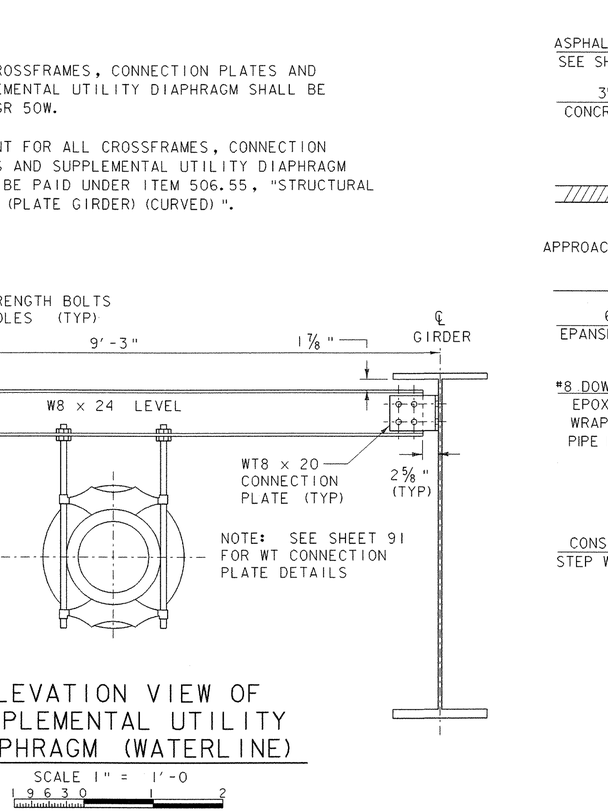
NOTES:

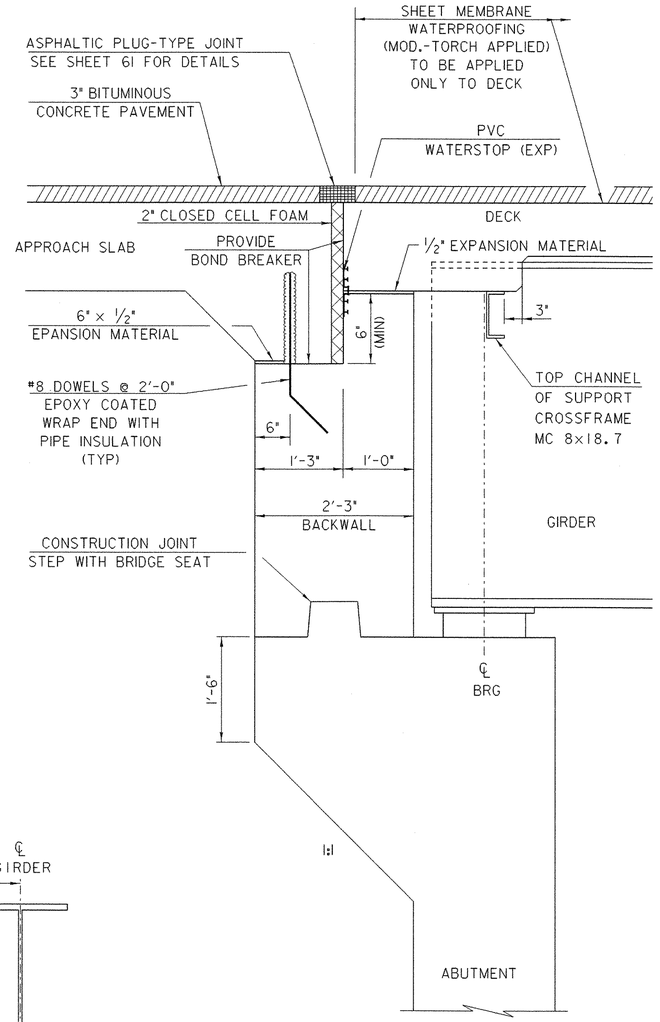
1. ALL CROSSFRAMES, CONNECTION PLATES AND SUPPLEMENTAL UTILITY DIAPHRAGM SHALL BE M270 GR 50W.
2. PAYMENT FOR ALL CROSSFRAMES, CONNECTION PLATES AND SUPPLEMENTAL UTILITY DIAPHRAGM SHALL BE PAID UNDER ITEM 506.55, "STRUCTURAL STEEL (PLATE GIRDER) (CURVED) ".



ELEVATION VIEW OF SUPPLEMENTAL UTILITY DIAPHRAGM (WATERLINE)

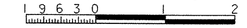
SCALE 1" = 1'-0

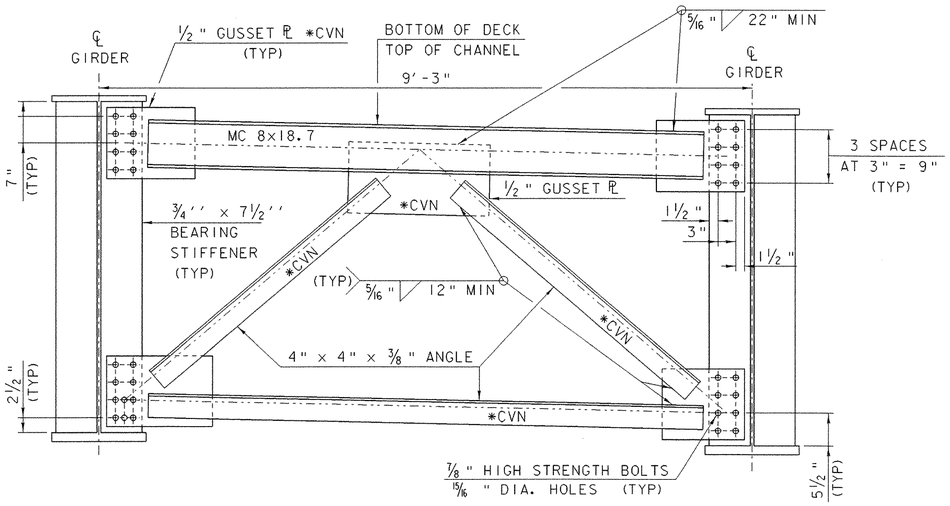




END BRIDGE DETAIL

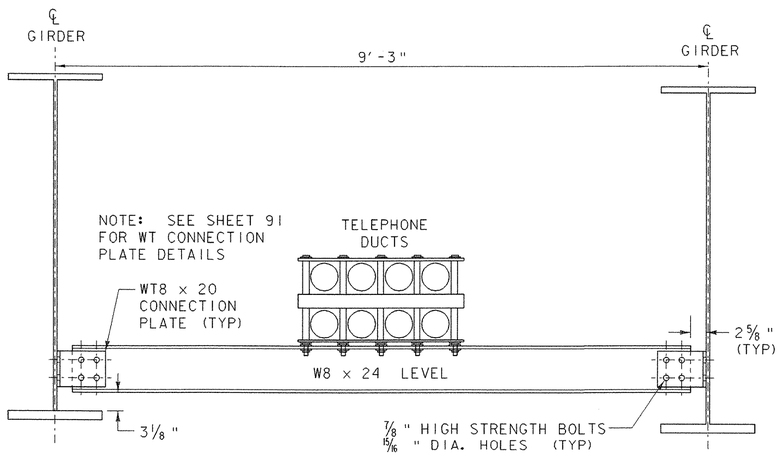
SCALE 1" = 1'-0





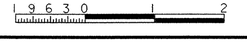
ELEVATION VIEW OF ABUTMENT/PIER CROSSFRAME

SCALE 1" = 1'-0



ELEVATION VIEW OF SUPPLEMENTAL UTILITY DIAPHRAGM (TELEPHONE)

SCALE 1" = 1'-0



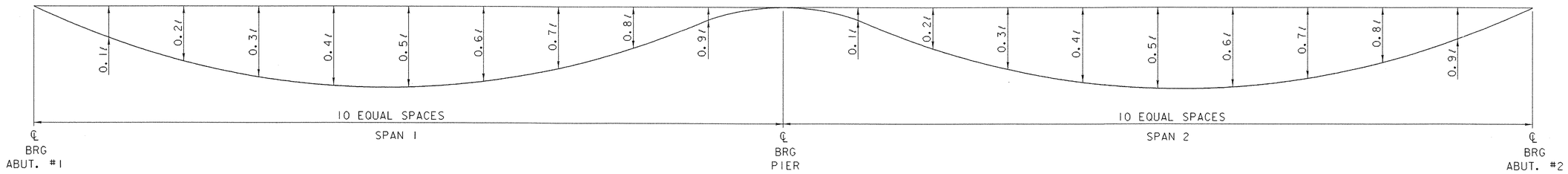
*CVN - DENOTES THAT CHARPY V-NOTCH TEST IS REQUIRED

CROSSFRAMES & END BRIDGE DETAIL

PROJECT NAME:	RANDOLPH
PROJECT NUMBER:	BRF 0241(29)

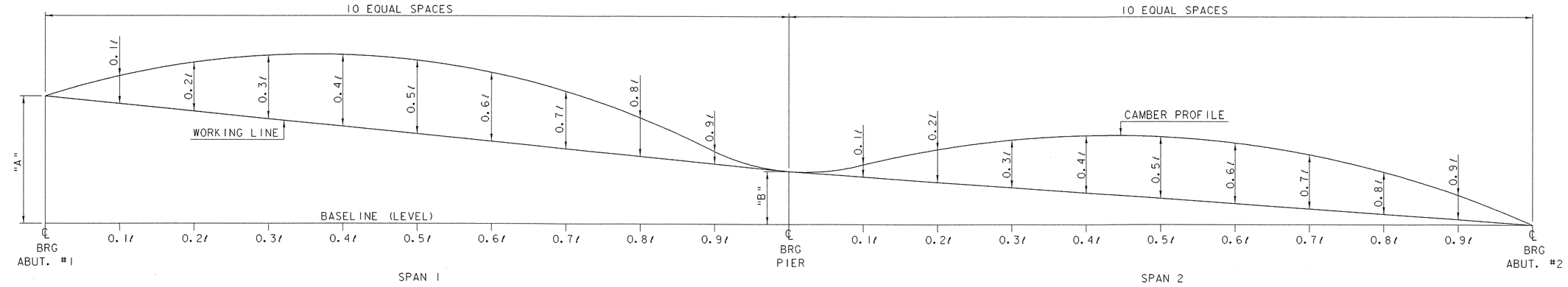
FILE NAME: /str5/88j096/sj096sup.dgn
PROJECT LEADER: W. SYMONDS
DESIGNED BY: T. SUMNER
sj096ceb.i

PLOT DATE: 29-AUG-2006
DRAWN BY: G. SHANGRAW
CHECKED BY: T. FILLBACH
SHEET 59 OF 135



DEFLECTION DIAGRAM

NTS - SEE TABLE BELOW



CAMBER DIAGRAM

NTS - SEE TABLE BELOW

CAMBER TABLE - TOTAL (inches)																		DISTANCE	
	SPAN 1									SPAN 2								(inches)	
GIRDER	.10ℓ	.20ℓ	.30ℓ	.40ℓ	.50ℓ	.60ℓ	.70ℓ	.80ℓ	.90ℓ	.10ℓ	.20ℓ	.30ℓ	.40ℓ	.50ℓ	.60ℓ	.70ℓ	.80ℓ	.90ℓ	"A"	"B"
5	15/16	1 5/8	2 1/8	2 3/8	2 3/8	2 1/8	1 3/4	1 3/16	9/16	9/16	1 3/16	1 3/4	2 1/8	2 3/8	2 3/8	2 1/8	1 5/8	15/16	15 7/16 "	5 15/16 "
4	1	1 3/4	2 1/4	2 9/16	2 9/16	2 1/4	1 13/16	1 1/4	9/16	9/16	1 1/4	1 13/16	2 1/4	2 9/16	2 9/16	2 1/4	1 3/4	1	15 7/16 "	5 15/16 "
3	1	1 13/16	2 5/16	2 5/8	2 5/8	2 5/16	1 7/8	1 1/4	9/16	9/16	1 1/4	1 7/8	2 5/16	2 5/8	2 5/8	2 5/16	1 13/16	1	15 7/16 "	5 15/16 "
2	1	1 15/16	2 3/8	2 5/8	2 5/8	2 3/8	1 7/8	1 1/4	9/16	9/16	1 1/4	1 7/8	2 3/8	2 5/8	2 5/8	2 3/8	1 15/16	1	15 5/16 "	5 15/16 "
1	1 1/16	1 7/8	2 7/16	2 11/16	2 11/16	2 3/8	1 7/8	1 1/4	9/16	9/16	1 1/4	1 7/8	2 3/8	2 11/16	2 11/16	2 7/16	1 7/8	1 1/16	15 3/16 "	5 11/16 "

DEAD LOAD DEFLECTION TABLE (inches)																		
	SPAN 1									SPAN 2								
GIRDER	.10ℓ	.20ℓ	.30ℓ	.40ℓ	.50ℓ	.60ℓ	.70ℓ	.80ℓ	.90ℓ	.10ℓ	.20ℓ	.30ℓ	.40ℓ	.50ℓ	.60ℓ	.70ℓ	.80ℓ	.90ℓ
5	- 7/16	- 13/16	- 1	- 1 1/8	- 1 1/8	- 15/16	- 11/16	- 3/8	- 1/8	- 1/8	- 3/8	- 11/16	- 15/16	- 1 1/8	- 1 1/8	- 1	- 13/16	- 7/16
4	- 1/2	- 7/8	- 1 3/16	- 1 5/16	- 1 1/4	- 1 1/16	- 3/4	- 3/8	- 1/8	- 1/8	- 3/8	- 3/4	- 1 1/16	- 1 1/4	- 1 5/16	- 1 3/16	- 7/8	- 1/2
3	- 9/16	- 1	- 1 1/4	- 1 3/8	- 1 5/16	- 1 1/8	- 13/16	- 7/16	- 1/8	- 1/8	- 7/16	- 13/16	- 1 1/8	- 1 5/16	- 1 3/8	- 1 1/4	- 15/16	- 9/16
2	- 9/16	- 1	- 1 1/4	- 1 3/8	- 1 5/16	- 1 1/8	- 13/16	- 7/16	- 1/8	- 1/8	- 7/16	- 13/16	- 1 1/8	- 1 5/16	- 1 3/8	- 1 1/4	- 1	- 9/16
1	- 5/8	- 1	- 1 5/16	- 1 7/16	- 1 3/8	- 1 1/8	- 13/16	- 7/16	- 1/8	- 1/8	- 7/16	- 13/16	- 1 1/8	- 1 3/8	- 1 7/16	- 1 5/16	- 1	- 9/16

NOTES:

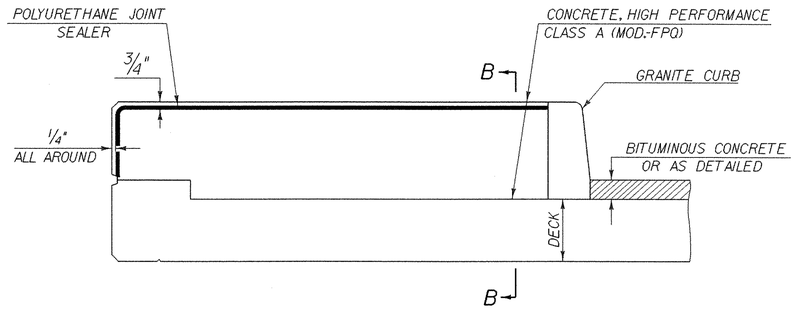
1. DIMENSIONS SHOWN ARE ALONG THE ARC OF THE ℄ OF THE GIRDER.
2. ENDS OF GIRDERS SHALL BE FABRICATED SO THAT THEY WILL BE PLUMB UNDER FULL DEAD LOAD.
3. BEARINGS STIFFENERS SHALL BE PLUMB AND PERPENDICULAR TO THE WEB IN THEIR FINAL POSITION.
4. DEAD LOAD DEFLECTION IS DUE TO GIRDER, DIAPHRAGMS, DECK,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

DEAD LOAD & CAMBER DIAGRAMS

PROJECT NAME: RANDOLPH
PROJECT NUMBER: BRF 0241 (29)

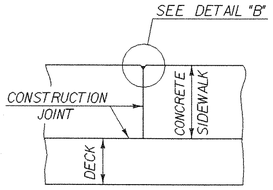
FILE NAME: /str5/88j096/sj096sup.dgn
PROJECT LEADER: W. SYMONDS
DESIGNED BY: T. SUMNER
sj096dlc.i

PLOT DATE: 29-AUG-2006
DRAWN BY: G. SHANGRAW
CHECKED BY: T. FILLBACH
SHEET 60 OF 135

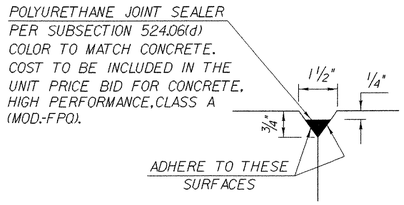


TYPICAL SECTION THROUGH CONCRETE SIDEWALK CONSTRUCTION JOINT

NOT TO SCALE



SECTION B - B



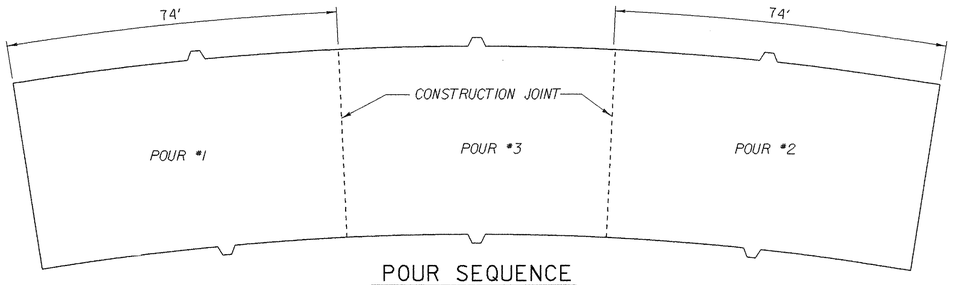
DETAIL "B"

P.V.C. WATERSTOP FOR EXPANSION JOINTS

THE COSTS FOR P.V.C. WATERSTOP SHALL BE INCLUDED IN THE UNIT PRICE BID FOR CONCRETE, HIGH PERFORMANCE CLASS A (MOD.-FPO). OTHER CONFIGURATIONS MAY BE USED UPON APPROVAL OF THE STRUCTURES ENGINEER.

NOTES:

1. CONSTRUCTION JOINTS THROUGH CONCRETE CURBS SHALL BE SPACED MAXIMUM 15'-0" CENTER TO CENTER AND SHALL BE 1'-6" MINIMUM FROM THE CENTER OF THE NEAREST BRIDGE RAIL POST. CONCRETE SHALL BE PLACED IN ALTERNATING SECTIONS WITH A MINIMUM OF 48 HOURS DELAY BETWEEN ADJACENT POURS.
2. LONGITUDINAL REINFORCING SHALL PASS THROUGH CONCRETE CURB CONSTRUCTION JOINTS.

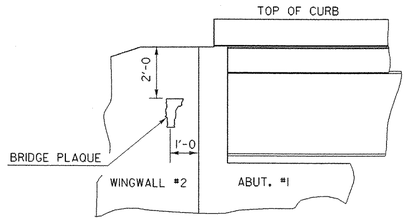


POUR SEQUENCE

NOT TO SCALE

POUR SEQUENCE NOTES:

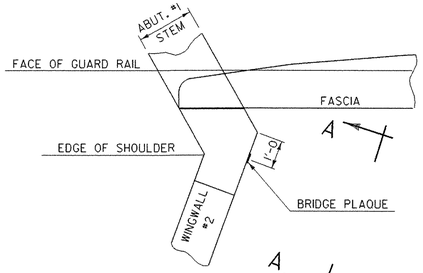
1. IF APPROVED BY THE ENGINEER, POURS #1 & #2 MAY BE POURED THE SAME DAY PROVIDED THAT THE MAXIMUM TIME SPAN OF THE POUR IS EIGHT HOURS. THE INDICATED POURING SEQUENCE SHALL BE FOLLOWED AND A RETARDING ADMIXTURE USED SO THAT THE DECK CONCRETE WILL NOT SET UP UNTIL ALL THE POUR HAS BEEN MADE. THE RETARDING ADMIXTURE SHALL BE INCIDENTAL TO THE OF 501.33 "CONCRETE HIGH PERFORMANCE, CLASS A (MOD.-FPO)".
2. TRANSVERSE BRIDGE SLAB CONSTRUCTION JOINTS, AS SHOWN ON THIS SHEET SHALL BE USED BETWEEN ADJACENT DECK POURS.
3. ALL INDIVIDUAL DECK POURS SHALL START FROM THE LOW END (RELATIVE TO GRADE).
4. THERE SHALL BE A MINIMUM DELAY PERIOD OF 96 HOURS BETWEEN POURS.
5. ANY POURING SEQUENCE OTHER THAN INDICATED SHALL BE SUBMITTED, IN WRITING, TO THE PROJECT MANAGER FOR APPROVAL.



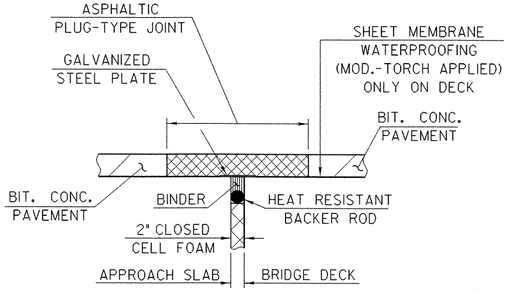
VIEW "A - A"

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.

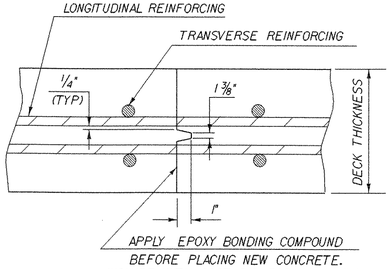


PLAN

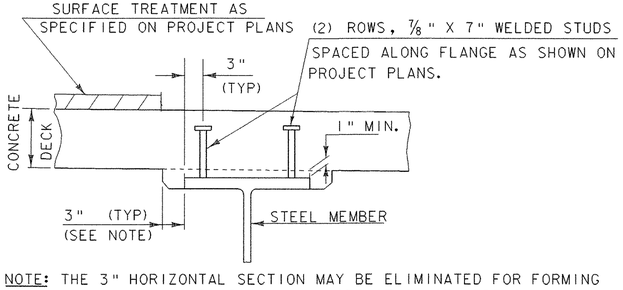


ASPHALTIC PLUG-TYPE JOINT DETAIL

NTS

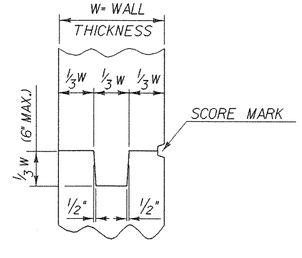


TRANSVERSE BRIDGE SLAB CONSTRUCTION JOINT DETAILS



NOTE: THE 3" HORIZONTAL SECTION MAY BE ELIMINATED FOR FORMING SYSTEMS DESIGNED FOR THE CONSTRUCTION OF VERTICAL HAUNCHES. SYSTEMS SHALL BE SUBMITTED FOR APPROVAL TO THE STRUCTURES ENGINEER. ALL VOIDS SHALL BE FILLED WITH MORTAR, TYPE IV OR POLYURETHANE JOINT SEALER.

HAUNCH AND SHEAR CONNECTOR DETAILS



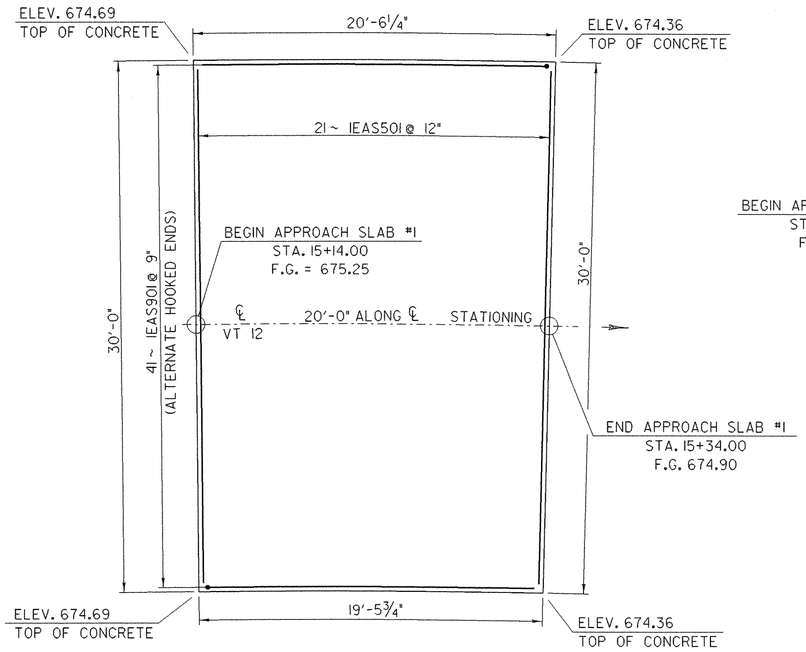
TYPICAL CONCRETE CONSTRUCTION JOINT

MISCELLANEOUS DETAILS

PROJECT NAME:	RANDOLPH
PROJECT NUMBER:	BRF 0241 (29)

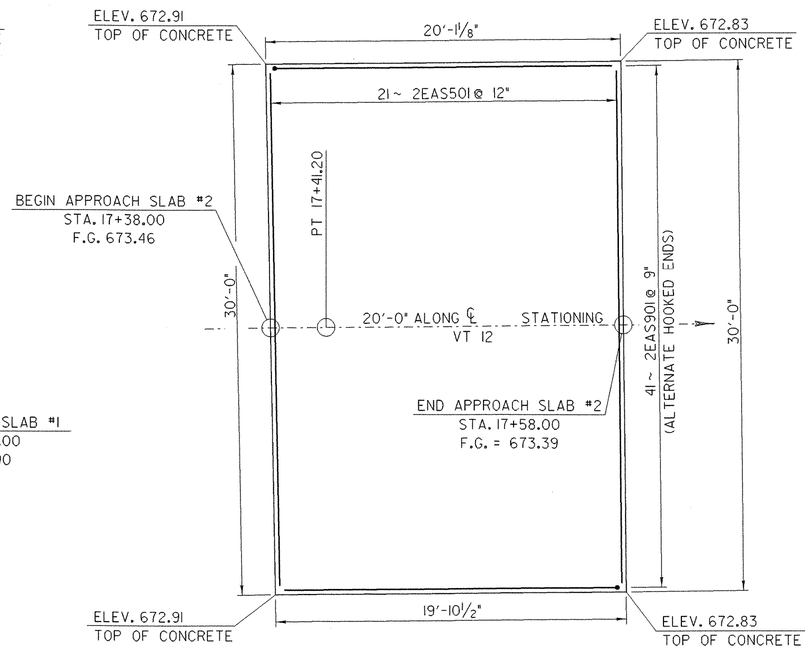
FILE NAME: /str5/88j096/sj096sup.dgn
PROJECT LEADER: W. SYMONDS
DESIGNED BY: T. SUMNER
sj096mis.i

PLOT DATE: 29-AUG-2006
DRAWN BY: G. SHANGRAW
CHECKED BY: T. FILLBACH
SHEET 61 OF 135



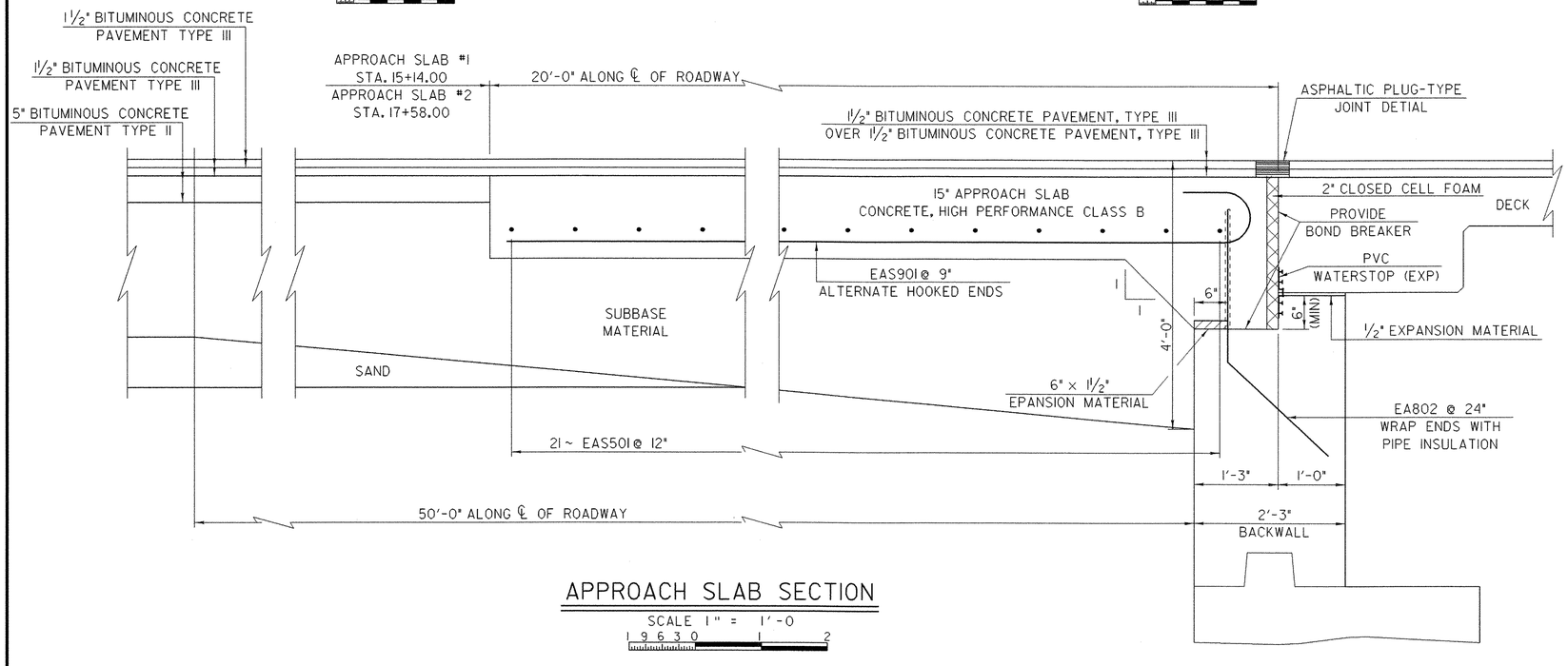
APPROACH SLAB #1

SCALE 1/4" = 1'-0



APPROACH SLAB #2

SCALE 1/4" = 1'-0



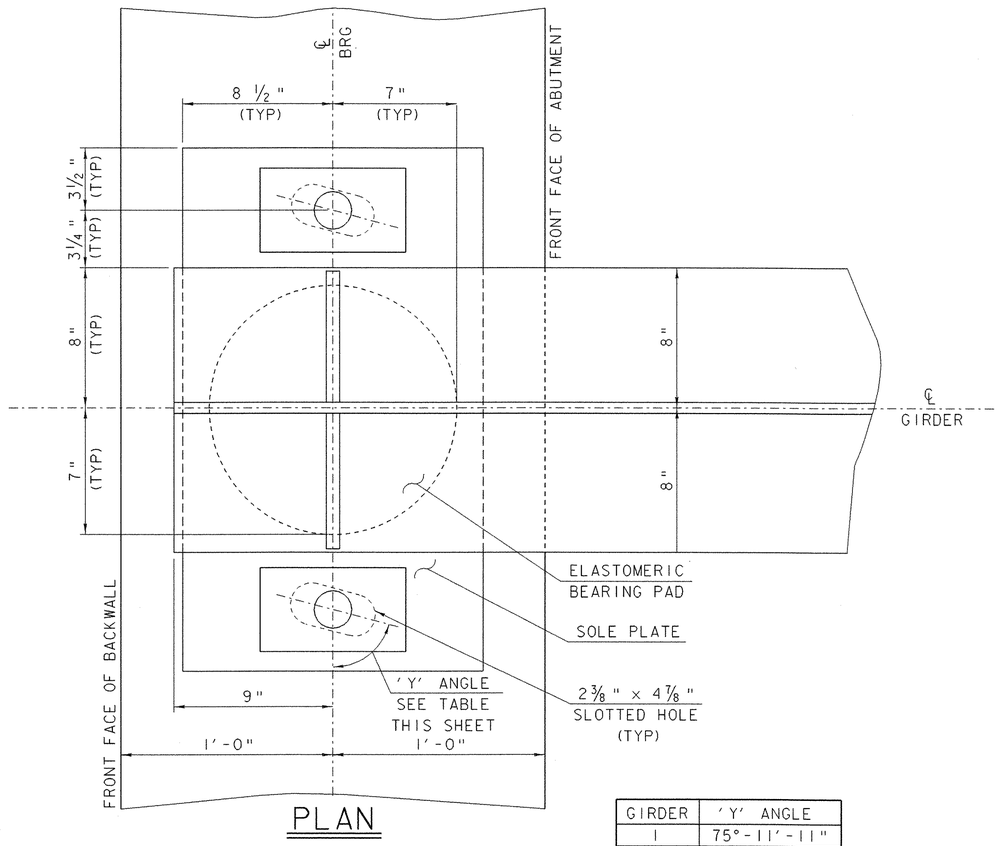
APPROACH SLAB SECTION

SCALE 1" = 1'-0

APPROACH SLABS

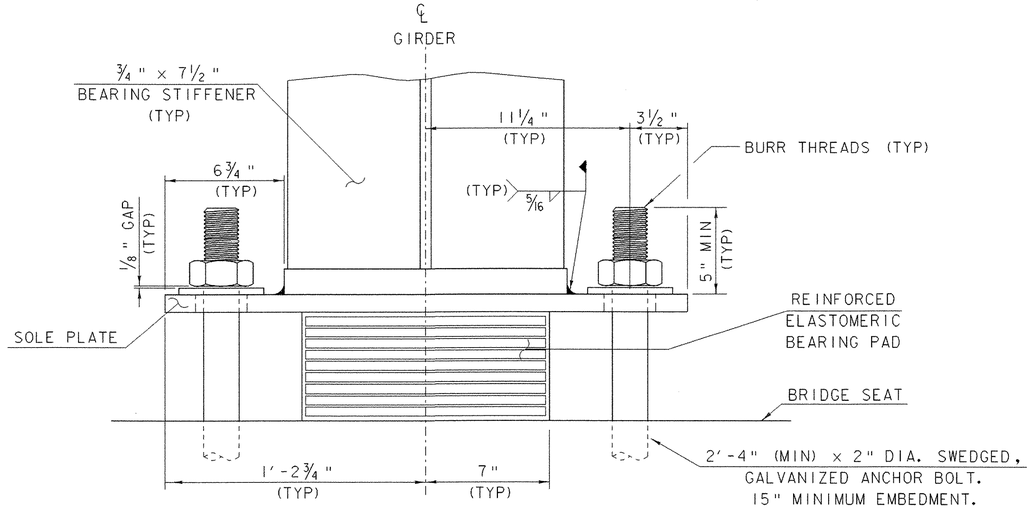
PROJECT NAME:	RANDOLPH
PROJECT NUMBER:	BRF 0241 (29)

FILE NAME: /str5/88j096/sj096sup.dgn	PLOT DATE: 29-AUG-2006
PROJECT LEADER: W. SYMONDS	DRAWN BY: G. SHANGRAW
DESIGNED BY: T. SUMNER	CHECKED BY: T. FILLBACH
sj096aps.i	SHEET 62 OF 135

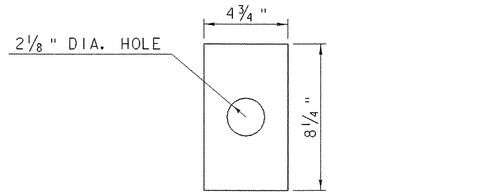


PLAN

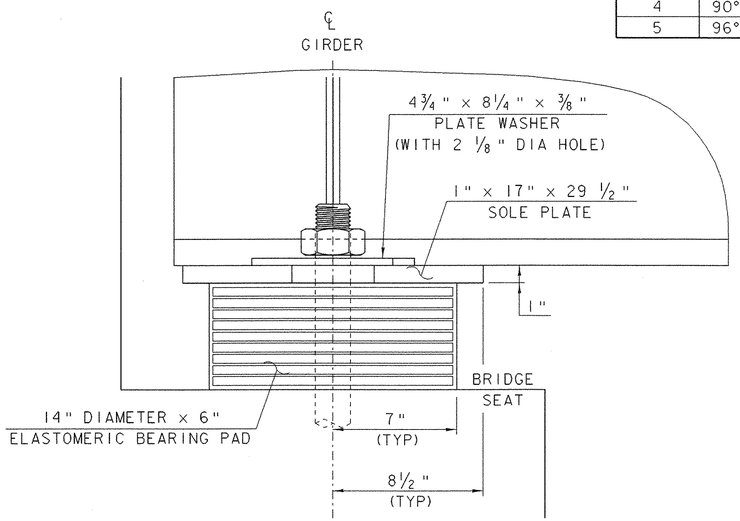
GIRDER	'Y' ANGLE
1	75°-11'-11"
2	80°-15'-49"
3	85°-30'-00"
4	90°-48'-45"
5	96°-06'-36"



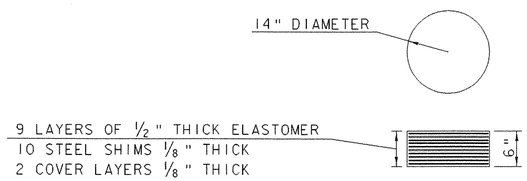
SECTION



WASHER



ELEVATION



REINFORCED ELASTOMERIC PAD

SCALE: 1" = 1'-0"

SCALE 3" = 1'-0

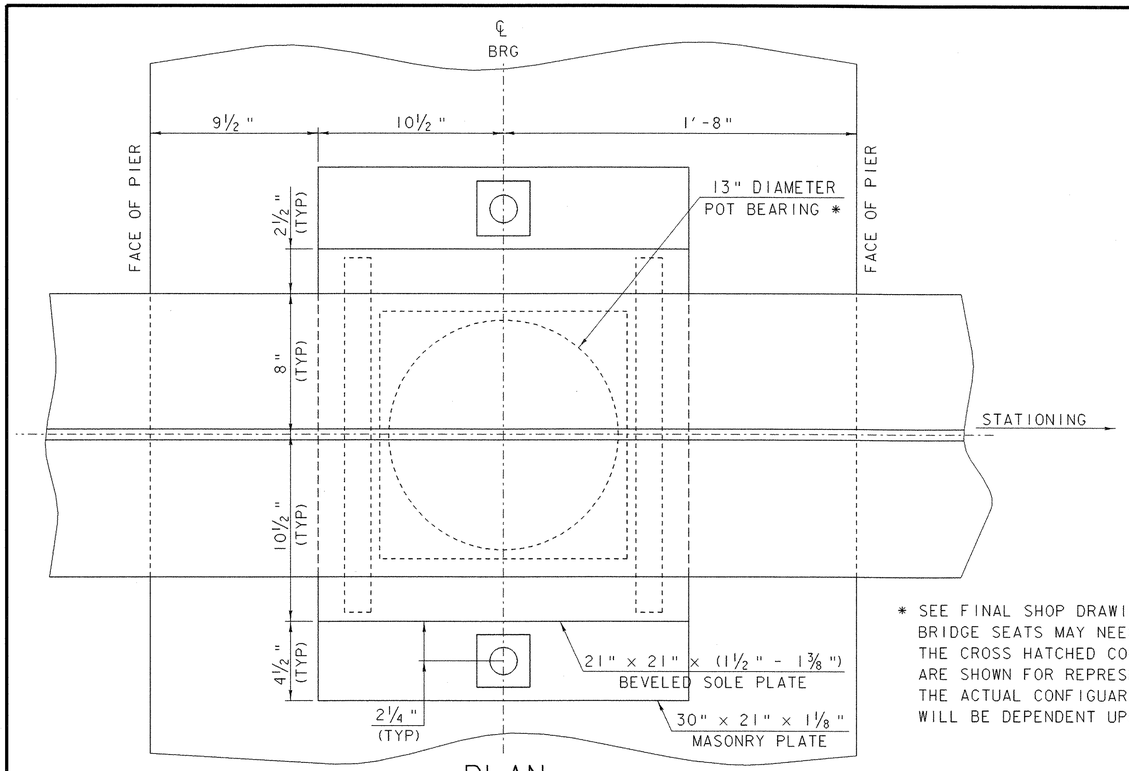
1 9 6 3 0 1

(UNLESS OTHERWISE NOTED)

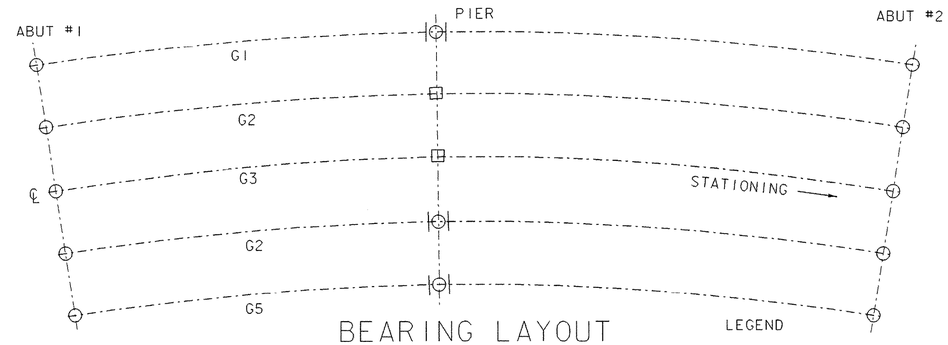
SEE SHEET 66 OF 135 FOR NOTES.

ABUTMENT #1 BEARINGS

PROJECT NAME:	RANDOLPH
PROJECT NUMBER:	BRF 0241(29)
FILE NAME: /str5/88j096/s88j096brg.dgn	PLOT DATE: 29-AUG-2006
PROJECT LEADER: W. SYMONDS	DRAWN BY: G. SHANGRAW
DESIGNED BY: T. SUMNER	CHECKED BY: T. FILLBACH
sj096br1.i	SHEET 63 OF 135



PLAN



BEARING LAYOUT

LEGEND

- □ FIXED POT BEARING
- ⊙ GUIDED POT BEARING
- ○ REINFORCED ELASTOMERIC BEARING

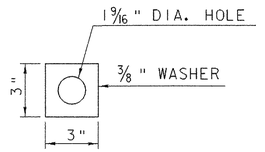
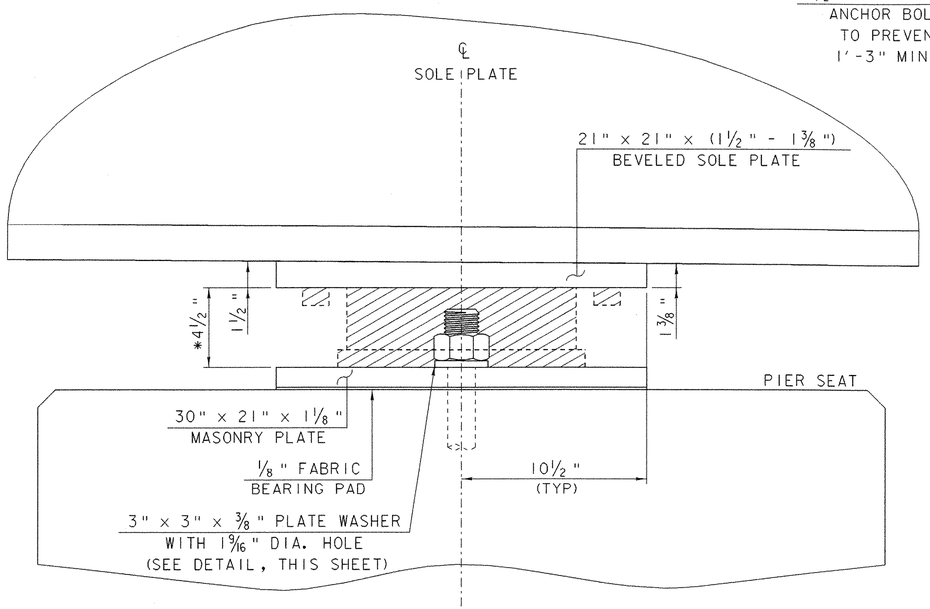
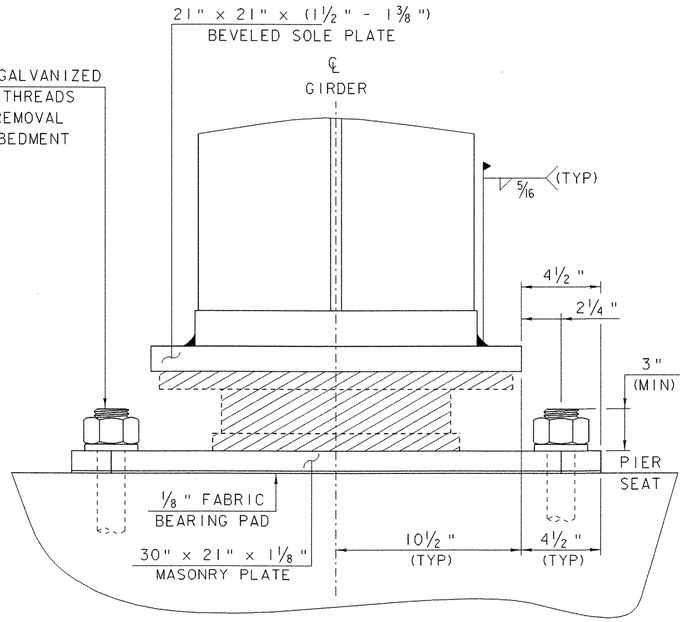


PLATE WASHER

* SEE FINAL SHOP DRAWINGS FOR EXACT DIMENSIONS. BRIDGE SEATS MAY NEED ADJUSTMENT. THE CROSS HATCHED COMPONENTS OF THE BEARING ARE SHOWN FOR REPRESENTATIVE PURPOSES ONLY. THE ACTUAL CONFIGUARTATION OF THE COMPONENTS WILL BE DEPENDENT UPON THE BEARING FABRICATOR.



ELEVATION



SECTION

SCALE 3" = 1'-0

1 9 6 3 0 1

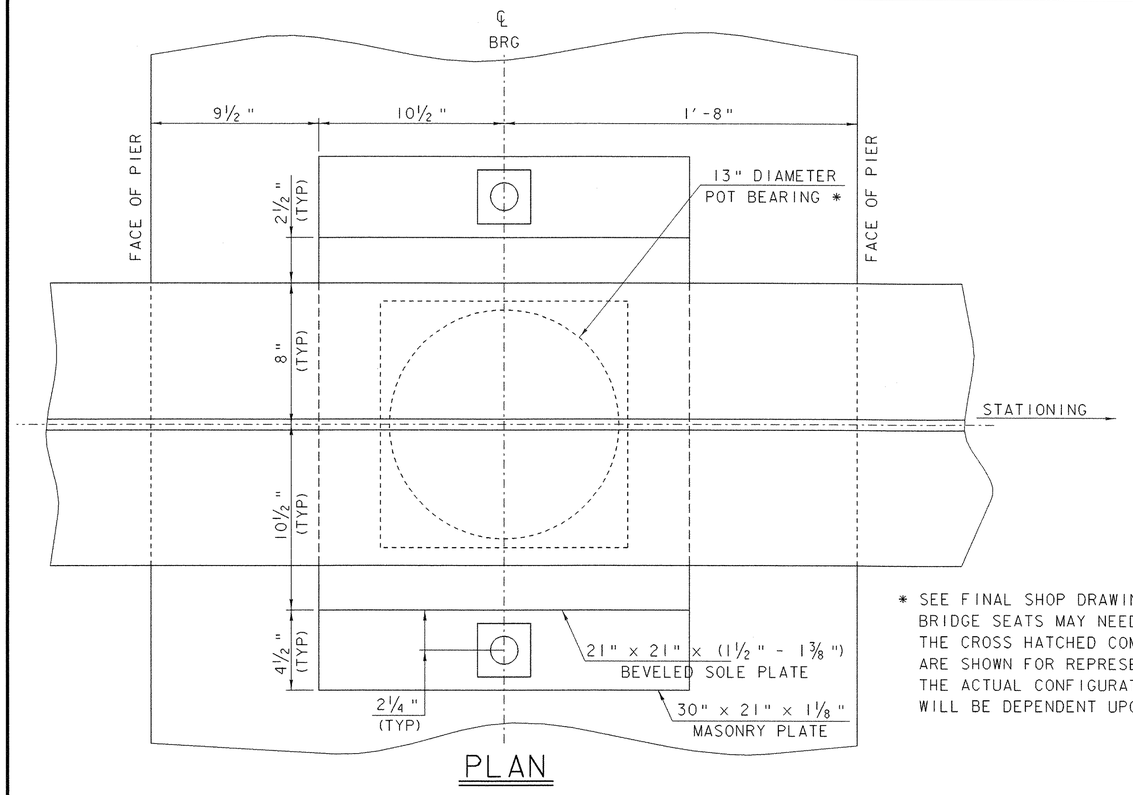
PIER BEARING NOTES

1. Pier bearings shall conform to applicable subsections of Sections 531 and 731.
2. Pier bearings shall be paid for under Item 531.10 "Bearing Device Assembly (Pot)".
3. The concrete surface under the bearing device shall be level.
4. Design Criteria:
   A. Base plate to concrete design pressure = 1.12 ksi maximum.
   B. Minimum allowable design rotation = 0.013 radians.
   C. Horizontal capacity shall be a minimum of 20% of the vertical load.
   D. Design load per bearing (unfactored) at pier = 450 K
5. All steel in bearing devices (except stainless) shall be AASHTO M-270, grade 50.
6. Anchor bolts shall be ASTM A-449 and have a minimum embedment of 1'-3" into the concrete and shall conform to subsection 714.08 in the "Vermont Standard Specifications for Construction.
7. All bearing devices shall be galvanized or metalized as per subsection 531.04(b) and 506.15. 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.
8. All anchor bolts, nuts and washers shall be galvanized. All washers shall be ⅜" 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 (POT)".
9. Submit Designs for Alternate Bearings for approval.
10. 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.

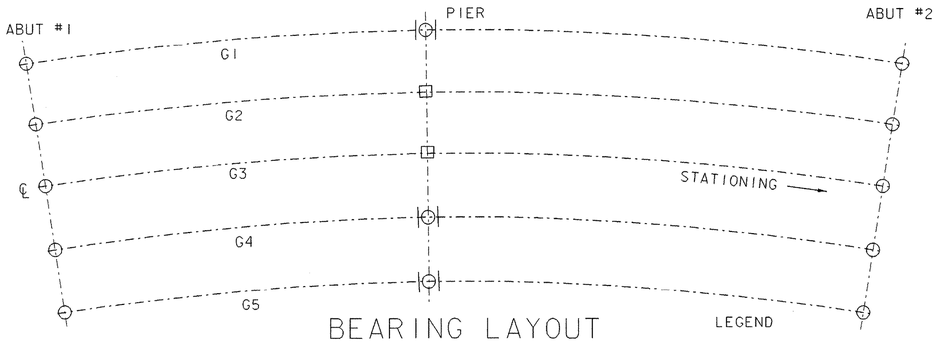
GUIDED POT BEARINGS AT PIER – GIRDERS 1, 4, & 5

PROJECT NAME:	RANDOLPH
PROJECT NUMBER:	BRF 0241(29)

FILE NAME: /str5/88j096/s88j096brg.dgn		PLOT DATE:	29-AUG-2006
PROJECT LEADER: W. SYMONDS		DRAWN BY:	G. SHANGRAW
DESIGNED BY:	T. SUMNER	CHECKED BY:	T. FILLBACH
sj096br2.i		SHEET	64 OF 135



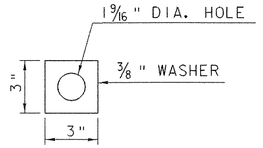
PLAN



BEARING LAYOUT

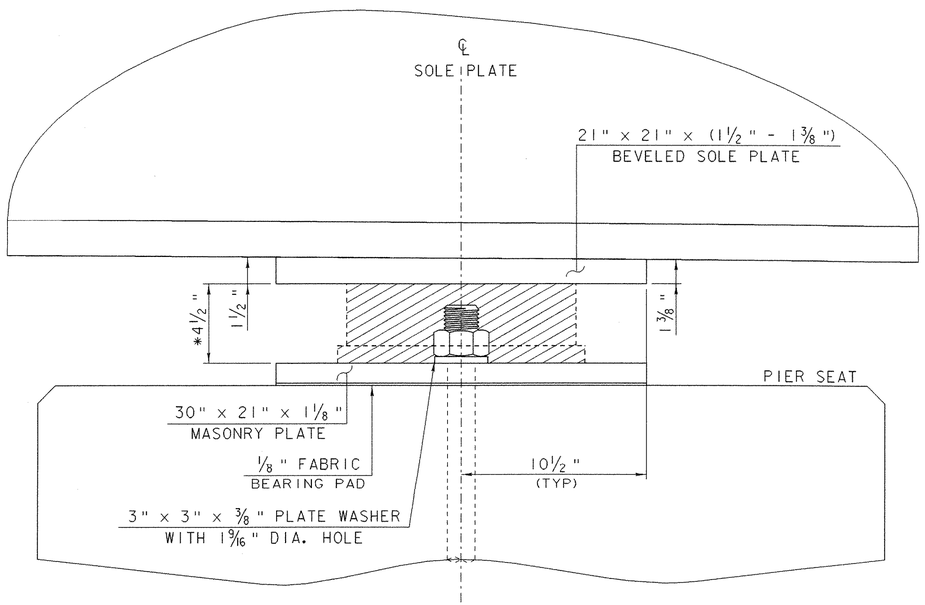
LEGEND

- □ FIXED POT BEARING
- ⊘ GUIDED POT BEARING
- ○ ELASTOMERIC BEARING

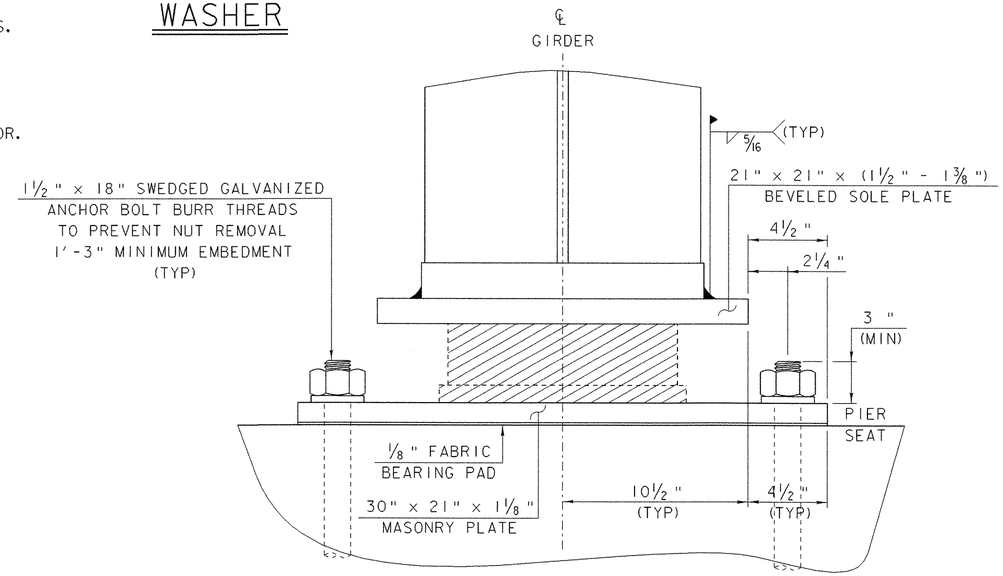


WASHER

* SEE FINAL SHOP DRAWINGS FOR EXACT DIMENSIONS. BRIDGE SEATS MAY NEED ADJUSTMENT. THE CROSS HATCHED COMPONENTS OF THE BEARING ARE SHOWN FOR REPRESENTATIVE PURPOSES ONLY. THE ACTUAL CONFIGURATION OF THE COMPONENTS WILL BE DEPENDENT UPON THE BEARING FABRICATOR.



ELEVATION

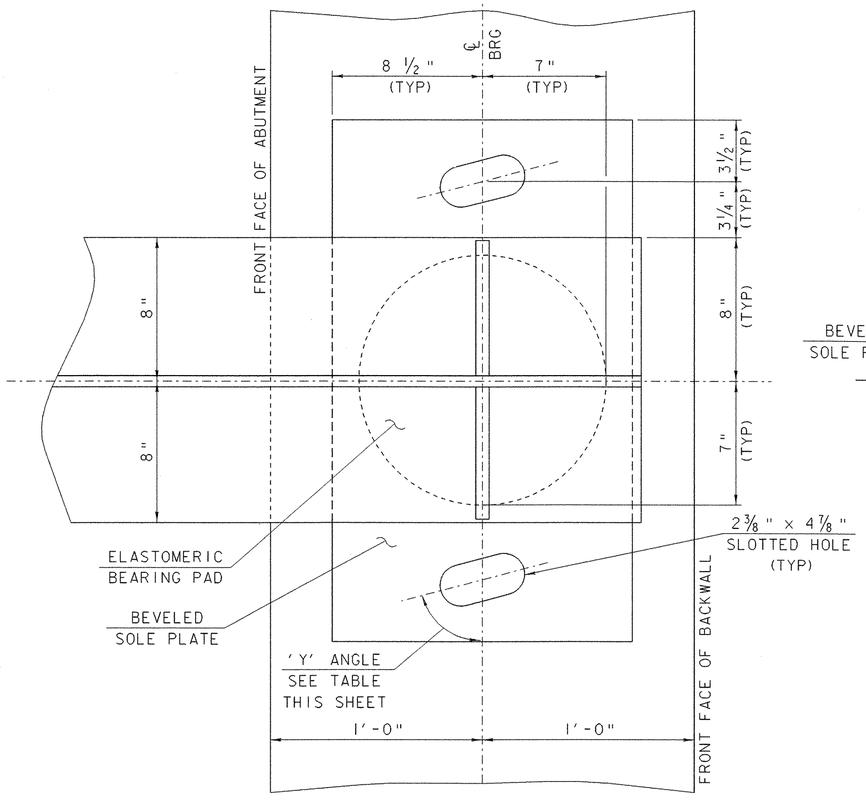


SECTION

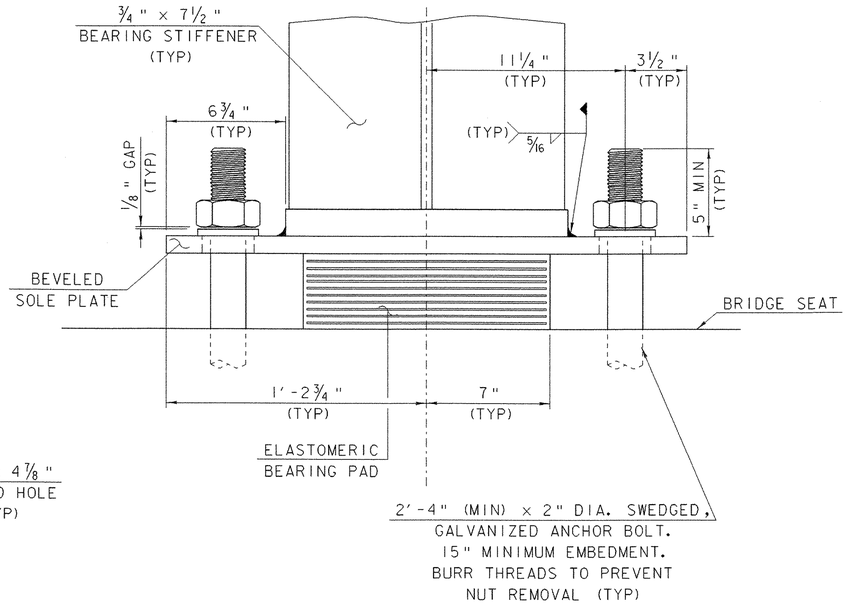
FIXED POT BEARINGS AT PIER – GIRDERS 2 & 3

PROJECT NAME:	RANDOLPH
PROJECT NUMBER:	BRF 0241 (29)

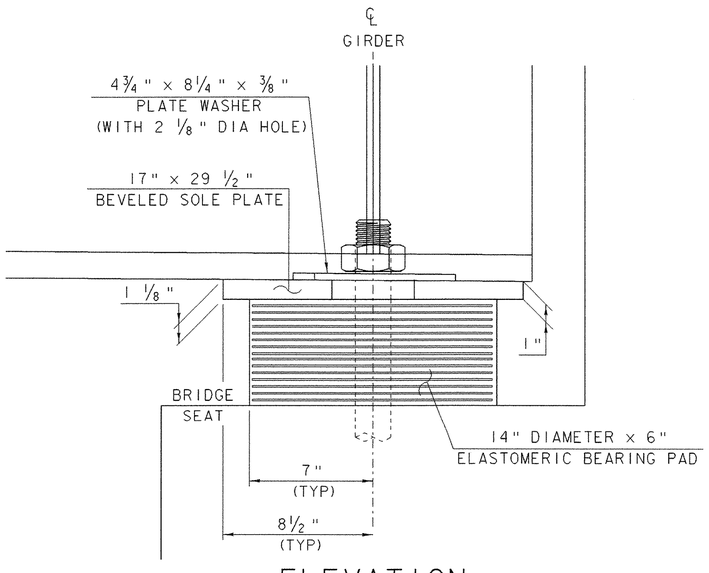
FILE NAME: /str5/88j096/s88j096brg.dgn PLOT DATE: 29-AUG-2006
PROJECT LEADER: W. SYMONDS DRAWN BY: G. SHANGRAW
DESIGNED BY: T. SUMNER CHECKED BY: T. FILLBACH
sj096br4.i SHEET 65 OF 135



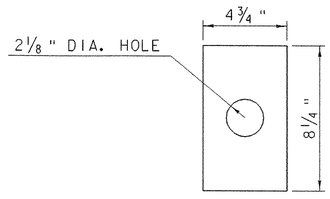
PLAN



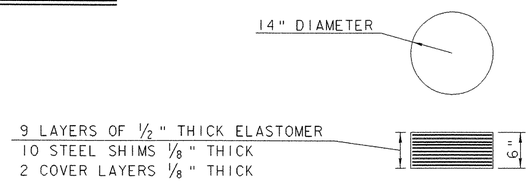
SECTION



ELEVATION



WASHER



REINFORCED ELASTOMERIC PAD
SCALE: 1" = 1'-0"

GIRDER	'Y' ANGLE
1	75.19°
2	80.26°
3	85.50°
4	90.81°
5	96.11°

SCALE 3" = 1'-0
1 9 6 3 0 1
(UNLESS OTHERWISE NOTED)

BEARING DEVICE NOTES

1. BEARINGS SHALL BE PAID FOR UNDER THE ITEM 531.10 "BEARING DEVICE ASSEMBLY (ELASTOMERIC)" AND SHALL CONFORM TO APPLICABLE SUBSECTIONS OF SECTION 531 AND 731.
2. FOR ELASTOMERIC BEARINGS, ALL MATERIALS AND FABRICATION SHALL BE PER AASHTO STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES, EDITION 2002 AND ITS LATEST REVISIONS AND AASHTO M 251.
3. AREAS OF GALVANIZED AND METALIZING DAMAGED BY WELDING AND/OR HANDLING SHALL BE REPAIRED BY METALIZING IN ACCORDANCE WITH ASTM A 780.
4. ANCHOR BOLTS, NUTS, AND WASHERS SHALL BE GALVANIZED PER AASHTO M 232.
5. ALL STEEL IN BEARING DEVICES SHALL BE AASHTO M 270 GRADE 50.
6. ALL REINFORCEMENT BETWEEN LAYERS OF ELASTOMERIC SHALL BE STEEL AASHTO M 270 GRADE 36. ALL INTERNAL STEEL PLATES SHALL BE SAND BLASTED AND FREE OF COATINGS, RUST, AND MILL SCALE. THE PLATES SHALL BE FREE OF SHARP EDGES AND BURRS.
7. STEEL REINFORCED ELASTOMERIC BEARINGS SHALL HAVE A MINIMUM OF ⅛" EDGE SEAL OF ELASTOMER INTEGRAL WITH THE BEARING OVER ALL INTERNAL PLATES.
8. ALTERNATE CONFIGURATIONS FOR BEARINGS MAY BE SUBMITTED FOR APPROVAL. ANY ALTERNATE SUBMITTED SHALL BE DESIGNED AND CERTIFIED TO MEET THE DESIGN LOADS AND CRITERIA SHOWN ON THIS SHEET. THE ALTERNATE SHALL MAINTAIN THE ANCHORAGE SYSTEM SHOWN AND SHALL BE DESIGNED PER AASHTO STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES 2002 EDITION AND ITS LATEST REVISIONS.
9. BRIDGE SEAT ELEVATIONS MAY BE REVISED TO ACCOMMODATE AN ALTERNATIVE CONFIGURATION.
10. THE STEEL SOLE PLATES SHALL BE HOT BONDED TO THE REINFORCED ELASTOMERIC PAD DURING THE VULCANZATION PROCESS. THE STEEL SURFACES TO BE BONDED TO THE PAD SHALL NOT BE METALIZED.
11. THE ANCHOR BOLTS SHALL MEET THE REQUIREMENTS OF ASTM A 449.

DESIGN CRITERIA:

A. DESIGN ROTATION = 0.0124 RADIANS

B. BEARINGS ARE DESIGNED AS PER AASHTO STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES, EDITION 2002 AND ITS LATEST REVISIONS, SECTION 14, METHOD B.

C. DESIGN CRITERIA:

MINIMUM ALLOWABLE DESIGN ROTATION = 0.0124
DEAD LOAD = 87 K
LIVE LOAD = 92 K
TRANSLATION = 0.932 IN

D. TEMPERATURE RANGE = -30°F TO +120°F

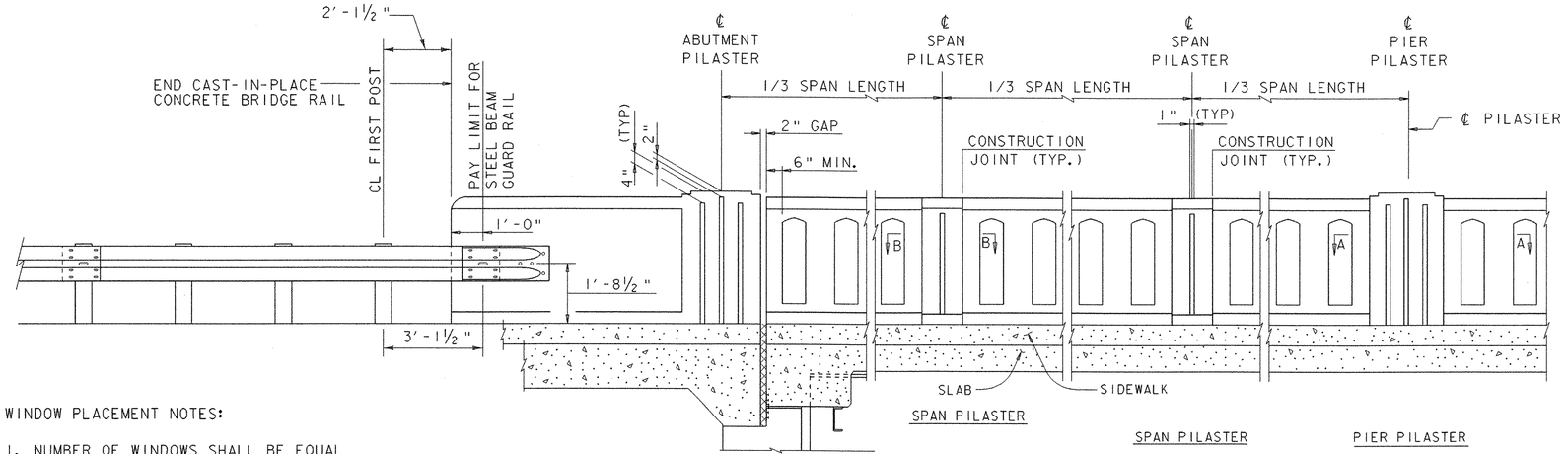
E. ELASTOMER SHALL HAVE NOMINAL HARDNESS OF 60 ON SHORE 'A' SCALE. ELASTOMER SHALL HAVE A SHEAR MODULUS BETWEEN 0.130 ksi AND 0.200 ksi. THE RAW ELASTOMER SHALL BE CLASSIFIED AS LOW TEMPERATURE GRADE 4 AS DEFINED IN TABLE 18.4.5.1 - 1A OF AASHTO, DIVISION II, SECTION 18.

F. NO FABRIC REINFORCEMENT WILL BE ALLOWED IN ELASTOMERIC PADS.

ABUTMENT #2 BEARINGS

PROJECT NAME:	RANDOLPH
PROJECT NUMBER:	BRF 0241 (29)

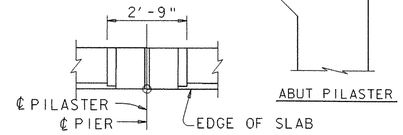
FILE NAME: /str5/88j096/s88j096brg.dgn PLOT DATE: 29-AUG-2006
PROJECT LEADER: W. SYMONDS DRAWN BY: G. SHANGRAW
DESIGNED BY: T. SUMNER CHECKED BY: T. FILLBACH
sj096br3.i SHEET 66 OF 135



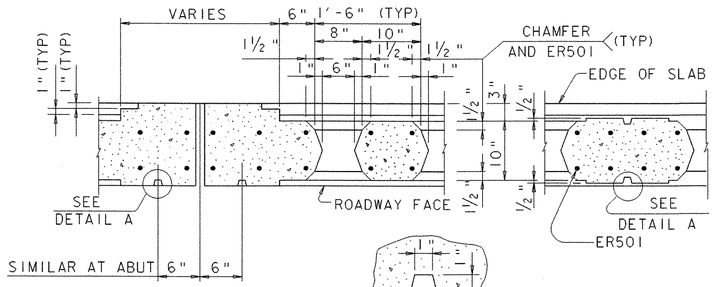
RAIL WITH PILASTERS

WINDOW PLACEMENT NOTES:

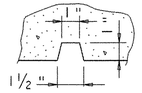
1. NUMBER OF WINDOWS SHALL BE EQUAL FOR ALL SEGMENTS BETWEEN PILASTERS.
2. SPAN PILASTERS SHALL BE PLACED AT 1/3 POINTS BETWEEN THE CENTERLINE OF THE ABUTMENT PILASTERS AND THE CENTERLINE OF THE PIER PILASTER.
3. THE WINDOW GROUP BETWEEN PILASTERS SHALL BE CENTERED BETWEEN THE PILASTERS. THE DISTANCE FROM PILASTER TO THE FIRST WINDOW MAY BE ADJUSTED FROM A MINIMUM OF 3" TO A MAXIMUM OF 7½".
4. THE ONLY EXCEPTION TO NOTE # 3 IS AN EXPANSION JOINT. THE MINIMUM DISTANCE FROM THE EDGE OF AN EXPANSION JOINT TO THE FIRST WINDOW IS 6".
5. NO SHOP DRAWINGS WILL BE REQUIRED FOR THIS RAIL. PRIOR TO FORMING THE RAILING THE CONTRACTOR SHALL DEMONSTRATE, TO THE SATISFACTION OF THE RESIDENT ENGINEER, THE FORMING TECHNIQUE AND THAT THE WINDOWS WILL BE PLACED CORRECTLY.
6. HOLES AND RECESSES MUST BE FORMED OR CORED. PERCUSSION DRILLING IS NOT PERMITTED.
7. 13 1⅜" DIA. WASHERS ARE REQUIRED UNDER ⅞" DIA. BOLT HEADS AND NUTS.



PIER PILASTER JOINT



SECTION A-A

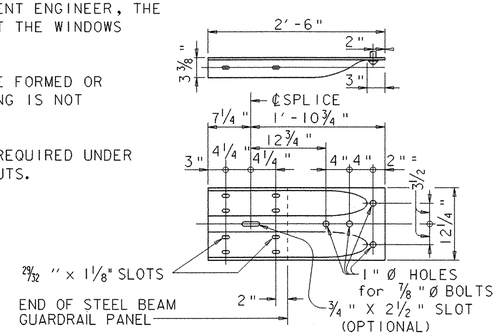


DETAIL A

SECTION B-B

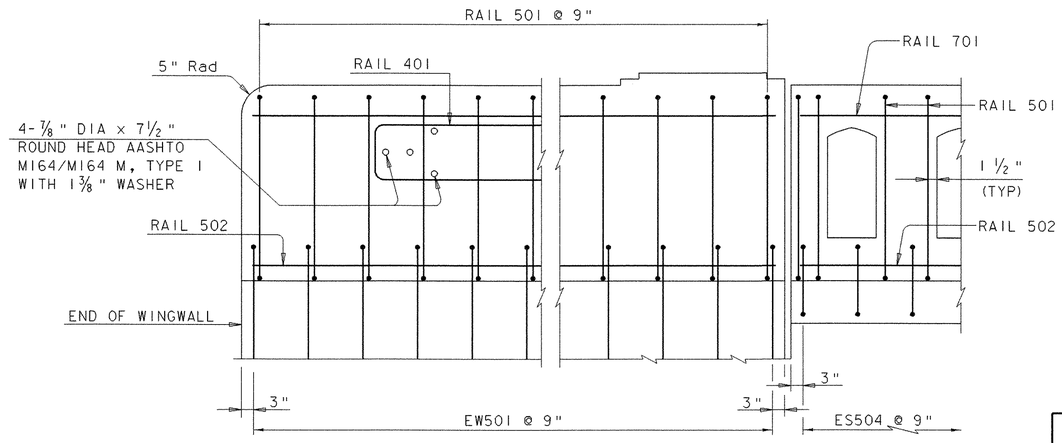
GENERAL RAILING NOTES:

1. ALL CONCRETE FOR RAILING SHALL BE AS DESCRIBED IN THE SPECIAL PROVISIONS.
2. DIMENSIONS RELATING TO REINFORCING STEEL ARE TO CENTERS OF BARS.
3. AVERAGE WEIGHT OF RAILING WITH NO OVERLAY INCREASE AND NO PILASTERS IS 340 LBS/LF.
5. ALL REINFORCING STEEL IN THE RAILING SHALL BE EPOXY COATED.
6. ALL SURFACES OF THE RAILING SHALL BE GIVEN A RUBBED FINISH PER VAOT STANDARD SPECIFICATIONS SUB-SECTION 501.16 (a)
7. OMIT BOLT HOLES AND TERMINAL CONNECTOR AT WINGWALL #4.



TERMINAL CONNECTOR

TERMINAL CONNECTOR SHALL RECEIVE THE SAME PROTECTIVE COATING AS THE ATTACHED METAL BEAM GUARD FENCE

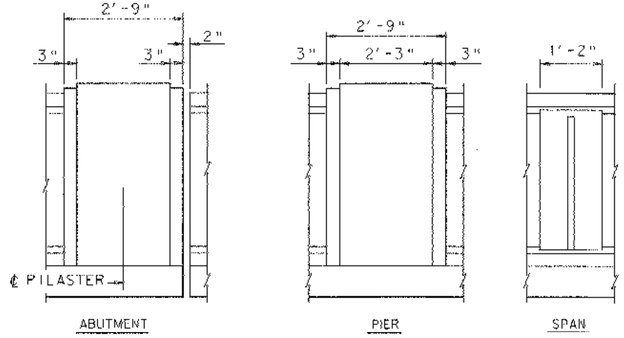


TYPICAL REINFORCING PLACEMENT

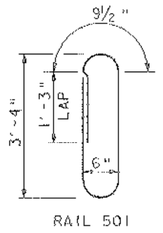
CAST-IN-PLACE CONCRETE BRIDGE RAIL (TEXAS)

PROJECT NAME:	RANDOLPH
PROJECT NUMBER:	BRF 0241 (29)

FILE NAME: /str5/88j096/sj096tex.dgn
PROJECT LEADER: W. SYMONDS
DESIGNED BY: W.B. SYMONDS
sj096trl.i
PLOT DATE: 29-AUG-2006
DRAWN BY: STR5
CHECKED BY: T. SUMNER
SHEET 67 OF 135



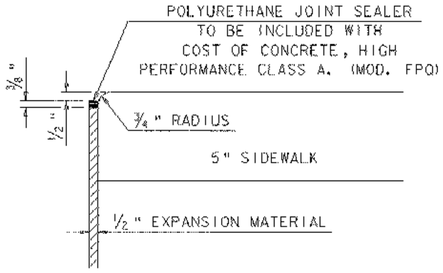
EXTERIOR PILASTER ELEVATIONS



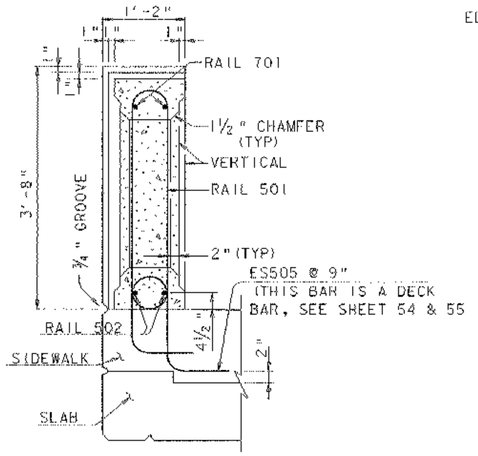
RAIL 501

BAR TYPES

NOTE: "RAIL BARS" ARE IN ADDITION TO THOSE FOUND ON THE REINFORCING STEEL SCHEDULE SHEET 84. PAYMENT FOR THESE BARS ARE INCIDENTAL TO ITEM 525.50 CAST-IN-PLACE BRIDGE RAIL (TEXAS)

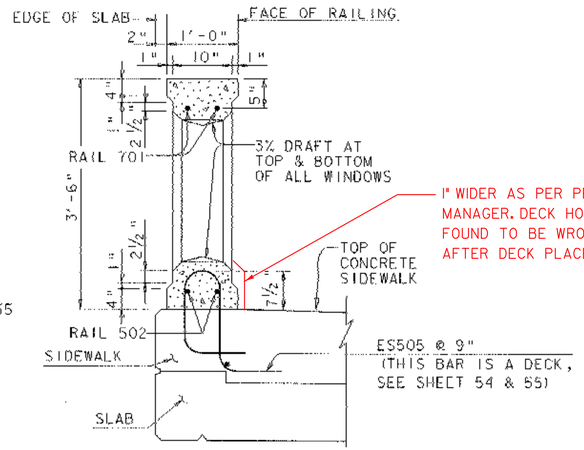


JOINT BETWEEN SIDEWALK AND WINGWALL

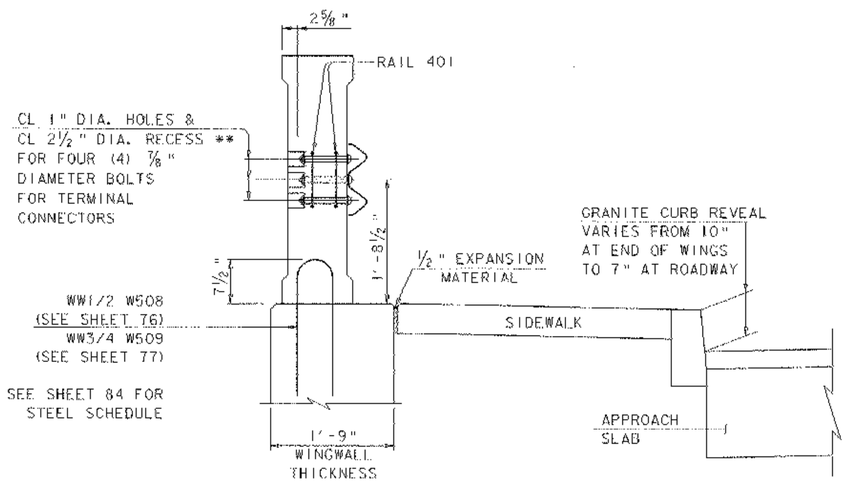


SECTION THRU POST ON BRIDGE SLAB

(SHOWING PILASTER)



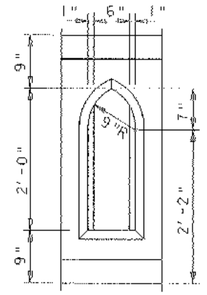
SECTION THRU WINDOW ON BRIDGE SLAB



SECTION THRU PARALLEL WINGWALL

(SHOWING MBGF CONNECTION)

** NOTE: THE HOLES AND RECESSES MUST BE FORMED OR CORED. NO PERCUSSION DRILLING WILL BE ALLOWED.



TYPE D

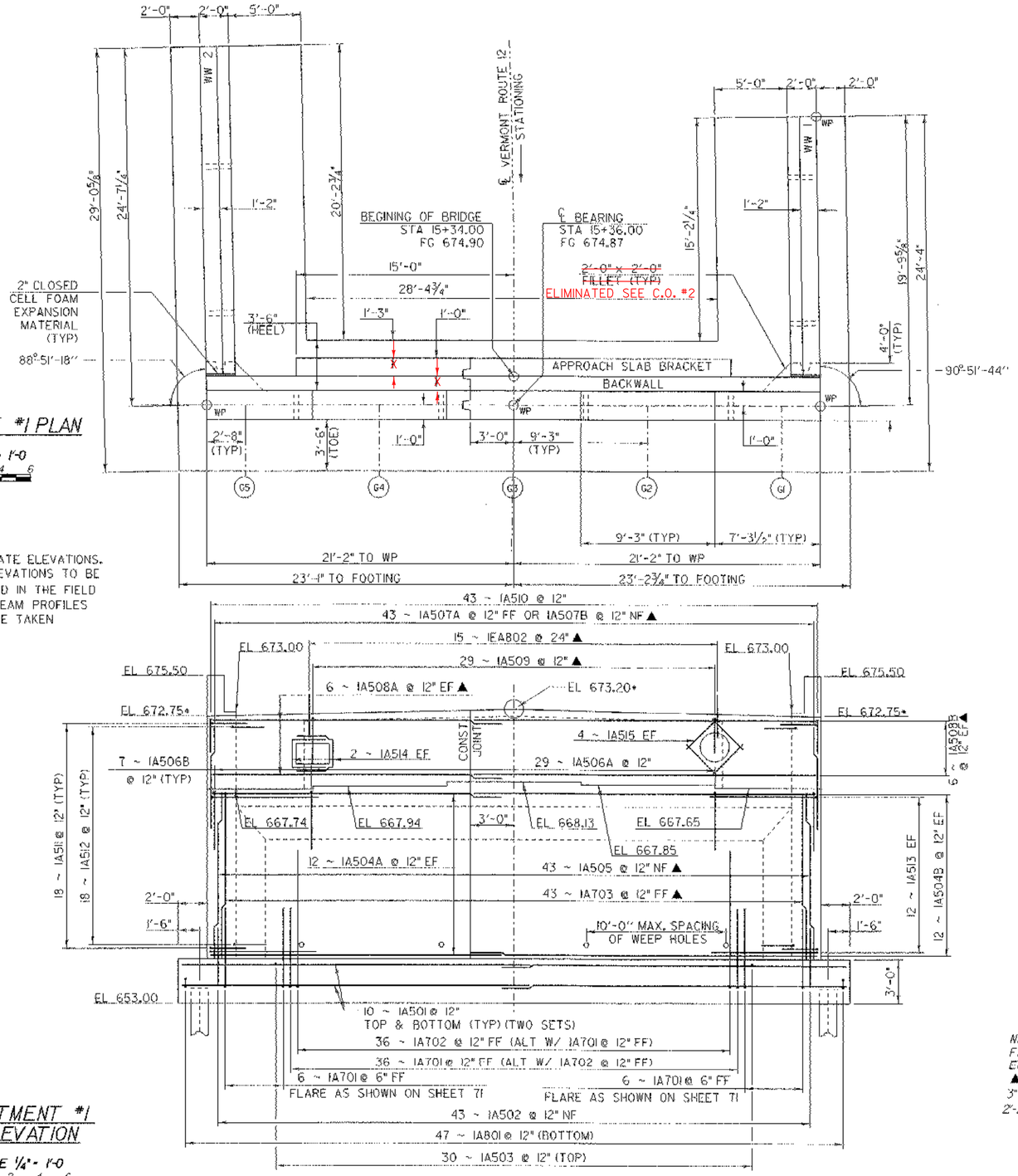
WINDOW DETAIL

CAST-IN-PLACE BRIDGE CONCRETE RAIL (TEXAS)

PROJECT NAME:	RANDOLPH
PROJECT NUMBER:	BRF 0241(29)

FILE NAME: /sfr5/BBJ096/sj096tex.dgn
PROJECT LEADER: W. SYMONDS
DESIGNED BY: W.B. SYMONDS
sj096fr2.i

PLOT DATE: 29-AUG-2006
DRAWN BY: STR5
CHECKED BY: T. SUMNER
SHEET 68 OF 135



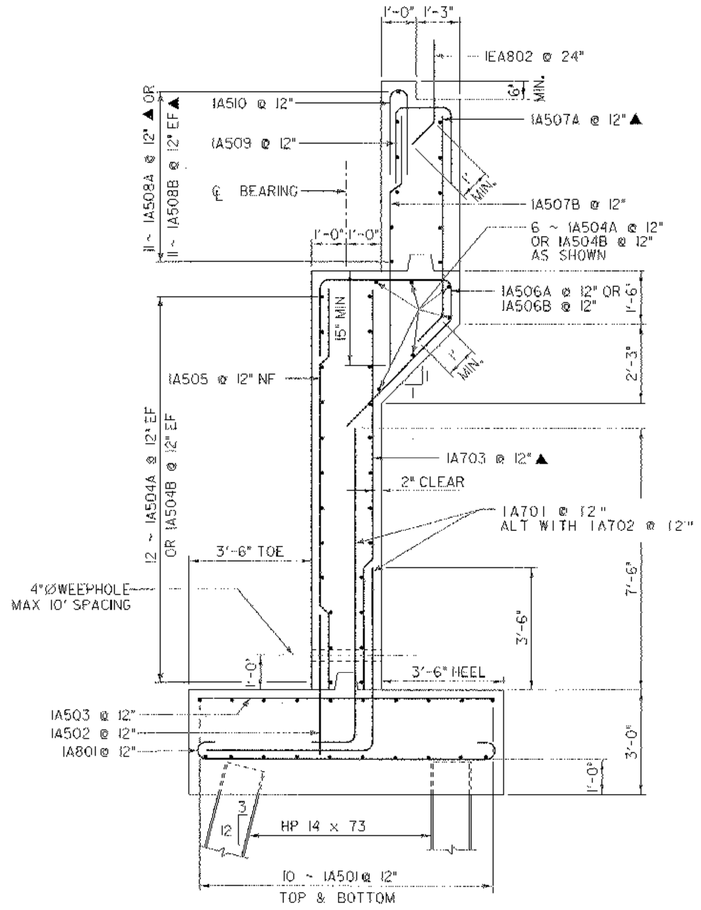
ABUTMENT #1 PLAN

SCALE ¼" = 1'-0

* APPROXIMATE ELEVATIONS. ACTUAL ELEVATIONS TO BE DETERMINED IN THE FIELD AFTER BEAM PROFILES ARE TAKEN

ABUTMENT #1 ELEVATION

SCALE ¼" = 1'-0



ABUTMENT #1 TYPICAL SECTION

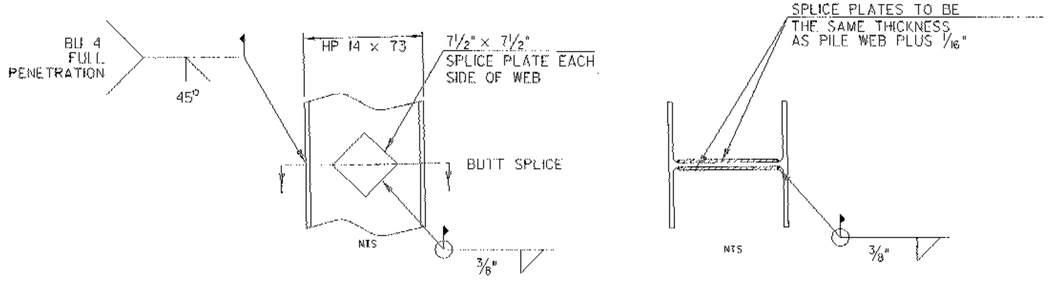
SCALE ½" = 1'-0

NOTE:

NF = NEAR FACE
FF = FAR FACE
EF = EACH FACE
▲ = CUT TO FIT IN FIELD
3" CLR. UNLESS OTHERWISE NOTED
2'-2" BAR LAP UNLESS OTHERWISE NOTED

ABUTMENT #1 PLAN & ELEVATION

PROJECT NAME:	RANDOLPH
PROJECT NUMBER:	BRF 0241 (29)
FILE NAME: /str5/88j096/s88j096sub.dgn	PLOT DATE: 29-AUG-2006
PROJECT LEADER: W. SYMONDS	DRAWN BY: G. SHANGRAW
DESIGNED BY: T. SUMNER	CHECKED BY: T. FILLBACH
sj906abutlpo.i	SHEET 70 OF 135



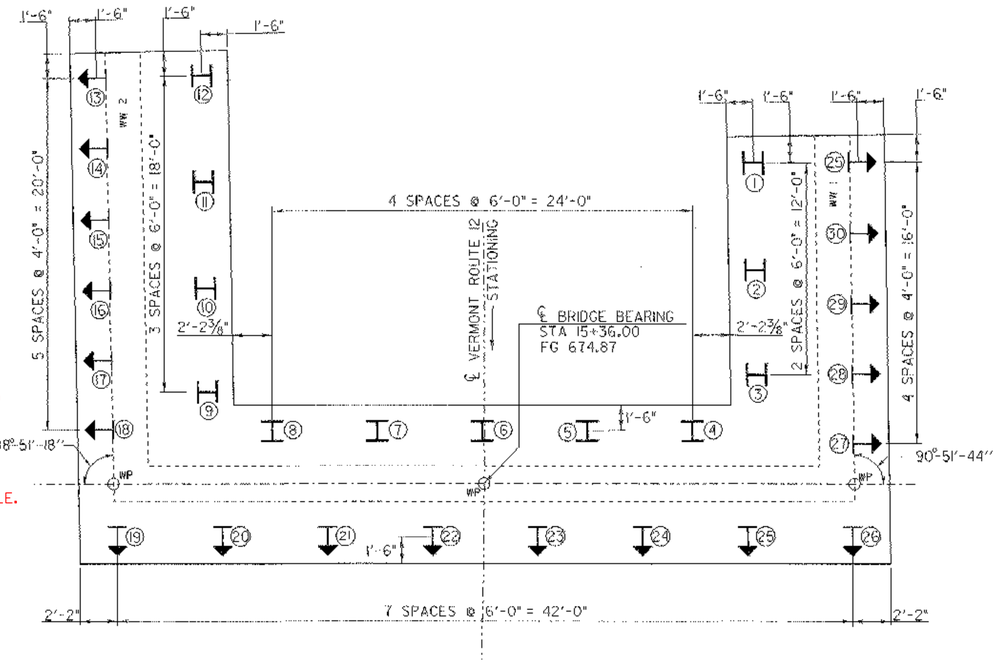
PILE NOTES:

1. H - INDICATES LOCATION OF A VERTICAL H-PILE
2. H - INDICATES LOCATION OF A BATTERED H-PILE
3. PILE SIZE: HP 14 x 73
4. PILE STEEL: ASTM A572/A572M (GRADE 50)
5. WELDING PROCEDURES TO BE APPROVED BY THE STRUCTURES ENGINEER PRIOR TO WELDING
6. PREFABRICATED PILE SPLICE PLATES MAY BE USED WITH THE APPROVAL OF THE RESIDENT ENGINEER
7. ULTIMATE CAPACITY: 365 KIPS (INCLUDES 2.25 FACTOR OF SAFETY).

DRIVING CRITERIA FROM DYNAMIIC TEST
7 BLOWES/INCH FOR 3 CONSECTIVE INCHES
WITH MINIMUM 9" HAMMER STROKE.
WRS 05-23-07

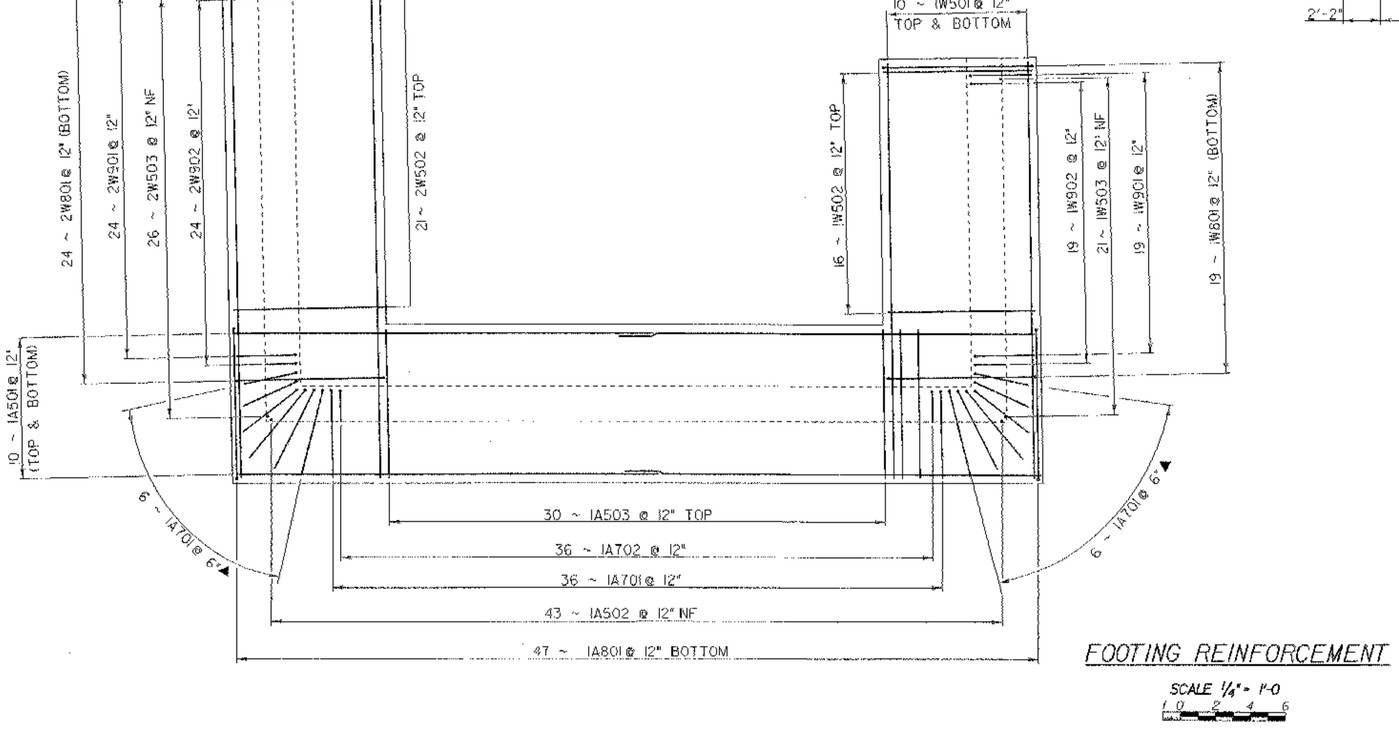
NOTE: WAIVE ANALYSES
9 BLOWES/FUEL 3/STROKE 7.5' (MAX 11.4')
FOR 3 CONSECUTIVE INCHES.

SEE BLACK BOOK PAGE 5-41
(NOTHING IN GEN SP, SPECIALS, OR SUPP.
C.BENDA SAIS NO RESTRIKES ON TEST PILE.



PILE SPACING

SCALE 1/4" = 1'-0



FOOTING REINFORCEMENT

SCALE 1/4" = 1'-0

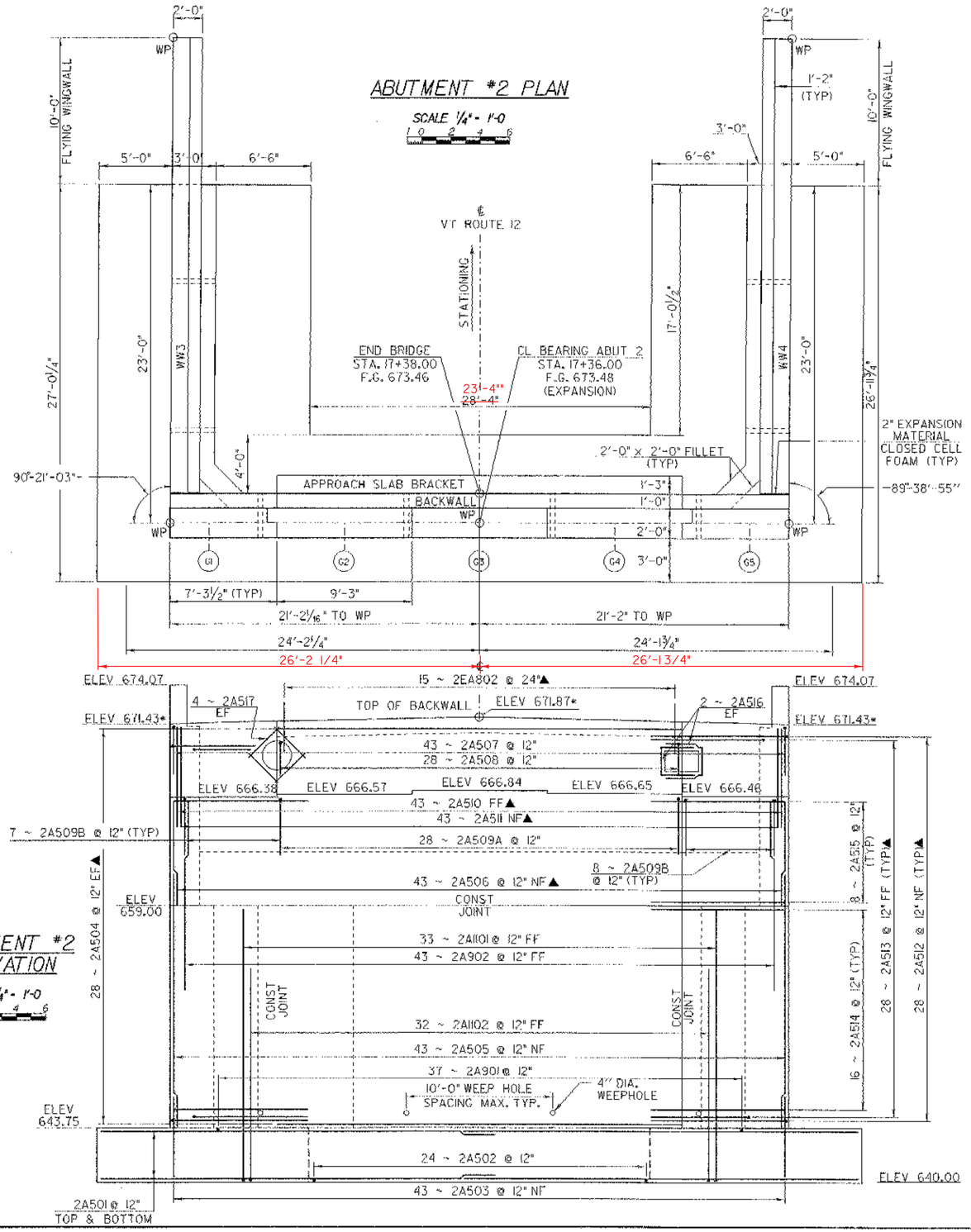
NOTE:

NF = NEAR FACE
FF = FAR FACE
EF = EACH FACE
▲ = CUT TO FIT IN FIELD
3" CLR. UNLESS OTHERWISE NOTED
2'-2" BAR LAP UNLESS OTHERWISE NOTED

ABUTMENT #1 FOOTING REINFORCING AND PILE SPACING

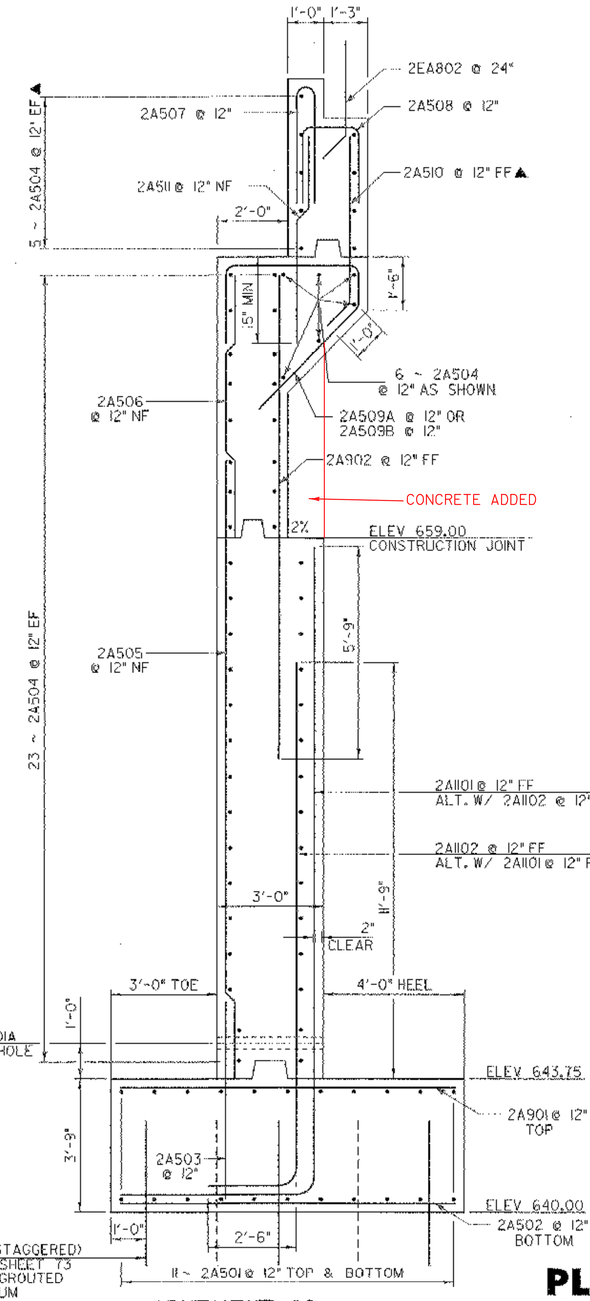
PROJECT NAME:	RANDOLPH
PROJECT NUMBER:	BRF 0241 (29)

FILE NAME: /str5/88j096/s88j096sub.dgn PLOT DATE: 29-AUG-2006
PROJECT LEADER: W. SYMONDS DRAWN BY: G. SHANGRAW
DESIGNED BY: T. SUMNER CHECKED BY: T. FILLBACH
s88j096abut1foot.i SHEET 71 OF 135



ABUTMENT #2 ELEVATION

SCALE 1/4"- 1'-0



ABUTMENT #2 TYPICAL SECTION

SCALE ½"- 1'-0

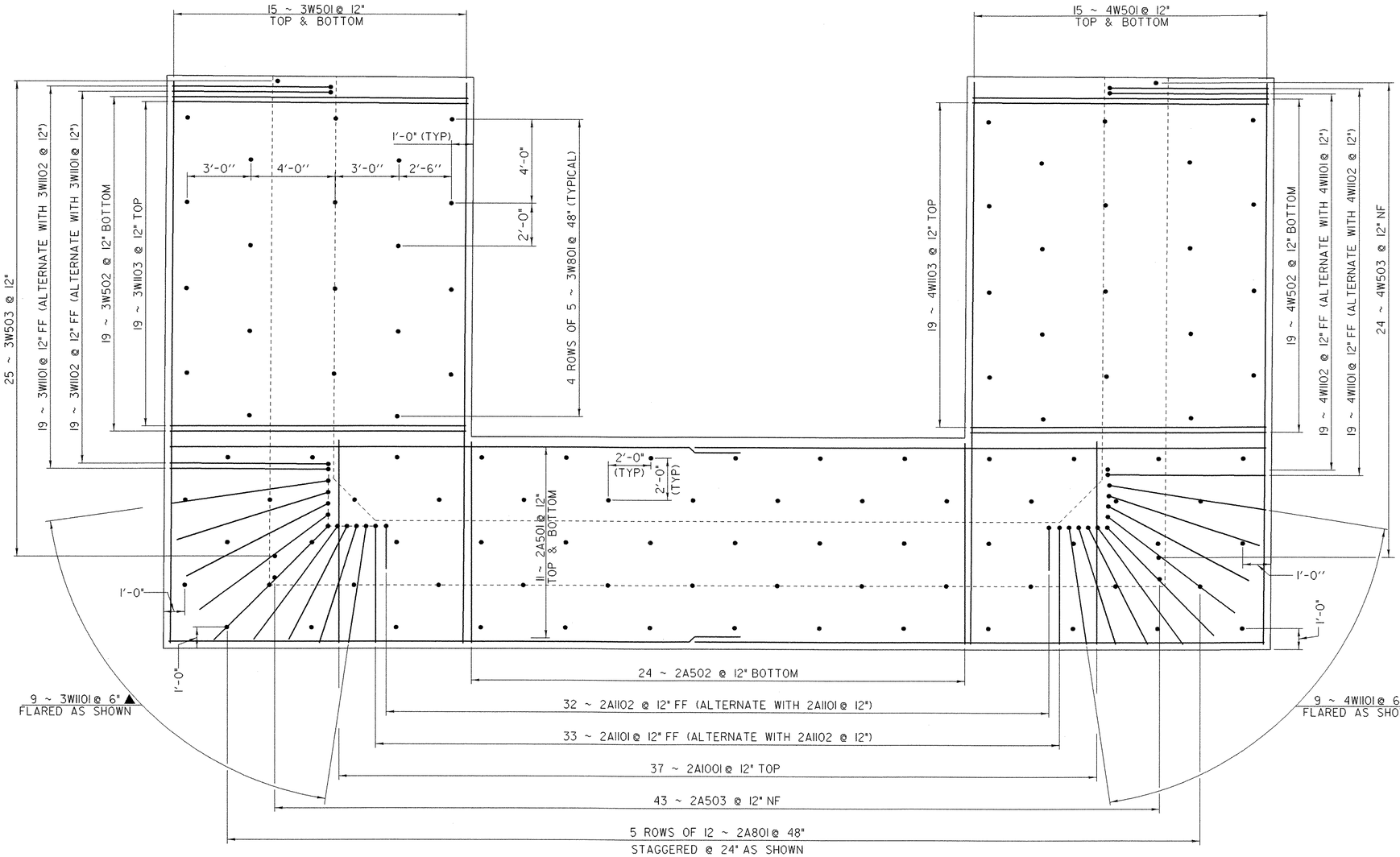
* APPROXIMATE ELEVATIONS. ACTUAL DIMENSIONS TO BE DETERMINED IN THE FIELD AFTER BEAM PROFILES ARE TAKEN

NOTE:

NF = NEAR FACE
FF = FAR FACE
EF = EACH FACE
▲ = CUT TO FIT IN FIELD
3" CLR. UNLESS OTHERWISE SPECIFIED ON THE PLANS.
SPLICE LAP LENGTH IS 2'-2" UNLESS OTHERWISE NOTED.

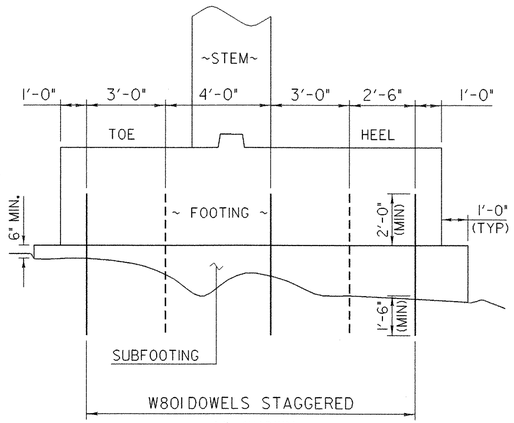
ABUTMENT #2 PLAN & ELEVATION

PROJECT NAME:	RANDOLPH
PROJECT NUMBER:	BRF 0241(29)
FILE NAME: /str5/88J096/s88J096sub.dgn	PLOT DATE: 29-AUG-2006
PROJECT LEADER: W. SYMONDS	DRAWN BY: G. SHANGRAW
DESIGNED BY: T. FILLBACH	CHECKED BY: T. SUMNER
sJ906abut2pe.i	SHEET 72 OF 135



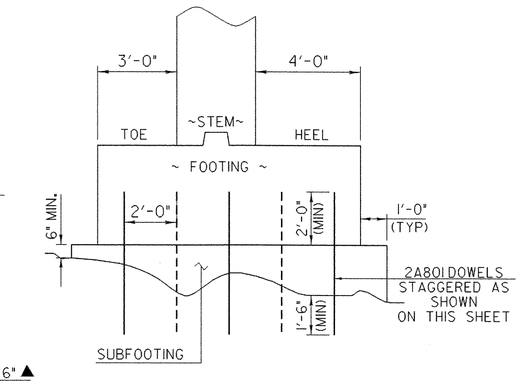
ABUTMENT 2 FOOTING REINFORCING

SCALE 3/8" = 1'-0



WINGWALL SUBFOOTING DETAIL

SCALE 3/8" = 1'-0



* FOR ESTIMATING PURPOSES THE #8 BAR DOWELS (2A801 OR W801) ARE 3'6" IN LENGTH (ASSUMING NO SUBFOOTING). IF A SUBFOOTING IS REQUIRED, THEN THE CONTRACTOR WILL BE RESPONSIBLE FOR LONGER #8 DOWELS AS SHOWN IN THE SUBFOOTING DETAIL.

ABUTMENT #2 SUBFOOTING DETAIL

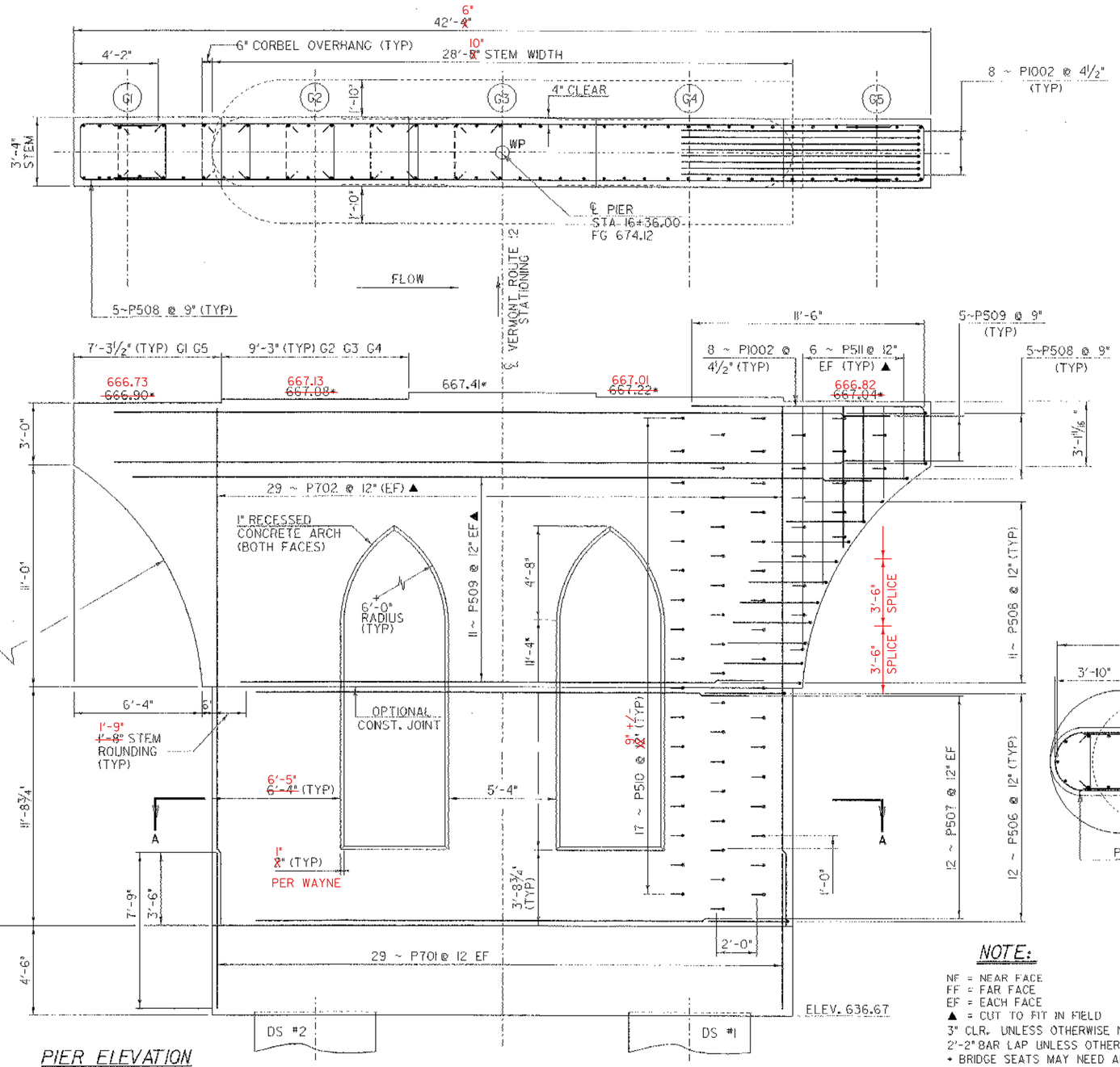
SCALE 3/8" = 1'-0

NOTE:

NF = NEAR FACE
FF = FAR FACE
EF = EACH FACE
▲ = CUT TO FIT IN FIELD
3" CLR. UNLESS OTHERWISE SPECIFIED ON THE PLANS.
SPLICE LAP LENGTH IS 2'-2" UNLESS OTHERWISE NOTED.

ABUTMENT #2 FOOTING REINFORCING

PROJECT NAME:	RANDOLPH
PROJECT NUMBER:	BRF 0241(29)
FILE NAME: /str5/88j096/s88j096sub.dgn	PLOT DATE: 29-AUG-2006
PROJECT LEADER: W. SYMONDS	DRAWN BY: G. SHANGRAW
DESIGNED BY: T. FILLBACH	CHECKED BY: T. SUMNER
sj096abut2foot.i	SHEET 73 OF 135

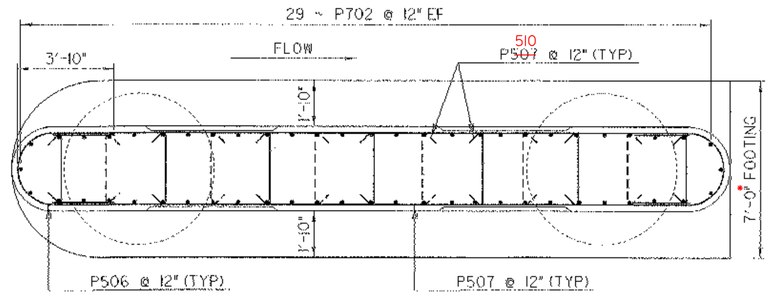


PIER ELEVATION

SCALE ⅜" = 1'-0

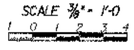
PIER PLAN

SCALE ⅜" = 1'-0



SECTION A-A

SCALE ⅜" = 1'-0



NOTE:

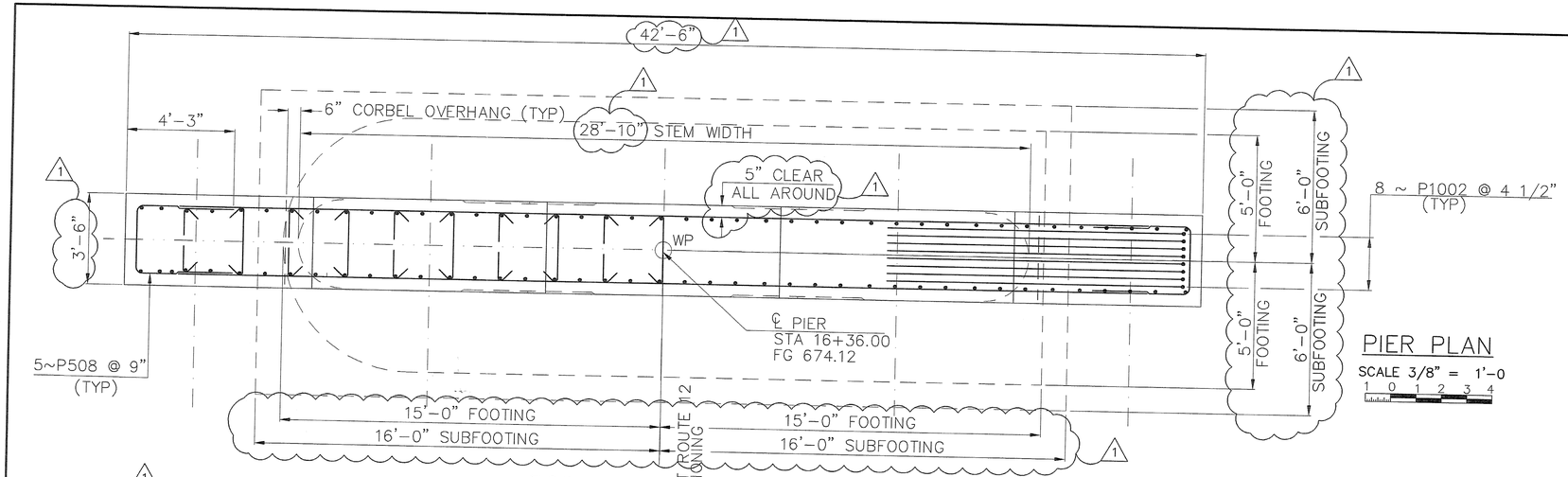
NF = NEAR FACE
FF = FAR FACE
EF = EACH FACE
▲ = CUT TO FIT IN FIELD
3" CLR. UNLESS OTHERWISE NOTED
2'-2" BAR LAP UNLESS OTHERWISE NOTED
* BRIDGE SEATS MAY NEED ADJUSTMENT BASED ON FINAL PIER BEARING SHOP DRAWING APPROVAL

* SEE C.O. #1 ALL ADDITIONAL CONCRETE FOR THE LARGER FOOTING IS INCLUDED IN C.O.#1

PIER PLAN & ELEVATION

PROJECT NAME:	RANDOLPH
PROJECT NUMBER:	BRF 0241 (29)

FILE NAME: /str5/88j096/s88j096sub.dgn PLOT DATE: 29-AUG-2006
PROJECT LEADER: W. SYMONDS DRAWN BY: G. SHANGRAW
DESIGNED BY: T. SUMNER CHECKED BY: T. PILLBACH
sj906pierplan.i SHEET 74 OF 135



PIER PLAN

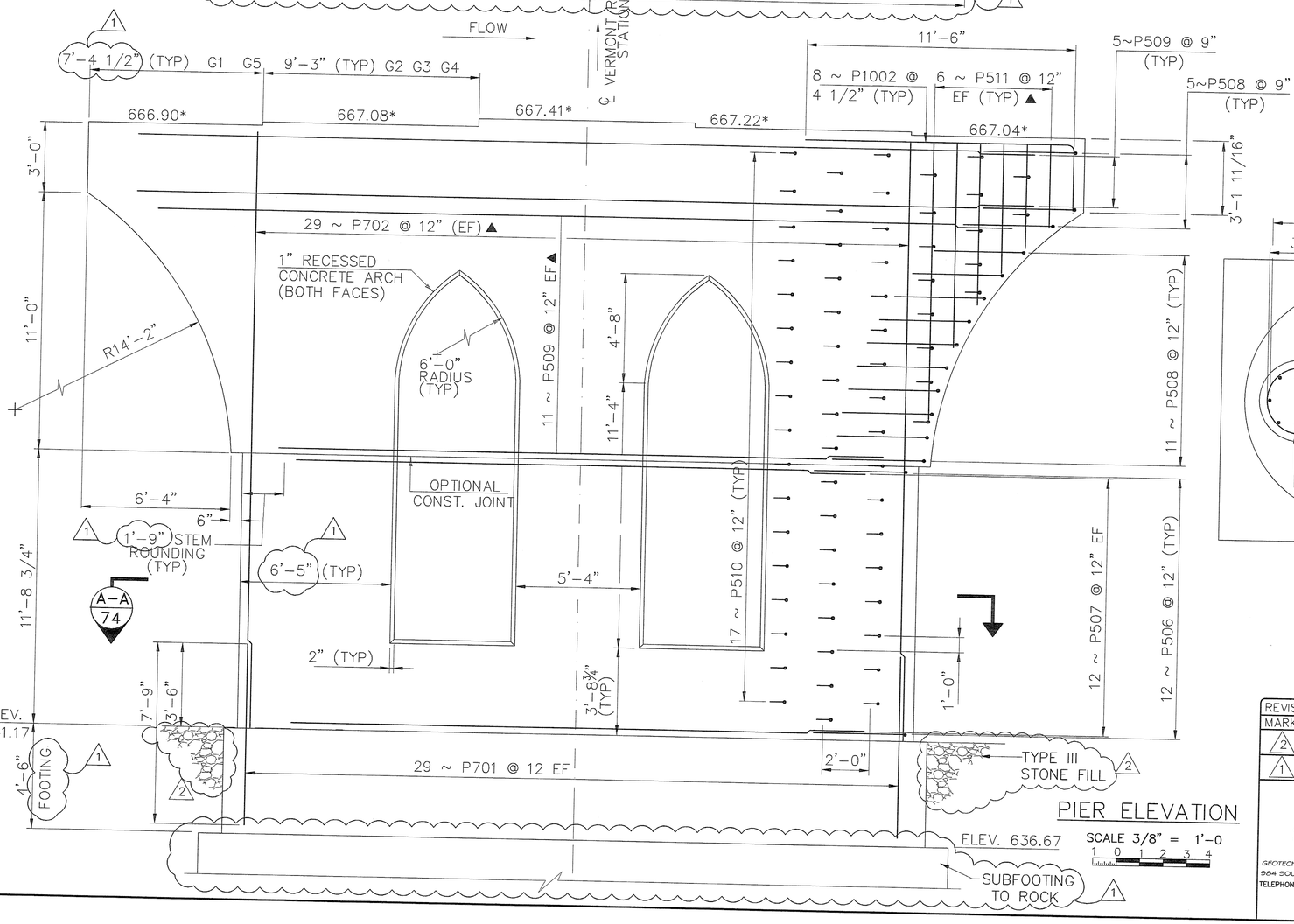
SCALE 3/8" = 1'-0

NOTES:

1. ALL REINFORCING IS AS SHOWN ON SHEET 74 OF 185, DATED 29-AUG-2006.

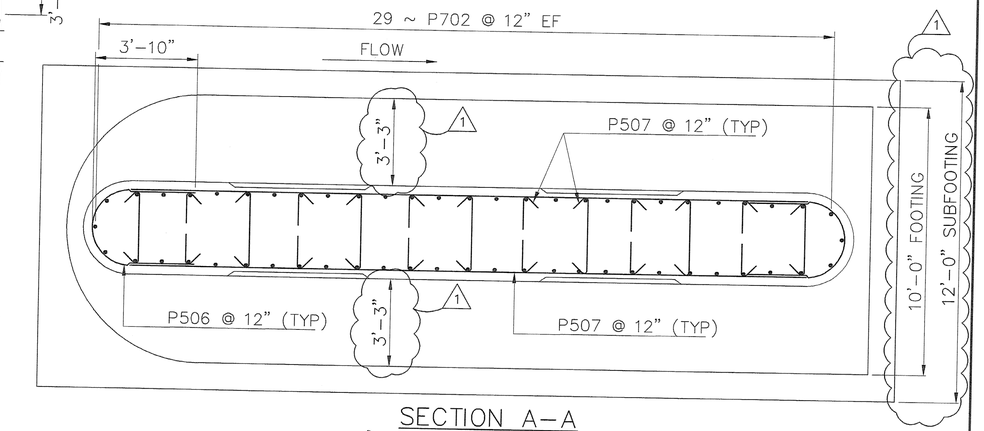
NOTE:

NF = NEAR FACE
FF = FAR FACE
EF = EACH FACE
▲ = CUT TO FIT IN FIELD
3" CLR. UNLESS OTHERWISE NOTED
2'-2" BAR LAP UNLESS OTHERWISE NOTED
* BRIDGE SEATS MAY NEED ADJUSTMENT BASED ON FINAL PIER BEARING SHOP DRAWING APPROVAL



PIER ELEVATION

SCALE 3/8" = 1'-0



SECTION A-A

SCALE 3/8" = 1'-0

STATE OF VERMONT — STEVEN L. WERK — 10/07/07 — LICENSED PROFESSIONAL ENGINEER — Civil

PIER PLAN & ELEVATION

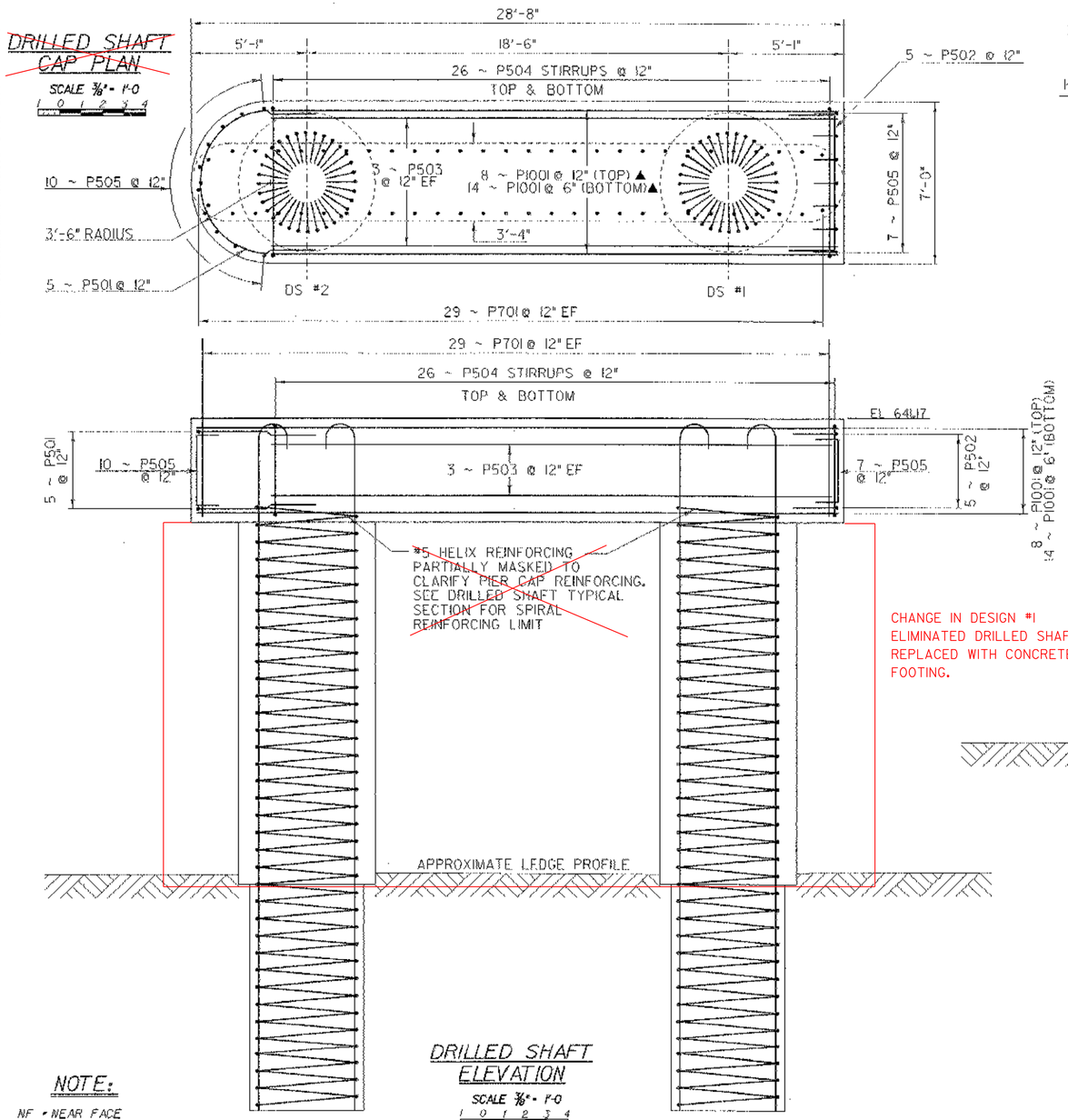
REVISIONS					
MARK	DATE	DESCRIPTIONS	DRWN	CHKD	APPVD.
2	2/21/07	ADDED STONE FILL	SMC	EMC	WJF
1	01/29/07	ELIMINATED DRILLED SHAFTS; INCREASED PIER LENGTH & THICKNESS BY 2"	SMC	EMC	WJF

GEODESIGN INCORPORATED
GEOTECHNICAL ENGINEERS · ENVIRONMENTAL CONSULTANTS
964 SOUTHFORD ROAD · MIDDLEBURY CONNECTICUT 06762
TELEPHONE: (203)758-8836 FACSIMILE: (203)758-8842

PROJECT NAME: RANDOLPH
PROJECT NUMBER: BRF 0241(29)

GEODESIGN FILE: RANDOLPH-PLAN&ELEV.dwg PLOT DATE: 2/21/07
PROJECT LEADER: W. SYMONDS DRAWN BY: G. SHANGRAW
DESIGNED BY: T. SUMNER CHECKED BY: T. FILLBACH
SHEET 74 OF 135

CL: \VERMONT\0721\CADD FILES\RANDOLPH-PLAN&ELEV.dwg



DRILLED SHAFT CAP PLAN

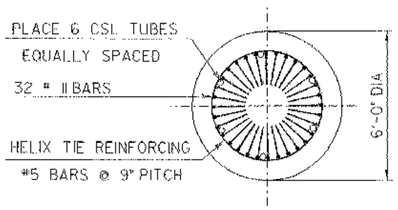
SCALE 3/8"= 1'-0

DRILLED SHAFT ELEVATION

SCALE 3/8"= 1'-0

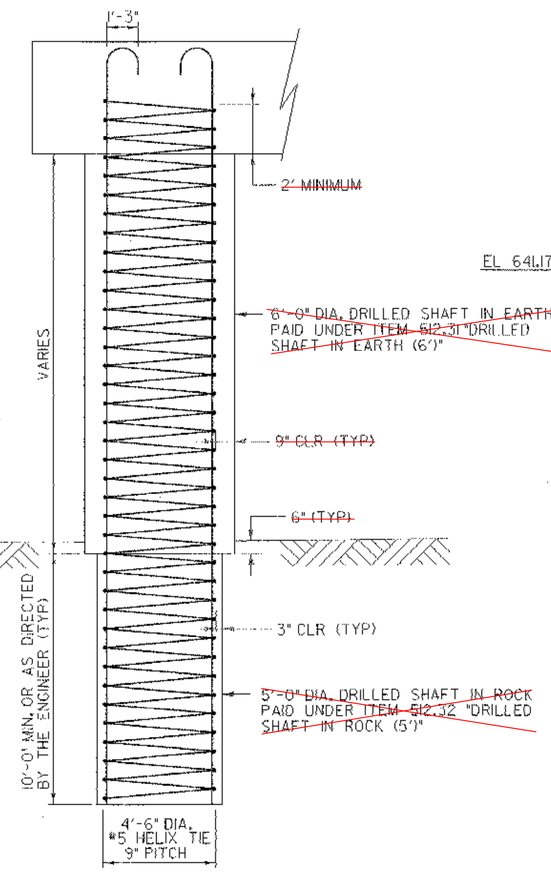
NOTE:

NF = NEAR FACE
FF = FAR FACE
EF = EACH FACE
▲ = CUT TO FIT IN FIELD
3" CLR. UNLESS OTHERWISE NOTED
2'-2" BAR LAP UNLESS OTHERWISE NOTED



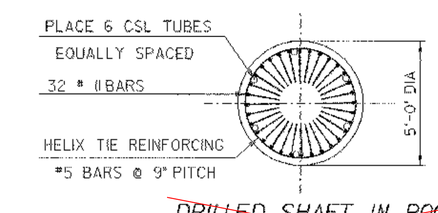
DRILLED SHAFT IN EARTH TYPICAL SECTION

SCALE 3/8"= 1'-0



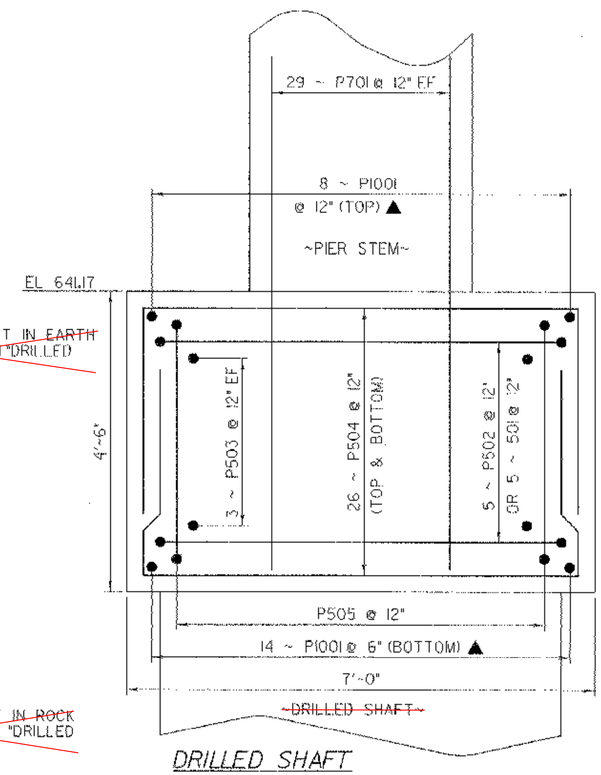
DRILLED SHAFT TYPICAL SECTION

SCALE 3/8"= 1'-0



DRILLED SHAFT IN ROCK TYPICAL SECTION

SCALE 3/8"= 1'-0

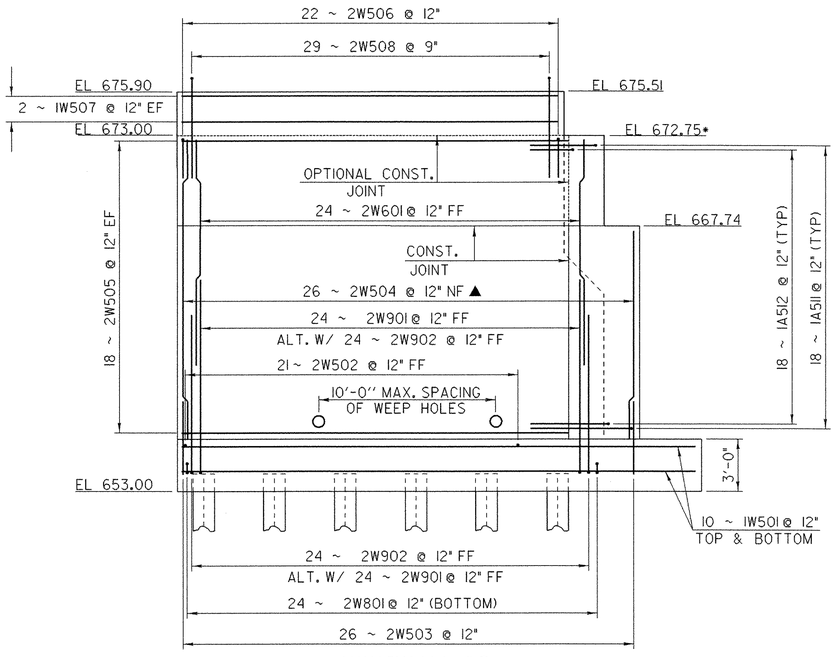


DRILLED SHAFT CAP TYPICAL

SCALE 1" = 1'-0

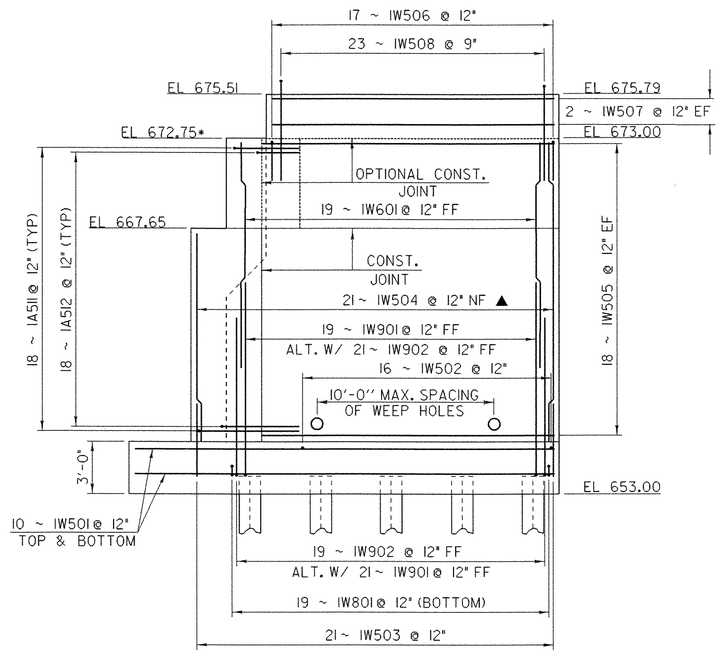
PIER CAP PLAN & ELEVATION DRILLED SHAFT DETAILS

PROJECT NAME:	RANDOLPH
PROJECT NUMBER:	BRF 024 I (29)
FILE NAME: /str/88j096/s88j096sub.dgn	PLOT DATE: 29-AUG-2006
PROJECT LEADER: W. SYMONDS	DRAWN BY: C. SHANGRAW
DESIGNED BY: T. SUMNER	CHECKED BY: T. FILLBACH
sj096shafts.i	SHEET 75 OF 135



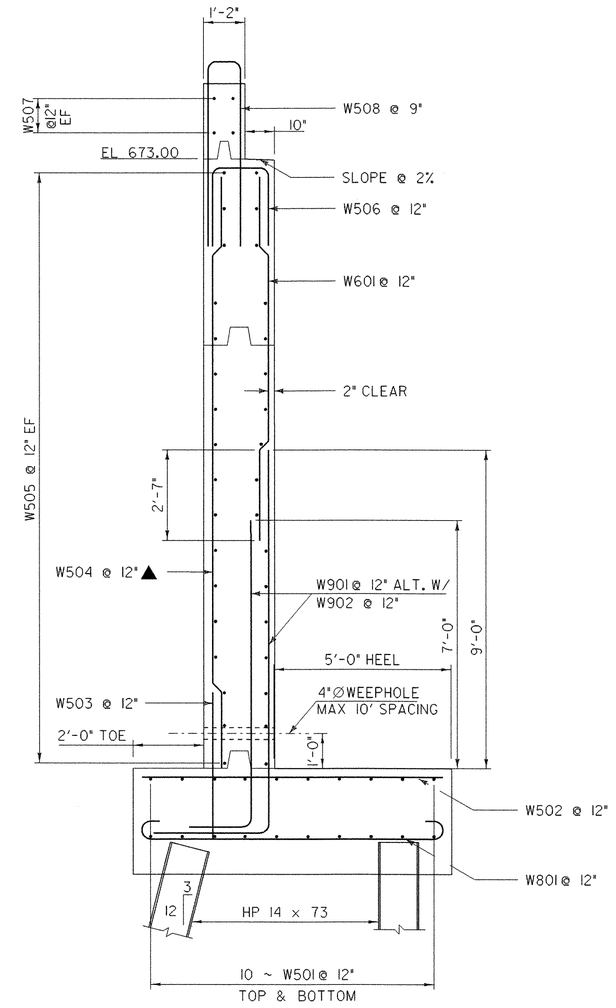
WINGWALL #2 ELEVATION

SCALE 1/4"- 1'-0



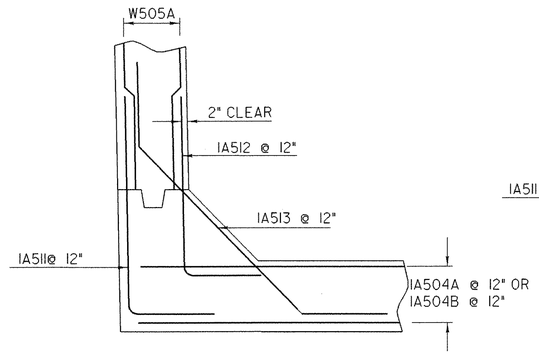
WINGWALL #1 ELEVATION

SCALE 1/4"- 1'-0



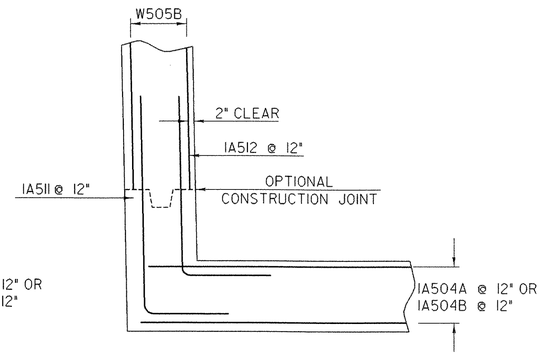
WINGWALL 1 & 2 ELEVATION (TYPICAL)

SCALE 1/2"- 1'-0



CORNER DETAIL WW1 & WW2 BELOW BRIDGE SEAT

SCALE 1/2"- 1'-0



CORNER DETAIL WW1 & WW2 ABOVE BRIDGE SEAT

SCALE 1/2"- 1'-0

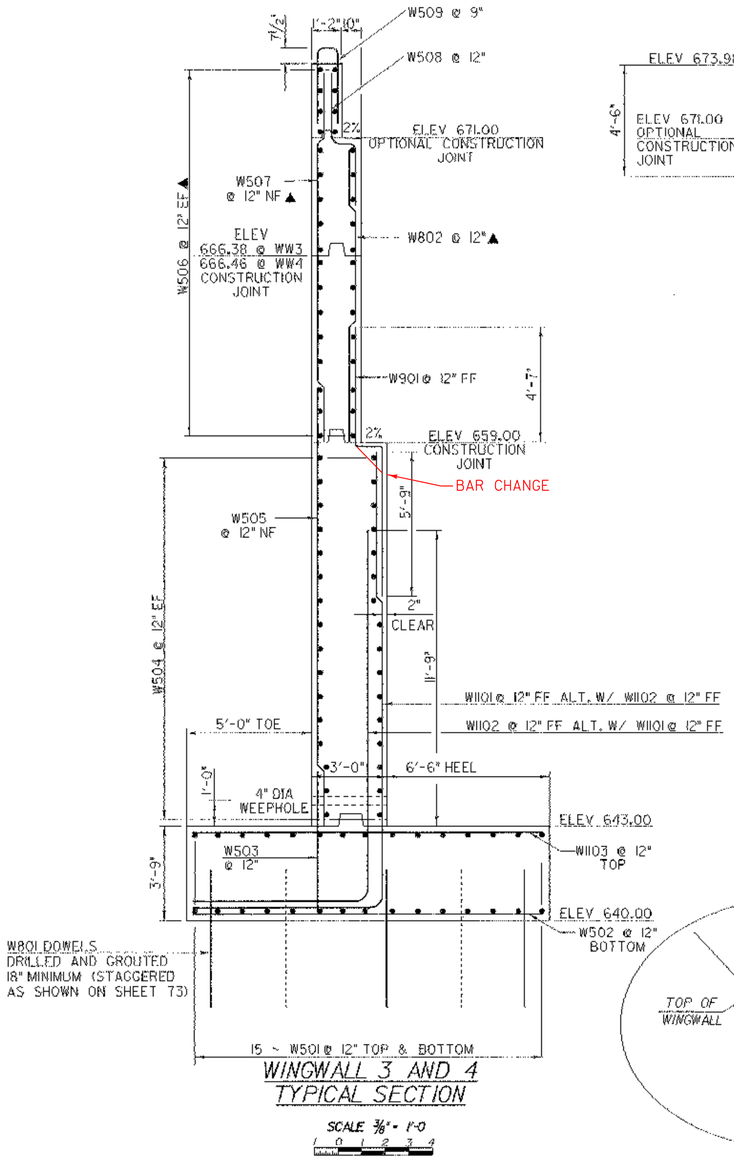
NOTE:

NF = NEAR FACE
FF = FAR FACE
EF = EACH FACE
▲ = CUT TO FIT IN FIELD
3" CLR. UNLESS OTHERWISE NOTED
2'-2" BAR LAP UNLESS OTHERWISE NOTED

WINGWALLS 1 & 2 SECTION & ELEVATION

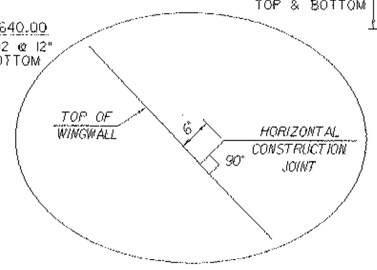
PROJECT NAME:	RANDOLPH
PROJECT NUMBER:	BRF 0241 (29)

FILE NAME: /str5/88j096/s88j096sub.dgn		PLOT DATE:	29-AUG-2006
PROJECT LEADER: W. SYMONDS		DRAWN BY:	G. SHANGRAW
DESIGNED BY:	T. SUMNER	CHECKED BY:	T. FILLBACH
sj096wings1&2.i		SHEET	76 OF 135



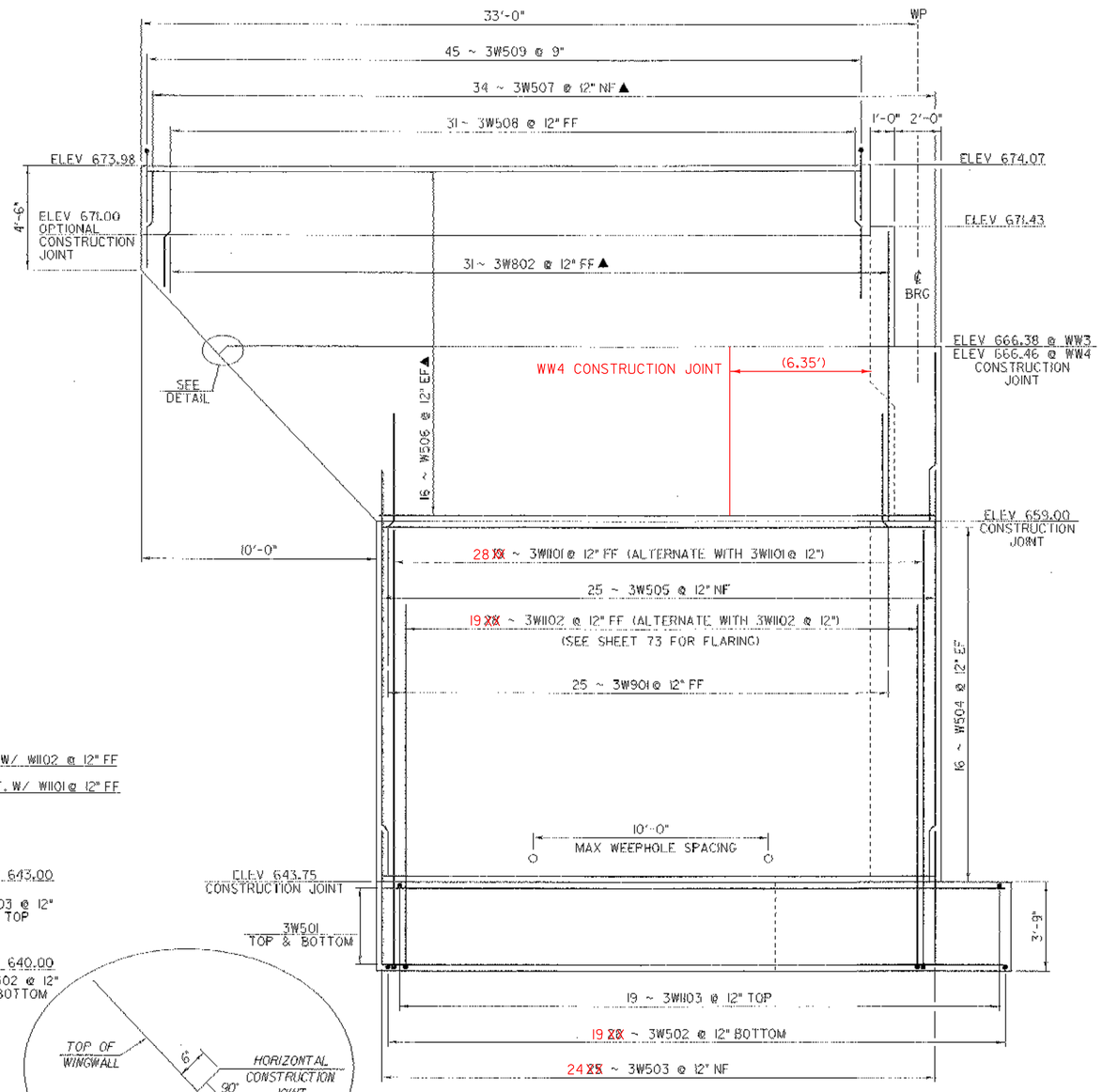
WINGWALL 3 AND 4 TYPICAL SECTION

SCALE 3/8" = 1'-0



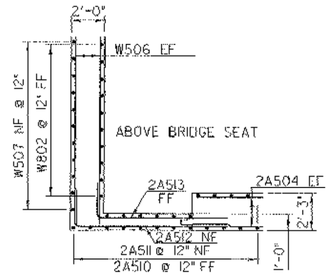
CONSTRUCTION JOINT DETAIL

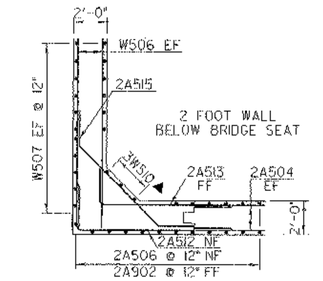
SCALE 1" = 1'-0

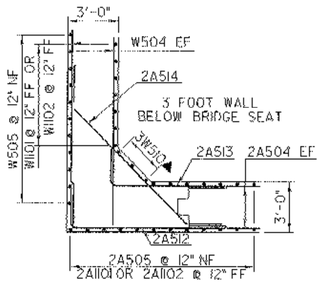


WINGWALL 3 ELEVATION (WINGWALL 4 SIMILAR)

SCALE 3/8" = 1'-0







CORNER DETAILS

SCALE 1/4" = 1'-0

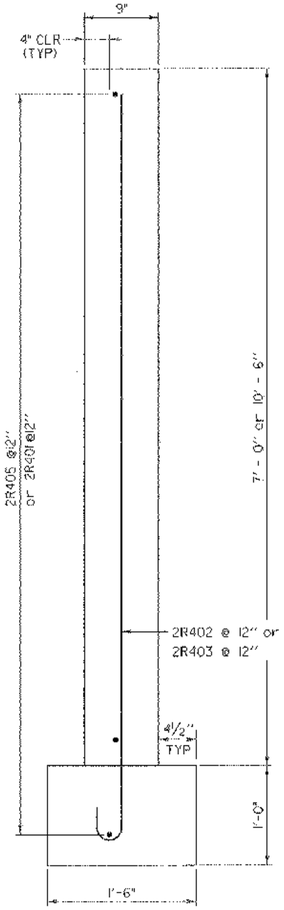
NOTE:

NF = NEAR FACE
FF = FAR FACE
EF = EACH FACE
▲ = CUT TO FIT IN FIELD
3" CLR. UNLESS OTHERWISE SPECIFIED ON THE PLANS.
SPLICE LAP LENGTH IS 2'-2" UNLESS OTHERWISE NOTED.

WINGWALLS 3 & 4 SECTION & ELEVATION

PROJECT NAME:	RANDOLPH
PROJECT NUMBER:	BRF 024 I (29)

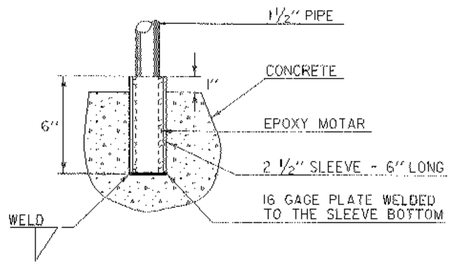
FILE NAME: /str5/88096/s88096sub.dgn		PLOT DATE:	29-AUG-2006
PROJECT LEADER:	W. SYMONDS	DRAWN BY:	C. SHANGRAW
DESIGNED BY:	T. SFILLBACH	CHECKED BY:	T. SUMNER
s096wings3&4. i		SHEET	77 OF 135



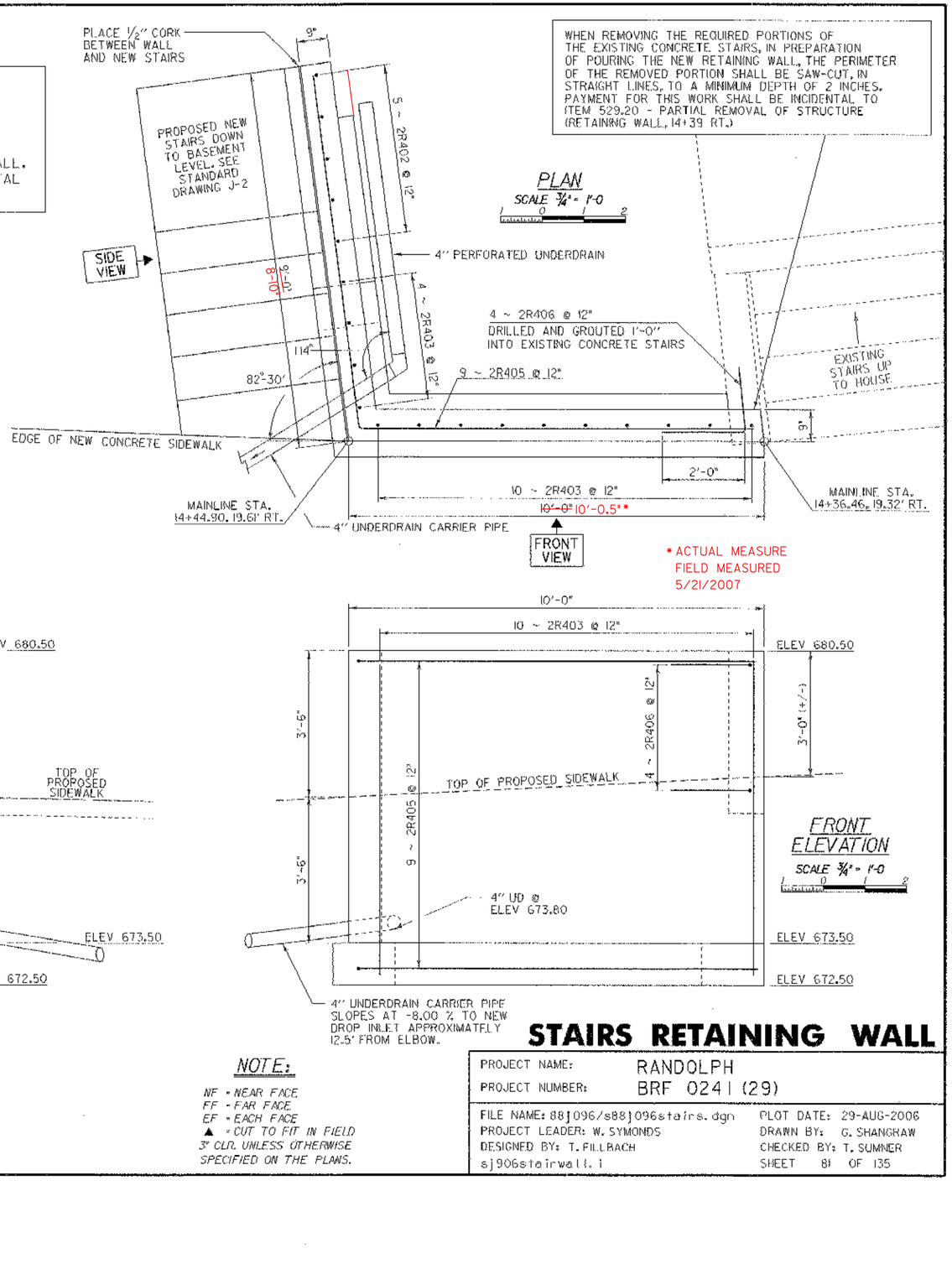
TYPICAL SECTION

SCALE 1½" = 1'-0

METAL HAND RAILING NOTES:
1) THE RAILING WILL BE PAINTED BLACK IN ACCORDANCE WITH SECTION 513.
2) THE RAILING NEED NOT BE GALVANIZED.
3) APPROVED SLEEVES WILL BE USED TO EMBED THE RAILING IN THE CONCRETE RETAINING WALL. PAYMENT FOR THE SLEEVES WILL BE INCIDENTAL TO ITEM 525.15 - METAL HAND RAILING.



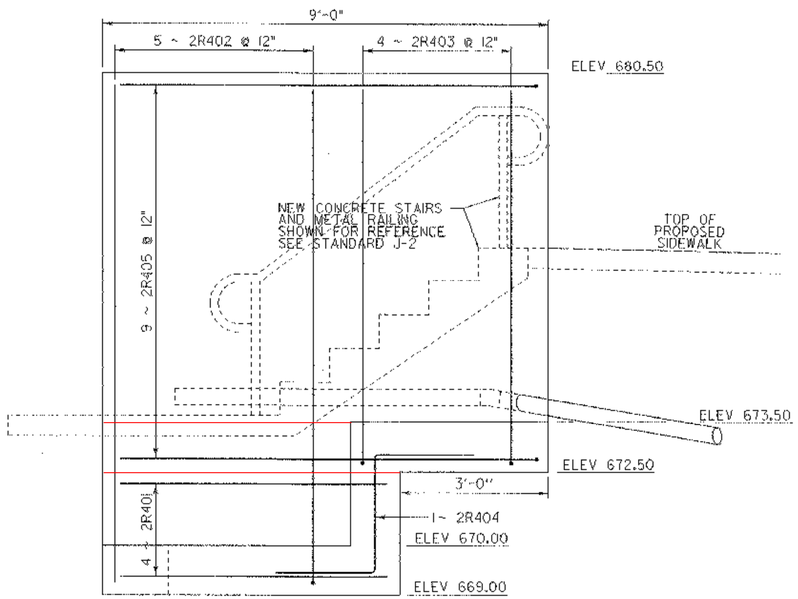
SLEEVE DETAIL
NTS



PLAN
SCALE ¾" = 1'-0

WHEN REMOVING THE REQUIRED PORTIONS OF THE EXISTING CONCRETE STAIRS, IN PREPARATION OF POURING THE NEW RETAINING WALL, THE PERIMETER OF THE REMOVED PORTION SHALL BE SAW-CUT, IN STRAIGHT LINES, TO A MINIMUM DEPTH OF 2 INCHES. PAYMENT FOR THIS WORK SHALL BE INCIDENTAL TO ITEM 529.20 - PARTIAL REMOVAL OF STRUCTURE (RETAINING WALL, 14+39 RT.)

* ACTUAL MEASURE FIELD MEASURED 5/21/2007



SIDE ELEVATION
SCALE ¾" = 1'-0

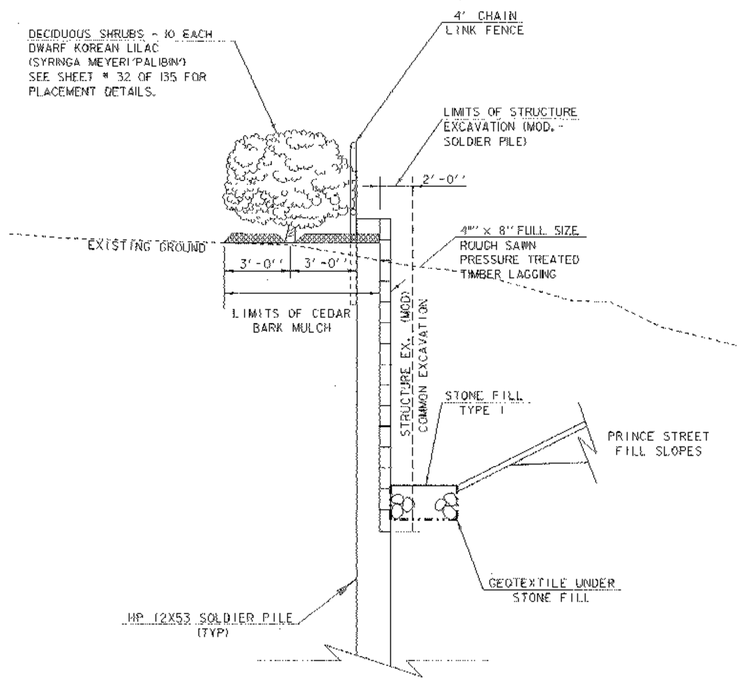
FRONT ELEVATION
SCALE ¾" = 1'-0

NOTE:
NF - NEAR FACE
FF - FAR FACE
EF - EACH FACE
▲ - CUT TO FIT IN FIELD
3" CLR. UNLESS OTHERWISE SPECIFIED ON THE PLANS.

STAIRS RETAINING WALL

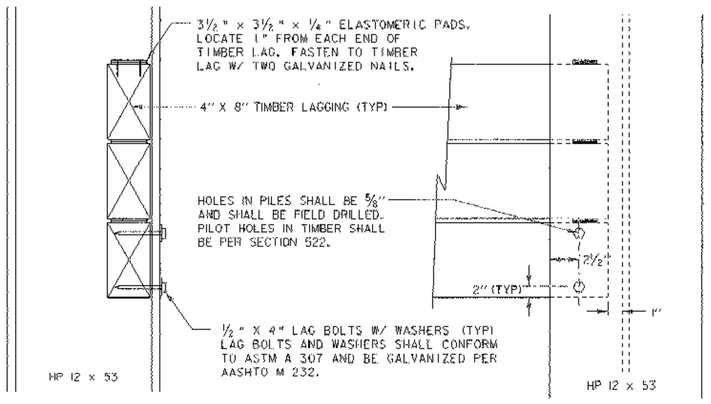
PROJECT NAME:	RANDOLPH
PROJECT NUMBER:	BRF 024 I (29)

FILE NAME: 88J096/s88J096stairs.dgn	PLOT DATE: 29-AUG-2008
PROJECT LEADER: W. SYMONDS	DRAWN BY: G. SHANGRAW
DESIGNED BY: T. FILLBACH	CHECKED BY: T. SUMNER
sj906stairwall.i	SHEET 81 OF 135



RETAINING WALL SECTION A-A

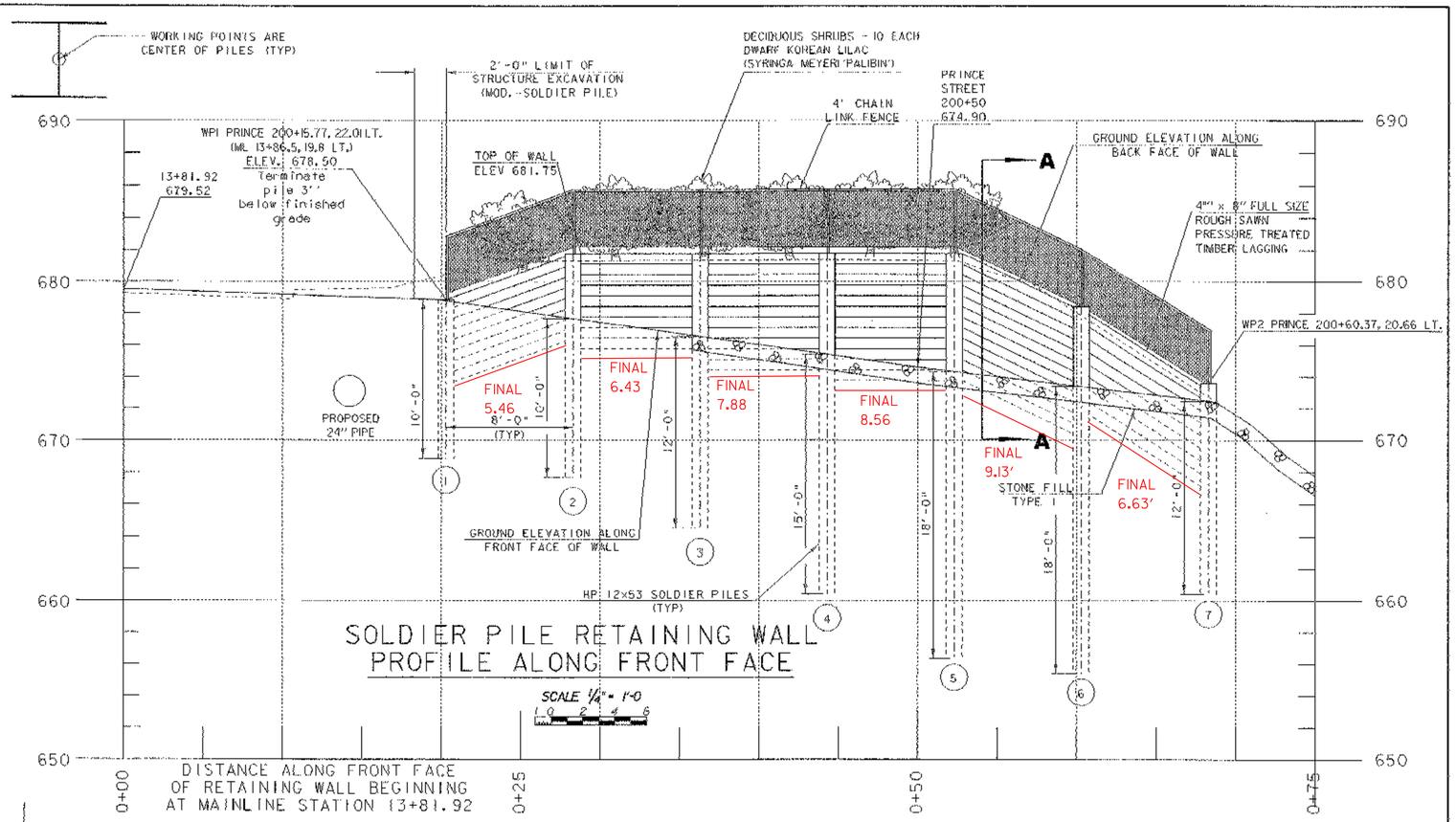
SCALE ½" = 1'-0



NOTE: TOP & BOTTOM TIMBER LAGS SHALL BE BOLTED AS SHOWN. IN ADDITION, ANY OTHER LAG ENDS NOT IN CONTACT WITH SOIL SHALL BE BOLTED.

TIMBER LAGGING ATTACHMENT DETAILS

NOT TO SCALE



SOLDIER PILE RETAINING WALL PROFILE ALONG FRONT FACE

SCALE 1" = 1'-0

Notes:

1. All elevations and dimensions shown for new construction are based on the contract design drawings for the new structure. Field verify all elevations and dimensions before proceeding with construction.

2. Piles shall be ASTM A572 Grade 50.

3. Timber lagging shall be a softwood, pressure treated structural lumber per section 522, providing at least 1200 psi allowable bending stress.

4. Excavation shall proceed at a pace that prevents movement of unsupported soil. If unstable material is encountered during excavation, suitable measures will be taken to stabilize it and prevent displacement.

5. The Contractor shall maintain a sufficient quantity of material on hand for lagging and other operations for protection of the work and for use in an accident or emergency.

6. All unsupported excavation will be supported within 24 hours of the time when it first became unsupported.

7. Provide dewatering and drainage for each stage of the excavation as required to control surface runoff.

8. See Special Provisions for pile tolerances.

9. Pile driving stresses shall be limited to 0.90 Fy.

10. Piles shall be driven to the proper elevation prior to any excavation for the retaining wall.

11. Excavation shall not be made beyond what is required to install the timber lags.

12. The timber lagging shall be in firm contact with the back of the outer flange of the soldier piles. Any space between the timber lagging and the face of excavation shall be backfilled promptly with ¾" crushed stone. The piles shall be cut to the final required elevation. Any driving damage shall be removed.

13. All sharp edges and corners shall be ground to ¼" radius. All costs of grinding shall be incidental to item 526.15. No splices in the piles will be allowed above finished grade.

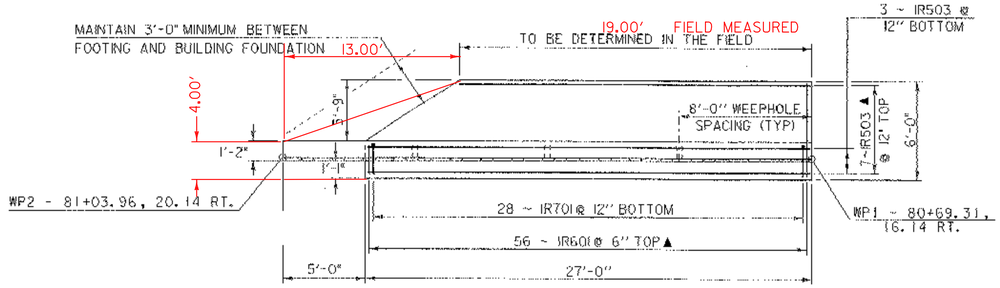
14. The soldier pile wall shall be constructed and paid for under the item 526.15. See special provisions for details.

SOLDIER PILE RETAINING WALL

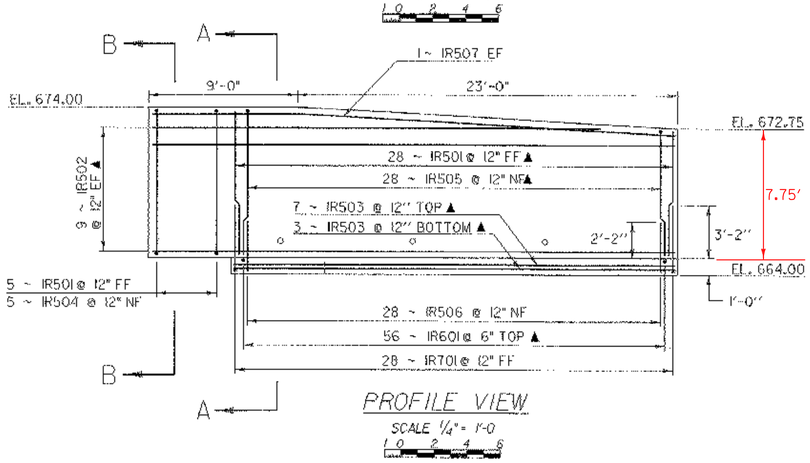
PROJECT NAME: RANDOLPH
PROJECT NUMBER: BRF 024K(29)

FILE NAME: /str5/88j096/sj096wall.dgn
PROJECT LEADER: W. SYMONDS
DESIGNED BY: T. FILLBACH
sj096pWewall1

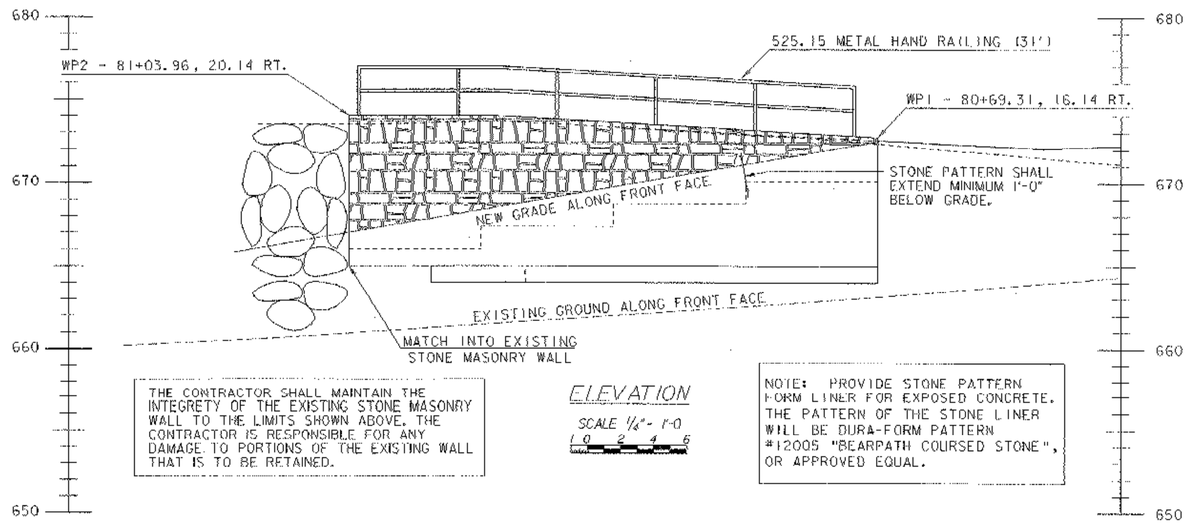
PLOT DATE: 29-AUG-2006
DRAWN BY: G. SHANGRAW
CHECKED BY: T. SUMNER
SHEET 82 OF 135



PLAN VIEW
SCALE 1/4"= 1'-0
1 0 2 4 6



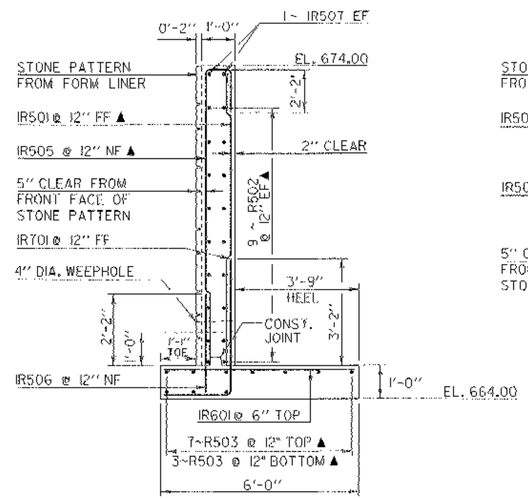
PROFILE VIEW
SCALE 1/4"= 1'-0
1 0 2 4 6



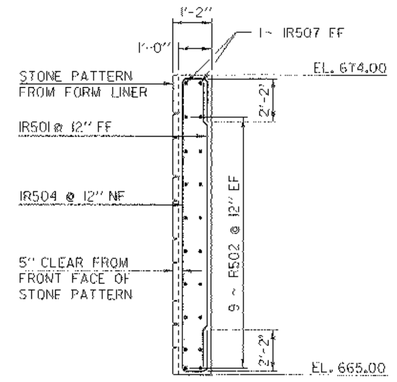
THE CONTRACTOR SHALL MAINTAIN THE INTEGRETY OF THE EXISTING STONE MASONRY WALL TO THE LIMITS SHOWN ABOVE. THE CONTRACTOR IS RESPONSIBLE FOR ANY DAMAGE TO PORTIONS OF THE EXISTING WALL THAT IS TO BE RETAINED.

ELEVATION
SCALE 1/4"= 1'-0
1 0 2 4 6

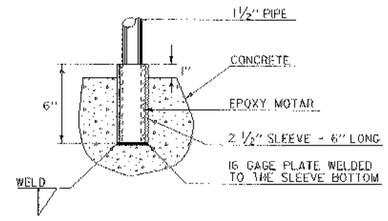
NOTE: PROVIDE STONE PATTERN FORM LINER FOR EXPOSED CONCRETE. THE PATTERN OF THE STONE LINER WILL BE DURA-FORM PATTERN #12005 "BEARPATH COURSED STONE", OR APPROVED EQUAL.



SECTION A-A
SCALE 1/2"= 1'-0
1 0 1 2



SECTION B-B
SCALE 1/2"= 1'-0
1 0 1 2



SLEEVE DETAIL
NTS

METAL HAND RAILING NOTES:
1) THE RAILING WILL BE PAINTED BLACK IN ACCORDANCE WITH SECTION 513.
2) THE RAILING NEED NOT BE GALVANIZED.
3) APPROVED SLEEVES WILL BE USED TO EMBED THE RAILING IN THE CONCRETE RETAINING WALL. PAYMENT FOR THE SLEEVES WILL BE INCIDENTAL TO ITEM 525.15 - METAL HAND RAILING.

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

RETAINING WALL ELEV. AT DRIVE STA 80+20 RT.

PROJECT NAME:	RANDOLPH
PROJECT NUMBER:	BRF 024I (29)

FILE NAME: /str5/88J096/sj096ret.dgn
PROJECT LEADER: W.B. SYMONDS
DESIGNED BY: T. FILLBACH
sj096retwall.1
PLOT DATE: 29-AUG-2006
DRAWN BY: T. FILLBACH
CHECKED BY: T. SUMNER
SHEET 83 OF 135

STATE OF VERMONT
AGENCY OF TRANSPORTATION

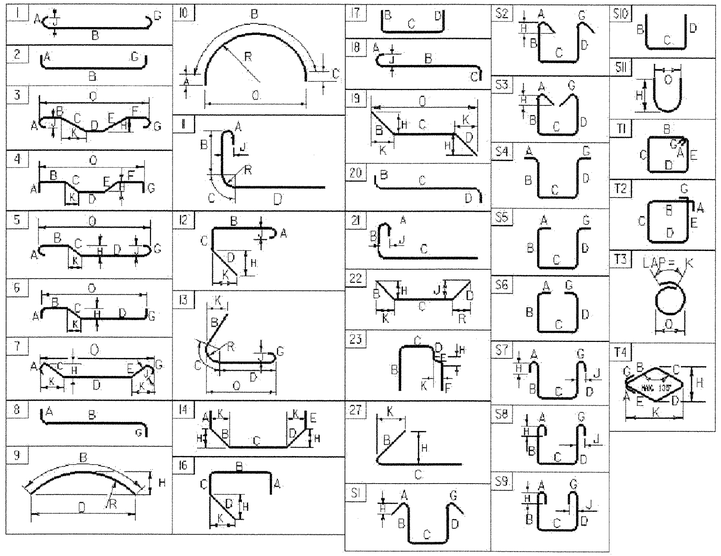
REINFORCING STEEL SCHEDULE

ITEM	EACH	SIZE	LENGTH	MARK	TYPE	A	B	C	D	E	F	G	H	J	K	R	O
DECK																	
✳	829	5	22'- 3"	ES501	STR												
✳	99	5	32'- 3"	ES502	STR												
	409	5	12'- 6"	ES503	S5	2'- 2"	1'- 6"	5'- 2"	1'- 6"			2'- 2"					
	88	5	8'- 4"	ES504	S5	2'- 2"	1'- 0"	2'- 0"	1'- 0"			2'- 2"					
	544	5	5'- 0"	ES505	S5	1'- 0"	1'- 3"	0'- 8"	1'- 1"			1'- 0"					
✳	19	5	9'- 10"	ES506	14	2'- 2"	2'- 3"	1'- 0"	2'- 3"	2'- 2"			2'- 0"		1'- 11"		
✳	829	6	22'- 3"	ES601	STR												
	719	6	32'- 3"	ES602	STR												
	43	6	41'- 0"	ES603A	STR												
✳	44	6	31'- 7"	ES603B	STR												
APPROACH SLAB #1																	
	21	5	29'- 6"	1EAS501	STR												
✳ ▲	42	9	21'- 3"	1EAS901	1	---	20'- 0"					1'- 3"		1'- 0"			
APPROACH SLAB #2																	
	21	5	29'- 6"	2EAS501	STR												
✳ ▲	42	9	20'- 10"	2EAS901	1	---	19'- 7"					1'- 3"		1'- 0"			
ABUTMENT #1																	
	40	5	24'- 0"	1A501	STR												
	43	5	4'- 2"	1A502	STR												
	47	5	8'- 6"	1A503	STR												
	30	5	20'- 1"	1A504A	STR												
	30	5	23'- 11"	1A504B	STR												
▲	43	5	11'- 10"	1A505	STR												
	29	5	11'- 3"	1A506A	16	2'- 2"	3'- 9"	1'- 1"	4'- 3"				3'- 0"		3'- 0"		
	14	5	9'- 6"	1A506B	16	2'- 2"	2'- 6"	2'- 4"	2'- 6"				1'- 9"		1'- 9"		
	43	5	7'- 4"	1A507A	19		6'- 4"	1'- 0"	---								---
	44	5	7'- 4"	1A507B	STR												
✳ ▲	12	5	20'- 1"	1A508A	STR												
✳ ▲	12	5	23'- 10"	1A508B	STR												
▲	29	5	6'- 2"	1A509	17		2'- 2"	1'- 10"	2'- 2"								
▲	43	5	5'- 9"	1A510	S10		2'- 7"	0'- 7"	2'- 7"								
	18	5	8'- 5"	1A511	17		2'- 2"	6'- 3"	---								
	18	5	6'- 11"	1A512	17		2'- 2"	4'- 9"	---								
	5	5	11'- 7"	1A513	19		2'- 2"	7'- 3"	2'- 2"								
	4	5	7'- 0"	1A514	17		2'- 6"	2'- 0"	2'- 6"				---		---		---
	8	5	3'- 0"	1A515	STR												
	49	7	10'- 7"	1A701	17		5'- 6"	5'- 1"	---			---					
	36	7	11'- 4"	1A702	17		9'- 6"	1'- 10"	---			---					
▲	43	7	11'- 10"	1A703	STR												
	47	8	10'- 4"	1A801	1	0'- 11"	8'- 6"					0'- 11"		0'- 8"			
▲	15	8	3'- 4"	1EA802	19		1'- 0"	2'- 4"					0'- 9"		0'- 9"		
WINGWALL #1																	
	20	5	23'- 10"	1W501	STR												
	16	5	8'- 6"	1W502	STR												
	21	5	4'- 2"	1W503	STR												
▲	21	5	16'- 9"	1W504	STR												
	36	5	16'- 6"	1W505	STR												
	17	5	5'- 11"	1W506	17		2'- 2"	1'- 7"	2'- 2"								0'- 6"
	4	5	16'- 1"	1W507	STR												
	23	5	12'- 2"	1W508	17		5'- 9"	0'- 8"	5'- 9"								
✳ ▲	20	6	10'- 4"	1W601	STR												
	20	8	10'- 4"	1W801	1	0'- 11"	8'- 6"					0'- 11"		0'- 8"			
	19	9	14'- 7"	1W901	17		11'- 0"	3'- 7"	---								
	19	9	11'- 7"	1W902	17		9'- 0"	2'- 7"	---								
WINGWALL #2																	
	20	5	28'- 6"	2W501	STR												
	21	5	8'- 6"	2W502	STR												
	26	5	4'- 2"	2W503	STR												
▲	26	5	16'- 9"	2W504	STR												
	36	5	16'- 6"	2W505	STR												
	22	5	5'- 11"	2W506	17		2'- 2"	1'- 7"	2'- 2"								
	4	5	21'- 4"	2W507	STR												
	29	5	12'- 2"	2W508	17		5'- 9"	0'- 8"	5'- 9"								
▲	24	6	10'- 4"	2W601	STR												
	24	8	10'- 4"	2W801	1	0'- 11"	8'- 6"					0'- 11"		0'- 8"			
	24	9	14'- 7"	2W901	17		11'- 0"	3'- 7"	---								
	25	9	3'- 4"	2W902	17		0'- 9"	2'- 7"	---								
ABUTMENT #2																	
	44	5	25'- 0"	2A501	STR												
	24	5	9'- 6"	2A502	STR												
	43	5	5'- 8"	2A503	STR												
	62	5	27'- 9"	2A504	STR												
	43	5	18'- 2"	2A505	STR												
▲	43	5	7'- 7"	2A506	STR												
	43	5	7'- 0"	2A507	S10		3'- 3"	0'- 6"	3'- 3"								
	28	5	6'- 2"	2A508	S10		2'- 2"	1'- 10"	2'- 2"								
	28	5	11'- 3"	2A509A	16	2'- 2"	3'- 9"	1'- 1"	4'- 3"				3'- 0"		3'- 0"		
	14	5	9'- 6"	2A509B	16	2'- 2"	2'- 6"	2'- 4"	2'- 6"				1'- 9"		1'- 9"		
▲	43	5	7'- 8"	2A510	19		1'- 0"	6'- 8"	---				0'- 8"	---	0'- 8"	---	
	44	5	7'- 4"	2A511	STR												
▲	56	5	11'- 7"	2A512	17		2'- 2"	9'- 5"	---								
▲	56	5	10'- 1"	2A513	17		2'- 2"	7'- 11"	---								

ITEM	EACH	SIZE	LENGTH	MARK	TYPE	A	B	C	D	E	F	G	H	J	K	R	O
	32	5	14'- 5"	2A514	14	---	2'- 2"	10'- 1"	2'- 2"	---			1'- 6"		1'- 6"		
	16	5	11'- 7"	2A515	14	---	2'- 2"	7'- 3"	2'- 2"	---			1'- 6"		1'- 6"		
	4	5	7'- 0"	2A516	S10		2'- 6"	2'- 0"	2'- 6"								
	8	5	3'- 0"	2A517	STR												
	60	8	3'- 6"	2A801	STR												
▲	15	8	3'- 4"	2EA802	19		1'- 0"	2'- 4"	---				0'- 8"	---	0'- 8"	---	
	37	9	9'- 6"	2A901	STR												
▲	43	9	13'- 3"	2A902	STR												
	33	11	24'- 1"	2A1101	17		5'- 7"	18'- 6"	---								
	32	11	17'- 9"	2A1102	17		2'- 6"	15'- 3"	---								
WINGWALL #3																	
	30	5	26'- 6"	3W501	STR												
	19	5	14'- 0"	3W502	STR												
	24	5	5'- 8"	3W503	STR												
	32	5	23'- 6"	3W504	STR												
	25	5	17'- 5"	3W505	STR												
▲	32	5	31'- 6"	3W506	STR												
▲	34	5	14'- 9"	3W507	STR												
	31	5	6'- 4"	3W508	20		3'- 0"	0'- 10"	2'- 6"								
	45	5	6'- 4"	3W509	S10		2'- 10"	0'- 8"	2'- 10"								
▲	3	5	23'- 0"	3W510	STR												
	20	8	3'- 6"	3W801	STR												
✳ ▲	32	8	11'- 6"	3W802	STR												
	25	9	11'- 9"	3W901	20		4'- 10"	1'- 0"	5'- 11"								
	28	11	14'- 0"	3W1103	STR												
▲	28	11	26'- 0"	3W1101	17		7'- 6"	18'- 6"	---								
	19	11	22'- 9"	3W1102	17		7'- 6"	15'- 3"	---								
WINGWALL #4																	
	30	5	26'- 6"	4W501	STR												
	19	5	14'- 0"	4W502	STR												
	24	5	5'- 8"	4W503	STR												
	32	5	23'- 6"	4W504	STR												
	25	5	17'- 5"	4W505	STR												
▲	32	5	31'- 6"	4W506	STR												
▲	34	5	14'- 9"	4W507	STR												
	31	5	6'- 4"	4W508	20		3'- 0"	0'- 10"	2'- 6"								
	45	5	6'- 4"	4W509	S10		2'- 10"	0'- 8"	2'- 10"								
▲	3	5	23'- 0"	4W510	STR												
	20	8	3'- 6"	4W801	STR												
✳ ▲	32	8	11'- 6"	4W802	STR												
	25	9	11'- 9"	4W901	20		4'- 10"	1'- 0"	5'- 11"								
	19	10	14'- 0"	4W1003	STR												
▲	28	11	26'- 0"	4W1101	17		7'- 6"	18'- 6"	---								
	19	11	22'- 9"	4W1102	17		7'- 6"	15'- 3"	---								
PIER																	
	5	5	14'- 7"	P501	10	2'- 2"	10'- 3"	2'- 2"									3'- 3" 6'- 6"
	5	5	10'- 10"	P502	17		2'- 2"	6'- 6"	2'- 2"								
	6	5	24'- 11"	P503	STR												
	52	5	13'- 0"	P504	17		3'- 3"	6'- 6"	3'- 3"								
	17	5	6'- 0"	P505	17		1'- 0"	4'- 0"	1'- 0"								
	24	5	8'- 7"	P506	10	2'- 2"	4'- 3"	2'- 2"									1'- 4" 2'- 8"
	24	5	25'- 4"	P507	STR												
	32	5	10'- 4"	P508	17		3'- 10"	2'- 8"	3'- 10"								
▲	32	5	38'- 4"	P509	STR												
	277	5	4'- 0"	P510	T5	0'- 8"	2'- 8"					0'- 8"	0'- 6"				
▲	24	5	14'- 3"	P511	STR												
	58	7	7'- 9"	P701	STR												
✳ ▲	59	7	25'- 11"	P702	STR												
▲	22	10	28'- 2"	P1001	STR												
✳	17	10	14'- 2"	P1002	17		---	11'- 6"	2'- 8"								
DRIVEWAY RETAINING WALL																	
✳ ▲	34	5	8'- 9"	1R501	STR												
▲	18	5	31'- 6"	1R502	STR												
	10	5	26'- 6"	1R503	STR												
	5	5	14'- 2"	1R504	S6	2'- 2"	0'- 8"	8'- 6"	0'- 8"			2'- 2"					
▲	28	5	11'- 7"	1R505	S6	2'- 2"	0'- 8"	8'- 9"	---			---					
	28	5	2'- 11"	1R506	STR												
	2	5	31'- 6"	1R507	19		8'- 8"	22'- 10"	---				0'- 1"		8'- 9"		
	57	6	5'- 6"	1R601	STR												
△	30	7	5'- 9"	1R701	17		1'- 10"	3'- 11"	---								
STAIRWAY RETAINING WALL																	
	4	4	5'- 6"	2R401	STR												
✳	6	4	11'- 6"	2R402	1	0'- 6"	11'- 0"					---		0'- 4"			
	14	4	8'- 0"	2R403	1	0'- 6"	7'- 6"					---		0'- 4"			
	1	4	7'- 6"	2R404	20		2'- 0"	3'- 6"	2'- 0"								
	9	4	26'- 5"	2R405	19		8'- 6"	9'- 6"	---			8'- 5"		1'- 1"			
	4	4	3'- 5"	2R406	17		1'- 5"	2'- 0"	---								

~ NOTES ~

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



ASTM STANDARD REINFORCING BARS

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

PROJECT NAME: RANDOLPH
PROJECT NUMBER: BRF 0241(29)

FILE NAME: /str5/88j096/sj096xcl.dgn
PROJECT MANAGER: W. SYMONDS
DESIGNED BY: T. SUMNER
REINFORCING STEEL SCHEDULE SHEET #1

PLOT DATE: 8/25/2006
DRAWN BY: R. PELLETT
CHECKED BY: T. FILLBACH
SHEET 84 OF 135

STATE OF VERMONT
AGENCY OF TRANSPORTATION

REINFORCING STEEL SCHEDULE

ITEM	EACH	SIZE	LENGTH	MARK	TYPE	A	B	C	D	E	F	G	H	J	K	R	O

ITEM	EACH	SIZE	LENGTH	MARK	TYPE	A	B	C	D	E	F	G	H	J	K	R	O
PIER FOOTING																	
25	5	10'- 8"	P504	1	0'- 7"	9'- 6"											0'- 7"
4	5	Var ies	P505	1	0'- 7"	Var ies											0'- 7"
50	7	11'- 2"	P703	1	0'- 10"	9'- 6"											0'- 10"
7	7	Var ies	P704	STR	0'- 10"	Var ies											0'- 10"
▲ 20	7	29'- 5"	P705	STR													

~ NOTES ~

1. UNLESS OTHERWISE DESIGNATED, ALL BAR REINFORCEMENT FOR CONCRETE IN SIZES UP TO AND INCLUDING NO. 18 SHALL CONFORM TO THE REQUIREMENTS OF THE "SPECIFICATIONS FOR DEFORMED BILLET-STEEL BARS FOR CONCRETE REINFORCEMENT", AASHTO M 31 (ASTM A 615-SI). ALL BARS SHALL BE GRADE 60, UNLESS OTHERWISE DESIGNATED.
2. FOR TYPICAL BENDING DETAILS, RECOMMENDED PIN DIAMETER "D" OF BENDS AND HOOKS, AND OTHER STANDARD PRACTICE, SEE CURRENT CONCRETE REINFORCING STEEL INSTITUTE "MANUAL OF STANDARD PRACTICE".
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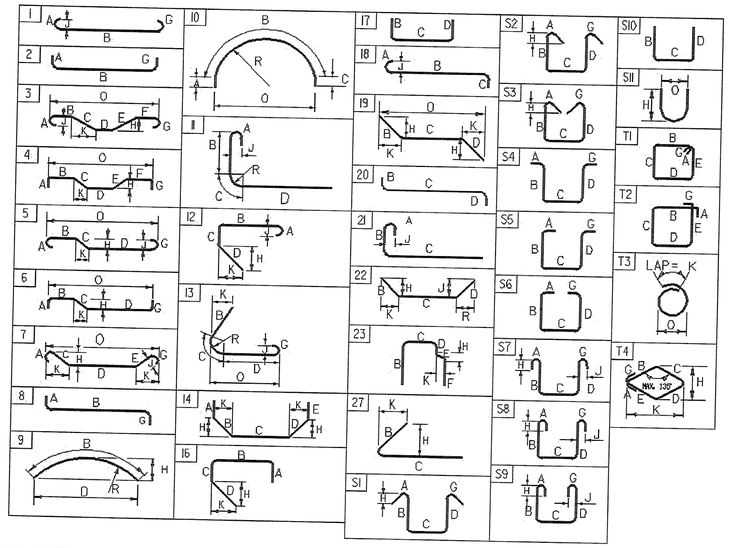
7. WHERE SLOPE DIFFERS FROM 45 DEGREES, DIMENSIONS "H" AND "K" MUST BE SHOWN.
8. ▲ DENOTES BARS TO BE CUT IN FIELD.
9. ✳ DENOTES ONE EXTRA BAR ADDED FOR TESTING PURPOSES.
10. △ DENOTES TWO EXTRA BARS ADDED FOR TESTING PURPOSES
11. E IN BAR MARK PREFIX DENOTES EPOXY COATED REINFORCING STEEL.



ASTM STANDARD REINFORCING BARS

BAR SIZE DESIGNATION	WEIGHT POUNDS PER FOOT	NOMINAL DIMENSIONS ROUND SECTION		
		DIAMETER INCHES	AREA INCHES ^{2}	PERIMETER INCHES
#3	0.376	0.375	0.11	1.178
#4	0.668	0.500	0.20	1.571
#5	1.043	0.625	0.31	1.963
#6	1.502	0.750	0.44	2.356
#7	2.044	0.875	0.60	2.749
#8	2.670	1.000	0.79	3.142
#9	3.400	1.128	1.00	3.544
#10	4.303	1.270	1.27	3.990
#11	5.313	1.410	1.56	4.430
#14	7.65	1.693	2.25	5.32
#18	13.60	2.257	4.00	7.09

STATE OF VERMONT
WILLIAM J. FERLEY
No. 10008
Civil
LICENSED
PROFESSIONAL ENGINEER

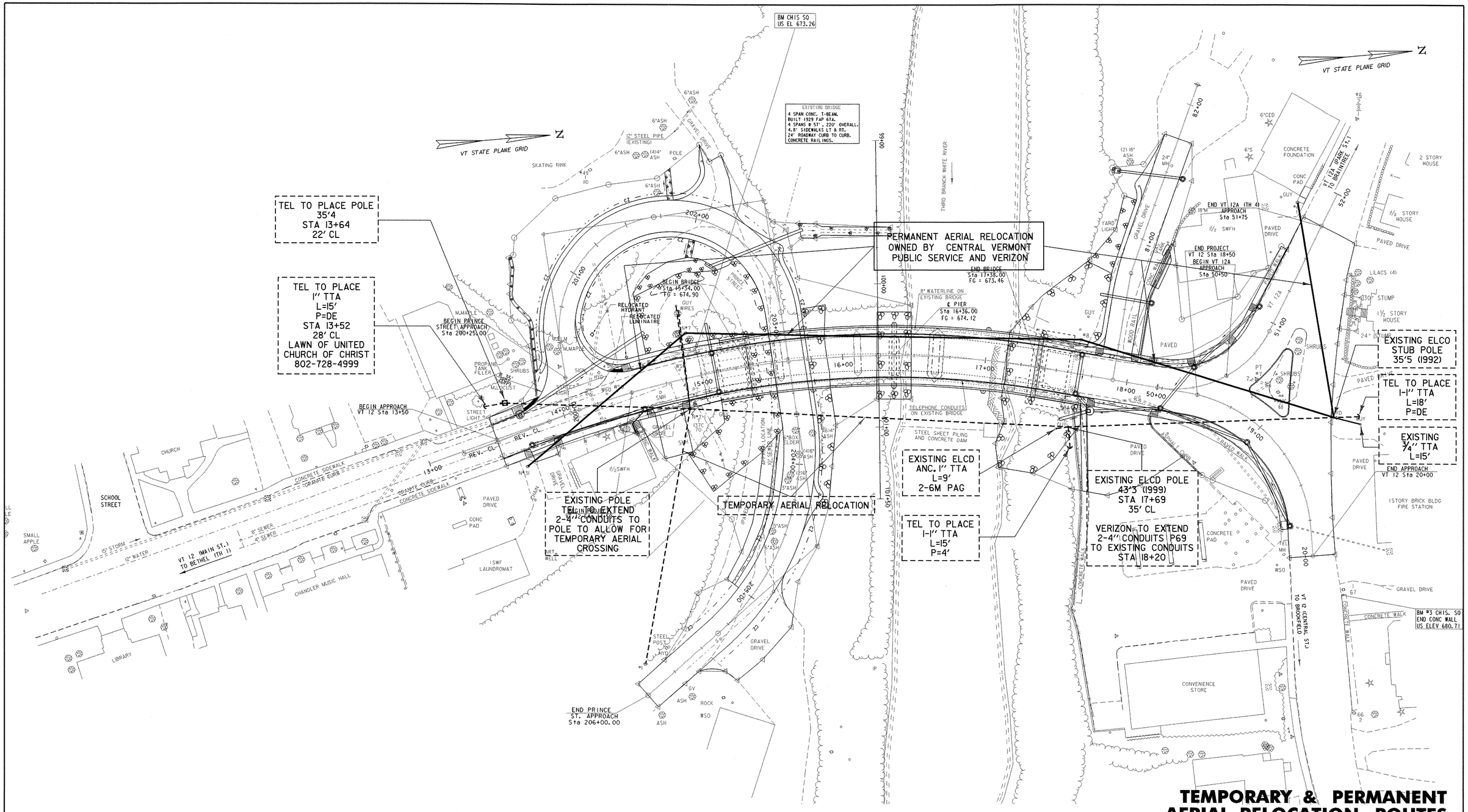
REINFORCING STEEL SCHEDULE

REVISIONS				
MARK	DATE	DESCRIPTIONS	DRWN	CHKD	APPVD
1	2/21/07	ELIMINATED DOWELS	SMC	EMC	WJF

GEODESIGN INCORPORATED
GEOTECHNICAL ENGINEERS • ENVIRONMENTAL CONSULTANTS
954 SOUTHFORD ROAD • MIDDLEBURY CONNECTICUT 06762
TELEPHONE: (203)758-8836 FACSIMILE: (203)758-8842

PROJECT NAME: RANDOLPH
PROJECT NUMBER: BRF 0241(29)

FILE NO. : SH84A.XLS
PROJECT LEADER: W.J.F.
DESIGNED BY: E.M.C.
PLOT DATE: 2/21/07
DRAWN BY: S.M.C.
CHECKED BY: W.J.F.
SHEET 84A OF 135



TEMPORARY & PERMANENT AERIAL RELOCATION ROUTES

PROJECT NAME:	RANDOLPH
PROJECT NUMBER:	BRF 0241(29)

FILE NAME: /str5/88J096/sj096utility.dgn	PLOT DATE: 29-AUG-2006
PROJECT LEADER: W. SYMONDS	DRAWN BY: G. Shangraw
DESIGNED BY: T. Sumner	CHECKED BY:
88J096utility.i	SHEET 86 OF 135

N

VT STATE PLANE GRID

METER DISCONNECT STANCHION
PER VAOT STANDARD E-175, DETAIL 1

RISER AT UTLITY POLE
PER VAOT STANDARD E-175, DETAIL 1.

ORNAMENTAL STREET LIGHT,
TYPICAL PER VAOT STANDARD
E-180A.

6" ELECTRICAL CONDUIT SLEEVE,
TYPICAL PER VERMONT STANDARD
SPECIFICATION 710.06

10" x 15" x 24" DEEP
OPEN BOTTOM JUNCTION BOX,
TYP. PER VAOT STANDARD E-173.

BEGIN PRINCE
STREET APPROACH
Sta 200+25.00

BEGIN APPROACH
VT 12 Sta 13+50

BEGIN PROJECT
VT 12 Sta 14+50

BEGIN BRIDGE
Sta 15+34.00
FG = 674.90

RELOCATED
HYDRANT

RELOCATED
LUMINAIRE

℄ PIER
Sta 16+36.00
FG = 674.12

END BRIDGE
Sta 17+38.00
FG = 673.46

END VT 12A (TH 4)
APPROACH
Sta 51+75

END PROJECT
VT 12 Sta 18+50

BEGIN VT 12A
APPROACH
Sta 50+50

APPROX LOCATION
10" SEWER LINE

SL-6
CKT-1

SL-5
CKT-1

SL-4
CKT-1

SL-3
CKT-1

SL-2
CKT-1

SL-1
CKT-1

R=35'
(TYP)

REV. CL

0 20 40
SCALE IN FEET

STREETLIGHTING LEGEND

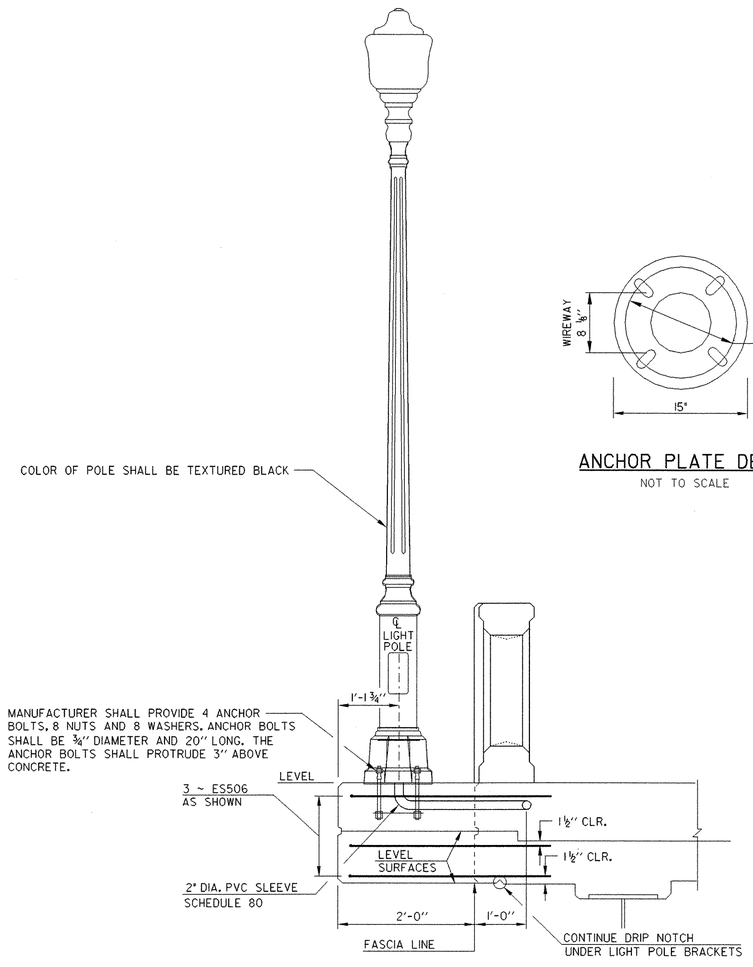
---------- E ---------- UNDERGROUND ELECTRICAL CONDUIT - 2" PVC WITH 2#6, 1#6G CONDUCTORS

----------ES---------- UNDERGROUND ELECTRICAL CONDUIT - 3" PVC WITH 3#2 CONDUCTORS

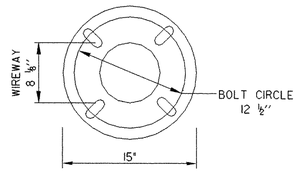
STREET LIGHTING ON BRIDGE

PROJECT NAME:	RANDOLPH
PROJECT NUMBER:	BRF 0241(29)

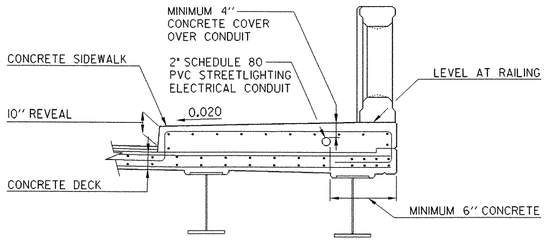
FILE NAME: /str5/88j096/sj096lgt4.dgn	PLOT DATE: 29-AUG-2006
PROJECT LEADER: W. SYMONDS	DRAWN BY: G. SHANGRAW
DESIGNED BY: DUFRESNE-HENRY	CHECKED BY:
sj096lighting.i	SHEET 87 OF 135



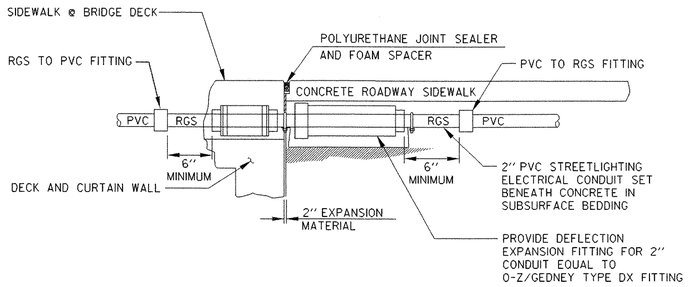
SECTION A-A
NOT TO SCALE



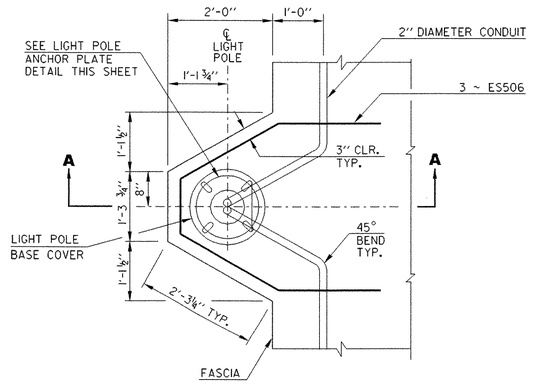
ANCHOR PLATE DETAIL
NOT TO SCALE



STREETLIGHTING ELECTRICAL CONDUIT IN SIDEWALK AT BRIDGE TYPICAL
NOT TO SCALE



STREETLIGHTING CONDUIT AT TRANSITION TO CONCRETE ROADWAY SIDEWALK
NOT TO SCALE



LIGHT POLE BASE REINFORCING DETAIL
NOT TO SCALE

GENERAL NOTES AND SPECIFICATIONS

1. THE SCOPE OF WORK IS TO PROVIDE ALL LABOR, MATERIALS, SERVICES, SUPPLIES, TOOLS, EQUIPMENT, TRANSPORTATION, AND FACILITIES NECESSARY TO FURNISH AND INSTALL COMPLETE ELECTRICAL WORK AS CALLED FOR ON THE DRAWINGS, SPECIFIED, OR INCIDENTAL TO THIS WORK. PAYMENT FOR THIS WORK WILL BE UNDER ITEM 679.15 - STREET LIGHTING.

2. THE COST OF PERMIT CERTIFICATES, LICENSES, INSPECTIONS AND APPROVALS SHALL BE INCIDENTAL TO THE STREETLIGHTING ITEMS.

3. ALL MATERIALS AND INSTALLATION SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE NATIONAL ELECTRICAL CODE, AND ALL CODES, REGULATIONS AND REQUIREMENTS OF ALL MUNICIPAL, STATE, FEDERAL, UTILITY, AND OTHER PUBLIC OR PRIVATE AUTHORITIES WHICH HAVE JURISDICTION. IN EACH CASE, CODES ARE MINIMUM REQUIREMENTS.

4. SHOP DRAWINGS: SUBMIT COMPLETE CATALOG INFORMATION PER SUBSECTION 105.03 FOR ALL MATERIALS AND EQUIPMENT TO BE PURCHASED AND USED ON THIS PROJECT, AS SPECIFIED ON THE DRAWINGS. DO NOT INSTALL MATERIALS OR EQUIPMENT WITHOUT APPROVAL BY THE ENGINEER. UNAPPROVED MATERIAL ALREADY INSTALLED SHALL BE SUBJECT TO REMOVAL AND REPLACEMENT WITH APPROVED MATERIALS AT THE CONTRACTOR'S EXPENSE.

5. MATERIALS AND EQUIPMENT SHALL BE LISTED BY UNDERWRITERS' LABORATORIES AND SHALL BE INSTALLED IN ACCORDANCE WITH SUCH LISTINGS.

6. INSTALLATION SHALL BE MADE IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.

7. CONTRACTOR TO CONTACT DIGSAFE IN VERMONT STATE PRIOR TO COMMENCING WORK.

8. CONTRACTOR TO CONTACT UTILITY COMPANY FOR COORDINATION OF NEW ELECTRICAL SERVICE.

9. ELECTRICAL SERVICES SHALL BE A 100A, 120/240V, SINGLE PHASE, THREE WIRE SERVICE. METER SOCKET SHALL BE PER UTILITY REQUIREMENTS. SEE VAOT STANDARDS E-175 DETAIL 1 FOR METER/DISCONNECT STANCHION. ALL SERVICE ENTRANCE EQUIPMENT SHALL BE RATED 22 KAIC (MIN.)
STANCHION SHALL INCLUDE A NEMA 4 ENCLOSURE WITH A 12 CKT PANEL WITH A 100A, 240V, 2 POLE MAIN BREAKER. PROVIDE (2) 20A, 240V, 2 POLE BREAKERS FOR STREET LIGHTING AND (4) 20A, 240V, 2 POLE BREAKERS WITH GROUND FAULT PROTECTION FOR PERMANENT BRIDGE CROSSING HEAT TRACE SYSTEM. PROVIDE (2) 20A, 120V, 1POLE BREAKERS FOR SPARE.
NEMA 4 ENCLOSURE SHALL BE SIZED TO ALSO INCLUDE THE EQUIPMENT REQUIRED FOR THE PERMANENT BRIDGE CROSSING HEAT TRACE CONTROL SYSTEM (1) INTERNAL SWITCHING CONTACTOR RATED AT 20A, 240V (2) SURFACE MOUNTED WEATHER-PROOF FLASHING LIGHT. (3) HIGH AND LOW TEMPERATURE ALARM AND HIGH CURRENT ALARM. (4) ALPHANUMERIC DISPLAY MOUNTED ON THE INSIDE OF THE PANEL. COORDINATE WITH PERMANENT BRIDGE CROSSING HEAT TRACE SYSTEM FOR EXACT REQUIREMENTS.

10. ORNAMENTAL STREETLIGHT SHALL BE:
LUMINAIRE: LUMAC 100MH-L29-PCFC-RR3-240-I-BKTX-LMS963IA
POLE: LUMAC R77-II-I-BKTX-LMS963IA
THERE SHALL BE NO SUBSTITUTIONS.

11. LUMINAIRE SOURCE SHALL BE MOUNTED AT 14FT ABOVE ROADWAY SURFACE. LIGHTING SHALL PROVIDE A MINIMUM MAINTAINED ILLUMINATION ON THE ROADWAY SURFACE (FROM STATION -TO STATION -) OF 0.9 FOOTCANDLES WITH A MAXIMUM UNIFORMITY OF 3:1.

12. MAXIMUM OF 270 DEGREES IN TOTAL BEND SHALL BE PERMITTED IN SINGLE RUN OF CONDUIT.

13. LIGHTS SHALL BE FUSED AT BASE WITH Y-TYPE FUSE KIT (EQUIVALENT OF HOMAC/FLOOD SEAL: FYC-6 AND 10 AMP FUSE.

14. UTILIZE DUAL-RATED PARALLEL TAP CONNECTORS AT POLE BASES EQUIVALENT TO ILSCO GTA SERIES WITH INSULATED COVERS.

15. UTILIZE APPROVED DUAL-RATED PARALLEL TAP CONNECTOR EQUAL TO ILSCO PED SERIES WATERTIGHT CONNECTOR. SUITABLE FOR DIRECT BURIAL IN JUNCTION BOXES, HANDHOLES AND MANHOLES.

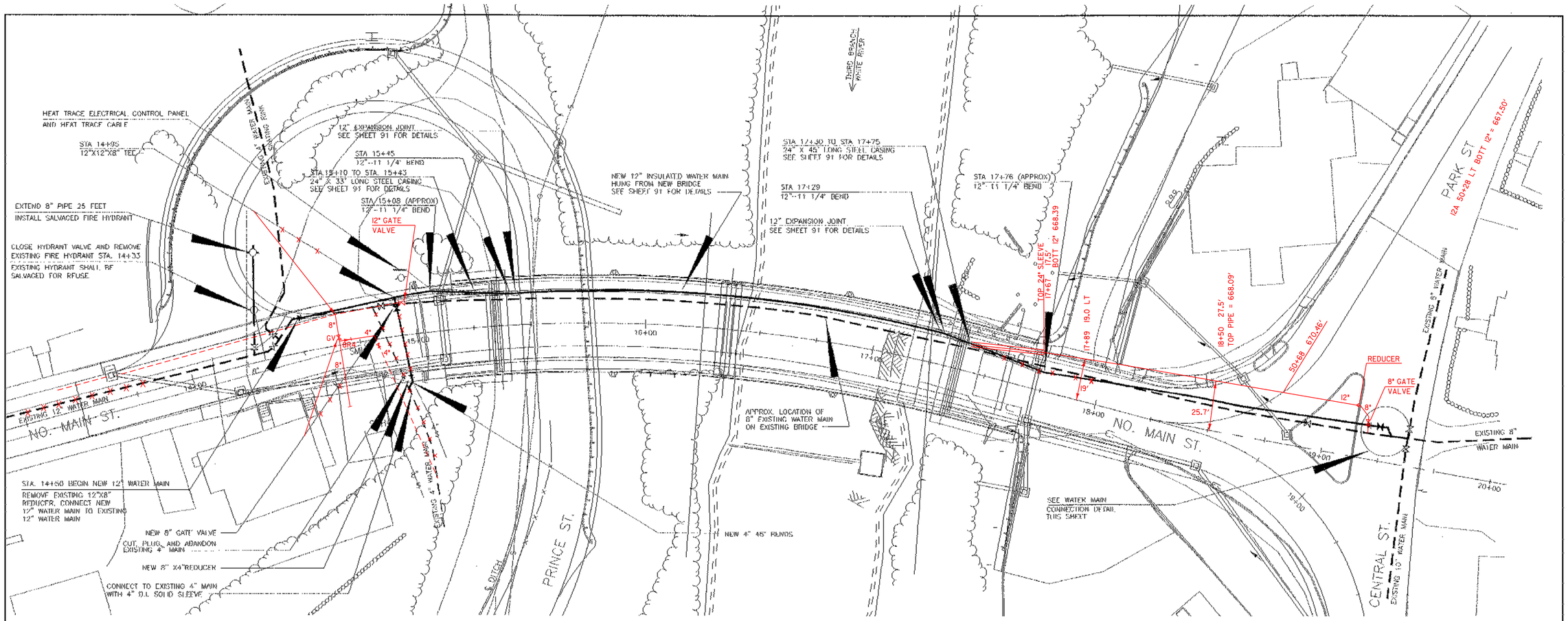
16. POWER STANCHION AND ASSOCIATED WORK WILL BE PAID FOR UNDER ITEM 679.28 - POWER STANCHION.

STREET LIGHTING DETAILS

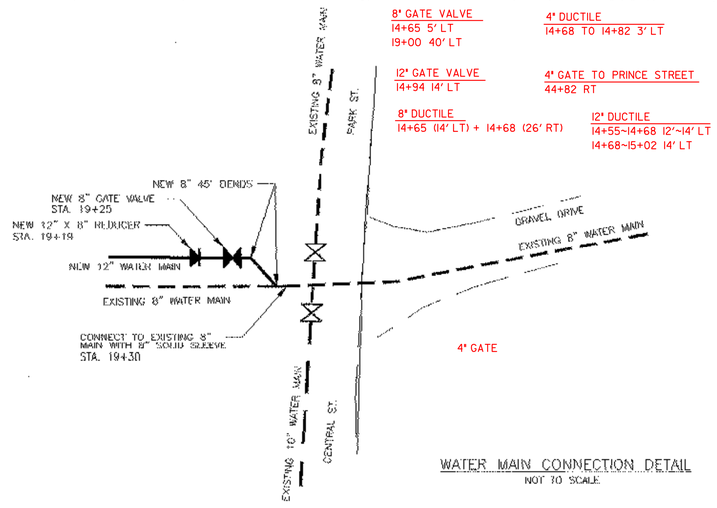
PROJECT NAME: RANDOLPH
PROJECT NUMBER: BRF 0241(29)

FILE NAME: /str5/88j096/sj096lgt4.dgn
PROJECT LEADER: W. Symonds
DESIGNED BY: DUFRESNE-HENRY
sj096lightingdet.1

PLOT DATE: 29-AUG-2006
DRAWN BY: G. Shangraw
CHECKED BY:
SHEET 88 OF 135



WATER MAIN PLAN
SCALE: 1" = 20'



WATER MAIN CONNECTION DETAIL
NOT TO SCALE

NOTE: 8" DUCTILE CAPPED AT 14+68 26' RT FOR FUTURE EXPANSION TO PRINCE ST. 4" GATE FOR SHUTTING OF THE 4 LINE WHEN THE 8" IS PUT IN SERVICE.

LEGEND

- EXISTING WATER MAIN
- NEW WATER MAIN
- EXISTING GATE VALVE
- NEW GATE VALVE

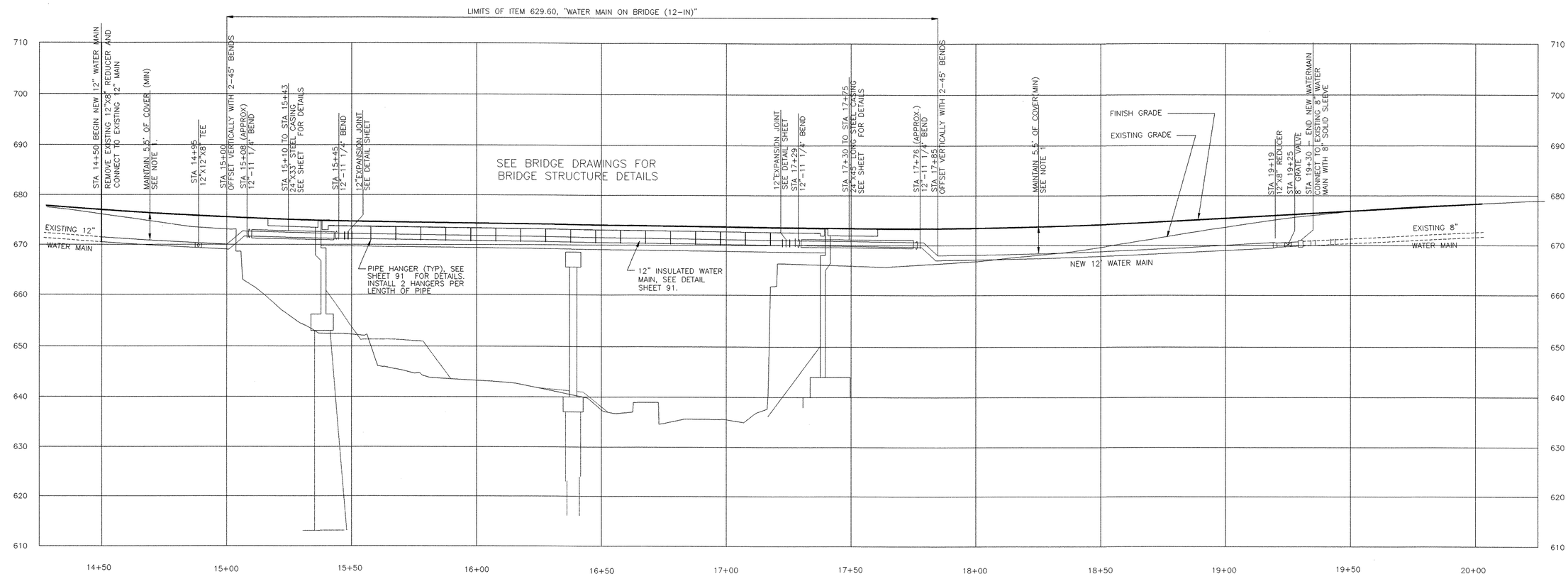
NOTE:
CONTRACTOR SHALL PLUG OR CAP AND ABANDON EXISTING PIPE OR REMOVE THE PIPE.

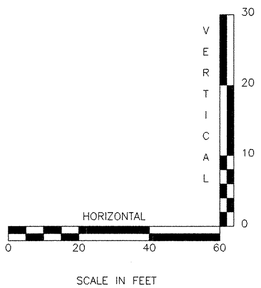
NOTE: INFORMATION ON THIS SHEET IS FOR THE WATER MAIN AND DETAILS ONLY. REFER TO OTHER DRAWINGS FOR BRIDGE AND ROADWAY DETAILS.

PERMANENT WATER MAIN PLAN

PROJECT NAME: RANDOLPH
PROJECT NUMBER: BRF 0241(29)

FILE NAME: s88j096water1.dgn
PROJECT LEADER: W. Symonds
DESIGNED BY: Dubois & King, Inc.
PLOT DATE: 29-AUG-2006
DRAWN BY:
CHECKED BY:
SHEET 89 OF 135





PERMANENT WATER MAIN PROFILE

NOTES

1. PROVIDE 4" RIGID INSULATION AT ALL LOCATIONS WHERE DEPTH OF COVER OVER WATER MAIN IS LESS THAN 5 1/2 FT.

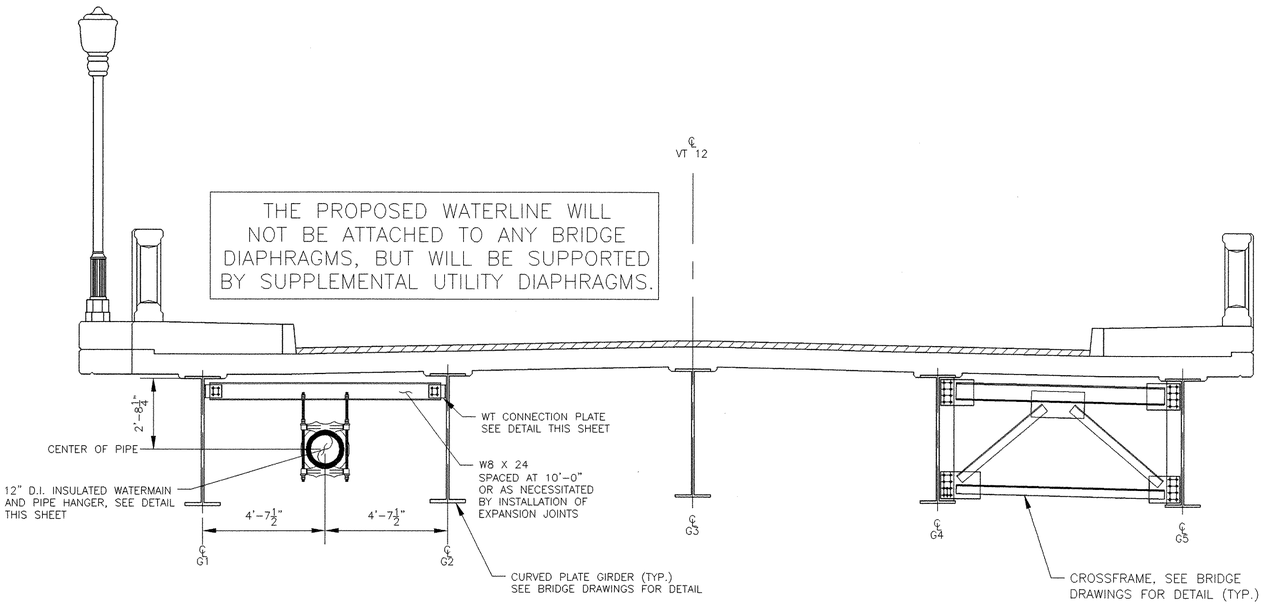
NOTE: INFORMATION ON THIS SHEET IS FOR THEWATER MAIN AND DETAILS ONLY. REFER TO OTHER DRAWINGS FOR BRIDGE AND ROADWAY DETAILS.

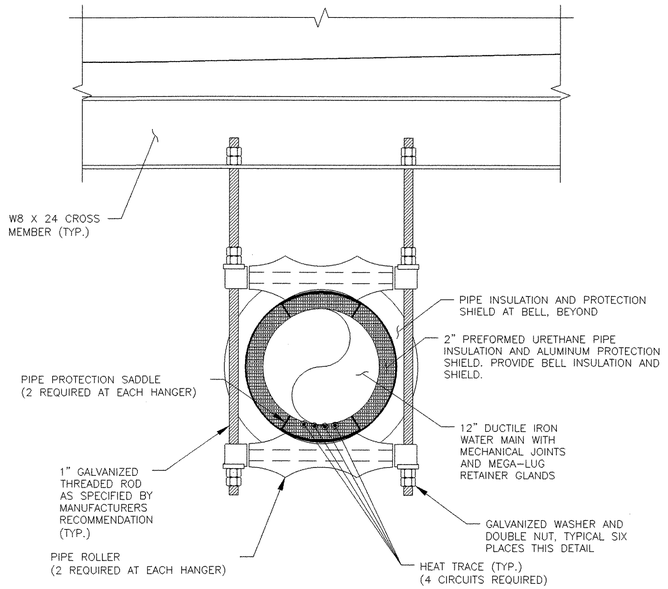
PERMANENT WATER MAIN PROFILE

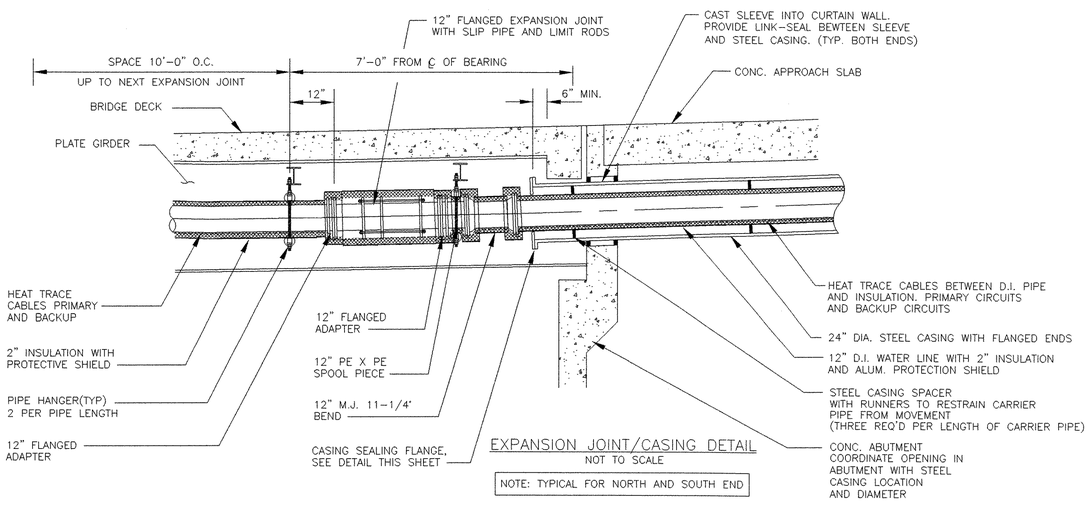
PROJECT NAME: RANDOLPH
PROJECT NUMBER: BRF 0241(29)

FILE NAME: s88j096water2.dgn
PROJECT LEADER: W. Symonds
DESIGNED BY: Dubois & King, Inc.

PLOT DATE: 29-AUG-2006
DRAWN BY:
CHECKED BY:
SHEET 90 OF 135

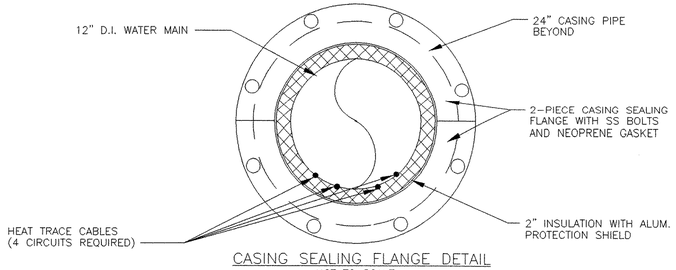




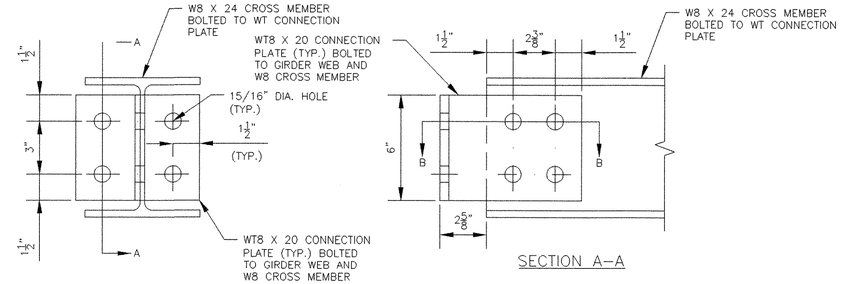


EXPANSION JOINT/CASING DETAIL
NOT TO SCALE

NOTE: TYPICAL FOR NORTH AND SOUTH END

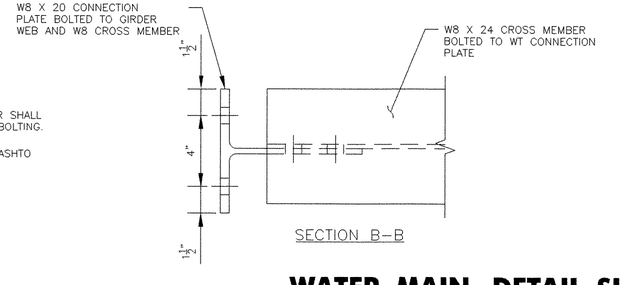


CASING SEALING FLANGE DETAIL
NOT TO SCALE



WT CONNNECTION PLATE DETAIL

SECTION A-A



SECTION B-B

NOTE:
ATTACHMENT OF WT-CONNECTION PLATE TO GIRDER SHALL BE ACCOMPLISHED THROUGH FIELD DRILLING AND BOLTING.

ALL CONNECTIONS SHALL BE MADE WITH ⅞" DIA. AASHTO M164 TYPE 3 BOLTS.

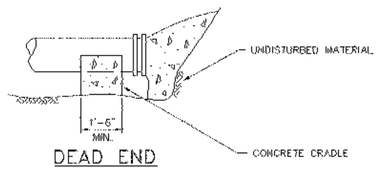
NOTE: INFORMATION ON THIS SHEET IS FOR THE WATER MAIN AND DETAILS ONLY. REFER TO OTHER DRAWINGS FOR BRIDGE AND ROADWAY DETAILS.

WATER MAIN DETAIL SHEET 1

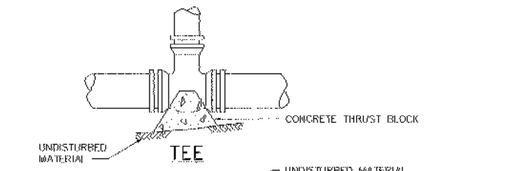
PROJECT NAME: RANDOLPH
PROJECT NUMBER: BRF 024I(29)

FILE NAME: s88j096water3.dgn
PROJECT LEADER: W. Symonds
DESIGNED BY: Dubois & King, Inc.
s88j096water4.i

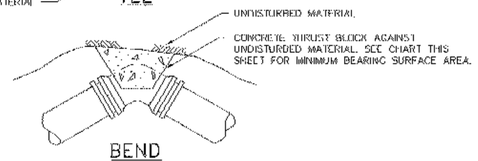
PLOT DATE: 29-AUG-2006
DRAWN BY:
CHECKED BY:
SHEET 91 OF 135



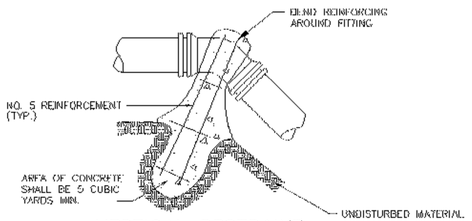
DEAD END



TEE



BEND



VERTICAL RESTRAINT

CONCRETE THRUST BLOCK DETAILS

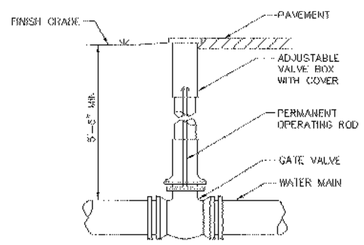
NOT TO SCALE

AREA OF BEARING FACE OF CONCRETE THRUST BLOCKS IN SQUARE FEET

PIPE SIZE (IN)	SOFT WET CLAY, SAND OR SILT	DRY SAND	COMPACT COARSE SAND OR GRAVEL HARDPAN
DEAD END OR TEE			
8 OR LESS	15	5	4
10	24	8	6
12	34	11	8
1/4 BEND			
6 OR LESS	21	7	5
10	33	11	8
12	48	16	12
1/8 BEND			
8 OR LESS	12	4	3
10	18	6	5
12	26	9	7
1/16 BEND			
8 OR LESS	6	2	2
10	9	3	2
12	13	4	3
SOIL BEARING CAPACITIES (APPROXIMATE)			
	1250 lbs/ft^2	4000 lbs/ft^2	6000 lbs/ft^2

THRUST BLOCK TABLE NOTES

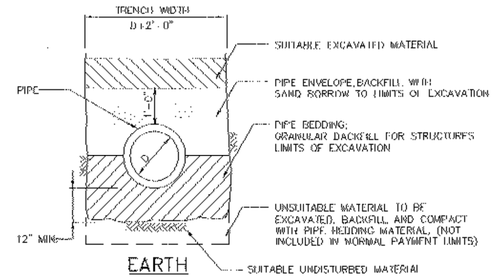
1. FIGURES BASED ON 300 PSI.
2. FOR PIPE SIZES NOT LISTED USE NEXT LARGER PIPE SIZE.
3. WHEN MORE THAN ONE SOIL TYPE IS ENCOUNTERED, THE ONE WITH LEAST BEARING CAPACITY SHALL BE USED.
4. RETAINING RODS OR RESTRAINED JOINT PIPE, AS APPROVED BY THE ENGINEER, SHALL BE USED IN PLACE OF THRUST BLOCKS WHEN MUCK IS ENCOUNTERED.



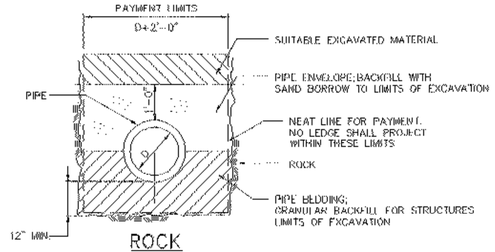
NOTE: UNLESS OTHERWISE INDICATED ALL GATE VALVES SHALL HAVE PERMANENTLY INSTALLED OPERATING RODS TERMINATING AT LEAST 2'-0" AND NOT MORE THAN 3'-0" BELOW THE TOP OF THE VALVE BOX

BURIED GATE VALVE DETAIL

NOT TO SCALE



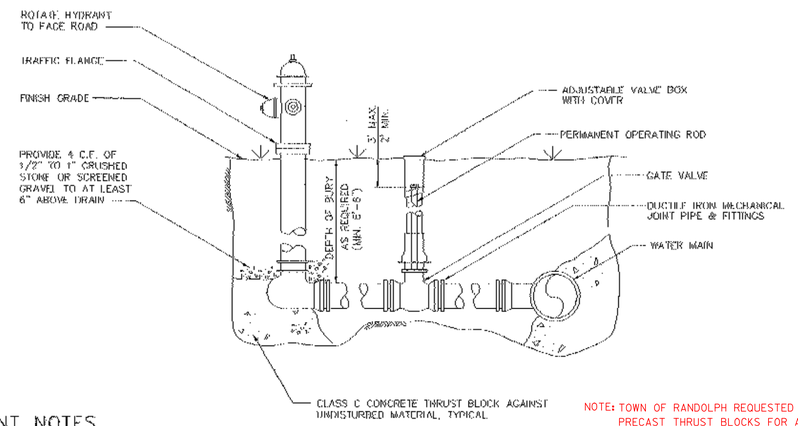
EARTH



ROCK

TRENCH SECTIONS

NOT TO SCALE



NOTE: TOWN OF RANDOLPH REQUESTED PRECAST THRUST BLOCKS FOR ALL TEES, BENDS, AND CAPS.

HYDRANT NOTES

1. HYDRANT TO BE PLUMB.
2. TRAFFIC FLANGE HEIGHT TO BE ABOVE FINISH GRADE AS RECOMMENDED BY THE MANUFACTURER.
3. ALL HYDRANTS TO BE COVERED WITH BURLAP BAGS UNTIL HYDRANTS ARE IN SERVICE AND UNDER OPERATION BY THE OWNER.
4. SEE PROFILE FOR DEPTH OF WATER MAIN AT HYDRANT LOCATIONS. (HYDRANT EXTENSIONS MAY BE REQUIRED TO ALLOW TRAFFIC FLANGE TO BE AT PROPER DISTANCE ABOVE GROUND)

HYDRANT WITH VALVE DETAIL

NOT TO SCALE

SEQUENCE OF CONSTRUCTION NOTES:

1. CONTRACTOR SHALL NOTIFY TOWN OF RANDOLPH IN WRITING TWO WEEKS PRIOR TO SHUTTING OFF WATER ACROSS THE EXISTING BRIDGE. CONTRACTOR SHALL COORDINATE WITH TOWN PERSONNEL FOR OPERATION OF GATE VALVES. ONLY TOWN PERSONNEL SHALL OPERATE GATE VALVES.
2. FIRE HYDRANT AT STA. 14+55 SHALL BE RELOCATED AS SHOWN ON THESE PLANS. WORK FOR RELOCATING THE HYDRANT SHALL BE PAID FOR UNDER ITEM 629.29 "RELOCATE HYDRANT". ADDITIONAL PIPE NECESSARY FOR RELOCATION SHALL BE PAID FOR UNDER ITEM 629.24 "DUCTILE IRON PIPE, CEMENT-LINED." THE FIRE HYDRANT SHALL BE RELOCATED PRIOR TO INSTALLATION OF THE TEMPORARY DETOUR. THE ELEVATION OF THE RELOCATED FIRE HYDRANT SHALL MATCH PROPOSED GRADING CONDITIONS.
3. NEW WATER MAIN SHALL BE CONSTRUCTED, PRESSURE TESTED AND DISINFECTED BY THE CONTRACTOR. CONSTRUCTION OF THE WATER MAIN ACROSS THE BRIDGE SHALL BE PAID FOR UNDER ITEM 629.60 "WATER MAIN ON BRIDGE (12-IN)" TO THE LIMITS SHOWN ON THESE PLANS. CONSTRUCTION BEYOND THE ITEM 629.60 "WATER MAIN ON BRIDGE (12-IN)" SHALL BE PAID FOR UNDER THE APPROPRIATE ITEMS AS SPECIFIED IN THE VTRANS STANDARD SPECIFICATIONS FOR CONSTRUCTION.
4. AFTER SUCCESSFUL PRESSURE TESTING AND DISINFECTING, CONNECTIONS SHALL BE MADE TO THE EXISTING WATER SYSTEM AS SHOWN ON THESE PLANS.
5. CONTRACTOR SHALL COORDINATE WITH TOWN OF RANDOLPH PERSONNEL FOR ACTIVATION OF WATER MAIN.

HEAT TRACE NOTES:

1. CONTRACTOR SHALL INSTALL HEAT TRACE ON THE BRIDGE AS SHOWN IN THESE PLANS AND DESCRIBED IN THE CONTRACT DOCUMENTS.
2. PAYMENT FOR THE HEAT TRACE ON THE BRIDGE SHALL BE CONSIDERED INCIDENTAL TO ITEM 629.60, "WATER MAIN ON BRIDGE (12-IN)". CONDUIT AND WIRE REQUIRED TO CONNECT THE HEAT TRACE TO THE POWER SOURCE SHALL BE PAID FOR UNDER ITEM 678.21, "ELECTRICAL CONDUIT" AND ITEM 678.24, "ELECTRICAL WIRING" RESPECTIVELY.
3. THE HEAT TRACE ELECTRICAL CONTROL PANEL SHALL BE LOCATED SO AS TO COINCIDE WITH THE ELECTRICAL CONTROL PANEL FOR THE BRIDGE LIGHTS.
4. THE POWER STANCHION REQUIRED FOR THE HEAT TRACE ELECTRICAL CONTROL PANEL SHALL BE COMBINED WITH THE STANCHION REQUIRED FOR THE BRIDGE LIGHTS. THERE SHALL ONLY BE ONE POWER STANCHION FOR THIS PROJECT. THE STANCHION SHALL CONFORM TO STANDARD E-175. PAYMENT FOR STANCHION SHALL BE MADE UNDER ITEM 679.28, "POWER STANCHION".

QUANTITIES

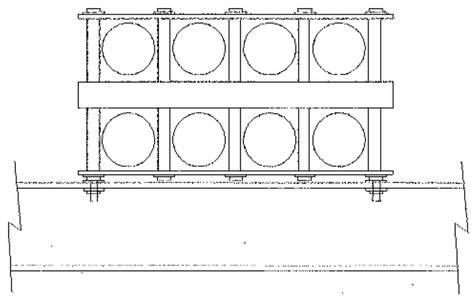
203.33	SAND BORROW	40 CY
204.20	TRENCH EXCAVATION OF EARTH	170 CY
204.30	GRANULAR BACKFILL FOR STRUCTURES	40 CY
622.10	INSULATION BOARD	0.50 MFBM
629.24	DUCTILE IRON PIPE, CEMENT LINED (12 IN)	200 LF
629.24	DUCTILE IRON PIPE, CEMENT LINED (8 IN)	70 LF
629.24	DUCTILE IRON PIPE, CEMENT LINED (4 IN)	10 LF
629.27	GATE VALVE WITH VALVE BOX (8 IN)	3 EA
629.29	RELOCATE HYDRANT	1 EA
629.42	TRANSFER TO NEW SYSTEM - WATER SYSTEM	1 LS
629.60	WATER MAIN ON BRIDGE (12-IN)	1 LS
678.21	ELECTRICAL CONDUIT(2" - PVC, SCHEDULE 40)	100 LF
678.21	ELECTRICAL CONDUIT(2" - PVC, SCHEDULE 80)	50 LF
678.24	ELECTRICAL WIRING	150 LF

NOTE: INFORMATION ON THIS SHEET IS FOR THE WATER MAIN AND DETAILS ONLY. REFER TO OTHER DRAWINGS FOR BRIDGE AND ROADWAY DETAILS.

WATER MAIN DETAIL SHEET 2

PROJECT NAME: RANDOLPH
PROJECT NUMBER: BRF 0241(29)

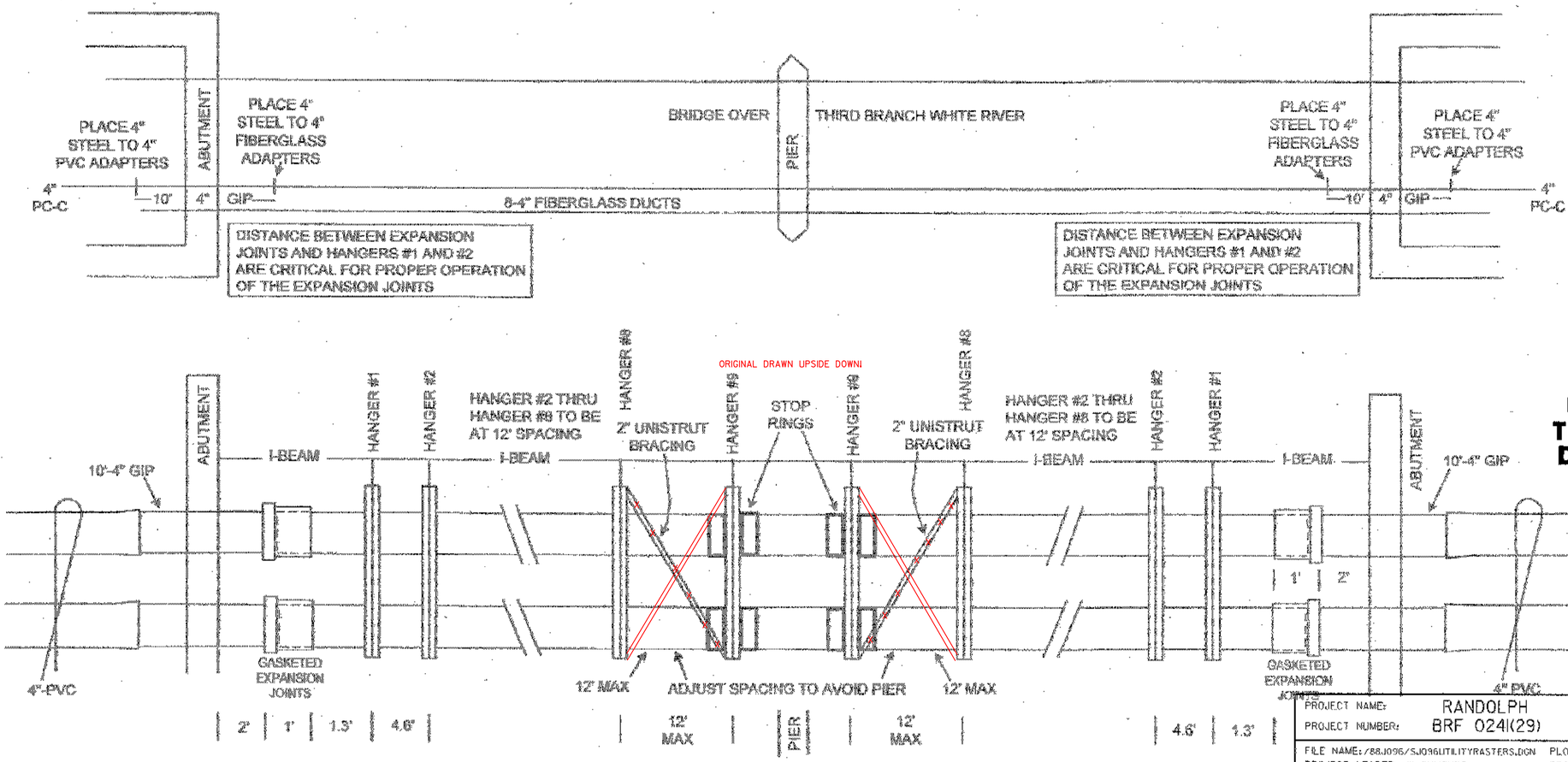
FILE NAME: s88j096water3.dgn
PROJECT LEADER: W. Symonds
DESIGNED BY: DuBois & King, Inc.
PLOT DATE: 29-AUG-2006
DRAWN BY:
CHECKED BY:
SHEET 92 OF 135



MATERIAL REQUIRED:

16	4"x10' STEEL DUCT (BY BRIDGE CONTRACTOR)
~~REVISED 4/13/2006~~ 1636'	4" FIBERGLASS DUCT WITHREADED ENDS
16	4" EXPANSION JOINTS (GASKETED)
16	SPLIT ANCHOR RINGS (SET)
~~REVISED 4/13/2006~~ 16	STEEL TO FIBERGLASS ADAPTERS
16	STEEL TO PVC ADAPTERS
~~REVISED 4/13/2006~~ 1904'	4" – 'C' PLASTIC DUCT (PVC)
5	SOLID ROUND DUCT PLUGS
18	2 HIGH BY 4 WIDE STANDARD BRIDGE HANGERS
4	2" UNISTRUT BRACING

	SAFETY NOTES: Heavy Traffic	MOD/REV NO.	DATE	EWO NO. 0
				PRINT 4 OF 0
				PREPARED BY: Dan Powell
				C. O. /EXCHANGE NAME:
	SIGNATURE:	TYPE	RECORD REF:	RNDH
	DATE: 12/29/05	AERIAL	1 & 1-1	C. O. /EXCHANGE CODE:
CVPS	PRE CT YES ☒ NO ☒	UNDERGROUND		4873
	PRIMARY VOLTAGE TO GROUND	BLOCK (NYT)		MUNICIPALITY:
	7.2 KV MGN SYSTEM	CONDUIT	3 & 5	Randolph
CABLE PRESS	UNDER PRESS YES ☐ NO ☒	BUFFER YES ☐	NO ☒	MANIFOLD LOCATION MH# NA
TRANSMISSION	28 GA LIMIT YES ☐ NO ☒	AMT. BRIDGE TAP		NA KF



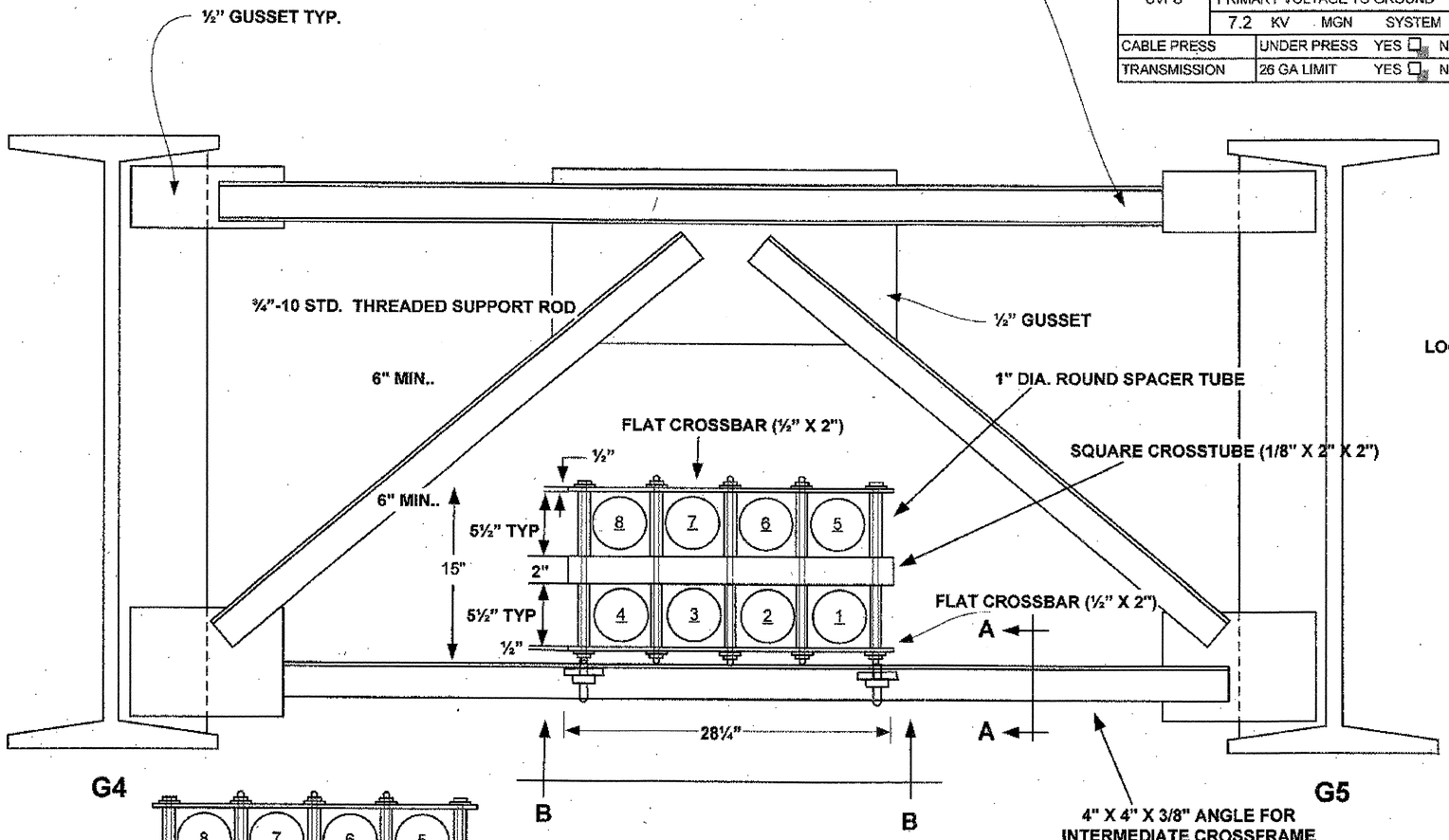
UTILITY – TELEPHONE DUCTS ON BRIDGE

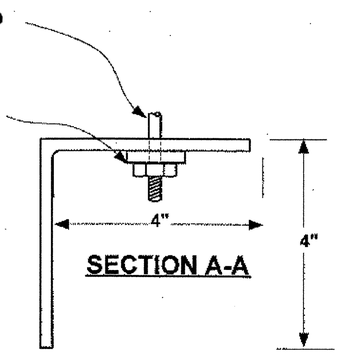
PROJECT NAME:	RANDOLPH
PROJECT NUMBER:	BRF 024I(29)
FILE NAME: /88J096/SJ096UTILITYRASTERS.DGN	PLOT DATE: 29-AUG-2006
PROJECT LEADER: W. SYMONDS	DRAWN BY: G. SHANGRAW
DESIGNED BY: VERIZON, INC.	CHECKED BY: T. SUMNER
sj096verizon1.i	SHEET 93 OF 135

PROJ # 7AA08E

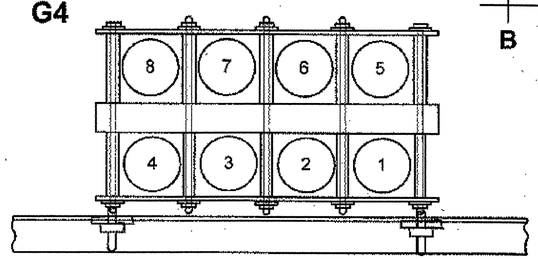
SAFETY NOTES: Heavy Traffic		MOD/REV NO	DATE	EWO NO. 0
				PRINT 5 OF 0
				PREPARED BY:
				T.H.BUSHEY
SIGNATURE:				C. O. /EXCHANGE NAME:
		TYPE	RECORD REF:	RNDH
DATE: 2/10/2006		AERIAL	1 & 1-1	C. O. /EXCHANGE CODE:
CVPS	PRE CT YES ☑ NO ☑	UNDERGROUND		4873
	PRIMARY VOLTAGE TO GROUND	BLOCK (NYT)		MUNICIPALITY:
	7.2 KV MGN SYSTEM	CONDUIT	3 & 5	Randolph
CABLE PRESS	UNDER PRESS YES ☐ NO ☑	BUFFER YES ☐	NO ☑	MANIFOLD LOCATION MH# NA
TRANSMISSION	26 GA LIMIT YES ☐ NO ☑	AMT. BRIDGE TAP		NA KF

REVISED 2/24/2006





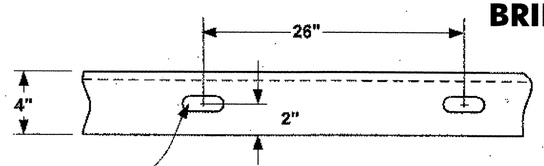
SECTION A-A



DETAIL C-C

THE TELEPHONE DUCT BANKS WILL NOT BE ATTACHED TO ANY BRIDGE DIAPHRAGMS, BUT WILL BE SUPPORTED BY SUPPLEMENTAL UTILITY DIAPHRAGMS. SEE SHEET 59 FOR DETAIL

SECTION B-B

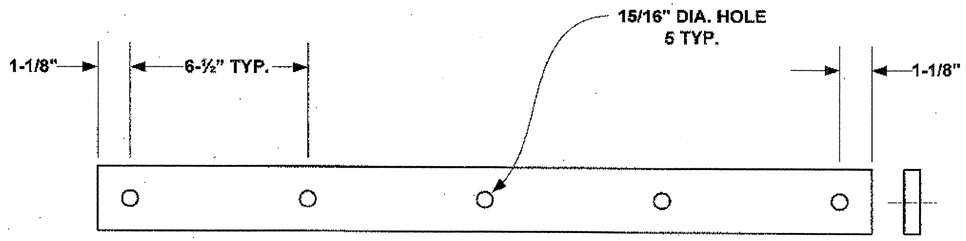


UTILITY – TELEPHONE DUCTS ON BRIDGE

PROJECT NAME:	RANDOLPH
PROJECT NUMBER:	BRF 024I(29)

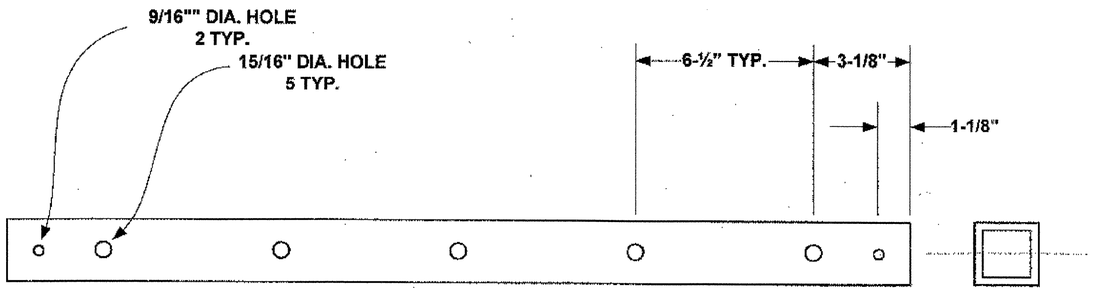
FILE NAME: /88J096/SJ096UTILITYRASTERS.DGN	PLOT DATE: 29-AUG-2006
PROJECT LEADER: W. SYMONDS	DRAWN BY: G. SHANGRAW
DESIGNED BY: VERIZON, INC.	CHECKED BY: T. SUMNER
sj096verizon2.i	SHEET 94 OF 135

PROJ # 7AA08E



FLAT CROSSBAR HOLE DETAIL

FLAT CROSSBAR (½" X 2")



SQUARE CROSSBAR HOLE DETAIL

SQUARE CROSSTUBE (1/8" X 2" X 2")

	SAFETY NOTES: HEAVY TRAFFIC	MOD/REV NO	DATE	EWO NO.
				PRINT 6 OF 0
				PREPARED BY: T.H.BUSHEY
	SIGNATURE:			C. O. /EXCHANGE NAME:
	DATE: 2/10/2006	TYPE	RECORD REF:	RNDH
		AERIAL		C. O. /EXCHANGE CODE:
ELCO	PRE CT YES ☑ NO ☑	UNDERGROUND		4873
	PRIMARY VOLTAGE TO GROUND	BLOCK (NYT)		MUNICIPALITY:
	7.2 KV MGN SYSTEM	CONDUIT		Randolph
CABLE PRESS	UNDER PRESS YES ☐ NO ☑	BUFFER YES ☐	NO ☑	MANIFOLD LOCATION MH# NA
TRANSMISSION	26 GA LIMIT YES ☐ NO ☑	AMT. BRIDGE TAP		NA KF

26 GA AREA, 24 GA. CABLE USED DUE TO DISTRICT POLICY

REVISED 2/24/2006

UTILITY – TELEPHONE DUCTS ON BRIDGE

PROJECT NAME:	RANDOLPH
PROJECT NUMBER:	BRF 024I(29)

FILE NAME: /88J096/SJ096UTILITYRASTERS.DGN	PLOT DATE: 29-AUG-2006
PROJECT LEADER: W. SYMONDS	DRAWN BY: G. SHANGRAW
DESIGNED BY: VERIZON, INC.	CHECKED BY: T. SUMNER
sj096verizon3.i	SHEET 95 OF 135

BRIDGE QUANTITY SHEET

GENERAL NOTES:

1. THE CONTRACTOR IS REQUIRED TO COMPLY WITH ALL NATIONALLY ACCEPTED SAFETY PRACTICES.

2. THE CONTRACTOR IS REQUIRED TO COMPLY WITH ALL LOCAL, STATE, FEDERAL AND VERIZON REGULATIONS.

3. THE DESIGN CABLE LOAD IS 8.14 POUNDS PER FOOT FOR EACH OF SIX DUCTS. THE TOTAL CONDUIT AND HANGER LOAD AT EACH SUPPORTS 652 LB.. BASED ON A NOMINAL SPACING OF 12 FEET.

4. THE CONTRACTOR MUST LOCATE AND PROTECT ALL EXISTING BURIED CABLES DURING EXCAVATION ON BRIDGE APPROACHES.

5. SPECIFIED FIBERGLASS CONDUIT AMERICAN U-TEL
   A. 4" DIAMETER FIBERGLASS DUCTS WITH THREADED JOINTS WITH 3000 LB.. PULLOUT STRENGTH.
   B. ULTIMATE TENSILE STRENGTH 10,000 PSI PER ASTM D-2105.
   C. 4" IPS 4.5" OUTSIDE DIAMETER x 4.36" INSIDE DIAMETER x 30 FT LENGTHS.
   D. CAPABLE OF HANGER SUPPORT SPANS OF 17.2" FOR 8 LBS.PER FT. CABLE BASED. ON LESS THAN 5/8" MIDSPAN DEFLECTION.

6. ALL DRAWINGS ARE BASED ON AVAILABLE CONTRACT DRAWINGS WHICH MAY VARY FROM ACTUAL AS-BUILT CONDITIONS. THE CONTRACTOR SHALL VERIFY ALL PERTINENT DIMENSIONS BEFORE FABRICATION OR INSTALLATION.

7. CONDUIT DRAINAGE. THE CONTRACTOR SHALL INSURE THAT ALL CONDUITS ARE SLOPED TO PROVIDE DRAINAGE FROM THE BRIDGE GRADE BEAM TO THE FIRST MANHOLE ON EITHER SIDE OF THE BRIDGE.

8. GASKETED EXPANSION JOINTS MUST BE PRESET FOR THE AMBIENT TEMPERATURE AT THE TIME OF INSTALLATION. (SEE RIGHT)

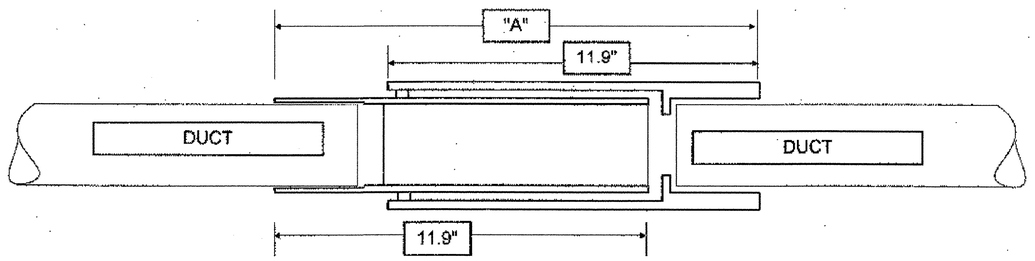
9. ALL CONDUIT ON BRIDGE APPROACHES IS TO BE CONCRETE ENCASED WITH A MINIMUM OF 2" OF CONCRETE ON TOP, BOTTOM, AND SIDES. DUCTS WILL BE SEPARATED BY 1" OF CONCRETE.

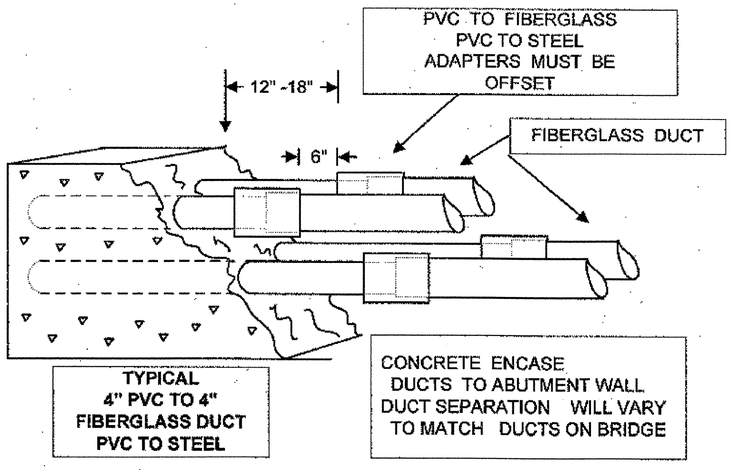
PROJ# 7AA08E

SAFETY NOTES: Heavy traffic		MOD/REV NO	DATE	EWO NO. 0
				PRINT 3 OF 0
				PREPARED BY:
				T.H.BUSHEY
				C. O. /EXCHANGE NAME:
SIGNATURE:		TYPE	RECORD REF:	RNDH
DATE: 2/10/2006		AERIAL	1 & 1-1	C. O. /EXCHANGE CODE:
CVPS	PRE CT YES ☑ NO ☑	UNDERGROUND		4873
	PRIMARY VOLTAGE TO GROUND	BLOCK (NYT)		MUNICIPALITY:
	7.2 KV MGN SYSTEM	CONDUIT	3 & 5	Randolph
CABLE PRESS	UNDER PRESS YES ☐ NO ☑	BUFFER YES ☐	NO ☑	MANIFOLD LOCATION MH# NA
TRANSMISSION	26 GA LIMIT YES ☐ NO ☑	AMT. BRIDGE TAP		NA KF

REVISED 2/24/2006

TYPICAL EXPANSION JOINT





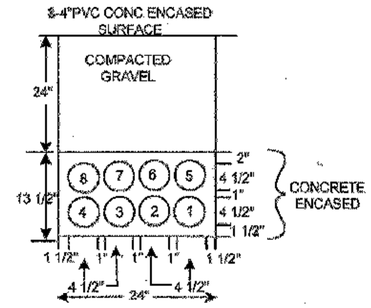
PRESET LENGTH "A" BASED ON AMBIENT TEMPERATURE"	
TEMPERATURE (degree)	LENGTH
- 20 F.	19.4"
0 F.	18.8"
20 F.	18.3"
40 F.	17.7"
60 F.	17.1"
80 F.	16.5"
100 F.	15.9"

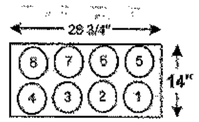
UTILITY – TELEPHONE DUCTS ON BRIDGE

PROJECT NAME: RANDOLPH
PROJECT NUMBER: BRF 024I(29)

FILE NAME: /88J096/SJ096UTILITYRASTERS.DGN
PROJECT LEADER: W. SYMONDS
DESIGNED BY: VERIZON, INC.
sj096verizon4.1

PLOT DATE: 29-AUG-2006
DRAWN BY: G. SHANGRAW
CHECKED BY: T. SUMNER
SHEET 96 OF 135





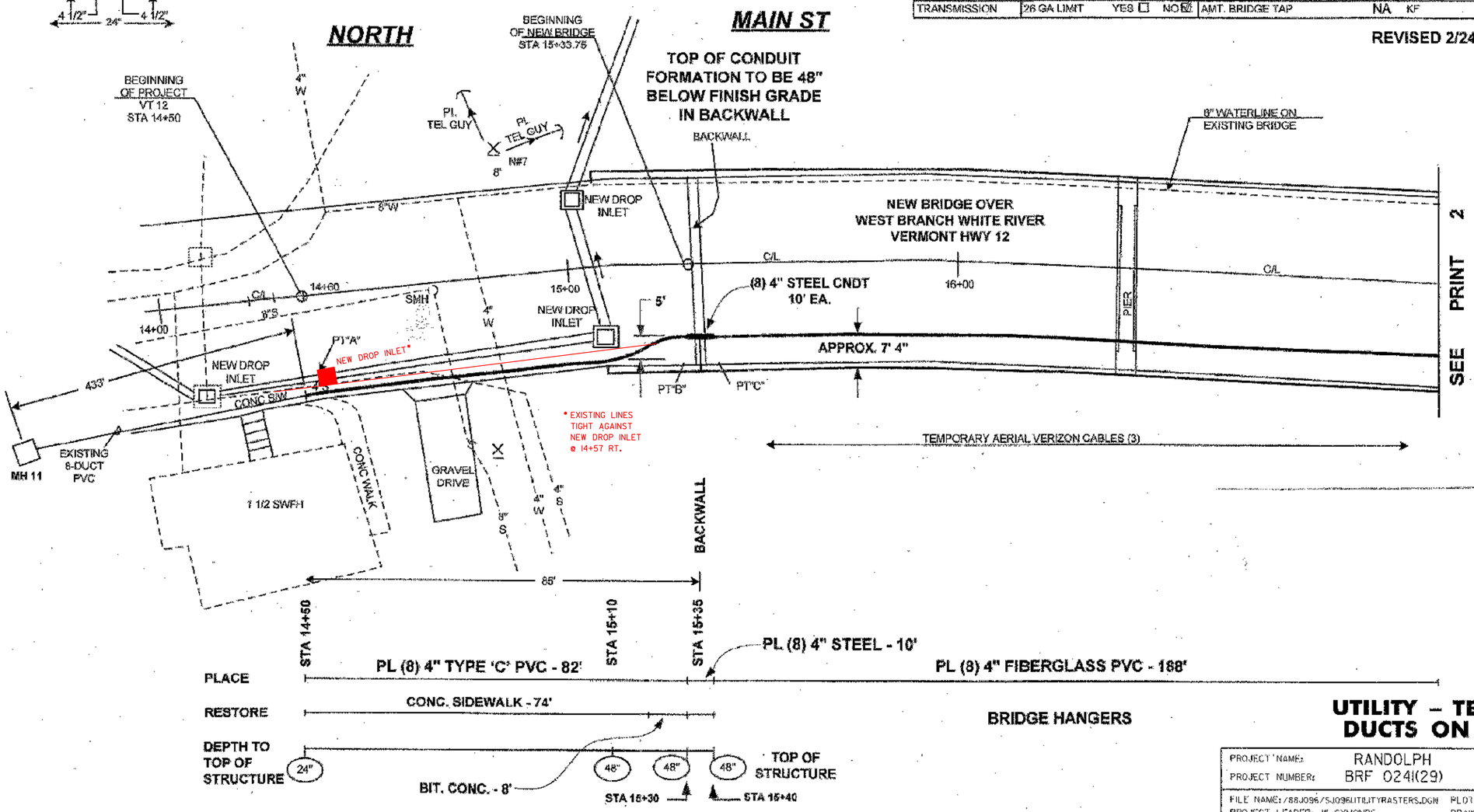
FORMATION IN
HANGERS
SEE PRINT 6
FOR HANGER ARRANGEMENT

PROJ# 7AA08E

VERIZON'S CONTACT
CONTRACT ENGINEER
THOMAS H BUSHEY
1-802-483-2973

SAFETY NOTES: Heavy Traffic		MOD/REV NO	DATE	EWO NO. 0
				PRINT 1 OF 0
				PREPARED BY:
				T.H.BUSHEY
				C. O. /EXCHANGE NAME:
SIGNATURE:		TYPE	RECORD REF:	RNDH
DATE: 2/10/2006		AERIAL	1 & 1-1	C. O. /EXCHANGE CODE:
CVPS	PRE CT YES ☑ NO ☑	UNDERGROUND		4873
	PRIMARY VOLTAGE TO GROUND	BLOCK (NYT)		MUNICIPALITY:
	7.2 KV MGN SYSTEM	CONDUIT	3 & 5	Randolph
CABLE PRESS	UNDER PRESS YES ☐ NO ☑	BUFFER YES ☐	NO ☒	MANIFOLD LOCATION MH# NA
TRANSMISSION	26 GA LIMIT YES ☐ NO ☑	AMT. BRIDGE TAP		NA KF

REVISED 2/24/2006



UTILITY – TELEPHONE DUCTS ON BRIDGE

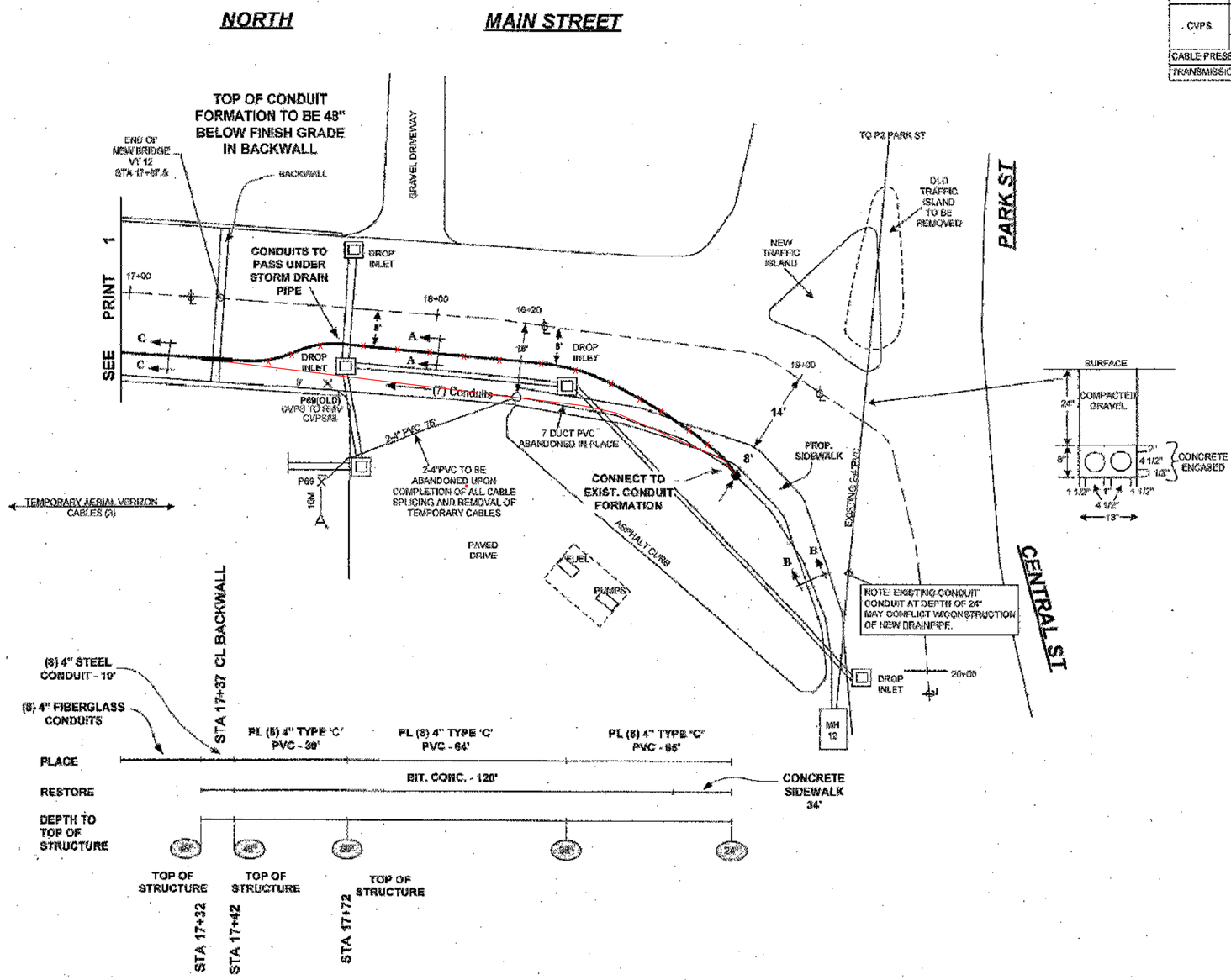
PROJECT NAME:	RANDOLPH
PROJECT NUMBER:	BRF 024I(29)
FILE NAME: /88J096/SJ096UTILITYRASTERS.DGN	PLOT DATE: 29-AUG-2006
PROJECT LEADER: W. SYMONDS	DRAWN BY: G. SHANGRAW
DESIGNED BY: VERIZON, INC.	CHECKED BY: T. SUMNER
sj096verizon5.i	SHEET 97 OF 135

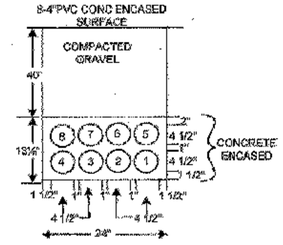
PROJ# 7AA08E

SAFETY NOTES: Heavy Traffic	MOD/REV NO	DATE	EWO NO. 0	
			PRINT 2 OF 0	
			PREPARED BY:	
			T.H.BUSHEY	
SIGNATURE:			C. O. /EXCHANGE NAME:	
DATE: 2/10/2006	TYPE	RECORD REF:	RNOH	
	AERIAL	1 & 1-1	C. O. /EXCHANGE CODE:	
PRE CT YES ☐ NO ☒	UNDERGROUND		4873	
CVPS: PRIMARY VOLTAGE TO GROUND	BLOCK (NY I)		MUNICIPALITY:	
7.2 KV MGN SYSTEM	CONDUIT	3 & 5	Randolph	
CABLE PRESS: UNDER PRESS YES ☐ NO ☒	BUFFER YES ☐ NO ☒		MANIFOLD LOCATION MH# NA	
TRANSMISSION: 26 GA LIMIT YES ☐ NO ☒	AMT. BRIDGE TAP		NA KF	

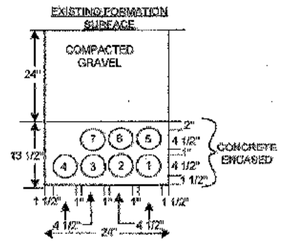
26 GA AREA, 24 GA. CABLE USED DUE TO DISTRICT POLICY

REVISED 2/24/2006



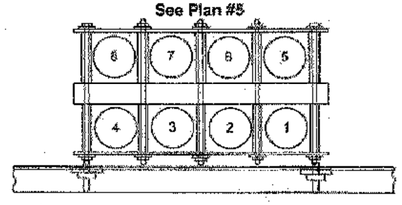


DETAIL A-A



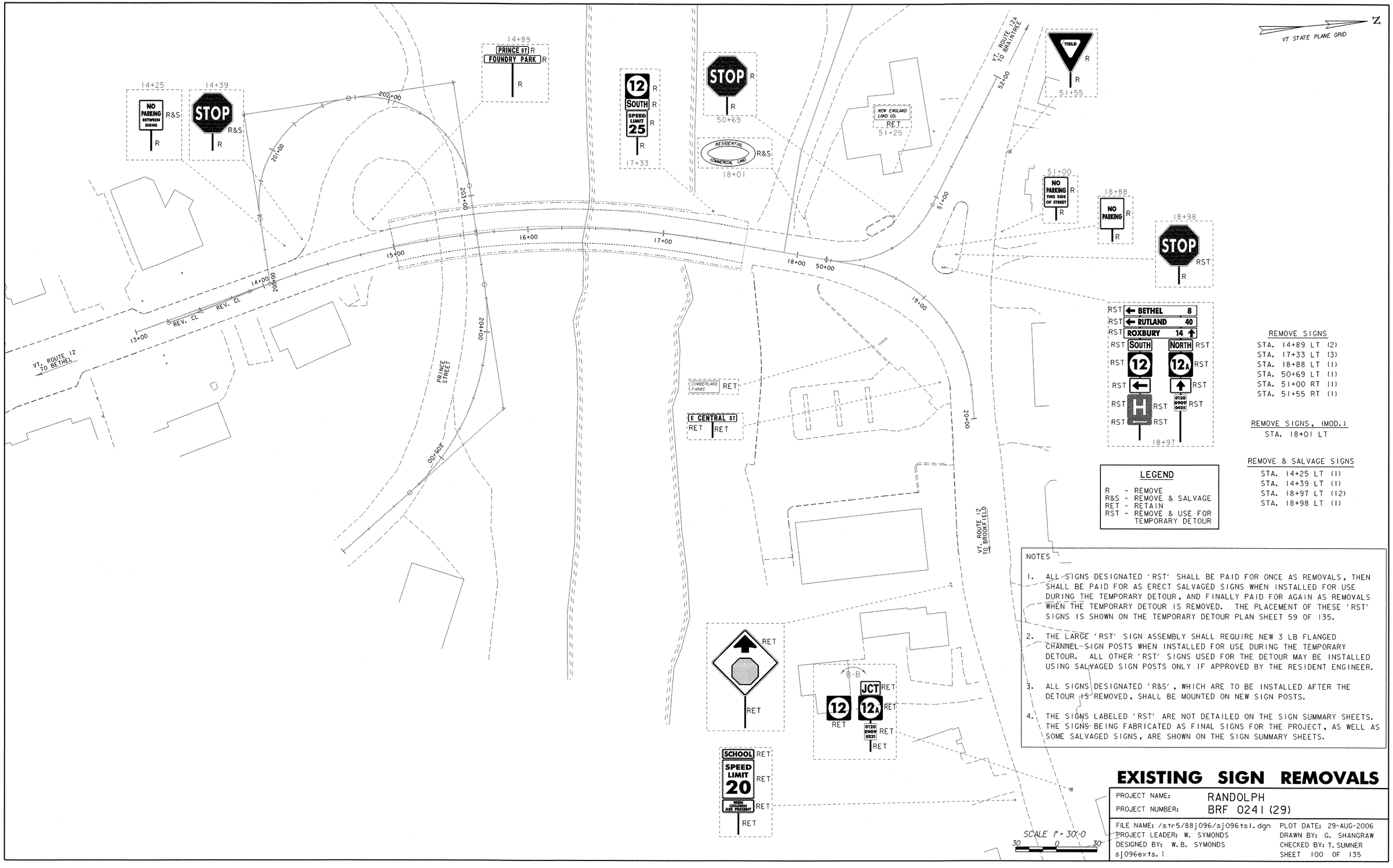
DETAIL B-B

DETAIL C-C
See Plan #5



UTILITY – TELEPHONE DUCTS ON BRIDGE

PROJECT NAME:	RANDOLPH
PROJECT NUMBER:	BRF 024I(29)
FILE NAME: /88J096/SJ096UTILITYRASTERS.DGN	PLOT DATE: 29-AUG-2006
PROJECT LEADER: W. SYMONDS	DRAWN BY: G. SHANGRAW
DESIGNED BY: VERIZON, INC.	CHECKED BY: T. SUMNER
sj096verizon6.i	SHEET 98 OF 135



REMOVE SIGNS

STA. 14+89 LT (2)
STA. 17+33 LT (3)
STA. 18+88 LT (1)
STA. 50+69 LT (1)
STA. 51+00 RT (1)
STA. 51+55 RT (1)

REMOVE SIGNS, (MOD.)

STA. 18+01 LT

REMOVE & SALVAGE SIGNS

STA. 14+25 LT (1)
STA. 14+39 LT (1)
STA. 18+97 LT (12)
STA. 18+98 LT (1)

LEGEND

R - REMOVE
R&S - REMOVE & SALVAGE
RET - RETAIN
RST - REMOVE & USE FOR TEMPORARY DETOUR

NOTES

1. ALL SIGNS DESIGNATED 'RST' SHALL BE PAID FOR ONCE AS REMOVALS, THEN SHALL BE PAID FOR AS ERECT SALVAGED SIGNS WHEN INSTALLED FOR USE DURING THE TEMPORARY DETOUR, AND FINALLY PAID FOR AGAIN AS REMOVALS WHEN THE TEMPORARY DETOUR IS REMOVED. THE PLACEMENT OF THESE 'RST' SIGNS IS SHOWN ON THE TEMPORARY DETOUR PLAN SHEET 59 OF 135.

2. THE LARGE 'RST' SIGN ASSEMBLY SHALL REQUIRE NEW 3 LB FLANGED CHANNEL SIGN POSTS WHEN INSTALLED FOR USE DURING THE TEMPORARY DETOUR. ALL OTHER 'RST' SIGNS USED FOR THE DETOUR MAY BE INSTALLED USING SALVAGED SIGN POSTS ONLY IF APPROVED BY THE RESIDENT ENGINEER.

3. ALL SIGNS DESIGNATED 'R&S', WHICH ARE TO BE INSTALLED AFTER THE DETOUR IS REMOVED, SHALL BE MOUNTED ON NEW SIGN POSTS.

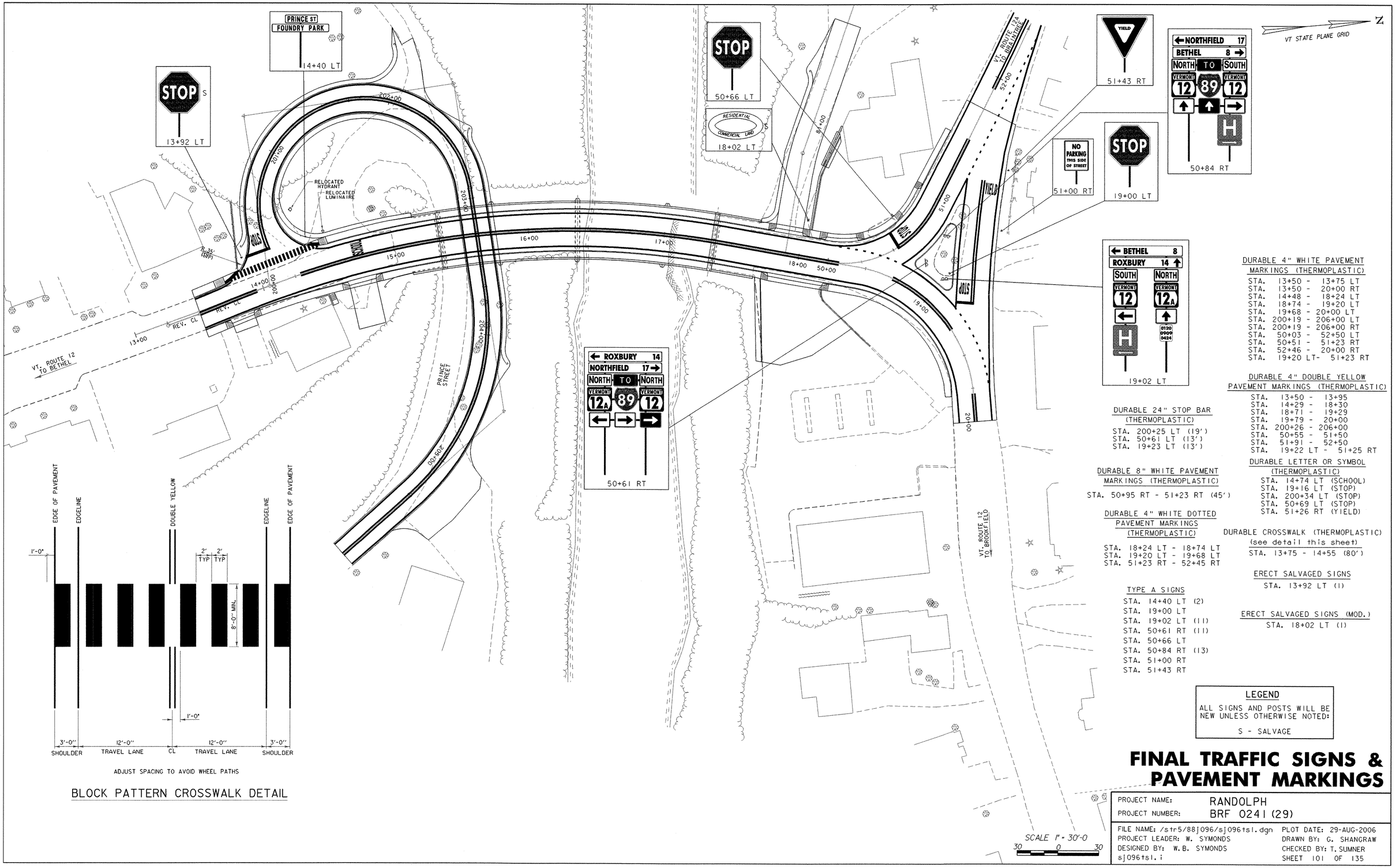
4. THE SIGNS LABELED 'RST' ARE NOT DETAILED ON THE SIGN SUMMARY SHEETS. THE SIGNS BEING FABRICATED AS FINAL SIGNS FOR THE PROJECT, AS WELL AS SOME SALVAGED SIGNS, ARE SHOWN ON THE SIGN SUMMARY SHEETS.

EXISTING SIGN REMOVALS

PROJECT NAME: RANDOLPH
PROJECT NUMBER: BRF 0241(29)

FILE NAME: /str5/88j096/sj096tsl.dgn
PROJECT LEADER: W. SYMONDS
DESIGNED BY: W.B. SYMONDS
sj096exts.i

PLOT DATE: 29-AUG-2006
DRAWN BY: G. SHANGRAW
CHECKED BY: T. SUMNER
SHEET 100 OF 135



BLOCK PATTERN CROSSWALK DETAIL

DURABLE 4" WHITE PAVEMENT MARKINGS (THERMOPLASTIC)

STA. 13+50 - 13+75 LT
STA. 13+50 - 20+00 RT
STA. 14+48 - 18+24 LT
STA. 18+74 - 19+20 LT
STA. 19+68 - 20+00 LT
STA. 200+19 - 206+00 LT
STA. 200+19 - 206+00 RT
STA. 50+03 - 52+50 LT
STA. 50+51 - 51+23 RT
STA. 52+46 - 20+00 RT
STA. 19+20 LT - 51+23 RT

DURABLE 4" DOUBLE YELLOW PAVEMENT MARKINGS (THERMOPLASTIC)

STA. 13+50 - 13+95
STA. 14+29 - 18+30
STA. 18+71 - 19+29
STA. 19+79 - 20+00
STA. 200+26 - 206+00
STA. 50+55 - 51+50
STA. 51+91 - 52+50
STA. 19+22 LT - 51+25 RT

DURABLE 24" STOP BAR (THERMOPLASTIC)

STA. 200+25 LT (19')
STA. 50+61 LT (13')
STA. 19+23 LT (13')

DURABLE 8" WHITE PAVEMENT MARKINGS (THERMOPLASTIC)

STA. 50+95 RT - 51+23 RT (45')

DURABLE 4" WHITE DOTTED PAVEMENT MARKINGS (THERMOPLASTIC)

STA. 18+24 LT - 18+74 LT
STA. 19+20 LT - 19+68 LT
STA. 51+23 RT - 52+45 RT

DURABLE LETTER OR SYMBOL (THERMOPLASTIC)

STA. 14+74 LT (SCHOOL)
STA. 19+16 LT (STOP)
STA. 200+34 LT (STOP)
STA. 50+69 LT (STOP)
STA. 51+26 RT (YIELD)

DURABLE CROSSWALK (THERMOPLASTIC) (see detail this sheet)

STA. 13+75 - 14+55 (80')

ERECT SALVAGED SIGNS

STA. 13+92 LT (1)

ERECT SALVAGED SIGNS (MOD.)

STA. 18+02 LT (1)

TYPE A SIGNS

STA. 14+40 LT (2)
STA. 19+00 LT
STA. 19+02 LT (11)
STA. 50+61 RT (11)
STA. 50+66 LT
STA. 50+84 RT (13)
STA. 51+00 RT
STA. 51+43 RT

LEGEND

ALL SIGNS AND POSTS WILL BE NEW UNLESS OTHERWISE NOTED:

S - SALVAGE

FINAL TRAFFIC SIGNS & PAVEMENT MARKINGS

PROJECT NAME: RANDOLPH
PROJECT NUMBER: BRF 0241 (29)

FILE NAME: /str5/88j096/sj096tsl.dgn
PROJECT LEADER: W. SYMONDS
DESIGNED BY: W.B. SYMONDS
sj096tsl.i

PLOT DATE: 29-AUG-2006
DRAWN BY: G. SHANGRAW
CHECKED BY: T. SUMNER
SHEET 101 OF 135

STATE OF VERMONT
AGENCY OF TRANSPORTATION

TRAFFIC SIGN SUMMARY SHEET

MILEMARKER, STATION, OR SIGN NUMBER	SIGN LEGEND	SIGN DIMENSIONS EA	WIDTH (in)	HEIGHT (in)	NEW & SALVAGED SIGNS "A"	"B"	SALV SIGN	SALV TIS	EXIST POST RETAIN	SALVAGE	NEW SIGN POSTS NO. OF POSTS	FLANGED CHANNEL lb/ft 1.12	2.0	3.0	SQUARE STEEL (in) lb/ft 1.75 1.88	2.0 2.16	2.5 3.35	ANCHOR	SLEEVE	TUBULAR ALUMINUM Ø (in) lb/ft 3.0 1.3	4.0 1.7	4.0 MOD 1.7	TUBULAR STEEL Ø (in) FOUNDATION	lb/ft 3.0 7.6	3.5 9.0	4.0 10.8	5.0 14.6	W-SHAPE STEEL FTG. SIZE 24"	30"	WEIGHT	POST SIZE	SIGN REMAINED	REMARKS	SIGN DETAIL DETAIL ON SHEET NUMBER	STD. SHEET NUMBER
												OPTION ITEMS																									
13+92	STOP S													13		13		X															ERECT ONE SALVAGED SIGN ON NEW POST		
14+40	PRINCE ST / FOUNDRY PARK	1 1	24 42	6 6	1.00 1.75						1			13		13		X																	E-123
18+02	RESIDENTIAL COMMERCIAL LAND S													26		26		X															ERECT ONE SALVAGED SIGN ON NEW POST		
18+92																																				
19+00	STOP	1	30	30	5.20						1			12		12		X																	E-143
19+02	BETHEL 8	1	72	12	6.0						2												2		26							YES	REQUIRES #3-TYPE "A" FRAME SEE STANDARD E-123		E-123
	RUTLAND 40	1	72	12	6.0																															E-123
	ROXBURY 14	1	72	12	6.0																															E-123
	SOUTH	1	24	12	2.00																															E-136B
	VERMONT 12	1	24	24	4.00																															E-136B
	0120 0909 0424	1 1	21 6	15 10	2.19 0.42																															E-136B E-138
					SF	SF	EA.	SF				FT	FT	89 FT	FT	89 FT	FT		EA	LB	LB	LB		LB	234 LB	LB	LB	EA.	EA.	LB						
					SUB TOTAL 34.56							89			89								2		234												
					GRAND TOTAL																																

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."

TRAFFIC SIGN SUMMARY SHEET #1

PROJECT NAME: RANDOLPH
PROJECT NUMBER: BRF 0241 (29)

FILE NAME: /str5/88j096/sj096ts2.dgn
PROJECT LEADER: W. SYMONDS
DESIGNED BY: G. SHANGRAW
sj096ss1.i

PLOT DATE: 29-AUG-2006
DRAWN BY: G. SHANGRAW
CHECKED BY: T. SUMNER
SHEET 102 OF 135

STATE OF VERMONT
AGENCY OF TRANSPORTATION

TRAFFIC SIGN SUMMARY SHEET

MILEMARKER, STATION, OR SIGN NUMBER	SIGN LEGEND	SIGN DIMENSIONS EA	WIDTH (in)	HEIGHT (in)	NEW & SALVAGED SIGNS "A"	"B"	SALV SIGN	SALV TIS	EXIST POST RETAIN	EXIST POST SALVAGE	NEW SIGN POSTS NO. OF POSTS	FLANGED CHANNEL lb/ft 1.12	2.0	3.0	SQUARE STEEL (in) lb/ft 1.75 1.88	2.0 2.16	2.5 3.35	ANCHOR	SLEEVE	TUBULAR ALUMINUM Ø (in) lb/ft 3.0 1.3	4.0 1.7	4.0 MOD 1.7	TUBULAR STEEL Ø (in) FOUNDATION	lb/ft 3.0 7.6	3.5 9.0	4.0 10.8	5.0 14.6	W-SHAPE STEEL FTG. SIZE 24"	30"	WEIGHT	POST SIZE	SIGN REFRAMED REQUIRED	REMARKS	SIGN DETAIL DETAIL ON SHEET NUMBER	STD. SHEET NUMBER
												OPTION ITEMS																									
19+02	NORTH	1	24	12	2.00																															E-136B
	VERMONT 12A	1	30	24	5.00																															E-136B
	↑	1	21	15	2.19																															E-136B
	H	1	24	24	4.00																															E-132
		1	24	6	1.00																															E-132
50+61	← ROXBURY 14	1	72	12	6.0						2												2		27						YES	REQUIRES #3-TYPE "A" FRAME SEE STANDARD E-123		E-123
	NORTHFIELD 17 →	1	72	12	6.0																															E-123
	MONTPELIER 27 →	1	72	12	6.0																															E-123
	NORTH	1	24	12	2.00																															E-136B
	VERMONT 12A	1	30	24	5.00																															E-136B
	←	1	21	15	2.19																															E-136B
						SF	SF	EA.	SF			FT	FT	FT	FT	FT	FT		EA	LB	LB	LB	EA.		243			EA.	EA.						
					SUB TOTAL	41.38																														
					GRAND TOTAL																			2		243										

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."

TRAFFIC SIGN SUMMARY SHEET #2

PROJECT NAME: RANDOLPH
PROJECT NUMBER: BRF 0241 (29)

FILE NAME: /str5/88j096/sj096ts2.dgn
PROJECT LEADER: W. SYMONDS
DESIGNED BY: G. SHANGRAW
sj096ss2.i

PLOT DATE: 29-AUG-2006
DRAWN BY: G. SHANGRAW
CHECKED BY: T. SUMNER

STATE OF VERMONT
AGENCY OF TRANSPORTATION

TRAFFIC SIGN SUMMARY SHEET

MILEMARKER, STATION, OR SIGN NUMBER	SIGN LEGEND	SIGN DIMENSIONS EA	WIDTH (in)	HEIGHT (in)	NEW & SALVAGED SIGNS "A"	"B"	SALV SIGN	SALV TIS	EXIST POST RETAIN	EXIST POST SALVAGE	NEW SIGN POSTS NO. OF POSTS	FLANGED CHANNEL lb/ft 1.12	2.0	3.0	SQUARE STEEL (in) 1.75 lb/ft 1.88	2.0 lb/ft 2.16	2.5 lb/ft 3.35	ANCHOR	SLEEVE	TUBULAR ALUMINUM Ø (in) 3.0 lb/ft 1.3	4.0 lb/ft 1.7	4.0 MOD lb/ft 1.7	TUBULAR STEEL Ø (in) FOUNDATION	3.0 lb/ft 7.6	3.5 lb/ft 9.0	4.0 lb/ft 10.8	5.0 lb/ft 14.6	W-SHAPE STEEL FTG. SIZE 24"	30"	WEIGHT	POST SIZE	REQUIRED SIGNS FABRICATED	REMARKS	SIGN DETAIL DETAIL ON SHEET NUMBER	STD. SHEET NUMBER
	OPTION ITEMS																																		
50+61	NORTH	1	24	12	2.00																														E-136B
	VERMONT 12	1	24	24	4.00																														E-136B
	→	1	21	15	2.19																														E-136B
	TO	1	24	12	2.00																														E-135
	INTERSTATE 89	1	24	24	3.20																														E-135
	→	1	21	15	2.19																														E-135
50+66	STOP	1	30	30	5.20						1			12		12		X																	E-143
50+84	← NORTHFIELD 17	1	72	12	6.0						2												2		36							YES	REQUIRES #3-TYPE "A" FRAME SEE STANDARD E-123		E-123
	BETHEL 8 →	1	72	12	6.0																														E-123
	RUTLAND 40 →	1	72	12	6.0																														E-123
	NORTH	1	24	12	2.00																														E-136B
	VERMONT 12	1	24	24	4.00																														E-136B
	↑	1	21	15	2.19																														E-136B
												FT	FT	12 FT	FT	12 FT	FT		EA	LB	LB	LB		LB	324 LB	LB	LB							
					SF	SF	EA.	SF				FT			FT					LB			EA.	LB				EA.	EA.	LB					
		SUB TOTAL			46.97							12			12								2	324											
		GRAND TOTAL																																	

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."

TRAFFIC SIGN SUMMARY SHEET #3

PROJECT NAME: RANDOLPH
PROJECT NUMBER: BRF 0241 (29)

FILE NAME: /str5/88j096/sj096ts2.dgn
PROJECT LEADER: W. SYMONDS
DESIGNED BY: G. SHANGRAW
sj096ss3.i

PLOT DATE: 29-AUG-2006
DRAWN BY: G. SHANGRAW
CHECKED BY: T.SUMNER
SHEET 104 OF 135

STATE OF VERMONT
AGENCY OF TRANSPORTATION

TRAFFIC SIGN SUMMARY SHEET

MILEMARKER, STATION, OR SIGN NUMBER	SIGN LEGEND	SIGN DIMENSIONS EA	WIDTH (in)	HEIGHT (in)	NEW & SALVAGED SIGNS "A"	"B"	SALV SIGN	SALV TIS	EXIST POST RETAIN	EXIST POST SALVAGE	NEW SIGN POSTS NO. OF POSTS	FLANGED CHANNEL lb/ft 1.12	2.0	3.0	SQUARE STEEL (in) 1.75	2.0	2.5 lb/ft 1.88	2.16	3.35	ANCHOR	SLEEVE	TUBULAR ALUMINUM Ø (in) 3.0	4.0	4.0 MOD lb/ft 1.3	1.7	1.7	TUBULAR STEEL Ø (in) FOUNDATION	3.0	3.5	4.0	5.0 lb/ft 7.6	9.0	10.8	14.6	W-SHAPE STEEL FTG. SIZE 24"	30"	WEIGHT	POST SIZE	SIGN REMOVED & REUSED	REMARKS	SIGN DETAIL DETAIL ON SHEET NUMBER	STD. SHEET NUMBER
											OPTION ITEMS																																
50+84	TO	1	24	12	2.00																																					E-135
	INTERSTATE 89	1	24	24	3.20																																					E-135
		1	21	15	2.19																																					E-135
	SOUTH	1	24	12	2.00																																					E-136B
	VERMONT 12	1	24	24	4.00																																					E-136B
		1	21	15	2.19																																					E-136B
	H	1	24	24	4.00																																					
		1	24	6	1.00																																					E-132
																																									E-132
51+00	NO PARKING THIS SIDE OF STREET	1	24	30	5.00						1			13		13			X																							
51+43	YIELD	1	36	36	3.90						1			14		14			X																							
												FT	FT	27 FT	FT	27 FT	FT		EA	LB	LB	LB		LB	LB	LB	LB													
	SF	SF	EA.	SF			FT				FT				LB			EA.		LB					EA.	EA.	LB													
SUB TOTAL	29.48						27				27																														
GRAND TOTAL	152.39						128				128							6		801																				

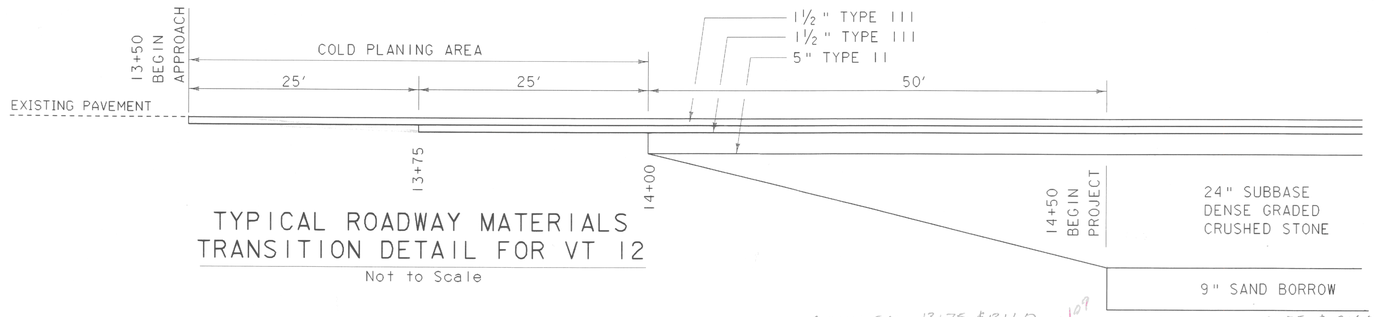
FINAL POST LENGTHS ARE TO BE DETERMINED IN THE FIELD. POST SIZES ARE COMPUTED BASED ON INFORMATION FURNISHED ON THE STANDARD SHEETS AND THE TRAFFIC & SAFETY DIVISION'S "SIGN POST DESIGN GUIDELINE."

TRAFFIC SIGN SUMMARY SHEET #4

PROJECT NAME: RANDOLPH
PROJECT NUMBER: BRF 0241(29)

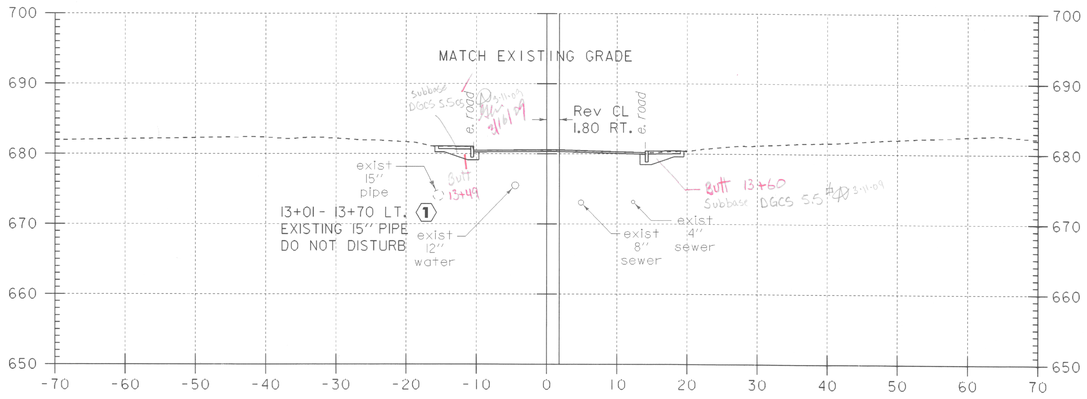
FILE NAME: /str5/88j096/sj096ts2.dgn
PROJECT LEADER: W. SYMONDS
DESIGNED BY: G. SHANGRAW
sj096ss4.i

PLOT DATE: 29-AUG-2006
DRAWN BY: G. SHANGRAW
CHECKED BY: T. SUMNER
SHEET 105 OF 135

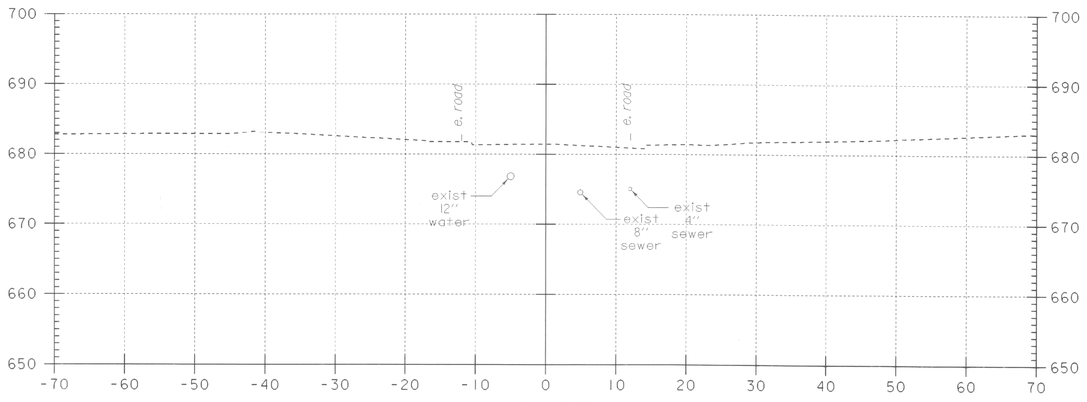


TYPICAL ROADWAY MATERIALS TRANSITION DETAIL FOR VT 12

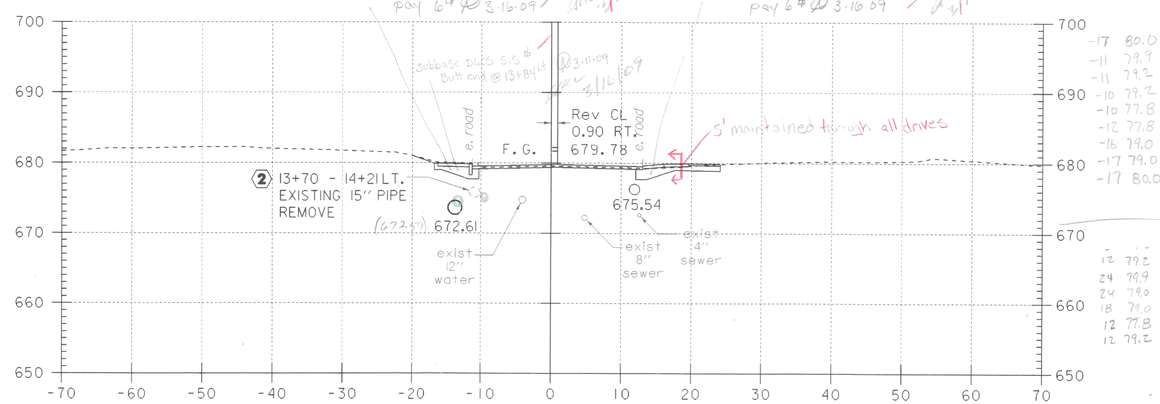
Not to Scale



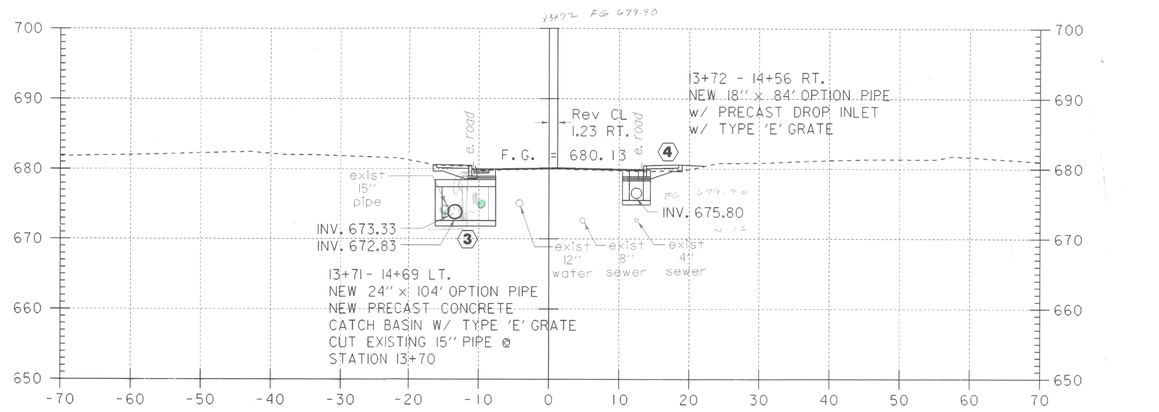
13+50
BEGIN
APPROACH



13+25



13+75



13+66

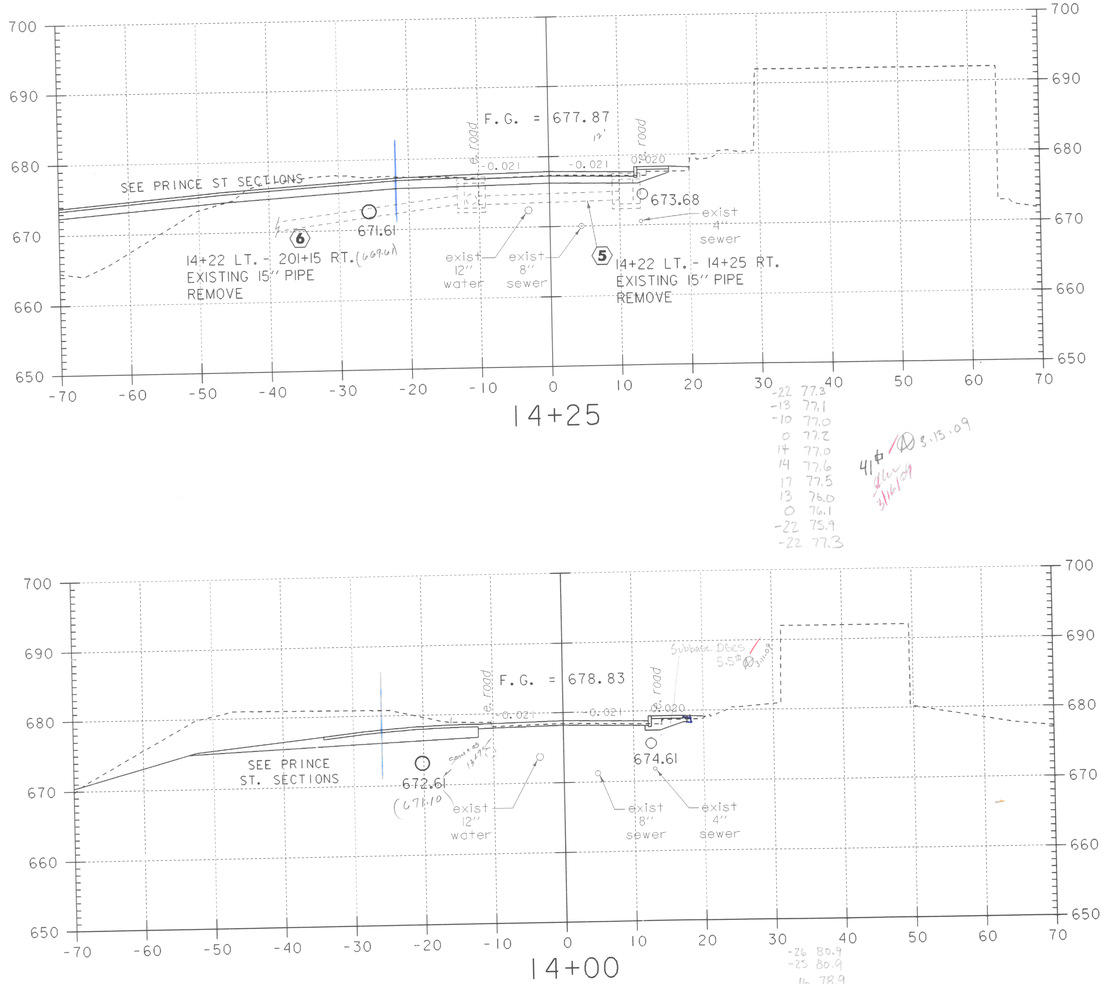
MAINLINE SECTIONS STA. 13+25 – STA. 13+75

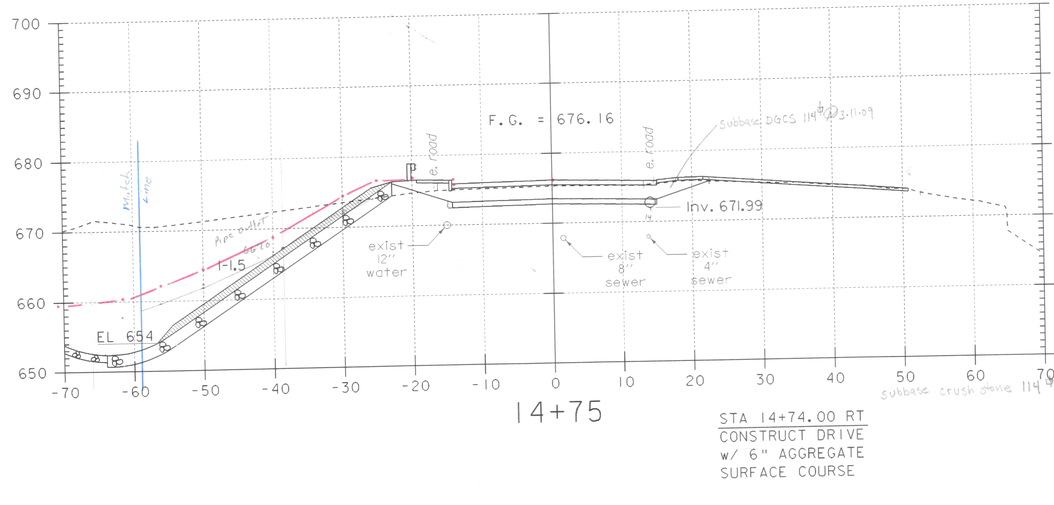
SCALE 1" = 10'-0

PROJECT NAME:	RANDOLPH
PROJECT NUMBER:	BRF 0241(29)

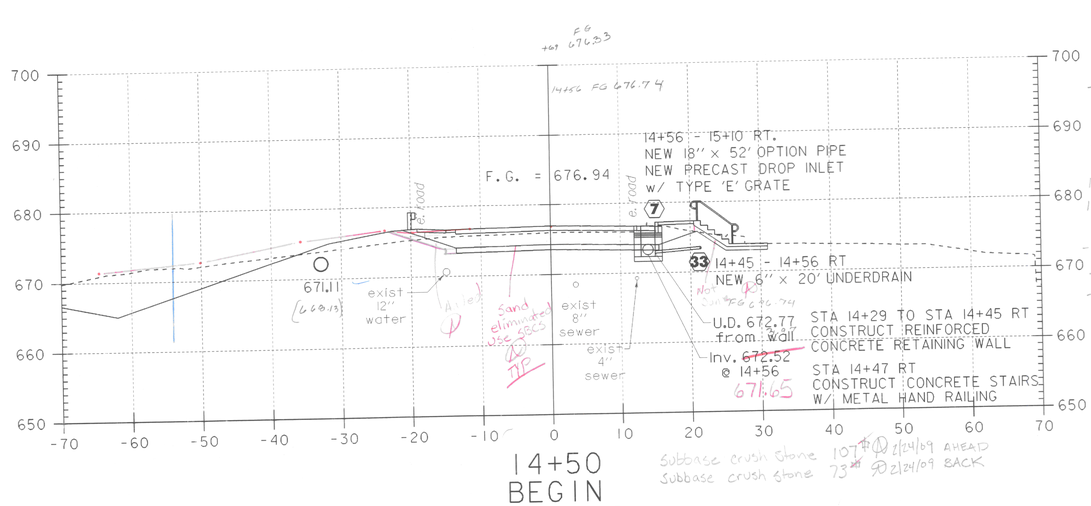
FILE NAME: /st~5/88j096/sj096m1x.dgn
PROJECT LEADER: W. SYMONDS
DESIGNED BY: W.B. SYMONDS
sj096m11.i

PLOT DATE: 29-AUG-2006
DRAWN BY: G. SHANGRAW
CHECKED BY: T. SUMNER
SHEET 110 OF 135





STA 14+74.00 RT
CONSTRUCT DRIVE
w/ 6" AGGREGATE
SURFACE COURSE



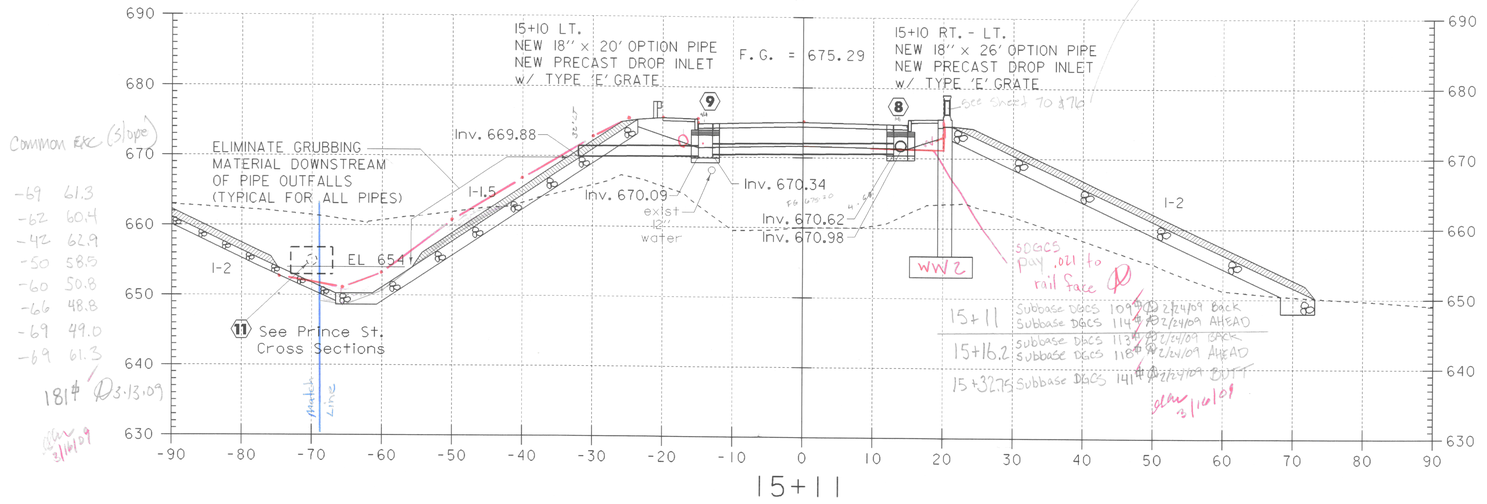
SCALE 1" = 10'-0

MAINLINE SECTIONS
STA. 14+00 – STA. 14+75

PROJECT NAME:	RANDOLPH
PROJECT NUMBER:	BRF 0241 (29)

FILE NAME: /str5/88j096/sj096mlx.dgn
PROJECT LEADER: W. SYMONDS
DESIGNED BY: W.B. SYMONDS
sj096m12.i

PLOT DATE: 29-AUG-2006
DRAWN BY: G. SHANGRAW
CHECKED BY: T. SUMNER
SHEET 111 OF 135



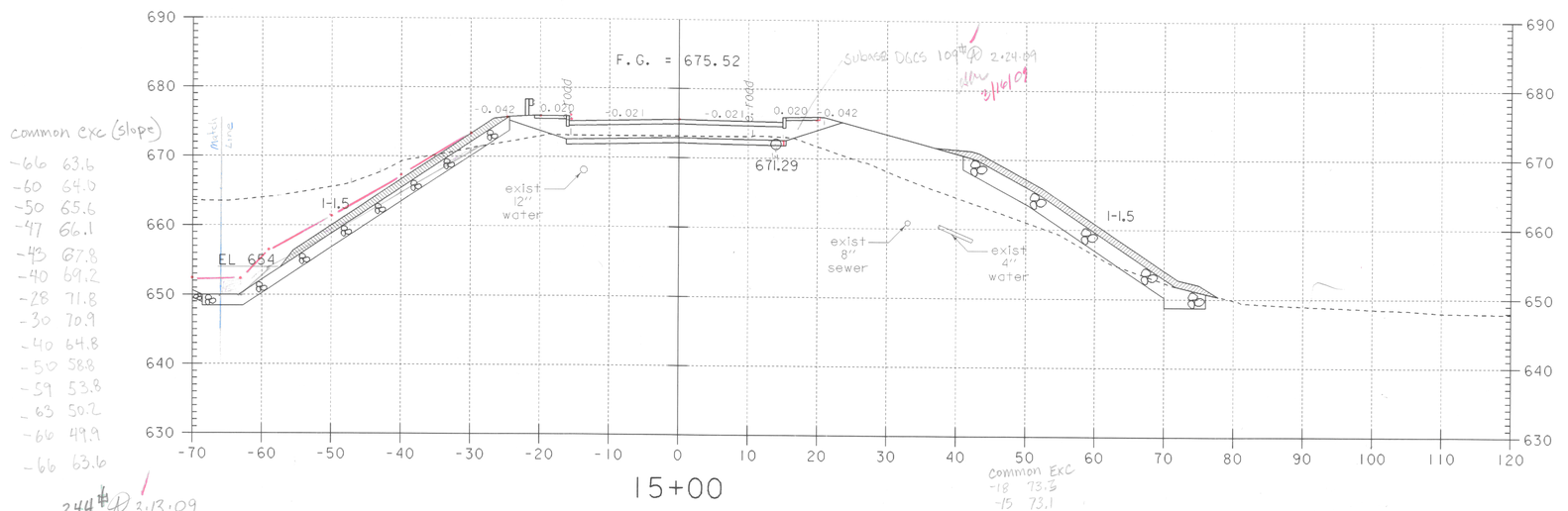
15+11

Subbase DGCS deduct Approach slab

15" slab minus 8" pavement = 7" into subbase

Slab width = 30' slab length = 15+14 to 15+32.75 = 18.75'

0.58' x 30' x 18.75' / 27 = 12.15 CY @ 2/24/09 JAW 3/16/09



15+00

MAINLINE SECTIONS
STA. 15+00 – STA. 15+11

SCALE 1" = 10'-0
10 0 10

PROJECT NAME:	RANDOLPH
PROJECT NUMBER:	BRF 0241 (29)
FILE NAME: /str5/88j096/sj096mlx.dgn	PLOT DATE: 29-AUG-2006
PROJECT LEADER: W. SYMONDS	DRAWN BY: G. SHANGRAW
DESIGNED BY: W.B. SYMONDS	CHECKED BY: T. SUMNER
sj096ml3.i	SHEET 112 OF 135

-0.6452 PVC	17+40.00	673.45
PVI	18+10.00	673.00
+2.8579 PVT	18+80.00	675.00

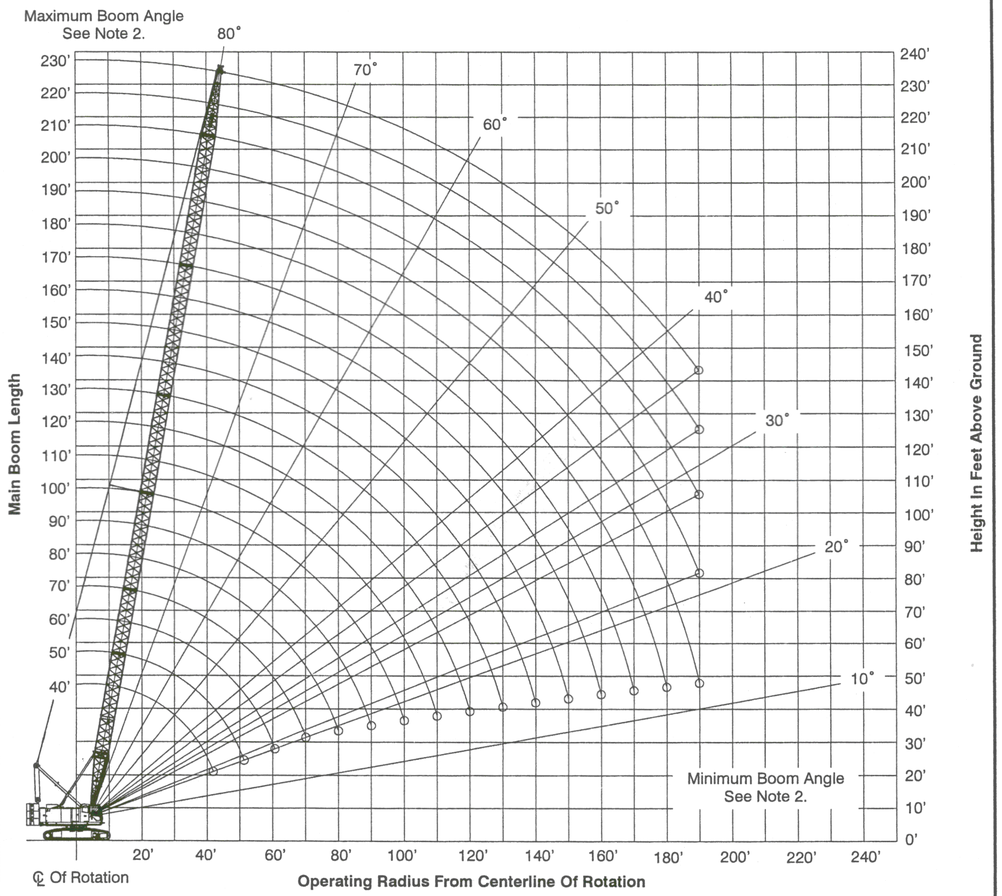
$$M = \frac{1}{2}\left(\frac{673.45 + 675.00}{2} - 673.00\right) = 0.61$$

$$0.61 \div 70^2 = 0.000125$$

			VC GRADE
17+40	673.45	—	673.45
+50	673.39	+0.01	673.40
+60	673.32	+0.05	673.37
+70	673.26	+.11	673.37
+80	673.13 (19)	+0.20	673.39
+90	673.07 (12)	+0.31	673.43
18+00	673.06	+0.45	673.51
+10	673.00	+0.61	673.61
+20	673.29	+0.45	673.74
+30	673.57	+.031	673.88
+40	673.85	+0.20	674.05
+50	674.14	+0.11	674.25
+60	674.43	+0.05	674.48
+70	674.71	+0.01	674.72
+80	675.00	—	675.00

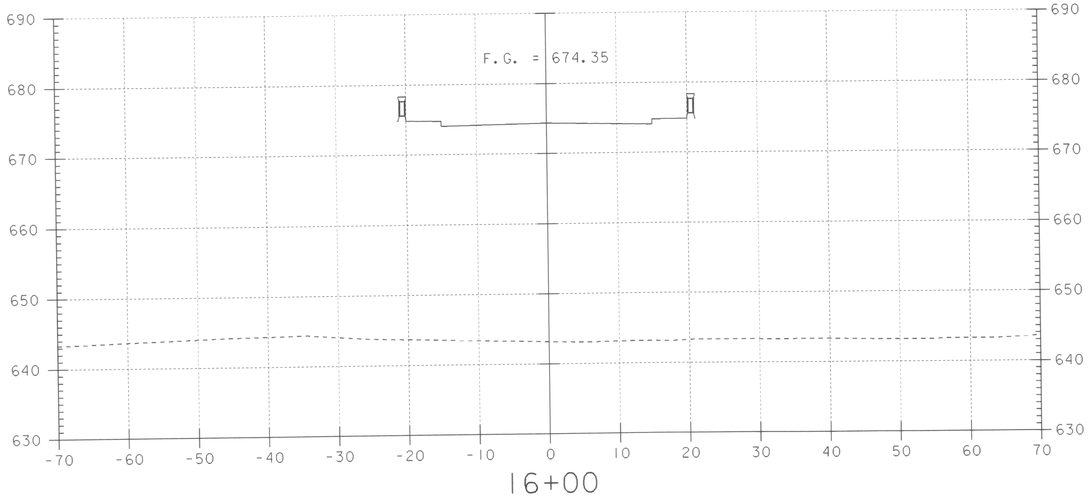
Working Range Diagram

40’ To 230’ Main Boom

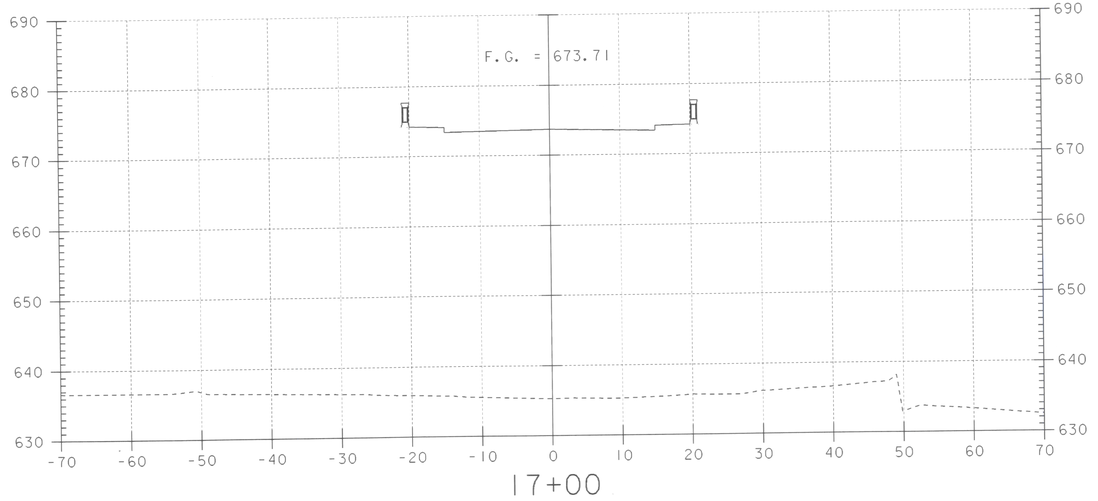


Notes:

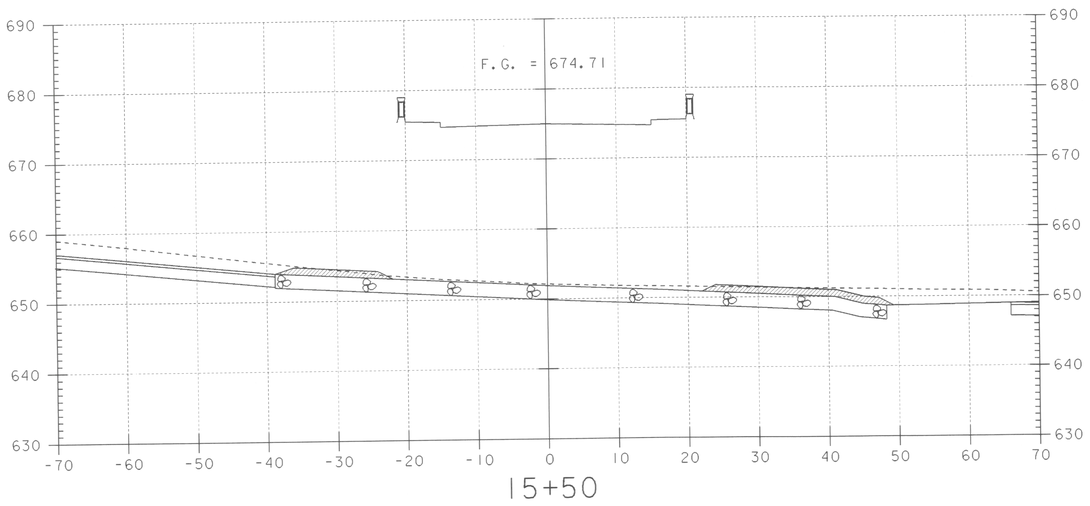
1. **Boom geometry shown is for unloaded condition and crane standing level on firm supporting surface. Boom deflection, subsequent radius, and boom angle change must be accounted for when applying load to hook.**
2. **Maximum and minimum boom angles are equal to the values listed in the capacity chart for each boom length.**



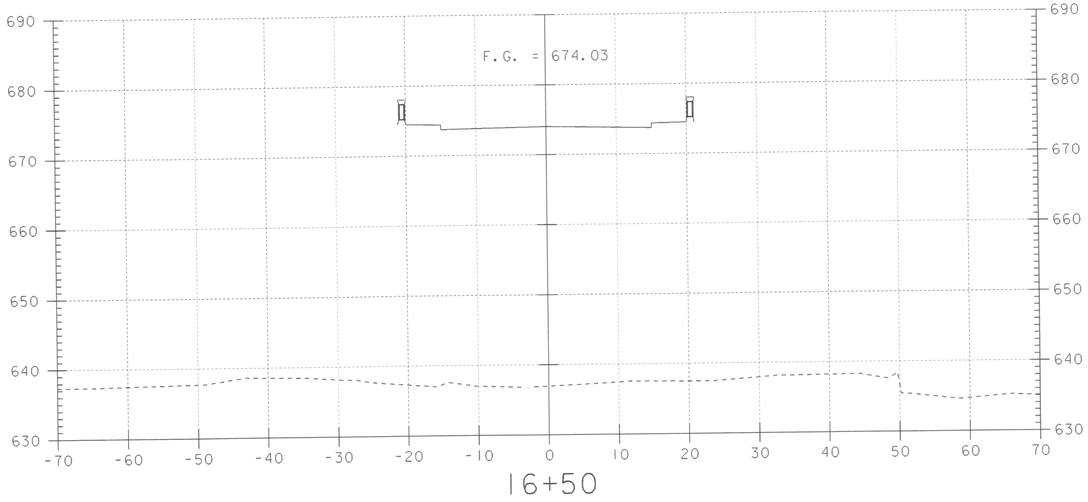
16+00



17+00



15+50



16+50

MAINLINE SECTIONS
STA. 15+50 – STA. 17+00

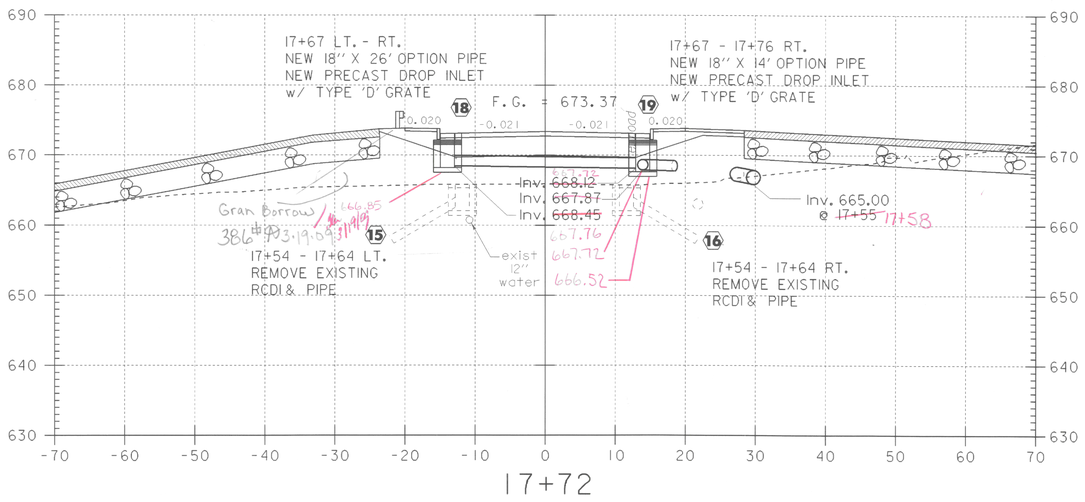
SCALE 1" = 10'-0
10 0 10

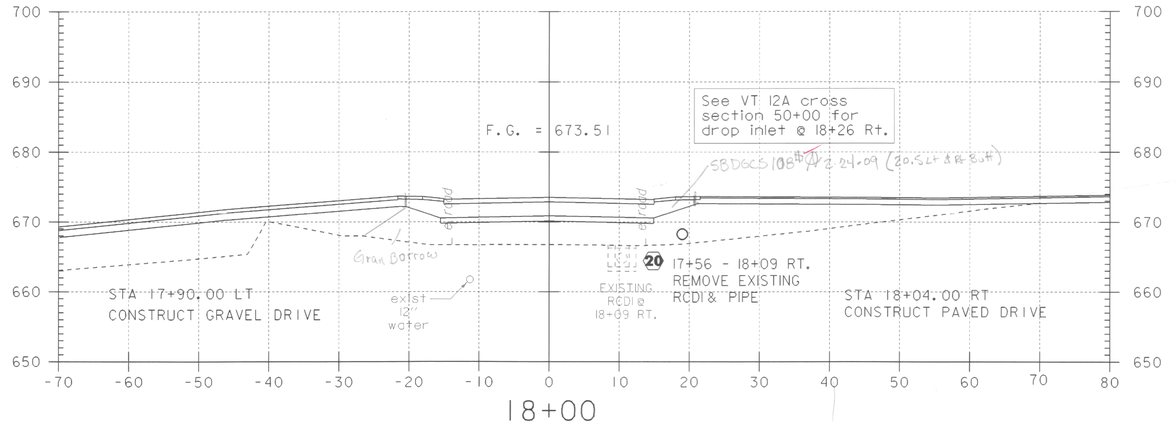
PROJECT NAME:	RANDOLPH
PROJECT NUMBER:	BRF 0241(29)

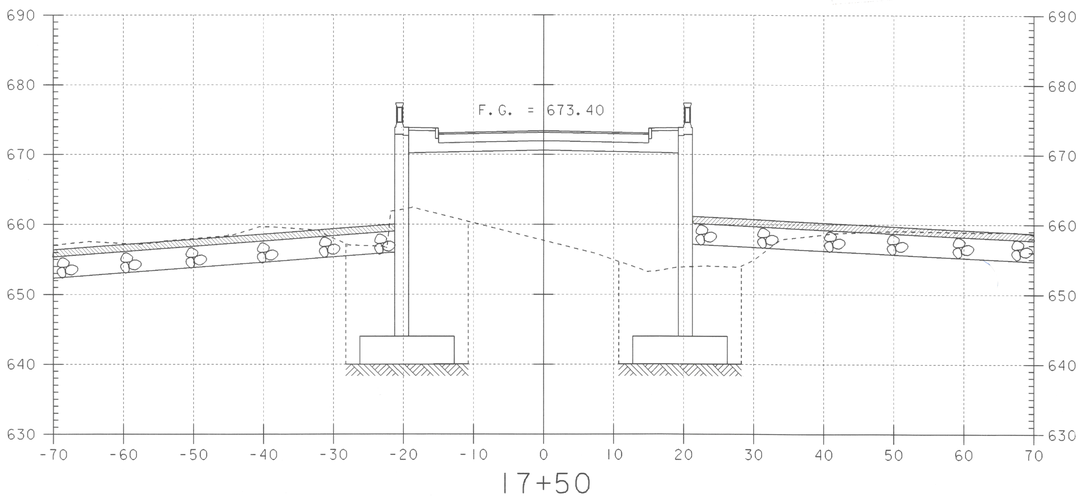
FILE NAME: /str5/88j096/sj096m1x.dgn
PROJECT LEADER: W. SYMONDS
DESIGNED BY: W.B. SYMONDS
sj096m14.i

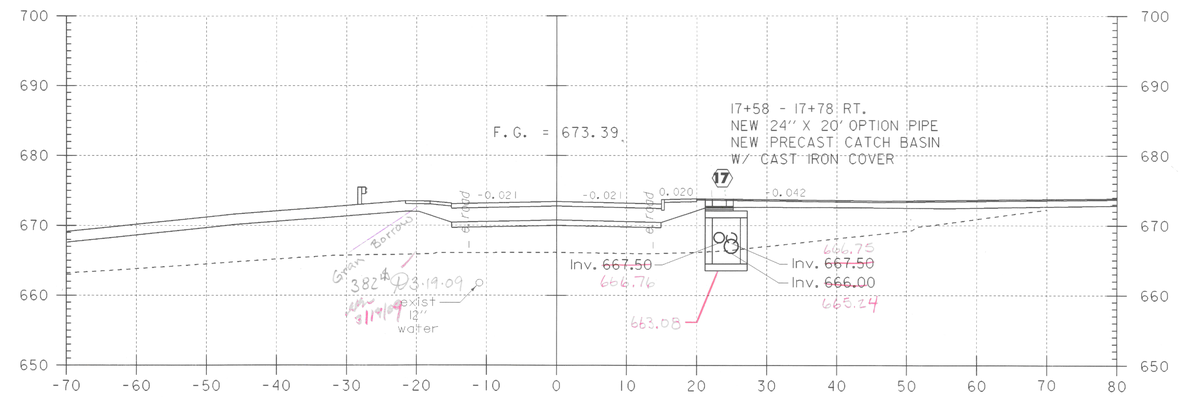
PLOT DATE: 29-AUG-2006
DRAWN BY: G. SHANGRAW
CHECKED BY: T. SUMNER
SHEET 113 OF 135

Subbase Dense Graded Crushed Stone
17+39.25 141# Bdl @ Abut 2
End WW 17+69 116# Back
125# Ahead
End 4' taper 17+89.25 109#
offer 3/16/09







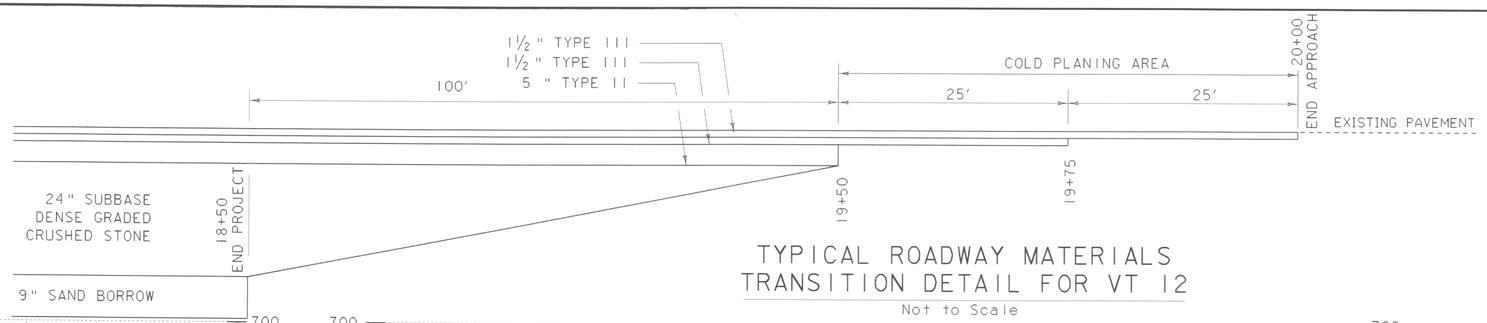


MAINLINE SECTIONS
STA. 17+50 – STA. 18+00

SCALE 1" = 10'-0
10 0 10

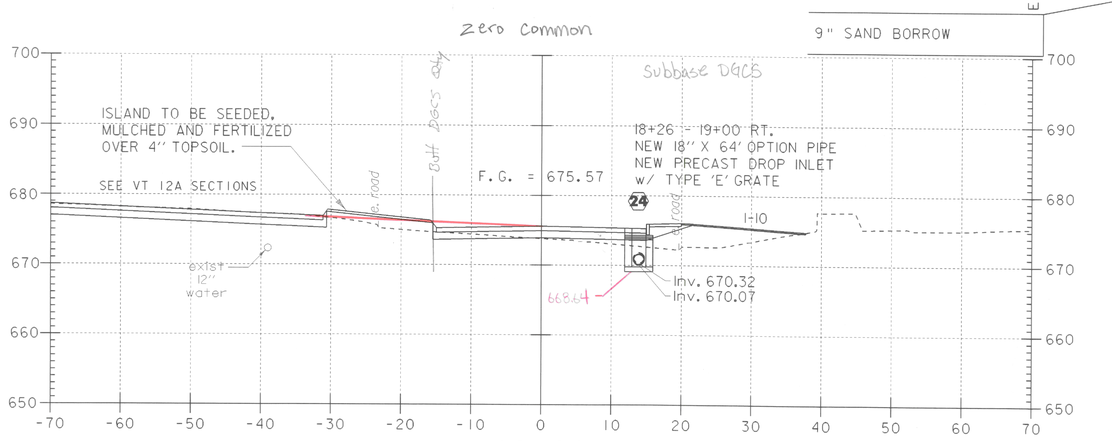
PROJECT NAME:	RANDOLPH
PROJECT NUMBER:	BRF 0241(29)

FILE NAME: /str5/88j096/sj096m1x.dgn	PLOT DATE: 29-AUG-2006
PROJECT LEADER: W. SYMONDS	DRAWN BY: G. SHANGRAW
DESIGNED BY: W.B. SYMONDS	CHECKED BY: T. SUMNER
sj096m15.i	SHEET 114 OF 135

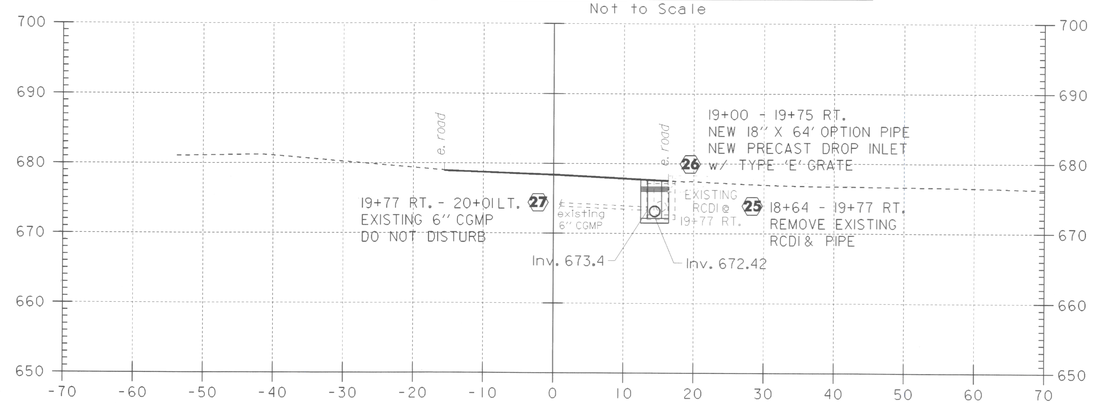


TYPICAL ROADWAY MATERIALS TRANSITION DETAIL FOR VT 12

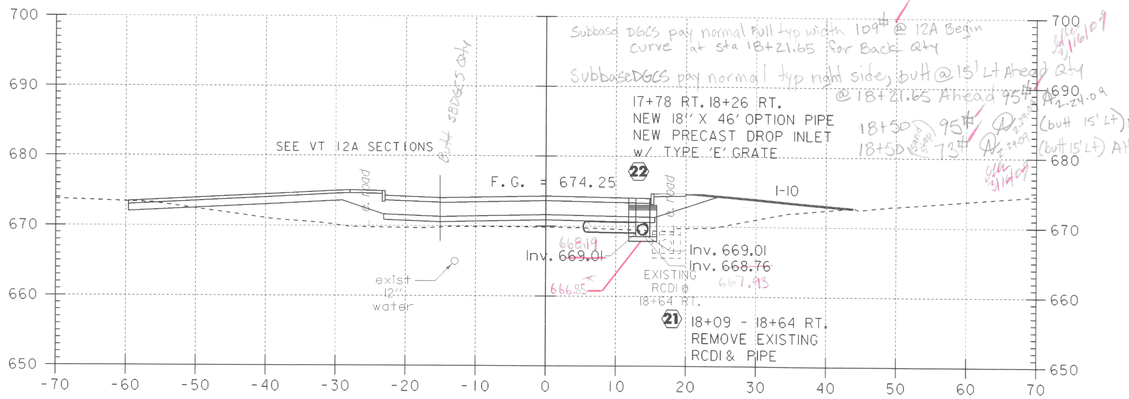
Not to Scale



19+00

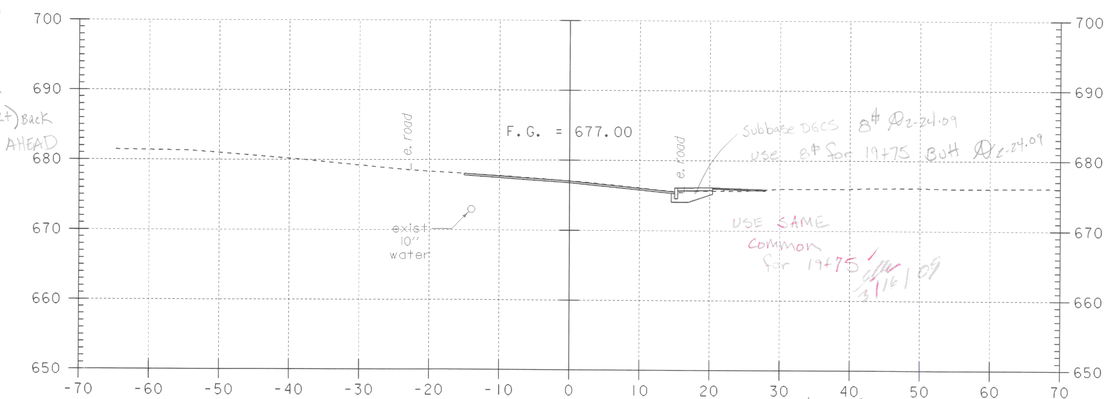


20+00
END
APPROACH



18+50
END
PROJECT

* DG @ 18+26 = 667.90



19+50

Use 19+30 as zero common

Common	Exc 19+50 & 19+75
14.5	75.5
16.0	75.5
16.0	75.8
20.5	75.7
20.5	75.0
17.0	74.0
14.5	74.0
14.5	75.5

8# @ 3.13.09

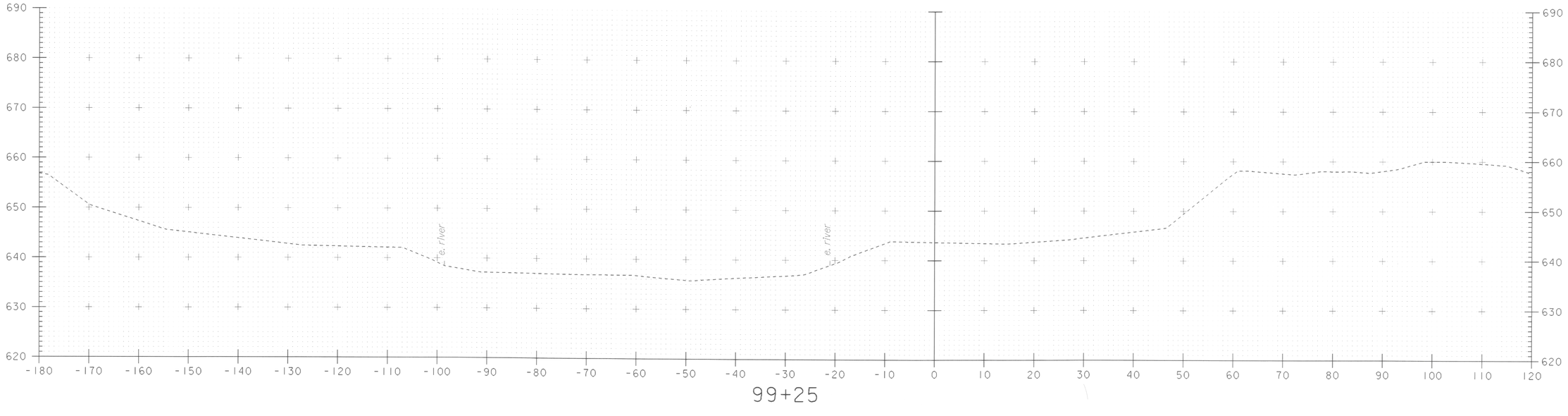
SCALE 1" = 10'-0
10 0 10

MAINLINE SECTIONS STA. 18+50 – STA. 20+00

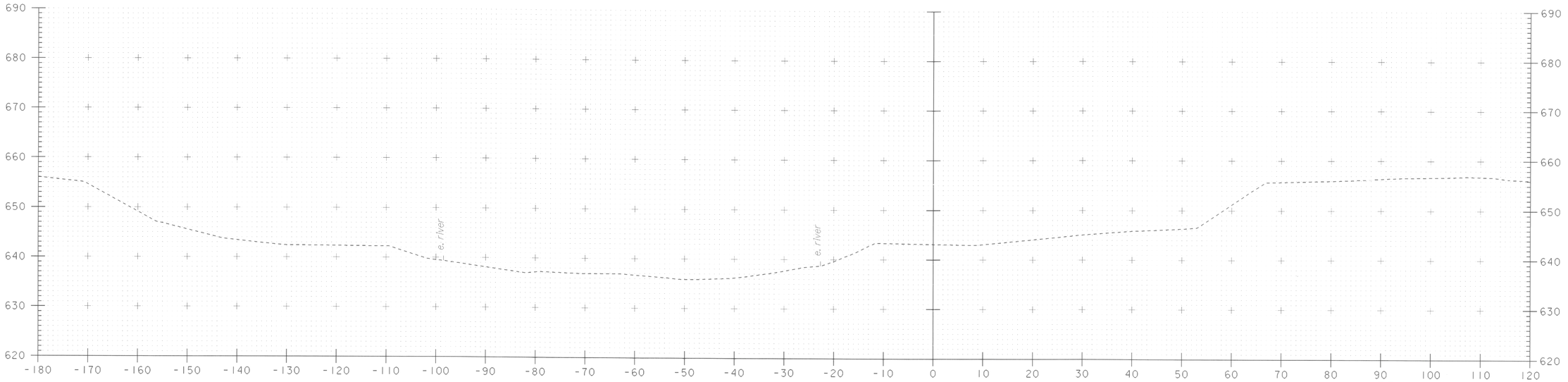
PROJECT NAME:	RANDOLPH
PROJECT NUMBER:	BRF 0241(29)

FILE NAME: /str5/88j096/sj096mlx.dgn
PROJECT LEADER: W. SYMONDS
DESIGNED BY: W.B. SYMONDS
sj096m16.i

PLOT DATE: 29-AUG-2006
DRAWN BY: G. SHANGRAW
CHECKED BY: T. SUMNER
SHEET 115 OF 135



99+25



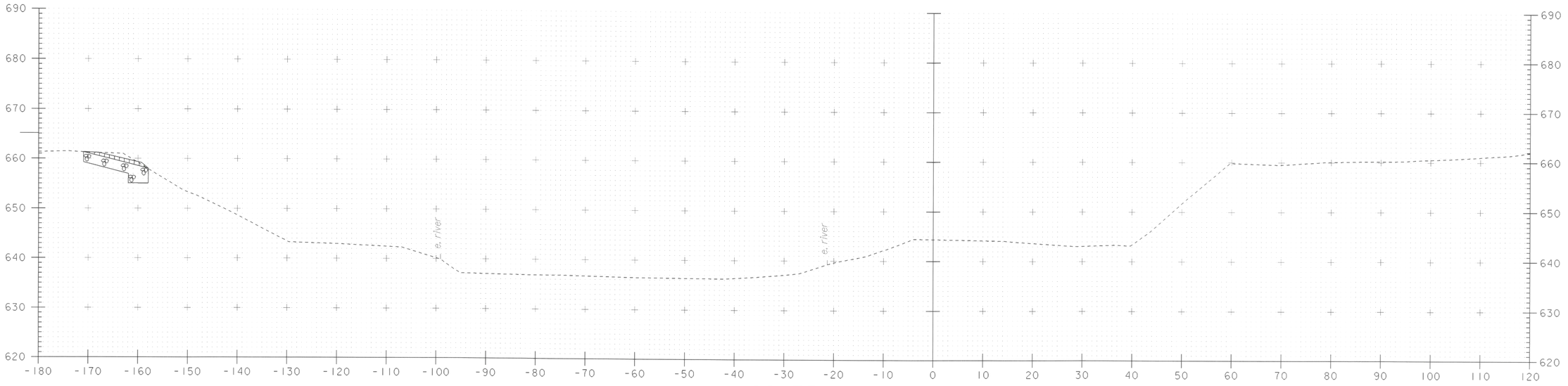
99+00

CHANNEL SECTIONS
STA 99+00 – STA 99+25

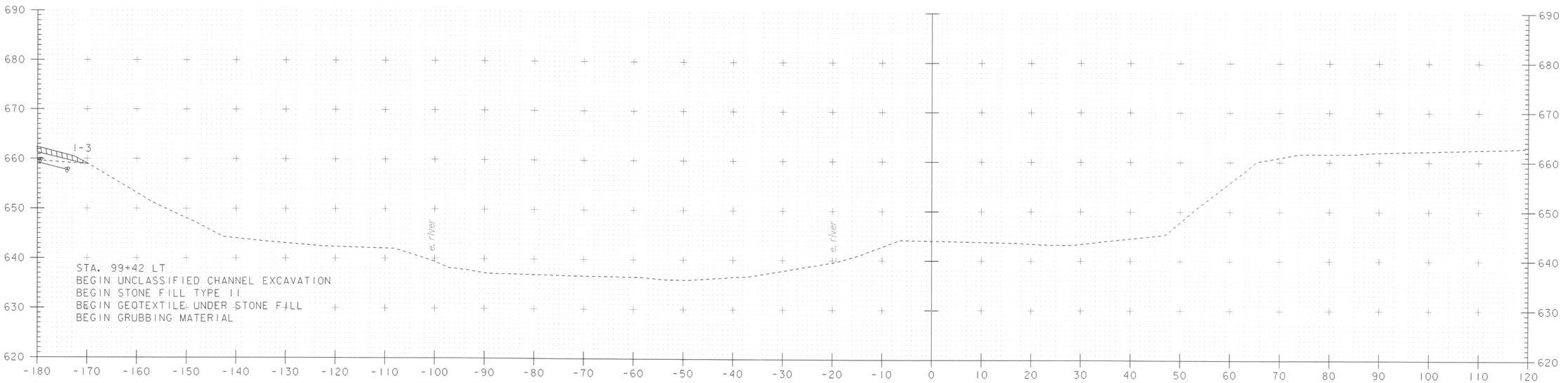
SCALE 1" = 10'-0
10 0 10

PROJECT NAME:	RANDOLPH
PROJECT NUMBER:	BRF 0241(29)

FILE NAME: /str5/88j096/sj096chx.dgn	PLOT DATE: 29-AUG-2006
PROJECT LEADER: W. SYMONDS	DRAWN BY: G. SHANGRAW
DESIGNED BY: W.B. SYMONDS	CHECKED BY: T. SUMNER
sj096cs1.i	SHEET 116 OF 135



99+75



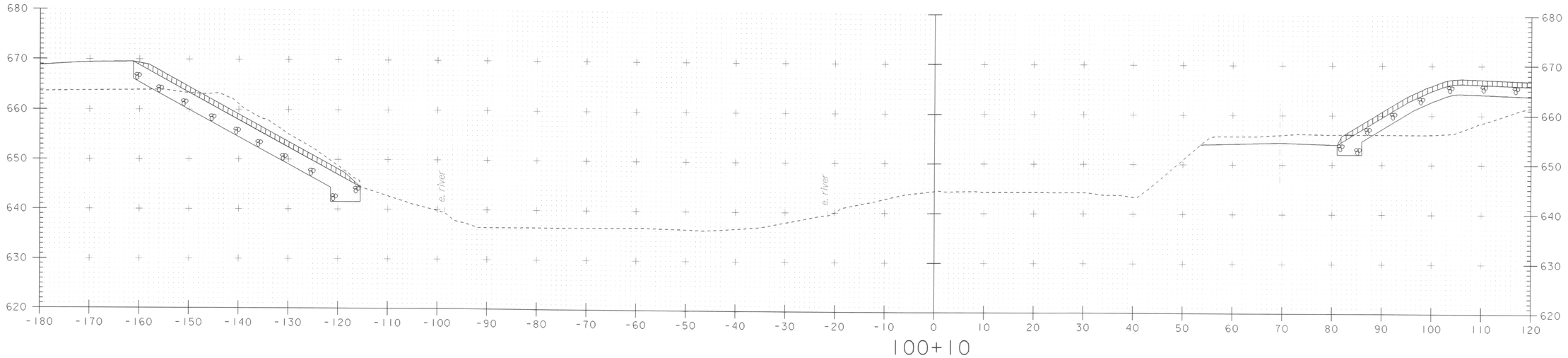
99+50

CHANNEL SECTIONS
STA 99+50 – STA 99+75

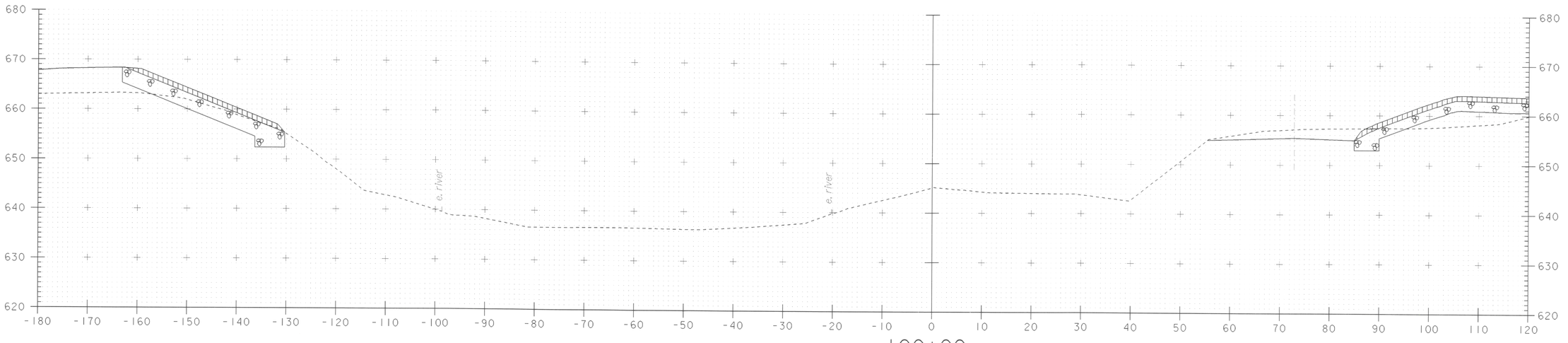
SCALE 1" = 10'-0
10 0 10

PROJECT NAME:	RANDOLPH
PROJECT NUMBER:	BRF 0241(29)

FILE NAME: /str5/88j096/sj096chx.dgn	PLOT DATE: 29-AUG-2006
PROJECT LEADER: W. SYMONDS	DRAWN BY: G. SHANGRAW
DESIGNED BY: W.B. SYMONDS	CHECKED BY: T. SUMNER
sj096cs2.i	SHEET 117 OF 135



100+10



100+00

STA. 99+87 LT
END STONE FILL, TYPE II
BEGIN STONE FILL TYPE III

STA. 99+82 RT
BEGIN UNCLASSIFIED CHANNEL EXCAVATION
BEGIN STONE FILL TYPE III
BEGIN GEOTEXTILE UNDER STONE FILL
BEGIN GRUBBING MATERIAL

SCALE 1" = 10'-0
10 0 10

CHANNEL SECTIONS
STA 100+00 – STA 100+10

PROJECT NAME:	RANDOLPH
PROJECT NUMBER:	BRF 0241(29)

FILE NAME: /str5/88j096/sj096chx.dgn	PLOT DATE: 29-AUG-2006
PROJECT LEADER: W. SYMONDS	DRAWN BY: G. SHANGRAW
DESIGNED BY: W.B. SYMONDS	CHECKED BY: T. SUMNER
sj096cs3.i	SHEET 118 OF 135

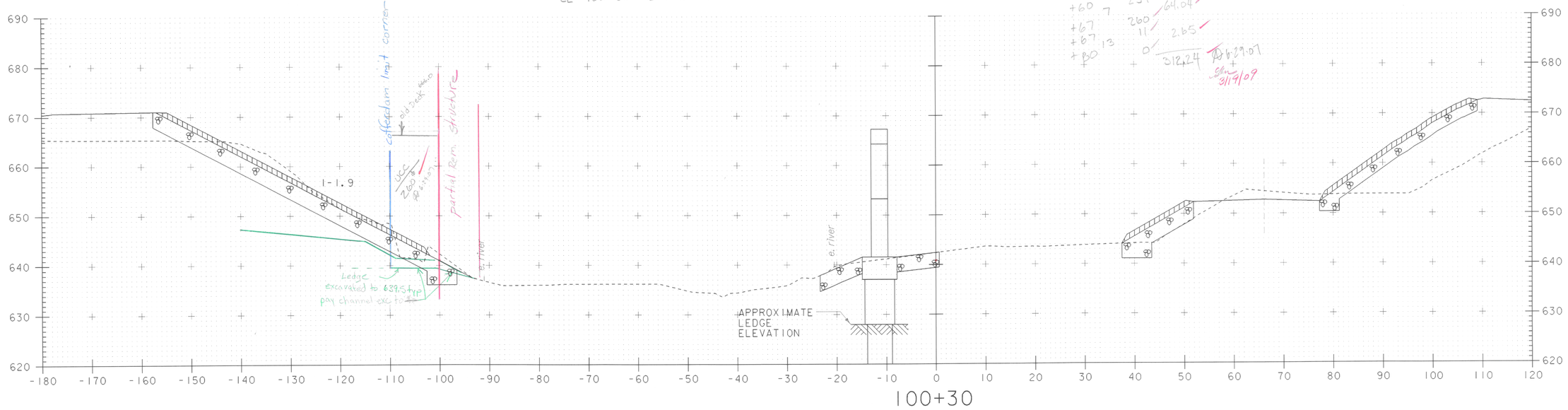
unclassified excav

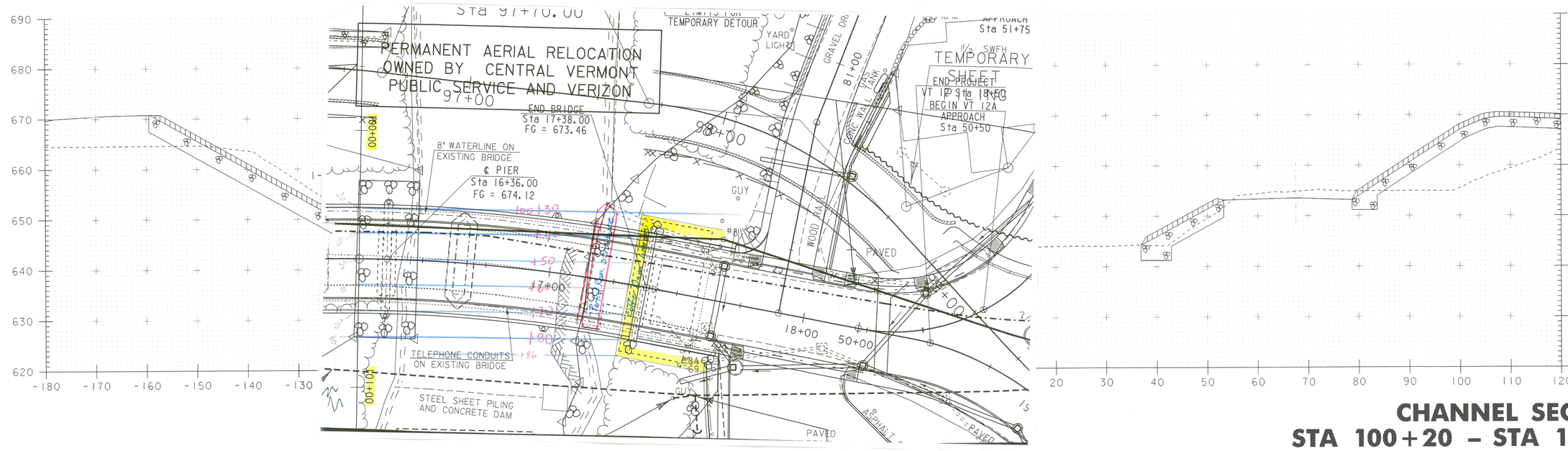
USE 100+30 as butt Ahead* 260# 6.29.07

*NOTE All excavation before 100+30 see Drive Sections - Paid a common EXC.
CL 100+30 = Drive sta. 80+28

sta	Dist	Area	CY
100+30	10	260	86.67
+40	10	208	77.04
+50	10	208	81.85
+60	7	234	64.04
+67	11	260	2.65
+67	13	0	
+80		312.24	

Ad 6.29.07
Sht 3/19/09

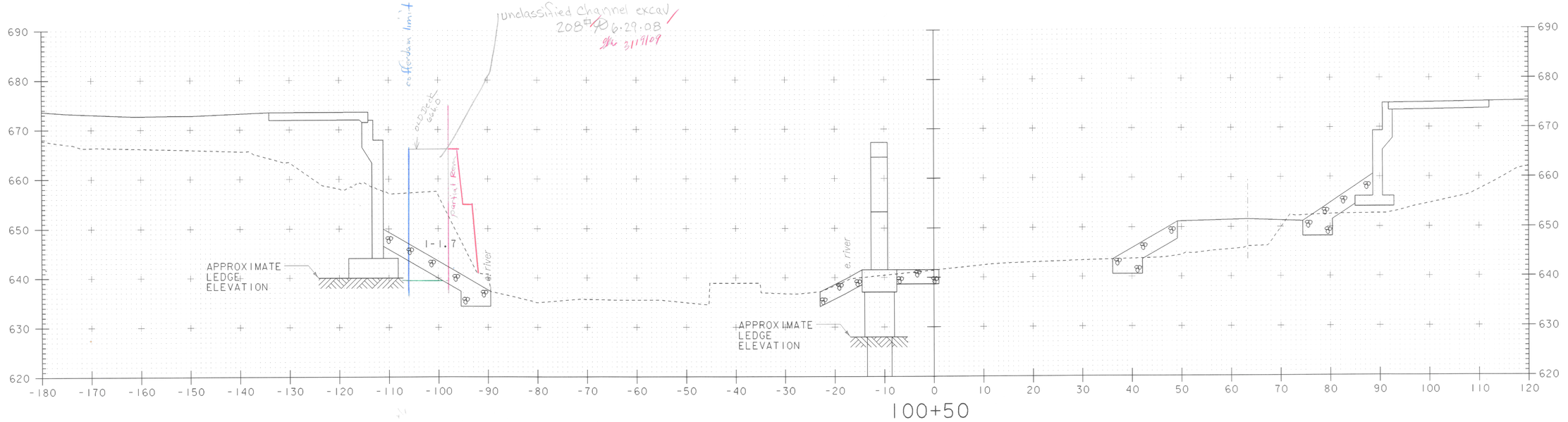




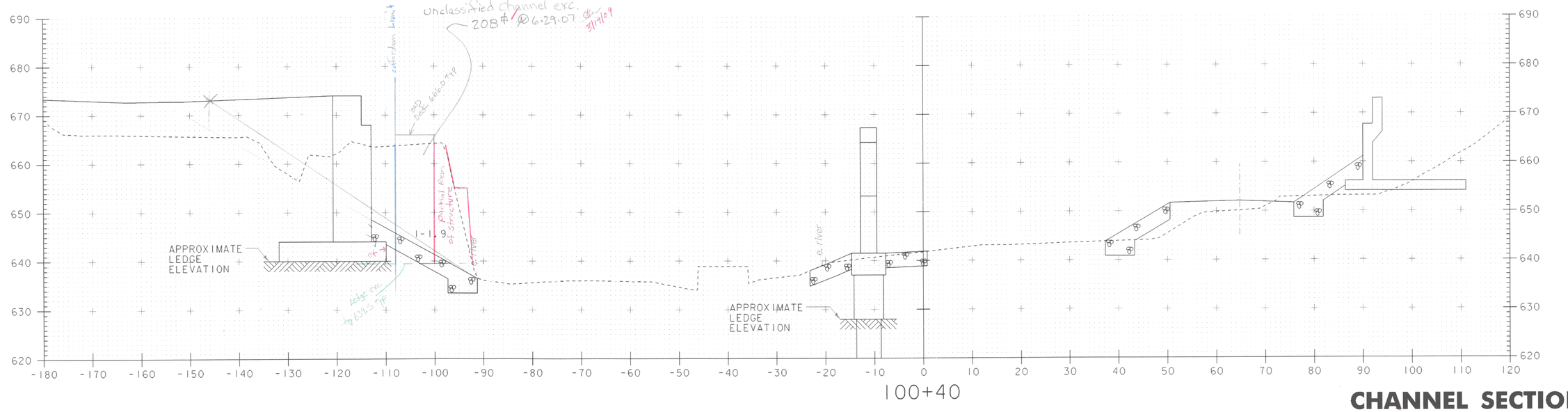
CHANNEL SECTIONS
STA 100+20 – STA 100+30

SCALE 1" = 10'-0
10 0 10

PROJECT NAME:	RANDOLPH
PROJECT NUMBER:	BRF 0241 (29)
FILE NAME: /str5/88j096/sj096chx.dgn	PLOT DATE: 29-AUG-2006
PROJECT LEADER: W. SYMONDS	DRAWN BY: G. SHANGRAW
DESIGNED BY: W.B. SYMONDS	CHECKED BY: T. SUMNER
sj096cs4.i	SHEET 119 OF 135



100+50



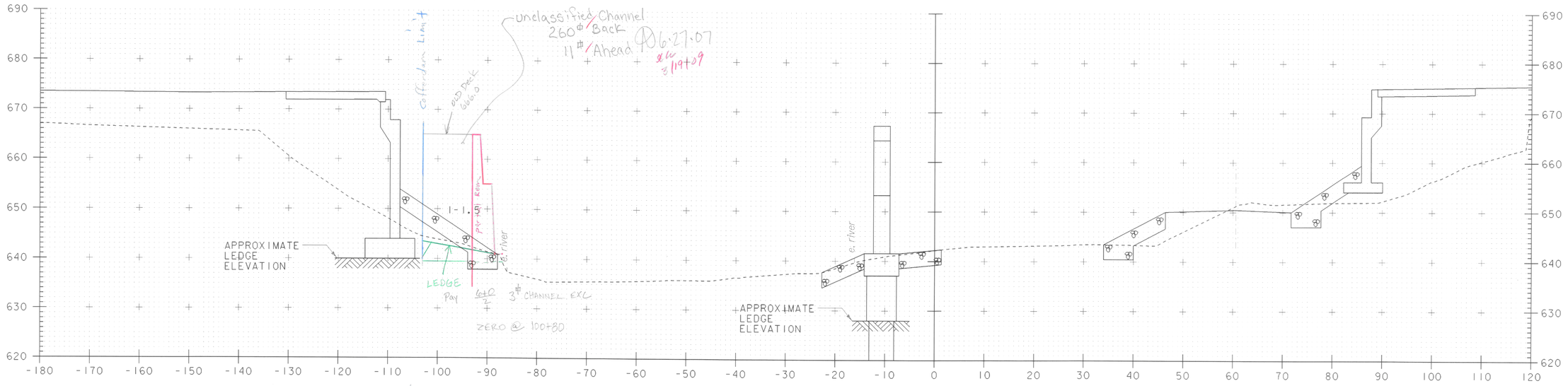
100+40

CHANNEL SECTIONS
STA 100+40 – STA 100+50

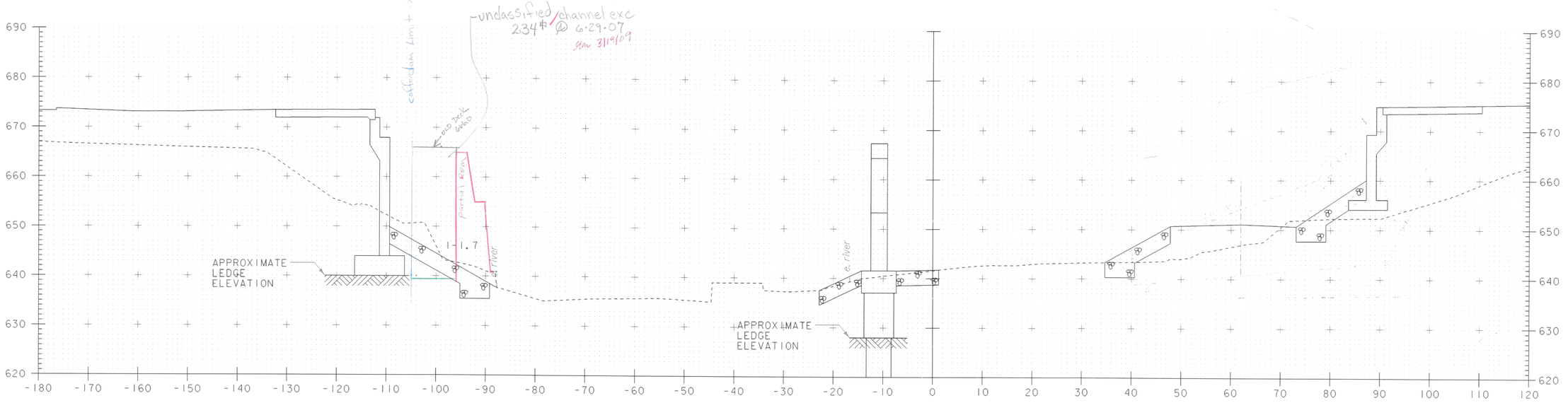
SCALE 1" = 10'-0

PROJECT NAME:	RANDOLPH
PROJECT NUMBER:	BRF 0241 (29)
FILE NAME: /str5/88j096/sj096chx.dgn	PLOT DATE: 29-AUG-2006
PROJECT LEADER: W. SYMONDS	DRAWN BY: G. SHANGRAW
DESIGNED BY: W.B. SYMONDS	CHECKED BY: T. SUMNER
sj096cs5. i	SHEET 120 OF 135

USE 100+67 butt Top elev 666.0 Back
USE original (dashed) line for Ahead
USE 100+76 End of partial rem @r



100+70



100+60

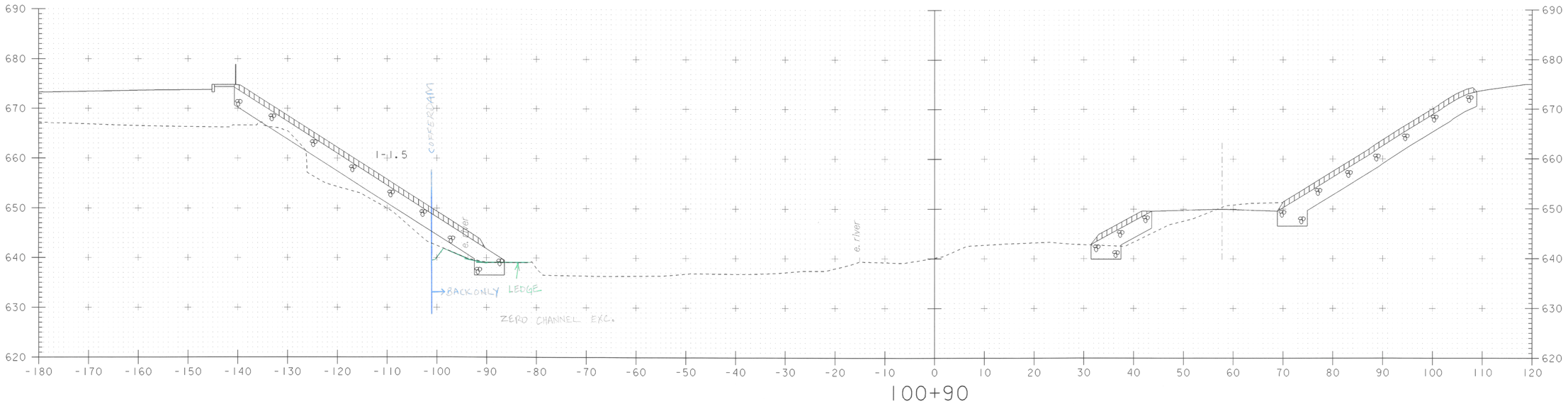
CHANNEL SECTIONS
STA 100+60 – STA 100+70

SCALE 1" = 10'-0
10 0 10

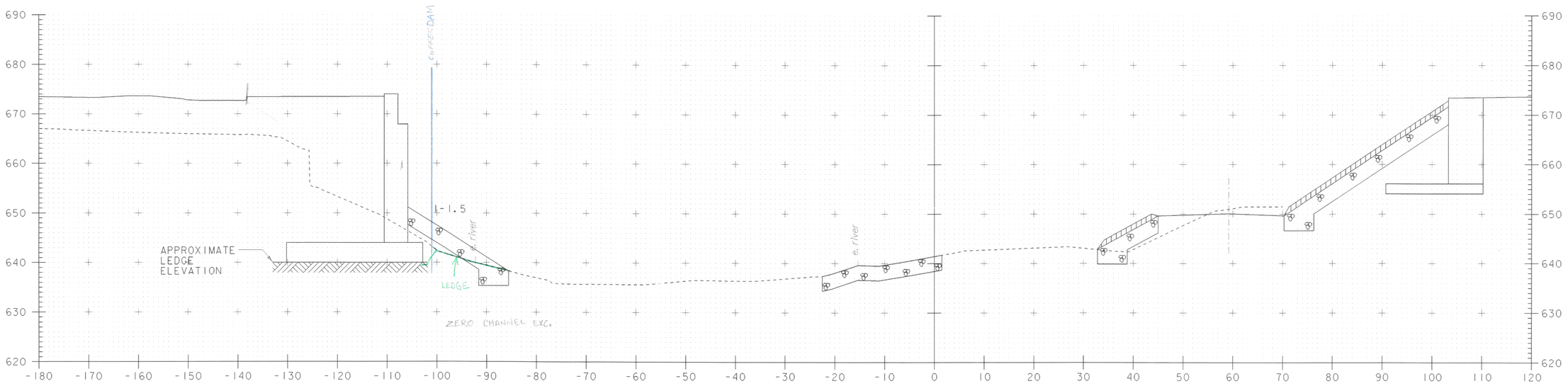
PROJECT NAME:	RANDOLPH
PROJECT NUMBER:	BRF 0241(29)

FILE NAME: /str5/88j096/sj096chx.dgn
PROJECT LEADER: W. SYMONDS
DESIGNED BY: W.B. SYMONDS
sj096cs6.i

PLOT DATE: 29-AUG-2006
DRAWN BY: G. SHANGRAW
CHECKED BY: T. SUMNER
SHEET 121 OF 135



100+90

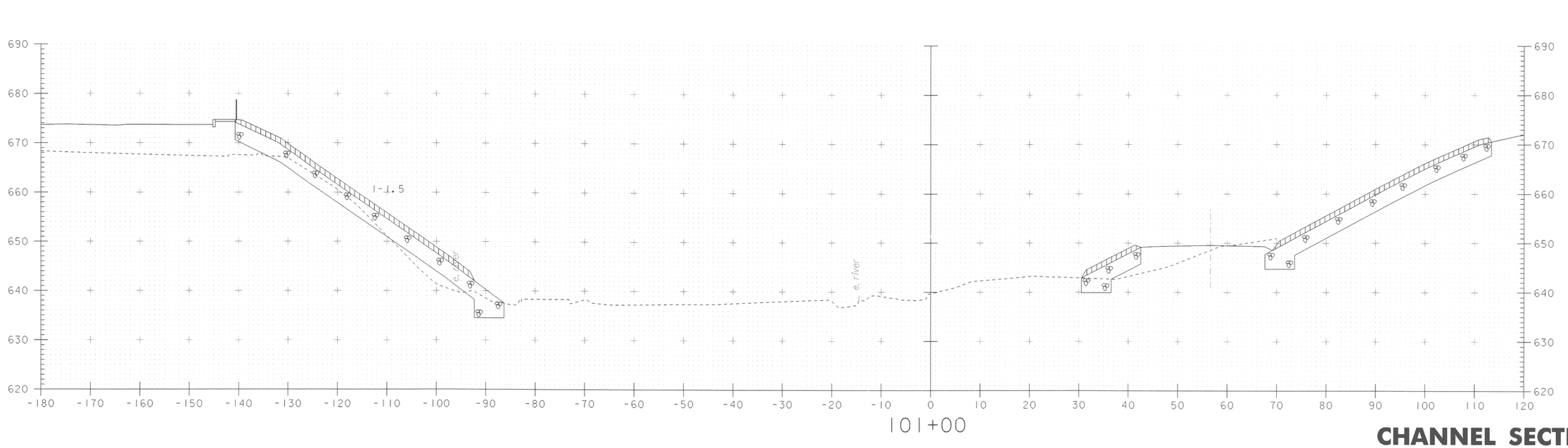


100+80

CHANNEL SECTIONS
STA 100+80 – STA 100+90

SCALE 1" = 10'-0
10 0 10

PROJECT NAME:	RANDOLPH
PROJECT NUMBER:	BRF 0241(29)
FILE NAME: /str5/88j096/sj096chx.dgn	PLOT DATE: 29-AUG-2006
PROJECT LEADER: W. SYMONDS	DRAWN BY: G. SHANGRAW
DESIGNED BY: W.B. SYMONDS	CHECKED BY: T. SUMNER
sj096cs7.i	SHEET 122 OF 135



CHANNEL SECTION STA 101+00

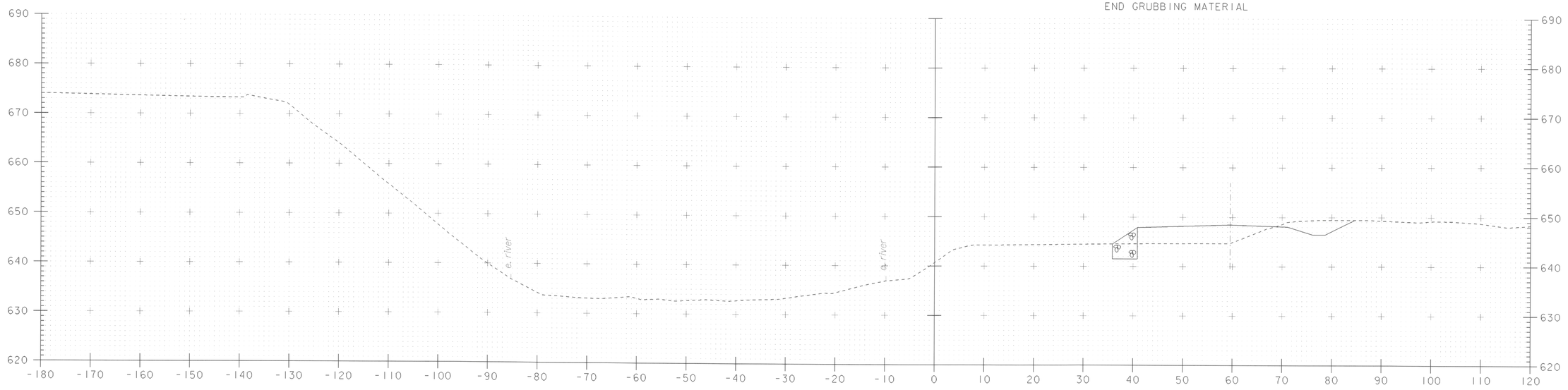
SCALE 1" = 10'-0

10 0 10

PROJECT NAME:	RANDOLPH
PROJECT NUMBER:	BRF 0241(29)

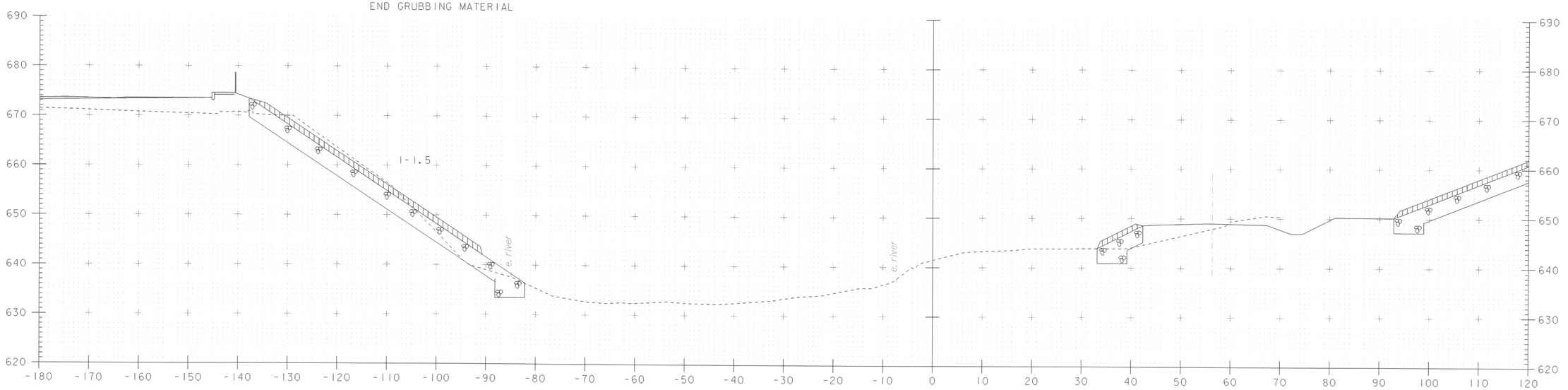
FILE NAME: /str5/88j096/sj096chx.dgn	PLOT DATE: 29-AUG-2006
PROJECT LEADER: W. SYMONDS	DRAWN BY: G. SHANGRAW
DESIGNED BY: W.B. SYMONDS	CHECKED BY: T. SUMNER
sj096cs8.i	SHEET 123 OF 135

STA. 101+55 RT
END UNCLASSIFIED CHANNEL EXCAVATION
END STONE FILL
END GEOTEXTILE UNDER STONE FILL
END GRUBBING MATERIAL



101+50

STA. 101+34 LT
END UNCLASSIFIED CHANNEL EXCAVATION
END STONE FILL
END GEOTEXTILE UNDER STONE FILL
END GRUBBING MATERIAL



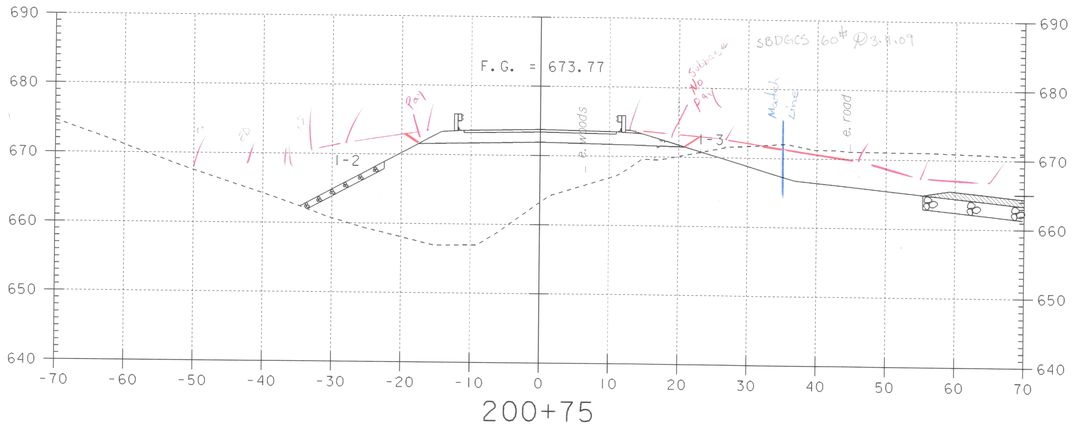
101+25

CHANNEL SECTIONS
STA 101+25 – STA 101+50

SCALE 1" = 10'-0
10 0 10

PROJECT NAME:	RANDOLPH
PROJECT NUMBER:	BRF 0241(29)

FILE NAME: /str5/88j096/sj096chx.dgn	PLOT DATE: 29-AUG-2006
PROJECT LEADER: W. SYMONDS	DRAWN BY: G. SHANGRAW
DESIGNED BY: W.B. SYMONDS	CHECKED BY: T. SUMNER
sj096cs9.i	SHEET 124 OF 135

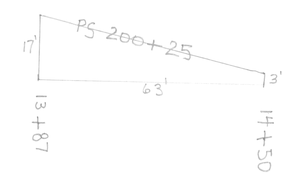


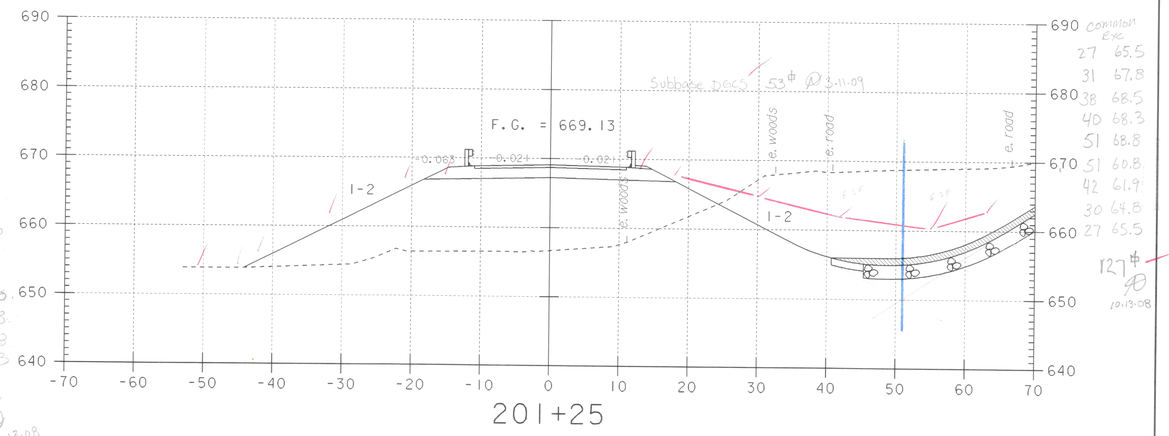
Common Exc
32 71.9
35 72.0
35 71.5
32 71.9
1# @ 10.13.08

Field Measured Qty for Mainline 13+87 to 14+50Lt @ Prince st 200+25
12' Lt
15' Lt

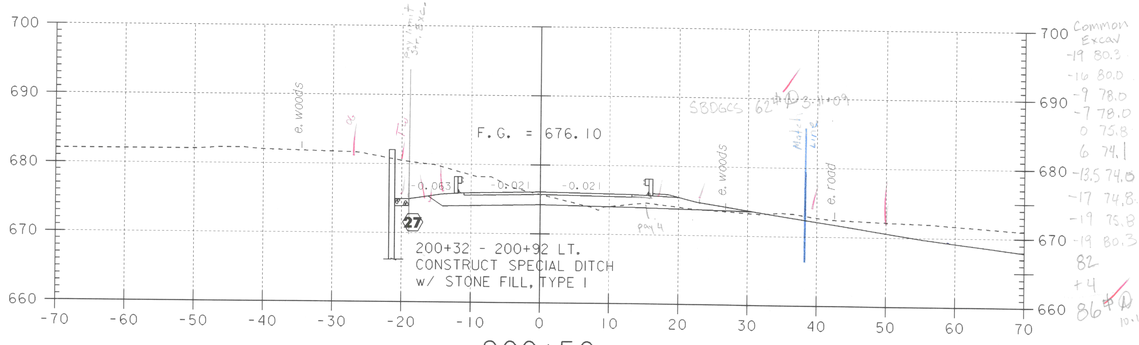
Subbase Depth 18"

17'+3' / 2 x 63' x 1.5' / 27 = 35.00 cy @ 10/31/07
@ 11/10/07

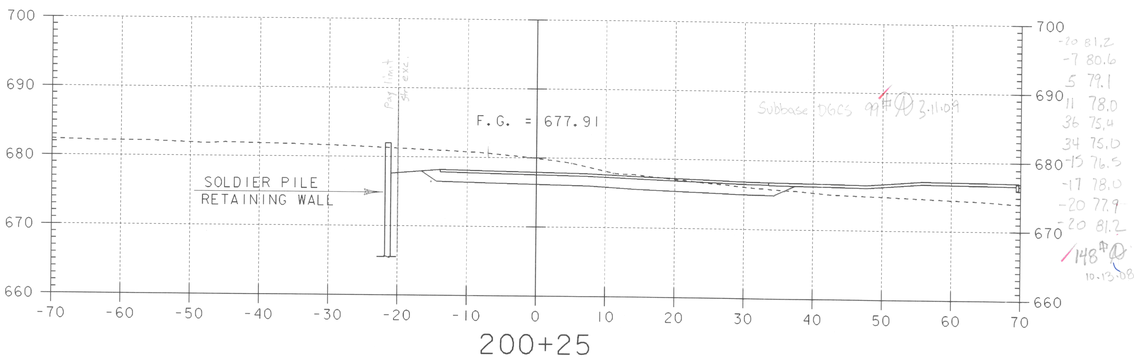




Common Exc
27 65.5
31 67.8
38 68.5
40 68.3
51 68.8
51 60.8
42 61.9
30 64.8
27 65.5
127# @ 10.13.08

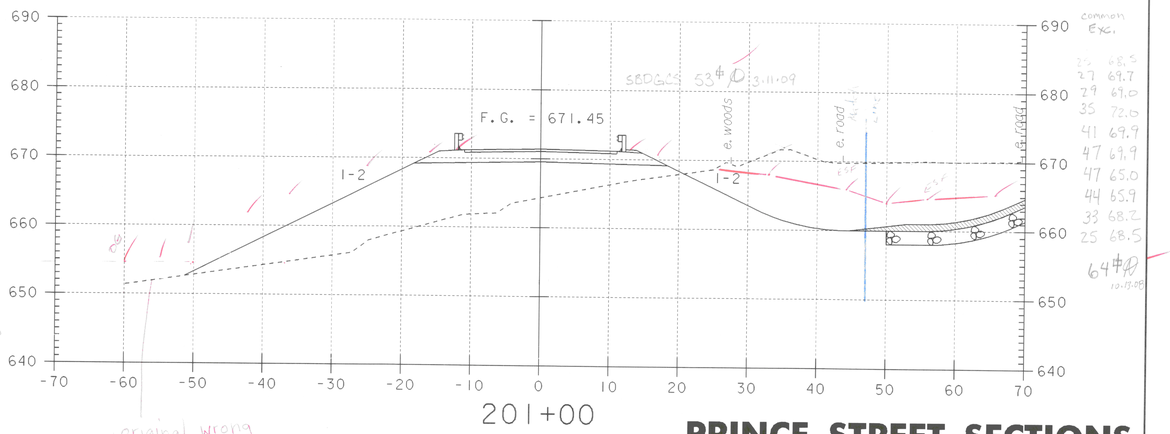


Common Excav
-19 80.3
-16 80.0
-9 78.0
-7 78.0
0 75.8
6 74.1
-13 74.5
-17 74.8
-19 75.8
-19 80.3
82
+4
86# @ 10.13.08



-20 81.2
-7 80.6
-5 79.1
11 78.0
36 75.4
34 75.0
-15 76.8
-17 78.0
-20 77.9
-20 81.2
148# @ 10.13.08

STA 200+25 LT
BEGIN STONE DITCH (TYPE I)



Common Exc.
25 68.5
27 69.7
29 67.0
35 72.0
41 69.7
47 69.9
47 65.0
44 65.9
33 68.2
25 68.5
64# @ 10.13.08

original wrong

STA 200+70 LT
END STONE DITCH (TYPE I)

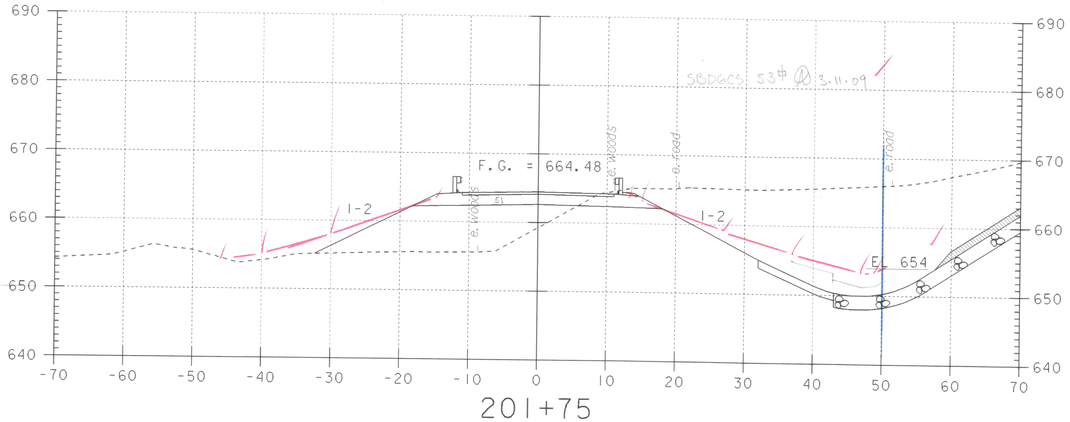
SCALE 1" = 10'-0
10 0 10

PRINCE STREET SECTIONS
STA. 200+25 – STA. 201+25

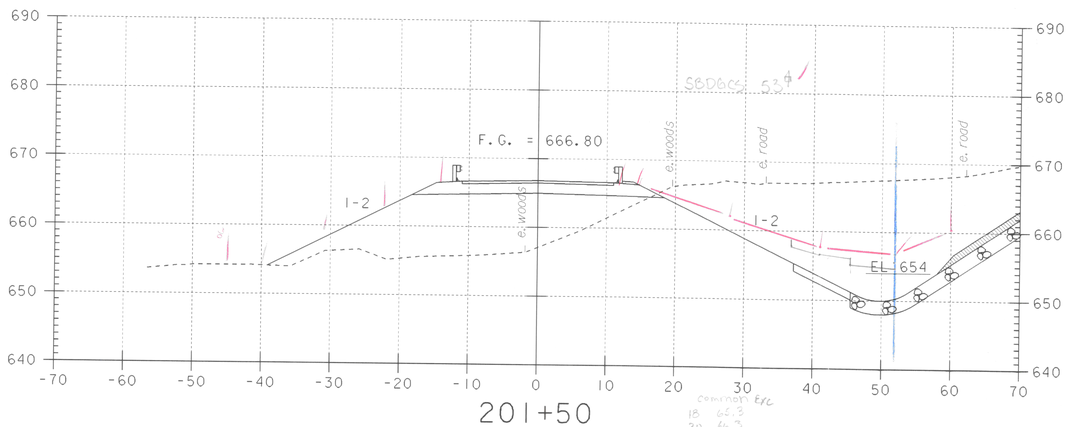
PROJECT NAME:	RANDOLPH
PROJECT NUMBER:	BRF 0241 (29)

FILE NAME: /str5/88j096/sj096prx.dgn
PROJECT LEADER: W. SYMONDS
DESIGNED BY: W.B. SYMONDS
sj096p1.i

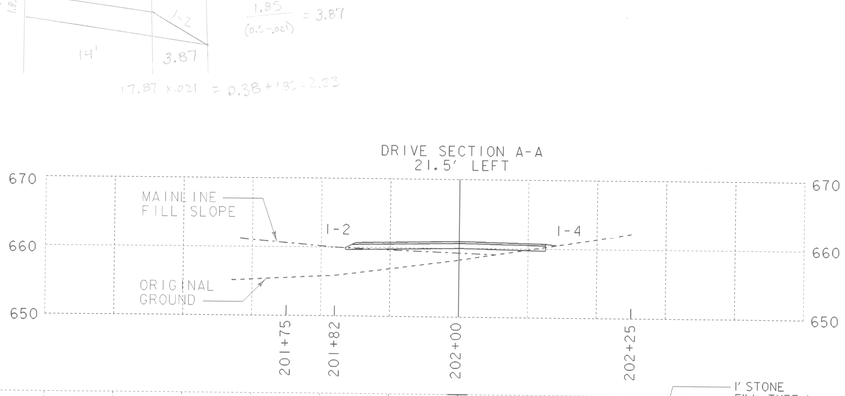
PLOT DATE: 29-AUG-2006
DRAWN BY: G. SHANGRAW
CHECKED BY: T. SUMNER
SHEET 125 OF 135



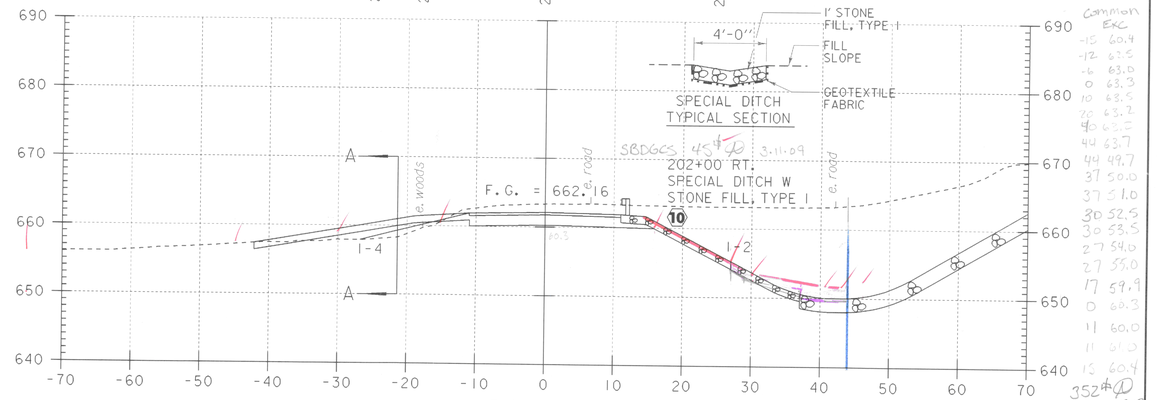
201+75



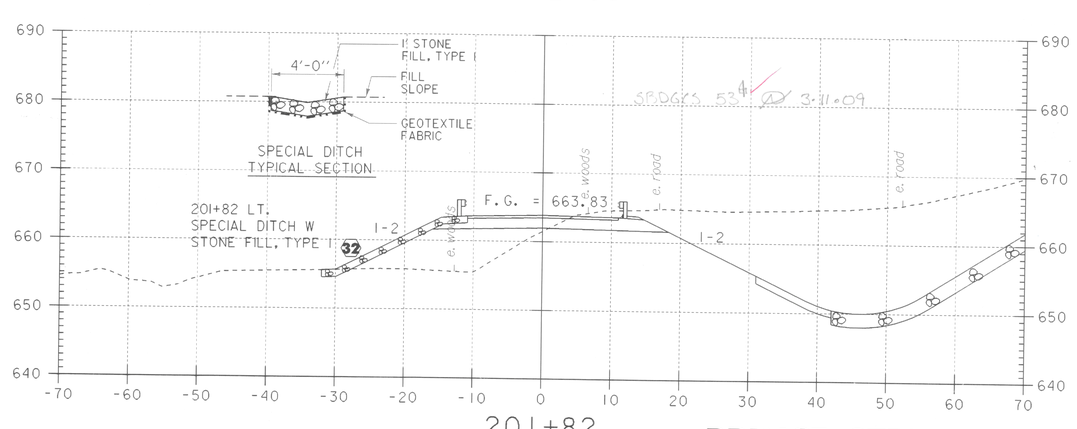
201+50



DRIVE SECTION A-A
21.5' LEFT



202+00



201+82

PRINCE STREET SECTIONS
STA. 201+50 – STA. 202+00

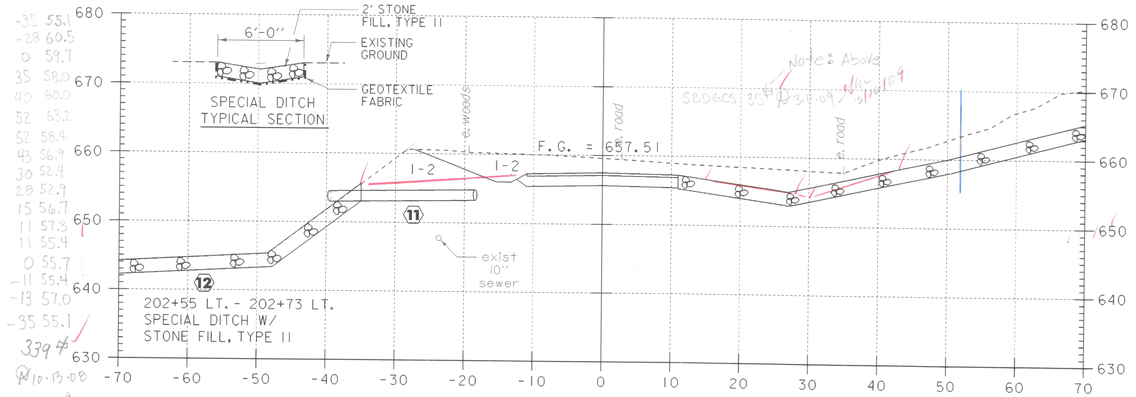
SCALE 1" = 10'-0
10 0 10

PROJECT NAME:	RANDOLPH
PROJECT NUMBER:	BRF 0241(29)

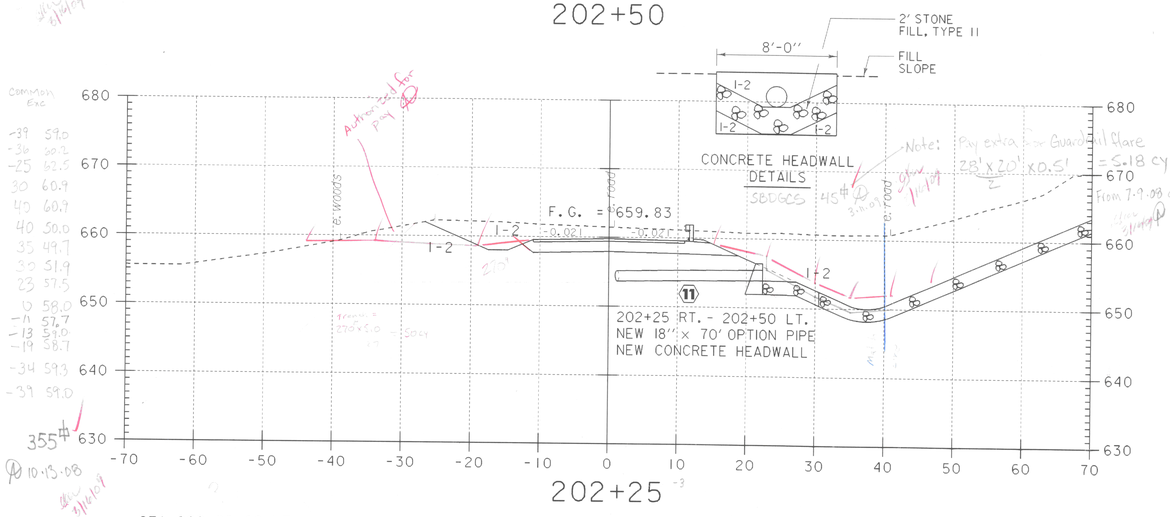
FILE NAME: /str5/88j096/sj096prx.dgn
PROJECT LEADER: W. SYMONDS
DESIGNED BY: W.B. SYMONDS
sj096p2.i

PLOT DATE: 29-AUG-2006
DRAWN BY: G. SHANGRAW
CHECKED BY: T. SUMNER
SHEET 126 OF 135

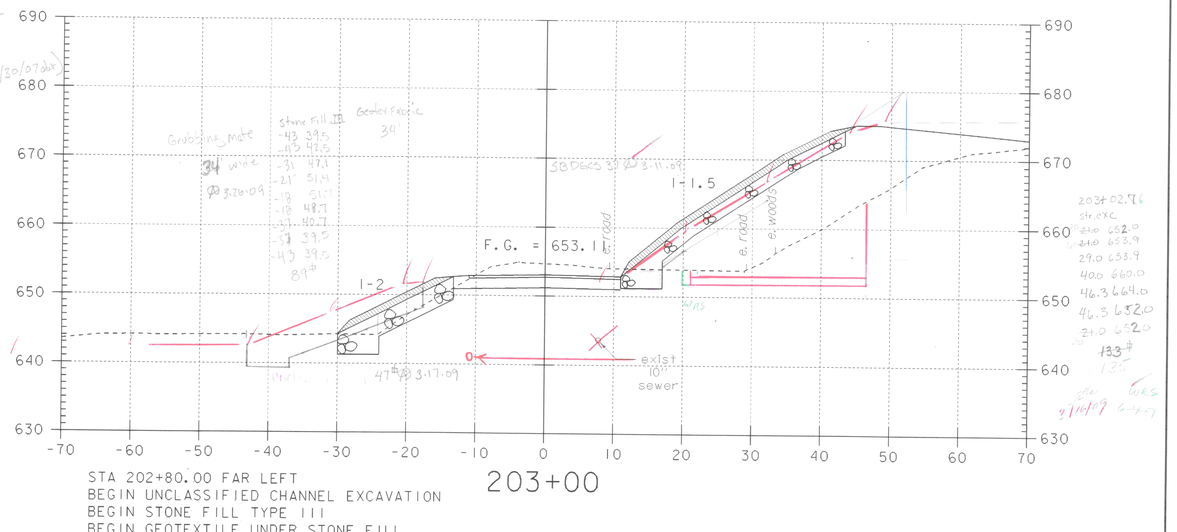
202+50±
Silt pocket removed on 11/30/07
Field measured for common & subbase DGCS
14' x 14' x 1.00'/27 = 7.26
12' x 18' x 1.00/27 = 8.00
15.26 ℄ 3.11.09 (From 11/30/07 dwr)



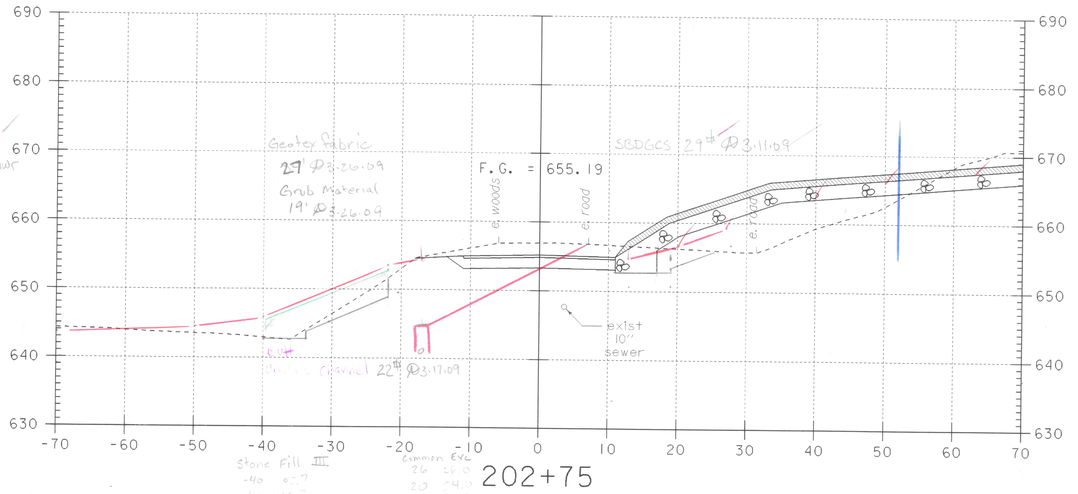
STA 202+08.00 LT
BEGIN UNCLASSIFIED CHANNEL EXCAVATION
BEGIN STONE FILL TYPE III
BEGIN GEOTEXTILE UNDER STONE FILL
BEGIN GRUBBING MATERIAL
END STONE LINED DITCH



STA 202+25.00 RT
BEGIN UNCLASSIFIED CHANNEL EXCAVATION
BEGIN STONE FILL TYPE III
BEGIN GEOTEXTILE UNDER STONE FILL
BEGIN GRUBBING MATERIAL
END STONE LINED DITCH



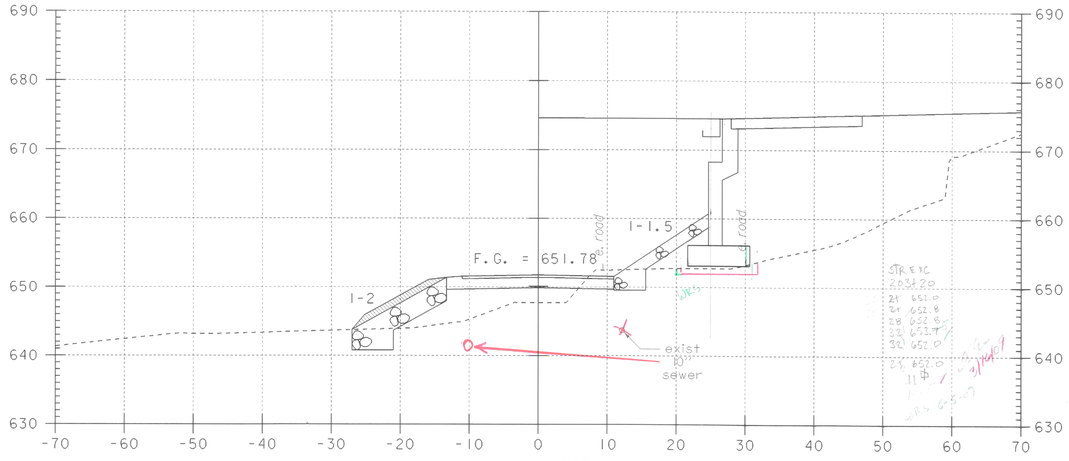
STA 202+80.00 FAR LEFT
BEGIN UNCLASSIFIED CHANNEL EXCAVATION
BEGIN STONE FILL TYPE III
BEGIN GEOTEXTILE UNDER STONE FILL
BEGIN GRUBBING MATERIAL



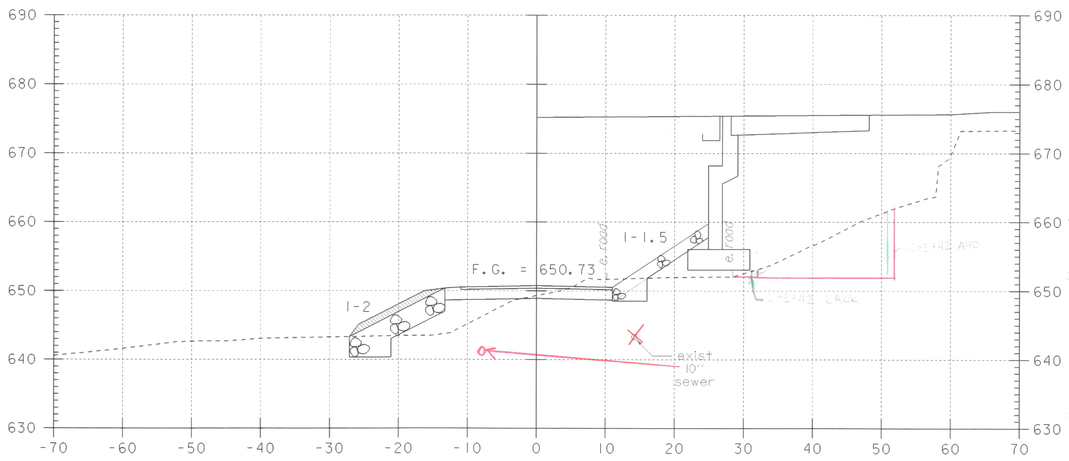
SCALE 1" = 10'-0

PRINCE STREET SECTIONS
STA. 202+25 - STA. 203+00

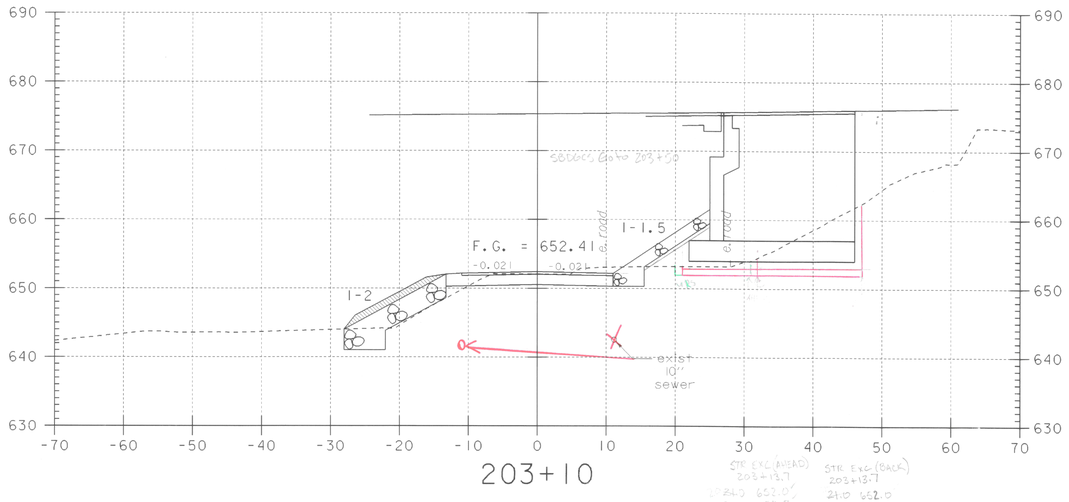
PROJECT NAME:	RANDOLPH
PROJECT NUMBER:	BRF 0241 (29)
FILE NAME: /str5/88/096/sj096prx.dgn	PLOT DATE: 29-AUG-2006
PROJECT LEADER: W. SYMONDS	DRAWN BY: G. SHANGRAW
DESIGNED BY: W.B. SYMONDS	CHECKED BY: T. SUMNER
sj096p3.i	SHEET 127 OF 135



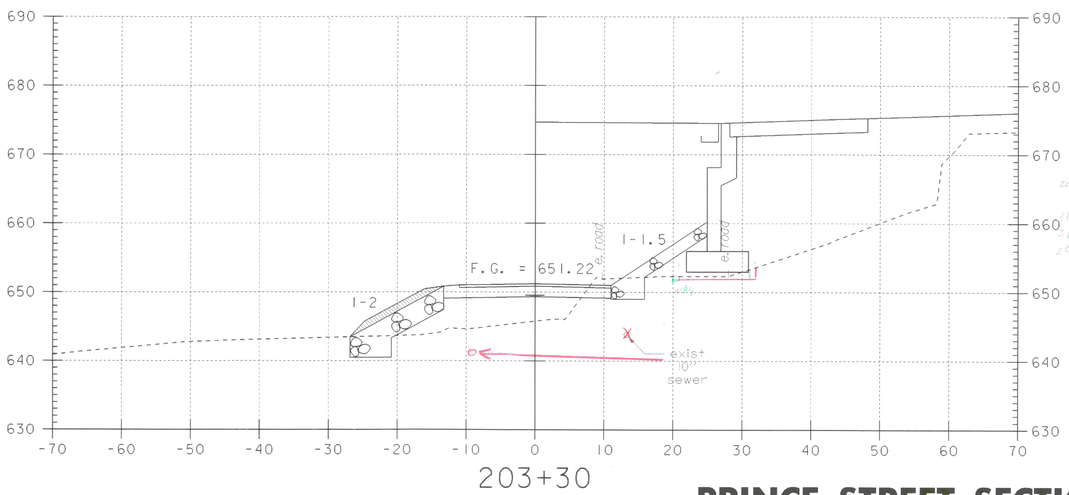
203+20



203+40



203+10



203+30

SCALE 1" = 10'-0
10 0 10

PRINCE STREET SECTIONS
STA. 203+10 – STA. 203+40

PROJECT NAME:	RANDOLPH
PROJECT NUMBER:	BRF 0241(29)

FILE NAME: /str5/88j096/sj096prx.dgn
PROJECT LEADER: W. SYMONDS
DESIGNED BY: W.B. SYMONDS
sj096p4.i

PLOT DATE: 29-AUG-2006
DRAWN BY: G. SHANGRAW
CHECKED BY: T. SUMNER
SHEET 128 OF 135

Prince Street Geotextile Fabric

202+75	27	Ex	84.72
203+00	34	Ex	166.6
+50	26	Ex	68.06
+75	23	Ex	62.50
204+00	22	Ex	54.17
+25	19	Ex	

4136.11 sy

Prince Street Stone Fill, TYPE III

202+75	25	63	70.37
203+00	50	89	146.30
+50	25	69	58.80
+75	25	58	45.83
204+00	25	41	35.65
+25	25	36	

Total 356.95 CY

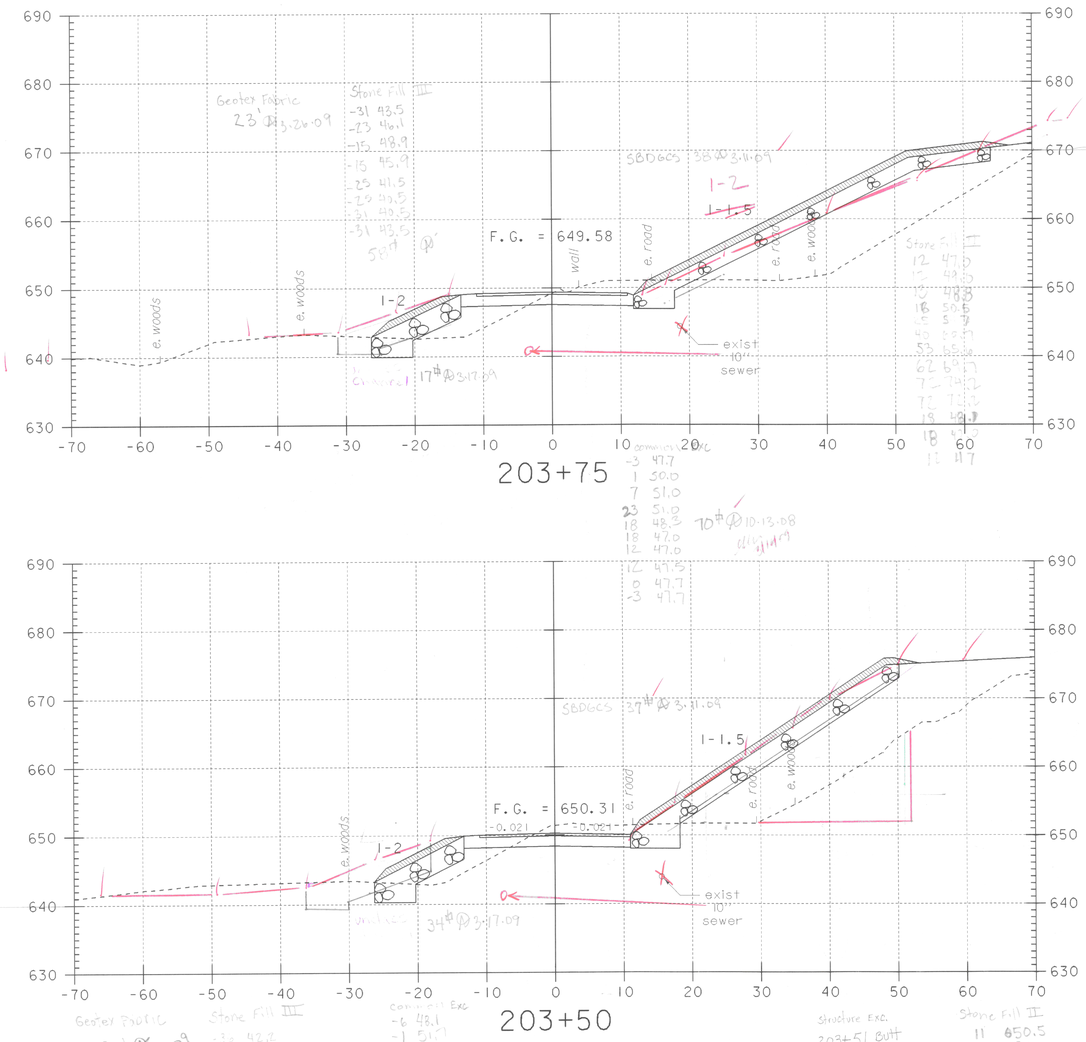
Prince Street Undassified Channel Exc.

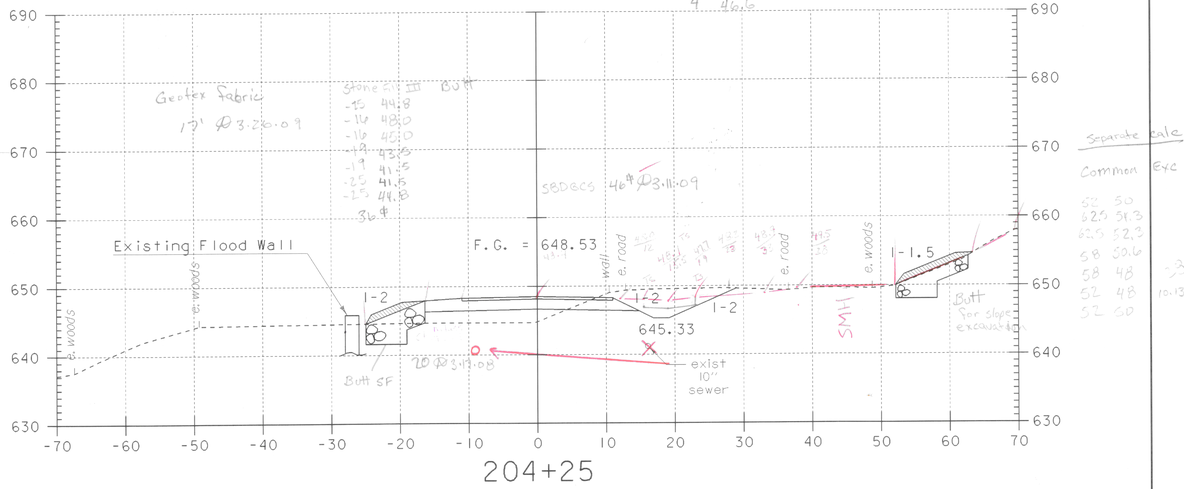
202+75 Butt	25	22	31.94
203+00	50	47	75.00
+50	25	34	24.07
+75	25	18	16.67
204+00	25	18	17.59
+25 Butt	25	20	

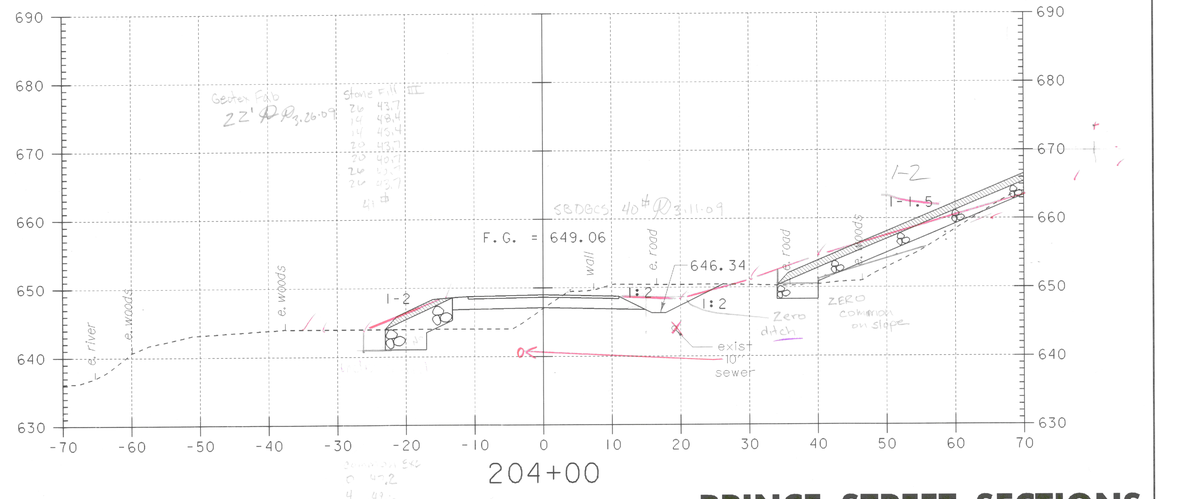
Total 165.27

Common Exc

4	45.6
10.5	48.7
13	49.3
28	49.7
38	49.5
33	48.7
23	48.3
23	47.3
19	46.7
155	47.1
15	46.4
4	46.6





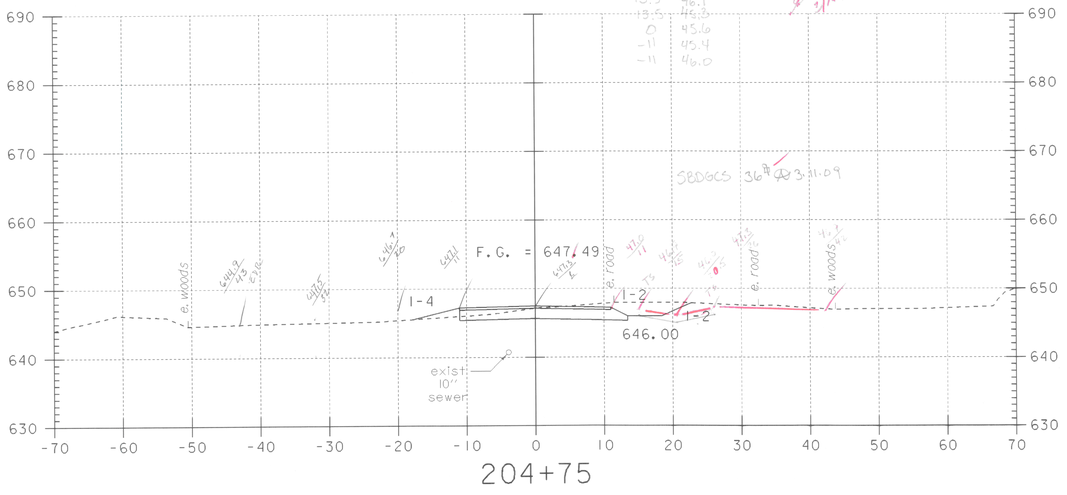


PRINCE STREET SECTIONS
STA. 203+50 – STA. 204+25

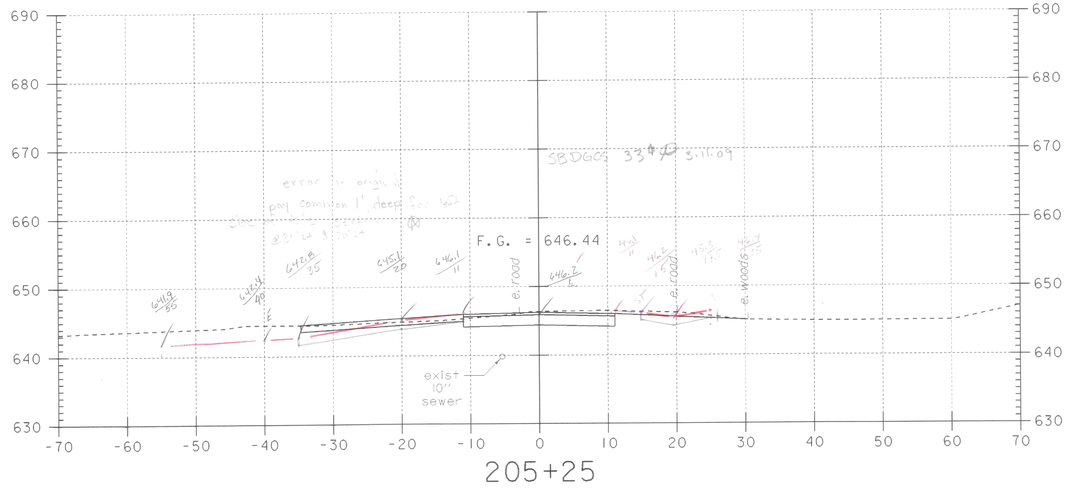
PROJECT NAME:	RANDOLPH
PROJECT NUMBER:	BRF 0241 (29)

FILE NAME: /str5/88j096/sj096prx.dgn
PROJECT LEADER: W. SYMONDS
DESIGNED BY: W.B. SYMONDS
sj096p5.i

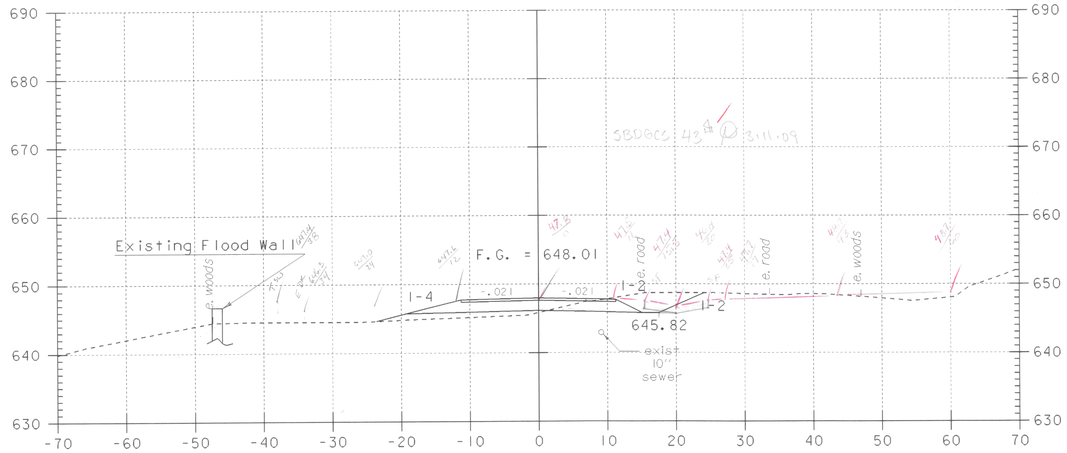
PLOT DATE: 29-AUG-2006
DRAWN BY: G. SHANGRAW
CHECKED BY: T. SUMNER
SHEET 129 OF 135



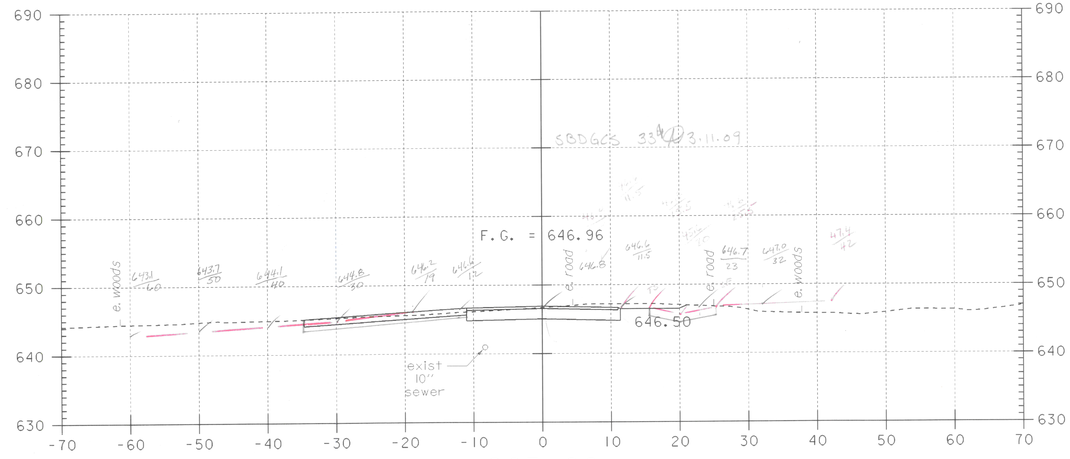
204+75



205+25



204+50



205+00

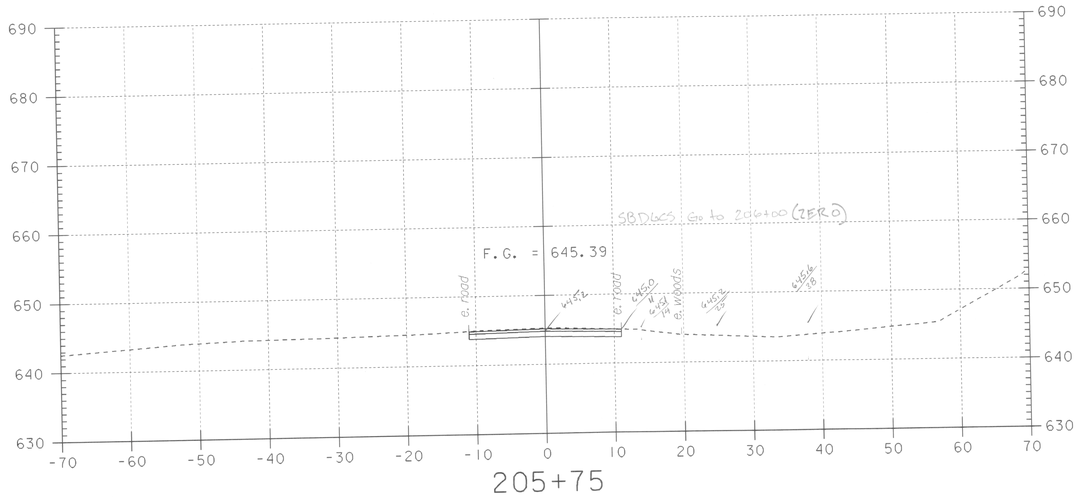
SCALE 1" = 10'-0

PRINCE STREET SECTIONS
STA. 204+50 – STA. 205+25

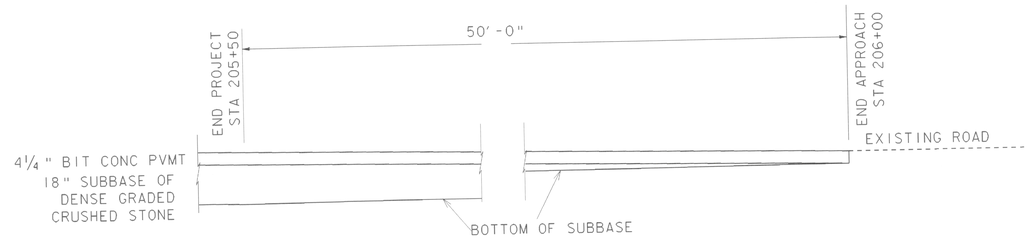
PROJECT NAME:	RANDOLPH
PROJECT NUMBER:	BRF 024 I (29)
FILE NAME: /str5/88j096/sj096prx.dgn	PLOT DATE: 29-AUG-2006
PROJECT LEADER: W. SYMONDS	DRAWN BY: G. SHANGRAW
DESIGNED BY: W.B. SYMONDS	CHECKED BY: T. SUMNER
sj096p6.i	SHEET 130 OF 135

205+75
Common Exc
-11 44.8
0 45.2
11 45.0
11 43.8
0 44.2
-11 43.8

20 # @ 10-13-08
41. ✓
3/10/09



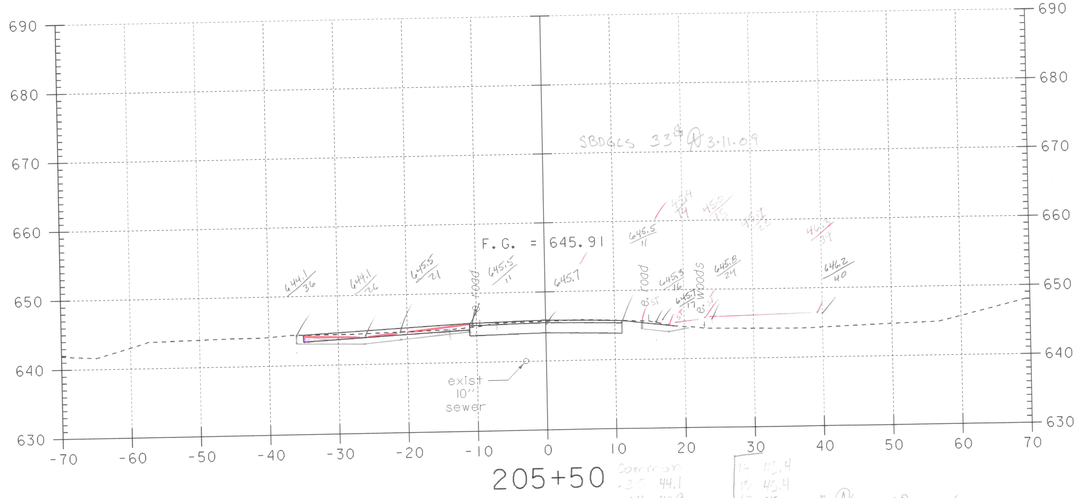
205+75



TAPER FOR END OF SUBBASE DETAIL

NTS

Common
Zero



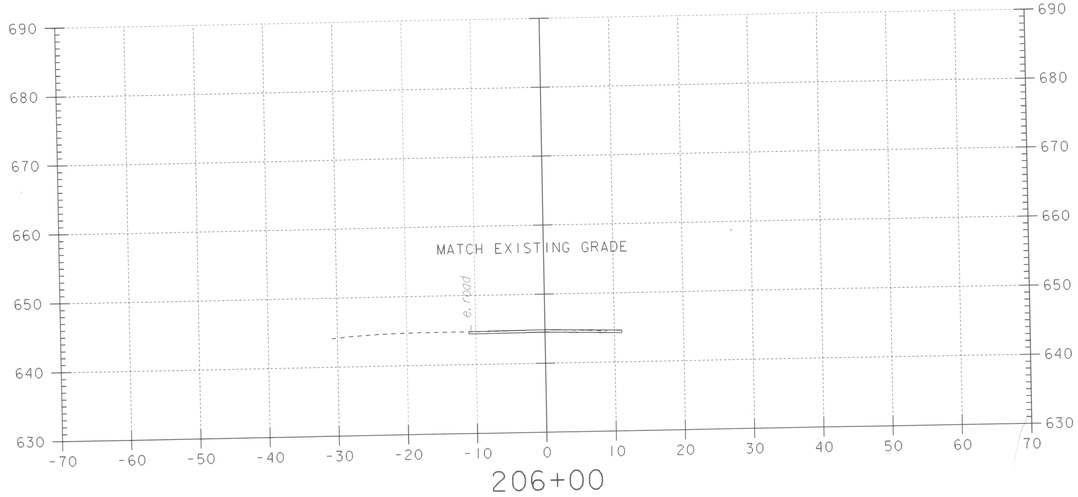
205+50

Common
-35 44.1
-14 44.9
-7 45.8
0 45.3
11 46.6
11 43.8 5# @ 10-13-08
0 44.0 @ 10-13-08
-11 43.8
-11 44.7
-21 46.5
-35 43.1
-35 44.1

12 45.4
15 45.4
13 45.0
21 44.8
13 42.5
14 44.4
14 45.4

3# @ 10-13-08
+6"-7
63# @ 10-13-08

Pay 63# for 205+50 & 205+66
cut 63# for 205+66 Back 57# Ahead @ 10-13-08
✓ 3/11/09



206+00

SCALE 1" = 10'-0
10 0 10

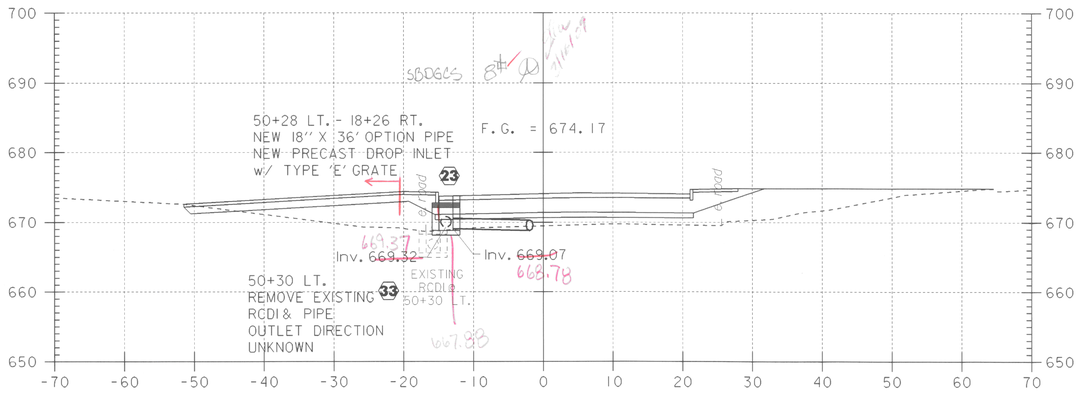
STA 206+00
END APPROACH

PRINCE STREET SECTIONS
STA. 205+50 – STA. 206+00

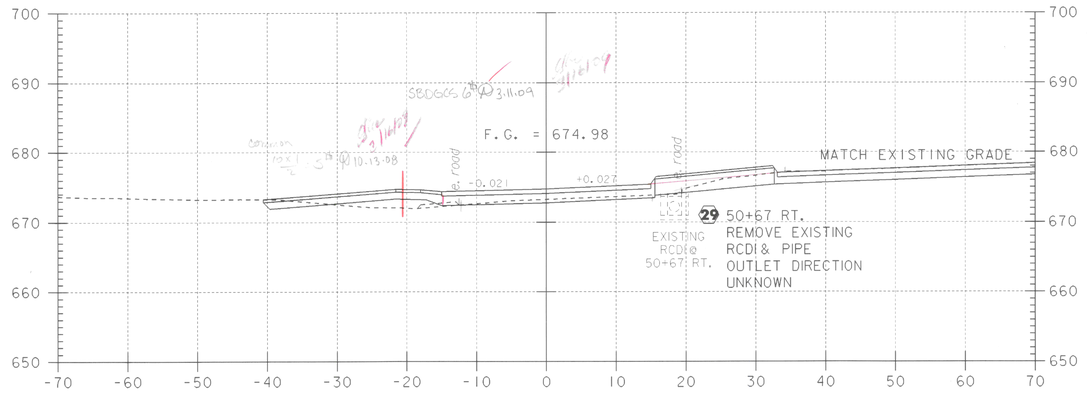
PROJECT NAME:	RANDOLPH
PROJECT NUMBER:	BRF 0241 (29)

FILE NAME: /str5/88j096/sj096prx.dgn
PROJECT LEADER: W. SYMONDS
DESIGNED BY: W.B. SYMONDS
sj096p7.i

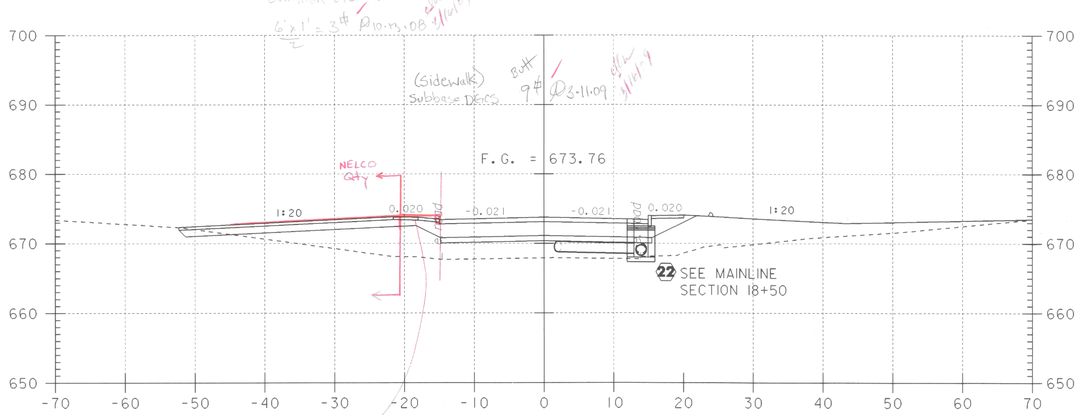
PLOT DATE: 29-AUG-2006
DRAWN BY: G. SHANGRAW
CHECKED BY: T. SUMNER
SHEET 131 OF 135



50+25

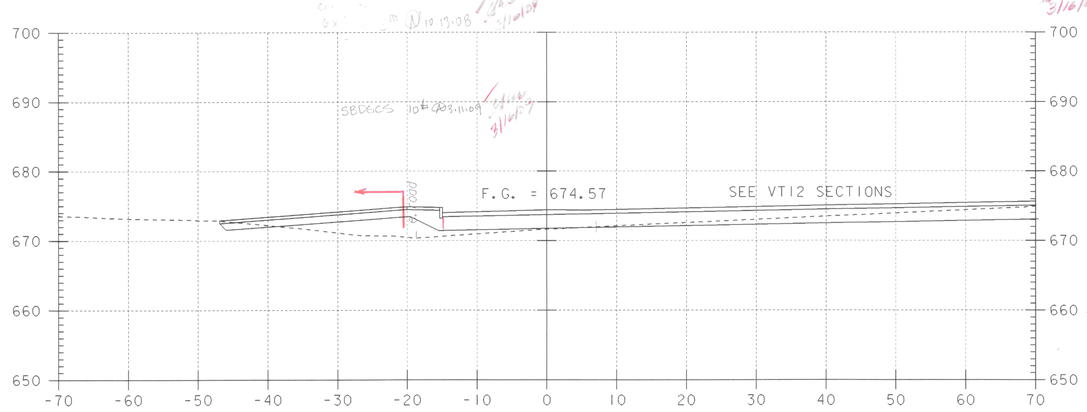


50+75



VT 12A 50+00
= VT 12 18+21.68

Drive eliminated



50+50

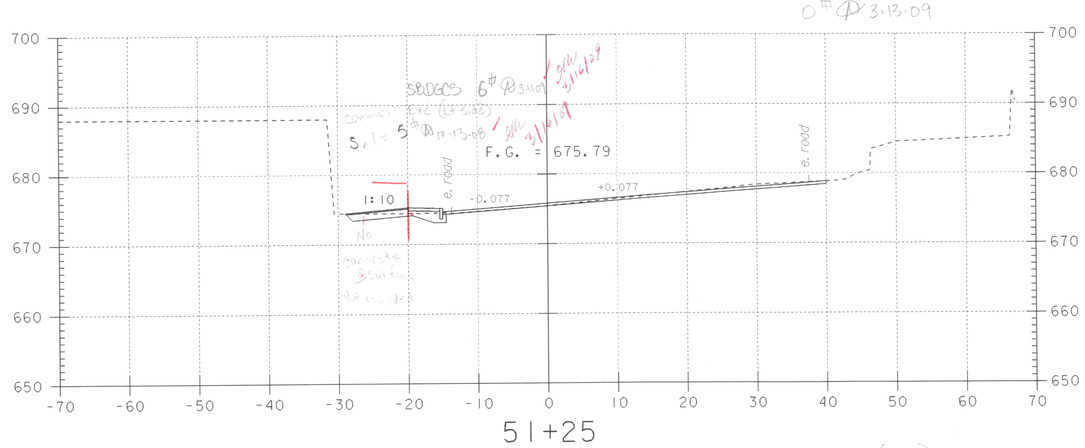
VT. 12A SECTIONS
STA. 50+00 – STA. 50+75

SCALE 1" = 10'-0
10 0 10

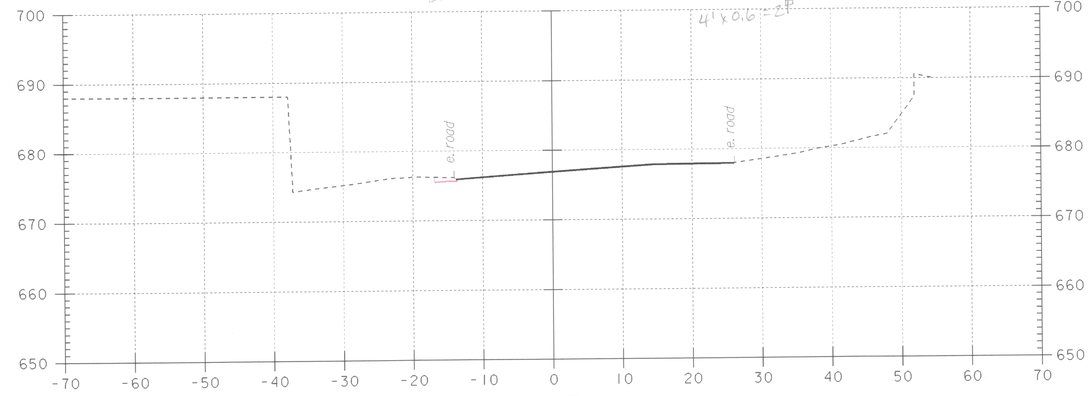
PROJECT NAME:	RANDOLPH
PROJECT NUMBER:	BRF 0241(29)

FILE NAME: /str5/88j096/sj096m1x.dgn
PROJECT LEADER: W. SYMONDS
DESIGNED BY: W.B. SYMONDS
sj096t41.i

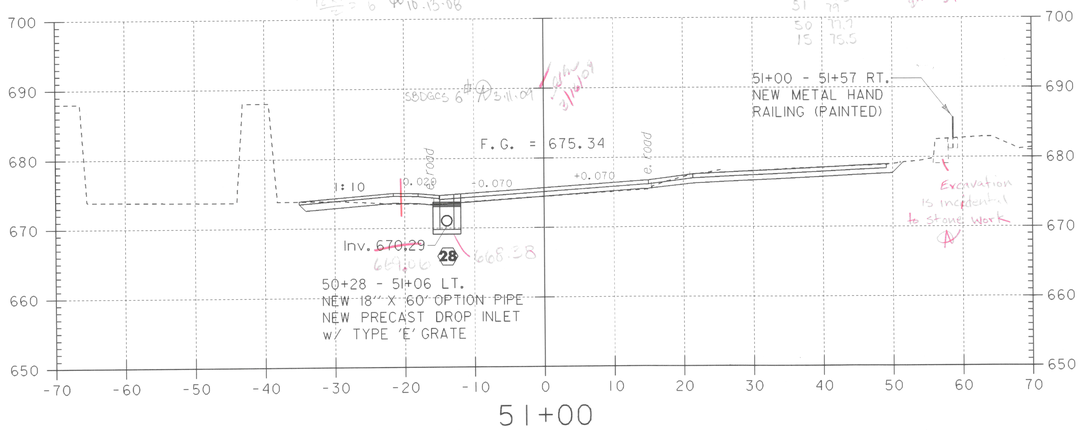
PLOT DATE: 29-AUG-2006
DRAWN BY: G. SHANGRAW
CHECKED BY: T. SUMNER
SHEET 132 OF 135



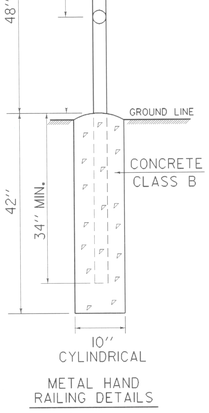
51+25



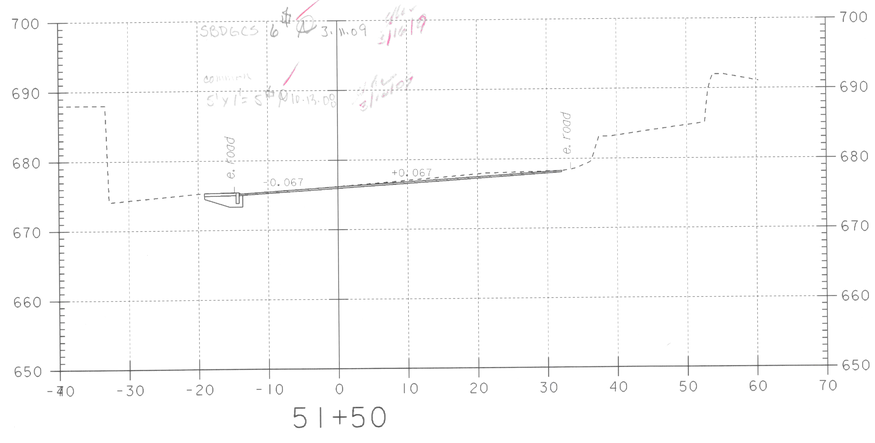
51+75
END
APPROACH



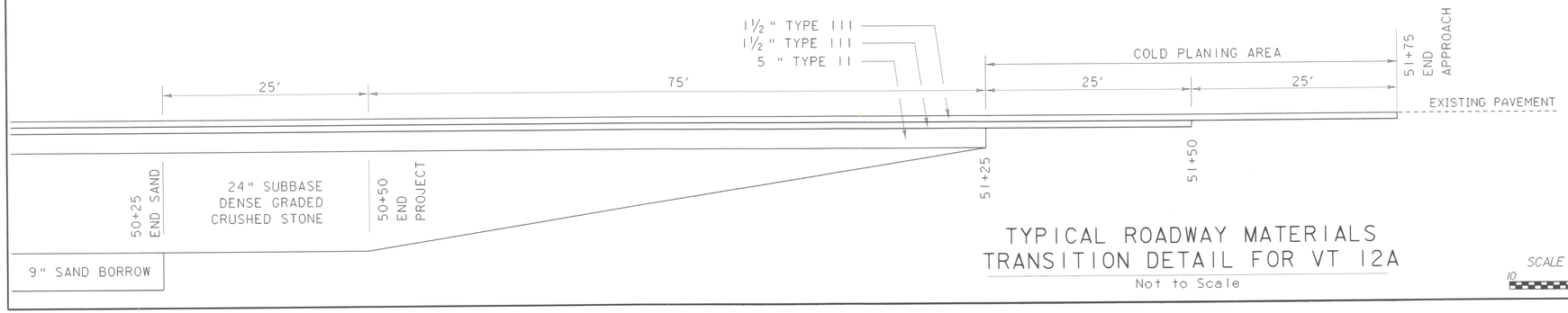
51+00



METAL HAND
RAILING DETAILS



51+50



TYPICAL ROADWAY MATERIALS
TRANSITION DETAIL FOR VT 12A
Not to Scale

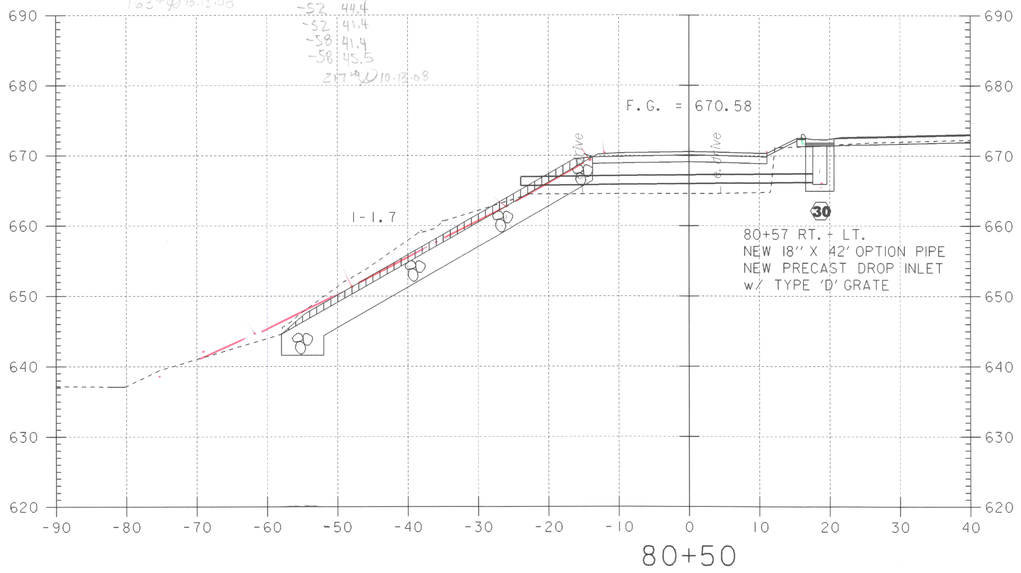
SCALE 1" = 10'-0
10 0 10

VT. 12A SECTIONS
STA. 51+00 – STA. 51+75

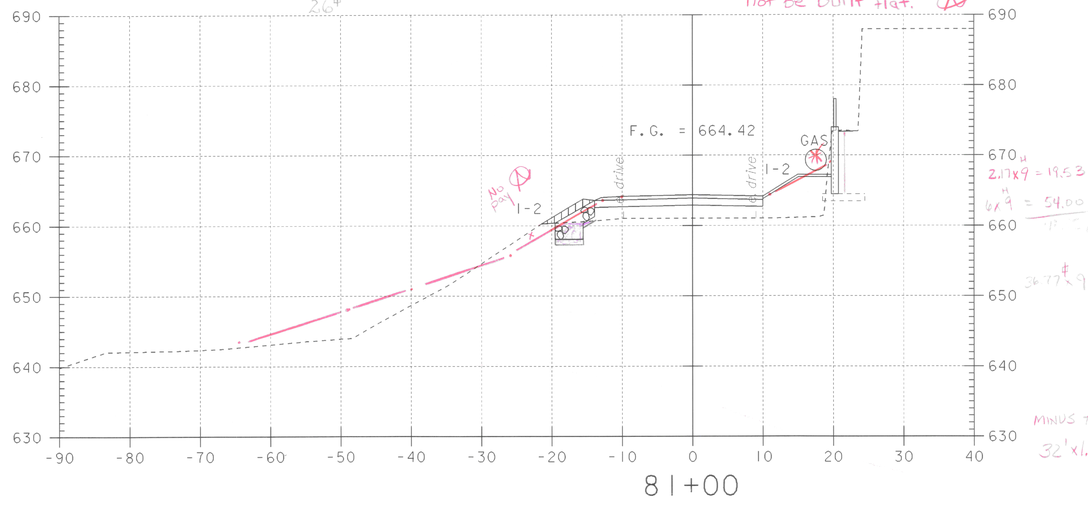
PROJECT NAME:	RANDOLPH
PROJECT NUMBER:	BRF 0241(29)

FILE NAME: /str5/88j096/sj096mlx.dgn
PROJECT LEADER: W. SYMONDS
DESIGNED BY: W.B. SYMONDS
sj096t42.i

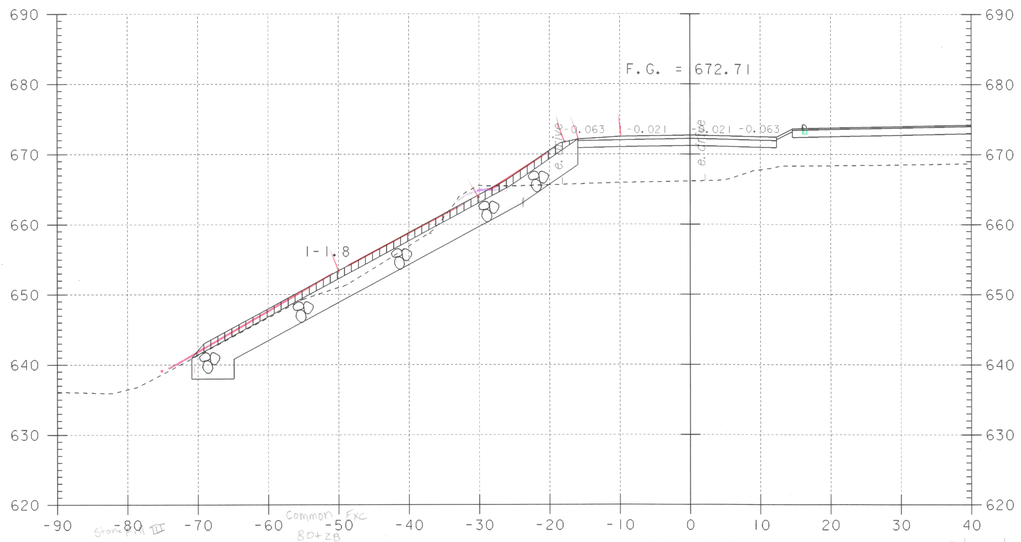
PLOT DATE: 29-AUG-2006
DRAWN BY: G. SHANGRAW
CHECKED BY: T. SUMNER
SHEET 133 OF 135



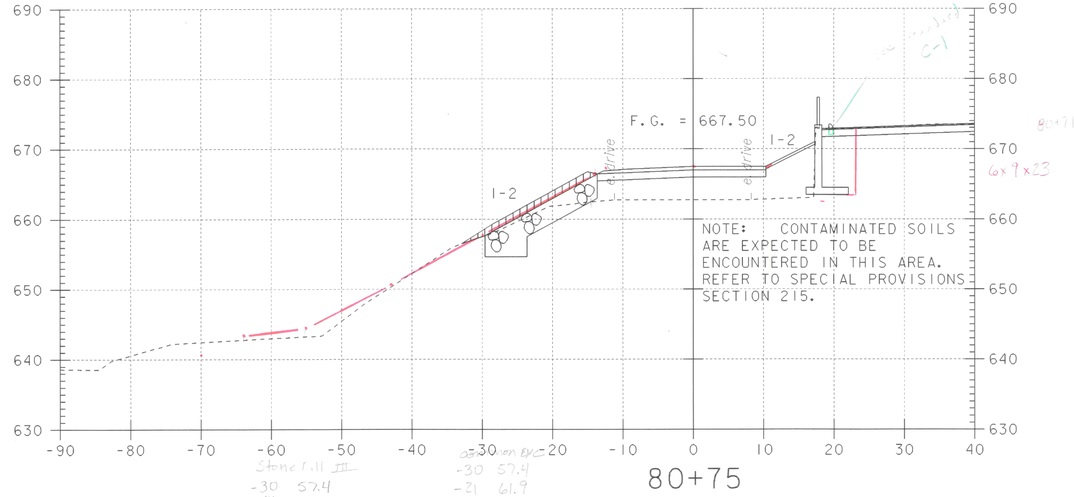
80+50



81+00



80+25



80+75

SEE NEXT SHEET FOR TYPICAL SECTION DETAILS

Note: Structure Excavation is 28'4" From ML & and ends at Drive offset 19' LT

Pay common butt station 80+28 ahead Using 80+25 x-section

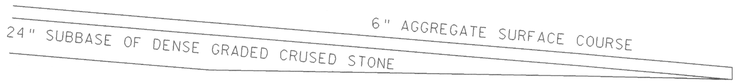
SCALE 1" = 10'-0

DRIVE SECTIONS STA 80+25 – STA 81+00

PROJECT NAME:	RANDOLPH
PROJECT NUMBER:	BRF 0241 (29)

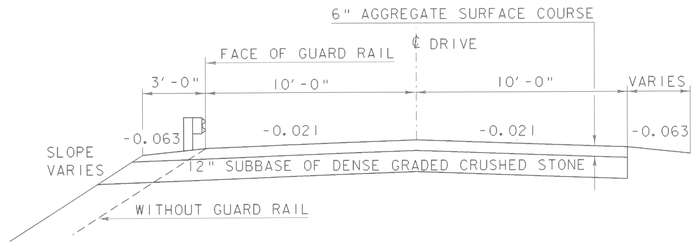
FILE NAME: /str5/88j096/sj096m1x.dgn
PROJECT LEADER: W. SYMONDS
DESIGNED BY: W.B. SYMONDS
sj096dr1.i

PLOT DATE: 29-AUG-2006
DRAWN BY: G. SHANGRAW
CHECKED BY: T. SUMNER
SHEET 134 OF 135

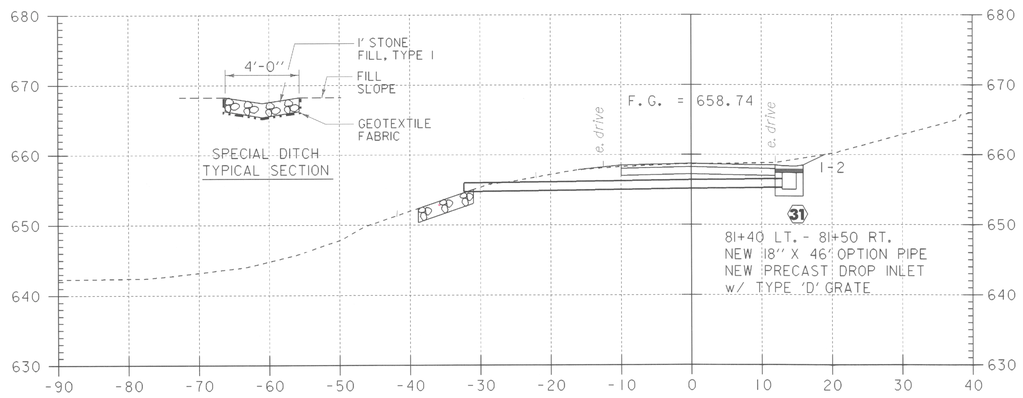


SUBBASE TAPER AT END OF DRIVE

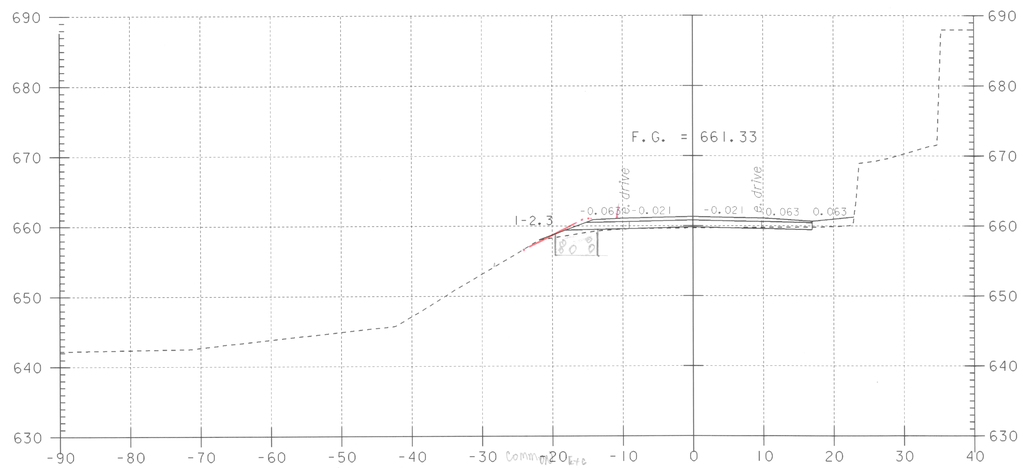
nts



TYPICAL SECTION DRIVE
LT OF VT12 STA 17+90



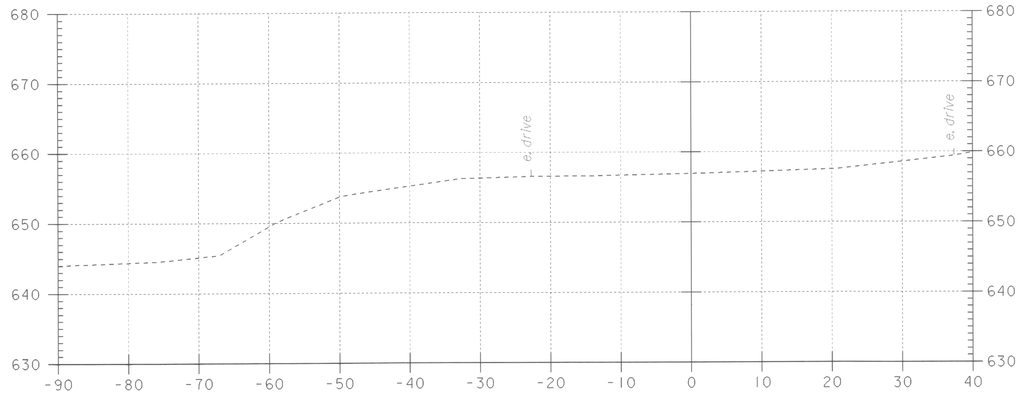
81+50



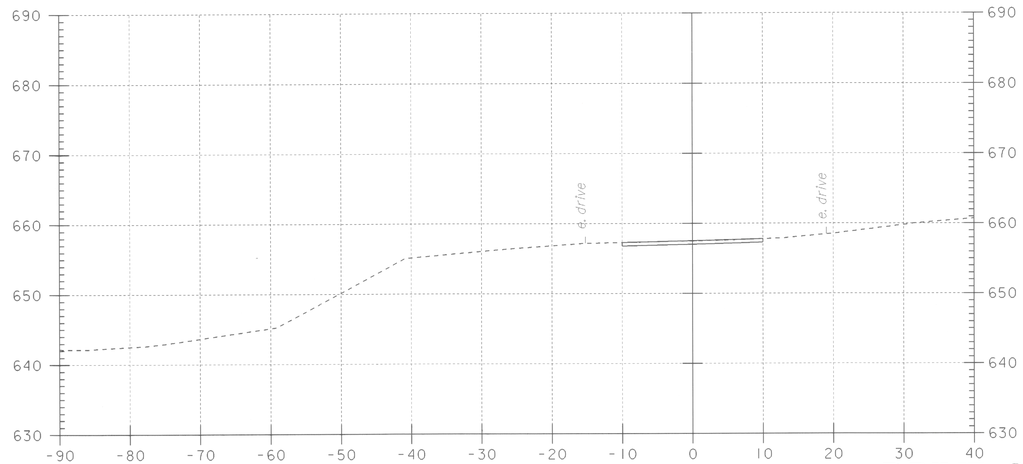
81+25

Slope Fill III
19.5 58.2
18 59.6
13.5 59.6
13.5 56.0
19.5 56.0
19.5 58.2
24" Ø 12-13-08

Comments
-19.5 58.2
-13.5 59.5
-13.5 56.0
-19.5 56.0
-19.5 58.2
17" Ø 12-13-08



82+00



81+75

DRIVE SECTIONS
STA 81+25 – STA 82+00

SCALE 1" = 10'-0
10 0 10

PROJECT NAME:	RANDOLPH
PROJECT NUMBER:	BRF 0241(29)

FILE NAME: /str5/88j096/sj096m1x.dgn
PROJECT LEADER: W. SYMONDS
DESIGNED BY: W.B. SYMONDS
sj096dr2.i

PLOT DATE: 29-AUG-2006
DRAWN BY: G. SHANGRAW
CHECKED BY: T. SUMNER
SHEET 135 OF 135

INDEX OF SHEETS

SHEET NO. 1 TITLE PAGE
" " 2 PLAN AND PROFILE STA. 1+61.5–4+00.
" " 3-6 SUPERSTRUCTURE DETAILS
" " 7 PIER DETAILS
" " 8-9 ABUTMENT DETAILS
" " 10-11 CROSS SECTIONS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
9	VT.	67A(C)	1928	1	11

STATE OF VERMONT
STATE HIGHWAY DEPARTMENT

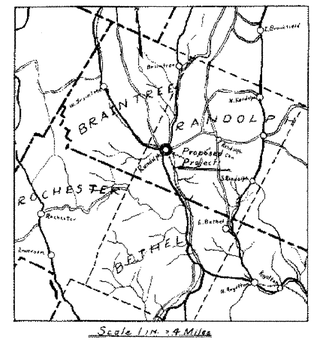
PLAN AND PROFILE OF PROPOSED
STATE HIGHWAY
FEDERAL AID PROJECT

TOWN OF RANDOLPH

RANDOLPH VILLAGE BRIDGE

OVER THIRD BRANCH OF THE WHITE RIVER

TOTAL LENGTH 238.5 FEET = 0.045 MILES



Scale 1 IN. = 4 Miles

SCALES

PROFILE — PLAN 1 IN. = 20 FEET; VERT. 1 IN. = 20 FEET; HORIZ. 1 IN. = 20 FEET; SECTIONS 1 IN. = 5 FEET

LAYOUT

SEE SHEET 3

NOTES

THIS PROJECT TO BE CONSTRUCTED IN ACCORDANCE WITH STANDARD SPECIFICATIONS ON FILE WITH THE U.S. BUREAU OF PUBLIC ROADS

STRUCTURES ON THIS PROJECT TO BE CONSTRUCTED IN ACCORDANCE WITH DETAILS GIVEN ON STRUCTURE SHEETS SERIES NOS. 5 17-18-19

CONVENTIONAL SIGNS

COUNTY LINE
TOWN LINE
FENCE LINE
STONE WALL
UNFENCED PROPERTY
GUARD RAIL
TRAVELED WAY
RAILROAD
RETAINING WALL
CENTER LINE — PC, 30° 45'
SURVEY LINE
CULVERT
DROP INLET
TROLLEY POLE
POWER POLE
TELEPHONE POLE
TREES
HEDGE

GROUND ELEVATION ..... DATUM 1252.6 LINE

GRADE ELEVATION ..... DATUM 1247.6 LINE

CURVE DATA

DEFLECTION ANGLE ..... △
DEGREE OF CURVE ..... D.
RADIUS OF CURVE ..... R.
TANGENT DISTANCE ..... T.
LENGTH OF CURVE ..... L.
EXTERNAL DISTANCE ..... E.
POINT OF INTERSECTION ..... P. I.
POINT OF CURVE ..... P. C.
POINT OF TANGENT ..... P. T.
POINT ON TANGENT ..... P. O. T.

DISTRICT	No. 7
BRIDGE	No 33-A
RANDOLPH	

APPROVED: APRIL 28 1928
N. L. Sargent
CHIEF ENGINEER

SUBMITTED BY ORDER OF THE STATE HIGHWAY BOARD

[redacted]
COMMISSIONER OF HIGHWAYS

RECOMMENDED [redacted]
DISTRICT ENGINEER
BUREAU OF PUBLIC ROADS

RECOMMENDED FOR APPROVAL [redacted]
CHIEF ENGINEER
BUREAU OF PUBLIC ROADS

APPROVED [redacted]
DIRECTOR - BUREAU OF PUBLIC ROADS

SERIES F. NO. 67A(C) FILED 7-33-4
SHEET 1 OF 11

PRINTED ON "HYDRAULIC" TRACING CLOTH BY K. E. CO., N. Y.

FED. HWY. ADM.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
		67A(6) 102.8		2	11

To Randolph Ctr. & North Field

B.M. No. 1
Elev. 100.00

Beginning of Project
Sta. 11+15 F.A.P. 67A-R
Sta. 3+47.0 F.A.P. 67A

Shop

House (Gone)

P.O.T. – Sta. 1+20.8

C.B.

S 19° 00' W

30.28

29.12

1+00

23.42

P.C. – 1+39.5

Existing Abutment

F.L.O.W.

Boring #1

House

Grist Mill

To Braintree & Northfield

Boring #3

Island

Boring #2

Main Channel

Top New Slope

Top New Bank

Revised Curve
Δ = 31°-03' Lt.
D = 100-00'
T = 157.2
L = 310.5
E = 21.7
R = 573.0

3+00

Boring #4

Original P.I.
3+18.7 = 3+15.3

Revised P.I.
3+18.7 = 3+10.8

End of Project
Sta. 4+00 F.A.P. 67A-R
Sta. 1+08.5 F.A.P. 67A

P.O.T. Sta. 6+08.9

P.T. – 4+70.0 = 4+74.5 Eq. -4.5

House

Collier

Bldg.

Hydrant

43.12

28.0

4+00

5+00

To Randolph

33.82

25.0

44.15

26.5

Old concrete abutment and wings shall be placed on outside of fill through open abutment, as protection against possible scour, and shall be paid for only under the item of Structure Excavation.

B.M. No. 2
Elev. 99.03

Boring Data

No. 1	No. 2	No. 3	No. 4
Ground	Ground	Ground	Ground
Coarse gravel, clay, gravel & hard pan	Coarse clean sand	Coarse sand & fine gravel	Shale, gravel
Clay & shale rock	Running sand	Coarse gravel	Shale, gravel, some clay
Shale ledge	Fine sand	(Hard pan, clay, shale & gravel)	Clay & sand
	Clay & shale	Ledge	Sand, clay & gravel
	Hard pan		Sand & clay
	Ledge		Sand, clay & gravel
			Sand & clay, gravel, sand & clay
			Apparent ledge

Correct

A.R. Bishop
Bridge Engineer

Beginning of Project
Sta. 11+15 F.A.P. 67A-R
Sta. 3+47.0 F.A.P. 67A

Sta. 1+18
V.C. 175'
Elev. 82.26

Sta. 0+00
Elev. 89.34

-6.0 %

Sta. 1+62 End of Bridge
Roway Grade 84.33

Sta. 2+17 ℄ Pier
Roway Grade 85.76

Sta. 2+72 ℄ Pier and Bridge
Roway Grade 87.69

Sta. 3+27 ℄ Pier
Roway Grade 89.63

Sta. 3+82 End of Bridge
Roway Grade 91.57

End of Project
Sta. 4+00 F.A.P. 67A-R
Sta. 1+08.5 F.A.P. 67A

Sta. 4+15
V.C. 65'
Elev. 92.70

Sta. 5+00
Elev. 98.50

+3.52 %

+6.82 %

High Water Nov. 4, 1927 Elev. 74.8

Normal High Water Elev. 70.0

Low Water Elev. 60.0

Boring #1 Ledge

Boring #3 Ledge

Boring #2 Ledge

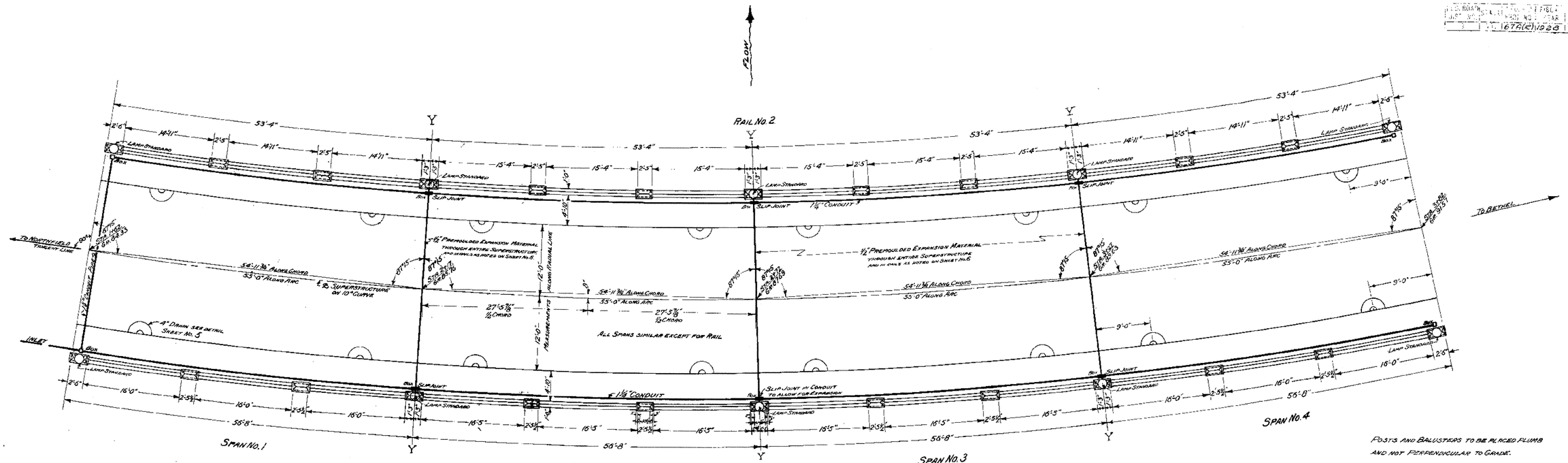
Boring #4 Ledge

B.M. No. 1 Top of Hydrant at Intersection Elev. 100.00
B.M. No. 2 " " " Right Sta. 4+35 Elev. 99.03

District No. 7
Bridge No. 33-44
Randolph

Series F No. 67A(R) Filed 733-44
Sheet 2 of 11

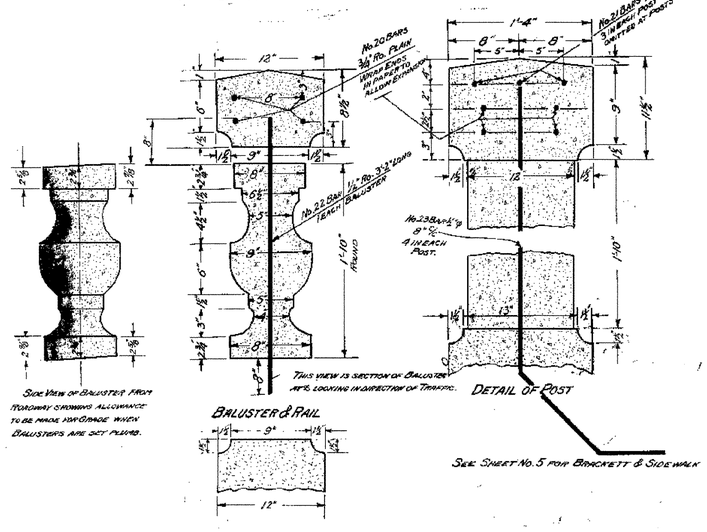
ROAD	SECTION	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
F	67A(12)	1928	3	11



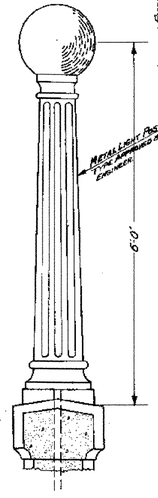
DETAILS OF EXPANSION IN POSTS Y ARE SHOWN ON SHEET No. 6

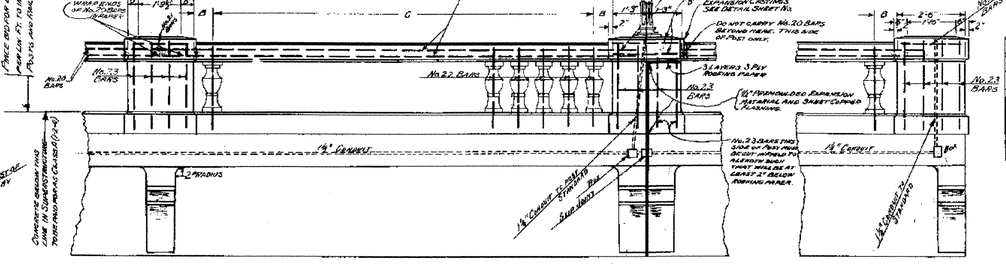
COST OF FURNISHING AND PLACING ½" PREMOULDED EXPANSION MATERIAL IN SUPERSTRUCTURE AS REQUIRED SHALL BE INCLUDED IN UNIT PRICE BID FOR CLASS A 1-2-4 CONCRETE

COST OF FURNISHING AND PLACING ½" PREMOULDED EXPANSION MATERIAL & SHEET COPPER FLASHING IN RAILS TO BE INCLUDED IN THE UNIT PRICE BID FOR BALUSTER AND RAIL.



SEE SHEET No. 5 FOR BRACKETT & SIDEWALK





LAMP STANDARD DETAILS:

ONE LIGHT REQUIRED (110 VOLTS 100 WATTS) GLOBE 16"x8"
SIZE OF BASE AT GROUND LINE - 11" SQUARE
DIAMETER OF FLUTED SHAFT - 5" TOP - 8" BOTTOM
BASE, SHAFT AND CAPITAL TO BE SEPARATE UNITS
BASE AND CAPITAL TO BE BEST GRADE OF TOUGH GREY FOUNDRY CAST IRON.
SHAFTS TO BE 2 PLY OF No. 22 U.S. GUAGE COPPER BEARING STEEL, LOCK SEAMED, DIE FLUTED AND PRESSED FIRMLY TOGETHER, NO SOLDER OR RIVETS TO BE USED.
10 COMPLETE STANDARDS REQUIRED.
COMPANY FURNISHING LIGHT STANDARDS SHALL PROVIDE ANCHOR BOLT PLAN.
ANCHOR BOLTS FOR LIGHT STANDARDS SHALL BE PLACED IN POST FORMS BEFORE CONCRETE IS DEPOSITED.

LUMP SUM BID FOR LAMP POSTS SHALL COVER THE COMPLETE COST OF LABOR AND MATERIALS AND FOR THE INSTALLATION OF THE FOLLOWING LIGHTING SYSTEM.
10 COMPLETE STANDARDS, CONDUITS, WIRING AND ALL INCIDENTALS NECESSARY FOR THE COMPLETE LIGHTING OF THE BRIDGE, BUT NOT TO INCLUDE WIRING FROM THE INLET OF THE BRIDGE TO THE POLE LINE. ALL WORK AND MATERIALS ENTERED INTO THE LIGHTING SYSTEM INSTALLATION FOR THE BRIDGE SHALL BE STANDARD WORK AND MATERIALS REQUIRED FOR THIS CLASS OF WORK AND SHALL BE PERFORMED IN SUCH A MANNER AS TO CONFORM TO THE CODE OF THE NATIONAL BOARD OF FIRE UNDERWRITERS.
LAMP STANDARDS TO RECEIVE:
1 FIELD COAT OF APPROVED RED LEAD & OIL
1 FIELD COAT OF STANDARD WHITE GUARD RAIL PAINT, TINTED TO GIVE ANY COLOR SATISFACTORY TO THE ENGINEER.
IF LIGHT STANDARDS ON PRESENT BRIDGE ARE IN GOOD CONDITION THEY MAY BE USED BY THE CONTRACTOR AND ADDITIONAL STANDARDS REQUIRED MUST BE SIMILAR.
½ OF LAMP POSTS TO BE ERECTED ON EACH OF END POSTS.
DETAILS FOR CONNECTIONS OF LAMP POSTS TO RAIL POSTS SHALL ALLOW FOR EXPANSION IN RAIL. CONTRACTOR WILL BE REQUIRED TO SUBMIT DETAIL PLANS OF LAMP BASE FOR APPROVAL BY ENGINEER.

GENERAL NOTES:

ALL CONCRETE IN SUPERSTRUCTURE TO BE CLASS A, 1-2-4 CONCRETE. (EXCEPT AS NOTED)

ALL WORK AND MATERIAL SHALL CONFORM TO THE STANDARD ROAD AND BRIDGE SPECIFICATIONS OF THE VERMONT DEPARTMENT OF HIGHWAYS 1926.

POSTS AND BALUSTERS TO BE PLACED PLUMB AND NOT PERPENDICULAR TO GRADE.

BALUSTERS TO BE A 1:2 MIX.

POSTS AND RAIL CAP TO BE GLASS A-A (1-1½-3)

RAIL DETAILS

LOCATION	RAIL No.	A	B	C
SPANS 2 & 3	1	16'-9"	8½"	18 @ 12" = 15'-0"
SPANS 2 & 3	2	15'-4"	8"	14 @ 12" = 14'-0"
SPANS 1 & 4	1	16'-0"	9⅜"	13 @ 11½" = 14'-9½"
SPANS 1 & 4	2	14'-11"	8⅞"	13 @ 12½" = 13'-8½"

SUPERSTRUCTURE DETAILS VILLAGE BRIDGE RANDOLPH, VT.

SUPERSTRUCTURE	
1-2-4 (CLASS A) CONCRETE	450 CU. YDS.
REINFORCING STEEL	144462 LBS.
LAMP POSTS (WIRED COMPLETE)	10 EACH
BALUSTRADE RAIL	441 LIN. FT.

Surveyed by Doe
Designed by H. P. Rodgers
Drawn by H. P. Rodgers
Traced by H. Brown Jr.
Checked by A. D. Worcott
Series F No. 67A (12) Filed 7-33-44
Sheet 3 of 11 Sheets

PRINTED ON "VANDALL" TRACING CLOTH U.S.A.

STATE OF VERMONT
DEPT. OF PUBLIC WORKS
BRIDGE NO. VI
PROJECT NO. BRF 067-1(8)
SHEETS 11
6TA(R) 1028

DETAIL ENDPOST SPAN NO.1.

DETAIL ENDPOST SPAN NO.4.

No 2 RAIL 53'-4" ALONG ARC AT ℄ OF RAIL

BRACKET B

BRACKET A

BRACKET A

BRACKET B

BEAM No 5

No. 10 BAR

No. 9 BAR

No. 10 BAR

53'-9⅞"

BEAM No 4

No. 7 BARS 6"℄ AT ℄ CHORD AND LAID ON RADIAL LINE

No. 8 BARS 6"℄ AT ℄ CHORD AND LAID ON RADIAL LINE

54'-9⅞"

87°-15'

87°-15'

BEAM No 3

54'-11⅛" ALONG ℄ CHORD

55" ALONG ARC

54'-11¼"

BEAM No 2

55'-6⅜"

56'-1⅜"

BEAM No 1

BRACKET B

BRACKET C

BRACKET C

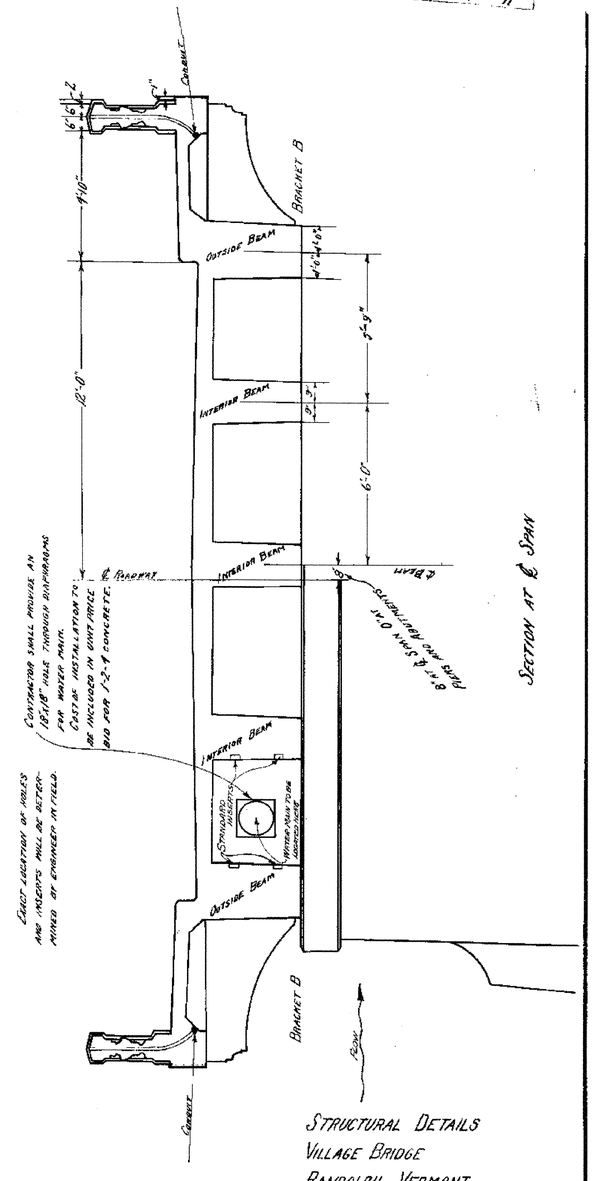
BRACKET B

No 1 RAIL 56'-8" ALONG ARC AT ℄ OF RAIL

DETAIL ENDPOST SPAN NO.1.

DETAIL ENDPOST SPAN NO.4.

FRONT



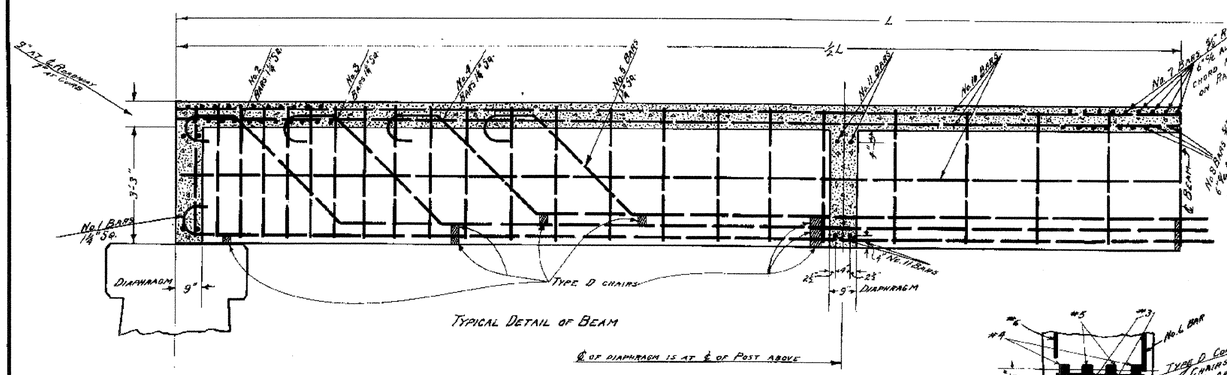
SECTION AT ℄ SPAN

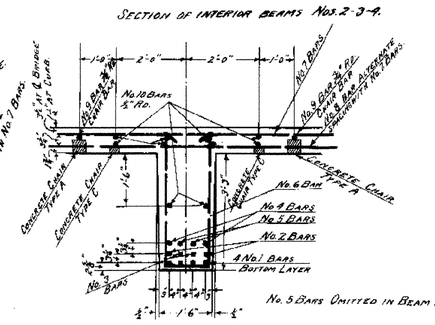
STRUCTURAL DETAILS
VILLAGE BRIDGE
RANDOLPH, VERMONT.

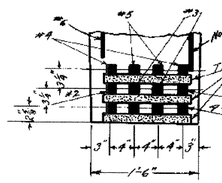
Surveyed by Doe
Designed by RADIGAN
Drawn by RADIGAN
Traced by BARRETT
Checked by H. W. Mauck
Series F No. 67A(R) Filed 7-33-44
Sheet 4 of 11 Sheets

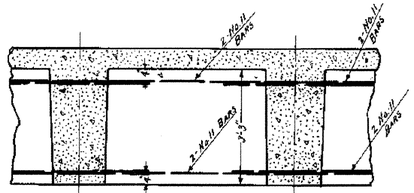
PRINTED ON HAMILTON TRACING CLOTH W. & L. Ozalid Co., N. Y.

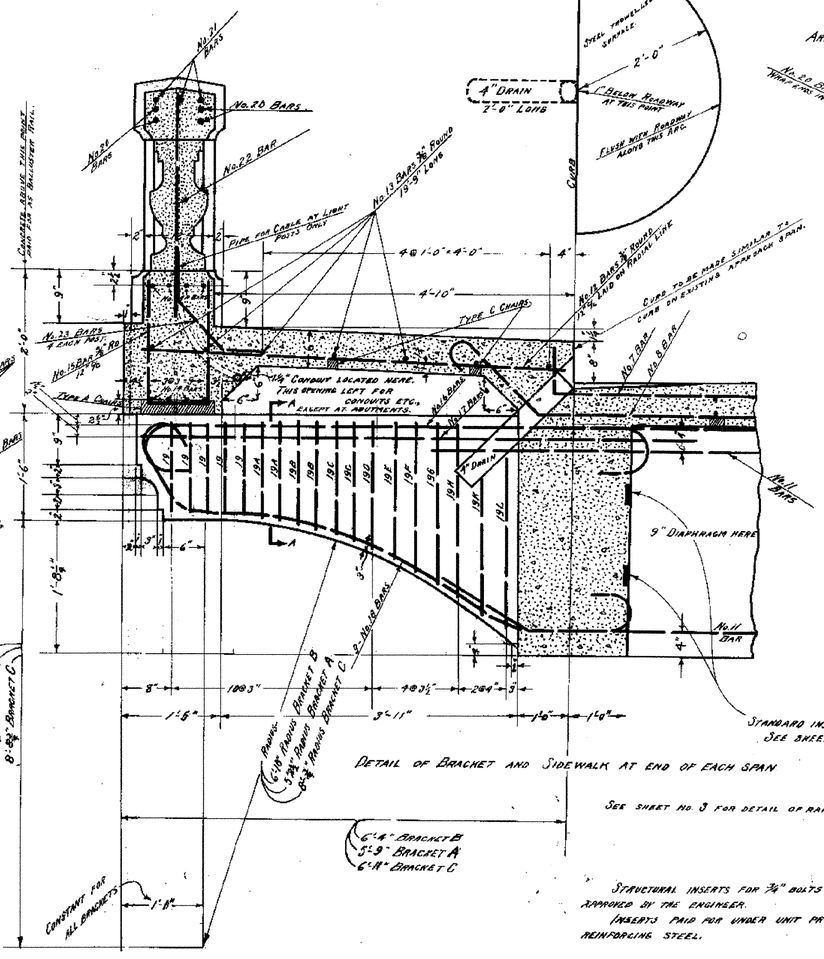
FED. HWY. NO. | STATE | PROJ. NO. | SHEET NO. | TOT. SHEETS
VT. 67A(R)1928 | 5 | 11



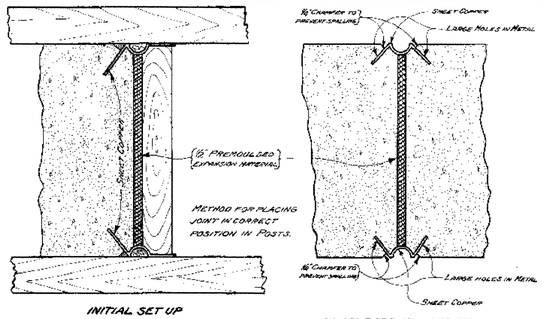






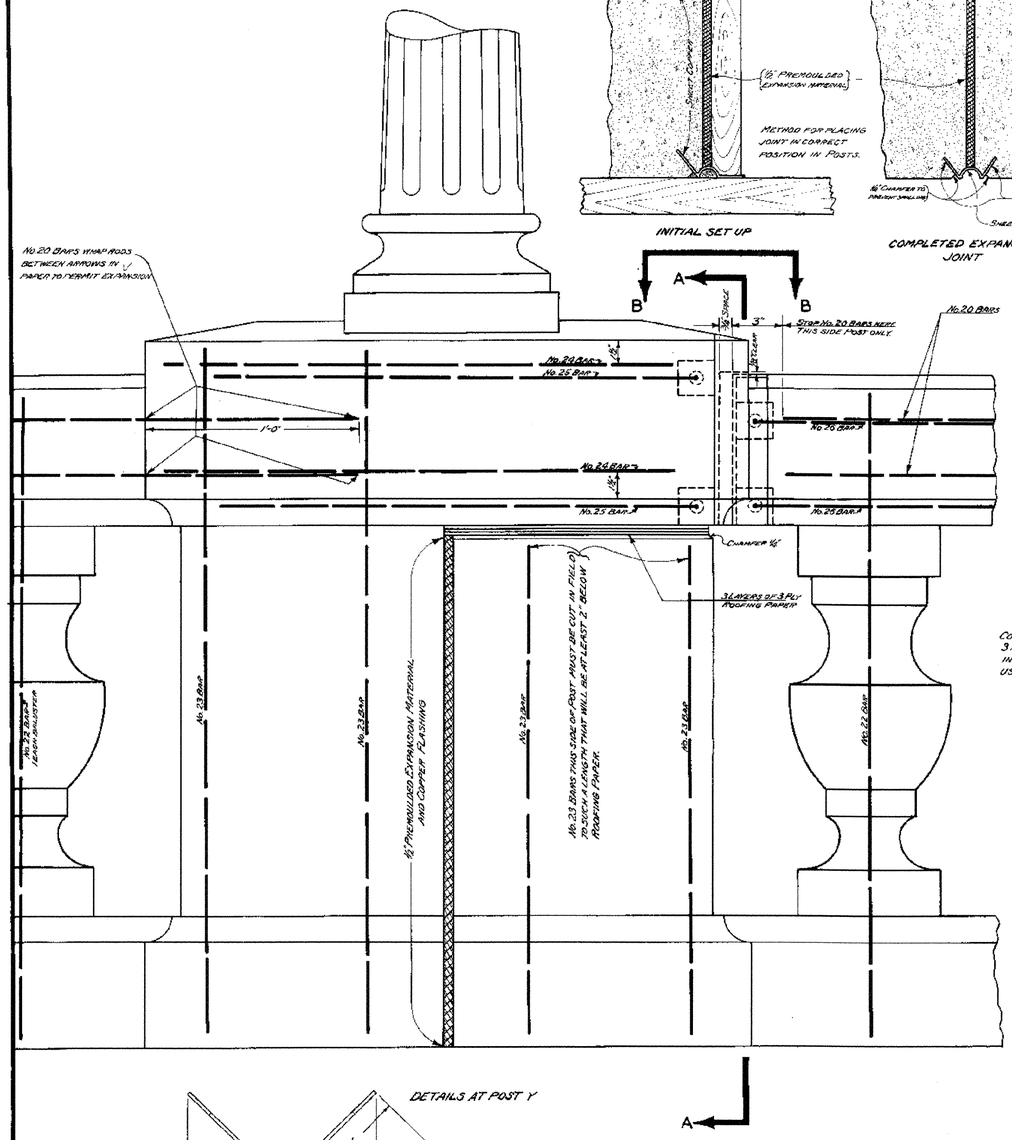

No.21 Bars
No.20 Bars
No.22 Bar
No.13 Bars ⅝" Round 19'-9" Long
Plug for Cable at Light Posts Only
Curb
4" Drain 2'-0" Long
Rough Finish Sidewalk
Float Finish Roadway at This Point
Finish with Radius Along This Arc.
Curb to be made similar to that on Existing Approach Span.
No.18 Bars ⅝" Round 19'-9" Long on Radial Line
No.13 Bars ⅝" Round 4 each Post
No.19 Bars ⅝" Rd 12
No.14 Bars
No.17 Bars
No.18 Bars
No.19 Bars
No.19A Bars
No.19B Bars
No.19C Bars
No.19D Bars
No.19E Bars
No.19F Bars
No.19G Bars
No.19H Bars
No.19K Bars
No.19L Bars
No.16 Bars
No.17A Bars
No.18 Bars
Type C Chairs
2 No.19E Bars
2 No.19D Bars
2 No.19C Bars
2 No.19B Bars
2 No.19A Bars
2 No.19 Bars
2 No.19K Bars
2 No.19H Bars
2 No.19G Bars
2 No.19F Bars

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
8	VT.	STATM	1928	6	11

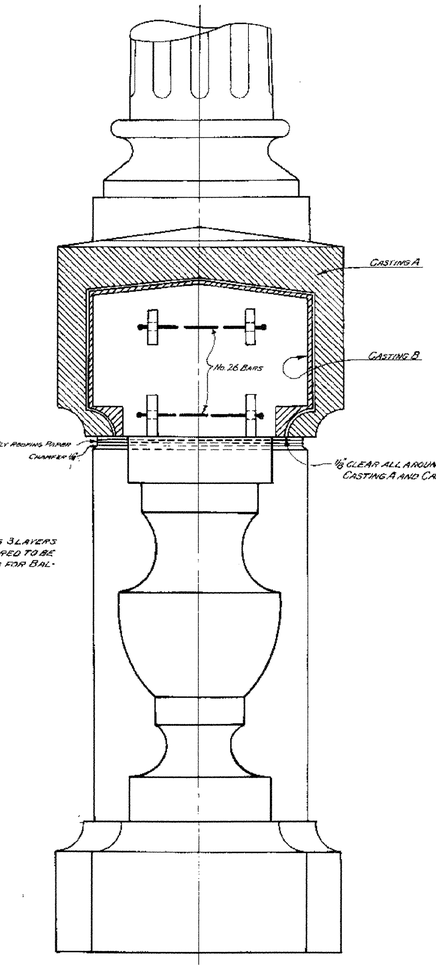


INITIAL SET UP

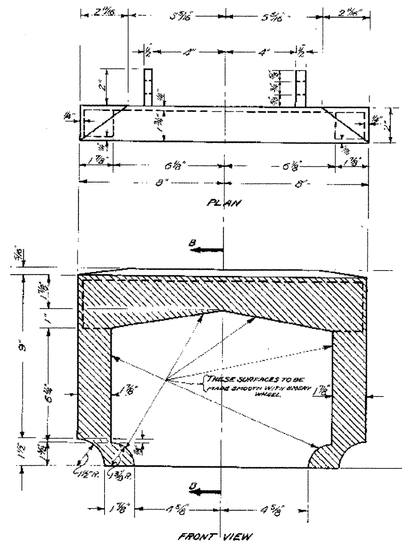
COMPLETED EXPANSION JOINT



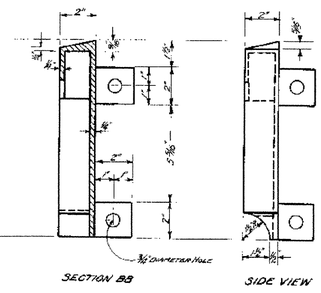
Cost of furnishing and placing 3 layers 3 ply roofing paper as required to be included in the unit price bid for Balusterstrade Rail.

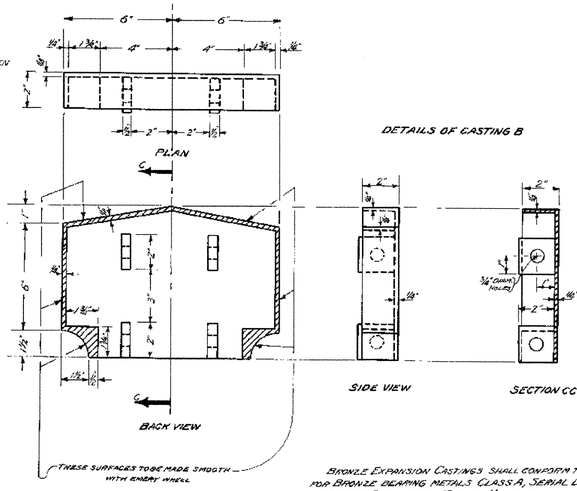


SECTION A A



DETAILS OF CASTING A





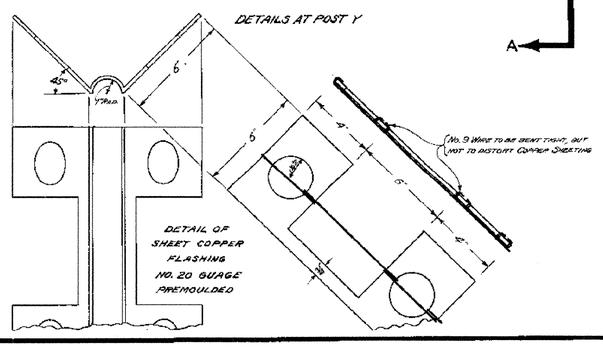
DETAILS OF CASTING B

Bronze Expansion Castings shall conform to Standard Specifications for Bronze Bearing Metals Class A, Serial Designation B22-21 of the American Society for Testing Materials.

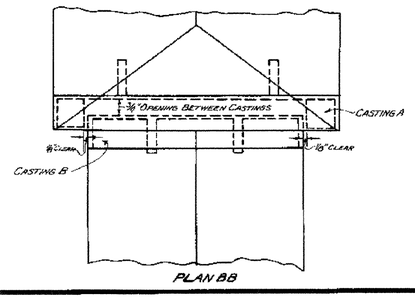
Edges of surfaces to be chamfered ⅛". Surfaces indicated to be smoothed with Emery Wheel.

Payment for furnishing and placing Bronze Expansion Castings, No. 20 Guage Copper Flashing and entire Expansion Device to be included in the unit price bid for for Balustrade Rail.

Casting A - 6 Required
Casting B - 6 Required



SCALE OF ENTIRE PLAN
3" = 1'-0"



PLAN BB

EXPANSION DETAILS IN RAIL
VILLAGE BRIDGE
RANDOLPH, — VT.

Surveyed by A.Q.Doe
Designed by A.D.Bishop
Drawn by H.O.Pedigan & F.C.Larson Jr.
Traced by F.C.Larson Jr.
Checked by H.W.Hamlett 4-14-28
Series F No. 67A(R) Filed 7-33-42
Sheet 6 of 11 Sheets

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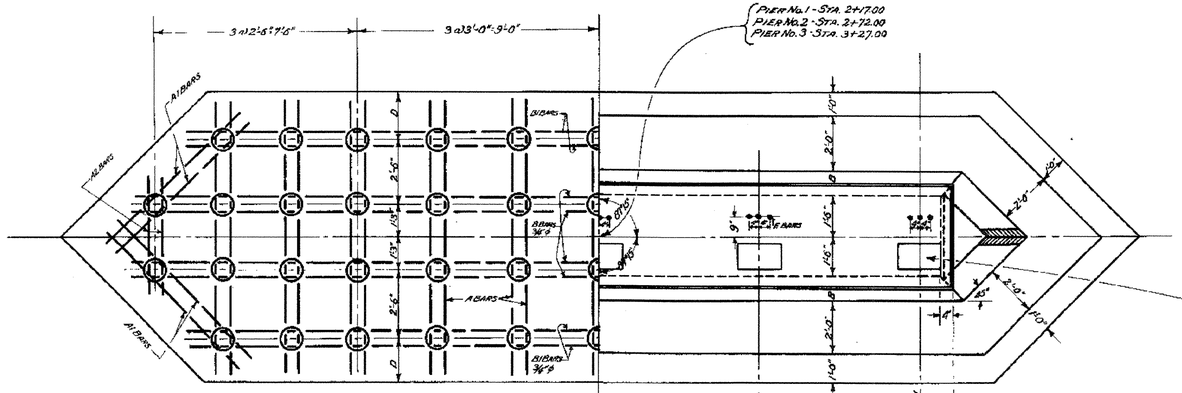
FED. AID PROJ. NO.	STATE	ROAD OR STR.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
		67A(R)	1928	7	11

HALF FOOTING PLAN - SYMMETRICAL ABOUT ℄

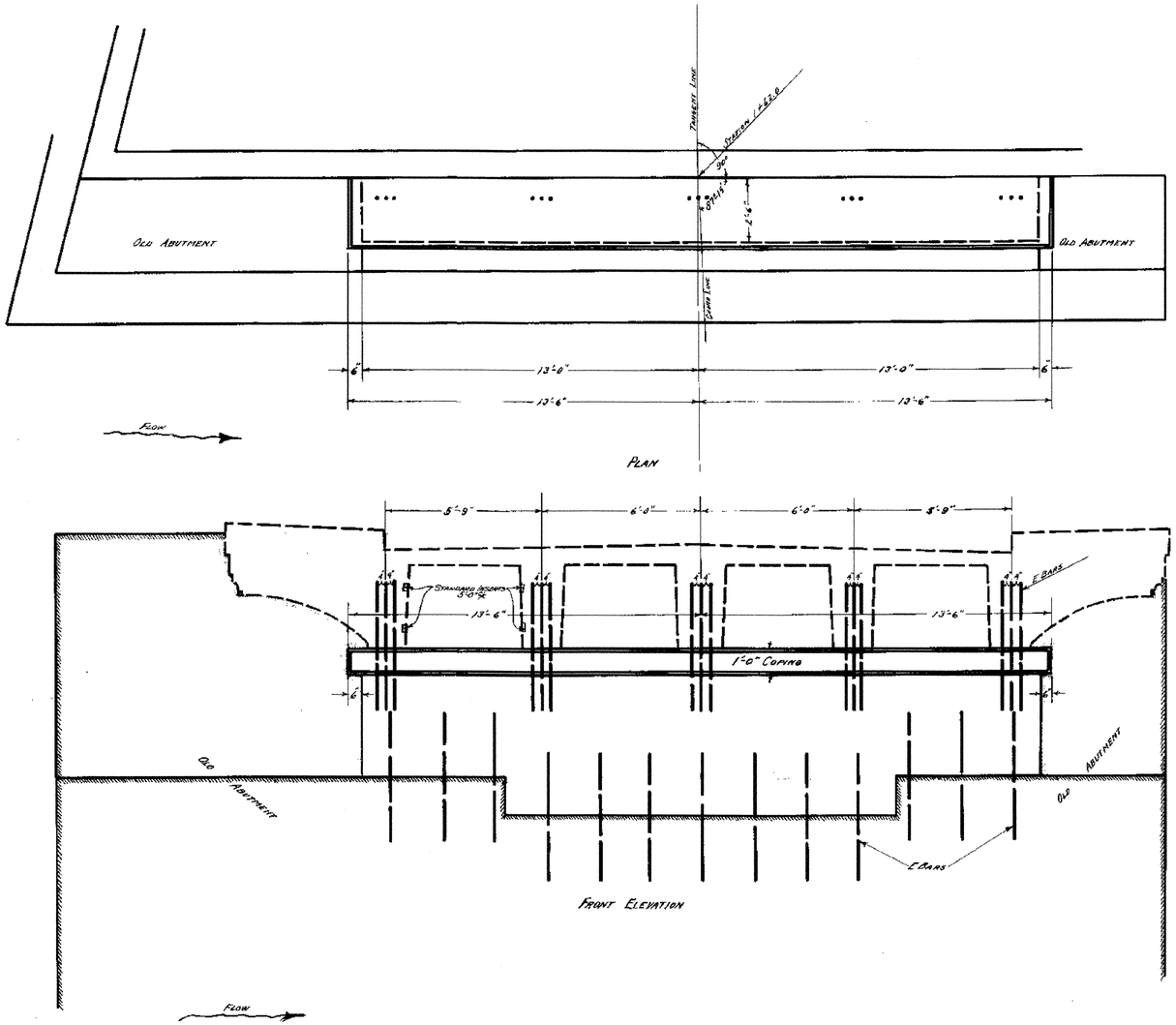
HALF PLAN - SYMMETRICAL ABOUT ℄

PIER No.1 - STA. 2+17.00
PIER No.2 - STA. 2+72.00
PIER No.3 - STA. 3+27.00

3 @ 12'-5"; 7'-6" — 3 @ 13'-0"; 3'-0"


A BARS
B BARS
A1 BARS
B BARS
3/4" ø
A BARS
B BARS
3/4" ø
B BARS
B BARS
B BARS
B BARS
45°
45°
4'-0"
2'-0"
2'-0"
1'-0"
2'-0"
1'-0"
2'-0"
1

FED. AID PROJ. NO.	STATE	FED. AID FISCAL YEAR	SHEET NO.	TOTAL SHEETS
		67A(8)1020	8	11



Notes—

All exposed edges shall be chamfered about 1", which dimension shall be the total length across the finished chamfer.

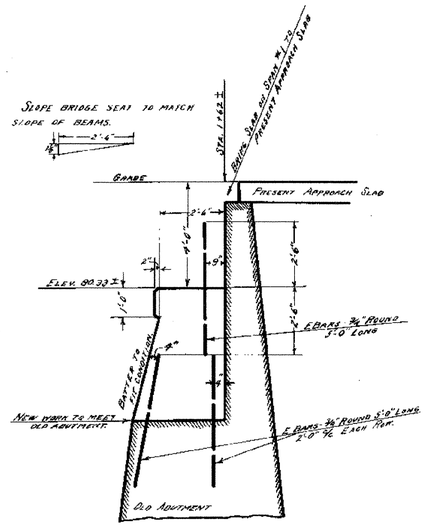
Any suitable structure excavation used by the contractor for any purpose other than for approach fill or back fill shall be replaced by an equivalent quantity of borrow by the contractor at his own expense unless same is ordered wasted by the engineer.

All work and materials shall conform to the Standard Road and Bridge Specifications of the Vermont Department of Highways.

All concrete in this abutment shall be Class B (1-2½-5)

All steel to be deformed bars.

Reinforcing steel shall conform to Standard Specifications for Billet Steel Concrete Reinforcement Bar, Intermediate or Structural Grade of The American Society for Testing Materials. Serial Designation A15-14.



End Elevation

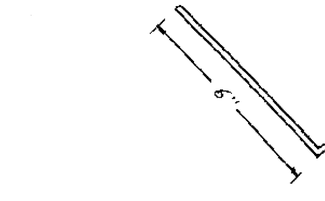
Holes 2'-6" deep shall be drilled into the old bridge seat for E bars. These bars shall be securely driven into these holes and grouted. Price for drilling, grouting and placing these bars in correct position to be included in unit price bid for Class B (1-2½-5) concrete.

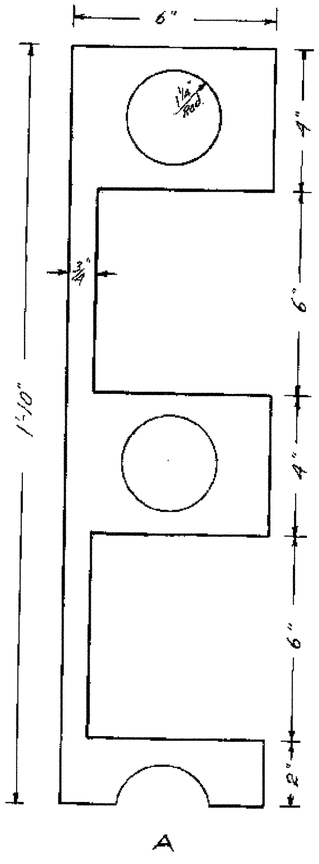
Abutment No. 1
Village Bridge
Randolph, Vt.

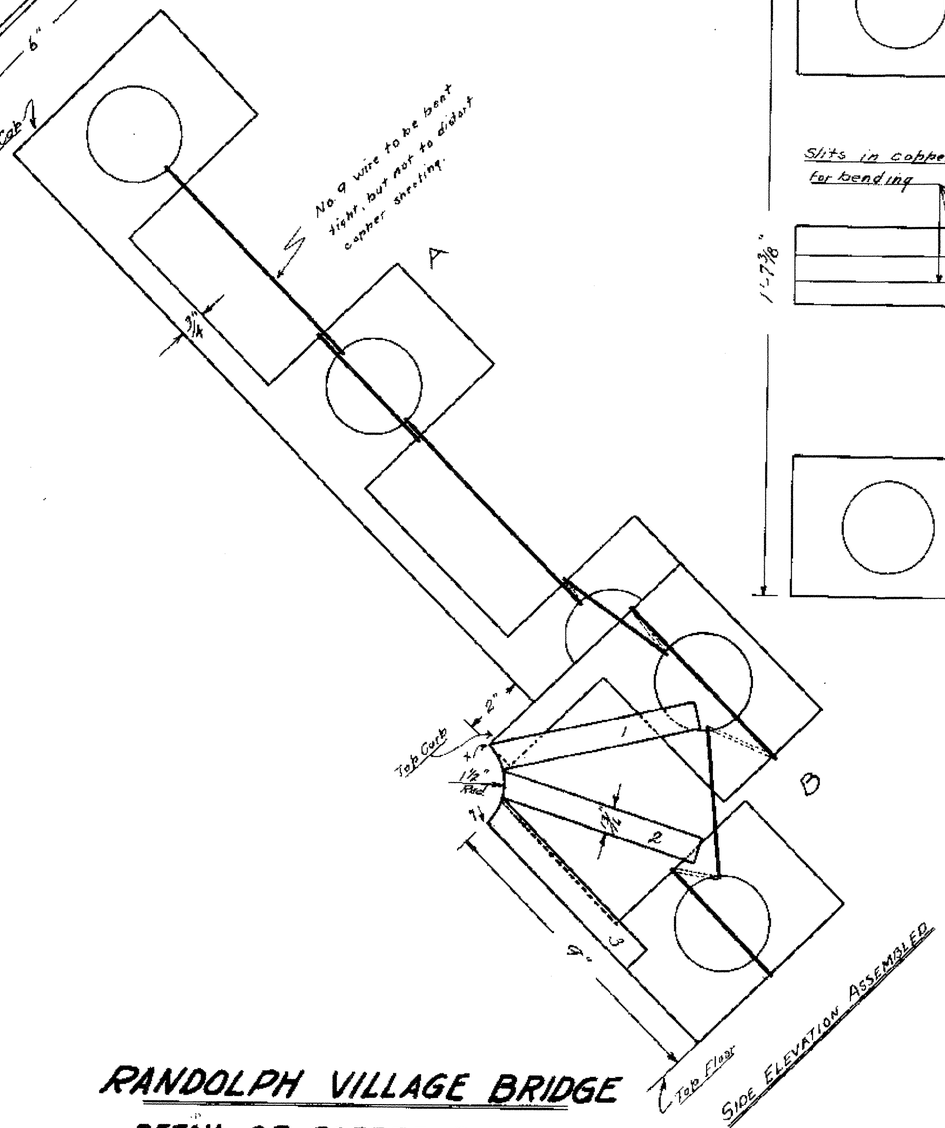
1-2½-5 Concrete	20 Cu. Yds.
Reinforcing Steel	308 Lbs.

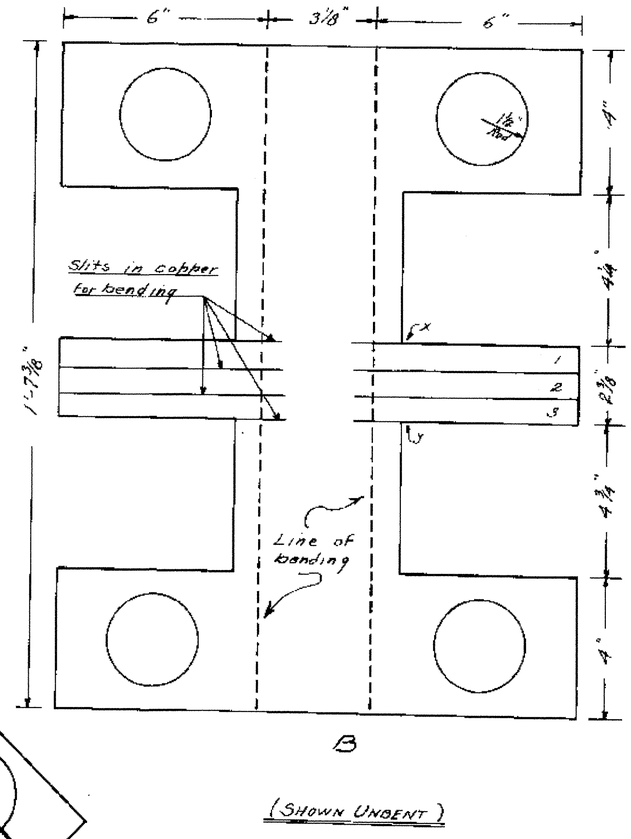
Surveyed by D.G.B.
Designed by Padigan
Drawn by Padigan
Traced by Barrett
Checked by H. W. Bennett
Series F No. 67A (8) Filed 7-33-44
Sheet 8 of 11 Sheets

PRINTED ON "IMPERVIOUS" TRACING CLOTH BY K & E CO., N.Y.









(Shown Unbent)

RANDOLPH VILLAGE BRIDGE

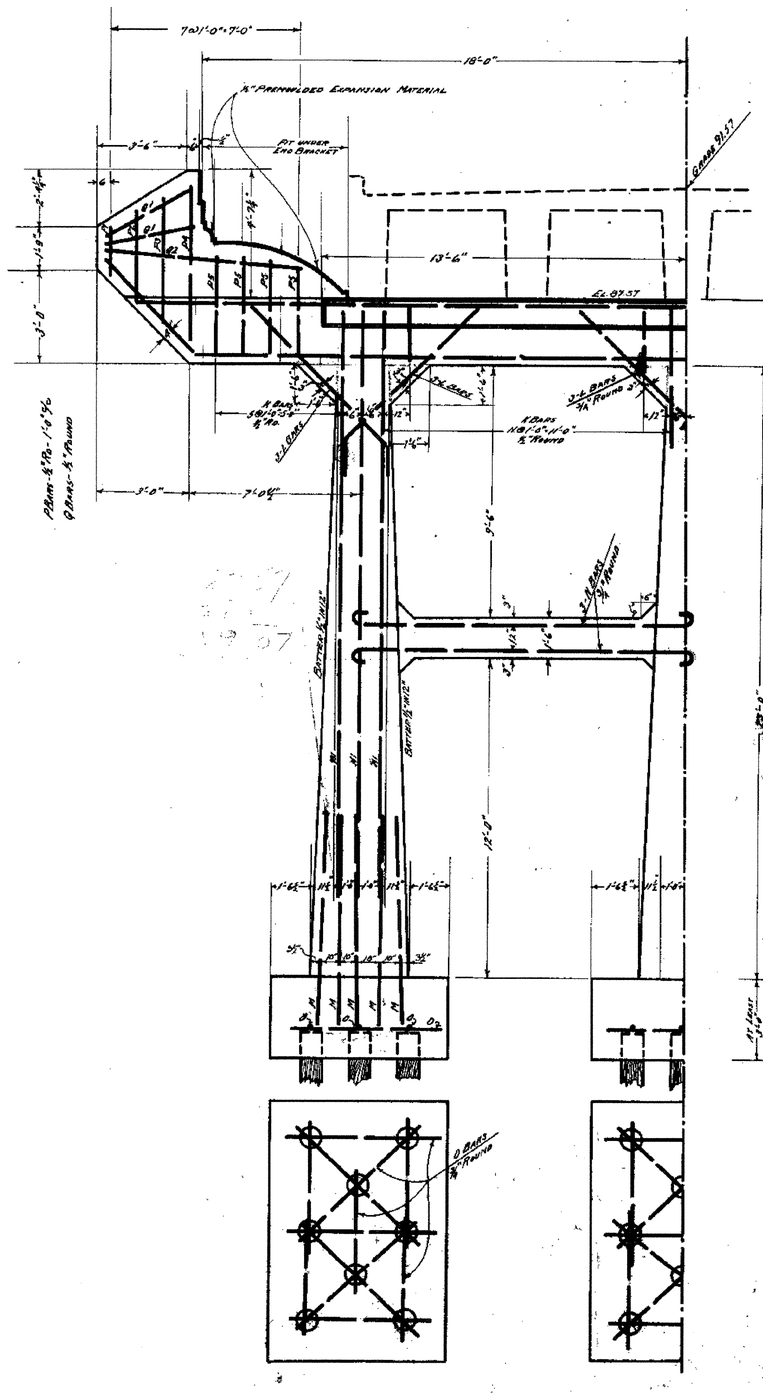
DETAIL OF COPPER FLASHING

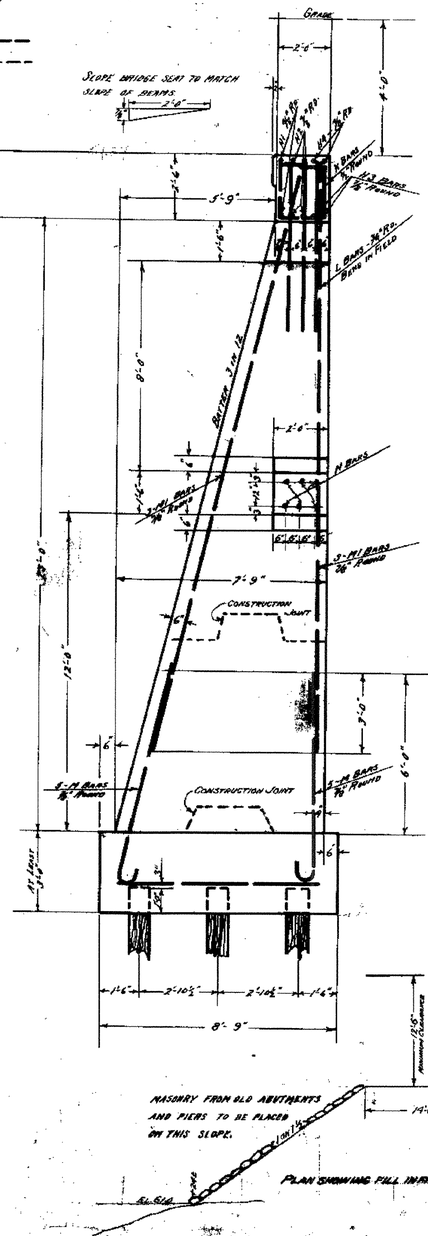
Designed by:-	H.E. Sargent
Detailed & Drawn by:-	W.B. McAllister 8-30-28
Traced by:-	W.B.M. 8-31-28
Checked by:-	

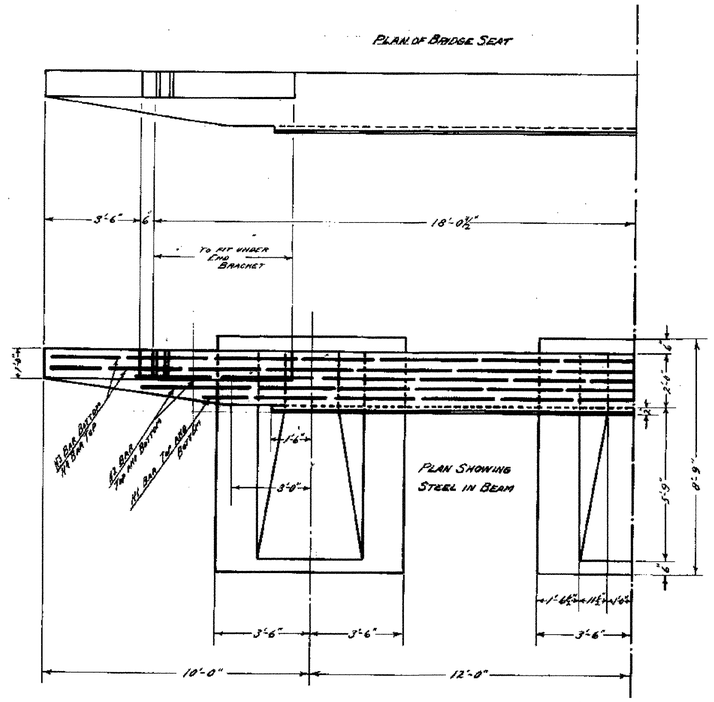
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
8	VT.	67A(6)1928	9	11	

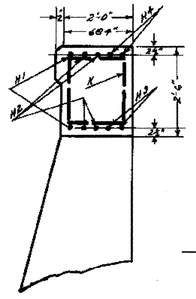
Contractor shall provide hole in diaphragm for water main as located in field during construction.

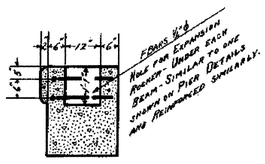
Cost shall be included in unit price bid for Class A, 1-2-4 concrete.

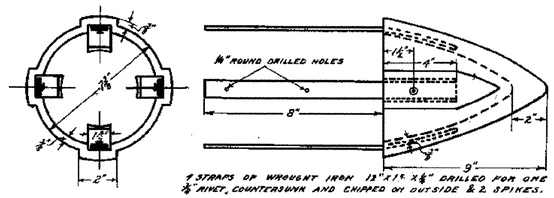












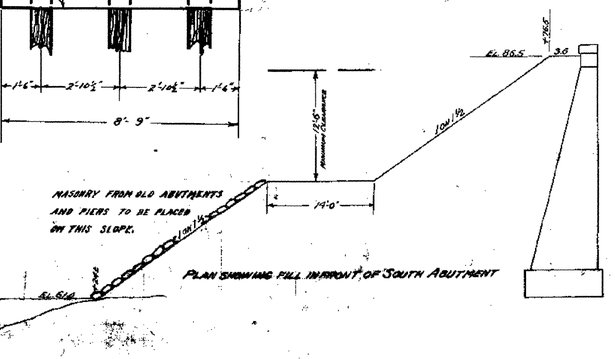
4 straps of wrought iron 13"x1½ x⅜" drilled for one ⅝" rivet, countersunk and chipped on outside & 2 spikes.

CAST STEEL PILE SHOE FOR 6" TO 8" TIPS.
Scale ¼"-1"

If jetting is necessary two water jets should be used with a water pressure of at least 150 to 200 lbs. per square inch. Pump to be of piston type with a 6" diameter intake pipe and a 4" diameter outlet pipe. The jet pipe to be about two inches in diameter, nozzle to be circular in section and of ½ to ⅝" in diameter.

Pile shoes as per sketch to be used as directed by Engineer. Unit price bid for wooden piles shall include jetting if necessary and furnishing and placing pile shoes.

Piling to be driven to a 15 ton bearing value.

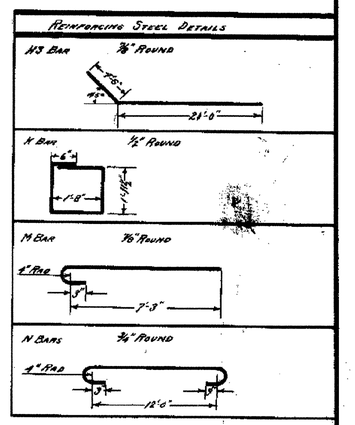


Notes—

All steel to be deformed bars.

Reinforcing steel shall conform to Standard Specifications for Billet Steel Concrete Reinforcement Bars, Intermediate or Structural Grade, of The American Society for Testing Materials. Serial Designation A15-41

Reinforcing Steel Details

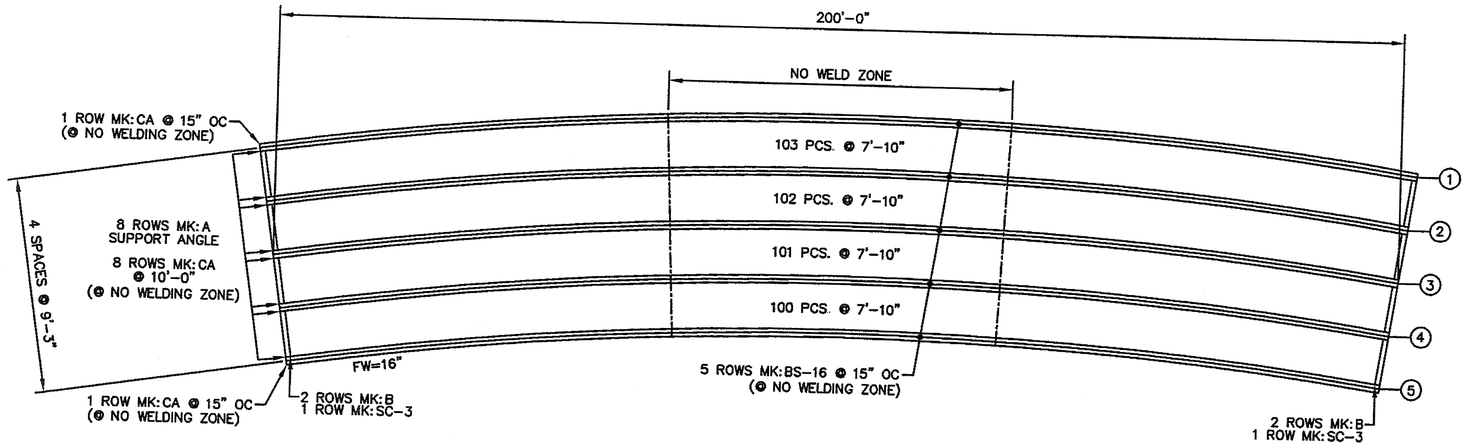


Abutment Details
Village Bridge
Randolph, Vermont.

Estimated Quantities

Structure Excavation	226 Cu.Yds.
1-2-4 Concrete	10 Cu.Yds.
1-2½-5 Concrete	60 Cu.Yds.
Reinforcing Steel	3245 Lbs.
Timber Piling	600 Ft.

Surveyed by Doe.
Designed by Radigan
Drawn by Radigan
Traced by Barrett
Checked by H.W. Marcott
Series F No. 67A(6) Filed 7-33-41
Sheet 9 of 11 Sheets

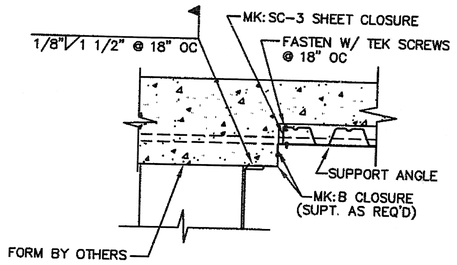


RANDOLPH BRIDGE

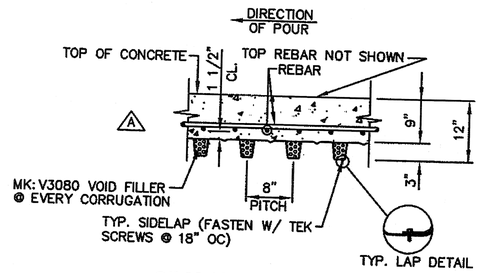
NO WELD ZONE DIMENSIONS	
GIRDER 1	59'-5 3/4"
GIRDER 2	57'-0 7/8"
GIRDER 3	55'-0"
GIRDER 4	53'-11 1/8"
GIRDER 5	52'-6 1/4"

THE "NO WELD ZONE" IS CENTERED ABOUT THE PIER (A)

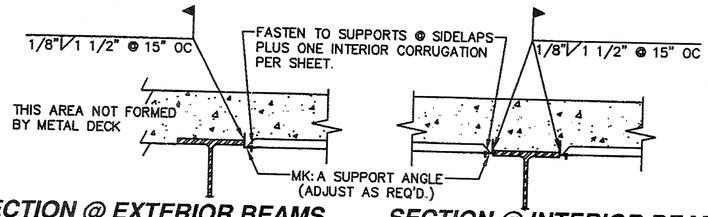
BILL OF MATERIAL			
MARK	NO. PCS.	LENGTH	DESCRIPTION
7'-10"	406	7'-10"	BRIDGE DECK 3" DEEP 8" PITCH 24" COVER CLOSED ENDS ASTM A653 GRADE 50 GALV. G-165 22 GAGE I=0.795 in4 S=0.441 in3
A	163	10'-0"	SUPPORT ANGLE 10 GAGE GALV. 3 1/2" 3" 2"
B	16	10'-0"	CLOSURE 16 GAGE GALV. 4" 3"
SC-3	8	10'-0"	SHEET CLOSURE 22 GAGE GALV. 3/4" 3 1/8" 1 1/2"
CA	150	2"	CLIP ANGLE 12 GAGE GALV. 3 1/2" 1"
BS-16	240	16 1/8"	BEAM STRAP 12 GAGE GALV. 2" WIDE FLAT
TEKS	4000	----	TEK SCREWS 1/4"X14X13/16" CADMIUM PLTD.
(A) V3080	1218	7-10"	VOID FILLER 3"



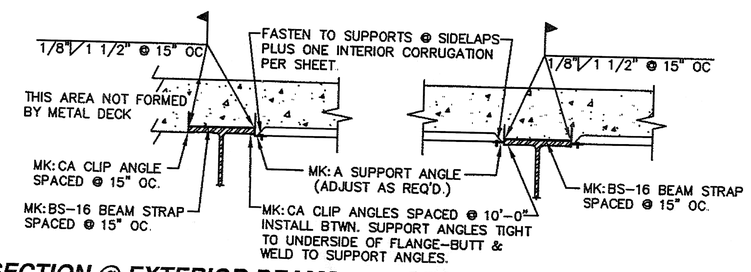
SECTION @ ABUTMENTS



3" X 8" SLAB SECTION



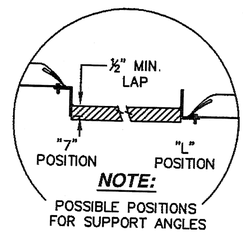
SECTION @ EXTERIOR BEAMS SECTION @ INTERIOR BEAMS REQUIRED @ WELDING ZONES



SECTION @ EXTERIOR BEAMS SECTION @ INTERIOR BEAMS REQUIRED @ NO WELDING ZONES

STATE OF VERMONT
WILLIS R. CONNER
No. 8727
CIVIL
LICENSED
PROFESSIONAL ENGINEER

7-24-07



NOTE:
POSSIBLE POSITIONS
FOR SUPPORT ANGLES

BRIDGE DECK GENERAL NOTES

1. Consolidated Systems, Inc. will furnish only that material listed in the Bill of Material.
2. All material for bridge deck form shall conform to ASTM specification A-653 (Grades 40 and 50) having a coating designation of G-165.
3. The contractor shall verify all dimensions.
4. Extra concrete poured on deck slab as a result of these metal forms shall be provided by the General Contractor and will not be the responsibility of or to the account of Consolidated Systems, Inc.
5. ALL DECK SHEETS SHALL HAVE A MINIMUM BEARING OF 1 1/2" AT EACH END OF THE DECK. CENTER FORMS ON SUPPORT ANGLES.
6. FOR THE SAFETY OF THE WORKMEN, ALL DECK SHEETS SHALL BE SECURELY FASTENED TO THE SUPPORT ANGLE AS THEY ARE PLACED BEFORE CONSTRUCTION TRAFFIC IS PERMITTED.
7. Reinforcing steel and supports for reinforcing steel shall be placed in accordance with applicable drawings and in conformance with good reinforced concrete practice and under the continuous supervision of a properly trained foreman.
8. CALCIUM CHLORIDE (OR ANY ADMIXTURE CONTAINING CHLORIDE SALTS) SHALL NOT BE USED IN THE CONCRETE PLACED ON THE BRIDGE DECK.
9. When pouring concrete, DO NOT allow overall depth to exceed the design slab depth plus three inches (3") otherwise, pour concrete over supporting beams and girders and spread to proper depth over bridge forms.
10. If situations arise that are not specifically covered by these notes or placing plans, or if there is any doubt as to the correct procedure to be followed in erection please contact Consolidated Systems, Inc. for additional instructions or clarification.
11. Vertical adjustment of support angles shall be determined in the field to maintain the correct slab thickness and roadway slope.
12. The metal closure shown in sections are intended for closure and alignment only and not intended to support the end of forms cut on a skew. Addition support and forming may be required.
13. Attach styro/foam filler to deck pan flutes with adhesive. The adhesive must be for use on expanded polystyrene. (A)
    Acceptable brands are HB FULLER or LEECH.

RECEIVED
BY TAS DR'D BY
JUL 27 2007
RESUBMIT APPROVED
BY DATE 7/30/07

REVISIONS	COMMENTS	DATE
A	STATE MARK-UPS	7/07

FILE: R:\RD_SHARE\2007\STATE\VT\RD50159.

REMARKS
BRIDGE DECK LAYOUT, SECTIONS, BILL OF MATERIAL AND GENERAL NOTES
RANDOLPH BRIDGE

CONSOLIDATED SYSTEMS INC. MEMPHIS, TN

CUSTOMER	WINTERSET, INC.				
PROJECT	BRF 0241 (29)				
LOCATION	ORANGE COUNTY, VT				
ENGINEER	VERMONT DEPARTMENT OF TRANSPORTATION				
DRAWN	BBW	DATE	JUNE 2007	CUST. ORDER NO.	CSI JOB NO. / DRAWING NO.
CHECKED	TLM	DATE	JUNE 2007		B0700159 / 1 of 1

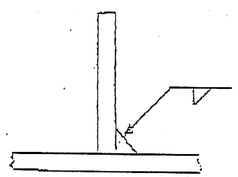
PROJECT NAME _____

PREQUALIFIED JOINT WELDING PROCEDURE PROJECT NUMBER _____
PROCEDURE SPECIFICATION

Material specification A36:A572-A588
Welding process FCAW
Manual or machine SEMI-AUTOMATIC
Position of welding FLAT OR HORIZONTAL
Filler metal specification AWS 5.20
Filler metal classification ALLOY RODS DUAL SHIELD II 71 ULTRA (E71T-1)
Flux N/A
Shielding gas CO_2 Flow rate 35 CFH
Single or multiple pass SINGLE AND MULTIPLE
Single or multiple arc SINGLE ELECTRICAL STICK-OUT 3/8"-3/4"
Welding current DC
Polarity REVERSE
Welding progression N/A
Root treatment NONE
Preheat and interpass temperature 50° to 3/4" INCL, 70° to 1 1/2" INCL, 150° to 2 3/4" INCL
Postheat treatment NONE
Supported by WPS 007 and 008

WELDING PROCEDURE

Pass no.	Electrode size	Welding current: Amperes	Welding current: Volts	Travel speed (T.P.M.)	Weld Size (e)	Joint detail
1	.045	220-240	26-28	16-18	3/16"	
1	.045	220-240	26-28	12-13	1/4"	
All	.045	210-230	25-27	9-10	5/16"	
1	.045	220-240	26-28	16-18		
2	.045	220-240	26-28	16-18	3/8" (3 passes)	
3	.045	220-240	26-28	16-18		
1	.045	210-230	25-27	9-11		
2	.045	210-230	25-27	9-11	7/16"	
3	.045	210-230	25-27	9-11	(3 passes)	

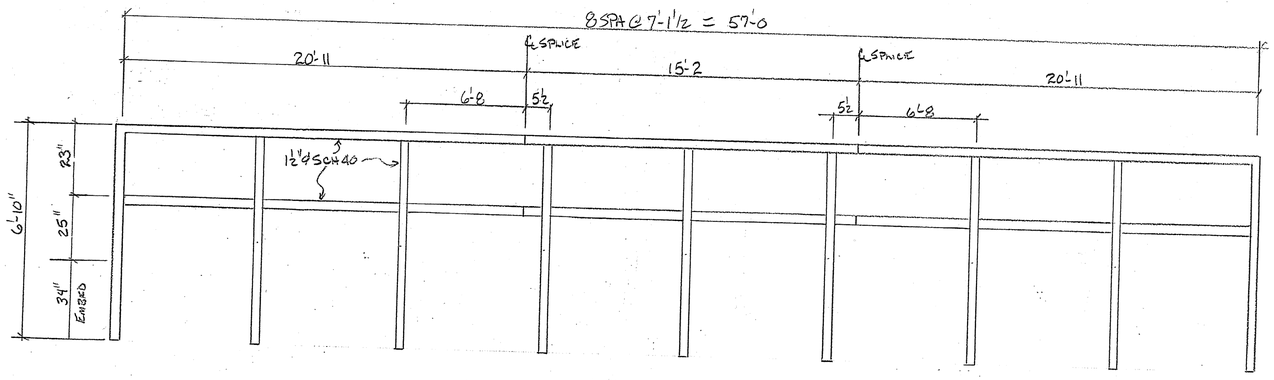


This procedure may vary due to fabrication sequence, fit-up, pass size, etc., within the limitation of variables given in Section 5.

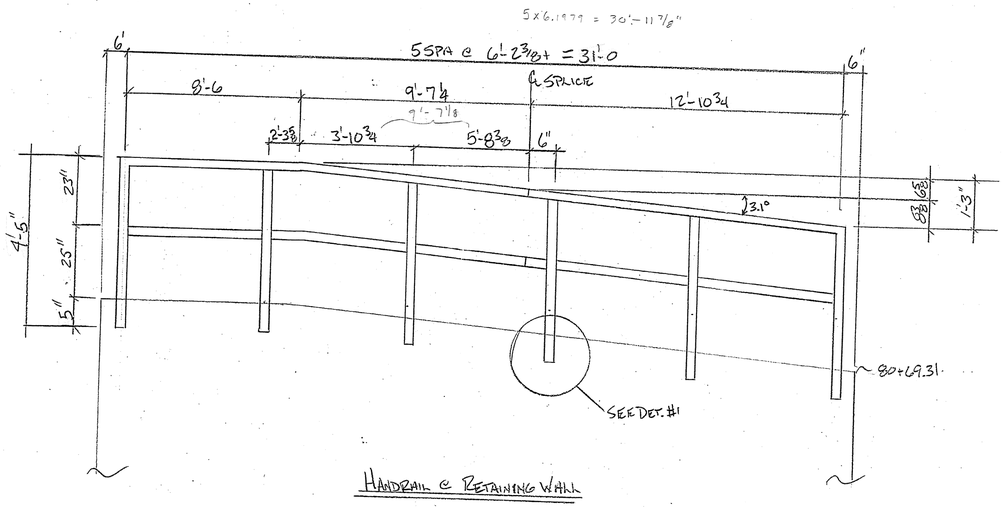
Procedure no. DS-16
Revision V TRANS

RECEIVED
CK'D BY _____ OK'D BY JWC
APR 04 2007
RESUBMIT _____ APPROVED ✓
BY _____ DATE 4-9-07

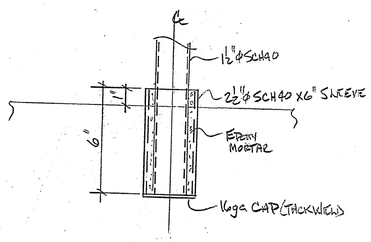
Contractor Merrimack Sheet Metal, Inc.
Authorized by Scott Blanchette
Date 11/26/07



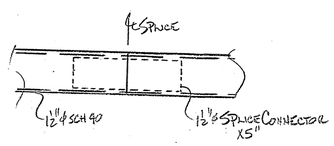
HANDRAILS @ RT 12A (STA 51+00 TO 51.57 RT)



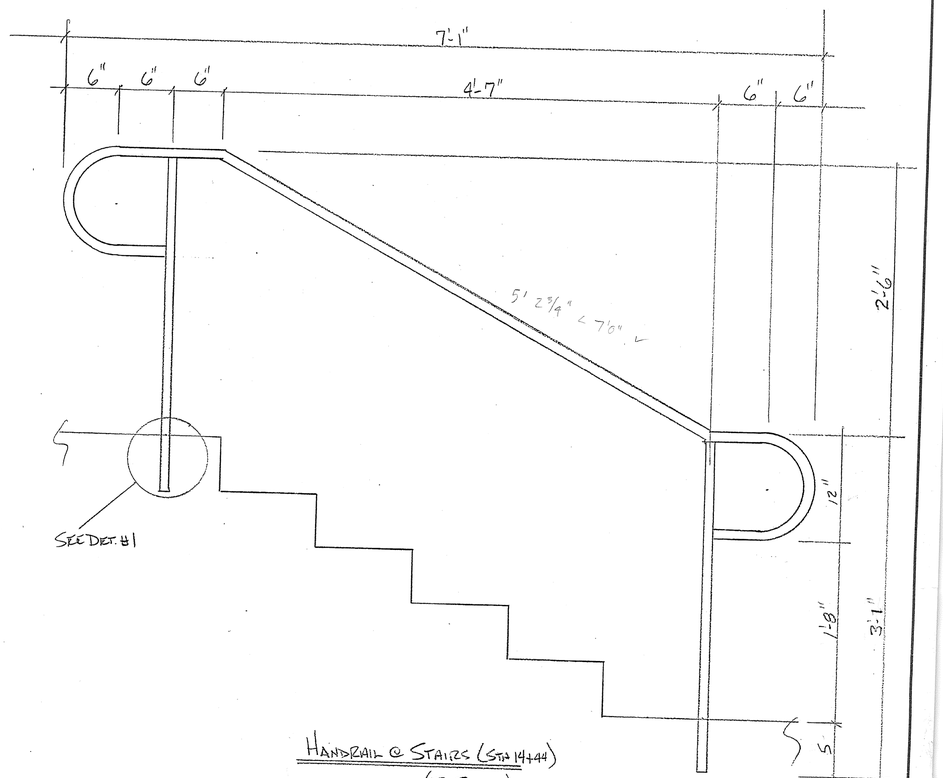
HANDRAIL @ RETAINING WALL



DETAIL #1
(8 REQD)



SPLICE DETAIL



HANDRAIL @ STAIRS (STA 14+44)
(2 REQD)

ADD

PAINT

SHERWIN WILLIAMS

PRIMER: CORTHANE I GALVA-PAC ONE PACK ZINE PRIMER 3-4 MILS

TOP COAT & FAST CLAD URETHANE 6-9 MILS

COLOR: BLACK FEDERAL STANDARD NO 595 COLOR CHIP NO. 27038

NOTE - ALL PIPE TO BE ASTM A53
- ALL MATERIAL PAINTED PER 513 - BLACK
- SHERWIN WILLIAMS PRIMER / EPOXY

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CK'D BY RHP OK'D BY
MAR 07 2007
RESUBMIT APPROVED As Noted
BY DATE

REV NO.	DATE	DESCRIPTION

HOLES
PAINT AS NOTED

DRAWING COVERS: HANDRAILS

DATE SUB.	PROJECT	#BRF 0241 (29)
	LOCATION	RANDOLPH, VT.
	ARCHITECT	
DATE APP.	ENGINEER	
DATE DIST.	CUSTOMER	WINTERGREEN

MERRIMACK SHEET METAL
119 HALL ST.
CONCORD, NH
03301
Tel: (603) 224-7766
Fax: (603) 224-7925

DRAWN BY	JD
CK'D. BY	PC
JOB NO.	1223
DWG. NO.	

VT-06215 Contract #BRF 0241 (29)

VTRANS
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OK'D BY OK'D BY JLC
DEC 13 2006
RESUBMIT APPROVED ✓
BY DATE 12-21-06

WELDING PROCEDURE FOR AWS PREQUALIFIED JOINTS

W2

PROCEDURE SPECIFICATIONS

MATERIAL SPECIFICATION ASTM A709 Gr. 36, 50, 50W
WELDING PROCESS SHIELDED METAL ARC WELDING
MANUAL OR MACHINE MANUAL
POSITION OF WELDING ALL (EXCEPT AS NOTED BELOW)
FILLER METAL SPECIFICATION AWS A5.1 AND A5.5
WELD METAL CLASSIFICATION E7018/E7028 (TACKING ONLY) AND E8018-C3
WIRE/FLUX D.N.A.
POLARITY DC+ OR AC
ROOT TREATMENT REMOVE LOOSE RUST, SCALE AND CONTAMINANTS
PREHEAT AND INTERPASS TEMPERATURE SEE PREHEAT CHART
ELECTRICAL STICK-OUT D.N.A.
SHIELDING GAS D.N.A.

REVISED: 11/12/02

ORIGINAL ISSUE: 01/01/92

WELDING PROCEDURE

PASS NO.	WIRE SIZE	CURRENT RANGE E7018 DC+	CURRENT RANGE E7018 AC	TRAVEL IPM	JOINT DETAIL
1	1/8	90-150	110-170	6-9	TACK WELDS
1	5/32	120-190	135-225	8-13	GROOVE ROOT PASSES AND TACK WELDS

PASS NO.	WIRE SIZE	CURRENT RANGE E7028 DC+	CURRENT RANGE E7028 AC	TRAVEL IPM	JOINT DETAIL (LIMITED TO FLAT AND HORIZONTAL TACK WELDS AND FLAT POSITION GROOVE ROOT PASSES)
1	5/32	170-240	180-270	8-13	GROOVE ROOT PASSES AND TACK WELDS

PASS NO.	WIRE SIZE	CURRENT RANGE E8018-C3 DC+	CURRENT RANGE E8018-C3 AC	TRAVEL IPM	JOINT DETAIL
1	5/32	130-190	140-225	8-13	GROOVE ROOT PASSES, REPAIR WELDS AND TACKS
ALL	5/32	130-190	140-225	8-13	FILLET WELDS
ALL	3/16	180-270	210-290	9-15	FILLET WELDS (FLAT AND HORIZONTAL WELDS ONLY)
ALL	7/32	250-330	270-370	9-16	FILLET WELDS (FLAT AND HORIZONTAL WELDS ONLY)

* WELD SIZE DETERMINED BY TRAVEL SPEED

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VT-06215 Contract #BRF 0241 (29)

WELDING PROCEDURE FOR AWS PREQUALIFIED JOINTS

W6

PROCEDURE SPECIFICATIONS

MATERIAL SPECIFICATION ASTM A709 Gr. 36, 50, 50W
WELDING PROCESS FLUX CORED ARC WELDING
MANUAL OR MACHINE SEMIAUTOMATIC OR MACHINE
POSITION OF WELDING 1F, 2F, 3F, 4F
FILLER METAL SPECIFICATION AWS A5.20
WELD METAL CLASSIFICATION E71T-1
WIRE/FLUX HOBART FORMULA XL 550
WIRE DIAMETER .052"
SINGLE OR MULTIPLE ARC SINGLE ARC
POLARITY DC+
ROOT TREATMENT REMOVE LOOSE RUST, SCALE, AND CONTAMINANTS
PREHEAT AND INTERPASS TEMPERATURE SEE PREHEAT CHART
ELECTRICAL STICK-OUT 3/4"
SHIELDING GAS 100% CO2

VTRANS
RECEIVED
CK'D BY ____ CK'D BY JWC
DEC 19 2006
RESUBMIT ____ APPROVED ✓
BY ____ DATE 12-21-06

WELDING PROCEDURE

REVISED:

ORIGINAL ISSUE: 5/3/06

PASS NO.	WELDING CURRENT			TRAVEL SPEED (IPM)	GAS FLOW	JOINT DETAIL
	AMPS	WIRE FEED SPEED	VOLTS			
1	225-250	285-335	25.0-27.0	14.75-16.5	40-50	ALL POSITION TACK WELDS

USED FOR:
TACK WELDING STIFFENER TO WEB

PREHEAT NOT REQUIRED FOR TACK WELDS REMELTED BY THE SAW PROCESS

PROCEDURE QUALIFICATION RECORD AWS-06-02 (EXPIRES 4/27/11)

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VT-06215 Contract #BRF 0241 (29)

WELDING PROCEDURE FOR AWS PREQUALIFIED JOINTS

W13

PROCEDURE SPECIFICATIONS

MATERIAL SPECIFICATION ASTM A709 Gr. 36, 50, 50W
WELDING PROCESS SUBMERGED ARC WELDING
MANUAL OR MACHINE SEMIAUTOMATIC OR MACHINE
POSITION OF WELDING 2F
FILLER METAL SPECIFICATION AWS A5.17
WELD METAL CLASSIFICATION F7A2-EM12K
WIRE/FLUX LINCOLN L61/960
WIRE DIAMETER 3/32 "
SINGLE OR MULTIPLE ARC SINGLE ARC
POLARITY DC-
ROOT TREATMENT REMOVE ALL MILL SCALE
PREHEAT AND INTERPASS TEMPERATURE SEE PREHEAT CHART
ELECTRICAL STICK-OUT 1 INCH
SHIELDING GAS D.N.A.

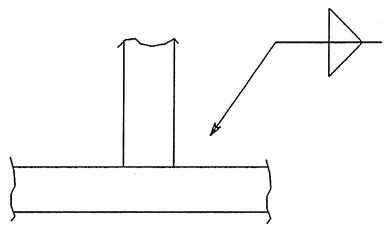
VTRANS RECEIVED DEC 18 2006
OK'D BY JWC
RESUBMIT APPROVED ✓
BY DATE 12-21-06

REVISED: 3/24/06
ORIGINAL ISSUE: 2/1/00

WELDING PROCEDURE

PASS NO.	WELDING CURRENT			TRAVEL SPEED (IPM)	JOINT DETAIL
	AMPS	WIRE FEED SPEED	VOLTS		
1	405-550	131-195	34.5-39.5	15.5-25.0	5/16" FILLET WELDS

PRIMARY USE:
WEB TO FLANGE
(AND OTHER APPLICATIONS AS NEEDED)



PROCEDURE QUALIFICATION RECORD AWS-03-7 (EXPIRES 2/4/08)
PROCEDURE QUALIFICATION RECORD 06-01B (EXPIRES 3/24/11)

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VT-06215 Contract #BRF 0241 (29)

WELDING PROCEDURE FOR AWS PREQUALIFIED JOINTS

W43

PROCEDURE SPECIFICATIONS

MATERIAL SPECIFICATION ASTM A709 Gr. 36, 50, 50W
WELDING PROCESS SUBMERGED ARC WELDING
MANUAL OR MACHINE SEMIAUTOMATIC OR MACHINE
POSITION OF WELDING 2F
FILLER METAL SPECIFICATION AWS A5.17
WELD METAL CLASSIFICATION F7A2-EM12K
WIRE/FLUX LINCOLN L61/761
WIRE DIAMETER 3/32"
SINGLE OR MULTIPLE ARC SINGLE ARC
POLARITY DC-
ROOT TREATMENT REMOVE LOOSE RUST, SCALE AND CONTAMINANTS
PREHEAT AND INTERPASS TEMPERATURE SEE PREHEAT CHART
ELECTRICAL STICK-OUT 1 INCH
SHIELDING GAS D.N.A.

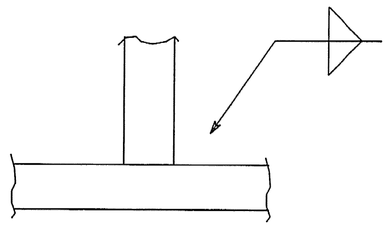
VTRANS
RECEIVED
CK'D BY JW
DEC 18 2006
RESUBMIT APPROVED ✓
BY DATE 12-21-06

WELDING PROCEDURE

REVISED: 12/10/02
ORIGINAL ISSUE: 2/1/00

PASS NO.	WELDING CURRENT			TRAVEL SPEED (IPM)	JOINT DETAIL
	AMPS	WIRE FEED SPEED	VOLTS		
1	360-440	114-146	29.0-36.0	11.0-27.0	5/16" FILLET WELD

PRIMARY USE:
STIFFENER TO WEB, STIFFENER TO FLANGE
(AND OTHER APPLICATIONS AS NEEDED)



PROCEDURE QUALIFICATION RECORD AWS-FCM-02-4 (EXPIRES 6/27/07)
PROCEDURE QUALIFICATION RECORD AWS-FCM-02-5A (EXPIRES 7/16/07)

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VT-06215 Contract #BRF 0241 (29)

WELDING PROCEDURE FOR AWS PREQUALIFIED JOINTS

W53

PROCEDURE SPECIFICATIONS

MATERIAL SPECIFICATION	ASTM A709 Gr. 36, 50, 50W
WELDING PROCESS	SUBMERGED ARC WELDING
MANUAL OR MACHINE	SEMIAUTOMATIC OR MACHINE
POSITION OF WELDING	2F
FILLER METAL SPECIFICATION	AWS A5.17
WELD METAL CLASSIFICATION	F7A2-EM12K
WIRE/FLUX	LINCOLN L61/960
WIRE DIAMETER	SEE BELOW
SINGLE OR MULTIPLE ARC	SINGLE ARC
POLARITY	SEE BELOW
ROOT TREATMENT	REMOVE LOOSE RUST, SCALE AND CONTAMINANTS
PREHEAT AND INTERPASS TEMPERATURE	SEE PREHEAT CHART
ELECTRICAL STICK-OUT	1 INCH
SHIELDING GAS	D.N.A.

VTRANS RECEIVED DEC 18 2006

CK'D BY JLC CK'D BY

RESUBMIT APPROVED ✓

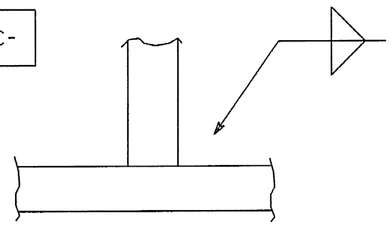
BY DATE 12-21-06

REVISED: 3/24/06

ORIGINAL ISSUE: 01/01/92

WELDING PROCEDURE

PASS NO.	WELDING CURRENT			TRAVEL SPEED (IPM)	WIRE DIA.	POL.	JOINT DETAIL
	AMPS	WIRE FEED SPEED	VOLTS				
1	400-550	123-217	32.5-39.5	14.0-23.0	5/64 "	DC+	5/16" FILLET WELDS
1	400-550	129-195	32.5-39.5	14.0-23.0	3/32 "	DC-	



PRIMARY USE:
CROSS FRAMES AND DIAPHRAGMS
(AND OTHER APPLICATIONS AS NEEDED)

PROCEDURE QUALIFICATION RECORD AWS-03-5 (EXPIRES 1/28/08)
PROCEDURE QUALIFICATION RECORD AWS-03-6 (EXPIRES 1/31/08)
PROCEDURE QUALIFICATION RECORD AWS-03-7 (EXPIRES 2/4/08)
PROCEDURE QUALIFICATION RECORD 06-01B (EXPIRES 3/24/11)

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VT-06215 Contract #BRF 0241 (29)

WELDING PROCEDURE FOR AWS PREQUALIFIED JOINTS

W71X-2

PROCEDURE SPECIFICATIONS

MATERIAL SPECIFICATION ASTM A709 Gr. 36, 50, 50W
WELDING PROCESS SUBMERGED ARC WELDING
MANUAL OR MACHINE SEMIAUTOMATIC OR MACHINE
POSITION OF WELDING 1G
FILLER METAL SPECIFICATION AWS A5.23
WELD METAL CLASSIFICATION F8A2-EN1K-N11-H8
WIRE/FLUX LINCOLN LA-75/960
WIRE DIAMETER 3/32"
SINGLE OR MULTIPLE ARC SINGLE ARC
POLARITY DC+
ROOT TREATMENT GRIND TO SOUND METAL AFTER BACKGOUGE
PREHEAT AND INTERPASS TEMPERATURE SEE PREHEAT CHART
ELECTRICAL STICK-OUT 1 INCH
SHIELDING GAS D.N.A.

WELDING PROCEDURE

VTRANS
RECEIVED
DEC 19 2006
OK'D BY JWC
RESUBMIT APPROVED ✓
BY DATE 12-21-06

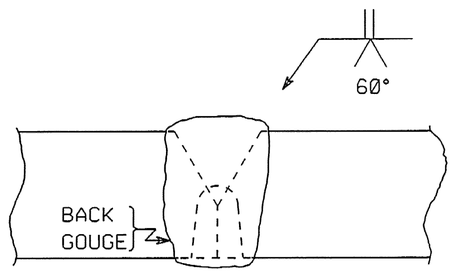
REVISED:

ORIGINAL ISSUE: 3/10/03

PASS NO.	WELDING CURRENT			TRAVEL SPEED (IPM)
	AMPS	WIRE FEED SPEED	VOLTS	
ALL	448-550	92-125	31.0-38.0	15.0-25.0

JOINT DETAIL

B-L2c-S



PROCEDURE QUALIFICATION RECORD AWS-04-1 (EXPIRES 4/29/09)
PROCEDURE QUALIFICATION RECORD AWS-04-2 (EXPIRES 2/2/09)

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VT-06215 Contract #BRF 0241 (29)

WELDING PROCEDURE FOR AWS PREQUALIFIED JOINTS

W71X-2R - AC

PROCEDURE SPECIFICATIONS

MATERIAL SPECIFICATION _____ ASTM A709 Gr. 36, 50, 50W
WELDING PROCESS _____ SUBMERGED ARC WELDING
MANUAL OR MACHINE _____ SEMIAUTOMATIC OR MACHINE
POSITION OF WELDING _____ 1G
FILLER METAL SPECIFICATION _____ AWS A5.23
WELD METAL CLASSIFICATION _____ F8A2-EN1K-N11-H8
WIRE/FLUX _____ LINCOLN LA-75/960
WIRE DIAMETER _____ 3/32 "
SINGLE OR MULTIPLE ARC _____ SINGLE ARC
POLARITY _____ AC (SEE RESTRICTIONS BELOW)
ROOT TREATMENT _____ GRIND TO SOUND METAL AFTER BACKGOUGE
PREHEAT AND INTERPASS TEMPERATURE _____ SEE PREHEAT CHART
ELECTRICAL STICK-OUT _____ 1 INCH
SHIELDING GAS _____ D.N.A.

WELDING PROCEDURE

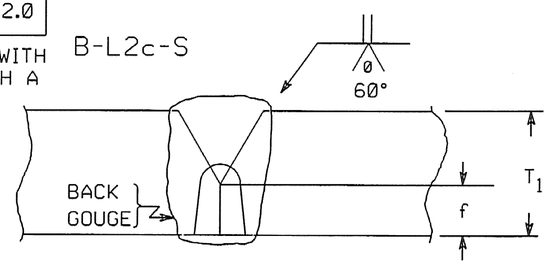
VTRANS RECEIVED
DEC 19 2006
CK'D BY _____ OK'D BY JLK
E/SUBMIT _____ APPROVED ✓
DATE 12-21-06

REVISED:
ORIGINAL ISSUE: 5/5/03

PASS NO.	WELDING CURRENT			TRAVEL SPEED (IPM)
	AMPS	WIRE FEED SPEED	VOLTS	
ALL	416-670	92-205	30.0-36.0	16.0-22.0

JOINT DETAIL

NOTE: THIS PROCEDURE SHALL ONLY BE USED WITH 1000 AMP SQUAREWAVE AC POWER SOURCE WITH A FREQUENCY OF 60HZ AND A 66/34 (DC+/DC-) POLARITY BALANCE PLUG.



THE MAXIMUM WELDING CURRENT TO BE USED IN MAKING A GROOVE WELD FOR ANY PASS THAT HAS FUSION TO BOTH FACES OF THE GROOVE SHALL BE 600 AMPS / 171 WIRE FEED SPEED.

PROCEDURE QUALIFICATION RECORD AWS-03-9 (EXPIRES 4/24/08)
PROCEDURE QUALIFICATION RECORD AWS-03-11 (EXPIRES 7/24/08)

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VT-06215 Contract #BRF 0241 (29)

VTRANS RECEIVED DEC 19 2006

CK'D BY _____ CK'D BY JWC

RESUBMIT _____ APPROVED ✓

BY _____ DATE 12-21-06

MINIMUM PREHEAT AND INTERPASS TEMPERATURE

SHIELDED METAL-ARC WELDING WITH LOW HYDROGEN ELECTRODES, OR SUBMERGED ARC WELDING, OR FLUX CORED ARC WELDING

THICKNESS OF THICKEST PART AT POINT OF WELDING - INCHES	ASTM A-36, A-572, AND A-588 M183, M223, AND M222 ASTM A709, GRADE 36 ASTM A709, GRADE 50 ASTM A709, GRADE 50W
TO ¾, INCL.	50° F
OVER ¾ TO 1½, INCL.	70° F
OVER 1½ TO 2½, INCL.	150° F
OVER 2½	225° F

MAXIMUM PREHEAT TEMPERATURE SHALL NOT EXCEED 450°F
MAXIMUM INTERPASS TEMPERATURE SHALL NOT EXCEED 550°F

REFER TO THE FOLLOWING CHART FOR EQUIVALENT STEEL TYPES.

ASTM A-36 AND A-709 GRADE 36 AND AASHTO M183

ASTM A-572 AND A-709 GRADE 50 AND AASHTO M223

ASTM A-588 AND A-709 GRADE 50W AND AASHTO M222

CONTACT QUALITY CONTROL FOR PREHEAT REQUIREMENTS ON ANY STEEL NOT SPECIFICALLY NOTED ABOVE

REVISED: 12/10/02

ORIGINAL ISSUE: 01/01/92

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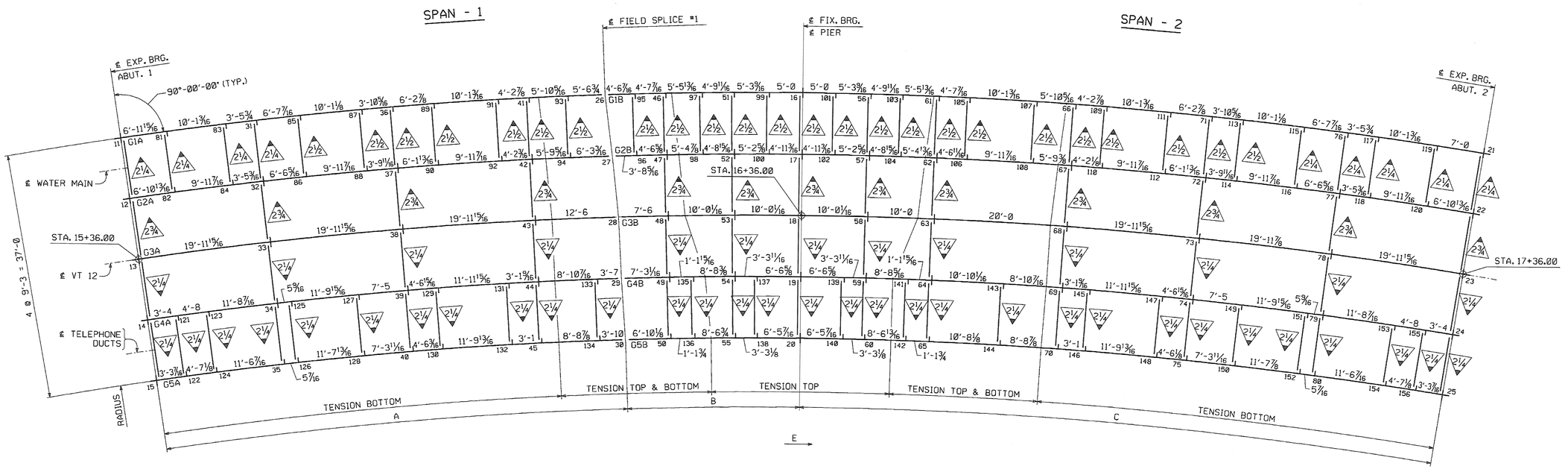
FED.ROAD DIV.NO.	STATE	FED.AID PROJ.NO.
	VT	



CALCULATION PLAN

LINE	RADIUS	A	B	C	D	E	F
G1	655'-1 7/16	73'-1 3/4	29'-8 15/16	102'-10 3/4	.0046	.0062	.0092
G2	645'-10 7/16	72'-10 13/16	28'-6 9/16	101'-5 5/16	.0038	.0063	.0087
G3	636'-7 7/16	72'-5 13/16	27'-6 1/8	99'-11 13/16	.0042	.0064	.0079
G4	627'-4 7/16	71'-6 13/16	26'-11 1/16	98'-6 7/16	.0035	.0065	.0096
G5	618'-1 7/16	70'-9 13/16	26'-3 3/16	97'-1 1/16	.0025	.0066	.0107

NOTES:

DIMENSIONS ON PLAN ALONG GIRDERS ARE GIVEN TO THE CHORD AT THE BOTTOM OF WEB IN FULLY CAMBERED POSITION. ALL OTHER DIMENSIONS ARE GIVEN HORIZONTALLY.
DIMENSIONS PLACED ON THE GIRDER LINES REPRESENT CROSSFRAME SPACING.
FIGURES GIVEN THUS: .0046 ARE THE GRADES OF THE GIRDERS AT THE BEARINGS IN FINAL POSITION; ARROW POINTS DOWNGRADE.
ALL STIFFENER AND CONNECTION PLATE SPACINGS ARE GIVEN TO ℄ PLATE.
ENDS OF GIRDERS AND ALL BEARING STIFFENERS TO BE VERTICAL IN FINAL POSITION.
ALL STEEL TO BE AASHTO M270 GRADE 50W (U.N.).
ALL FIELD CONNECTIONS TO BE MADE WITH 7/8"ø H.S. (AASHTO M164 TYPE 3) BOLTS IN 15/16"ø HOLES.
FIGURES GIVEN THUS: 2½ ARE THE DIFFERENCES IN ELEVATIONS OF GIRDERS (IN THE PLANE OF THE CROSSFRAME IN FINAL POSITION) AT CROSSFRAMES; ARROW POINTS TOWARD LOW GIRDER.
FOR TYPICAL DETAIL LAYOUTS, SEE DRAWINGS PREFIXED 'TD'.

NOTE
THE PURPOSE OF THIS DRAWING IS TO COORDINATE GEOMETRIC CONTROL INFORMATION. THIS DRAWING IS SUBMITTED FOR INFORMATION ONLY AND IS NOT INTENDED FOR SHOP FABRICATION. THIS DRAWING IS FOR REFERENCE ONLY, APPROVAL IS NOT REQUIRED.

RECEIVED
OK'D BY YCT OK'D BY
JAN 30 2007
RESUBMIT APPROVED YCT
BY DATE 1-31-2007

NO.	REVISION	BY	DATE
△			
△			
△			

HIGH STEEL STRUCTURES, INC.
1170 Hempstead Road
Lancaster, PA 17605-0008
Phone 717/299-5211
A Division of High Industries, Inc.

WORKSHEET ~ CALCULATION PLAN
VT. 12 (MAIN ST.) OVER THIRD BRANCH OF THE WHITE RIVER
VT. 12 STA. 15+36.00 TO STA. 17+36.00
TOWN OF RANDOLPH, ORANGE COUNTY, VT. BRIDGE NO. 42
STATE OF VERMONT
AGENCY OF TRANSPORTATION

STATE CONTRACT OR REF. NO. PROJECT NO. RANDOLPH BRF 0241 (29)
CONTRACTOR WINTERSET, INC.
IN CHARGE: BRITIGAN (IH) MADE BY: ERS CHK'D. BY: WBW DATE: 11-8-06
CONTRACT NUMBER: VT-06215-1 DRAWING NUMBER: WS1 OF WS1

06215 X2 1/25/07 Final Approval and Distribution TO:Winterset, Inc.

ENGLISH
Scale = .0104166667 Feet/Foot
BY: cshaffer
PLOTTED: 11/13/06 10:53:39 AM
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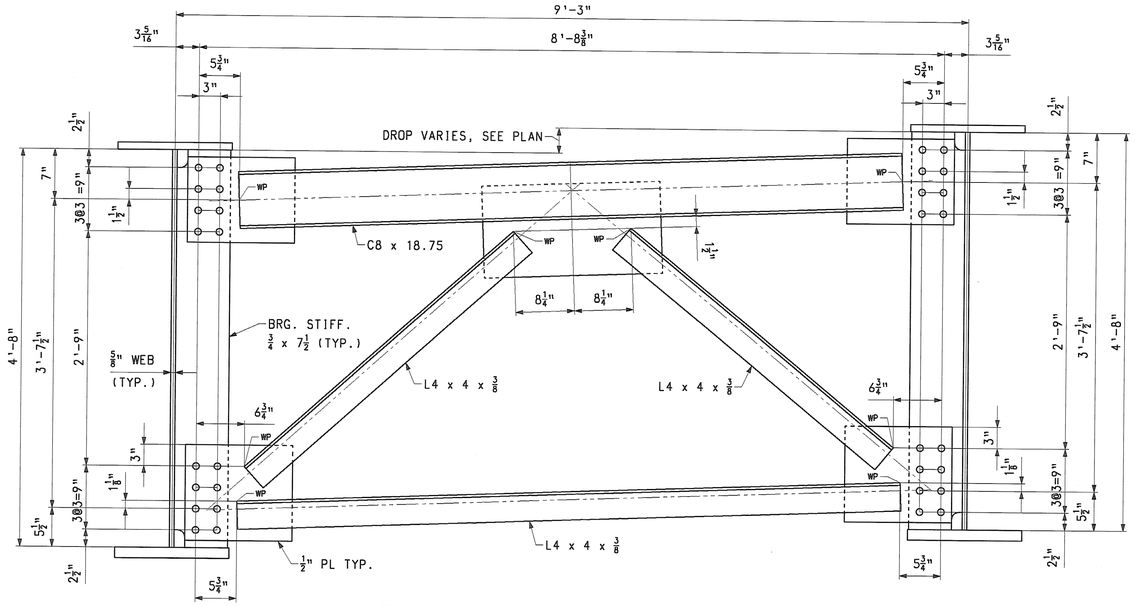
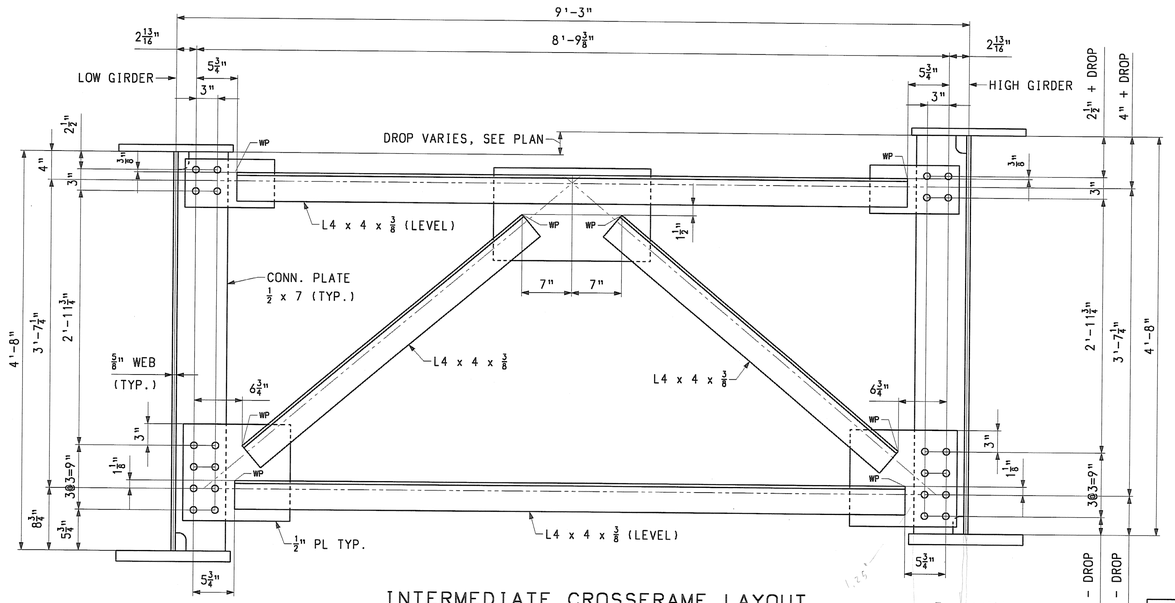
FED.ROAD DIV.NO.	STATE	FED.AID PROJ.NO.
	VT	



END & PIER CROSSFRAME LAYOUT

(LOOKING TOWARD BACKWALL AT ABUT.)
(LOOKING STATIONS AHEAD AT PIER)



INTERMEDIATE CROSSFRAME LAYOUT

(LOOKING STATIONS AHEAD)

RECEIVED
JAN 30 2007
CK'D BY
RESUBMIT
APPROVED
BY
DATE 1-31-2007

NOTES:

FOR NOTES, SEE DRAWING WS1.

WORK THIS DRAWING WITH WS1.

NOTE
THE PURPOSE OF THIS DRAWING IS TO COORDINATE GEOMETRIC CONTROL INFORMATION. THIS DRAWING IS SUBMITTED FOR INFORMATION ONLY AND IS NOT INTENDED FOR SHOP FABRICATION. THIS DRAWING IS FOR REFERENCE ONLY. APPROVAL IS NOT REQUIRED.

NO.	REVISION	BY	DATE

HIGH STEEL STRUCTURES, INC.
1770 Hempstead Road
Lancaster, PA 17605-0008
Phone 717/299-5211
A Division of High Industries, Inc.

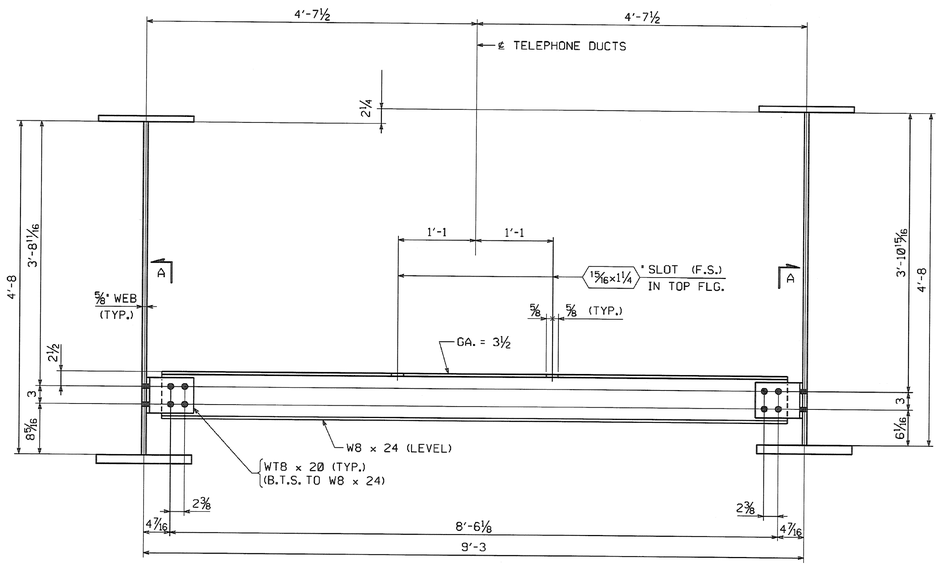
TYPICAL DETAILS
VT. 12 (MAIN ST.) OVER THIRD BRANCH OF THE WHITE RIVER
VT. 12 STA. 15+36.00 TO STA. 17+36.00
TOWN OF RANDOLPH, ORANGE COUNTY, VT. BRIDGE NO. 42
STATE OF VERMONT
AGENCY OF TRANSPORTATION

STATE CONTRACT OR REF. NO.: PROJECT NO. RANDOLPH BRF 0241 (29)
CONTRACTOR: WINTERSET, INC.
IN CHARGE: BRITIGAN (IH) MADE BY: RC CHK'D. BY: CS DATE: 11/6/06
CONTRACT NUMBER: VT-06215-1 DRAWING NUMBER: TD1 OF TD2

06215 X2 1/25/07 Final Approval and Distribution TO:Winterset, Inc.

PLOTTED: DATE\$97B90.234567 BY: USERNAME

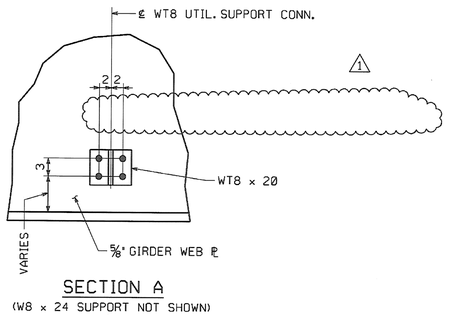
FED.ROAD DIV.NO.	STATE	FED.AID PROJ.NO.
	VT	



TYP. TELEPHONE CONDUIT SUPPORT

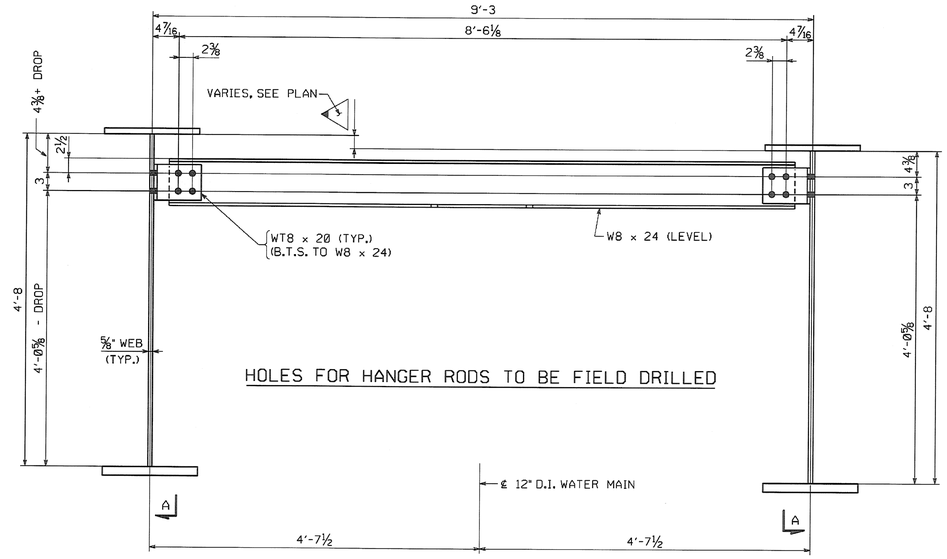
(LOOKING BACKSTATIONS)

3/4" ø SUPPORT RODS AND RELATED SUPPORT BRACKET HARDWARE ARE NOT BY H.S.S.I.



SECTION A

(W8 x 24 SUPPORT NOT SHOWN)



TYP. WATER MAIN SUPPORT

(LOOKING BACKSTATIONS)

1" ø HANGER RODS, HARDWARE AND OTHER SADDLE MATERIAL ARE NOT BY H.S.S.I.

RECEIVED
CK'D BY TK OK'D BY
JAN 30 2007
RESUBMIT APPROVED TK
BY WK DATE 1-31-2007

NOTES:

FOR NOTES, SEE DRAWING WS1.
WORK THIS DRAWING WITH DRAWING WS1.

NOTE
THE PURPOSE OF THIS DRAWING IS TO COORDINATE GEOMETRIC CONTROL INFORMATION. THIS DRAWING IS SUBMITTED FOR INFORMATION ONLY AND IS NOT INTENDED FOR SHOP FABRICATION. THIS DRAWING IS FOR REFERENCE ONLY, APPROVAL IS NOT REQUIRED.

NO.	REVISION	BY	DATE
1	REMOVE FIELD DRILL NOTE	MAF	1-19-07

HIGH STEEL STRUCTURES, INC.
1770 Hempstead Road
Lancaster, PA 17605-0008
Phone 717/299-5211
A Division of High Industries, Inc.

TYPICAL DETAILS - UTILITY SUPPORT LAYOUTS
VT. 12 (MAIN ST.) OVER THIRD BRANCH OF THE WHITE RIVER
VT. 12 STA. 15+36.00 TO STA. 17+36.00
TOWN OF RANDOLPH, ORANGE COUNTY, VT. BRIDGE NO. 42
STATE OF VERMONT
AGENCY OF TRANSPORTATION

STATE CONTRACT OR REF. NO. PROJECT NO. RANDOLPH BRF 0241 (29)
CONTRACTOR WINTERSET, INC.
IN CHARGE: BRITIGAN (IH) MADE BY: WBW CHK'D BY: CS DATE: 11-6-06
CONTRACT NUMBER: VT-06215-1 DRAWING NUMBER: TD2 OF TD2

ENGLISH
BY: estoley
PLOTTED: 01/22/07 03:31:19 PM

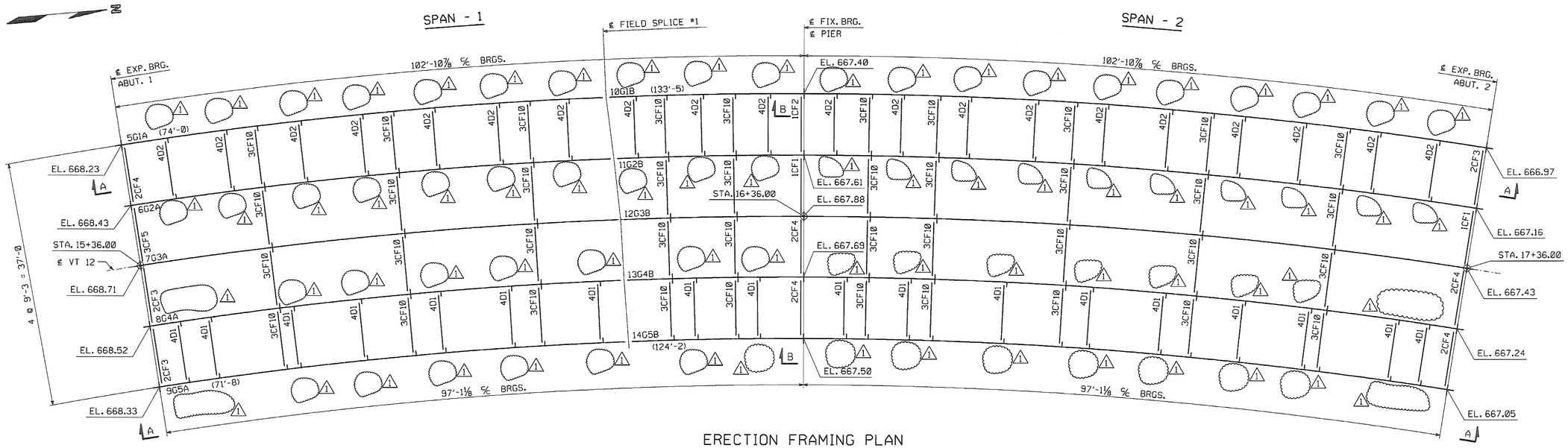
06215 X2 1/25/07 Final Approval and Distribution TO:Winterset, Inc.

ENGLISH

FED.ROAD DIV.NO.	STATE	FED.AID PROJ.NO.
	VT	

SHIPPING WEIGHTS

SHIPPING PIECE MARK	WEIGHT EA. (LBS)
G1A	19,906
G2A	20,009
G3A	17,755
G4A	17,546
G5A	17,194
G1B	39,642
G2B	39,153
G3B	33,360
G4B	32,849
G5B	31,895



ERECTION FRAMING PLAN

FIELD BOLT SUMMARY

(2% ADDITIONAL BOLTS ADDED + 3 EA. FOR TESTING)

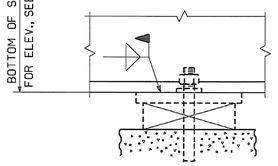
AASHTO M164 TYPE 3 (RCT); W/HVY HEX HD & AASHTO M291 GRADE DH3 HEX NUT

- 215 - 7/8"ø HIGH STRENGTH BOLTS x 0'-4 1/4
- 248 - 7/8"ø HIGH STRENGTH BOLTS x 0'-3 3/4
- 444 - 7/8"ø HIGH STRENGTH BOLTS x 0'-3
- 705 - 7/8"ø HIGH STRENGTH BOLTS x 0'-2 1/2
- 982 - 7/8"ø HIGH STRENGTH BOLTS x 0'-2 1/4
- 313 - 7/8"ø HIGH STRENGTH BOLTS x 0'-2

AASHTO M293 WEATHERING (RCT); ROUND & FLAT

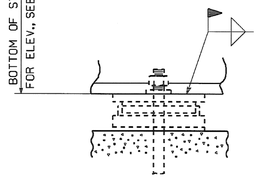
- 2,907 - STD WASHERS FOR 7/8"ø BOLT

CONTRACTOR NOTE:
ELEVATIONS ARE GIVEN TO BOTTOM OF STEEL - DO NOT POUR TO FINAL ELEVATIONS WITHOUT VERIFICATION OF BEARING HEIGHTS AND BRIDGE SEATS.

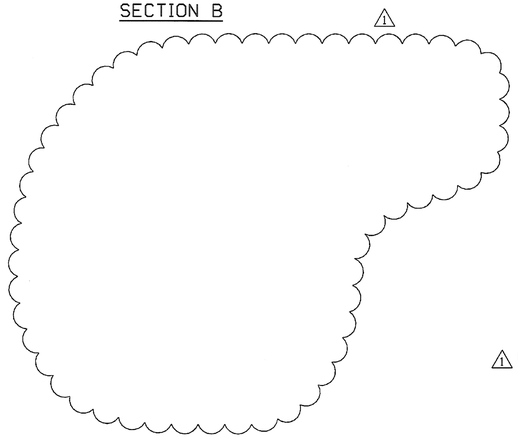


SECTION A

CONTRACTOR NOTE:
ELEVATIONS ARE GIVEN TO BOTTOM OF STEEL - DO NOT POUR TO FINAL ELEVATIONS WITHOUT VERIFICATION OF BEARING HEIGHTS AND BRIDGE SEATS.



SECTION B



NOTES:

NO CREDIT WILL BE ALLOWED FOR WORK PERFORMED BY OTHERS IN REPLACING OR CORRECTING MATERIALS OR WORKMANSHIP COVERED BY THIS DRAWING UNLESS EXPRESSLY AUTHORIZED BY HIGH STEEL STRUCTURES, INC.

HIGH STEEL STRUCTURES, INC. DOES NOT SUPPLY SHEAR STUDS, ROD HANGERS, HARDWARE AT UTILITIES, BEARING ASSEMBLIES INCLUDING PADS AND ANCHOR BOLTS, HOLES FOR FLEMMING BRACKETS

ERECTOR NOTE: ELEVATIONS, CAMBER CHECKS AND HORIZONTAL ALIGNMENT OF FIELD SPLICES MUST BE COMPLETED PRIOR TO FINAL BOLTING. HIGH STEEL STRUCTURES IS TO BE NOTIFIED AND CONSULTED, PRIOR TO FINAL BOLTING, IF SPLICE LOCATIONS ARE NOT WITHIN ACCEPTABLE TOLERANCE. BOTH VERTICAL & HORIZONTAL CORRECTION OF ANY UNACCEPTABLE SPLICES AFTER FINAL BOLTING WILL BE AT NO COST TO HIGH STEEL STRUCTURES.

NOTICE: WEIGHTS OF MEMBERS LISTED ON THESE DRAWINGS ARE ESTIMATED WEIGHTS AND ACTUAL WEIGHTS WILL VARY. HIGH STEEL STRUCTURES, INC. WILL NOT BE RESPONSIBLE FOR ANY ERECTION PROCEDURES, SHIPPING PROCEDURES, ETC. DEVELOPED USING ESTIMATED WEIGHTS AS SHOWN.

ALL DIMENSIONS ARE GIVEN HORIZONTALLY (U.N.O.).

DIMENSIONS GIVEN THUS: (74'-0) ARE THE SHIPPING LENGTHS OUT TO OUT OF FASCIA GIRDERS.

THE SHIPPING MARKS SHOWN CONSIST OF THE PREFIX INDICATING THE SHEET NUMBER UPON WHICH THE PIECE IS DETAILED ALONG WITH THE SHIPPING PIECE MARK.

ERECTOR NOTE: ALL BOLTS MUST BE LOCATED IN ACCORDANCE WITH THE LIST OF FIELD CONNECTIONS. HIGH STEEL STRUCTURES WILL NOT BE RESPONSIBLE FOR FURNISHING ADDITIONAL BOLTS OR FOR ANY OTHER RELATED COSTS OR DAMAGES RESULTING FROM IMPROPER LOCATION OF BOLTS.

ALL FIELD BOLTS THRU WEB OF FASCIA GIRDERS ARE TO HAVE HEADS ON OUTSIDE OF WEB.

ALL FIELD BOLTS THRU BOTTOM FLANGE ARE TO HAVE HEADS UP.

(RCT) INDICATES ROTATIONAL CAPACITY TESTED BOLTS. DO NOT MIX NUTS, BOLTS AND WASHERS FROM DIFFERENT CONTAINERS UNLESS ALL NUTS, BOLTS AND WASHERS HAVE THE SAME LOT NUMBER.

1 ANCHOR BOLTS MUST BE SET BEFORE CROSSFRAMES AT BEARINGS ARE ERECTED, AND HEIGHTS MUST BE CHECKED.

SEE DRAWING SA1 FOR MATCH MARKING SYSTEM.

WORK THIS DRAWING WITH DRAWING E2.

HIGH STEEL STRUCTURES, INC.

HIGH STEEL STRUCTURES, INC.
1770 HEMPSTEAD ROAD
LANCASTER, PA 17605-0008
Phone (717) 299-5211
A Division of High Industries, Inc.

LIST OF FIELD CONNECTIONS

ONE WASHER PER BOLT UNLESS NOTED OTHERWISE

LINE	ACTUAL NUMBER REQ'D	BOLT DIAM.	BOLT LENGTH	BOLTS PER CONN.	NO. OF CONN	GRIP	THICKNESS OF PIECES JOINED					PIECES CONNECTED AND REMARKS
1	252	7/8	3	84	3	1 5/8	1/2	5/8	1/2			WEB SPLICE @ FS1 G3-G5
2	180	7/8	3	90	2	1 5/8	1/2	5/8	1/2			WEB SPLICE @ FS1 G1-G2
3	120	7/8	3 3/4	40	3	2 1/2	1/2	1 1/2	1/2			TOP FLANGE SPLICE @ FS1 G3-G5
4	96	7/8	4 1/4	48	2	3	1/2	2	1/2			TOP FLANGE SPLICE @ FS1 G1-G2
5	120	7/8	3 3/4	40	3	2 1/2	1/2	1 1/2	1/2			BOTTOM FLANGE SPLICE @ FS1 G3-G5
6	112	7/8	4 1/4	56	2	3	1/2	2	1/2			BOTTOM FLANGE SPLICE @ FS1 G1-G2
7	384	7/8	2 1/2	16	24	1 1/4	3/4	1/2				END & PIER CROSSFRAMES TO BRG. STIFF.
8	960	7/8	2 1/4	12	80	1	1/2	1/2				INT. CROSSFRAMES TO CONN. PL.
9	304	7/8	2 1/2	4	76	1 1/8	1/2	5/8				UTILITY CONN. WT TO GIRDER WEB
10	304	7/8	2	4	76	9/16	5/16	1/4				UTILITY CONN. WT TO UTILITY SUPPORT
11												

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BY WY SD DATE 1-31-2007

NO.	REVISION	BY	DATE
1	REMOVE FIELD DRILL AND CHECK ANCHOR BOLT HEIGHTS NOTES	MF	1-19-07

HIGH STEEL STRUCTURES, INC.
1770 Hempstead Road
Lancaster, PA 17605-0008
Phone 717/299-5211
A Division of High Industries, Inc.

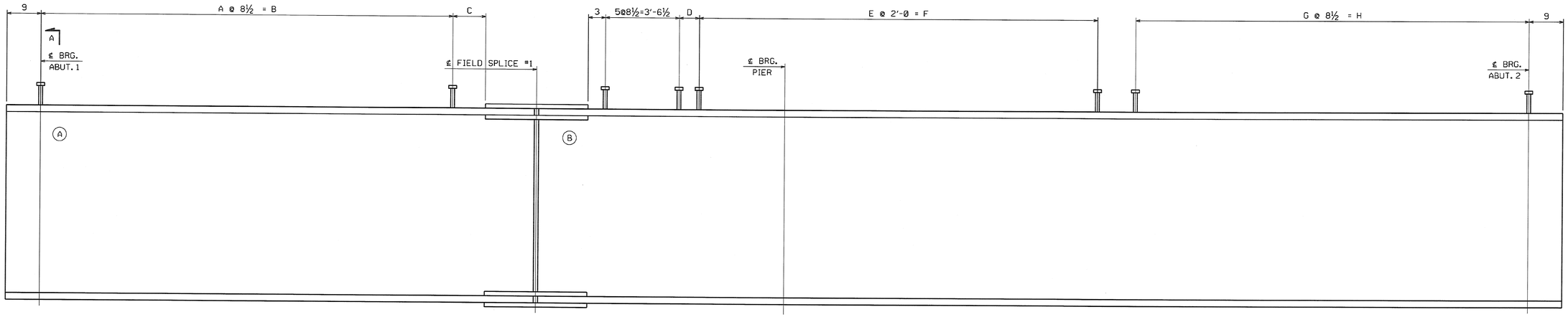
ERECTION FRAMING PLAN
VT. 12 (MAIN ST.) OVER THIRD BRANCH OF THE WHITE RIVER
VT. 12 STA. 15+36.00 TO STA. 17+36.00
TOWN OF RANDOLPH, ORANGE COUNTY, VT. BRIDGE NO. 42
STATE OF VERMONT
AGENCY OF TRANSPORTATION

STATE CONTRACT OR REF. NO. PROJECT NO. RANDOLPH BRF 0241 (29)
CONTRACTOR WINTERSET, INC.
IN CHARGE: BRITIGAN (IH) MADE BY: ERS CHK'D. BY: CS DATE: 11-13-06
CONTRACT NUMBER: VT-06215-1 DRAWING NUMBER: E1 OF E2

PLOTTED: 01/22/07 03:29:36 PM BY: ssoley

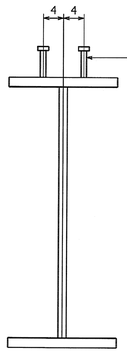
ENGLISH

FED.ROAD DIV.NO.	STATE	FED.AID PROJ.NO.
	VT	



SHEAR STUD CONNECTOR LOCATION LAYOUT

MARK	A	B	C	D	E	F	G	H
G1	100	70'-10	6⅞	2'-0⅝	26	52'-0	102	72'-3
G2	100	70'-10	3⅞	1'-7¾	25	50'-0	102	72'-3
G3	100	70'-10	4⅞	1'-6⅞	24	48'-0	101	71'-6½
G4	99	70'-1½	2⅜	6	24	48'-0	100	70'-10
G5	98	69'-5	1⅞	1'-1⅛	23	46'-0	99	70'-1½



⅞"ø SHEAR STUD CONNECTOR (TYP.)
TO BE FIELD APPLIED
(NOT SUPPLIED OR ATTACHED BY H.S.S.I.)

SECTION A

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HIGH STEEL STRUCTURES, INC.
1770 Hempstead Road
Lancaster, PA 17605-0008
Phone 717/299-5211
A Division of High Industries, Inc.

ERECTION PLAN ~ STUD LAYOUTS
VT. 12 (MAIN ST.) OVER THIRD BRANCH OF THE WHITE RIVER
VT. 12 STA. 15+36.00 TO STA. 17+36.00
TOWN OF RANDOLPH, ORANGE COUNTY, VT. BRIDGE NO. 42
STATE OF VERMONT
AGENCY OF TRANSPORTATION

STATE CONTRACT OR REF. NO. PROJECT NO. RANDOLPH BRF 0241 (29)
CONTRACTOR WINTERSET, INC.
IN CHARGE: BRITIGAN (IH) MADE BY: BRS CHK'D. BY: CS DATE: 11-13-06
CONTRACT NUMBER: VT-06215-1 DRAWING NUMBER: E2 OF E2

NOTES:

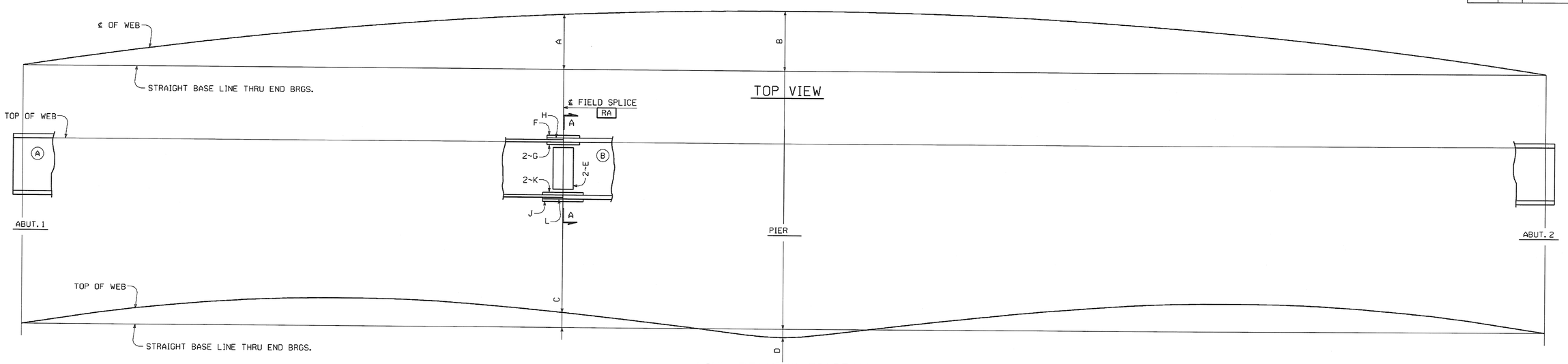
FOR NOTES, SEE DRAWING E1.
WORK THIS DRAWING WITH DRAWING E1.
(A) INDICATES SUFFIX MARK OF SHIPPING PIECE.

PLOTTED: 11/13/06 01:37:34 PM BY: cshoffar-

06215 X2 1/25/07 Final Approval and Distribution TO:Winterset, Inc.

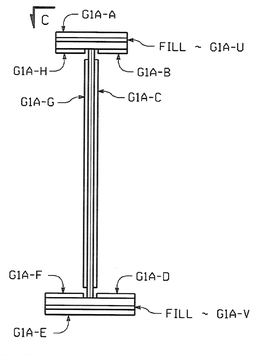
ENGLISH

FED.ROAD DIV.NO.	STATE	FED.AID PROJ.NO.
	VT	

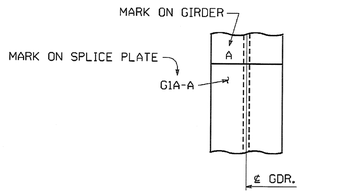


LINE REAMING DIAGRAM

GDR. LINE	A	B	C	D	E	F	G	H	J	K	L
G1	7'-4¾	8'-0 13/16	0'-0 7/16	-0'-1 15/16	x1a	x1d	x1h	x1m	x1c	x1g	x1n
G2	7'-3 15/16	7'-11 7/16	0'-0½	-0'-1¾	x1a	x1d	x1h	x1m	x1c	x1g	x1n
G3	7'-3	7'-10 1/16	0'-0 7/16	-0'-1 3/16	x1b	x1f	x1k	x1p	x1f	x1k	x1p
G4	7'-1 3/16	7'-8 1/16	0'-0⅜	-0'-1 3/16	x1b	x1f	x1k	x1p	x1f	x1k	x1p
G5	7'-0 1/16	7'-7 5/16	0'-0 5/16	-0'-1 3/16	x1b	x1f	x1k	x1p	x1f	x1k	x1p



SECTION A-A FOR G1A
(G2A, G3A, G4A, G5A SIMILAR)



VIEW C
(ROTATE 180° WHERE REQUIRED)
(HOLES NOT SHOWN FOR CLARITY)

NOTES:

ALL SPLICE PLATES ARE MATCH MARKED AFTER REAMING AS SHOWN IN SECTION A-A.
THE MATCH MARKS ON THE SPLICE MATERIAL CONSIST OF THE MARK OF THE GIRDER THEY ARE SHIPPED WITH AND A SUFFIX. THE MARKINGS ARE LOCATED ON THE STEEL AT THE END OF THE SPLICE MATERIAL WHICH IS ON THE GIRDER IT IS SHIPPED WITH. MATCH MARKING MARKS WILL APPEAR ON EDGES OF PLATES. THE CORRESPONDING SUFFIX (A, B, C, ETC.) IS MARKED NEAR THE SPLICE PLATE ON THE GIRDER (SEE VIEW C).
FOR GIRDER MARKS, SEE THE ERECTION FRAMING PLAN DRAWINGS.
HOLES MARKED RA ARE TO BE SUB-PUNCHED/SUB-DRILLED ¼"ø UNDER SIZE AND REAMED TO FULL SIZE OR DRILLED FROM SOLID WITH CONNECTING PARTS ASSEMBLED AND MATCH MARKED. HOLES TO BE 15/16"ø.
(A) INDICATES SUFFIX MARK OF SHIPPING PIECE.
NEGATIVE CAMBER ORDINATES INDICATE THAT TOP OF WEB IS BELOW BASE LINE.

RECEIVED
CK'D BY 1/24 CK'D BY
JAN 30 2007
RESUBMIT APPROVED 1/24
BY WY SH DATE 1-31-2007

NO.	REVISION	BY	DATE

HIGH STEEL STRUCTURES, INC.
1770 Hempstead Road
Lancaster, PA 17605-0008
Phone 717/299-5211
A Division of High Industries, Inc.

SHOP ASSEMBLY DIAGRAM
VT. 12 (MAIN ST.) OVER THIRD BRANCH OF THE WHITE RIVER
VT. 12 STA. 15+36.00 TO STA. 17+36.00
TOWN OF RANDOLPH, ORANGE COUNTY, VT. BRIDGE NO. 42
STATE OF VERMONT
AGENCY OF TRANSPORTATION

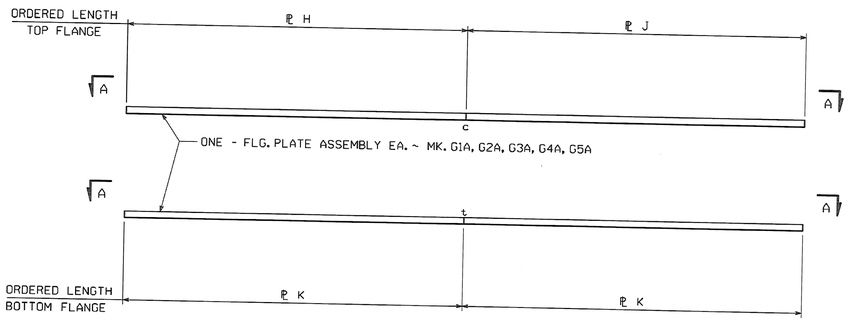
STATE CONTRACT OR REF. NO. PROJECT NO. RANDOLPH BRF 0241 (29)
CONTRACTOR WINTERSET, INC.
IN CHARGE: BRITIGAN (IH) MADE BY: MGK CHK'D. BY: GS DATE: 11/8/06
CONTRACT NUMBER: VT-06215-1 DRAWING NUMBER: SA1 OF SA1

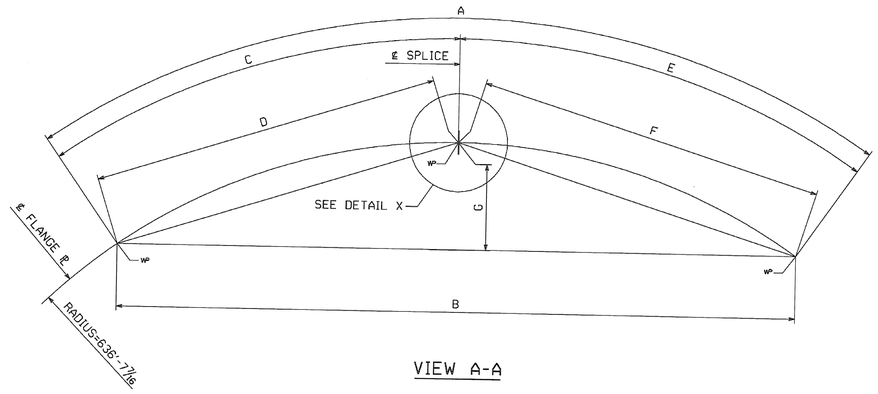
06215 X2 1/25/07 Final Approval and Distribution TO:Winterset, Inc.

BY: cshaffer
PLOTTED: 11/13/06 10:53:42 AM

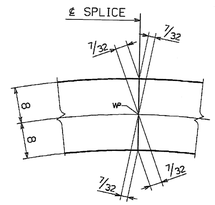
ENGLISH

FED.ROAD DIV.NO.	STATE	FED.AID PROJ.NO.
	VT	



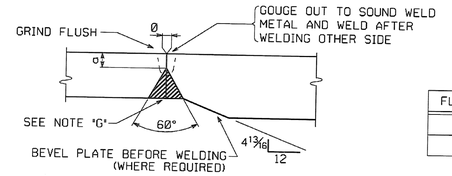


VIEW A-A



DETAIL X

MARK	FLANGE	A	B	C	D	E	F	G	H	J	K
G1A	TOP	73'-11 1/16	73'-11 3/16	37'-0 5/16	37'-0 1/4	36'-11 3/8	36'-11 5/16	1'-0 7/8	1 x 16 x 37'-2 (4/7)	1 x 16 x 37'-2 (4/7)	--
G2A	TOP	73'-8 1/16	73'-8 3/16	36'-10 1/16	36'-10 3/4	36'-9 7/8	36'-9 13/16	1'-0 1/16	1 x 16 x 37'-2 (4/7)	1 x 16 x 37'-0 (4/8)	--
G3A	TOP	73'-3 1/16	73'-3 3/16	36'-8 5/16	36'-8 1/4	36'-7 3/8	36'-7 5/16	1'-0 1/16	1 x 16 x 36'-10 (4/9)	1 x 16 x 36'-9 (4/10)	--
G4A	TOP	72'-4 1/16	72'-4 1/4	36'-2 1/16	36'-2 3/4	36'-1 7/8	36'-1 13/16	1'-0 3/8	1 x 16 x 36'-5 (4/11)	1 x 16 x 36'-4 (4/12)	--
G5A	TOP	71'-7 5/8	71'-7 3/16	35'-10 1/4	35'-10 3/16	35'-9 3/8	35'-9 5/16	1'-0 1/16	1 x 16 x 36'-0 (4/13)	1 x 16 x 36'-0 (4/13)	--
G1A	BOTTOM	73'-10 5/8	73'-10 1/8	36'-11 1/4	36'-11 3/16	36'-11 3/8	36'-11 5/16	1'-0 7/8	--	--	1 1/2 x 16 x 37'-1 (4/6)
G2A	BOTTOM	73'-7 1/16	73'-7 3/16	36'-9 13/16	36'-9 3/4	36'-9 7/8	36'-9 13/16	1'-0 3/4	--	--	1 1/2 x 16 x 37'-1 (4/6)
G3A	BOTTOM	73'-2 1/16	73'-2 3/16	36'-7 5/16	36'-7 1/4	36'-7 3/8	36'-7 5/16	1'-0 5/8	--	--	1 x 16 x 36'-9 (4/10)
G4A	BOTTOM	72'-3 1/16	72'-3 1/4	36'-1 13/16	36'-1 3/4	36'-1 7/8	36'-1 13/16	1'-0 5/16	--	--	1 x 16 x 36'-4 (4/12)
G5A	BOTTOM	71'-6 1/16	71'-6 1/4	35'-9 5/16	35'-9 1/4	35'-9 3/8	35'-9 5/16	1'-0 1/16	--	--	1 x 16 x 36'-0 (4/13)



FLG. THK.	α
1	¼
1½	⅜

TYPICAL FLANGE PLATE SPLICE
FOR FLANGE PLATES 2" THICK AND UNDER (B-L2c-S)

RECEIVED
CK'D BY TCT OK'D BY
JAN 30 2007
RESUBMIT APPROVED TCT
BY DATE 1-31-2007

NOTE "G"
ALL SPLICES MAY HAVE A MAXIMUM REINFORCEMENT OF ⅛". GRIND SMOOTH AT SPLICES THAT ARE TO BE TESTED AND ALL BOTTOM FLANGE SPLICES.

NOTES:
FOR GENERAL SHOP NOTES, SEE DRAWING GN1.
ALL FLANGE PLATES REQUIRE CHARPY V-NOTCH TEST.
DIMENSIONS SHOWN THUS: [36'-11½] ARE THE ACTUAL DIMENSIONS THAT WILL APPEAR ON THE GIRDER DETAIL DRAWINGS.
THE LETTERS "t" & "c" AT FLANGE SPLICES INDICATE TENSION AND COMPRESSION SPLICES RESPECTIVELY.
⚠1 ALL SPLICES MARKED "c" TO BE RADIOGRAPHICALLY TESTED 25%.
ALL SPLICES MARKED "t" TO BE RADIOGRAPHICALLY TESTED 100%.

NO.	REVISION	BY	DATE
1	CHANGE ULTRASONICALY TESTED NOTE	MF	1-19-07

HIGH STEEL STRUCTURES, INC.
1770 Hempstead Road
Lancaster, PA 17605-0008
Phone 717/299-5211
A Division of High Industries, Inc.

FLANGE SPLICE DETAILS
VT. 12 (MAIN ST.) OVER THIRD BRANCH OF THE WHITE RIVER
VT. 12 STA. 15+36.00 TO STA. 17+36.00
TOWN OF RANDOLPH, ORANGE COUNTY, VT. BRIDGE NO. 42
STATE OF VERMONT
AGENCY OF TRANSPORTATION

STATE CONTRACT OR REF. NO. PROJECT NO. RANDOLPH BRF 0241 (29)
CONTRACTOR WINTERSET, INC.
IN CHARGE: BRITIGAN (IH) MADE BY: ERS CHK'D. BY: CS DATE: 11-8-06
CONTRACT NUMBER: VT-06215-1 DRAWING NUMBER: FS1 OF FS2

CODE:30

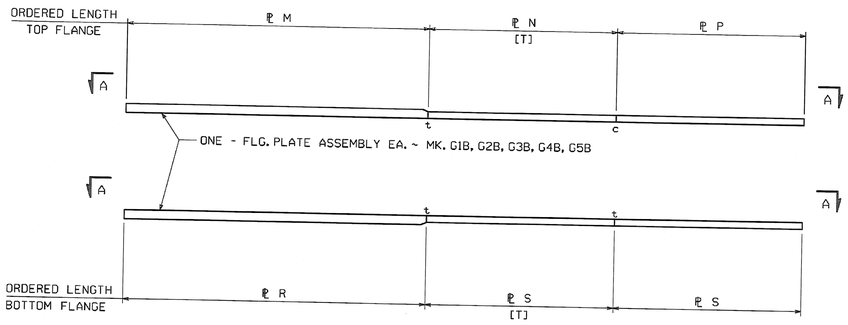
06215 X2 1/25/07 Final Approval and Distribution

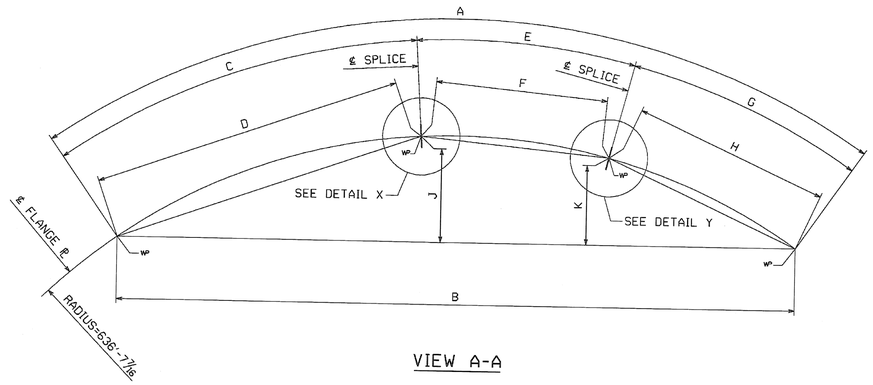
TO:Winterset, Inc.

PLOTTED: 01/22/07 03:29:40 PM BY: estoley

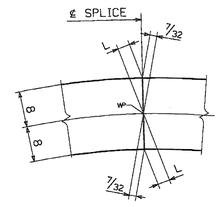
ENGLISH

FED.ROAD DIV.NO.	STATE	FED.AID PROJ.NO.
	VT	

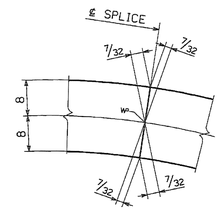




VIEW A-A



DETAIL X



DETAIL Y

MARK	FLANGE	A	B	C	D	E	F	G	H	J	K	L	M	N	P	R	S	T
G1B	TOP	133'-4⅛	133'-1¼	59'-5	59'-4¾	36'-11½	36'-11⁷⁄₁₆	36'-11⅝	36'-11⅜	3'-5⅜	2'-9⁹⁄₁₆	⅜	2 × 16 × 59'-8 (4/1)	1 × 16 × 37'-2 (4/7)	1 × 16 × 37'-2 (4/7)	--	--	36'-11½
G2B	TOP	130'-8⁹⁄₁₆	130'-5⁹⁄₁₆	57'-0³⁄₁₆	56'-11¹⁵⁄₁₆	36'-10	36'-9¹⁵⁄₁₆	36'-10⅛	36'-10¹⁄₁₆	3'-3⅜	2'-8⅝	11⁄32	2 × 16 × 57'-3 (4/2)	1 × 16 × 37'-0 (4/8)	1 × 16 × 37'-0 (4/8)	--	--	36'-10
G3B	TOP	128'-2⅞	127'-11⅞	54'-11⅝	54'-11⅛	36'-7½	36'-7⅛	36'-7⅝	36'-7⅜	3'-1⅞	2'-7⅞	11⁄32	1½ × 16 × 55'-2 (4/3)	1 × 16 × 36'-9 (4/10)	1 × 16 × 36'-10 (4/9)	--	--	36'-7½
G4B	TOP	126'-2⅜	126'-0⅛	53'-10⁷⁄₁₆	53'-10¼	36'-2	36'-1¹⁵⁄₁₆	36'-2⅛	36'-2¹⁄₁₆	3'-0¹¹⁄₁₆	2'-6¹¹⁄₁₆	11⁄32	1½ × 16 × 54'-1 (4/4)	1 × 16 × 36'-4 (4/12)	1 × 16 × 36'-4 (4/12)	--	--	36'-2
G5B	TOP	124'-0⅝	123'-10⁵⁄₁₆	52'-5⁷⁄₁₆	52'-5¼	35'-9½	35'-9⁷⁄₁₆	35'-9¹¹⁄₁₆	35'-9⅝	2'-11⅜	2'-5¾	11⁄32	1½ × 16 × 52'-8 (4/5)	1 × 16 × 36'-0 (4/13)	1 × 16 × 36'-0 (4/13)	--	--	35'-9½
G1B	BOTTOM	133'-4⅜	133'-1¹⁄₁₆	59'-5¹⁄₁₆	59'-5⅞	36'-11½	36'-11⅞	36'-11⅜	36'-11⁵⁄₁₆	3'-5⅜	2'-9⅞	⅜	--	--	--	2 × 16 × 59'-8 (4/1)	1½ × 16 × 37'-1 (4/6)	36'-11½
G2B	BOTTOM	130'-8¾	130'-6	57'-0⅞	57'-0⅝	36'-10	36'-9⁵⁄₁₆	36'-9⅞	36'-9¹³⁄₁₆	3'-3⅜	2'-8⅜	11⁄32	--	--	--	2 × 16 × 57'-3 (4/2)	1½ × 16 × 37'-1 (4/6)	36'-10
G3B	BOTTOM	128'-2¹³⁄₁₆	128'-0¼	55'-0	54'-11¹³⁄₁₆	36'-7½	36'-7⁷⁄₁₆	36'-7⁵⁄₁₆	36'-7¼	3'-1⁵⁄₁₆	2'-7⅝	11⁄32	--	--	--	1½ × 16 × 55'-2 (4/3)	1 × 16 × 36'-9 (4/10)	36'-7½
G4B	BOTTOM	126'-3	126'-0⅜	53'-11½	53'-10¹⁵⁄₁₆	36'-2	36'-1⁵⁄₁₆	36'-1⅞	36'-1¹³⁄₁₆	3'-0¾	2'-6¹¹⁄₁₆	11⁄32	--	--	--	1½ × 16 × 54'-1 (4/4)	1 × 16 × 36'-4 (4/12)	36'-2
G5B	BOTTOM	124'-1⅛	123'-10¹³⁄₁₆	52'-6³⁄₁₆	52'-6	35'-9½	35'-9⅛	35'-9⁷⁄₁₆	35'-9⅜	2'-11⅜	2'-5¾	11⁄32	--	--	--	1½ × 16 × 52'-8 (4/5)	1 × 16 × 36'-0 (4/13)	35'-9½

NOTES:
FOR WELDING DETAILS, SEE DWG. FSI.
FOR OTHER NOTES, SEE DWG. FSI.

CODE:30

RECEIVED
CK'D BY TLT CK'D BY
JAN 30 2007
RESUBMIT APPROVED TLT
BY WY DATE 1-31-2007

NO.	REVISION	BY	DATE
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△			

HIGH STEEL STRUCTURES, INC.
1770 Hempstead Road
Lancaster, PA 17605-0008
Phone 717/299-5211
A Division of High Industries, Inc.

FLANGE SPLICE DETAILS
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VT. 12 STA. 15+36.00 TO STA. 17+36.00
TOWN OF RANDOLPH, ORANGE COUNTY, VT. BRIDGE NO. 42
STATE OF VERMONT
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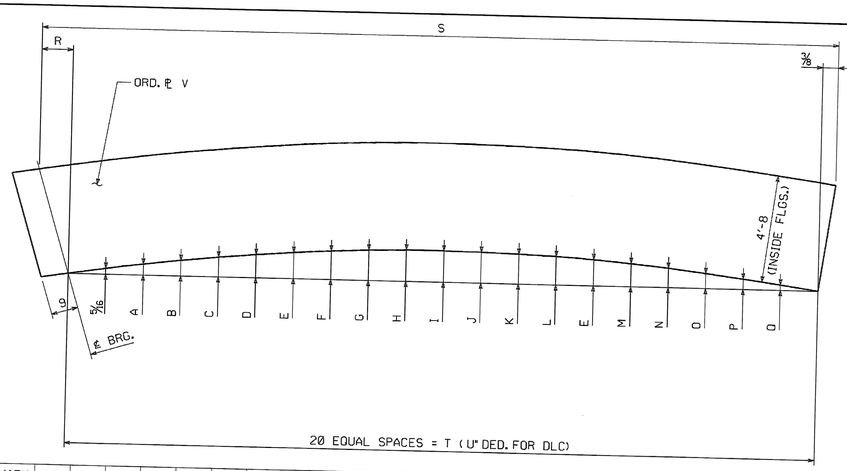
STATE CONTRACT OR REF. NO. PROJECT NO. RANDOLPH BRF 0241 (29)
CONTRACTOR WINTERSET, INC.
IN CHARGE: BRITIGAN (IH) MADE BY: BRS CHK'D. BY: CS DATE: 11-8-06
CONTRACT NUMBER: VT-06215-1 DRAWING NUMBER: FS2 OF FS2

06215 X2 1/25/07 Final Approval and Distribution

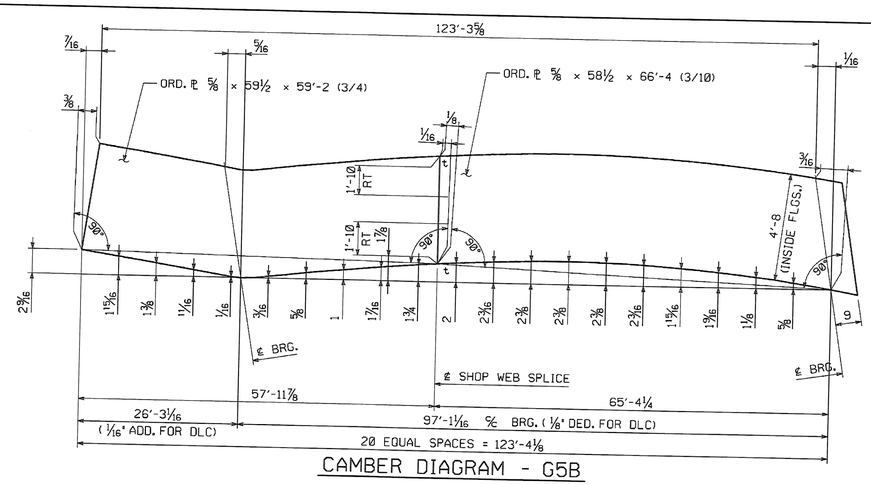
TO:Winterset, Inc.

PLOTTED: 11/13/06
10:53:48 AM
BY: cshaffer

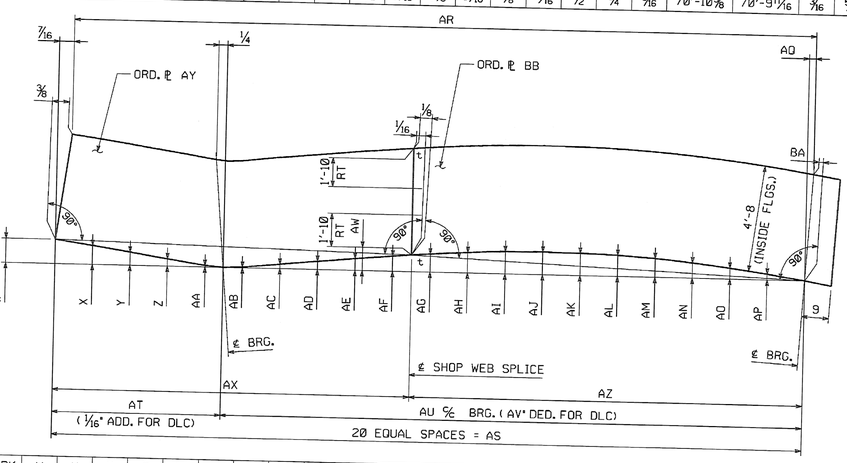
ENGLISH



MARK	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V
G1A	5/8	7/8	1 1/16	1 1/4	1 7/16	1 9/16	1 5/8	1 11/16	1 11/16	1 11/16	1 5/8	1 9/16	1 1/4	1 1/16	1 3/16	9/16	5/16	1/16	73'-2 1/16	73'-1 5/8	1/4	5/8 × 59 × 74'-2 (3/5)
G2A	9/16	1 3/16	1	1 1/4	1 3/8	1 1/2	1 5/8	1 11/16	1 11/16	1 5/8	1 9/16	1 1/2	1 1/4	1 1/16	1 3/16	9/16	5/16	5/8	72'-11 11/16	72'-10 11/16	1/4	5/8 × 59 × 74'-2 (3/5)
G3A	9/16	1 3/16	1 1/16	1 1/4	1 3/8	1 1/2	1 9/16	1 5/8	1 11/16	1 11/16	1 5/8	1 9/16	1 3/16	1	3/4	9/16	5/16	5/8	72'-6 1/16	72'-5 1/16	1/4	5/8 × 59 × 74'-2 (3/5)
G4A	9/16	1 3/16	1 1/16	1 3/16	1 3/8	1 7/16	1 9/16	1 5/8	1 5/8	1 5/8	1 9/16	1 1/2	1 3/16	1	3/4	1/2	1/4	5/8	71'-7 1/16	71'-6 1/16	1/4	5/8 × 59 × 72'-7 (3/6)
G5A	9/16	3/4	1 5/16	1 1/8	1 1/4	1 3/8	1 7/16	1 1/2	1 1/2	1 1/2	1 7/16	1 3/8	1 1/16	7/8	1 1/16	1/2	1/4	9/16	70'-10 5/8	70'-9 1/16	3/16	5/8 × 58 1/2 × 71'-10 (3/7)

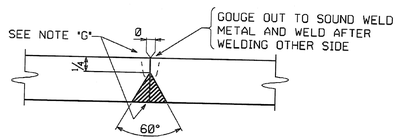


CAMBER DIAGRAM - G5B



MARK	W	X	Y	Z	AA	AB	AC	AD	AE	AF	AG	AH	AI	AJ	AK	AL	AM	AN	AO	AP	AQ	AR	AS	AT	AU	AV	AW
G1B	2 15/16	2 1/4	1 9/16	7/8	3/16	1/16	9/16	1	1 7/16	1 13/16	2 3/16	2 7/16	2 11/16	2 3/4	2 11/16	2 1/2	2 1/4	1 13/16	1 5/16	1 1/16	0	132'-7 1/8	132'-7 9/16	29'-8 13/16	102'-10 3/4	1/8	2 1/16
G2B	2 3/4	2 1/8	1 7/16	13/16	1/8	1/8	9/16	1	1 7/16	1 7/8	2 3/16	2 7/16	2 5/8	2 11/16	2 5/8	2 7/16	2 3/16	1 3/4	1 1/4	1 1/16	0	129'-11 5/16	129'-11 3/4	28'-6 7/16	101'-5 5/16	1/8	2 1/16
G3B	2 11/16	2 1/16	1 7/16	3/4	1/16	1/8	5/8	1 1/16	1 1/2	1 7/8	2 3/16	2 7/16	2 5/8	2 11/16	2 9/16	2 3/8	2 1/8	1 3/4	1 1/4	5/8	1/16	127'-5 7/16	127'-5 13/16	27'-6	99'-11 13/16	3/16	2
G4B	2 5/8	2 1/16	1 3/8	3/4	1/16	1/8	5/8	1 1/16	1 7/16	1 13/16	2 1/8	2 3/8	2 5/8	2 5/8	2 1/2	2 5/16	2 1/16	1 11/16	1 1/4	1 1/16	0	125'-5 9/16	125'-6	26'-11 3/16	98'-6 7/16	1/8	1 15/16

MARK	AX	AY	AZ	BA	BB
G1B	64'-5 7/8	5/8 × 59 1/2 × 64'-8 (3/1)	68'-1 1/16	1/8	5/8 × 58 1/2 × 69'-1 (3/8)
G2B	61'-11 15/16	5/8 × 59 1/2 × 62'-2 (3/2)	67'-11 13/16	1/8	5/8 × 58 1/2 × 69'-1 (3/8)
G3B	59'-11 7/8	5/8 × 59 1/2 × 60'-2 (3/3)	67'-5 15/16	1/16	5/8 × 58 1/2 × 69'-1 (3/8)
G4B	58'-11 15/16	5/8 × 59 1/2 × 59'-2 (3/4)	66'-6 1/16	1/8	5/8 × 58 1/2 × 67'-6 (3/9)



TYPICAL WEB PLATE SPLICE
FOR WEB PLATES 5/16" TO 2" THICK (B-L2c-S)

NOTES:

FOR GENERAL SHOP NOTES, SEE DRAWING GN1.
ALL WEB PLATES REQUIRE CHARPY V-NOTCH TEST.
THE LETTERS "t" & "c" AT WEB SPLICES INDICATE TENSION AND COMPRESSION EDGES AT SPLICES.
RT INDICATES RADIOGRAPHIC TESTING FOR 1/6 OF THE WEB DEPTH AT TENSION EDGE PLUS 25% OF THE REMAINDER.

NOTE "G"

ALL WELDS MAY HAVE A MAXIMUM REINFORCEMENT OF 1/8". GRIND THE WELDS SMOOTH IN THE AREAS TO BE TESTED AND FOR THE FULL DEPTH OF WEB ON G1B (F.S.) AND G5B (N.S.).

FED.ROAD DIV.NO.	STATE	FED.AID PROJ.NO.
	VT	

RECEIVED
JAN 30 2007
CK'D BY TC4 CK'D BY
RESUBMIT APPROVED TC4
BY DATE 1-31-2007

CODE:30

NO.	REVISION	BY	DATE
△			
△			
△			

HIGH STEEL STRUCTURES, INC.
1770 Hempstead Road
Lancaster, PA 17605-0008
Phone 717/299-5211
A Division of High Industries, Inc.

WEB CAMBER DIAGRAMS
VT. 12 (MAIN ST.) OVER THIRD BRANCH OF THE WHITE RIVER
VT. 12 STA. 15+36.00 TO STA. 17+36.00
TOWN OF RANDOLPH, ORANGE COUNTY, VT. BRIDGE NO. 42
STATE OF VERMONT
AGENCY OF TRANSPORTATION
STATE CONTRACT OR REF. NO. PROJECT NO. RANDOLPH BRF 0241 (29)
CONTRACTOR WINTERSET, INC.
IN CHARGE: BRITIGAN (IH) MADE BY: KMA CHK'D. BY: SJA DATE: 11/7/06
CONTRACT NUMBER: VT-06215-1 DRAWING NUMBER: WC1 OF WC1

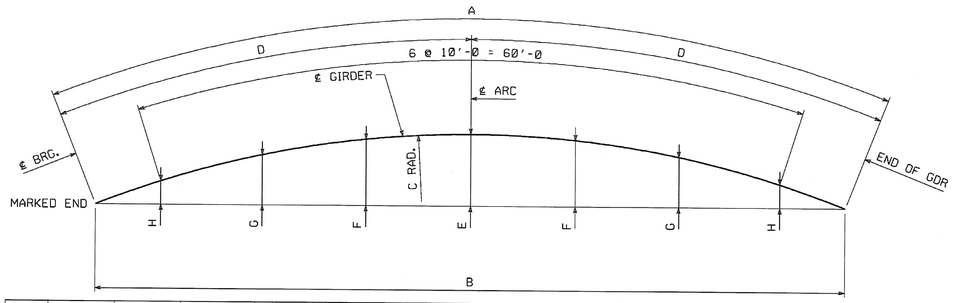
06215 X2 1/25/07 Final Approval and Distribution

TO:Winterset, Inc.

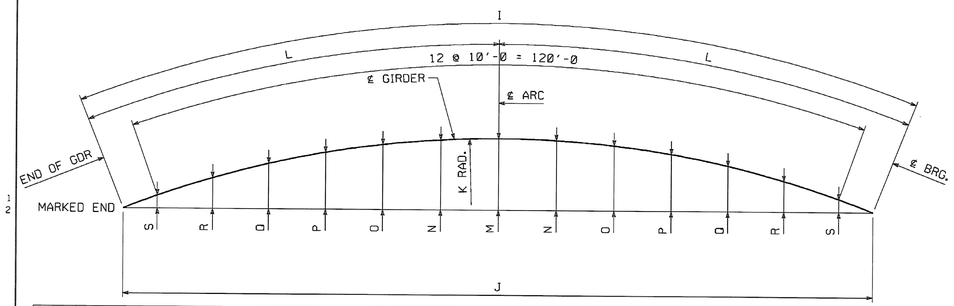
PLOTTED: 11/13/06
10:53:58 AM
BY: cshaffer

ENGLISH

FED.ROAD DIV.NO.	STATE	FED.AID PROJ.NO.
	VT	



MARK	A	B	C	D	E	F	G	H
G1A	73'-2 11/16	73'-2 1/4	655'-1 7/16	36'-7 11/32	1'-0 1/4	11 3/8	8 5/8	4 1/16
G2A	72'-11 11/16	72'-11 1/4	645'-10 7/16	36'-5 27/32	1'-0 3/8	11 7/16	8 5/8	4
G3A	72'-6 11/16	72'-6 3/16	636'-7 7/16	36'-3 11/32	1'-0 3/8	11 7/16	8 5/8	3 15/16
G4A	71'-7 11/16	71'-7 1/4	627'-4 7/16	35'-9 27/32	1'-0 1/4	11 5/16	8 7/16	3 11/16
G5A	70'-10 5/8	70'-10 3/16	618'-1 7/16	35'-5 5/16	1'-0 3/16	11 1/4	8 5/16	3 7/16



MARK	I	J	K	L	M	N	O	P	Q	R	S
G1B	132'-7 1/8	132'-4 7/16	655'-1 7/16	66'-3 9/16	3'-4 1/4	3'-3 5/16	3'-0 9/16	2'-8	2'-1 5/16	1'-5 5/16	7 1/4
G2B	129'-11 5/16	129'-8 11/16	645'-10 7/16	64'-11 21/32	3'-3 3/16	3'-2 1/4	2'-11 7/16	2'-6 13/16	2'-0 5/16	1'-4	5 3/4
G3B	127'-5 7/16	127'-2 7/8	636'-7 7/16	63'-8 23/32	3'-2 1/4	3'-1 5/16	2'-10 1/2	2'-5 3/4	1'-11 3/16	1'-2 11/16	4 5/16
G4B	125'-5 5/16	125'-3 1/16	627'-4 7/16	62'-8 25/32	3'-1 5/8	3'-0 5/8	2'-9 3/4	2'-5	1'-10 5/16	1'-1 11/16	3 3/16
G5B	123'-3 5/8	123'-1 3/16	618'-1 7/16	61'-7 13/16	3'-0 7/8	2'-11 7/8	2'-9	2'-4 1/8	1'-9 5/16	1'-0 5/8	1 15/16

RECEIVED
CK'D BY YT CK'D BY
JAN 30 2007
RESUBMIT APPROVED YT
BY WY SY DATE 1-31-2007

NOTES:
ALL DIMENSIONS APPLY AT THE TOP OF WEB PLATE OF THE GIRDERS.

NO.	REVISION	BY	DATE
1			
2			
3			

HIGH STEEL STRUCTURES, INC.
1770 Hempstead Road
Lancaster, PA 17605-0008
Phone 717/299-5211
A Division of High Industries, Inc.

HORIZONTAL CURVE DIAGRAMS
VT. 12 (MAIN ST.) OVER THIRD BRANCH OF THE WHITE RIVER
VT. 12 STA. 15+36.00 TO STA. 17+36.00
TOWN OF RANDOLPH, ORANGE COUNTY, VT. BRIDGE NO. 42
STATE OF VERMONT
AGENCY OF TRANSPORTATION

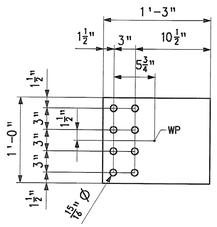
STATE CONTRACT OR REF. NO. PROJECT NO. RANDOLPH BRF 0241 (29)
CONTRACTOR WINTERSET, INC.
IN CHARGE: BRITIGAN (IH) MADE BY: KMA CHK'D. BY: SJA DATE: 11/7/06
CONTRACT NUMBER: VT-06215-1 DRAWING NUMBER: HC1 OF HC1

CODE: 30

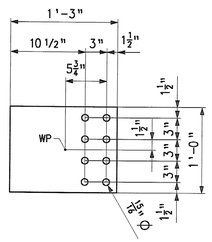
06215 X2 1/25/07 Final Approval and Distribution TO:Winterset, Inc.

PLOTTED: 11/13/06 10:53:53 AM
BY: cshaffer

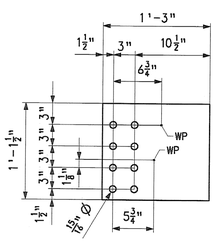
FED.ROAD DIV.NO.	STATE	FED.AID PROJ.NO.
	VT	



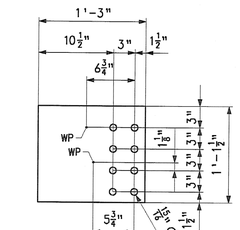
GUSSET PLATE MK. m1a



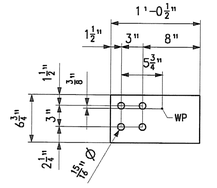
GUSSET PLATE MK. m1b



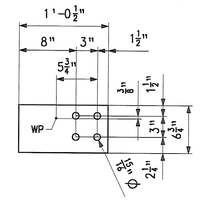
GUSSET PLATE MK. m1c



GUSSET PLATE MK. m1d



GUSSET PLATE MK. m1f



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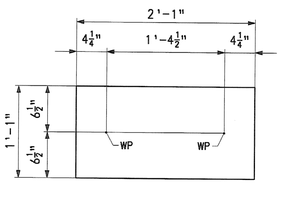

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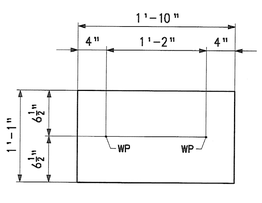

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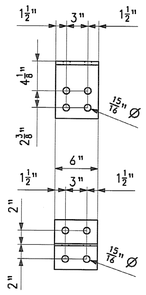


CONN. WT MK. m1m
(CODE: 56)

BILL OF MATERIAL

SHIP	QTY EA.	MARK	COMM	DESCRIPTION	LENGTH	SPEC	GRADE	TEST	REMARKS	GRP	ITEM	GROSS WEIGHT EA.	DEDUCTED WEIGHT EA.	NET WEIGHT EA.
1	12	m1a	PL	1/2 x 12	1 3	M270	50W	T		11	3	25.52		25.52
1	12	m1b	PL	1/2 x 12	1 3	M270	50W	T		11	3	25.52		25.52
1	52	m1c	PL	1/2 x 13 1/2	1 3	M270	50W	T		11	3	28.71		28.71
1	52	m1d	PL	1/2 x 13 1/2	1 3	M270	50W	T		11	3	28.71		28.71
1	40	m1f	PL	1/2 x 6 3/4	1 0 1/2	M270	50W	T		11	3	11.96		11.96
1	40	m1g	PL	1/2 x 6 3/4	1 0 1/2	M270	50W	T		11	3	11.96		11.96
1	12	m1h	PL	1/2 x 13	2 1	M270	50W	T		11	3	46.08		46.08
1	40	m1k	PL	1/2 x 13	1 10	M270	50W	T		11	3	40.55		40.55
1	76	m1m	WT	8 x 20	0 6	M270	50W			10	2	10.00		10.00

RECEIVED
OK'D BY TCF OK'D BY
JAN 30 2007
RESUBMIT APPROVED TCF
BY WYSJ DATE 1-31-2007

NOTES:

HOLES: 15/16" Ø
BOLTS: NONE
PAINT: NONE
FOR GENERAL SHOP NOTES, SEE DWG. GN1.

CODE: 63 (U.N.) 56

NO.	REVISION	BY	DATE
1			
2			
3			

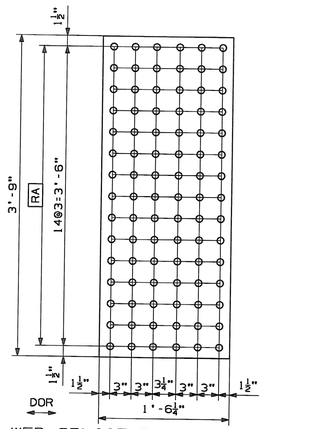
HIGH STEEL STRUCTURES, INC.
1770 Hempstead Road
Lancaster, PA 17605-0008
Phone 717/299-5211
A Division of High Industries, Inc.

MISCELLANEOUS JOB STANDARDS
VT. 12 (MAIN ST.) OVER THIRD BRANCH OF THE WHITE RIVER
VT. 12 STA. 15+36.00 TO STA. 17+36.00
TOWN OF RANDOLPH, ORANGE COUNTY, VT. BRIDGE NO. 42
STATE OF VERMONT
AGENCY OF TRANSPORTATION

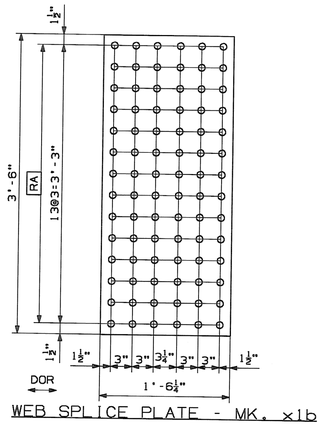
STATE CONTRACT OR REF. NO. PROJECT NO. RANDOLPH BRF 0241 (29)
CONTRACTOR WINTERSET, INC.
IN CHARGE: BRITIGAN (IH) MADE BY: RC CHK'D. BY: CS DATE: 11/6/06
CONTRACT NUMBER: VT-06215-1 DRAWING NUMBER: M1 OF M1

PLOTTED: DATE\$789012345\$7 BY: USERNAME

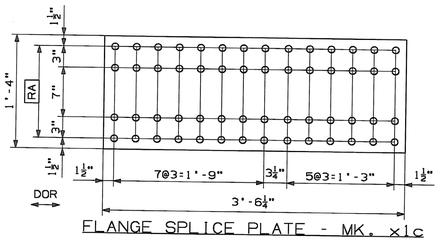
06215 X2 1/25/07 Final Approval and Distribution TO:Winterset, Inc.



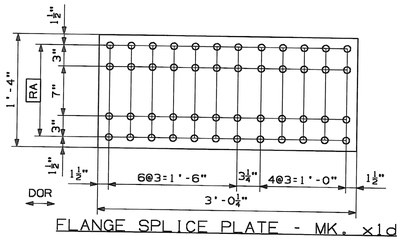
WEB SPLICE PLATE - MK. x1a



WEB SPLICE PLATE - MK. x1b



FLANGE SPLICE PLATE - MK. x1c



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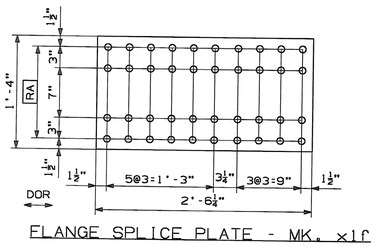

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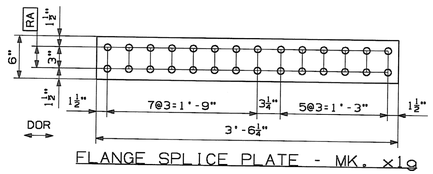

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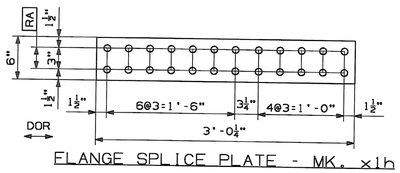

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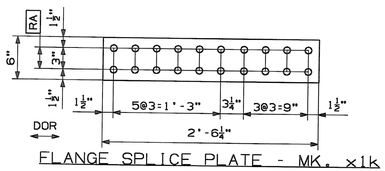

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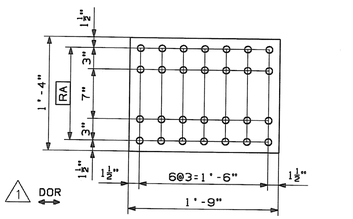
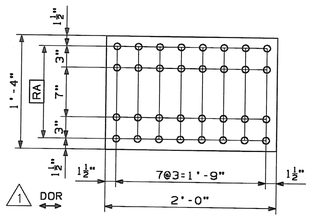
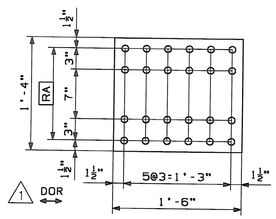


FLANGE FILL PLATE - MK. x1m



FLANGE FILL PLATE - MK. x1n



FLANGE FILL PLATE - MK. x1p

FED.ROAD DIV.NO.	STATE	FED.AID PROJ.NO.
	VT	

BILL OF MATERIAL

SHIP	QTY EA.	MARK	COMM	DESCRIPTION	LENGTH	SPEC	GRADE	TEST	REMARKS	GRP	ITEM	GROSS WEIGHT EA.	DEDUCTED WEIGHT EA.	NET WEIGHT EA.
1	4	x1a	PL	1/2 x 45	1 6 1/4	M270	50W	T		6	1	116.44		116.44
1	6	x1b	PL	1/2 x 42	1 6 1/4	M270	50W	T		6	2	108.68		108.68
1	2	x1c	PL	1/2 x 16	3 6 1/4	M270	50W	T		6	3	95.84		95.84
1	2	x1d	PL	1/2 x 16	3 0 1/4	M270	50W	T		6	3	82.23		82.23
1	6	x1f	PL	1/2 x 16	2 6 1/4	M270	50W	T		6	3	68.62		68.62
1	4	x1g	PL	1/2 x 6	3 6 1/4	M270	50W	T		6	4	35.94		35.94
1	4	x1h	PL	1/2 x 6	3 0 1/4	M270	50W	T		6	4	30.84		30.84
1	12	x1k	PL	1/2 x 6	2 6 1/4	M270	50W	T		6	4	25.73		25.73
1	2	x1m	PL	1 x 16	1 9	M270	50W	T	FILL PL	6	5	95.28		95.28
1	2	x1n	PL	1/2 x 16	2 0	M270	50W	T	FILL PL	6	6	54.44		54.44
1	6	x1p	PL	1/2 x 16	1 6	M270	50W	T	FILL PL	6	6	40.83		40.83

RECEIVED
CK'D BY TCF CK'D BY
JAN 30 2007
RESUBMIT APPROVED TCF
BY WY SY DATE 1-31-2007

NO.	REVISION	BY	DATE
1	ADDED DIRECTION OF ROLL AND CHARPY TEST	MAF	1-19-07

HIGH STEEL STRUCTURES, INC.
1770 Hempstead Road
Lancaster, PA 17605-0008
Phone 717/299-5211
A Division of High Industries, Inc.

GIRDER JOB STANDARDS
VT. 12 (MAIN ST.) OVER THIRD BRANCH OF THE WHITE RIVER
VT. 12 STA. 15+36.00 TO STA. 17+36.00
TOWN OF RANDOLPH, ORANGE COUNTY, VT. BRIDGE NO. 42
STATE OF VERMONT
AGENCY OF TRANSPORTATION

STATE CONTRACT OR REF. NO. PROJECT NO. RANDOLPH BRF 0241 (29)
CONTRACTOR WINTERSET, INC.
IN CHARGE: BRITIGAN (IH) MADE BY: RC CHK'D. BY: CS DATE: 11/7/06
CONTRACT NUMBER: VT-06215-1 DRAWING NUMBER: X1 OF X2

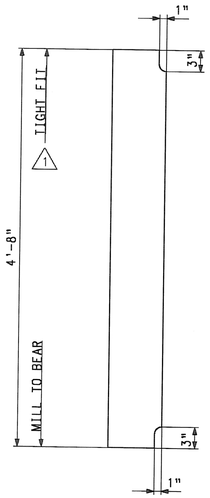
NOTES:
HOLES: 15/16" Ø
BOLTS: NONE
PAINT: NONE
FOR GENERAL SHOP NOTES, SEE DWG. GN1.

CODE: 30

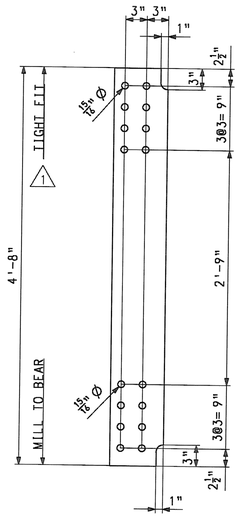
06215 X2 1/25/07 Final Approval and Distribution TO:Winterset, Inc.

PLOTTED: DATE567890123456789 BY: USERNAME

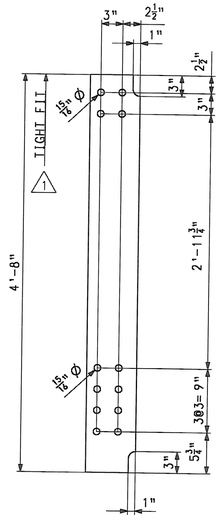
FED.ROAD DIV.NO.	STATE	FED.AID PROJ.NO.
	VT	



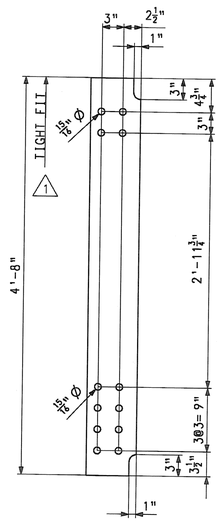
BRG. STIFF. MK. x2a



BRG. STIFF. MK. x2b



CONN. PLATE MK. x2c



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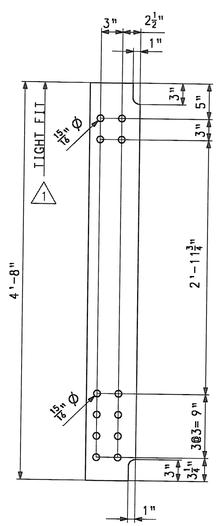

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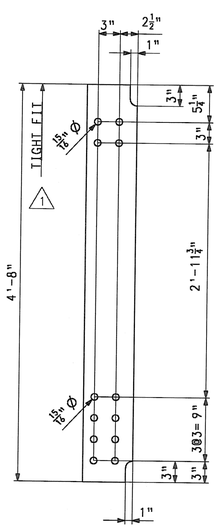
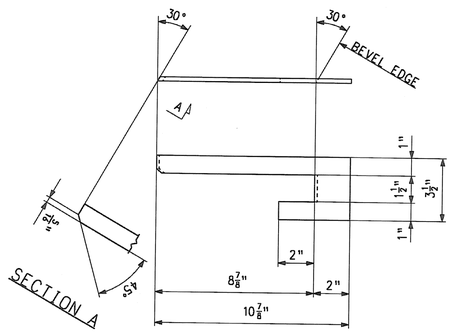
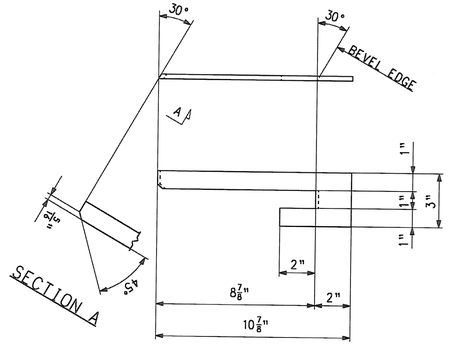


CONN. PLATE MK. x2g



DRIP PLATE MK. x2k



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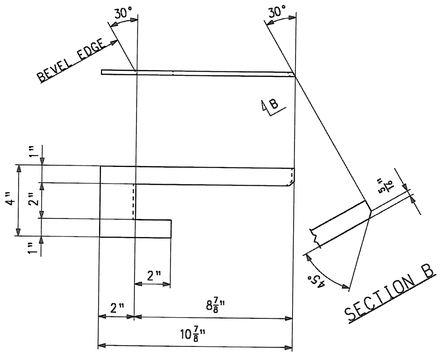
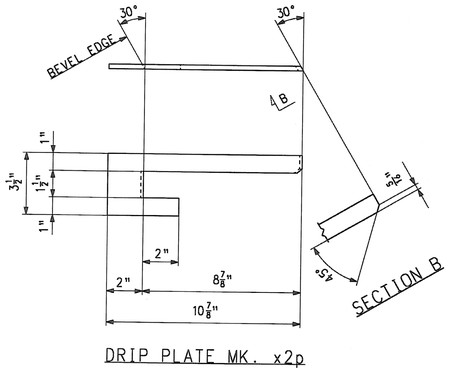


DRIP PLATE MK. x2n



DRIP PLATE MK. x2p

BILL OF MATERIAL

SHIP	QTY EA.	MARK	COMM	DESCRIPTION	LENGTH	SPEC	GRADE	TEST	REMARKS	GRP	ITEM	GROSS WEIGHT EA.	DEDUCTED WEIGHT EA.	NET WEIGHT EA.
1	6	x2a	PL	3/4 x 7 1/2	4 8	M270	50W			7	1	89		89
1	24	x2b	PL	3/4 x 7 1/2	4 8	M270	50W	T		7	1	89		89
1	40	x2c	PL	1/2 x 7	4 8	M270	50W	T		7	2	56		56
1	22	x2d	PL	1/2 x 7	4 8	M270	50W	T		7	2	56		56
1	8	x2f	PL	1/2 x 7	4 8	M270	50W	T		7	2	56		56
1	10	x2g	PL	1/2 x 7	4 8	M270	50W	T		7	2	56		56
1	1	x2k	PL	1/4 x 3 1/2	0 10 7/8	M270	50W			7	4	3		3
1	1	x2m	PL	1/4 x 3	0 10 7/8	M270	50W			7	5	2		2
1	1	x2n	PL	1/4 x 4	0 10 7/8	M270	50W			7	3	3		3
1	1	x2p	PL	1/4 x 3 1/2	0 10 7/8	M270	50W			7	4	3		3

RECEIVED
OK'D BY: [illegible] OK'D BY:
JAN 30 2007
RESUBMIT: APPROVED: [illegible]
BY: [illegible] DATE: 1-31-2007

NOTES:

HOLES: 15/16" Ø
BOLTS: NONE
PAINT: NONE
FOR GENERAL SHOP NOTES, SEE DWG. GN1.

CODE: 30

NO.	REVISION	BY	DATE
1	ADDED TIGHT FIT & CHARPY TEST	MAF	1-19-07

HIGH STEEL STRUCTURES, INC.
1770 Hempstead Road
Lancaster, PA 17605-0008
Phone 717/299-5211
A Division of High Industries, Inc.

GIRDER JOB STANDARDS
VT. 12 (MAIN ST.) OVER THIRD BRANCH OF THE WHITE RIVER
VT. 12 STA. 15+36.00 TO STA. 17+36.00
TOWN OF RANDOLPH, ORANGE COUNTY, VT. BRIDGE NO. 42
STATE OF VERMONT
AGENCY OF TRANSPORTATION

STATE CONTRACT OR REF. NO.: PROJECT NO. RANDOLPH BRF 0241 (29)
CONTRACTOR: WINTERSET, INC.
IN CHARGE: BRITIGAN (IH) MADE BY: WBW CHK'D. BY: CS DATE: 11-8-06
CONTRACT NUMBER: VT-06215-1 DRAWING NUMBER: X2 OF X2

06215 X2 1/25/07 Final Approval and Distribution

TO: Winterset, Inc.

PLOTTED: DATE5678901234567 BY: USERNAME

ENGLISH

FED.ROAD DIV.NO.	STATE	FED.AID PROJ.NO.
	VT	

GENERAL SHOP NOTES

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

MATERIAL:
UNLESS NOTED OTHERWISE, ALL STEEL TO BE AASHTO M270 GRADE 50W.
(T) INDICATES ZONE 2 CHARPY V-NOTCH TESTING REQUIRED.

SHOP PROCEDURE:
ALL FLANGE AND WEB PLATE SPLICES TO BE MADE BEFORE FINAL FITTING AND WELDING INTO GIRDER.
CAMBER TOLERANCE: -0" TO +¾"
ALL RE-ENTRANT CUTS TO HAVE 1" MIN. RADIUS.
BEARING AREA, AS NOTED ON GIRDER DETAILS, INDICATES AREA THAT MUST BE FLAT AND TRUE TO RECEIVE SOLE PLATE.
DOR INDICATES DIRECTION OF ROLLING.
(CG) INDICATES CORNER GRINDING.
CORNER GRINDING IS REQUIRED FOR MAIN MEMBER FLANGE PLATES, ALL FIELD SPLICE PLATES AND CROSSFRAME GUSSETS. ALL SHARP CORNERS AND EDGES THAT ARE MARRED,
⚠1 CUT OR ROUGHENED IN HANDLING SHALL BE GROUND TO (1/16") RADIUS BY GRINDING.
IDENTIFICATION MARKS ON UNPAINTED STEEL SHALL BE IMPRESSED INTO THE MEMBER (WITH A LOW-STRESS STAMP) IN A NON-STRESSED OR LOW STRESSED AREA OF THE MEMBER.
⚠1 TIGHT FIT FOR ALL INTERMEDIATE CONNECTION P'S AND ABUTMENT BEARING STIFFENERS SHALL CONFORM TO AWS SECTION 3.5.1.10

TIGHT FIT FOR PIER BEARING STIFFENERS SHALL CONFORM TO STATE OF VERMONT STANDARD SPECIFICATIONS FOR CONSTRUCTION, SECTION 506.12 (g), 1

INSPECTION:
SHOP INSPECTION BY THE VERMONT AGENCY OF TRANSPORTATION

WELDING:
ALL WELDING IS TO CONFORM TO AWS D1.5-02.
WELDING METHODS, PROCEDURES, AND MATERIALS SHALL COMPLY WITH THE SPECIFIC PROCEDURE DESIGNATED IN THE WELD SYMBOL TAIL.
FOR WELDING STIFFENERS AND CONNECTION PLATES TO GIRDERS, SEE STIFFENER WELDING DETAIL. ⚠1
FOR WELDING CROSSFRAMES, SEE SECONDARY MEMBER WELDING DETAIL.

IDENTIFICATION OF HOLE PLACEMENT:
UNLESS NOTED OTHERWISE, BOLT HOLES IN MATERIAL ⅝" OR LESS IN THICKNESS MAY BE CNC (COMPUTER NUMERICALLY CONTROLLED) PUNCHED OR CNC DRILLED FULL SIZE UNASSEMBLED. ALL MATERIAL THICKER THAN ⅝" IS TO BE DRILLED.

NON-DESTRUCTIVE TESTING:
FLANGE AND WEB PLATE SPLICES TO BE ULTRASONICALLY AND RADIOGRAPHICALLY TESTED, AS CALLED FOR ON DRAWINGS PREFIXED "FS" AND "WC", BY H.S.S.I.

MAGNETIC PARTICLE INSPECTION IS REQUIRED ON AT LEAST 1'-0 OF EVERY 10'-0 LENGTH OF FILLET WELDS AND 1'-0 OF SUCH WELDS LESS THAN 10'-0 IN LENGTH ON GIRDER WEB TO FLANGE, CONNECTION PLATES TO WEB AND FLANGE AND CROSSFRAME WELDS. TESTING PER THE YOKE METHOD, USING DC.

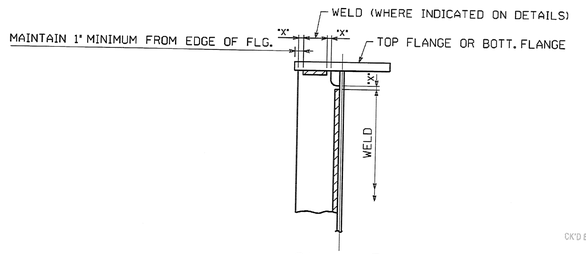
[RA] NOTE:
HOLES MARKED [RA] ON DETAIL DRAWINGS TO BE SUB-PUNCHED/SUB-DRILLED ¼"ø UNDER SIZE AND REAMED TO FULL SIZE OR DRILLED FROM SOLID WITH CONNECTING PARTS ASSEMBLED AND MATCH MARKED.

CLEANING:
ALL STEEL TO BE BLAST CLEANED TO SSPC-SP10 (NEAR WHITE), AFTER FABRICATION.

PAINTING:
NO PAINT

DRAWING REFERENCE:

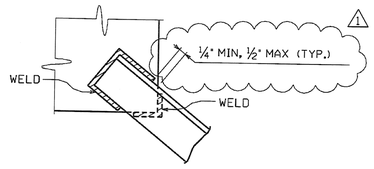
FLANGE SPLICES	-PREFIXED "FS"
WEB CAMBERS	-PREFIXED "WC"
GIRDER JOB STANDARDS	-PREFIXED "X"
CROSSFRAME JOB STDS.	-PREFIXED "M"
SHOP ASSEMBLY	-PREFIXED "SA"
HORIZONTAL CURVE	-PREFIXED "HC"
WELDING PROCEDURE	-PREFIXED "WP"



X = ⅜" MIN, ⅞" MAX

STIFFENER WELDING DETAIL

ALL CROSSFRAME WELDS ARE TO BE TERMINATED FROM EDGE OF GUSSET PLATES, FILL PLATES OR ANGLES AS INDICATED



SECONDARY MEMBER WELDING DETAIL

RECEIVED
CK'D BY MF OK'D BY
JAN 30 2007
RESUBMIT APPROVED MF
BY DATE 1-31-2007

NO.	REVISION	BY	DATE
1	ADDED NOTES TO SPECIFICATIONS AND SHOP PROCEDURES; ADDED DIMENSIONS TO DETAIL	MF	1-19-07

HIGH STEEL STRUCTURES, INC.
1770 Hempstead Road
Lancaster, PA 17605-0008
Phone 717/299-5211
A Division of High Industries, Inc.

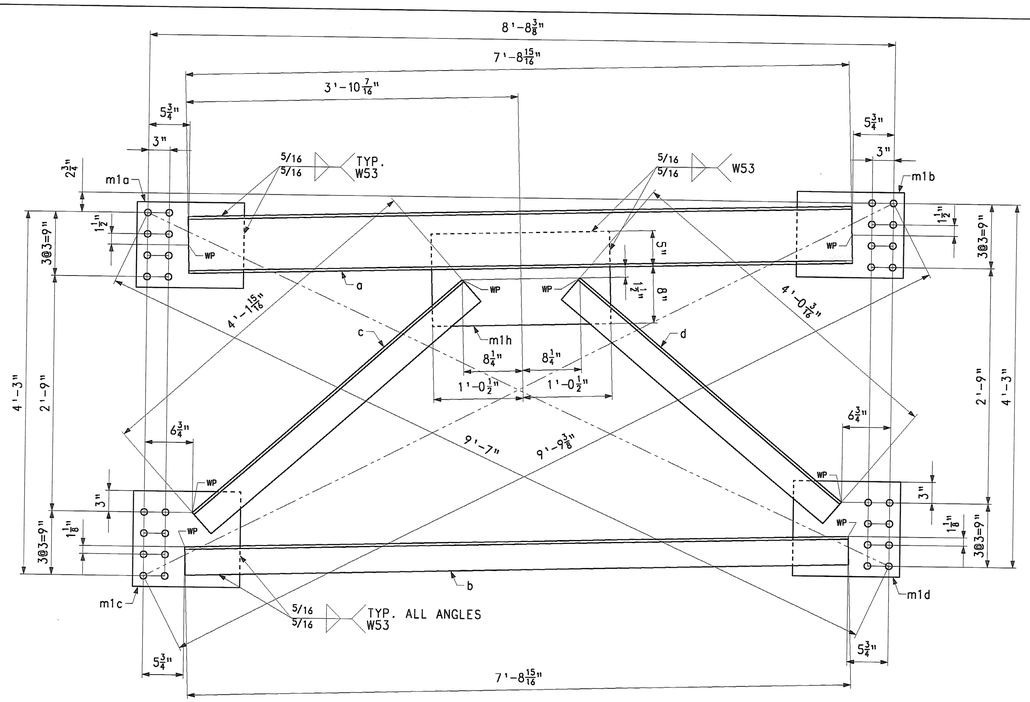
GENERAL SHOP NOTES
VT. 12 (MAIN ST.) OVER THIRD BRANCH OF THE WHITE RIVER
VT. 12 STA. 15+36.00 TO STA. 17+36.00
TOWN OF RANDOLPH, ORANGE COUNTY, VT. BRIDGE NO. 42
STATE OF VERMONT
AGENCY OF TRANSPORTATION

STATE CONTRACT OR REF. NO. PROJECT NO. RANDOLPH BRF 0241 (29)
CONTRACTOR WINTERSET, INC.
IN CHARGE: BRITIGAN (IH) MADE BY: Kmz CHK'D. BY: SJA DATE: 11-1-06
CONTRACT NUMBER: VT-06215-1 DRAWING NUMBER: GN1 OF GN1

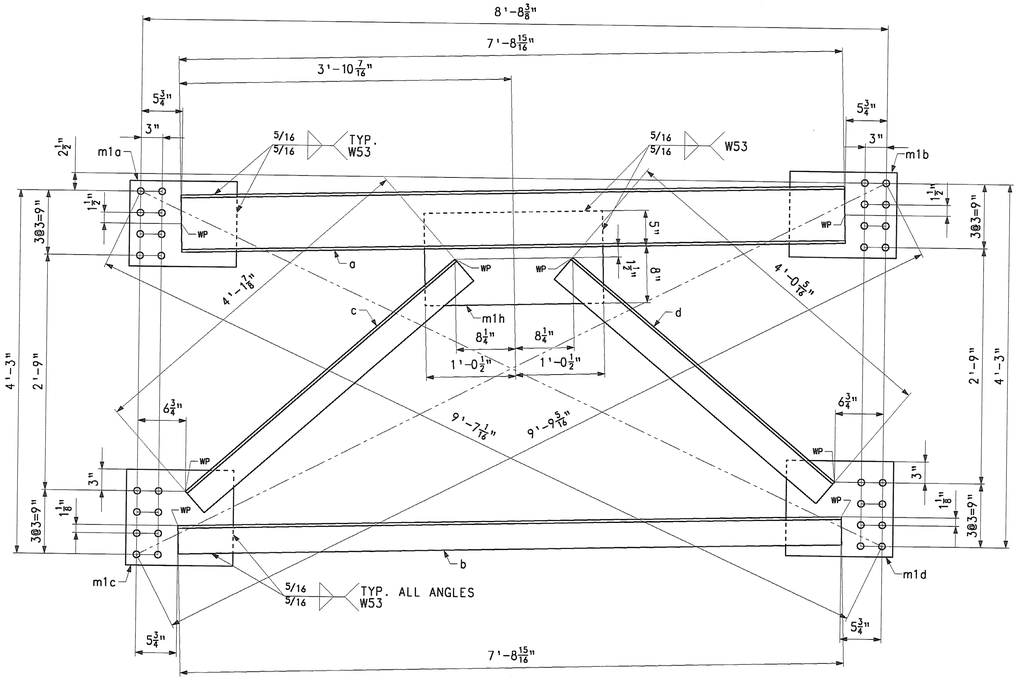
06215 X2 1/25/07 Final Approval and Distribution

TO:Winterset, Inc.

PLOTTED: 01/22/07 03:29:42 PM
BY: estoley



CROSSFRAME MK. CF1



CROSSFRAME MK. CF2

FED. ROAD DIV. NO.	STATE	FED. AID PROJ. NO.
	VT	

BILL OF MATERIAL

SHIP	QTY EA.	MARK	COMM	DESCRIPTION	LENGTH	SPEC	GRADE	TEST	REMARKS	GRP	ITEM	GROSS WEIGHT EA.	DEDUCTED WEIGHT EA.	NET WEIGHT EA.
1	2	CF1		CROSSFRAME								454.52		454.52
	2	a	C	8 × 18.75	7 8 15/16	M270	50W	T		11	1	145.21		145.21
	2	b	L	4 × 4 × 3/8	7 8 15/16	M270	50W	T		11	2	75.28		75.28
	2	c	L	4 × 4 × 3/8	4 1 15/16	M270	50W	T		11	2	40.45		40.45
	2	d	L	4 × 4 × 3/8	4 0 3/16	M270	50W	T		11	2	39.03		39.03
	2	m1a	PL	1/2 × 12	1 3	M270	50W	T		11	3	25.52		25.52
	2	m1b	PL	1/2 × 12	1 3	M270	50W	T		11	3	25.52		25.52
	2	m1c	PL	1/2 × 13 1/2	1 3	M270	50W	T		11	3	28.71		28.71
	2	m1d	PL	1/2 × 13 1/2	1 3	M270	50W	T		11	3	28.71		28.71
	2	m1h	PL	1/2 × 13	2 1	M270	50W	T		11	3	46.08		46.08
1	1	CF2		CROSSFRAME								454.57		454.57
	1	a	C	8 × 18.75	7 8 15/16	M270	50W	T		11	1	145.21		145.21
	1	b	L	4 × 4 × 3/8	7 8 15/16	M270	50W	T		11	2	75.28		75.28
	1	c	L	4 × 4 × 3/8	4 1 7/8	M270	50W	T		11	2	40.40		40.40
	1	d	L	4 × 4 × 3/8	4 0 5/16	M270	50W	T		11	2	39.13		39.13
	1	m1a	PL	1/2 × 12	1 3	M270	50W	T		11	3	25.52		25.52
	1	m1b	PL	1/2 × 12	1 3	M270	50W	T		11	3	25.52		25.52
	1	m1c	PL	1/2 × 13 1/2	1 3	M270	50W	T		11	3	28.71		28.71
	1	m1d	PL	1/2 × 13 1/2	1 3	M270	50W	T		11	3	28.71		28.71
	1	m1h	PL	1/2 × 13	2 1	M270	50W	T		11	3	46.08		46.08
									TOTAL WEIGHT THIS SHEET:			1363.61 lbs.		

RECEIVED
CK'D BY YK OK'D BY
JAN 30 2007
RESUBMIT APPROVED YK
BY DATE 1-31-2007

NOTES:

HOLES: 15/16" Ø
BOLTS: NONE
PAINT: NONE
FOR GENERAL SHOP NOTES, SEE DWG. GN1.

CODE: 63

NO.	REVISION	BY	DATE

HIGH STEEL STRUCTURES, INC.
1770 Hempstead Road
Lancaster, PA 17605-0008
Phone 717/299-5211
A Division of High Industries, Inc.

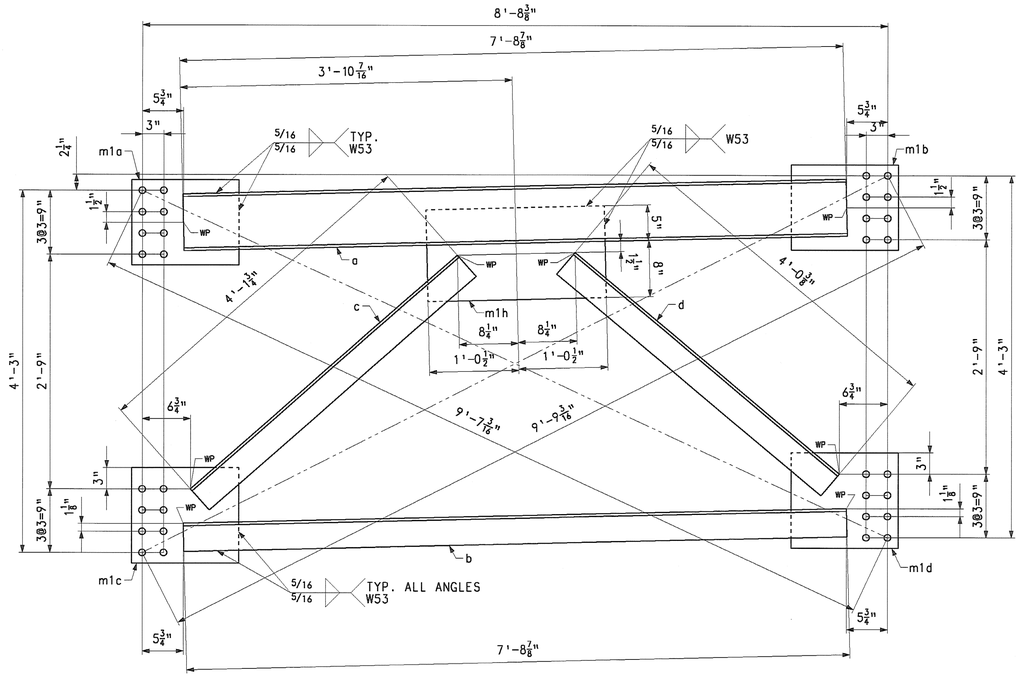
CROSSFRAMES CF1 & CF2
VT. 12 (MAIN ST.) OVER THIRD BRANCH OF THE WHITE RIVER
VT. 12 STA. 15+36.00 TO STA. 17+36.00
TOWN OF RANDOLPH, ORANGE COUNTY, VT. BRIDGE NO. 42
STATE OF VERMONT
AGENCY OF TRANSPORTATION

STATE CONTRACT OR REF. NO. PROJECT NO. RANDOLPH BRF 0241 (29)
CONTRACTOR WINTERSET, INC.
IN CHARGE: BRITIGAN (IH) MADE BY: RC CHK'D BY: CS DATE: 11/8/06
CONTRACT NUMBER: VT-06215-1 DRAWING NUMBER: 1 OF 14

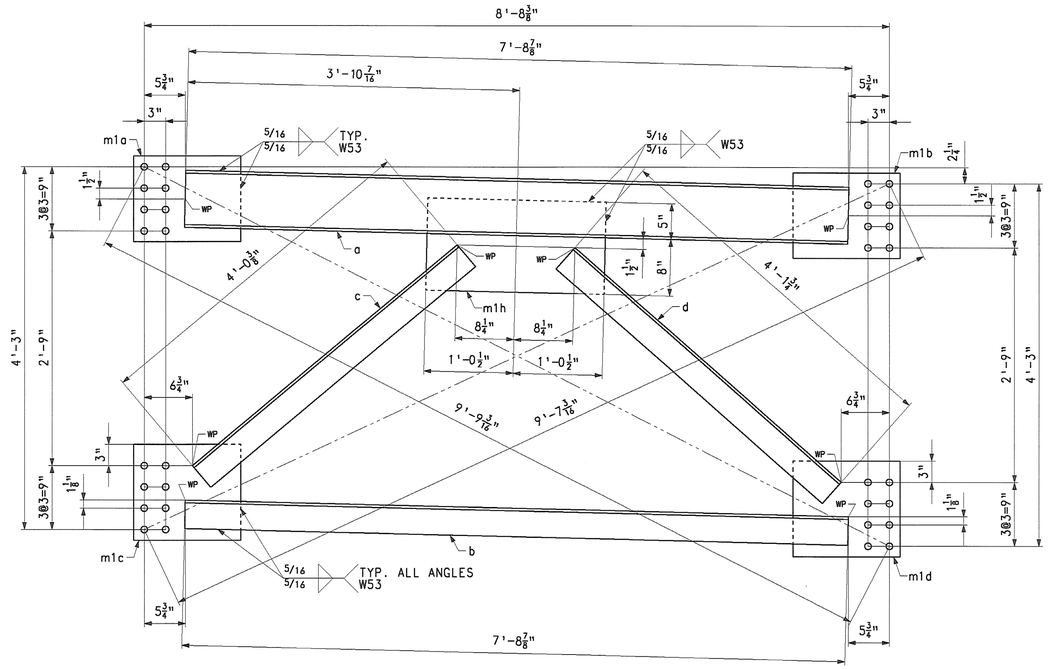
06215 X2 1/25/07 Final Approval and Distribution

TO:Winterset, Inc.

PLOTTED: DATE%%/%%%%/1234567 BY: USERNAME



CROSSFRAME MK. CF3



CROSSFRAME MK. CF4

FED.ROAD DIV.NO.	STATE	FED.AID PROJ.NO.
	VT	

BILL OF MATERIAL

SHIP	QTY EA.	MARK	COMM	DESCRIPTION	LENGTH	SPEC	GRADE	TEST	REMARKS	GRP	ITEM	GROSS WEIGHT EA.	DEDUCTED WEIGHT EA.	NET WEIGHT EA.
1	3	CF3		CROSSFRAMES								454.37		454.37
	3	a	C	8 x 18.75	7 8 7/8	M270	50W	T		11	1	145.12		145.12
	3	b	L	4 x 4 x 3/8	7 8 7/8	M270	50W	T		11	2	75.23		75.23
	3	c	L	4 x 4 x 3/8	4 1 3/4	M270	50W	T		11	2	40.30		40.30
	3	d	L	4 x 4 x 3/8	4 0 3/8	M270	50W	T		11	2	39.18		39.18
	3	m1a	PL	1/2 x 12	1 3	M270	50W	T		11	3	25.52		25.52
	3	m1b	PL	1/2 x 12	1 3	M270	50W	T		11	3	25.52		25.52
	3	m1c	PL	1/2 x 13 1/2	1 3	M270	50W	T		11	3	28.71		28.71
	3	m1d	PL	1/2 x 13 1/2	1 3	M270	50W	T		11	3	28.71		28.71
	3	m1h	PL	1/2 x 13	2 1	M270	50W	T		11	3	46.08		46.08
1	5	CF4		CROSSFRAMES								454.37		454.37
	5	a	C	8 x 18.75	7 8 7/8	M270	50W	T		11	1	145.12		145.12
	5	b	L	4 x 4 x 3/8	7 8 7/8	M270	50W	T		11	2	75.23		75.23
	5	c	L	4 x 4 x 3/8	4 0 3/8	M270	50W	T		11	2	39.18		39.18
	5	d	L	4 x 4 x 3/8	4 1 3/4	M270	50W	T		11	2	40.30		40.30
	5	m1a	PL	1/2 x 12	1 3	M270	50W	T		11	3	25.52		25.52
	5	m1b	PL	1/2 x 12	1 3	M270	50W	T		11	3	25.52		25.52
	5	m1c	PL	1/2 x 13 1/2	1 3	M270	50W	T		11	3	28.71		28.71
	5	m1d	PL	1/2 x 13 1/2	1 3	M270	50W	T		11	3	28.71		28.71
	5	m1h	PL	1/2 x 13	2 1	M270	50W	T		11	3	46.08		46.08
					TOTAL WEIGHT THIS SHEET:							3634.96 lbs.		

RECEIVED
CK'D BY: RF CK'D BY:
JAN 30 2007
RESUBMIT: APPROVED: RF
BY: WY DATE: 1-31-2007

NOTES:

HOLES: 15/16" Ø
BOLTS: NONE
PAINT: NONE
FOR GENERAL SHOP NOTES, SEE DWG. GN1.

CODE: 63

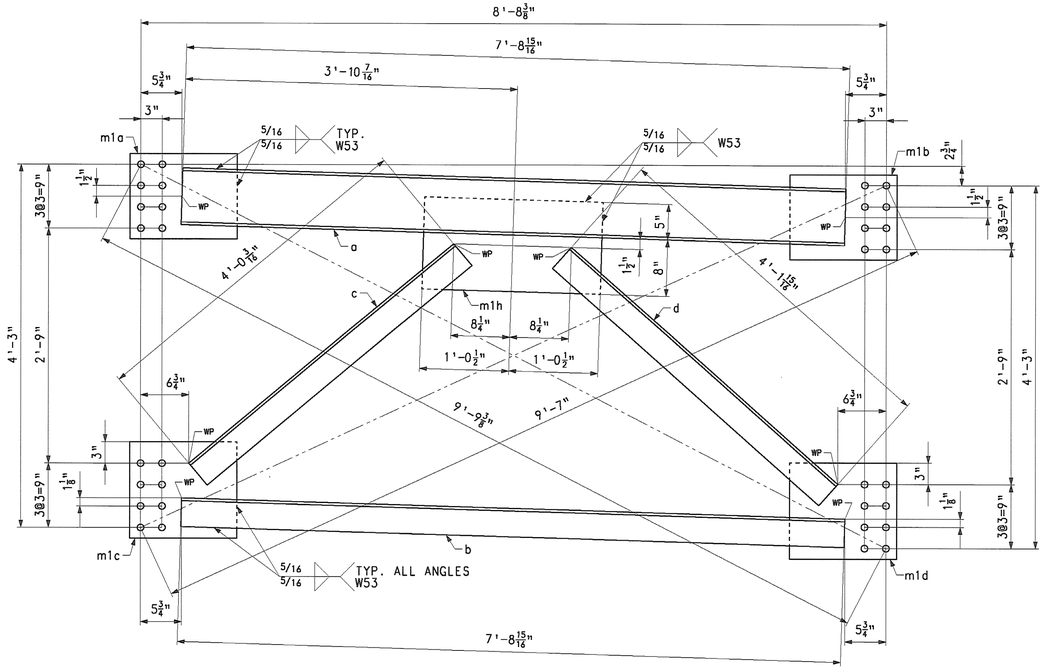
NO.	REVISION	BY	DATE

HIGH STEEL STRUCTURES, INC.
1770 Hempstead Road
Lancaster, PA 17605-0008
Phone 717/299-5211
A Division of High Industries, Inc.

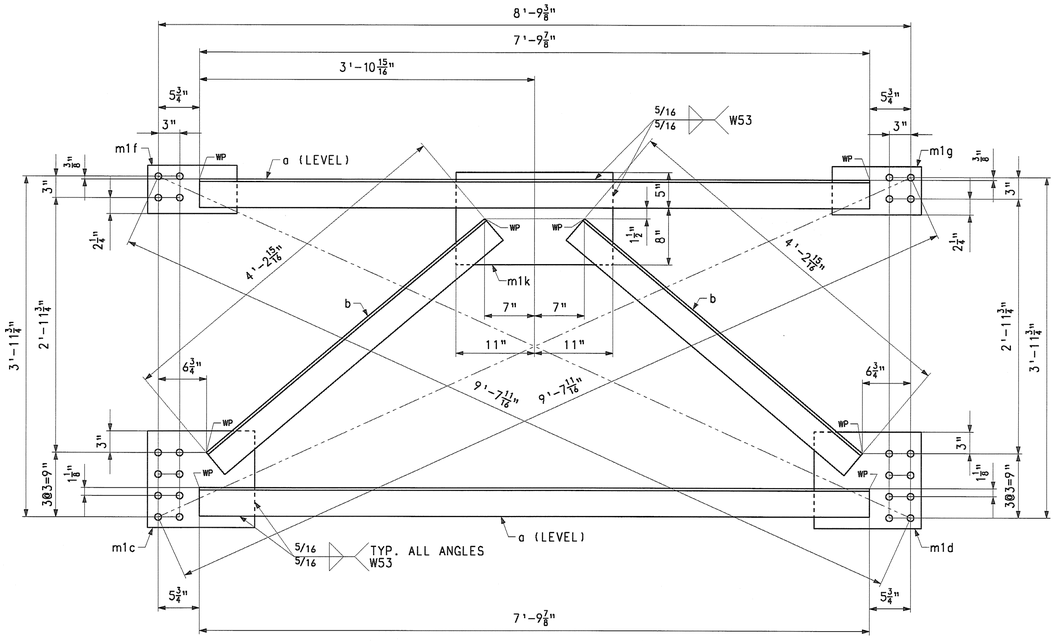
CROSSFRAMES CF3 & CF4
VT. 12 (MAIN ST.) OVER THIRD BRANCH OF THE WHITE RIVER
VT. 12 STA. 15+36.00 TO STA. 17+36.00
TOWN OF RANDOLPH, ORANGE COUNTY, VT. BRIDGE NO. 42
STATE OF VERMONT
AGENCY OF TRANSPORTATION

STATE CONTRACT OR REF. NO. PROJECT NO. RANDOLPH BRF 0241 (29)
CONTRACTOR: WINTERSET, INC.
IN CHARGE: BRITIGAN (IH) MADE BY: RC CHK'D. BY: CS DATE: 11/8/06
CONTRACT NUMBER: VT-06215-1 DRAWING NUMBER: 2 OF 14

PLOTTED: DATE\9780\01234567 BY: USERNAME



CROSSFRAME MK.CF5



CROSSFRAME MK.CF10

FED.ROAD DIV.NO.	STATE	FED.AID PROJ.NO.
	VT	

BILL OF MATERIAL

SHIP	QTY EA.	MARK	COMM	DESCRIPTION	LENGTH	SPEC	GRADE	TEST	REMARKS	GRP	ITEM	GROSS WEIGHT EA.	DEDUCTED WEIGHT EA.	NET WEIGHT EA.
1	1	CF5		CROSSFRAME								454.52		454.52
	1	a	C	8 x 18.75	7 8 15/16	M270	50W	T		11	1	145.21		145.21
	1	b	L	4 x 4 x 3/8	7 8 15/16	M270	50W	T		11	2	75.28		75.28
	1	c	L	4 x 4 x 3/8	4 0 3/16	M270	50W	T		11	2	39.03		39.03
	1	d	L	4 x 4 x 3/8	4 1 15/16	M270	50W	T		11	2	40.45		40.45
	1	m1a	PL	1/2 x 12	1 3	M270	50W	T		11	3	25.52		25.52
	1	m1b	PL	1/2 x 12	1 3	M270	50W	T		11	3	25.52		25.52
	1	m1c	PL	1/2 x 13 1/2	1 3	M270	50W	T		11	3	28.71		28.71
	1	m1d	PL	1/2 x 13 1/2	1 3	M270	50W	T		11	3	28.71		28.71
	1	m1h	PL	1/2 x 13	2 1	M270	50W	T		11	3	46.08		46.08
1	40	CF10		CROSSFRAMES								356.49		356.49
	80	a	L	4 x 4 x 3/8	7 9 7/8	M270	50W	T		11	2	76.04		76.04
	80	b	L	4 x 4 x 3/8	4 2 15/16	M270	50W	T		11	2	41.26		41.26
	40	m1c	PL	1/2 x 13 1/2	1 3	M270	50W	T		11	3	28.71		28.71
	40	m1d	PL	1/2 x 13 1/2	1 3	M270	50W	T		11	3	28.71		28.71
	40	m1f	PL	1/2 x 6 3/4	1 0 1/2	M270	50W	T		11	3	11.96		11.96
	40	m1g	PL	1/2 x 6 3/4	1 0 1/2	M270	50W	T		11	3	11.96		11.96
	40	m1k	PL	1/2 x 13	1 10	M270	50W	T		11	3	40.55		40.55

TOTAL WEIGHT THIS SHEET: 14714.27 lbs.

RECEIVED
CK'D BY KT CK'D BY
JAN 30 2007
RESUBMIT APPROVED KT
BY DATE 1-31-2007

NOTES:

HOLES: 15/16" Ø
BOLTS: NONE
PAINT: NONE
FOR GENERAL SHOP NOTES, SEE DWG. GN1.

CODE: 63

NO.	REVISION	BY	DATE

HIGH STEEL STRUCTURES, INC.
1770 Hempstead Road
Lancaster, PA 17605-0008
Phone 717/299-5211
A Division of High Industries, Inc.

CROSSFRAMES CF5 & CF10
VT. 12 (MAIN ST.) OVER THIRD BRANCH OF THE WHITE RIVER
VT. 12 STA. 15+36.00 TO STA. 17+36.00
TOWN OF RANDOLPH, ORANGE COUNTY, VT. BRIDGE NO. 42
STATE OF VERMONT
AGENCY OF TRANSPORTATION

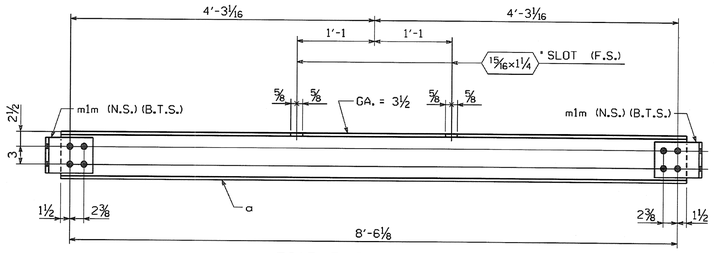
STATE CONTRACT OR REF. NO. PROJECT NO. RANDOLPH BRF 0241 (29)
CONTRACTOR WINTERSET, INC.
IN CHARGE: BRITIGAN (IH) MADE BY: RC CHK'D. BY: CS DATE: 11/8/06
CONTRACT NUMBER: VT-06215-1 DRAWING NUMBER: 3 OF 14

PLOTTED: DATE\%m/%d/%Y\%I:%M%p BY: USERNAME

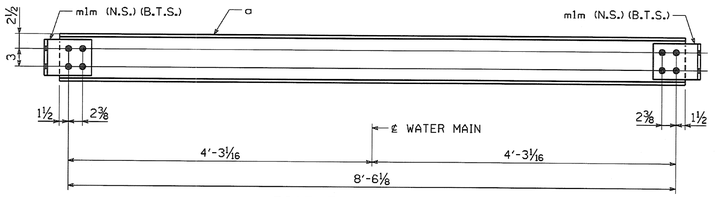
06215 X2 1/25/07 Final Approval and Distribution TO:Winterset, Inc.

ENGLISH

FED.ROAD DIV.NO.	STATE	FED.AID PROJ.NO.
	VT	



DIAPHRAGM ~ MK. D1



DIAPHRAGM ~ MK. D2

BILL OF MATERIAL

SHIP	QTY EA.	MARK	COMM	DESCRIPTION	LENGTH	SPEC	GRADE	TEST	REMARKS	GRP	ITEM	GROSS WEIGHT EA.	DEDUCTED WEIGHT EA.	NET WEIGHT EA.
1	18	D1		DIAPHRAGMS								230.25	0.00	230.25
	18	a	W	8 x 24	8 9 1/8	M270	50W			10	1	210.25	0.00	210.25
	36	m1m	WT	8 x 20	0 6	M270	50W		(B.T.S.)	10	2	10.00	0.00	10.00
1	20	D2		DIAPHRAGMS								230.25	0.00	230.25
	20	a	W	8 x 24	8 9 1/8	M270	50W			10	1	210.25	0.00	210.25
	40	m1m	WT	8 x 20	0 6	M270	50W		(B.T.S.)	10	2	10.00	0.00	10.00
									TOTAL WEIGHT THIS SHEET:					8749.50 lbs.

RECEIVED
CK'D BY TK CK'D BY
JAN 30 2007
RESUBMIT APPROVED TK
BY DATE 1-31-2007

SHOP NOTE

HOLES: 15/16"ø (U.N.)
BOLTS: NONE
PAINT: NONE
FOR GENERAL SHOP NOTES, SEE DWG. GN1.

CODE:56

NO.	REVISION	BY	DATE

HIGH STEEL STRUCTURES, INC.
1770 Hempstead Road
Lancaster, PA 17605-0008
Phone 717/299-5211
A Division of High Industries, Inc.

DIAPHRAGMS D1 & D2
VT. 12 (MAIN ST.) OVER THIRD BRANCH OF THE WHITE RIVER
VT. 12 STA. 15+36.00 TO STA. 17+36.00
TOWN OF RANDOLPH, ORANGE COUNTY, VT. BRIDGE NO. 42
STATE OF VERMONT
AGENCY OF TRANSPORTATION

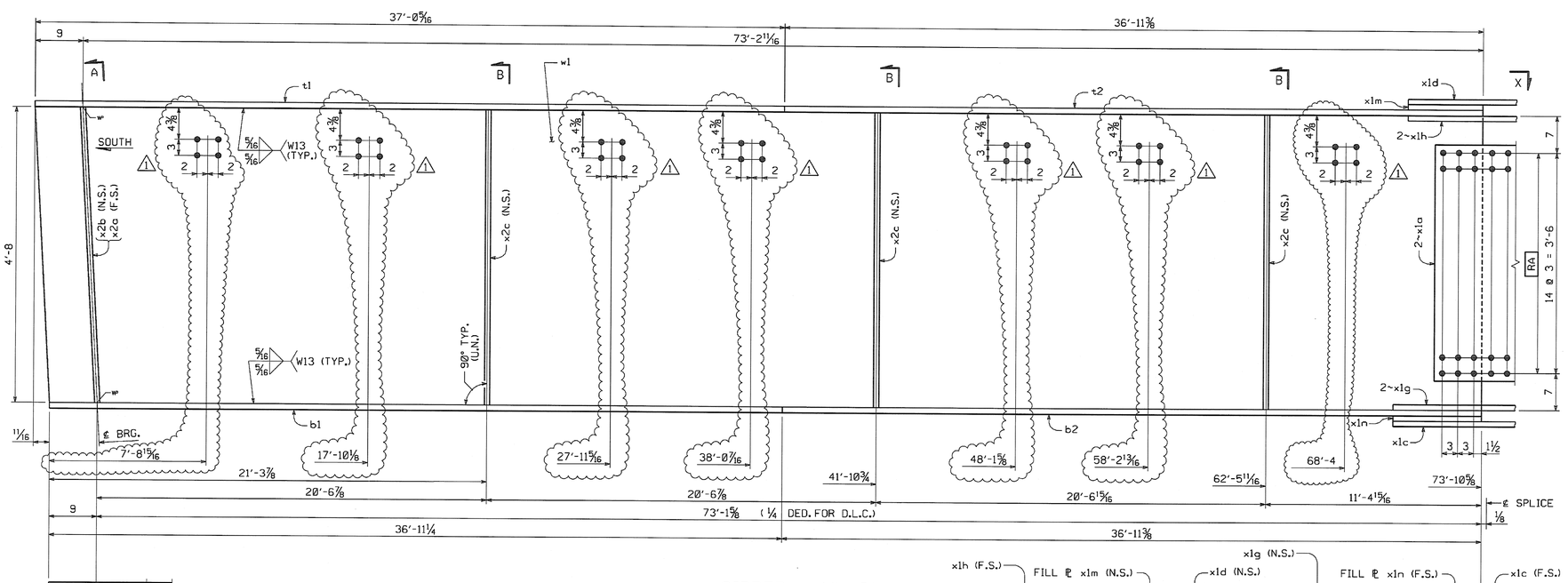
STATE CONTRACT OR REF. NO. PROJECT NO. RANDOLPH BRF 0241 (29)
CONTRACTOR WINTERSET, INC.
IN CHARGE: BRITIGAN (IH) MADE BY: RC CHK'D. BY: CS DATE: 11/6/06
CONTRACT NUMBER: VT-06215-1 DRAWING NUMBER: 4 OF 14

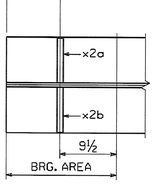
PLOTTED: 11/13/06 10:54:07 AM
BY: cshaffer

06215 X2 1/25/07 Final Approval and Distribution TO:Winterset, Inc.

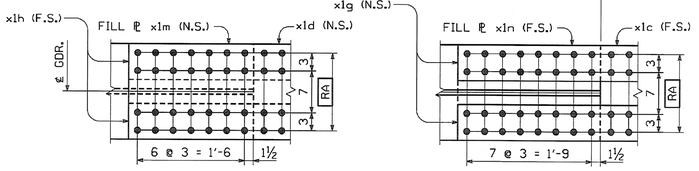
ENGLISH

FED.ROAD DIV.NO.	STATE	FED.AID PROJ.NO.
	VT	

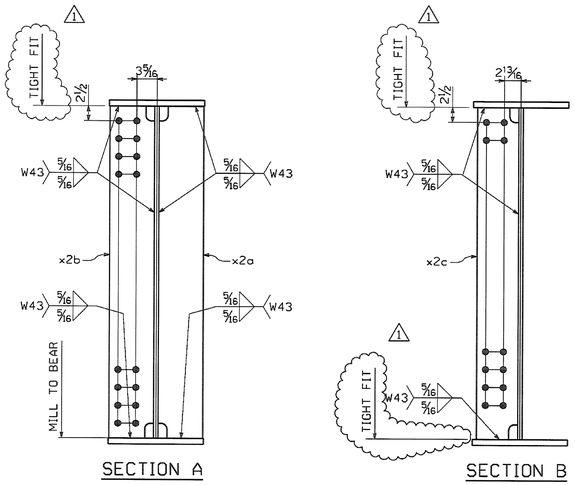




GIRDER ~ MK. G1A



VIEW X



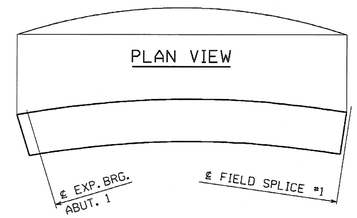
SECTION A

SECTION B

BILL OF MATERIAL

QTY EA.	MARK	COMM	DESCRIPTION	LENGTH	SPEC	GRADE	TEST	REMARKS	GRP	ITEM	GROSS WEIGHT EA.	DEDUCTED WEIGHT EA.	NET WEIGHT EA.
1	G1A		GIRDER								19911.16	5.43	19905.73
1	w1	PL	5/8 x 56	73 11 11/16	M270	50W	T		3	5	8810.09	5.43	8804.66
1	t1	PL	1 x 16	37 0 5/16	M270	50W	T		4	7	2015.86	0.00	2015.86
1	t2	PL	1 x 16	36 11 3/8	M270	50W	T		4	7	2011.61	0.00	2011.61
1	b1	PL	1 1/2 x 16	36 11 1/4	M270	50W	T		4	6	3016.56	0.00	3016.56
1	b2	PL	1 1/2 x 16	36 11 3/8	M270	50W	T		4	6	3017.41	0.00	3017.41
2	x1a	PL	1/2 x 45	1 6 1/4	M270	50W	T		6	1	116.44	0.00	116.44
1	x1c	PL	1/2 x 16	3 6 1/4	M270	50W	T		6	3	95.84	0.00	95.84
1	x1d	PL	1/2 x 16	3 0 1/4	M270	50W	T		6	3	82.23	0.00	82.23
2	x1g	PL	1/2 x 6	3 6 1/4	M270	50W	T		6	4	35.94	0.00	35.94
2	x1h	PL	1/2 x 6	3 0 1/4	M270	50W	T		6	4	30.84	0.00	30.84
1	x1m	PL	1 x 16	1 9	M270	50W	T	FILL PL	6	5	95.28	0.00	95.28
1	x1n	PL	1/2 x 16	2 0	M270	50W	T	FILL PL	6	6	54.44	0.00	54.44
1	x2a	PL	3/4 x 7 1/2	4 8	M270	50W			7	1	89.32	0.00	89.32
1	x2b	PL	3/4 x 7 1/2	4 8	M270	50W	T		7	1	89.32	0.00	89.32
3	x2c	PL	1/2 x 7	4 8	M270	50W	T		7	2	55.58	0.00	55.58

TOTAL WEIGHT THIS SHEET: 19905.73 lbs.



ORIENTATION DIAGRAM

RECEIVED
JAN 30 2007

SHOP NOTE

HOLES: 15/16"ø (U.N.)
BOLTS: NONE
PAINT: NONE
FOR GENERAL SHOP NOTES, SEE DWG. GN1.
FOR WEB CAMBER DIAGRAM, SEE DWG. WC1.
FOR HORIZ. CURVE DIAGRAM, SEE DWG. HC1.

CODE:30

NO.	REVISION	BY	DATE
1	ADD TIGHT FIT AND CHARPY TEST NOTES. ADD HOLES AND DIMS. FOR WATER MAIN SUPPORT	MAF	1-19-07

HIGH STEEL STRUCTURES, INC.
1770 Hempstead Road
Lancaster, PA 17605-0008
Phone 717/299-5211
A Division of High Industries, Inc.

GIRDER G1A
VT. 12 (MAIN ST.) OVER THIRD BRANCH OF THE WHITE RIVER
VT. 12 STA. 15+36.00 TO STA. 17+36.00
TOWN OF RANDOLPH, ORANGE COUNTY, VT. BRIDGE NO. 42
STATE OF VERMONT
AGENCY OF TRANSPORTATION

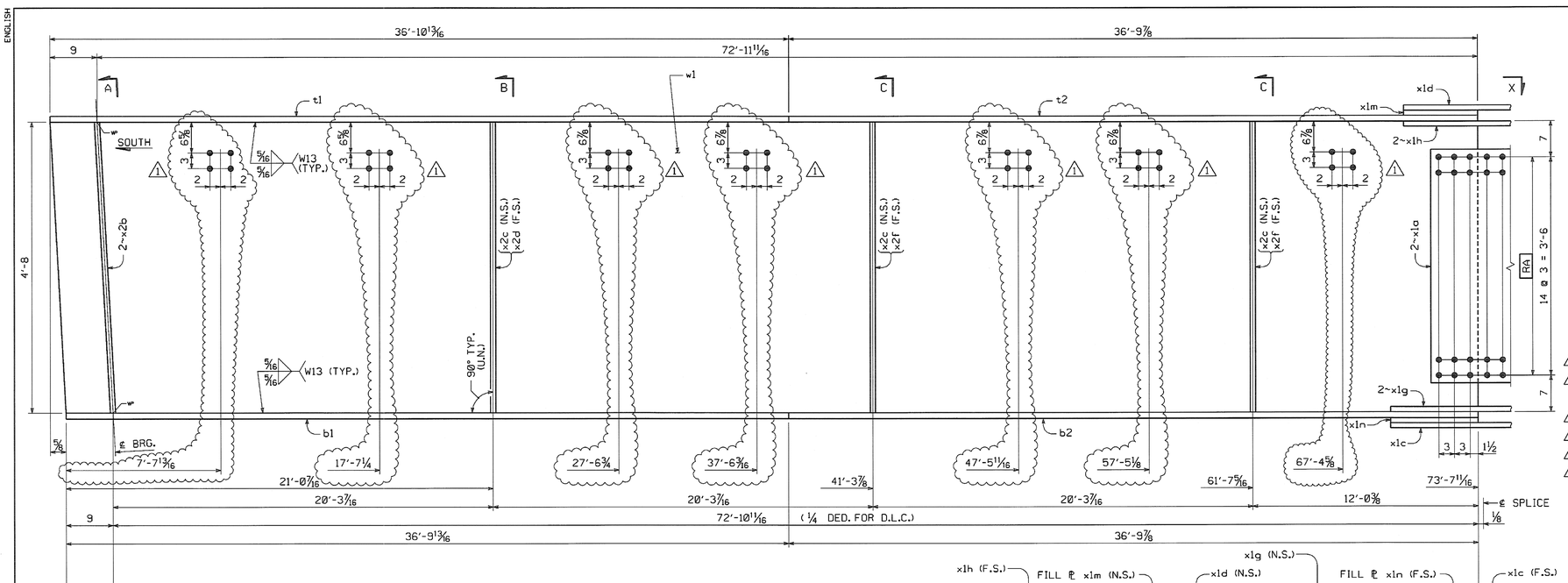
STATE CONTRACT OR REF. NO. PROJECT NO. RANDOLPH BRF 0241 (29)
CONTRACTOR WINTERSET, INC.
IN CHARGE: BRITIGAN (IH) MADE BY: MAF CHK'D BY: GS DATE: 11-10-06
CONTRACT NUMBER: VT-06215-1 DRAWING NUMBER: 5 OF 14

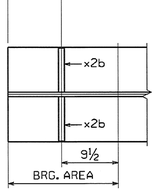
PLOTTED: 01/22/07 03:29:51 PM
BY: estolay

06215 X2 1/25/07 Final Approval and Distribution TO:Winterset, Inc.

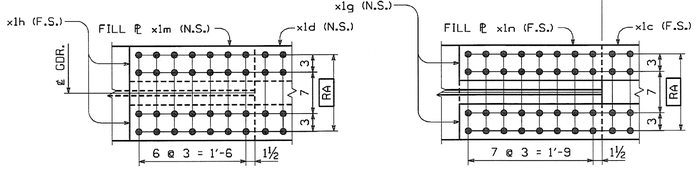
ENGLISH

FED.ROAD DIV.NO.	STATE	FED.AID PROJ.NO.
	VT	

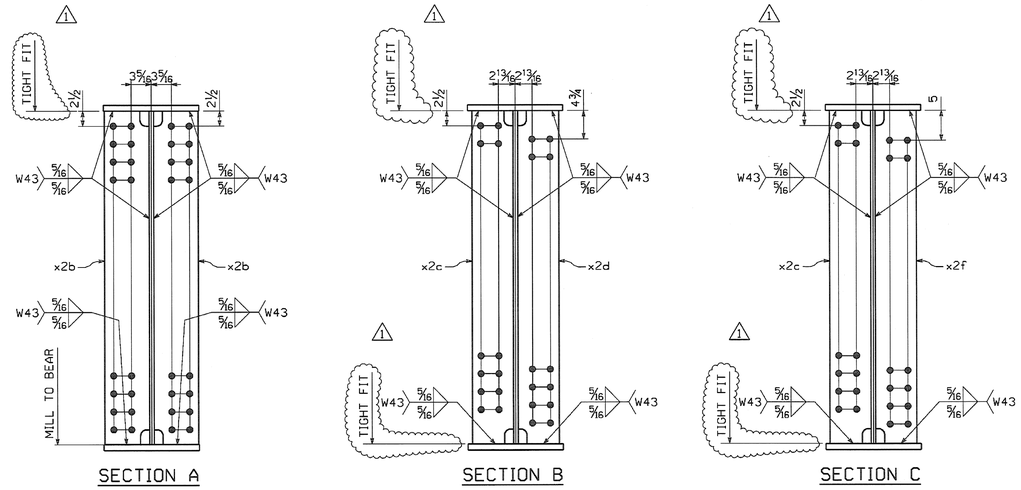




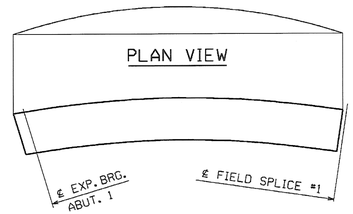
GIRDER ~ MK. G2A



VIEW X



SECTION A SECTION B SECTION C



ORIENTATION DIAGRAM

BILL OF MATERIAL

QTY EA.	MARK	COMM	DESCRIPTION	LENGTH	SPEC	GRADE	TEST	REMARKS	GRP	ITEM	GROSS WEIGHT EA.	DEDUCTED WEIGHT EA.	NET WEIGHT EA.
1	G2A		GIRDER								20014.52	5.04	20009.48
1	w1	PL	5/8 x 56	73 8 11/16	M270	50W	T		3	5	8780.32	5.04	8775.28
1	t1	PL	1 x 16	36 10 13/16	M270	50W	T		4	7	2009.06	0.00	2009.06
1	t2	PL	1 x 16	36 9 7/8	M270	50W	T		4	8	2004.80	0.00	2004.80
1	b1	PL	1 1/2 x 16	36 9 13/16	M270	50W	T		4	6	3006.78	0.00	3006.78
1	b2	PL	1 1/2 x 16	36 9 7/8	M270	50W	T		4	6	3007.20	0.00	3007.20
2	x1a	PL	1/2 x 45	1 6 1/4	M270	50W	T		6	1	116.44	0.00	116.44
1	x1c	PL	1/2 x 16	3 6 1/4	M270	50W	T		6	3	95.84	0.00	95.84
1	x1d	PL	1/2 x 16	3 0 1/4	M270	50W	T		6	3	82.23	0.00	82.23
2	x1g	PL	1/2 x 6	3 6 1/4	M270	50W	T		6	4	35.94	0.00	35.94
2	x1h	PL	1/2 x 6	3 0 1/4	M270	50W	T		6	4	30.84	0.00	30.84
1	x1m	PL	1 x 16	1 9	M270	50W	T	FILL PL	6	5	95.28	0.00	95.28
1	x1n	PL	1/2 x 16	2 0	M270	50W	T	FILL PL	6	6	54.44	0.00	54.44
2	x2b	PL	3/4 x 7 1/2	4 8	M270	50W	T		7	1	89.32	0.00	89.32
3	x2c	PL	1/2 x 7	4 8	M270	50W	T		7	2	55.58	0.00	55.58
1	x2d	PL	1/2 x 7	4 8	M270	50W	T		7	2	55.58	0.00	55.58
2	x2f	PL	1/2 x 7	4 8	M270	50W	T		7	2	55.58	0.00	55.58

TOTAL WEIGHT THIS SHEET: 20009.48 lbs.

RECEIVED
CK'D BY MF CK'D BY
JAN 30 2007
RESUBMIT APPROVED MF
BY DATE 1.31.2007

SHOP NOTE

HOLES: 15/16"ø (U.N.)
BOLTS: NONE
PAINT: NONE
FOR GENERAL SHOP NOTES, SEE DWG. GN1.
FOR WEB CAMBER DIAGRAM, SEE DWG. WC1.
FOR HORIZ. CURVE DIAGRAM, SEE DWG. HC1.

CODE:30

NO.	REVISION	BY	DATE
1	ADD TIGHT FIT AND CHARPY TEST NOTES. ADD HOLES AND DIMS. FOR WATER MAIN SUPPORT	MAF	1-19-07

HIGH STEEL STRUCTURES, INC.
1170 Hempstead Road
Lancaster, PA 17605-0008
Phone 717/299-5211
A Division of High Industries, Inc.

GIRDER G2A
VT. 12 (MAIN ST.) OVER THIRD BRANCH OF THE WHITE RIVER
VT. 12 STA. 15+36.00 TO STA. 17+36.00
TOWN OF RANDOLPH, ORANGE COUNTY, VT. BRIDGE NO. 42
STATE OF VERMONT
AGENCY OF TRANSPORTATION

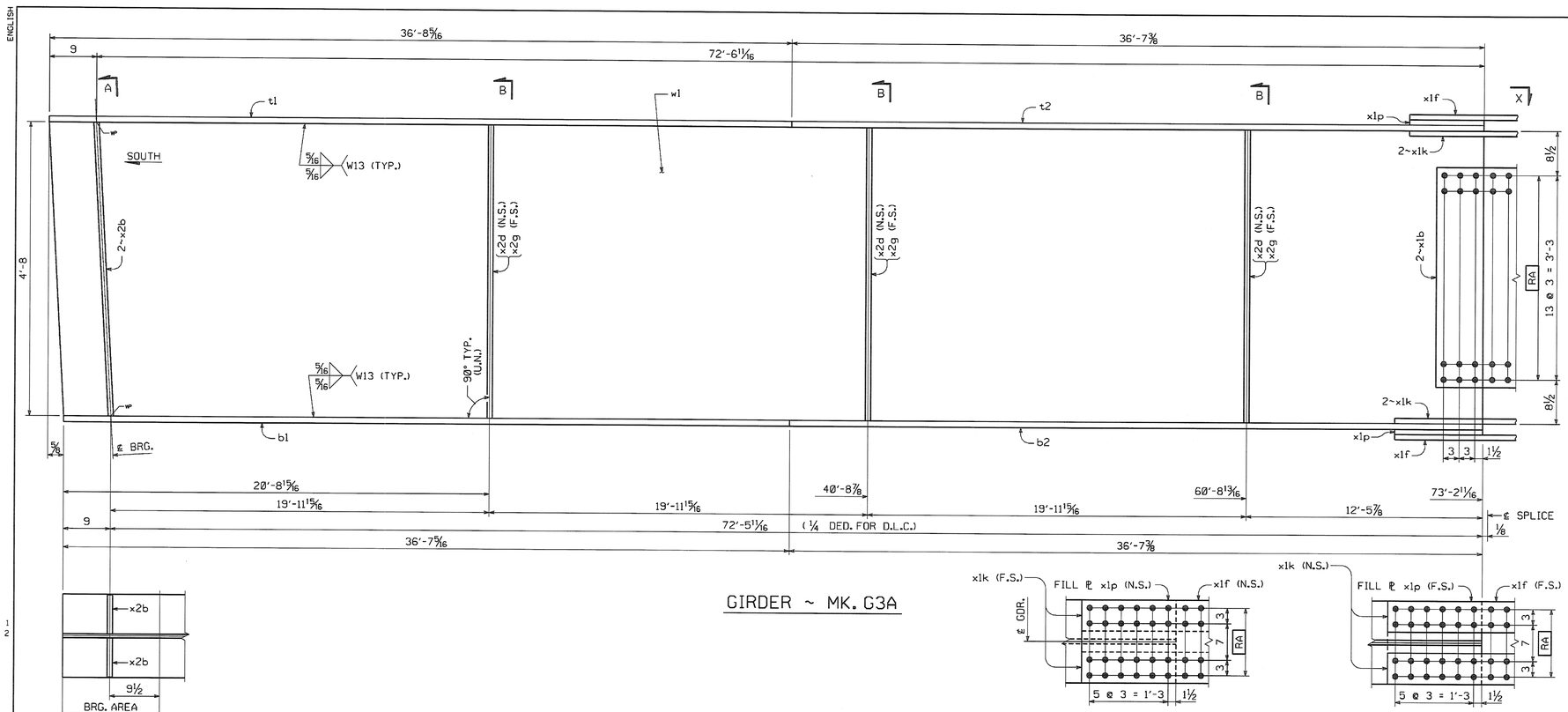
STATE CONTRACT OR REF. NO. PROJECT NO. RANDOLPH BRF 0241 (29)
CONTRACTOR WINTERSET, INC.
IN CHARGE: BRITIGAN (IH) MADE BY: MAF CHK'D. BY: CS DATE: 11-10-06
CONTRACT NUMBER: VT-06215-1 DRAWING NUMBER: 6 OF 14

PLOTTED: 01/22/07 03:28:00 PM BY: rstaley

06215 X2 1/25/07 Final Approval and Distribution TO:Winterset, Inc.

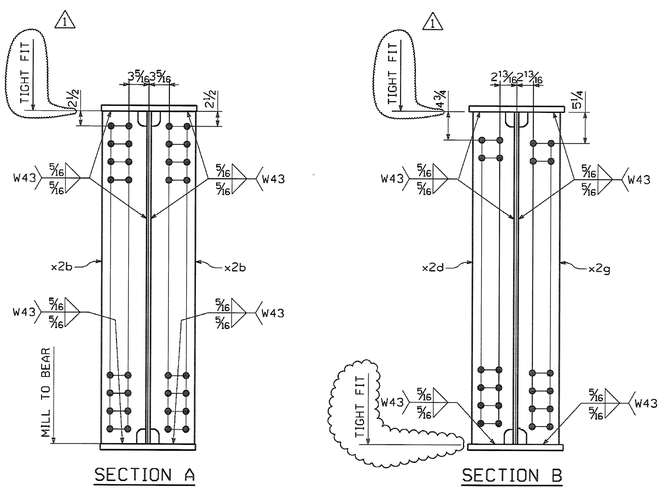
ENGLISH

FED.ROAD DIV.NO.	STATE	FED.AID PROJ.NO.
	VT	



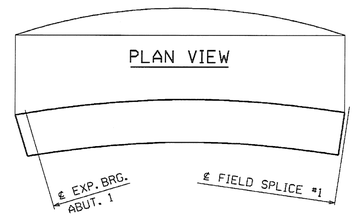
GIRDER ~ MK. G3A

VIEW X



SECTION A

SECTION B



ORIENTATION DIAGRAM

BILL OF MATERIAL

QTY EA.	MARK	COMM	DESCRIPTION	LENGTH	SPEC	GRADE	TEST	REMARKS	GRP	ITEM	GROSS WEIGHT EA	DEDUCTED WEIGHT EA	NET WEIGHT EA
1	G3A		GIRDER								17759.82	5.04	17754.78
1	w1	PL	5/8 x 56	73 3 11/16	M270	50W	T		3	5	8730.69	5.04	8725.65
1	t1	PL	1 x 16	36 8 5/16	M270	50W	T		4	9	1997.71	0.00	1997.71
1	t2	PL	1 x 16	36 7 3/8	M270	50W	T		4	10	1993.46	0.00	1993.46
1	b1	PL	1 x 16	36 7 5/16	M270	50W	T		4	10	1993.18	0.00	1993.18
1	b2	PL	1 x 16	36 7 3/8	M270	50W	T		4	10	1993.46	0.00	1993.46
2	x1b	PL	1/2 x 42	1 6 1/4	M270	50W	T		6	2	108.68	0.00	108.68
2	x1f	PL	1/2 x 16	2 6 1/4	M270	50W	T		6	3	68.62	0.00	68.62
4	x1k	PL	1/2 x 6	2 6 1/4	M270	50W	T		6	4	25.73	0.00	25.73
1 2	x1p	PL	1/2 x 16	1 6	M270	50W	T	FILL PL	6	6	40.83	0.00	40.83
1 2	x2b	PL	3/4 x 7 1/2	4 8	M270	50W	T		7	1	89.32	0.00	89.32
1 3	x2d	PL	1/2 x 7	4 8	M270	50W	T		7	2	55.58	0.00	55.58
1 3	x2g	PL	1/2 x 7	4 8	M270	50W	T		7	2	55.58	0.00	55.58

TOTAL WEIGHT THIS SHEET: 17754.78 lbs.

RECEIVED
CK'D BY MF CK'D BY
JAN 30 2007
RESUBMIT APPROVED MF
BY DATE 1-31-2007

SHOP NOTE

HOLES: 15/16"ø (U.N.)
BOLTS: NONE
PAINT: NONE
FOR GENERAL SHOP NOTES, SEE DWG. GN1.
FOR WEB CAMBER DIAGRAM, SEE DWG. WC1.
FOR HORIZ. CURVE DIAGRAM, SEE DWG. HC1.

CODE:30

NO.	REVISION	BY	DATE
1	ADD TIGHT FIT AND CHARPY TEST NOTE.	MAF	1-19-07

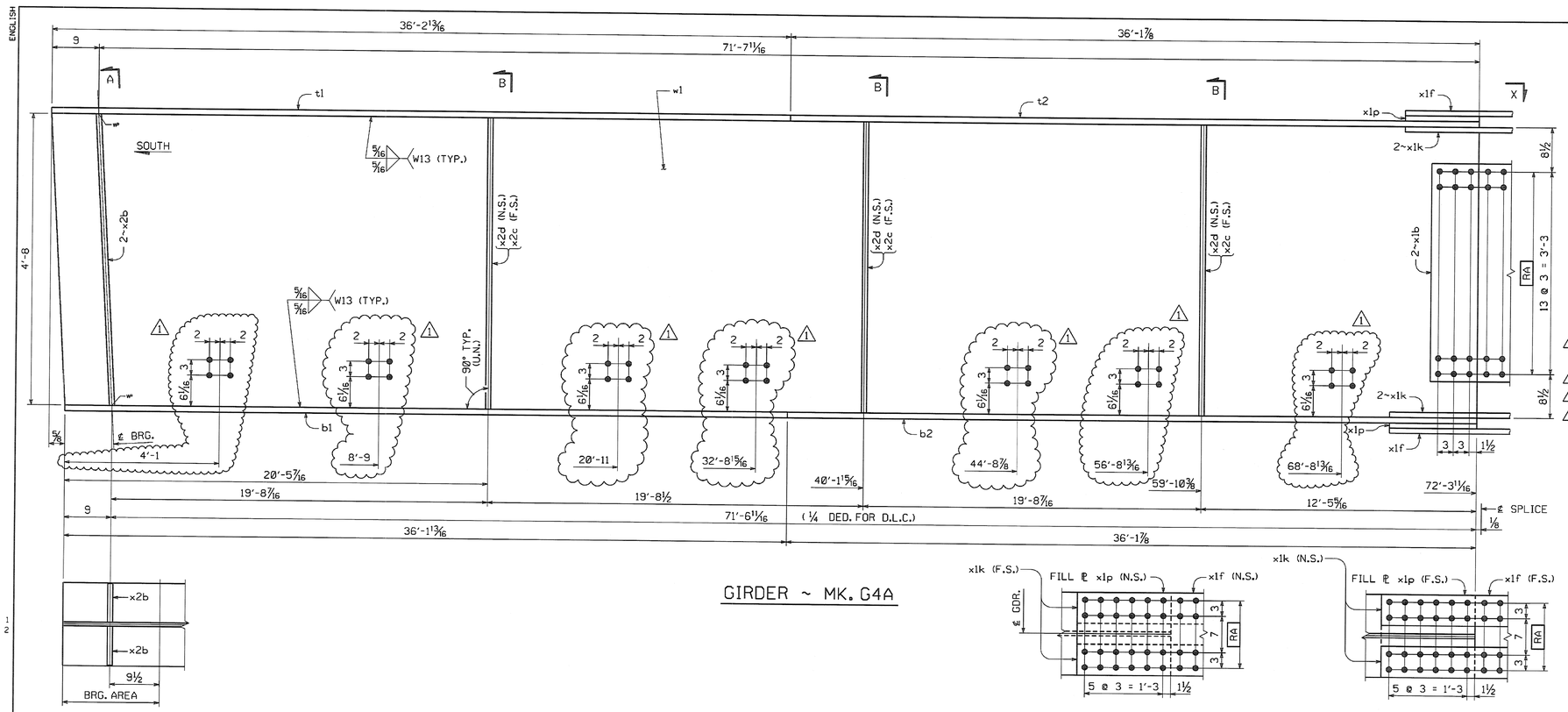
HIGH STEEL STRUCTURES, INC.
1770 Hempstead Road
Lancaster, PA 17605-0008
Phone 717/299-5211
A Division of High Industries, Inc.

GIRDER G3A
VT. 12 (MAIN ST.) OVER THIRD BRANCH OF THE WHITE RIVER
VT. 12 STA. 15+36.00 TO STA. 17+36.00
TOWN OF RANDOLPH, ORANGE COUNTY, VT. BRIDGE NO. 42
STATE OF VERMONT
AGENCY OF TRANSPORTATION

STATE CONTRACT OR REF. NO. PROJECT NO. RANDOLPH BRF 0241 (29)
CONTRACTOR WINTERSET, INC.
IN CHARGE: BRITIGAN (IH) MADE BY: MAF CHK'D BY: GS DATE: 11-10-06
CONTRACT NUMBER: VT-06215-1 DRAWING NUMBER: 7 OF 14

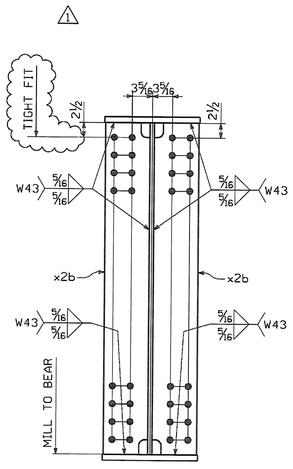
PLOTTED: 01/22/07 03:38:09 PM BY: estaley

ENGLISH

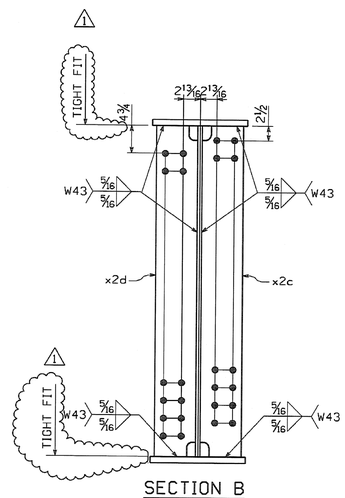


GIRDER ~ MK. G4A

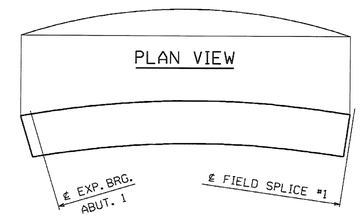
VIEW X



SECTION A



SECTION B



ORIENTATION DIAGRAM

FED.ROAD DIV.NO.	STATE	FED.AID PROJ.NO.
	VT	

BILL OF MATERIAL

QTY EA.	MARK	COMM	DESCRIPTION	LENGTH	SPEC	GRADE	TEST	REMARKS	GRP	ITEM	GROSS WEIGHT EA	DEDUCTED WEIGHT EA	NET WEIGHT EA
1	G4A		GIRDER								17550.84	5.04	17545.80
1	w1	PL	5/8 x 56	72 4 11/16	M270	50W	T		3	6	8621.52	5.04	8616.48
1	t1	PL	1 x 16	36 2 13/16	M270	50W	T		4	11	1972.76	0.00	1972.76
1	t2	PL	1 x 16	36 1 7/8	M270	50W	T		4	12	1968.51	0.00	1968.51
1	b1	PL	1 x 16	36 1 13/16	M270	50W	T		4	12	1968.22	0.00	1968.22
1	b2	PL	1 x 16	36 1 7/8	M270	50W	T		4	12	1968.51	0.00	1968.51
2	x1b	PL	1/2 x 42	1 6 1/4	M270	50W	T		6	2	108.68	0.00	108.68
2	x1f	PL	1/2 x 16	2 6 1/4	M270	50W	T		6	3	68.62	0.00	68.62
4	x1k	PL	1/2 x 6	2 6 1/4	M270	50W	T		6	4	25.73	0.00	25.73
2	x1p	PL	1/2 x 16	1 6	M270	50W	T	FILL PL	6	6	40.83	0.00	40.83
1 2	x2b	PL	3/4 x 7 1/2	4 8	M270	50W	T		7	1	89.32	0.00	89.32
1 3	x2c	PL	1/2 x 7	4 8	M270	50W	T		7	2	55.58	0.00	55.58
1 3	x2d	PL	1/2 x 7	4 8	M270	50W	T		7	2	55.58	0.00	55.58

TOTAL WEIGHT THIS SHEET: 17545.80 lbs.

RECEIVED
CK'D BY MF CK'D BY
JAN 30 2007
RESUBMIT APPROVED MF
BY DATE 1-31-2007

SHOP NOTE

HOLES: 15/16"ø (U.N.)
BOLTS: NONE
PAINT: NONE
FOR GENERAL SHOP NOTES, SEE DWG. GN1.
FOR WEB CAMBER DIAGRAM, SEE DWG. WC1.
FOR HORIZ. CURVE DIAGRAM, SEE DWG. HC1.

CODE:30

NO.	REVISION	BY	DATE
1	ADD TIGHT FIT AND CHARPY TEST NOTES. ADD HOLES AND DIMS. FOR TELEPHONE SUPPORT	MAF	1-19-07

HIGH STEEL STRUCTURES, INC.
1770 Hempstead Road
Lancaster, PA 17605-0008
Phone 717/299-5211
A Division of High Industries, Inc.

GIRDER G4A
VT. 12 (MAIN ST.) OVER THIRD BRANCH OF THE WHITE RIVER
VT. 12 STA. 15+36.00 TO STA. 17+36.00
TOWN OF RANDOLPH, ORANGE COUNTY, VT. BRIDGE NO. 42
STATE OF VERMONT
AGENCY OF TRANSPORTATION

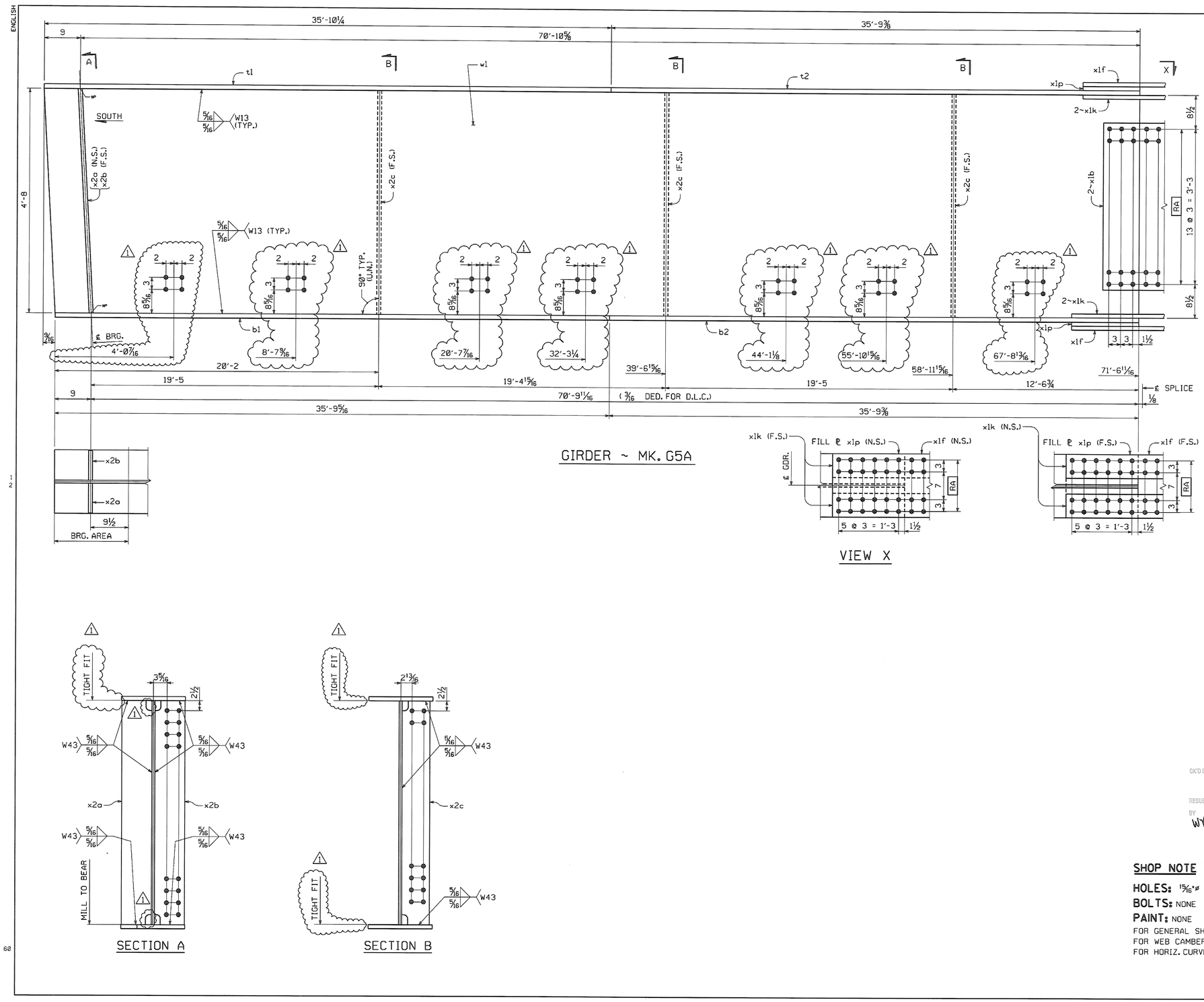
STATE CONTRACT OR REF. NO. PROJECT NO. RANDOLPH BRF 0241 (29)
CONTRACTOR WINTERSET, INC.
IN CHARGE: BRITIGAN (IH) MADE BY: MAF CHK'D. BY: CS DATE: 11-10-06
CONTRACT NUMBER: VT-06215-1 DRAWING NUMBER: 8 OF 14

06215 X2 1/25/07 Final Approval and Distribution TO:Winterset, Inc.

PLOTTED: 01/22/07 03:38:18 PM By: estaley

ENGLISH

FED.ROAD DIV.NO.	STATE	FED.AID PROJ.NO.
	VT	



GIRDER ~ MK. G5A

VIEW X

SECTION A

SECTION B

ORIENTATION DIAGRAM

BILL OF MATERIAL

QTY EA.	MARK	COMM	DESCRIPTION	LENGTH	SPEC	GRADE	TEST	REMARKS	GRP	ITEM	GROSS WEIGHT EA.	DEDUCTED WEIGHT EA.	NET WEIGHT EA.
1	G5A		GIRDER								17198.60	4.85	17193.75
1	w1	PL	5/8 x 56	71 7 5/8	M270	50W	T		3	7	8531.58	4.85	8526.73
1	t1	PL	1 x 16	35 10 1/4	M270	50W	T		4	13	1952.06	0.00	1952.06
1	t2	PL	1 x 16	35 9 3/8	M270	50W	T		4	13	1948.09	0.00	1948.09
1	b1	PL	1 x 16	35 6 5/16	M270	50W	T		4	13	1934.20	0.00	1934.20
1	b2	PL	1 x 16	35 9 3/8	M270	50W	T		4	13	1948.09	0.00	1948.09
2	x1b	PL	1/2 x 42	1 6 1/4	M270	50W	T		6	2	108.68	0.00	108.68
2	x1f	PL	1/2 x 16	2 6 1/4	M270	50W	T		6	3	68.62	0.00	68.62
4	x1k	PL	1/2 x 6	2 6 1/4	M270	50W	T		6	4	25.73	0.00	25.73
2	x1p	PL	1/2 x 16	1 6	M270	50W	T	FILL PL	6	6	40.83	0.00	40.83
1	x2a	PL	3/4 x 7 1/2	4 8	M270	50W			7	1	89.32	0.00	89.32
1	x2b	PL	3/4 x 7 1/2	4 8	M270	50W	T		7	1	89.32	0.00	89.32
3	x2c	PL	1/2 x 7	4 8	M270	50W	T		7	2	55.58	0.00	55.58

TOTAL WEIGHT THIS SHEET: 17193.75 lbs.

RECEIVED
CK'D BY TLF OK'D BY
JAN 30 2007
RESUBMIT APPROVED TLF
BY WY DATE 1-31-2007

SHOP NOTE

HOLES: 15⁄16"ø (U.N.)
BOLTS: NONE
PAINT: NONE
FOR GENERAL SHOP NOTES, SEE DWG. GN1.
FOR WEB CAMBER DIAGRAM, SEE DWG. WC1.
FOR HORIZ. CURVE DIAGRAM, SEE DWG. HC1.

CODE:30

NO.	REVISION	BY	DATE
1	ADD TIGHT FIT AND CHARPY TEST NOTES. ADD HOLES AND DIMS. FOR TELEPHONE SUPPORT	MAF	1-19-07

HIGH STEEL STRUCTURES, INC.
1770 Hempstead Road
Lancaster, PA 17605-0008
Phone 717/299-5211
A Division of High Industries, Inc.

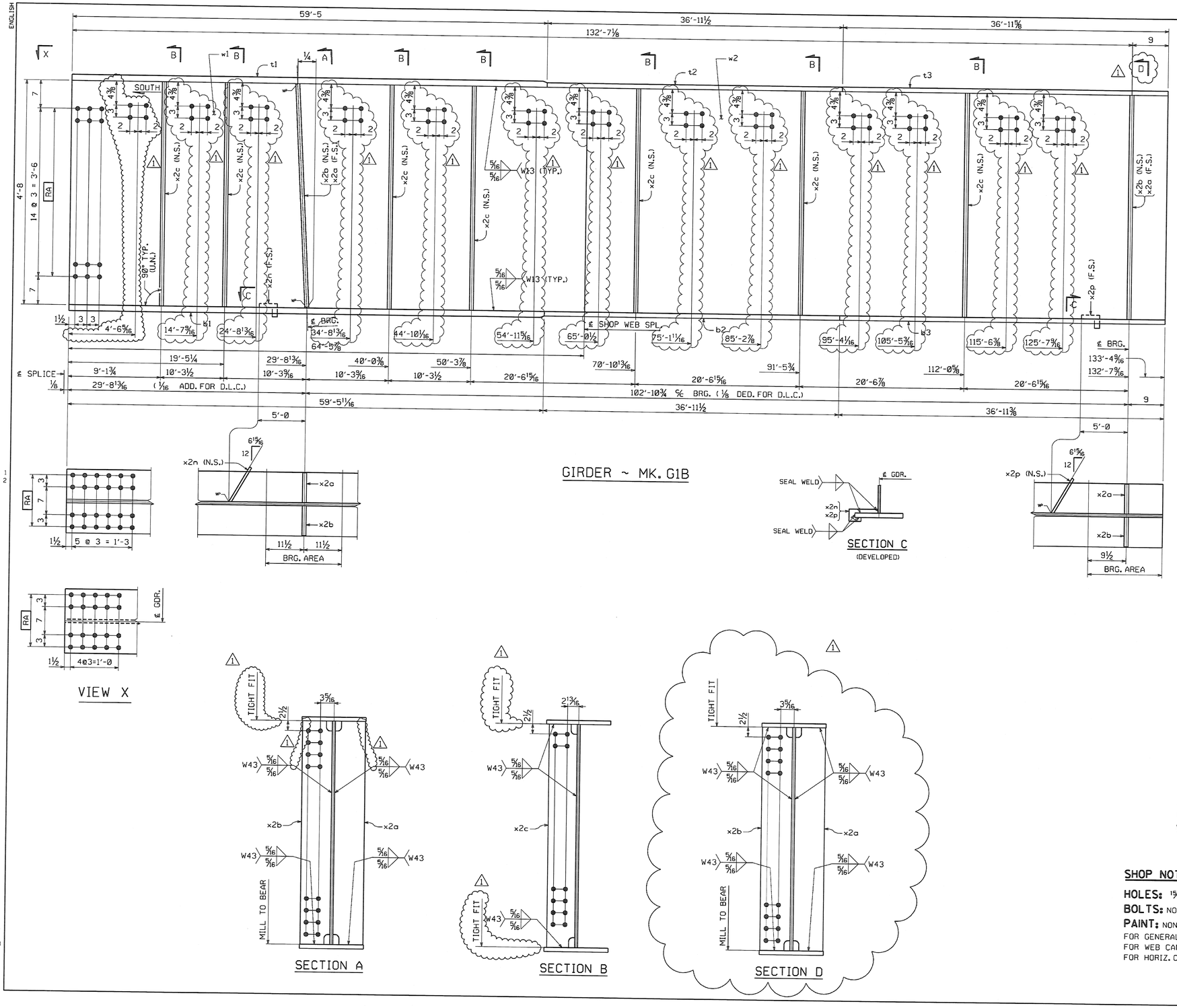
GIRDER G5A
VT. 12 (MAIN ST.) OVER THIRD BRANCH OF THE WHITE RIVER
VT. 12 STA. 15+36.00 TO STA. 17+36.00
TOWN OF RANDOLPH, ORANGE COUNTY, VT. BRIDGE NO. 42
STATE OF VERMONT
AGENCY OF TRANSPORTATION

STATE CONTRACT OR REF. NO. PROJECT NO. RANDOLPH BRF 0241 (29)
CONTRACTOR WINTERSET, INC.
IN CHARGE: BRITIGAN (IH) MADE BY: MAF CHK'D. BY: CS DATE: 11-10-06
CONTRACT NUMBER: VT-06215-1 DRAWING NUMBER: 9 OF 14

PLOTTED: 01/22/07 03:38:27 PM BY: astaley

06215 X2 1/25/07 Final Approval and Distribution TO:Winterset, Inc.

ENGLISH



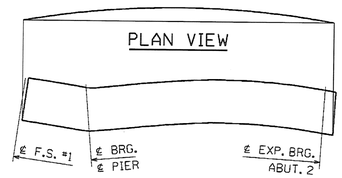
GIRDER ~ MK. G1B

BILL OF MATERIAL

FED.ROAD DIV.NO.	STATE	FED.AID PROJ.NO.
	VT	

QTY EA	MARK	COMM	DESCRIPTION	LENGTH	SPEC	GRADE	TEST	REMARKS	GRP	ITEM	GROSS WEIGHT EA	DEDUCTED WEIGHT EA	NET WEIGHT EA
1	G1B		GIRDER								39645.66	3.37	39642.29
1	w1	PL	5/8 x 56	64 5 7/8	M270	50W	T		3	1	7680.53	2.13	7678.40
1	w2	PL	5/8 x 56	68 10 7/8	M270	50W	T		3	8	8206.54	1.24	8205.30
1	t1	PL	2 x 16	59 5	M270	50W	T		4	1	6469.81	0.00	6469.81
1	t2	PL	1 x 16	36 11 1/2	M270	50W	T		4	7	2012.18	0.00	2012.18
1	t3	PL	1 x 16	36 11 5/8	M270	50W	T		4	7	2012.74	0.00	2012.74
1	b1	PL	2 x 16	59 5 11/16	M270	50W	T		4	1	6476.05	0.00	6476.05
1	b2	PL	1 1/2 x 16	36 11 1/2	M270	50W	T		4	6	3018.26	0.00	3018.26
1	b3	PL	1 1/2 x 16	36 11 3/8	M271	50W	T		4	6	3017.41	0.00	3017.41
2	x2a	PL	3/4 x 7 1/2	4 8	M270	50W			7	1	89.32	0.00	89.32
2	x2b	PL	3/4 x 7 1/2	4 8	M270	50W	T		7	1	89.32	0.00	89.32
7	x2c	PL	1/2 x 7	4 8	M270	50W	T		7	2	55.58	0.00	55.58
1	x2n	PL	1/4 x 4	0 10 7/8	M270	50W			7	3	3.08	0.00	3.08
1	x2p	PL	1/4 x 3 1/2	0 10 7/8	M270	50W			7	4	2.70	0.00	2.70

TOTAL WEIGHT THIS SHEET: 39642.29 lbs.



ORIENTATION DIAGRAM

RECEIVED
CK'D BY TLT CK'D BY
JAN 30 2007
RESUBMIT APPROVED TLT
BY DATE 1-31-2007

SHOP NOTE

HOLES: 15/16"ø (U.N.)
BOLTS: NONE
PAINT: NONE
FOR GENERAL SHOP NOTES, SEE DWG. GN1.
FOR WEB CAMBER DIAGRAM, SEE DWG. WC1.
FOR HORIZ. CURVE DIAGRAM, SEE DWG. HC1.

CODE:30

NO.	REVISION	BY	DATE
1	ADD TIGHT FIT AND CHARPY TEST NOTES. ADD HOLES AND DIMS. FOR WATER MAIN SUPPORT. REMOVE WELD SYMBOLS.	MAF	1-19-07

HIGH STEEL STRUCTURES, INC.
1770 Hempstead Road
Lancaster, PA 17605-0008
Phone 717/299-5211
A Division of High Industries, Inc.

GIRDER G1B
VT. 12 (MAIN ST.) OVER THIRD BRANCH OF THE WHITE RIVER
VT. 12 STA. 15+36.00 TO STA. 17+36.00
TOWN OF RANDOLPH, ORANGE COUNTY, VT. BRIDGE NO. 42
STATE OF VERMONT
AGENCY OF TRANSPORTATION

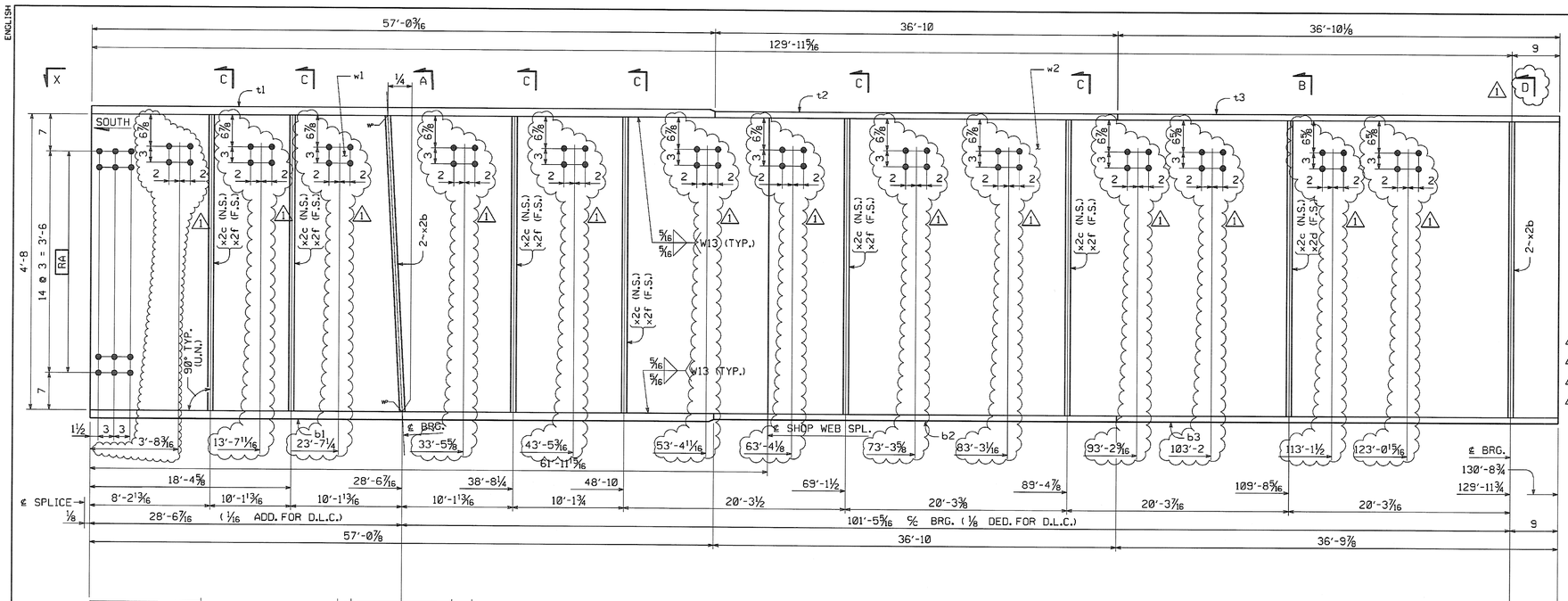
STATE CONTRACT OR REF. NO. PROJECT NO. RANDOLPH BRF 0241 (29)
CONTRACTOR WINTERSET, INC.
IN CHARGE: BRITIGAN (IH) MADE BY: MAF CHK'D. BY: CS DATE: 11-10-06
CONTRACT NUMBER: VT-06215-1 DRAWING NUMBER: 10 OF 14

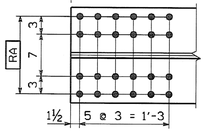
PLOTTED: 01/22/07
03:36:38 PM
BY: estoley

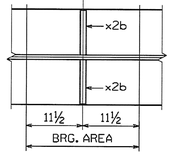
06215 X2 1/25/07 Final Approval and Distribution

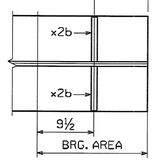
TO:Winterset, Inc.

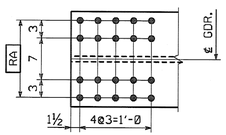
ENGLISH





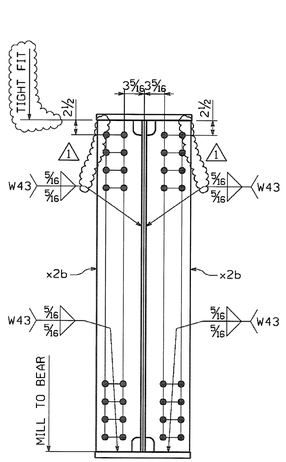




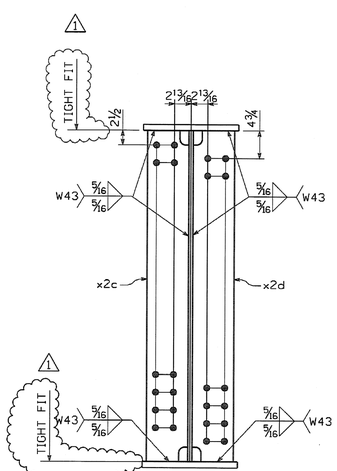


VIEW X

GIRDER ~ MK. G2B



SECTION A



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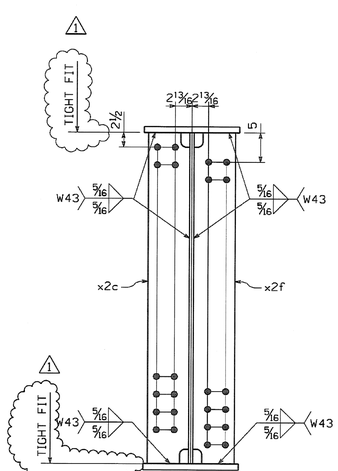

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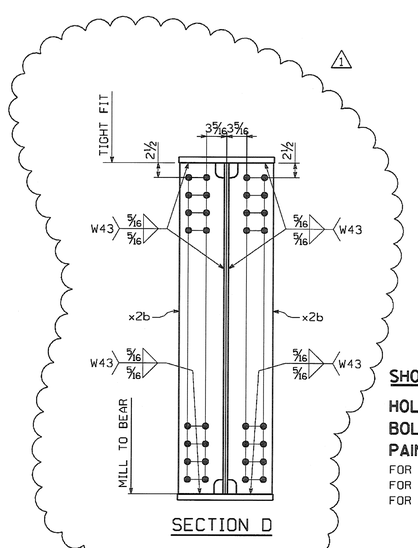

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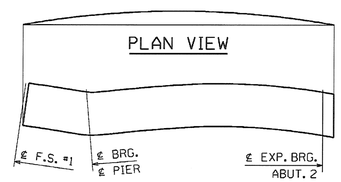


ORIENTATION DIAGRAM

FED.ROAD DIV.NO.	STATE	FED.AID PROJ.NO.
	VT	

BILL OF MATERIAL

QTY EA.	MARK	COMM	DESCRIPTION	LENGTH	SPEC	GRADE	TEST	REMARKS	GRP	ITEM	GROSS WEIGHT EA.	DEDUCTED WEIGHT EA.	NET WEIGHT EA.
1	G2B		GIRDER								39156.28	3.37	39152.91
1	w1	PL	5/8 x 56	61 11 15/16	M270	50W	T		3	2	7383.41	2.13	7381.28
1	w2	PL	5/8 x 56	68 9	M270	50W	T		3	8	8187.93	1.24	8186.69
1	t1	PL	2 x 16	57 0 3/16	M270	50W	T		4	2	6208.37	0.00	6208.37
1	t2	PL	1 x 16	36 10	M270	50W	T		4	8	2005.37	0.00	2005.37
1	t3	PL	1 x 16	36 10 1/8	M270	50W	T		4	8	2005.94	0.00	2005.94
1	b1	PL	2 x 16	57 0 7/8	M270	50W	T		4	2	6214.61	0.00	6214.61
1	b2	PL	1 1/2 x 16	36 10	M270	50W	T		4	6	3008.06	0.00	3008.06
1	b3	PL	1 1/2 x 16	36 9 7/8	M271	50W	T		4	6	3007.20	0.00	3007.20
1 4	x2b	PL	3/4 x 7 1/2	4 8	M270	50W	T		7	1	89.32	0.00	89.32
1 7	x2c	PL	1/2 x 7	4 8	M270	50W	T		7	2	55.58	0.00	55.58
1 1	x2d	PL	1/2 x 7	4 8	M270	50W	T		7	2	55.58	0.00	55.58
1 6	x2f	PL	1/2 x 7	4 8	M270	50W	T		7	2	55.58	0.00	55.58

TOTAL WEIGHT THIS SHEET: 39152.91 lbs.

RECEIVED
CK'D BY TLF CK'D BY
JAN 30 2007
RESUBMIT APPROVED TLF
BY WY DATE 1-31-2007

SHOP NOTE

HOLES: 15/16"ø (U.N.)
BOLTS: NONE
PAINT: NONE
FOR GENERAL SHOP NOTES, SEE DWG. GN1.
FOR WEB CAMBER DIAGRAM, SEE DWG. WC1.
FOR HORIZ. CURVE DIAGRAM, SEE DWG. HC1.

CODE:30

NO.	REVISION	BY	DATE
1	ADD TIGHT FIT AND CHARPY TEST NOTES, ADD HOLES AND DIMS. FOR WATER MAIN SUPPORT. REMOVE WELD SYMBOL.	MAF	1-19-07

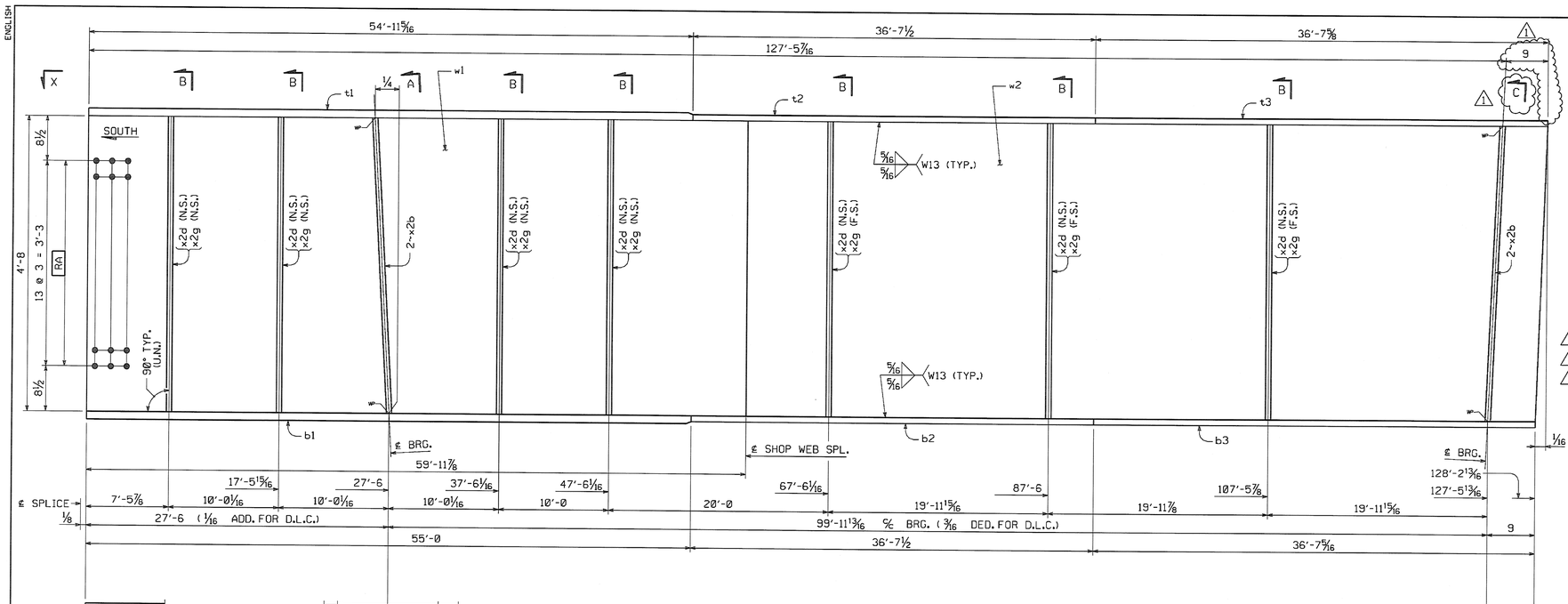
HIGH STEEL STRUCTURES, INC.
1770 Hempstead Road
Lancaster, PA 17605-0008
Phone 717/299-5211
A Division of High Industries, Inc.

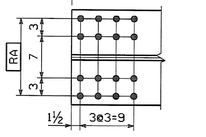
GIRDER	G2B
VT. 12 (MAIN ST.) OVER THIRD BRANCH OF THE WHITE RIVER	
VT. 12 STA. 15+36.00 TO STA. 17+36.00	
TOWN OF RANDOLPH, ORANGE COUNTY, VT. BRIDGE NO. 42	
STATE OF VERMONT	
AGENCY OF TRANSPORTATION	
STATE CONTRACT OR REF. NO.	PROJECT NO. RANDOLPH BRF 0241 (29)
CONTRACTOR	WINTERSET, INC.
IN CHARGE: BRITIGAN (IH)	MADE BY: MAF CHK'D. BY: GS DATE: 11-10-06
CONTRACT NUMBER:	VT-06215-1 DRAWING NUMBER: 11 OF 14

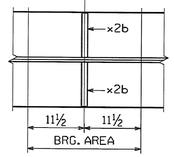
PLOTTED: 01/22/07 03:30:47 PM BY: estaley

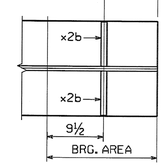
06215 X2 1/25/07 Final Approval and Distribution TO:Winterset, Inc.

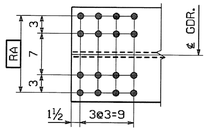
ENGLISH





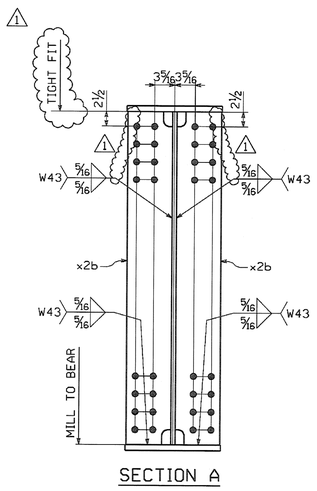




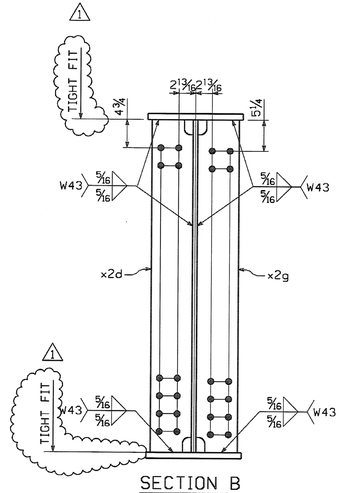


VIEW X

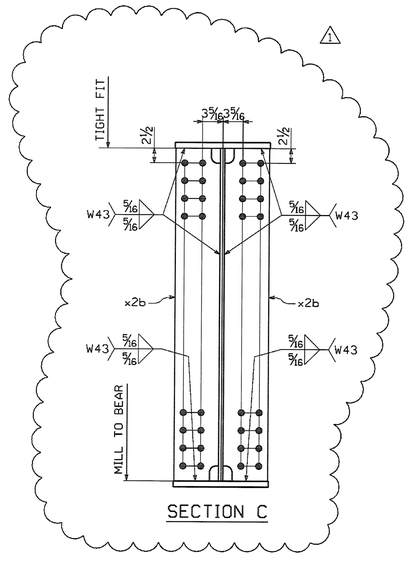
GIRDER ~ MK. G3B



SECTION A



SECTION B



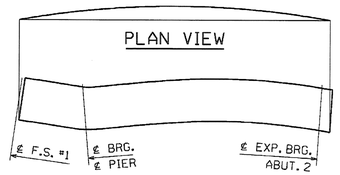
SECTION C

FED.ROAD DIV.NO.	STATE	FED.AID PROJ.NO.
	VT	

BILL OF MATERIAL

QTY EA.	MARK	COMM	DESCRIPTION	LENGTH	SPEC	GRADE	TEST	REMARKS	GRP	ITEM	GROSS WEIGHT EA.	DEDUCTED WEIGHT EA.	NET WEIGHT EA.
1	G3B		GIRDER								33363.47	3.45	33360.02
1	w1	PL	5/8 x 56	59 11 7/8	M270	50W	T		3	3	7144.59	2.52	7142.07
1	w2	PL	5/8 x 56	68 3 1/16	M270	50W	T		3	8	8129.01	0.93	8128.08
1	t1	PL	1 1/2 x 16	54 11 5/16	M270	50W	T		4	3	4486.99	0.00	4486.99
1	t2	PL	1 x 16	36 7 1/2	M270	50W	T		4	10	1994.03	0.00	1994.03
1	t3	PL	1 x 16	36 7 5/8	M270	50W	T		4	9	1994.59	0.00	1994.59
1	b1	PL	1 1/2 x 16	55 0	M270	50W	T		4	3	4491.67	0.00	4491.67
1	b2	PL	1 x 16	36 7 1/2	M270	50W	T		4	10	1994.03	0.00	1994.03
1	b3	PL	1 x 16	36 7 5/16	M271	50W	T		4	10	1993.18	0.00	1993.18
1 4	x2b	PL	3/4 x 7 1/2	4 8	M270	50W	T		7	1	89.32	0.00	89.32
1 7	x2d	PL	1/2 x 7	4 8	M270	50W	T		7	2	55.58	0.00	55.58
1 7	x2g	PL	1/2 x 7	4 8	M270	50W	T		7	2	55.58	0.00	55.58

TOTAL WEIGHT THIS SHEET: 33360.02 lbs.



ORIENTATION DIAGRAM

RECEIVED
CK'D BY TCT CK'D BY
JAN 30 2007
RESUBMIT APPROVED TCT
BY DATE 1-30-2007

SHOP NOTE

HOLES: 15/16" ø (U.N.)
BOLTS: NONE
PAINT: NONE
FOR GENERAL SHOP NOTES, SEE DWG. GN1.
FOR WEB CAMBER DIAGRAM, SEE DWG. WC1.
FOR HORIZ. CURVE DIAGRAM, SEE DWG. HC1.

CODE:30

NO.	REVISION	BY	DATE
1	ADD TIGHT FIT AND CHARPY TEST NOTES. REMOVE WELD SYMBOL. CHANGE LOCATION OF DIMENSIONS.	MAF	1-19-07

HIGH STEEL STRUCTURES, INC.
1770 Hempstead Road
Lancaster, PA 17605-0008
Phone 717/299-5211
A Division of High Industries, Inc.

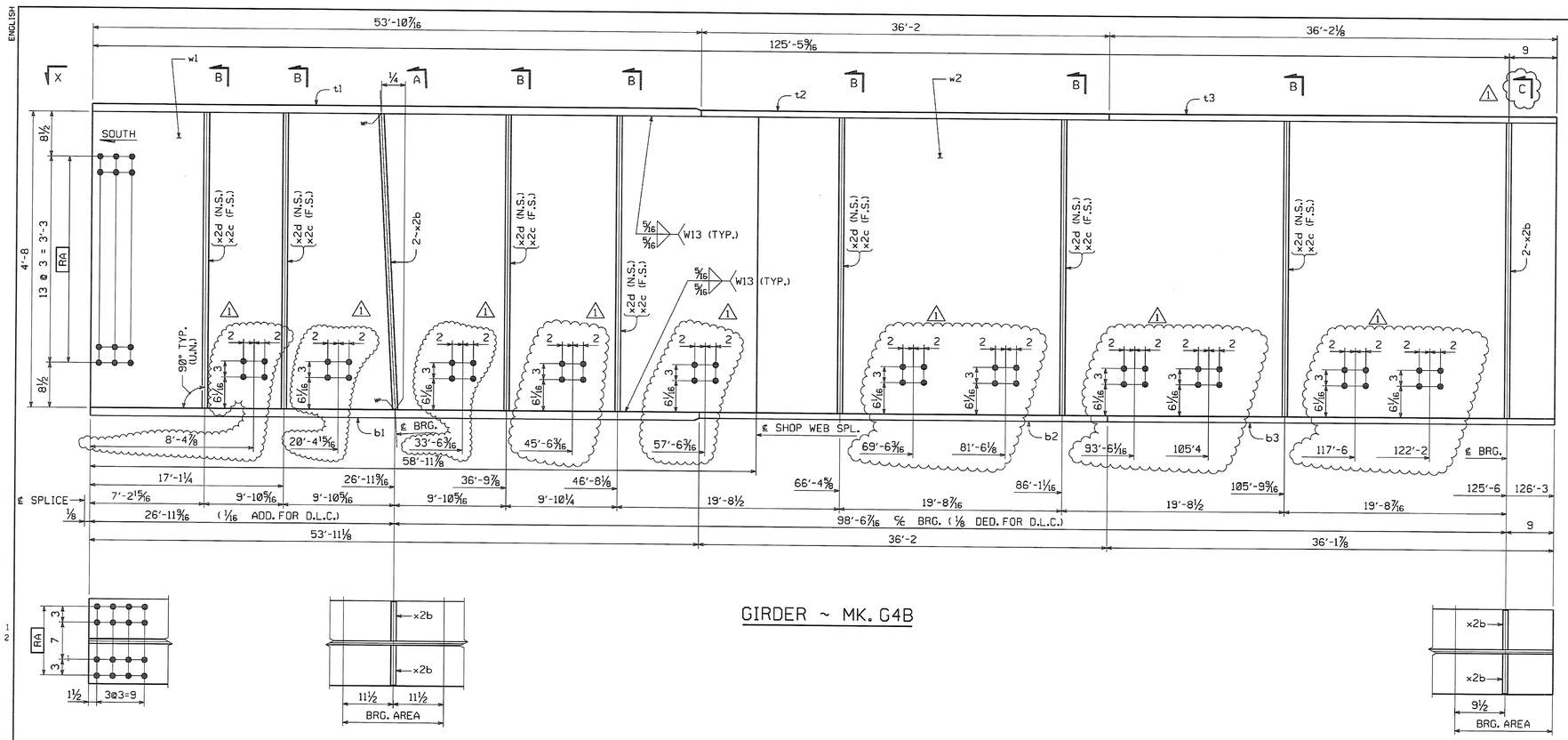
GIRDER G3B
VT. 12 (MAIN ST.) OVER THIRD BRANCH OF THE WHITE RIVER
VT. 12 STA. 15+36.00 TO STA. 17+36.00
TOWN OF RANDOLPH, ORANGE COUNTY, VT. BRIDGE NO. 42
STATE OF VERMONT
AGENCY OF TRANSPORTATION

STATE CONTRACT OR REF. NO. PROJECT NO. RANDOLPH BRF 0241 (29)
CONTRACTOR WINTERSET, INC.
IN CHARGE: BRITIGAN (IH) MADE BY: MAF CHK'D BY: GS DATE: 11-10-06
CONTRACT NUMBER: VT-06215-1 DRAWING NUMBER: 12 OF 14

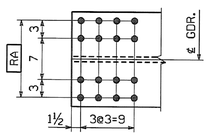
06215 X2 1/25/07 Final Approval and Distribution TO:Winterset, Inc.

PLOTTED: 01/22/07 03:30:57 PM BY: estolay

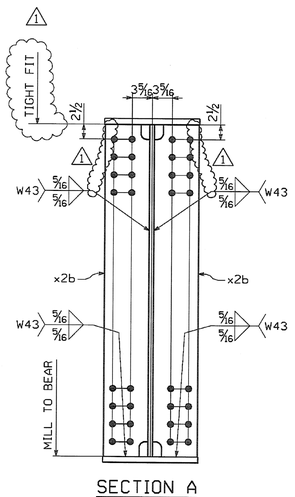
ENGLISH



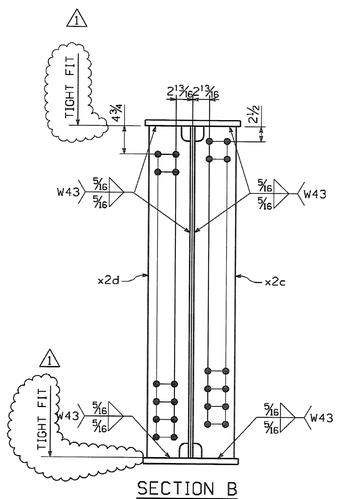
GIRDER ~ MK. G4B



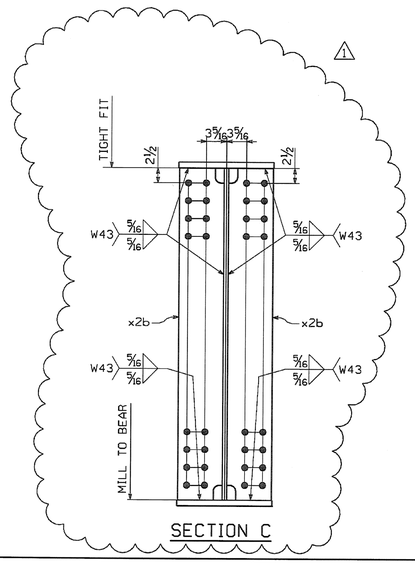
VIEW X



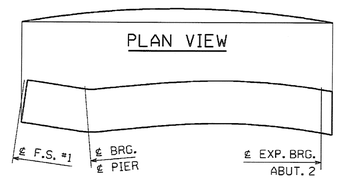
SECTION A



SECTION B



SECTION C



ORIENTATION DIAGRAM

FED.ROAD DIV.NO.	STATE	FED.AID PROJ.NO.
	VT	

BILL OF MATERIAL

QTY EA	MARK	COMM	DESCRIPTION	LENGTH	SPEC	GRADE	TEST	REMARKS	GRP	ITEM	GROSS WEIGHT EA	DEDUCTED WEIGHT EA	NET WEIGHT EA
1	G4B		GIRDER								32852.37	3.37	32849.00
1	w1	PL	5/8 x 56	58 11 15/16	M270	50W	T		3	4	7026.12	2.13	7023.99
1	w2	PL	5/8 x 56	67 3 3/16	M270	50W	T		3	9	8011.15	1.24	8009.91
1	t1	PL	1 1/2 x 16	53 10 7/16	M270	50W	T		4	4	4399.37	0.00	4399.37
1	t2	PL	1 x 16	36 2	M270	50W	T		4	12	1969.07	0.00	1969.07
1	t3	PL	1 x 16	36 2 1/8	M270	50W	T		4	12	1969.64	0.00	1969.64
1	b1	PL	1 1/2 x 16	53 11 1/8	M270	50W	T		4	4	4404.05	0.00	4404.05
1	b2	PL	1 x 16	36 2	M270	50W	T		4	12	1969.07	0.00	1969.07
1	b3	PL	1 x 16	36 1 7/8	M271	50W	T		4	12	1968.51	0.00	1968.51
4	x2b	PL	3/4 x 7 1/2	4 8	M270	50W	T		7	1	89.32	0.00	89.32
7	x2c	PL	1/2 x 7	4 8	M270	50W	T		7	2	55.58	0.00	55.58
7	x2d	PL	1/2 x 7	4 8	M270	50W	T		7	2	55.58	0.00	55.58

TOTAL WEIGHT THIS SHEET: 32849.00 lbs.

RECEIVED
CK'D BY TK CK'D BY
JAN 30 2007
RESUBMIT APPROVED TK
BY DATE 1-31-2007

SHOP NOTE

HOLES: 15/16"ø (U.N.)
BOLTS: NONE
PAINT: NONE
FOR GENERAL SHOP NOTES, SEE DWG. GN1.
FOR WEB CAMBER DIAGRAM, SEE DWG. WC1.
FOR HORIZ. CURVE DIAGRAM, SEE DWG. HC1.

CODE:30

NO.	REVISION	BY	DATE
1	ADD TIGHT FIT AND CHARPY TEST NOTES. ADD HOLES AND DIMS. FOR TELEPHONE SUPPORT. REMOVE WELD SYMBOL.	MAF	1-19-07

HIGH STEEL STRUCTURES, INC.
1770 Hempstead Road
Lancaster, PA 17605-0008
Phone 717/299-5211
A Division of High Industries, Inc.

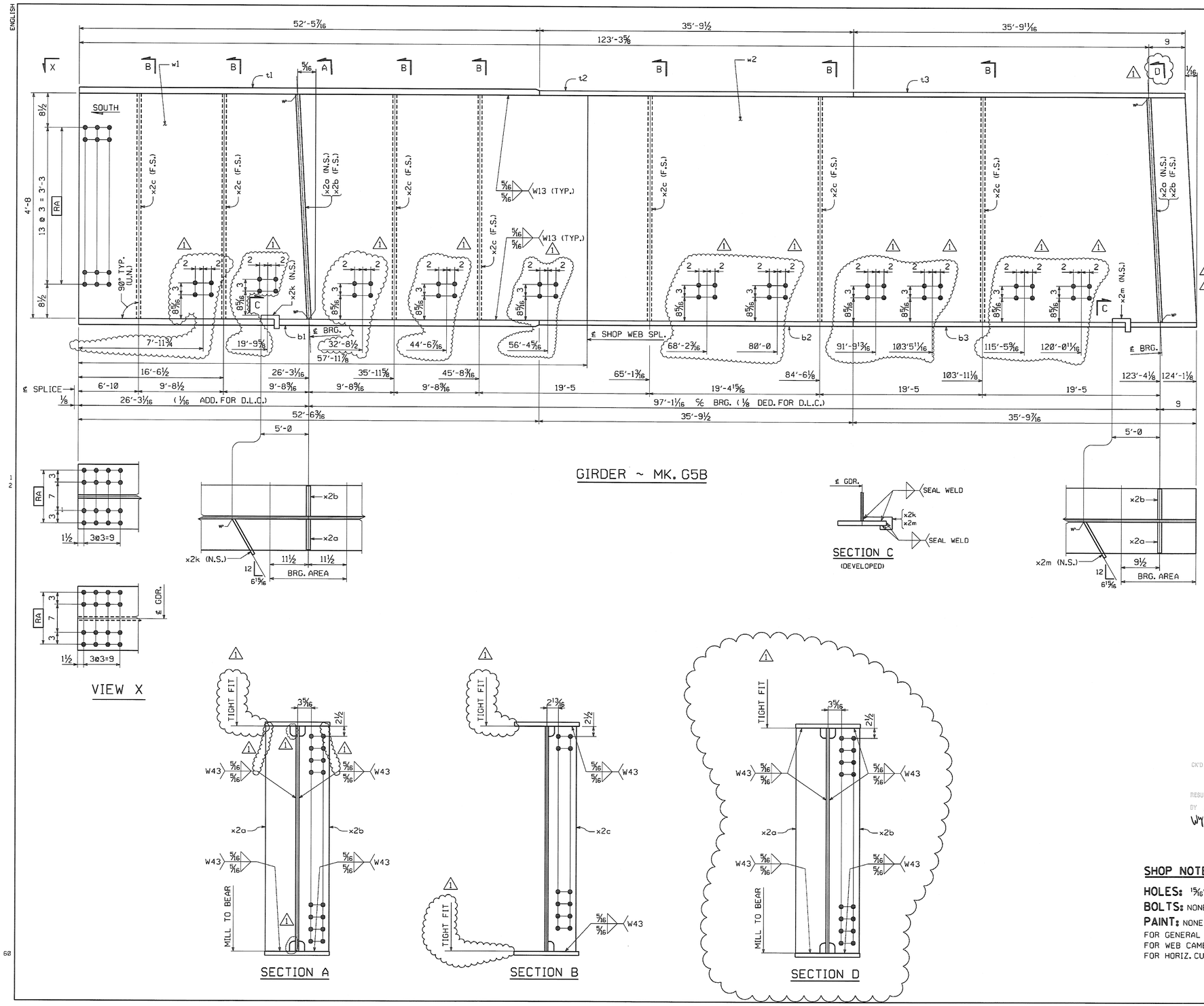
GIRDER G4B
VT. 12 (MAIN ST.) OVER THIRD BRANCH OF THE WHITE RIVER
VT. 12 STA. 15+36.00 TO STA. 17+36.00
TOWN OF RANDOLPH, ORANGE COUNTY, VT. BRIDGE NO. 42
STATE OF VERMONT
AGENCY OF TRANSPORTATION

STATE CONTRACT OR REF. NO. PROJECT NO. RANDOLPH BRF 0241 (29)
CONTRACTOR WINTERSET, INC.
IN CHARGE: BRITIGAN (IH) MADE BY: MAF CHK'D. BY: CS DATE: 11-10-06
CONTRACT NUMBER: VT-06215-1 DRAWING NUMBER: 13 OF 14

PLOTTED: 01/22/07 @3:31:06 PM
BY: estaley

06215 X2 1/25/07 Final Approval and Distribution TO:Winterset, Inc.

ENGLISH



GIRDER ~ MK. G5B

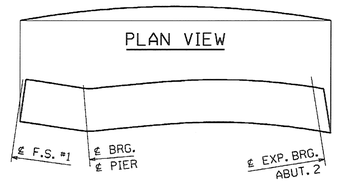
VIEW X

SECTION C
(DEVELOPED)

SECTION A

SECTION B

SECTION D



ORIENTATION DIAGRAM

FED.ROAD DIV.NO.	STATE	FED.AID PROJ.NO.
	VT	

BILL OF MATERIAL

QTY EA.	MARK	COMM	DESCRIPTION	LENGTH	SPEC	GRADE	TEST	REMARKS	GRP	ITEM	GROSS WEIGHT EA.	DEDUCTED WEIGHT EA.	NET WEIGHT EA.
1	G5B		GIRDER								31899.46	4.07	31895.39
1	w1	PL	5/8 x 56	57 11 7/8	M270	50W	T		3	4	6906.40	2.52	6903.88
1	w2	PL	5/8 x 56	66 1 3/8	M270	50W	T		3	10	7874.06	1.55	7872.51
1	t1	PL	1 1/2 x 16	52 5 7/16	M270	50W	T		4	5	4283.67	0.00	4283.67
1	t2	PL	1 x 16	35 9 1/2	M270	50W	T		4	13	1948.66	0.00	1948.66
1	t3	PL	1 x 16	35 9 11/16	M270	50W	T		4	13	1949.51	0.00	1949.51
1	b1	PL	1 1/2 x 16	52 6 3/16	M270	50W	T		4	5	4288.78	0.00	4288.78
1	b2	PL	1 x 16	35 9 1/2	M270	50W	T		4	13	1948.66	0.00	1948.66
1	b3	PL	1 x 16	35 9 7/16	M271	50W	T		4	13	1948.37	0.00	1948.37
2	x2a	PL	3/4 x 7 1/2	4 8	M270	50W			7	1	89.32	0.00	89.32
2	x2b	PL	3/4 x 7 1/2	4 8	M270	50W	T		7	1	89.32	0.00	89.32
7	x2c	PL	1/2 x 7	4 8	M270	50W	T		7	2	55.58	0.00	55.58
1	x2k	PL	1/4 x 3 1/2	0 10 7/8	M270	50W			7	4	2.70	0.00	2.70
1	x2m	PL	1/4 x 3	0 10 7/8	M270	50W			7	5	2.31	0.00	2.31

TOTAL WEIGHT THIS SHEET: 31895.39 lbs.

TOTAL WEIGHT FOR BID ITEM NO. 0140 506.55: 297,576.98 lbs.

RECEIVED
CK'D BY TCT OK'D BY
JAN 30 2007
RESUBMIT APPROVED TCT
BY DATE 1-31-2007

SHOP NOTE

HOLES: 1 5/16"ø (U.N.)
BOLTS: NONE
PAINT: NONE
FOR GENERAL SHOP NOTES, SEE DWG. GN1.
FOR WEB CAMBER DIAGRAM, SEE DWG. WC1.
FOR HORIZ. CURVE DIAGRAM, SEE DWG. HC1.

CODE:30

NO.	REVISION	BY	DATE
1	ADD TIGHT FIT AND CHARPY TEST NOTES, ADD HOLES AND DIMS. FOR TELEPHONE SUPPORT, REMOVE WELD SYMBOL.	MAF	1-19-07

HIGH STEEL STRUCTURES, INC.
1770 Hempstead Road
Lancaster, PA 17605-0008
Phone 717/299-5211
A Division of High Industries, Inc.

GIRDER G5B
VT. 12 (MAIN ST.) OVER THIRD BRANCH OF THE WHITE RIVER
VT. 12 STA. 15+36.00 TO STA. 17+36.00
TOWN OF RANDOLPH, ORANGE COUNTY, VT. BRIDGE NO. 42
STATE OF VERMONT
AGENCY OF TRANSPORTATION

STATE CONTRACT OR REF. NO. PROJECT NO. RANDOLPH BRF 0241 (29)
CONTRACTOR WINTERSET, INC.
IN CHARGE: BRITIGAN (IH) MADE BY: MAF CHK'D. BY: CS DATE: 11-10-06
CONTRACT NUMBER: VT-06215-1 DRAWING NUMBER: 14 OF 14

06215 X2 1/25/07 Final Approval and Distribution TO:Winterset, Inc.

PLOTTED: 01/22/07 03:31:16 PM BY: estaley

STATE OF VERMONT
AGENCY OF TRANSPORTATION
ROUTE NO. VT 12 (MAJOR COLLECTOR),
BRIDGE NO. 42 PROJECT BRF-0241(29)
ORANGE COUNTY TOWN OF RANDOLPH
WINTERSET, INC.

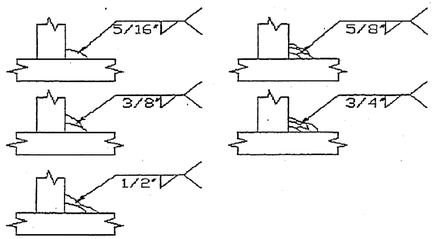
COSMEC INC.

WELDING PROCEDURE SPECIFICATION

SPECIFICATIONS AND CODE: AASHTO--AWS D1.5
MATERIAL SPECIFICATION ASTM A709 GR 50W, GR 50, GR 36
WELDING PROCESS---------- FCAW-G
MANUAL OR MACHINE------- SEMI-AUTOMATIC
POSITION OF WELDING----- 1F & 2F
FILLER METAL SPECIFICATION AWS 5.20 CLASSIFICATION: E71T
MANUFACTURER: LINCOLN ELECTRIC TRADENAME: E71T OUTERSHIELD
FLUX------- INTERNAL
SHIELDING GAS---------- CO2 FLOW RATE 45 CFH
SINGLE OR MULTIPLE PASS MULTIPLE
SINGLE OR MULTIPLE ARC SINGLE
WELDING CURRENT---------- DC
POLARITY: REVERSE (EP)
WELDING PROGRESSION----------
ROOT TREATMENT---------- CLEANED & PREPARED BRIGHT METAL
PREHEAT AND INTERPASS TEMPERATURE---------- SEE BELOW
POSTHEAT TEMPERATURE N/A
HEAT IMPUT MIN.---------- MAX.-----

WELDING PROCEDURE

PASS NO.	ELECTRODE SIZE	WELDING CURRENT AMPERES	VOLTS	TRAVEL SPEED	JOINT DETAIL
ALL	0.045	190-230	27-29	8-9	



PREHEAT TEMPS.

THICKNESS	TEMP.
UP TO 3/4"	50 DEG. F
OVER 3/4" TO 1 1/2"	70 DEG. F
OVER 1 1/2" TO 2 1/2"	150 DEG. F
OVER 2 1/2"	225 DEG. F
INTERPASS TEMP:	400 DEG. F

THIS PROCEURE MAY VARY DUE TO FABRICATION SEQUENCE, FIT-UP, PASS SIZE, ETC. WITHIN THE LIMITATION OF VARIABLES GIVEN IN SECTION 5.

PROCEDURE NO. FCAW-FILLET
SUPPORTING PQR:.FCAW-1.0-05
REVISION NO.

CONTRACTOR: COSMEC INC.
AUTHORIZED BY:DONALD VOSE

AWS QC 1 DONALD F VOSE 01100651 CWI

DATE:--- 1/31/2005

VTRANS RECEIVED
CK'D BY_____ OK'D BY JWC
FEB 26 2007
RESUBMIT_____ APPROVED ✓
BY DATE 3-9-07

STATE OF VERMONT
AGENCY OF TRANSPORTATION
ROUTE NO. VT 12 (MAJOR COLLECTOR),
BRIDGE NO. 42 PROJECT BRF-0241(29)
ORANGE COUNTY TOWN OF RANDOLPH
WINTERSET, INC.

COSMEC INC.

WELDING PROCEDURE SPECIFICATION

SPECIFICATIONS AND CODE: D1.6
MATERIAL SPECIFICATION ASTM A240 TYPE 304 TO ASTM A709 GR 50W
WELDING PROCESS---------- GTAW
MANUAL OR MACHINE------- MANUAL
POSITION OF WELDING----- 1F & 2F
FILLER METAL SPECIFICATION ER309L CLASSIFICATION: A5.9
MANUFACTURER: HARRIS WELCO TRADENAME:
FLUX------- INTERNAL
SHIELDING GAS---------- ARGON FLOW RATE 45 CFH
SINGLE OR MULTIPLE PASS SINGLE
SINGLE OR MULTIPLE ARC SINGLE
WELDING CURRENT--------- DC
POLARITY: REVERSE (EN)
WELDING PROGRESSION----------
ROOT TREATMENT---------- CLEANED & PREPARED BRIGHT METAL
PREHEAT AND INTERPASS TEMPERATURE---------- SEE BELOW
POSTHEAT TEMPERATURE N/A
HEAT IMPUT MIN.---------- MAX.----

WELDING PROCEDURE

PASS NO.	ELECTRODE SIZE	WELDING CURRENT AMPERES	VOLTS	TRAVEL SPEED	JOINT DETAIL
ALL	3/32"	130--155 16 GA THRU 10 GA BM THICKNESS	14-17	6.75--8.5	LAP JOINT

PREHEAT TEMPS. ***PREHEAT UNTIL NO MOSITURE PRESENT

THICKNESS	TEMP.
UP TO 3/4"	100 DEG.
OVER 3/4" TO 1 1/2"	100 DEG.
OVER 1 1/2" TO 2 1/2"	100 DEG.
OVER 2 1/2"	100 DEG.

THIS PROCEURE MAY VARY DUE TO FABRICATION SEQUENCE, FIT-UP, PASS SIZE, ETC.
WITHIN THE LIMITATION OF VARIABLES GIVEN IN SECTION 5.
SUPPORTING PQR: GTAW-WF-05
PROCEDURE NO. GTAW-WF
CONTRACTOR: COSMEC INC.
AUTHORIZED BY: DONALD VOSE
REVISION NO. 1
CWI#:01100651 Donald Vose

DATE:--- 2/1/2005

VTRANS
RECEIVED
CK'D BY_____OK'D BY JWC
FEB 26 2007
RESUBMIT_____APPROVED ✓
BY DATE 3-9-07

AWS
QC 1
DONALD F. VOSE
01100651
CWI

STATE OF VERMONT
AGENCY OF TRANSPORTATION
ROUTE NO. VT 12 (MAJOR COLLECTOR),
BRIDGE NO. 42 PROJECT BRF-0241(29)
ORANGE COUNTY TOWN OF RANDOLPH
WINTERSET, INC.

EMS-QC-110

VTRANS
RECEIVED
CK'D BY_____ OK'D BY JWC
FEB 26 2007
RESUBMIT_____ APPROVED ✓
BY DATE 3-9-07

COSMEC, INC.
70 SOUTH STREET
WALPOLE, MA 02081
PH# 508-668-6600
FAX# 508-660-1022

ENGINEERING AND MANUFACTURING STANDARD
PTFE FACING AND STEEL
OR PREFORMED FABRIC SUBSTRATE
SURFACE PREPARATION AND ADHESIVE PROCEDURE

The PTFE facing shall be prepared for bonding to a substrate material by chemically etching the face to be bonded using the sodium ammonia process.

The mating surface of the substrate shall be prepared for bonding using a three-step process as follows:

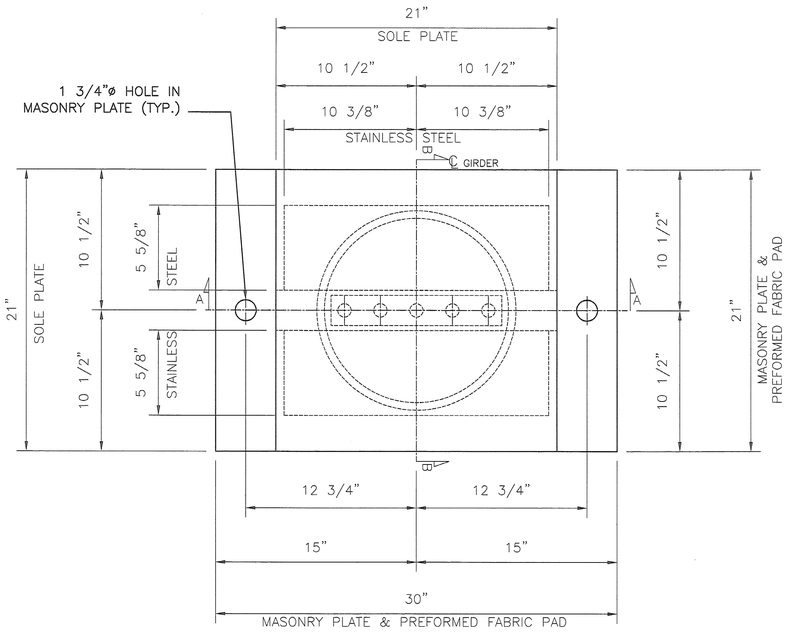
1. preliminary degrease using methyl ethyl ketone.
2. mechanically roughen to approx. 125 RMS and thoroughly brush and clean for final degreasing.
3. final degrease using methyl ethyl ketone

The PTFE and substrate mating surfaces shall be clean and dry with final degreasing performed within 30 minutes of bonding. Adhesive shall consist of a two-part epoxy adhesive system conforming to Military Specification MMM-A-134

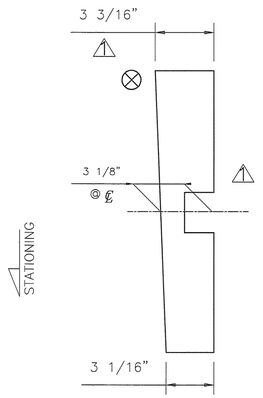
The adhesive shall be applied to the full area of the contact surface in an even manner so as to establish a glue line not less than .002 inch nor more than .010 inch thick. Surfaces being bonded are to be assembled immediately with open assembly time not to exceed 20 minutes.

The PTFE material shall be greater in width and length than the substrate material by at least ½ inch when bonded. The PTFE shall be applied with contact starting at one edge and with contact progressing across entire bonded surface to eliminate air entrapment. The PTFE is to be in full contact with the steel or preformed fabric substrate. Curing of the bond shall be done under pressure of approx. 2-100 psi for 10-12 hours at approx. 70°F or other schedules as established by the manufacturer of the adhesive.

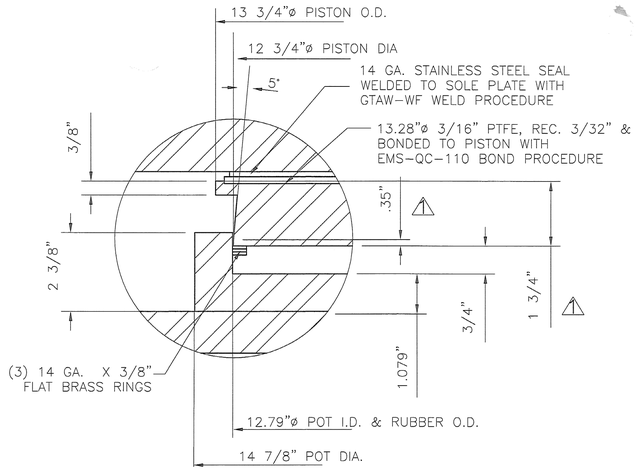
The PTFE shall be carefully trimmed to the same size as the substrate after bond curing and all bonds shall be visually inspected for bond retention.



PLAN



SIDE ELEVATION



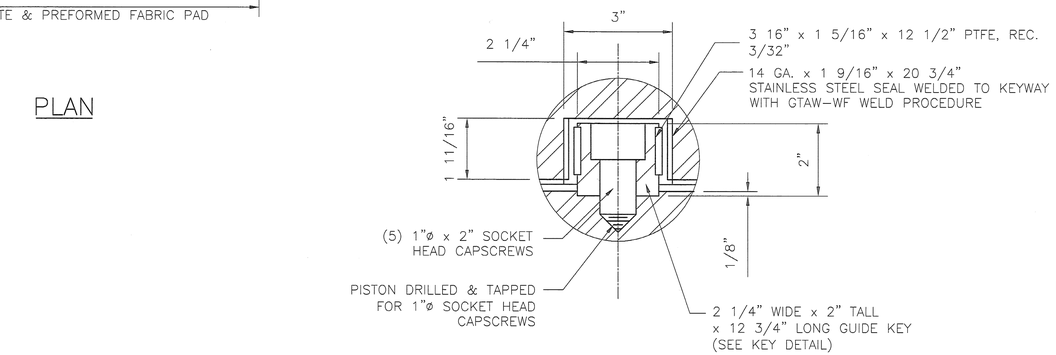
DETAIL A

BEARING MATERIALS

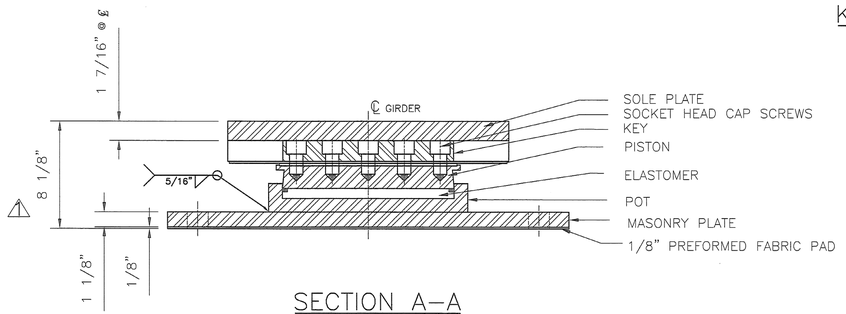
1. STEEL – ASTM A.709 GR 50 ZINC METALIZED
2. BRASS SEALING RINGS – ASTM B.36 HALF HARD
3. PREFORMED FABRIC PAD – AASHTO SPECIFICATION DIV.II SPEC. 18.4.9.1
4. ELASTOMER – VIRGIN PLAIN NEOPRENE WITH HARDNESS OF 50 DUROMETER (+/– 5)
5. STAINLES STEEL – ASTM A240 TYPE 304, #8 MIRROR FINISH
6. SOCKET HEAD CAPSCREWS – ASTM A.574
7. ANCHOR BOLTS – SEE DETAIL
8. PTFE – ASTM D.4894 VIRGIN UNFILLED

BEARING NOTES:

1. ANCHOR BOLTS AND ASSOCIATED HARDWARE SHALL BE GALVANIZED IN ACCORDANCE WITH ASTM M232
2. LOCATION OF FABRICATION – 70 SOUTH STREET WALPOLE, MA 02081
3. COSMEC, INC. REPRESENTATIVE: MR. MATT McANDREWS (508–668–6600)
4. ALL BEARING DEVICES SHALL BE ZINC METALIZED AS PER SUBSECTION 531.04(b) AND 506.15(b). BEARINGS SHALL BE SEALED WITH AN APPROVED SEALER AS SPECIFIED IN STANDARD SPEC. SUBSECTION 506.15(b). AREAS OF METALIZING DAMAGED BY FIELD WELDING OR HANDLING SHALL BE PAINTED WITH AN APPROVED SEALANT.
5. ⊗ MARKS HIGH END OF BEVELED



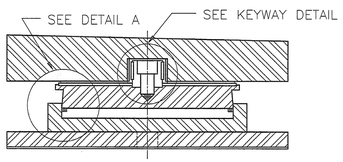
KEYWAY DETAIL



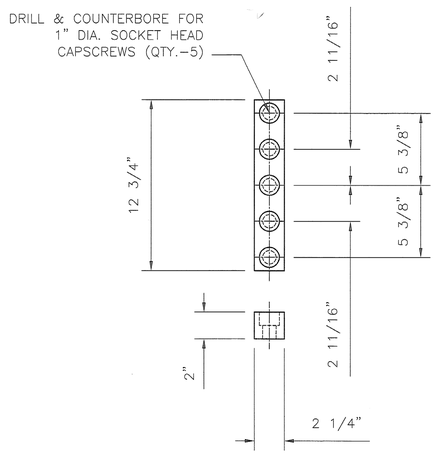
SECTION A–A

COSMEC TRANSVERSE CENTER–GUIDED POT BEARING

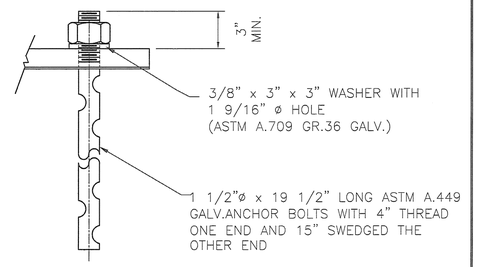
LOCATION: PIER 1, GIRDER 1, 4 & 5
QUANTITY: 3
TOTAL VERTICAL CAPACITY= 450 KIPS
TOTAL HORIZONTAL CAPACITY= 90 KIPS
ROTATIONAL CAPACITY= .013 RADIANS



⚠ SECTION B–B



KEY DETAIL



ANCHOR BOLT DETAIL

RECEIVED
CK'D BY TMS CK'D BY
JUN 06 2007
RESUBMIT APPROVED ✓
BY W4 SV DATE 6/6/07

REV.		BY	DATE	CK'D	DATE
⚠1	REVISED SOLE PLATE SIDE ELEV., REVISED DETAIL A, SECTION B–B & OVERALL HEIGHT.	MM	6/1/07	MCM	6/1/07

STATE OF VERMONT
AGENCY OF TRANSPORTATION

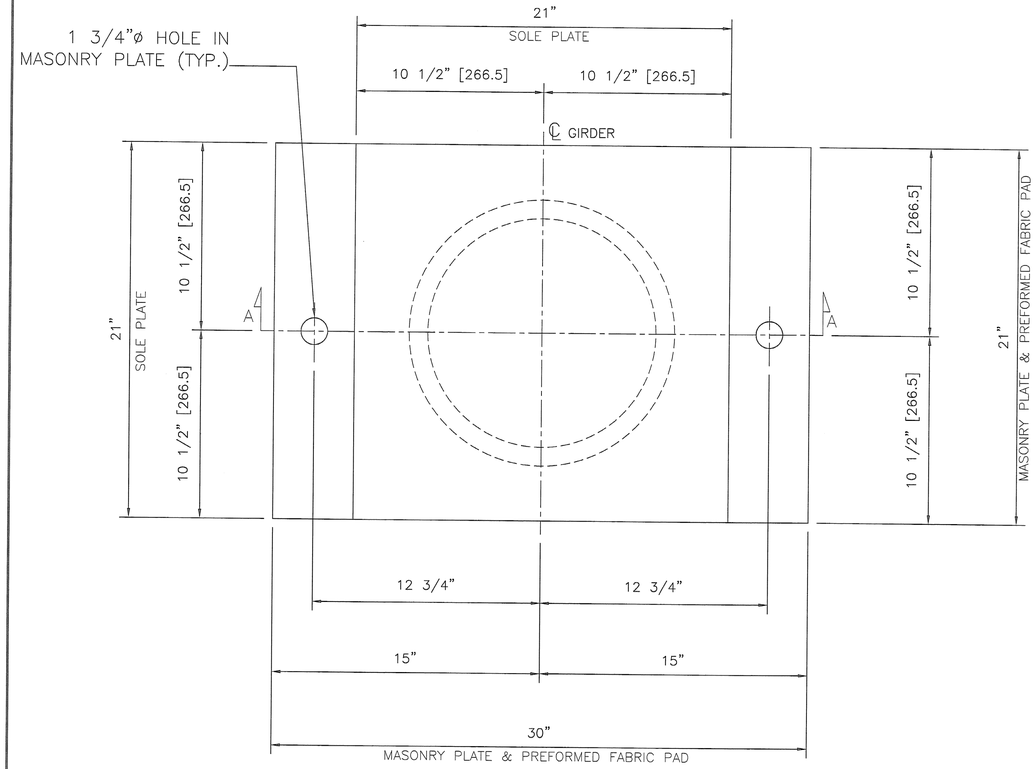
ROUTE NO. VT 12 (MAJOR COLLECTOR),
BRIDGE NO. 42
TOWN OF RANDOLPH
ORANGE COUNTY
PROJECT BRF–0241(29)

DYNAMIC RUBBER
A DIVISION OF COSMEC, INC
1391 FLAT CREEK ROAD
BUILDING 5
ATHENS, TX 75751

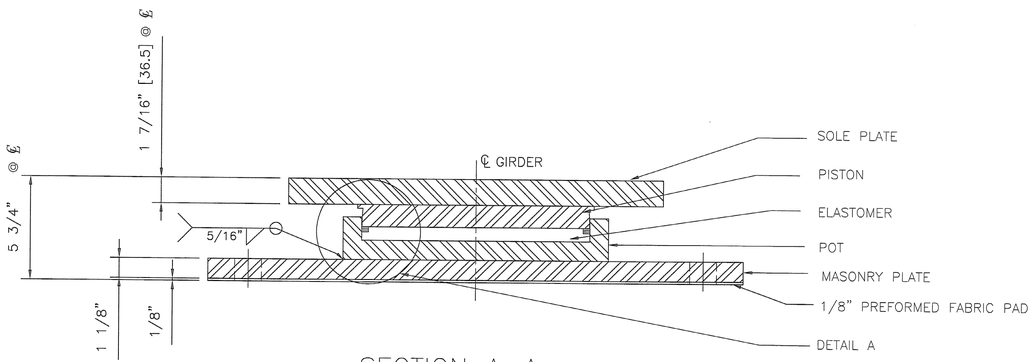
SCALE: 3/16"=1"	DRAWN BY: MAE	CHECKED BY: MCM
SHEET 1 OF 4	DATE: 2/1/07	DATE: 2/21/07

COSMEC POT BEARINGS

CUSTOMER	S.O. NUMBER	DRAWING NUMBER	REV.
WINTERSET, INC.	60689	5127	1



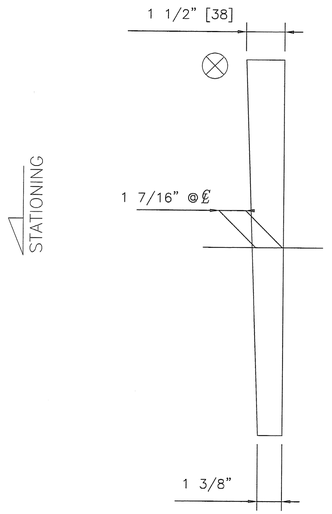
PLAN



SECTION A–A

COSMEC FIXED POT BEARING

LOCATION: PIER 1, GIRDER 2 & 3
QUANTITY: 2
TOTAL VERTICAL CAPACITY= 450 KIPS
TOTAL HORIZONTAL CAPACITY= 90 KIPS
ROTATIONAL CAPACITY= .015 RADIANS

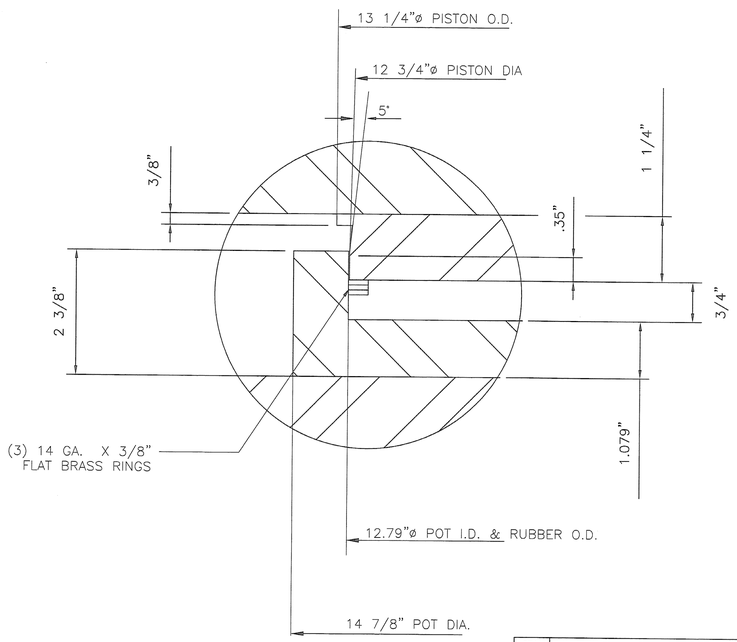


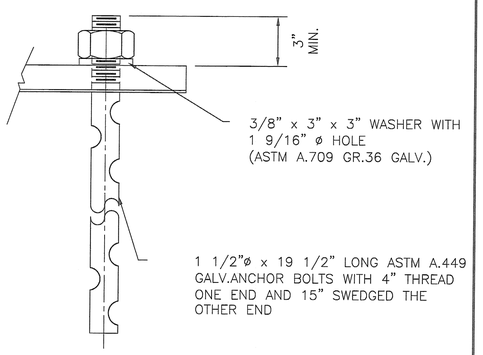
BEARING MATERIALS

1. STEEL – AASHTO M–270 GR 36 ZINC METALIZED
2. BRASS SEALING RINGS – ASTM B.36 HALF HARD
3. PREFORMED FABRIC PAD – AASHTO SPECIFICATION DIV.II SPEC. 18.4.9.1
4. ELASTOMER – VIRGIN PLAIN NEOPRENE WITH HARDNESS OF 50 DUROMETER (+/– 5)
5. ANCHOR BOLTS – SEE DETAIL

BEARING NOTES:

1. ANCHOR BOLTS AND ASSOCIATED HARDWARE SHALL BE GALVANIZED IN ACCORDANCE WITH ASTM M232
2. LOCATION OF FABRICATION – 70 SOUTH STREET WALPOLE, MA 02081
3. COSMEC, INC. REPRESENTATIVE: MR. MATT McANDREWS (508–668–6600)
4. ALL BEARING DEVICES SHALL BE ZINC METALIZED AS PER SUBSECTION 531.04(b) AND 506.15(b). BEARINGS SHALL BE SEALED WITH AN APPROVED SEALER AS SPECIFIED IN STANDARD SPEC. SUBSECTION 506.15(b). AREAS OF METALIZING DAMAGED BY FIELD WELDING OR HANDLING SHALL BE PAINTED WITH AN APPROVED SEALANT.
5. ⊗ MARKS HIGH END OF BEVELED





ANCHOR BOLT DETAIL

RECEIVED
JUN 0 6 2007

STATE OF VERMONT
AGENCY OF TRANSPORTATION

ROUTE NO. VT 12 (MAJOR COLLECTOR),
BRIDGE NO. 42
TOWN OF RANDOLPH
ORANGE COUNTY
PROJECT BRF–0241(29)

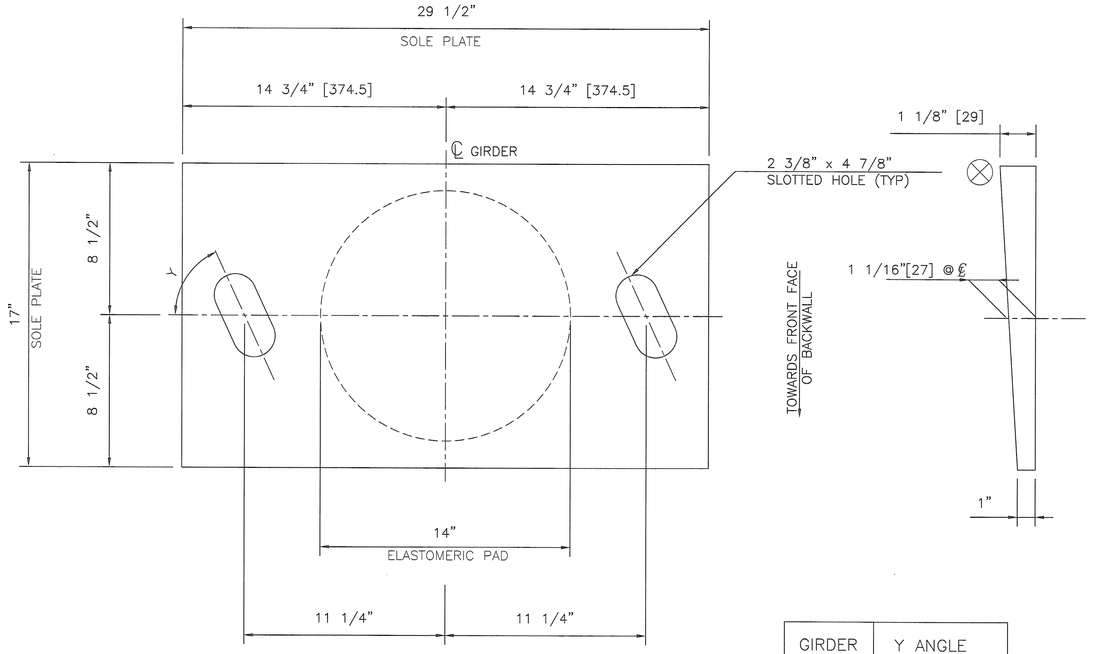
COSMEC, INC. 70 SOUTH STREET WALPOLE, MA. 02081

SCALE: 1/4"=1"	DRAWN BY: MAE	CHECKED BY: MCM
SHEET 2 OF 4	DATE: 11/22/06	DATE 2/21/07

COSMEC POT BEARINGS

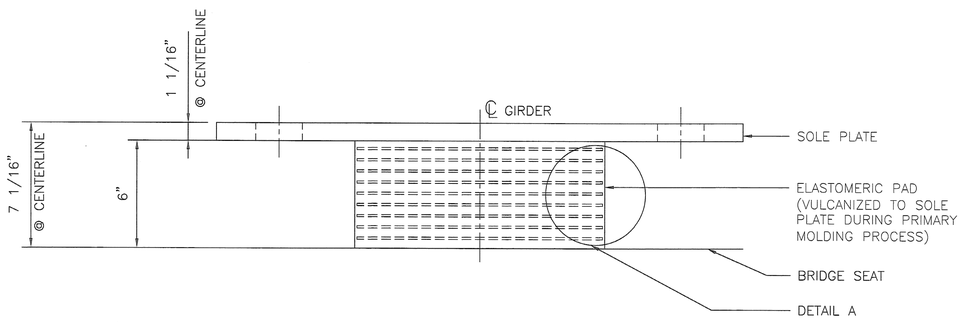
CUSTOMER	S.O. NUMBER	DRAWING NUMBER	REV.
WINTERSET, INC.	60689	5128	0

REV.		BY:	DATE	CK'D BY:	DATE
		--	--	--	--



PLAN

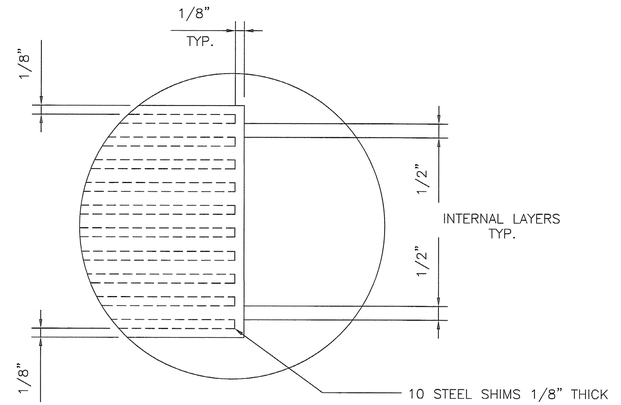
GIRDER	Y ANGLE
1	75.19°
2	80.26°
3	85.50°
4	90.81°
5	96.11°



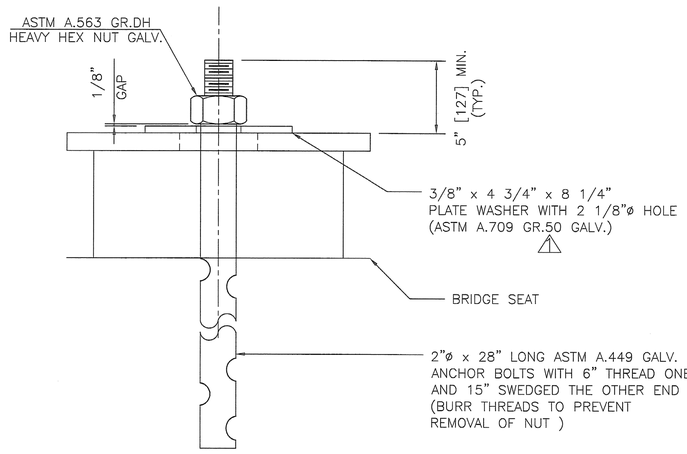
FRONT ELEVATION

COSMEC EXPANSION ELASTOMERIC BEARING

LOCATION:
ABUTMENT NO.2 GR. 1-5
TOTAL QUANTITY - 5



DETAIL A



ANCHOR BOLT DETAIL
(SIDE VIEW)

BEARING MATERIALS

1. STEEL – ASTM A.709 GR 50 ZINC METALIZED

2. ELASTOMER – 60 DUROMETER GRADE 4 NATURAL RUBBER SHEAR MODULUS BETWEEN .130 AND .200 KSI

3. ANCHOR BOLTS – SEE DETAIL

4. STEEL SHIMS – AASHTO M270 GR.36 (A.709 GR.36)

BEARING NOTES:

1. ANCHOR BOLTS AND ASSOCIATED HARDWARE SHALL BE GALVANIZED IN ACCORDANCE WITH ASTM M232

2. LOCATION OF FABRICATION – 70 SOUTH STREET WALPOLE, MA 02081

3. COSMEC, INC. REPRESENTATIVE: MR. MATT McANDREWS (508-668-6600)

4. ALL BEARING DEVICES SHALL BE ZINC METALIZED AS PER SUBSECTION 531.04(b) AND 506.15(b). BEARINGS SHALL BE SEALED WITH AN APPROVED SEALER AS SPECIFIED IN STANDARD SPEC. SUBSECTION 506.15(b). AREAS OF METALIZING DAMAGED BY FIELD WELDING OR HANDLING SHALL BE PAINTED WITH AN APPROVED SEALANT.

5. ⊗ MARKS HIGH END OF BEVELED

6. DESIGN CRITERIA: MINMIMUM DESIGN ROTATION: .0124 RADIANS
   DEAD LOAD: 87 KIPS
   LIVE LOAD: 92 KIPS
   TOTAL LOAD: 179 KIPS
   TRANSLATION: .932 INCHES

⚠1 7. ALL STEEL FABRICATION SHALL BE COMPLETED PRIOR TO VULCANIZING THE ELASTOMER TO THE SOLE PLATE.

RECEIVED
CK'D BY TMS CK'D BY
JUN 06 2007
RESUBMIT APPROVED ✓
BY WJ DATE 6/8/07

REV.		BY:	DATE	CK'D BY:	DATE
⚠1	ADDED NOTE 7 & REVISED WASHER PLATE MATERIAL.	MM	6/1/07	MCM	6/1/07

STATE OF VERMONT
AGENCY OF TRANSPORTATION

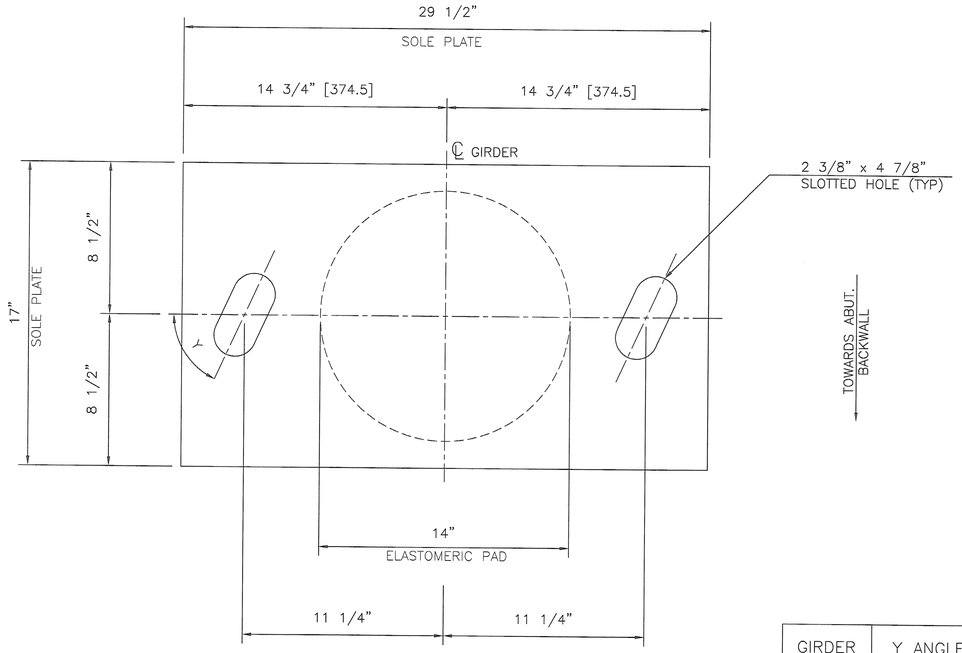
ROUTE NO. VT 12 (MAJOR COLLECTOR),
BRIDGE NO. 42
TOWN OF RANDOLPH
ORANGE COUNTY
PROJECT BRF-0241(29)

COSMEC, INC. 70 SOUTH STREET WALPOLE, MA. 02081

SCALE: 1/4"=1"	DRAWN BY: MAE	CHECKED BY: MCM
SHEET 4 OF 4	DATE: 11/22/06	DATE 2/21/07

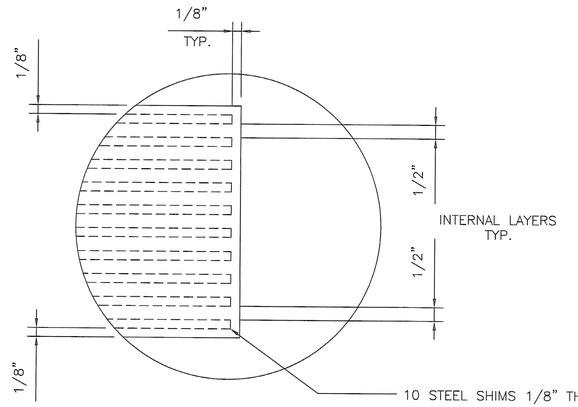
COSMEC ELASTOMERIC BEARINGS

CUSTOMER	S.O. NUMBER	DRAWING NUMBER	REV.
WINTERSET, INC.	60689	5129	1



PLAN

GIRDER	Y ANGLE ⚠
1	75.19°
2	80.26°
3	85.50°
4	90.81°
5	96.11°



DETAIL A

BEARING MATERIALS

1. STEEL – ASTM A.709 GR 50 ZINC METALIZED

2. ELASTOMER – 60 DUROMETER GRADE 4 NATURAL RUBBER SHEAR MODULUS BETWEEN .130 AND .200 KSI

3. ANCHOR BOLTS – SEE DETAIL

4. STEEL SHIMS – AASHTO M270 GR.36 (A.709 GR.36)

BEARING NOTES:

1. ANCHOR BOLTS AND ASSOCIATED HARDWARE SHALL BE GALVANIZED IN ACCORDANCE WITH ASTM M232

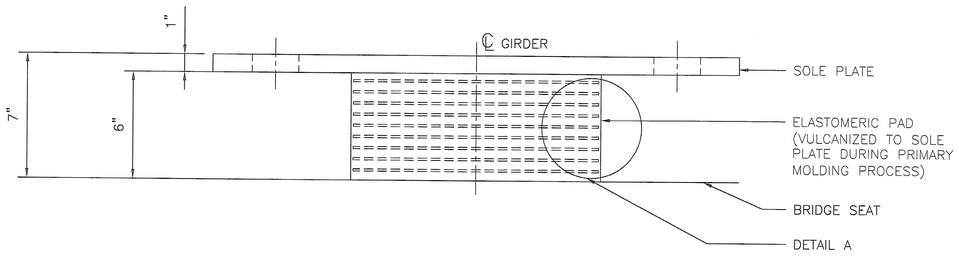
2. LOCATION OF FABRICATION – 70 SOUTH STREET
WALPOLE, MA 02081

3. COSMEC, INC. REPRESENTATIVE: MR. MATT McANDREWS
(508–668–6600)

4. ALL BEARING DEVICES SHALL BE ZINC METALIZED AS PER SUBSECTION 531.04(b) AND 506.15(b). BEARINGS SHALL BE SEALED WITH AN APPROVED SEALER AS SPECIFIED IN STANDARD SPEC. SUBSECTION 506.15(b). AREAS OF METALIZING DAMAGED BY FIELD WELDING OR HANDLING SHALL BE PAINTED WITH AN APPROVED SEALANT.

5. DESIGN CRITERIA: MINMIMUM DESIGN ROTATION: .0124 RADIANS
DEAD LOAD: 87 KIPS
LIVE LOAD: 92 KIPS
TOTAL LOAD: 179 KIPS
TRANSLATION: .932 INCHES

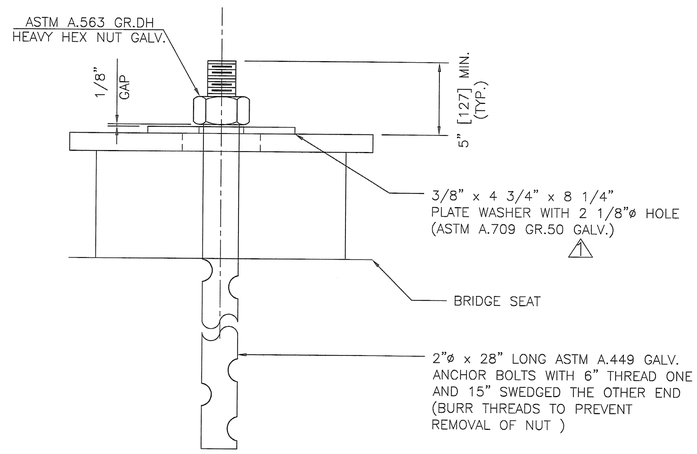
⚠ 6. ALL STEEL FABRICATION SHALL BE COMPLETED PRIOR TO VULCANIZING THE ELASTOMER TO THE SOLE PLATE.



FRONT ELEVATION

COSMEC EXPANSION ELASTOMERIC BEARING

LOCATION:
ABUTMENT NO.1 GR. 1–5
TOTAL QUANTITY – 5



ANCHOR BOLT DETAIL
(SIDE VIEW)

RECEIVED
CK'D BY TAS CK'D BY
JUN 0 6 2007
RESUBMIT APPROVED ✓
BY DATE 6/6/07

REV.		BY:	DATE	CK'D BY:	DATE
⚠	ADDED NOTE 6, REVISED ANGLE TABLE & REVISED WASHER MATERIAL.	--	--	--	--

STATE OF VERMONT
AGENCY OF TRANSPORTATION

ROUTE NO. VT 12 (MAJOR COLLECTOR),
BRIDGE NO. 42
TOWN OF RANDOLPH
ORANGE COUNTY
PROJECT BRF–0241(29)

COSMEC, INC. 70 SOUTH STREET WALPOLE, MA. 02081

SCALE: 1/4"=1"	DRAWN BY: MAE	CHECKED BY: MCM
SHEET 3 OF 4	DATE: 11/22/06	DATE: 2/21/07

COSMEC ELASTOMERIC BEARINGS

CUSTOMER	S.O. NUMBER	DRAWING NUMBER	REV.
WINTERSET, INC.	60689	5130	1